

TEST REPORT

Client Earth Environmental & Geotechnical Ltd

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

Contract A5487 -
Kronospan North Access Road

Job Number MRN 4589/93
Date of Issue 12 October 2023
Page 1 of 65

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.

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

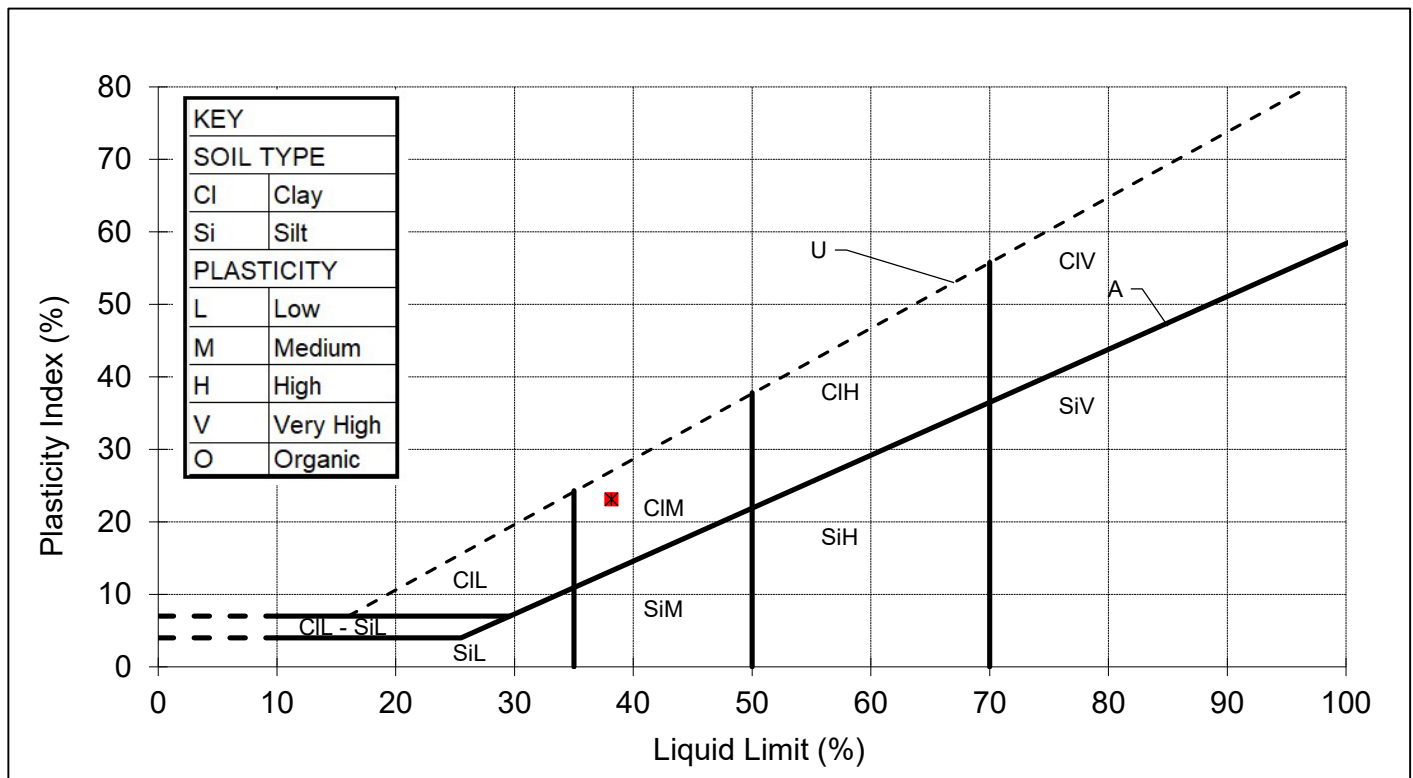
CLIENT	Earth Environmental & Geotechnical Ltd		
SITE	A5487 - Kronospan North Access Road		
JOB NUMBER	MRN 4589/93		

SAMPLE LABEL	CP01 (1.20-1.65m)	DATE SAMPLED	14-Aug-23
SAMPLE No.	130413	DATE RECEIVED	24-Aug-23
DATE TESTED	06-Sep-23	SAMPLED BY	Client

MATERIAL	Grey 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)	21.1	38.9	0.983	
Determination 2 (avg)	21.0	38.7		

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
32.0	38	15	23	86



REMARKS

SIGNED

NAME

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

DATE

12-Oct-23

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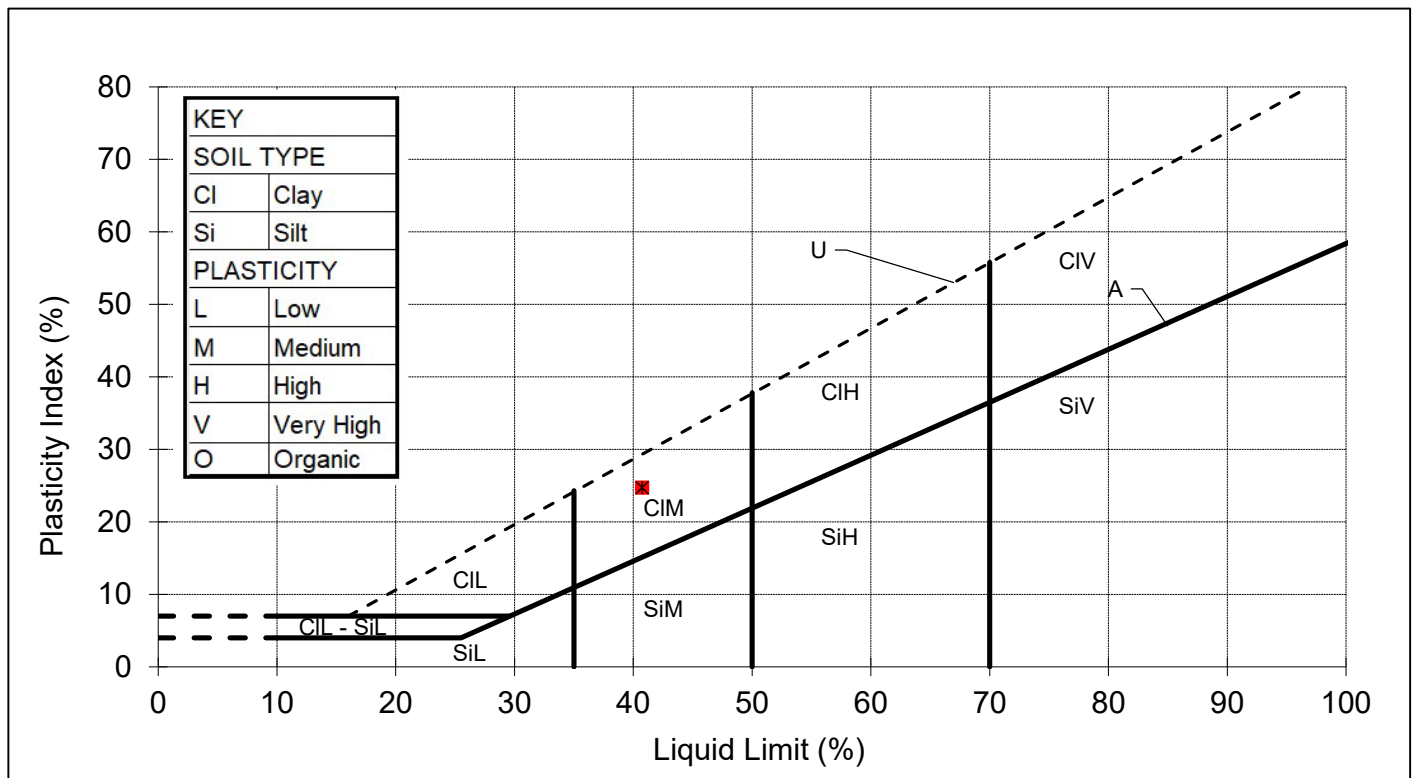
CLIENT	Earth Environmental & Geotechnical Ltd		
SITE	A5487 - Kronospan North Access Road		
JOB NUMBER	MRN 4589/93		

SAMPLE LABEL	CP01 (3.0-3.450m)	DATE SAMPLED	14-Aug-23
SAMPLE No.	130506	DATE RECEIVED	25-Aug-23
DATE TESTED	06-Sep-23	SAMPLED BY	Client

MATERIAL	Grey 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)	18.6	39.7	1.023	
Determination 2 (avg)	18.7	39.9		

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
29.7	41	16	25	97



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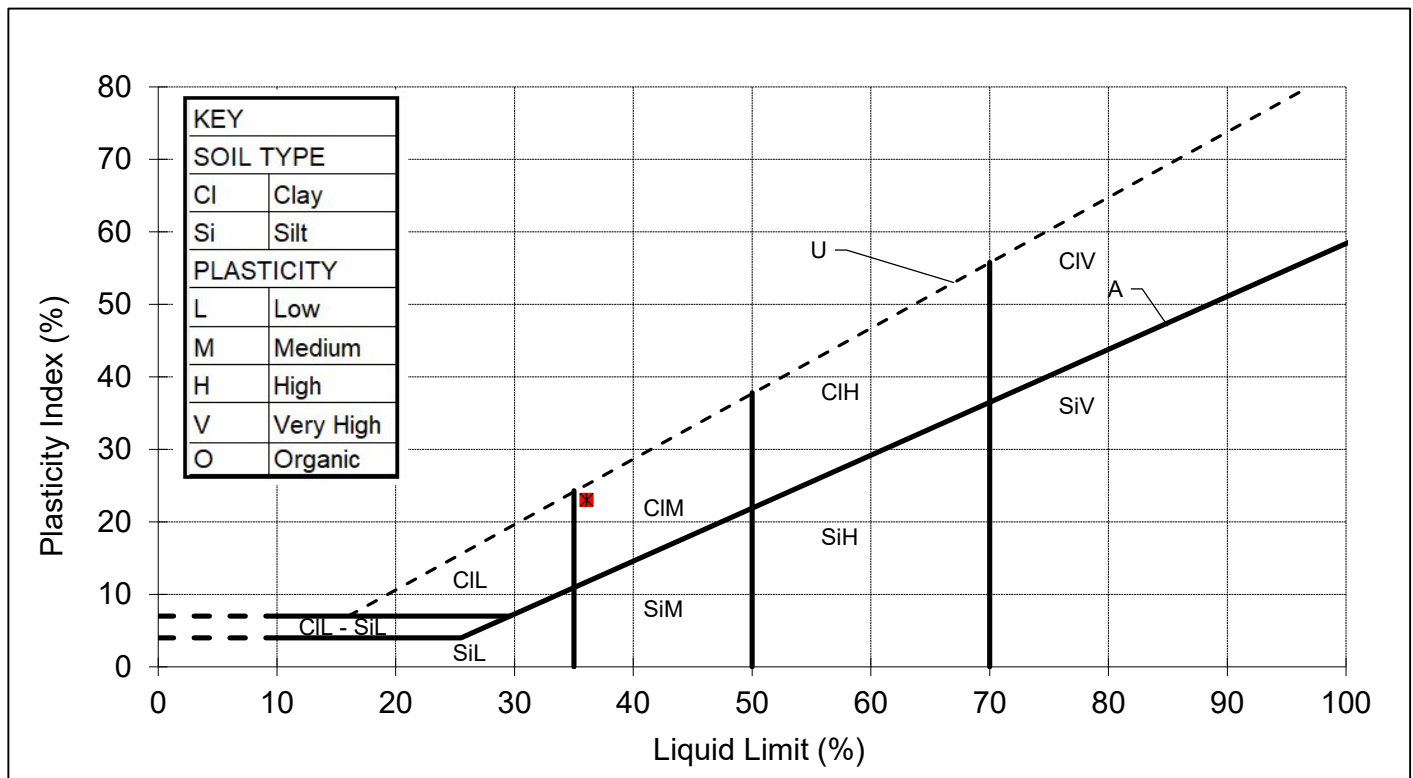
CLIENT	Earth Environmental & Geotechnical Ltd		
SITE	A5487 - Kronospan North Access Road		
JOB NUMBER	MRN 4589/93		

SAMPLE LABEL	CP11 (2.50m)	DATE SAMPLED	15-Aug-23
SAMPLE No.	130502	DATE RECEIVED	25-Aug-23
DATE TESTED	06-Sep-23	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)	19.6	35.7	1.007	
Determination 2 (avg)	19.7	35.9		

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
14.3	36	13	23	84



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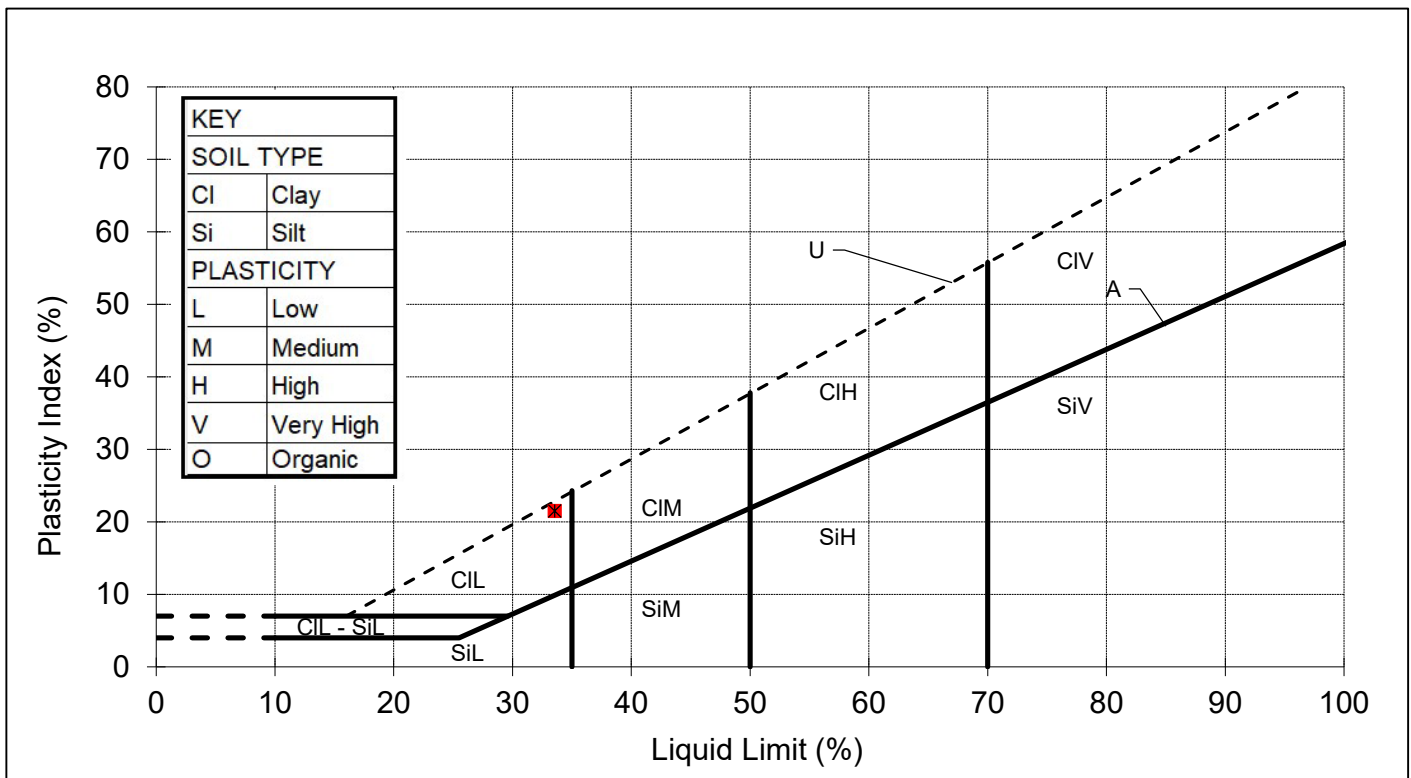
CLIENT	Earth Environmental & Geotechnical Ltd		
SITE	A5487 - Kronospan North Access Road		
JOB NUMBER	MRN 4589/93		

SAMPLE LABEL	CP11 (12.50m)	DATE SAMPLED	16-Aug-23
SAMPLE No.	130504	DATE RECEIVED	25-Aug-23
DATE TESTED	06-Sep-23	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)	18.6	32.8	1.021	
Determination 2 (avg)	18.6	32.9		

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
13.1	34	12	22	81



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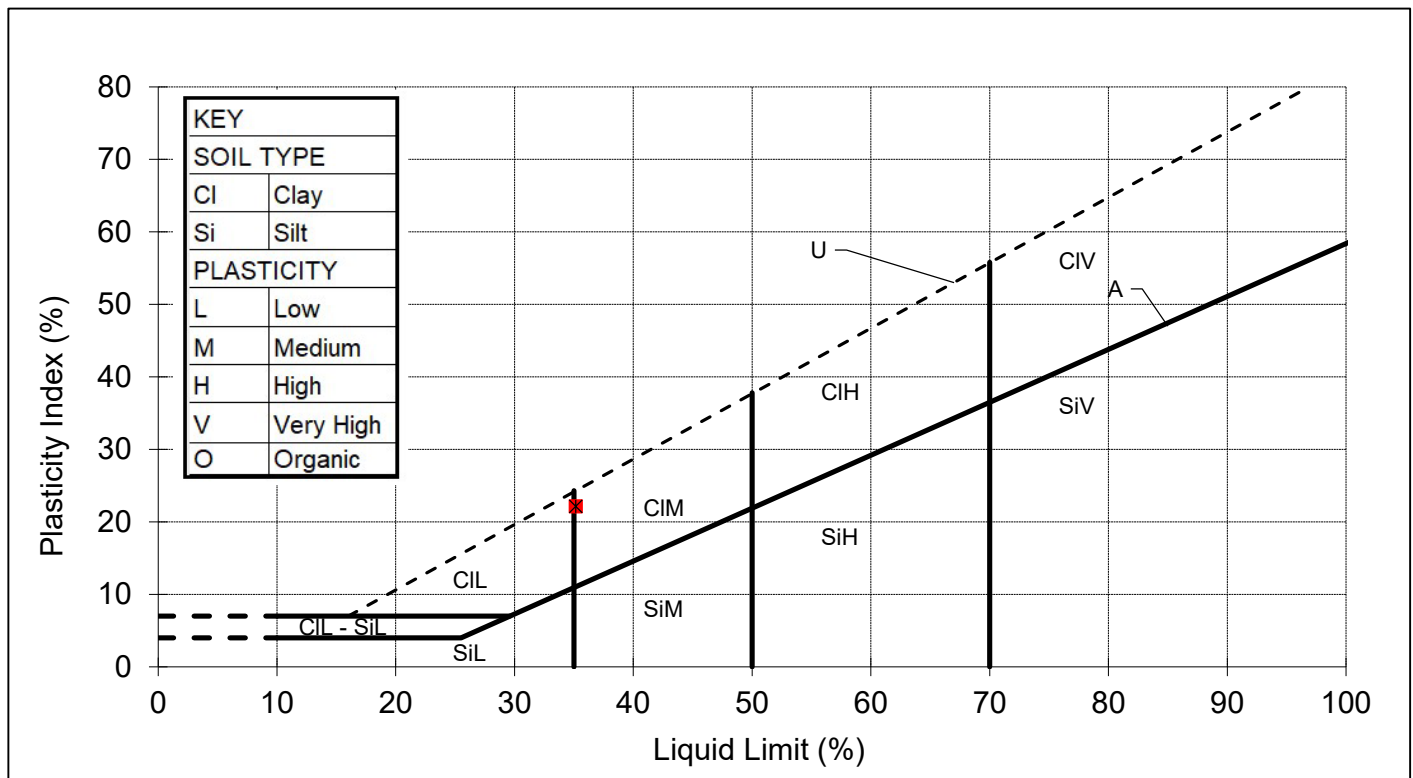
CLIENT	Earth Environmental & Geotechnical Ltd		
SITE	A5487 - Kronospan North Access Road		
JOB NUMBER	MRN 4589/93		

SAMPLE LABEL	CP12 (8.0m)	DATE SAMPLED	17-Aug-23
SAMPLE No.	130111	DATE RECEIVED	24-Aug-23
DATE TESTED	06-Sep-23	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)	18.7	34.5	1.016	
Determination 2 (avg)	19.2	34.7		

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
9.8	35	13	22	77



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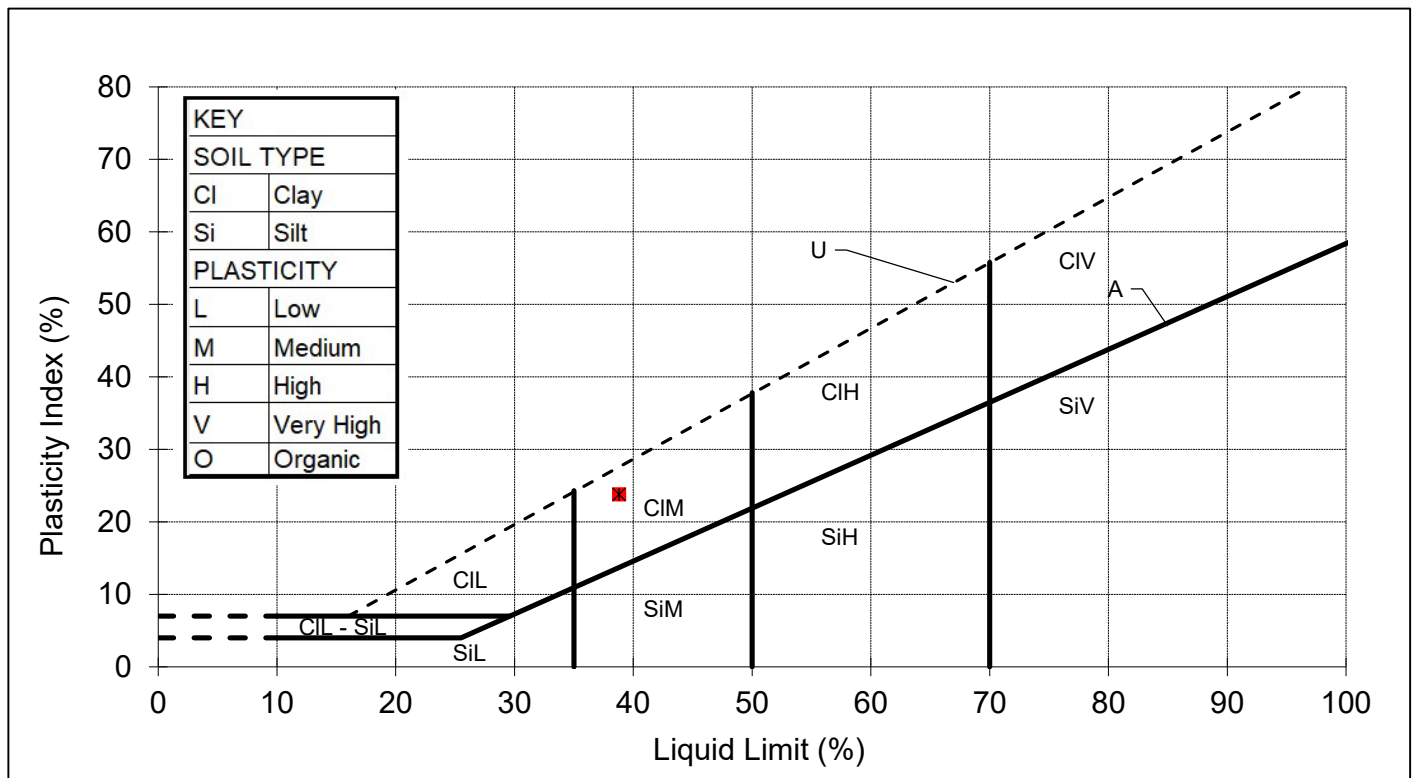
CLIENT	Earth Environmental & Geotechnical Ltd		
SITE	A5487 - Kronospan North Access Road		
JOB NUMBER	MRN 4589/93		

SAMPLE LABEL	CP12 (14.0m)	DATE SAMPLED	17-Aug-23
SAMPLE No.	130113	DATE RECEIVED	24-Aug-23
DATE TESTED	06-Sep-23	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)	19.2	37.8	1.013	
Determination 2 (avg)	19.5	38.8		

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
18.5	39	15	24	96



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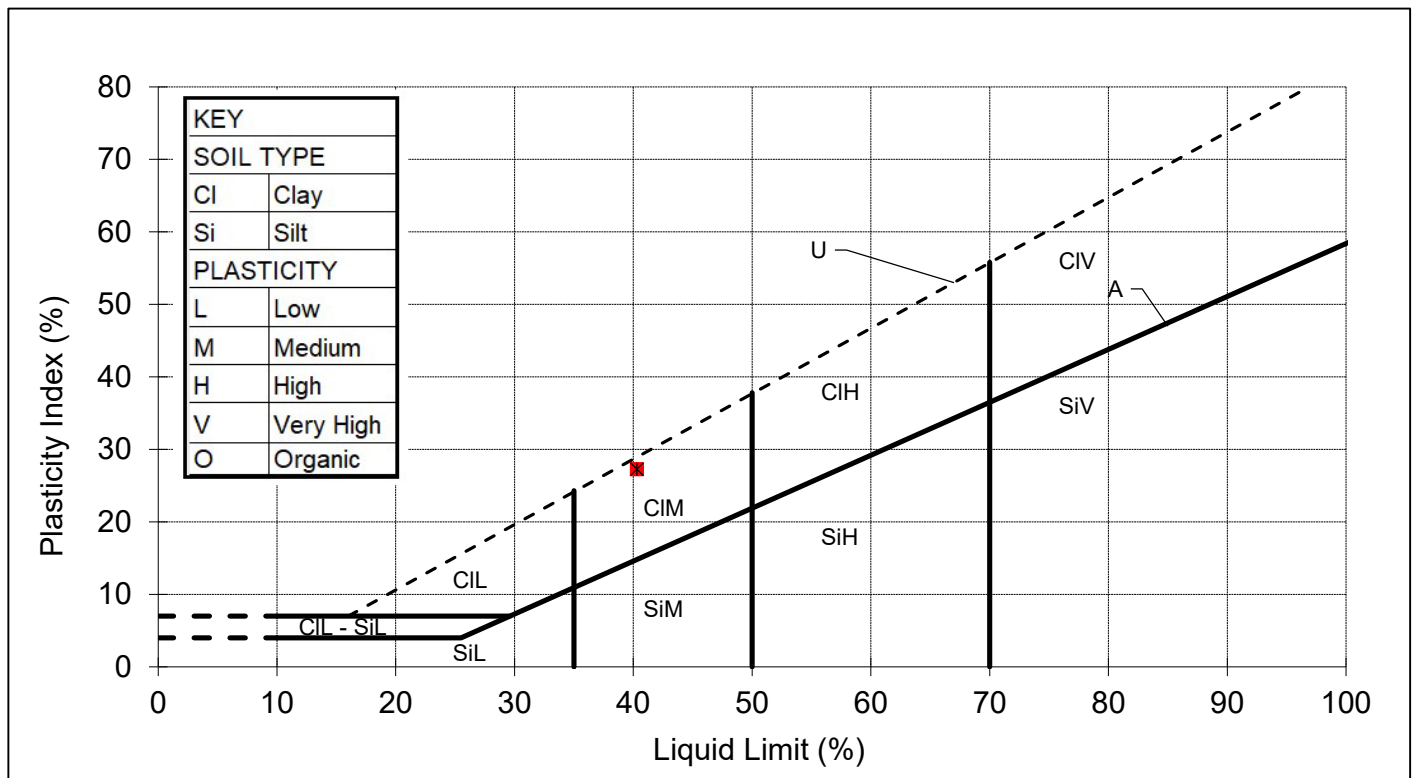
CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A5487 - Kronospan North Access Road
JOB NUMBER	MRN 4589/93

SAMPLE LABEL	CP13 (2.0m)	DATE SAMPLED	17-Aug-23
SAMPLE No.	130118	DATE RECEIVED	24-Aug-23
DATE TESTED	06-Sep-23	SAMPLED BY	Client

MATERIAL	Grey 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)	18.6	39.1	1.032	
Determination 2 (avg)	18.0	39.0		

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
28.2	40	13	27	93



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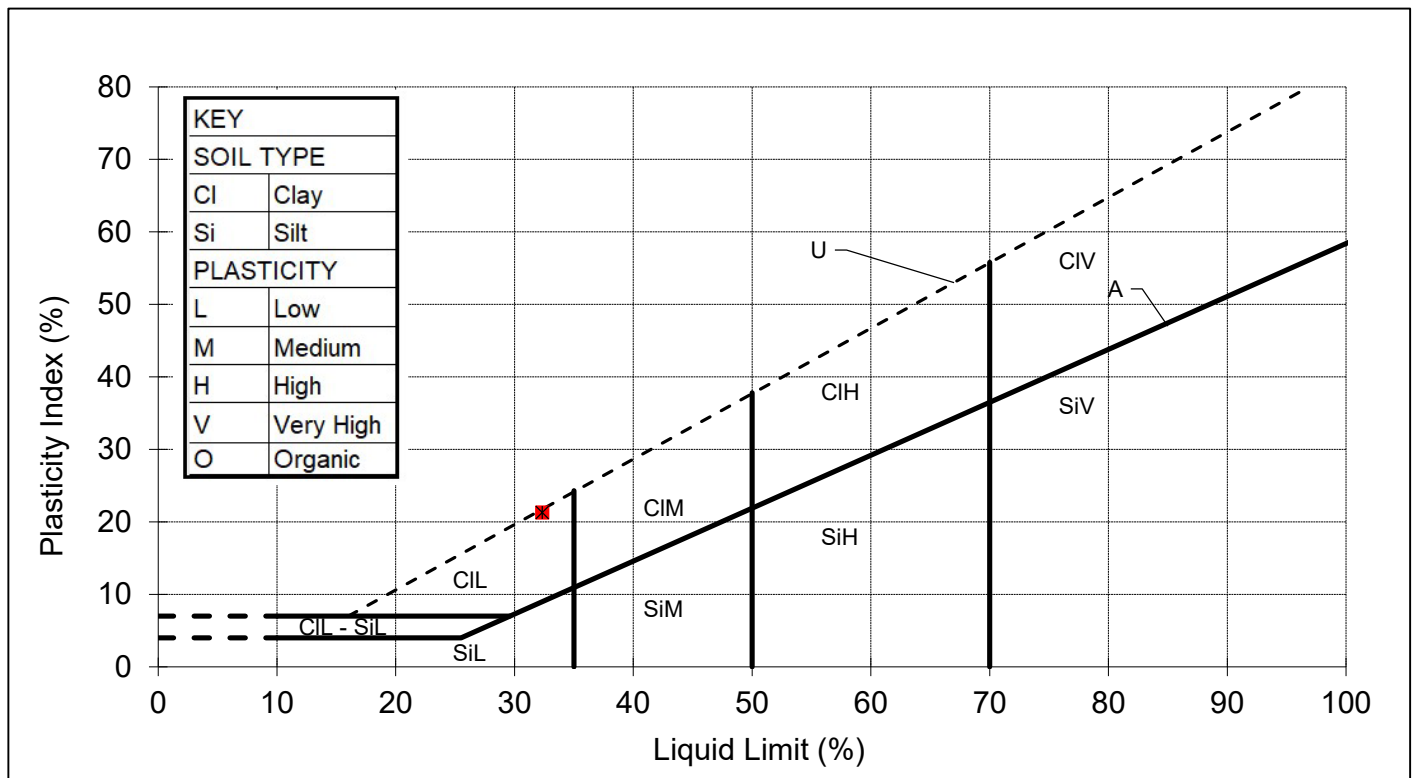
CLIENT	Earth Environmental & Geotechnical Ltd		
SITE	A5487 - Kronospan North Access Road		
JOB NUMBER	MRN 4589/93		

SAMPLE LABEL	CP13 (12.0-12.45m)	DATE SAMPLED	17-Aug-23
SAMPLE No.	130188	DATE RECEIVED	24-Aug-23
DATE TESTED	06-Sep-23	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)	19.7	32.4	1.001	
Determination 2 (avg)	20.2	32.2		

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
9.3	32	11	21	69



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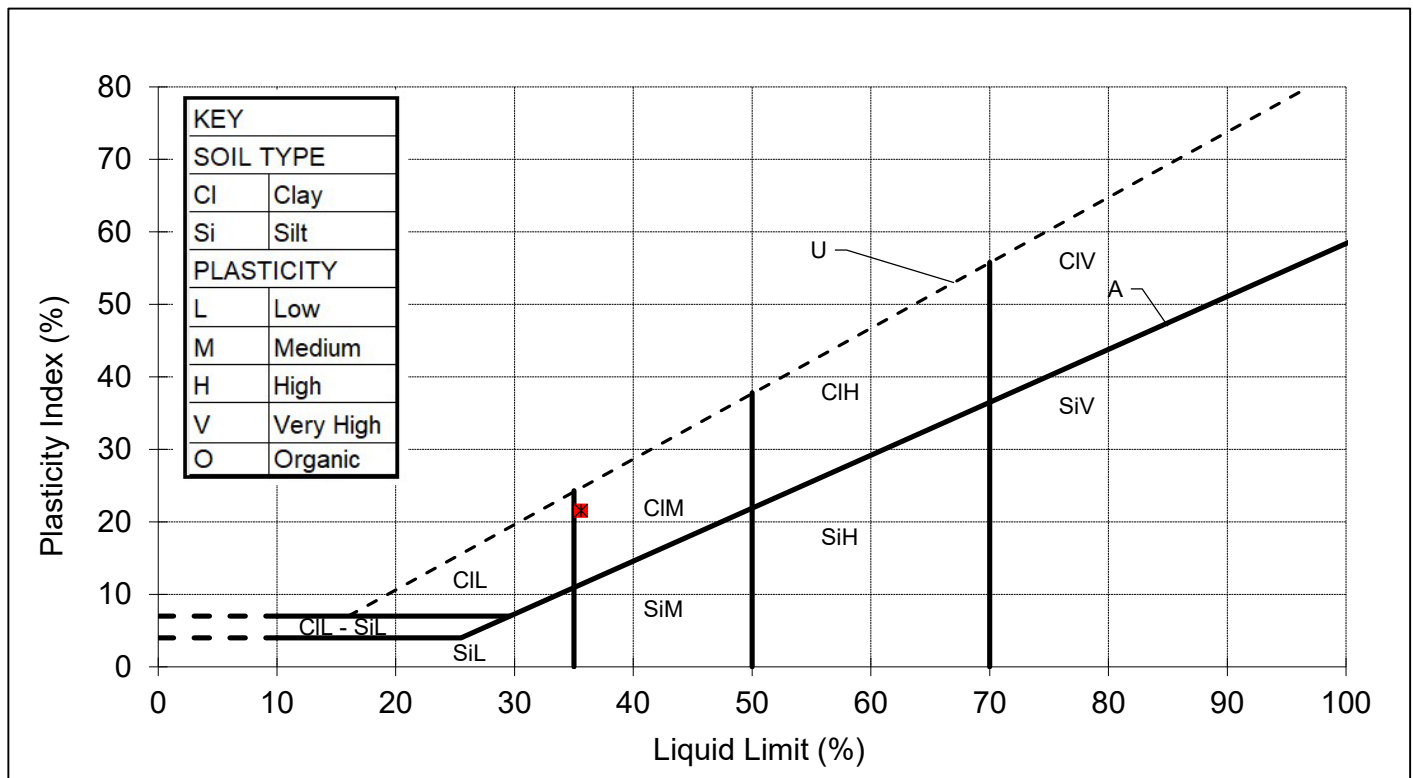
CLIENT	Earth Environmental & Geotechnical Ltd		
SITE	A5487 - Kronospan North Access Road		
JOB NUMBER	MRN 4589/93		

SAMPLE LABEL	CP02 (2.5m)	DATE SAMPLED	18-Aug-23
SAMPLE No.	130134	DATE RECEIVED	24-Aug-23
DATE TESTED	06-Sep-23	SAMPLED BY	Client

MATERIAL	Grey 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)	21.1	36.1	0.986	
Determination 2 (avg)	20.7	36.1		

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
22.7	36	14	22	87



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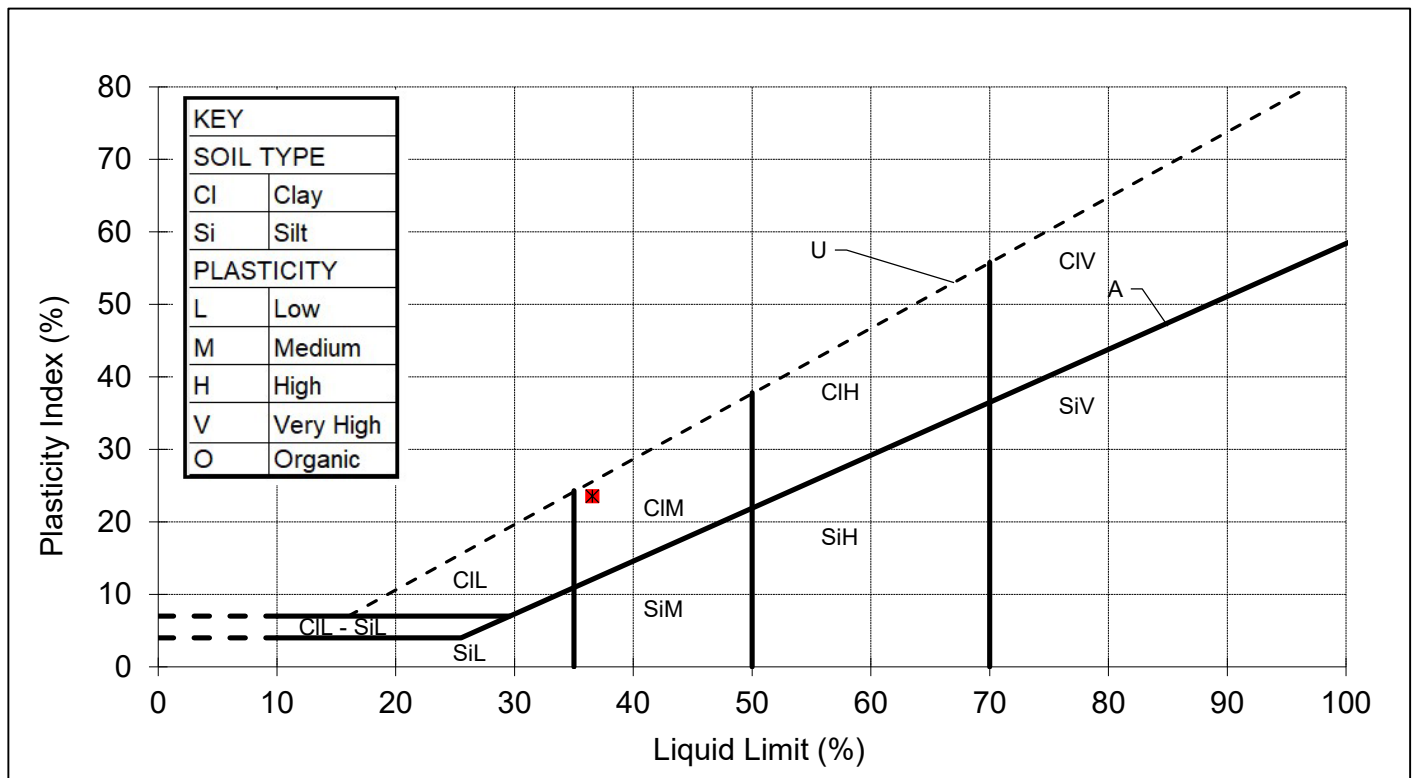
CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A5487 - Kronospan North Access Road
JOB NUMBER	MRN 4589/93

SAMPLE LABEL	CP02 (9.50m)	DATE SAMPLED	18-Aug-23
SAMPLE No.	130140	DATE RECEIVED	24-Aug-23
DATE TESTED	06-Sep-23	SAMPLED BY	Client

MATERIAL	Grey 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)	18.2	35.5	1.034
Determination 2 (avg)	18.2	35.2	

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
16.0	37	13	24	86



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

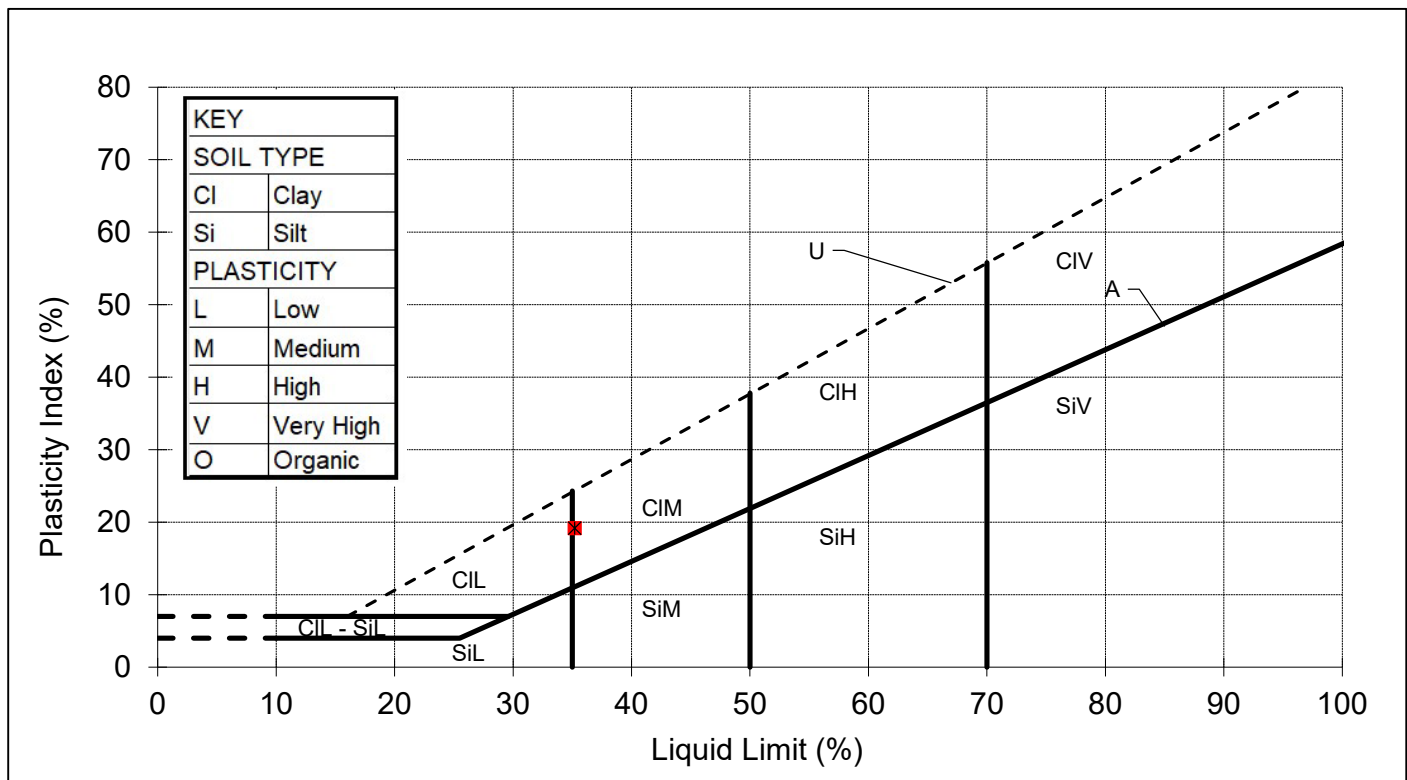
CLIENT	Earth Environmental & Geotechnical Ltd		
SITE	A5487 - Kronospan North Access Road		
JOB NUMBER	MRN 4589/93		

SAMPLE LABEL	CP03 (1.2-1.65m)	DATE SAMPLED	18-Aug-23
SAMPLE No.	130087	DATE RECEIVED	24-Aug-23
DATE TESTED	06-Sep-23	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)	16.7	34.0	1.046	
Determination 2 (avg)	16.5	33.3		

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
28.1	35	16	19	94



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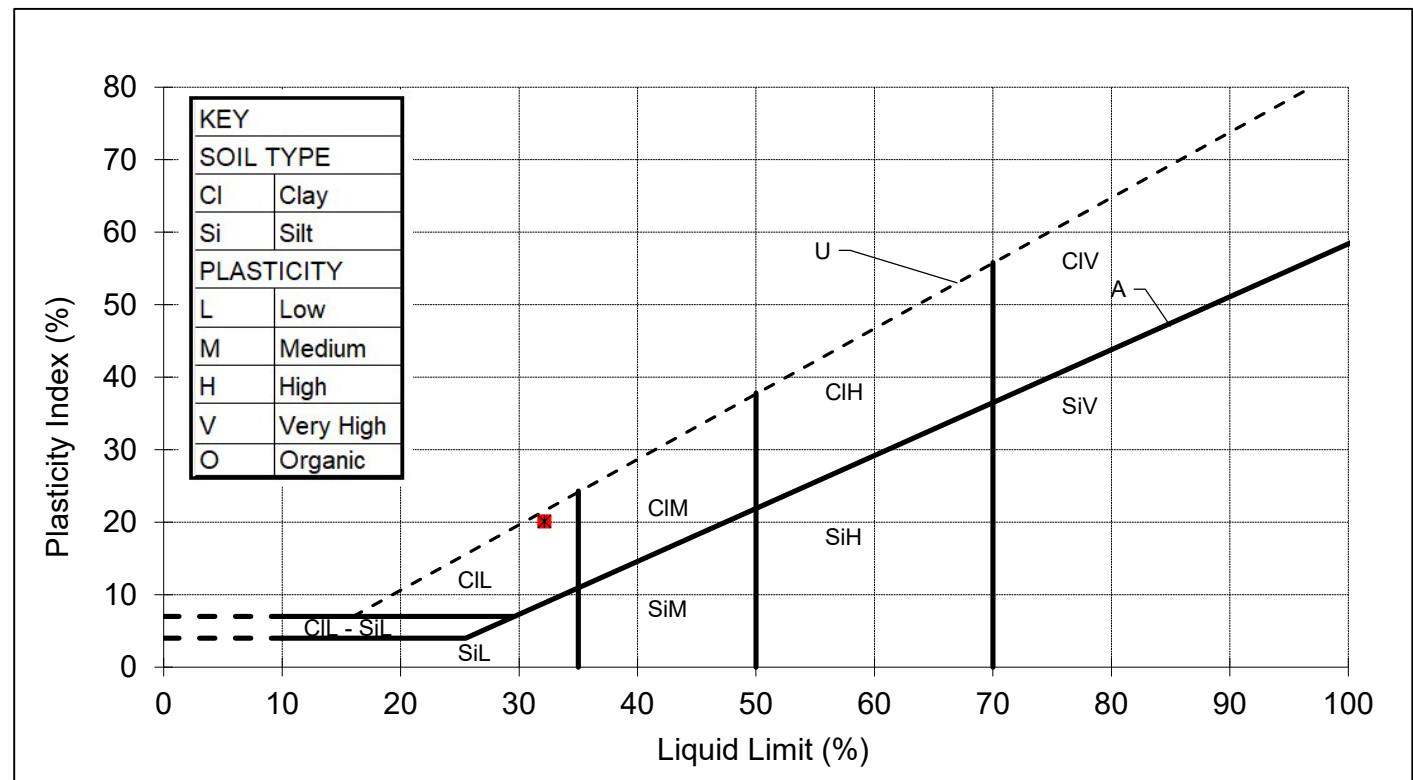
CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A5487 - Kronospan North Access Road
JOB NUMBER	MRN 4589/93

SAMPLE LABEL	CP10 (2.5m)	DATE SAMPLED	18-Aug-23
SAMPLE No.	130144	DATE RECEIVED	24-Aug-23
DATE TESTED	06-Sep-23	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)	19.1	31.8	1.009	
Determination 2 (avg)	19.7	31.9		

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
12.3	32	12	20	83



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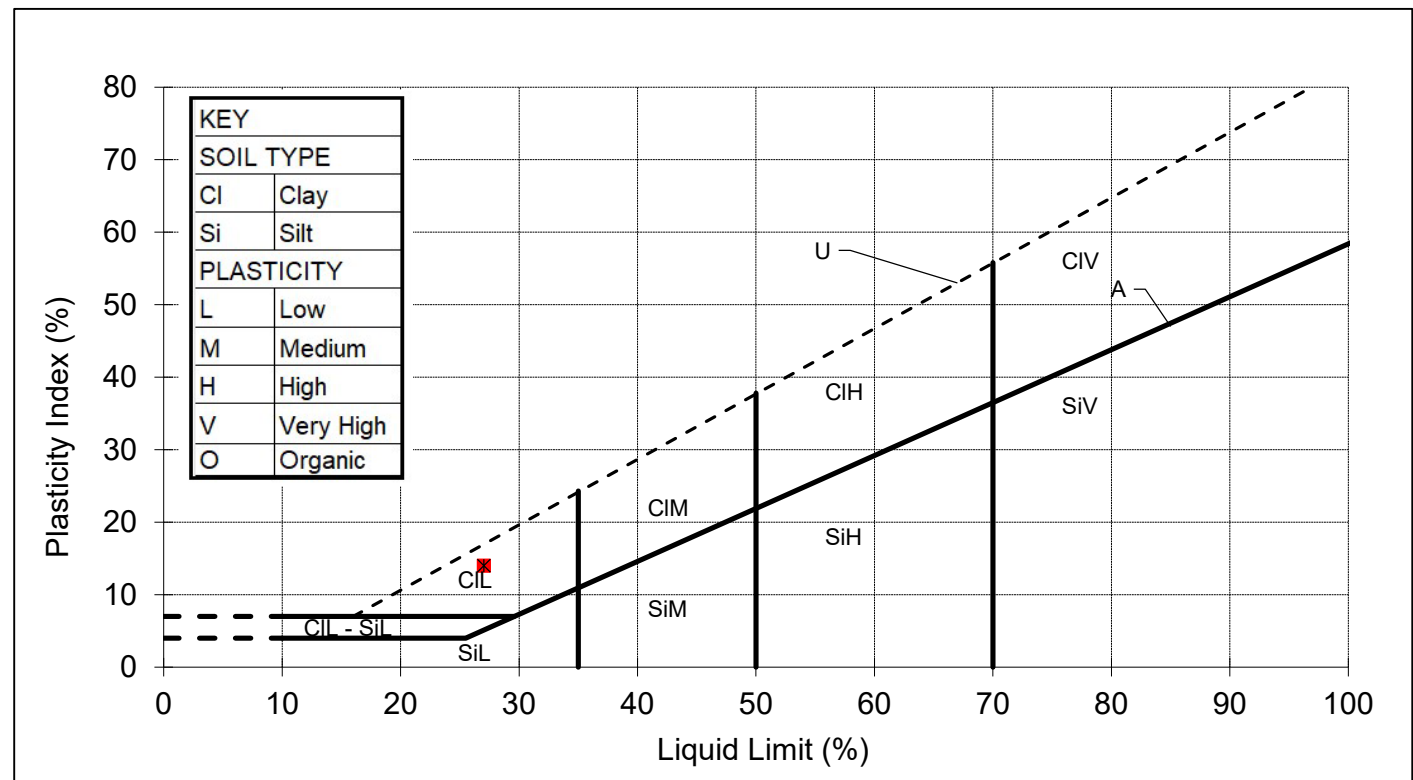
CLIENT	Earth Environmental & Geotechnical Ltd		
SITE	A5487 - Kronospan North Access Road		
JOB NUMBER	MRN 4589/93		

SAMPLE LABEL	CP10 (9.0-9.45m)	DATE SAMPLED	18-Aug-23
SAMPLE No.	130197	DATE RECEIVED	24-Aug-23
DATE TESTED	06-Sep-23	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)	23.3	28.2	0.958	
Determination 2 (avg)	23.7	28.2		

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
17.2	27	13	14	99



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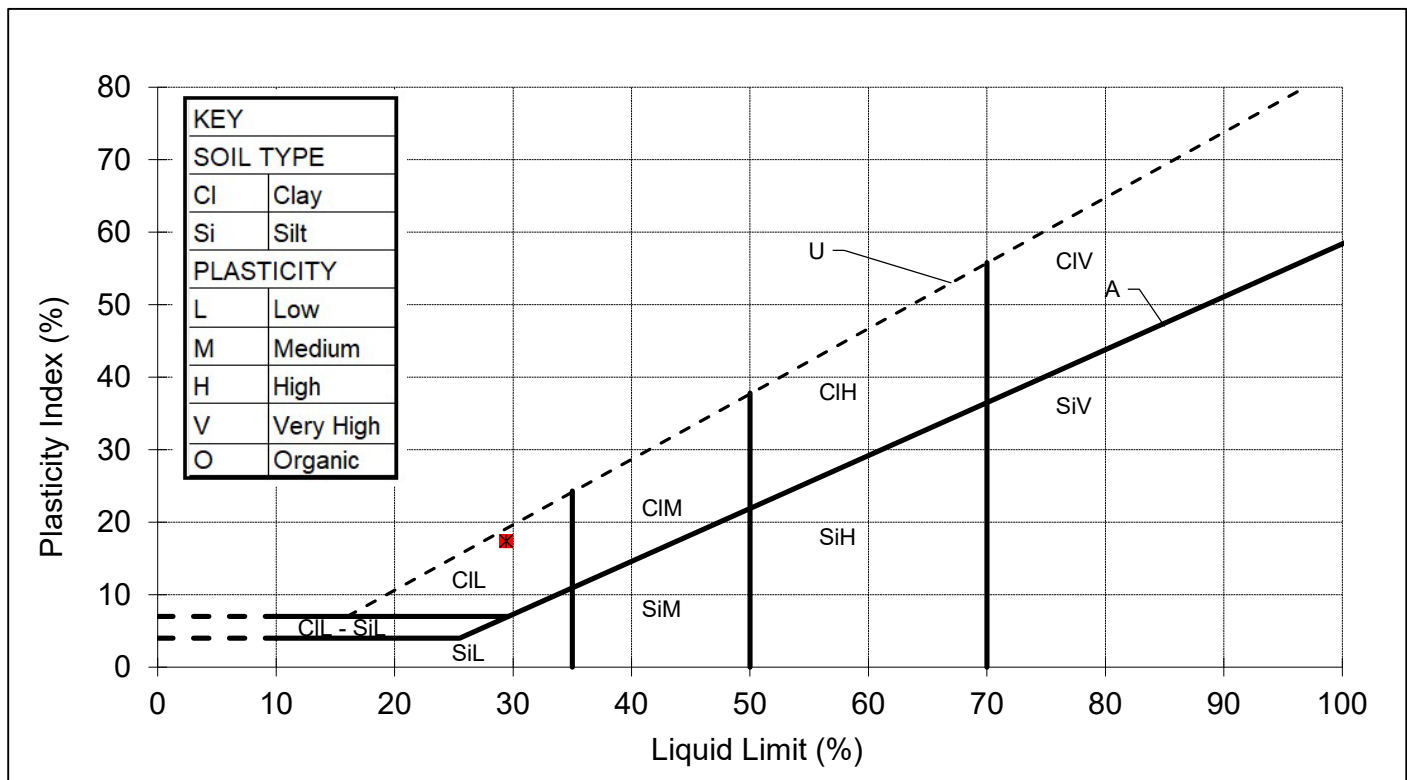
CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A5487 - Kronospan North Access Road
JOB NUMBER	MRN 4589/93

SAMPLE LABEL	CP10 (10.5-10.95m)	DATE SAMPLED	18-Aug-23
SAMPLE No.	130102	DATE RECEIVED	24-Aug-23
DATE TESTED	06-Sep-23	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)	21.2	29.9	0.984	
Determination 2 (avg)	20.8	29.9		

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
10.1	29	12	17	92



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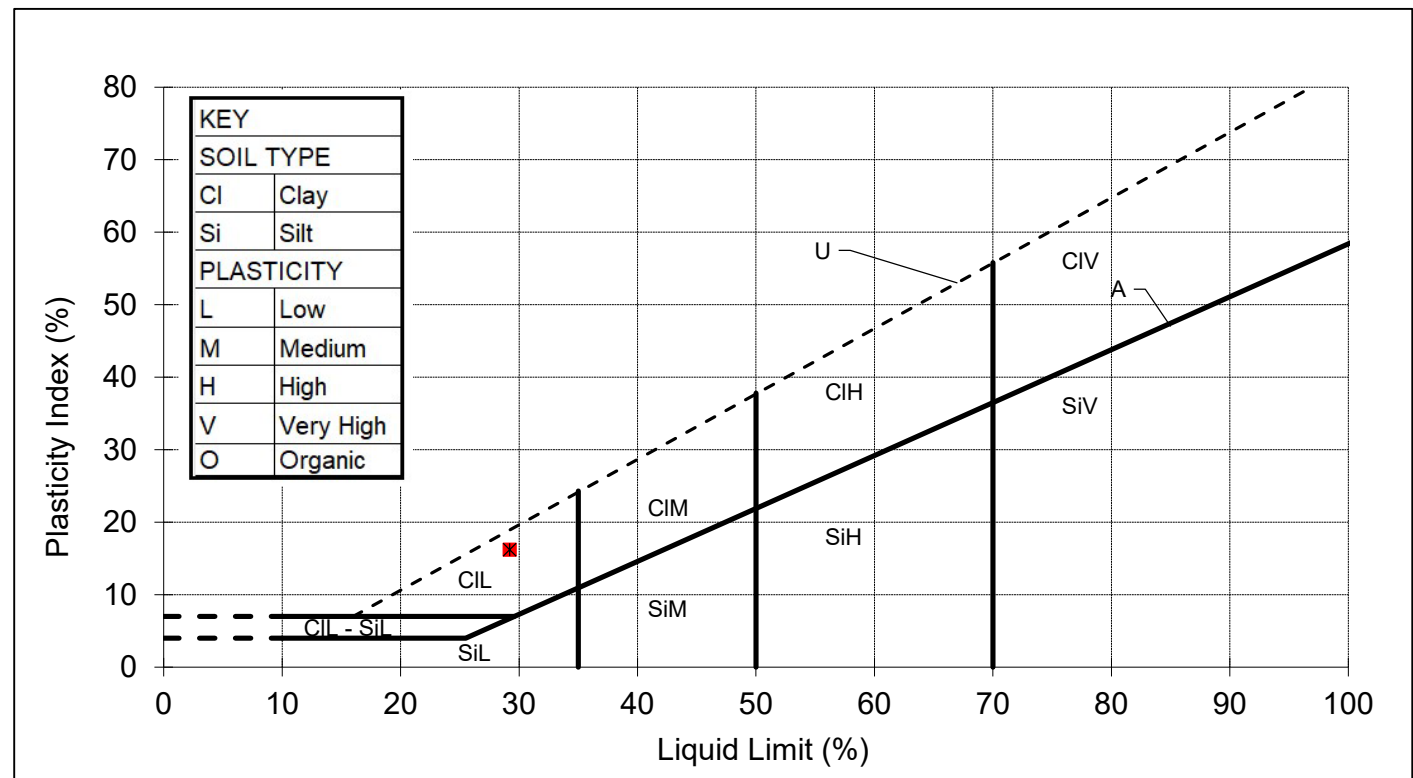
CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A5487 - Kronospan North Access Road
JOB NUMBER	MRN 4589/93

SAMPLE LABEL	WS04 (2.0m)	DATE SAMPLED	14-Aug-23
SAMPLE No.	130226	DATE RECEIVED	24-Aug-23
DATE TESTED	06-Sep-23	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)	18.6	28.6	1.020	
Determination 2 (avg)	18.8	28.7		

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
14.4	29	13	16	90



REMARKS

SIGNED

NAME

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

DATE

12-Oct-23

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

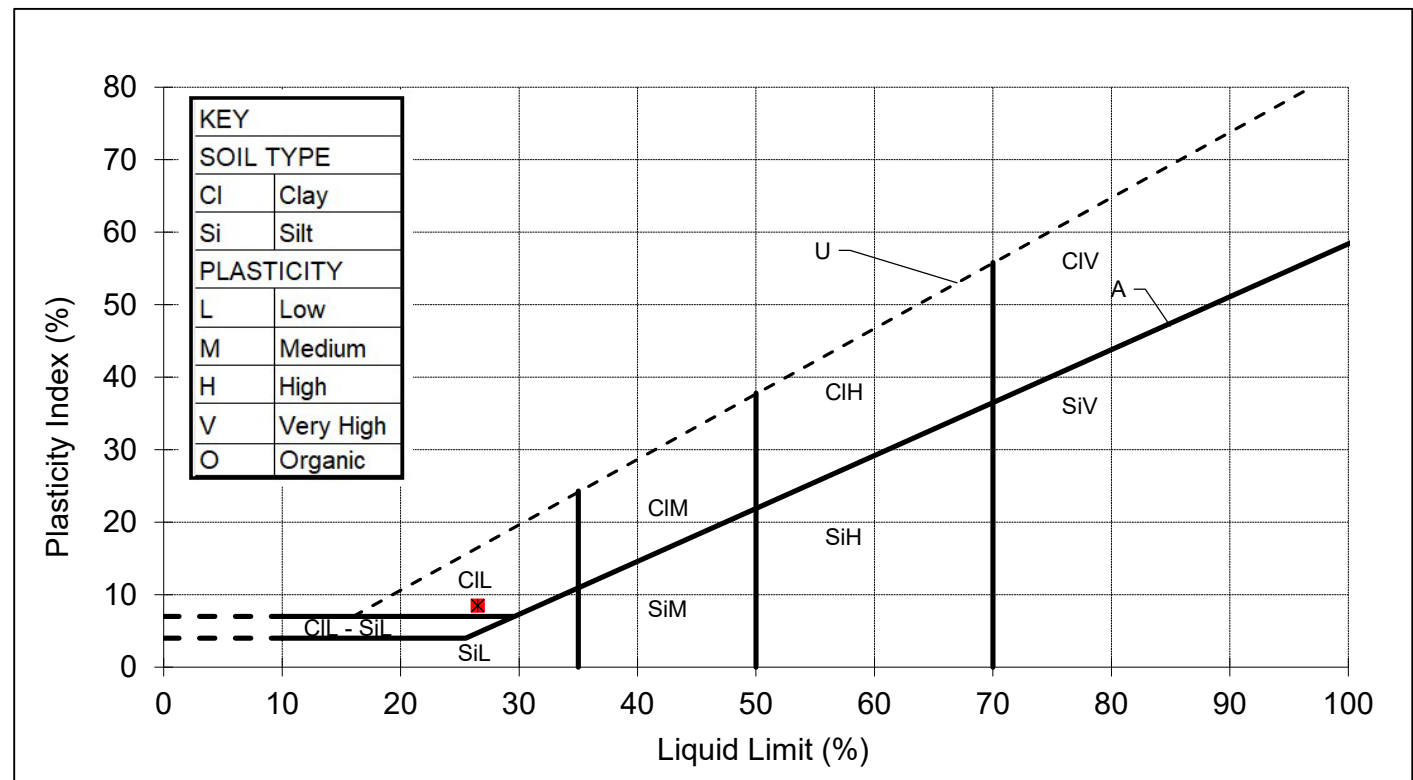
CLIENT	Earth Environmental & Geotechnical Ltd		
SITE	A5487 - Kronospan North Access Road		
JOB NUMBER	MRN 4589/93		

SAMPLE LABEL	WS03 (2.0m)	DATE SAMPLED	14-Aug-23
SAMPLE No.	130226	DATE RECEIVED	24-Aug-23
DATE TESTED	06-Sep-23	SAMPLED BY	Client

MATERIAL	Brown clayey slightly sandy SILT		
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)	17.8	25.7	1.033	
Determination 2 (avg)	17.7	25.6		

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
22.0	26	18	8	99



REMARKS

SIGNED

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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

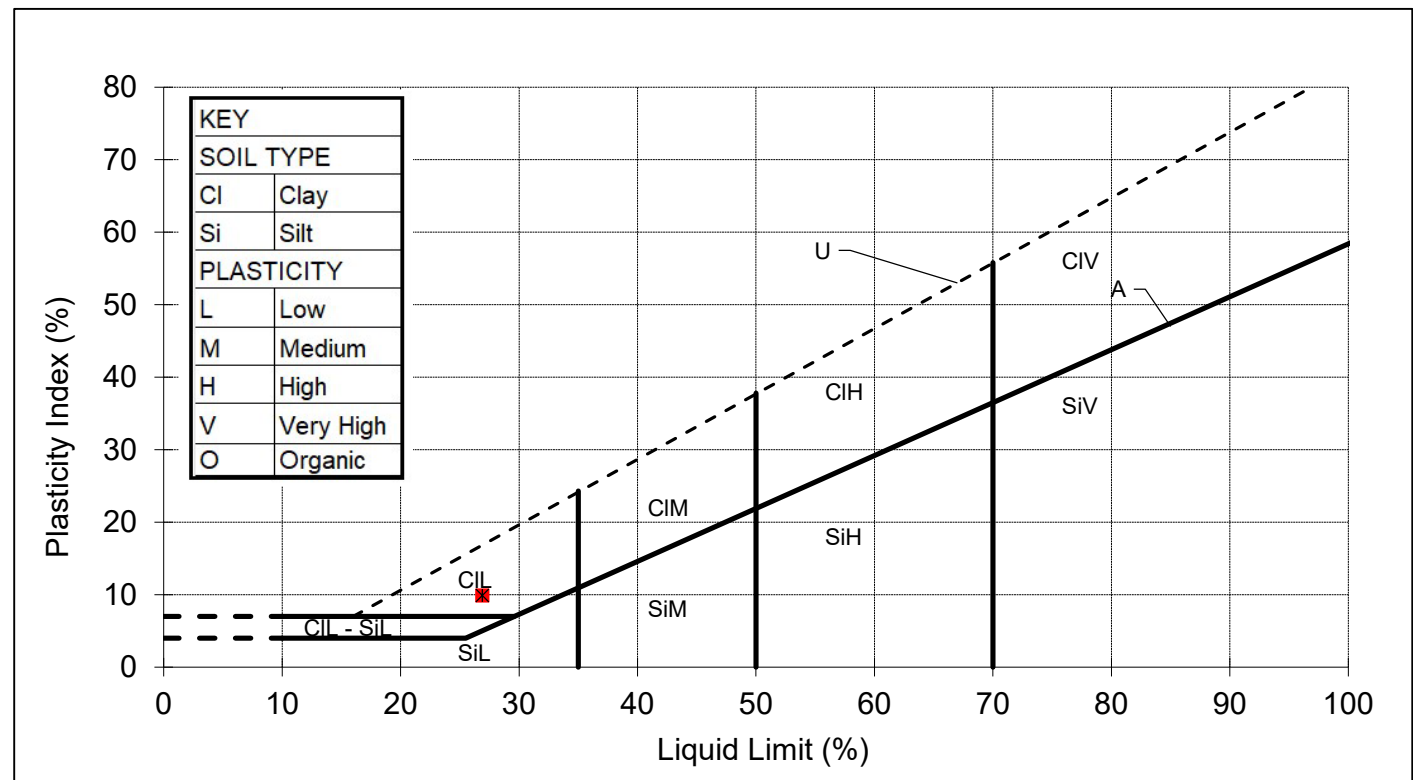
CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A5487 - Kronospan North Access Road
JOB NUMBER	MRN 4589/93

SAMPLE LABEL	WS10 (2.5m)	DATE SAMPLED	17-Aug-23
SAMPLE No.	130260	DATE RECEIVED	24-Aug-23
DATE TESTED	06-Sep-23	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)	19.4	26.8	1.010	
Determination 2 (avg)	19.3	26.5		

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
19.8	27	17	10	91



REMARKS

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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

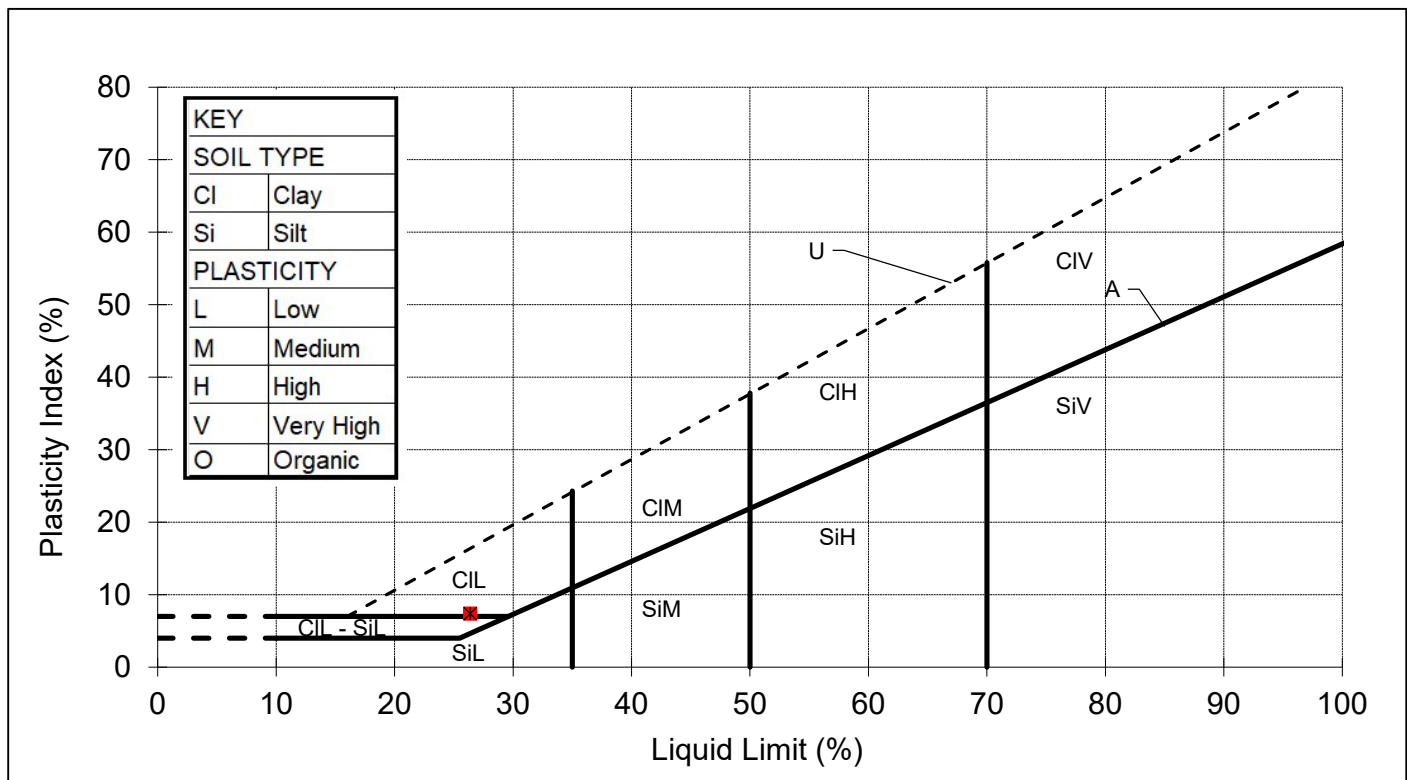
CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A5487 - Kronospan North Access Road
JOB NUMBER	MRN 4589/93

SAMPLE LABEL	WS01 (1.50m)	DATE SAMPLED	22-Aug-23
SAMPLE No.	130206	DATE RECEIVED	24-Aug-23
DATE TESTED	06-Sep-23	SAMPLED BY	Client

MATERIAL	Brown clayey slightly sandy SILT		
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)	18.6	25.8	1.025
Determination 2 (avg)	18.1	25.7	

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
21.9	26	19	7	98



REMARKS

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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

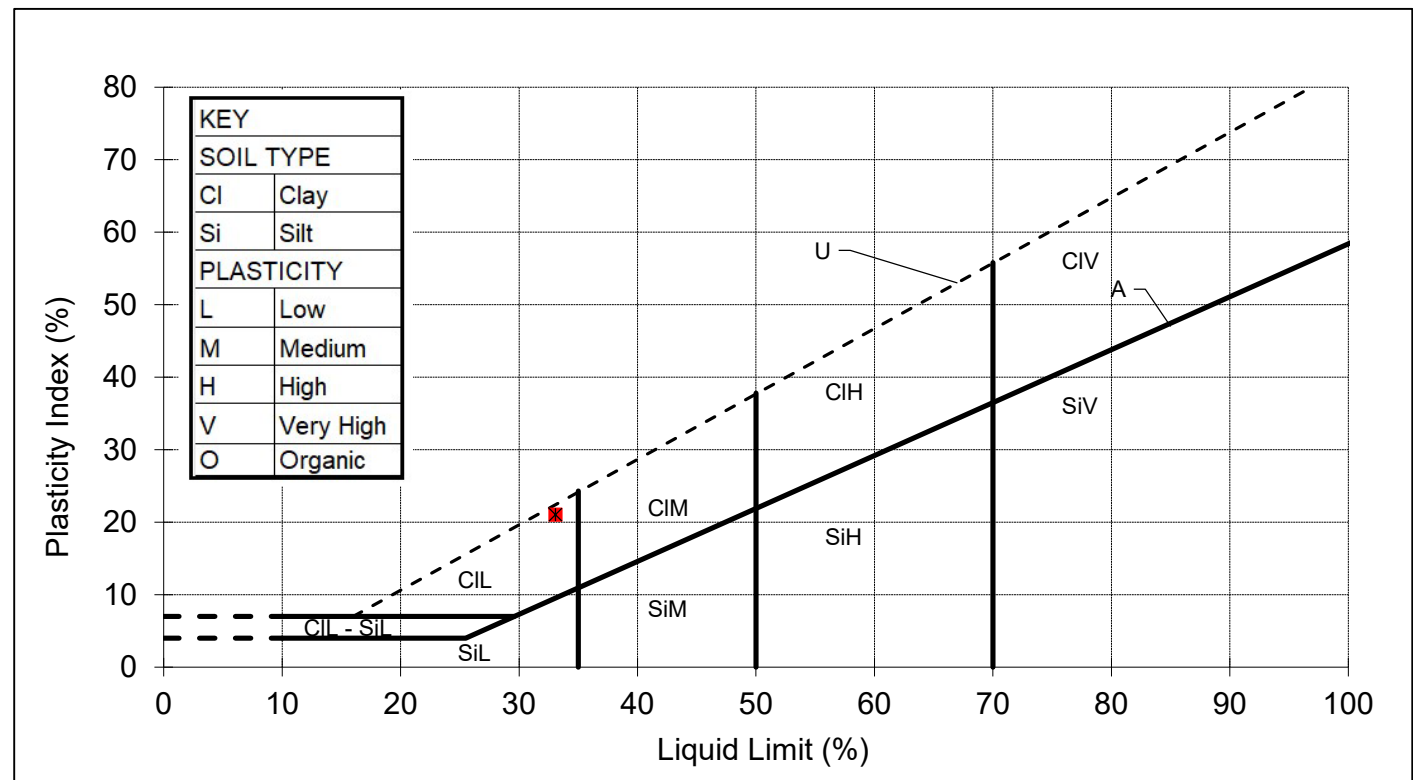
CLIENT	Earth Environmental & Geotechnical Ltd		
SITE	A5487 - Kronospan North Access Road		
JOB NUMBER	MRN 4589/93		

SAMPLE LABEL	WS14 (2.0m)	DATE SAMPLED	16-Aug-23
SAMPLE No.	130298	DATE RECEIVED	24-Aug-23
DATE TESTED	06-Sep-23	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)	17.1	31.8	1.038	
Determination 2 (avg)	17.5	31.9		

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
9.1	33	12	21	85



REMARKS

SIGNED

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O.P. Davies BA (Hons)
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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

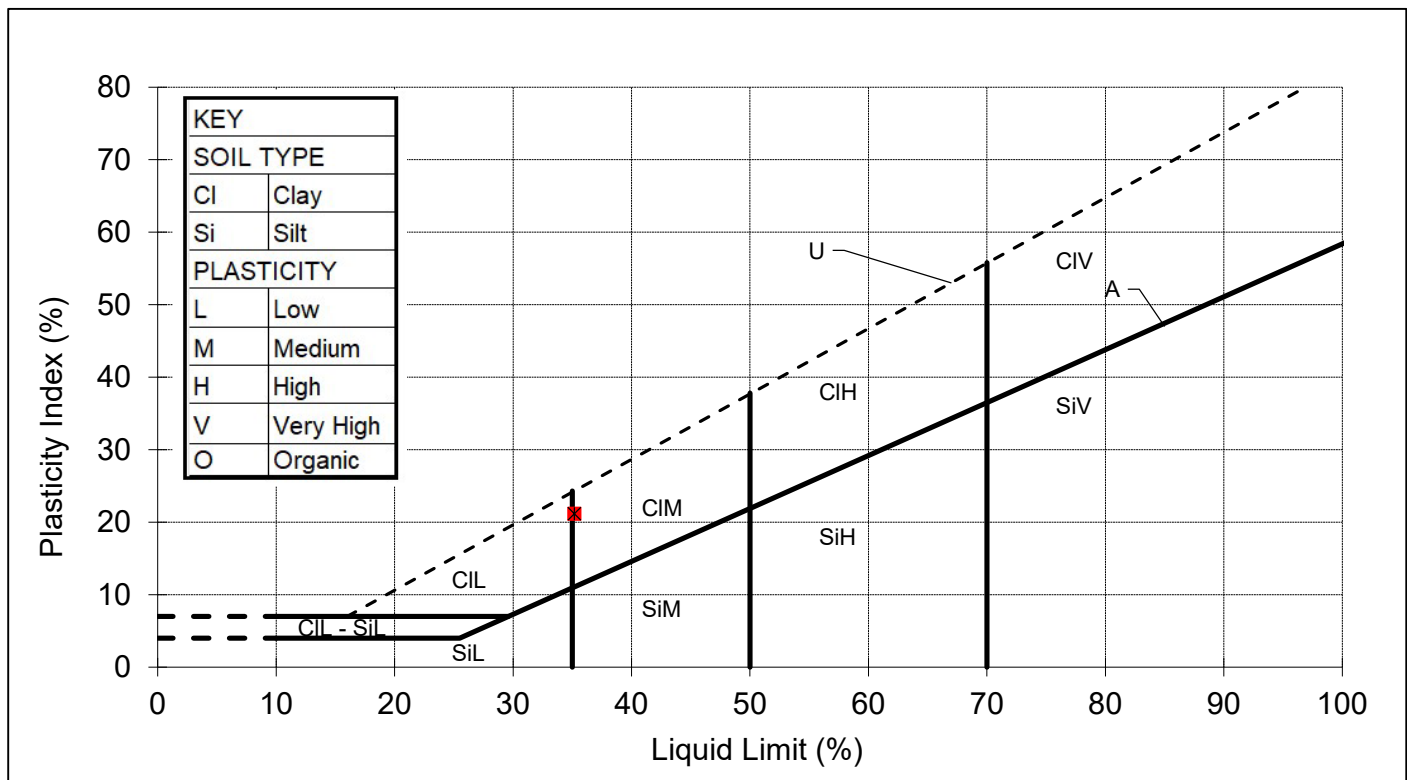
CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A5487 - Kronospan North Access Road
JOB NUMBER	MRN 4589/93

SAMPLE LABEL	WS15 (2.5m)	DATE SAMPLED	16-Aug-23
SAMPLE No.	130301	DATE RECEIVED	24-Aug-23
DATE TESTED	06-Sep-23	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)	17.9	34.2	1.024	
Determination 2 (avg)	18.9	34.5		

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
19.2	35	14	21	89



REMARKS

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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

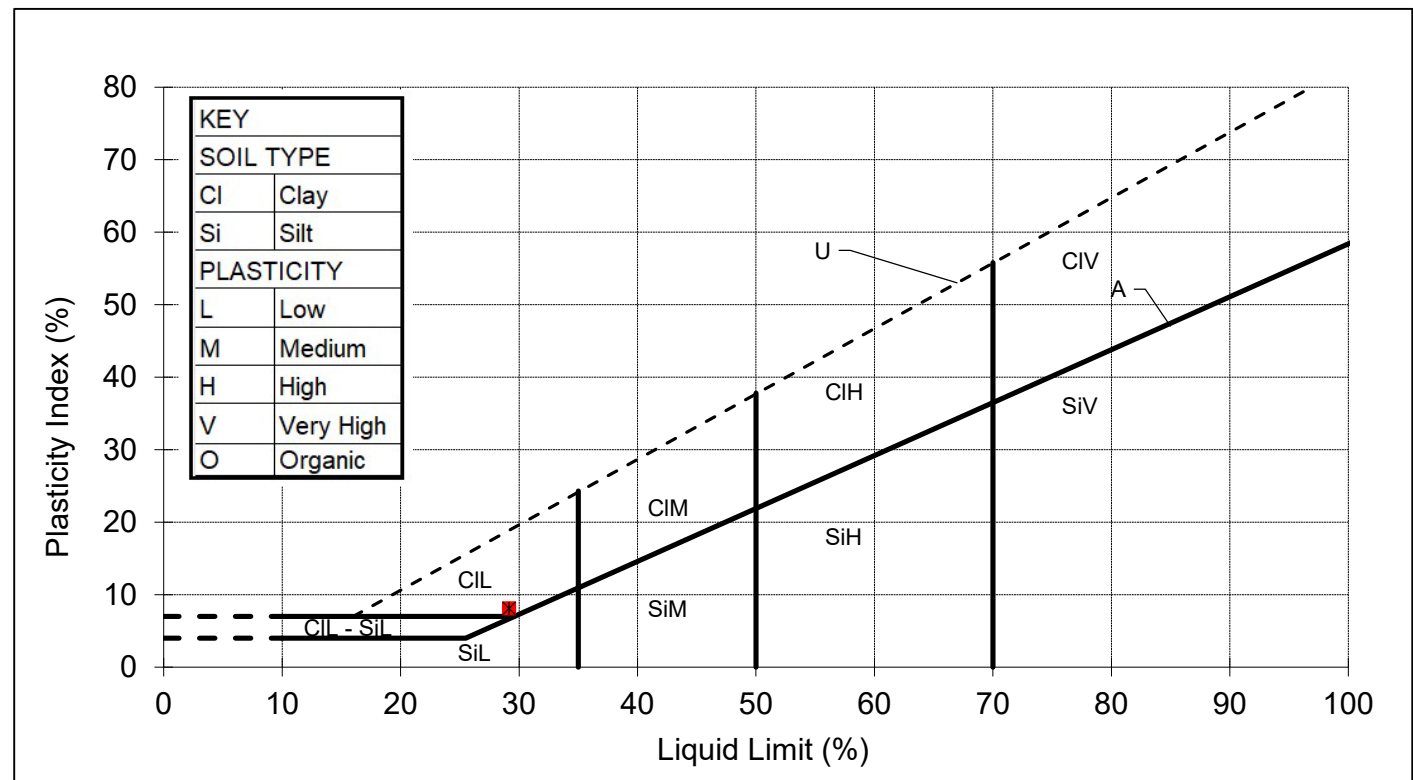
CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A5487 - Kronospan North Access Road
JOB NUMBER	MRN 4589/93

SAMPLE LABEL	TP01 (1.00m)	DATE SAMPLED	22-Aug-23
SAMPLE No.	130421	DATE RECEIVED	24-Aug-23
DATE TESTED	06-Sep-23	SAMPLED BY	Client

MATERIAL	Brown slightly sandy slightly gravelly SILT		
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)	16.8	28.1	1.045
Determination 2 (avg)	16.7	27.7	

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
14.5	29	21	8	50



REMARKS

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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

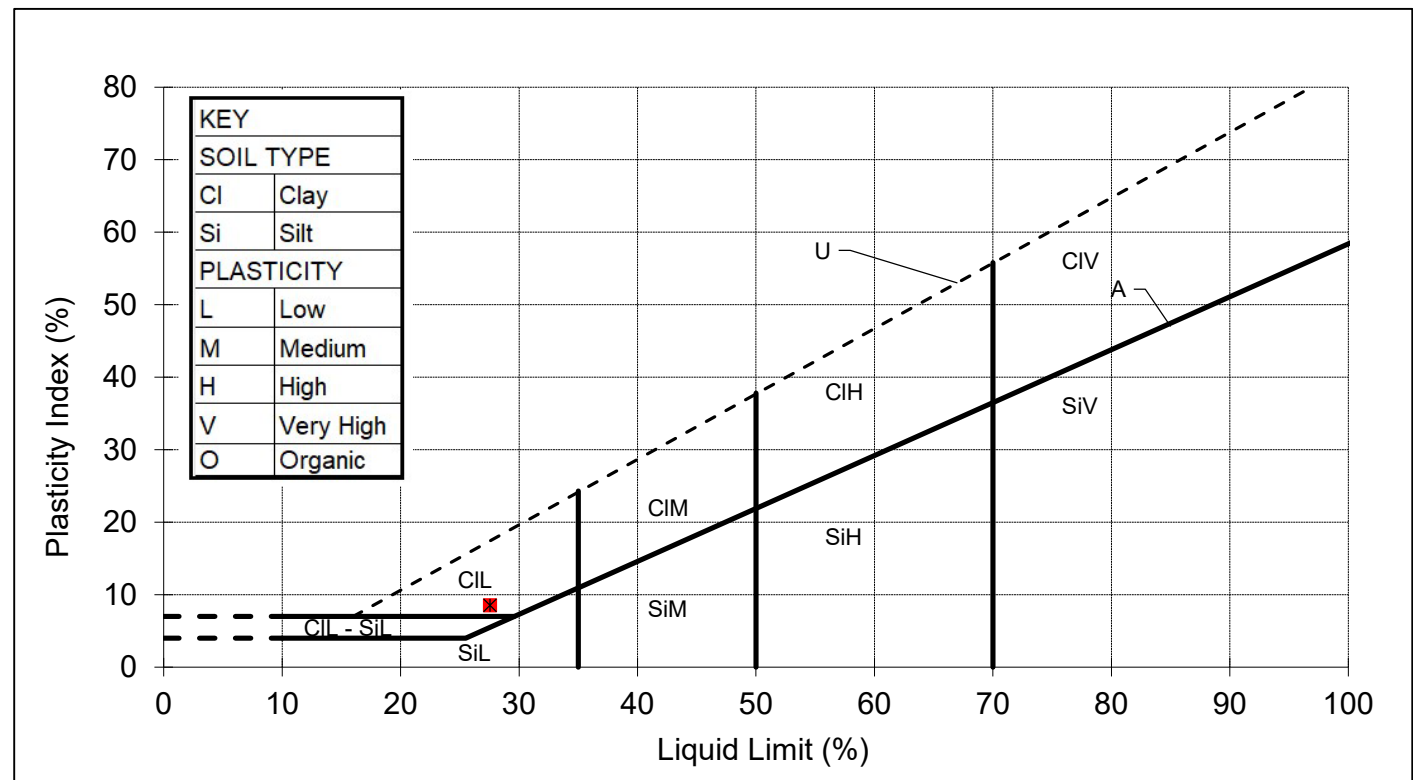
CLIENT	Earth Environmental & Geotechnical Ltd		
SITE	A5487 - Kronospan North Access Road		
JOB NUMBER	MRN 4589/93		

SAMPLE LABEL	TP02 (1.50m)	DATE SAMPLED	22-Aug-23
SAMPLE No.	130428	DATE RECEIVED	24-Aug-23
DATE TESTED	06-Sep-23	SAMPLED BY	Client

MATERIAL	Brown slightly sandy slightly gravelly SILT		
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)	17.4	26.5	1.039	
Determination 2 (avg)	17.1	26.5		

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
13.4	28	19	9	80



REMARKS

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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

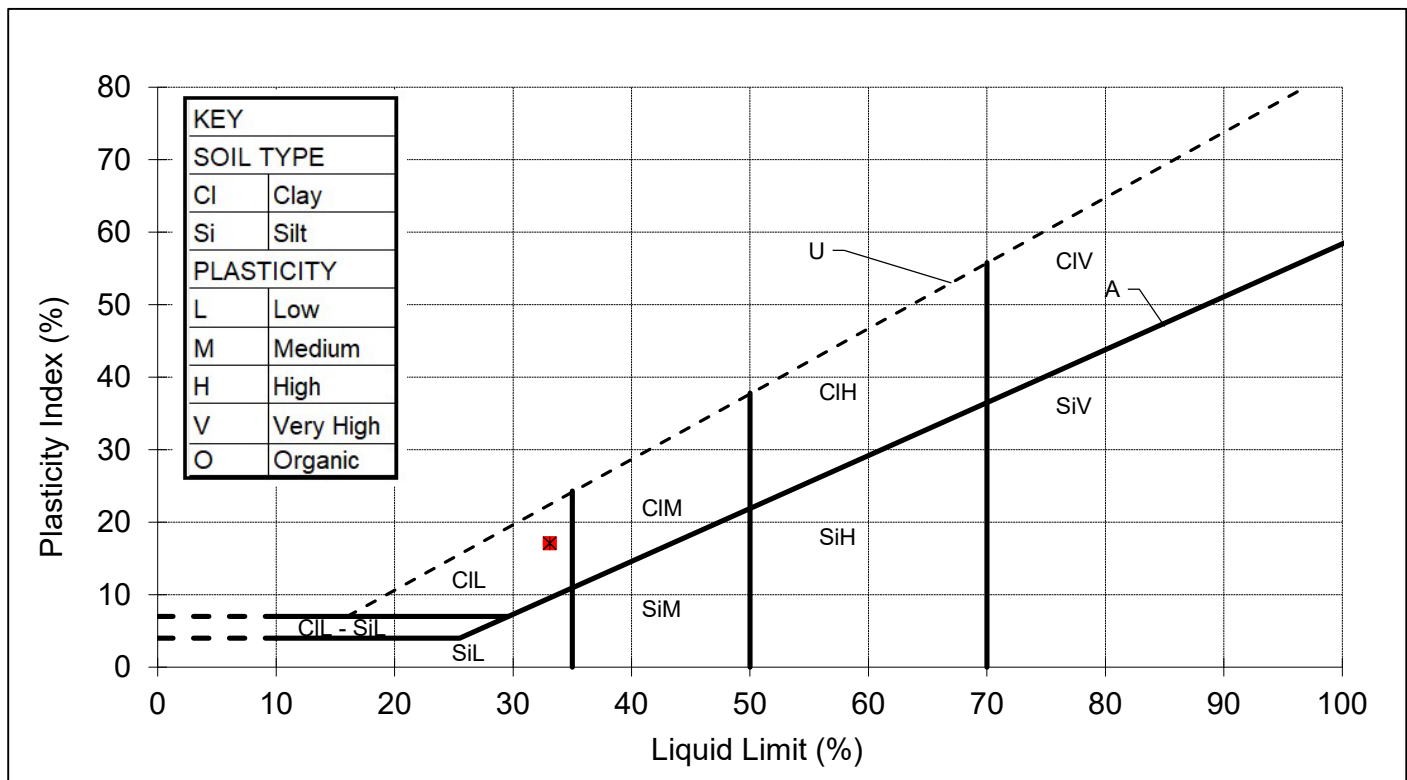
CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A5487 - Kronospan North Access Road
JOB NUMBER	MRN 4589/93

SAMPLE LABEL	TP04 (1.00m)	DATE SAMPLED	22-Aug-23
SAMPLE No.	130439	DATE RECEIVED	25-Aug-23
DATE TESTED	06-Sep-23	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)	18.9	32.8	
Determination 2 (avg)	18.6	32.2	

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
17.9	33	16	17	88



REMARKS

SIGNED

NAME

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(Laboratory Manager)

DATE

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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

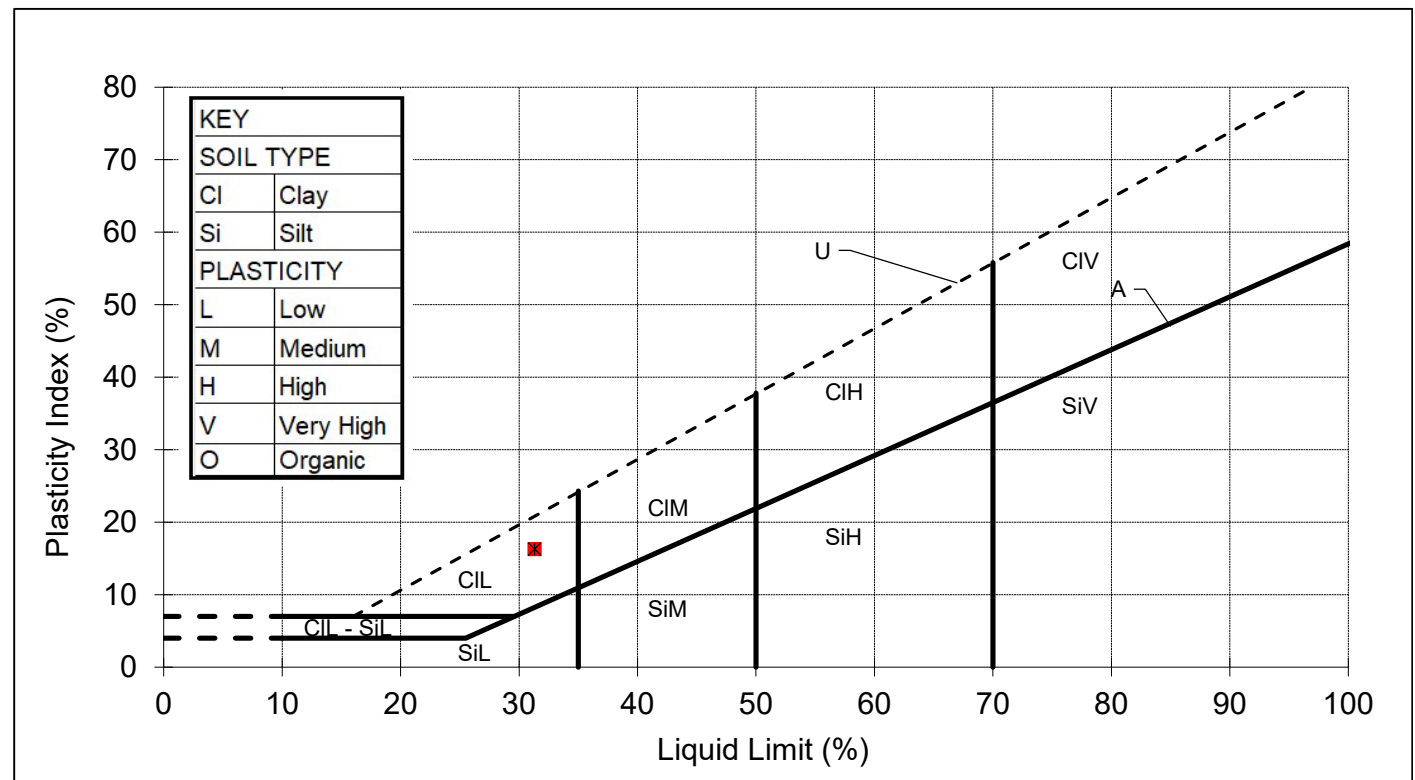
CLIENT	Earth Environmental & Geotechnical Ltd		
SITE	A5487 - Kronospan North Access Road		
JOB NUMBER	MRN 4589/93		

SAMPLE LABEL	TP05 (1.00m)	DATE SAMPLED	22-Aug-23
SAMPLE No.	130447	DATE RECEIVED	25-Aug-23
DATE TESTED	06-Sep-23	SAMPLED BY	Client

MATERIAL	Made Ground		
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)	16.8	30.0	1.044	
Determination 2 (avg)	16.8	30.0		

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
15.0	31	15	16	57



REMARKS

SIGNED

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

DATE 12-Oct-23

MURRAY RIX

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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

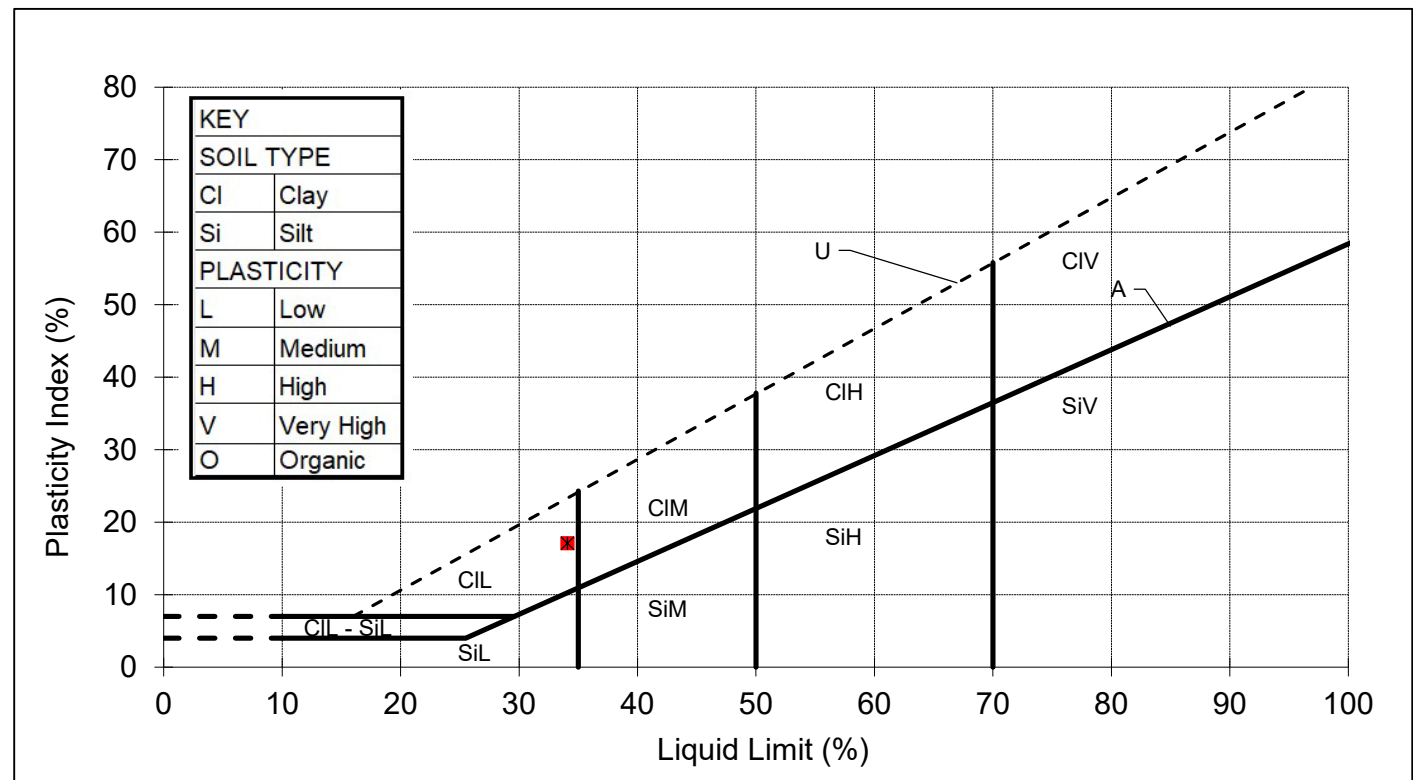
CLIENT	Earth Environmental & Geotechnical Ltd		
SITE	A5487 - Kronospan North Access Road		
JOB NUMBER	MRN 4589/93		

SAMPLE LABEL	TP07 (2.0m)	DATE SAMPLED	22-Aug-23
SAMPLE No.	130456	DATE RECEIVED	25-Aug-23
DATE TESTED	06-Sep-23	SAMPLED BY	Client

MATERIAL	Made Ground		
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)	18.2	33.2	1.027	
Determination 2 (avg)	18.2	33.2		

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
19.5	34	17	17	79



REMARKS

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

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

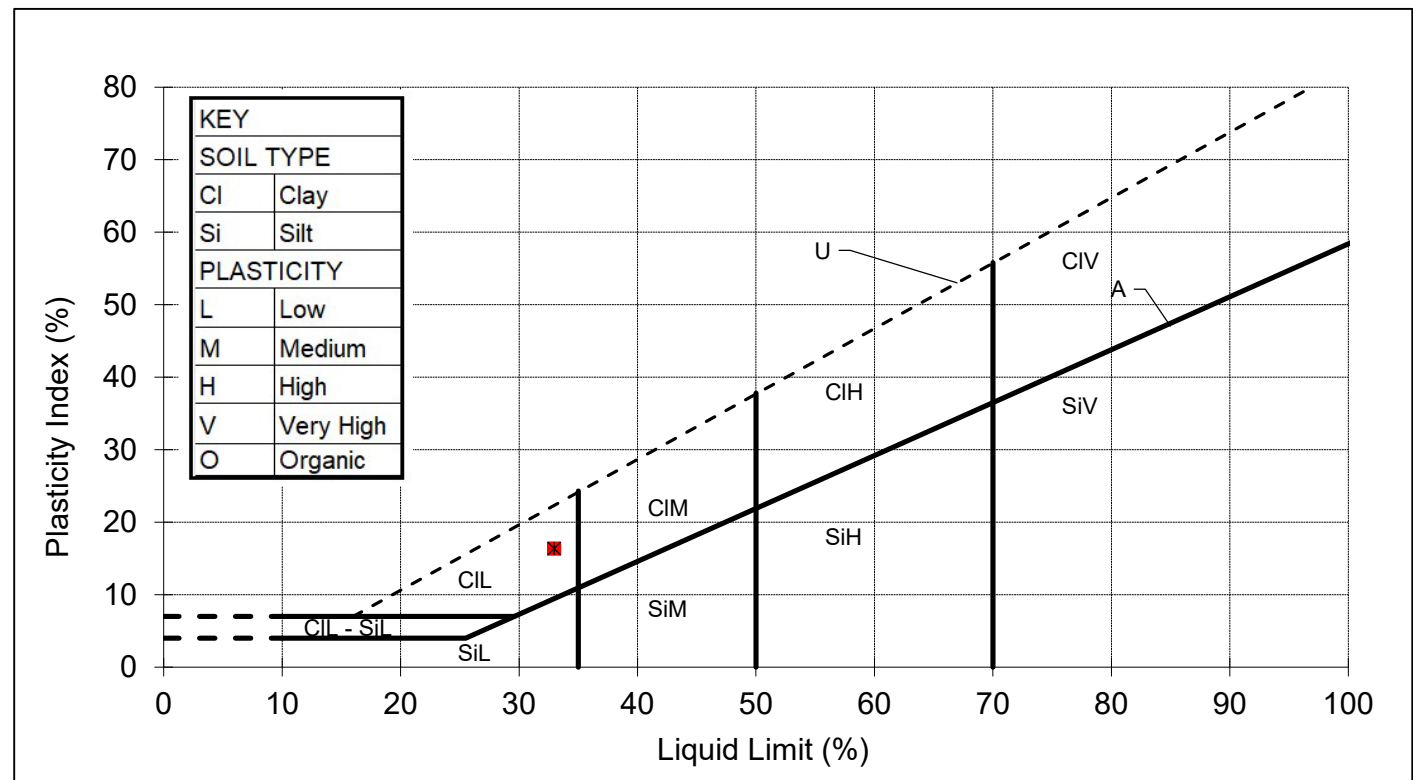
CLIENT	Earth Environmental & Geotechnical Ltd		
SITE	A5487 - Kronospan North Access Road		
JOB NUMBER	MRN 4589/93		

SAMPLE LABEL	TP10 (1.00m)	DATE SAMPLED	22-Aug-23
SAMPLE No.	130461	DATE RECEIVED	25-Aug-23
DATE TESTED	06-Sep-23	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)	18.2	32.2	1.027	
Determination 2 (avg)	18.2	32.2		

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
14.6	33	17	16	65



REMARKS

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

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

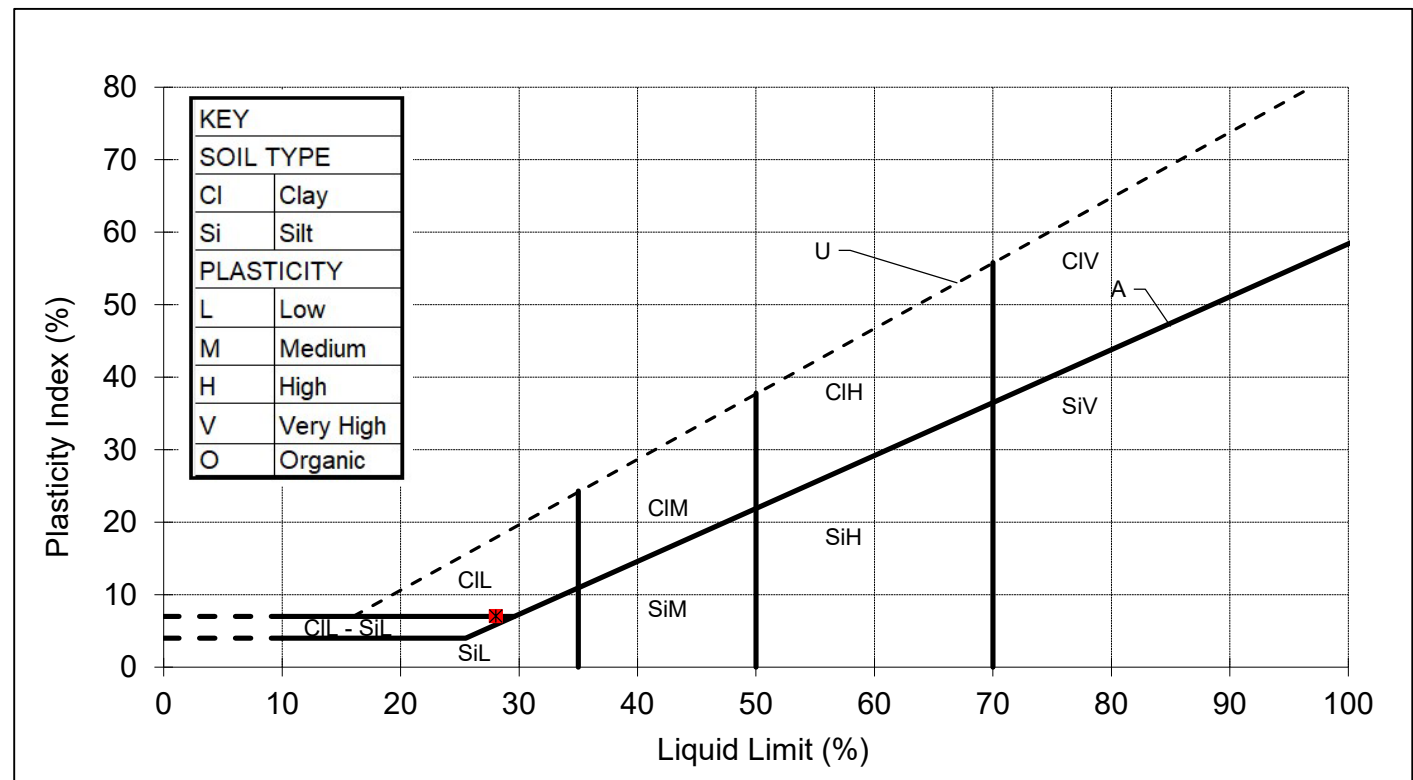
CLIENT	Earth Environmental & Geotechnical Ltd		
SITE	A5487 - Kronospan North Access Road		
JOB NUMBER	MRN 4589/93		

SAMPLE LABEL	TP10 (2.0m)	DATE SAMPLED	21-Aug-23
SAMPLE No.	130463	DATE RECEIVED	25-Aug-23
DATE TESTED	06-Sep-23	SAMPLED BY	Client

MATERIAL	Brown slightly clayey slightly sandy slightly gravelly SILT		
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)	20.0	28.2	1.000	
Determination 2 (avg)	20.0	27.9		

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
22.1	28	21	7	91



REMARKS

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

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

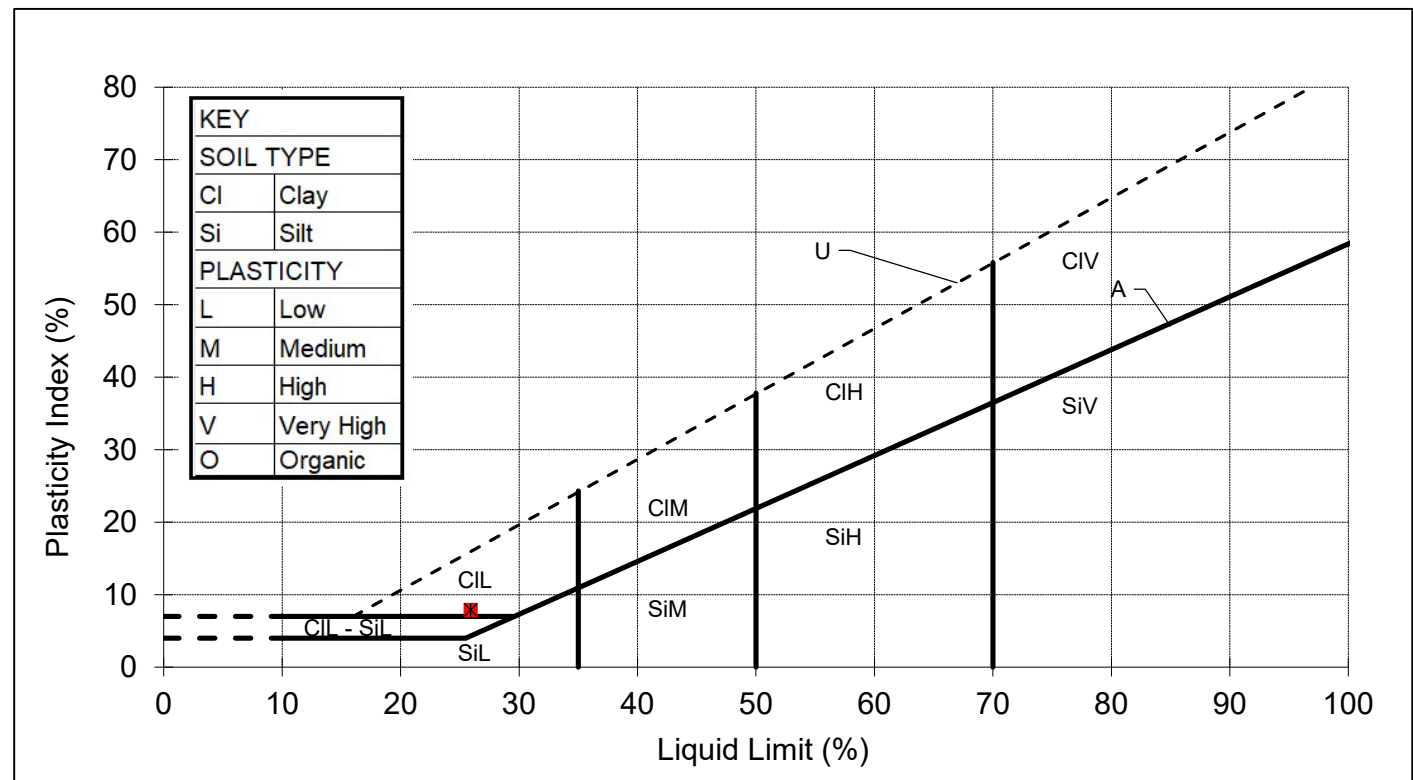
CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A5487 - Kronospan North Access Road
JOB NUMBER	MRN 4589/93

SAMPLE LABEL	TP10 (2.0m)	DATE SAMPLED	21-Aug-23
SAMPLE No.	130469	DATE RECEIVED	25-Aug-23
DATE TESTED	06-Sep-23	SAMPLED BY	Client

MATERIAL	Brown slightly clayey slightly sandy slightly gravelly SILT		
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)	18.8	25.5	1.018	
Determination 2 (avg)	18.8	25.4		

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
20.6	26	18	8	87



REMARKS

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

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

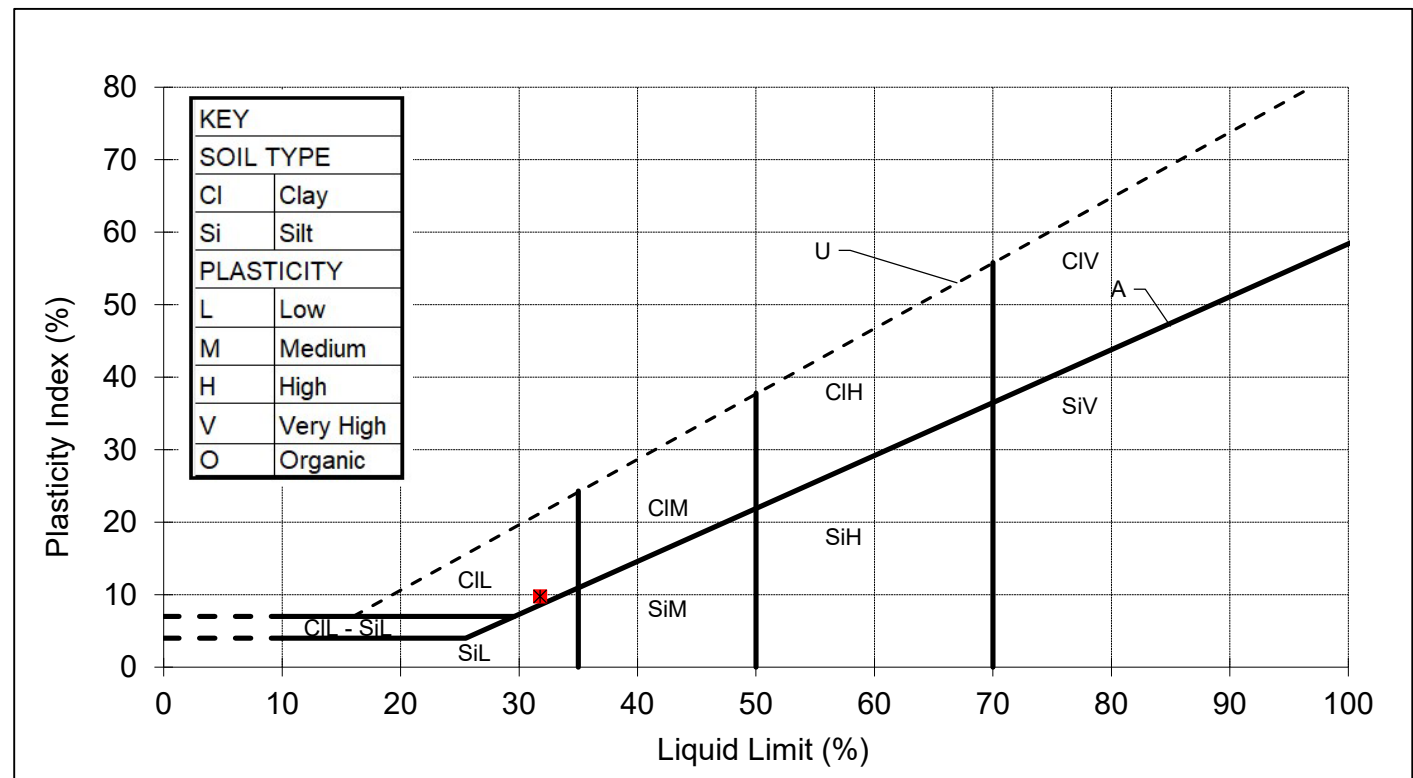
CLIENT	Earth Environmental & Geotechnical Ltd		
SITE	A5487 - Kronospan North Access Road		
JOB NUMBER	MRN 4589/93		

SAMPLE LABEL	TP15 (2.0m)	DATE SAMPLED	21-Aug-23
SAMPLE No.	130483	DATE RECEIVED	25-Aug-23
DATE TESTED	06-Sep-23	SAMPLED BY	Client

MATERIAL	Brown slightly clayey slightly sandy slightly gravelly SILT		
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)	19.5	31.7	1.011	
Determination 2 (avg)	19.1	31.2		

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
17.5	32	22	10	96



REMARKS

SIGNED

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

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

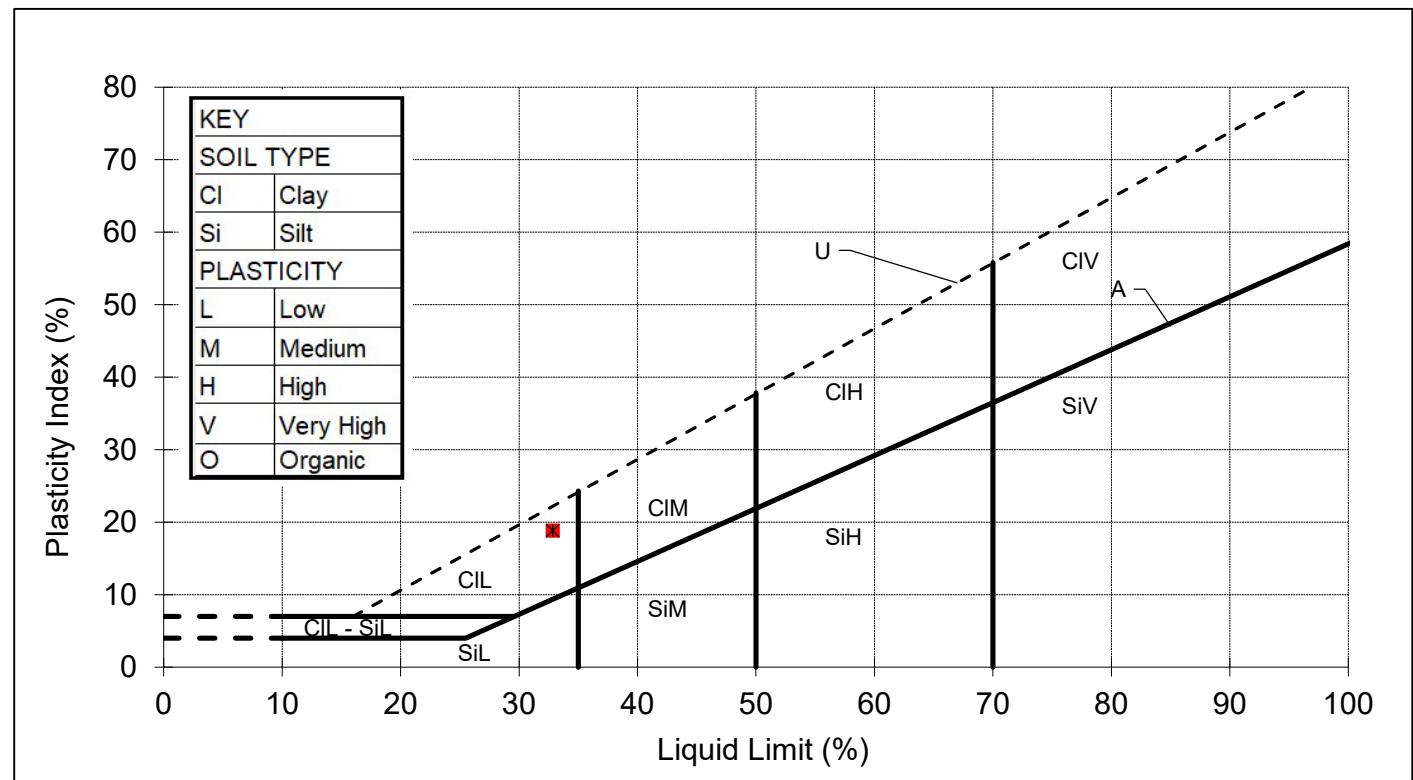
CLIENT	Earth Environmental & Geotechnical Ltd		
SITE	A5487 - Kronospan North Access Road		
JOB NUMBER	MRN 4589/93		

SAMPLE LABEL	TP16 (1.00m)	DATE SAMPLED	21-Aug-23
SAMPLE No.	130485	DATE RECEIVED	25-Aug-23
DATE TESTED	06-Sep-23	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)	18.5	32.2	1.023	
Determination 2 (avg)	18.4	32.0		

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
19.9	33	14	19	56



REMARKS

SIGNED

NAME

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

DATE

12-Oct-23

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

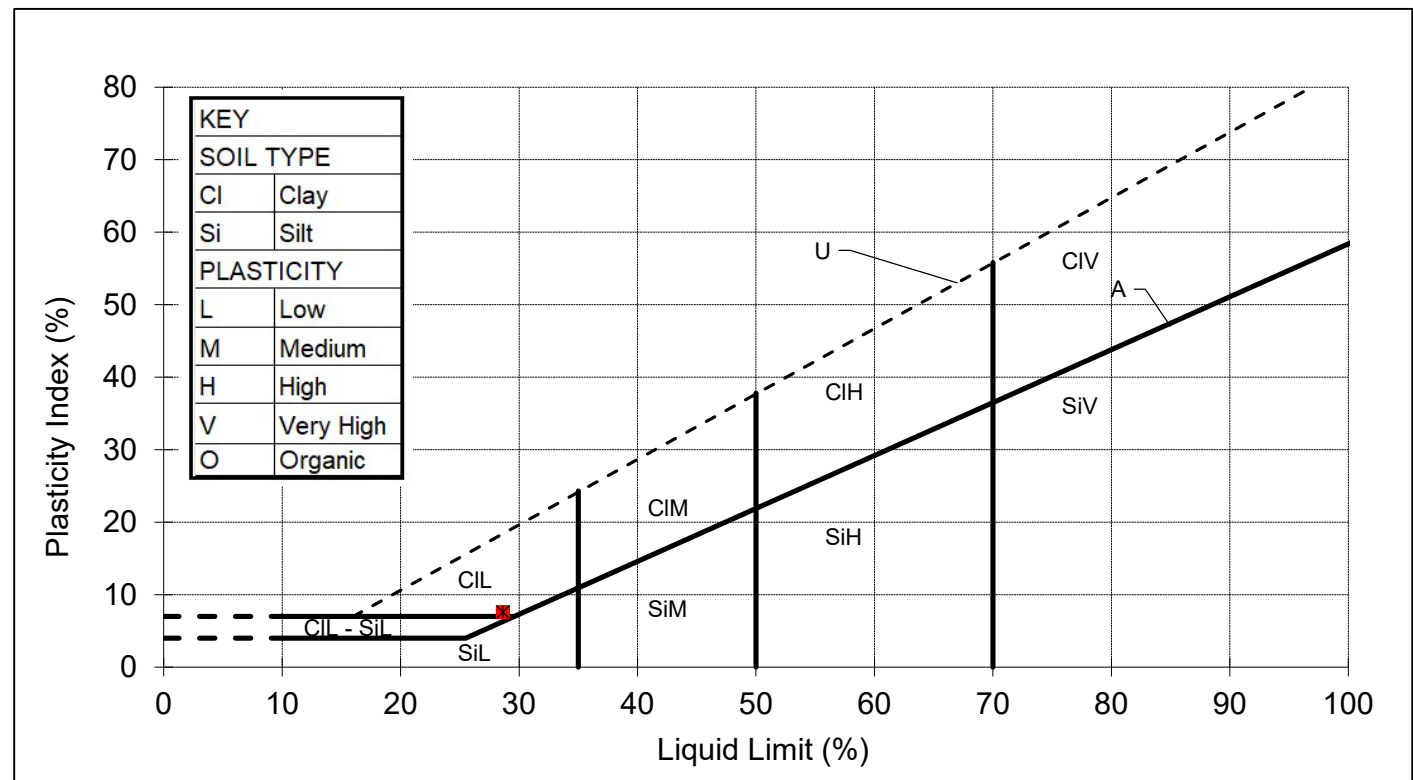
CLIENT	Earth Environmental & Geotechnical Ltd		
SITE	A5487 - Kronospan North Access Road		
JOB NUMBER	MRN 4589/93		

SAMPLE LABEL	TP16 (2.0m)	DATE SAMPLED	21-Aug-23
SAMPLE No.	130487	DATE RECEIVED	25-Aug-23
DATE TESTED	06-Sep-23	SAMPLED BY	Client

MATERIAL	Brown slightly sandy slightly gravelly SILT		
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)	17.6	28.1	1.035	
Determination 2 (avg)	17.5	27.2		

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
18.9	29	21	8	93



REMARKS

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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

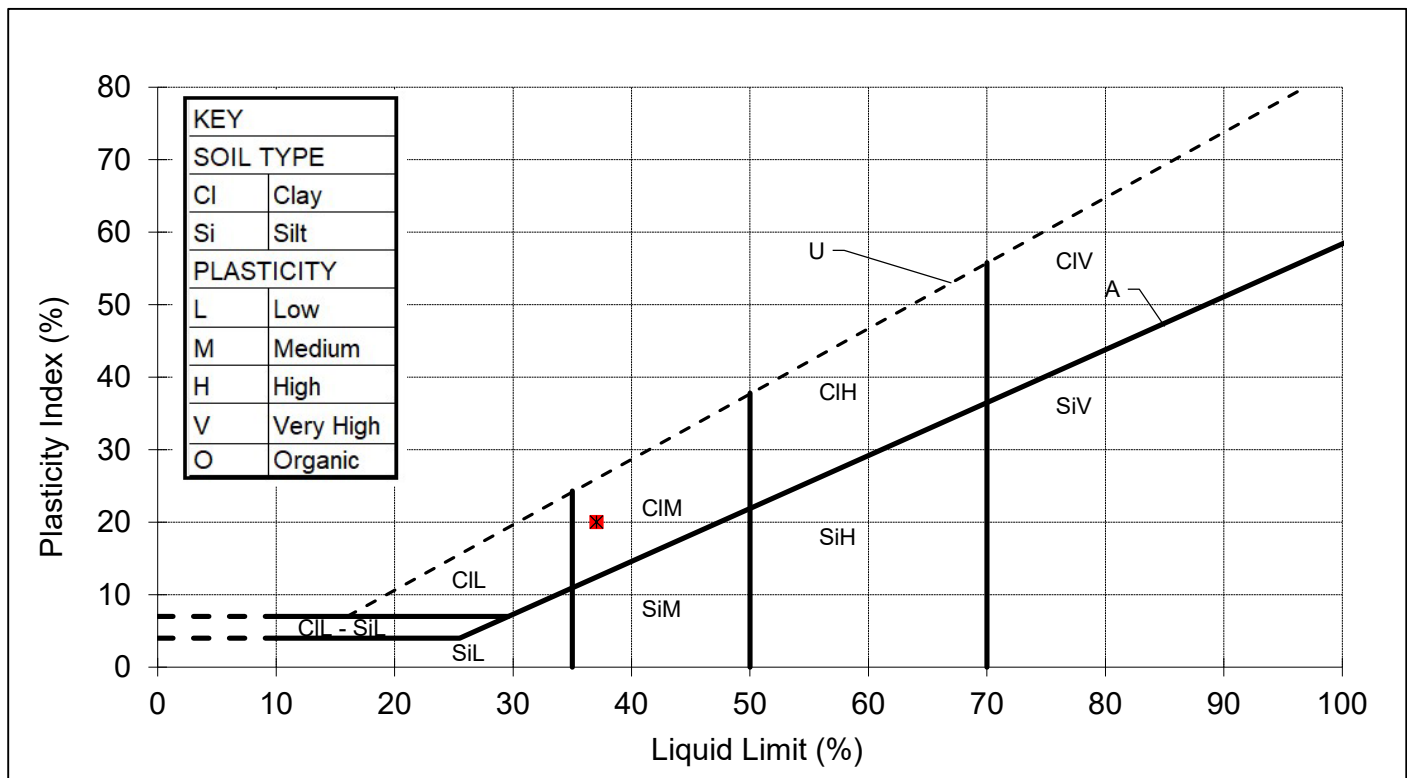
CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A5487 - Kronospan North Access Road
JOB NUMBER	MRN 4589/93

SAMPLE LABEL	TP17 (0.5m)	DATE SAMPLED	21-Aug-23
SAMPLE No.	130488	DATE RECEIVED	25-Aug-23
DATE TESTED	06-Sep-23	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)	16.5	34.8	1.054	
Determination 2 (avg)	16.8	35.5		

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
20.8	37	17	20	81



REMARKS

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TEST CERTIFICATE
PARTICLE SIZE DISTRIBUTION

BS EN ISO 17892-4:2016

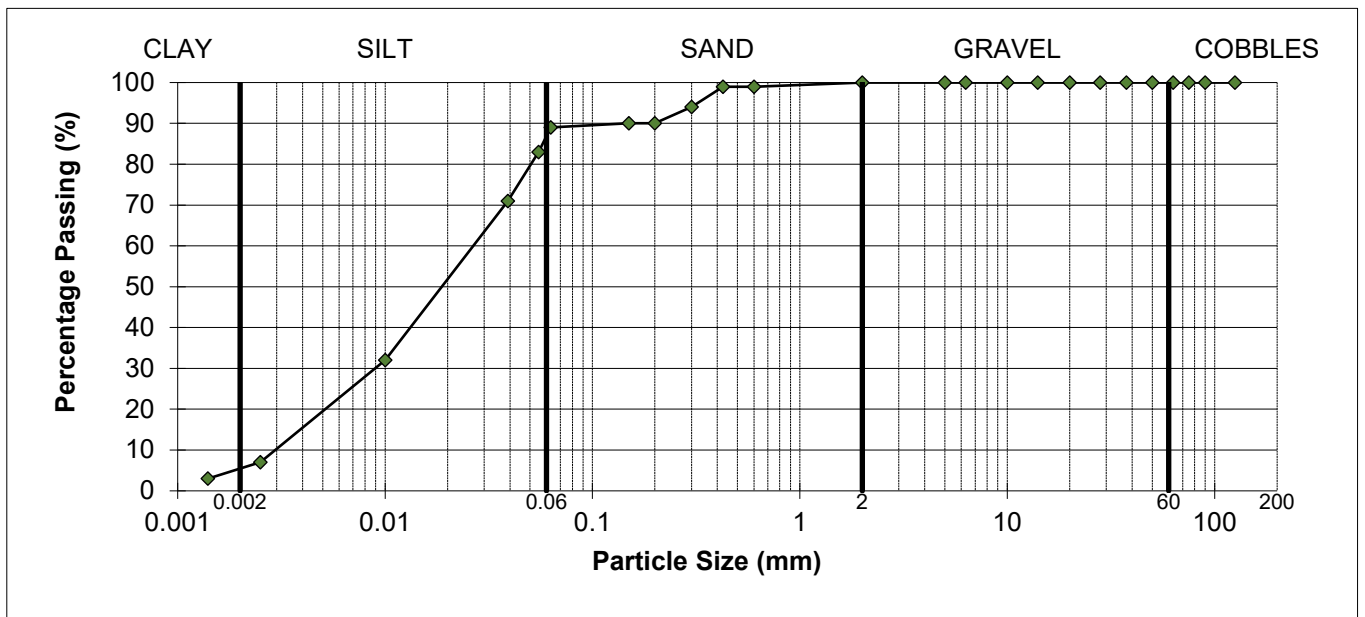
Determination of Water Content in accordance with BS EN ISO 17892-1:2014+A1:2022 (Oven Dry)

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A5487 - Kronospan North Access Road
JOB NUMBER	MRN 4589/93

SAMPLE LABEL	CP13 (4.0m)	DATE SAMPLED	17-Aug-23
LAB SAMPLE No	130119	DATE RECEIVED	24-Aug-23
DATE TESTED	04-Sep-23	SAMPLED BY	Client

MATERIAL	Brown 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	94	
50	100		0.2	90	
37.5	100		0.15	90	
28	100		0.063	89	
20	100		0.055	83	
14	100		0.039	71	
10	100		0.01	32	
6.3	100		0.0025	7	
5	100		0.0014	3	



REMARKS

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TEST CERTIFICATE
PARTICLE SIZE DISTRIBUTION

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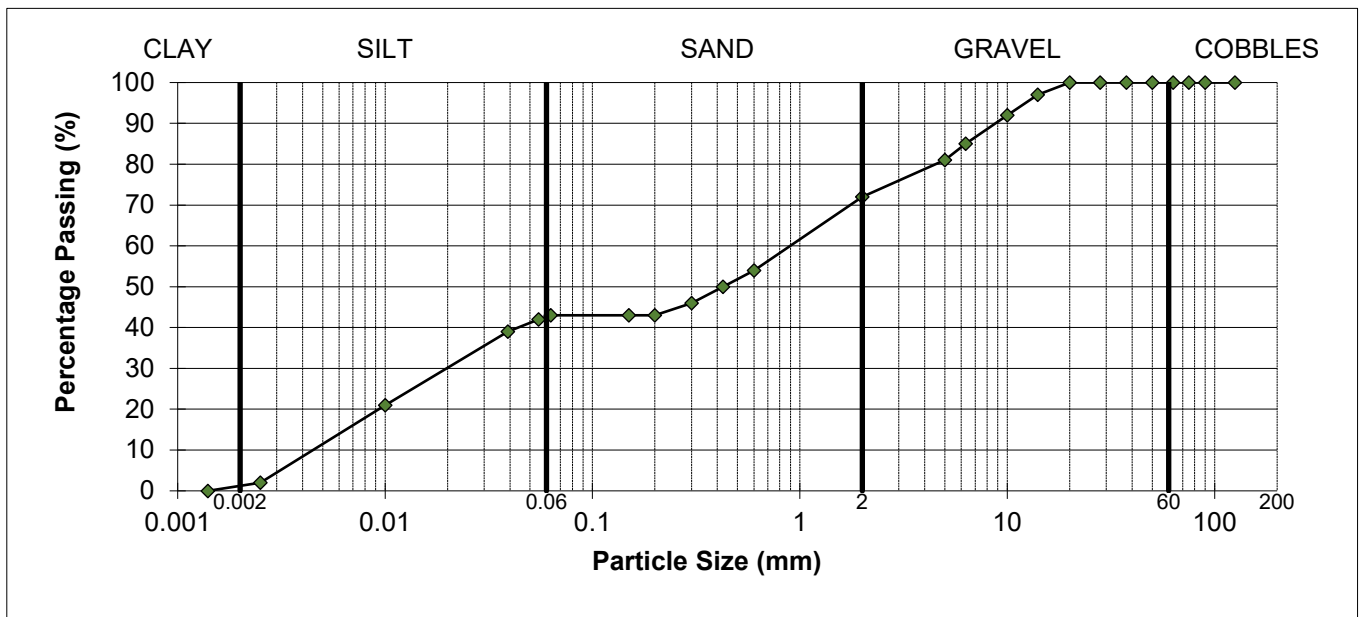
Determination of Water Content in accordance with BS EN ISO 17892-1:2014+A1:2022 (Oven Dry)

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A5487 - Kronospan North Access Road
JOB NUMBER	MRN 4589/93

SAMPLE LABEL	TP01 (1.00m)	DATE SAMPLED	22-Aug-23
LAB SAMPLE No	130421	DATE RECEIVED	25-Aug-23
DATE TESTED	04-Sep-23	SAMPLED BY	Client

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

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100		2	72	
90	100		0.6	54	
75	100		0.425	50	
63	100		0.3	46	
50	100		0.2	43	
37.5	100		0.15	43	
28	100		0.063	43	
20	100		0.055	42	
14	97		0.039	39	
10	92		0.01	21	
6.3	85		0.0025	2	
5	81		0.0014	0	



REMARKS

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TEST CERTIFICATE
PARTICLE SIZE DISTRIBUTION

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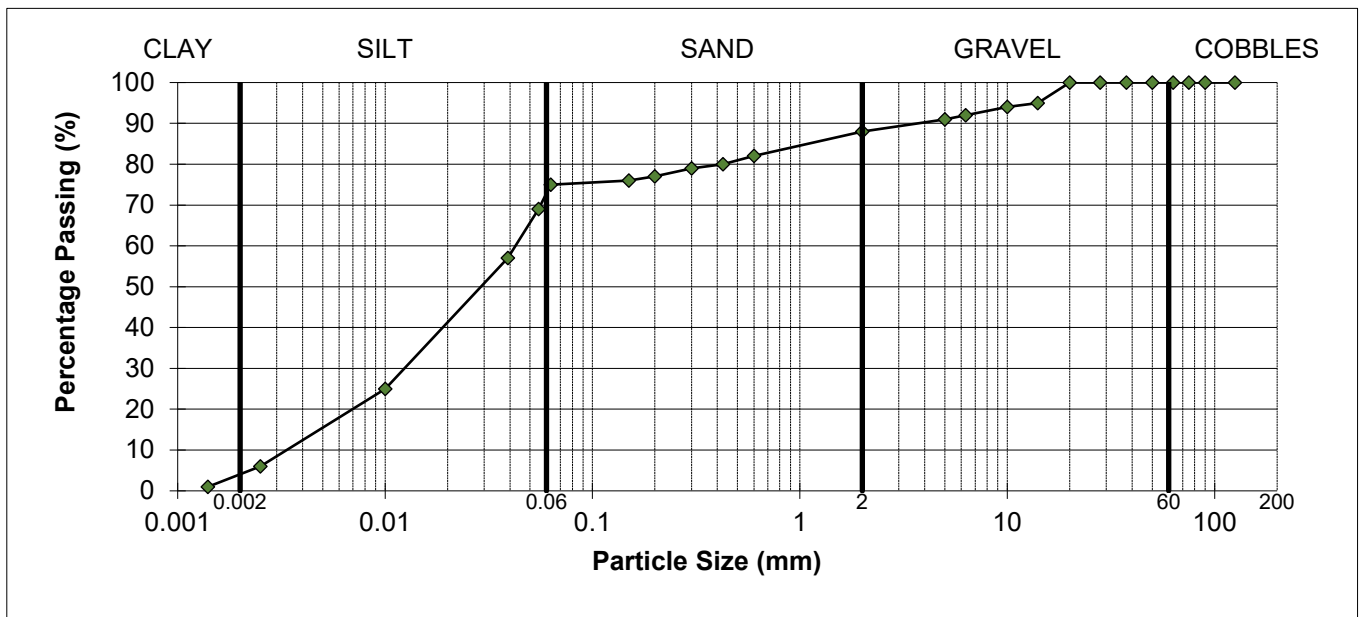
Determination of Water Content in accordance with BS EN ISO 17892-1:2014+A1:2022 (Oven Dry)

CLIENT	Earth Environmental & Geotechnical Ltd		
SITE	A5487 - Kronospan North Access Road		
JOB NUMBER	MRN 4589/93		

SAMPLE LABEL	TP02 (1.50m)	DATE SAMPLED	22-Aug-23
LAB SAMPLE No	130428	DATE RECEIVED	25-Aug-23
DATE TESTED	04-Sep-23	SAMPLED BY	Client

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

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100		2	88	
90	100		0.6	82	
75	100		0.425	80	
63	100		0.3	79	
50	100		0.2	77	
37.5	100		0.15	76	
28	100		0.063	75	
20	100		0.055	69	
14	95		0.039	57	
10	94		0.01	25	
6.3	92		0.0025	6	
5	91		0.0014	1	



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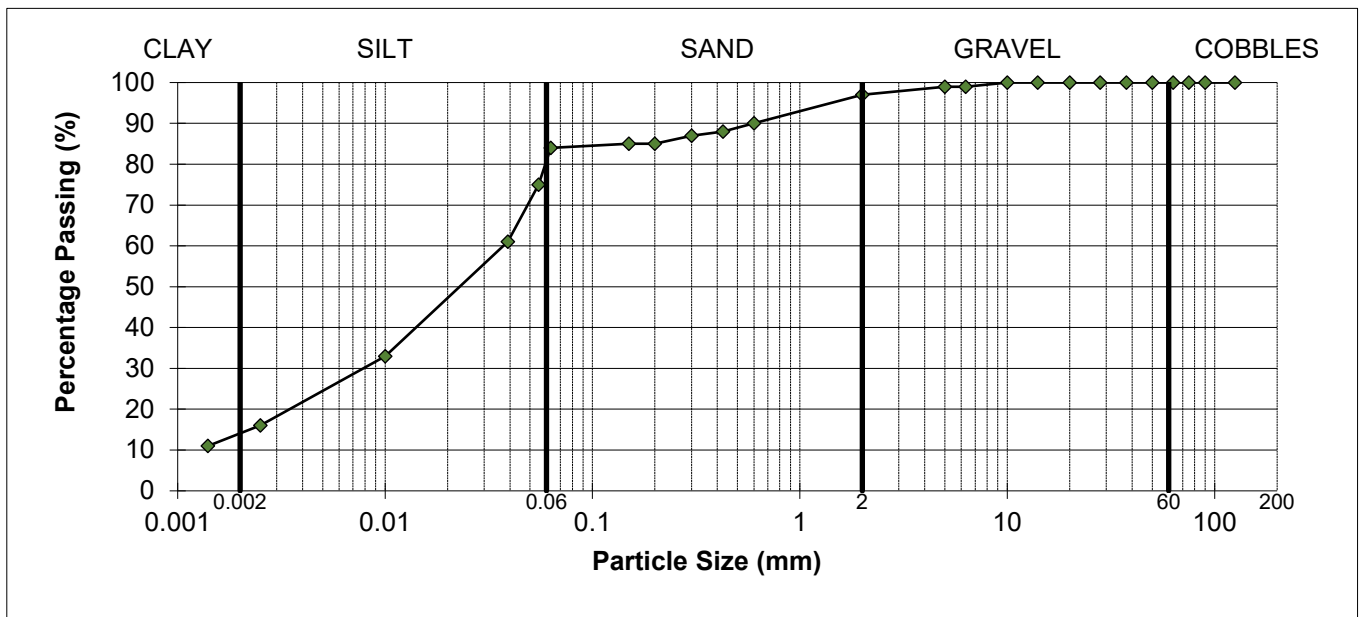
Determination of Water Content in accordance with BS EN ISO 17892-1:2014+A1:2022 (Oven Dry)

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A5487 - Kronospan North Access Road
JOB NUMBER	MRN 4589/93

SAMPLE LABEL	TP04 (1.00m)	DATE SAMPLED	22-Aug-23
LAB SAMPLE No	130439	DATE RECEIVED	25-Aug-23
DATE TESTED	04-Sep-23	SAMPLED BY	Client

MATERIAL	Brown silty slightly sandy slightly gravelly CLAY
ADVISED SOURCE	Site Investigation Sample

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100		2	97	
90	100		0.6	90	
75	100		0.425	88	
63	100		0.3	87	
50	100		0.2	85	
37.5	100		0.15	85	
28	100		0.063	84	
20	100		0.055	75	
14	100		0.039	61	
10	100		0.01	33	
6.3	99		0.0025	16	
5	99		0.0014	11	



REMARKS

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TEST CERTIFICATE
PARTICLE SIZE DISTRIBUTION

BS EN ISO 17892-4:2016

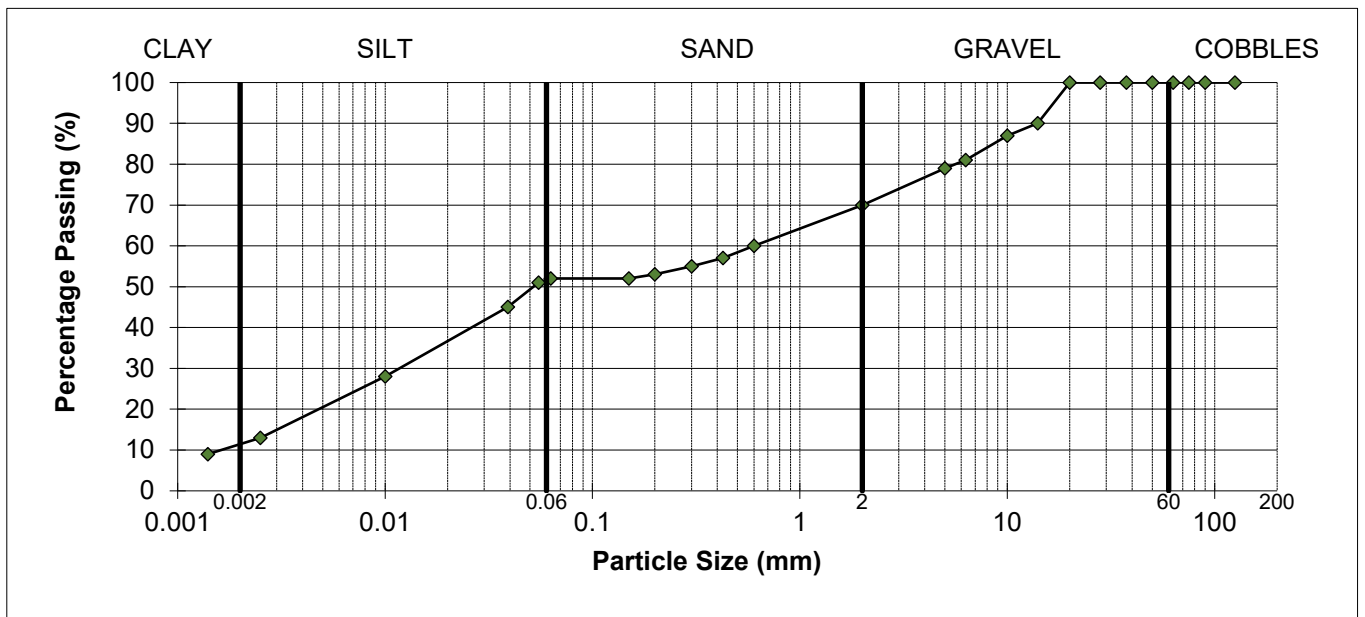
Determination of Water Content in accordance with BS EN ISO 17892-1:2014+A1:2022 (Oven Dry)

CLIENT	Earth Environmental & Geotechnical Ltd		
SITE	A5487 - Kronospan North Access Road		
JOB NUMBER	MRN 4589/93		

SAMPLE LABEL	TP05 (1.00m)	DATE SAMPLED	23-Aug-23
LAB SAMPLE No	130447	DATE RECEIVED	25-Aug-23
DATE TESTED	04-Sep-23	SAMPLED BY	Client

MATERIAL	Made Ground
ADVISED SOURCE	Site Investigation Sample

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100		2	70	
90	100		0.6	60	
75	100		0.425	57	
63	100		0.3	55	
50	100		0.2	53	
37.5	100		0.15	52	
28	100		0.063	52	
20	100		0.055	51	
14	90		0.039	45	
10	87		0.01	28	
6.3	81		0.0025	13	
5	79		0.0014	9	



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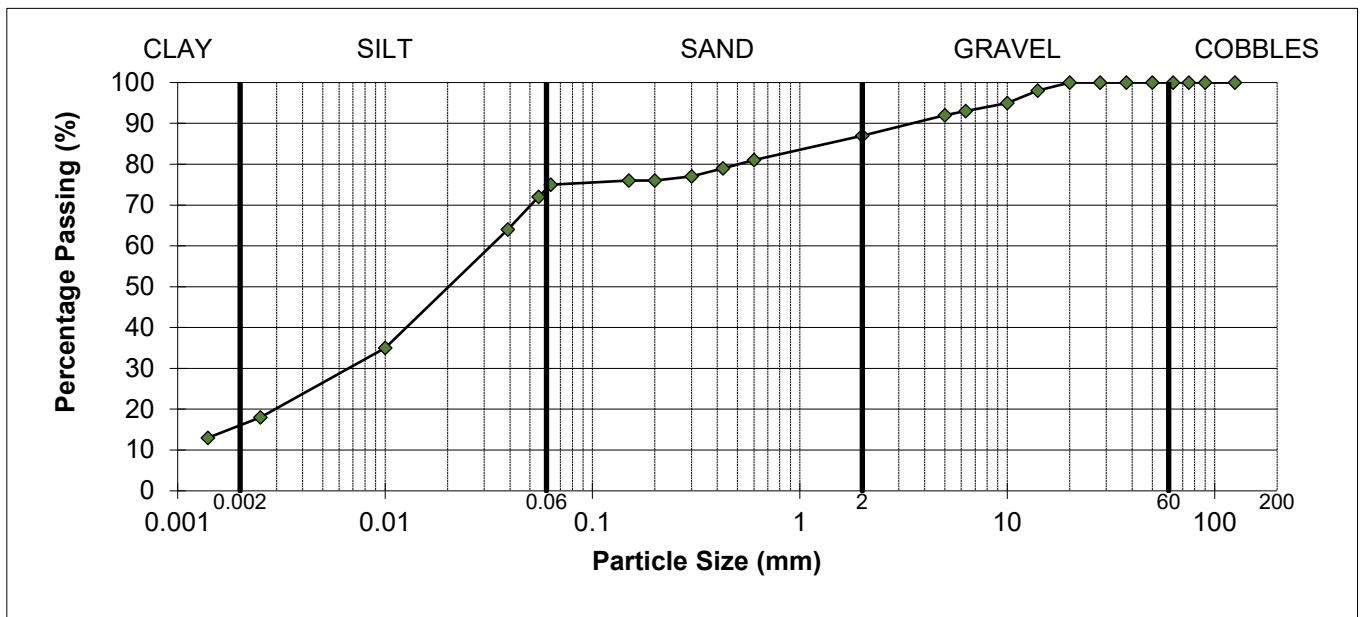
Determination of Water Content in accordance with BS EN ISO 17892-1:2014+A1:2022 (Oven Dry)

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A5487 - Kronospan North Access Road
JOB NUMBER	MRN 4589/93

SAMPLE LABEL	TP07 (2.0m)	DATE SAMPLED	23-Aug-23
LAB SAMPLE No	130456	DATE RECEIVED	25-Aug-23
DATE TESTED	04-Sep-23	SAMPLED BY	Client

MATERIAL	Made Ground
ADVISED SOURCE	Site Investigation Sample

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100		2	87	
90	100		0.6	81	
75	100		0.425	79	
63	100		0.3	77	
50	100		0.2	76	
37.5	100		0.15	76	
28	100		0.063	75	
20	100		0.055	72	
14	98		0.039	64	
10	95		0.01	35	
6.3	93		0.0025	18	
5	92		0.0014	13	



REMARKS

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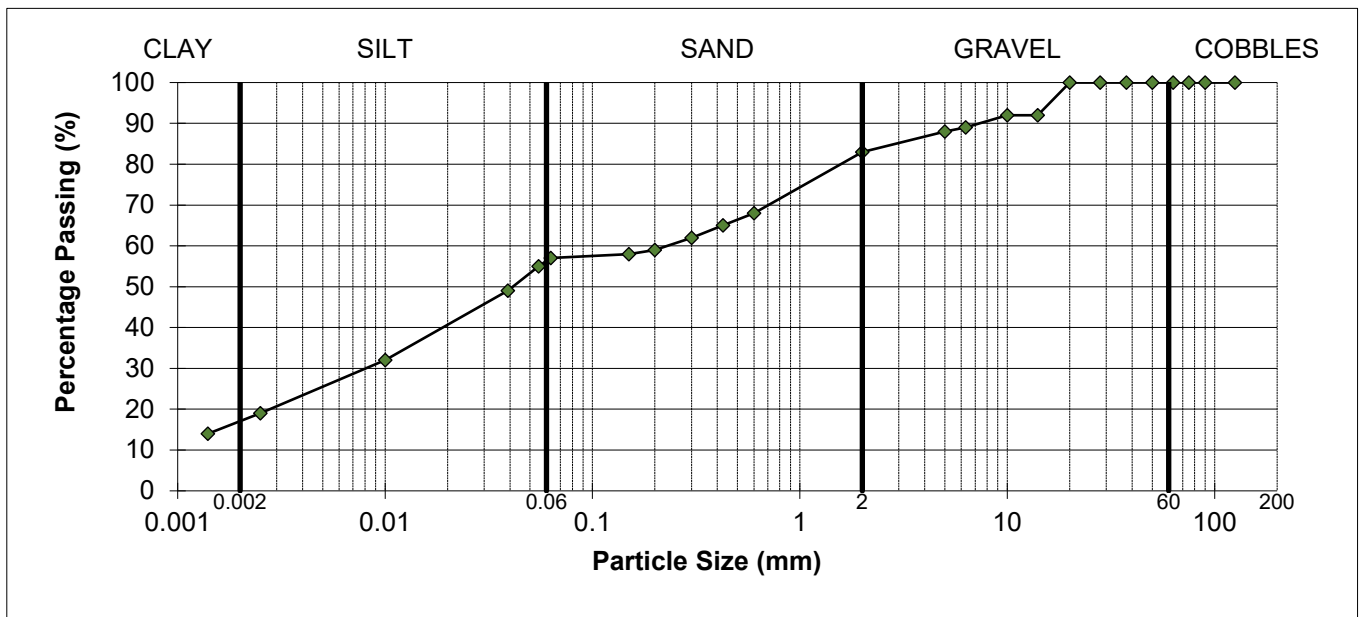
Determination of Water Content in accordance with BS EN ISO 17892-1:2014+A1:2022 (Oven Dry)

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A5487 - Kronospan North Access Road
JOB NUMBER	MRN 4589/93

SAMPLE LABEL	TP10 (1.00m)	DATE SAMPLED	23-Aug-23
LAB SAMPLE No	130461	DATE RECEIVED	25-Aug-23
DATE TESTED	04-Sep-23	SAMPLED BY	Client

MATERIAL	Brown silty slightly sandy slightly gravelly CLAY
ADVISED SOURCE	Site Investigation Sample

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100		2	83	
90	100		0.6	68	
75	100		0.425	65	
63	100		0.3	62	
50	100		0.2	59	
37.5	100		0.15	58	
28	100		0.063	57	
20	100		0.055	55	
14	92		0.039	49	
10	92		0.01	32	
6.3	89		0.0025	19	
5	88		0.0014	14	



REMARKS

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PARTICLE SIZE DISTRIBUTION

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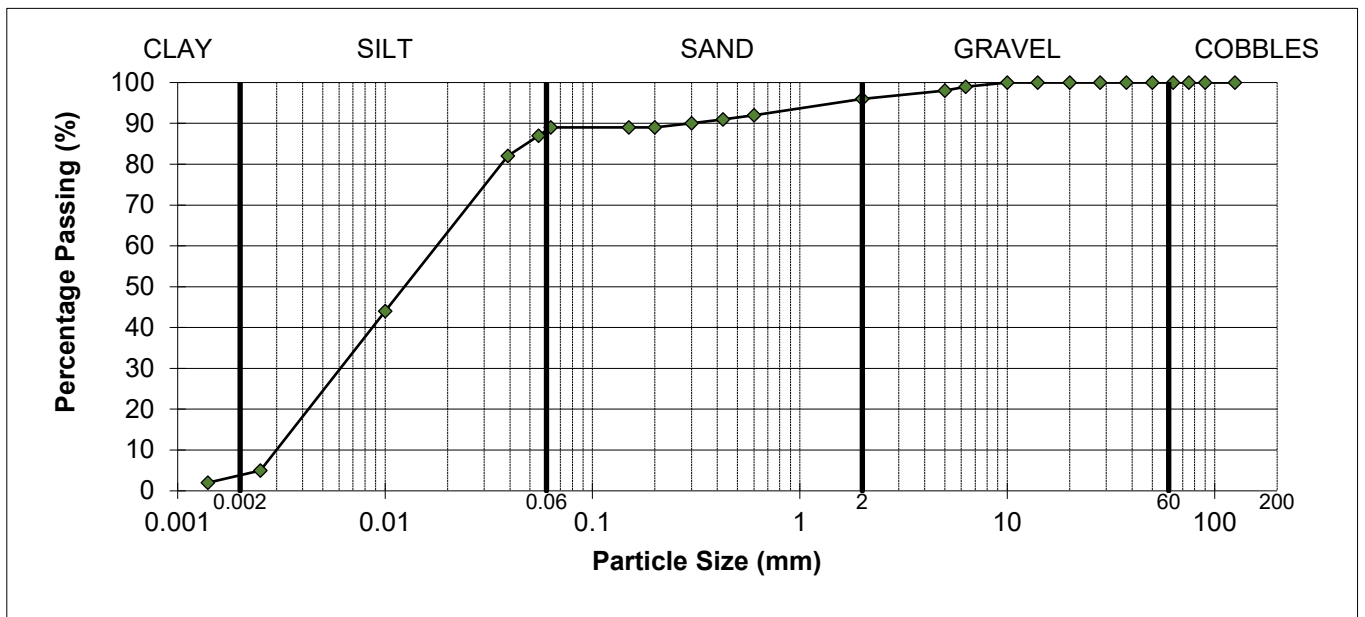
Determination of Water Content in accordance with BS EN ISO 17892-1:2014+A1:2022 (Oven Dry)

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A5487 - Kronospan North Access Road
JOB NUMBER	MRN 4589/93

SAMPLE LABEL	TP10 (2.00m)	DATE SAMPLED	21-Aug-23
LAB SAMPLE No	130463	DATE RECEIVED	25-Aug-23
DATE TESTED	04-Sep-23	SAMPLED BY	Client

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

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100		2	96	
90	100		0.6	92	
75	100		0.425	91	
63	100		0.3	90	
50	100		0.2	89	
37.5	100		0.15	89	
28	100		0.063	89	
20	100		0.055	87	
14	100		0.039	82	
10	100		0.01	44	
6.3	99		0.0025	5	
5	98		0.0014	2	



REMARKS

SIGNED

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

DATE

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TEST CERTIFICATE
PARTICLE SIZE DISTRIBUTION

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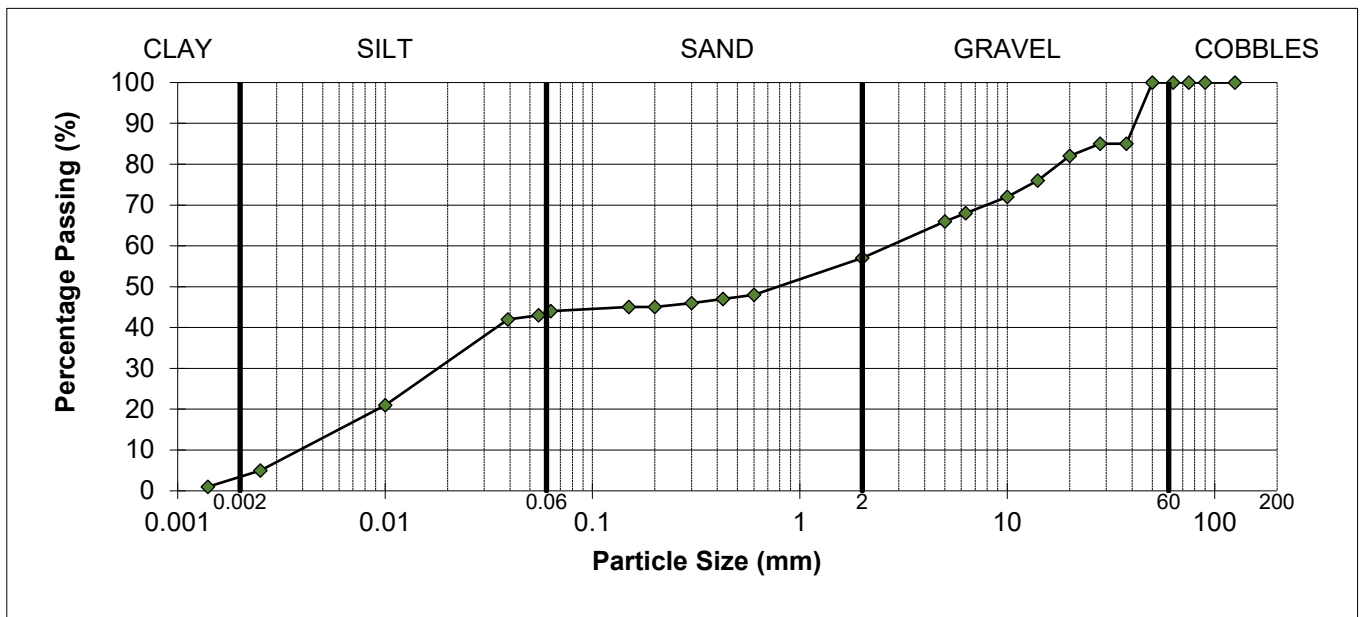
Determination of Water Content in accordance with BS EN ISO 17892-1:2014+A1:2022 (Oven Dry)

CLIENT	Earth Environmental & Geotechnical Ltd		
SITE	A5487 - Kronospan North Access Road		
JOB NUMBER	MRN 4589/93		

SAMPLE LABEL	TP14 (2.0m)	DATE SAMPLED	21-Aug-23
LAB SAMPLE No	130479	DATE RECEIVED	25-Aug-23
DATE TESTED	04-Sep-23	SAMPLED BY	Client

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

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100		2	57	
90	100		0.6	48	
75	100		0.425	47	
63	100		0.3	46	
50	100		0.2	45	
37.5	85		0.15	45	
28	85		0.063	44	
20	82		0.055	43	
14	76		0.039	42	
10	72		0.01	21	
6.3	68		0.0025	5	
5	66		0.0014	1	



REMARKS

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PARTICLE SIZE DISTRIBUTION

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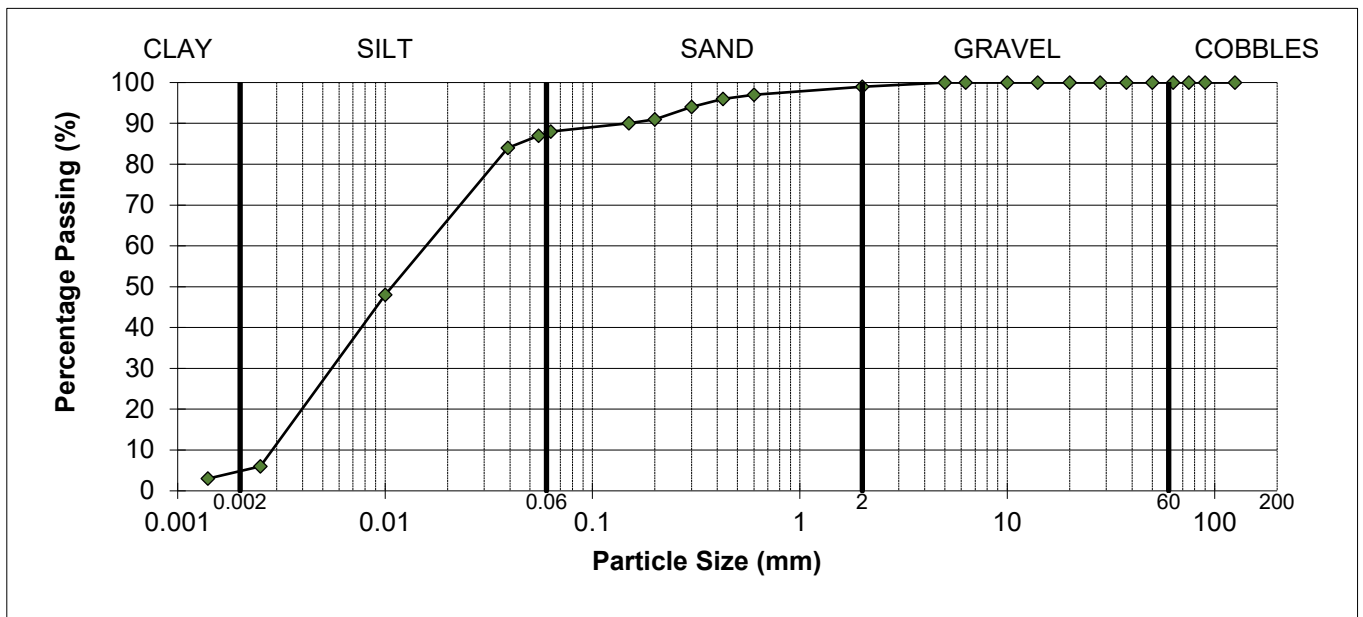
Determination of Water Content in accordance with BS EN ISO 17892-1:2014+A1:2022 (Oven Dry)

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A5487 - Kronospan North Access Road
JOB NUMBER	MRN 4589/93

SAMPLE LABEL	TP15 (2.0m)	DATE SAMPLED	21-Aug-23
LAB SAMPLE No	130483	DATE RECEIVED	25-Aug-23
DATE TESTED	04-Sep-23	SAMPLED BY	Client

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

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100		2	99	
90	100		0.6	97	
75	100		0.425	96	
63	100		0.3	94	
50	100		0.2	91	
37.5	100		0.15	90	
28	100		0.063	88	
20	100		0.055	87	
14	100		0.039	84	
10	100		0.01	48	
6.3	100		0.0025	6	
5	100		0.0014	3	



REMARKS

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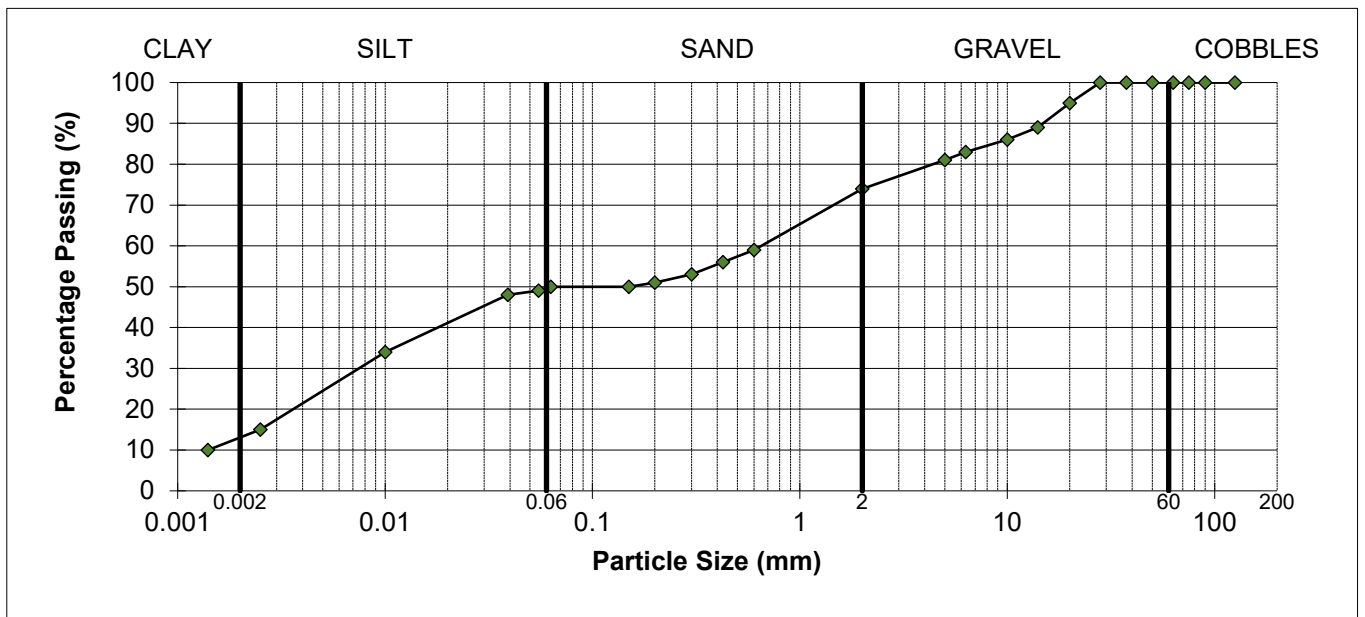
Determination of Water Content in accordance with BS EN ISO 17892-1:2014+A1:2022 (Oven Dry)

CLIENT	Earth Environmental & Geotechnical Ltd		
SITE	A5487 - Kronospan North Access Road		
JOB NUMBER	MRN 4589/93		

SAMPLE LABEL	TP16 (1.00m)	DATE SAMPLED	21-Aug-23
LAB SAMPLE No	130485	DATE RECEIVED	25-Aug-23
DATE TESTED	04-Sep-23	SAMPLED BY	Client

MATERIAL	Brown silty slightly sandy slightly gravelly CLAY		
ADVISED SOURCE	Site Investigation Sample		

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100		2	74	
90	100		0.6	59	
75	100		0.425	56	
63	100		0.3	53	
50	100		0.2	51	
37.5	100		0.15	50	
28	100		0.063	50	
20	95		0.055	49	
14	89		0.039	48	
10	86		0.01	34	
6.3	83		0.0025	15	
5	81		0.0014	10	



REMARKS

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TEST CERTIFICATE

PARTICLE SIZE DISTRIBUTION

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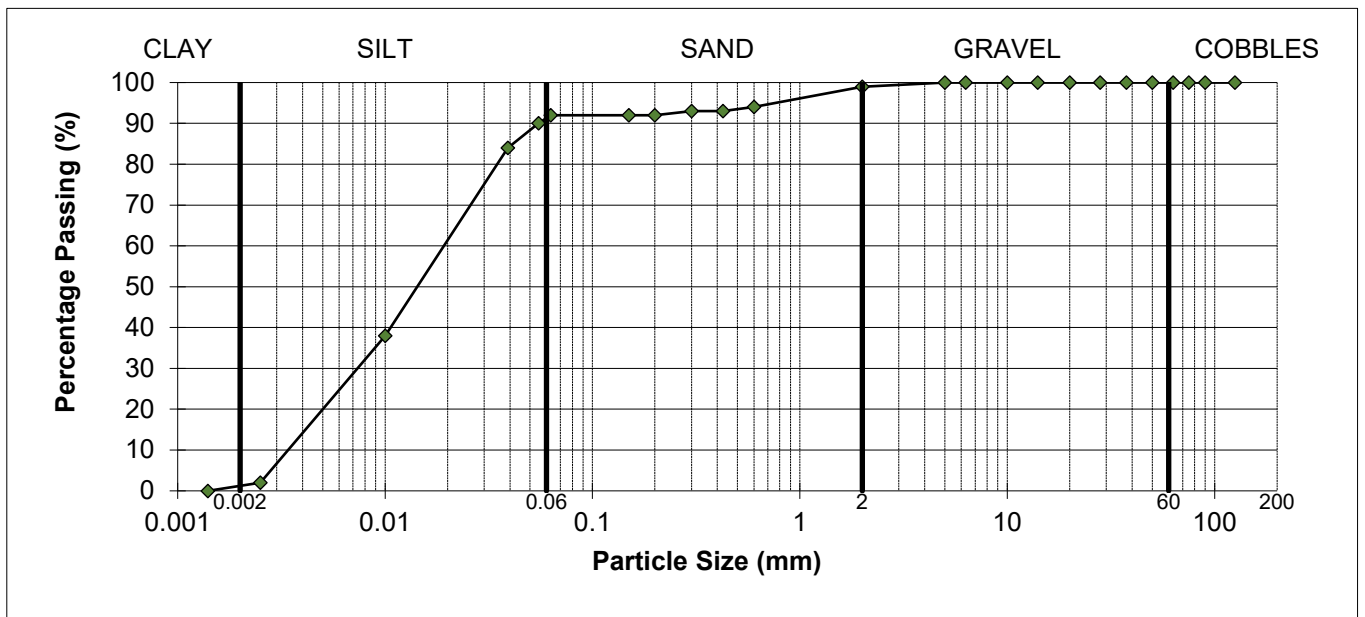
Determination of Water Content in accordance with BS EN ISO 17892-1:2014+A1:2022 (Oven Dry)

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A5487 - Kronospan North Access Road
JOB NUMBER	MRN 4589/93

SAMPLE LABEL	TP16 (2.0m)	DATE SAMPLED	21-Aug-23
LAB SAMPLE No	130487	DATE RECEIVED	25-Aug-23
DATE TESTED	04-Sep-23	SAMPLED BY	Client

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

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100		2	99	
90	100		0.6	94	
75	100		0.425	93	
63	100		0.3	93	
50	100		0.2	92	
37.5	100		0.15	92	
28	100		0.063	92	
20	100		0.055	90	
14	100		0.039	84	
10	100		0.01	38	
6.3	100		0.0025	2	
5	100		0.0014	0	



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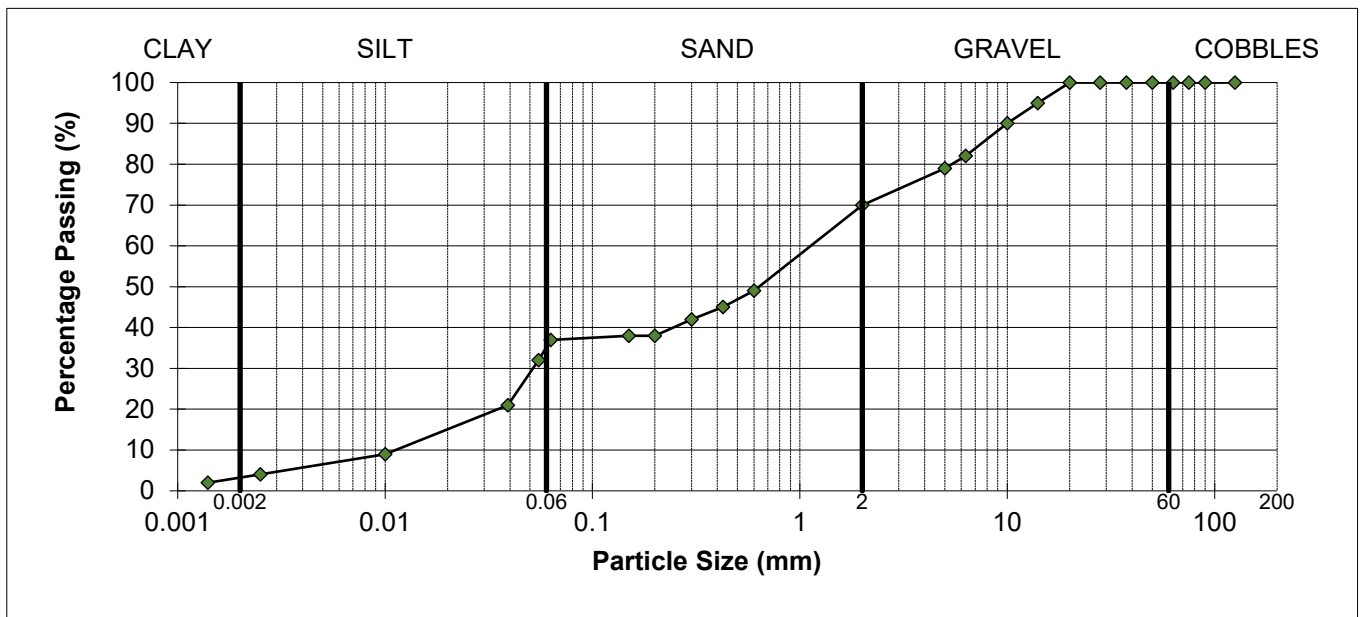
Determination of Water Content in accordance with BS EN ISO 17892-1:2014+A1:2022 (Oven Dry)

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A5487 - Kronospan North Access Road
JOB NUMBER	MRN 4589/93

SAMPLE LABEL	TP17 (1.00m)	DATE SAMPLED	21-Aug-23
LAB SAMPLE No	130489	DATE RECEIVED	25-Aug-23
DATE TESTED	04-Sep-23	SAMPLED BY	Client

MATERIAL	Brown slightly clayey slightly gravelly SAND
ADVISED SOURCE	Site Investigation Sample

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100		2	70	
90	100		0.6	49	
75	100		0.425	45	
63	100		0.3	42	
50	100		0.2	38	
37.5	100		0.15	38	
28	100		0.063	37	
20	100		0.055	32	
14	95		0.039	21	
10	90		0.01	9	
6.3	82		0.0025	4	
5	79		0.0014	2	



REMARKS

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PARTICLE SIZE DISTRIBUTION

BS EN ISO 17892-4:2016

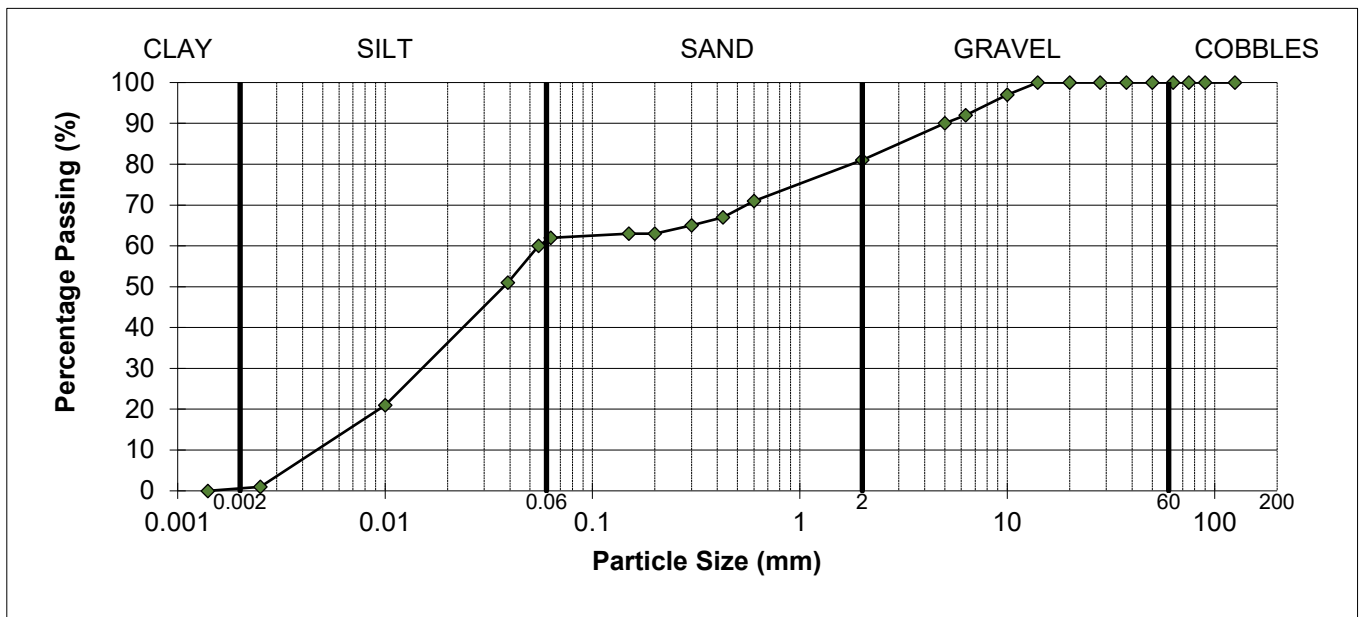
Determination of Water Content in accordance with BS EN ISO 17892-1:2014+A1:2022 (Oven Dry)

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A5487 - Kronospan North Access Road
JOB NUMBER	MRN 4589/93

SAMPLE LABEL	TP17 (1.50m)	DATE SAMPLED	21-Aug-23
LAB SAMPLE No	130490	DATE RECEIVED	25-Aug-23
DATE TESTED	04-Sep-23	SAMPLED BY	Client

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

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100		2	81	
90	100		0.6	71	
75	100		0.425	67	
63	100		0.3	65	
50	100		0.2	63	
37.5	100		0.15	63	
28	100		0.063	62	
20	100		0.055	60	
14	100		0.039	51	
10	97		0.01	21	
6.3	92		0.0025	1	
5	90		0.0014	0	



REMARKS

SIGNED

NAME

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

DATE

12-Oct-23

TEST CERTIFICATE
PARTICLE SIZE DISTRIBUTION

BS EN ISO 17892-4:2016

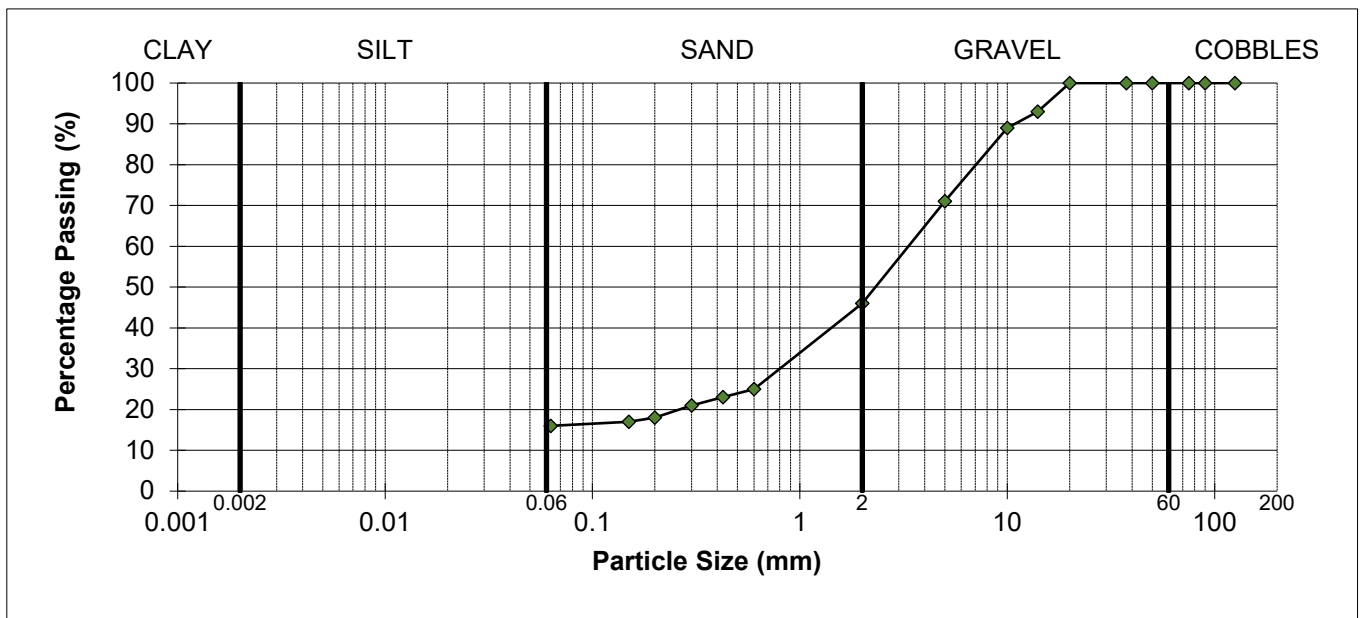
Determination of Water Content in accordance with BS EN ISO 17892-1:2014+A1:2022 (Oven Dry)

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A5487 - Kronospan North Access Road
JOB NUMBER	MRN 4589/93

SAMPLE LABEL	CP12 (4.0-4.45m)	DATE SAMPLED	17-Aug-23
LAB SAMPLE No	130110	DATE RECEIVED	24-Aug-23
DATE TESTED	04-Sep-23	SAMPLED BY	Client

MATERIAL	Brown silty sandy GRAVEL
ADVISED SOURCE	Site Investigation Sample

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100		5	71	
90	100		2	46	
75	100		0.6	25	
50	100		0.425	23	
37.5	100		0.3	21	
20	100		0.2	18	
14	93		0.15	17	
10	89		0.063	16	



REMARKS

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NAME

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

DATE

12-Oct-23

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BS EN ISO 17892-4:2016

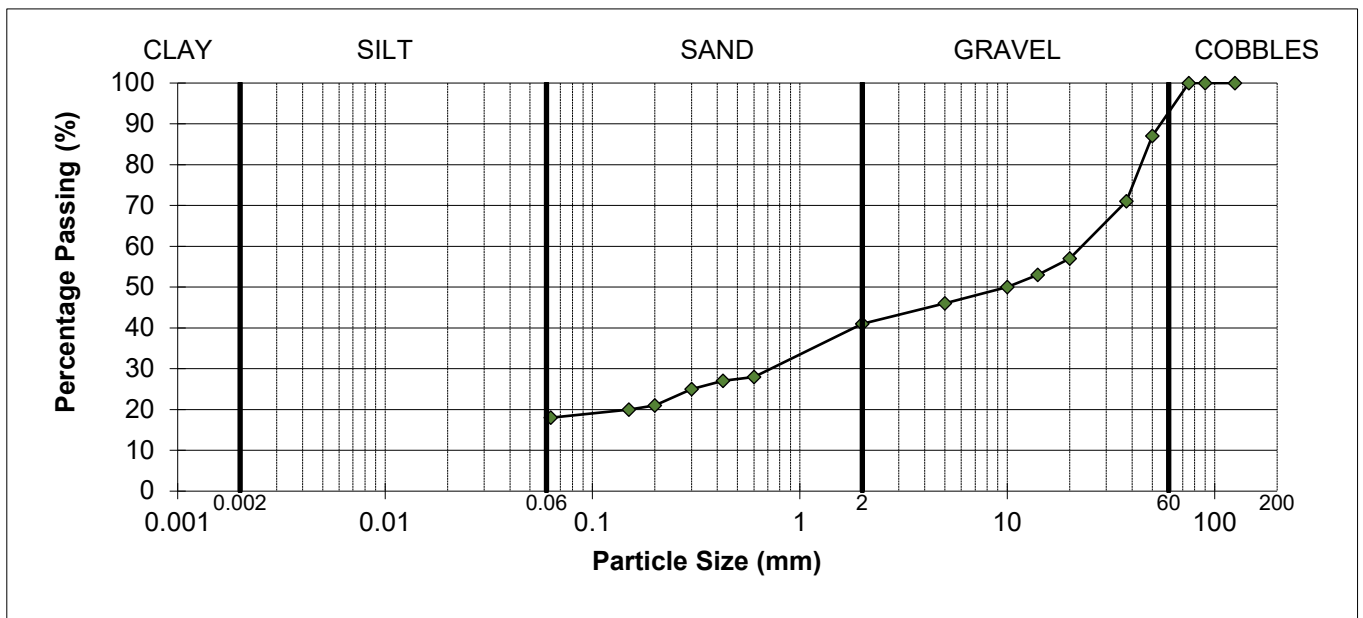
Determination of Water Content in accordance with BS EN ISO 17892-1:2014+A1:2022 (Oven Dry)

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A5487 - Kronospan North Access Road
JOB NUMBER	MRN 4589/93

SAMPLE LABEL	CP13 (9.0-9.45m)	DATE SAMPLED	17-Aug-23
LAB SAMPLE No	130123	DATE RECEIVED	24-Aug-23
DATE TESTED	04-Sep-23	SAMPLED BY	Client

MATERIAL	Brown silty sandy GRAVEL
ADVISED SOURCE	Site Investigation Sample

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100		5	46	
90	100		2	41	
75	100		0.6	28	
50	87		0.425	27	
37.5	71		0.3	25	
20	57		0.2	21	
14	53		0.15	20	
10	50		0.063	18	



REMARKS

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

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12-Oct-23

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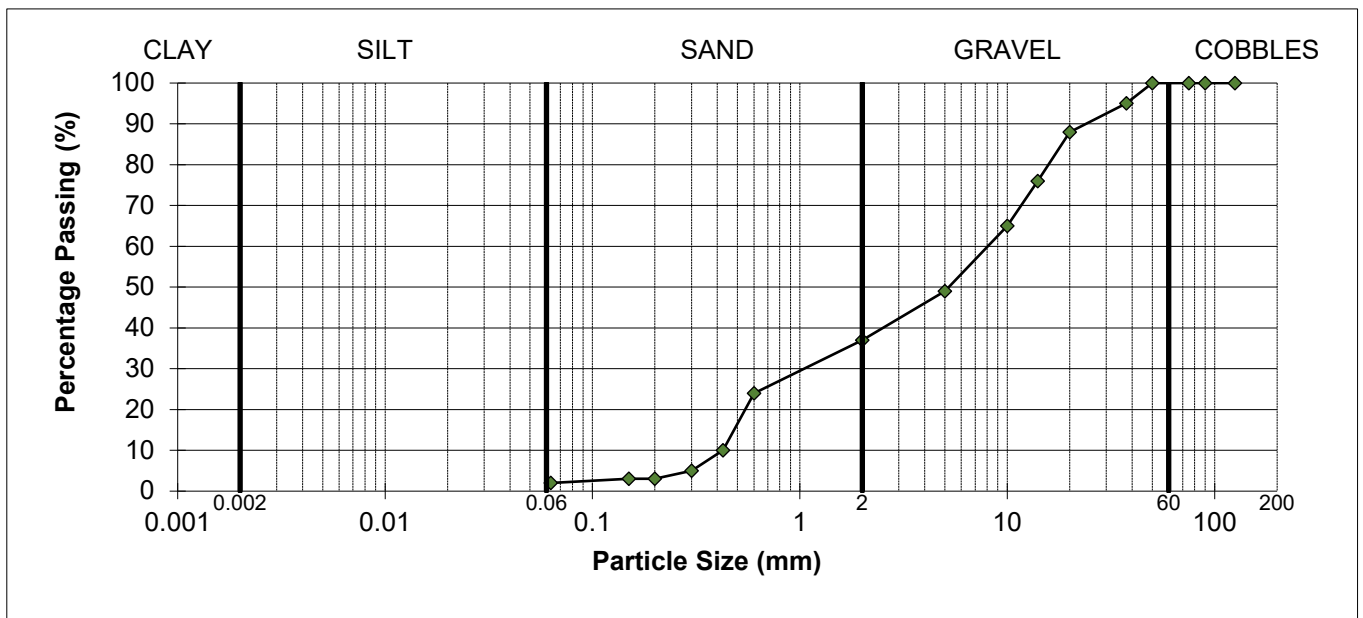
Determination of Water Content in accordance with BS EN ISO 17892-1:2014+A1:2022 (Oven Dry)

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A5487 - Kronospan North Access Road
JOB NUMBER	MRN 4589/93

SAMPLE LABEL	CP10 (3.0-3.45m)	DATE SAMPLED	18-Aug-23
LAB SAMPLE No	130097	DATE RECEIVED	24-Aug-23
DATE TESTED	04-Sep-23	SAMPLED BY	Client

MATERIAL	Brown silty sandy GRAVEL
ADVISED SOURCE	Site Investigation Sample

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100		5	49	
90	100		2	37	
75	100		0.6	24	
50	100		0.425	10	
37.5	95		0.3	5	
20	88		0.2	3	
14	76		0.15	3	
10	65		0.063	2	



REMARKS

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O.P. Davies BA (Hons)
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PARTICLE SIZE DISTRIBUTION

BS EN ISO 17892-4:2016

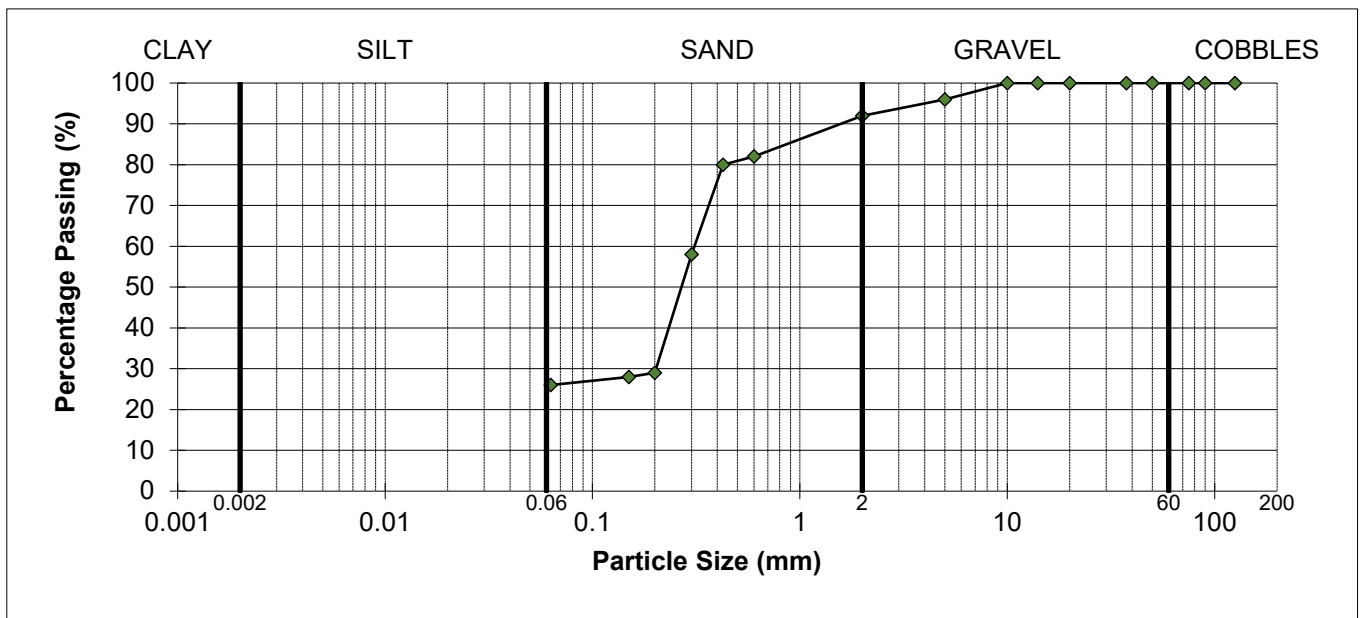
Determination of Water Content in accordance with BS EN ISO 17892-1:2014+A1:2022 (Oven Dry)

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A5487 - Kronospan North Access Road
JOB NUMBER	MRN 4589/93

SAMPLE LABEL	CP10 (6.0-6.45m)	DATE SAMPLED	18-Aug-23
LAB SAMPLE No	130100	DATE RECEIVED	24-Aug-23
DATE TESTED	04-Sep-23	SAMPLED BY	Client

MATERIAL	Brown silty slightly gravelly SAND
ADVISED SOURCE	Site Investigation Sample

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100		5	96	
90	100		2	92	
75	100		0.6	82	
50	100		0.425	80	
37.5	100		0.3	58	
20	100		0.2	29	
14	100		0.15	28	
10	100		0.063	26	



REMARKS

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

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TEST CERTIFICATE
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BS EN ISO 17892-4:2016

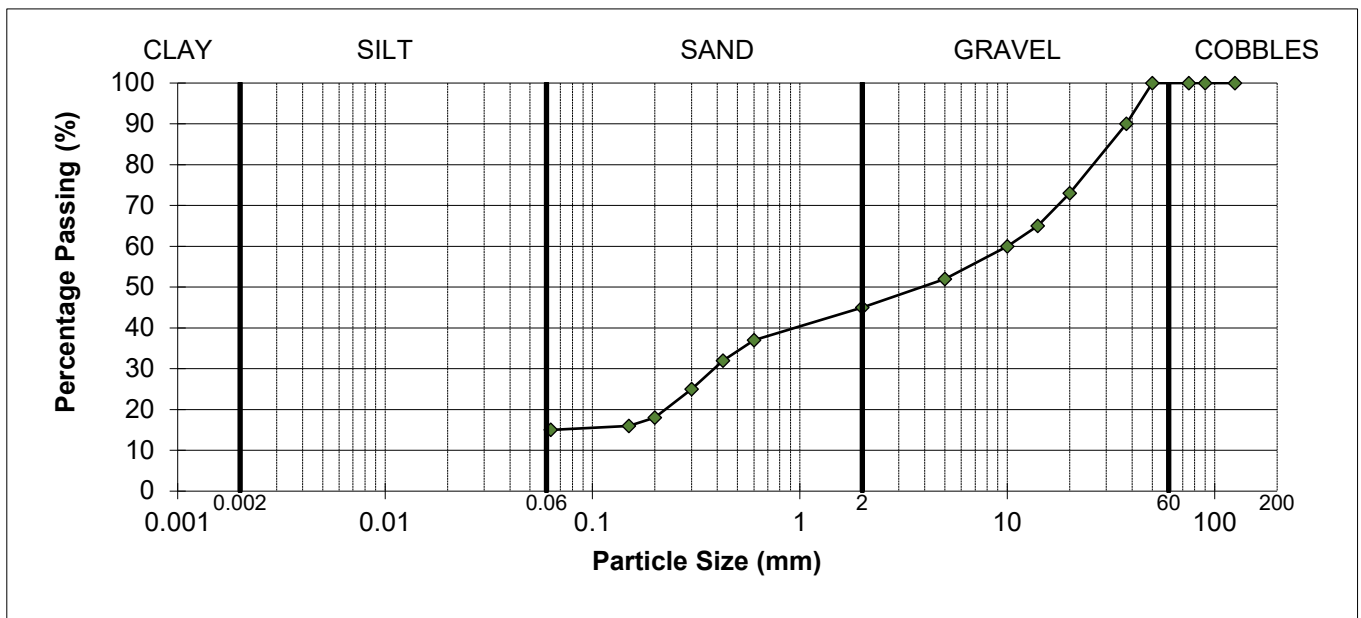
Determination of Water Content in accordance with BS EN ISO 17892-1:2014+A1:2022 (Oven Dry)

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A5487 - Kronospan North Access Road
JOB NUMBER	MRN 4589/93

SAMPLE LABEL	TP01 (2.5m)	DATE SAMPLED	22-Aug-23
LAB SAMPLE No	130424	DATE RECEIVED	25-Aug-23
DATE TESTED	04-Sep-23	SAMPLED BY	Client

MATERIAL	Brown silty SAND & GRAVEL
ADVISED SOURCE	Site Investigation Sample

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100		5	52	
90	100		2	45	
75	100		0.6	37	
50	100		0.425	32	
37.5	90		0.3	25	
20	73		0.2	18	
14	65		0.15	16	
10	60		0.063	15	



REMARKS

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O.P. Davies BA (Hons)
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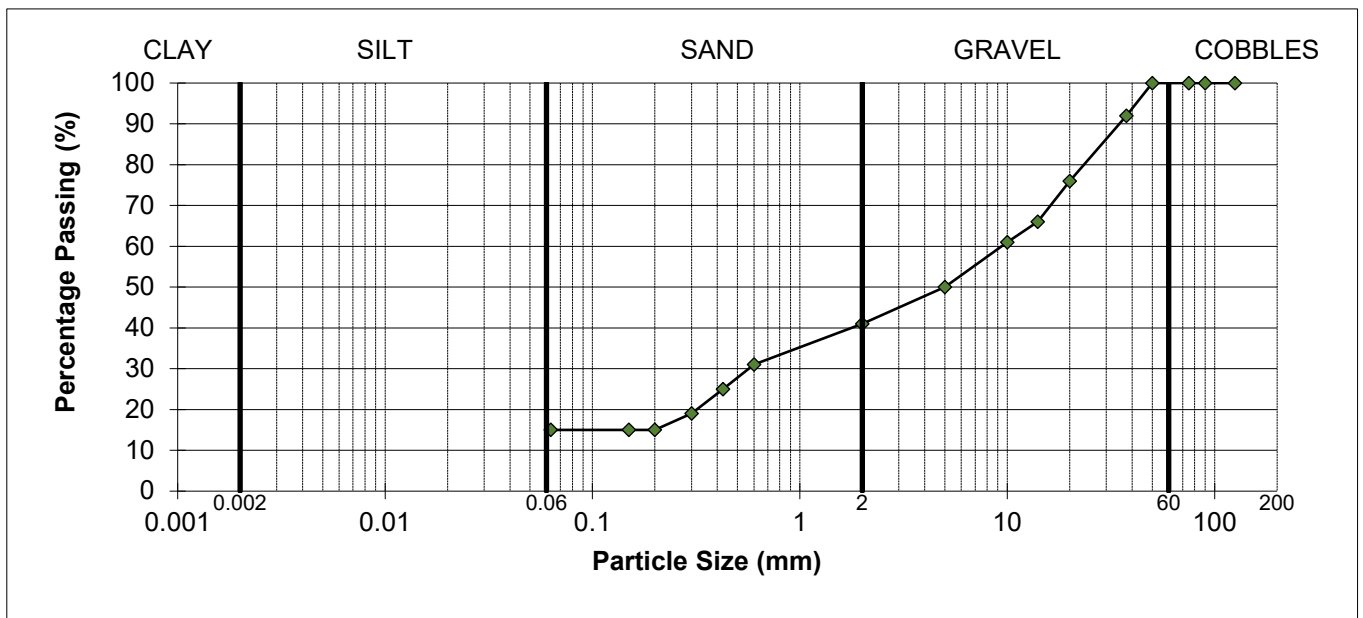
Determination of Water Content in accordance with BS EN ISO 17892-1:2014+A1:2022 (Oven Dry)

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A5487 - Kronospan North Access Road
JOB NUMBER	MRN 4589/93

SAMPLE LABEL	TP02 (1.50m)	DATE SAMPLED	22-Aug-23
LAB SAMPLE No	130430	DATE RECEIVED	25-Aug-23
DATE TESTED	04-Sep-23	SAMPLED BY	Client

MATERIAL	Brown silty SAND & GRAVEL
ADVISED SOURCE	Site Investigation Sample

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100		5	50	
90	100		2	41	
75	100		0.6	31	
50	100		0.425	25	
37.5	92		0.3	19	
20	76		0.2	15	
14	66		0.15	15	
10	61		0.063	15	



REMARKS

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O.P. Davies BA (Hons)
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PARTICLE SIZE DISTRIBUTION

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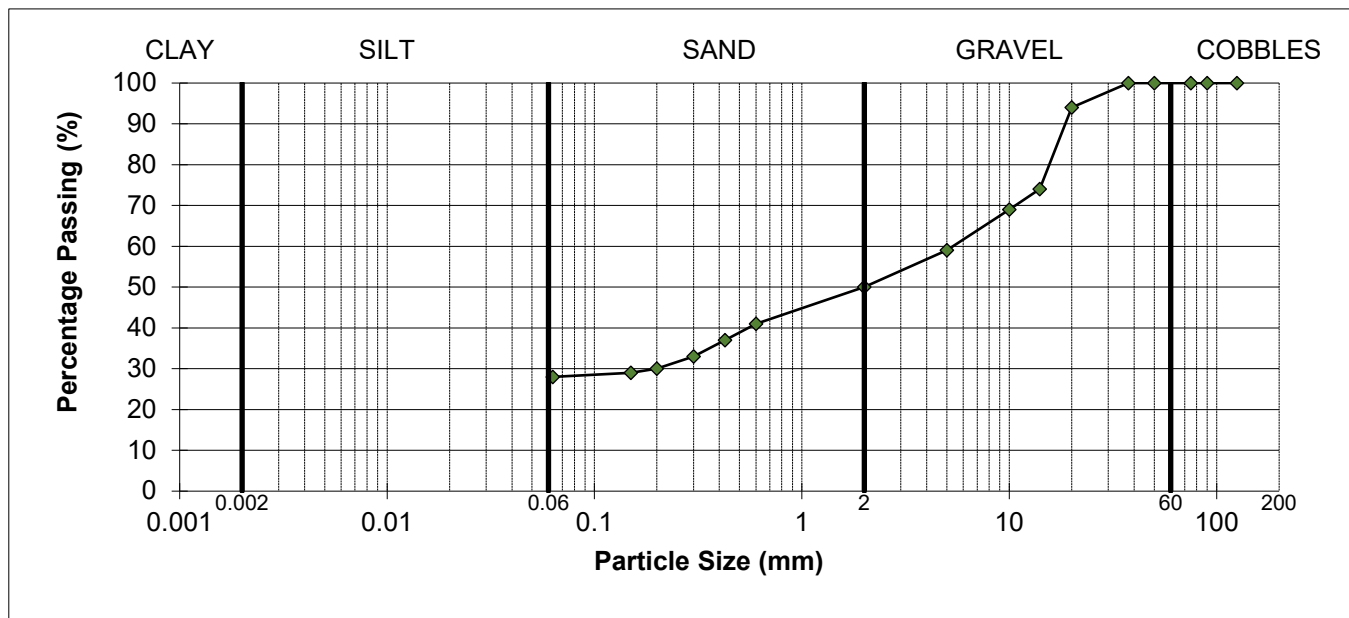
Determination of Water Content in accordance with BS EN ISO 17892-1:2014+A1:2022 (Oven Dry)

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A5487 - Kronospan North Access Road
JOB NUMBER	MRN 4589/93

SAMPLE LABEL	TP06 (3.0m)	DATE SAMPLED	23-Aug-23
LAB SAMPLE No	130452	DATE RECEIVED	25-Aug-23
DATE TESTED	04-Sep-23	SAMPLED BY	Client

MATERIAL	Made Ground
ADVISED SOURCE	Site Investigation Sample

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100		5	59	
90	100		2	50	
75	100		0.6	41	
50	100		0.425	37	
37.5	100		0.3	33	
20	94		0.2	30	
14	74		0.15	29	
10	69		0.063	28	



REMARKS

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(Laboratory Manager)

DATE

12-Oct-23

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PARTICLE SIZE DISTRIBUTION

BS EN ISO 17892-4:2016

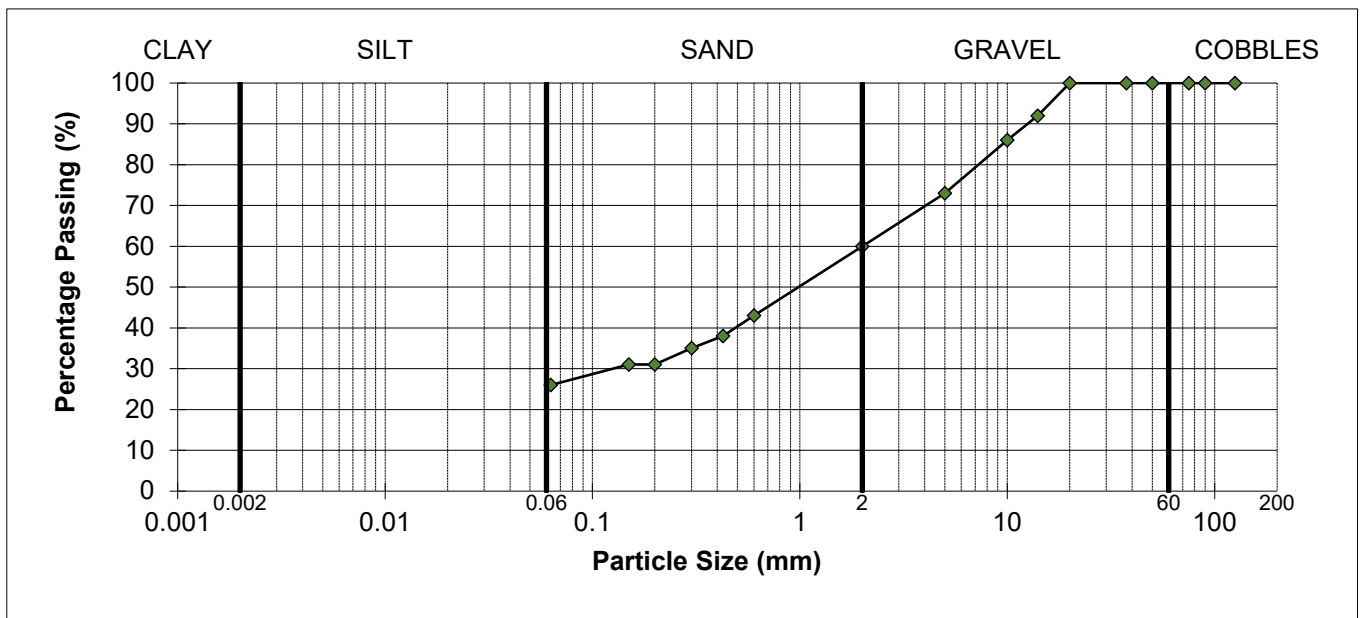
Determination of Water Content in accordance with BS EN ISO 17892-1:2014+A1:2022 (Oven Dry)

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A5487 - Kronospan North Access Road
JOB NUMBER	MRN 4589/93

SAMPLE LABEL	TP17 (3.0m)	DATE SAMPLED	21-Aug-23
LAB SAMPLE No	130493	DATE RECEIVED	25-Aug-23
DATE TESTED	04-Sep-23	SAMPLED BY	Client

MATERIAL	Brown silty SAND & GRAVEL
ADVISED SOURCE	Site Investigation Sample

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100		5	73	
90	100		2	60	
75	100		0.6	43	
50	100		0.425	38	
37.5	100		0.3	35	
20	100		0.2	31	
14	92		0.15	31	
10	86		0.063	26	



REMARKS

SIGNED



NAME

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

DATE

12-Oct-23

MURRAY RIX

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



TEST CERTIFICATE

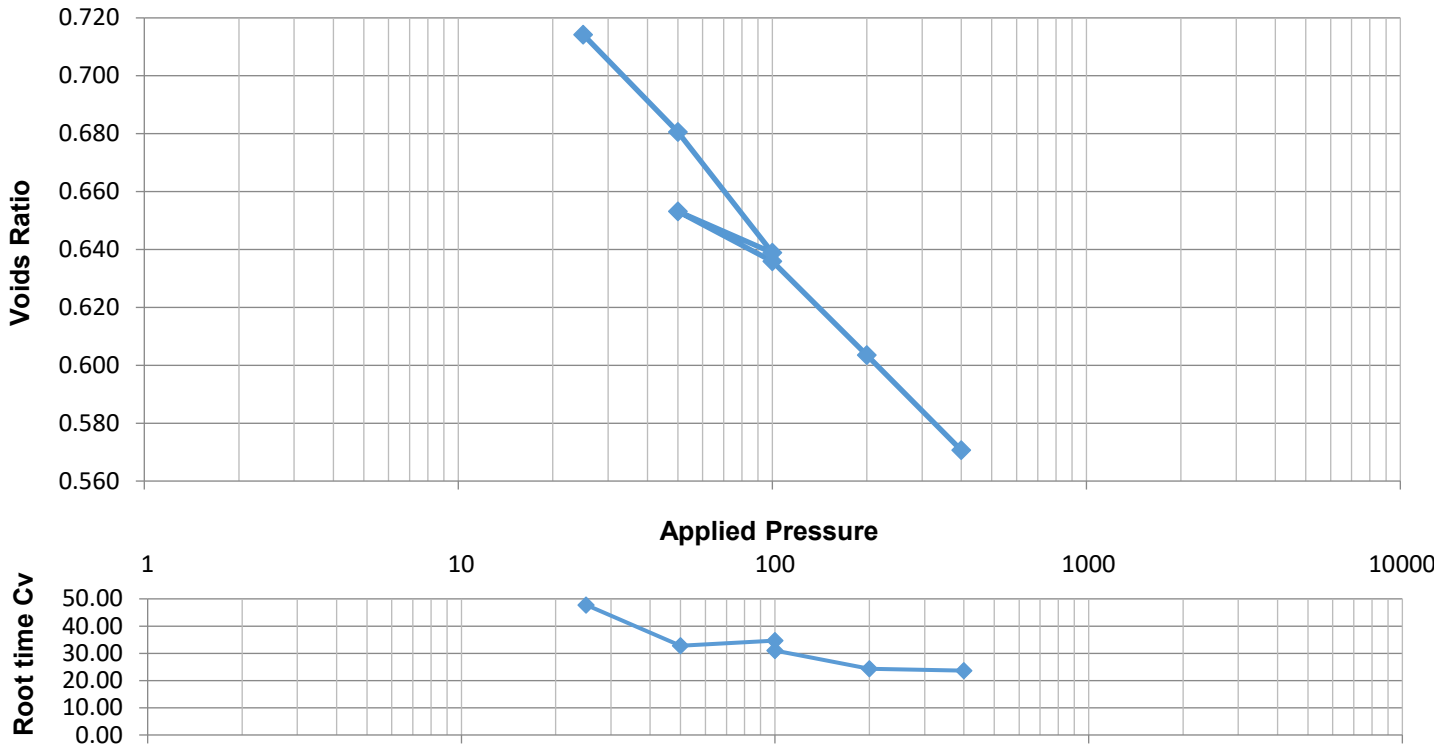
INCREMENTAL LOADING OEDOMETER TEST
BS EN ISO 17892-5:2017

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A5487 - Kronospan North Access Road
JOB NUMBER	MRN 4589/93

SAMPLE LABEL	CP01 (2.0-2.45m)	DATE SAMPLED	14-Aug-23
LAB SAMPLE No.	130192	DATE RECEIVED	24-Aug-23
DATE TESTED	12-Sep-23	SAMPLED BY	Client
MATERIAL	Grey silty slightly sandy slightly gravelly CLAY		
ADVISED SOURCE	Site Investigation Sample		

Specimen Location	Sample Length (mm)	450	Specimen depth from top of Sample (mm)	10
	Sample Orientation	Vertical	Specimen Condition	Undisturbed

INITIAL CONDITIONS						Load No.	Applied Pressure	Sample Height	Void Ratio	Mv	Temp	Cv t90 root	Cv t50 log
						kPa	mm		m²/MN	°C	m²/yr	m²/yr	
Height	20.1	mm	Particle density	2.65	Ass	1	25	19.05	0.714	2.02	20	47.77	49.70
Diameter	70.1	mm	Initial void ratio	0.81		2	50	18.67	0.681	0.79	20	32.83	31.89
Weight wet	144.4	g	Deg. of sat.	89	%	3	100	18.21	0.639	0.49	20	34.63	35.37
Water cont.*	27.2	%	Swell. press.	0	kN/m²	4	50	18.37	0.653	0.17	20		
Bulk Density	1.87	Mg/m³	Dry density	1.47	Mg/m³	5	100	18.18	0.636	0.21	20	31.06	28.93
*determined from specimen trimmings						6	200	17.82	0.603	0.20	20	24.36	21.89
						7	400	17.45	0.571	0.10	20	23.64	25.26



Remarks/Abnormalities

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

Signed

Date 12 October 2023

MURRAY RIX

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



TEST CERTIFICATE

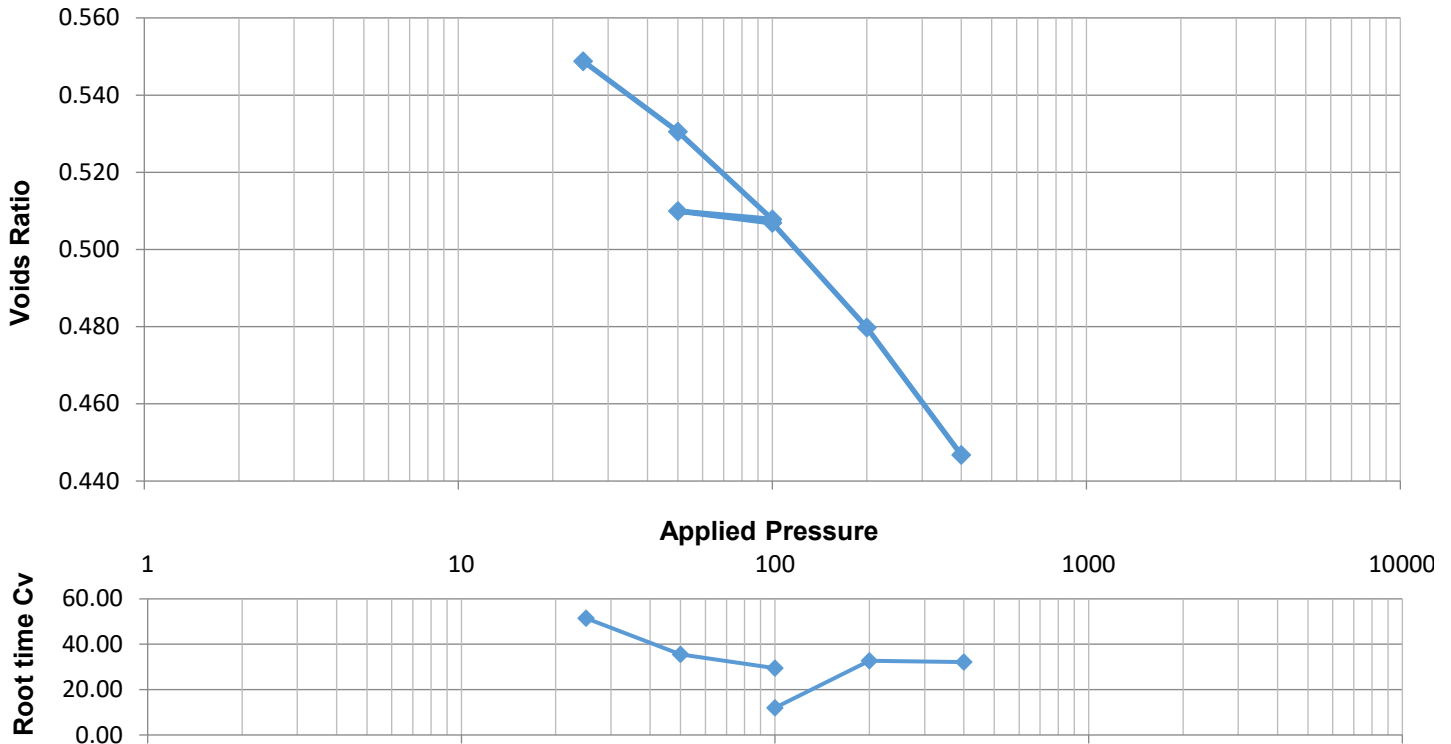
INCREMENTAL LOADING OEDOMETER TEST
BS EN ISO 17892-5:2017

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A5487 - Kronospan North Access Road
JOB NUMBER	MRN 4589/93

SAMPLE LABEL	CP11 (3.0-3.45m)	DATE SAMPLED	15-Aug-23
LAB SAMPLE No.	130198	DATE RECEIVED	24-Aug-23
DATE TESTED	12-Sep-23	SAMPLED BY	Client
MATERIAL	Grey silty slightly sandy slightly gravelly CLAY		
ADVISED SOURCE	Site Investigation Sample		

Specimen Location	Sample Length (mm)	450	Specimen depth from top of Sample (mm)	10
	Sample Orientation	Vertical	Specimen Condition	Undisturbed

INITIAL CONDITIONS						Load No.	Applied Pressure	Sample Height	Void Ratio	Mv	Temp	Cv t90 root	Cv t50 log
							kPa	mm		m ² /MN	°C	m ² /yr	m ² /yr
Height	20.2	mm	Particle density	2.65	Ass	1	25	19.55	0.549	1.30	20	51.45	51.34
Diameter	70.0	mm	Initial void ratio	0.60		2	50	19.32	0.530	0.47	20	35.50	37.75
Weight wet	155.1	g	Deg. of sat.	90	%	3	100	19.03	0.508	0.30	20	29.51	30.83
Water cont.*	20.4	%	Swell. press.	0	kN/m ²	4	50	19.06	0.510	0.03	20		
Bulk Density	1.99	Mg/m ³	Dry density	1.66	Mg/m ³	5	100	19.02	0.507	0.04	20	11.98	10.03
*determined from specimen trimmings						6	200	18.67	0.480	0.18	20	32.77	31.84
						7	400	18.26	0.447	0.11	20	32.15	31.67



Remarks/Abnormalities

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

Signed

Date 12 October 2023

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TEST CERTIFICATE

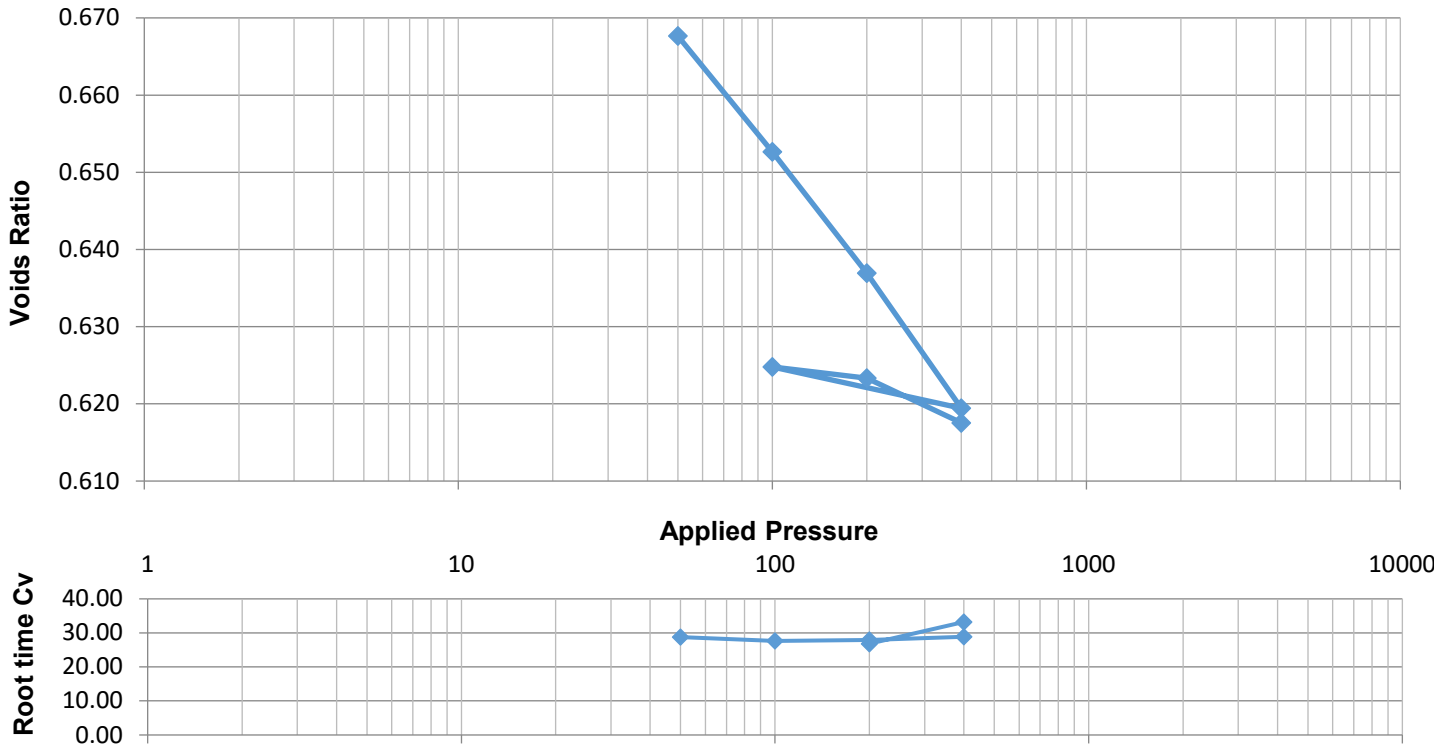
INCREMENTAL LOADING OEDOMETER TEST
BS EN ISO 17892-5:2017

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A5487 - Kronospan North Access Road
JOB NUMBER	MRN 4589/93

SAMPLE LABEL	CP13 (3.0-3.45m)	DATE SAMPLED	17-Aug-23
LAB SAMPLE No.	130199	DATE RECEIVED	24-Aug-23
DATE TESTED	12-Sep-23	SAMPLED BY	Client
MATERIAL	Grey silty slightly sandy slightly gravelly CLAY		
ADVISED SOURCE	Site Investigation Sample		

Specimen Location	Sample Length (mm)	450	Specimen depth from top of Sample (mm)	30
	Sample Orientation	Vertical	Specimen Condition	Undisturbed

INITIAL CONDITIONS						Load No.	Applied Pressure	Sample Height	Void Ratio	Mv	Temp	Cv t90 root	Cv t50 log
							kPa	mm		m ² /MN	°C	m ² /yr	m ² /yr
Height	20.0	mm	Particle density	2.65	Ass	1	50	19.11	0.668	0.84	20	28.76	28.23
Diameter	70.0	mm	Initial void ratio	0.74		2	100	18.94	0.653	0.18	20	27.66	27.68
Weight wet	147.3	g	Deg. of sat.	93	%	3	200	18.76	0.637	0.09	20	27.88	26.40
Water cont.*	26.1	%	Swell. press.	0	kN/m ²	4	400	18.56	0.619	0.05	20	28.82	29.20
Bulk Density	1.92	Mg/m ³	Dry density	1.52	Mg/m ³	5	100	18.62	0.625	0.01	20		
*determined from specimen trimmings						6	200	18.60	0.623	0.01	20	26.83	25.73
						7	400	18.54	0.618	0.02	20	33.21	34.49



Remarks/Abnormalities

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

Signed

Date 12 October 2023

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TEL 0161 475 0870



TEST CERTIFICATE

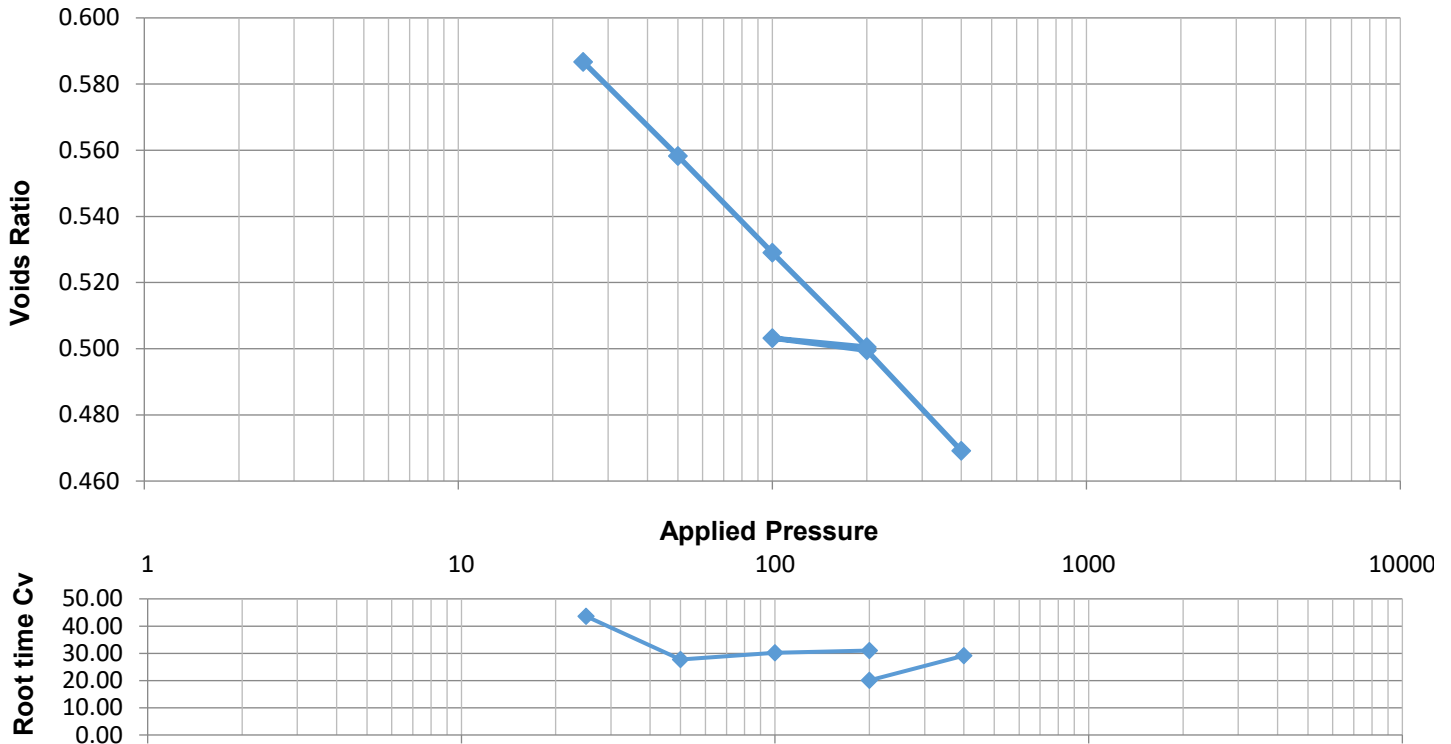
INCREMENTAL LOADING OEDOMETER TEST
BS EN ISO 17892-5:2017

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A5487 - Kronospan North Access Road
JOB NUMBER	MRN 4589/93

SAMPLE LABEL	CP02 (2.0-2.45m)	DATE SAMPLED	17-Aug-23
LAB SAMPLE No.	130193	DATE RECEIVED	24-Aug-23
DATE TESTED	13-Sep-23	SAMPLED BY	Client
MATERIAL	Grey silty slightly sandy slightly gravelly CLAY		
ADVISED SOURCE	Site Investigation Sample		

Specimen Location	Sample Length (mm)	450	Specimen depth from top of Sample (mm)	20
	Sample Orientation	Vertical	Specimen Condition	Undisturbed

INITIAL CONDITIONS						Load No.	Applied Pressure	Sample Height	Void Ratio	Mv	Temp	Cv t90 root	Cv t50 log
						kPa	mm		m²/MN	°C	m²/yr	m²/yr	
Height	20.1	mm	Particle density	2.65	Ass	1	25	19.00	0.587	2.11	20	43.61	41.32
Diameter	70.1	mm	Initial void ratio	0.68		2	50	18.66	0.558	0.72	20	27.69	27.12
Weight wet	149.0	g	Deg. of sat.	86	%	3	100	18.31	0.529	0.37	20	30.20	31.73
Water cont.*	21.8	%	Swell. press.	0	kN/m²	4	200	17.97	0.501	0.19	20	31.02	31.69
Bulk Density	1.93	Mg/m³	Dry density	1.58	Mg/m³	5	100	18.00	0.503	0.02	20		
*determined from specimen trimmings						6	200	17.96	0.499	0.02	20	20.06	21.35
						7	400	17.59	0.469	0.10	20	29.19	30.43



Remarks/Abnormalities

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

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Date 12 October 2023

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TEL 0161 475 0870



TEST CERTIFICATE

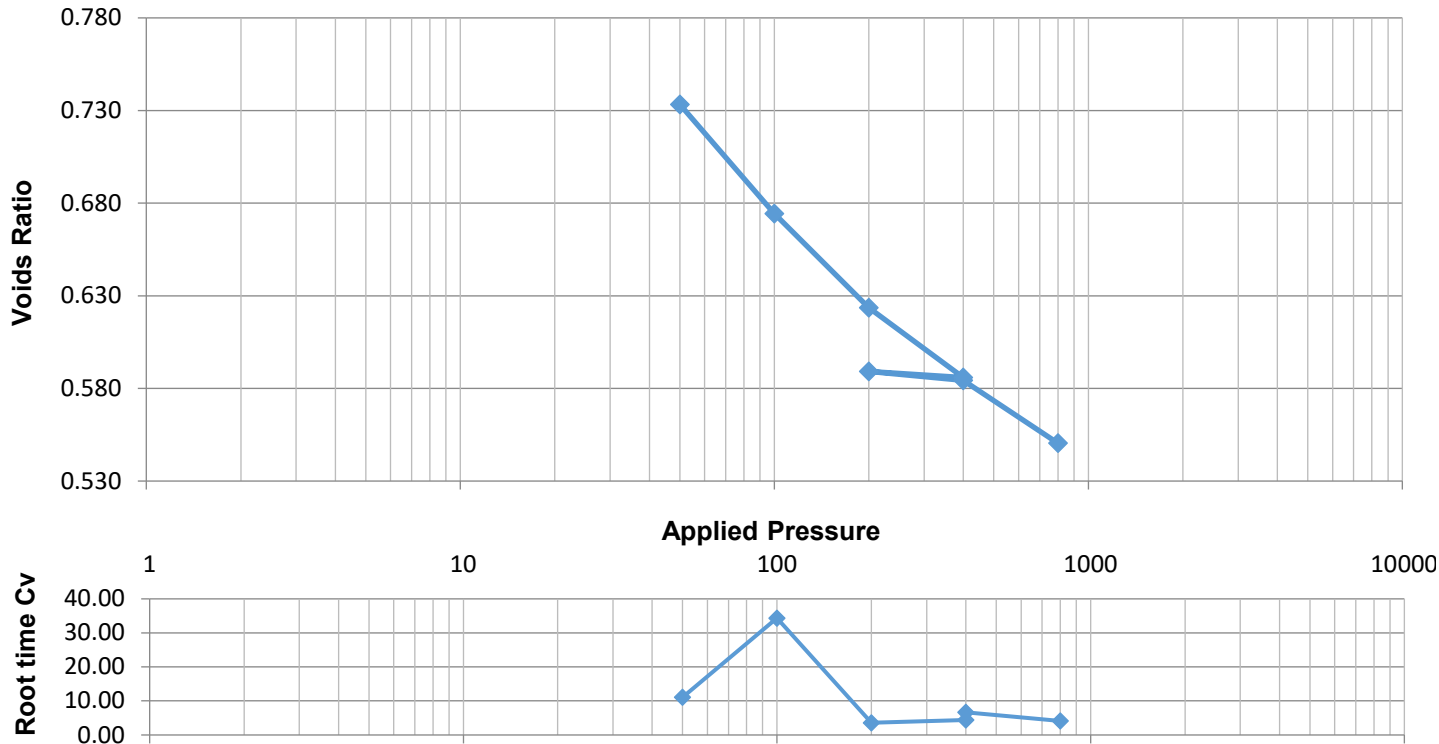
INCREMENTAL LOADING OEDOMETER TEST
BS EN ISO 17892-5:2017

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A5487 - Kronospan North Access Road
JOB NUMBER	MRN 4589/93

SAMPLE LABEL	CP03 (4.0-4.45m)	DATE SAMPLED	18-Aug-23
LAB SAMPLE No.	130196	DATE RECEIVED	24-Aug-23
DATE TESTED	13-Sep-23	SAMPLED BY	Client
MATERIAL	Grey silty slightly sandy slightly gravelly CLAY		
ADVISED SOURCE	Site Investigation Sample		

Specimen Location	Sample Length (mm)	450	Specimen depth from top of Sample (mm)	30
	Sample Orientation	Vertical	Specimen Condition	Undisturbed

INITIAL CONDITIONS					Load No.	Applied Pressure kPa	Sample Height mm	Void Ratio	Mv m ² /MN	Temp °C	Cv t90 root m ² /yr	Cv t50 log m ² /yr	
Height	20.2	mm	Particle density	2.65	Ass	1	50	19.81	0.733	0.38	20	11.04	10.41
Diameter	70.0	mm	Initial void ratio	0.77		2	100	19.14	0.674	0.68	20	34.36	30.82
Weight wet	131.6	g	Deg. of sat.	44	%	3	200	18.56	0.623	0.30	20	3.60	3.73
Water cont.*	12.8	%	Swell. press.	0	kN/m ²	4	400	18.13	0.586	0.12	20	4.38	3.46
Bulk Density	1.69	Mg/m ³	Dry density	1.50	Mg/m ³	5	200	18.16	0.589	0.01	20		
*determined from specimen trimmings						6	400	18.11	0.584	0.01	20	6.68	6.17
						7	800	17.72	0.550	0.05	20	4.10	3.65



Remarks/Abnormalities

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

Signed

Date 12 October 2023

MURRAY RIX

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TEST CERTIFICATE

UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION

BS EN ISO 17892-8:2018

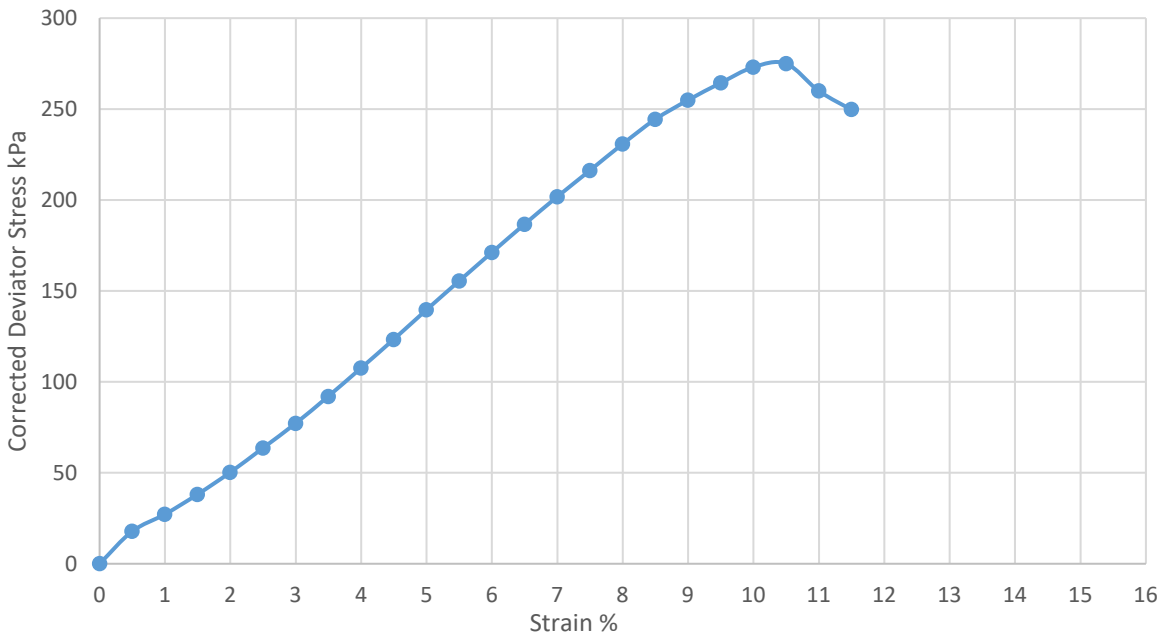
CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A5487 - Kronospan North Access Road
JOB NUMBER	MRN 4589/93

SAMPLE LABEL	CP01 (2.0-2.45m)	DATE SAMPLED	14-Aug-23
LAB SAMPLE No.	130192	DATE RECEIVED	24-Aug-23
DATE TESTED	31-Aug-23	SAMPLED BY	Client
MATERIAL	Grey silty slightly sandy slightly gravelly CLAY		
ADVISED SOURCE	Site Investigation Sample		

INITIAL CONDITIONS

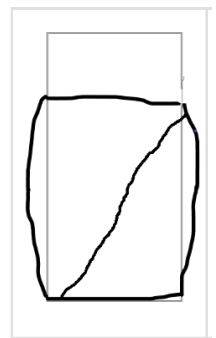
Specimen Location		Sample Length (mm)	450	Specimen depth from top of Sample (mm)	50
		Sample Orientation	Vertical	Specimen Condition	Undisturbed
		Specimen Length (mm)	198	Specimen Water Content (%)	27.7
		Specimen Diameter (mm)	100	Specimen Bulk Density (Mg/m3)	1.87
		Membrane Thickness (mm)	0.4	Specimen Dry Density (Mg/m3)	1.46
		Membrane Correction	3.39		

CORRECTED DEVIATOR STRESS vs AXIAL STRAIN



TEST TYPE
SINGLE STAGE

SKETCH OF
SPECIMEN AT
FAILURE



COMBINED

Cell Pressure (kPa)	Failure Strain (%)	Rate of Strain (%/min)	Corrected Deviator Stress (kPa)	Shear Strength c_u (kPa)
50	10.5	2.0	275	138

Remarks/Abnormalities

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

Signed

Date 12 October 2023

MURRAY RIX

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



TEST CERTIFICATE

UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION

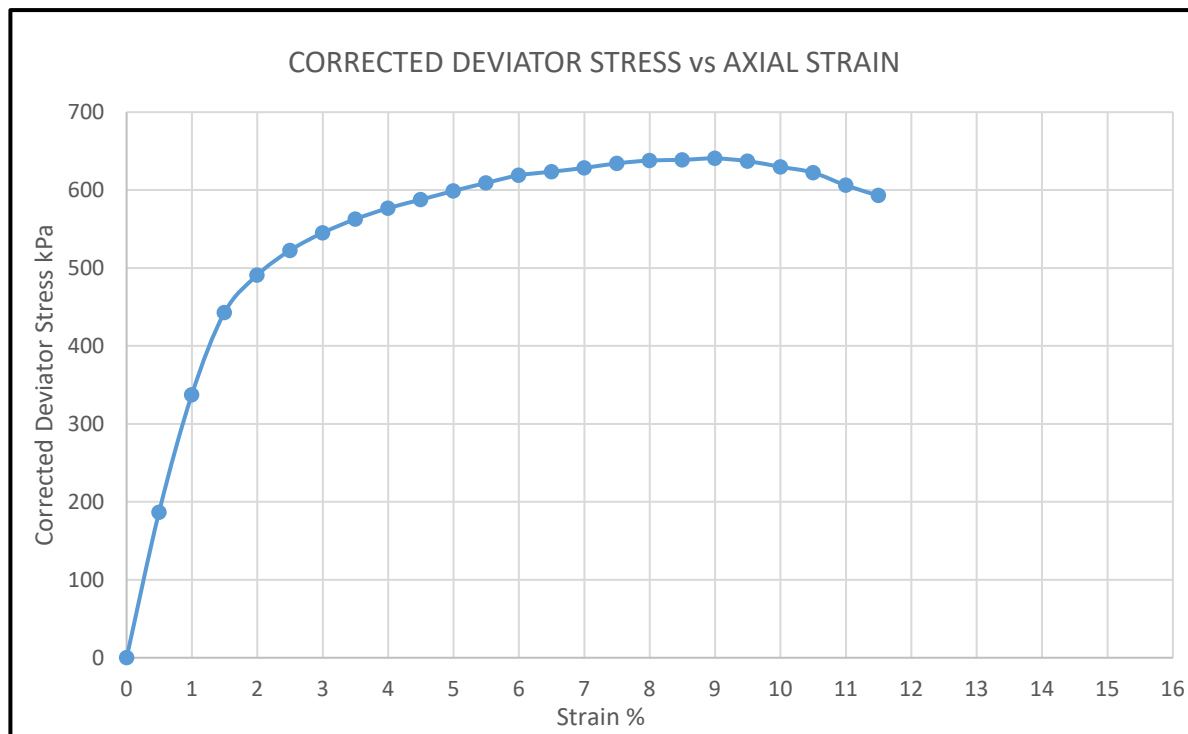
BS EN ISO 17892-8:2018

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A5487 - Kronospan North Access Road
JOB NUMBER	MRN 4589/93

SAMPLE LABEL	CP11 (3.0-3.45m)	DATE SAMPLED	15-Aug-23
LAB SAMPLE No.	130198	DATE RECEIVED	24-Aug-23
DATE TESTED	04-Sep-23	SAMPLED BY	Client
MATERIAL	Grey silty slightly sandy slightly gravelly CLAY		
ADVISED SOURCE	Site Investigation Sample		

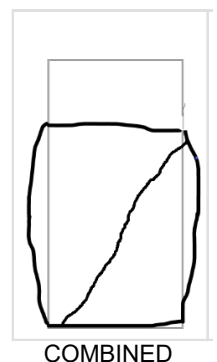
INITIAL CONDITIONS

Specimen Location		Sample Length (mm)	450	Specimen depth from top of Sample (mm)	50
		Sample Orientation	Vertical	Specimen Condition	Undisturbed
		Specimen Length (mm)	187	Specimen Water Content (%)	20.4
		Specimen Diameter (mm)	100	Specimen Bulk Density (Mg/m3)	1.99
		Membrane Thickness (mm)	0.4	Specimen Dry Density (Mg/m3)	1.65
		Membrane Correction	2.68		



TEST TYPE
SINGLE STAGE

SKETCH OF
SPECIMEN AT
FAILURE



Cell Pressure (kPa)	Failure Strain (%)	Rate of Strain (%/min)	Corrected Deviator Stress (kPa)	Shear Strength c_u (kPa)
50	9.0	2.0	641	320

Remarks/Abnormalities

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

Signed

Date 12 October 2023

MURRAY RIX

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



TEST CERTIFICATE

UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION

BS EN ISO 17892-8:2018

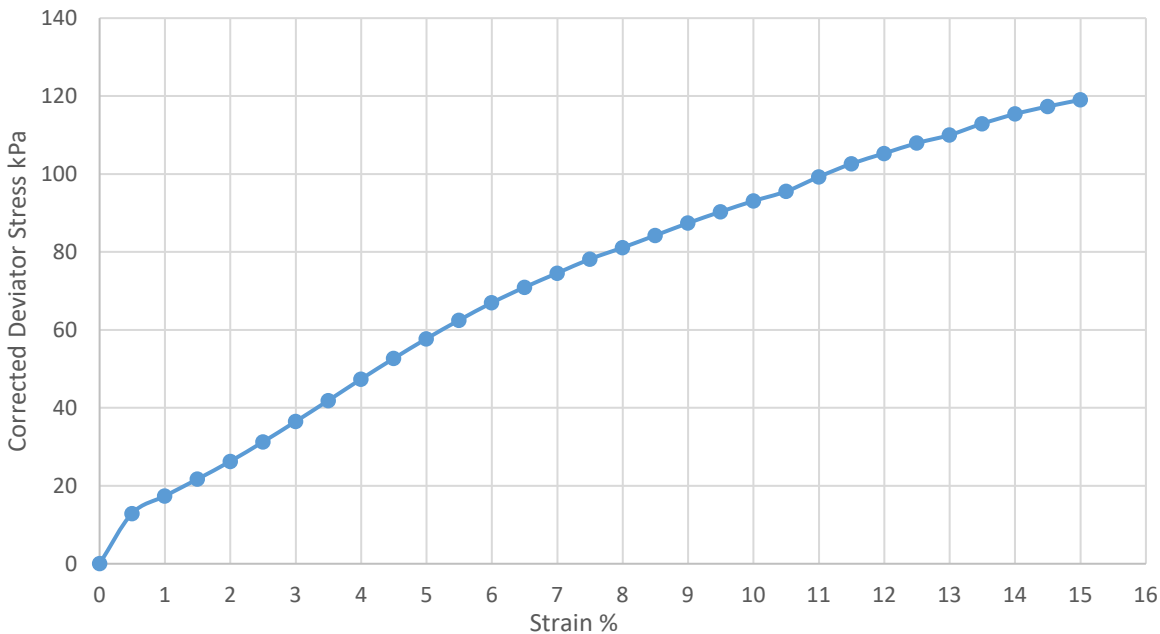
CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A5487 - Kronospan North Access Road
JOB NUMBER	MRN 4589/93

SAMPLE LABEL	CP13 (3.0-3.45m)	DATE SAMPLED	17-Aug-23
LAB SAMPLE No.	130198	DATE RECEIVED	24-Aug-23
DATE TESTED	04-Sep-23	SAMPLED BY	Client
MATERIAL	Grey silty slightly sandy slightly gravelly CLAY		
ADVISED SOURCE	Site Investigation Sample		

INITIAL CONDITIONS

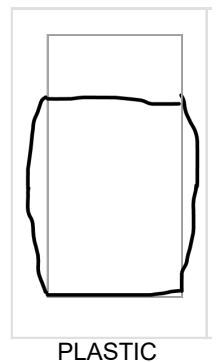
Specimen Location		Sample Length (mm)	450	Specimen depth from top of Sample (mm)	100
		Sample Orientation	Vertical	Specimen Condition	Undisturbed
		Specimen Length (mm)	199	Specimen Water Content (%)	26.1
		Specimen Diameter (mm)	99	Specimen Bulk Density (Mg/m3)	1.92
		Membrane Thickness (mm)	0.4	Specimen Dry Density (Mg/m3)	1.52
		Membrane Correction	3.39		

CORRECTED DEVIATOR STRESS vs AXIAL STRAIN



TEST TYPE
SINGLE STAGE

SKETCH OF
SPECIMEN AT
FAILURE



Cell Pressure (kPa)	Failure Strain (%)	Rate of Strain (%/min)	Corrected Deviator Stress (kPa)	Shear Strength c_u (kPa)
50	15.0	2.0	119	60

Remarks/Abnormalities

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

Signed

Date 12 October 2023

MURRAY RIX

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DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



TEST CERTIFICATE

UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION

BS EN ISO 17892-8:2018

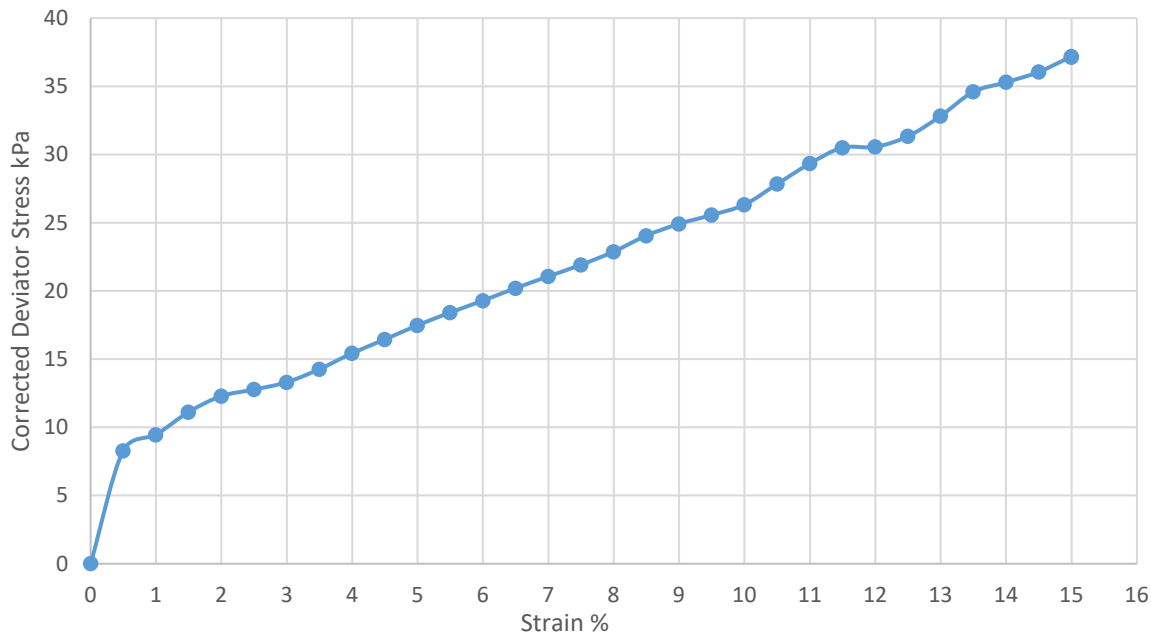
CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A5487 - Kronospan North Access Road
JOB NUMBER	MRN 4589/93

SAMPLE LABEL	CP102 (2.0-1.45m)	DATE SAMPLED	17-Aug-23
LAB SAMPLE No.	130193	DATE RECEIVED	24-Aug-23
DATE TESTED	04-Sep-23	SAMPLED BY	Client
MATERIAL	Grey silty slightly sandy slightly gravelly CLAY		
ADVISED SOURCE	Site Investigation Sample		

INITIAL CONDITIONS

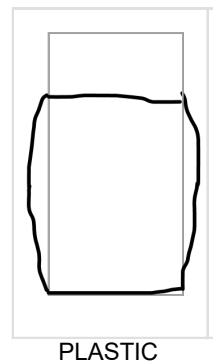
Specimen Location		Sample Length (mm)	450	Specimen depth from top of Sample (mm)	60
		Sample Orientation	Vertical	Specimen Condition	Undisturbed
		Specimen Length (mm)	195	Specimen Water Content (%)	22.3
		Specimen Diameter (mm)	101	Specimen Bulk Density (Mg/m3)	1.88
		Membrane Thickness (mm)	0.4	Specimen Dry Density (Mg/m3)	1.54
		Membrane Correction	3.39		

CORRECTED DEVIATOR STRESS vs AXIAL STRAIN



TEST TYPE
SINGLE STAGE

SKETCH OF
SPECIMEN AT
FAILURE



Cell Pressure (kPa)	Failure Strain (%)	Rate of Strain (%/min)	Corrected Deviator Stress (kPa)	Shear Strength Cu (kPa)
50	15.0	2.0	37	19

Remarks/Abnormalities

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

Signed

Date 12 October 2023

MURRAY RIX

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



TEST CERTIFICATE

UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION

BS EN ISO 17892-8:2018

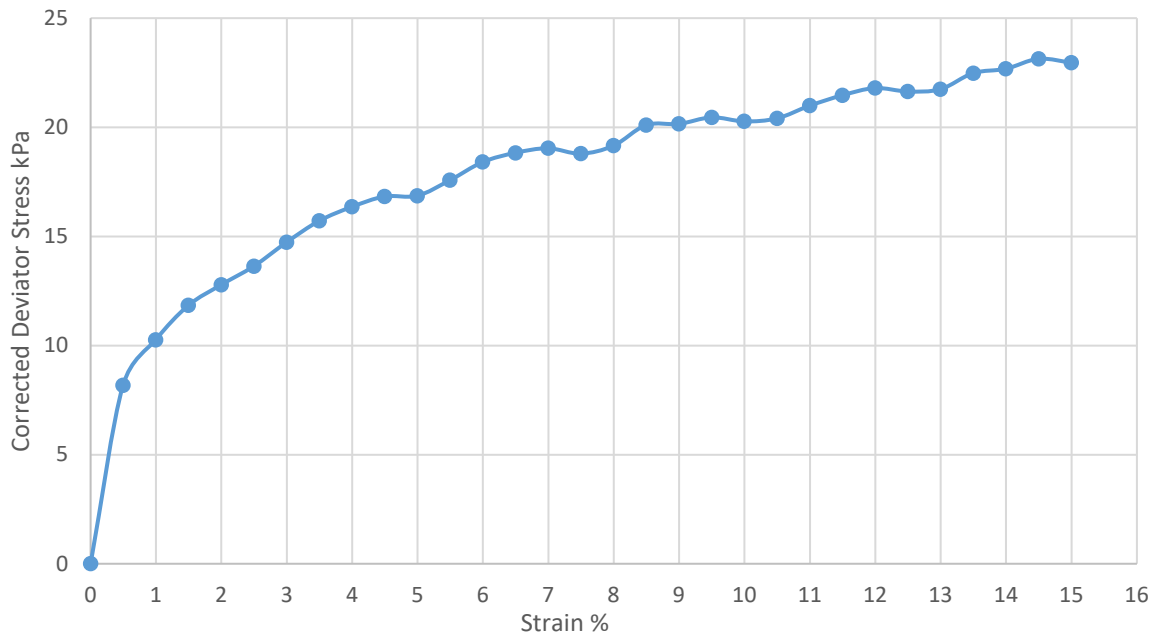
CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A5487 - Kronospan North Access Road
JOB NUMBER	MRN 4589/93

SAMPLE LABEL	CP02 (9.0-9.45m)	DATE SAMPLED	18-Aug-23
LAB SAMPLE No.	130195	DATE RECEIVED	24-Aug-23
DATE TESTED	04-Sep-23	SAMPLED BY	Client
MATERIAL	Brown silty slightly sandy slightly gravelly CLAY		
ADVISED SOURCE	Site Investigation Sample		

INITIAL CONDITIONS

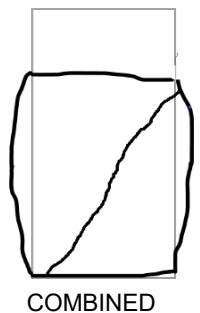
Specimen Location		Sample Length (mm)	280	Specimen depth from top of Sample (mm)	40
		Sample Orientation	Vertical	Specimen Condition	Undisturbed
		Specimen Length (mm)	195	Specimen Water Content (%)	22.8
		Specimen Diameter (mm)	100	Specimen Bulk Density (Mg/m3)	2.14
		Membrane Thickness (mm)	0.4	Specimen Dry Density (Mg/m3)	1.74
		Membrane Correction	3.39		

CORRECTED DEVIATOR STRESS vs AXIAL STRAIN



TEST TYPE
SINGLE STAGE

SKETCH OF
SPECIMEN AT
FAILURE



COMBINED

Cell Pressure (kPa)	Failure Strain (%)	Rate of Strain (%/min)	Corrected Deviator Stress (kPa)	Shear Strength c_u (kPa)
200	14.5	2.0	23	12

Remarks/Abnormalities

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

Signed

Date 12 October 2023

TEST REPORT

Client Earth Environmental & Geotechnical Ltd

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

Contract A5487 -
Kronospan North Access Road

Job Number MRN 4589/94
Date of Issue 16 October 2023
Page 1 of 3

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.

MURRAY RIX

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

TEST CERTIFICATE

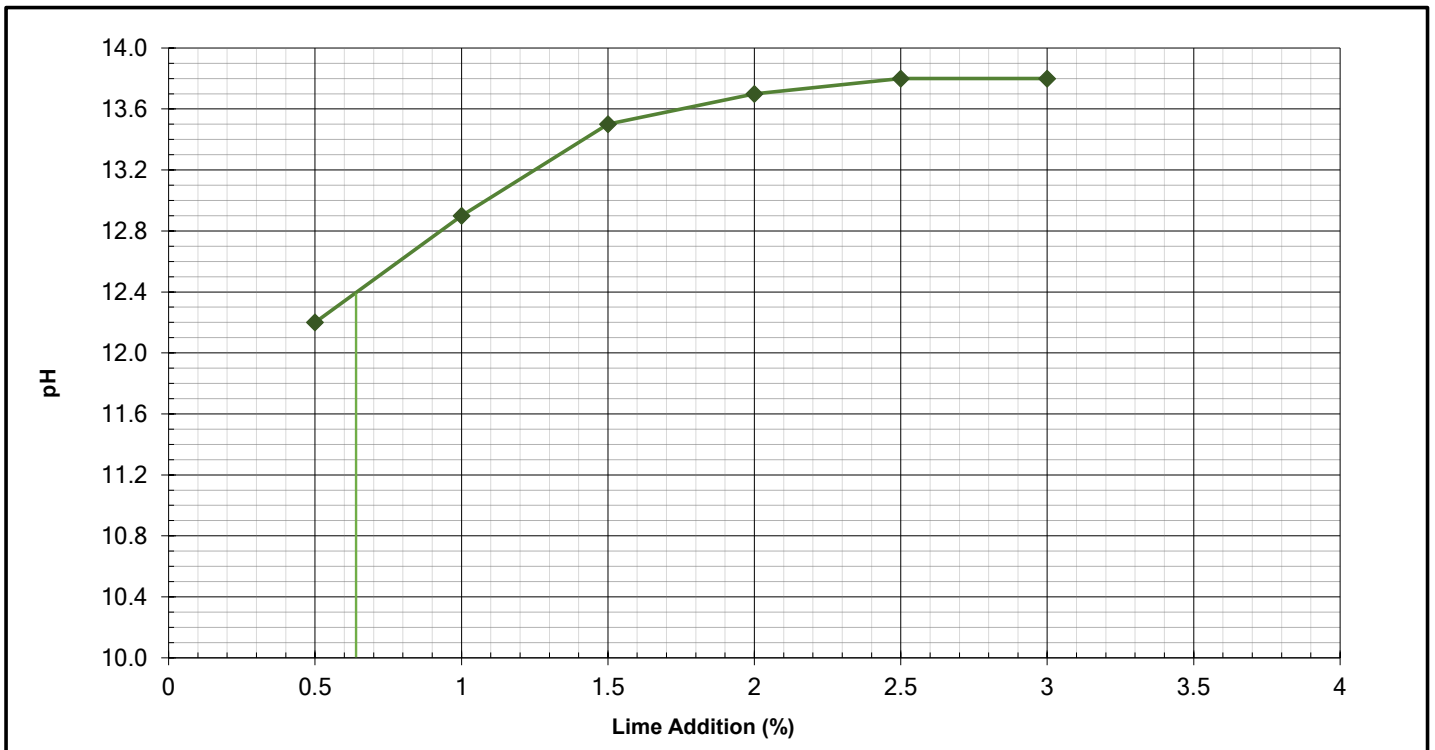
DETERMINATION OF THE INITIAL CONSUMPTION OF LIME
BS 1924-2:2018

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A5487 - Kronospan North Access Road
JOB NUMBER	MRN 4589/94

SAMPLE LABEL	TP03 (1.00m)	DATE SAMPLED	22-Aug-23
SAMPLE No.	130433	DATE RECEIVED	24-Aug-23
DATE TESTED	29-Sep-23	SAMPLED BY	Client

MATERIAL	Brown slightly sandy SILT	LIME USED	Quicklime
SAMPLE CERT.	No	% RET. 425um	1%

LIME ADDITION (%)	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	5.0	6.0
pH (25°C)	12.2	12.9	13.5	13.7	13.8	13.8	----	----	----	----



INITIAL CONSUMPTION OF LIME (%)	0.6
------------------------------------	-----

REMARKS

SIGNED

NAME

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

DATE

16-Oct-23

MURRAY RIX

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

TEST CERTIFICATE

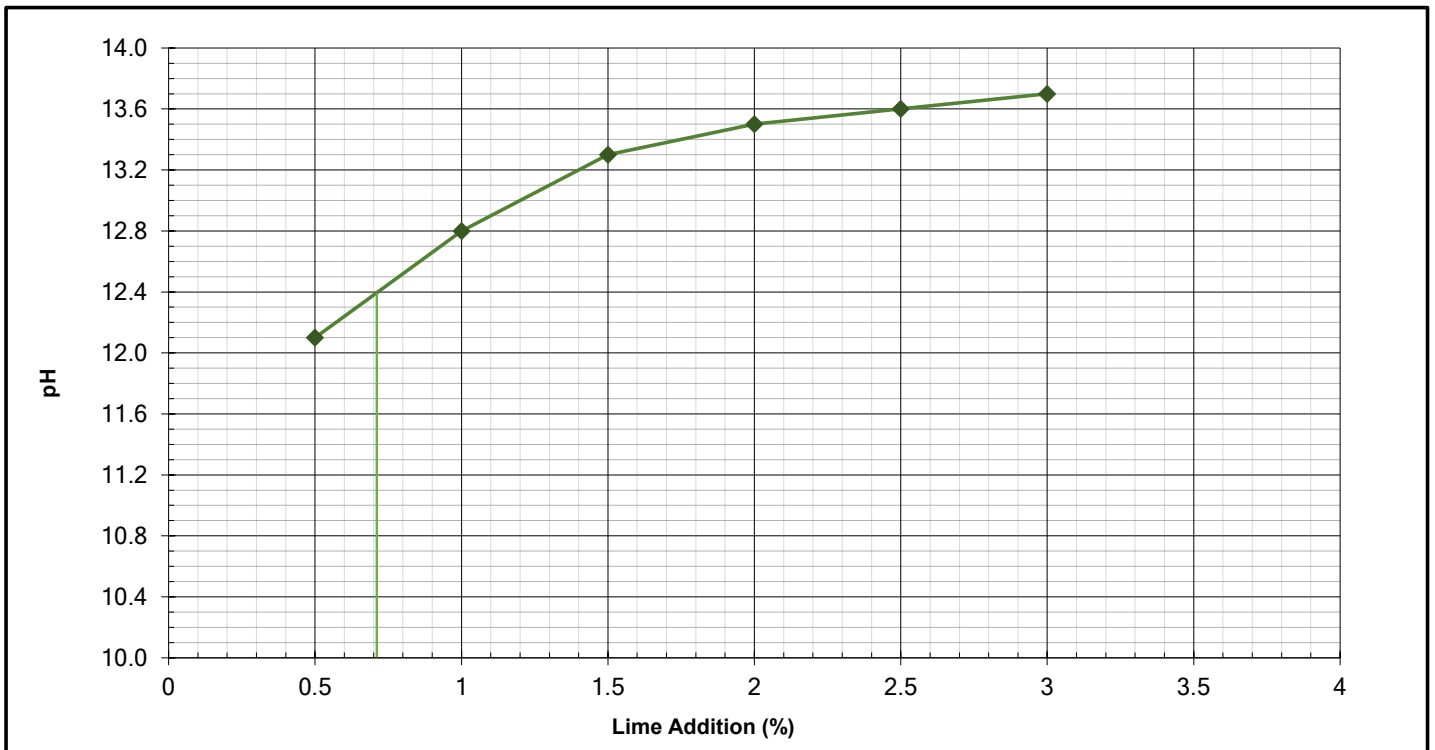
DETERMINATION OF THE INITIAL CONSUMPTION OF LIME
BS 1924-2:2018

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A5487 - Kronospan North Access Road
JOB NUMBER	MRN 4589/94

SAMPLE LABEL	TP10 (1.50m)	DATE SAMPLED	23-Aug-23
SAMPLE No.	130462	DATE RECEIVED	24-Aug-23
DATE TESTED	29-Sep-23	SAMPLED BY	Client

MATERIAL	Brown silty slightly sandy CLAY	LIME USED	Quicklime
SAMPLE CERT.	No	% RET. 425um	5%

LIME ADDITION (%)	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	5.0	6.0
pH (25°C)	12.1	12.8	13.3	13.5	13.6	13.7	----	----	----	----



INITIAL CONSUMPTION OF LIME (%)	0.7
------------------------------------	-----

REMARKS

SIGNED

NAME

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

DATE

16-Oct-23

TEST REPORT

Client Earth Environmental & Geotechnical Ltd

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

Contract A5487 -
Kronospan North Access Road

Job Number MRN 4589/95
Date of Issue 19 October 2023
Page 1 of 17

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.
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- 5 The results included within the report are representative of the samples submitted for analysis.
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TEST CERTIFICATE
PARTICLE SIZE DISTRIBUTION

BS EN ISO 17892-4:2016

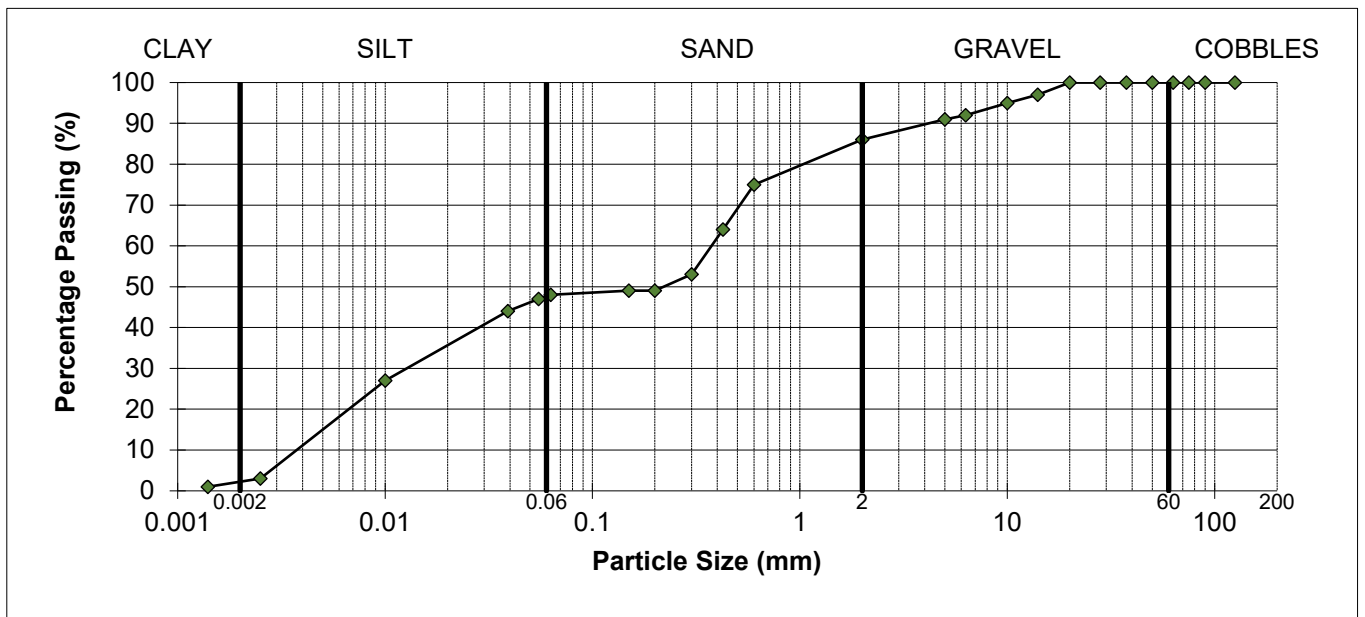
Determination of Water Content in accordance with BS EN ISO 17892-1:2014+A1:2022 (Oven Dry)

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A5487 - Kronospan North Access Road
JOB NUMBER	MRN 4589/95

SAMPLE LABEL	TP103 (1.0m)	DATE SAMPLED	22-Sep-23
LAB SAMPLE No	131507	DATE RECEIVED	22-Sep-23
DATE TESTED	03-Oct-23	SAMPLED BY	Client

MATERIAL	Brown very silty gravelly SAND
ADVISED SOURCE	Site Investigation Sample

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100		2	86	
90	100		0.6	75	
75	100		0.425	64	
63	100		0.3	53	
50	100		0.2	49	
37.5	100		0.15	49	
28	100		0.063	48	
20	100		0.055	47	
14	97		0.039	44	
10	95		0.01	27	
6.3	92		0.0025	3	
5	91		0.0014	1	



REMARKS

As received water content = 14.5%

SIGNED

NAME

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

DATE

19-Oct-23

TEST CERTIFICATE
PARTICLE SIZE DISTRIBUTION

BS EN ISO 17892-4:2016

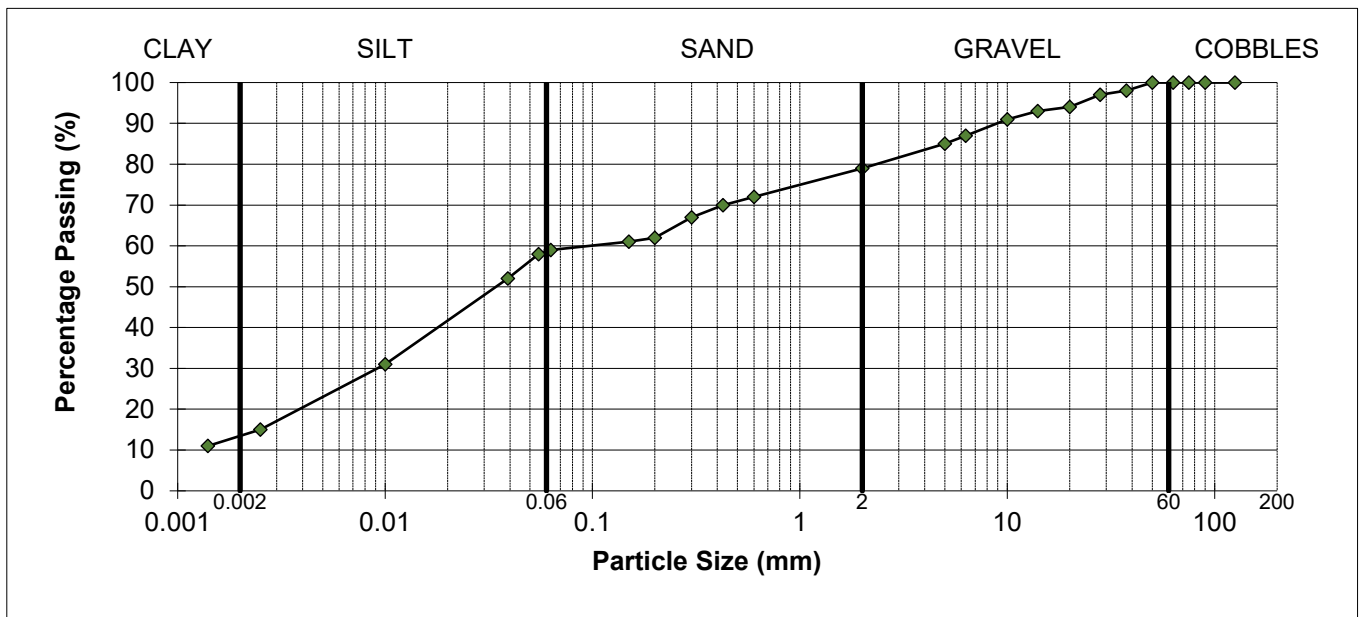
Determination of Water Content in accordance with BS EN ISO 17892-1:2014+A1:2022 (Oven Dry)

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A5487 - Kronospan North Access Road
JOB NUMBER	MRN 4589/95

SAMPLE LABEL	TP104 (1.0m)	DATE SAMPLED	22-Sep-23
LAB SAMPLE No	131510	DATE RECEIVED	22-Sep-23
DATE TESTED	03-Oct-23	SAMPLED BY	Client

MATERIAL	Brown silty slightly sandy slightly gravelly CLAY
ADVISED SOURCE	Site Investigation Sample

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100		2	79	
90	100		0.6	72	
75	100		0.425	70	
63	100		0.3	67	
50	100		0.2	62	
37.5	98		0.15	61	
28	97		0.063	59	
20	94		0.055	58	
14	93		0.039	52	
10	91		0.01	31	
6.3	87		0.0025	15	
5	85		0.0014	11	



REMARKS

As received water content = 15.1%

SIGNED

NAME

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

DATE

19-Oct-23

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

TEST CERTIFICATE
PARTICLE SIZE DISTRIBUTION

BS EN ISO 17892-4:2016

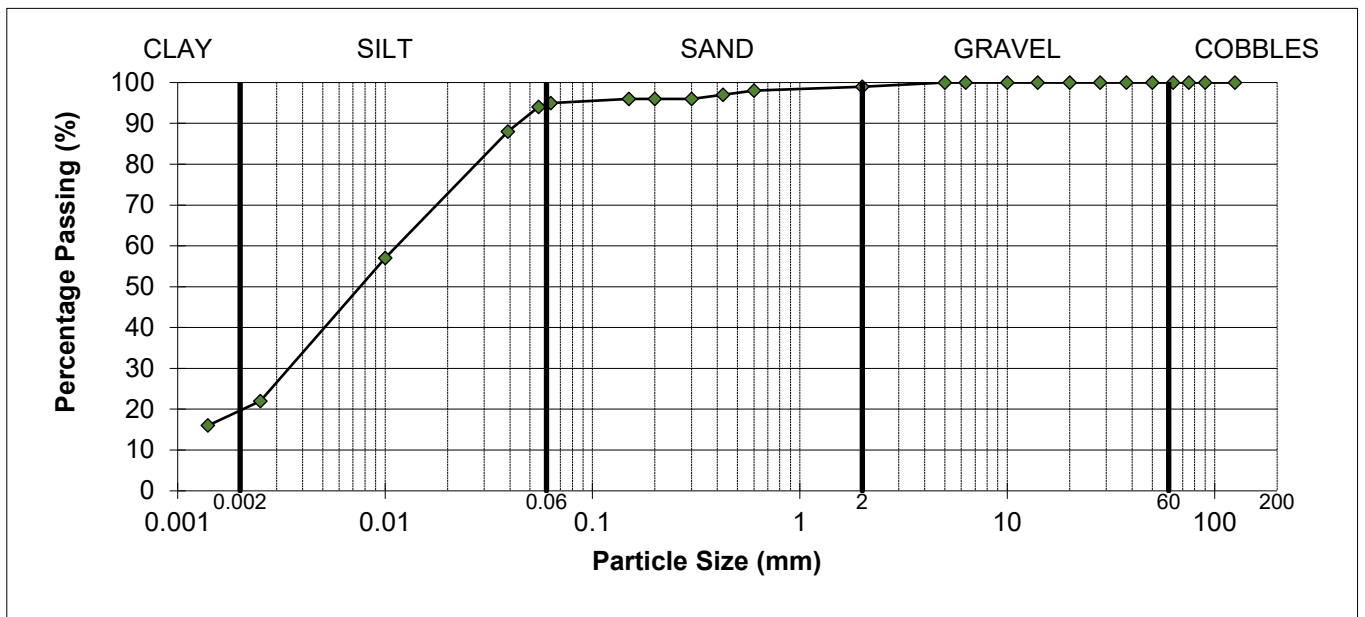
Determination of Water Content in accordance with BS EN ISO 17892-1:2014+A1:2022 (Oven Dry)

CLIENT	Earth Environmental & Geotechnical Ltd		
SITE	A5487 - Kronospan North Access Road		
JOB NUMBER	MRN 4589/95		

SAMPLE LABEL	TP106 (1.0m)	DATE SAMPLED	22-Sep-23
LAB SAMPLE No	131516	DATE RECEIVED	22-Sep-23
DATE TESTED	03-Oct-23	SAMPLED BY	Client

MATERIAL	Brown silty slightly sandy slightly gravelly CLAY		
ADVISED SOURCE	Site Investigation Sample		

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100		2	99	
90	100		0.6	98	
75	100		0.425	97	
63	100		0.3	96	
50	100		0.2	96	
37.5	100		0.15	96	
28	100		0.063	95	
20	100		0.055	94	
14	100		0.039	88	
10	100		0.01	57	
6.3	100		0.0025	22	
5	100		0.0014	16	



REMARKS

As received water content = 18.7%

SIGNED

NAME

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

DATE

19-Oct-23

TEST CERTIFICATE
PARTICLE SIZE DISTRIBUTION

BS EN ISO 17892-4:2016

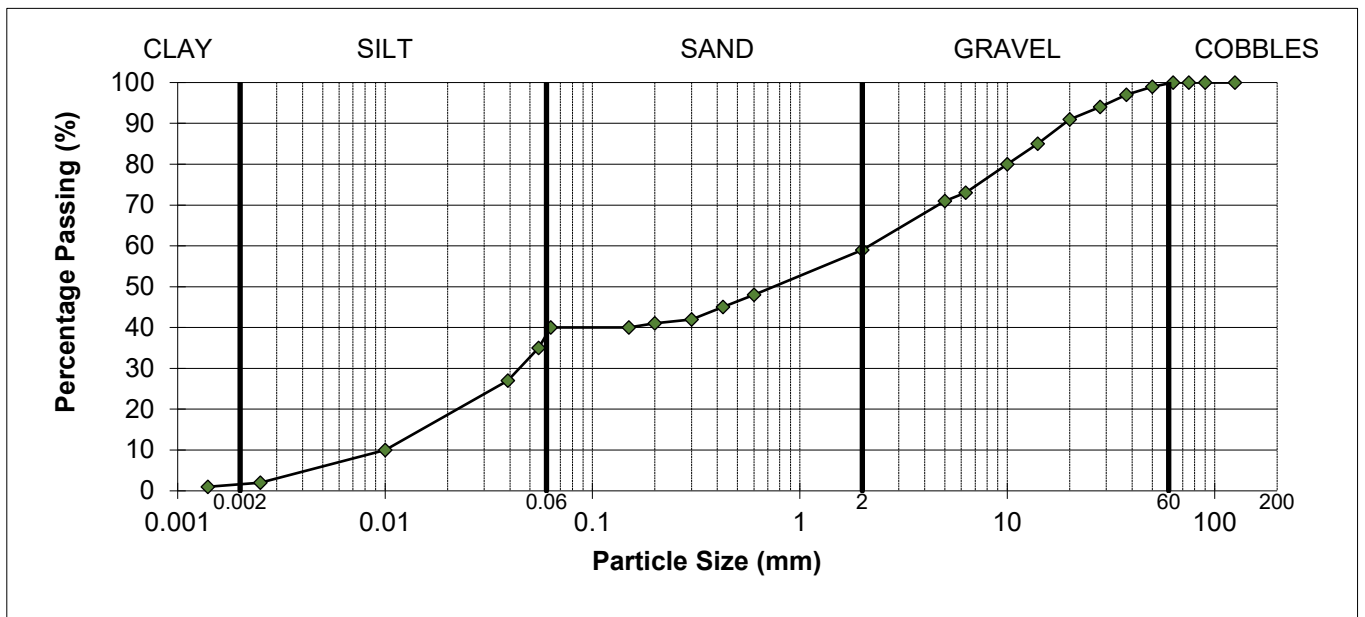
Determination of Water Content in accordance with BS EN ISO 17892-1:2014+A1:2022 (Oven Dry)

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A5487 - Kronospan North Access Road
JOB NUMBER	MRN 4589/95

SAMPLE LABEL	TP107 (1.0m)	DATE SAMPLED	22-Sep-23
LAB SAMPLE No	131519	DATE RECEIVED	22-Sep-23
DATE TESTED	03-Oct-23	SAMPLED BY	Client

MATERIAL	Brown clay bound very silty SAND & GRAVEL
ADVISED SOURCE	Site Investigation Sample

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100		2	59	
90	100		0.6	48	
75	100		0.425	45	
63	100		0.3	42	
50	99		0.2	41	
37.5	97		0.15	40	
28	94		0.063	40	
20	91		0.055	35	
14	85		0.039	27	
10	80		0.01	10	
6.3	73		0.0025	2	
5	71		0.0014	1	



REMARKS

As received water content = 11.5%

SIGNED

NAME

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

DATE

19-Oct-23

TEST CERTIFICATE
PARTICLE SIZE DISTRIBUTION

BS EN ISO 17892-4:2016

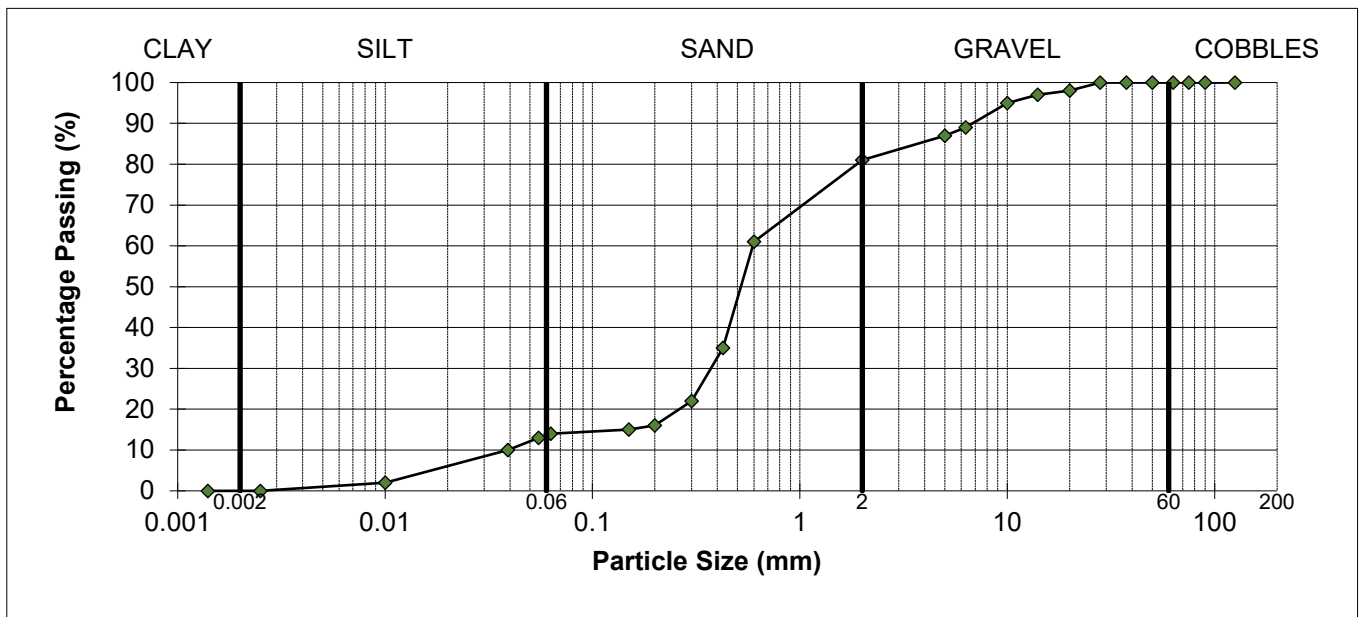
Determination of Water Content in accordance with BS EN ISO 17892-1:2014+A1:2022 (Oven Dry)

CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A5487 - Kronospan North Access Road
JOB NUMBER	MRN 4589/95

SAMPLE LABEL	TP109 (1.0m)	DATE SAMPLED	22-Sep-23
LAB SAMPLE No	131519	DATE RECEIVED	22-Sep-23
DATE TESTED	03-Oct-23	SAMPLED BY	Client

MATERIAL	Brown silty slightly gravelly SAND
ADVISED SOURCE	Site Investigation Sample

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100		2	81	
90	100		0.6	61	
75	100		0.425	35	
63	100		0.3	22	
50	100		0.2	16	
37.5	100		0.15	15	
28	100		0.063	14	
20	98		0.055	13	
14	97		0.039	10	
10	95		0.01	2	
6.3	89		0.0025	0	
5	87		0.0014	0	



REMARKS

As received water content = 8.7%

SIGNED

NAME

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

DATE

19-Oct-23

MURRAY RIX

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



TEST CERTIFICATE

CALIFORNIA BEARING RATIO (CBR)

BS 1377-2:2022 Cl. 15

DETERMINATION OF WATER CONTENT - BS EN ISO 17892-1:2014+A1:2022 (Oven Dry)

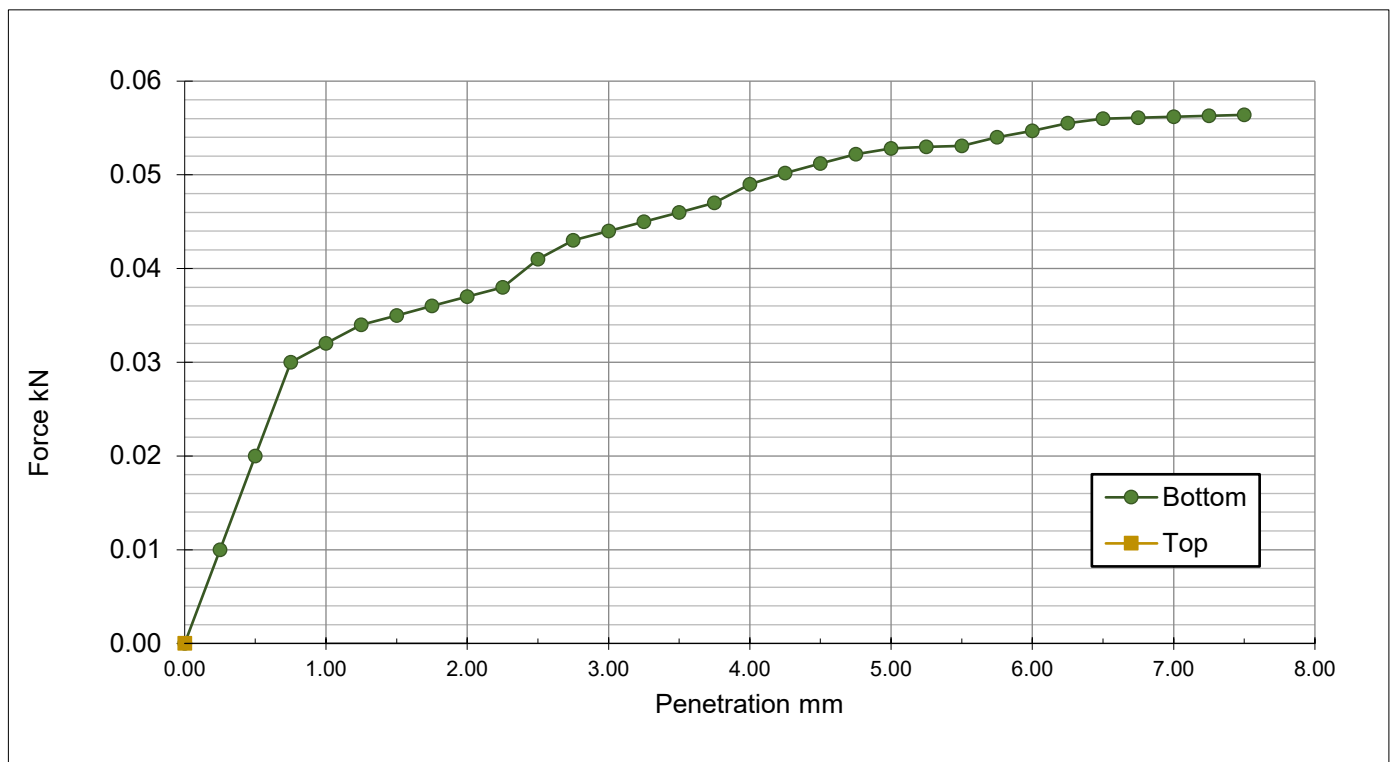
CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A5487 - Kronospan North Access Road
JOB NUMBER	MRN 4589/95

SAMPLE LABEL	TP102 (1.0m)	DATE SAMPLED	22-Sep-23
LAB SAMPLE No	131504	DATE RECEIVED	22-Sep-23
DATE TESTED	10-Oct-23	SAMPLED BY	Client

MATERIAL	Brown silty slightly sandy slightly gravelly CLAY
ADVISED SOURCE	Site Investigation Sample

INITIAL CONDITIONS

SAMPLE PREPARATION	Dynamic Compaction, Specified Effort, 2.5 kg Rammer				
GREATER THAN 20 mm REMOVED	0 %				
BULK DENSITY	1.97 Mg/m ³	MOISTURE CONTENT	25.3 %	DRY DENSITY	1.57 Mg/m ³
TEST CONDITION	Unsoaked	MEASURED SWELL	N/A mm	SURCHARGE	2 kg



CBR VALUE

Top %
Bottom %

ORIGIN CORRECTION

Top mm
Bottom mm

FINAL MOISTURE CONTENT

Top %
Bottom %

REMARKS

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

SIGNED

DATE

19-Oct-23

MURRAY RIX

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



TEST CERTIFICATE

CALIFORNIA BEARING RATIO (CBR)

BS 1377-2:2022 Cl. 15

DETERMINATION OF WATER CONTENT - BS EN ISO 17892-1:2014+A1:2022 (Oven Dry)

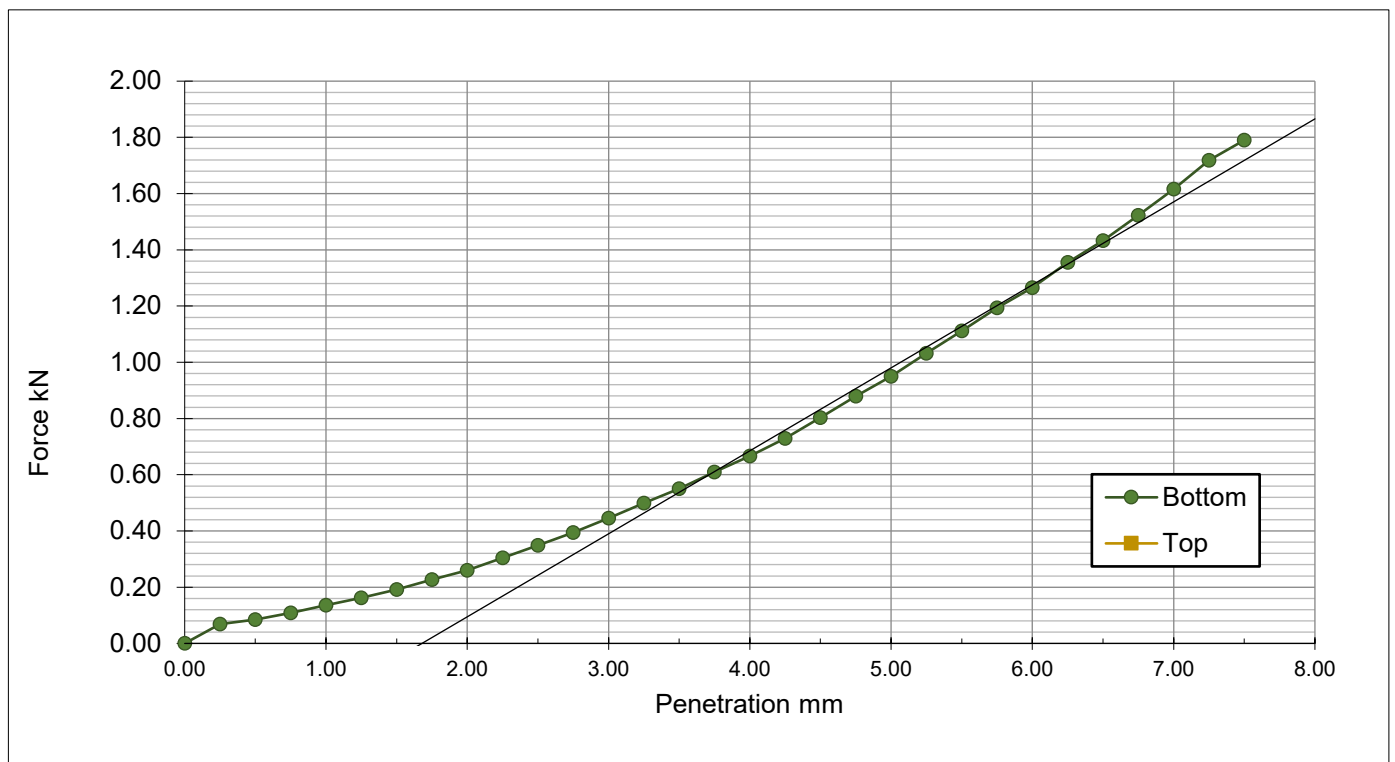
CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A5487 - Kronospan North Access Road
JOB NUMBER	MRN 4589/95

SAMPLE LABEL	TP103 (1.0m)	DATE SAMPLED	22-Sep-23
LAB SAMPLE No	131507	DATE RECEIVED	22-Sep-23
DATE TESTED	10-Oct-23	SAMPLED BY	Client

MATERIAL	Brown very silty gravelly SAND
ADVISED SOURCE	Site Investigation Sample

INITIAL CONDITIONS

SAMPLE PREPARATION	Dynamic Compaction, Specified Effort, 2.5 kg Rammer				
GREATER THAN 20 mm REMOVED	0 %				
BULK DENSITY	2.09 Mg/m ³	MOISTURE CONTENT	15.1 %	DRY DENSITY	1.81 Mg/m ³
TEST CONDITION	Unsoaked	MEASURED SWELL	N/A mm	SURCHARGE	2 kg



CBR VALUE

Top %
Bottom %

ORIGIN CORRECTION

Top mm
Bottom mm

FINAL MOISTURE CONTENT

Top %
Bottom %

REMARKS

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

SIGNED

DATE

19-Oct-23

MURRAY RIX

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



TEST CERTIFICATE

CALIFORNIA BEARING RATIO (CBR)

BS 1377-2:2022 Cl. 15

DETERMINATION OF WATER CONTENT - BS EN ISO 17892-1:2014+A1:2022 (Oven Dry)

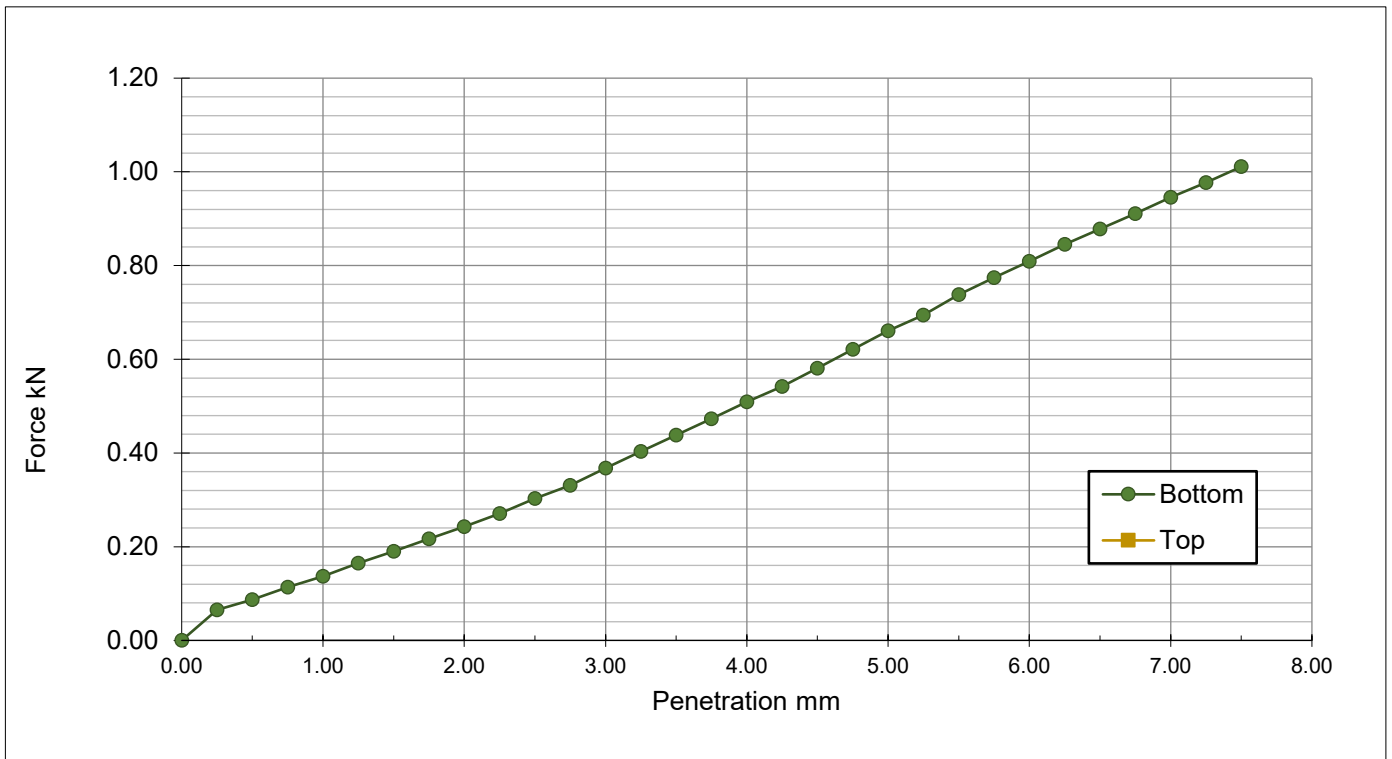
CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A5487 - Kronospan North Access Road
JOB NUMBER	MRN 4589/95

SAMPLE LABEL	TP104 (1.0m)	DATE SAMPLED	22-Sep-23
LAB SAMPLE No	131510	DATE RECEIVED	22-Sep-23
DATE TESTED	10-Oct-23	SAMPLED BY	Client

MATERIAL	Brown silty slightly sandy slightly gravelly CLAY
ADVISED SOURCE	Site Investigation Sample

INITIAL CONDITIONS

SAMPLE PREPARATION	Dynamic Compaction, Specified Effort, 2.5 kg Rammer				
GREATER THAN 20 mm REMOVED	6 %				
BULK DENSITY	2.14 Mg/m ³	MOISTURE CONTENT	15.0 %	DRY DENSITY	1.86 Mg/m ³
TEST CONDITION	Unsoaked	MEASURED SWELL	N/A mm	SURCHARGE	2 kg



CBR VALUE

Top %
Bottom %

ORIGIN CORRECTION

Top mm
Bottom mm

FINAL MOISTURE CONTENT

Top %
Bottom %

REMARKS

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

SIGNED

DATE

19-Oct-23

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TEST CERTIFICATE

CALIFORNIA BEARING RATIO (CBR)

BS 1377-2:2022 Cl. 15

DETERMINATION OF WATER CONTENT - BS EN ISO 17892-1:2014+A1:2022 (Oven Dry)

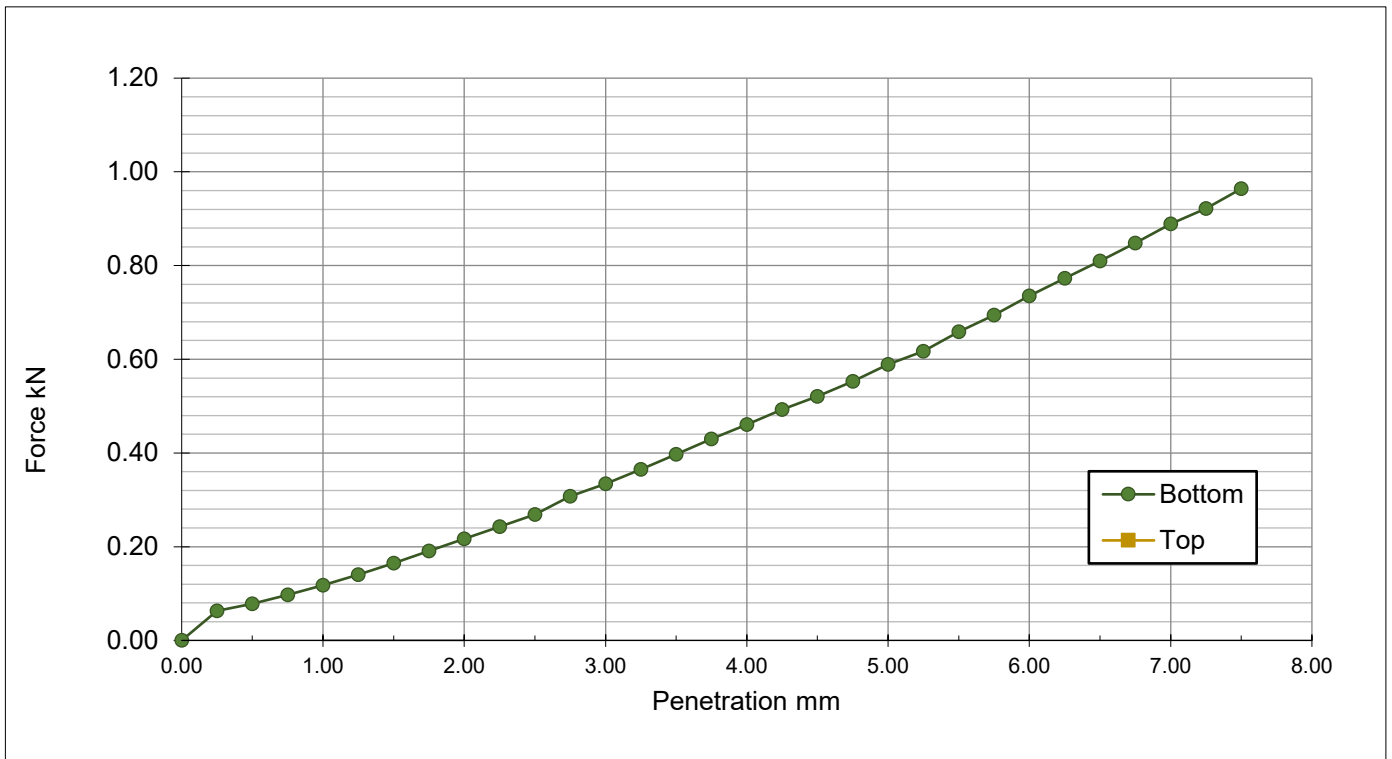
CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A5487 - Kronospan North Access Road
JOB NUMBER	MRN 4589/95

SAMPLE LABEL	TP106 (1.0m)	DATE SAMPLED	22-Sep-23
LAB SAMPLE No	131516	DATE RECEIVED	22-Sep-23
DATE TESTED	10-Oct-23	SAMPLED BY	Client

MATERIAL	Brown silty slightly sandy slightly gravelly CLAY
ADVISED SOURCE	Site Investigation Sample

INITIAL CONDITIONS

SAMPLE PREPARATION	Dynamic Compaction, Specified Effort, 2.5 kg Rammer				
GREATER THAN 20 mm REMOVED	0 %				
BULK DENSITY	2.05 Mg/m ³	MOISTURE CONTENT	18.7 %	DRY DENSITY	1.73 Mg/m ³
TEST CONDITION	Unsoaked	MEASURED SWELL	N/A mm	SURCHARGE	2 kg



CBR VALUE

Top N/A %
Bottom 2.9 %

ORIGIN CORRECTION

Top N/A mm
Bottom N/A mm

FINAL MOISTURE CONTENT

Top N/A %
Bottom 18.7 %

REMARKS

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

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TEST CERTIFICATE

CALIFORNIA BEARING RATIO (CBR)

BS 1377-2:2022 Cl. 15

DETERMINATION OF WATER CONTENT - BS EN ISO 17892-1:2014+A1:2022 (Oven Dry)

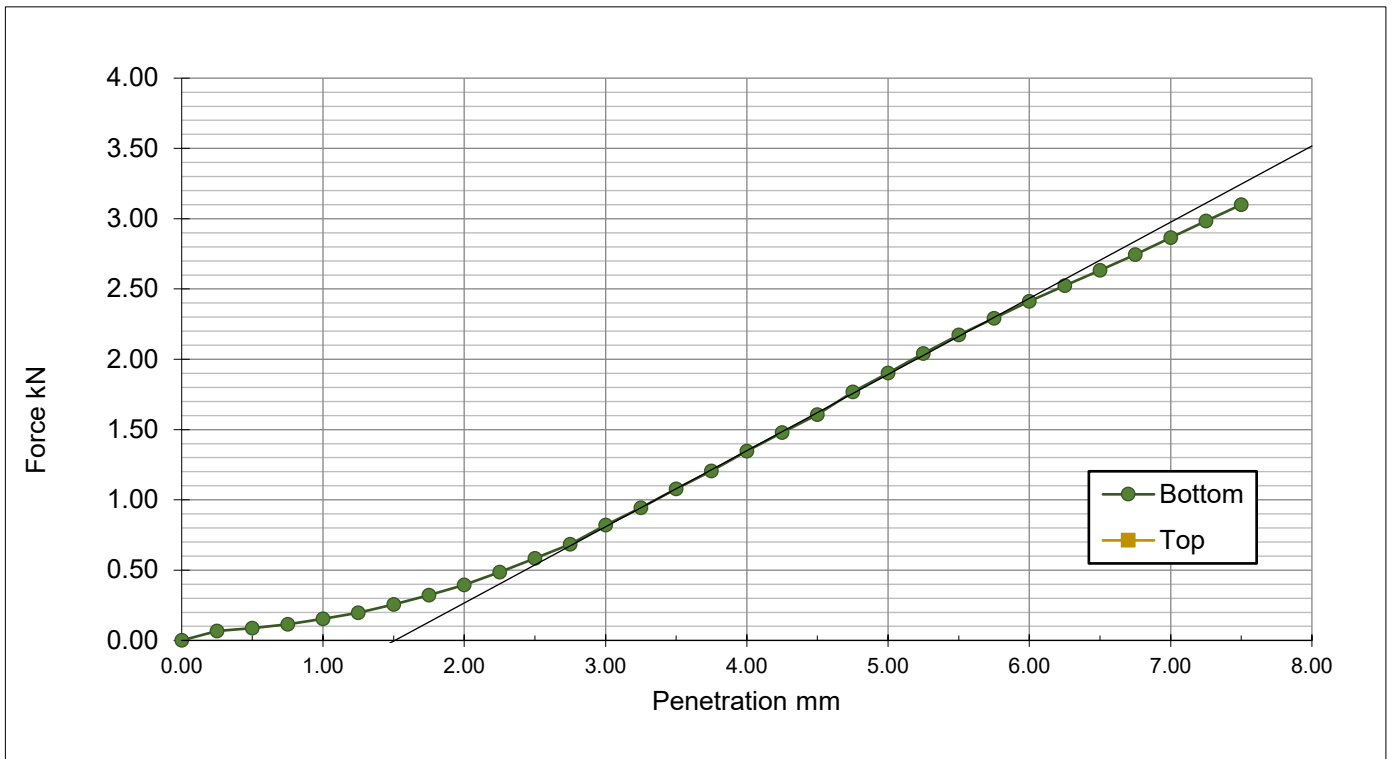
CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A5487 - Kronospan North Access Road
JOB NUMBER	MRN 4589/95

SAMPLE LABEL	TP107 (1.0m)	DATE SAMPLED	22-Sep-23
LAB SAMPLE No	131519	DATE RECEIVED	22-Sep-23
DATE TESTED	10-Oct-23	SAMPLED BY	Client

MATERIAL	Brown clay bound very silty SAND & GRAVEL
ADVISED SOURCE	Site Investigation Sample

INITIAL CONDITIONS

SAMPLE PREPARATION	Dynamic Compaction, Specified Effort, 2.5 kg Rammer				
GREATER THAN 20 mm REMOVED	9 %				
BULK DENSITY	2.07 Mg/m ³	MOISTURE CONTENT	14.2 %	DRY DENSITY	1.81 Mg/m ³
TEST CONDITION	Unsoaked	MEASURED SWELL	N/A mm	SURCHARGE	2 kg



CBR VALUE

Top N/A %
Bottom 13.2 %

ORIGIN CORRECTION

Top N/A mm
Bottom N/A mm

FINAL MOISTURE CONTENT

Top N/A %
Bottom 14.2 %

REMARKS

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

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19-Oct-23

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TEST CERTIFICATE

CALIFORNIA BEARING RATIO (CBR)

BS 1377-2:2022 Cl. 15

DETERMINATION OF WATER CONTENT - BS EN ISO 17892-1:2014+A1:2022 (Oven Dry)

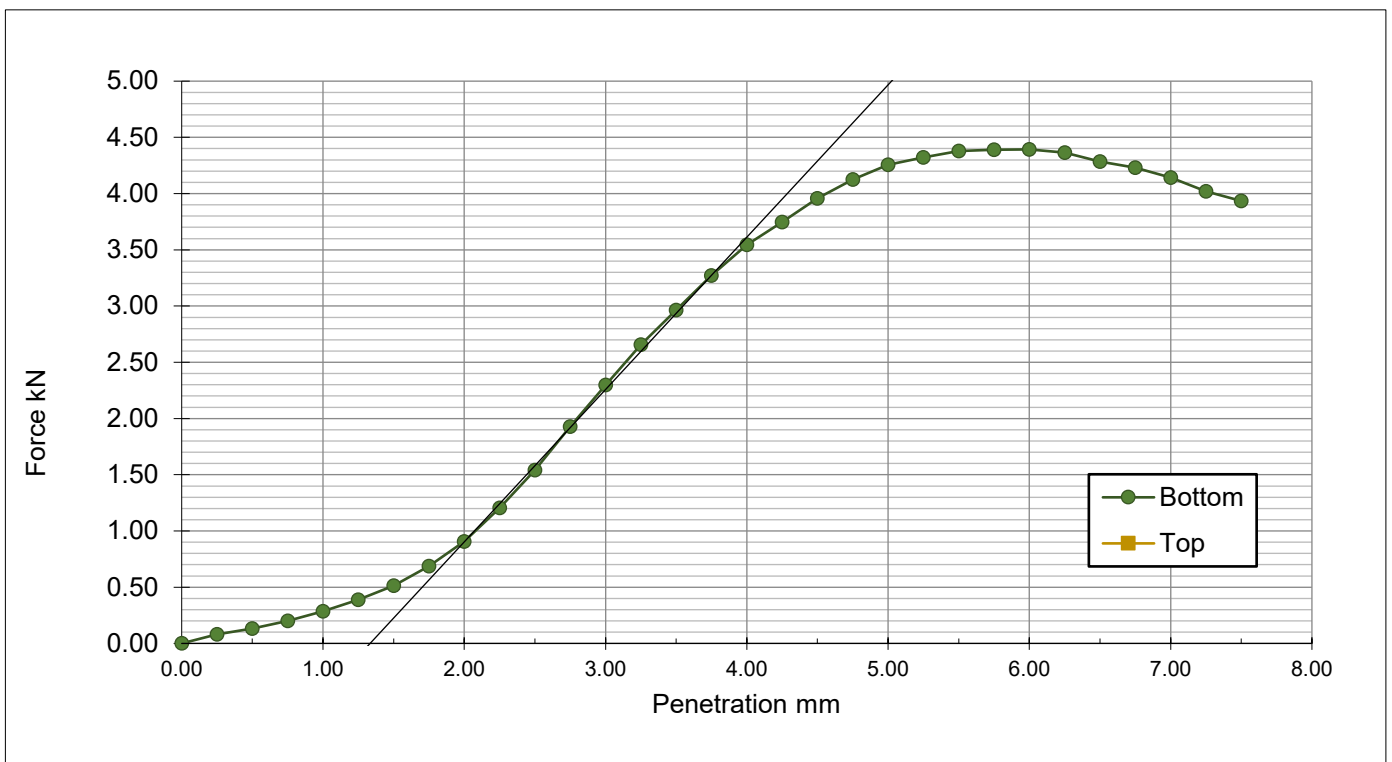
CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A5487 - Kronospan North Access Road
JOB NUMBER	MRN 4589/95

SAMPLE LABEL	TP109 (1.0m)	DATE SAMPLED	22-Sep-23
LAB SAMPLE No	131521	DATE RECEIVED	22-Sep-23
DATE TESTED	10-Oct-23	SAMPLED BY	Client

MATERIAL	Brown silty slightly gravelly SAND
ADVISED SOURCE	Site Investigation Sample

INITIAL CONDITIONS

SAMPLE PREPARATION	Dynamic Compaction, Specified Effort, 2.5 kg Rammer				
GREATER THAN 20 mm REMOVED	2 %				
BULK DENSITY	2.08 Mg/m ³	MOISTURE CONTENT	9.3 %	DRY DENSITY	1.90 Mg/m ³
TEST CONDITION	Unsoaked	MEASURED SWELL	N/A mm	SURCHARGE	2 kg



CBR VALUE

Top N/A %
Bottom 24.8 %

ORIGIN CORRECTION

Top N/A mm
Bottom N/A mm

FINAL MOISTURE CONTENT

Top N/A %
Bottom 9.3 %

REMARKS

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

SIGNED

DATE

19-Oct-23

MURRAY RIX

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DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



TEST CERTIFICATE

DRY DENSITY/WATER CONTENT RELATIONSHIP 2.5kg RAMMER

BS 1377-2:2022 Cl.11

PARTICLE DENSITY METHOD BS 1377-2:2022 Cl.9.2

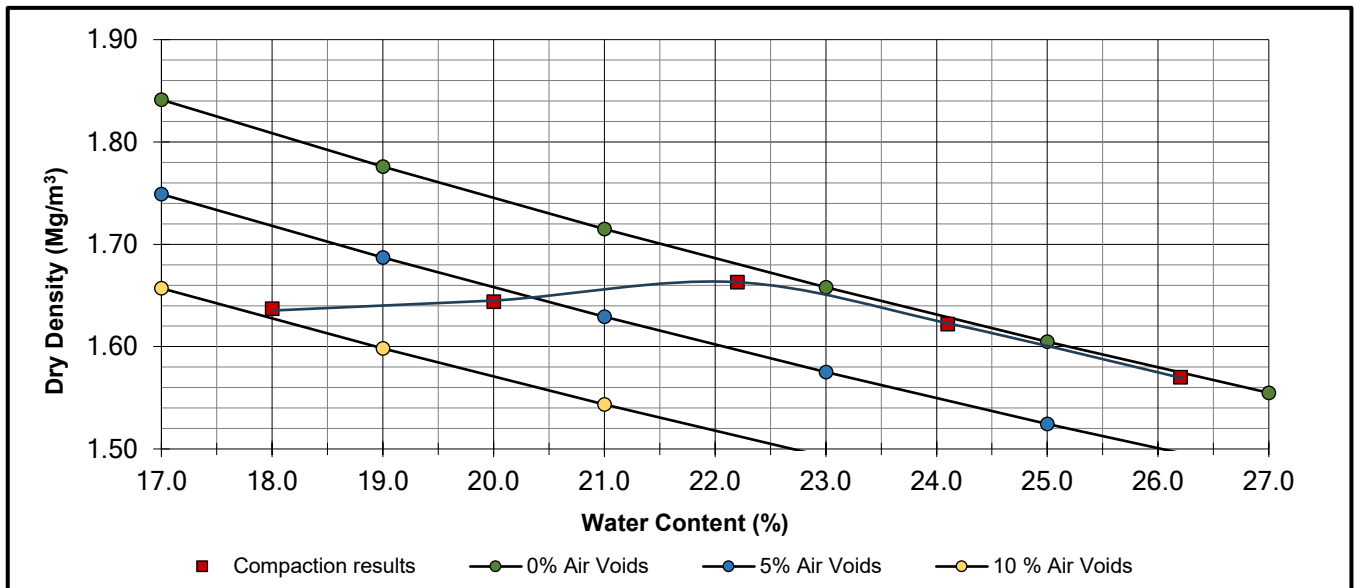
CLIENT	Earth Environmental & Geotechnical Ltd		
SITE	A5487 - Kronospan North Access Road		
JOB NUMBER	MRN 4589/95		

SAMPLE LABEL	TP102 (2.0m)	DATE SAMPLED	22-Sep-23
SAMPLE NUMBER	131505	DATE RECEIVED	22-Sep-23
DATE TESTED	03-Oct-23	SAMPLED BY	Client

MATERIAL	Brown slightly sandy SILT		
ADVISED SOURCE	Site Investigation Sample		
PRE TREATMENT	Air Dried / Separate Batches		

RETAINED 37.5mm	0	%	GRADING ZONE	Zone 1	
RETAINED 20mm	0	%	PARTICLE DENSITY	2.68	Mg/m ³ (Assumed)

POINT NUMBER	WATER CONTENT (%)	DRY DENSITY (Mg/m ³)
1	18.0	1.637
2	20.0	1.644
3	22.2	1.663
4	24.1	1.622
5	26.2	1.570



OPTIMUM WATER CONTENT	22	(%)
MAXIMUM DRY DENSITY	1.66	(Mg/m ³)

REMARKS

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

SIGNED

DATE 19-Oct-23

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TEST CERTIFICATE

DRY DENSITY/WATER CONTENT RELATIONSHIP 2.5kg RAMMER

BS 1377-2:2022 Cl.11

PARTICLE DENSITY METHOD BS 1377-2:2022 Cl.9.2

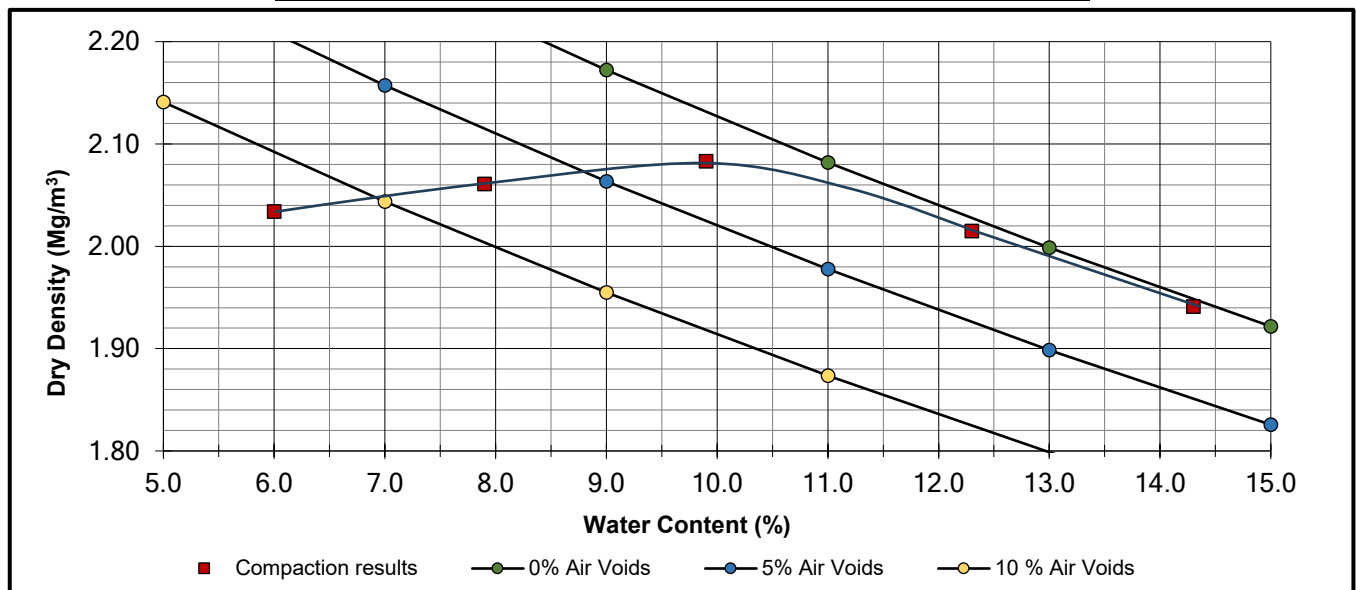
CLIENT	Earth Environmental & Geotechnical Ltd		
SITE	A5487 - Kronospan North Access Road		
JOB NUMBER	MRN 4589/95		

SAMPLE LABEL	TP103 (2.0m)	DATE SAMPLED	22-Sep-23
SAMPLE NUMBER	131508	DATE RECEIVED	22-Sep-23
DATE TESTED	03-Oct-23	SAMPLED BY	Client

MATERIAL	Brown silty slightly gravelly SAND		
ADVISED SOURCE	Site Investigation Sample		
PRE TREATMENT	Air Dried / Separate Batches		

RETAINED 37.5mm	0	%	GRADING ZONE	Zone 1	
RETAINED 20mm	0	%	PARTICLE DENSITY	2.70	Mg/m ³ (Assumed)

POINT NUMBER	WATER CONTENT (%)	DRY DENSITY (Mg/m ³)
1	6.0	2.034
2	7.9	2.061
3	9.9	2.083
4	12.3	2.015
5	14.3	1.941



OPTIMUM WATER CONTENT	9.9	(%)
MAXIMUM DRY DENSITY	2.08	(Mg/m ³)

REMARKS

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(Laboratory Manager)

SIGNED

DATE 19-Oct-23

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TEST CERTIFICATE

DRY DENSITY/WATER CONTENT RELATIONSHIP 2.5kg RAMMER

BS 1377-2:2022 Cl.11

PARTICLE DENSITY METHOD BS 1377-2:2022 Cl.9.2

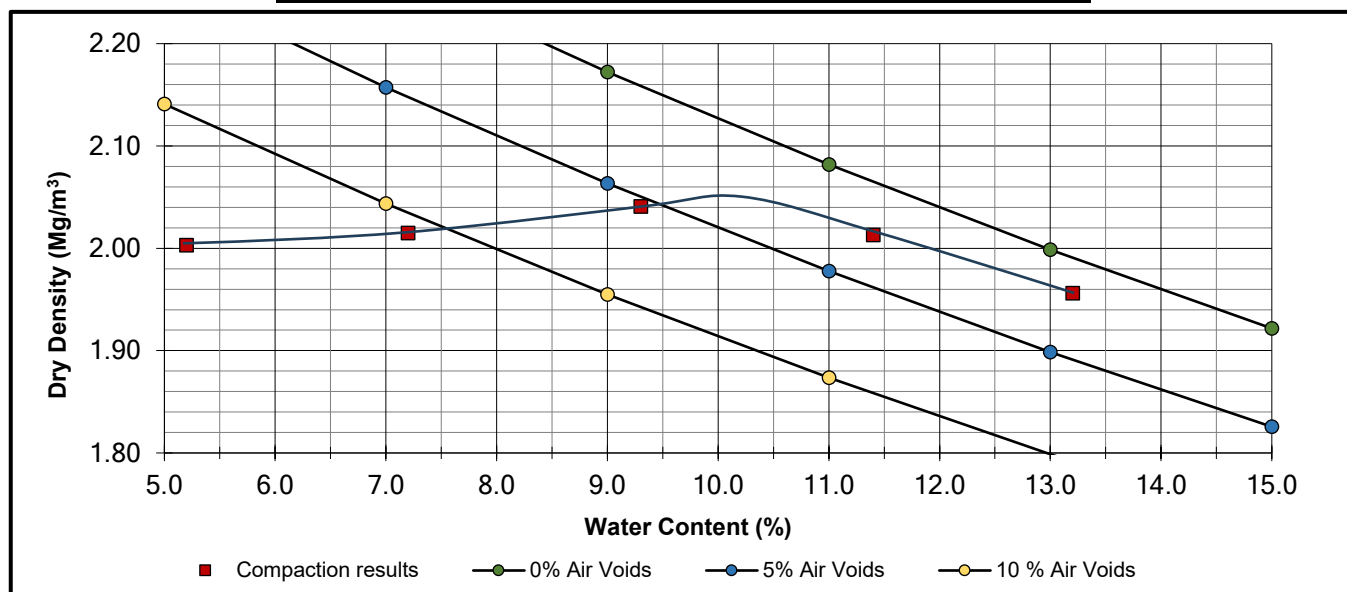
CLIENT	Earth Environmental & Geotechnical Ltd		
SITE	A5487 - Kronospan North Access Road		
JOB NUMBER	MRN 4589/95		

SAMPLE LABEL	TP104 (2.0m)	DATE SAMPLED	22-Sep-23
SAMPLE NUMBER	131511	DATE RECEIVED	22-Sep-23
DATE TESTED	03-Oct-23	SAMPLED BY	Client

MATERIAL	Brown silty gravelly SAND		
ADVISED SOURCE	Site Investigation Sample		
PRE TREATMENT	Air Dried / Separate Batches		

RETAINED 37.5mm	0	%	GRADING ZONE	Zone 2
RETAINED 20mm	2	%	PARTICLE DENSITY	2.70 Mg/m ³ (Assumed)

POINT NUMBER	WATER CONTENT (%)	DRY DENSITY (Mg/m ³)
1	5.2	2.003
2	7.2	2.015
3	9.3	2.041
4	11.4	2.013
5	13.2	1.956



OPTIMUM WATER CONTENT	10	(%)
MAXIMUM DRY DENSITY	2.05	(Mg/m ³)

REMARKS

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

SIGNED

DATE 19-Oct-23

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TEST CERTIFICATE

DRY DENSITY/WATER CONTENT RELATIONSHIP 2.5kg RAMMER

BS 1377-2:2022 Cl.11

PARTICLE DENSITY METHOD BS 1377-2:2022 Cl.9.2

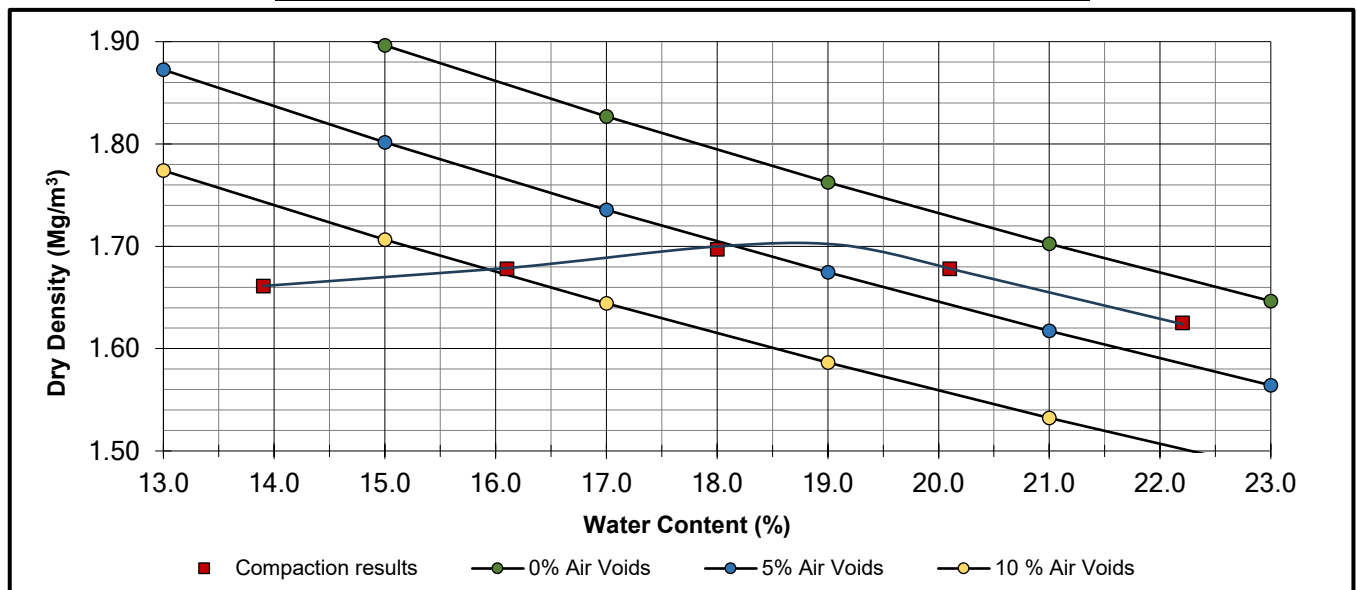
CLIENT	Earth Environmental & Geotechnical Ltd		
SITE	A5487 - Kronospan North Access Road		
JOB NUMBER	MRN 4589/95		

SAMPLE LABEL	TP106 (2.0m)	DATE SAMPLED	22-Sep-23
SAMPLE NUMBER	131517	DATE RECEIVED	22-Sep-23
DATE TESTED	03-Oct-23	SAMPLED BY	Client

MATERIAL	Brown very silty slightly sandy CLAY		
ADVISED SOURCE	Site Investigation Sample		
PRE TREATMENT	Air Dried / Separate Batches		

RETAINED 37.5mm	0	%	GRADING ZONE	Zone 2
RETAINED 20mm	1	%	PARTICLE DENSITY	2.65 Mg/m ³ (Assumed)

POINT NUMBER	WATER CONTENT (%)	DRY DENSITY (Mg/m ³)
1	13.9	1.661
2	16.1	1.678
3	18.0	1.697
4	20.1	1.678
5	22.2	1.625



OPTIMUM WATER CONTENT	19	(%)
MAXIMUM DRY DENSITY	1.70	(Mg/m ³)

REMARKS

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

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DATE 19-Oct-23

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TEST CERTIFICATE

DRY DENSITY/WATER CONTENT RELATIONSHIP 2.5kg RAMMER

BS 1377-2:2022 Cl.11

PARTICLE DENSITY METHOD BS 1377-2:2022 Cl.9.2

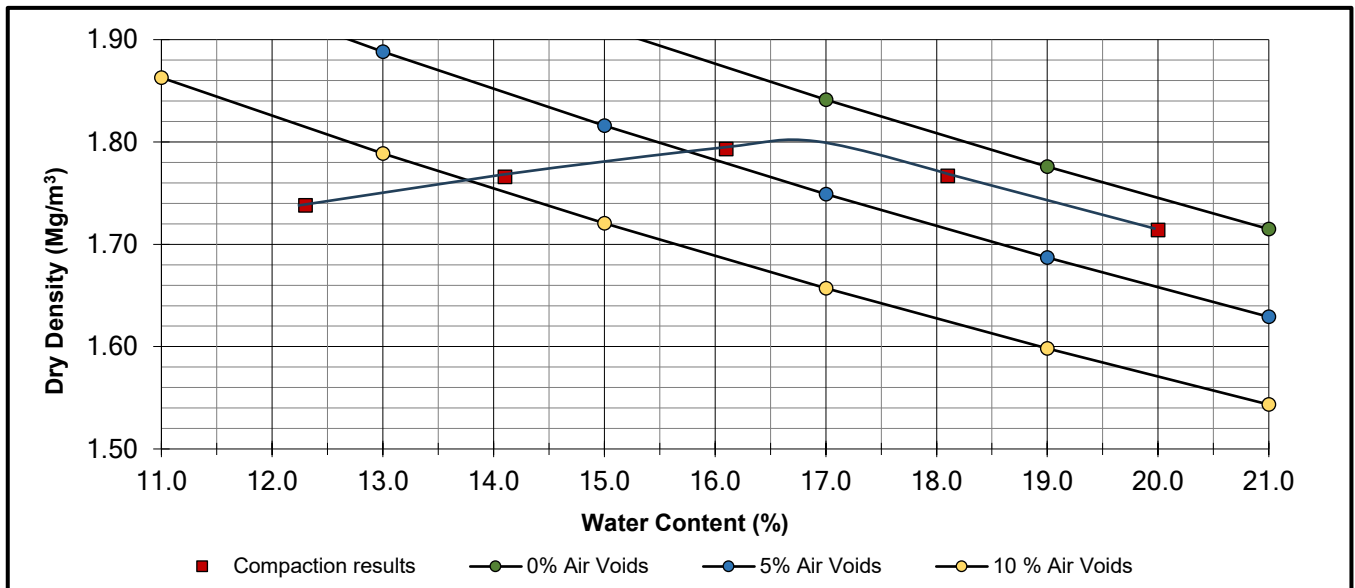
CLIENT	Earth Environmental & Geotechnical Ltd		
SITE	A5487 - Kronospan North Access Road		
JOB NUMBER	MRN 4589/95		

SAMPLE LABEL	TP108 (2.0m)	DATE SAMPLED	22-Sep-23
SAMPLE NUMBER	131517	DATE RECEIVED	22-Sep-23
DATE TESTED	03-Oct-23	SAMPLED BY	Client

MATERIAL	Brown silty sandy gravelly CLAY		
ADVISED SOURCE	Site Investigation Sample		
PRE TREATMENT	Air Dried / Separate Batches		

RETAINED 37.5mm	5	%	GRADING ZONE	Zone 4
RETAINED 20mm	21	%	PARTICLE DENSITY	2.68 Mg/m ³ (Assumed)

POINT NUMBER	WATER CONTENT (%)	DRY DENSITY (Mg/m ³)
1	12.3	1.738
2	14.1	1.766
3	16.1	1.793
4	18.1	1.767
5	20.0	1.714



OPTIMUM WATER CONTENT	19	(%)
MAXIMUM DRY DENSITY	1.70	(Mg/m ³)

REMARKS

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

SIGNED

DATE 19-Oct-23

TEST REPORT

Client Earth Environmental & Geotechnical Ltd

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

Contract A5487 -
Kronospan North Access Road

Job Number MRN 4589/96
Date of Issue 19 October 2023
Page 1 of 4

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.



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

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

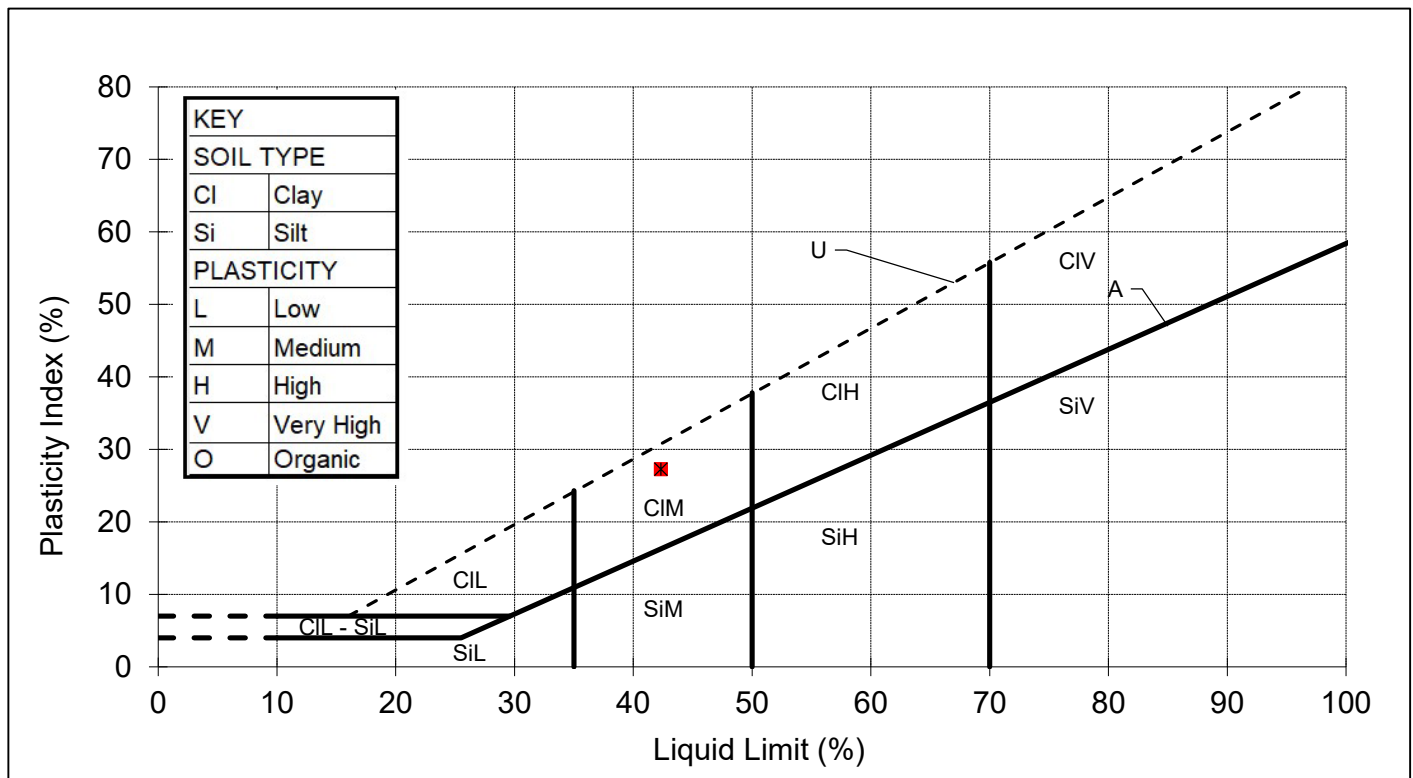
CLIENT	Earth Environmental & Geotechnical Ltd		
SITE	A5487 - Kronospan North Access Road		
JOB NUMBER	MRN 4589/96		

SAMPLE LABEL	WS24 (2.5m)	DATE SAMPLED	28-Sep-23
SAMPLE No.	132275	DATE RECEIVED	06-Oct-23
DATE TESTED	09-Oct-23	SAMPLED BY	Client

MATERIAL	Dark brown slightly 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)	18.6	41.2	1.029	
Determination 2 (avg)	18.2	41.0		

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
23.3	42	15	27	99



REMARKS

SIGNED

NAME

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(Laboratory Manager)

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

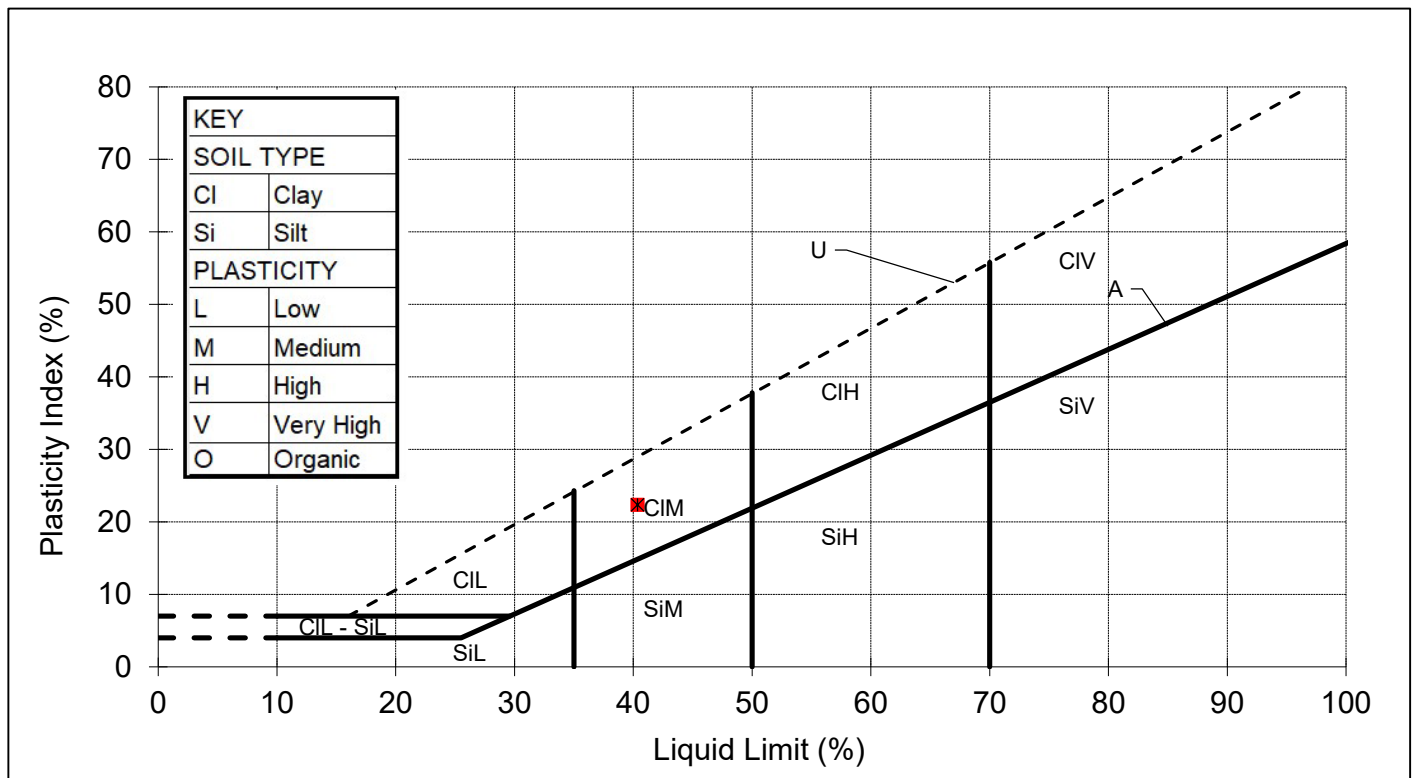
CLIENT	Earth Environmental & Geotechnical Ltd
SITE	A5487 - Kronospan North Access Road
JOB NUMBER	MRN 4589/96

SAMPLE LABEL	WS24 (3.5m)	DATE SAMPLED	28-Sep-23
SAMPLE No.	132277	DATE RECEIVED	06-Oct-23
DATE TESTED	09-Oct-23	SAMPLED BY	Client

MATERIAL	Brown slightly 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)	20.0	40.0	1.000	
Determination 2 (avg)	20.1	40.7		

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
29.0	40	18	22	95



REMARKS

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

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

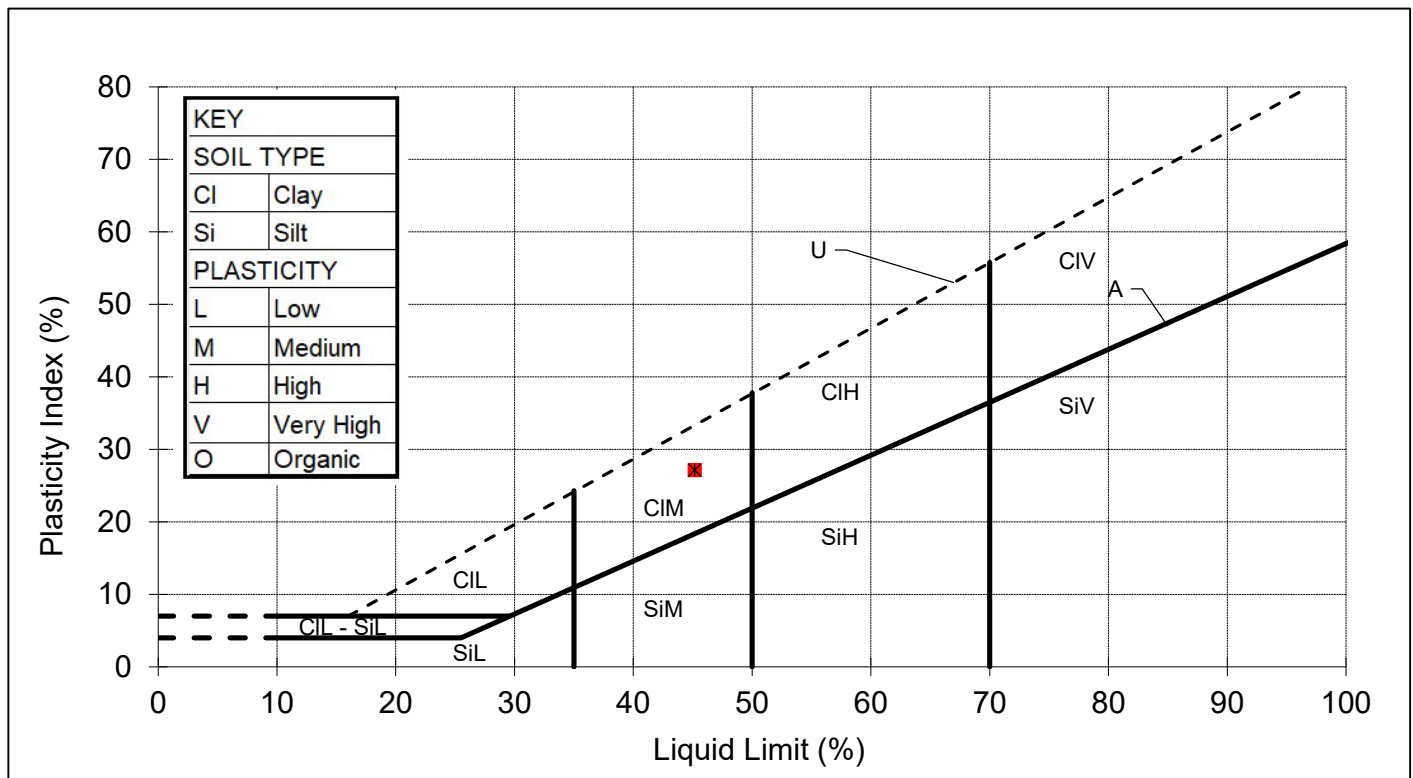
CLIENT	Earth Environmental & Geotechnical Ltd		
SITE	A5487 - Kronospan North Access Road		
JOB NUMBER	MRN 4589/96		

SAMPLE LABEL	WS24 (4.5m)	DATE SAMPLED	28-Sep-23
SAMPLE No.	132279	DATE RECEIVED	06-Oct-23
DATE TESTED	09-Oct-23	SAMPLED BY	Client

MATERIAL	Grey slightly silty slightly sandy 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)	16.5	42.8	1.054	
Determination 2 (avg)	16.8	42.9		

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
33.2	45	18	27	100



REMARKS

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(Laboratory Manager)

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