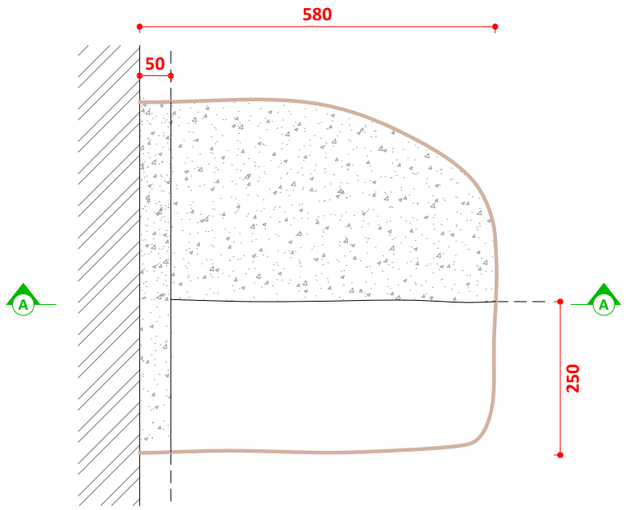
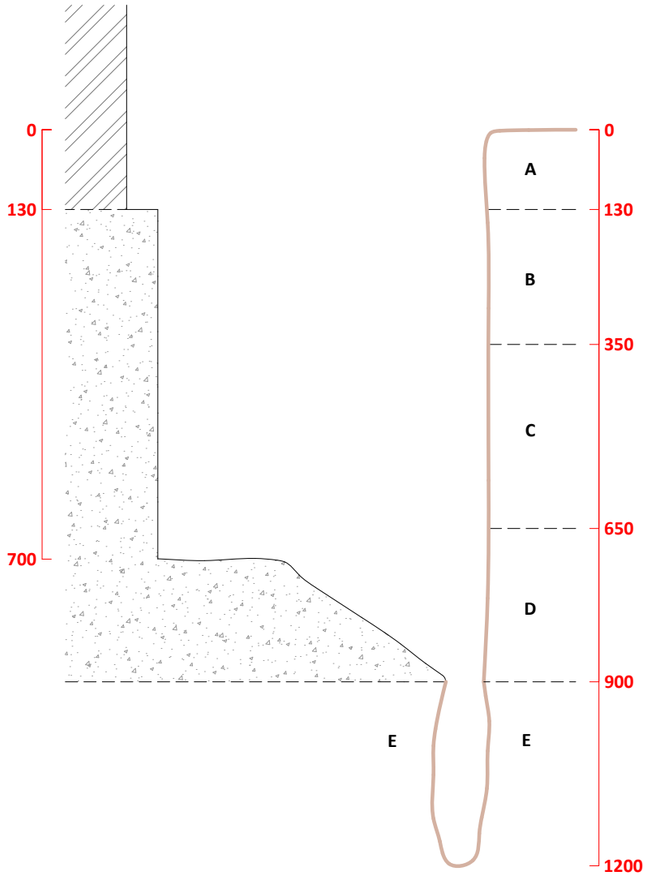
Plan



Section A-A



Photographic records

Key

A. ASPHALT.

B. Medium dense light grey slightly sandy fine to coarse angular to subangular GRAVEL of limestone.
(MADE GROUND - SUBBASE)

C. Medium dense brown slightly silty slightly sandy medium to coarse angular to subrounded GRAVEL of sandstone.
(MADE GROUND - SUBBASE)

D. Soft brown mottled orange slightly sandy slightly gravelly CLAY. Gravel is fine subangular sandstone.
(MADE GROUND - REWORKED ALLUVIUM)

E. Soft brown mottled orange slightly sandy slightly gravelly CLAY. Gravel is fine subangular sandstone.
(ALLUVIUM)

Observed features
Assumed features
Excavation outline

Brick
Concrete

Notes

1. Trial pit sides remained upright and stable.
2. Dimensions shown in millimetres.
3. No groundwater encountered.

Samples - Disturbed (D) / Environmental (ES) / Bulk (B)

- 0.5m (B)
- 0.7m (D)
- 1.0m (D)

Pocket penetrometer testing

- 0.7m - 21kN/m^2
- 1.0m - 17kN/m^2

REV	DESCRIPTION	LOGD	PREP	DATE
A	First issue	JT	KD	21.11.2024

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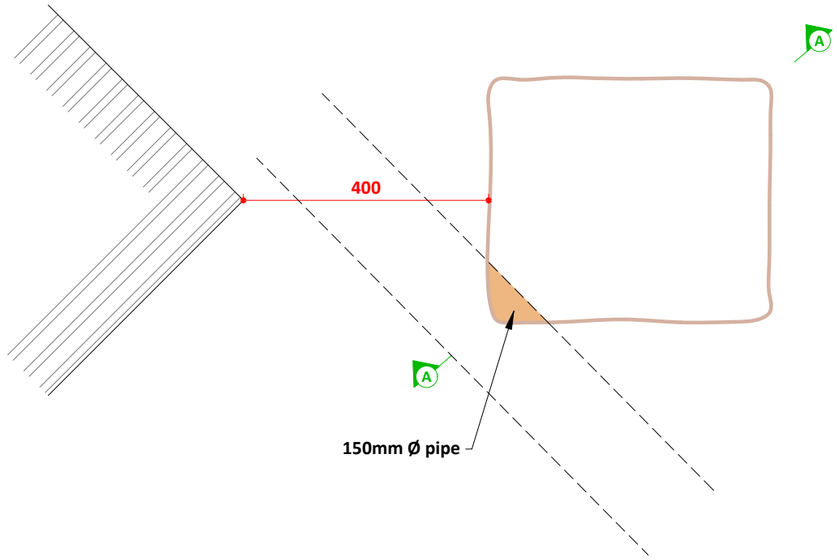
PROJECT
Jewsons, Huddersfield

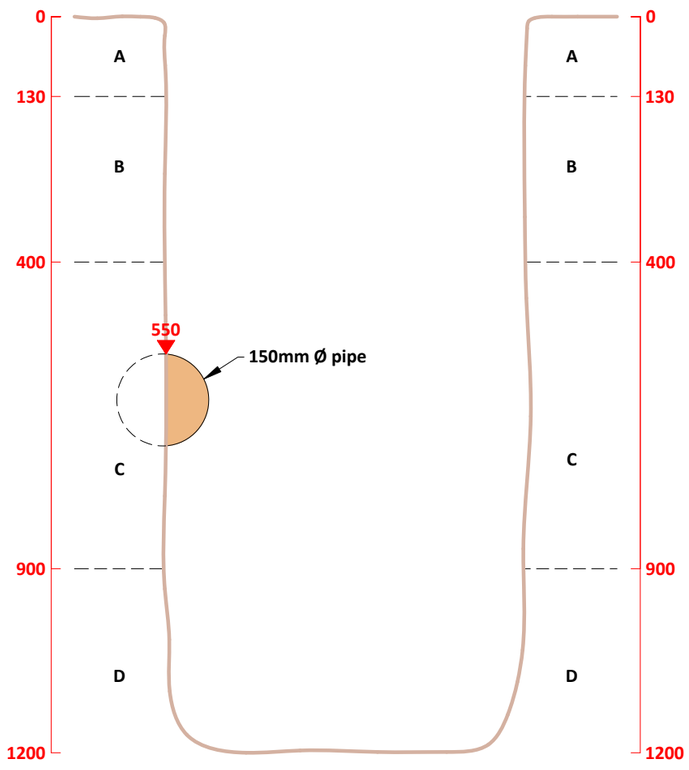
TITLE
Trial pit record

METHOD		DATE OF WORKS
Hand tools		07.10.2024
PROJECT NO.	SCALE AT A3	LOCATION REFERENCE
STW6714	1:10	TP01

Plan



Section A-A



Photographic records

Key

A. ASPHALT.

B. Grey very sandy silty medium to coarse angular to subangular GRAVEL of limestone.
(MADE GROUND - SUBBASE)

C. Yellowish brown and brown very gravelly clayey fine to medium SAND. Gravel is coarse subangular sandstone.
(MADE GROUND)

D. Firm brown slightly gravelly slightly sandy CLAY. Gravel is fine to medium subangular sandstone.
(ALLUVIUM)

Observed features
Assumed features
Excavation outline

Brick

500 Spot level

Notes
1. Trial pit sides remained upright and stable.
2. Dimensions shown in millimetres.
3. No groundwater encountered.
4. Unable to reposition due to CAT signals/racking/pipe in the pit restricted how deep we could excavate..

Samples - Disturbed (D) / Environmental (ES) / Bulk (B)
- 0.4 - 0.9m (B)

REV	DESCRIPTION	LOGD	PREP	DATE
A	First issue	JT	KD	21.11.2024

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PROJECT: Jewsons, Huddersfield		
TITLE: Trial pit record		
METHOD: Hand tools		DATE OF WORKS: 07.10.2024
PROJECT NO.: STW6714	SCALE AT A3: 1:10	LOCATION REFERENCE: TP02

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Appendix D Photographic Records

General Site Photographs

Photograph 1 – Photograph of the warehouse/offices building looking south

Photograph 2 – Photograph of the site entrance looking east

Photograph 3 – Photograph of the storage yard looking south

Photograph 4 – Photograph of the northeastern warehouse building looking northeast

Photograph 5 – Photograph from inside the western warehouse, looking south

Photograph 6 – Photograph of the western warehouse, looking northwest

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RBH01

Photograph 1 - Photograph of RBH01 1.2m – 3.7m bgl

Photograph 2 - Photograph of RBH01 10.0m – 13.0m bgl

Photograph 3 - Photograph of RBH01 13.0m – 16.0m bgl

RBH02

Photograph 1 - Photograph of RBH02 1.2m – 4.0m bgl

Photograph 2 - Photograph of RBH02 11.5m – 14.0m bgl

Photograph 3 - Photograph of RBH02 14.0m – 16.5m bgl

Photograph 4 - Photograph of RBH02 16.5m – 18.0m bgl

Appendix E In Situ Test Results

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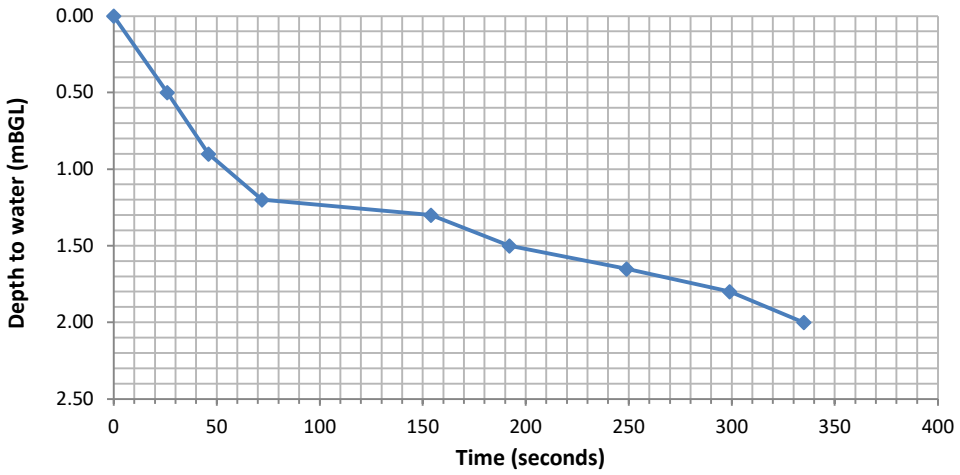
Permeability test in a borehole using open systems (BS EN ISO 22282-2:2012)

Location	Test number	Test method	Test system	Test date
WLS02	1	Falling Head	Standpipe installation	27/11/24

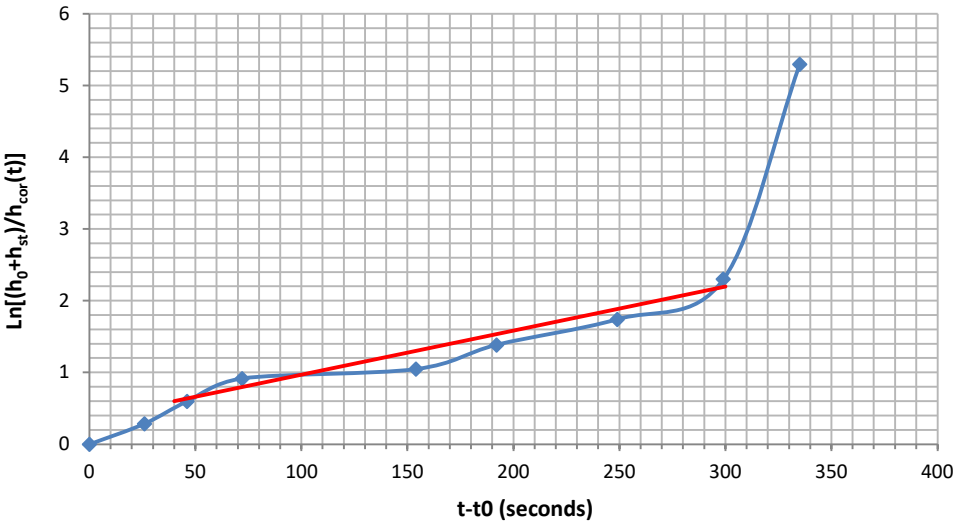
Top of test section (m)	Bottom of test section (m)	Test section length (m)	Test diameter (m)	Pipe diameter (m)
1.00	2.00	1	0.1	0.055

Variables at start of test

Groundwater (mBGL)	Water after injection (mBGL)	Change in head (m)
None	0	2.00



Water dissipated q



F	Shape factor according BS EN ISO 22282-1:2012	2.097	m
S	Cross sectional area of measurement tube	0.0024	m^2
h_{st}	Corrective term to initial static level	0.00E+00	m
α	Gradient of line alpha	6.15E-03	s^{-1}
k	**Permeability (α S / F)**	**6.97E-06**	**m/s**

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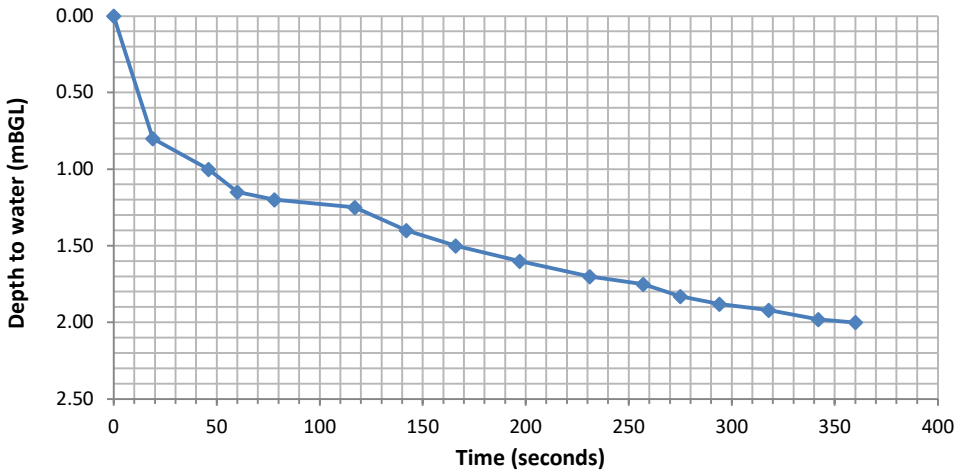
Permeability test in a borehole using open systems (BS EN ISO 22282-2:2012)

Location	Test number	Test method	Test system	Test date
WLS02	2	Falling Head	Standpipe installation	27/11/24

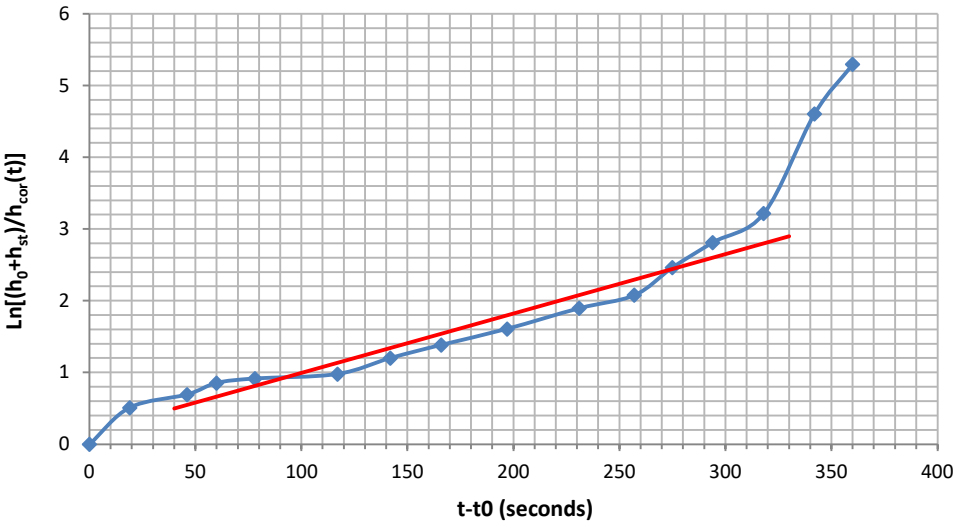
Top of test section (m)	Bottom of test section (m)	Test section length (m)	Test diameter (m)	Pipe diameter (m)
1.00	2.00	1	0.1	0.055

Variables at start of test

Groundwater (mBGL)	Water after injection (mBGL)	Change in head (m)
None	0	2.00



Water dissipated q



F	Shape factor according BS EN ISO 22282-1:2012	2.097	m
S	Cross sectional area of measurement tube	0.0024	m^2
h_{st}	Corrective term to initial static level	0.00E+00	m
α	Gradient of line alpha	8.28E-03	s^{-1}
k	**Permeability (α S / F)**	**9.37E-06**	**m/s**

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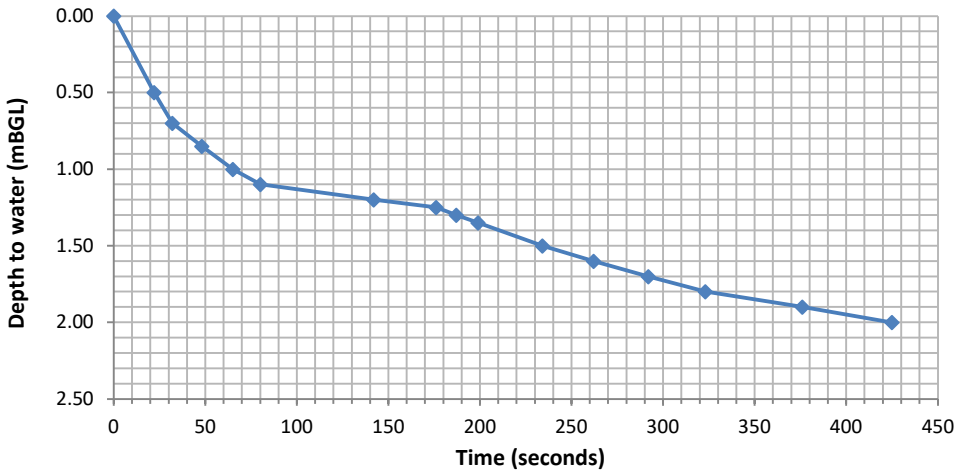
Permeability test in a borehole using open systems (BS EN ISO 22282-2:2012)

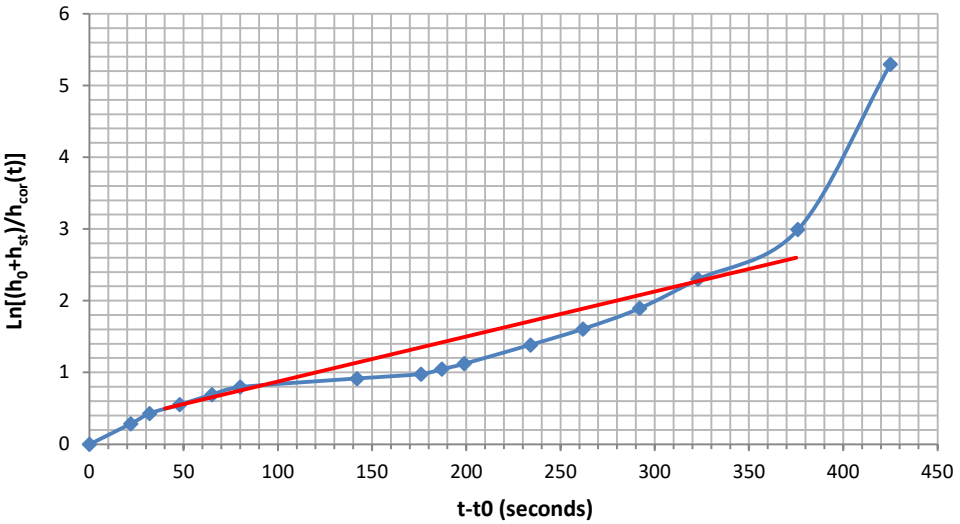
Location	Test number	Test method	Test system	Test date
WLS02	3	Falling Head	Standpipe installation	27/11/24

Top of test section (m)	Bottom of test section (m)	Test section length (m)	Test diameter (m)	Pipe diameter (m)
1.00	2.00	1	0.1	0.055

Variables at start of test

Groundwater (mBGL)	Water after injection (mBGL)	Change in head (m)
None	0	2.00





F	Shape factor according BS EN ISO 22282-1:2012	2.097	m
S	Cross sectional area of measurement tube	0.0024	m^2
h_{st}	Corrective term to initial static level	0.00E+00	m
α	Gradient of line alpha	6.27E-03	s^{-1}
k	**Permeability (α S / F)**	**7.10E-06**	**m/s**

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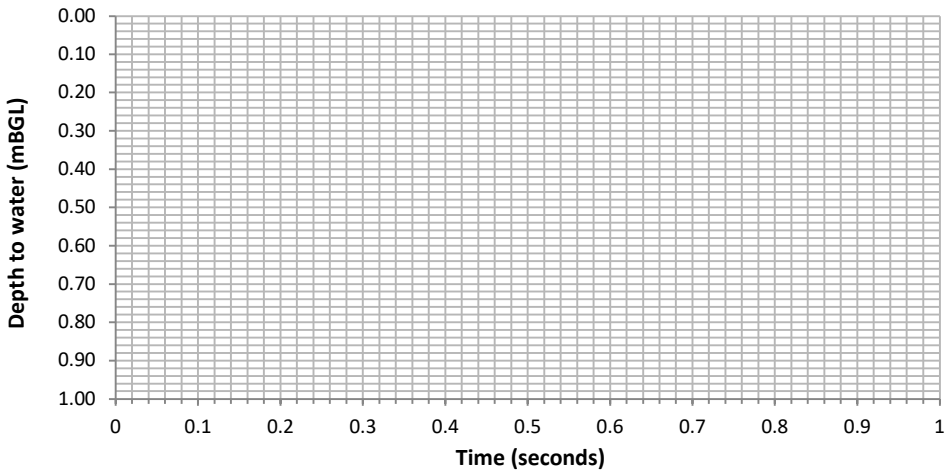
Permeability test in a borehole using open systems (BS EN ISO 22282-2:2012)

Location	Test number	Test method	Test system	Test date
WLS04	1	Falling Head	Standpipe installation	27/11/24

Top of test section (m)	Bottom of test section (m)	Test section length (m)	Test diameter (m)	Pipe diameter (m)
1.00	2.80	1.8	0.1	0.055

Variables at start of test

Groundwater (mBGL)	Water after injection (mBGL)	Change in head (m)
None	N/A, see comments	N/A



Water dissipated quicker than could be measured, therefore unable to determine permeability.

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Table summarising Pocket Penetrometer results

** Instrument limit reached.*

Location	Start Depth (m)	Results 1-3	Average	Undrained Shear Strength (kN/m^2)
CPT01	0.70	4/3.75/4.25	4.00	200
CPT07	0.80	1.5/1.75/1.25	1.50	75
CPT08	1.00	2/1.5/1.75	1.75	88
CPT08	0.70	1/1/1	1.00	50
RBH01	1.90	1/1.5/1.5	1.33	67
RBH01	1.50	1.5/1.5/1.5	1.50	75
RBH01	1.30	0.75/0.75/1	0.83	42
WLS01	1.80	1/1/1	1.00	50
WLS01	1.50	0.5/0.5/0.75	0.58	29
WLS01	1.30	0.5/0.75/1	0.75	38
WLS01	0.80	1/1.5/1.75	1.42	71
WLS01	0.60	1/1.5/1	1.17	58
WLS02	1.80	0/0.25/0.25	0.17	8
WLS02	1.60	0.5/0.25/0.25	0.33	17
WLS02	1.30	0.25/0.25/0.5	0.33	17
WLS02	1.00	0.5/0.75/0.75	0.67	33
WLS02	0.80	0.5/0.75/0.75	0.67	33
WLS02	0.50	0.25/0/0.25	0.17	8
WLS03	1.80	1/1/1	1.00	50
WLS03	1.60	1.75/1.75/1.75	1.75	88
WLS03	1.40	1.75/1.5/1.5	1.58	79
WLS03	0.90	1.25/1/1	1.08	54
WLS03	0.70	1/1.5/1.25	1.25	63
WLS05	0.80	0.75/0.75/1	0.83	42
WLS05	0.50	1/1/1	1.00	50
WLS06	3.50	2.25/3.5/3.5	3.08	154
WLS06	1.60	1.25/1/1	1.08	54
WLS06	1.50	1.5/1.75/1.5	1.58	79
WLS07	3.80	4.5/4.5/4.5	4.50	225
WLS07	1.80	0.5/0.5/0.5	0.50	25
WLS07	1.60	1.5/0.75/0.75	1.00	50
WLS07	1.30	1.5/2/2	1.83	92
WLS07	0.90	2/1.75/1.5	1.75	88
WLS07	0.60	1.5/1.5/2	1.67	83
WLS08	3.10	2/2/2	2.00	100
WLS08	2.90	1.5/1.5/1.5	1.50	75
WLS08	2.70	1.25/1.25/1.5	1.33	67

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Table summarising Pocket Penetrometer results

** Instrument limit reached.*

Location	Start Depth (m)	Results 1-3	Average	Undrained Shear Strength (kN/m^2)
WLS09	2.90	4.5/4.5/4.5	4.50	225

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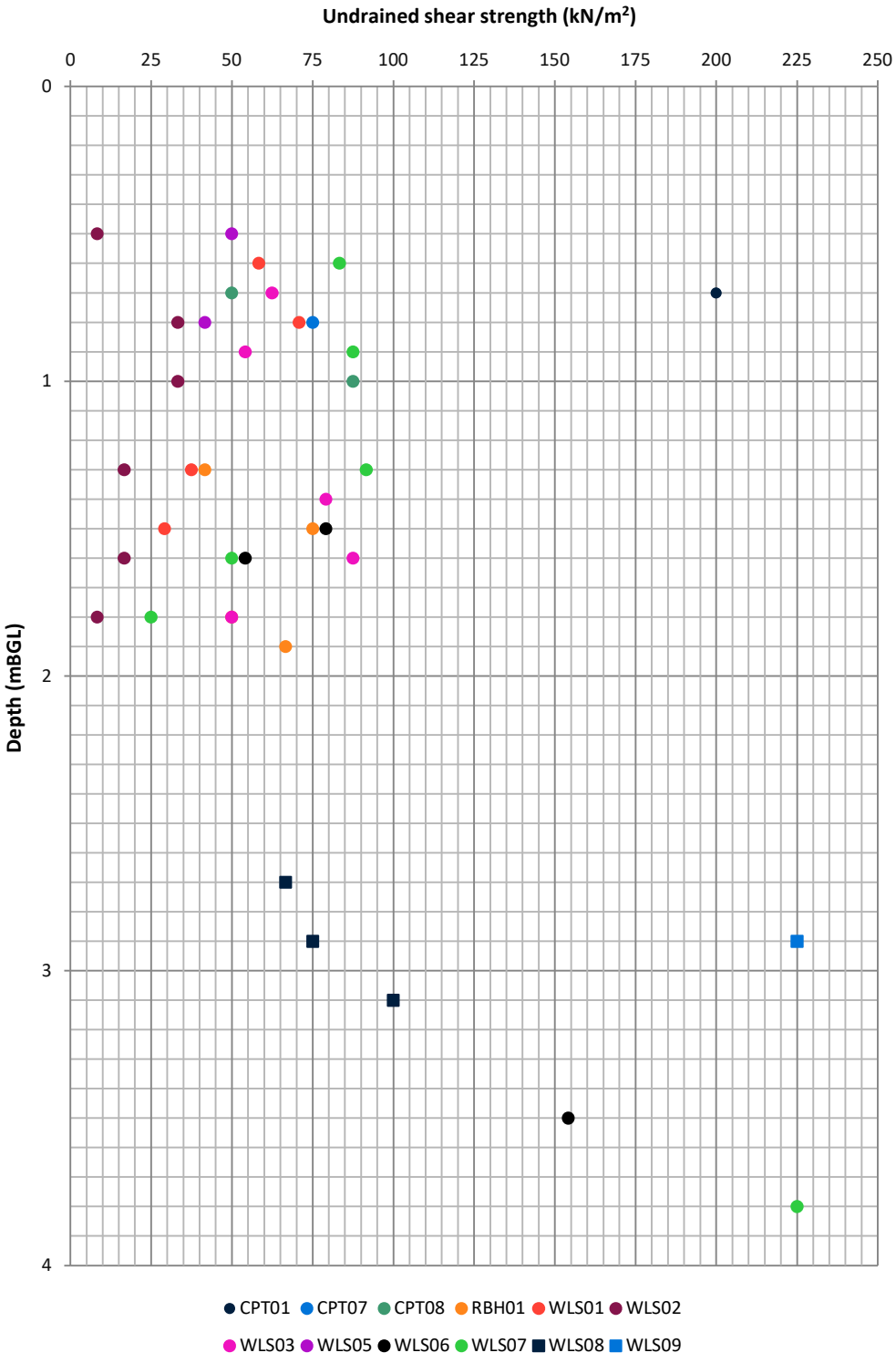
Plot summarising Pocket Penetrometer results versus depth filtered by location



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Plot summarising Pocket Penetrometer results versus depth filtered by geology

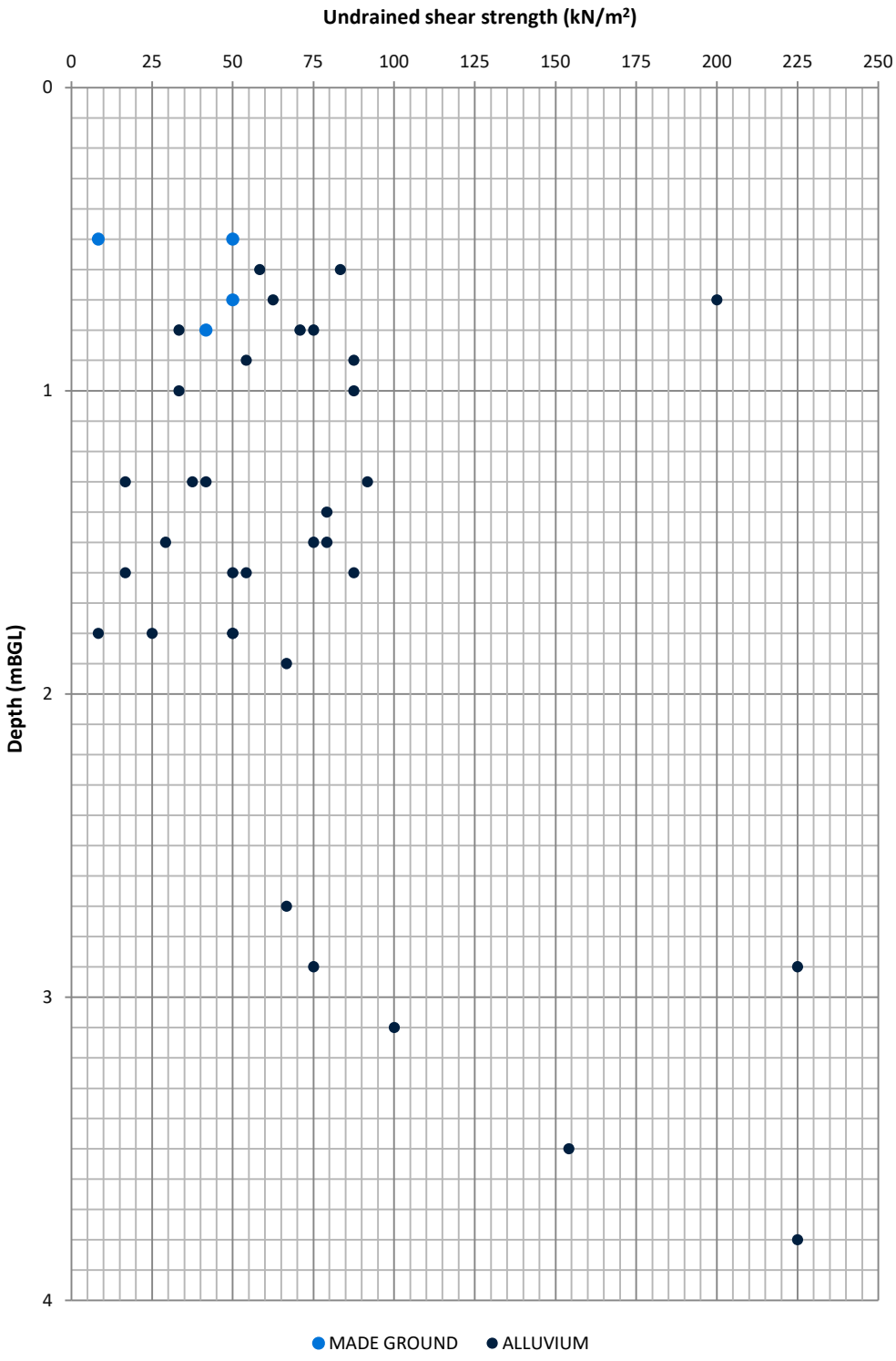

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Table summarising Standard Penetration Test (SPT) results

Location	Start Depth (m)					Penetration (mm)	
		Seating 1-2	Main 1-4	Total Seating	Total Main	Total Seating	Total Main
RBH01	14.00	8/16	19/19/12	24	50	150	170
RBH01	16.00	25	41/9	25	50	11	79
RBH01	14.50	25	31/19	25	50	30	85
RBH01	13.00	25	29/21	25	50	10	95
RBH01	11.50	25	31/19	25	50	30	105
RBH01	10.00	6/18	20/21/9	24	50	150	190
RBH01	8.00	7/12	12/26/12	19	50	150	190
RBH01	7.30	8/17	24/26	25	50	135	115
RBH01	5.70	7/7	7/8/7/11	14	33	150	300
RBH01	4.20	6/8	11/5/6/4	14	26	150	300
RBH01	3.70	4/5	6/4/6/8	9	24	150	300
RBH01	1.20	1/1	2/2/1/1	2	6	150	300
RBH02	14.00	8/16	19/19/12	24	50	150	220
RBH02	15.00	25	41/9	25	50	30	85
RBH02	13.00	12/12	12/16/12/10	24	50	150	285
RBH02	11.50	6/12	18/19/13	18	50	150	210
RBH02	10.00	25	36/14	25	50	40	95
RBH02	9.00	16/9	18/18/13	25	50	115	170
RBH02	7.50	11/14	24/26	25	50	105	125
RBH02	6.00	7/5	9/10/11/12	12	42	150	300
RBH02	5.00	8/11	11/10/6/8	19	35	150	300
RBH02	4.00	4/8	12/20/18	12	50	150	160
RBH02	3.00	3/3	4/2/3/1	6	10	150	300
RBH02	2.00	4/3	2/1/2/1	7	6	150	300
RBH02	1.20	3/2	2/3/3/1	5	9	150	300
WLS01	2.00	1/4	13/14/18/5	5	50	150	230
WLS01	1.20	1/1	1/1/1/1	2	4	150	300
WLS02	2.00	1/1	15/15/20	2	50	150	195
WLS02	1.20	0/0	1/1/2/2	0	6	150	300
WLS03	3.00	6/7	9/13/15/13	13	50	150	275
WLS03	2.00	2/5	6/5/3/5	7	19	150	300
WLS03	1.20	1/1	1/1/2/2	2	6	150	300
WLS04	5.00	8/7	7/14/24/5	15	50	150	230
WLS04	4.50	7/7	8/9/7/9	14	33	150	300
WLS04	4.00	3/3	4/7/5/5	6	21	150	300
WLS04	3.00	3/7	3/3/2/2	10	10	150	300
WLS04	2.00	4/2	2/2/3/3	6	10	150	300
WLS04	1.20	3/3	4/3/2/2	6	11	150	300

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Table summarising Standard Penetration Test (SPT) results

Location	Start Depth (m)					Penetration (mm)	
		Seating 1-2	Main 1-4	Total Seating	Total Main	Total Seating	Total Main
WLS05	4.00	12/11	12/13/13/12	23	50	150	285
WLS05	3.00	2/2	3/2/3/3	4	11	150	300
WLS05	2.00	2/2	2/2/2/3	4	9	150	300
WLS05	1.20	2/1	1/2/4/6	3	13	150	300
WLS06	4.00	13/12	13/13/14/10	25	50	150	255
WLS06	3.00	5/3	4/3/5/5	8	17	150	300
WLS06	2.00	3/3	4/3/4/4	6	15	150	300
WLS06	1.20	2/1	1/2/3/3	3	9	150	300
WLS07	4.00	2/4	13/16/16/5	6	50	150	230
WLS07	3.00	2/2	3/4/6/6	4	19	150	300
WLS07	2.00	1/1	2/2/2/2	2	8	150	300
WLS07	1.20	2/1	2/1/2/2	3	7	150	300
WLS08	4.00	15/10	12/14/14/10	25	50	150	245
WLS08	3.00	2/4	6/8/6/9	6	29	150	300
WLS08	2.00	6/6	7/7/10/8	12	32	150	300
WLS08	1.20	2/3	3/2/3/3	5	11	150	300
WLS09	3.00	2/4	8/14/15/13	6	50	150	230
WLS09	2.00	5/8	8/6/6/6	13	26	150	300
WLS09	1.20	2/2	2/1/2/3	4	8	150	300

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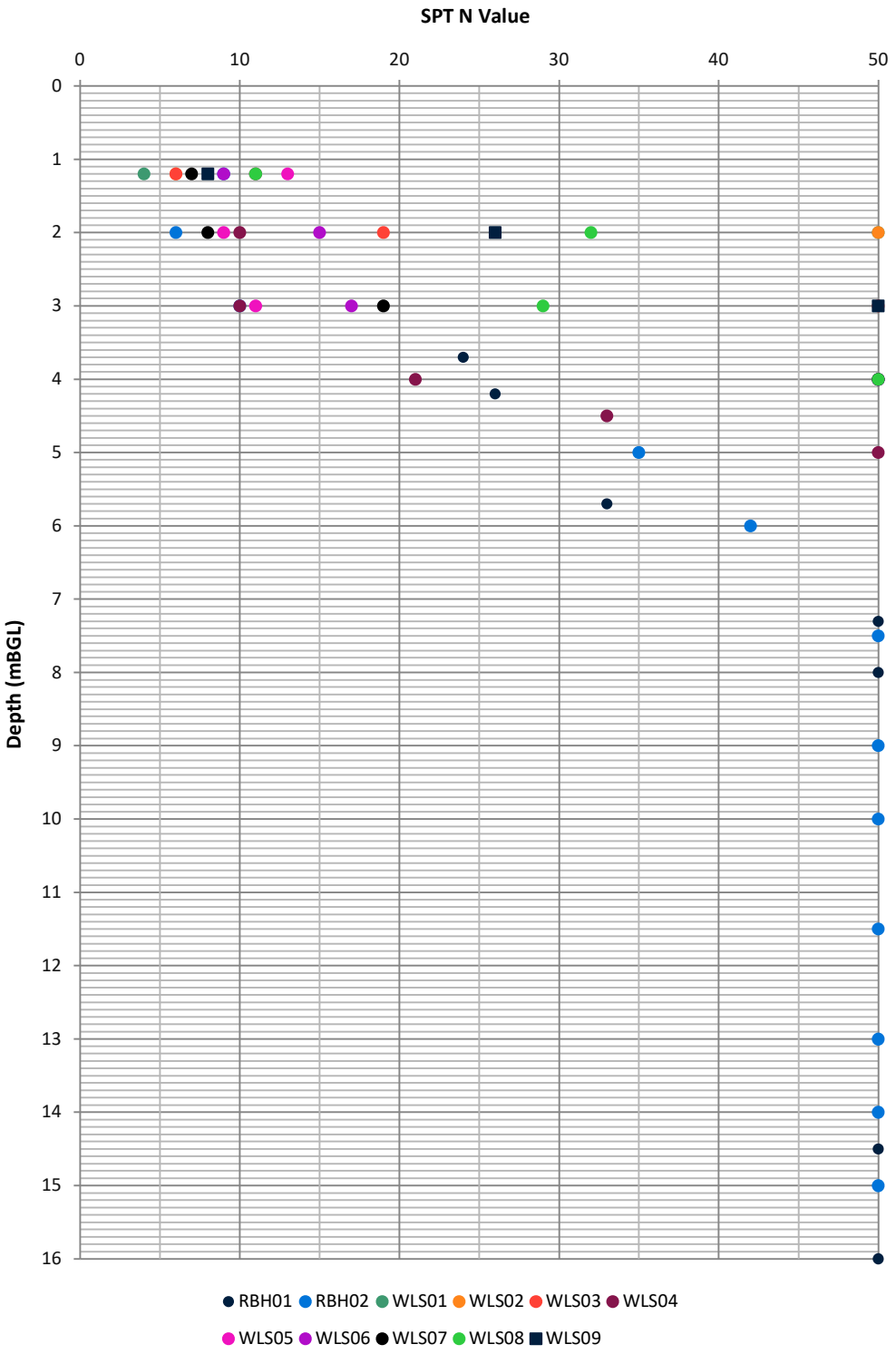
Plot summarising Standard Penetration Test (SPT) results versus depth filtered by location



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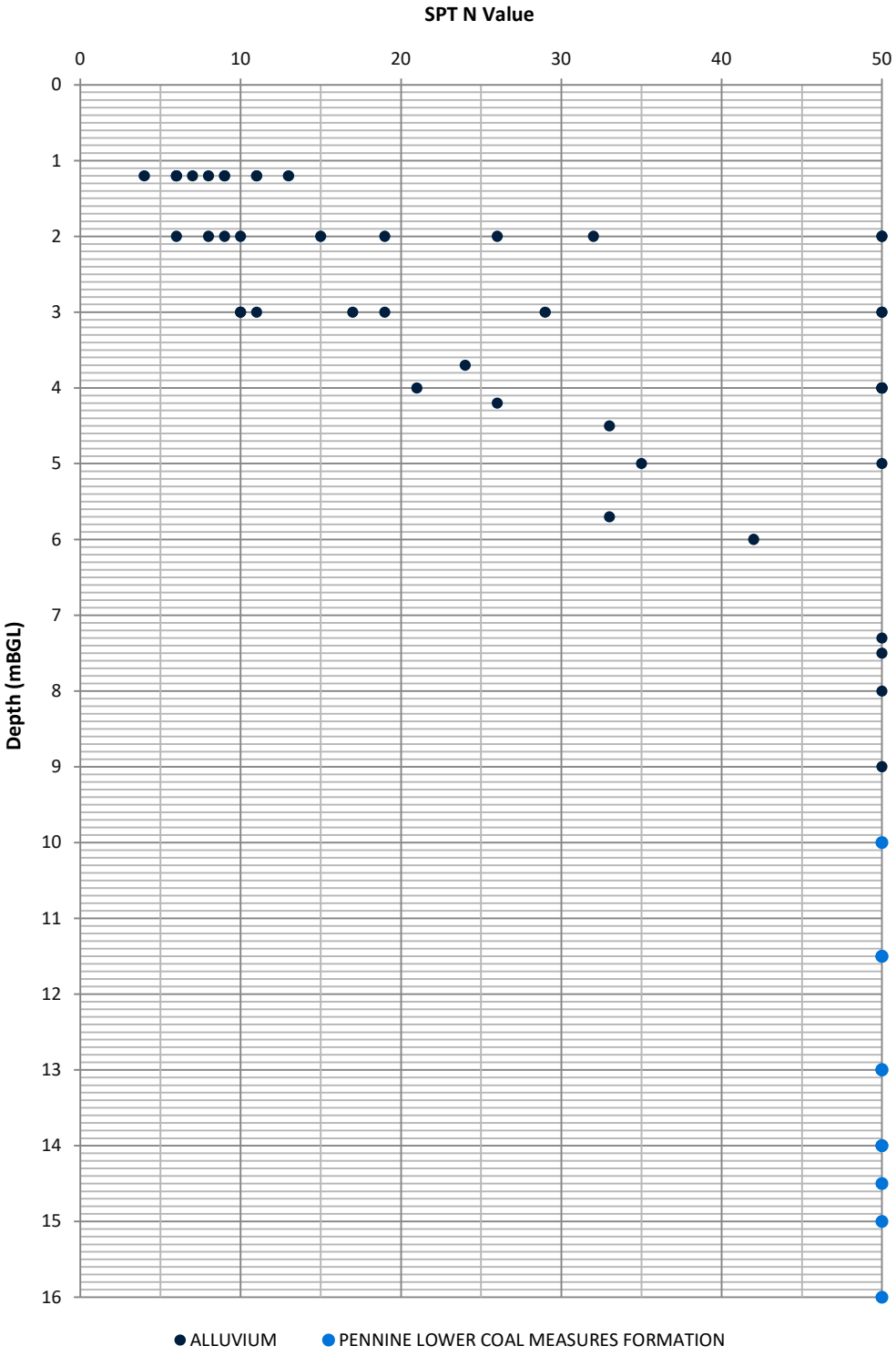
Plot summarising Standard Penetration Test (SPT) results versus depth filtered by geology



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Appendix F Post Fieldwork Monitoring

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Ground gas and groundwater monitoring results

Notes

1) The instrument limit of detection has been adopted where no gas flows or concentrations have been recorded (indicated in grey italics).
2) Atmospheric temperature (*) data sourced from local weather station data.
3) CH4 = methane; CO2 = carbon dioxide; O2 = oxygen; PPM = parts per million CO = carbon monoxide; H2S = hydrogen sulphide.
4) Gas Screening Values (GSVs) are rounded to 3 decimal places.

								Worst case scenario	0.6	0.4	0.4	12.8	12.8	0.1	0.1	0	0	0.00	0.00	0.08	0.08	TWO	
								Average scenario	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0.00	0.00	0.00	0.00	ONE	
Date	Time	Location	Install Reference	Install Response Zone		Atmospheric Pressure (mB)	Atmospheric Temperature (°C) *	Depth to Water (m)	Gas Steady Flow	CH_4 (%v/v)		CO_2 (%v/v)		O_2 (%v/v)			Other Gases (PPM)		GSV (CH_4)		GSV (CO_2)		Indicative (steady) CIRIA Characteristic Situation	Notes
				Response Zone (mBGL)	Flooded				l/Hr	Peak	Steady	Peak	Steady	Minimum	Average		CO	H_2S	Peak	Steady	Peak	Steady		
23/10/2024	12:27	RBH01	1	1.00 - 10.00	No	-	13	2.72	Groundwater level monitoring only															
07/11/2024	14:40	RBH01	1	1.00 - 10.00	No	-	11	4.20																
27/11/2024	15:10	RBH01	1	1.00 - 10.00	No	-	5	2.74																
05/12/2024	11:55	RBH01	1	1.00 - 10.00	No	-	11	2.90																
23/10/2024	12:40	RBH02	1	1.00 - 10.00	No	-	13	2.96																
11/07/2024	15:07	RBH02	1	1.00 - 10.00	No	-	11	3.20																
27/11/2024	15:20	RBH02	1	1.00 - 10.00	No	-	5	3.55																
05/12/2024	11:50	RBH02	1	1.00 - 10.00	No	-	11	2.80																
23/10/2024	12:05	WLS02	1	1.00 - 2.00	No	1026	13	Dry	0.2	0.2	0.2	12.8	12.8	0.1	0.1	0	0	0.000	0.000	0.026	0.026	CS-1	Elevated carbon dioxide, consider CS-2.
11/07/2024	15:39	WLS02	1	1.00 - 2.00	No	1024	11	Dry	0.1	0.3	0.3	11.6	11.6	2.5	2.5	0	0	0.000	0.000	0.012	0.012	CS-1	Elevated carbon dioxide, consider CS-2.
27/11/2024	15:29	WLS02	1	1.00 - 2.00	No	1009	5	Dry	0.5	0.4	0.4	10.6	10.1	2.3	2.3	0	0	0.002	0.002	0.053	0.051	CS-1	Elevated carbon dioxide, consider CS-2.
12/05/2024	11:23	WLS02	1	1.00 - 2.00	No	997	12	1.90	0.4	0.2	0.1	10.4	10.0	4.5	4.5	0	0	0.001	0.000	0.042	0.040	CS-1	Elevated carbon dioxide, consider CS-2.
23/10/2024	11:38	WLS03	1	1.00 - 3.00	No	1024	13	Dry	0	0.1	0.1	2.5	2.5	18.0	18.1	0	0	0.000	0.000	0.003	0.003	CS-1	
07/11/2024	15:46	WLS03	1	1.00 - 3.00	-	1024	11	-	Monitoring not possible due to parked plant															
27/11/2024	14:20	WLS03	1	1.00 - 3.00	No	1017	5	Dry	0.6	0.2	0.2	2.4	2.4	18.7	18.7	0	0	0.001	0.001	0.014	0.014	CS-1	
12/05/2024	11:49	WLS03	1	1.00 - 3.00	No	997	12	2.84	0.4	0.1	0.1	3.9	3.9	14.7	14.7	0	0	0.000	0.000	0.016	0.016	CS-1	
23/10/2024	12:17	WLS04	1	1.00 - 2.80	No	1024	13	Dry	0.1	0.0	0.0	4.1	3.8	17.2	17.2	0	0	0.000	0.000	0.004	0.004	CS-1	
11/07/2024	15:51	WLS04	1	1.00 - 2.80	No	1024	11	Dry	0.1	0.3	0.1	11.1	4.1	3.9	17.1	0	0	0.000	0.000	0.011	0.004	CS-1	Elevated carbon dioxide, consider CS-2.
27/11/2024	15:04	WLS04	1	1.00 - 2.80	No	1010	5	Dry	0.5	0.2	0.2	2.0	2.0	19.4	19.4	0	0	0.001	0.001	0.010	0.010	CS-1	
12/05/2024	11:37	WLS04	1	1.00 - 2.80	No	997	11	Dry	0.3	0.1	0.1	9.4	3.6	6.0	17.8	0	0	0.000	0.000	0.028	0.011	CS-1	Elevated carbon dioxide, consider CS-2.

soiltechnics
environmental ▪ geotechnical ▪ building fabric

Appendix G Geotechnical Laboratory Test Results

TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS

Tested in Accordance with: BS EN ISO 17892-12:2018+A2:2022, cl 5.3.14, 5.5, Fall Cone Method, 1 Pt Test, BS 1377-2:2022, cl 5.3, 6

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

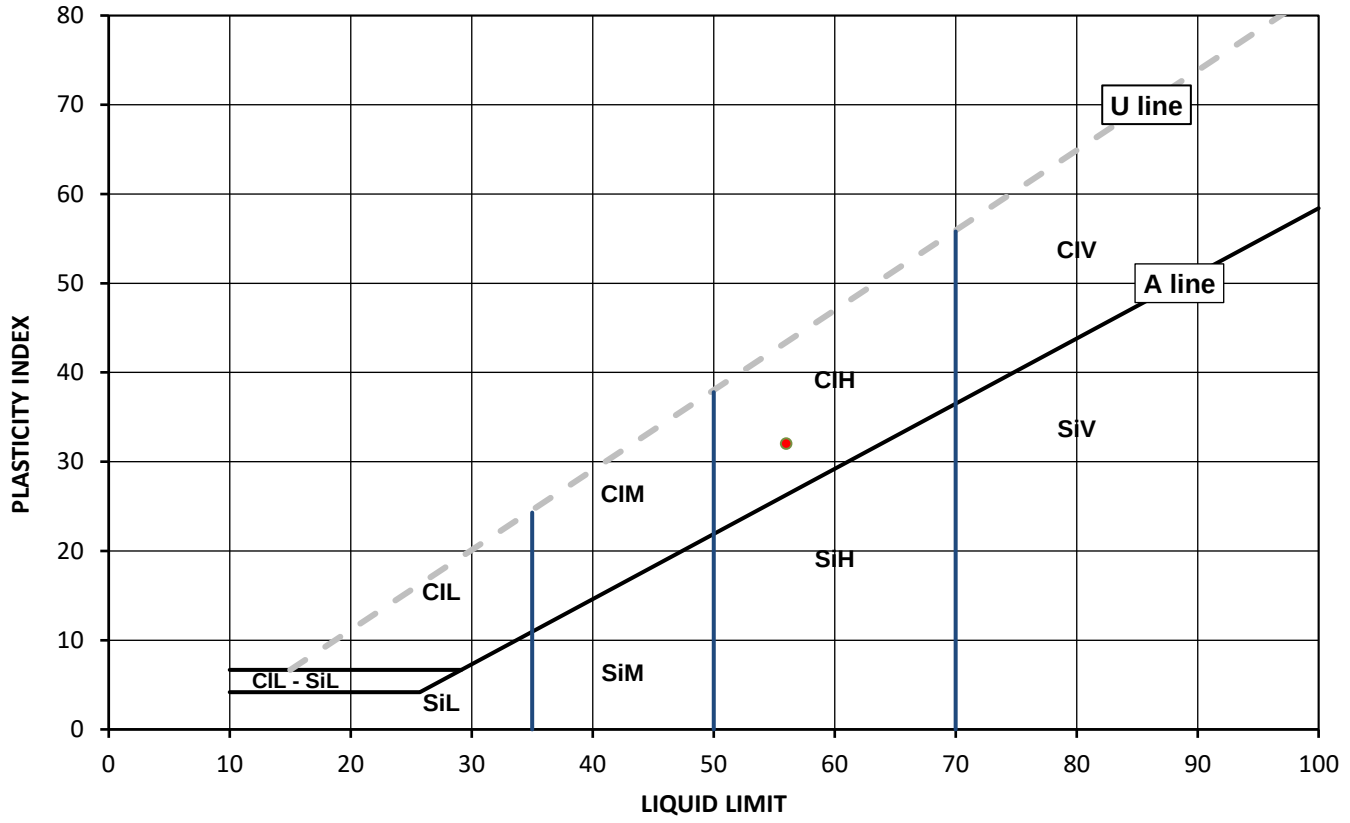
Client:	Soiltechnics Limited	Client Reference:	STW6714
Client Address:	Cedar Barn, White Lodge, Walgrave, Northampton, NN6 9PY	Job Number:	24-049359-1
		Date Sampled:	09/10/2024
		Date Received:	22/10/2024
Contact:	Admin	Date Tested:	30/10/2024
Site Address:	Jewson, Huddersfield	Sampled By:	Not Given

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	356394	Depth Top [m]:	1.50
Hole No.:	RBH01	Depth Base [m]:	Not Given
Sample Reference:	RBH01-1.5-2	Sample Type:	D
Sample Description:	Brown slightly sandy CLAY		
Sample Preparation:	Tested in natural condition;		
Cone Type:	80g/30deg		

As Received Water Content [W] %	Corrected Liquid Limit [WL] %	Correlation Factor	Plastic Limit [Wp] %	Plasticity Index [Ip] %	Liquidity index [IL] % #	Consistency index [IC] % #	% Passing 425µm BS Test Sieve
36.9	56	1.018	24	32	0.41	0.59	100



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

		Plasticity		Liquid Limit
Cl	Clay	L	Low	below 35
Si	Silt	M	Medium	35 to 50
		H	High	50 to 70
		V	Very high	exceeding 70
		O	Organic	append to classification for organic material (eg ClHO)

Note: Water Content by BS EN 17892-1:2014+A1:2022, BS 1377-2:2022; Correlation Factor by Clayton C.R.I and Jukes A.W (1978); # Non accredited

Remarks:

Signed:

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Date Reported: 12/11/2024

GF 360.13

TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS

Tested in Accordance with: BS EN ISO 17892-12:2018+A2:2022, cl 5.3.14, 5.5, Fall Cone Method, 1 Pt Test, BS 1377-2:2022, cl 5.3, 6

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

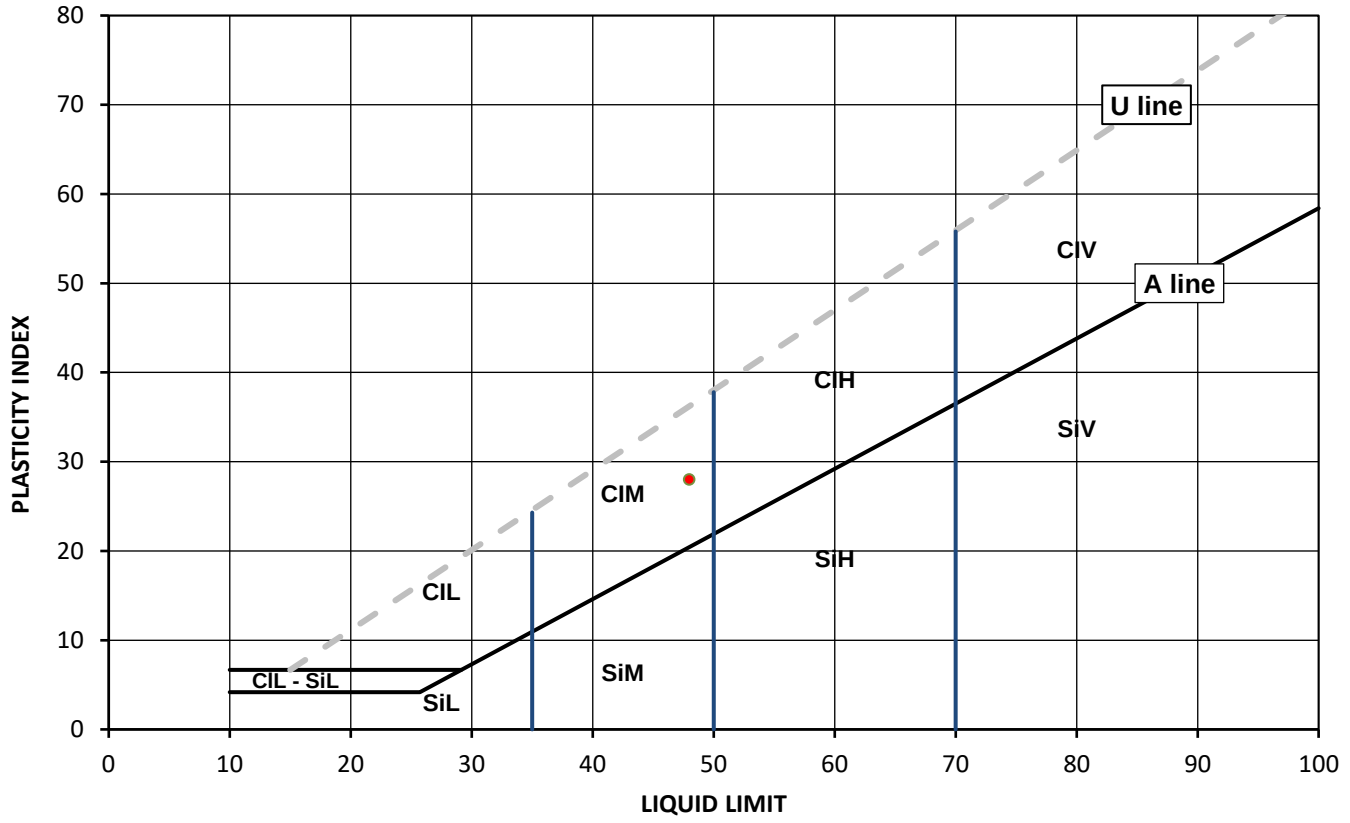
Client:	Soiltechnics Limited	Client Reference:	STW6714
Client Address:	Cedar Barn, White Lodge, Walgrave, Northampton, NN6 9PY	Job Number:	24-049359-1
		Date Sampled:	07/10/2024
		Date Received:	22/10/2024
Contact:	Admin	Date Tested:	30/10/2024
Site Address:	Jewson, Huddersfield	Sampled By:	Not Given

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	356404	Depth Top [m]:	0.80
Hole No.:	WLS01	Depth Base [m]:	Not Given
Sample Reference:	WLS01-0.8-3	Sample Type:	D
Sample Description:	Brown slightly gravelly slightly sandy CLAY		
Sample Preparation:	Tested after >0.425 mm removed by hand;		
Cone Type:	80g/30deg		

As Received Water Content [W] %	Corrected Liquid Limit [WL] %	Correlation Factor	Plastic Limit [Wp] %	Plasticity Index [Ip] %	Liquidity index [IL] % #	Consistency index [IC] % #	% Passing 425µm BS Test Sieve
28.3	48	1.039	20	28	0.29	0.71	99



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

		Plasticity		Liquid Limit
Cl	Clay	L	Low	below 35
Si	Silt	M	Medium	35 to 50
		H	High	50 to 70
		V	Very high	exceeding 70
		O	Organic	append to classification for organic material (eg ClHO)

Note: Water Content by BS EN 17892-1:2014+A1:2022, BS 1377-2:2022; Correlation Factor by Clayton C.R.I and Jukes A.W (1978); # Non accredited

Remarks:

Signed:

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Date Reported: 12/11/2024

GF 360.13

TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS

Tested in Accordance with: BS EN ISO 17892-12:2018+A2:2022, cl 5.3.14, 5.5, Fall Cone Method, 1 Pt Test, BS 1377-2:2022, cl 5.3, 6

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

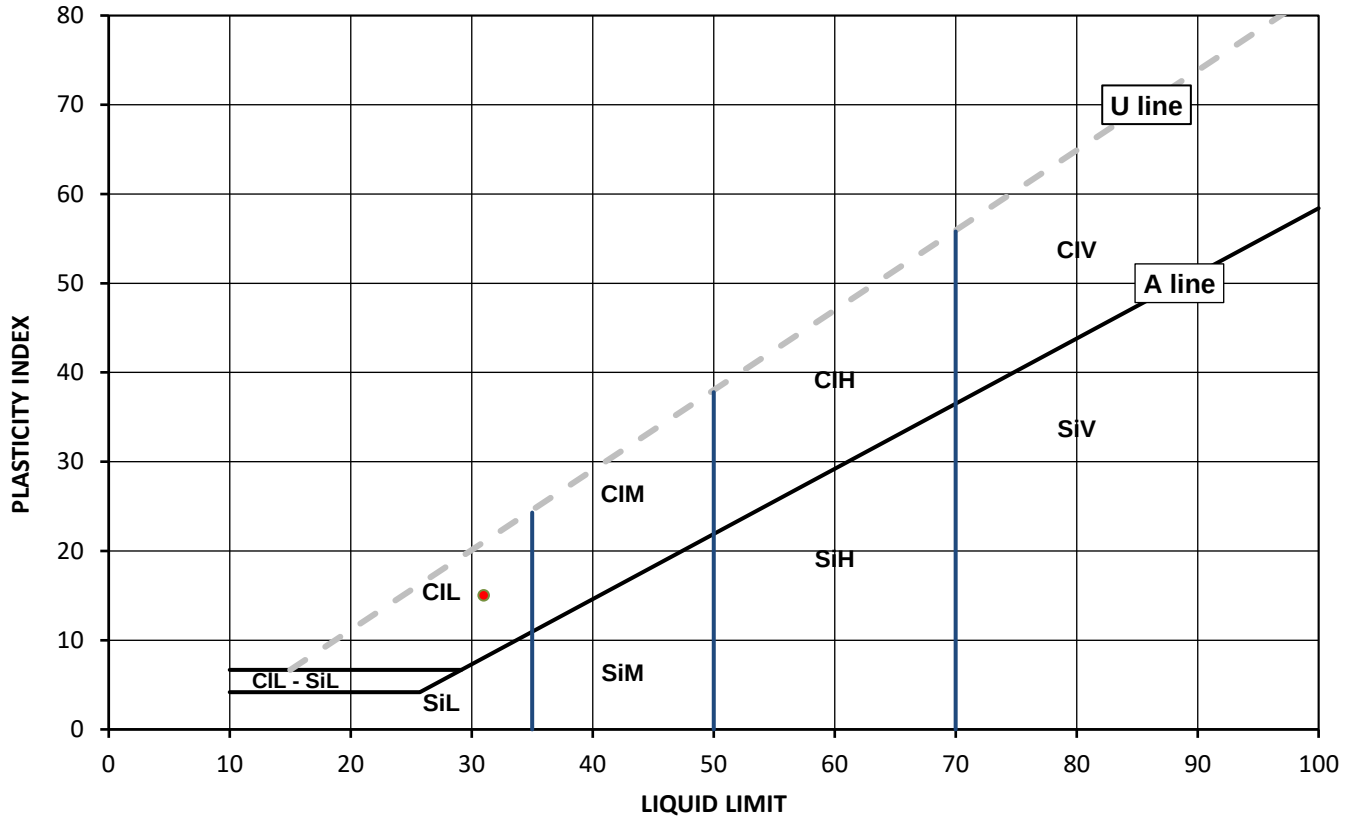
Client:	Soiltechnics Limited	Client Reference:	STW6714
Client Address:	Cedar Barn, White Lodge, Walgrave, Northampton, NN6 9PY	Job Number:	24-049359-1
		Date Sampled:	07/10/2024
		Date Received:	22/10/2024
Contact:	Admin	Date Tested:	30/10/2024
Site Address:	Jewson, Huddersfield	Sampled By:	Not Given

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	356405	Depth Top [m]:	1.80
Hole No.:	WLS01	Depth Base [m]:	Not Given
Sample Reference:	WLS01-1.8-4	Sample Type:	D
Sample Description:	Greyish brown very sandy CLAY		
Sample Preparation:	Tested in natural condition;		
Cone Type:	80g/30deg		

As Received Water Content [W] %	Corrected Liquid Limit [WL] %	Correlation Factor	Plastic Limit [Wp] %	Plasticity Index [Ip] %	Liquidity index [IL] % #	Consistency index [IC] % #	% Passing 425µm BS Test Sieve
19.6	31	1.015	16	15	0.27	0.73	100



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

		Plasticity		Liquid Limit
Cl	Clay	L	Low	below 35
Si	Silt	M	Medium	35 to 50
		H	High	50 to 70
		V	Very high	exceeding 70
		O	Organic	append to classification for organic material (eg ClHO)

Note: Water Content by BS EN 17892-1:2014+A1:2022, BS 1377-2:2022; Correlation Factor by Clayton C.R.I and Jukes A.W (1978); # Non accredited

Remarks:

Signed: Monika Siewior

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Date Reported: 12/11/2024

GF 360.13

TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS

Tested in Accordance with: BS EN ISO 17892-12:2018+A2:2022, cl 5.3.14, 5.5, Fall Cone Method, 1 Pt Test, BS 1377-2:2022, cl 5.3, 6

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

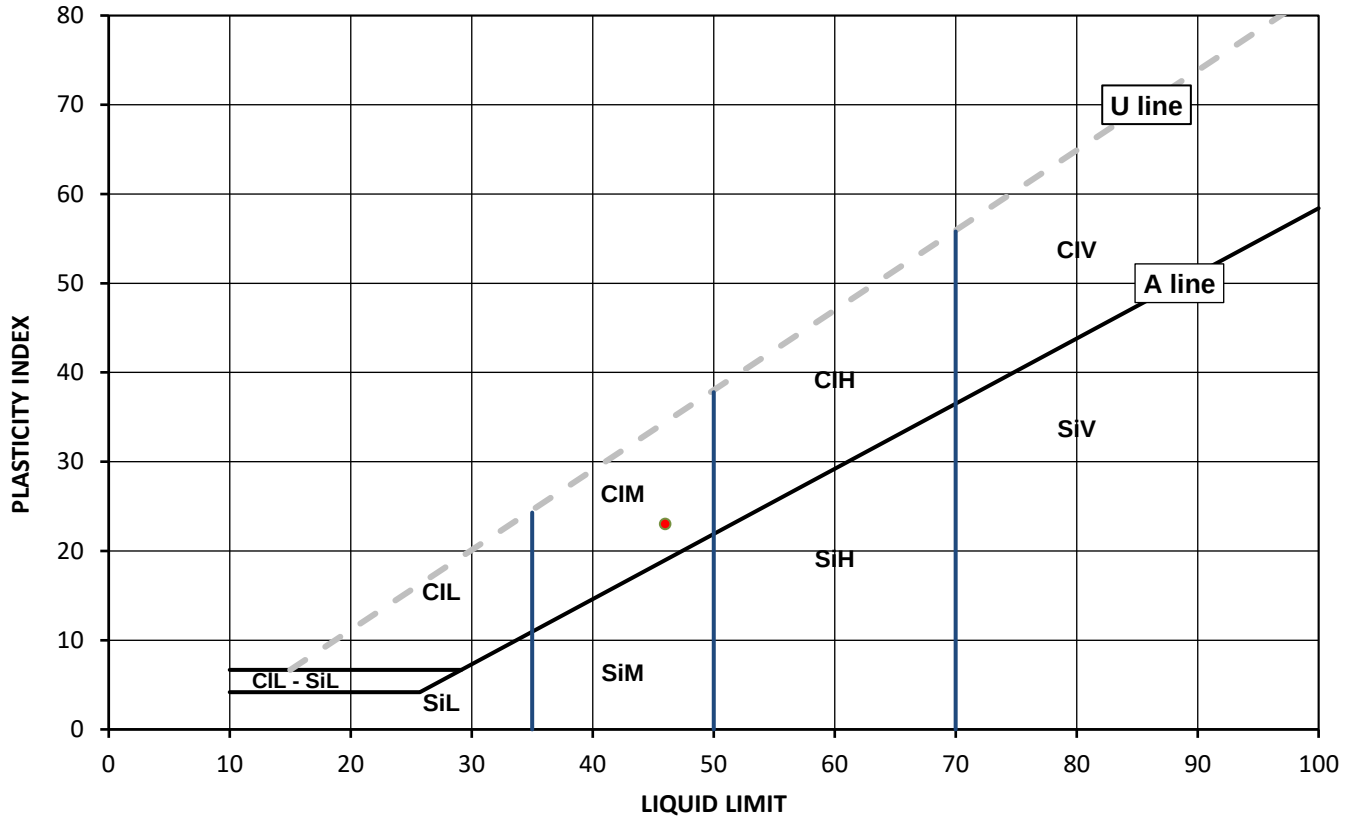
Client:	Soiltechnics Limited	Client Reference:	STW6714
Client Address:	Cedar Barn, White Lodge, Walgrave, Northampton, NN6 9PY	Job Number:	24-049359-1
		Date Sampled:	07/10/2024
		Date Received:	22/10/2024
Contact:	Admin	Date Tested:	30/10/2024
Site Address:	Jewson, Huddersfield	Sampled By:	Not Given

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	356406	Depth Top [m]:	0.80
Hole No.:	WLS02	Depth Base [m]:	Not Given
Sample Reference:	WLS02-0.8-2	Sample Type:	D
Sample Description:	Brown slightly sandy CLAY		
Sample Preparation:	Tested in natural condition;		
Cone Type:	80g/30deg		

As Received Water Content [W] %	Corrected Liquid Limit [WL] %	Correlation Factor	Plastic Limit [Wp] %	Plasticity Index [Ip] %	Liquidity index [IL] % #	Consistency index [IC] % #	% Passing 425µm BS Test Sieve
33.0	46	0.984	23	23	0.43	0.57	100



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

		Plasticity		Liquid Limit
Cl	Clay	L	Low	below 35
Si	Silt	M	Medium	35 to 50
		H	High	50 to 70
		V	Very high	exceeding 70
		O	Organic	append to classification for organic material (eg ClHO)

Note: Water Content by BS EN 17892-1:2014+A1:2022, BS 1377-2:2022; Correlation Factor by Clayton C.R.I and Jukes A.W (1978); # Non accredited

Remarks:

Signed:

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Date Reported: 12/11/2024

GF 360.13

TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS

Tested in Accordance with: BS EN ISO 17892-12:2018+A2:2022, cl 5.3.14, 5.5, Fall Cone Method, 1 Pt Test, BS 1377-2:2022, cl 5.3, 6

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

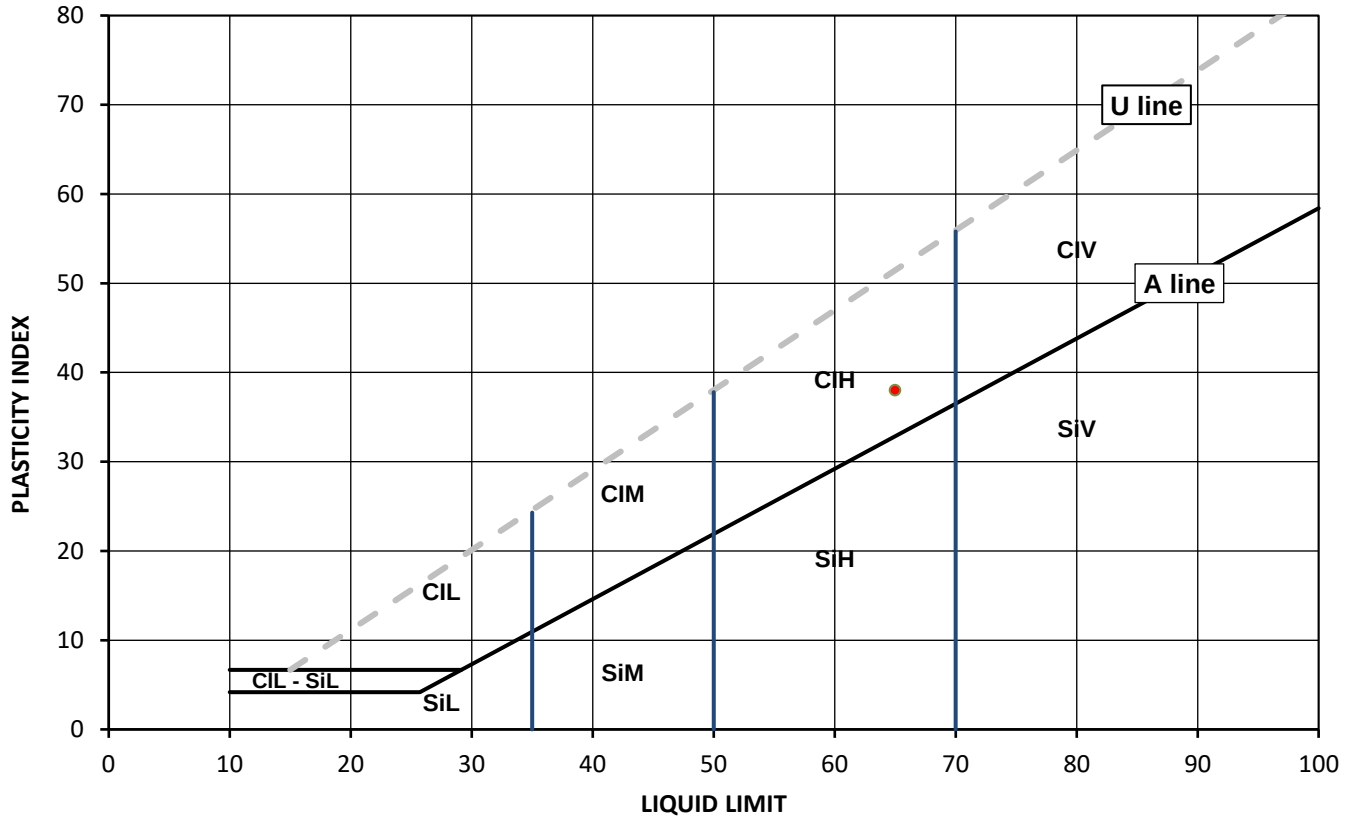
Client:	Soiltechnics Limited	Client Reference:	STW6714
Client Address:	Cedar Barn, White Lodge, Walgrave, Northampton, NN6 9PY	Job Number:	24-049359-1
		Date Sampled:	07/10/2024
		Date Received:	22/10/2024
Contact:	Admin	Date Tested:	30/10/2024
Site Address:	Jewson, Huddersfield	Sampled By:	Not Given

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	356407	Depth Top [m]:	0.70
Hole No.:	WLS03	Depth Base [m]:	Not Given
Sample Reference:	WLS03-0.7-2	Sample Type:	D
Sample Description:	Brown slightly gravelly CLAY		
Sample Preparation:	Tested after >0.425 mm removed by hand;		
Cone Type:	80g/30deg		

As Received Water Content [W] %	Corrected Liquid Limit [WL] %	Correlation Factor	Plastic Limit [Wp] %	Plasticity Index [Ip] %	Liquidity index [IL] % #	Consistency index [IC] % #	% Passing 425µm BS Test Sieve
30.4	65	1.018	27	38	0.08	0.92	76



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

		Plasticity		Liquid Limit
Cl	Clay	L	Low	below 35
Si	Silt	M	Medium	35 to 50
		H	High	50 to 70
		V	Very high	exceeding 70
		O	Organic	append to classification for organic material (eg ClHO)

Note: Water Content by BS EN 17892-1:2014+A1:2022, BS 1377-2:2022; Correlation Factor by Clayton C.R.I and Jukes A.W (1978); # Non accredited

Remarks:

Signed: Monika Siewior

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Date Reported: 12/11/2024

GF 360.13

TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS

Tested in Accordance with: BS EN ISO 17892-12:2018+A2:2022, cl 5.3.14, 5.5, Fall Cone Method, 1 Pt Test, BS 1377-2:2022, cl 5.3, 6

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

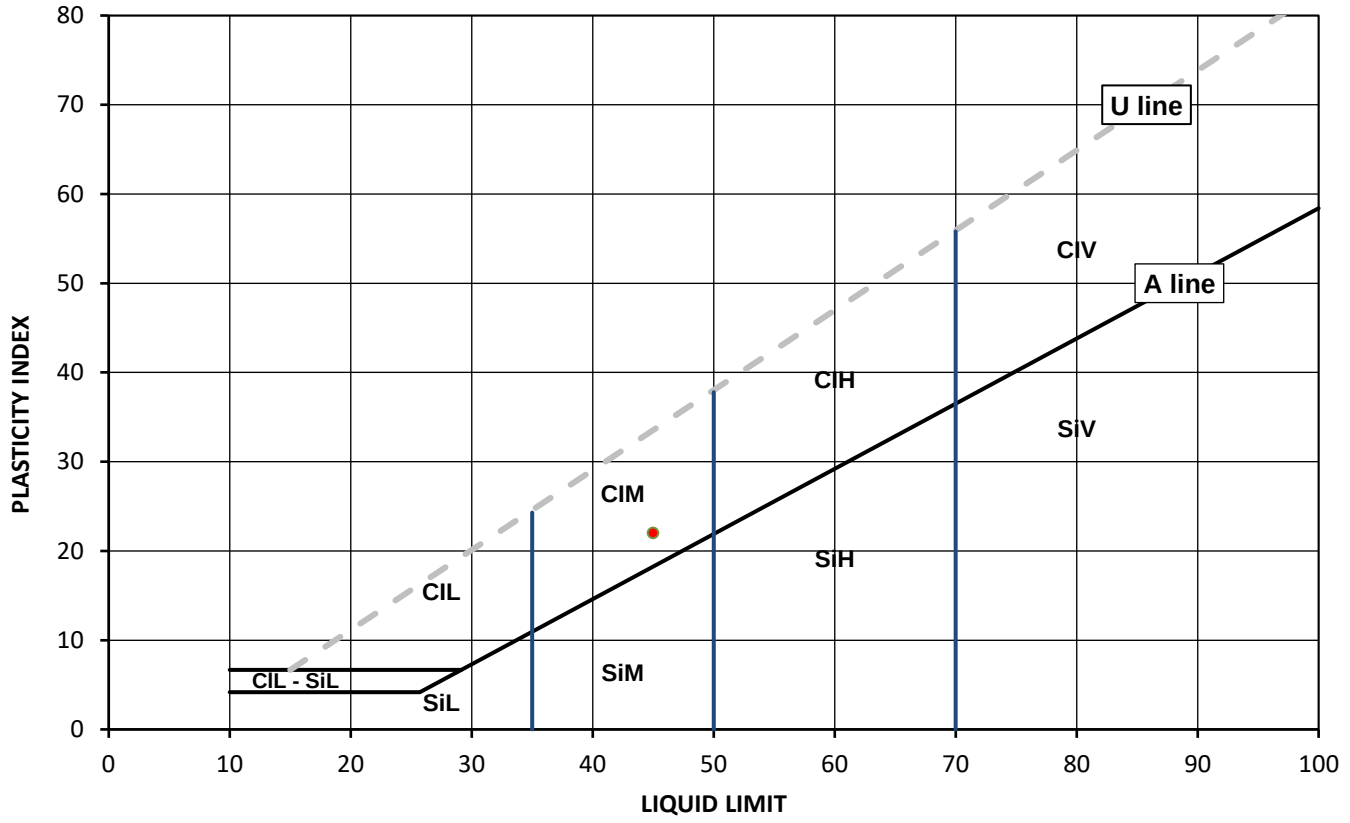
Client:	Soiltechnics Limited	Client Reference:	STW6714
Client Address:	Cedar Barn, White Lodge, Walgrave, Northampton, NN6 9PY	Job Number:	24-049359-1
		Date Sampled:	08/10/2024
		Date Received:	22/10/2024
Contact:	Admin	Date Tested:	05/11/2024
Site Address:	Jewson, Huddersfield	Sampled By:	Not Given

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	356411	Depth Top [m]:	0.80
Hole No.:	WLS06	Depth Base [m]:	1.20
Sample Reference:	WLS06-0.8-2	Sample Type:	B
Sample Description:	Brown slightly gravelly slightly sandy CLAY		
Sample Preparation:	Tested after washing to remove >0.425 mm;		
Cone Type:	80g/30deg		

As Received Water Content [W] %	Corrected Liquid Limit [WL] %	Correlation Factor	Plastic Limit [Wp] %	Plasticity Index [Ip] %	Liquidity index [IL] % #	Consistency index [IC] % #	% Passing 425µm BS Test Sieve
23.8	45	0.968	23	22	0.05	0.95	92



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

		Plasticity		Liquid Limit
Cl	Clay	L	Low	below 35
Si	Silt	M	Medium	35 to 50
		H	High	50 to 70
		V	Very high	exceeding 70
		O	Organic	append to classification for organic material (eg ClHO)

Note: Water Content by BS EN 17892-1:2014+A1:2022, BS 1377-2:2022; Correlation Factor by Clayton C.R.I and Jukes A.W (1978); # Non accredited

Remarks:

Signed:

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Date Reported: 12/11/2024

GF 360.13

TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS

Tested in Accordance with: BS EN ISO 17892-12:2018+A2:2022, cl 5.3.14, 5.5, Fall Cone Method, 1 Pt Test, BS 1377-2:2022, cl 5.3, 6

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

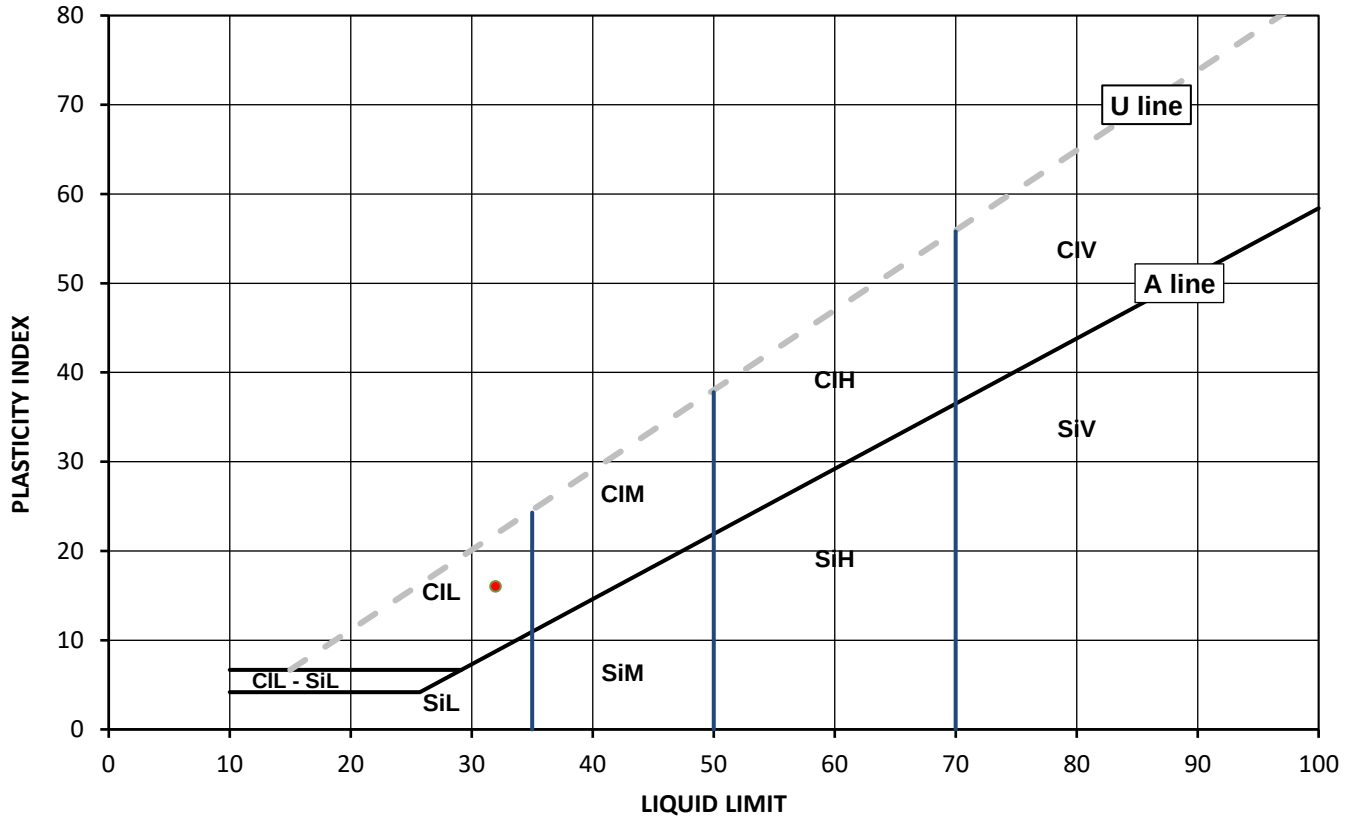
Client:	Soiltechnics Limited	Client Reference:	STW6714
Client Address:	Cedar Barn, White Lodge, Walgrave, Northampton, NN6 9PY	Job Number:	24-049359-1
		Date Sampled:	08/10/2024
		Date Received:	22/10/2024
Contact:	Admin	Date Tested:	30/10/2024
Site Address:	Jewson, Huddersfield	Sampled By:	Not Given

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	356412	Depth Top [m]:	3.50
Hole No.:	WLS06	Depth Base [m]:	Not Given
Sample Reference:	WLS06-3.5-5	Sample Type:	D
Sample Description:	Brown gravelly very sandy CLAY		
Sample Preparation:	Tested after washing to remove >0.425 mm;		
Cone Type:	80g/30deg		

As Received Water Content [W] %	Corrected Liquid Limit [WL] %	Correlation Factor	Plastic Limit [Wp] %	Plasticity Index [Ip] %	Liquidity index [IL] % #	Consistency index [IC] % #	% Passing 425µm BS Test Sieve
13.0	32	1.014	16	16	-0.19	1.19	49



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

		Plasticity		Liquid Limit
Cl	Clay	L	Low	below 35
Si	Silt	M	Medium	35 to 50
		H	High	50 to 70
		V	Very high	exceeding 70
		O	Organic	append to classification for organic material (eg ClHO)

Note: Water Content by BS EN 17892-1:2014+A1:2022, BS 1377-2:2022; Correlation Factor by Clayton C.R.I and Jukes A.W (1978); # Non accredited

Remarks:

Signed:

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Date Reported: 12/11/2024

GF 360.13

SUMMARY REPORT

SUMMARY OF CLASSIFICATION TEST RESULTS

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

Tested in Accordance with:

BS EN ISO 17892-12:2018+A2:2022, cl 5.3.14, 5.5, Fall Cone Method, 1 Pt Test, BS 1377-2:2022, cl 5.3, 6. Correlation Factor by Clayton C.R.I and Jukes A.W (1978). W by BS EN ISO 17892-1:2014+A1:2022.

4041

Client: Soiltechnics Limited

Client Address: Cedar Barn, White Lodge, Walgrave, Northampton, NN6 9PY

Contact: Admin

Site Address: Jewson, Huddersfield

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Client Reference: STW6714
Job Number: 24-049359-1
Date Sampled: 07/10 - 09/10/2024
Date Received: 22/10/2024
Date Tested: 05/11/2024
Sampled By: Not Given

Test results

Laboratory Reference	Hole No.	Sample				Description	Remarks	W	Liquid & Plastic Limit							Density		
		Reference	Depth Top m	Depth Base m	Type			%	% Passing 425um %	WL* %	Correlation Factor	Wp %	Ip %	Cone type	Sample Preparation	bulk Mg/m3	dry Mg/m3	PD Mg/m3
356394	RBH01	RBH01-1.5-2	1.50	Not Given	D	Brown slightly sandy CLAY	Atterberg 1 Point	36.9	100	56	1.018	24	32	80g/30 deg	N			
356404	WLS01	WLS01-0.8-3	0.80	Not Given	D	Brown slightly gravelly slightly sandy CLAY	Atterberg 1 Point	28.3	99	48	1.039	20	28	80g/30 deg	R			
356405	WLS01	WLS01-1.8-4	1.80	Not Given	D	Greyish brown very sandy CLAY	Atterberg 1 Point	19.6	100	31	1.015	16	15	80g/30 deg	N			
356406	WLS02	WLS02-0.8-2	0.80	Not Given	D	Brown slightly sandy CLAY	Atterberg 1 Point	33.0	100	46	0.984	23	23	80g/30 deg	N			
356407	WLS03	WLS03-0.7-2	0.70	Not Given	D	Brown slightly gravelly CLAY	Atterberg 1 Point	30.4	76	65	1.018	27	38	80g/30 deg	R			
356411	WLS06	WLS06-0.8-2	0.80	1.20	B	Brown slightly gravelly slightly sandy CLAY	Atterberg 1 Point	23.8	92	45	0.968	23	22	80g/30 deg	WR			
356412	WLS06	WLS06-3.5-5	3.50	Not Given	D	Brown gravelly very sandy CLAY	Atterberg 1 Point	13.0	49	32	1.014	16	16	80g/30 deg	WR			

Note: # Non accredited; NP - Non plastic; N - Tested in natural condition, R - Tested after >0.425mm removed by hand, WR - Tested after washing to remove >425mm; * - One point liquid limit corrected as per the report Correlation Factor by Clayton C.R.I and Jukes A.W (1978)

Comments:

Signed:

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Date Reported: 12/11/2024 **GF 361.15**

SUMMARY REPORT

DETERMINATION OF WATER CONTENT

Tested in Accordance with: BS EN ISO 17892-1:2014+A1:2022, BS 1377-2: 2022, clause 4.1

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

Client: Soiltechnics Limited

Client Address: Cedar Barn, White Lodge,
Walgrave, Northampton, NN6 9PY

Contact: Admin

Site Address: Jewson, Huddersfield

Client Reference: STW6714
Job Number: 24-049359-1
Date Sampled: 07/10 - 09/10/2024
Date Received: 22/10/2024
Date Tested: 30/10 - 05/11/2024
Sampled By: Not Given

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Test results

Laboratory Reference	Hole No.	Sample				Description	Remarks	WC											
		Reference	Depth Top m	Depth Base m	Type			%											
356394	RBH01	RBH01-1.5-2	1.50	Not Given	D	Brown slightly sandy CLAY		36.9											
356404	WLS01	WLS01-0.8-3	0.80	Not Given	D	Brown slightly gravelly slightly sandy CLAY		28.3											
356405	WLS01	WLS01-1.8-4	1.80	Not Given	D	Greyish brown very sandy CLAY		19.6											
356406	WLS02	WLS02-0.8-2	0.80	Not Given	D	Brown slightly sandy CLAY		33.0											
356407	WLS03	WLS03-0.7-2	0.70	Not Given	D	Brown slightly gravelly CLAY		30.4											
356411	WLS06	WLS06-0.8-2	0.80	1.20	B	Brown slightly gravelly slightly sandy CLAY		23.8											
356412	WLS06	WLS06-3.5-5	3.50	Not Given	D	Brown gravelly very sandy CLAY		13.0											

Comments:

Signed:

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Date Reported: 12/11/2024

GF 126.18

TEST CERTIFICATE

DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Tested in Accordance with: BS EN ISO 17892-4:2016, BS 1377-2:2022 cl. 10

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

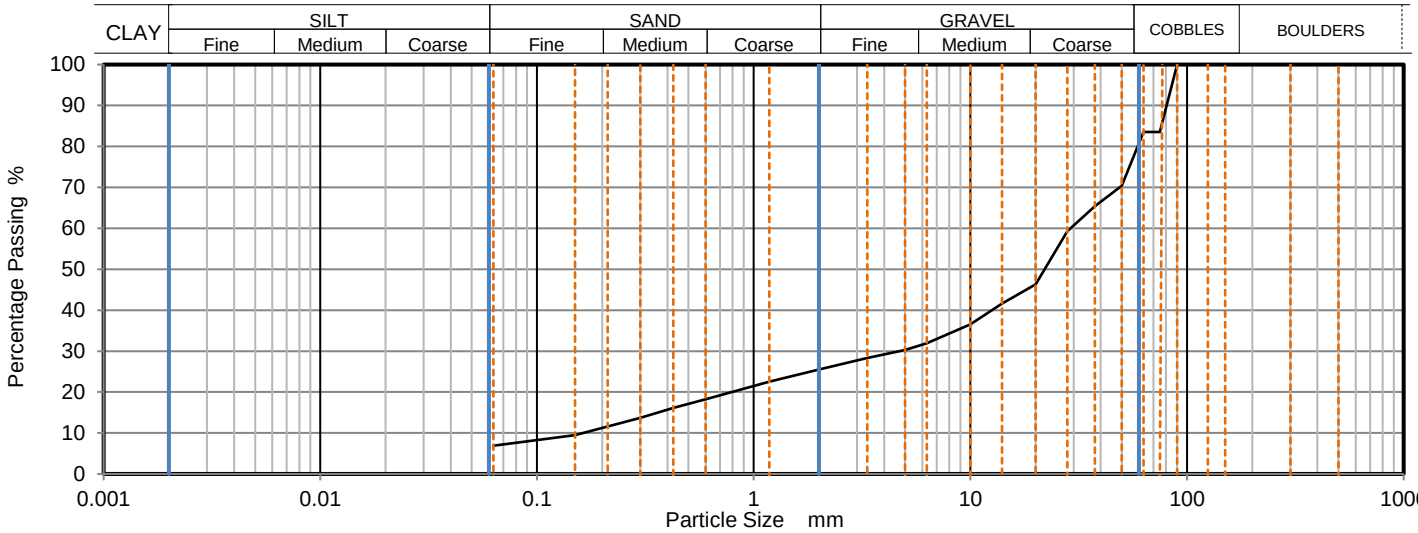
4041

Client:	Soiltechnics Limited	Client Reference:	STW6714
Client Address:	Cedar Barn, White Lodge, Walgrave, Northampton, NN6 9PY	Job Number:	24-049359-1
		Date Sampled:	09/10/2024
		Date Received:	22/10/2024
Contact:	Admin	Date Tested:	05/11/2024
Site Address:	Jewson, Huddersfield	Sampled By:	Not Given

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	356396	Depth Top [m]:	2.90
Hole No.:	RBH01	Depth Base [m]:	3.70
Sample Reference:	RBH01-2.7-5	Sample Type:	B
Sample Description:	Brown sandy GRAVEL with cobbles		
Sample Preparation:	Sample was quartered, oven dried at 107.8 °C and broken down by hand.		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
500	100		
300	100		
150	100		
125	100		
90	100		
75	84		
63	84		
50	70		
37.5	65		
28	59		
20	46		
14	42		
10	37		
6.3	32		
5	30		
3.35	28		
2	26		
1.18	23		
0.6	18		
0.425	16		
0.3	14		
0.212	12		
0.15	10		
0.063	7		

Sample Proportions	% dry mass
Very coarse	17.00
Gravel	57.00
Sand	19.00
Fines <0.063 mm	7.00

Grading Analysis		
D100	mm	90
D60	mm	29
D30	mm	4.69
D10	mm	0.164
Uniformity Coefficient		180
Curvature Coefficient		4.6

Uniformity and Curvature Coefficient calculated in accordance with BS EN ISO 14688-2:2018

Note: Tested in Accordance with ISO 17892 -4, by sieving on as received or wet sample

Remarks: The material submitted - fails to meet the minimum mass requirements as stated in BS EN ISO 17892-4:2016 Table 1.

Signed:

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Date Reported: 12/11/2024

GF 366.11

TEST CERTIFICATE

DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Tested in Accordance with: BS EN ISO 17892-4:2016, BS 1377-2:2022 cl. 10

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

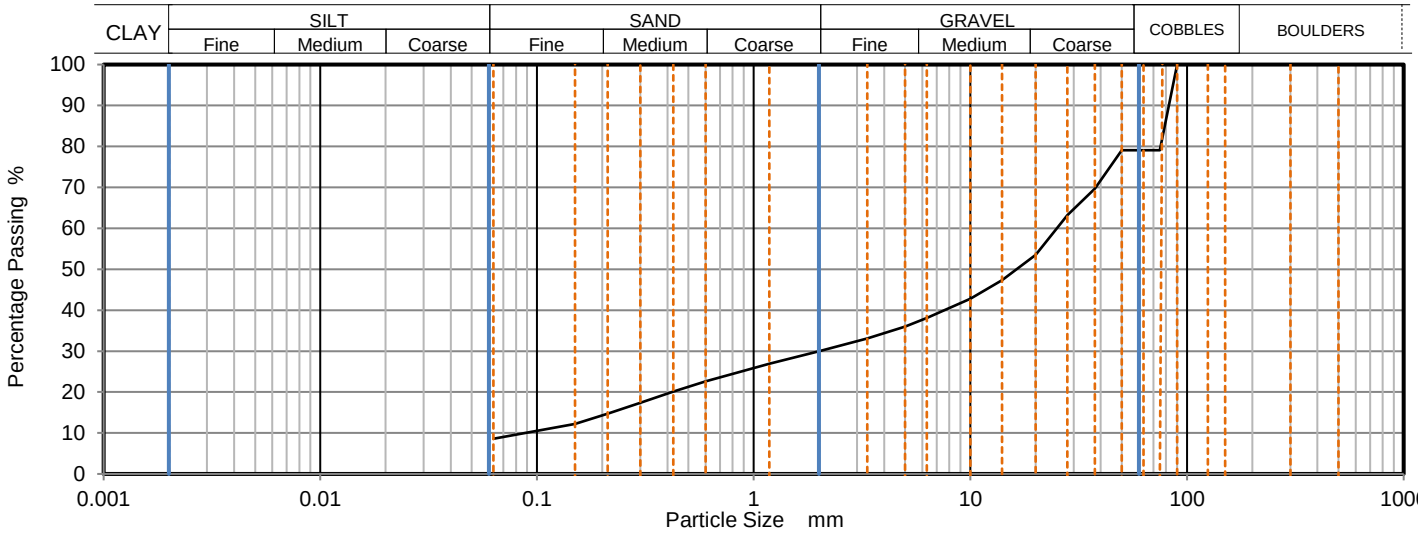
4041

Client:	Soiltechnics Limited	Client Reference:	STW6714
Client Address:	Cedar Barn, White Lodge, Walgrave, Northampton, NN6 9PY	Job Number:	24-049359-1
		Date Sampled:	09/10/2024
		Date Received:	22/10/2024
Contact:	Admin	Date Tested:	05/11/2024
Site Address:	Jewson, Huddersfield	Sampled By:	Not Given

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	356399	Depth Top [m]:	1.20
Hole No.:	RBH02	Depth Base [m]:	1.50
Sample Reference:	RBH02-1.2-1	Sample Type:	B
Sample Description:	Brown clayey very sandy GRAVEL with cobbles		
Sample Preparation:	Sample was quartered, oven dried at 107.8 °C and broken down by hand.		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
500	100		
300	100		
150	100		
125	100		
90	100		
75	79		
63	79		
50	79		
37.5	70		
28	63		
20	54		
14	47		
10	43		
6.3	38		
5	36		
3.35	33		
2	30		
1.18	27		
0.6	23		
0.425	20		
0.3	17		
0.212	15		
0.15	12		
0.063	9		

Sample Proportions	% dry mass
Very coarse	21.00
Gravel	49.00
Sand	21.00
Fines <0.063 mm	9.00

Grading Analysis		
D100	mm	90
D60	mm	25.1
D30	mm	2
D10	mm	0.088
Uniformity Coefficient		280
Curvature Coefficient		1.8

Uniformity and Curvature Coefficient calculated in accordance with BS EN ISO 14688-2:2018

Note: Tested in Accordance with ISO 17892 -4, by sieving on as received or wet sample

Remarks: The material submitted - fails to meet the minimum mass requirements as stated in BS EN ISO 17892-4:2016 Table 1.

Signed:

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Date Reported: 12/11/2024

GF 366.11

TEST CERTIFICATE

DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Tested in Accordance with: BS EN ISO 17892-4:2016, BS 1377-2:2022 cl. 10

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

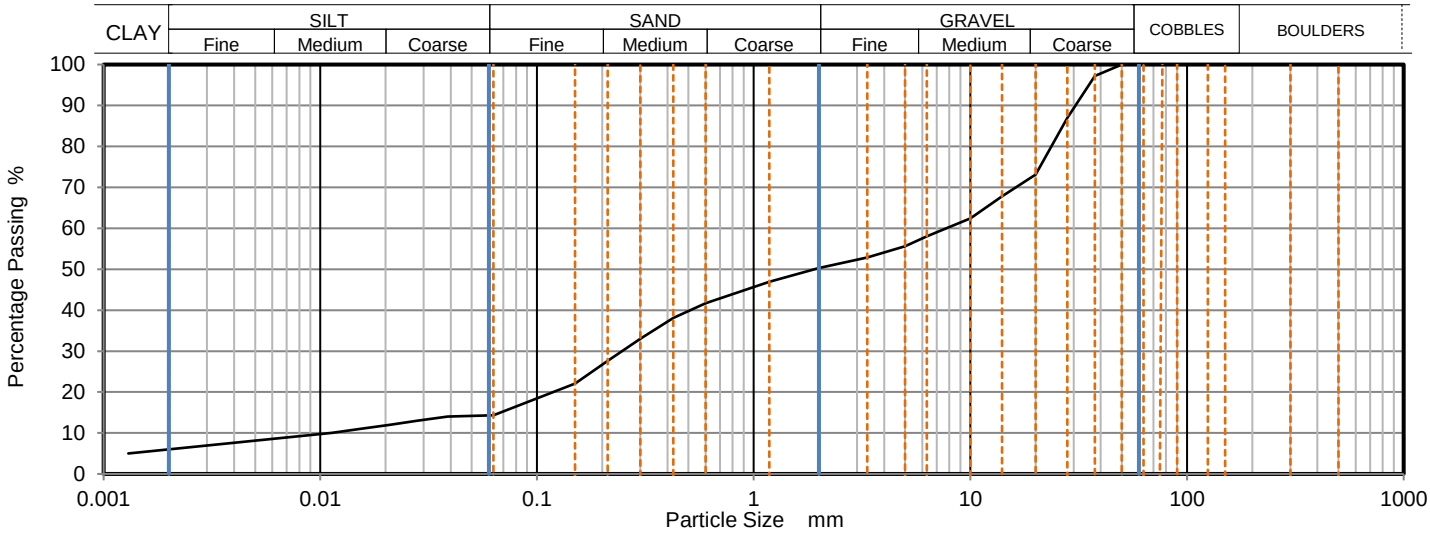
4041

Client:	Soiltechnics Limited	Client Reference:	STW6714
Client Address:	Cedar Barn, White Lodge, Walgrave, Northampton, NN6 9PY	Job Number:	24-049359-1
		Date Sampled:	07/10/2024
		Date Received:	22/10/2024
Contact:	Admin	Date Tested:	05/11/2024
Site Address:	Jewson, Huddersfield	Sampled By:	Not Given

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	356408	Depth Top [m]:	2.40
Hole No.:	WLS03	Depth Base [m]:	3.00
Sample Reference:	WLS03-2.4-4	Sample Type:	B
Sample Description:	Brown very sandy clayey GRAVEL		
Sample Preparation:	Sample was quartered, oven dried at 107.8 °C and broken down by hand.		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
500	100	0.0387	14
300	100	0.0280	13
150	100	0.0208	12
125	100	0.0151	11
90	100	0.0113	10
75	100	0.0013	5
63	100		
50	100		
37.5	97		
28	87		
20	73		
14	68		
10	62		
6.3	58		
5	56		
3.35	53		
2	50		
1.18	47		
0.6	42	Particle density	(assumed)
0.425	38	2.65	Mg/m3
0.3	33		
0.212	28		
0.15	22		
0.063	14		

Sample Proportions	% dry mass
Very coarse	0.00
Gravel	50.00
Sand	36.00
Silt	8.00
Clay	6.00

Grading Analysis		
D100	mm	50
D60	mm	7.76
D30	mm	0.248
D10	mm	0.00964
Uniformity Coefficient		800
Curvature Coefficient		0.82

Uniformity and Curvature Coefficient calculated in accordance with BS EN ISO 14688-2:2018

Note: Tested in Accordance with ISO 17892 -4, by sieving and hydrometer sedimentation

Remarks: The material submitted - fails to meet the minimum mass requirements as stated in BS EN ISO 17892-4:2016 Table 1.

Signed:

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Date Reported: 12/11/2024

GF 366.11

TEST CERTIFICATE

DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Tested in Accordance with: BS EN ISO 17892-4:2016, BS 1377-2:2022 cl. 10

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

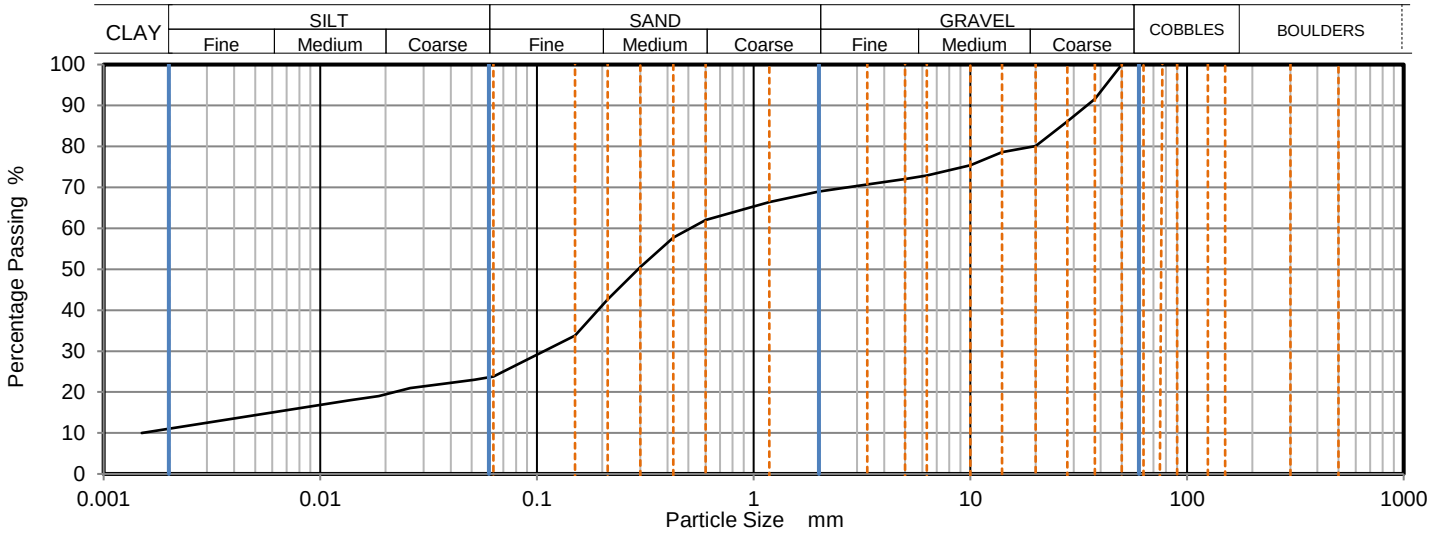
4041

Client:	Soiltechnics Limited	Client Reference:	STW6714
Client Address:	Cedar Barn, White Lodge, Walgrave, Northampton, NN6 9PY	Job Number:	24-049359-1
		Date Sampled:	07/10/2024
		Date Received:	22/10/2024
Contact:	Admin	Date Tested:	05/11/2024
Site Address:	Jewson, Huddersfield	Sampled By:	Not Given

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	356409	Depth Top [m]:	0.50
Hole No.:	WLS04	Depth Base [m]:	1.00
Sample Reference:	WLS04-0.5-2	Sample Type:	B
Sample Description:	Brown very gravelly very clayey SAND		
Sample Preparation:	Sample was quartered, oven dried at 107.8 °C and broken down by hand.		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
500	100	0.0514	23
300	100	0.0366	22
150	100	0.0260	21
125	100	0.0186	19
90	100	0.0137	18
75	100	0.0015	10
63	100		
50	100		
37.5	92		
28	86		
20	80		
14	79		
10	75		
6.3	73		
5	72		
3.35	71		
2	69		
1.18	66		
0.6	62	Particle density	(assumed)
0.425	58	2.65	Mg/m3
0.3	51		
0.212	43		
0.15	34		
0.063	24		

Sample Proportions	% dry mass
Very coarse	0.00
Gravel	31.00
Sand	46.00
Silt	12.00
Clay	11.00

Grading Analysis		
D100	mm	50
D60	mm	0.51
D30	mm	0.108
D10	mm	
Uniformity Coefficient		8.1
Curvature Coefficient		

Uniformity and Curvature Coefficient calculated in accordance with BS EN ISO 14688-2:2018

Note: Tested in Accordance with ISO 17892 -4, by sieving and hydrometer sedimentation

Remarks: The material submitted - fails to meet the minimum mass requirements as stated in BS EN ISO 17892-4:2016 Table 1.

Signed:

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Date Reported: 12/11/2024

GF 366.11

TEST CERTIFICATE

DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Tested in Accordance with: BS EN ISO 17892-4:2016, BS 1377-2:2022 cl. 10

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

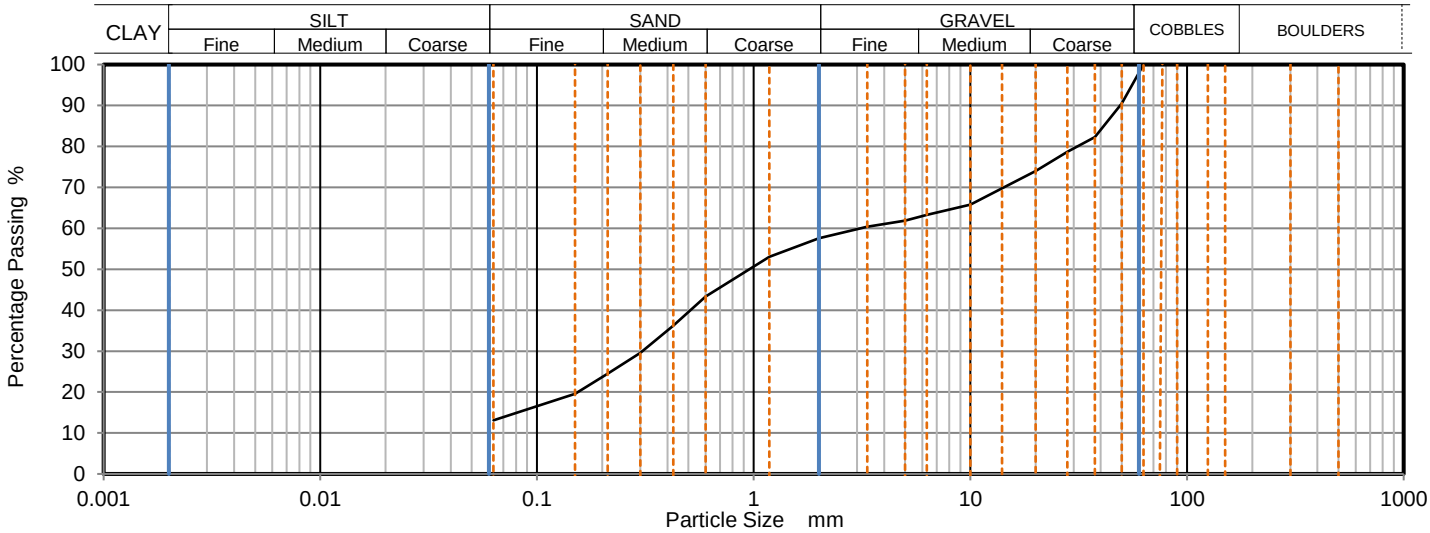
4041

Client:	Soiltechnics Limited	Client Reference:	STW6714
Client Address:	Cedar Barn, White Lodge, Walgrave, Northampton, NN6 9PY	Job Number:	24-049359-1
		Date Sampled:	07/10/2024
		Date Received:	22/10/2024
Contact:	Admin	Date Tested:	05/11/2024
Site Address:	Jewson, Huddersfield	Sampled By:	Not Given

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	356410	Depth Top [m]:	1.60
Hole No.:	WLS05	Depth Base [m]:	2.90
Sample Reference:	WLS05-1.6-3	Sample Type:	B
Sample Description:	Brown very gravelly clayey SAND		
Sample Preparation:	Sample was quartered, oven dried at 107.9 °C and broken down by hand.		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
500	100		
300	100		
150	100		
125	100		
90	100		
75	100		
63	100		
50	91		
37.5	82		
28	79		
20	74		
14	70		
10	66		
6.3	63		
5	62		
3.35	60		
2	58		
1.18	53		
0.6	43		
0.425	36		
0.3	30		
0.212	25		
0.15	20		
0.063	13		

Sample Proportions	% dry mass
Very coarse	0.00
Gravel	42.00
Sand	45.00
Fines <0.063 mm	13.00

Grading Analysis		
D100	mm	63
D60	mm	3.12
D30	mm	0.306
D10	mm	
Uniformity Coefficient		50
Curvature Coefficient		

Uniformity and Curvature Coefficient calculated in accordance with BS EN ISO 14688-2:2018

Note: Tested in Accordance with ISO 17892 -4, by sieving on as received or wet sample

Remarks: The material submitted - fails to meet the minimum mass requirements as stated in BS EN ISO 17892-4:2016 Table 1.

Signed:

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Date Reported: 12/11/2024

GF 366.11

SUMMARY REPORT

DETERMINATION OF POINT LOAD STRENGTH

Tested in Accordance with: ISRM: 2007, pages 125-132

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

Client: Soiltechnics Limited

Client Address: Cedar Barn, White Lodge,
Walgrave, Northampton, NN6 9PY

Contact: Admin

Site Address: Jewson, Huddersfield

Client Reference: STW6714
Job Number: 24-049359-1
Date Sampled: 09/10 - 10/10/2024
Date Received: 22/10/2024
Date Tested: 07/11/2024
Sampled By: Not Given

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Test results

Laboratory Reference	Hole No.	Sample				Description	Remarks (including water content if measured)	Specimen Reference	Test Type see ISRM		Failure Valid (Y/N)	Dimensions				Force P	Equivalent diameter, De	Point Load Strength Index	
		Reference	Depth Top	Depth Base	Type				Type (D, A, I, B)	Direction (L, P or U)		Lne	W	Dps	Dps'			Is	Is(50)
			m	m								mm	mm	mm	mm	kN	mm	MPa	MPa
356397	RBH01	RBH01-15-8	15.00	15.10	C	Grey SILTSTONE	WC = 7.2%	1	I	U	YES	56.0	86.0	66.0	40.0	0.7	66.2	0.16	0.18
356398	RBH01	RBH01-15.7-9	15.70	15.80	D	Light grey SILTSTONE	WC = 7.8%	1	A	U	YES	-	85.8	58.0	48.0	0.9	72.4	0.17	0.20
356400	RBH02	RBH02-15.93-4	15.93	16.00	C	Black SILTSTONE	WC = 2.4%	1	A	U	YES	-	86.1	64.0	30.0	6.7	57.4	2.02	2.15
356401	RBH02	RBH02-16.70-5	16.70	17.00	C	Dark grey BASALT	WC = 1.0%	1	I	U	YES	150.4	87.1	74.0	65.0	42.2	84.9	5.86	7.43
356402	RBH02	RBH02-17.3-6	17.30	17.50	C	Grey SILTSTONE	WC = 5.0%	1	A	U	YES	-	87.8	47.0	40.0	6.4	66.9	1.43	1.63
356403	RBH02	RBH02-17.9-7	17.90	18.00	C	Grey SILTSTONE	WC = 3.4%	1	D	U	YES	49.9	86.7	87.0	81.0	1.9	83.8	0.26	0.33

Note: # non accredited; Test Type: D - Diametral, A - Axial, I - Irregular Lump, B - Block; Direction: L - parallel to planes of weakness, P - perpendicular to planes of weakness, U - unknown or random;
Dimensions: Dps - Distance between platens (platen separation), Dps' - at failure (see ISRM note 6), Lne - Length from platens to nearest free end W - Width of shortest dimension perpendicular to load, P;
Detailed legend for test and dimensions, based on ISRM, is shown above; Size factor, F = (De/50)0.45 for all tests

Equipment No.: i2 4341 Calibration Date: 15/03/2024 - 15/03/2025

Comments:

Signed:

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Date Reported: 12/11/2024

GF 134.16

4041

TEST CERTIFICATE

UNCONSOLIDATED UNDRAINED TRIAXIAL TEST

Tested in Accordance with: BS EN ISO 17982-8:2018, BS 1377-2 Cl. 28:2022

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

Environmental Science

Client:	Soiltechnics Limited	Client Reference:	STW6714
Client Address:	Cedar Barn, White Lodge, Walgrave, Northampton, NN6 9PY	Job Number:	24-049359-1
		Date Sampled:	09/10/2024
		Date Received:	22/10/2024
Contact:	Admin	Date Tested:	04/11/2024
Site Address:	Jewson, Huddersfield	Sampled By:	Not Given

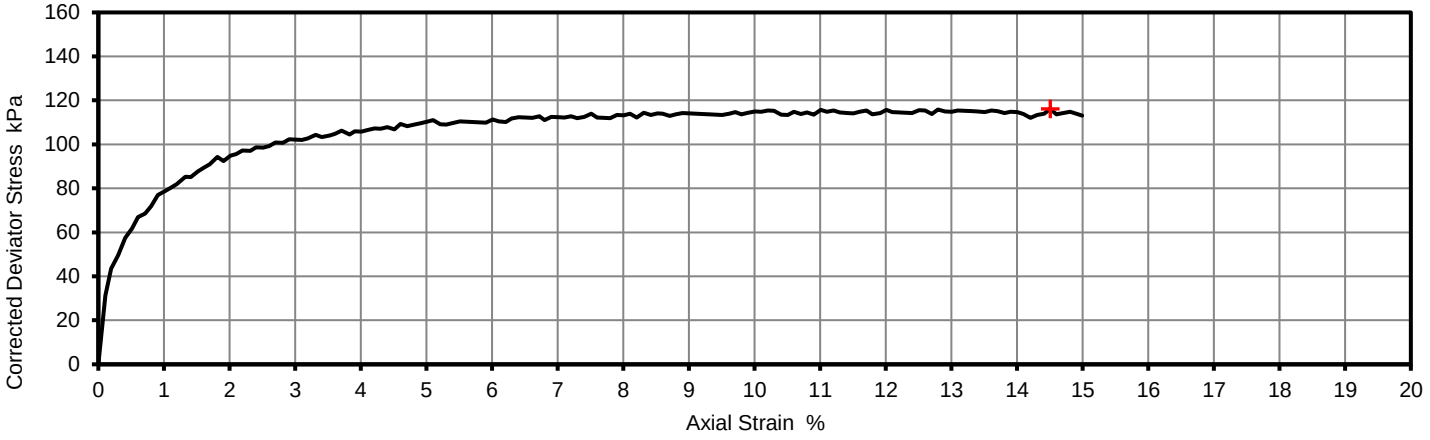
Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Test Results:

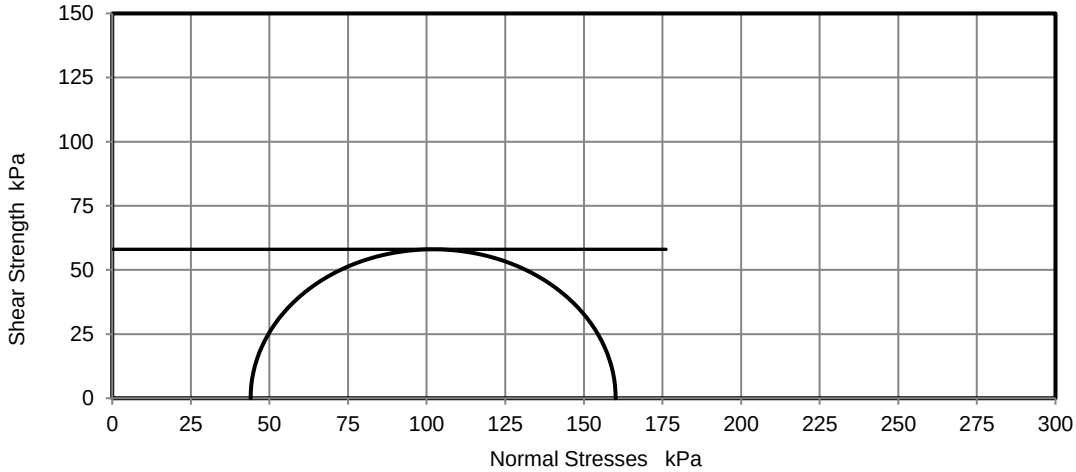
Laboratory Reference:	356395	Depth Top [m]:	2.20
Hole No.:	RBH01	Depth Base [m]:	2.70
Sample Reference:	RBH01-2.2-4	Sample Type:	UT
Sample Description:	Dark brown very sandy CLAY		
Sample Preparation:	Sample prepared in accordance with BS EN ISO 17892-8: 2018 Clause 6.2.		

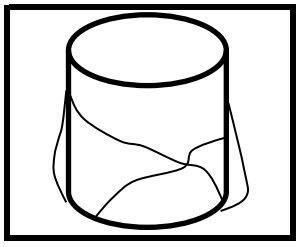
Test Number	1		Rate of Strain	2.00	%/min	
Depth within Sample	-	m	Cell Pressure	44	kPa	
Length	76.04	mm	Axial Strain at Failure	14.5	%	
Diameter	38.05	mm	Deviator Stress, (σ1 - σ3)f	116	kPa	
Length Prior to Shearing	76.04	mm	Undrained Shear Strength, cu	58	kPa	½(σ1 - σ3)f
Bulk Density	1.80	Mg/m3	Mode of Failure	Compound		
Initial Water Content	17.5	%	Membrane Thickness	0.18	mm	
Final Water Content	17.7	%	Membrane Correction	3.96	kPa	
Dry Density	1.53	Mg/m3				

Deviator Stress v Axial Strain

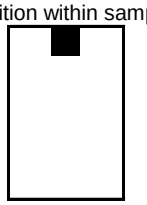


Mohr Circles





Position within sample



Note: Deviator stress corrected for area change and membrane effects.

Remarks: Unable to take a photo.

Signed: Monika Siewior

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Date Reported: 12/11/2024

GF 463.4

TEST CERTIFICATE

INCREMENTAL LOADING OEDOMETER TEST

Tested in Accordance with: BS EN ISO 17892-5:2017, BS 1377-2:2022 Cl. 16 & 17

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

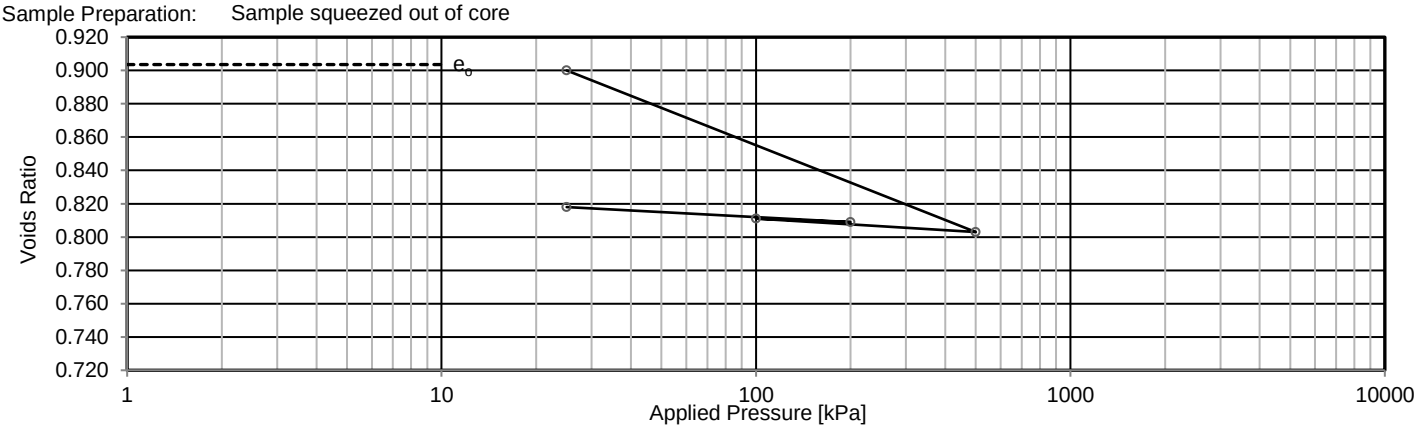
4041

Client:	Soiltechnics Limited	Client Reference:	STW6714
Client Address:	Cedar Barn, White Lodge, Walgrave, Northampton, NN6 9PY	Job Number:	24-049359-1
		Date Sampled:	09/10/2024
		Date Received:	22/10/2024
Contact:	Admin	Date Tested:	31/10/2024
Site Address:	Jewson, Huddersfield	Sampled By:	Not Given

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	356395	Depth Top [m]:	2.20
Hole No.:	RBH01	Depth Base [m]:	2.70
Sample Reference:	RBH01-2.2-4	Sample Type:	UT
Sample Description:	Dark brown very sandy CLAY		
Sample Preparation:	Sample squeezed out of core		



Specimen details	Diameter [mm]	Height [mm]	Water content [%]	Bulk density [Mg/m3]	Dry density [Mg/m3]	Voids ratio -	Degree of saturation [%]	Avg. temp for test [°C]	Swelling pressure [kPa]	Total test time [days]
Initial	50.03	20.11	24.4	1.73	1.39	0.904	71	22	Not measured	5
Final	-	19.20	23.2	1.80	1.46	0.818	75			

Sample orientation: Vertical

Particle density: assumed 2.65 Mg/m3

Pressure [kPa]	Voids ratio -	Eoed [MPa]	Mv [m2/MN]	Cv (t50, log) [m2/yr]	Cv (t90, root) [m2/yr]	Cα -
0	0.904	-	-	-	-	-
25	0.9	15.2	0.066	N/A	3.6	0.00026
500	0.803	9.3	0.11	160	90	0.0012
100	0.811	100.6	0.01			
200	0.809	100.5	0.01	N/A	N/A	N/A
25	0.818	38.7	0.027			

Note: Cv corrected to 20°C, results have been corrected for equipment deformation

Remarks:

Signed: Monika Siewior

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Date Reported: 12/11/2024

GF 448.6