



Test Report

South West Geotechnical Ltd
Unit 3 Brooklands,
Howden Road,
Tiverton,
Devon
EX16 5HW

Job No:	14117	Date Received:	07/04/22
Job Name:	Cardigan	Date Sent:	28/04/22
Client Name:	CJ Associates	Transmittal Number:	T7441
Client Job No:	-	Senders Initials:	DT
Client Address	Portview Road, Avonmouth, Bristol, BS11 9JE	Report Revision No.	1
		Sampled by SWG lab staff?	NO

[illegible]

Sampling not performed by South West Geotechnical laboratory staff. Results apply to the samples as received.

Approved Signatories:

David Trowbridge (Laboratory Manager)

Matt Stokes (Senior Technician)

The results contained within this report only relate to the samples tested, as received from the client. This certificate shall not be reproduced except in full, without prior written approval of the laboratory.



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Summary of Classification Test Results

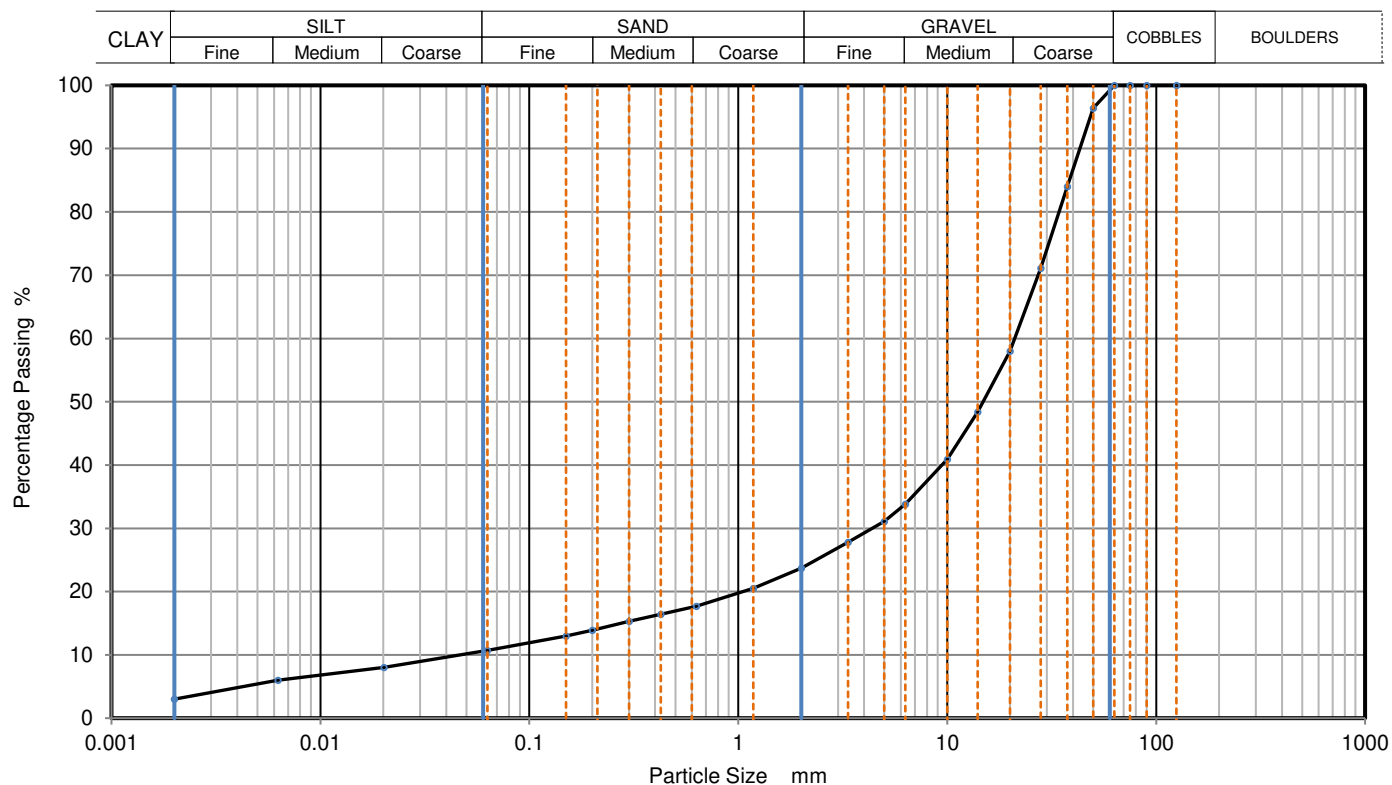
Unit 3 Brooklands,
Howden Road,
Tiverton,
Devon
EX16 5HW



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Project No.		Project Name										
14117		Cardigan										
Client Job No.		Client										
2071916		CJ Associates										
Hole No.	Sample				Soil Description	WC	Passing 425µm	LL	PL	PI	Particle density	Remarks
	Type	Top	Base	Ref		%	%	%	%	%	Mg/m3	
BH03	B	2.50	3.00		Greyish brown and brown slightly clayey silty sandy GRAVEL	14.0	-	-	-	-	-	
BH03	B	3.00	4.00		Greyish brown and light brown slightly clayey silty very sandy GRAVEL	14.7	-	-	-	-	-	
BH03	B	4.00	4.75		Grey and dark grey slightly clayey silty sandy GRAVEL	11.1	-	-	-	-	-	
BH03	B	6.00	7.00		Grey clayey gravelly very silty SAND	30.5	-	-	-	-	-	
						-	-	-	-	-	-	
						-	-	-	-	-	-	
						-	-	-	-	-	-	
						-	-	-	-	-	-	
						-	-	-	-	-	-	
						-	-	-	-	-	-	
						-	-	-	-	-	-	
Preparation in accordance with BS1377-1:2016 where applicable. Atterberg 4 point preparation in accordance with BS EN ISO 17892-12:2018												
Key Atterberg Limits 4pt - BS EN ISO 17892-12:2018 (30° cone and increasing water contents) unless : 1pt - BS1377-2:1990 (CL.4.4)						Water Content (wc) % BS EN ISO 17892-1:2014 Particle density BS1377-2:1990 sp - small pyknometer CL.8.3 gj - gas jar CL.8.2		Date		Approved By		Page No.
								28/04/2022		Matt Stokes - Senior Technician		KL001R Index Summary
												1

	PARTICLE SIZE DISTRIBUTION		Project No.	14117	
			Borehole/Pit No.	BH03	
Project Name	Cardigan		Sample No.		
Soil Description	Greyish brown and brown slightly clayey silty sandy GRAVEL		Depth, m	2.50	
Specimen Reference	4	Specimen Depth	m	Sample Type	B
Test Method	BS EN ISO 17892-4: 2016, clauses 5.2 & 5.4				



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100	0.0201	8
90	100	0.0063	6
75	100	0.0020	3
63	100		
50	96		
37.5	84		
28	71		
20	58		
14	48		
10	41		
6.3	34		
5	31		
3.35	28		
2	24		
1.18	21		
0.63	18	Particle density (assumed) 2.65 Mg/m3	
0.425	16		
0.3	15		
0.2	14		
0.15	13		
0.063	11		

Dry Mass of sample, g	5152
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Sample Proportions	% dry mass
Very coarse	0
Gravel	76
Sand	13
Silt	7
Clay	3

Grading Analysis	
D100	mm
D60	mm
D30	mm
D10	mm
Uniformity Coefficient	460
Curvature Coefficient	20

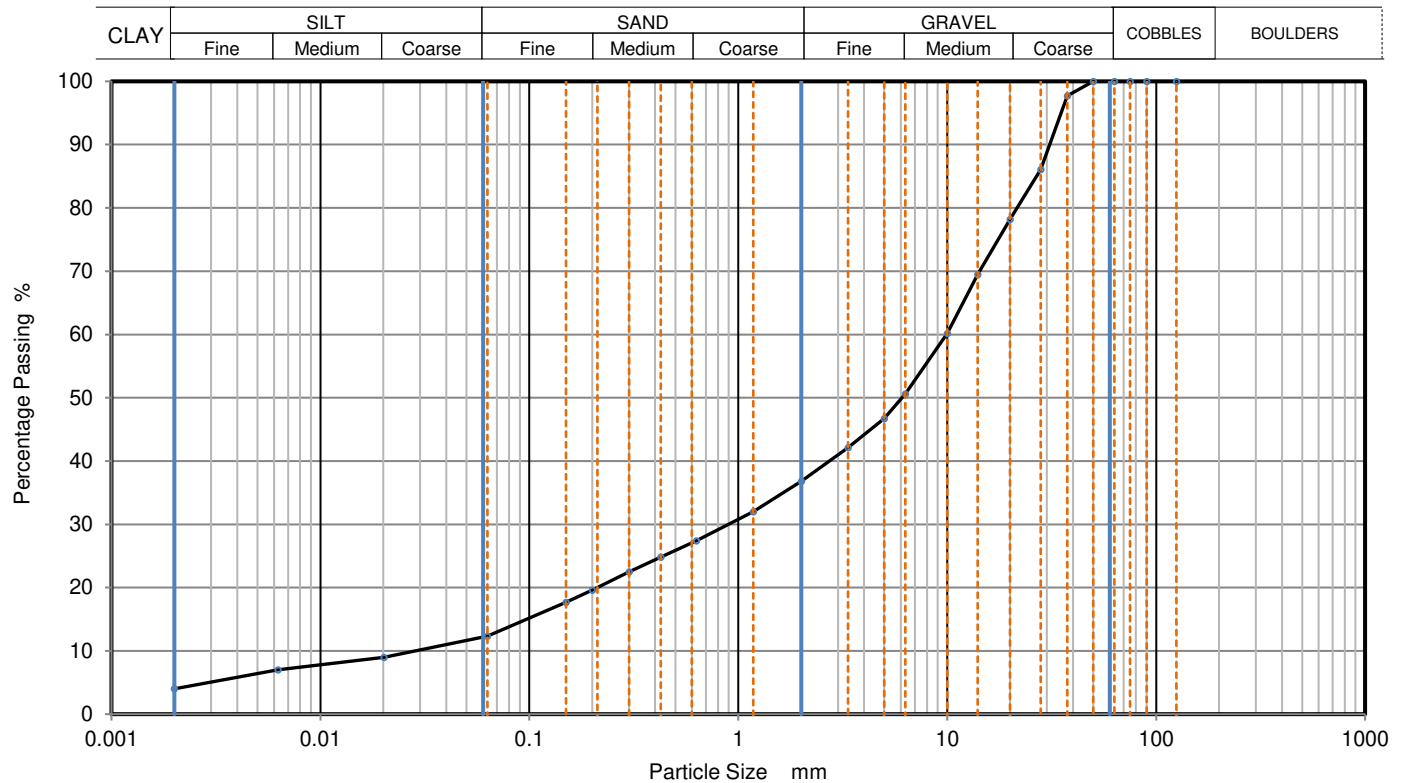
Remarks
Preparation and testing in accordance with BS EN ISO 17892-4: 2016 - Deviation to standard as insufficient material provided in order to meet the minimum mass requirement



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Approved by	Date	Sheet ID:
Matt Stokes - Senior Technician	28/04/2022	KL002R PSD

	PARTICLE SIZE DISTRIBUTION		Project No.	14117	
			Borehole/Pit No.	BH03	
Project Name	Cardigan		Sample No.		
Soil Description	Greyish brown and light brown slightly clayey silty very sandy GRAVEL		Depth, m	3.00	
Specimen Reference	4	Specimen Depth	m	Sample Type	B
Test Method	BS EN ISO 17892-4: 2016, clauses 5.2 & 5.4				



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100	0.0201	9
90	100	0.0063	7
75	100	0.0020	4
63	100		
50	100		
37.5	98		
28	86		
20	78		
14	70		
10	60		
6.3	51		
5	47		
3.35	42		
2	37		
1.18	32		
0.63	27	Particle density (assumed) 2.65 Mg/m3	
0.425	25		
0.3	23		
0.2	20		
0.15	18		
0.063	12		

Dry Mass of sample, g	3742
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Sample Proportions	% dry mass
Very coarse	0
Gravel	63
Sand	25
Silt	9
Clay	4

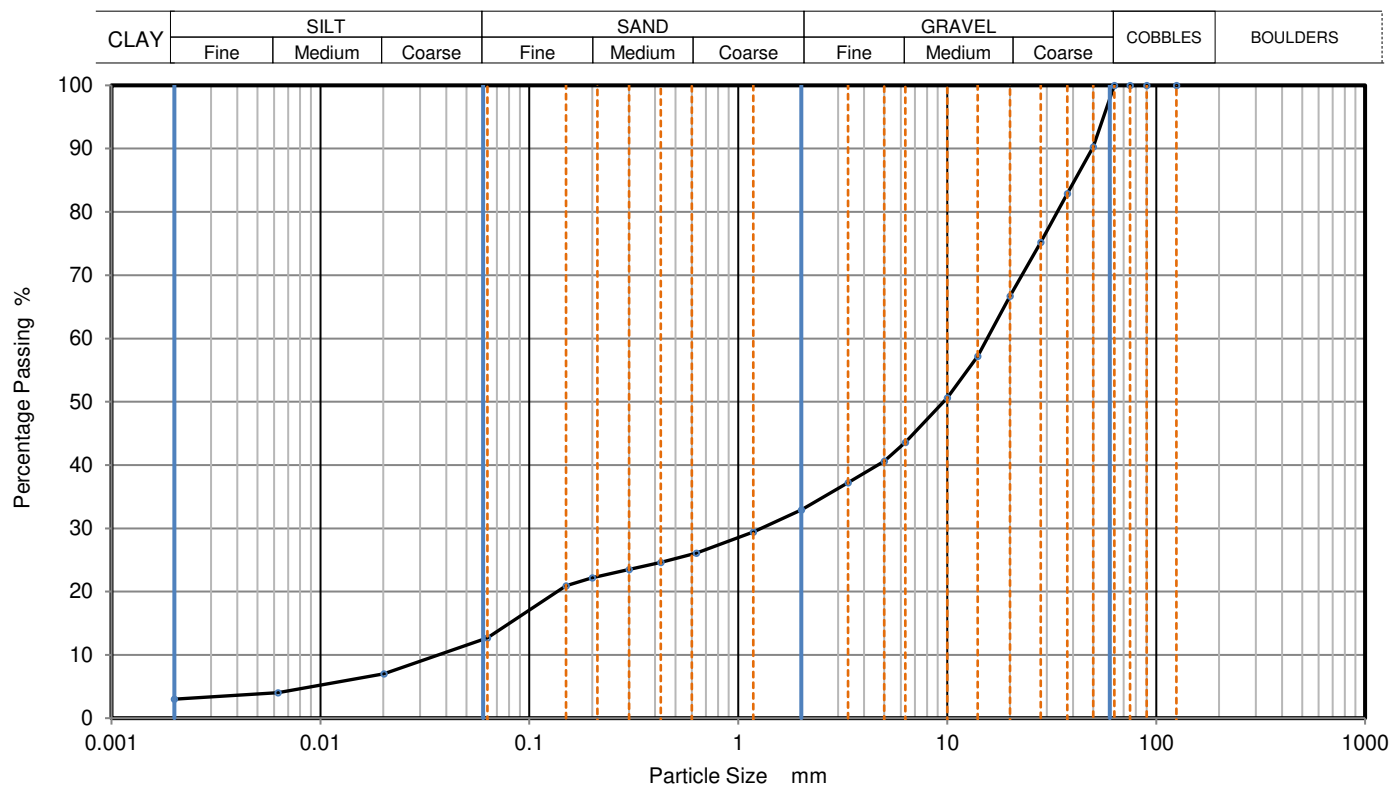
Grading Analysis	
D100	mm
D60	mm
D30	mm
D10	mm
Uniformity Coefficient	370
Curvature Coefficient	3

Remarks
Preparation and testing in accordance with BS EN ISO 17892-4: 2016 - Deviation to standard as insufficient material provided in order to meet the minimum mass requirement



Approved by	Date	Sheet ID:
Matt Stokes - Senior Technician	28/04/2022	KL002R PSD

	PARTICLE SIZE DISTRIBUTION		Project No.	14117	
			Borehole/Pit No.	BH03	
Project Name	Cardigan		Sample No.		
Soil Description	Grey and dark grey slightly clayey silty sandy GRAVEL		Depth, m	4.00	
Specimen Reference	4	Specimen Depth	m	Sample Type	B
Test Method	BS EN ISO 17892-4: 2016, clauses 5.2 & 5.4				



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100	0.0201	7
90	100	0.0063	4
75	100	0.0020	3
63	100		
50	90		
37.5	83		
28	75		
20	67		
14	57		
10	51		
6.3	44		
5	41		
3.35	37		
2	33		
1.18	29		
0.63	26	Particle density (assumed) 2.65 Mg/m3	
0.425	25		
0.3	24		
0.2	22		
0.15	21		
0.063	13		

Dry Mass of sample, g	8360
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Sample Proportions	% dry mass
Very coarse	0
Gravel	67
Sand	20
Silt	10
Clay	3

Grading Analysis	
D100	mm
D60	mm
D30	mm
D10	mm
Uniformity Coefficient	420
Curvature Coefficient	2.9

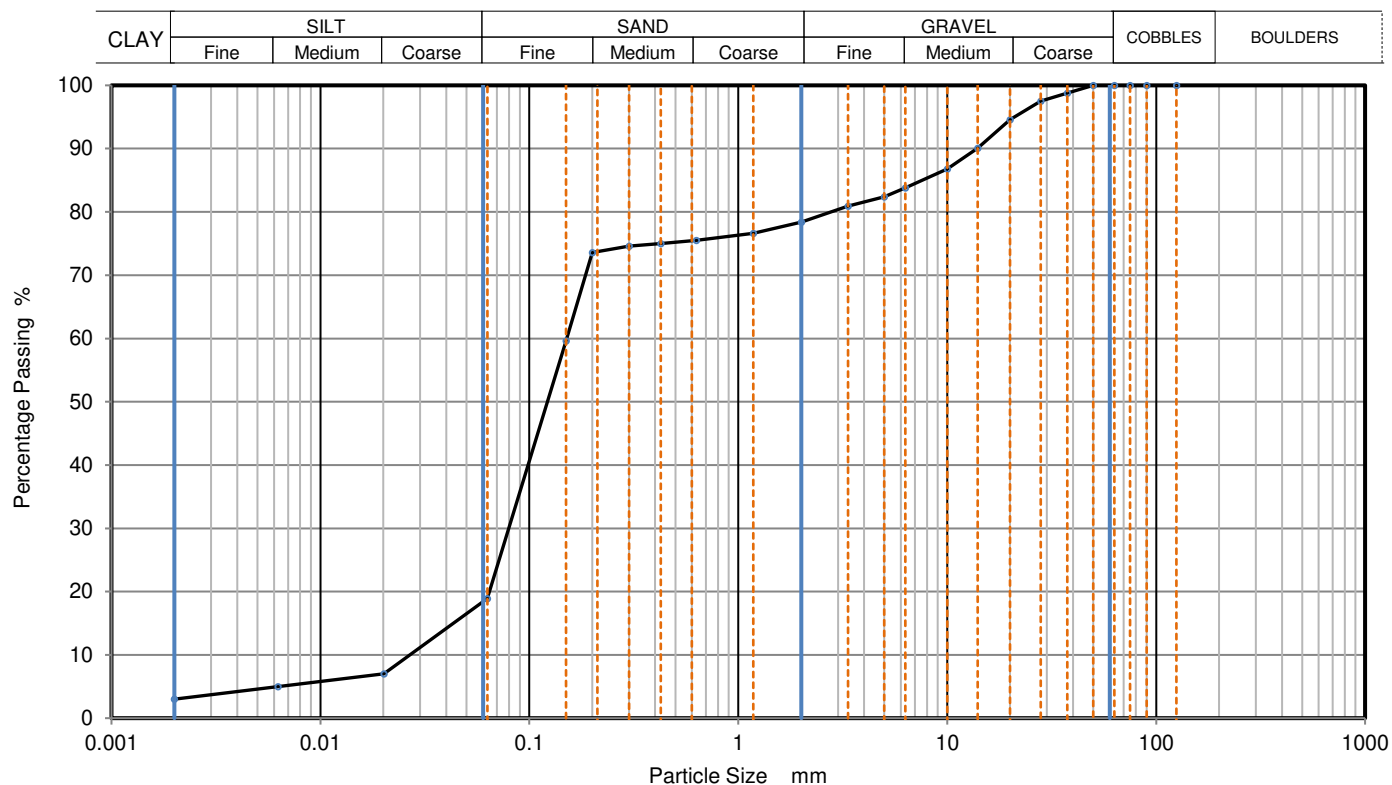
Remarks
Preparation and testing in accordance with BS EN ISO 17892-4: 2016 - Deviation to standard as insufficient material provided in order to meet the minimum mass requirement



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Approved by	Date	Sheet ID:
Matt Stokes - Senior Technician	28/04/2022	KL002R PSD

	PARTICLE SIZE DISTRIBUTION		Project No.	14117	
			Borehole/Pit No.	BH03	
Project Name	Cardigan		Sample No.		
Soil Description	Grey slightly clayey silty very gravelly SAND		Depth, m	5.00	
Specimen Reference	2	Specimen Depth	m	Sample Type	B
Test Method	BS EN ISO 17892-4: 2016, clauses 5.2 & 5.4				



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100	0.0201	7
90	100	0.0063	5
75	100	0.0020	3
63	100		
50	100		
37.5	99		
28	98		
20	95		
14	90		
10	87		
6.3	84		
5	82		
3.35	81		
2	78		
1.18	77		
0.63	76	Particle density (assumed) 2.65 Mg/m3	
0.425	75		
0.3	75		
0.2	74		
0.15	60		
0.063	19		

Dry Mass of sample, g	9107
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Sample Proportions	% dry mass
Very coarse	0
Gravel	22
Sand	60
Silt	16
Clay	3

Grading Analysis	
D100	mm
D60	mm
D30	mm
D10	mm
Uniformity Coefficient	5.8
Curvature Coefficient	1.6

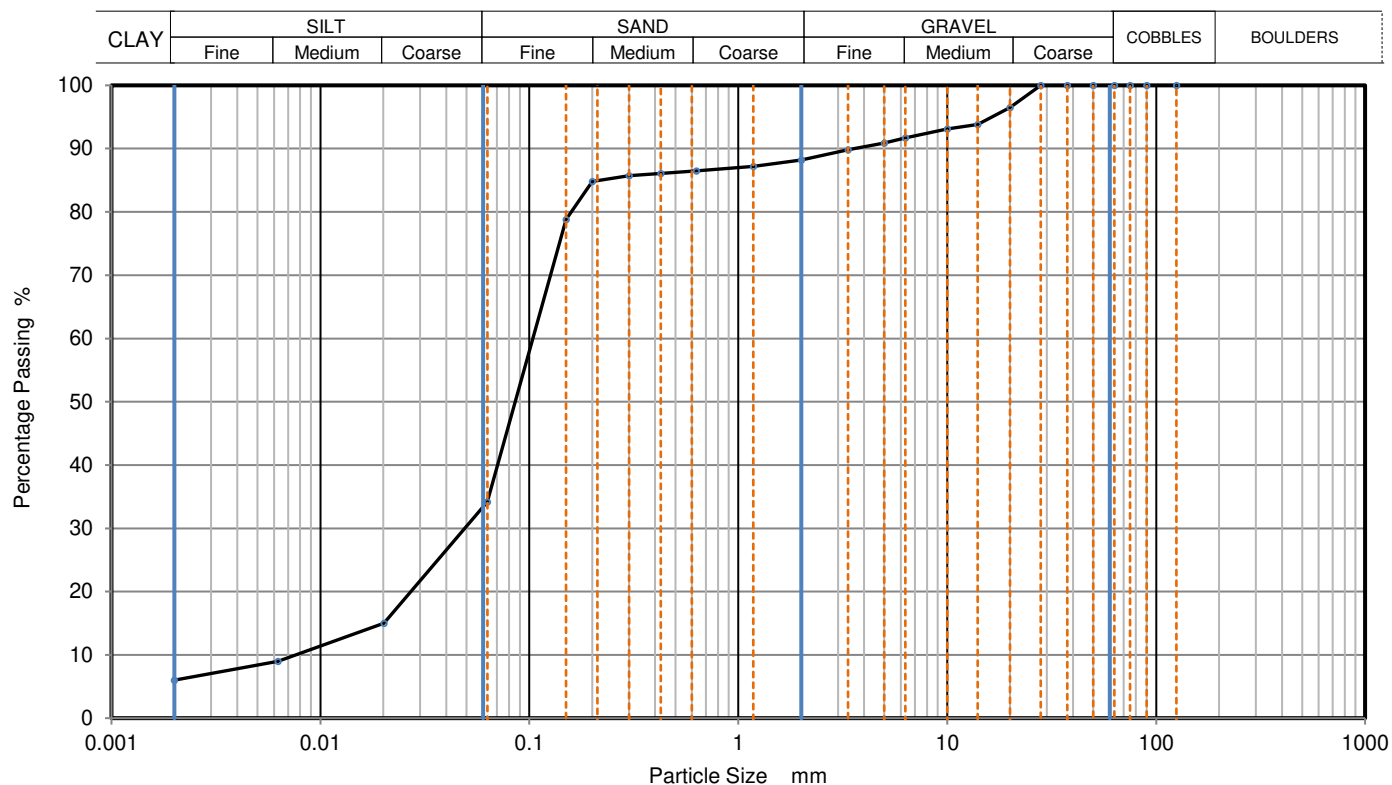
Remarks



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Approved by	Date	Sheet ID:
Matt Stokes - Senior Technician	28/04/2022	KL002R PSD

	PARTICLE SIZE DISTRIBUTION		Project No.	14117	
			Borehole/Pit No.	BH03	
Project Name	Cardigan		Sample No.		
Soil Description	Grey clayey gravelly/ very silty SAND		Depth, m	6.00	
Specimen Reference	4	Specimen Depth	m	Sample Type	B
Test Method	BS EN ISO 17892-4: 2016, clauses 5.2 & 5.4				



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100	0.0201	15
90	100	0.0063	9
75	100	0.0020	6
63	100		
50	100		
37.5	100		
28	100		
20	97		
14	94		
10	93		
6.3	92		
5	91		
3.35	90		
2	88		
1.18	87		
0.63	87	Particle density (assumed) 2.65 Mg/m3	
0.425	86		
0.3	86		
0.2	85		
0.15	79		
0.063	34		

Dry Mass of sample, g	6321
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Sample Proportions	% dry mass
Very coarse	0
Gravel	12
Sand	54
Silt	29
Clay	6

Grading Analysis	
D100	mm
D60	mm
D30	mm
D10	mm
Uniformity Coefficient	14
Curvature Coefficient	3.2

Remarks
Preparation and testing in accordance with BS EN ISO 17892-4: 2016



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Approved by	Date	Sheet ID:
Matt Stokes - Senior Technician	28/04/2022	KL002R PSD

 Point Load Results Summary Sheet Unit 3 Brooklands, Howden Road, Tiverton, Devon EX16 5HW																	
Project No.						Project Name											
14117						Cardigan											
Client Job No.						Client											
2071916						CJ Associates											
Hole No.	Sample				Specimen Depth	Axial / Diametral / Irregular	THICKNESS (mm) - D	WIDTH (mm) - W	DIAMETER (mm) - D	BREAKING LOAD (kN) - P	D2e (mm2)	Is (MPa)	De	De/50	kPLT	Is 50 (MPa)	Sample Description
	Ref.	Top	Base	Type													
BH03		10.7		C		A	39.46	22.23		9.1	1116.81	8.15	33.42	0.67	0.83	6.80	Grey MUDSTONE
BH03		11.3		C		D			89.22	0.4	7960.80	0.05	89.22	1.78	1.30	0.07	Grey MUDSTONE
BH03		11.4		C		A	33.56	315.73		16.5	13491.26	1.22	116.15	2.32	1.46	1.79	Grey MUDSTONE
BH03		12.3		C		D			88.53	11	7837.56	1.40	88.53	1.77	1.29	1.81	Grey MUDSTONE
BH03		12.5		C		A	14.27	231.40		7.2	4205.32	1.71	64.85	1.30	1.12	1.92	Grey MUDSTONE
BH03		12.7		C		D			88.85	4.4	7894.32	0.56	88.85	1.78	1.30	0.72	Grey MUDSTONE
BH03		12.9		C		A	33.69	183.56		14.7	7872.96	1.87	88.73	1.77	1.29	2.42	Grey MUDSTONE
BH03		13.1		C		D			81.44	18.5	6633.02	2.79	81.44	1.63	1.25	3.47	Grey MUDSTONE
BH03		13.4		C		A	23.85	239.73		15.3	7279.93	2.10	85.32	1.71	1.27	2.67	Grey MUDSTONE
BH03		13.8		C		D			90.71	0.7	8227.70	0.09	90.71	1.81	1.31	0.11	Grey MUDSTONE
Wylie and Mah (1991) Rock Slope Engineering $Is = P/D2e$ $D2e = (4(WD))/p$ $De = \sqrt{D2e}$						Where a description is followed by (X) this denotes a failure along an existing weakness		Samples tested in accordance with International Journal of Rock Mechanics and Mining. Lab Sheet Reference: KL011R Point Load				Date 28/04/22		Approved By Matt Stokes - Senior Technician		Page No. 1	

 Point Load Results Summary Sheet Unit 3 Brooklands, Howden Road, Tiverton, Devon EX16 5HW																			
Project No.						Project Name													
14117						Cardigan													
Client Job No.						Client													
2071916						CJ Associates													
Hole No.	Sample				Specimen Depth	Axial / Diametral / Irregular	THICKNESS (mm) - D	WIDTH (mm) - W	DIAMETER (mm) - D	BREAKING LOAD (kN) - P	D2e (mm2)	Is (MPa)	De	De/50	kPLT	Is 50 (MPa)	Sample Description		
	Ref.	Top	Base	Type															
BH03		14		C		A	35.71	213.82		11.5	9721.08	1.18	98.60	1.97	1.36	1.61	Grey MUDSTONE		
BH03		14.2		C		D			89.12	1.6	7941.78	0.20	89.12	1.78	1.30	0.26	Grey MUDSTONE		
BH03		14.3		C		A	33.63	154.91		13.5	6633.76	2.04	81.45	1.63	1.25	2.53	Grey MUDSTONE		
BH03		14.4		C		D			89.28	3.4	7970.32	0.43	89.28	1.79	1.30	0.55	Grey MUDSTONE		
BH03		14.6		C		D			89.69	3.5	8044.30	0.44	89.69	1.79	1.30	0.57	Grey MUDSTONE		
Wyllie and Mah (1991) Rock Slope Engineering						Where a description is followed by (X) this denotes a failure along an existing weakness				Samples tested in accordance with International Journal of Rock Mechanics and Mining. Lab Sheet Reference: KL011R Point Load				Date		Approved By		Page No.	
Is = P/D2e D2e = (4(WD))/p De = √D2e														28/04/22		Matt Stokes - Senior Technician		2	

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 22/03135
Issue Number: 1

Date: 12 April, 2022

Client: CJ Associates
Portview Road
Avonmouth
Bristol
BS11 9JE

Project Manager: Admin/Lorna Logan
Project Name: Cardigan GI
Project Ref: 2071916-L15575-S9175
Order No: N/A
Date Samples Received: 01/04/22
Date Instructions Received: 04/04/22
Date Analysis Completed: 12/04/22

Approved by:



Richard Wong
Client Manager

Envirolab Job Number: 22/03135

Client Project Name: Cardigan GI

Client Project Ref: 2071916-L15575-S9175

Lab Sample ID	22/03135/1	22/03135/2	22/03135/3	22/03135/4	22/03135/5	22/03135/6		Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	BH02	BH02	BH03	BH03	BH03	BH03				
Depth to Top	0.00	3.00	0.50	1.70	2.00	4.00				
Depth To Bottom	0.50	5.00	1.00	2.00	2.50	4.75				
Date Sampled										
Sample Type	Soil - D	Soil - D	Soil - D	Soil - D	Soil - D	Soil - D				
Sample Matrix Code	6AE	5	5A	6A	6A	6AE				
% Stones >10mm _A	14.7	<0.1	34.6	60.3	47.2	20.4		% w/w	0.1	A-T-044
pH BRE _D ^{M#}	6.91	8.52	8.57	8.70	8.36	8.02		pH	0.01	A-T-031s
Sulphate BRE (water sol 2:1) _D ^{M#}	<10	177	10	38	22	65		mg/l	10	A-T-026s

REPORT NOTES

General

This report shall not be reproduced, except in full, without written approval from Envirolab.

The results reported herein relate only to the material supplied to the laboratory.

The residue of any samples contained within this report, and any received with the same delivery, will be disposed of six weeks after initial scheduling. For samples tested for Asbestos we will retain a portion of the dried sample for a minimum of six months after the initial Asbestos testing is completed.

Analytical results reflect the quality of the sample at the time of analysis only.

Opinions and interpretations expressed are outside the scope of our accreditation.

If results are in italic font they are associated with an AQC failure, these are not accredited and are unreliable.

A deviating samples report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.

The Client Sample No, Client Sample ID, Depth to Top, Depth to Bottom and Date Sampled were all provided by the client.

Soil chemical analysis:

All results are reported as dry weight (<40°C).

For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.

For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any "A" subscripts

All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH analysis of water by method A-T-007:

Free and visible oils are excluded from the sample used for analysis so that the reported result represents the dissolved phase only.

Electrical Conductivity of water by Method A-T-037:

Results greater than 12900µS/cm @ 25°C / 11550µS/cm @ 20°C fall outside the calibration range and as such are unaccredited.

Asbestos:

Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.

Stones etc. are not removed from the sample prior to analysis.

Quantification of asbestos is a 3 stage process including visual identification, hand picking and weighing and fibre counting by sedimentation/phase contrast optical microscopy if required. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres) quantification by sedimentation is performed. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used.

Predominant Matrix Codes:

1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample, 9 = INCINERATOR ASH.

Samples with Matrix Code 7 & 8 are not predominantly a SAND/LOAM/CLAY mix and are not covered by our BSEN 17025 or MCERTS accreditations, with the exception of bulk asbestos which are BSEN 17025 accredited.

Secondary Matrix Codes:

A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal,

E = contains roots/twigs.

Key:

IS indicates Insufficient Sample for analysis.

US indicates Unsuitable Sample for analysis.

NDP indicates No Determination Possible.

NAD indicates No Asbestos Detected.

N/A indicates Not Applicable.

Superscript # indicates method accredited to ISO 17025.

Superscript "M" indicates method accredited to MCERTS.

Subscript "A" indicates analysis performed on the sample as received.

Subscript "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve

EPH CWG results have humics mathematically subtracted through instrument calculation

TPH results "with Cleanup" indicates results cleaned up with Silica during extraction

EPH CWG GCxGC ID from TPH CWG

Where we have identified humic substances in any ID's from TPH CWG with Clean Up please note that the concentration of these humic substances is not included in the quantified results and are included in the ID for information.

Please contact us if you need any further information.

Envirolab Deviating Samples Report

Units 7&8 Sandpits Business Park, Mottram Road, Hyde, SK14 3AR
Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: CJ Associates, Portview Road, Avonmouth, Bristol, BS11 9JE

Project No: 22/03135

Project: Cardigan GI

Date Received: 04/04/2022 (am)

Clients Project No: 2071916-L15575-S9175

Cool Box Temperatures (°C): 7.7

Lab Sample ID	22/03135/1	22/03135/2	22/03135/3	22/03135/4	22/03135/5	22/03135/6
Client Sample No						
Client Sample ID/Depth	BH02 0.00-0.50m	BH02 3.00-5.00m	BH03 0.50-1.00m	BH03 1.70-2.00m	BH03 2.00-2.50m	BH03 4.00-4.75m
Date Sampled						
Deviation Code						
E (no date)	✓	✓	✓	✓	✓	✓

Key

E (no date) No sampling date provided (all results affected if not provided)

If, at any point before reaching the laboratory, the temperature of the samples has breached those set in published standards, e.g. BS-EN 5667-3, ISO 18400-102:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	22/03135/1	22/03135/2	22/03135/3	22/03135/4	22/03135/5	22/03135/6
Client Sample No						
Client Sample ID/Depth	BH02 0.00-0.50m	BH02 3.00-5.00m	BH03 0.50-1.00m	BH03 1.70-2.00m	BH03 2.00-2.50m	BH03 4.00-4.75m
Date Sampled						
A-T-026s	12/04/2022	12/04/2022	12/04/2022	12/04/2022	12/04/2022	12/04/2022
A-T-031s	12/04/2022	12/04/2022	12/04/2022	12/04/2022	12/04/2022	12/04/2022
A-T-044	07/04/2022	07/04/2022	07/04/2022	07/04/2022	07/04/2022	07/04/2022

The above dates are the analysis completion dates, please note that these are not necessarily the date that the analysis was weighed/extracted.

End of Report

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 22/03278
Issue Number: 1

Date: 12 April, 2022

Client: CJ Associates
Portview Road
Avonmouth
Bristol
BS11 9JE

Project Manager: Admin/Lorna Logan
Project Name: Cardigan GI
Project Ref: 2071916-L15575-S9175
Order No: N/A
Date Samples Received: 05/04/22
Date Instructions Received: 05/04/22
Date Analysis Completed: 12/04/22

Approved by:



Richard Wong
Client Manager

Envirolab Job Number: 22/03278

Client Project Name: Cardigan GI

Client Project Ref: 2071916-L15575-S9175

Lab Sample ID	22/03278/1							Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	BH02									
Depth to Top	1.20									
Depth To Bottom	2.00									
Date Sampled										
Sample Type	Soil - D									
Sample Matrix Code	6A									
% Stones >10mm _A	<0.1							% w/w	0.1	A-T-044
pH BRE _D ^{M#}	8.82							pH	0.01	A-T-031s
Sulphate BRE (water sol 2:1) _D ^{M#}	62							mg/l	10	A-T-026s

REPORT NOTES

General

This report shall not be reproduced, except in full, without written approval from Envirolab.

The results reported herein relate only to the material supplied to the laboratory.

The residue of any samples contained within this report, and any received with the same delivery, will be disposed of six weeks after initial scheduling. For samples tested for Asbestos we will retain a portion of the dried sample for a minimum of six months after the initial Asbestos testing is completed.

Analytical results reflect the quality of the sample at the time of analysis only.

Opinions and interpretations expressed are outside the scope of our accreditation.

If results are in italic font they are associated with an AQC failure, these are not accredited and are unreliable.

A deviating samples report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.

The Client Sample No, Client Sample ID, Depth to Top, Depth to Bottom and Date Sampled were all provided by the client.

Soil chemical analysis:

All results are reported as dry weight (<40°C).

For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.

For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any "A" subscripts

All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH analysis of water by method A-T-007:

Free and visible oils are excluded from the sample used for analysis so that the reported result represents the dissolved phase only.

Electrical Conductivity of water by Method A-T-037:

Results greater than 12900µS/cm @ 25°C / 11550µS/cm @ 20°C fall outside the calibration range and as such are unaccredited.

Asbestos:

Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.

Stones etc. are not removed from the sample prior to analysis.

Quantification of asbestos is a 3 stage process including visual identification, hand picking and weighing and fibre counting by sedimentation/phase contrast optical microscopy if required. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres) quantification by sedimentation is performed. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used.

Predominant Matrix Codes:

1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample, 9 = INCINERATOR ASH.

Samples with Matrix Code 7 & 8 are not predominantly a SAND/LOAM/CLAY mix and are not covered by our BSEN 17025 or MCERTS accreditations, with the exception of bulk asbestos which are BSEN 17025 accredited.

Secondary Matrix Codes:

A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal,

E = contains roots/twigs.

Key:

IS indicates Insufficient Sample for analysis.

US indicates Unsuitable Sample for analysis.

NDP indicates No Determination Possible.

NAD indicates No Asbestos Detected.

N/A indicates Not Applicable.

Superscript # indicates method accredited to ISO 17025.

Superscript "M" indicates method accredited to MCERTS.

Subscript "A" indicates analysis performed on the sample as received.

Subscript "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve

EPH CWG results have humics mathematically subtracted through instrument calculation

TPH results "with Cleanup" indicates results cleaned up with Silica during extraction

EPH CWG GCxGC ID from TPH CWG

Where we have identified humic substances in any ID's from TPH CWG with Clean Up please note that the concentration of these humic substances is not included in the quantified results and are included in the ID for information.

Please contact us if you need any further information.

Envirolab Deviating Samples Report

Units 7&8 Sandpits Business Park, Mottram Road, Hyde, SK14 3AR
Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: CJ Associates, Portview Road, Avonmouth, Bristol, BS11 9JE

Project No: 22/03278

Project: Cardigan GI

Date Received: 05/04/2022 (am)

Clients Project No: 2071916-L15575-S9175

Cool Box Temperatures (°C): 10.1

Lab Sample ID	22/03278/1
Client Sample No	
Client Sample ID/Depth	BH02 1.20-2.00m
Date Sampled	
Deviation Code	
E (no date)	✓

Key

E (no date) No sampling date provided (all results affected if not provided)

If, at any point before reaching the laboratory, the temperature of the samples has breached those set in published standards, e.g. BS-EN 5667-3, ISO 18400-102:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

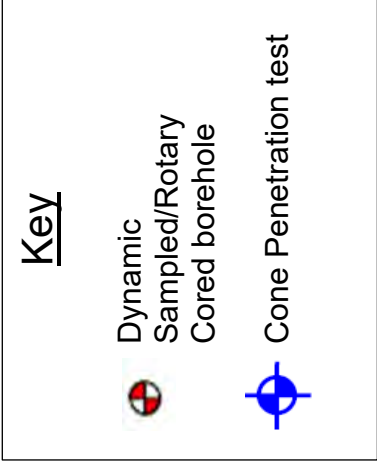
Envirolab Analysis Dates

Lab Sample ID	22/03278/1
Client Sample No	
Client Sample ID/Depth	BH02 1.20-2.00m
Date Sampled	
A-T-026s	12/04/2022
A-T-031s	12/04/2022
A-T-044	11/04/2022

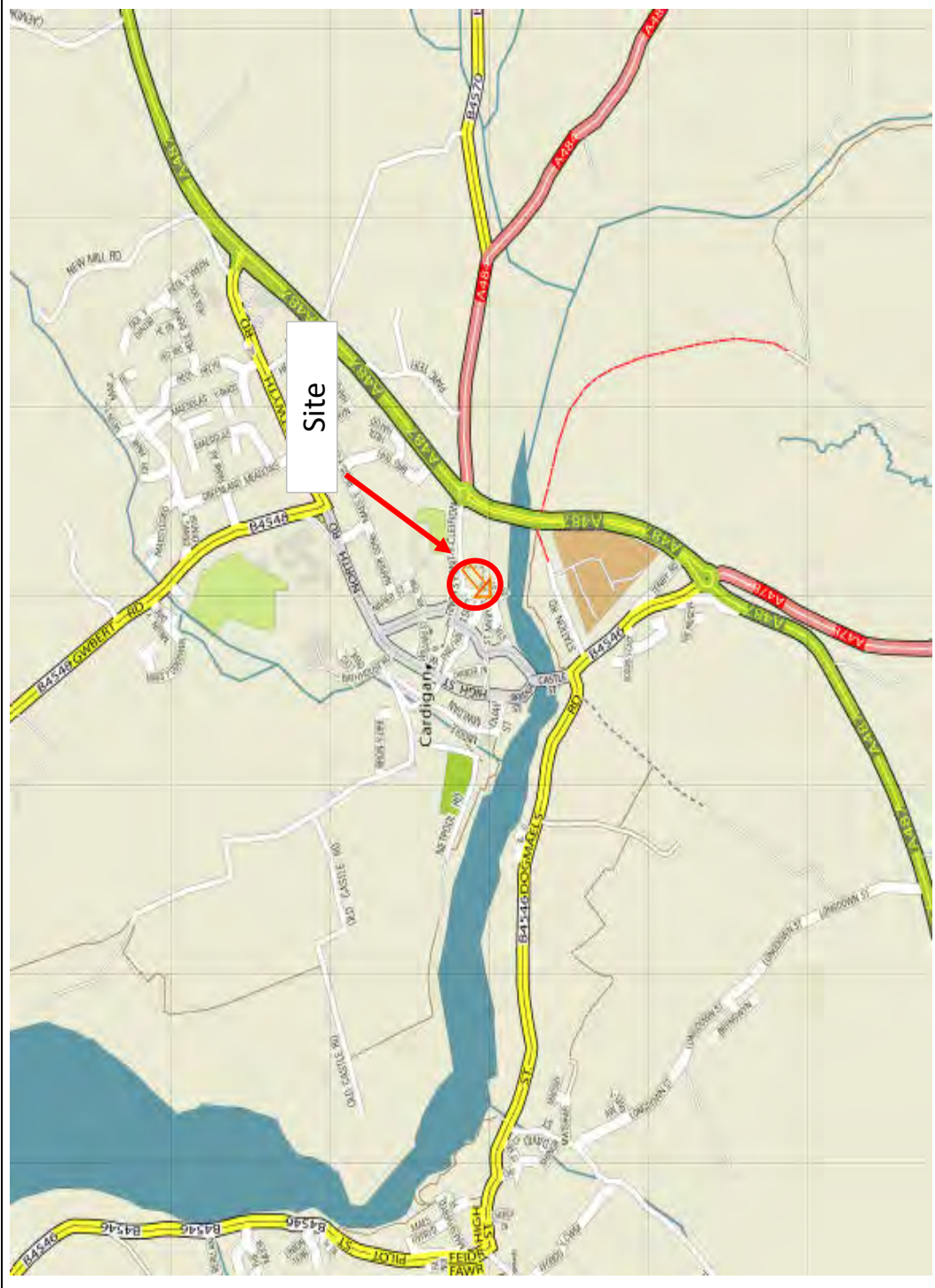
The above dates are the analysis completion dates, please note that these are not necessarily the date that the analysis was weighed/extracted.

End of Report

Appendix E- Drawings



CJAssociates



CJAssociates Portview Road Avonmouth Bristol BS11 9JE Tel: 0117 982 1473		Project Cardigan Flood Risk Management	Drawing Title Site Location Map
Client Natural Resources Wales		Project No. 2071916	