



PARTICLE SIZE DISTRIBUTION
BS EN ISO 17892-4:2016
Wet Sieve, Clause 5.2

Contract Number

79439

Borehole/Pit No.

CP01

Project Name

ELRS Port Talbot

Sample No.

Sample Description

Grey slightly silty clayey fine to coarse sandy fine to coarse GRAVEL

Depth Top

0.60

Depth Base

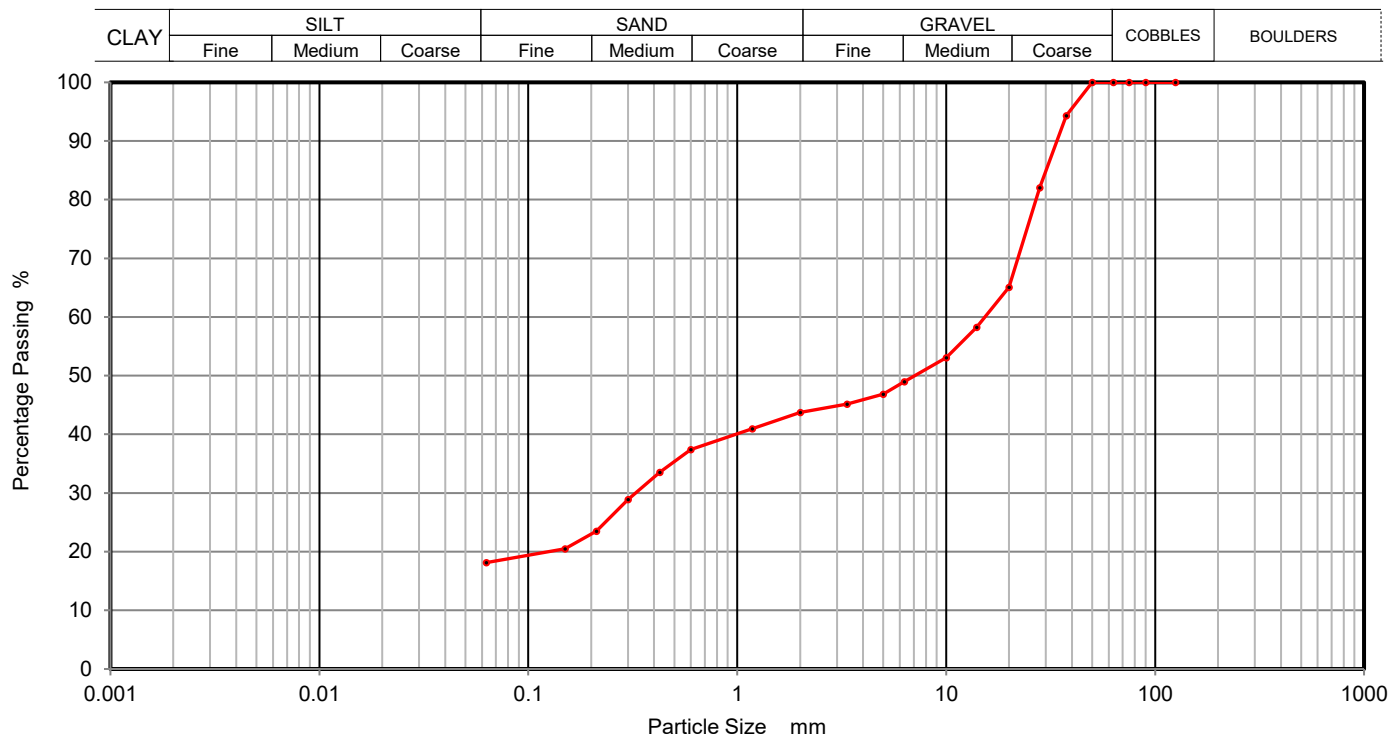
1.20

Date Tested

02/07/2025

Sample Type

B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	94		
28	82		
20	65		
14	58		
10	53		
6.3	49		
5	47		
3.35	45		
2	44		
1.18	41		
0.63	37		
0.425	34		
0.30	29		
0.20	24		
0.15	21		
0.063	18		

Sample Proportions	% dry mass
Cobbles	0
Gravel	56
Sand	26
Silt and Clay	18

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator

Jordan. W

PARTICLE SIZE DISTRIBUTION
BS EN ISO 17892-4:2016
Wet Sieve, Clause 5.2

Contract Number

79439

Borehole/Pit No.

CP01

Project Name

ELRS Port Talbot

Sample No.

Sample Description

Brown slightly silty/ clayey fine to coarse sandy fine to coarse GRAVEL

Depth Top

2.50

Depth Base

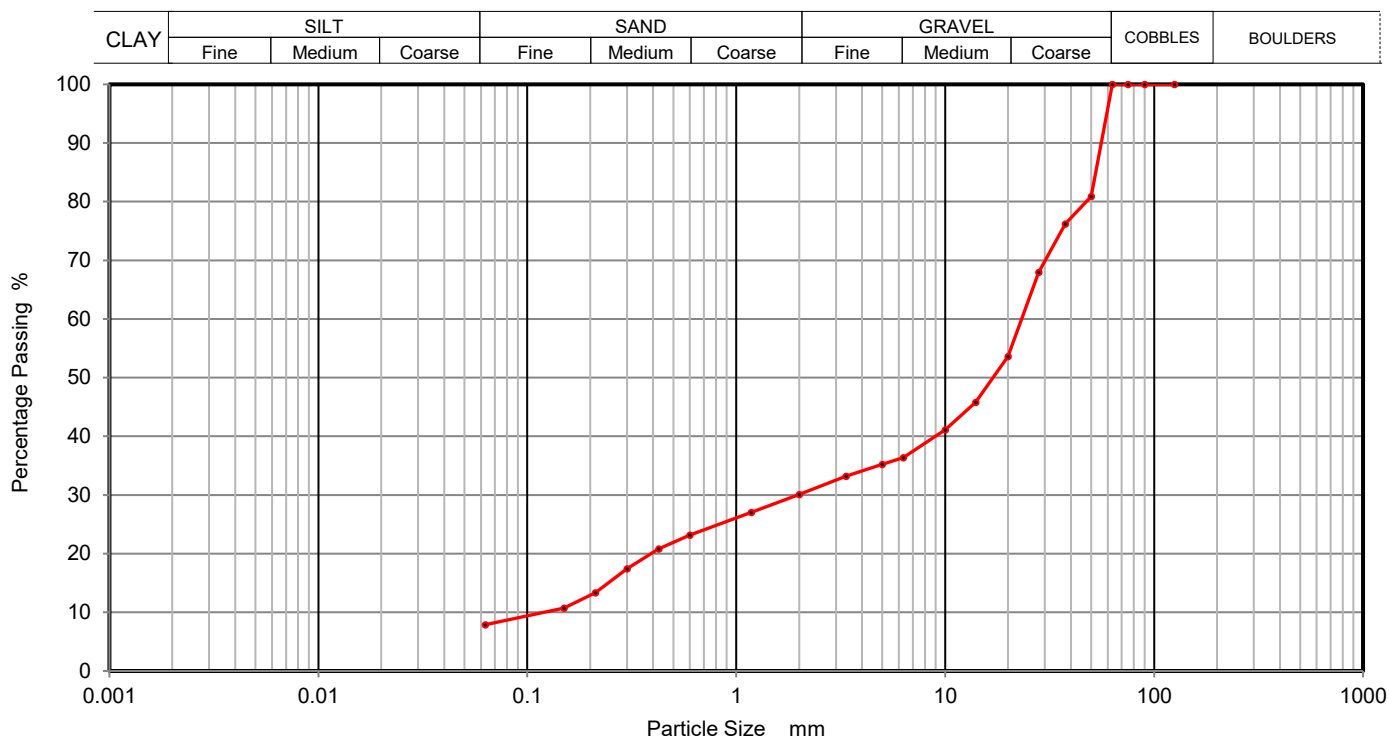
3.10

Date Tested

02/07/2025

Sample Type

B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	81		
37.5	76		
28	68		
20	54		
14	46		
10	41		
6.3	36		
5	35		
3.35	33		
2	30		
1.18	27		
0.63	23		
0.425	21		
0.30	17		
0.20	13		
0.15	11		
0.063	8		

Sample Proportions	% dry mass
Cobbles	0
Gravel	70
Sand	22
Silt and Clay	8

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator

Jordan. W

PARTICLE SIZE DISTRIBUTION
BS EN ISO 17892-4:2016
Wet Sieve, Clause 5.2

Contract Number

79439

Borehole/Pit No.

CP01

Project Name

ELRS Port Talbot

Sample No.

Sample Description

Brown silty/ clayey fine to coarse sandy fin to coarse GRAVEL

Depth Top

4.00

Depth Base

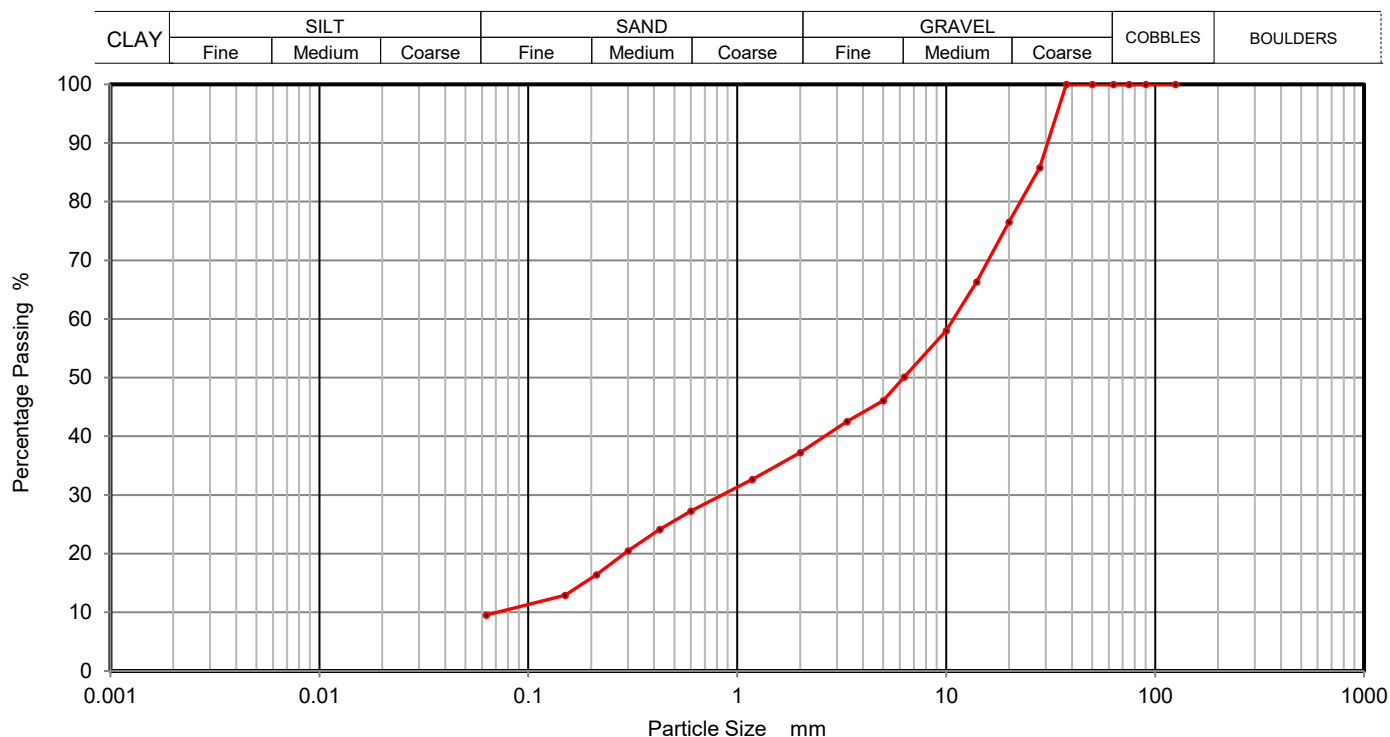
4.38

Date Tested

02/07/2025

Sample Type

SPTLS



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	86		
20	77		
14	66		
10	58		
6.3	50		
5	46		
3.35	43		
2	37		
1.18	33		
0.63	27		
0.425	24		
0.30	21		
0.20	16		
0.15	13		
0.063	10		

Sample Proportions	% dry mass
Cobbles	0
Gravel	63
Sand	27
Silt and Clay	10

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator

Jordan. W

PARTICLE SIZE DISTRIBUTION
BS EN ISO 17892-4:2016
Wet Sieve, Clause 5.2

Contract Number

79439

Borehole/Pit No.

CP01

Project Name

ELRS Port Talbot

Sample No.

Sample Description

Brown silty/ clayey fine to coarse sandy fin to coarse GRAVEL

Depth Top

5.10

Depth Base

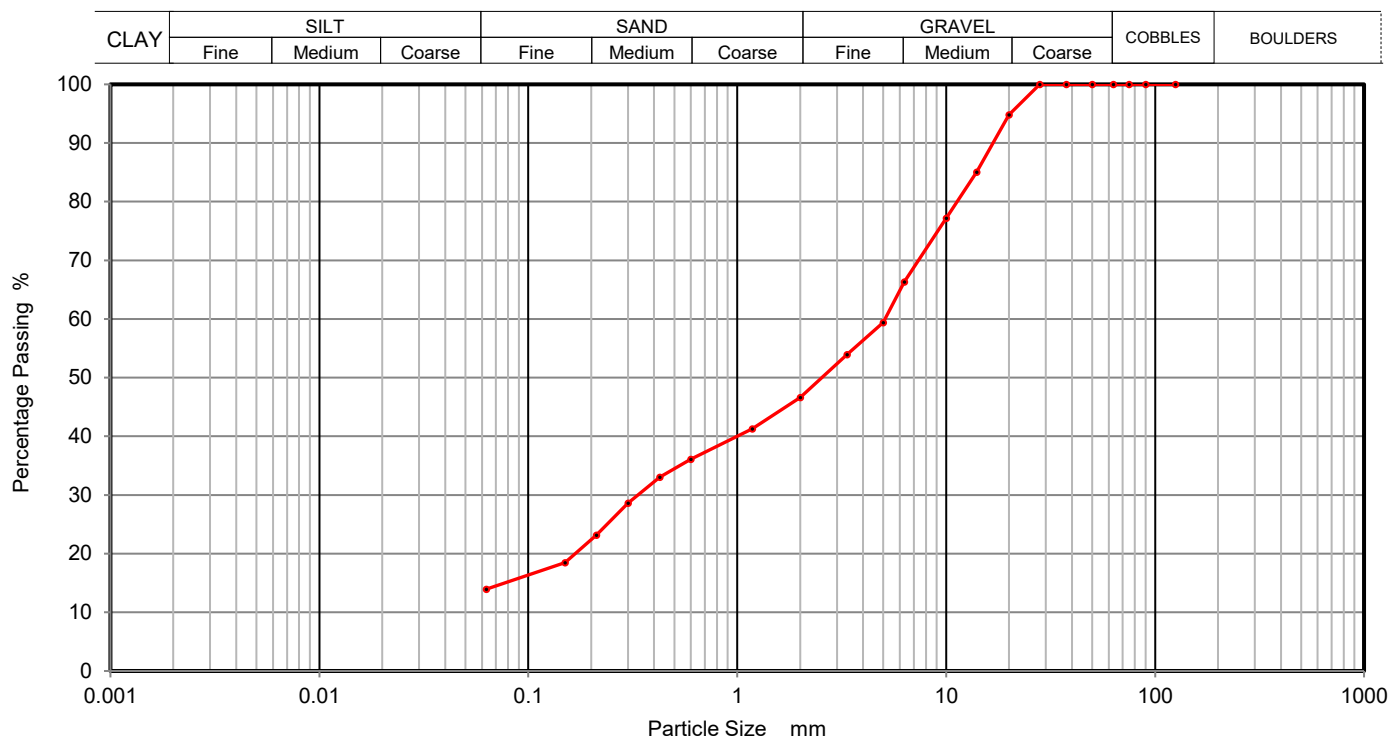
5.37

Date Tested

02/07/2025

Sample Type

SPTLS



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	95		
14	85		
10	77		
6.3	66		
5	59		
3.35	54		
2	47		
1.18	41		
0.63	36		
0.425	33		
0.30	29		
0.20	23		
0.15	18		
0.063	14		

Sample Proportions	% dry mass
Cobbles	0
Gravel	53
Sand	33
Silt and Clay	14

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator

Jordan. W

PARTICLE SIZE DISTRIBUTION
BS EN ISO 17892-4:2016
Wet Sieve, Clause 5.2

Contract Number **79439**

Borehole/Pit No. **SA01**

Project Name **ELRS Port Talbot**

Sample No.

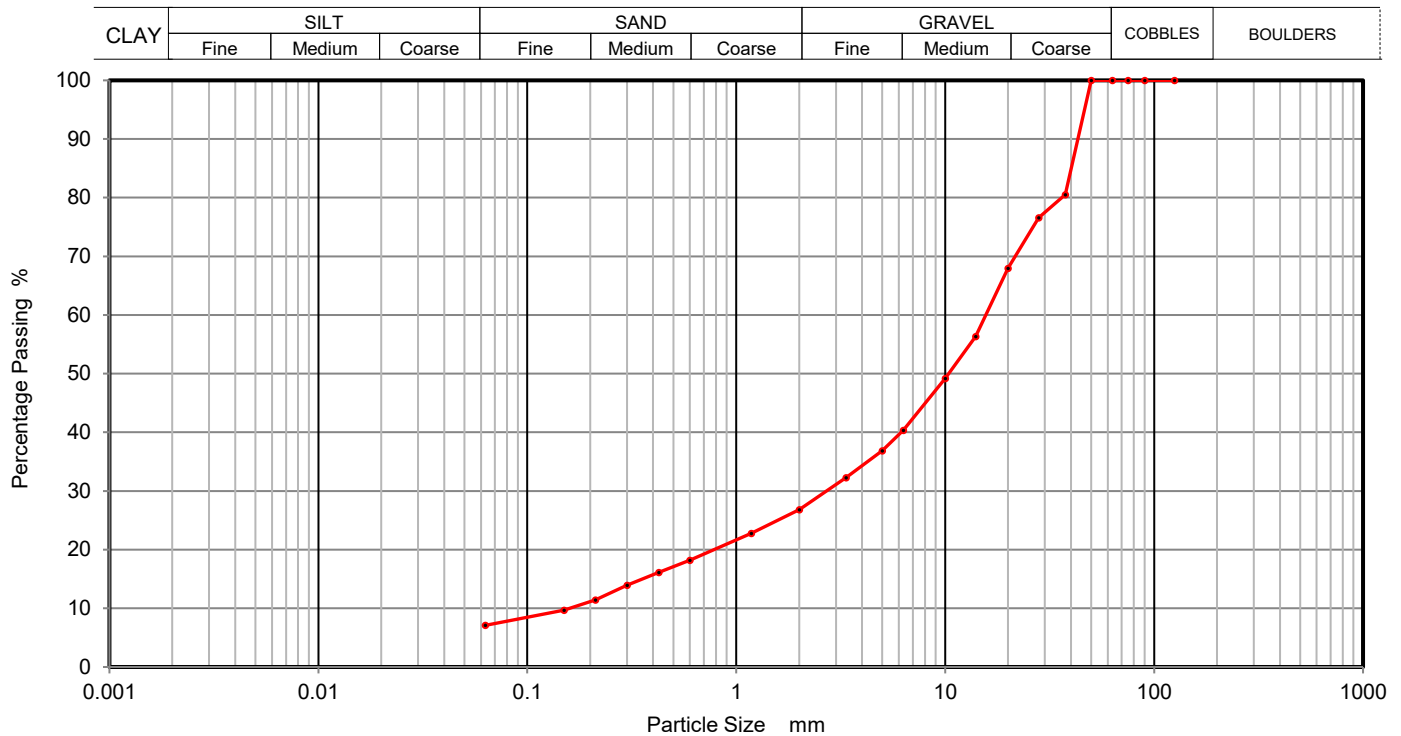
Sample Description **Black slightly silty/ clayey fine to coarse sandy fine to coarse GRAVEL (ashfill)**

Depth Top **0.10**

Depth Base **0.40**

Date Tested **02/07/2025**

Sample Type **B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	81		
28	77		
20	68		
14	56		
10	49		
6.3	40		
5	37		
3.35	32		
2	27		
1.18	23		
0.63	18		
0.425	16		
0.30	14		
0.20	11		
0.15	10		
0.063	7		

Sample Proportions	% dry mass
Cobbles	0
Gravel	73
Sand	20
Silt and Clay	7

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator

Jordan. W

PARTICLE SIZE DISTRIBUTION
BS EN ISO 17892-4:2016
Wet Sieve, Clause 5.2

Contract Number

79439

Borehole/Pit No.

SA01

Project Name

ELRS Port Talbot

Sample No.

Sample Description

Grey slightly silty/ clayey slightly sandy fine to coarse GRAVEL with cobbles

Depth Top

1.20

Depth Base

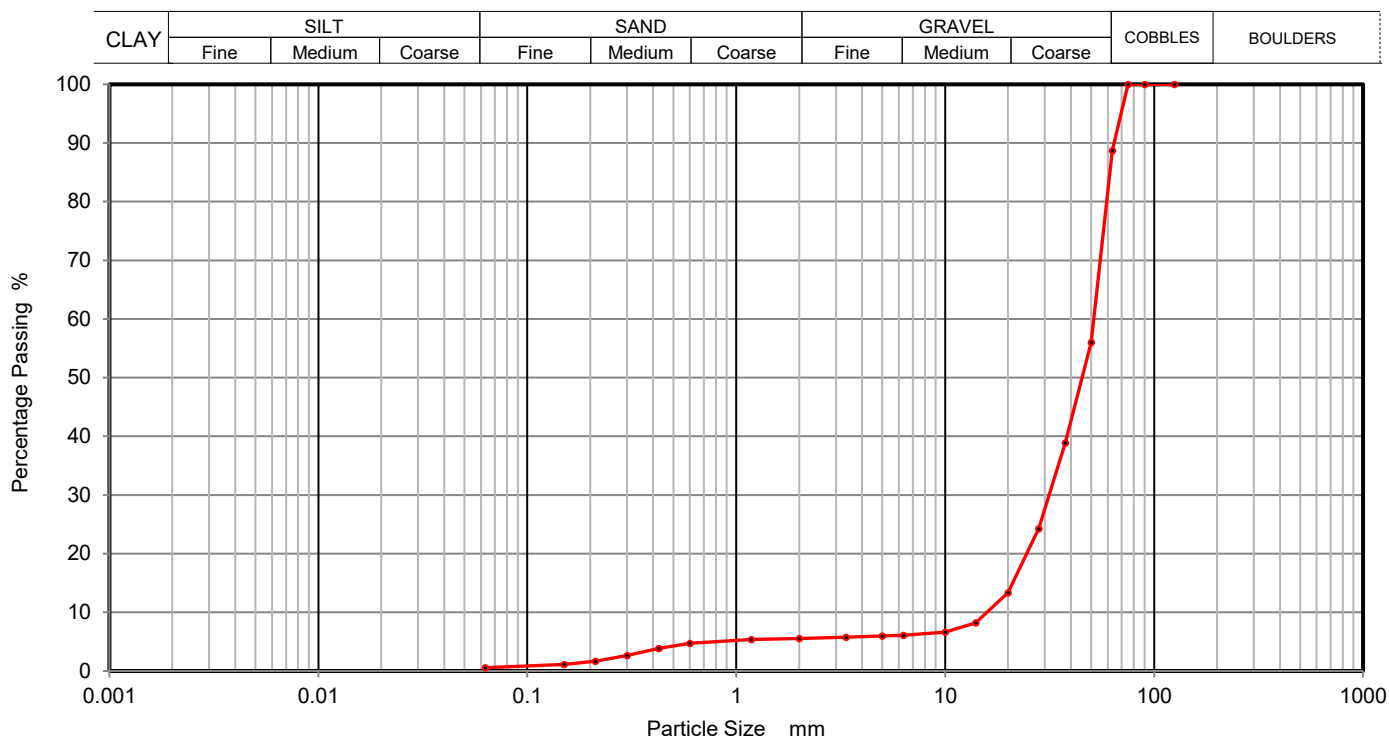
1.60

Date Tested

02/07/2025

Sample Type

B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	89		
50	56		
37.5	39		
28	24		
20	13		
14	8		
10	7		
6.3	6		
5	6		
3.35	6		
2	6		
1.18	5		
0.63	5		
0.425	4		
0.30	3		
0.20	2		
0.15	1		
0.063	1		

Sample Proportions	% dry mass
Cobbles	11
Gravel	83
Sand	5
Silt and Clay	1

Remarks

Preparation and testing in accordance with BS17892 unless noted below

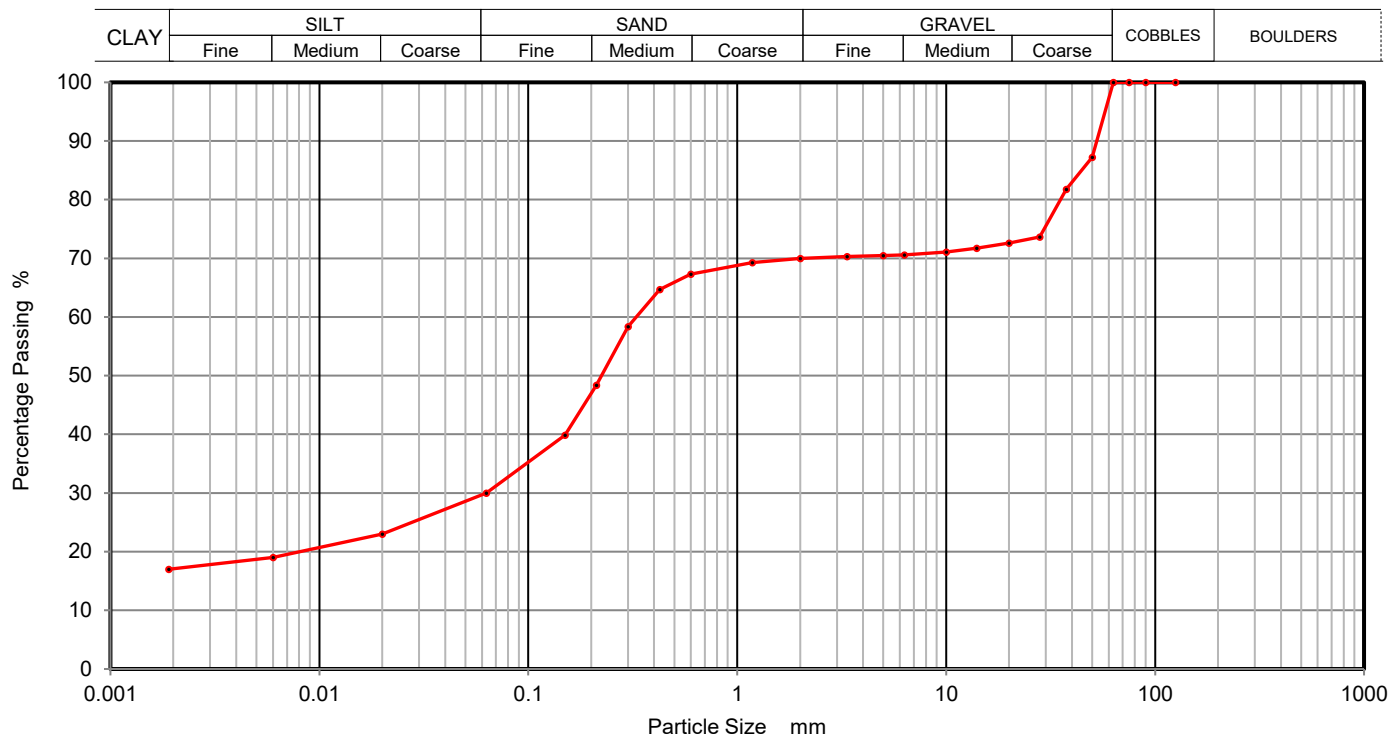
Operator

Jordan. W

PARTICLE SIZE DISTRIBUTION
BS EN ISO 17892-4:2016
Wet Sieve & Pipette Analysis, Clause 5.2 & 5.4

Contract Number	79439
Borehole/Pit No.	SA02
Sample No.	
Depth Top	0.70
Depth Base	0.90
Sample Type	B

Project Name	ELRS Port Talbot
Sample Description	Brown silty clayey fine to coarse gravelly fine to coarse SAND
Date Tested	02/07/2025



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100	0.0200	23
90	100	0.0060	19
75	100	0.0020	17
63	100		
50	87		
37.5	82		
28	74		
20	73		
14	72		
10	71		
6.3	71		
5	70		
3.35	70		
2	70		
1.18	69		
0.63	67		
0.425	65		
0.30	58		
0.20	48		
0.15	40		
0.063	30		

Sample Proportions	% dry mass
Cobbles	0
Gravel	30
Sand	40
Silt	13
Clay	17

Remarks
Preparation and testing in accordance with BS17892 unless noted below

Operator
Jordan. W

PARTICLE SIZE DISTRIBUTION
BS EN ISO 17892-4:2016
Wet Sieve, Clause 5.2

Contract Number

79439

Borehole/Pit No.

SA02

Project Name

ELRS Port Talbot

Sample No.

Sample Description

Grey slightly silty/ clayey fine to coarse sandy fine to coarse GRAVEL
with cobbles

Depth Top

1.10

Depth Base

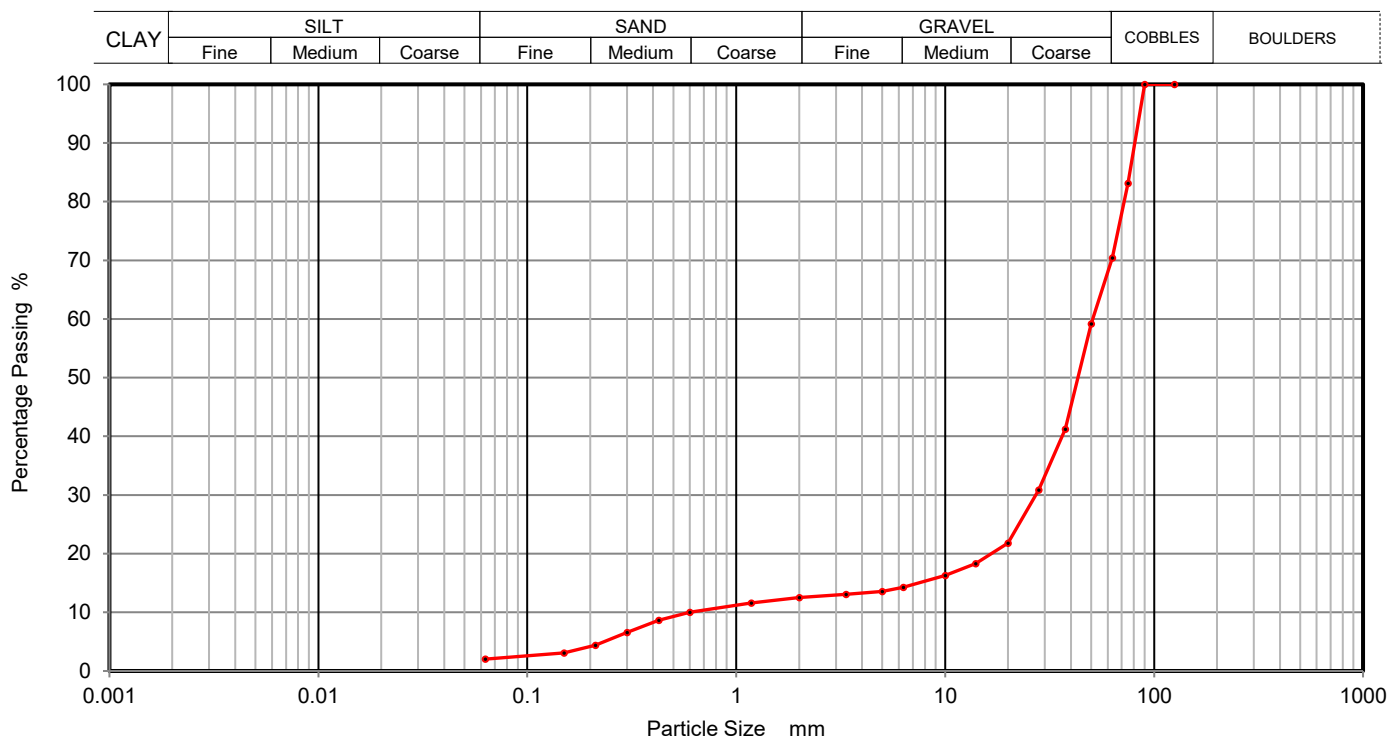
1.40

Date Tested

02/07/2025

Sample Type

B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	83		
63	70		
50	59		
37.5	41		
28	31		
20	22		
14	18		
10	16		
6.3	14		
5	14		
3.35	13		
2	13		
1.18	12		
0.63	10		
0.425	9		
0.30	7		
0.20	4		
0.15	3		
0.063	2		

Sample Proportions	% dry mass
Cobbles	30
Gravel	57
Sand	11
Silt and Clay	2

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator

Jordan. W

PARTICLE SIZE DISTRIBUTION
BS EN ISO 17892-4:2016
Wet Sieve, Clause 5.2

Contract Number

79439

Borehole/Pit No.

SA03

Project Name

ELRS Port Talbot

Sample No.

Sample Description

Grey slightly silty/ clayey fine to coarse sandy fine to coarse GRAVEL
with cobbles

Depth Top

1.20

Depth Base

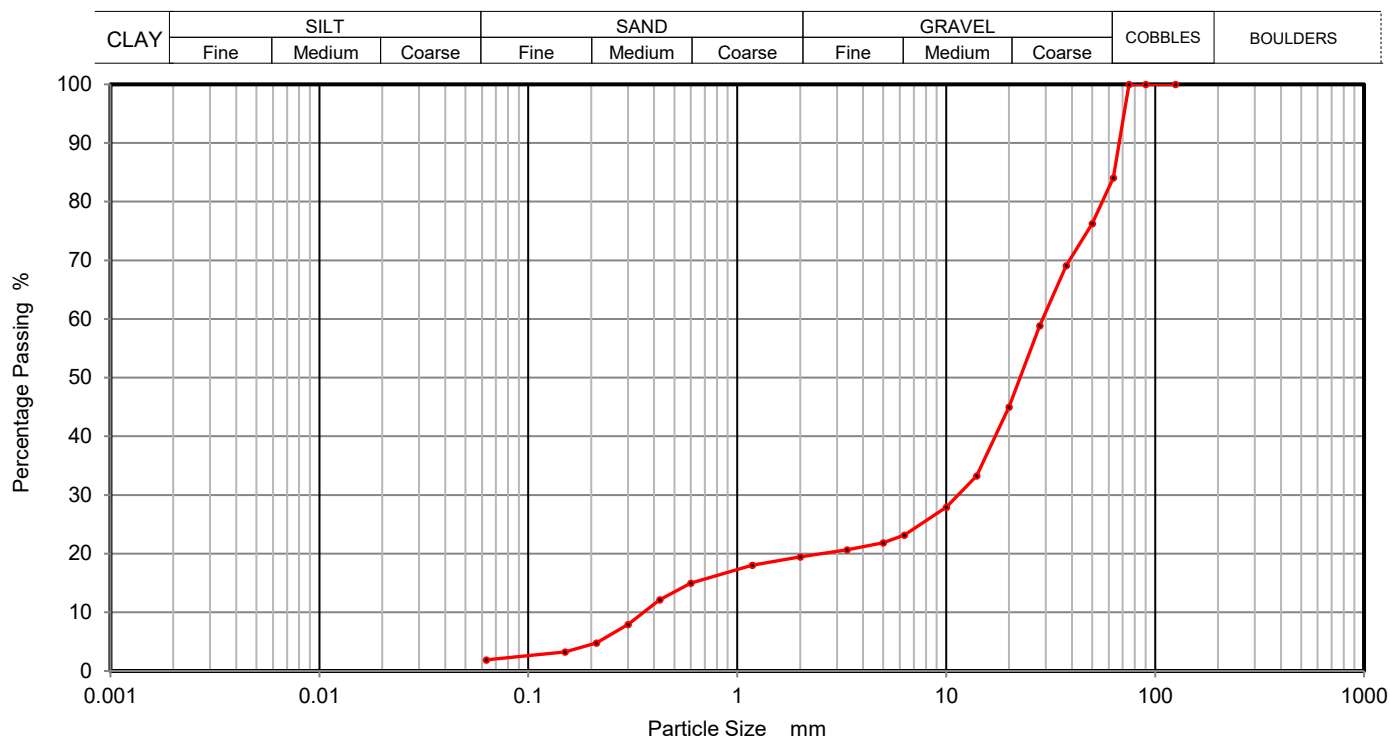
1.50

Date Tested

02/07/2025

Sample Type

B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	84		
50	76		
37.5	69		
28	59		
20	45		
14	33		
10	28		
6.3	23		
5	22		
3.35	21		
2	19		
1.18	18		
0.63	15		
0.425	12		
0.30	8		
0.20	5		
0.15	3		
0.063	2		

Sample Proportions	% dry mass
Cobbles	16
Gravel	65
Sand	17
Silt and Clay	2

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator

Jordan. W

PARTICLE SIZE DISTRIBUTION
BS EN ISO 17892-4:2016
Wet Sieve, Clause 5.2

Contract Number

79439

Borehole/Pit No.

WS02

Project Name

ELRS Port Talbot

Sample No.

Sample Description

Brown slightly silty clayey fine to coarse sandy fine to coarse GRAVEL

Depth Top

1.00

Depth Base

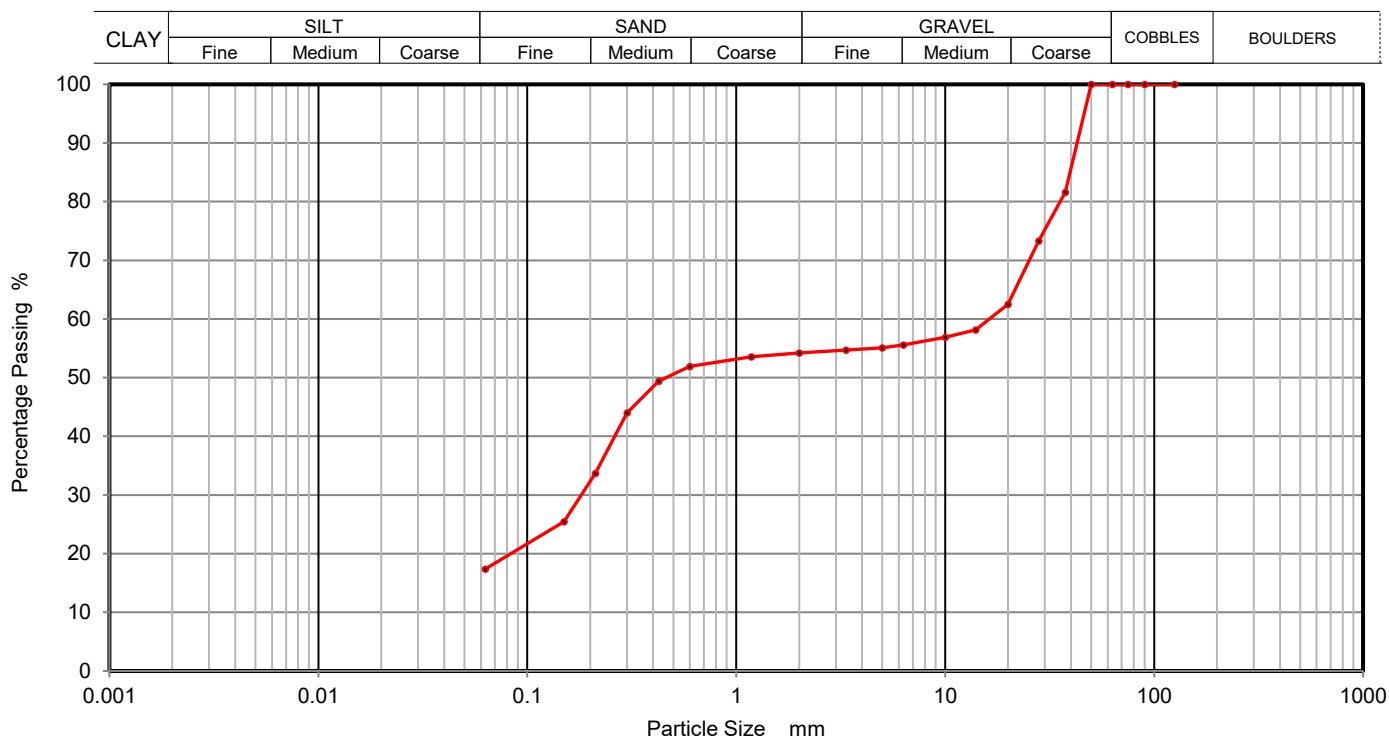
1.20

Date Tested

02/07/2025

Sample Type

B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	82		
28	73		
20	63		
14	58		
10	57		
6.3	56		
5	55		
3.35	55		
2	54		
1.18	54		
0.63	52		
0.425	49		
0.30	44		
0.20	34		
0.15	25		
0.063	17		

Sample Proportions	% dry mass
Cobbles	0
Gravel	46
Sand	37
Silt and Clay	17

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator

Jordan. W



7 - 11 Harding Street
Leicester
LE1 4DH

GSTL
Unit 3-4 Heol Aur
Dafen Ind Estate
Dafen
SA14 8QN

Analytical Test Report: L25/06574/GSL - 25-71682

Your Project Reference:	Els Port Talbot 784-8071864		
Your Order Number:	79439	Samples Received / Instructed:	30/06/2025 / 30/06/2025
Report Issue Number:	1	Sample Tested:	30/06 to 10/07/2025
Samples Analysed:	5 sample(s)	Report issued:	10/07/2025

Signed

James Gane
Analytical Services Manager
CTS

Notes:

General

Please refer to Methodologies page for details pertaining to the analytical methods undertaken.

Samples will be retained for 14 days after issue of this report unless otherwise requested.

Moisture Content was determined in accordance with CTS method statement MS - CL - Sample Prep, oven dried at <30°C.

Moisture Content is reported as a percentage of the dry mass of soil, this calculation is in accordance with BS1377, Part 2, 1990, Clause 3.2

Where specification limits are included these are for guidance only. Where a measured value has been highlighted this is not implying acceptance or failure and certainty of measurement values have not been taken into account.

Uncertainty of measurement values are available on request.

Samples were supplied by customer, results apply to the samples as received.

Deviating Samples

On receipt samples are compared against our sample holding and handling protocols, where any deviations have been noted these are reported on our deviating sample page (if present)

Accreditation Key

This report shall not be reproduce except in full

UKAS = UKAS Accreditation, MCERTS = MCERTS Accreditation, u = Unaccredited, subUKAS - Subcontracted to a laboratory UKAS accredited for this test, subMCERTS - Subcontracted to a laboratory MCERTS accredited for this test

MCERTS Accreditation only covers the SAND, CLAY and LOAM matrices

UKAS accreditation on waters only covers the Ground water and Surface water matrices

Date of Issue: 21.05.25

Issued by: J. Gane

Issue No: 4

Rev No: 27

L25/06574/GSL - 25-71682

Project Reference - Elrs Port Talbot 784-
B071864

Analytical Test Results - Chemical Analysis

Lab Reference			538181	538182	538183	538184	538185
Client Sample ID			-	-	-	-	-
Client Sample Location			SA02	SA03	CP01	CP01	WS02
Client Sample Type			B	B	B	B	B
Client Sample Number			-	-	-	-	-
Depth - Top (m)			0.70	1.20	0.00	1.60	1.00
Depth - Bottom (m)			0.90	1.50	0.50	2.00	1.20
Date of Sampling			-	16/06/2025	16/06/2025	16/06/2025	18/06/2025
Time of Sampling			-	-	-	-	-
Sample Matrix			Clay	Sand	Sand	Sand	Clay
Determinant	Units	Accreditation					
Water soluble sulphate (as SO ₄)	(mg/l)	u	26	47	16	27	22
Acid Soluble Sulphate	(%)	u	0.02	0.01	0.08	< 0.01	0.02
Total Sulphur	(%)	UKAS	0.03	0.02	0.16	0.02	0.02
pH Value	pH Units	MCERTS	7.3	8.0	8.0	8.2	8.0
Water Soluble Chloride	(mg/l)	u	9.8	4.2	2.7	5.2	10
Water Soluble Nitrate (As NO ₃)	(mg/l)	u	10	4.4	5.3	< 1.0	1.8
Water Soluble Magnesium	(mg/l)	u	2.7	< 1.5	5.3	1.8	3.3



7 - 11 Harding Street
Leicester
LE1 4DH

L25/06574/GSL - 25-71682

Project Reference - Elrs Port Talbot 784-B071864

Sample Descriptions

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Description	Moisture Content (%)	Stone Content (%)	Passing 2mm test sieve (%)
538181	-	SA02	B	-	Brown gravelly slightly sandy silty clay	-	-	100
538182	-	SA03	B	-	Brown gravelly silty sand	-	-	44
538183	-	CP01	B	-	Dark grey gravelly silty sand	-	-	80
538184	-	CP01	B	-	Brown gravelly slightly clayey silty sand	-	-	73
538185	-	WS02	B	-	Brown gravelly slightly sandy silty clay	-	-	97



7 - 11 Harding Street
Leicester
LE1 4DH

L25/06574/GSL - 25-71682

Project Reference - Elrs Port Talbot 784-B071864

Sample Comments

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Comments
538181	-	SA02	B	-	
538182	-	SA03	B	-	
538183	-	CP01	B	-	
538184	-	CP01	B	-	
538185	-	WS02	B	-	

L25/06574/GSL - 25-71682

Project Reference - Elrs Port Talbot 784-B071864

Analysis Methodologies

Test Code	Test Name / Reference	Sample condition for analysis	Sample Preparation	Test Details
ANIONSS	MS - CL - Anions by Aquakem (2:1Extract)	Oven dried	Passing 2mm test sieve	Determination of Anions (inc Sulphate, chloride etc.) in soils by Aquakem. Analysis is based on a 2:1 water to soil extraction ratio
PHS	MS - CL - pH in Soils	As received	Passing 10mm test sieve	Determination of pH in soils using a pH probe (using a 1:3 soil to water extraction)
ASSO4S	MS - CL - Acid Soluble Sulphate	Oven Dried	Passing 2mm test sieve	Determination of total sulphate in soils by acid extraction followed by ICP analysis
SAMPLEPREP	MS - CL - Sample Preparation	-	-	Preparation of samples (including determination of moisture content) to allow for subsequent analysis
1377TS-ELT	BS1377 Total Sulphur Content by HTC	Oven dried	BS1377 : Part 1 : 2016	Total Sulphur Content testing of Soil in accordance with BS 1377 : Part 3 : 2018 + A1 : 2021 Clause 7.10 (using Eltra CS-800 Analyser)
1377MGICP	BS1377 WS Magnesium (ICP)	Oven dried	Passing 2mm test sieve	Water Soluble Magnesium testing of Soil in accordance with BS 1377 : Part 3 : 2018 + A1 : 2021 Clause 10.



4161



L25/06574/GSL - 25-71682

Project Reference - Elrs Port Talbot 784-B071864

Sample Deviations

Deviations are listed below against each sample and associated test method, where deviation(s) are noted it means data may not be representative of the sample at the time of sampling and it is possible that results provided may be compromised.

Observations on receipt

A - No date of sampling provided

W - No time of sampling provided for water sample

C - Received in inappropriate container

H - Contains headspace

T - Temperature on receipt exceeds storage temperature

R - Sample(s) received with less than 96 hours for testing to commence/complete, any result formally classed as deviating will be marked with an X against the applicable test (i.e. RX)

Observations whilst in laboratory

X - Exceeds sampling to extraction or analysis timescales

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Test	Deviations
538181	-	SA02	B	-		A
538182	-	SA03	B	-	MS - CL - pH in Soils	RX
538183	-	CP01	B	-	MS - CL - pH in Soils	RX
538184	-	CP01	B	-	MS - CL - pH in Soils	RX
538185	-	WS02	B	-	MS - CL - pH in Soils	RX

APPENDIX G: CHEMICAL LABORATORY TEST RESULTS

Tetra Tech.
5th Floor
Longcross Court
47 Newport Road
Cardiff
CF24 0AD

t: 07825 552006

e: nicholas.bool@tetrattech.com
ross.wright@tetrattech.com

i2 Analytical Ltd.
7 Woodshots Meadow,
Croxley Green
Business Park,
Watford,
Herts,
WD18 8YS

t: 01923 225404
f: 01923 237404
e: reception@i2analytical.com

Analytical Report Number : 25-032617

Project / Site name:	ELRS Port Talbot	Samples received on:	20/06/2025
Your job number:	B07164	Samples instructed on/ Analysis started on:	20/06/2025
Your order number:	7020469	Analysis completed by:	01/07/2025
Report Issue Number:	1	Report issued on:	01/07/2025
Samples Analysed:	7 soil samples - 3 leachate samples		



Signed:

Joanna Wawrzeczko
Senior Reporting Specialist
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41-711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting
air	- once the analysis is complete

Excel copies of reports are only valid when accompanied by this PDF certificate.

Retention period for records and reports is minimum 6 years from the date of issue of the final report.
Some records may be kept for longer according to other legal/best practice requirements.

Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.
Application of uncertainty of measurement would provide a range within which the true result lies.
An estimate of measurement uncertainty can be provided on request.

Analytical Report Number: 25-032617
Project / Site name: ELRS Port Talbot

Lab Sample Number	589029	589030	589031	589032	589033
Sample Reference	SA02	SA03	HP03	WS03	HP06
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Water Matrix	N/A	N/A	N/A	N/A	N/A
Depth (m)	0.3	0.15	0.2	0.2	0.3
Date Sampled	16/06/2025	16/06/2025	17/06/2025	17/06/2025	17/06/2025
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status		

Stone Content	%	0.1	NONE	66.5	< 0.1	49.4	< 0.1	78.8
Moisture Content	%	0.01	NONE	9.9	2.1	15	8.9	2.4
Total mass of sample received	kg	0.1	NONE	1.5	1	0.5	0.6	0.6

Asbestos

Asbestos in Soil Detected/Not Detected	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	WIK	MBI	MBI	MBI	MBI
Analysis completed	N/A	N/A	N/A	30/06/2025	30/06/2025	30/06/2025	30/06/2025	30/06/2025

General Inorganics

pH (L099)	pH Units	N/A	MCERTS	8.4	8.3	8.1	8.7	8.2
Free Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	mg/kg	2.5	MCERTS	42	92	47	28	52
Water Soluble SO ₄ 16hr extraction (2:1)	mg/l	1.25	MCERTS	21.1	46.1	23.5	13.9	26
Fraction Organic Carbon (FOC) Automated	N/A	0.001	MCERTS	0.043	0.0037	0.053	0.024	0.038

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
----------------------------	-------	---	--------	-------	-------	-------	-------	-------

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	0.15	0.07	0.37	0.45	0.22
Acenaphthylene	mg/kg	0.05	MCERTS	0.09	0.08	0.16	6.3	2.2
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.35	0.78	0.49
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.35	5.7	2.8
Phenanthrene	mg/kg	0.05	MCERTS	0.46	0.4	3.7	50	28
Anthracene	mg/kg	0.05	MCERTS	0.12	0.5	0.72	15	7.5
Fluoranthene	mg/kg	0.05	MCERTS	1.1	2.7	5.4	75	36
Pyrene	mg/kg	0.05	MCERTS	0.94	2.3	4.6	51	21
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.64	1.4	2.9	47	15
Chrysene	mg/kg	0.05	MCERTS	0.75	1.6	2.9	47	14
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	0.95	1.8	4.4	56	16
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	0.43	0.7	1.3	23	4.4
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.73	1.5	3.1	37	9.7
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.44	0.73	2.2	17	5.2
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	0.12	0.2	0.43	7.1	1.6
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.47	0.8	2.4	16	4.7

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	7.35	14.8	35	455	168
-----------------------------	-------	-----	-----------	------	------	----	-----	-----

Analytical Report Number: 25-032617
Project / Site name: ELRS Port Talbot

Lab Sample Number	589029	589030	589031	589032	589033
Sample Reference	SA02	SA03	HP03	WS03	HP06
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Water Matrix	N/A	N/A	N/A	N/A	N/A
Depth (m)	0.3	0.15	0.2	0.2	0.3
Date Sampled	16/06/2025	16/06/2025	17/06/2025	17/06/2025	17/06/2025
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status		

Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	30	4.9	26	6.7	8.1
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	0.89	0.3	1.5	1.9	0.69
Boron (water soluble)	mg/kg	0.2	MCERTS	0.4	0.5	1.2	0.7	0.3
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	0.2	0.3	2.3	0.4	< 0.2
Chromium (hexavalent)	mg/kg	1.8	MCERTS	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8
Chromium (III)	mg/kg	1	NONE	9.4	9.4	37	9.6	14
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	9.4	9.4	37	9.6	14
Copper (aqua regia extractable)	mg/kg	1	MCERTS	87	12	160	62	19
Lead (aqua regia extractable)	mg/kg	1	MCERTS	61	12	1200	20	140
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	28	6.7	55	42	25
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	1.5	< 1.0	2.5	< 1.0	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	22	6.8	66	27	20
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	190	33	690	110	120

Petroleum Hydrocarbons

TPHCWG - Aliphatic >EC5 - EC6 _{HS,1D,AL}	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aliphatic >EC6 - EC8 _{HS,1D,AL}	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aliphatic >EC8 - EC10 _{HS,1D,AL}	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aliphatic >EC10 - EC12 _{EH,CU,1D,AL}	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPHCWG - Aliphatic >EC12 - EC16 _{EH,CU,1D,AL}	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	8.6	< 2.0
TPHCWG - Aliphatic >EC16 - EC21 _{EH,CU,1D,AL}	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	14	< 8.0
TPHCWG - Aliphatic >EC21 - EC35 _{EH,CU,1D,AL}	mg/kg	8	MCERTS	< 8.0	< 8.0	38	12	130
TPHCWG - Aliphatic >EC35 - EC44 _{EH,CU,1D,AL}	mg/kg	8.4	NONE	< 8.4	< 8.4	9.1	12	350
TPHCWG - Aliphatic >EC5 - EC35 _{EH,CU+HS,1D,AL}	mg/kg	10	NONE	< 10	< 10	38	34	130
TPHCWG - Aliphatic >EC5 - EC44 _{EH,CU+HS,1D,AL}	mg/kg	10	NONE	< 10	< 10	47	46	480

TPHCWG - Aromatic >EC5 - EC7 _{HS,1D,AR}	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC7 - EC8 _{HS,1D,AR}	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC8 - EC10 _{HS,1D,AR}	mg/kg	0.02	MCERTS	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aromatic >EC10 - EC12 _{EH,CU,1D,AR}	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPHCWG - Aromatic >EC12 - EC16 _{EH,CU,1D,AR}	mg/kg	2	MCERTS	< 2.0	< 2.0	2.2	8.2	< 2.0
TPHCWG - Aromatic >EC16 - EC21 _{EH,CU,1D,AR}	mg/kg	10	MCERTS	< 10	< 10	< 10	93	< 10
TPHCWG - Aromatic >EC21 - EC35 _{EH,CU,1D,AR}	mg/kg	10	MCERTS	23	22	31	240	260
TPHCWG - Aromatic >EC35 - EC44 _{EH,CU,1D,AR}	mg/kg	8.4	NONE	< 8.4	< 8.4	< 8.4	36	630
TPHCWG - Aromatic >EC5 - EC35 _{EH,CU+HS,1D,AR}	mg/kg	10	NONE	23	22	33	340	260
TPHCWG - Aromatic >EC5 - EC44 _{EH,CU+HS,1D,AR}	mg/kg	10	NONE	23	22	33	370	890

VOCs

MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Benzene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Toluene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Ethylbenzene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
p & m-Xylene	µg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
o-Xylene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

Analytical Report Number: 25-032617
Project / Site name: ELRS Port Talbot

Lab Sample Number				589034	589035
Sample Reference				WS01	CP01
Sample Number				None Supplied	None Supplied
Water Matrix				N/A	N/A
Depth (m)				0.7	0.5
Date Sampled				17/06/2025	16/06/2025
Time Taken				None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status		

Stone Content	%	0.1	NONE	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	12	17
Total mass of sample received	kg	0.1	NONE	0.6	0.6

Asbestos

Asbestos in Soil Detected/Not Detected	Type	N/A	ISO 17025	Not-detected	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	MBI	MBI
Analysis completed	N/A	N/A	N/A	30/06/2025	30/06/2025

General Inorganics

pH (L099)	pH Units	N/A	MCERTS	8.6	8.3
Free Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0
Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	mg/kg	2.5	MCERTS	72	31
Water Soluble SO ₄ 16hr extraction (2:1)	mg/l	1.25	MCERTS	35.9	15.3
Fraction Organic Carbon (FOC) Automated	N/A	0.001	MCERTS	0.02	0.047

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0
----------------------------	-------	---	--------	-------	-------

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	0.19	0.38
Acenaphthylene	mg/kg	0.05	MCERTS	0.22	0.11
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	0.61	0.33
Anthracene	mg/kg	0.05	MCERTS	0.23	0.07
Fluoranthene	mg/kg	0.05	MCERTS	1.8	0.3
Pyrene	mg/kg	0.05	MCERTS	1.6	0.29
Benzo(a)anthracene	mg/kg	0.05	MCERTS	1.3	0.28
Chrysene	mg/kg	0.05	MCERTS	1.3	0.38
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	1.9	0.63
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	0.85	0.27
Benzo(a)pyrene	mg/kg	0.05	MCERTS	1.5	0.49
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.88	0.35
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	0.21	0.09
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.87	0.41

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	13.3	4.39
-----------------------------	-------	-----	-----------	------	------

Analytical Report Number: 25-032617
Project / Site name: ELRS Port Talbot

Lab Sample Number				589034	589035
Sample Reference				WS01	CP01
Sample Number				None Supplied	None Supplied
Water Matrix				N/A	N/A
Depth (m)				0.7	0.5
Date Sampled				17/06/2025	16/06/2025
Time Taken				None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status		

Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	16	17
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	4	3.7
Boron (water soluble)	mg/kg	0.2	MCERTS	1.2	0.4
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	1.8	MCERTS	< 1.8	< 1.8
Chromium (III)	mg/kg	1	NONE	16	33
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	16	33
Copper (aqua regia extractable)	mg/kg	1	MCERTS	110	95
Lead (aqua regia extractable)	mg/kg	1	MCERTS	27	25
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	91	94
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	2	2.5
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	52	72
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	77	54

Petroleum Hydrocarbons

TPHCWG - Aliphatic >EC5 - EC6 _{HS_1D_AL}	mg/kg	0.01	MCERTS	< 0.010	< 0.010
TPHCWG - Aliphatic >EC6 - EC8 _{HS_1D_AL}	mg/kg	0.01	MCERTS	< 0.010	< 0.010
TPHCWG - Aliphatic >EC8 - EC10 _{HS_1D_AL}	mg/kg	0.01	MCERTS	< 0.010	< 0.010
TPHCWG - Aliphatic >EC10 - EC12 _{EH_CU_1D_AL}	mg/kg	1	MCERTS	< 1.0	< 1.0
TPHCWG - Aliphatic >EC12 - EC16 _{EH_CU_1D_AL}	mg/kg	2	MCERTS	< 2.0	< 2.0
TPHCWG - Aliphatic >EC16 - EC21 _{EH_CU_1D_AL}	mg/kg	8	MCERTS	< 8.0	< 8.0
TPHCWG - Aliphatic >EC21 - EC35 _{EH_CU_1D_AL}	mg/kg	8	MCERTS	12	< 8.0
TPHCWG - Aliphatic >EC35 - EC44 _{EH_CU_1D_AL}	mg/kg	8.4	NONE	77	36
TPHCWG - Aliphatic >EC5 - EC35 _{EH_CU+HS_1D_AL}	mg/kg	10	NONE	12	< 10
TPHCWG - Aliphatic >EC5 - EC44 _{EH_CU+HS_1D_AL}	mg/kg	10	NONE	89	36

TPHCWG - Aromatic >EC5 - EC7 _{HS_1D_AR}	mg/kg	0.01	MCERTS	< 0.010	< 0.010
TPHCWG - Aromatic >EC7 - EC8 _{HS_1D_AR}	mg/kg	0.01	MCERTS	< 0.010	< 0.010
TPHCWG - Aromatic >EC8 - EC10 _{HS_1D_AR}	mg/kg	0.02	MCERTS	< 0.020	< 0.020
TPHCWG - Aromatic >EC10 - EC12 _{EH_CU_1D_AR}	mg/kg	1	MCERTS	< 1.0	< 1.0
TPHCWG - Aromatic >EC12 - EC16 _{EH_CU_1D_AR}	mg/kg	2	MCERTS	< 2.0	< 2.0
TPHCWG - Aromatic >EC16 - EC21 _{EH_CU_1D_AR}	mg/kg	10	MCERTS	< 10	< 10
TPHCWG - Aromatic >EC21 - EC35 _{EH_CU_1D_AR}	mg/kg	10	MCERTS	55	78
TPHCWG - Aromatic >EC35 - EC44 _{EH_CU_1D_AR}	mg/kg	8.4	NONE	100	110
TPHCWG - Aromatic >EC5 - EC35 _{EH_CU+HS_1D_AR}	mg/kg	10	NONE	55	78
TPHCWG - Aromatic >EC5 - EC44 _{EH_CU+HS_1D_AR}	mg/kg	10	NONE	160	190

VOCs

MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	MCERTS	< 5.0	< 5.0
Benzene	µg/kg	5	MCERTS	< 5.0	< 5.0
Toluene	µg/kg	5	MCERTS	< 5.0	< 5.0
Ethylbenzene	µg/kg	5	MCERTS	< 5.0	< 5.0
p & m-Xylene	µg/kg	8	MCERTS	< 8.0	< 8.0
o-Xylene	µg/kg	5	MCERTS	< 5.0	< 5.0

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

Analytical Report Number: 25-032617
Project / Site name: ELRS Port Talbot

Lab Sample Number				589029	589030	589034
Sample Reference				SA02	SA03	WS01
Sample Number				None Supplied	None Supplied	None Supplied
Water Matrix				N/A	N/A	N/A
Depth (m)				0.3	0.15	0.7
Date Sampled				16/06/2025	16/06/2025	17/06/2025
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	Units	Test Limit of detection	Test Accreditation Status			

General Inorganics

pH (automated)	pH Units	N/A	ISO 17025	7.9	8.2	7.6
Total Cyanide	µg/l	10	ISO 17025	< 10	< 10	< 10
Sulphate as SO ₄	mg/l	0.045	ISO 17025	3.19	2.01	1.49
Chloride	mg/l	0.15	ISO 17025	0.21	< 0.15	0.17
Ammoniacal Nitrogen as NH ₃	µg/l	15	NONE	39	150	48
Ammoniacal Nitrogen as NH ₄ ⁺	µg/l	15	NONE	41	160	50
Dissolved Organic Carbon (DOC)	mg/l	0.1	NONE	4.1	6.6	6
Nitrate as NO ₃	mg/l	0.05	NONE	0.1	< 0.05	< 0.05
Nitrite as NO ₂	µg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0
Alkalinity as CaCO ₃	mgCaCO ₃ /l	3	ISO 17025	9.6	18	9.8

Total Phenols

Total Phenols (monohydric) low level	µg/l	1	NONE	< 1.0	< 1.0	< 1.0
--------------------------------------	------	---	------	-------	-------	-------

Speciated PAHs

Naphthalene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01
Acenaphthylene	µg/l	0.01	NONE	< 0.01	< 0.01	0.05
Acenaphthene	µg/l	0.01	NONE	0.03	0.03	0.03
Fluorene	µg/l	0.01	NONE	0.03	0.03	0.03
Phenanthrene	µg/l	0.01	NONE	0.08	0.1	0.1
Anthracene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01
Fluoranthene	µg/l	0.01	NONE	< 0.01	< 0.01	0.08
Pyrene	µg/l	0.01	NONE	< 0.01	< 0.01	0.07
Benzo(a)anthracene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01
Chrysene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01

Total PAH

Total EPA-16 PAHs	µg/l	0.16	NONE	< 0.16	< 0.16	0.36
-------------------	------	------	------	--------	--------	------

Analytical Report Number: 25-032617
Project / Site name: ELRS Port Talbot

Lab Sample Number				589029	589030	589034
Sample Reference				SA02	SA03	WS01
Sample Number				None Supplied	None Supplied	None Supplied
Water Matrix				N/A	N/A	N/A
Depth (m)				0.3	0.15	0.7
Date Sampled				16/06/2025	16/06/2025	17/06/2025
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)				Units	Test Limit of detection	Test Accreditation Status

Heavy Metals / Metalloids

Antimony (dissolved)	µg/l	1.7	ISO 17025	< 1.7	< 1.7	< 1.7
Arsenic (dissolved)	µg/l	1	ISO 17025	3.3	2.9	3.9
Barium (dissolved)	µg/l	0.05	ISO 17025	20	11	23
Beryllium (dissolved)	µg/l	0.2	ISO 17025	< 0.2	< 0.2	< 0.2
Boron (dissolved)	µg/l	10	ISO 17025	22	18	24
Cadmium (dissolved)	µg/l	0.08	ISO 17025	< 0.08	< 0.08	< 0.08
Chromium (dissolved)	µg/l	0.4	ISO 17025	1.2	3.4	1.5
Copper (dissolved)	µg/l	0.7	ISO 17025	18	30	24
Lead (dissolved)	µg/l	1	ISO 17025	2.7	2.6	1.4
Mercury (dissolved)	µg/l	0.5	ISO 17025	< 0.5	< 0.5	< 0.5
Molybdenum (dissolved)	µg/l	0.4	ISO 17025	1.3	0.7	0.8
Nickel (dissolved)	µg/l	0.3	ISO 17025	1.6	1.1	3.4
Selenium (dissolved)	µg/l	4	ISO 17025	< 4.0	< 4.0	< 4.0
Zinc (dissolved)	µg/l	0.4	ISO 17025	20	14	12

Petroleum Hydrocarbons

TPH - Aliphatic >EC5 - EC6 HS_1D_AL	µg/l	1	NONE	< 1.0	< 1.0	< 1.0
TPH - Aliphatic >EC6 - EC8 HS_1D_AL	µg/l	1	NONE	< 1.0	< 1.0	< 1.0
TPH - Aliphatic >EC8 - EC10 HS_1D_AL	µg/l	1	NONE	< 1.0	< 1.0	< 1.0
TPH - Aliphatic >EC10 - EC12 EH_2D_AL_#1_#2	µg/l	10	NONE	< 10	< 10	< 10
TPH - Aliphatic >EC12 - EC16 EH_2D_AL_#1_#2	µg/l	10	NONE	< 10	< 10	< 10
TPH - Aliphatic >EC16 - EC21 EH_2D_AL_#1_#2	µg/l	10	NONE	< 10	< 10	< 10
TPH - Aliphatic >EC21 - EC35 EH_2D_AL_#1_#2	µg/l	10	NONE	< 10	< 10	< 10
Total TPH Aliphatic >EC10 - EC35 EH_2D_AL_#1_#2	µg/l	10	NONE	< 10	< 10	< 10

TPH - Aromatic >EC5 - EC7 HS_1D_AR	µg/l	1	NONE	< 1.0	< 1.0	< 1.0
TPH - Aromatic >EC7 - EC8 HS_1D_AR	µg/l	1	NONE	< 1.0	< 1.0	< 1.0
TPH - Aromatic >EC8 - EC10 EH_1D_AR_MS	µg/l	1	NONE	< 1.0	< 1.0	< 1.0
TPH - Aromatic >EC10 - EC12 EH_2D_AR_#1_#2	µg/l	10	NONE	< 10 ^{##}	< 10	< 10
TPH - Aromatic >EC12 - EC16 EH_2D_AR_#1_#2	µg/l	10	NONE	< 10	< 10	< 10
TPH - Aromatic >EC16 - EC21 EH_2D_AR_#1_#2	µg/l	10	NONE	< 10	< 10	< 10
TPH - Aromatic >EC21 - EC35 EH_2D_AR_#1_#2	µg/l	10	NONE	< 10	< 10	< 10
Total TPH Aromatic >EC10 - EC35 EH_2D_AR_#1_#2	µg/l	10	NONE	< 10	< 10	< 10

VOCs

MTBE (Methyl Tertiary Butyl Ether)	µg/l	3	NONE	< 3.0	< 3.0	< 3.0
Benzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0
Toluene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0
o-xylene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

Analytical Report Number : 25-032617

Project / Site name: ELRS Port Talbot

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
589029	SA02	None Supplied	0.3	Brown loam and sand with gravel and stones
589030	SA03	None Supplied	0.15	Brown sand with gravel and tar
589031	HP03	None Supplied	0.2	Brown loam and sand with gravel and stones
589032	WS03	None Supplied	0.2	Brown sand with gravel and tar
589033	HP06	None Supplied	0.3	Non Soil. ⁹
589034	WS01	None Supplied	0.7	Brown sand with clinker and gravel
589035	CP01	None Supplied	0.5	Brown sand with clinker and gravel

Analytical Report Number : 25-032617

Project / Site name: ELRS Port Talbot

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters Heating/Cooling (PrW) DI Process Water (DI PrW)

Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Asbestos identification in Soil	Asbestos Identification with the use of polarised light microscopy in conjunction with dispersion staining techniques	In-house method based on HSG 248, 2021	A001B	D	ISO 17025
Moisture Content	Moisture content, determined gravimetrically (up to 30°C)	In-house method	L019B	W	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight	In-house method based on British Standard Methods and MCERTS requirements.	L019B	D	NONE
Dissolved Organic Carbon in leachate	Determination of dissolved organic carbon in leachate by the measurement on a non-dispersive infrared analyser of carbon dioxide released by acidification	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037B	W	NONE
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil	L038B	D	MCERTS
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES	In-house method based on Second Site Properties version 3	L038B	D	MCERTS
Sulphate, water soluble, in soil (16hr extraction)	Sulphate, water soluble, in soil (16hr extraction)	In-house method	L038B	D	MCERTS
Metals by ICP-OES in leachate	Determination of metals in leachate by acidification followed by ICP-OES	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil	L039B	W	ISO 17025
Speciated PAHs and/or Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds (including PAH) in soil by extraction in dichloromethane and hexane followed by GC-MS	In-house method based on USEPA 8270	L064B	D	MCERTS
BTEX and/or Volatile organic compounds in leachate	Determination of volatile organic compounds in leachate by headspace GC-MS	In-house method based on USEPA 8260	L073B	W	NONE
BTEX and/or Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS	In-house method based on USEPA 8260	L073B	W	MCERTS
Total petroleum hydrocarbons with carbon banding by GC-FID/GC-MS HS in soil	Determination of total petroleum hydrocarbons in soil by GC-FID/GC-MS HS with carbon banding aliphatic and aromatic	In-house method	L076B/L088-PL	D/W	MCERTS
Nitrite, leachate soluble, in leachate	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton & Polish Standard Method PN-82/C-04579.08	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton & Polish Standard Method PN-82/C-04579.08	L082B	W	ISO 17025
Nitrate, leachate soluble, in leachate	Determination of nitrate by reaction with sodium salicylate and colorimetry	In-house method based on Examination of Water and Wastewater & Polish Standard Method PN-82/C-04579.08	L078-PL	W	NONE
Chromium III in soil	In-house method by calculation from total Cr and Cr VI	In-house method by calculation	L080-PL/L130B	W	NONE
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in NaOH and addition of 1,5 diphenylcarbazide followed by colorimetry	In-house method	L080-PL	W	MCERTS

Analytical Report Number : 25-032617

Project / Site name: ELRS Port Talbot

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters Heating/Cooling (PrW) DI Process Water (DI PrW)

Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Free cyanide in soil	Determination of free cyanide by distillation followed by colorimetry	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	MCERTS
Monohydric phenols (low level) in leachate	Determination of phenols in leachate by distillation followed by colorimetry	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	MCERTS
Total cyanide in leachate	Determination of total cyanide by distillation followed by colorimetry	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	ISO 17025
Alkalinity in leachate	Determination of Alkalinity by discrete analyser (colorimetry)	In-house method based on MEWAM & USEPA Method 310.2	L082B	W	ISO 17025
Chloride in leachate	Determination of Chloride colorimetrically by discrete analyser	In-house based on MEWAM Method ISBN 0117516260	L082B	W	ISO 17025
Ammonia as NH ₃ in leachate	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082B	W	NONE
Ammonium as NH ₄ in leachate	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082B	W	NONE
Total petroleum hydrocarbons with carbon banding by GC-MS/GC-MS HS in leachate	Determination of total petroleum hydrocarbons in leachate by GC-MS/GC-MS HS with carbon banding aliphatic and aromatic	In-house method	L070B/L088-PL	W	NONE
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement	In-house method	L099-PL	D	MCERTS
pH at 20°C in leachate (automated)	Determination of pH in leachate by electrometric measurement	In-house method	L099-PL	W	ISO 17025
Total petroleum hydrocarbons with carbon banding by GCxGC-FID	Determination of total petroleum hydrocarbons in leachate by GC x GC FID with carbon banding aliphatic and aromatic C10-C35	In-house method	L101B	W	NONE
Speciated PAHs and/or Semi-volatile organic compounds in leachate	SVOCs and PAHs in leachate	In-house method	L102B		NONE
Fraction Organic Carbon FOC Automated	Determination of fraction of organic carbon in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate	In-house method	L009B	D	MCERTS

Analytical Report Number : 25-032617
Project / Site name: ELRS Port Talbot

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters Heating/Cooling (PrW) DI Process Water (DI PrW)
Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Soil Descriptions	Textural classification	In-house method	L019B	W	NONE

For method numbers ending in 'UK' or 'A' analysis have been carried out in our laboratory in the United Kingdom (Watford).

For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).

For method numbers ending in 'PL' or 'B' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30°C.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Information in Support of Analytical Results

List of HWOL Acronyms and Operators

Acronym	Descriptions
HS	Headspace Analysis
MS	Mass spectrometry
FID	Flame Ionisation Detector
GC	Gas Chromatography
EH	Extractable Hydrocarbons (i.e. everything extracted by the solvent(s))
CU	Clean-up - e.g. by Florisil®, silica gel
1D	GC - Single coil/column gas chromatography
2D	GC-GC - Double coil/column gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics
AR	Aromatics
#1	EH_2D_Total but with humics mathematically subtracted
#2	EH_2D_Total but with fatty acids mathematically subtracted
-	Operator - underscore to separate acronyms (exception for +)
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total

Quality control parameter failure associated with individual result applies to calculated sum of individuals.
The result for sum should be interpreted with caution

##- Quality control parameter has a high recovery (outside of limit); however the associated result is below the reporting limit, other checks applied prior to reporting the data have been accepted. The result should be considered as being deviating and may be compromised.

*g - Unaccredited sample matrix.

Analytical Report Number : 25-032617

Project / Site name: ELRS Port Talbot

This deviation report indicates the sample and test deviations that apply to the samples submitted for analysis. Please note that the associated result(s) may be unreliable and should be interpreted with care.

Key: a - No sampling date b - Incorrect container/Insufficient material provided c - Holding time d - Headspace e - Temperature

Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
CP01	N/A	S	589035	b	Asbestos identification in Soil	A001B	b
HP03	N/A	S	589031	b	Asbestos identification in Soil	A001B	b
HP06	N/A	S	589033	b	Asbestos identification in Soil	A001B	b
SA02	N/A	S	589029	b	Asbestos identification in Soil	A001B	b
SA03	N/A	S	589030	b	Asbestos identification in Soil	A001B	b
WS01	N/A	S	589034	b	Asbestos identification in Soil	A001B	b
WS03	N/A	S	589032	b	Asbestos identification in Soil	A001B	b

Tetra Tech.
5th Floor
Longcross Court
47 Newport Road
Cardiff
CF24 0AD

t: 07825 552006

e: ross.wright@tetratech.com

i2 Analytical Ltd.
7 Woodshots Meadow,
Croxley Green
Business Park,
Watford,
Herts,
WD18 8YS

t: 01923 225404

f: 01923 237404

e: reception@i2analytical.com

Analytical Report Number : 25-036002

Project / Site name:	ELRS Port Talbot	Samples received on:	03/07/2025
Your job number:	784-B071864	Samples instructed on/ Analysis started on:	08/07/2025
Your order number:	7020469	Analysis completed by:	16/07/2025
Report Issue Number:	1	Report issued on:	16/07/2025
Samples Analysed:	1 water sample		



Signed:

Rafał Szczepańczyk
Technical Reviewer
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41-711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting
air	- once the analysis is complete

Excel copies of reports are only valid when accompanied by this PDF certificate.

Retention period for records and reports is minimum 6 years from the date of issue of the final report.
Some records may be kept for longer according to other legal/best practice requirements.

Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.
Application of uncertainty of measurement would provide a range within which the true result lies.
An estimate of measurement uncertainty can be provided on request.

Analytical Report Number: 25-036002

Project / Site name: ELRS Port Talbot

Your Order No: 7020469

Lab Sample Number				607304
Sample Reference				CP01
Sample Number				None Supplied
Water Matrix				Other water
Depth (m)				3.20
Date Sampled				02/07/2025
Time Taken				None Supplied
Analytical Parameter (Water Analysis)	Units	Test Limit of detection	Test Accreditation Status	

General Inorganics

pH (L099)	pH Units	N/A	NONE	7.1
Total Cyanide	µg/l	10	NONE	< 10
Sulphate as SO ₄	mg/l	0.045	NONE	18
Chloride	mg/l	0.15	NONE	17
Ammoniacal Nitrogen as NH ₃	µg/l	15	NONE	49
Ammoniacal Nitrogen as NH ₄ ⁺	µg/l	15	NONE	52
Dissolved Organic Carbon (DOC)	mg/l	0.1	NONE	1.21
Nitrate as N	mg/l	0.01	NONE	4.61
Nitrate as NO ₃	mg/l	0.05	NONE	20.4
Nitrite as NO ₂	mgCaCO ₃ /l	3	NONE	27
Alkalinity as CaCO ₃				76

Total Phenols

Total Phenols (Monohydric) Low Level	µg/l	1	NONE	< 1.0
--------------------------------------	------	---	------	-------

Speciated PAHs

Naphthalene	µg/l	0.01	NONE	< 0.01
Acenaphthylene	µg/l	0.01	NONE	< 0.01
Acenaphthene	µg/l	0.01	NONE	< 0.01
Fluorene	µg/l	0.01	NONE	< 0.01
Phenanthrene	µg/l	0.01	NONE	< 0.01
Anthracene	µg/l	0.01	NONE	< 0.01
Fluoranthene	µg/l	0.01	NONE	< 0.01
Pyrene	µg/l	0.01	NONE	< 0.01
Benzo(a)anthracene	µg/l	0.01	NONE	< 0.01
Chrysene	µg/l	0.01	NONE	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	NONE	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	NONE	< 0.01
Benzo(a)pyrene	µg/l	0.01	NONE	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	NONE	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	NONE	< 0.01
Benzo(ghi)perylene	µg/l	0.01	NONE	< 0.01

Total PAH

Total EPA-16 PAHs	µg/l	0.16	NONE	< 0.16
-------------------	------	------	------	--------

Analytical Report Number: 25-036002

Project / Site name: ELRS Port Talbot

Your Order No: 7020469

Lab Sample Number				607304
Sample Reference				CP01
Sample Number				None Supplied
Water Matrix				Other water
Depth (m)				3.20
Date Sampled				02/07/2025
Time Taken				None Supplied
Analytical Parameter (Water Analysis)	Units	Test Limit of detection	Test Accreditation Status	

Heavy Metals / Metalloids

Antimony (dissolved)	µg/l	0.4	NONE	< 0.4
Arsenic (dissolved)	µg/l	0.15	NONE	0.27
Barium (dissolved)	µg/l	0.06	NONE	26
Beryllium (dissolved)	µg/l	0.1	NONE	< 0.1
Cadmium (dissolved)	µg/l	0.02	NONE	0.09
Chromium (dissolved)	µg/l	0.2	NONE	< 0.2
Copper (dissolved)	µg/l	0.5	NONE	1.5
Lead (dissolved)	µg/l	0.2	NONE	< 0.2
Mercury (dissolved)	µg/l	0.05	NONE	< 0.05
Molybdenum (dissolved)	µg/l	0.05	NONE	0.17
Nickel (dissolved)	µg/l	0.5	NONE	0.9
Selenium (dissolved)	µg/l	0.6	NONE	1.4
Zinc (dissolved)	µg/l	0.5	NONE	28

Boron (dissolved)	µg/l	10	NONE	27
-------------------	------	----	------	----

Petroleum Hydrocarbons

TPH - Aliphatic >EC5 - EC6 _{HS_1D_AL}	µg/l	1	NONE	< 1.0
TPH - Aliphatic >EC6 - EC8 _{HS_1D_AL}	µg/l	1	NONE	< 1.0
TPH - Aliphatic >EC8 - EC10 _{HS_1D_AL}	µg/l	1	NONE	< 1.0
TPH - Aliphatic >EC10 - EC12 _{EH_2D_AL_#1_#2}	µg/l	10	NONE	< 10
TPH - Aliphatic >EC12 - EC16 _{EH_2D_AL_#1_#2}	µg/l	10	NONE	< 10
TPH - Aliphatic >EC16 - EC21 _{EH_2D_AL_#1_#2}	µg/l	10	NONE	< 10
TPH - Aliphatic >EC21 - EC35 _{EH_2D_AL_#1_#2}	µg/l	10	NONE	< 10
Total TPH Aliphatic >EC10 - EC35 _{EH_2D_AL_#1_#2}	µg/l	10	NONE	< 10

TPH - Aromatic >EC5 - EC7 _{HS_1D_AR}	µg/l	1	NONE	< 1.0
TPH - Aromatic >EC7 - EC8 _{HS_1D_AR}	µg/l	1	NONE	< 1.0
TPH - Aromatic >EC8 - EC10 _{HS_1D_AR}	µg/l	1	NONE	< 1.0
TPH - Aromatic >EC10 - EC12 _{EH_2D_AR_#1_#2}	µg/l	10	NONE	< 10
TPH - Aromatic >EC12 - EC16 _{EH_2D_AR_#1_#2}	µg/l	10	NONE	< 10
TPH - Aromatic >EC16 - EC21 _{EH_2D_AR_#1_#2}	µg/l	10	NONE	< 10
TPH - Aromatic >EC21 - EC35 _{EH_2D_AR_#1_#2}	µg/l	10	NONE	< 10
Total TPH Aromatic >EC10 - EC35 _{EH_2D_AR_#1_#2}	µg/l	10	NONE	< 10

VOCs

MTBE (Methyl Tertiary Butyl Ether)	µg/l	3	NONE	< 3.0
Benzene	µg/l	1	NONE	< 1.0
Toluene	µg/l	1	NONE	< 1.0
Ethylbenzene	µg/l	1	NONE	< 1.0
p & m-xylene	µg/l	1	NONE	< 1.0
o-xylene	µg/l	1	NONE	< 1.0

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

Analytical Report Number : 25-036002

Project / Site name: ELRS Port Talbot

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters Heating/Cooling (PrW) DI Process Water (DI PrW)

Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Metals in water by ICP-MS (dissolved)	Determination of metals in water by acidification followed by ICP-MS. Accredited matrices: SW, PW, GW, except B - SW, GW, Hg - SW, PW, Al - SW, PW	In-house method based on USEPA Method 6020 & 200.8 for the determination of trace elements in water by ICP-MS	L012B	W	NONE
Dissolved Organic Carbon in water	Determination of dissolved organic carbon in water by TOC/DOC NDIR Analyser. Accredited matrices: SW, PW, GW, FSE, LL	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037B	W	NONE
Metals in water by ICP-OES (dissolved)	Determination of metals in water by acidification followed by ICP-OES. Accredited matrices: SW, PW, GW, FSE, LL; PrW, DI PrW (Al, Cu, Fe, Zn)	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil	L039B	W	NONE
BTEX and/or Volatile Organic Compounds in water	Determination of volatile organic compounds in water by headspace GC-MS. Accredited matrices: SW, PW, GW	In-house method based on USEPA 8260	L073B	W	NONE
Nitrate as N in water	Determination of nitrate by reaction with sodium salicylate followed by colorimetry. Accredited matrices: SW, PW, GW, FSE, LL	In-house method based on Examination of Water and Wastewater & Polish Standard Method PN-82/C-04579.08	L078-PL	W	NONE
Nitrite in water	Determination of nitrite in water by addition of sulphanilamide and NED followed by colorimetry using discrete analyser. Accredited matrices: SW, PW, GW, FSE, LL	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082B	W	NONE
Nitrate in water	Determination of nitrate by reaction with sodium salicylate followed by colorimetry. Accredited matrices: SW, PW, GW, FSE, LL	In-house method based on Examination of Water and Wastewater & Polish Standard Method PN-82/C-04579.08	L078-PL	W	NONE
Monohydric phenols (low level) in water	Determination of phenols in water by continuous flow analyser	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	NONE
Total cyanide in water	Determination of total cyanide in water by distillation followed by colorimetry. Accredited matrices: SW, PW, GW, FSE, LL	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	NONE
Alkalinity of water (discrete analyser)	Determination of alkalinity of water by colorimetry using discrete analyser. Accredited matrices: SW, PW, GW, FSE, LL	In-house method based on MEWAM & USEPA Method 310.2	L082B	W	NONE
Chloride in water	Determination of chloride in water by colorimetry using discrete analyser. Accredited matrices: SW, PW, GW, FSE, LL	In-house based on MEWAM Method ISBN 0117516260	L082B	W	NONE
Ammonia as NH3 in water	Determination of ammonium/ammonia/ammoniacal nitrogen by the colorimetric salicylate/nitroprusside method using discrete analyser. Accredited matrices: SW, PW, GW, FSE, LL	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082B	W	NONE
Ammonium as NH4 in water	Determination of ammonium/ammonia/ammoniacal nitrogen by the colorimetric salicylate/nitroprusside method using discrete analyser. Accredited matrices: SW, PW, GW, FSE, LL	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082B	W	NONE
Total Petroleum Hydrocarbons in water by HS-GC-MS	Determination of total petroleum hydrocarbons in water by headspace GC-MS. Accredited matrices: SW, PW, GW	In-house method	L088-PL	W	NONE
pH of water at 20°C (automated)	Determination of pH of water by electrochemical measurement. Accredited matrices: SW, PW, GW, FSE, LL	In-house method	L099-PL	W	NONE
Total Petroleum Hydrocarbons with carbon banding in water by GCxGC-FID	Determination of total petroleum hydrocarbons in water by GCxGC FID with carbon banding aliphatic and aromatic C10-C35. Accredited matrices: SW, PW, GW	In-house method	L101B	W	NONE

Analytical Report Number : 25-036002

Project / Site name: ELRS Port Talbot

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters Heating/Cooling (PrW) DI Process Water (DI PrW)

Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Speciated PAHs and/or Semi-volatile organic compounds in water	Determination of semi-volatile organic compounds (including PAHs) in water by extraction in dichloromethane followed by GC-MS. Accredited matrices (PAHs): SW, PW, GW	In-house method based on USEPA 8270	L102B	W	NONE
Sulphate in water	Determination of sulphate in water after filtration by acidification followed by ICP-OES. Accredited matrices: SW, PW, GW, PrW, DI PrW, FSE, LL	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil	L039B	W	NONE

For method numbers ending in 'UK' or 'A' analysis have been carried out in our laboratory in the United Kingdom (Watford).

For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).

For method numbers ending in 'PL' or 'B' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Information in Support of Analytical Results

List of HWOL Acronyms and Operators

Acronym	Descriptions
HS	Headspace Analysis
MS	Mass spectrometry
FID	Flame Ionisation Detector
GC	Gas Chromatography
EH	Extractable Hydrocarbons (i.e. everything extracted by the solvent(s))
CU	Clean-up - e.g. by Florisil®, silica gel
1D	GC - Single coil/column gas chromatography
2D	GC-GC - Double coil/column gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics
AR	Aromatics
#1	EH_2D_Total but with humics mathematically subtracted
#2	EH_2D_Total but with fatty acids mathematically subtracted
_	Operator - underscore to separate acronyms (exception for +)
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total

Quality control parameter failure associated with individual result applies to calculated sum of individuals.

The result for sum should be interpreted with caution

Sample Deviation Report



Analytical Report Number : 25-036002

Project / Site name: ELRS Port Talbot

This deviation report indicates the sample and test deviations that apply to the samples submitted for analysis. Please note that the associated result(s) may be unreliable and should be interpreted with care.

Key: a - No sampling date b - Incorrect container/Insufficient material provided c - Holding time d - Headspace e - Temperature

Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
CP01	N/A	W	607304	c	Ammonia as NH ₃ in water	L082B	c
CP01	N/A	W	607304	c	Ammonium as NH ₄ in water	L082B	c
CP01	N/A	W	607304	c	BTEX and/or Volatile Organic Compounds in water	L073B	c
CP01	N/A	W	607304	c	Nitrite in water	L082B	c
CP01	N/A	W	607304	c	Total Petroleum Hydrocarbons in water by HS-GC-MS	L088-PL	c
CP01	N/A	W	607304	c	Total cyanide in water	L080-PL	c
CP01	N/A	W	607304	c	pH of water at 20°C (automated)	L099-PL	c

APPENDIX H: GROUNDWATER AND GROUND GAS MONITORING RESULTS

Tetra Tech

LANDGAS AND GROUNDWATER MONITORING RESULTS

Atlantic House, Greenwood Close, Cardiff Gate Business Park, Pontprennau, Cardiff, CF23 8RD.



Site Name: ELRS Port Talbot

Job No.: 784-B071864

Client: Neath Port Talbot County Borough Council

Date Monitored:

Monitoring Engineer:

Weather:

26/06/25

TR

Sun

EQUIPMENT USED

Type	Make	Serial	Last Calibrated
Gas Analyser	Landtec GA5000	G502044	May-25
Interface Meter	Solinst	122-004988-1	n/a

LANDGAS CONCENTRATIONS - INSTALLATION CONDITIONS

Exploratory Hole No	Peak		Steady									
	CH ₄ (% vol)	CO ₂ (% vol)	CH ₄ (% vol)	CO ₂ (% vol)	O ₂ (% vol)	BAL (%)	PID (ppm)	H ₂ S (ppm)	HCN (ppm)	CO (ppm)	Time	Remarks
WS01	0.0	0.8	0.0	0.8	20.1	79.1	nt	<1	nt	1	09:05	
WS02	0.0	3.6	0.0	3.6	16.1	80.3	nt	<1	nt	1	09:32	
WS03	0.0	2.0	0.0	2.0	17.8	80.1	nt	<1	nt	1	09:46	
CP01	0.0	0.6	0.0	0.6	20.0	79.4	nt	<1	nt	1	09:20	

LANDGAS - PHYSICAL PARAMETERS

Exploratory Hole No	Atmos Pressure (m bar)	Atmos Temp (°C)	BH Flow		BH Pressure		Remarks
			Peak (L/hr)	Steady (L/hr)	Peak (mbar)	Steady (mbar)	
WS01	1008	16.0	0.30	0.30	-0.10	-0.10	
WS02	1008	16.0	0.40	0.40	0.12	0.03	
WS03	1008	16.0	0.40	0.40	0.00	0.00	
CP01	1008	16.0	0.3	0.3	-0.05	-0.05	

AMBIENT ATMOSPHERIC CONDITIONS

Parameter	Before Monitoring	After Monitoring	ATMOSPHERIC PRESSURE CONDITIONS	
CH ₄ (% vol)	0.0	0.0	3 days prior (m bar)	1015
CO ₂ (% vol)	0.1	0.1	2 days prior (m bar)	1012
O ₂ (% vol)	21.1	21.0	1 day prior (m bar)	1012
PID (ppm)	nt	nt	during (m bar) am,midday,pm	1008/1014/1017
Atmos Press. (m bar)	1008	1009	1 day post (m bar)	1018

GROUNDWATER / NAPL - PHYSIO-CHEMICAL PARAMETERS

Exploratory Hole No	Water Surface (mbgl)	Base Depth (mbgl)	LNAPL Surface (mbgl)	DNAPL Surface (mbgl)	Water Quality Indicators								Remarks
					ORP (mV)	SPC (µs/cm)	C (µs/cm)	Ph (value)	DO (mg/L)	Dissolved Solids (ppt)	Resistivity (Ω-cm)	Temp (°C)	
WS01	DRY	1.28	nd	nd									
WS02	DRY	1.27	nd	nd									
WS03	DRY	0.95	nd	nd									
CP01	3.43	5.28	nd	nd									

Notes

nt = not tested

nd = not detected

Data Compiled by: TR

Data Checked by: NEB

Tetra Tech

LANDGAS AND GROUNDWATER MONITORING RESULTS

Atlantic House, Greenwood Close, Cardiff Gate Business Park, Pontprennau, Cardiff, CF23 8RD.



Site Name: ELRS Port Talbot

Job No.: 784-B071864

Client: Neath Port Talbot County Borough Council

Date Monitored:

Monitoring Engineer:

Weather:

02/07/25

RW

Sun

EQUIPMENT USED

Type	Make	Serial	Last Calibrated
Gas Analyser	Landtec GA5000	G502044	May-25
Interface Meter	Solinst	122-004988-1	n/a

LANDGAS CONCENTRATIONS - INSTALLATION CONDITIONS

Exploratory Hole No	Peak		Steady									
	CH ₄ (% vol)	CO ₂ (% vol)	CH ₄ (% vol)	CO ₂ (% vol)	O ₂ (% vol)	BAL (%)	PID (ppm)	H ₂ S (ppm)	HCN (ppm)	CO (ppm)	Time	Remarks
WS01	0.1	1.0	0.1	1.0	19.8	79.1	nt	<1	nt	<1	10:35	
WS02	0.1	2.6	0.1	2.4	18.4	79.2	nt	4	nt	<1	10:45	
WS03	0.1	2.6	0.1	1.8	19.8	79	nt	<1	nt	<1	11:00	
CP01	0.1	1.0	0.1	0.3	20.3	79.3	nt	1	nt	<1	10:50	

LANDGAS - PHYSICAL PARAMETERS

Exploratory Hole No	Atmos Pressure (m bar)	Atmos Temp (°C)	BH Flow		BH Pressure		Remarks
			Peak (L/hr)	Steady (L/hr)	Peak (mbar)	Steady (mbar)	
WS01	1018	20.0	0.2	0.2	0.07	0.05	
WS02	1018	20.0	0.2	0.2	-0.09	-0.03	
WS03	1020	20.0	0.1	0.1	0.02	0.02	
CP01	1020	20.0	0.2	0.2	0.03	0.03	

AMBIENT ATMOSPHERIC CONDITIONS

Parameter	Before Monitoring	After Monitoring
CH ₄ (% vol)	0.1	0.0
CO ₂ (% vol)	0.1	0.1
O ₂ (% vol)	20.9	20.9
PID (ppm)	nt	nt
Atmos Press. (m bar)	1018	1020

ATMOSPHERIC PRESSURE CONDITIONS

3 days prior (m bar)	1025
2 days prior (m bar)	1016
1 day prior (m bar)	1016
during (m bar) am,midday,pm	1020,1022,1020
1 day post (m bar)	1028

GROUNDWATER / NAPL - PHYSIO-CHEMICAL PARAMETERS

Exploratory Hole No	Water Surface (mbgl)	Base Depth (mbgl)	LNAPL Surface (mbgl)	DNAPL Surface (mbgl)	Water Quality Indicators								Remarks
					ORP (mV)	SPC (µs/cm)	C (µs/cm)	Ph (value)	DO (mg/L)	Dissolved Solids (ppt)	Resistivity (Ω-cm)	Temp (°C)	
WS01	DRY	1.28	nd	nd									
WS02	DRY	1.27	nd	nd									
WS03	DRY	0.95	nd	nd									
CP01	3.26	5.28	nd	nd									

Notes

nt = not tested

nd = not detected

Data Compiled by: RW

Data Checked by: NEB

Tetra Tech

LANDGAS AND GROUNDWATER MONITORING RESULTS

Atlantic House, Greenwood Close, Cardiff Gate Business Park, Pontprennau, Cardiff, CF23 8RD.



Site Name: ELRS Port Talbot
Job No.: 784-B071864
Client: Neath Port Talbot County Borough Council

Date Monitored:
Monitoring Engineer:
Weather:

10/07/25
 RW
 Sun

EQUIPMENT USED

Type	Make	Serial	Last Calibrated
Gas Analyser	Landtec GA5000	G502044	May-25
Interface Meter	Solinst	122-004988-1	n/a

LANDGAS CONCENTRATIONS - INSTALLATION CONDITIONS

Exploratory Hole No	Peak		Steady									
	CH ₄ (% vol)	CO ₂ (% vol)	CH ₄ (% vol)	CO ₂ (% vol)	O ₂ (% vol)	BAL (%)	PID (ppm)	H ₂ S (ppm)	HCN (ppm)	CO (ppm)	Time	Remarks
WS01	0.1	1.2	0.1	1.2	19.5	79.2	nt	<1	nt	1	10:15	
WS02	0.2	3.4	0.1	3.4	16.6	80	nt	<1	nt	<1	10:35	
WS03	0.2	1.3	0.1	1.3	20.3	79.5	nt	<1	nt	1	10:05	
CP01	0.1	2.3	0.1	2.3	16.9	80.7	nt	<1	nt	<1	10:25	

LANDGAS - PHYSICAL PARAMETERS

Exploratory Hole No	Atmos Pressure (m bar)	Atmos Temp (°C)	BH Flow		BH Pressure		Remarks
			Peak (L/hr)	Steady (L/hr)	Peak (mbar)	Steady (mbar)	
WS01	1022	22.0	-0.3	-0.3	-0.10	-0.1	
WS02	1022	22.0	0.5	0.5	0.09	0.09	
WS03	1022	22.0	0.0	0.0	-0.15	-0.15	
CP01	1022	22.0	-0.1	-0.1	0.02	0.02	

AMBIENT ATMOSPHERIC CONDITIONS

Parameter	Before Monitoring	After Monitoring	ATMOSPHERIC PRESSURE CONDITIONS	
CH ₄ (% vol)	0.0	0.0	3 days prior (m bar)	1015
CO ₂ (% vol)	0.1	0.1	2 days prior (m bar)	1020
O ₂ (% vol)	20.3	20.3	1 day prior (m bar)	1022
PID (ppm)	nt	nt	during (m bar) am,midday,pm	1023/1023/1023
Atmos Press. (m bar)	1022	1022	1 day post (m bar)	1021

GROUNDWATER / NAPL - PHYSIO-CHEMICAL PARAMETERS

Exploratory Hole No	Water Surface (mbgl)	Base Depth (mbgl)	LNAPL Surface (mbgl)	DNAPL Surface (mbgl)	Water Quality Indicators								Remarks
					ORP (mV)	SPC (µs/cm)	C (µs/cm)	Ph (value)	DO (mg/L)	Dissolved Solids (ppt)	Resistivity (Ω-cm)	Temp (°C)	
WS01	DRY	1.28	nd	nd									
WS02	DRY	1.27	nd	nd									
WS03	DRY	0.95	nd	nd									
CP01	3.23	5.28	nd	nd									

Notes

nt = not tested
 nd = not detected

Data Compiled by: RW
 Data Checked by: NEB

APPENDIX I: CIRIA C552 RISK METHODOLOGY

The following tables are derived from CIRIA C552 and have been used to define the risk rating presented in the Qualitative Risk Assessment matrix.

Classification of consequence

Classification	Definition
Severe	Short term (acute) risk to human health likely to result in 'significant harm' as defined by the Environment Protection Act 1990, Part IIA. Short term risk of pollution (note; Water Resources Act contains no scope for considering significant pollution) of sensitive water resource. Catastrophic damage to building/property. A short-term risk to a particular ecosystem, or organism forming part of such ecosystem. (Note the definitions of ecological systems within the Draft Circular on Contaminated Land DETR, 2000).
Medium	Chronic damage to human health ('significant harm', as defined In DETR, 2000). Pollution of sensitive water resources (note; Water Resources Act contains no scope for considering significant pollution). A significant change in a particular ecosystem, or an organism forming part of such an ecosystem. (Note the definitions of ecological systems within the Draft Circular on Contaminated Land DETR, 2000).
Mild	Pollution of non-sensitive water resources. Significant damage to crops, buildings, structures and services ('significant harm', as defined In DETR, 2000). Damage to sensitive buildings/structures/services or the environment.
Minor	Harm, although not necessarily significant harm, which may result in a financial loss, or expenditure to resolve. Non-permanent health effects to human health (easily prevented by means such as personal protective clothing etc). Easily repairable effects of damage to buildings, structures and services.

Classification of probability

Classification	Definition
High likelihood	There is a pollution linkage and an event that either appears very likely in the short term and almost inevitable over the long term or there is evidence at the receptor of harm or pollution.
Likely	There is a pollutant linkage and all the elements are present and in the right place, which means that it is probable that an event will occur. Circumstances are such that an event is not inevitable, but possible in the short term and likely over the long term.
Low likelihood	There is a pollution linkage and circumstances are possible under which an event could occur. However, it is by no means certain that even over a longer period that such an event would take place, and is even less likely in the shorter term.
Unlikely	There is a pollution linkage but circumstances are such that it is improbable that an event would occur even in the very long term.

Matrix of consequence against probability to gain a risk classification

		Consequence			
		Severe	Medium	Mild	Minor
Probability	High Likelihood	Very High Risk	High Risk	Moderate Risk	Moderate/Low Risk
	Likely	High Risk	Moderate Risk	Moderate/Low Risk	Low Risk
	Low likelihood	Moderate Risk	Moderate/Low Risk	Low Risk	Very Low Risk
	Unlikely	Moderate/Low Risk	Low Risk	Very Low Risk	Very Low Risk