

Report Notes

General

- This report shall not be reproduced, except in full, without written approval from Envirolab.
- The client Sample No, Client Sample ID, Depth to top, Depth to Bottom and Date Sampled are all provided by the client and can affect the validity of results.
- 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 within the same delivery, will be disposed of **four weeks** after the 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 our scope of accreditation.
- A deviating sample 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.
- If a sample is outside of the calibration range or affected by interferences then it may need diluting. This will result in the limit of detection (LOD) being raised.
- Subcontracted Analysis: Please see the appended report for any deviations, current LODs and accreditation status of the test.

Key

Superscript “#”	Accredited to ISO 17025
Superscript “M”	Accredited to MCertS
Superscript “U”	Individual result not accredited
None of the above symbols	Analysis unaccredited
Subscript “A”	Analysis performed on as-received Sample
Subscript “D”	Analysis performed on the dried sample, crushed to pass 2mm sieve.
Subscript “D” on Asbestos	Analysis performed on a dried aliquot of sample provided.
Subscript “^”	Analysis has dependant options against results. Details appear in the comments of your Sample receipt
IS	Insufficient Sample for analysis
US	Unsuitable Sample for analysis
NDP	No Determination Possible
NAD	No Asbestos Detected
Trace	Asbestos found not suitable for Gravimetric Quantification – not enough to accurately weigh.
N/A	Not applicable

Asbestos

Identification: 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
 “Trace Asbestos Identified” will be reported if there is not enough present to verify the type.

Assigned Matrix Codes

1	SAND	6	CLAY/LOAM	A	Contains Stones
2	LOAM	7	OTHER	B	Contains Construction Rubble
3	CLAY	8	Asbestos Bulk (Only Asbestos ID accredited)	C	Contains visible hydrocarbons
4	LOAM/SAND	9	Incinerator Ash (some Metals accredited)	D	Contains glass / metal
5	SAND/CLAY			E	Contains roots / twigs

Note: 7,8,9 matrices are not covered by our ISO 17025 or MCertS accreditation, unless stated above.

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 by method A-T-007:

For waters, free and visible oils are excluded from the sample used for analysis, so the reported result represents the dissolved phase only.
 Results “with Clean up” indicates samples cleaned up with Silica during extraction.

EPH CWG (method A-T-055) from TPH CWG:

EPH CWG results have humics mathematically subtracted through instrument calculation.

Where these humic substances have been identified in any IDs from “TPH CWG with clean up” please note that the concentration is **NOT** included in the quantified results but present in the ID for information.

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.

Please contact your client manager if you require any further information.

Envirolab Deviating Samples Report

Hattersley Science & Technology Park, Stockport Road, Hattersley, SK14 3QU
Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: CJ Associates (Bridgend), Unit 1-3, Block 6, Newlands Avenue, Brackla
Industrial Estate, Bridgend, Mid Glamorgan, CF31 2DA

Project: Afon Wysg

Clients Project No: 2441224 - L17495 - S11174

Project No: 25/07145

Date Received: 03/07/2025 (am)

Cool Box Temperatures (°C): 16.0

NO DEVIATIONS IDENTIFIED

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	25/07145/1
Client Sample No	
Client Sample ID/Depth	Sample 1
Date Sampled	01/07/25
A-T-007s	08/07/2025
A-T-019s	08/07/2025
A-T-024s	09/07/2025
A-T-031s	09/07/2025
A-T-040s	09/07/2025
A-T-044	09/07/2025
A-T-045	04/07/2025

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

Laboratory Test Certificate

CJAssociates

Site Afon Wysg
Client Jones Bros Ruthin (Civil Engineering) Co Ltd

F.A.O. Sion Williams
Address Ty Glyn
Canol y Dre
Ruthin
Denbighshire
LL15 1QW

Order Number TBC
Job Number 2441224
Lab Number L17524

Number of samples submitted for testing: 1 sample (s)

Moisture Content 1 test(s)
Particle Size Distribution 1 test(s)
Dry Density / MC Relationship - Vibrating Hammer Method 1 test(s)

Results apply to the sample(s) as received.
* Non UKAS accredited test

Date (s) sample (s) received at laboratory: 28 Jul-24
Date of receipt of testing instructions 28 Jul-24
Date testing started: 30 Jul-24
Date of issue: 27 Aug-24

Please note that we will keep the sample (s) for one month after submission of our report and will then dispose of them without notice unless you ask us to store them. We will then make a separate charge for this.



1429

Approved by :
Lisa Maiden

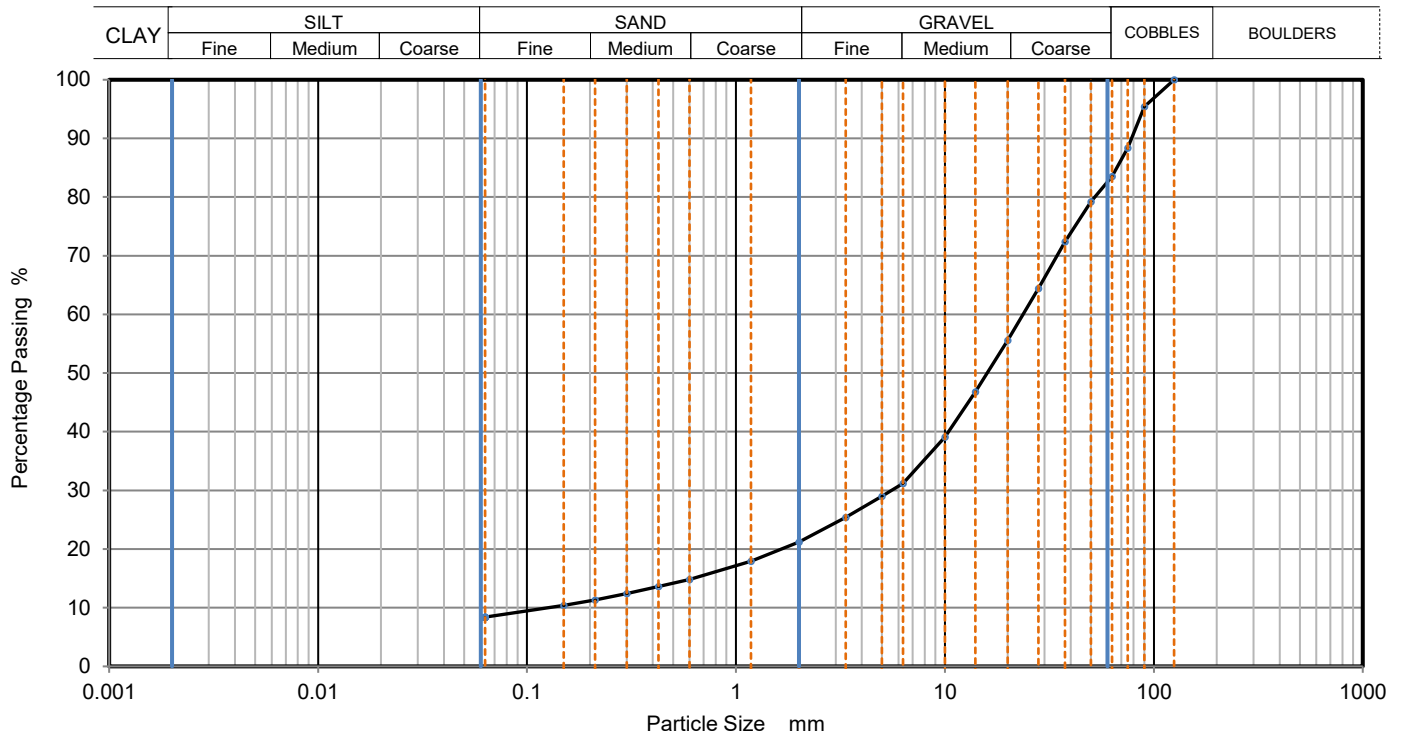
L Maiden

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Water Content Performed in accordance with BS EN ISO 17892-1 : 2014

Key				Date Printed	Approved By	Table
Density test	Liquid Limit	Atterberg Prep	Particle density	08/06/2025 00:00	Lisa Maiden	1
Linear measurement	4pt cone unless :	1. in natural condition	sp - small pyknom			sheet
wd - water displacement	cas - Casagrande method	2. after >425um removed by hand	gj - gas jar			1
wi - immersion in water	1pt - single point test	3. after washing to remove >425um				

	PARTICLE SIZE DISTRIBUTION			Job Ref	2441224
				Borehole/Pit No.	Sample1
Site Name	Afon Wysg			Sample No.	28.07.25
Soil Description	Red brown silty sandy GRAVEL with medium cobble content			Depth, m	0.00
Specimen Reference		Specimen Depth	m	Sample Type	B
Test Method	BS1377:Part 2:1990, clause 9.2			KeyLAB ID	CJA_202507300



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	95		
75	88		
63	84		
50	79		
37.5	72		
28	64		
20	56		
14	47		
10	39		
6.3	31		
5	29		
3.35	25		
2	21		
1.18	18		
0.6	15		
0.425	14		
0.3	12		
0.212	11		
0.15	10		
0.063	8		

Dry Mass of sample, g

99602

Sample Proportions	% dry mass
Very coarse	17
Gravel	62
Sand	13
Fines <0.063mm	8

Grading Analysis		
D100	mm	125
D60	mm	23.7
D30	mm	5.53
D10	mm	0.125
Uniformity Coefficient		190
Curvature Coefficient		10

Remarks

Preparation and testing in accordance with BS1377 unless noted below

Material complies with Class 1A grading requirements. Testing undertaken in accordance with documented British standard so measurement of uncertainty not applied to the statement of conformity.

Operator	Checked	Approved	Sheet printed	Fig 1 Sheet
		Lisa Maiden	06/08/2025 14:04	



Laboratory Report



Contract Number: 80217

Client Ref: **2441224**

Client PO: **2441224**

Date Received: **08-08-2025**

Date Completed: **21-08-2025**

Report Date: **21-08-2025**

Client: **CJ Associates**

This report has been checked and approved by:

Contract Title: **Afon Wysg**
For the attention of: **Lisa Maiden**

Shaun Jones
Laboratory manager

Description	Qty
Dry Den/MC (Vibrating Hammer Method) BS 1377-2:2022 Clause 11.7 - * UKAS	1

Notes: Observations and Interpretations are outside the UKAS Accreditation

* - denotes test included in laboratory scope of accreditation

- denotes test carried out by approved contractor

@ - denotes non accredited tests

This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This test report/certificate shall not be reproduced except in full, without the approval of GEO Site & Testing Services Ltd. Any opinions or interpretations stated - within this report/certificate are excluded from the laboratories UKAS accreditation.

Approved Signatories:

Brendan Evans (Senior Office Administrator) - Brendan Evans (Business Support Co-ordinator) - Darren Bourne (Quality Senior Technician)

Paul Evans (Director) - Richard John (Quality/Technical Manager) - Shaun Jones (Laboratory manager)

Shaun Thomas (Site Manager) - Wayne Honey (HR & HSE Manager)

Determination of The Dry Density / Water Content Relationship
BS 1377-2:2022 Clause 11.7

Contract Number

80217

BH / TP No

Sample 1

Project Name

Afon Wysg

Sample No

28.07.25

Sample Description

Brown silty fine to coarse GRAVEL

Depth Top

Compaction Method

Vibrating Rammer

Depth Bottom

Date Tested

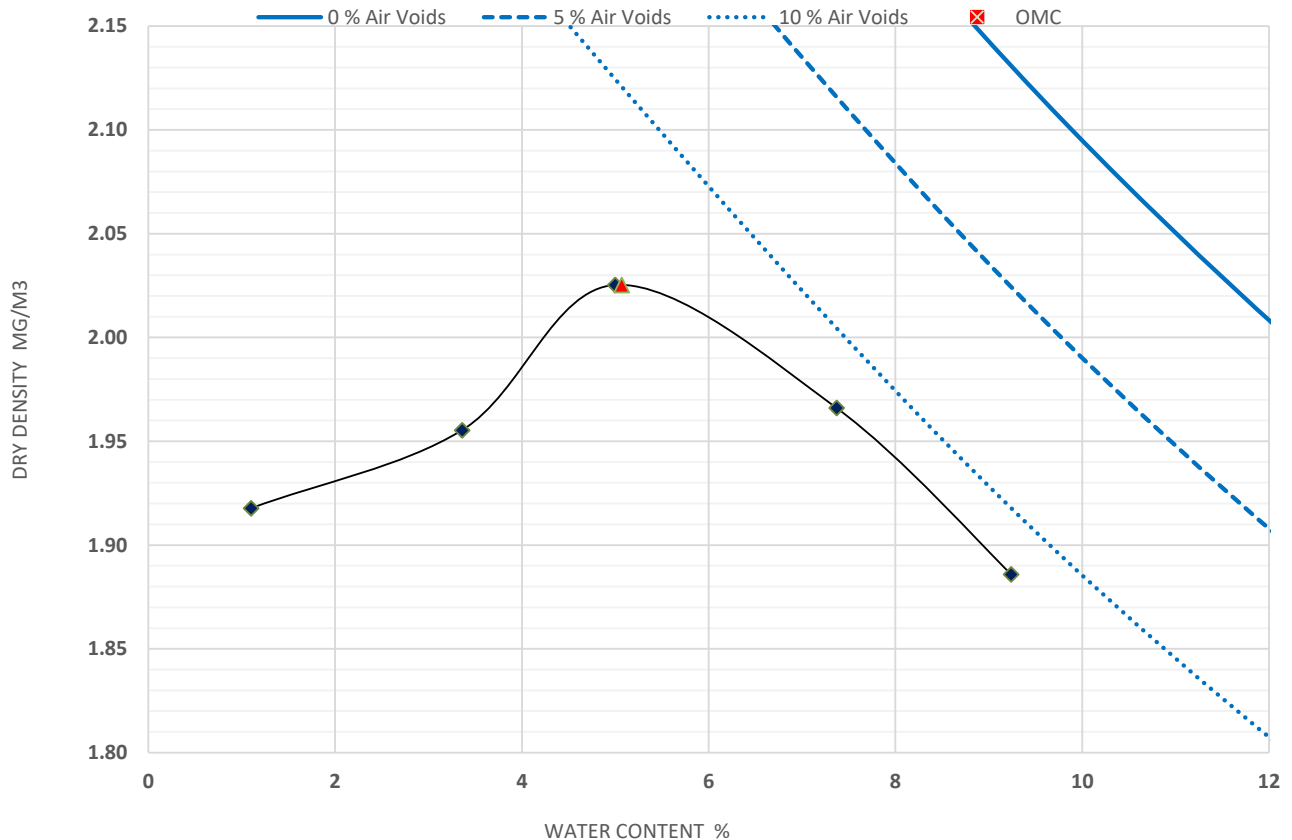
19/08/2025

Sample Type

B

Grading Zone

X



Compaction Point	1	2	3	4	5							
Water Content	1.1	3.4	5.0	7.4	9.2							
Bulk Density	1.94	2.02	2.13	2.11	2.06							
Dry Density	1.92	1.96	2.03	1.97	1.89							

Initial Water Content	1.1	%	Single or Separate Sample Used	Single
Maximum Dry Density	2.03	Mg/m ³		
Optimum Water Content	5.1	%		
Particle Density	2.65	Mg/m ³	Assumed	
Material Retained 37.5mm	29	%		
Material Retained 20mm	26	%		

Operator

Conor. D

Laboratory Test Certificate

CJAssociates

Site Afon Wysg
Client Jones Bros Ruthin (Civil Engineering) Co Ltd

F.A.O. Sion Williams
Address Ty Glyn
Canol y Dre
Ruthin
Denbighshire
LL15 1QW

Order Number TBC
Job Number 2441224
Lab Number L17526

Number of samples submitted for testing: 3 sample (s)

Moisture Content	.....	1	test(s)
Particle Size Distribution	.....	1	test(s)
Dry Density / MC Relationship - Vibrating Hammer Method	.....	1	test(s)
Waste Classification Suite	.....	2	Suite(s)
Waste Classification Report	.....	1	Sum

Results apply to the sample(s) as received.
* Non UKAS accredited test

Date (s) sample (s) received at laboratory:	.....	30	Jul-24
Date of receipt of testing instructions	.....	30	Jul-24
Date testing started:	.....	30	Jul-24
Date of issue:	.....	27	Aug-24

Please note that we will keep the sample (s) for one month after submission of our report and will then dispose of them without notice unless you ask us to store them. We will then make a separate charge for this.

Approved by :
Lisa Maiden

R Maiden



1429

This report shall not be reproduced except in full without approval of CJ Associates

C.J. Associates Geotechnical Ltd
Portview Road
Avonmouth - Bristol BS11 9JE
Tel: 0117 982 1473

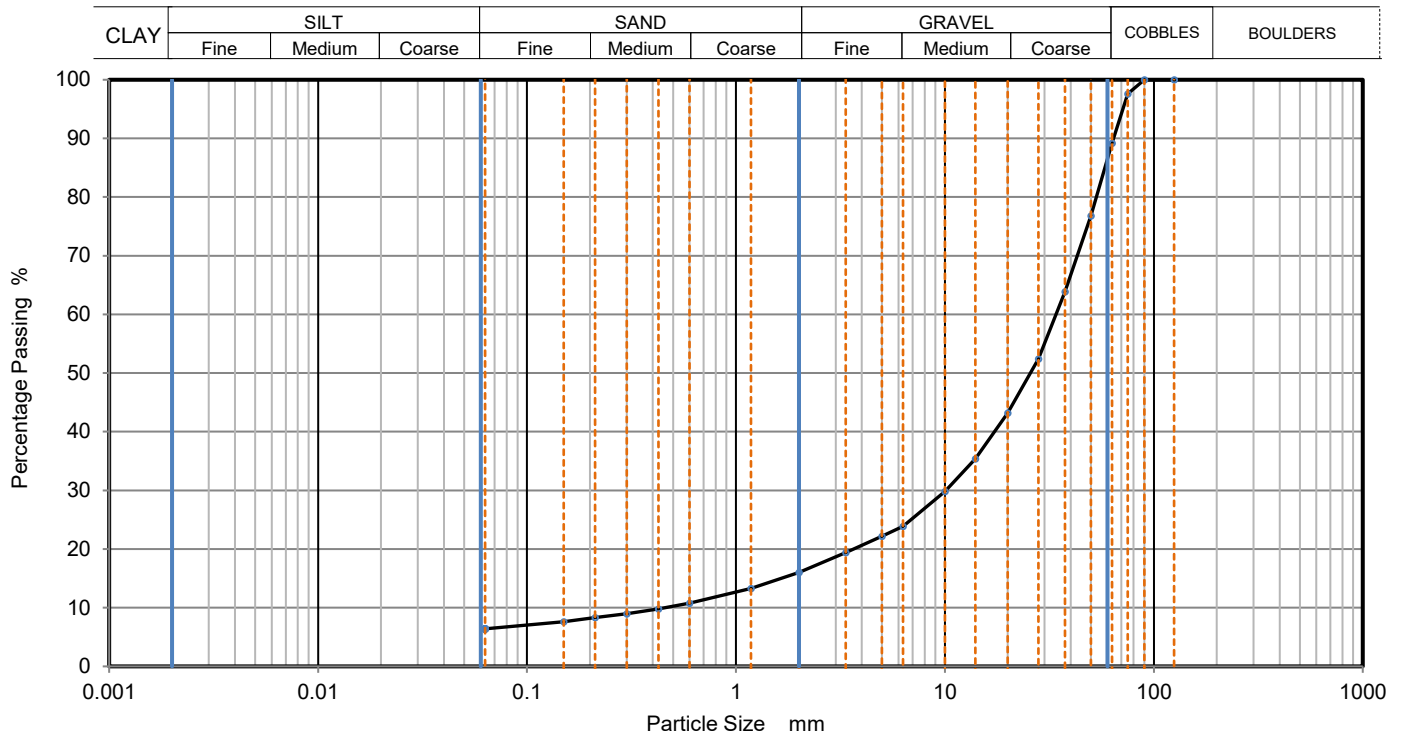
Time [08:54] Date [27/08/2025]

Page [] of []

Water Content Performed in accordance with BS EN ISO 17892-1 : 2014

Key				Date Printed	Approved By	Table
Density test	Liquid Limit	Atterberg Prep	Particle density	08/06/2025 00:00	Lisa Maiden	1
Linear measurement	4pt cone unless :	1. in natural condition	sp - small pyknom			sheet
wd - water displacement	cas - Casagrande method	2. after >425um removed by hand	gj - gas jar			1
wi - immersion in water	1pt - single point test	3. after washing to remove >425um				

	PARTICLE SIZE DISTRIBUTION			Job Ref	2441224
				Borehole/Pit No.	Sample1
Site Name	Afon Wysg			Sample No.	30.07.25
Soil Description	Red brown silty sandy GRAVEL with medium cobble content			Depth, m	0.00
Specimen Reference		Specimen Depth	m	Sample Type	B
Test Method	BS1377:Part 2:1990, clause 9.2			KeyLAB ID	CJA_202507301



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	98		
63	89		
50	77		
37.5	64		
28	52		
20	43		
14	35		
10	30		
6.3	24		
5	22		
3.35	19		
2	16		
1.18	13		
0.6	11		
0.425	10		
0.3	9		
0.212	8		
0.15	8		
0.063	6		

Dry Mass of sample, g

81385

Sample Proportions	% dry mass
Very coarse	11
Gravel	73
Sand	10
Fines <0.063mm	6

Grading Analysis	
D100	mm
D60	mm
D30	mm
D10	mm
Uniformity Coefficient	75
Curvature Coefficient	6.7

Remarks

Preparation and testing in accordance with BS1377 unless noted below

Material complies with Class 1A grading requirements. Testing undertaken in accordance with documented British standard so measurement of uncertainty not applied to the statement of conformity.

Operator	Checked	Approved	Sheet printed	Fig 1
		Lisa Maiden	06/08/2025 14:08	
				Sheet



Laboratory Report



Contract Number: 80216

Client Ref: **2441224**

Client PO: **2441224**

Date Received: **08-08-2025**

Date Completed: **21-08-2025**

Report Date: **21-08-2025**

Client: **CJ Associates**

This report has been checked and approved by:

Contract Title: **Afon Wysg**
For the attention of: **Lisa Maiden**

Shaun Jones
Laboratory manager

Description	Qty
Dry Den/MC (Vibrating Hammer Method) BS 1377-2:2022 Clause 11.7 - * UKAS	1

Notes: Observations and Interpretations are outside the UKAS Accreditation

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Approved Signatories:

Brendan Evans (Senior Office Administrator) - Brendan Evans (Business Support Co-ordinator) - Darren Bourne (Quality Senior Technician)

Paul Evans (Director) - Richard John (Quality/Technical Manager) - Shaun Jones (Laboratory manager)

Shaun Thomas (Site Manager) - Wayne Honey (HR & HSE Manager)

Determination of The Dry Density / Water Content Relationship
BS 1377-2:2022 Clause 11.7

Contract Number

80216

BH / TP No

Sample 1

Project Name

Afon Wysg

Sample No

30.07.25

Sample Description

Brown slightly sandy silty fine to coarse GRAVEL

Depth Top

Compaction Method

Vibrating Rammer

Depth Bottom

Date Tested

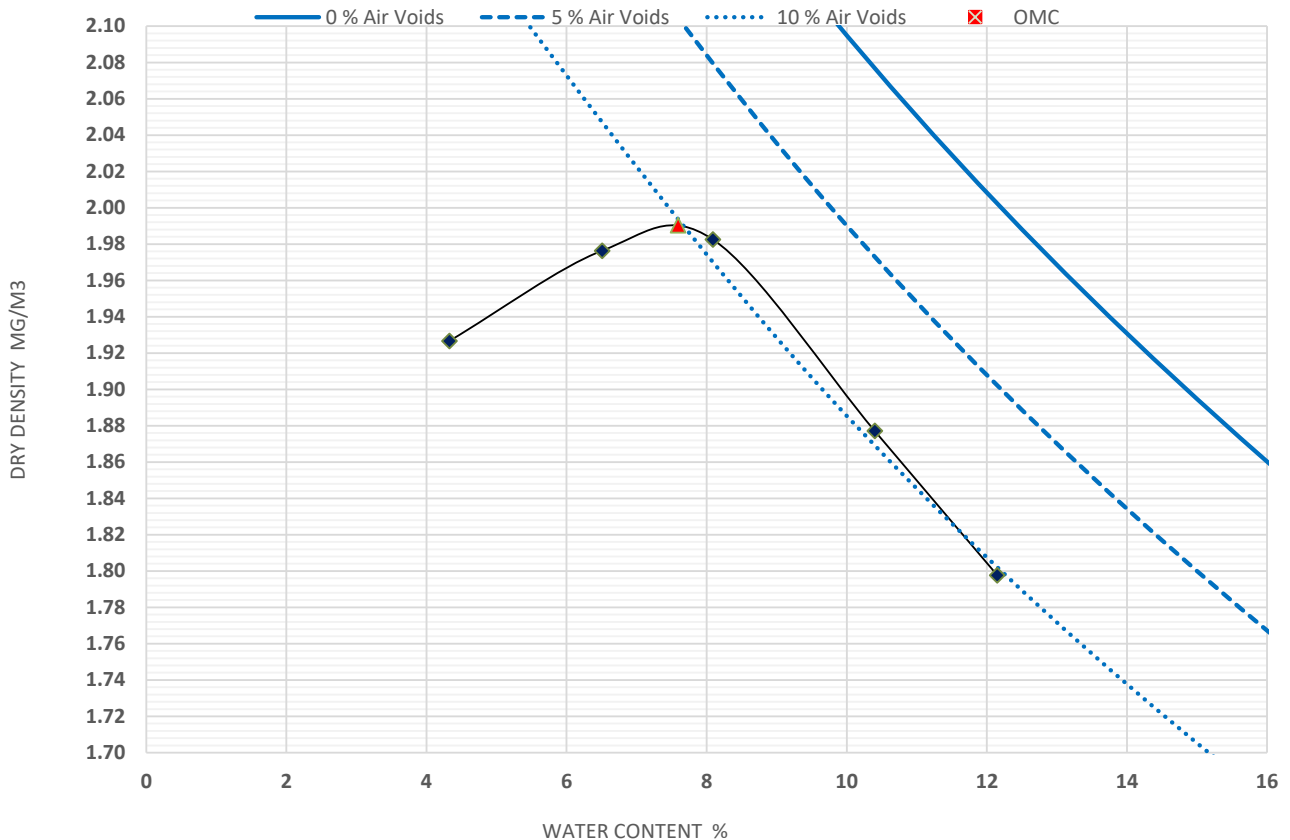
19/08/2025

Sample Type

B

Grading Zone

X



Compaction Point	1	2	3	4	5							
Water Content	4.3	6.5	8.1	10.4	12.2							
Bulk Density	2.01	2.11	2.14	2.07	2.02							
Dry Density	1.93	1.98	1.98	1.88	1.80							

Initial Water Content	8.1	%	Single or Separate Sample Used	Single
Maximum Dry Density	1.99	Mg/m ³	Assumed	
Optimum Water Content	7.6	%		
Particle Density	2.65	Mg/m ³	Assumed	
Material Retained 37.5mm	29	%		
Material Retained 20mm	25	%		

Operator

Conor. D

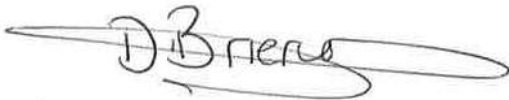
FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 25/08377
Issue Number: 1
Date: 08 August, 2025

Client: CJ Associates (Bridgend)
Unit 1-3, Block 6, Newlands Avenue
Brackla Industrial Estate
Bridgend
Mid Glamorgan
CF31 2DA

Project Manager: Admin/Lisa Maiden
Project Name: Afon Wysg
Project Ref: 2441224-L17526-S11208
Order No: N/A
Date Samples Received: 01/08/25
Date Instructions Received: 01/08/25
Date Analysis Completed: 08/08/25

Approved by:



Danielle Brierley
Client Services Supervisor

Envirolab Job Number: 25/08377

Client Project Name: Afon Wysg

Client Project Ref: 2441224-L17526-S11208

Lab Sample ID	25/08377/1	25/08377/2					HWOL Report Acronym	Units	Limit of Detection	Method ref
Client Sample No	Area 2	Area 3								
Client Sample ID										
Depth to Top										
Depth To Bottom										
Date Sampled	30-Jul-25	30-Jul-25								
Sample Type	SOIL	SOIL								
Sample Matrix Code	6ABE	6AE								
% Moisture at <40C _A	4.2	7.8						% w/w	0.1	A-T-044
% Stones >10mm _A	<0.1	<0.1						% w/w	0.1	A-T-044
pH _D ^{M#}	7.53	7.60						pH	0.01	A-T-031s
Arsenic _D ^{M#}	7	17						mg/kg	1	A-T-024s
Cadmium _D	<1.0	<1.0						mg/kg	1	A-T-024s
Copper _D ^{M#}	26	34						mg/kg	1	A-T-024s
Chromium _D ^{M#}	9	29						mg/kg	1	A-T-024s
Chromium (hexavalent) _D	<1	<1						mg/kg	1	A-T-040s
Lead _D ^{M#}	48	63						mg/kg	1	A-T-024s
Mercury _D	<0.17	<0.17						mg/kg	0.17	A-T-024s
Nickel _D ^{M#}	11	27						mg/kg	1	A-T-024s
Selenium _D ^{M#}	<1	1						mg/kg	1	A-T-024s
Zinc _D ^{M#}	43	143						mg/kg	1	A-T-024s

Envirolab Job Number: 25/08377

Client Project Name: Afon Wysg

Client Project Ref: 2441224-L17526-S11208

Lab Sample ID	25/08377/1	25/08377/2					HWOL Report Acronym	Units	Limit of Detection	Method ref
Client Sample No	Area 2	Area 3								
Client Sample ID										
Depth to Top										
Depth To Bottom										
Date Sampled	30-Jul-25	30-Jul-25								
Sample Type	SOIL	SOIL								
Sample Matrix Code	6ABE	6AE								
Asbestos in Soil (inc. matrix)										
Asbestos in soil _D [#]	NAD	NAD								A-T-045
Asbestos Matrix (visual) _D	-	-								A-T-045
Asbestos Matrix (microscope) _D	-	-								A-T-045
Asbestos ACM - Suitable for Water Absorption Test? _D	N/A	N/A								A-T-045

Envirolab Job Number: 25/08377

Client Project Name: Afon Wysg

Client Project Ref: 2441224-L17526-S11208

Lab Sample ID	25/08377/1	25/08377/2					HWOL Report Acronym	Units	Limit of Detection	Method ref
Client Sample No	Area 2	Area 3								
Client Sample ID										
Depth to Top										
Depth To Bottom										
Date Sampled	30-Jul-25	30-Jul-25								
Sample Type	SOIL	SOIL								
Sample Matrix Code	6ABE	6AE								
PAH-16MS										
Acenaphthene _A ^{M#}	<0.01	<0.01						mg/kg	0.01	A-T-019s
Acenaphthylene _A ^{M#}	<0.01	<0.01						mg/kg	0.01	A-T-019s
Anthracene _A ^{M#}	<0.02	<0.02						mg/kg	0.02	A-T-019s
Benzo(a)anthracene _A ^{M#}	0.04	0.05						mg/kg	0.04	A-T-019s
Benzo(a)pyrene _A ^{M#}	0.04	0.04						mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene _A ^{M#}	0.07	0.07						mg/kg	0.05	A-T-019s
Benzo(ghi)perylene _A ^{M#}	<0.05	<0.05						mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene _A ^{M#}	<0.07	<0.07						mg/kg	0.07	A-T-019s
Chrysene _A ^{M#}	0.06	0.07						mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene _A ^{M#}	<0.04	<0.04						mg/kg	0.04	A-T-019s
Fluoranthene _A ^{M#}	<0.08	0.09						mg/kg	0.08	A-T-019s
Fluorene _A ^{M#}	<0.01	<0.01						mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene _A ^{M#}	0.05	0.04						mg/kg	0.03	A-T-019s
Naphthalene _A ^{M#}	<0.03	<0.03						mg/kg	0.03	A-T-019s
Phenanthrene _A ^{M#}	0.04	0.04						mg/kg	0.03	A-T-019s
Pyrene _A ^{M#}	<0.07	0.08						mg/kg	0.07	A-T-019s
Total PAH-16MS _A ^{M#}	0.30	0.48						mg/kg	0.01	A-T-019s
TPH Total with CLEAN UP + ID										
TPH total (>C6-C40) _A	37	14					EH_1D_Total	mg/kg	10	A-T-007s
TPH ID Interpretation _A	C12-C40 with unknown hydrocarbons	Concentration too low to identify								A-T-007s

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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 by method A-T-007:

For waters, free and visible oils are excluded from the sample used for analysis, so the reported result represents the dissolved phase only.

Results “with Clean up” indicates samples cleaned up with Silica during extraction.

EPH CWG (method A-T-055) from TPH CWG:

EPH CWG results have humics mathematically subtracted through instrument calculation.

Where these humic substances have been identified in any IDs from “TPH CWG with clean up” please note that the concentration is **NOT** included in the quantified results but present in the ID for information.

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.

Please contact your client manager if you require any further information.

Envirolab Deviating Samples Report

Hattersley Science & Technology Park, Stockport Road, Hattersley, SK14 3QU
Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: CJ Associates (Bridgend), Unit 1-3, Block 6, Newlands Avenue, Brackla
Industrial Estate, Bridgend, Mid Glamorgan, CF31 2DA

Project: Afon Wysg

Clients Project No: 2441224-L17526-S11208

Project No: 25/08377

Date Received: 01/08/2025 (am)

Cool Box Temperatures (°C): 15.4

NO DEVIATIONS IDENTIFIED with respect to sampling dates or containers received.

Note: 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 (for water samples $5 \pm 3^{\circ}\text{C}$), ISO 18400-105:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	25/08377/1	25/08377/2
Client Sample No	Area 2	Area 3
Client Sample ID/Depth		
Date Sampled	30/07/25	30/07/25
A-T-007s	07/08/2025	07/08/2025
A-T-019s	05/08/2025	05/08/2025
A-T-024s	08/08/2025	08/08/2025
A-T-031s	07/08/2025	07/08/2025
A-T-040s	06/08/2025	06/08/2025
A-T-044	06/08/2025	06/08/2025
A-T-045	04/08/2025	04/08/2025

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

Waste Classification Report

HazWasteOnline™ classifies waste as either **hazardous** or **non-hazardous** based on its chemical composition, related legislation and the rules and data defined in the current UK or EU technical guidance (Appendix C) (note that HP 9 Infectious is not assessed). It is the responsibility of the classifier named below to:

- understand the origin of the waste
- select the correct List of Waste code(s)
- confirm that the list of determinands, results and sampling plan are fit for purpose
- select and justify the chosen metal species (Appendix B)
- correctly apply moisture correction and other available corrections
- add the meta data for their user-defined substances (Appendix A)
- check that the classification engine is suitable with respect to the national destination of the waste (Appendix C)



TO7CH-HWS86-JJK4Q

To aid the reviewer, the laboratory results, assumptions and justifications managed by the classifier are highlighted in pale yellow.

Report is invalid if pages are removed.

Job name

2441224 - L17526 Afon Wysg

Description/Comments

Envirolab Report 25/08377

Project

2441224

Site

Afon Wysg

Classified by

Name: **Lorna Logan**
Date: **08 Aug 2025 11:51 GMT**
Telephone: **0117 9821473**

Company: **CJ Associates Geotechnical Ltd**
Portview Road
Avonmouth
Bristol
BS11 9JE

HazWasteOnline™ provides a two day, hazardous waste classification course that covers the use of the software and both basic and advanced waste classification techniques. Certification has to be renewed every 3 years.

HazWasteOnline™ Certification:**CERTIFIED**

Course
Hazardous Waste Classification

Date
09 Feb 2023

Next 3 year Refresher due by Feb 2026

Purpose of classification

7 - Disposal of Waste

Address of the waste

Afon Wysg Battery Storage, Simec Uskmouth Power Station, West Nash Road

Post Code NP18 2BZ

SIC for the process giving rise to the waste

42220 Construction of utility projects for electricity and telecommunications

Description of industry/producer giving rise to the waste

Jones Brothers, Civil Engineering Contractor

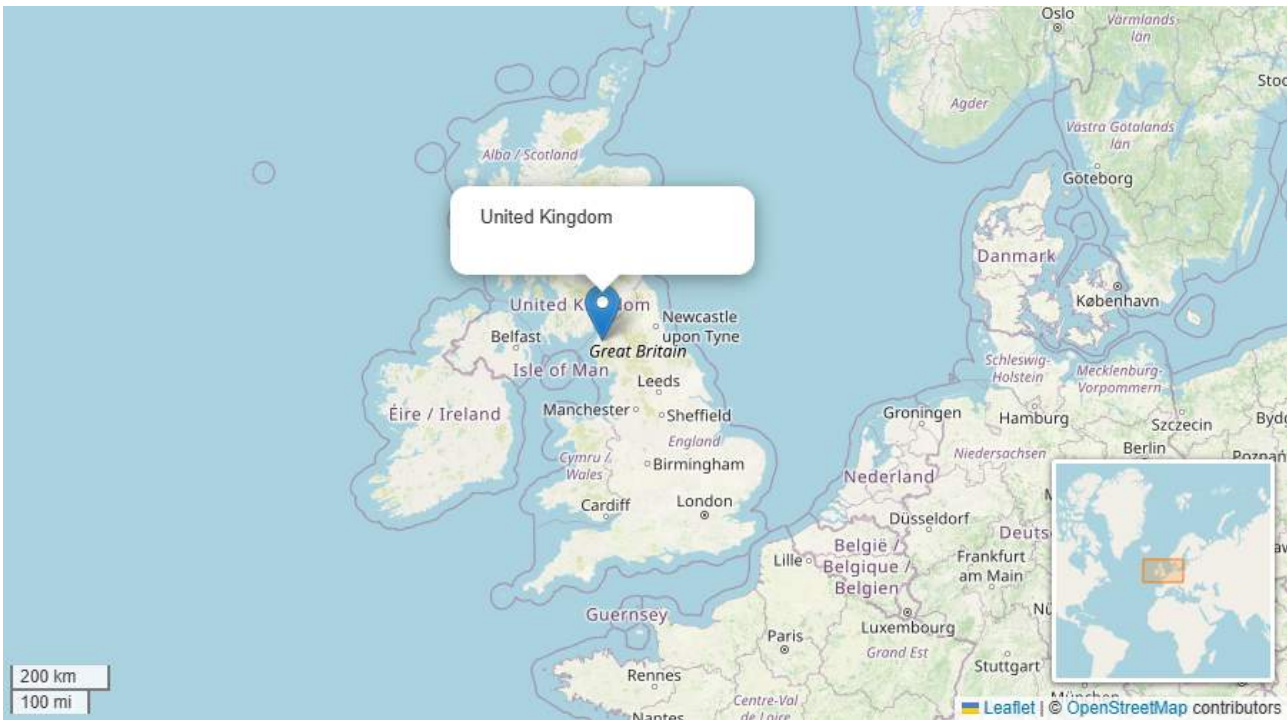
Description of the specific process, sub-process and/or activity that created the waste

Stripping topsoil by mechanical means

Description of the waste

Site won topsoil

Waste Location



Job summary

#	Sample name	Depth [m]	Classification Result	Hazard properties	Page
1	Area 3-20250730		Non Hazardous		3
2	Area 2-20250730		Non Hazardous		5

Related documents

#	Name	Description
1	25-08377.hwol	Envirolab .hwol file used to populate the Job
2	Soils Waste Classification CJA Generic - WM3 v1.2.GB - WM3 v1.2.GB	waste stream template used to create this Job

Report

Created by: Lorna Logan
Created date: 08 Aug 2025 11:51 GMT

Appendices	Page
Appendix A: Classifier defined and non GB MCL determinands	7
Appendix B: Rationale for selection of metal species	8
Appendix C: Version	8

Classification of sample: Area 3-20250730

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:	LoW Code:
Area 3-20250730	Chapter:
Moisture content:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
7.8%	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
(wet weight correction)	Entry:

Hazard properties

None identified

Determinands

Moisture content: 7.8% Wet Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number									
1	pH				7.6	pH		7.6	pH	7.6 pH		
2	arsenic { arsenic acid and its salts with the exception of those specified elsewhere in this Annex }				17	mg/kg	1.895	29.695	mg/kg	0.00297 %	✓	
	033-005-00-1											
3	cadmium { cadmium oxide }				<1	mg/kg	1.142	<1.142	mg/kg	<0.000114 %		<LOD
	048-002-00-0	215-146-2	1306-19-0									
4	chromium in Cr(III) compounds { chromium(III) oxide (worst case) }				29	mg/kg	1.462	39.079	mg/kg	0.00391 %	✓	
		215-160-9	1308-38-9									
5	copper { copper sulphate pentahydrate }				34	mg/kg	3.929	123.168	mg/kg	0.0123 %	✓	
	029-023-00-4	231-847-6	7758-99-8									
6	lead { lead chromate }			1	63	mg/kg	1.56	90.603	mg/kg	0.00581 %	✓	
	082-004-00-2	231-846-0	7758-97-6									
7	mercury { mercury difulminate }				<0.17	mg/kg	1.419	<0.241	mg/kg	<0.0000241 %		<LOD
	080-005-00-2	211-057-8	628-86-4									
8	nickel { nickel dibromate }				27	mg/kg	5.358	133.39	mg/kg	0.0133 %	✓	
	028-053-00-5	238-596-1	14550-87-9									
9	selenium { nickel selenate }				1	mg/kg	2.554	2.355	mg/kg	0.000235 %	✓	
	028-031-00-5	239-125-2	15060-62-5									
10	zinc { zinc chromate }				143	mg/kg	2.774	365.76	mg/kg	0.0366 %	✓	
	024-007-00-3	236-878-9	13530-65-9									
11	naphthalene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
	601-052-00-2	202-049-5	91-20-3									
12	acenaphthylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		205-917-1	208-96-8									
13	acenaphthene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		201-469-6	83-32-9									
14	fluorene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		201-695-5	86-73-7									
15	phenanthrene				0.04	mg/kg		0.0369	mg/kg	0.00000369 %	✓	
		201-581-5	85-01-8									
16	anthracene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		204-371-1	120-12-7									
17	fluoranthene				0.09	mg/kg		0.083	mg/kg	0.0000083 %	✓	
		205-912-4	206-44-0									

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
18	pyrene	204-927-3	129-00-0		0.08 mg/kg		0.0738 mg/kg	0.00000738 %	✓	
19	benz[a]anthracene	601-033-00-9	200-280-6		0.05 mg/kg		0.0461 mg/kg	0.00000461 %	✓	
20	chrysene	601-048-00-0	205-923-4		0.07 mg/kg		0.0645 mg/kg	0.00000645 %	✓	
21	benzo[b]fluoranthene	601-034-00-4	205-911-9		0.07 mg/kg		0.0645 mg/kg	0.00000645 %	✓	
22	benzo[k]fluoranthene	601-036-00-5	205-916-6		<0.07 mg/kg		<0.07 mg/kg	<0.000007 %		<LOD
23	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5		0.04 mg/kg		0.0369 mg/kg	0.00000369 %	✓	
24	indeno[123-cd]pyrene	205-893-2	193-39-5		0.04 mg/kg		0.0369 mg/kg	0.00000369 %	✓	
25	dibenz[a,h]anthracene	601-041-00-2	200-181-8		<0.04 mg/kg		<0.04 mg/kg	<0.000004 %		<LOD
26	benzo[ghi]perylene	205-883-8	191-24-2		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
27	TPH (C6 to C40) petroleum group		TPH		14 mg/kg		12.908 mg/kg	0.00129 %	✓	
28	asbestos	650-013-00-6	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5		< mg/kg		< mg/kg	<		<LOD
29	chromium in Cr(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8		<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<LOD
Total:								0.0765 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
•	Determinand defined or amended by HazWasteOnline (see Appendix A)
•	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and ≤ 75°C"

Force this Hazardous Property to non-hazardous for cumulative determinand results below the threshold of: **38 mg/kg (0.0038%)**
because: No liquid phase

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group (conc.: 0.00129%)

Classification of sample: Area 2-20250730

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:	LoW Code:
Area 2-20250730	Chapter:
Moisture content:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
4.2% (wet weight correction)	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 4.2% Wet Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number									
1	pH				7.53	pH		7.53	pH	7.53 pH		
2	arsenic { arsenic acid and its salts with the exception of those specified elsewhere in this Annex }				7	mg/kg	1.895	12.705	mg/kg	0.00127 %	✓	
	033-005-00-1											
3	cadmium { cadmium oxide }				<1	mg/kg	1.142	<1.142	mg/kg	<0.000114 %		<LOD
	048-002-00-0	215-146-2	1306-19-0									
4	chromium in Cr(III) compounds { chromium(III) oxide (worst case) }				9	mg/kg	1.462	12.602	mg/kg	0.00126 %	✓	
		215-160-9	1308-38-9									
5	copper { copper sulphate pentahydrate }				26	mg/kg	3.929	97.865	mg/kg	0.00979 %	✓	
	029-023-00-4	231-847-6	7758-99-8									
6	lead { lead chromate }			1	48	mg/kg	1.56	71.727	mg/kg	0.0046 %	✓	
	082-004-00-2	231-846-0	7758-97-6									
7	mercury { mercury difulminate }				<0.17	mg/kg	1.419	<0.241	mg/kg	<0.0000241 %		<LOD
	080-005-00-2	211-057-8	628-86-4									
8	nickel { nickel dibromate }				11	mg/kg	5.358	56.466	mg/kg	0.00565 %	✓	
	028-053-00-5	238-596-1	14550-87-9									
9	selenium { nickel selenate }				<1	mg/kg	2.554	<2.554	mg/kg	<0.000255 %		<LOD
	028-031-00-5	239-125-2	15060-62-5									
10	zinc { zinc chromate }				43	mg/kg	2.774	114.278	mg/kg	0.0114 %	✓	
	024-007-00-3	236-878-9	13530-65-9									
11	naphthalene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
	601-052-00-2	202-049-5	91-20-3									
12	acenaphthylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		205-917-1	208-96-8									
13	acenaphthene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		201-469-6	83-32-9									
14	fluorene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		201-695-5	86-73-7									
15	phenanthrene				0.04	mg/kg		0.0383	mg/kg	0.00000383 %	✓	
		201-581-5	85-01-8									
16	anthracene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		204-371-1	120-12-7									
17	fluoranthene				<0.08	mg/kg		<0.08	mg/kg	<0.000008 %		<LOD
		205-912-4	206-44-0									

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
18	pyrene	204-927-3	129-00-0		<0.07 mg/kg		<0.07 mg/kg	<0.000007 %		<LOD
19	benz[a]anthracene	601-033-00-9	200-280-6	56-55-3	0.04 mg/kg		0.0383 mg/kg	0.00000383 %	✓	
20	chrysene	601-048-00-0	205-923-4	218-01-9	0.06 mg/kg		0.0575 mg/kg	0.00000575 %	✓	
21	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	0.07 mg/kg		0.0671 mg/kg	0.00000671 %	✓	
22	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	<0.07 mg/kg		<0.07 mg/kg	<0.000007 %		<LOD
23	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	0.04 mg/kg		0.0383 mg/kg	0.00000383 %	✓	
24	indeno[123-cd]pyrene	205-893-2	193-39-5		0.05 mg/kg		0.0479 mg/kg	0.00000479 %	✓	
25	dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3	<0.04 mg/kg		<0.04 mg/kg	<0.000004 %		<LOD
26	benzo[ghi]perylene	205-883-8	191-24-2		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
27	TPH (C6 to C40) petroleum group		TPH		37 mg/kg		35.446 mg/kg	0.00354 %	✓	
28	confirm TPH has NOT arisen from diesel or petrol				☒					
29	asbestos	650-013-00-6	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5		< mg/kg		< mg/kg	<		<LOD
30	chromium in Cr(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0	<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<LOD
Total:								0.0376 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
•	Determinand defined or amended by HazWasteOnline (see Appendix A)
•	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and ≤ 75°C"

Force this Hazardous Property to non-hazardous for cumulative determinand results below the threshold of: 38 mg/kg (0.0038%) because: No liquid phase

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group (conc.: 0.00354%)

Appendix A: Classifier defined and non GB MCL determinands

- **pH** (CAS Number: PH)

Description/Comments: Appendix C4
Data source: WM3 1st Edition 2015
Data source date: 25 May 2015
Hazard Statements: None.

- **chromium(III) oxide (worst case)** (EC Number: 215-160-9, CAS Number: 1308-38-9)

Description/Comments: Data from C&L Inventory Database
Data source: <https://echa.europa.eu/information-on-chemicals/cl-inventory-database/-/discli/details/33806>
Data source date: 17 Jul 2015
Hazard Statements: Acute Tox. 4; H332 , Acute Tox. 4; H302 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Skin Irrit. 2; H315 , Resp. Sens. 1; H334 , Skin Sens. 1; H317 , Repr. 1B; H360FD , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

- **acenaphthylene** (EC Number: 205-917-1, CAS Number: 208-96-8)

Description/Comments: Data from C&L Inventory Database
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 17 Jul 2015
Hazard Statements: Acute Tox. 4; H302 , Acute Tox. 1; H330 , Acute Tox. 1; H310 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Skin Irrit. 2; H315

- **acenaphthene** (EC Number: 201-469-6, CAS Number: 83-32-9)

Description/Comments: Data from C&L Inventory Database
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 17 Jul 2015
Hazard Statements: Eye Irrit. 2; H319 , STOT SE 3; H335 , Skin Irrit. 2; H315 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410 , Aquatic Chronic 2; H411

- **fluorene** (EC Number: 201-695-5, CAS Number: 86-73-7)

Description/Comments: Data from C&L Inventory Database
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 06 Aug 2015
Hazard Statements: Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

- **phenanthrene** (EC Number: 201-581-5, CAS Number: 85-01-8)

Description/Comments: Data from C&L Inventory Database
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 06 Aug 2015
Hazard Statements: Acute Tox. 4; H302 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Carc. 2; H351 , Skin Sens. 1; H317 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410 , Skin Irrit. 2; H315

- **anthracene** (EC Number: 204-371-1, CAS Number: 120-12-7)

Description/Comments: Data from C&L Inventory Database
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 17 Jul 2015
Hazard Statements: Eye Irrit. 2; H319 , STOT SE 3; H335 , Skin Irrit. 2; H315 , Skin Sens. 1; H317 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

- **fluoranthene** (EC Number: 205-912-4, CAS Number: 206-44-0)

Description/Comments: Data from C&L Inventory Database
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 21 Aug 2015
Hazard Statements: Acute Tox. 4; H302 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

- **pyrene** (EC Number: 204-927-3, CAS Number: 129-00-0)

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 2014
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 21 Aug 2015
Hazard Statements: Skin Irrit. 2; H315 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

- **indeno[123-cd]pyrene** (EC Number: 205-893-2, CAS Number: 193-39-5)

Description/Comments: Data from C&L Inventory Database
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 06 Aug 2015
Hazard Statements: Carc. 2; H351

■ **benzo[ghi]perylene** (EC Number: 205-883-8, CAS Number: 191-24-2)

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 28/02/2015
 Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
 Data source date: 23 Jul 2015
 Hazard Statements: Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

■ **TPH (C6 to C40) petroleum group** (CAS Number: TPH)

Description/Comments: Unknown Oil

Hazard statements taken from WM3 1st Edition 2015

Data source: WM3 1st Edition 2015

Data source date: 25 May 2015

Hazard Statements: Flam. Liq. 3; H226 , Asp. Tox. 1; H304 , STOT RE 2; H373 , Muta. 1B; H340 , Carc. 1B; H350 , Repr. 2; H361d , Aquatic Chronic 2; H411

■ **confirm TPH has NOT arisen from diesel or petrol**

Description/Comments: Chapter 3, section 4b requires a positive confirmation for benzo[a]pyrene to be used as a marker in evaluating Carc. 1B; H350 (HP 7) and Muta. 1B; H340 (HP 11)
 Data source: WM3 1st Edition 2015
 Data source date: 25 May 2015
 Hazard Statements: None.

Appendix B: Rationale for selection of metal species

arsenic {arsenic acid and its salts with the exception of those specified elsewhere in this Annex}

Worst case

cadmium {cadmium oxide}

Reasonable case CLP species based on hazard statements/molecular weight, very low solubility in water. Industrial sources include: electroplating baths, electrodes for storage batteries, catalysts, ceramic glazes, phosphors, pigments and nematocides. Worst case compounds in CLP: cadmium sulphate, chloride, fluoride & iodide not expected as either very soluble and/or compound's industrial usage not related to site history.

chromium in Cr(III) compounds {chromium(III) oxide (worst case)}

Worst case

copper {copper sulphate pentahydrate}

Worst case

lead {lead chromate}

Worst case CLP species based on hazard statements/molecular weight.

mercury {mercury difulminate}

Worst case scenario

nickel {nickel dibromate}

Worst case

selenium {nickel selenate}

Worst case species

zinc {zinc chromate}

Worst case species

chromium in Cr(VI) compounds {chromium(VI) oxide}

Worst case

Appendix C: Version

HazWasteOnline Classification Engine: WM3 1st Edition v1.2.GB - Oct 2021

HazWasteOnline Classification Engine Version: 2025.213.6734.12217 (02 Aug 2025)

HazWasteOnline Database: 2025.213.6734.12217 (02 Aug 2025)

This classification utilises the following guidance and legislation:

WM3 v1.2.GB - Waste Classification - 1st Edition v1.2.GB - Oct 2021

CLP Regulation - Regulation 1272/2008/EC of 16 December 2008

1st ATP - Regulation 790/2009/EC of 10 August 2009

2nd ATP - Regulation 286/2011/EC of 10 March 2011

3rd ATP - Regulation 618/2012/EU of 10 July 2012

4th ATP - Regulation 487/2013/EU of 8 May 2013

Correction to 1st ATP - Regulation 758/2013/EU of 7 August 2013

5th ATP - Regulation 944/2013/EU of 2 October 2013

6th ATP - Regulation 605/2014/EU of 5 June 2014

WFD Annex III replacement - Regulation 1357/2014/EU of 18 December 2014

Revised List of Waste 2014 - Decision 2014/955/EU of 18 December 2014

7th ATP - Regulation 2015/1221/EU of 24 July 2015

8th ATP - Regulation (EU) 2016/918 of 19 May 2016

9th ATP - Regulation (EU) 2016/1179 of 19 July 2016

10th ATP - Regulation (EU) 2017/776 of 4 May 2017

HP14 amendment - Regulation (EU) 2017/997 of 8 June 2017

13th ATP - Regulation (EU) 2018/1480 of 4 October 2018

14th ATP - Regulation (EU) 2020/217 of 4 October 2019

15th ATP - Regulation (EU) 2020/1182 of 19 May 2020

The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use)(Amendment etc.) (EU Exit)

Regulations 2020 - UK: 2020 No. 1567 of 16th December 2020

The Waste and Environmental Permitting etc. (Legislative Functions and Amendment etc.) (EU Exit) Regulations 2020 - UK:

2020 No. 1540 of 16th December 2020

GB MCL List - version 1.1 of 09 June 2021

GB MCL List v2.0 - version 2.0 of 20th October 2023

GB MCL List v3.0 - version 3.0 of 11th January 2024

GB MCL List v4.0 - version 4.0 of 2nd March 2024

GB MCL List v5.0 - version 5.0 of 26th June 2024

GB MCL List v6.0 - version 6.0 of 15th February 2025

Laboratory Test Certificate

CJAssociates

Site Afon Wysg
Client Jones Bros Ruthin (Civil Engineering) Co Ltd

F.A.O. Sion Williams
Address Ty Glyn
Canol y Dre
Ruthin
Denbighshire
LL15 1QW

Order Number TBC
Job Number 2441224
Lab Number L17536

Number of samples submitted for testing: 1 sample (s)

Moisture Content 1 test(s)
Particle Size Distribution 1 test(s)
Dry Density / MC Relationship - Vibrating Hammer Method 1 test(s)

Results apply to the sample(s) as received.
* Non UKAS accredited test

Date (s) sample (s) received at laboratory: 6 Aug-24
Date of receipt of testing instructions 6 Aug-24
Date testing started: 7 Aug-24
Date of issue: 10 Sep-24

Please note that we will keep the sample (s) for one month after submission of our report and will then dispose of them without notice unless you ask us to store them. We will then make a separate charge for this.



1429

Approved by :
Lisa Maiden

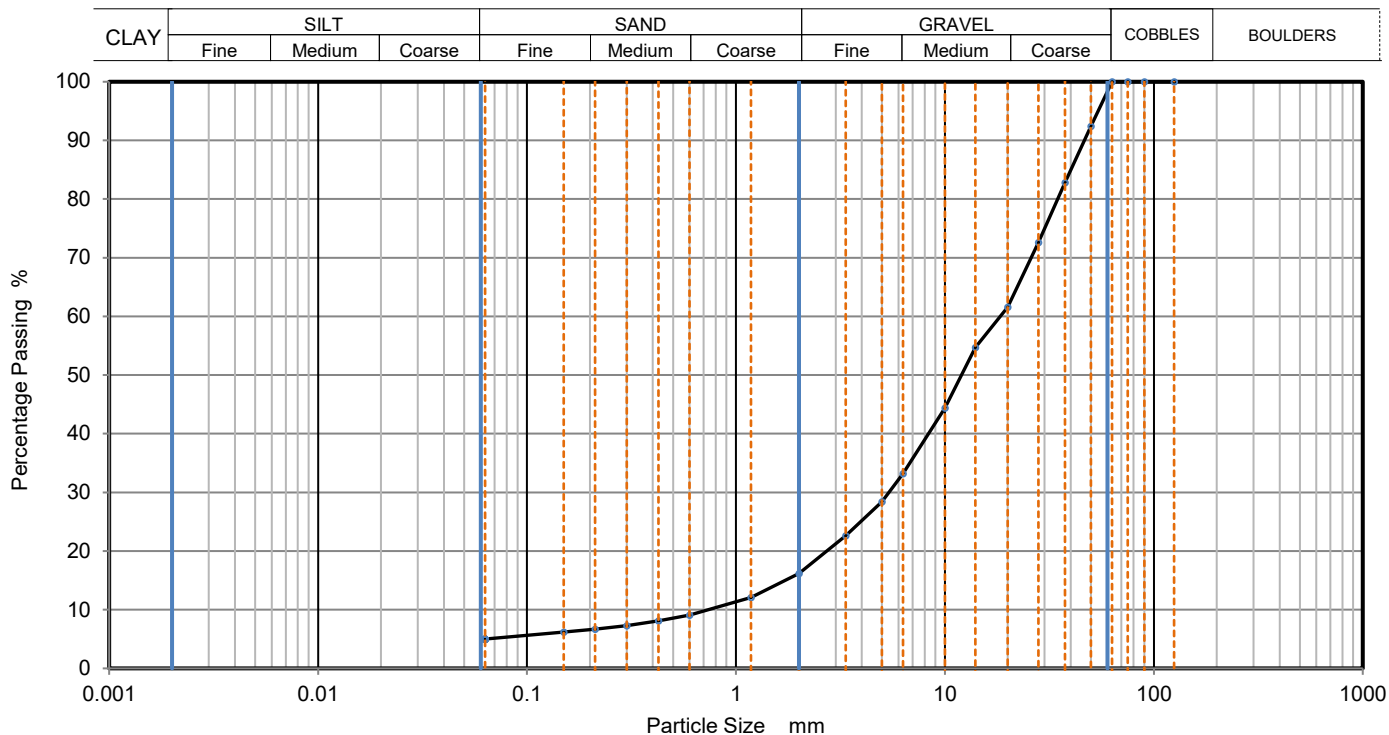
L Maiden

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Water Content Performed in accordance with BS EN ISO 17892-1 : 2014

Key				Date Printed	Approved By	Table
Density test	Liquid Limit	Atterberg Prep	Particle density	13/08/2025	Lisa Maiden	1
Linear measurement unless	4pt cone unless :	1. in natural condition	sp - small pyknom			sheet
wd - water displacement	cas - Casagrande method	2. after >425um removed by hand	gj - gas jar			1
wi - immersion in water	1pt - single point test	3. after washing to remove >425um				

CJAssociates	PARTICLE SIZE DISTRIBUTION			Job Ref	2441224
				Borehole/Pit No.	Sample1
Site Name	Afon Wysg			Sample No.	06.08.25
Soil Description	Brown silty sandy GRAVEL			Depth, m	0.00
Specimen Reference		Specimen Depth	m	Sample Type	B
Test Method	BS1377:Part 2:1990, clause 9.2			KeyLAB ID	CJA_202508071



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	92		
37.5	83		
28	73		
20	62		
14	55		
10	44		
6.3	33		
5	28		
3.35	23		
2	16		
1.18	12		
0.6	9		
0.425	8		
0.3	7		
0.212	7		
0.15	6		
0.063	5		

Dry Mass of sample, g

50265

Sample Proportions	% dry mass
Very coarse	0
Gravel	84
Sand	11
Fines <0.063mm	5

Grading Analysis	
D100	mm
D60	mm
D30	mm
D10	mm
Uniformity Coefficient	25
Curvature Coefficient	2.2

Remarks

Preparation and testing in accordance with BS1377 unless noted below

Material complies with Class 1A grading requirements. Testing undertaken in accordance with documented British standard so measurement of uncertainty not applied to the statement of conformity.

Operator	Checked	Approved	Sheet printed	Fig 1
		Lisa Maiden	13/08/2025 13:40	
				Sheet



Laboratory Report



Contract Number: 80349

Client Ref: **2441224**

Client PO: **2441224**

Date Received: **18-08-2025**

Date Completed: **05-09-2025**

Report Date: **05-09-2025**

Client: **CJ Associates**

This report has been checked and approved by:

Contract Title: **Afon Wysg**
For the attention of: **Lisa Maiden**

Richard John
Quality/Technical Manager

Description	Qty
Dry Den/MC (Vibrating Hammer Method) BS 1377-2:2022 Clause 11.7 - * UKAS	1

Notes: Observations and Interpretations are outside the UKAS Accreditation

* - denotes test included in laboratory scope of accreditation

- denotes test carried out by approved contractor

@ - denotes non accredited tests

This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This test report/certificate shall not be reproduced except in full, without the approval of GEO Site & Testing Services Ltd. Any opinions or interpretations stated - within this report/certificate are excluded from the laboratories UKAS accreditation.

Approved Signatories:

Brendan Evans (Senior Office Administrator) - Brendan Evans (Business Support Co-ordinator) - Darren Bourne (Quality Senior Technician)

Paul Evans (Director) - Richard John (Quality/Technical Manager) - Shaun Jones (Laboratory manager)

Shaun Thomas (Site Manager) - Wayne Honey (HR & HSE Manager)

Determination of The Dry Density / Water Content Relationship
BS 1377-2:2022 Clause 11.7

Contract Number

80349

BH / TP No

Sample 1 - 06.08.2025

Project Name

Afon Wysg

Sample No

Sample Description

Red/ brown silty fine to coarse GRAVEL

Depth Top

Compaction Method

Vibrating Rammer

Depth Bottom

Date Tested

04/09/2025

Sample Type

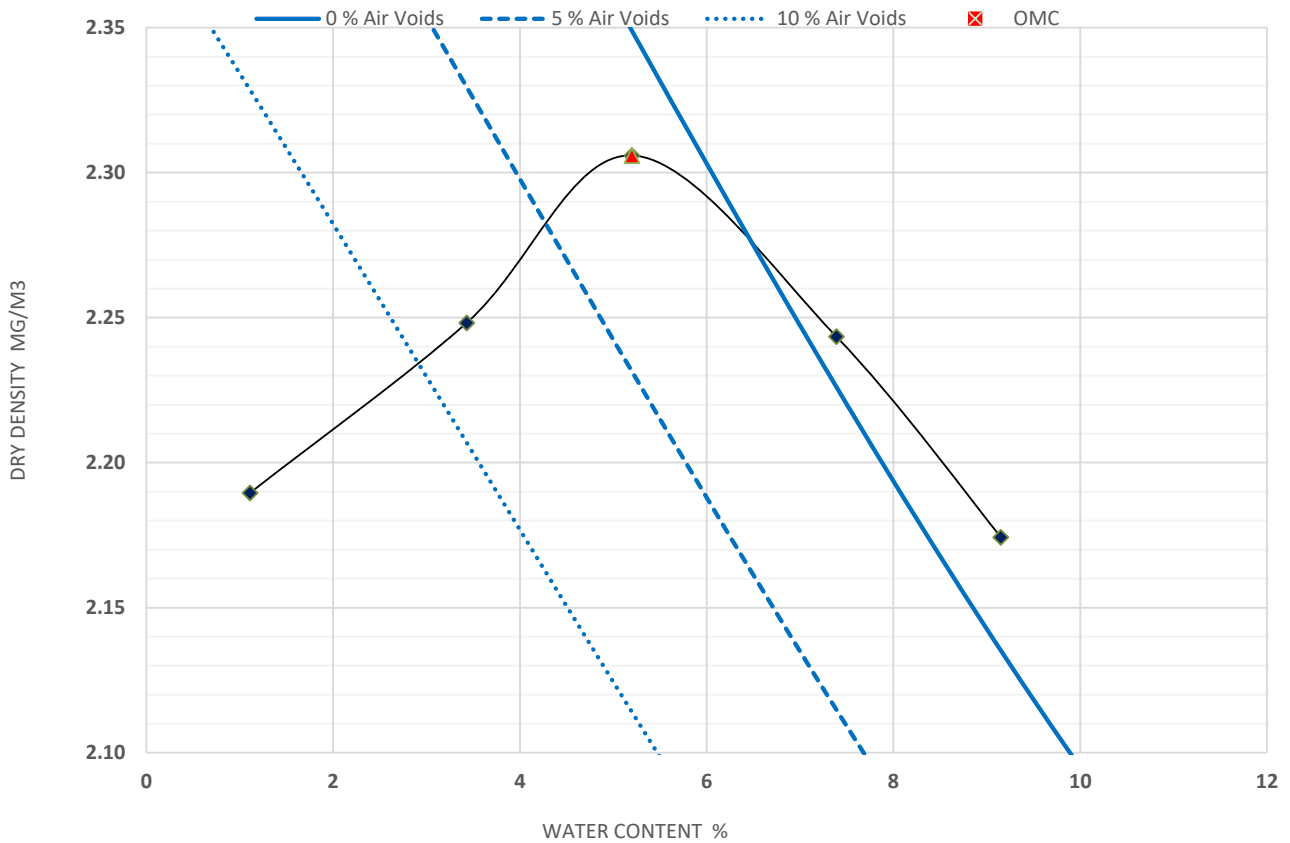
B

Grading Zone

X Non-Standard Test

Susceptible to Crushing

Yes



Compaction Point	1	2	3	4	5							
Water Content	1.1	3.4	5.2	7.4	9.2							
Bulk Density	2.21	2.33	2.43	2.41	2.37							
Dry Density	2.19	2.25	2.31	2.24	2.17							

Initial Water Content	1.1	%	Single or Separate Sample Used	Separate
Maximum Dry Density	2.31	Mg/m3	Assumed	
Optimum Water Content	5.2	%		
Particle Density	2.65	Mg/m3		
Material Retained 37.5mm	19	%		
Material Retained 20mm	27	%		

Operator

Conal. A

Laboratory Test Certificate

CJAssociates

Site Afon Wysg
Client Jones Bros Ruthin (Civil Engineering) Co Ltd

F.A.O. Sion Williams
Address Ty Glyn
Canol y Dre
Ruthin
Denbighshire
LL15 1QW

Order Number TBC
Job Number 2441224
Lab Number L17545

Number of samples submitted for testing: 1 sample (s)

Particle Size Distribution 1 test(s)
Dry Density / MC Relationship - Vibrating Hammer Method 1 test(s)

Results apply to the sample(s) as received.
* Non UKAS accredited test

Date (s) sample (s) received at laboratory: 8 Aug-24
Date of receipt of testing instructions 8 Aug-24
Date testing started: 15 Aug-24
Date of issue: 12 Sep-24

Please note that we will keep the sample (s) for one month after submission of our report and will then dispose of them without notice unless you ask us to store them. We will then make a separate charge for this.



1429

Approved by :
Lisa Maiden

R Maiden

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TEST REPORT

WATER CONTENT AND PARTICLE SIZE DISTRIBUTION

BS EN 1097-5:2008 & BS EN 933-1:2012

Project No.:	2441224	Client:	Jones Bros. Ruthin (Civil Engineering) Co. Ltd
Project Name:	Afon Wysg NP18 2BZ	Address:	Ty Glyn, Canol-Y-Dre, Ruthin LL15 1QW
Sample No.:	21755		

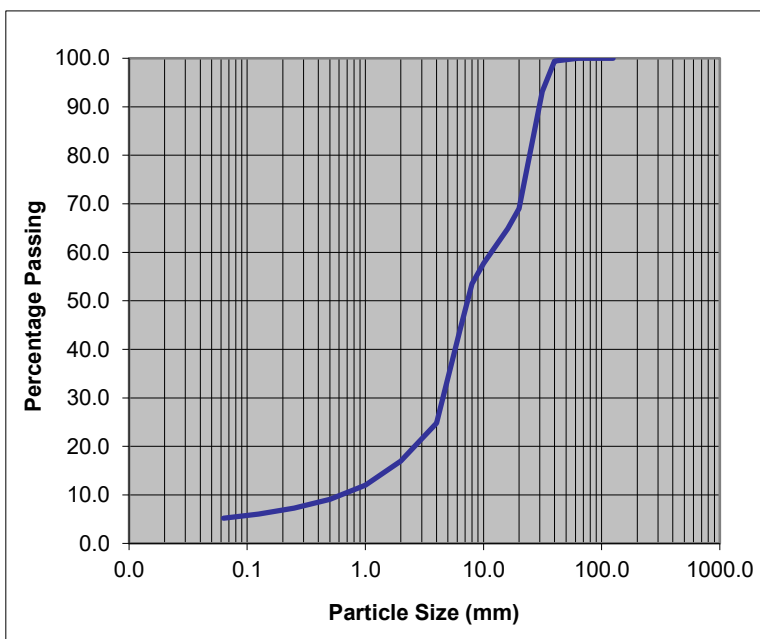
Site Reference:	Type 3 - 08.08.25	Sample Type:	Bulk
Location in works:	Afon Wysg Battery Plant Site Layer 4	Material Description:	Red brown silty sandy GRAVEL
Date Sampled:	08 August 2025	Material Source:	Site Won
Sampled By:	P Hanson	Material Supplier:	Site Won
Sampling Certificate Received:	Yes	Specification:	SHW Series 800
Date Received:	08 August 2025	Date Tested:	19 August 2025

TEST RESULTS

Particle Size (mm)	Percentage Passing	Specification
125.0	100	
80.0	100	100
63.0	100	
40.0	99	80 - 99
31.5	93	
20.0	69	50 - 78
16.0	65	
10.0	58	31 - 60
8.0	54	
6.3	44	
4.0	25	18 - 46
2.0	17	10 - 35
1.0	12	6 - 26
0.5	9	0 - 20
0.250	7	
0.125	6	
0.063	5.2	0 - 5

Water Content (%)	2.6	* Non UKAS Accredited Test
-------------------	-----	----------------------------

Dry mass of sample, kg	37.0
Method of Analysis	Washing & Sieving



Remarks: Material does not comply with Type 3 grading requirements.

N.B. Testing is carried out in accordance with documented British Standard so measurement of uncertainty has not been applied to the statement of conformity

QA Ref.		Approver	Date	Fig.
EN 933-1 Rev. 3.0	Unit 3, Block 6 Newlands Ave, Brackla Industrial Estate, Bridgend, CF31 2DA. Tel: 01656 657710		20/08/2025	
		R Anstee, Materials and Field Testing Director		



Laboratory Report



Contract Number: 80457

Client Ref: **2441224**

Client PO: **2441224 – L17545 – S11236**

Date Received: **20-08-2025**

Date Completed: **12-09-2025**

Report Date: **12-09-2025**

Client: **CJ Associates**

This report has been checked and approved by:

Contract Title: **Afon Wysg**

For the attention of: **Lisa Maiden**

Richard John
Quality/Technical Manager

Description	Qty
Dry Den/MC (Vibrating Hammer Method) BS 1377:1990 - Part 4 : 3.7 - * UKAS	1

Notes: Observations and Interpretations are outside the UKAS Accreditation

* - denotes test included in laboratory scope of accreditation

- denotes test carried out by approved contractor

@ - denotes non accredited tests

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Approved Signatories:

Brendan Evans (Senior Office Administrator) - Brendan Evans (Business Support Co-ordinator) - Darren Bourne (Quality Senior Technician)

Luke Williams (Laboratory Technician) - Paul Evans (Director) - Richard John (Quality/Technical Manager)

Shaun Jones (Laboratory manager) - Shaun Thomas (Site Manager) - Wayne Honey (HR & HSE Manager)

Dry Density / Moisture Content Relationship BS 1377:Part 4:1990

Contract Number

80457

BH / TP No

Type 3 - 08.08.25

Project Name

Afon Wysg

Sample No

Sample Description

Brown sandy silty fine to coarse GRAVEL

Depth Top

Compaction Method

Vibrating Rammer

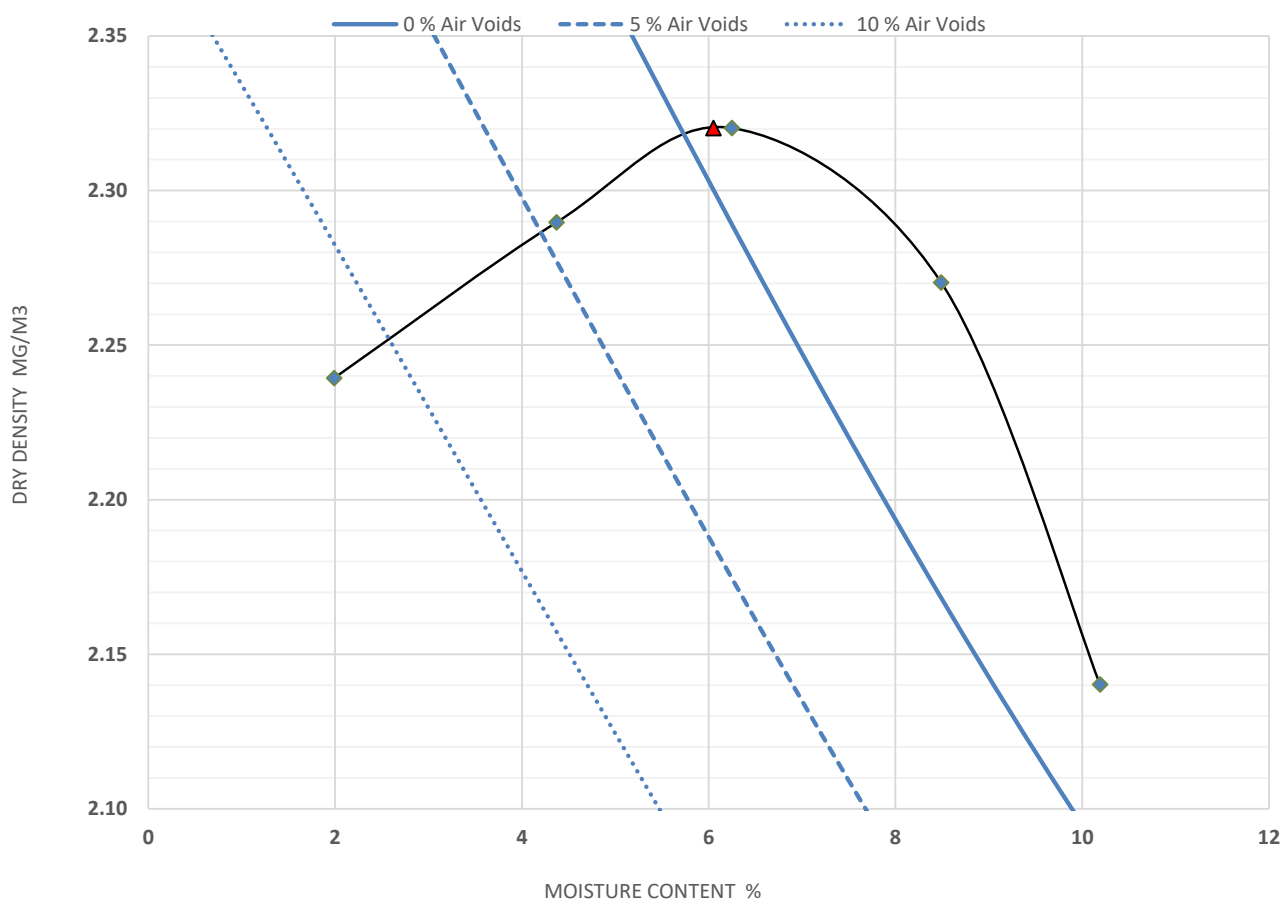
Depth Bottom

Date Tested

10/09/2025

Sample Type

B



Compaction Point	1	2	3	4	5							
Moisture Content	2.0	4.4	6.3	8.5	10							
Bulk Density	2.28	2.39	2.47	2.46	2.36							
Dry Density	2.24	2.29	2.32	2.27	2.14							

Initial Moisture Content	2.0	%	Single or Separate Sample Used	Separate
Maximum Dry Density	2.32	Mg/m3	Assumed	
Optimum Moisture Content	6.1	%		
Particle Density	2.65	Mg/m3		
Material Retained 37.5mm	6	%		
Material Retained 20mm	30	%		

Operator

Conal. A

Laboratory Test Certificate

CJAssociates

Site Afon Wysg
Client Jones Bros Ruthin (Civil Engineering) Co Ltd

F.A.O. Sion Williams
Address Ty Glyn
Canol y Dre
Ruthin
Denbighshire
LL15 1QW

Order Number TBC
Job Number 2441224
Lab Number L17547

Number of samples submitted for testing: 1 sample (s)

Particle Size Distribution 1 test(s)
Dry Density / MC Relationship - Vibrating Hammer Method 1 test(s)

Results apply to the sample(s) as received.
* Non UKAS accredited test

Date (s) sample (s) received at laboratory: 13 Aug-24
Date of receipt of testing instructions 13 Aug-24
Date testing started: 15 Aug-24
Date of issue: 12 Sep-24

Please note that we will keep the sample (s) for one month after submission of our report and will then dispose of them without notice unless you ask us to store them. We will then make a separate charge for this.



1429

Approved by :
Lisa Maiden

R Maiden

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TEST REPORT

WATER CONTENT AND PARTICLE SIZE DISTRIBUTION

BS EN 1097-5:2008 & BS EN 933-1:2012

Project No.: 2441224	Client: Jones Bros. Ruthin (Civil Engineering) Co. Ltd
Project Name: Afon Wysg NP18 2BZ	Address: Ty Glyn, Canol-Y-Dre, Ruthin LL15 1QW
Sample No.: 21756	

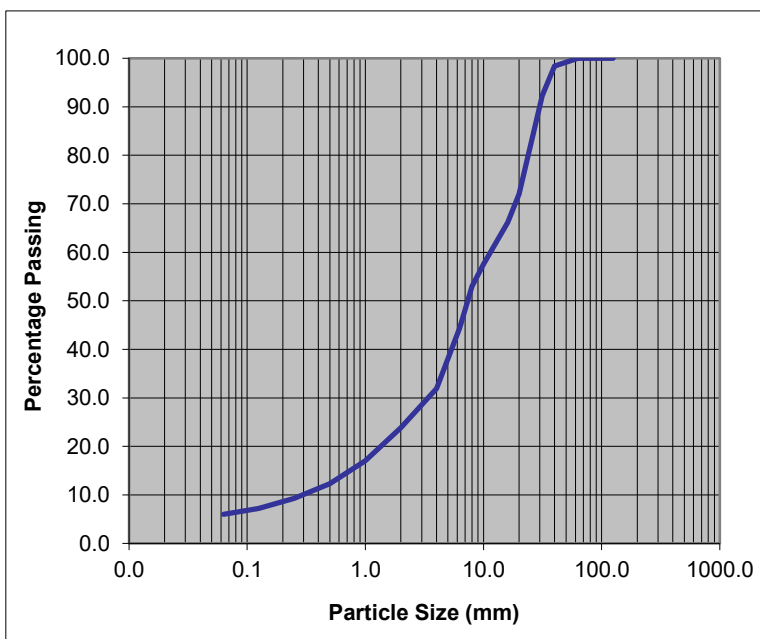
Site Reference: Type 3 - 13.08.25	Sample Type: Bulk
Location in works: Afon Wysg Battery Plant Site Stockpile	Material Description: Grey brown silty sandy GRAVEL
Date Sampled: 13 August 2025	Material Source: Site Won
Sampled By: P Hanson	Material Supplier: Site Won
Sampling Certificate Received: Yes	Specification: SHW Series 800
Date Received: 13 August 2025	Date Tested: 19 August 2025

TEST RESULTS

Particle Size (mm)	Percentage Passing	Specification
125.0	100	
80.0	100	100
63.0	100	
40.0	98	80 - 99
31.5	92	
20.0	72	50 - 78
16.0	66	
10.0	58	31 - 60
8.0	53	
6.3	44	
4.0	32	18 - 46
2.0	24	10 - 35
1.0	17	6 - 26
0.5	12	0 - 20
0.250	9	
0.125	7	
0.063	6.0	0 - 5

Water Content (%)	2.3	* Non UKAS Accredited Test
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Dry mass of sample, kg	34.5
Method of Analysis	Washing & Sieving



Remarks: Material does not comply with Type 3 grading requirements.

N.B. Testing is carried out in accordance with documented British Standard so measurement of uncertainty has not been applied to the statement of conformity

QA Ref.		Approver	Date	Fig.
EN 933-1 Rev. 3.0	Unit 3, Block 6 Newlands Ave, Brackla Industrial Estate, Bridgend, CF31 2DA. Tel: 01656 657710	 R Anstee, Materials and Field Testing Director	20/08/2025	



Laboratory Report



Contract Number: 80458

Client Ref: **2441224**

Client PO: **2441224 – L17547 – S11237**

Date Received: **20-08-2025**

Date Completed: **12-09-2025**

Report Date: **12-09-2025**

Client: **CJ Associates**

This report has been checked and approved by:

Contract Title: **Afon Wysg**
For the attention of: **Lisa Maiden**

Richard John
Quality/Technical Manager

Description	Qty
Dry Den/MC (Vibrating Hammer Method) BS 1377-2:2022 Clause 11.7 - * UKAS	1

Notes: Observations and Interpretations are outside the UKAS Accreditation

* - denotes test included in laboratory scope of accreditation

- denotes test carried out by approved contractor

@ - denotes non accredited tests

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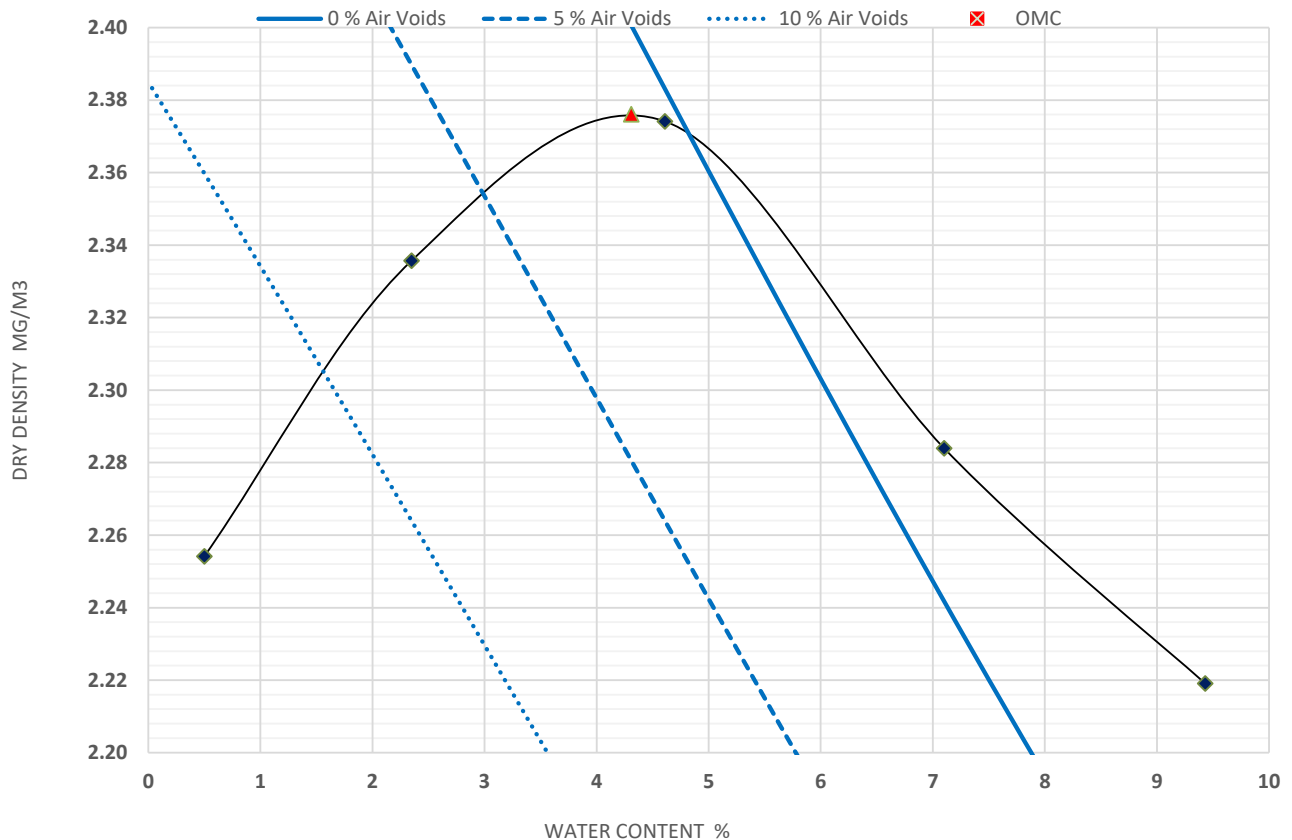
Approved Signatories:

Brendan Evans (Senior Office Administrator) - Brendan Evans (Business Support Co-ordinator) - Darren Bourne (Quality Senior Technician)

Luke Williams (Laboratory Technician) - Paul Evans (Director) - Richard John (Quality/Technical Manager)

Shaun Jones (Laboratory manager) - Shaun Thomas (Site Manager) - Wayne Honey (HR & HSE Manager)

	Determination of The Dry Density / Water Content Relationship BS 1377-2:2022 Clause 11.7	Contract Number	80458
		BH / TP No	Type 3 - 13.08.25
Project Name	Afon Wysg	Sample No	
Sample Description	Brown sandy silty fine to coarse GRAVEL	Depth Top	
Compaction Method	Vibrating Rammer	Depth Bottom	
Date Tested	10/09/2025	Sample Type	B
Grading Zone	3	Susceptible to Crushing	Yes



Compaction Point	1	2	3	4	5							
Water Content	0.5	2.3	4.6	7.1	9.4							
Bulk Density	2.27	2.39	2.48	2.45	2.43							
Dry Density	2.25	2.34	2.37	2.28	2.22							

Initial Water Content	2.3	%	Single or Separate Sample Used	Separate
Maximum Dry Density	2.38	Mg/m ³	Assumed	
Optimum Water Content	4.3	%		
Particle Density	2.65	Mg/m ³		
Material Retained 37.5mm	0	%		
Material Retained 20mm	18	%		

Operator
Conal. A

Laboratory Test Certificate

CJAssociates

Site Afon Wysg
Client Jones Bros Ruthin (Civil Engineering) Co Ltd

F.A.O. Sion Williams
Address Ty Glyn
Canol y Dre
Ruthin
Denbighshire
LL15 1QW

Order Number TBC
Job Number 2441224
Lab Number L17549

Number of samples submitted for testing: 1 sample (s)

Particle Size Distribution 1 test(s)
Dry Density / MC Relationship - Vibrating Hammer Method 1 test(s)

Results apply to the sample(s) as received.
* Non UKAS accredited test

Date (s) sample (s) received at laboratory: 15 Aug-24
Date of receipt of testing instructions 15 Aug-24
Date testing started: 15 Aug-24
Date of issue: 12 Sep-24

Please note that we will keep the sample (s) for one month after submission of our report and will then dispose of them without notice unless you ask us to store them. We will then make a separate charge for this.



1429

Approved by :
Lisa Maiden

L Maiden

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TEST REPORT

WATER CONTENT AND PARTICLE SIZE DISTRIBUTION

BS EN 1097-5:2008 & BS EN 933-1:2012

Project No.:	2441224	Client:	Jones Bros. Ruthin (Civil Engineering) Co. Ltd
Project Name:	Afon Wysg NP18 2BZ	Address:	Ty Glyn, Canol-Y-Dre, Ruthin LL15 1QW
Sample No.:	21757		

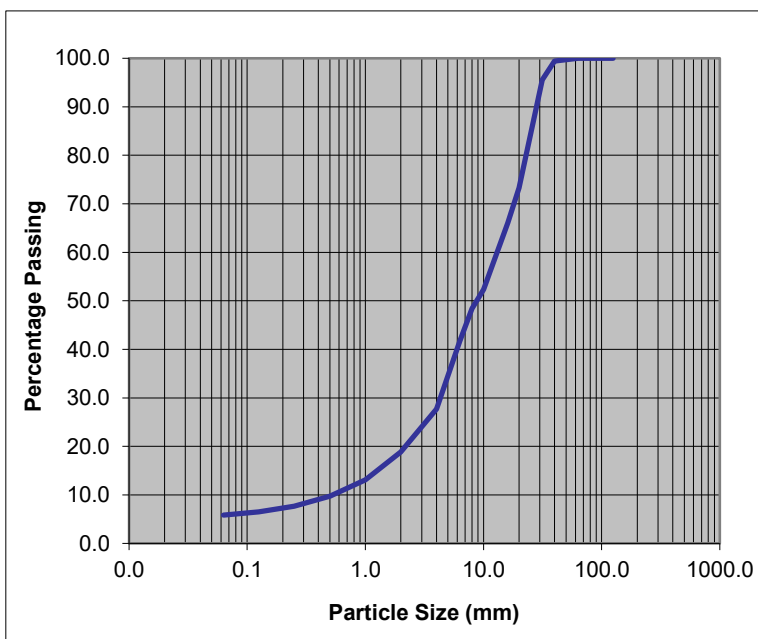
Site Reference:	Type 3 - 15.08.25	Sample Type:	Bulk
Location in works:	Afon Wysg Battery Plant Site Stockpile	Material Description:	Grey brown silty sandy GRAVEL
Date Sampled:	15 August 2025	Material Source:	Site Won
Sampled By:	P Hanson	Material Supplier:	Site Won
Sampling Certificate Received:	Yes	Specification:	SHW Series 800
Date Received:	15 August 2025	Date Tested:	19 August 2025

TEST RESULTS

Particle Size (mm)	Percentage Passing	Specification
125.0	100	
80.0	100	100
63.0	100	
40.0	99	80 - 99
31.5	96	
20.0	73	50 - 78
16.0	66	
10.0	52	31 - 60
8.0	48	
6.3	42	
4.0	28	18 - 46
2.0	19	10 - 35
1.0	13	6 - 26
0.5	10	0 - 20
0.250	8	
0.125	7	
0.063	5.8	0 - 5

Water Content (%)	1.7	* Non UKAS Accredited Test
-------------------	-----	----------------------------

Dry mass of sample, kg	37.3
Method of Analysis	Washing & Sieving



Remarks: Material does not comply with Type 3 grading requirements.

N.B. Testing is carried out in accordance with documented British Standard so measurement of uncertainty has not been applied to the statement of conformity

QA Ref.		Approver	Date	Fig.
EN 933-1 Rev. 3.0	Unit 3, Block 6 Newlands Ave, Brackla Industrial Estate, Bridgend, CF31 2DA. Tel: 01656 657710		20/08/2025	
		R Anstee, Materials and Field Testing Director		



Laboratory Report



Contract Number: 80459

Client Ref: **2441224**

Client PO: **2441224 – L17549 – S11238**

Date Received: **20-08-2025**

Date Completed: **12-09-2025**

Report Date: **12-09-2025**

Client: **CJ Associates**

This report has been checked and approved by:

Contract Title: **Afon Wysg**
For the attention of: **Lisa Maiden**

Richard John
Quality/Technical Manager

Description	Qty
Dry Den/MC (Vibrating Hammer Method) BS 1377-2:2022 Clause 11.7 - * UKAS	1

Notes: Observations and Interpretations are outside the UKAS Accreditation

* - denotes test included in laboratory scope of accreditation

- denotes test carried out by approved contractor

@ - denotes non accredited tests

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Approved Signatories:

Brendan Evans (Senior Office Administrator) - Brendan Evans (Business Support Co-ordinator) - Darren Bourne (Quality Senior Technician)

Luke Williams (Laboratory Technician) - Paul Evans (Director) - Richard John (Quality/Technical Manager)

Shaun Jones (Laboratory manager) - Shaun Thomas (Site Manager) - Wayne Honey (HR & HSE Manager)

Determination of The Dry Density / Water Content Relationship
BS 1377-2:2022 Clause 11.7

Contract Number

80459

BH / TP No

Type 3 - 15.08.25

Project Name

Afon Wysg

Sample No

Sample Description

Brown sandy silty fine to coarse GRAVEL

Depth Top

Compaction Method

Vibrating Rammer

Depth Bottom

Date Tested

10/09/2025

Sample Type

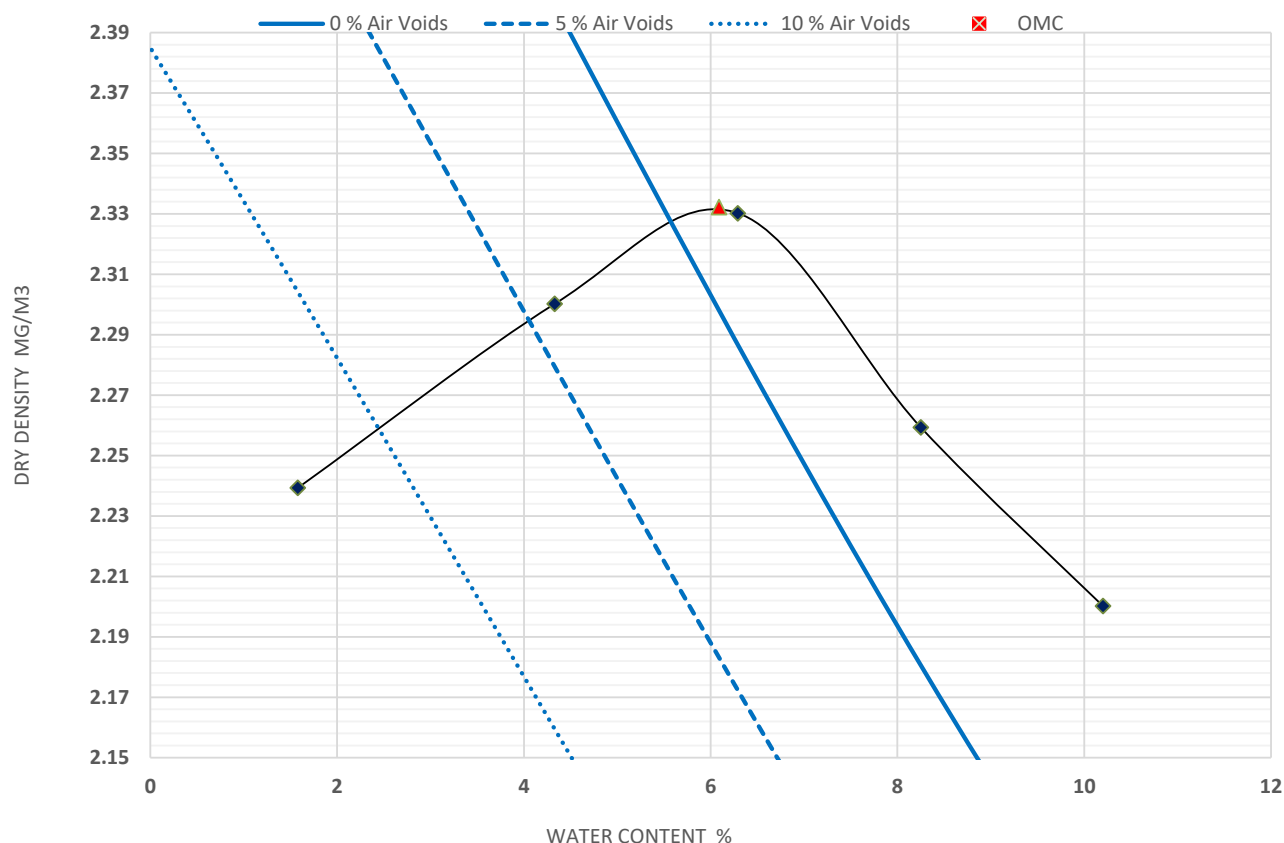
B

Grading Zone

X Non-Standard Test

Susceptible to Crushing

Yes



Compaction Point	1	2	3	4	5							
Water Content	1.6	4.3	6.3	8.3	10.2							
Bulk Density	2.27	2.40	2.48	2.45	2.42							
Dry Density	2.24	2.30	2.33	2.26	2.20							

Initial Water Content	1.6	%	Single or Separate Sample Used	Separate
Maximum Dry Density	2.33	Mg/m3		
Optimum Water Content	6.1	%		
Particle Density	2.65	Mg/m3	Assumed	
Material Retained 37.5mm	5	%		
Material Retained 20mm	33	%		

Operator

Conal. A

Laboratory Test Certificate

CJAssociates

Site Afon Wysg
Client Jones Bros Ruthin (Civil Engineering) Co Ltd

F.A.O. Sion Williams
Address Ty Glyn
Canol y Dre
Ruthin
Denbighshire
LL15 1QW

Order Number TBC
Job Number 2441224
Lab Number L17726

Number of samples submitted for testing: 4 sample (s)

Particle Size Distribution - BS EN 933-1 : 2012	.....	1	test(s)
Asbestos Screen	.....	3	test(s)
Asbestos Quantification	.....	2	test(s)
Sample Disposal for Asbestos Positive Sample	.....	2	test(s)

Results apply to the sample(s) as received.

* Non UKAS accredited test

Date (s) sample (s) received at laboratory:	.....	27	Jan-26
Date of receipt of testing instructions	.....	27	Jan-26
Date testing started:	.....	27	Jan-26
Date of issue:	.....	19	Feb-26

Please note that we will keep the sample (s) for one month after submission of our report and will then dispose of them without notice unless you ask us to store them. We will then make a separate charge for this.

Approved by :
Lisa Maiden

L Maiden



1429

This report shall not be reproduced except in full without approval of CJ Associates

C.J. Associates Geotechnical Ltd
Portview Road
Avonmouth - Bristol BS11 9JE
Tel: 0117 982 1473

Time [09:25] Date [19/02/2026]

TEST REPORT

WATER CONTENT AND PARTICLE SIZE DISTRIBUTION

BS EN 1097-5:2008 & BS EN 933-1:2012

Project No.: **2441224**

Project Name: **Afon Wysg NP18 2BZ**

Sample No.: **23910**

Client:

Jones Bros. Ruthin (Civil Engineering) Co. Ltd

Address:

**Ty Glyn,
Canol-Y-Dre,
Ruthin
LL15 1QW**

Site Reference: **Type 1 - S1**

Location in works: **Stockpile**

Sample Type:

Bulk

Material Description:

**Brown silty very sandy
GRAVEL**

Date Sampled: **27 January 2026**

Sampled By: **P Hanson**

Sampling Certificate
Received: **Yes**

Material Source:

Site Won

Material Supplier:

Site Won

Specification:

SHW Series 800

Date Received: **27 January 2026**

Date Tested:

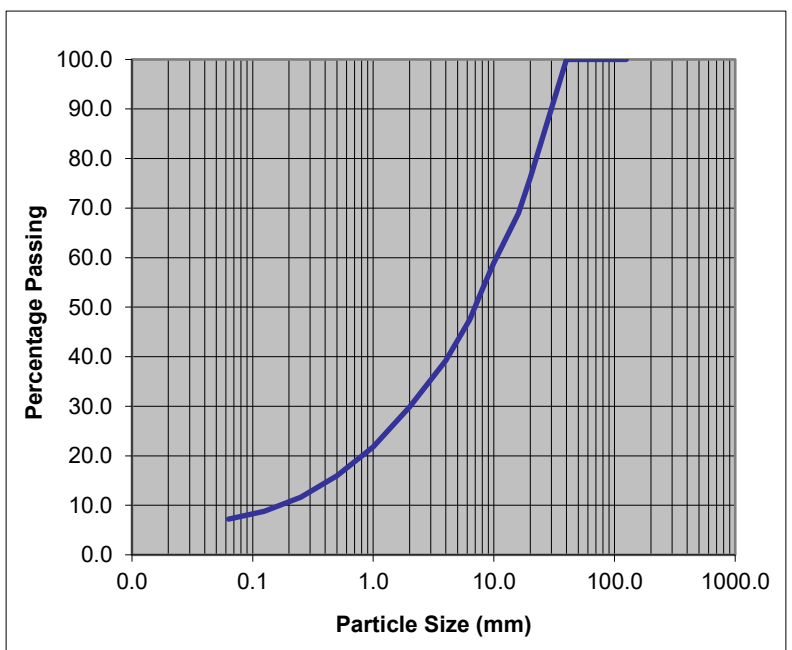
13 February 2026

TEST RESULTS

Particle Size (mm)	Percentage Passing	Specification
125.0	100	
80.0	100	
63.0	100	100
40.0	100	
31.5	92	75 - 99
20.0	76	
16.0	69	43 - 81
10.0	59	
8.0	54	23 - 66
6.3	47	
4.0	39	12 - 53
2.0	30	6 - 42
1.0	22	3 - 32
0.5	16	
0.250	12	
0.125	9	
0.063	7.2	0 - 9

Water Content (%)	3.9	* Non UKAS Accredited Test
-------------------	-----	----------------------------

Dry mass of sample, kg	28.6
Method of Analysis	Washing & Sieving



Remarks: Material complies with Type 1 grading requirements.

N.B. Testing is carried out in accordance with documented British Standard so measurement of uncertainty has not been applied to the statement of conformity

QA Ref.

CJAssociates

EN 933-1
Rev. 3.0

Unit 3, Block 6 Newlands Ave, Brackla
Industrial Estate, Bridgend, CF31 2DA.
Tel: 01656 657710

Page 2 of 7

Approver

R. Anstee

Date

18/02/2026

Fig.

R Anstee, Materials and Field Testing Director

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 26/00917
Issue Number: 1 **Date:** 30 January, 2026

Client: CJ Associates (Bridgend)
Unit 1-3, Block 6, Newlands Avenue
Brackla Industrial Estate
Bridgend
Mid Glamorgan
CF31 2DA

Project Manager: Admin/Lisa Maiden
Project Name: Afon Wysg
Project Ref: 2441224-L17726-S11397
Order No: N/A
Date Samples Received: 28/01/26
Date Instructions Received: 28/01/26
Date Analysis Completed: 30/01/26

Approved by:



Zipporah Bannister
Client Manager

Envirolab Job Number: 26/00917

Client Project Name: Afon Wysg

Client Project Ref: 2441224-L17726-S11397

Lab Sample ID	26/00917/1	26/00917/2	26/00917/3					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	Sample 1	Sample 2	Sample 3							
Depth to Top										
Depth To Bottom										
Date Sampled	27-Jan-26	27-Jan-26	27-Jan-26							
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES							
Sample Matrix Code	4AE	4ABE	6AE							
Asbestos in Soil (inc. matrix) ^										
Asbestos in soil [#]	Amosite & Chrysotile	Chrysotile	NAD							A-T-045
Asbestos Matrix (visual) ₀	-	-	-							A-T-045
Asbestos Matrix (microscope) ₀	Loose Fibres	Loose Fibres	-							A-T-045
Asbestos ACM - Suitable for Water Absorption Test? ₀	N/A	N/A	N/A							A-T-045
Asbestos in Soil Quantification % (Hand Picking & Weighing)										
Asbestos in soil % composition (hand picking and weighing) ₀	<0.001	0.010	-					% w/w	0.001	A-T-054

Report Notes

General

- This report shall not be reproduced, except in full, without written approval from Envirolab.
- The client Sample No, Client Sample ID, Depth to top, Depth to Bottom and Date Sampled are all provided by the client and can affect the validity of results.
- 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 within the same delivery, will be disposed of **four weeks** after the 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 our scope of accreditation.
- A deviating sample 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.
- If a sample is outside of the calibration range or affected by interferences then it may need diluting. This will result in the limit of detection (LOD) being raised.
- Subcontracted Analysis: Please see the appended report for any deviations, current LODs and accreditation status of the test.

Key

Superscript “#”	Accredited to ISO 17025
Superscript “M”	Accredited to MCertS
Superscript “U”	Individual result not accredited
None of the above symbols	Analysis unaccredited
Subscript “A”	Analysis performed on as-received Sample
Subscript “D”	Analysis performed on the dried sample, crushed to pass 2mm sieve.
Subscript “D” on Asbestos	Analysis performed on a dried aliquot of sample provided.
Subscript “A”	Analysis has dependant options against results. Details appear in the comments of your Sample receipt
IS	Insufficient Sample for analysis
US	Unsuitable Sample for analysis
NDP	No Determination Possible
NAD	No Asbestos Detected
Trace	Asbestos found not suitable for Gravimetric Quantification – not enough to accurately weigh.
N/A	Not applicable

Asbestos

Identification: 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

“Trace Asbestos Identified” will be reported if there is not enough present to verify the type.

Assigned Matrix Codes

1	SAND	6	CLAY/LOAM	A	Contains Stones
2	LOAM	7	OTHER	B	Contains Construction Rubble
3	CLAY	8	Asbestos Bulk (Only Asbestos ID accredited)	C	Contains visible hydrocarbons
4	LOAM/SAND	9	Incinerator Ash (some Metals accredited)	D	Contains glass / metal
5	SAND/CLAY			E	Contains roots / twigs
Note: 7,8,9 matrices are not covered by our ISO 17025 or MCertS accreditation, unless stated above.					

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 by method A-T-007:

For waters, free and visible oils are excluded from the sample used for analysis, so the reported result represents the dissolved phase only.

Results “with Clean up” indicates samples cleaned up with Silica during extraction.

EPH CWG (method A-T-055) from TPH CWG:

EPH CWG results have humics mathematically subtracted through instrument calculation.

Where these humic substances have been identified in any IDs from “TPH CWG with clean up” please note that the concentration is **NOT** included in the quantified results but present in the ID for information.

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.

Please contact your client manager if you require any further information.

Envirolab Deviating Samples Report

Hattersley Science & Technology Park, Stockport Road, Hattersley, SK14 3QU
Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: CJ Associates (Bridgend), Unit 1-3, Block 6, Newlands Avenue, Brackla
Industrial Estate, Bridgend, Mid Glamorgan, CF31 2DA

Project: Afon Wysg

Clients Project No: 2441224-L17726-S11397

Project No: 26/00917

Date Received: 28/01/2026 (am)

Cool Box Temperatures (°C): 5.4

NO DEVIATIONS IDENTIFIED

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	26/00917/1	26/00917/2	26/00917/3
Client Sample No			
Client Sample ID/Depth	Sample 1	Sample 2	Sample 3
Date Sampled	27/01/26	27/01/26	27/01/26
A-T-045	29/01/2026	29/01/2026	29/01/2026
A-T-054	30/01/2026	30/01/2026	

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

Laboratory Test Certificate

CJAssociates

Site Afon Wysg
Client Jones Bros Ruthin (Civil Engineering) Co Ltd

F.A.O. Sion Williams
Address Ty Glyn
Canol y Dre
Ruthin
Denbighshire
LL15 1QW

Order Number TBC
Job Number 2441224
Lab Number L17545

Number of samples submitted for testing: 1 sample (s)

Particle Size Distribution 1 test(s)
Dry Density / MC Relationship - Vibrating Hammer Method 1 test(s)

Results apply to the sample(s) as received.
* Non UKAS accredited test

Date (s) sample (s) received at laboratory: 8 Aug-24
Date of receipt of testing instructions 8 Aug-24
Date testing started: 15 Aug-24
Date of issue: 12 Sep-24

Please note that we will keep the sample (s) for one month after submission of our report and will then dispose of them without notice unless you ask us to store them. We will then make a separate charge for this.



1429

Approved by :
Lisa Maiden

R Maiden

This report shall not be reproduced except in full without approval of CJ Associates

TEST REPORT

WATER CONTENT AND PARTICLE SIZE DISTRIBUTION

BS EN 1097-5:2008 & BS EN 933-1:2012

Project No.:	2441224	Client:	Jones Bros. Ruthin (Civil Engineering) Co. Ltd
Project Name:	Afon Wysg NP18 2BZ	Address:	Ty Glyn, Canol-Y-Dre, Ruthin LL15 1QW
Sample No.:	21755		

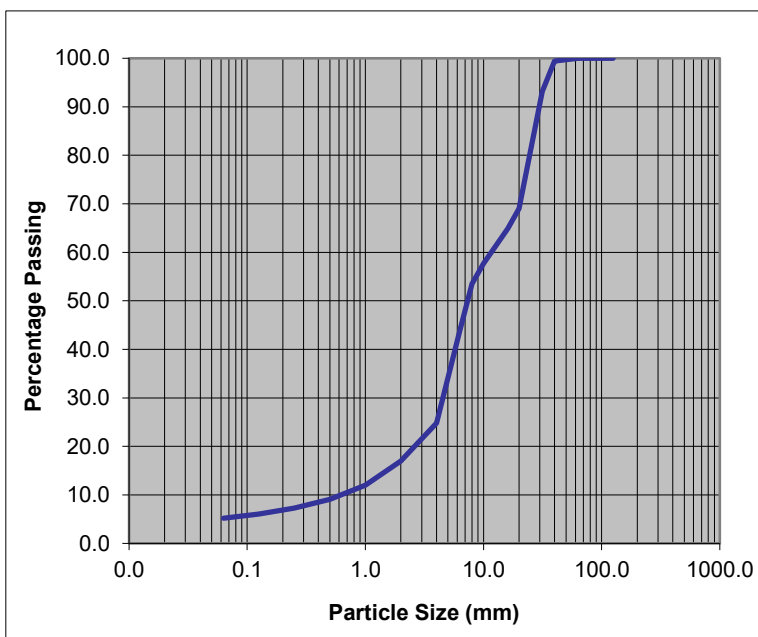
Site Reference:	Type 3 - 08.08.25	Sample Type:	Bulk
Location in works:	Afon Wysg Battery Plant Site Layer 4	Material Description:	Red brown silty sandy GRAVEL
Date Sampled:	08 August 2025	Material Source:	Site Won
Sampled By:	P Hanson	Material Supplier:	Site Won
Sampling Certificate Received:	Yes	Specification:	SHW Series 800
Date Received:	08 August 2025	Date Tested:	19 August 2025

TEST RESULTS

Particle Size (mm)	Percentage Passing	Specification
125.0	100	
80.0	100	100
63.0	100	
40.0	99	80 - 99
31.5	93	
20.0	69	50 - 78
16.0	65	
10.0	58	31 - 60
8.0	54	
6.3	44	
4.0	25	18 - 46
2.0	17	10 - 35
1.0	12	6 - 26
0.5	9	0 - 20
0.250	7	
0.125	6	
0.063	5.2	0 - 5

Water Content (%)	2.6	* Non UKAS Accredited Test
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Dry mass of sample, kg	37.0
Method of Analysis	Washing & Sieving



Remarks: Material does not comply with Type 3 grading requirements.

N.B. Testing is carried out in accordance with documented British Standard so measurement of uncertainty has not been applied to the statement of conformity

QA Ref.		Approver	Date	Fig.
EN 933-1 Rev. 3.0	Unit 3, Block 6 Newlands Ave, Brackla Industrial Estate, Bridgend, CF31 2DA. Tel: 01656 657710		20/08/2025	
		R Anstee, Materials and Field Testing Director		



Laboratory Report



Contract Number: 80457

Client Ref: **2441224**

Client PO: **2441224 – L17545 – S11236**

Date Received: **20-08-2025**

Date Completed: **12-09-2025**

Report Date: **12-09-2025**

Client: **CJ Associates**

This report has been checked and approved by:

Contract Title: **Afon Wysg**

For the attention of: **Lisa Maiden**

Richard John
Quality/Technical Manager

Description	Qty
Dry Den/MC (Vibrating Hammer Method) BS 1377:1990 - Part 4 : 3.7 - * UKAS	1

Notes: Observations and Interpretations are outside the UKAS Accreditation

* - denotes test included in laboratory scope of accreditation

- denotes test carried out by approved contractor

@ - denotes non accredited tests

This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This test report/certificate shall not be reproduced except in full, without the approval of GEO Site & Testing Services Ltd. Any opinions or interpretations stated - within this report/certificate are excluded from the laboratories UKAS accreditation.

Approved Signatories:

Brendan Evans (Senior Office Administrator) - Brendan Evans (Business Support Co-ordinator) - Darren Bourne (Quality Senior Technician)

Luke Williams (Laboratory Technician) - Paul Evans (Director) - Richard John (Quality/Technical Manager)

Shaun Jones (Laboratory manager) - Shaun Thomas (Site Manager) - Wayne Honey (HR & HSE Manager)

Dry Density / Moisture Content Relationship BS 1377:Part 4:1990

Contract Number

80457

BH / TP No

Type 3 - 08.08.25

Project Name

Afon Wysg

Sample No

Sample Description

Brown sandy silty fine to coarse GRAVEL

Depth Top

Compaction Method

Vibrating Rammer

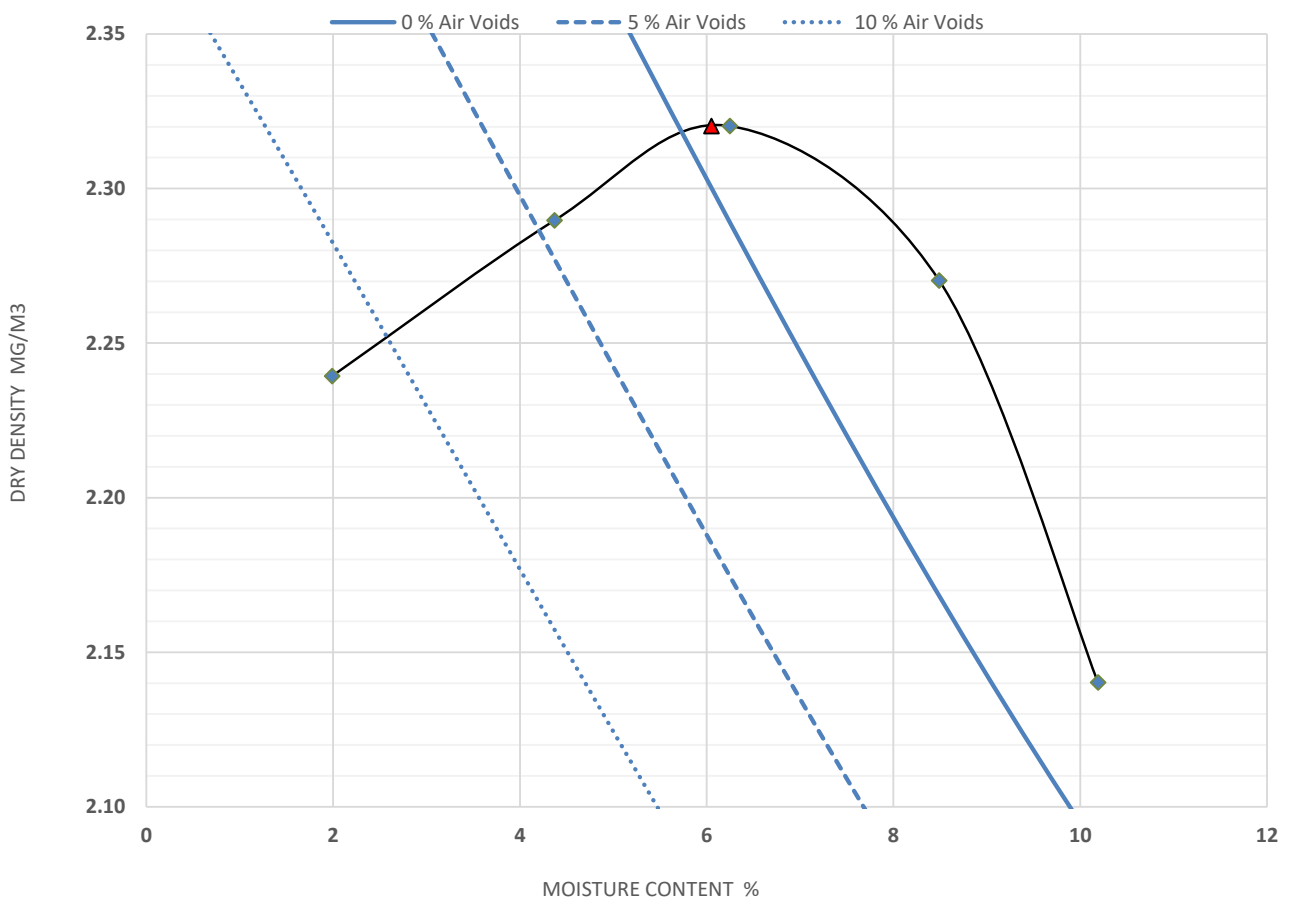
Depth Bottom

Date Tested

10/09/2025

Sample Type

B



Compaction Point	1	2	3	4	5							
Moisture Content	2.0	4.4	6.3	8.5	10							
Bulk Density	2.28	2.39	2.47	2.46	2.36							
Dry Density	2.24	2.29	2.32	2.27	2.14							

Initial Moisture Content	2.0	%	Single or Separate Sample Used	Separate
Maximum Dry Density	2.32	Mg/m ³	Assumed	
Optimum Moisture Content	6.1	%		
Particle Density	2.65	Mg/m ³		
Material Retained 37.5mm	6	%		
Material Retained 20mm	30	%		

Operator

Conal. A

Laboratory Test Certificate

CJAssociates

Site Afon Wysg
Client Jones Bros Ruthin (Civil Engineering) Co Ltd

F.A.O. Sion Williams
Address Ty Glyn
Canol y Dre
Ruthin
Denbighshire
LL15 1QW

Order Number TBC
Job Number 2441224
Lab Number L17547

Number of samples submitted for testing: 1 sample (s)

Particle Size Distribution 1 test(s)
Dry Density / MC Relationship - Vibrating Hammer Method 1 test(s)

Results apply to the sample(s) as received.
* Non UKAS accredited test

Date (s) sample (s) received at laboratory: 13 Aug-24
Date of receipt of testing instructions 13 Aug-24
Date testing started: 15 Aug-24
Date of issue: 12 Sep-24

Please note that we will keep the sample (s) for one month after submission of our report and will then dispose of them without notice unless you ask us to store them. We will then make a separate charge for this.



1429

Approved by :
Lisa Maiden

R Maiden

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TEST REPORT

WATER CONTENT AND PARTICLE SIZE DISTRIBUTION

BS EN 1097-5:2008 & BS EN 933-1:2012

Project No.: 2441224	Client: Jones Bros. Ruthin (Civil Engineering) Co. Ltd
Project Name: Afon Wysg NP18 2BZ	Address: Ty Glyn, Canol-Y-Dre, Ruthin LL15 1QW
Sample No.: 21756	

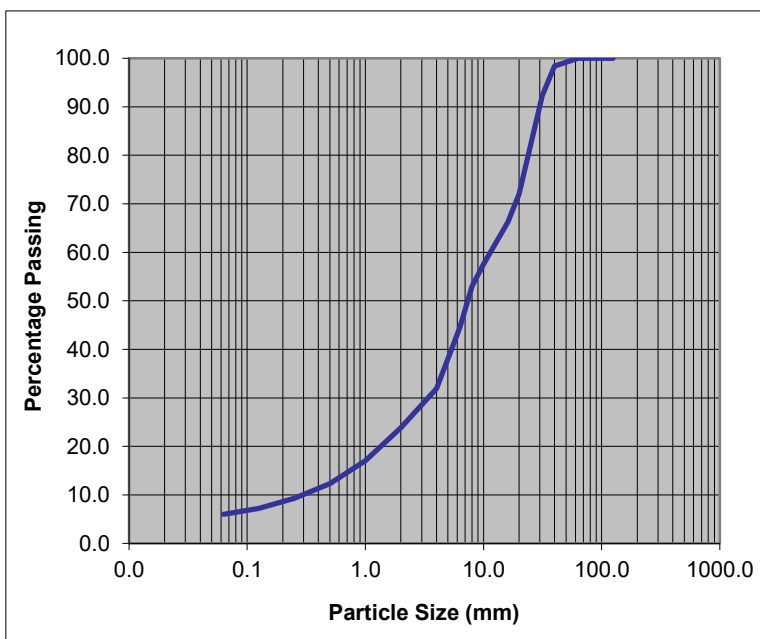
Site Reference: Type 3 - 13.08.25	Sample Type: Bulk
Location in works: Afon Wysg Battery Plant Site Stockpile	Material Description: Grey brown silty sandy GRAVEL
Date Sampled: 13 August 2025	Material Source: Site Won
Sampled By: P Hanson	Material Supplier: Site Won
Sampling Certificate Received: Yes	Specification: SHW Series 800
Date Received: 13 August 2025	Date Tested: 19 August 2025

TEST RESULTS

Particle Size (mm)	Percentage Passing	Specification
125.0	100	
80.0	100	100
63.0	100	
40.0	98	80 - 99
31.5	92	
20.0	72	50 - 78
16.0	66	
10.0	58	31 - 60
8.0	53	
6.3	44	
4.0	32	18 - 46
2.0	24	10 - 35
1.0	17	6 - 26
0.5	12	0 - 20
0.250	9	
0.125	7	
0.063	6.0	0 - 5

Water Content (%)	2.3	* Non UKAS Accredited Test
-------------------	-----	----------------------------

Dry mass of sample, kg	34.5
Method of Analysis	Washing & Sieving



Remarks: Material does not comply with Type 3 grading requirements.

N.B. Testing is carried out in accordance with documented British Standard so measurement of uncertainty has not been applied to the statement of conformity

QA Ref.		Approver	Date	Fig.
EN 933-1 Rev. 3.0	Unit 3, Block 6 Newlands Ave, Brackla Industrial Estate, Bridgend, CF31 2DA. Tel: 01656 657710	 R Anstee, Materials and Field Testing Director	20/08/2025	



Laboratory Report



Contract Number: 80458

Client Ref: **2441224**

Client PO: **2441224 – L17547 – S11237**

Date Received: **20-08-2025**

Date Completed: **12-09-2025**

Report Date: **12-09-2025**

Client: **CJ Associates**

This report has been checked and approved by:

Contract Title: **Afon Wysg**

For the attention of: **Lisa Maiden**

Richard John
Quality/Technical Manager

Description	Qty
Dry Den/MC (Vibrating Hammer Method) BS 1377-2:2022 Clause 11.7 - * UKAS	1

Notes: Observations and Interpretations are outside the UKAS Accreditation

* - denotes test included in laboratory scope of accreditation

- denotes test carried out by approved contractor

@ - denotes non accredited tests

This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This test report/certificate shall not be reproduced except in full, without the approval of GEO Site & Testing Services Ltd. Any opinions or interpretations stated - within this report/certificate are excluded from the laboratories UKAS accreditation.

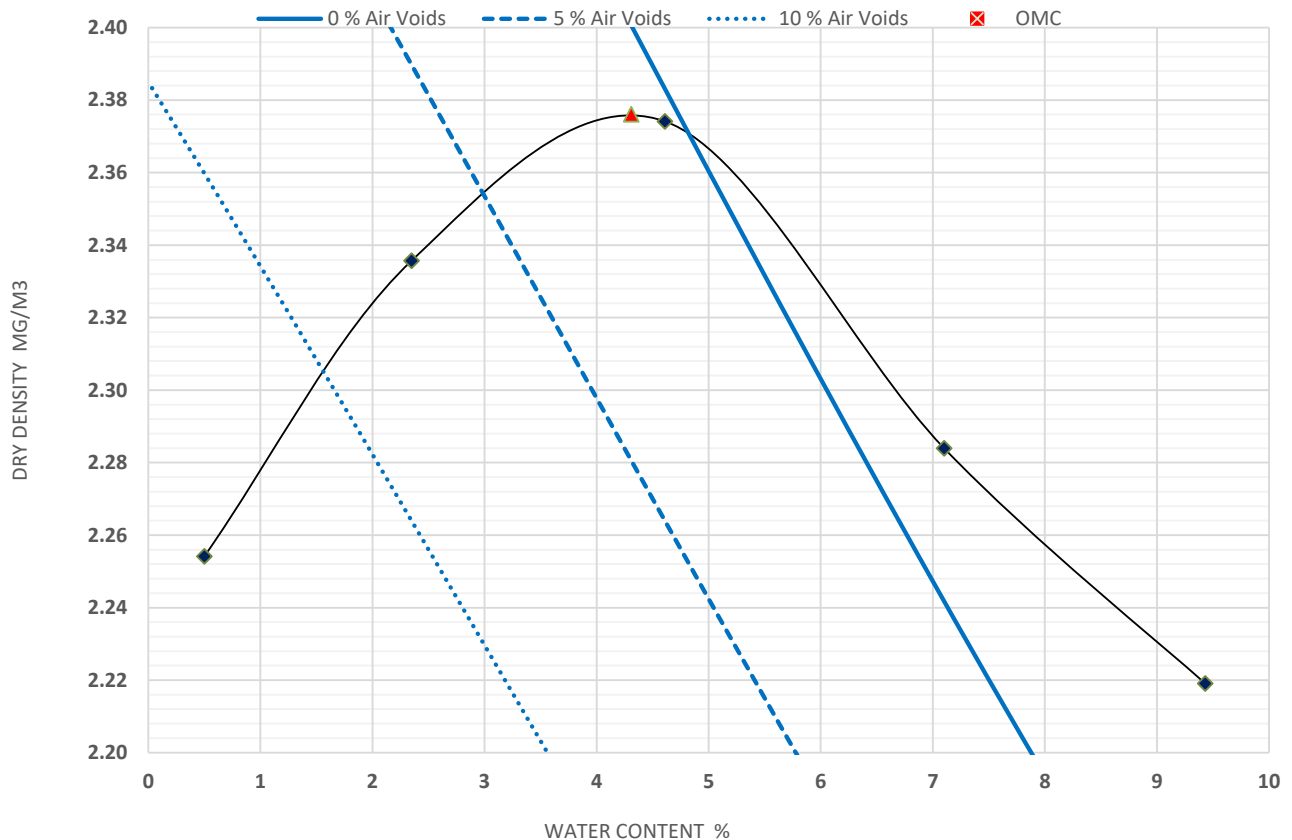
Approved Signatories:

Brendan Evans (Senior Office Administrator) - Brendan Evans (Business Support Co-ordinator) - Darren Bourne (Quality Senior Technician)

Luke Williams (Laboratory Technician) - Paul Evans (Director) - Richard John (Quality/Technical Manager)

Shaun Jones (Laboratory manager) - Shaun Thomas (Site Manager) - Wayne Honey (HR & HSE Manager)

	Determination of The Dry Density / Water Content Relationship BS 1377-2:2022 Clause 11.7	Contract Number	80458
		BH / TP No	Type 3 - 13.08.25
Project Name	Afon Wysg	Sample No	
Sample Description	Brown sandy silty fine to coarse GRAVEL	Depth Top	
Compaction Method	Vibrating Rammer	Depth Bottom	
Date Tested	10/09/2025	Sample Type	B
Grading Zone	3	Susceptible to Crushing	Yes



Compaction Point	1	2	3	4	5							
Water Content	0.5	2.3	4.6	7.1	9.4							
Bulk Density	2.27	2.39	2.48	2.45	2.43							
Dry Density	2.25	2.34	2.37	2.28	2.22							

Initial Water Content	2.3	%	Single or Separate Sample Used	Separate
Maximum Dry Density	2.38	Mg/m3		
Optimum Water Content	4.3	%		
Particle Density	2.65	Mg/m3	Assumed	
Material Retained 37.5mm	0	%		
Material Retained 20mm	18	%		

Operator
Conal. A

Laboratory Test Certificate

CJAssociates

Site Afon Wysg
Client Jones Bros Ruthin (Civil Engineering) Co Ltd

F.A.O. Sion Williams
Address Ty Glyn
Canol y Dre
Ruthin
Denbighshire
LL15 1QW

Order Number TBC
Job Number 2441224
Lab Number L17549

Number of samples submitted for testing: 1 sample (s)

Particle Size Distribution 1 test(s)
Dry Density / MC Relationship - Vibrating Hammer Method 1 test(s)

Results apply to the sample(s) as received.
* Non UKAS accredited test

Date (s) sample (s) received at laboratory: 15 Aug-24
Date of receipt of testing instructions 15 Aug-24
Date testing started: 15 Aug-24
Date of issue: 12 Sep-24

Please note that we will keep the sample (s) for one month after submission of our report and will then dispose of them without notice unless you ask us to store them. We will then make a separate charge for this.



1429

Approved by :
Lisa Maiden

L Maiden

This report shall not be reproduced except in full without approval of CJ Associates

TEST REPORT

WATER CONTENT AND PARTICLE SIZE DISTRIBUTION

BS EN 1097-5:2008 & BS EN 933-1:2012

Project No.:	2441224	Client:	Jones Bros. Ruthin (Civil Engineering) Co. Ltd
Project Name:	Afon Wysg NP18 2BZ	Address:	Ty Glyn, Canol-Y-Dre, Ruthin LL15 1QW
Sample No.:	21757		

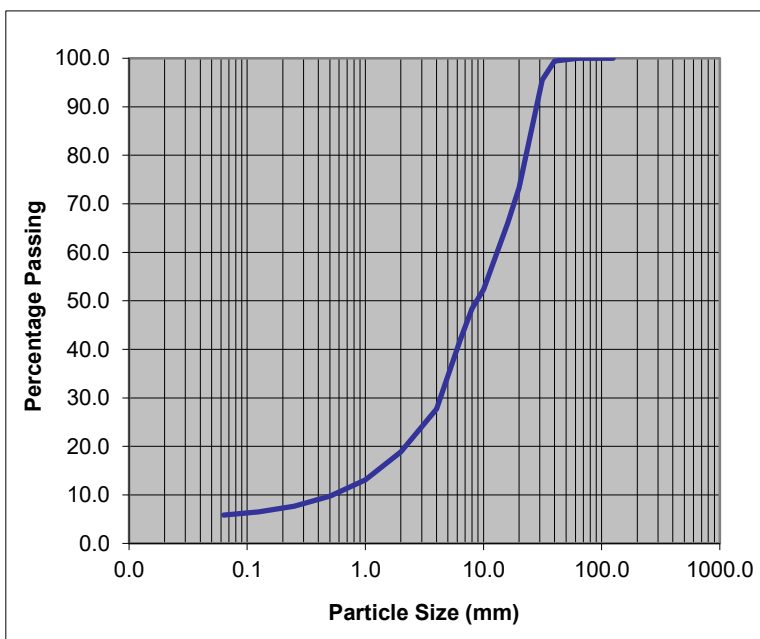
Site Reference:	Type 3 - 15.08.25	Sample Type:	Bulk
Location in works:	Afon Wysg Battery Plant Site Stockpile	Material Description:	Grey brown silty sandy GRAVEL
Date Sampled:	15 August 2025	Material Source:	Site Won
Sampled By:	P Hanson	Material Supplier:	Site Won
Sampling Certificate Received:	Yes	Specification:	SHW Series 800
Date Received:	15 August 2025	Date Tested:	19 August 2025

TEST RESULTS

Particle Size (mm)	Percentage Passing	Specification
125.0	100	
80.0	100	100
63.0	100	
40.0	99	80 - 99
31.5	96	
20.0	73	50 - 78
16.0	66	
10.0	52	31 - 60
8.0	48	
6.3	42	
4.0	28	18 - 46
2.0	19	10 - 35
1.0	13	6 - 26
0.5	10	0 - 20
0.250	8	
0.125	7	
0.063	5.8	0 - 5

Water Content (%)	1.7	* Non UKAS Accredited Test
-------------------	-----	----------------------------

Dry mass of sample, kg	37.3
Method of Analysis	Washing & Sieving



Remarks: Material does not comply with Type 3 grading requirements.

N.B. Testing is carried out in accordance with documented British Standard so measurement of uncertainty has not been applied to the statement of conformity

QA Ref.		Approver	Date	Fig.
EN 933-1 Rev. 3.0	Unit 3, Block 6 Newlands Ave, Brackla Industrial Estate, Bridgend, CF31 2DA. Tel: 01656 657710		20/08/2025	
		R Anstee, Materials and Field Testing Director		



Laboratory Report



Contract Number: 80459

Client Ref: **2441224**

Client PO: **2441224 – L17549 – S11238**

Date Received: **20-08-2025**

Date Completed: **12-09-2025**

Report Date: **12-09-2025**

Client: **CJ Associates**

This report has been checked and approved by:

Contract Title: **Afon Wysg**

For the attention of: **Lisa Maiden**

Richard John
Quality/Technical Manager

Description	Qty
Dry Den/MC (Vibrating Hammer Method) BS 1377-2:2022 Clause 11.7 - * UKAS	1

Notes: Observations and Interpretations are outside the UKAS Accreditation

* - denotes test included in laboratory scope of accreditation

- denotes test carried out by approved contractor

@ - denotes non accredited tests

This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This test report/certificate shall not be reproduced except in full, without the approval of GEO Site & Testing Services Ltd. Any opinions or interpretations stated - within this report/certificate are excluded from the laboratories UKAS accreditation.

Approved Signatories:

Brendan Evans (Senior Office Administrator) - Brendan Evans (Business Support Co-ordinator) - Darren Bourne (Quality Senior Technician)

Luke Williams (Laboratory Technician) - Paul Evans (Director) - Richard John (Quality/Technical Manager)

Shaun Jones (Laboratory manager) - Shaun Thomas (Site Manager) - Wayne Honey (HR & HSE Manager)

Determination of The Dry Density / Water Content Relationship
BS 1377-2:2022 Clause 11.7

Contract Number

80459

BH / TP No

Type 3 - 15.08.25

Project Name

Afon Wysg

Sample No

Sample Description

Brown sandy silty fine to coarse GRAVEL

Depth Top

Compaction Method

Vibrating Rammer

Depth Bottom

Date Tested

10/09/2025

Sample Type

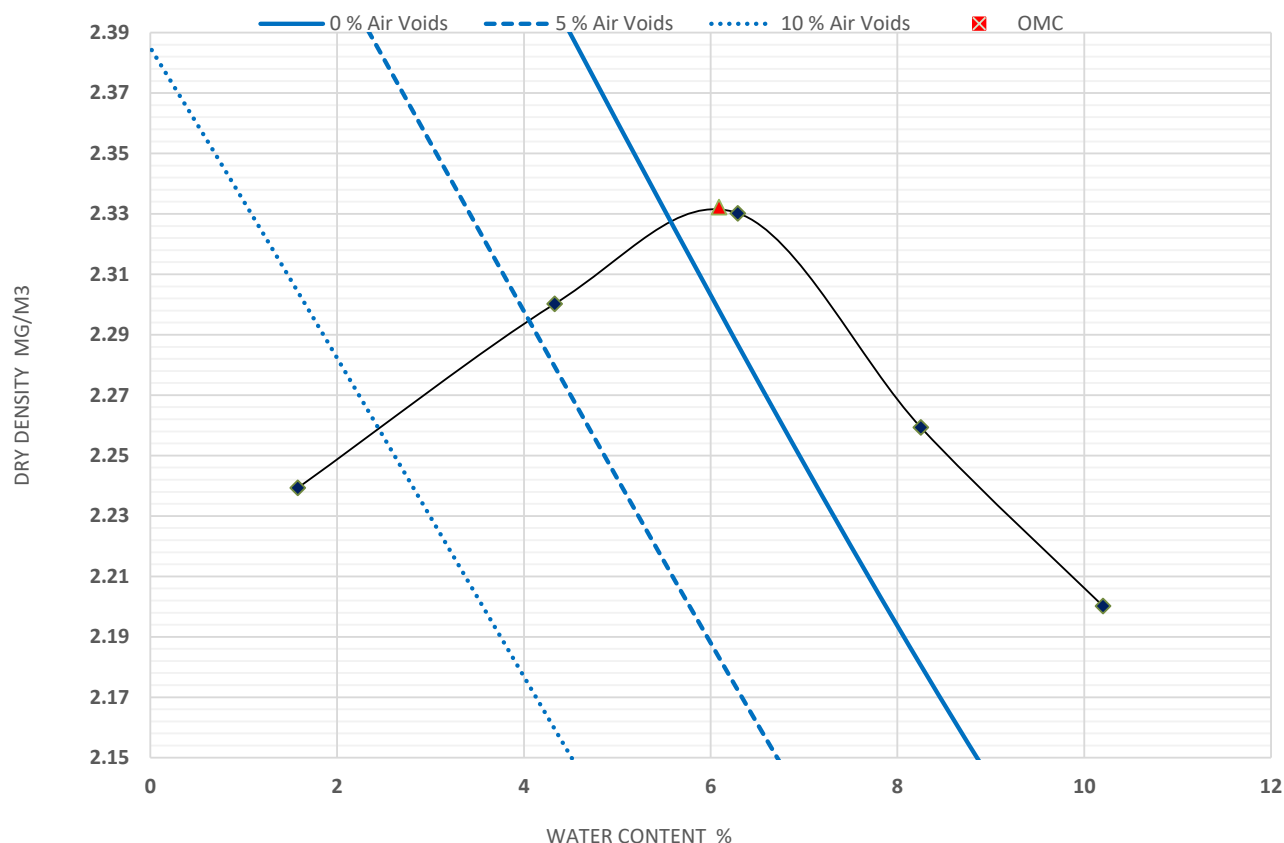
B

Grading Zone

X Non-Standard Test

Susceptible to Crushing

Yes



Compaction Point	1	2	3	4	5							
Water Content	1.6	4.3	6.3	8.3	10.2							
Bulk Density	2.27	2.40	2.48	2.45	2.42							
Dry Density	2.24	2.30	2.33	2.26	2.20							

Initial Water Content	1.6	%	Single or Separate Sample Used	Separate
Maximum Dry Density	2.33	Mg/m3		
Optimum Water Content	6.1	%		
Particle Density	2.65	Mg/m3	Assumed	
Material Retained 37.5mm	5	%		
Material Retained 20mm	33	%		

Operator

Conal. A