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e: Kalex Group

Analytical Report Number : 23-31942

Replaces Analytical Report Number: 23-31942, issue no. 1

Additional analysis undertaken.

Analysis Asbestos undertaken for samples with symbol ^ as per client's request

Date Sampled added for all samples as per client's request

Project / Site name:	Ashley Rd	Samples received on:	04/05/2023
Your job number:	LQ1139	Samples instructed on/ Analysis started on:	04/05/2023
Your order number:		Analysis completed by:	19/05/2023
Report Issue Number:	2	Report issued on:	19/05/2023
Samples Analysed:	16 soil samples		



Signed:

Elżbieta Suchy
Junior 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

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

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: 23-31942
Project / Site name: Ashley Rd

Lab Sample Number				2668728	2668729	2668730	2668731	2668732
Sample Reference				SP/0405/1	SP/0405/2	SP/0405/3	SP/0405/4	SP/0405/5
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				04/05/2023	04/05/2023	04/05/2023	04/05/2023	04/05/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	-	-	-	-	-
Moisture Content	%	0.01	NONE	-	-	-	-	-
Total mass of sample received	kg	0.001	NONE	-	-	-	-	-

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	SCA	SCA	SCA	SCA	SCA

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	-	-	-	-	-
Total Cyanide	mg/kg	1	MCERTS	-	-	-	-	-
Free Cyanide	mg/kg	1	MCERTS	-	-	-	-	-
Total Sulphate as SO ₄	mg/kg	50	MCERTS	-	-	-	-	-
Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	mg/kg	2.5	MCERTS	-	-	-	-	-
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	-	-	-	-	-
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	-	-	-	-	-
Sulphide	mg/kg	1	NONE	-	-	-	-	-
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	-	-	-	-	-

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	-	-	-	-	-
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Speciated PAHs

Naphthalene	mg/kg	0.05	NONE	-	-	-	-	-
Acenaphthylene	mg/kg	0.05	NONE	-	-	-	-	-
Acenaphthene	mg/kg	0.05	NONE	-	-	-	-	-
Fluorene	mg/kg	0.05	NONE	-	-	-	-	-
Phenanthrene	mg/kg	0.05	NONE	-	-	-	-	-
Anthracene	mg/kg	0.05	NONE	-	-	-	-	-
Fluoranthene	mg/kg	0.05	NONE	-	-	-	-	-
Pyrene	mg/kg	0.05	NONE	-	-	-	-	-
Benzo(a)anthracene	mg/kg	0.05	NONE	-	-	-	-	-
Chrysene	mg/kg	0.05	NONE	-	-	-	-	-
Benzo(b)fluoranthene	mg/kg	0.05	NONE	-	-	-	-	-
Benzo(k)fluoranthene	mg/kg	0.05	NONE	-	-	-	-	-
Benzo(a)pyrene	mg/kg	0.05	NONE	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	NONE	-	-	-	-	-
Dibenz(a,h)anthracene	mg/kg	0.05	NONE	-	-	-	-	-
Benzo(ghi)perylene	mg/kg	0.05	NONE	-	-	-	-	-

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	NONE	-	-	-	-	-
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Analytical Report Number: 23-31942
Project / Site name: Ashley Rd

Lab Sample Number	2668728	2668729	2668730	2668731	2668732
Sample Reference	SP/0405/1	SP/0405/2	SP/0405/3	SP/0405/4	SP/0405/5
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled	04/05/2023	04/05/2023	04/05/2023	04/05/2023	04/05/2023
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		

Heavy Metals / Metalloids

Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	-	-	-	-	-
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	-	-
Barium (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	-	-
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	-	-	-	-	-
Boron (water soluble)	mg/kg	0.2	MCERTS	-	-	-	-	-
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	-	-	-	-	-
Chromium (hexavalent)	mg/kg	1.8	MCERTS	-	-	-	-	-
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	-	-
Copper (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	-	-
Lead (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	-	-
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	-	-	-	-	-
Molybdenum (aqua regia extractable)	mg/kg	0.25	MCERTS	-	-	-	-	-
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	-	-
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	-	-
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	-	-
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	-	-

Monoaromatics & Oxygenates

Benzene	µg/kg	5	NONE	-	-	-	-	-
Toluene	µg/kg	5	NONE	-	-	-	-	-
Ethylbenzene	µg/kg	5	NONE	-	-	-	-	-
p & m-xylene	µg/kg	5	NONE	-	-	-	-	-
o-xylene	µg/kg	5	NONE	-	-	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	NONE	-	-	-	-	-

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6 HS_ID_AL	mg/kg	0.001	NONE	-	-	-	-	-
TPH-CWG - Aliphatic >EC6 - EC8 HS_ID_AL	mg/kg	0.001	NONE	-	-	-	-	-
TPH-CWG - Aliphatic >EC8 - EC10 HS_ID_AL	mg/kg	0.001	NONE	-	-	-	-	-
TPH-CWG - Aliphatic >EC10 - EC12 EH_CU_ID_AL	mg/kg	1	NONE	-	-	-	-	-
TPH-CWG - Aliphatic >EC12 - EC16 EH_CU_ID_AL	mg/kg	2	NONE	-	-	-	-	-
TPH-CWG - Aliphatic >EC16 - EC21 EH_CU_ID_AL	mg/kg	8	NONE	-	-	-	-	-
TPH-CWG - Aliphatic >EC21 - EC35 EH_CU_ID_AL	mg/kg	8	NONE	-	-	-	-	-
TPH-CWG - Aliphatic (EC5 - EC35) EH_CU+HS_ID_AL	mg/kg	10	NONE	-	-	-	-	-

TPH-CWG - Aromatic >EC5 - EC7 HS_ID_AR	mg/kg	0.001	NONE	-	-	-	-	-
TPH-CWG - Aromatic >EC7 - EC8 HS_ID_AR	mg/kg	0.001	NONE	-	-	-	-	-
TPH-CWG - Aromatic >EC8 - EC10 HS_ID_AR	mg/kg	0.001	NONE	-	-	-	-	-
TPH-CWG - Aromatic >EC10 - EC12 EH_CU_ID_AR	mg/kg	1	NONE	-	-	-	-	-
TPH-CWG - Aromatic >EC12 - EC16 EH_CU_ID_AR	mg/kg	2	NONE	-	-	-	-	-
TPH-CWG - Aromatic >EC16 - EC21 EH_CU_ID_AR	mg/kg	10	NONE	-	-	-	-	-
TPH-CWG - Aromatic >EC21 - EC35 EH_CU_ID_AR	mg/kg	10	NONE	-	-	-	-	-
TPH-CWG - Aromatic (EC5 - EC35) EH_CU+HS_ID_AR	mg/kg	10	NONE	-	-	-	-	-

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

Analytical Report Number: 23-31942
Project / Site name: Ashley Rd

Lab Sample Number				2668733^	2668734	2668735^	2668736	2668737^
Sample Reference				STP1	STP1	STP2	STP2	STP3
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.20-0.50	1.20-1.50	0.20-0.50	1.30-1.50	0.20-0.40
Date Sampled				04/05/2023	04/05/2023	04/05/2023	04/05/2023	04/05/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	20	18	15	8.8	14
Total mass of sample received	kg	0.001	NONE	0.9	0.9	0.9	0.9	0.9

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	-	Not-detected	-	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	JBH	N/A	JBH	N/A	JBH

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	7.4	6.8	7.6	7.8	7.4
Total Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Free Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Sulphate as SO ₄	mg/kg	50	MCERTS	1200	680	3100	420	1600
Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	mg/kg	2.5	MCERTS	630	400	1600	310	990
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.31	0.2	0.78	0.15	0.5
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	314	198	776	154	496
Sulphide	mg/kg	1	NONE	1.9	< 1.0	6	< 1.0	< 1.0
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	1.7	0.5	2	0.2	1.3

Total Phenols

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

Naphthalene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	NONE	0.19	< 0.05	0.16	< 0.05	0.15
Anthracene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	NONE	0.36	< 0.05	0.41	< 0.05	0.37
Pyrene	mg/kg	0.05	NONE	0.35	< 0.05	0.38	< 0.05	0.35
Benzo(a)anthracene	mg/kg	0.05	NONE	0.25	< 0.05	0.26	< 0.05	0.23
Chrysene	mg/kg	0.05	NONE	0.23	< 0.05	0.25	< 0.05	0.23
Benzo(b)fluoranthene	mg/kg	0.05	NONE	0.32	< 0.05	0.36	< 0.05	0.29
Benzo(k)fluoranthene	mg/kg	0.05	NONE	0.12	< 0.05	0.13	< 0.05	0.12
Benzo(a)pyrene	mg/kg	0.05	NONE	0.24	< 0.05	0.27	< 0.05	0.22
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	NONE	0.15	< 0.05	0.18	< 0.05	0.13
Dibenz(a,h)anthracene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	NONE	0.17	< 0.05	0.2	< 0.05	0.13

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	NONE	2.38	< 0.80	2.6	< 0.80	2.22
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Analytical Report Number: 23-31942
Project / Site name: Ashley Rd

Lab Sample Number				2668733^	2668734	2668735^	2668736	2668737^
Sample Reference				STP1	STP1	STP2	STP2	STP3
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.20-0.50	1.20-1.50	0.20-0.50	1.30-1.50	0.20-0.40
Date Sampled				04/05/2023	04/05/2023	04/05/2023	04/05/2023	04/05/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Heavy Metals / Metalloids								
Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	9.6	< 1.0	29	< 1.0	12
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	22	14	36	18	27
Barium (aqua regia extractable)	mg/kg	1	MCERTS	280	180	1000	94	540
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	1.7	1.3	2.2	0.83	1.8
Boron (water soluble)	mg/kg	0.2	MCERTS	4.2	4.5	7.2	1.1	4.7
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	2.1	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	1.8	MCERTS	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	26	40	41	28	34
Copper (aqua regia extractable)	mg/kg	1	MCERTS	410	31	510	21	320
Lead (aqua regia extractable)	mg/kg	1	MCERTS	750	44	1100	23	820
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	1.4	< 0.3	2.5	< 0.3	1.1
Molybdenum (aqua regia extractable)	mg/kg	0.25	MCERTS	2.3	0.73	3.7	0.62	3.1
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	26	34	43	32	29
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	48	68	54	53	58
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	610	100	2200	260	2000

Monoaromatics & Oxygenates

Benzene	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Toluene	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Ethylbenzene	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
p & m-xylene	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
o-xylene	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6 HS_1D_AL	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8 HS_1D_AL	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10 HS_1D_AL	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12 EH_CU_1D_AL	mg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16 EH_CU_1D_AL	mg/kg	2	NONE	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21 EH_CU_1D_AL	mg/kg	8	NONE	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35 EH_CU_1D_AL	mg/kg	8	NONE	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35) EH_CU+HS_1D_AL	mg/kg	10	NONE	< 10	< 10	< 10	< 10	< 10

TPH-CWG - Aromatic >EC5 - EC7 HS_1D_AR	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8 HS_1D_AR	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10 HS_1D_AR	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12 EH_CU_1D_AR	mg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16 EH_CU_1D_AR	mg/kg	2	NONE	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aromatic >EC16 - EC21 EH_CU_1D_AR	mg/kg	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >EC21 - EC35 EH_CU_1D_AR	mg/kg	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (EC5 - EC35) EH_CU+HS_1D_AR	mg/kg	10	NONE	< 10	< 10	< 10	< 10	< 10

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

Analytical Report Number: 23-31942
Project / Site name: Ashley Rd

Lab Sample Number				2668738	2668739^	2668740	2668741^	2668742
Sample Reference				STP3	STP5	STP5	STP15	STP15
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.00-1.40	0.25-0.50	1.00-1.40	0.40-0.60	1.20-1.50
Date Sampled				04/05/2023	04/05/2023	04/05/2023	04/05/2023	04/05/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)				Units	Limit of detection	Accreditation Status		
Stone Content				%	0.1	NONE	< 0.1	< 0.1
Moisture Content				%	0.01	NONE	15	14
Total mass of sample received				kg	0.001	NONE	0.9	0.9

Asbestos in Soil	Type	N/A	ISO 17025	-	Not-detected	-	Not-detected	-
Asbestos Analyst ID	N/A	N/A	N/A	N/A	JBH	N/A	JBH	N/A

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	6.7	10	6.8	8	7.7
Total Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Free Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Sulphate as SO ₄	mg/kg	50	MCERTS	1200	3800	700	5500	270
Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	mg/kg	2.5	MCERTS	710	1800	510	3500	210
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.36	0.92	0.25	1.7	0.11
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	357	924	253	1740	106
Sulphide	mg/kg	1	NONE	< 1.0	2.3	< 1.0	14	1.1
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	0.4	1.3	0.2	1.3	0.2

Total Phenols

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

Naphthalene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	0.29
Acenaphthylene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	NONE	< 0.05	0.14	< 0.05	0.06	< 0.05
Anthracene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	NONE	< 0.05	0.28	< 0.05	0.17	< 0.05
Pyrene	mg/kg	0.05	NONE	< 0.05	0.27	< 0.05	0.19	< 0.05
Benzo(a)anthracene	mg/kg	0.05	NONE	< 0.05	0.17	< 0.05	0.15	< 0.05
Chrysene	mg/kg	0.05	NONE	< 0.05	0.17	< 0.05	0.19	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	NONE	< 0.05	0.19	< 0.05	0.35	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	NONE	< 0.05	0.08	< 0.05	0.11	< 0.05
Benzo(a)pyrene	mg/kg	0.05	NONE	< 0.05	0.15	< 0.05	0.23	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	NONE	< 0.05	0.09	< 0.05	0.19	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	NONE	< 0.05	0.1	< 0.05	0.24	< 0.05

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	NONE	< 0.80	1.64	< 0.80	1.88	< 0.80
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Analytical Report Number: 23-31942
Project / Site name: Ashley Rd

Lab Sample Number				2668738	2668739^	2668740	2668741^	2668742
Sample Reference				STP3	STP5	STP5	STP15	STP15
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.00-1.40	0.25-0.50	1.00-1.40	0.40-0.60	1.20-1.50
Date Sampled				04/05/2023	04/05/2023	04/05/2023	04/05/2023	04/05/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Heavy Metals / Metalloids								
Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	< 1.0	22	< 1.0	18	< 1.0
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	14	24	15	47	16
Barium (aqua regia extractable)	mg/kg	1	MCERTS	190	920	90	410	57
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	1.2	1.6	0.81	3.4	0.72
Boron (water soluble)	mg/kg	0.2	MCERTS	1.7	1.8	1.1	4.9	2.4
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	1.4	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	1.8	MCERTS	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	38	34	26	28	22
Copper (aqua regia extractable)	mg/kg	1	MCERTS	24	330	18	250	15
Lead (aqua regia extractable)	mg/kg	1	MCERTS	55	710	24	550	31
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	0.6	< 0.3	0.7	< 0.3
Molybdenum (aqua regia extractable)	mg/kg	0.25	MCERTS	0.54	2.2	0.58	6.2	2.6
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	33	45	26	45	20
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	61	46	47	60	41
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	100	1400	47	660	61

Monoaromatics & Oxygenates

Benzene	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Toluene	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Ethylbenzene	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
p & m-xylene	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
o-xylene	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6 HS_ID_AL	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8 HS_ID_AL	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10 HS_ID_AL	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12 EH_CU_ID_AL	mg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16 EH_CU_ID_AL	mg/kg	2	NONE	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21 EH_CU_ID_AL	mg/kg	8	NONE	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35 EH_CU_ID_AL	mg/kg	8	NONE	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35) EH_CU+HS_ID_AL	mg/kg	10	NONE	< 10	< 10	< 10	< 10	< 10

TPH-CWG - Aromatic >EC5 - EC7 HS_ID_AR	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8 HS_ID_AR	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10 HS_ID_AR	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12 EH_CU_ID_AR	mg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16 EH_CU_ID_AR	mg/kg	2	NONE	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aromatic >EC16 - EC21 EH_CU_ID_AR	mg/kg	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >EC21 - EC35 EH_CU_ID_AR	mg/kg	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (EC5 - EC35) EH_CU+HS_ID_AR	mg/kg	10	NONE	< 10	< 10	< 10	< 10	< 10

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

Analytical Report Number: 23-31942
Project / Site name: Ashley Rd

Lab Sample Number					2668872
Sample Reference					SP/0405/6
Sample Number					None Supplied
Depth (m)					None Supplied
Date Sampled					04/05/2023
Time Taken					None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		
Stone Content	%	0.1	NONE		-
Moisture Content	%	0.01	NONE		-
Total mass of sample received	kg	0.001	NONE		-

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	SCA

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	-
Total Cyanide	mg/kg	1	MCERTS	-
Free Cyanide	mg/kg	1	MCERTS	-
Total Sulphate as SO ₄	mg/kg	50	MCERTS	-
Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	mg/kg	2.5	MCERTS	-
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	-
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	-
Sulphide	mg/kg	1	NONE	-
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	-

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	-
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Speciated PAHs

Naphthalene	mg/kg	0.05	NONE	-
Acenaphthylene	mg/kg	0.05	NONE	-
Acenaphthene	mg/kg	0.05	NONE	-
Fluorene	mg/kg	0.05	NONE	-
Phenanthrene	mg/kg	0.05	NONE	-
Anthracene	mg/kg	0.05	NONE	-
Fluoranthene	mg/kg	0.05	NONE	-
Pyrene	mg/kg	0.05	NONE	-
Benzo(a)anthracene	mg/kg	0.05	NONE	-
Chrysene	mg/kg	0.05	NONE	-
Benzo(b)fluoranthene	mg/kg	0.05	NONE	-
Benzo(k)fluoranthene	mg/kg	0.05	NONE	-
Benzo(a)pyrene	mg/kg	0.05	NONE	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	NONE	-
Dibenz(a,h)anthracene	mg/kg	0.05	NONE	-
Benzo(ghi)perylene	mg/kg	0.05	NONE	-

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	NONE	-
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Analytical Report Number: 23-31942
Project / Site name: Ashley Rd

Lab Sample Number				2668872
Sample Reference				SP/0405/6
Sample Number				None Supplied
Depth (m)				None Supplied
Date Sampled				04/05/2023
Time Taken				None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status	
Heavy Metals / Metalloids				
Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	-
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	-
Barium (aqua regia extractable)	mg/kg	1	MCERTS	-
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	-
Boron (water soluble)	mg/kg	0.2	MCERTS	-
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	-
Chromium (hexavalent)	mg/kg	1.8	MCERTS	-
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	-
Copper (aqua regia extractable)	mg/kg	1	MCERTS	-
Lead (aqua regia extractable)	mg/kg	1	MCERTS	-
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	-
Molybdenum (aqua regia extractable)	mg/kg	0.25	MCERTS	-
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	-
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	-
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	-
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	-

Monoaromatics & Oxygenates

Benzene	µg/kg	5	NONE	-
Toluene	µg/kg	5	NONE	-
Ethylbenzene	µg/kg	5	NONE	-
p & m-xylene	µg/kg	5	NONE	-
o-xylene	µg/kg	5	NONE	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	NONE	-

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6 HS_ID_AL	mg/kg	0.001	NONE	-
TPH-CWG - Aliphatic >EC6 - EC8 HS_ID_AL	mg/kg	0.001	NONE	-
TPH-CWG - Aliphatic >EC8 - EC10 HS_ID_AL	mg/kg	0.001	NONE	-
TPH-CWG - Aliphatic >EC10 - EC12 EH_CU_ID_AL	mg/kg	1	NONE	-
TPH-CWG - Aliphatic >EC12 - EC16 EH_CU_ID_AL	mg/kg	2	NONE	-
TPH-CWG - Aliphatic >EC16 - EC21 EH_CU_ID_AL	mg/kg	8	NONE	-
TPH-CWG - Aliphatic >EC21 - EC35 EH_CU_ID_AL	mg/kg	8	NONE	-
TPH-CWG - Aliphatic (EC5 - EC35) EH_CU+HS_ID_AL	mg/kg	10	NONE	-

TPH-CWG - Aromatic >EC5 - EC7 HS_ID_AR	mg/kg	0.001	NONE	-
TPH-CWG - Aromatic >EC7 - EC8 HS_ID_AR	mg/kg	0.001	NONE	-
TPH-CWG - Aromatic >EC8 - EC10 HS_ID_AR	mg/kg	0.001	NONE	-
TPH-CWG - Aromatic >EC10 - EC12 EH_CU_ID_AR	mg/kg	1	NONE	-
TPH-CWG - Aromatic >EC12 - EC16 EH_CU_ID_AR	mg/kg	2	NONE	-
TPH-CWG - Aromatic >EC16 - EC21 EH_CU_ID_AR	mg/kg	10	NONE	-
TPH-CWG - Aromatic >EC21 - EC35 EH_CU_ID_AR	mg/kg	10	NONE	-
TPH-CWG - Aromatic (EC5 - EC35) EH_CU+HS_ID_AR	mg/kg	10	NONE	-

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

Analytical Report Number : 23-31942
Project / Site name: Ashley Rd

* 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 *
2668733	STP1	None Supplied	0.20-0.50	Brown clay and sand with clinker and gravel
2668734	STP1	None Supplied	1.20-1.50	Brown clay and sand with gravel.
2668735	STP2	None Supplied	0.20-0.50	Brown loam and clay with gravel and vegetation.
2668736	STP2	None Supplied	1.30-1.50	Brown clay and sand with gravel.
2668737	STP3	None Supplied	0.20-0.40	Brown clay and loam with gravel and vegetation.
2668738	STP3	None Supplied	1.00-1.40	Brown clay and sand with gravel.
2668739	STP5	None Supplied	0.25-0.50	Brown loam and clay with concrete.
2668740	STP5	None Supplied	1.00-1.40	Brown clay and sand with gravel.
2668741	STP15	None Supplied	0.40-0.60	Brown loam and sand with gravel and vegetation.
2668742	STP15	None Supplied	1.20-1.50	Brown clay and sand with gravel.

Analytical Report Number : 23-31942
Project / Site name: Ashley Rd

Water matrix abbreviations:

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS
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.	L038-PL	D	MCERTS
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	A001-PL	D	ISO 17025
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	L038-PL	D	MCERTS
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 (Skalar)	L080-PL	W	MCERTS
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/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 (skalar)	L080-PL	W	MCERTS
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	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
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode.	In-house method	L010-PL	D	NONE
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In house method.	L038-PL	D	MCERTS
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.	L019-UK/PL	D	NONE
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method.	L009-PL	D	MCERTS
BTEX and MTBE in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS. Individual components MCERTS accredited	In-house method based on USEPA8260	L073B-PL	W	NONE
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method with silica gel split/clean up.	L088/76-PL	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 : 23-31942
Project / Site name: Ashley Rd

Water matrix abbreviations:

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS

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

Analytical Report Number : 23-31942

Project / Site name: Ashley Rd

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 c - Holding time d - Headspace e - Temperature

Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
STP1	None Supplied	S	2668733	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
STP1	None Supplied	S	2668733	b	TPHCWG (Soil)	L088/76-PL	b
STP1	None Supplied	S	2668734	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
STP1	None Supplied	S	2668734	b	TPHCWG (Soil)	L088/76-PL	b
STP15	None Supplied	S	2668741	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
STP15	None Supplied	S	2668741	b	TPHCWG (Soil)	L088/76-PL	b
STP15	None Supplied	S	2668742	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
STP15	None Supplied	S	2668742	b	TPHCWG (Soil)	L088/76-PL	b
STP2	None Supplied	S	2668735	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
STP2	None Supplied	S	2668735	b	TPHCWG (Soil)	L088/76-PL	b
STP2	None Supplied	S	2668736	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
STP2	None Supplied	S	2668736	b	TPHCWG (Soil)	L088/76-PL	b
STP3	None Supplied	S	2668737	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
STP3	None Supplied	S	2668737	b	TPHCWG (Soil)	L088/76-PL	b
STP3	None Supplied	S	2668738	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
STP3	None Supplied	S	2668738	b	TPHCWG (Soil)	L088/76-PL	b
STP5	None Supplied	S	2668739	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
STP5	None Supplied	S	2668739	b	TPHCWG (Soil)	L088/76-PL	b
STP5	None Supplied	S	2668740	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
STP5	None Supplied	S	2668740	b	TPHCWG (Soil)	L088/76-PL	b



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e: Kalex Group

Analytical Report Number : 23-32267

Project / Site name: Ashley Rd

Samples received on: 05/05/2023

Your job number: LQ1139

**Samples instructed on/
Analysis started on:** 05/05/2023

Your order number:

Analysis completed by: 10/05/2023

Report Issue Number: 1

Report issued on: 11/05/2023

Samples Analysed: 1 bulk sample - 2 soil samples

Signed:

Anna Goc
Junior 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

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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: 23-32267
Project / Site name: Ashley Rd

Lab Sample Number				2670539	2672422
Sample Reference				SP/0505/01	SP/0505/02
Sample Number				None Supplied	soil
Depth (m)				None Supplied	None Supplied
Date Sampled				05/05/2023	05/05/2023
Time Taken				None Supplied	None Supplied
Analytical Parameter (Soil Analysis)				Units	Limit of detection
				Accreditation Status	

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	Chrysotile, Amosite- Loose Fibres	Chrysotile- Loose Fibres
Asbestos in Soil	Type	N/A	ISO 17025	Detected	Detected
Asbestos Analyst ID	N/A	N/A	N/A	JSW	JSW

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



Analytical Report Number: 23-32267
Project / Site name: Ashley Rd

Lab Sample Number				2670540
Sample Reference				SP/0505/02
Sample Number				bulk
Depth (m)				None Supplied
Date Sampled				05/05/2023
Time Taken				None Supplied
Analytical Parameter (Bulk Analysis)	Units	Limit of detection	Accreditation Status	

Asbestos Identification	Type	N/A	ISO 17025	No Asbestos Detected
Asbestos Analyst ID	N/A	N/A	N/A	ASE

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



Analytical Report Number : 23-32267
Project / Site name: Ashley Rd

Water matrix abbreviations:
Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (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	A001-PL	D	ISO 17025
Asbestos identification in Bulks	Asbestos Identification in bulk material with the use of polarised light microscopy in conjunction with dispersion staining techniques.	In house method based on HSG 248	A001-PL	W	ISO 17025

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.



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e: Kalex Group

Analytical Report Number : 23-32271

Project / Site name: Ashley Road

Samples received on: 05/05/2023

Your job number: LQ1139

**Samples instructed on/
Analysis started on:** 05/05/2023

Your order number:

Analysis completed by: 12/05/2023

Report Issue Number: 1

Report issued on: 15/05/2023

Samples Analysed: 10 soil samples

Signed:

Izabela Wójcik

Izabela Wójcik
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

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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: 23-32271
Project / Site name: Ashley Road

Lab Sample Number				2670552	2670553	2670554	2670555	2670556
Sample Reference				STP9	STP9	STP14	STP14	STP13
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.50-1.00	1.50-1.70	0.50-1.00	1.70-2.00	0.30-0.80
Date Sampled				05/05/2023	05/05/2023	05/05/2023	05/05/2023	05/05/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	18	18	13	17	11
Total mass of sample received	kg	0.001	NONE	1	1	1	1	1

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	-	Not-detected	-	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	EWS	N/A	EWS	N/A	EWS

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	7.7	6.8	7.6	7.6	8.7
Total Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Free Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Sulphate as SO4	mg/kg	50	MCERTS	5600	800	5100	840	6500
Water Soluble Sulphate as SO4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	1700	430	1800	660	2600
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.83	0.22	0.9	0.33	1.3
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	831	217	899	328	1290
Sulphide	mg/kg	1	NONE	30	< 1.0	33	< 1.0	30
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	3.9	0.8	3.5	0.4	1.5

Total Phenols

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

Naphthalene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	NONE	< 0.05	< 0.05	0.1	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	NONE	< 0.05	< 0.05	0.18	< 0.05	< 0.05
Fluorene	mg/kg	0.05	NONE	< 0.05	< 0.05	0.2	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	NONE	0.15	< 0.05	3.8	< 0.05	0.11
Anthracene	mg/kg	0.05	NONE	< 0.05	< 0.05	0.93	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	NONE	0.38	< 0.05	7.2	< 0.05	0.13
Pyrene	mg/kg	0.05	NONE	0.33	< 0.05	6.2	< 0.05	0.1
Benzo(a)anthracene	mg/kg	0.05	NONE	0.2	< 0.05	3.9	< 0.05	0.1
Chrysene	mg/kg	0.05	NONE	0.25	< 0.05	3.6	< 0.05	0.14
Benzo(b)fluoranthene	mg/kg	0.05	NONE	0.3	< 0.05	4.4	< 0.05	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	NONE	0.13	< 0.05	1.7	< 0.05	< 0.05
Benzo(a)pyrene	mg/kg	0.05	NONE	0.21	< 0.05	3.4	< 0.05	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	NONE	0.14	< 0.05	1.8	< 0.05	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	NONE	< 0.05	< 0.05	0.43	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	NONE	0.17	< 0.05	2.1	< 0.05	< 0.05

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	NONE	2.26	< 0.80	39.9	< 0.80	< 0.80
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Analytical Report Number: 23-32271
Project / Site name: Ashley Road

Lab Sample Number	2670552				2670553	2670554	2670555	2670556
Sample Reference	STP9				STP9	STP14	STP14	STP13
Sample Number	None Supplied				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	0.50-1.00				1.50-1.70	0.50-1.00	1.70-2.00	0.30-0.80
Date Sampled	05/05/2023				05/05/2023	05/05/2023	05/05/2023	05/05/2023
Time Taken	None Supplied				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					

Heavy Metals / Metalloids

Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	70	< 1.0	82	< 1.0	43
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	160	10	100	21	130
Barium (aqua regia extractable)	mg/kg	1	MCERTS	750	100	880	110	620
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	13	0.86	8	1.3	8.8
Boron (water soluble)	mg/kg	0.2	MCERTS	6.6	3	6.1	3.8	4.3
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	1.8	MCERTS	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	71	27	49	40	56
Copper (aqua regia extractable)	mg/kg	1	MCERTS	4700	28	1400	30	2700
Lead (aqua regia extractable)	mg/kg	1	MCERTS	1800	72	2400	62	1600
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Molybdenum (aqua regia extractable)	mg/kg	0.25	MCERTS	24	1.4	14	1.4	16
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	210	15	120	25	130
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	140	45	93	71	98
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	3300	73	2100	65	1700

Monoaromatics & Oxygenates

Benzene	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Toluene	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Ethylbenzene###	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
p & m-xylene###	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
o-xylene###	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6 _{HS_1D_AL}	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8 _{HS_1D_AL}	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10 _{HS_1D_AL}	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12 _{EH_CU_1D_AL}	mg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	1.9
TPH-CWG - Aliphatic >EC12 - EC16 _{EH_CU_1D_AL}	mg/kg	2	NONE	< 2.0	< 2.0	2.3	< 2.0	3.4
TPH-CWG - Aliphatic >EC16 - EC21 _{EH_CU_1D_AL}	mg/kg	8	NONE	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35 _{EH_CU_1D_AL}	mg/kg	8	NONE	< 8.0	< 8.0	32	< 8.0	13
TPH-CWG - Aliphatic (EC5 - EC35) _{EH_CU+HS_1D_AL}	mg/kg	10	NONE	< 10	< 10	39	< 10	22

TPH-CWG - Aromatic >EC5 - EC7 _{HS_1D_AR}	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8 _{HS_1D_AR}	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10 _{HS_1D_AR}	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12 _{EH_CU_1D_AR}	mg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16 _{EH_CU_1D_AR}	mg/kg	2	NONE	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aromatic >EC16 - EC21 _{EH_CU_1D_AR}	mg/kg	10	NONE	< 10	< 10	20	< 10	< 10
TPH-CWG - Aromatic >EC21 - EC35 _{EH_CU_1D_AR}	mg/kg	10	NONE	< 10	< 10	42	< 10	< 10
TPH-CWG - Aromatic (EC5 - EC35) _{EH_CU+HS_1D_AR}	mg/kg	10	NONE	< 10	< 10	64	< 10	< 10

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

Analytical Report Number: 23-32271
Project / Site name: Ashley Road

Lab Sample Number				2670557	2670558	2670559	2670560	2670561
Sample Reference				STP13	STP11	STP11	STP7	STP7
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.50-1.90	0.20-0.50	0.80-1.10	0.20-0.60	1.20-1.40
Date Sampled				05/05/2023	05/05/2023	05/05/2023	05/05/2023	05/05/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	25	17	16	17	11
Total mass of sample received	kg	0.001	NONE	1	1	1	1	1

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	-	Not-detected	-
Asbestos Analyst ID	N/A	N/A	N/A	EWS	EWS	N/A	EWS	N/A

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	7.4	7.3	7.8	7.9	7.4
Total Cyanide	mg/kg	1	MCERTS	< 1.0	1.6	< 1.0	< 1.0	< 1.0
Free Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Sulphate as SO4	mg/kg	50	MCERTS	5000	18000	1100	19000	950
Water Soluble Sulphate as SO4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	2100	3300	710	3200	670
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	1	1.6	0.35	1.6	0.34
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	1040	1640	354	1590	337
Sulphide	mg/kg	1	NONE	33	45	< 1.0	25	36
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	6.9	3.1	0.4	2.5	0.2

Total Phenols

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

Naphthalene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	NONE	0.13	0.24	0.11	0.3	< 0.05
Anthracene	mg/kg	0.05	NONE	< 0.05	0.07	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	NONE	0.48	0.64	0.15	0.49	< 0.05
Pyrene	mg/kg	0.05	NONE	0.54	0.63	0.12	0.46	< 0.05
Benzo(a)anthracene	mg/kg	0.05	NONE	0.36	0.48	< 0.05	0.26	< 0.05
Chrysene	mg/kg	0.05	NONE	0.63	0.58	< 0.05	0.32	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	NONE	0.47	0.73	< 0.05	0.33	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	NONE	0.21	0.28	< 0.05	0.17	< 0.05
Benzo(a)pyrene	mg/kg	0.05	NONE	0.24	0.54	< 0.05	0.25	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	NONE	0.19	0.31	< 0.05	0.18	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	NONE	0.19	0.36	< 0.05	< 0.05	< 0.05

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	NONE	3.44	4.86	< 0.80	2.76	< 0.80
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Analytical Report Number: 23-32271
Project / Site name: Ashley Road

Lab Sample Number				2670557	2670558	2670559	2670560	2670561
Sample Reference				STP13	STP11	STP11	STP7	STP7
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.50-1.90	0.20-0.50	0.80-1.10	0.20-0.60	1.20-1.40
Date Sampled				05/05/2023	05/05/2023	05/05/2023	05/05/2023	05/05/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Heavy Metals / Metalloids								
Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	50	25	< 1.0	30	< 1.0
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	150	75	19	77	16
Barium (aqua regia extractable)	mg/kg	1	MCERTS	660	340	140	370	91
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	13	4.9	1.5	6.3	0.91
Boron (water soluble)	mg/kg	0.2	MCERTS	11	12	4	23	5.4
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	1.8	MCERTS	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	45	33	42	35	28
Copper (aqua regia extractable)	mg/kg	1	MCERTS	640	360	27	500	19
Lead (aqua regia extractable)	mg/kg	1	MCERTS	2600	890	45	940	23
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	1.3	< 0.3	1.1	< 0.3
Molybdenum (aqua regia extractable)	mg/kg	0.25	MCERTS	22	9.3	1.4	12	0.87
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	130	55	29	78	29
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	120	79	76	83	53
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	1600	580	72	490	43

Monoaromatics & Oxygenates

Benzene	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Toluene	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Ethylbenzene###	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
p & m-xylene###	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
o-xylene###	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6 _{HS_1D_AL}	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8 _{HS_1D_AL}	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10 _{HS_1D_AL}	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12 _{EH_CU_1D_AL}	mg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16 _{EH_CU_1D_AL}	mg/kg	2	NONE	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21 _{EH_CU_1D_AL}	mg/kg	8	NONE	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35 _{EH_CU_1D_AL}	mg/kg	8	NONE	< 8.0	9.2	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35) _{EH_CU+HS_1D_AL}	mg/kg	10	NONE	< 10	11	< 10	< 10	< 10

TPH-CWG - Aromatic >EC5 - EC7 _{HS_1D_AR}	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8 _{HS_1D_AR}	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10 _{HS_1D_AR}	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12 _{EH_CU_1D_AR}	mg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16 _{EH_CU_1D_AR}	mg/kg	2	NONE	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aromatic >EC16 - EC21 _{EH_CU_1D_AR}	mg/kg	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >EC21 - EC35 _{EH_CU_1D_AR}	mg/kg	10	NONE	< 10	23	< 10	< 10	< 10
TPH-CWG - Aromatic (EC5 - EC35) _{EH_CU+HS_1D_AR}	mg/kg	10	NONE	< 10	28	< 10	< 10	< 10

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



Analytical Report Number : 23-32271
Project / Site name: Ashley Road

* 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 *
2670552	STP9	None Supplied	0.50-1.00	Brown loam and sand with gravel and clinker
2670553	STP9	None Supplied	1.50-1.70	Brown clay and sand with gravel.
2670554	STP14	None Supplied	0.50-1.00	Brown loam and sand with gravel and clinker
2670555	STP14	None Supplied	1.70-2.00	Brown clay and sand with gravel.
2670556	STP13	None Supplied	0.30-0.80	Brown loam and sand with gravel and clinker
2670557	STP13	None Supplied	1.50-1.90	Brown loam and sand with clinker and glass.
2670558	STP11	None Supplied	0.20-0.50	Brown loam and sand with gravel.
2670559	STP11	None Supplied	0.80-1.10	Brown clay and sand with gravel.
2670560	STP7	None Supplied	0.20-0.60	Brown clay and sand with gravel.
2670561	STP7	None Supplied	1.20-1.40	Brown clay and sand with gravel.

Analytical Report Number : 23-32271
Project / Site name: Ashley Road

Water matrix abbreviations:

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS
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.	L038-PL	D	MCERTS
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	A001-PL	D	ISO 17025
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	L038-PL	D	MCERTS
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 (Skalar)	L080-PL	W	MCERTS
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/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 (skalar)	L080-PL	W	MCERTS
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	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
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode.	In-house method	L010-PL	D	NONE
Total sulphate (as SO ₄ in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In house method.	L038-PL	D	MCERTS
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.	L019-UK/PL	D	NONE
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method.	L009-PL	D	MCERTS
BTEX and MTBE in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS. Individual components MCERTS accredited	In-house method based on USEPA8260	L073B-PL	W	NONE
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method with silica gel split/clean up.	L088/76-PL	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 : 23-32271
Project / Site name: Ashley Road

Water matrix abbreviations:
Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS

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 - understore 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 this result; other checks applied prior to reporting the data have been accepted. The result should be considered as being deviating and may be compromised.

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e: Kalex Group

Analytical Report Number : 23-32649

Project / Site name:	Ashley Road	Samples received on:	09/05/2023
Your job number:	LQ1139	Samples instructed on/ Analysis started on:	09/05/2023
Your order number:		Analysis completed by:	17/05/2023
Report Issue Number:	1	Report issued on:	17/05/2023
Samples Analysed:	4 soil samples		



Signed:

Joanna Wawrzeczko
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

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

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: 23-32649
Project / Site name: Ashley Road

Lab Sample Number	2672622			2672623	2672624	2672625
Sample Reference	STP6			STP6	STP4	STP4
Sample Number	None Supplied			None Supplied	None Supplied	None Supplied
Depth (m)	0.50-0.90			1.00-1.20	0.20-0.30	1.00-1.20
Date Sampled	05/05/2023			05/05/2023	05/05/2023	05/05/2023
Time Taken	None Supplied			None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status			
Stone Content	%	0.1	NONE	40	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	8.2	16	8.2
Total mass of sample received	kg	0.001	NONE	0.7	0.7	0.7

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	-	Not-detected	-
Asbestos Analyst ID	N/A	N/A	N/A	JBH	N/A	JBH	N/A

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	9.5	7.3	10.7	8.1
Total Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	3.1	< 1.0
Free Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
Total Sulphate as SO4	mg/kg	50	MCERTS	5700	630	12000	730
Water Soluble Sulphate as SO4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	2900	400	3700	440
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	1.4	0.2	1.9	0.22
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	1440	201	1870	220
Sulphide	mg/kg	1	NONE	25	< 1.0	17	< 1.0
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	1.5	0.6	1.4	0.5

Total Phenols

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

Naphthalene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	NONE	0.07	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	NONE	0.07	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	NONE	1	< 0.05	1.3	< 0.05
Anthracene	mg/kg	0.05	NONE	0.23	< 0.05	0.2	< 0.05
Fluoranthene	mg/kg	0.05	NONE	2.7	< 0.05	3.2	0.09
Pyrene	mg/kg	0.05	NONE	2.5	< 0.05	3.2	0.09
Benzo(a)anthracene	mg/kg	0.05	NONE	1.4	< 0.05	2	< 0.05
Chrysene	mg/kg	0.05	NONE	1.6	< 0.05	2.3	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	NONE	2	< 0.05	3.4	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	NONE	0.67	< 0.05	1.1	< 0.05
Benzo(a)pyrene	mg/kg	0.05	NONE	1.4	< 0.05	1.9	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	NONE	0.97	< 0.05	1.6	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	NONE	0.27	< 0.05	0.47	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	NONE	1.2	< 0.05	1.9	< 0.05

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	NONE	16	< 0.80	22.7	< 0.80
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Analytical Report Number: 23-32649
Project / Site name: Ashley Road

Lab Sample Number	2672622	2672623	2672624	2672625
Sample Reference	STP6	STP6	STP4	STP4
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	0.50-0.90	1.00-1.20	0.20-0.30	1.00-1.20
Date Sampled	05/05/2023	05/05/2023	05/05/2023	05/05/2023
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status	

Heavy Metals / Metalloids

Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	12	3	12	2.4
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	26	9.4	35	11
Barium (aqua regia extractable)	mg/kg	1	MCERTS	560	150	330	88
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	2.4	1.5	1.6	0.86
Boron (water soluble)	mg/kg	0.2	MCERTS	5.4	5	1.2	1.4
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	1.1	< 0.2	1.7	< 0.2
Chromium (hexavalent)	mg/kg	1.8	MCERTS	< 1.8	< 1.8	< 1.8	< 1.8
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	31	41	29	27
Copper (aqua regia extractable)	mg/kg	1	MCERTS	290	34	460	24
Lead (aqua regia extractable)	mg/kg	1	MCERTS	750	31	1600	57
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	1.3	< 0.3	1.8	< 0.3
Molybdenum (aqua regia extractable)	mg/kg	0.25	MCERTS	4.8	1.6	3.3	0.86
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	40	31	39	17
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	54	73	71	48
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	700	72	630	56

Monoaromatics & Oxygenates

Benzene	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0
Toluene	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0
Ethylbenzene	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0
p & m-xylene	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0
o-xylene	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6 _{HS_1D_AL}	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8 _{HS_1D_AL}	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10 _{HS_1D_AL}	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12 _{EH_CU_1D_AL}	mg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16 _{EH_CU_1D_AL}	mg/kg	2	NONE	< 2.0	< 2.0	4	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21 _{EH_CU_1D_AL}	mg/kg	8	NONE	< 8.0	< 8.0	15	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35 _{EH_CU_1D_AL}	mg/kg	8	NONE	< 8.0	< 8.0	31	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35) _{EH_CU+HS_1D_AL}	mg/kg	10	NONE	< 10	< 10	50	< 10

TPH-CWG - Aromatic >EC5 - EC7 _{HS_1D_AR}	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8 _{HS_1D_AR}	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10 _{HS_1D_AR}	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12 _{EH_CU_1D_AR}	mg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16 _{EH_CU_1D_AR}	mg/kg	2	NONE	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aromatic >EC16 - EC21 _{EH_CU_1D_AR}	mg/kg	10	NONE	13	< 10	< 10	< 10
TPH-CWG - Aromatic >EC21 - EC35 _{EH_CU_1D_AR}	mg/kg	10	NONE	21	< 10	19	< 10
TPH-CWG - Aromatic (EC5 - EC35) _{EH_CU+HS_1D_AR}	mg/kg	10	NONE	33	< 10	27	< 10

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

Analytical Report Number : 23-32649

Project / Site name: Ashley Road

* 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 *
2672622	STP6	None Supplied	0.50-0.90	Brown sandy loam with gravel and rubble.
2672623	STP6	None Supplied	1.00-1.20	Brown clay and sand with gravel.
2672624	STP4	None Supplied	0.20-0.30	Brown sandy loam with rubble and gravel
2672625	STP4	None Supplied	1.00-1.20	Light brown clay and sand with gravel.

Analytical Report Number : 23-32649

Project / Site name: Ashley Road

Water matrix abbreviations:

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS
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.	L038-PL	D	MCERTS
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	A001-PL	D	ISO 17025
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	L038-PL	D	MCERTS
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 (Skalar)	L080-PL	W	MCERTS
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/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 (skalar)	L080-PL	W	MCERTS
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	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
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode.	In-house method	L010-PL	D	NONE
Total sulphate (as SO ₄ in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In house method.	L038-PL	D	MCERTS
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.	L019-UK/PL	D	NONE
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method.	L009-PL	D	MCERTS
BTEX and MTBE in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS. Individual components MCERTS accredited	In-house method based on USEPA8260	L073B-PL	W	NONE
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method with silica gel split/clean up.	L088/76-PL	W	NONE

Analytical Report Number : 23-32649

Project / Site name: Ashley Road

Water matrix abbreviations:

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
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
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS

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 - understore to separate acronyms (exception for +)
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total

Sample Deviation Report



Analytical Report Number : 23-32649

Project / Site name: Ashley Road

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 c - Holding time d - Headspace e - Temperature

Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
STP4	None Supplied	S	2672624	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
STP4	None Supplied	S	2672624	b	TPHCWG (Soil)	L088/76-PL	b
STP4	None Supplied	S	2672625	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
STP4	None Supplied	S	2672625	b	TPHCWG (Soil)	L088/76-PL	b
STP6	None Supplied	S	2672622	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
STP6	None Supplied	S	2672622	b	TPHCWG (Soil)	L088/76-PL	b
STP6	None Supplied	S	2672623	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
STP6	None Supplied	S	2672623	b	TPHCWG (Soil)	L088/76-PL	b





Appendix D Results Summaries.

Project / Site name: Ashley Road

MADE GROUND	Sample Ref.		TP101	TP102	TP103	BH09	BH11	BH11	BH1	BH3	BH10	BH12	BH13	BH14C	BH16A	BH17A	CBR2	CBR3	TP4	TP1
Analytical Parameter	Depth (m)		0.40	0.40	0.30	0.90	0.60	1.4	0.50	0.50	0.60	0.50	0.50	0.90	0.70	0.50	0.30	0.40	0.50	0.40
	Units	LoD	30/11/2021	30/11/2021	30/11/2021	30/11/2021	30/11/2021	30/11/2021	30/11/2021	30/11/2021	08/12/2021	08/12/2021	08/12/2021	08/12/2021	08/12/2021	08/12/2021	08/12/2021	08/12/2021	08/12/2021	08/12/2021
Stone Content	%	0.10	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG
Moisture Content	%	0.01	0.10	0.10	0.10	0.10	0.10	0.10	33	21	0.10	0.10	0.10	51	0.10	0.10	0.10	28	36	0.10
Total mass of sample received	kg	0.001	12	7.2	10	11	11	10	13	9.0	16	13	15	16	16	17	16	9.4	8.5	16
Asbestos																				
Asbestos on Soil Screen/Identification Name	Type	N/A	-	Chrysotile	-	-	-	-	-	-	-	-	-	-	-	-	-	Chrysotile	-	-
Asbestos in Soil	Type	N/A	Detected	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected	-	Not-detected	Not-detected	Not-detected	Detected	Not-detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	-	0.018	-	-	-	-	-	-	-	-	-	-	-	-	-	0.001	-	-
Asbestos Quantification (Total)	%	0.001	-	0.018	-	-	-	-	-	-	-	-	-	-	-	-	-	0.001	-	-
Asbestos Analyst ID	N/A	N/A	SCA	SCA	SCA	SCA	SCA	SCA	SCA	SCA	SZS	SZS	SZS	-	SZS	SZS	SZS	SZS	SZS	SZS
General Inorganics																				
pH - Automated	pH Units	N/A	9.0	8.5	8.1	8.6	10.6	8.6	10.8	11.3	7.4	8.4	9.3	8.8	8.2	9.1	8.4	10.6	10.3	8.1
Total Cyanide	mg/kg	1.0	2.1	1.0	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	61	1.7	1.6	1.0	1.0	1.0	1.0	1.0
Free Cyanide	mg/kg	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Sulphate as SO4	mg/kg	50	2800	7300	7400	5200	6000	2200	3500	3600	2500	1100	1800	2100	770	790	3900	3000	2000	790
Water Soluble Sulphate as SO4 16hr extraction (2:1)	mg/kg	2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Water Soluble SO4 16hr extraction (2:1)	g/l	0.00125	0.27	2.0	3.5	0.40	0.45	0.69	0.20	0.15	0.45	0.16	0.13	0.34	0.12	0.29	0.38	0.15	0.19	0.15
Water Soluble SO4 16hr extraction (2:1)	mg/l	1.25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sulphide	mg/kg	1.0	86	170	89	4.8	56	120	27	7.5	23	17	47	1400	1.4	3.6	39	1.0	5.0	1.1
Total Organic Carbon (TOC) - Automated	%	0.10	3.8	4.8	3.7	3.1	1.6	2.1	1.4	1.0	2.5	1.7	1.3	0.90	1.3	1.1	2.9	0.90	3.5	1.9
Water soluble Chloride (2:1)	mg/kg	1.0	170	160	280	2600	1400	5100	69	100	230	60	150	310	26	53	350	250	34	63
Total Phenols																				
Total Phenols (monohydric)	mg/kg	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Speciated PAHs																				
Naphthalene	mg/kg	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Acenaphthylene	mg/kg	0.05	0.43	0.37	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Acenaphthene	mg/kg	0.05	0.35	0.25	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Fluorene	mg/kg	0.05	0.37	0.20	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Phenanthrene	mg/kg	0.05	7.2	2.4	1.7	0.85	0.45	0.05	0.05	0.05	0.05	0.05	0.43	0.54	0.05	0.05	0.05	0.05	0.05	0.05
Anthracene	mg/kg	0.05	1.8	0.71	0.50	0.29	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Fluoranthene	mg/kg	0.05	11	4.6	4.1	1.6	0.84	0.05	0.05	0.05	0.05	0.31	0.84	1.7	0.05	0.05	0.05	0.60	0.38	0.78
Pyrene	mg/kg	0.05	9.7	4.0	3.8	1.4	0.88	0.05	0.05	0.05	0.05	0.31	0.66	1.3	0.05	0.05	0.05	0.54	0.45	0.72
Benzo(a)anthracene	mg/kg	0.05	6.9	3.4	3.6	0.80	0.56	0.05	0.05	0.05	0.05	0.27	0.54	0.53	0.05	0.05	0.05	0.35	0.57	0.54
Chrysene	mg/kg	0.05	4.4	2.3	2.9	0.66	0.36	0.05	0.05	0.05	0.05	0.19	0.43	0.59	0.05	0.05	0.05	0.37	0.39	0.39
Benzo(b)fluoranthene	mg/kg	0.05	5.6	4.2	3.7	0.67	0.47	0.05	0.05	0.05	0.05	0.27	0.70	0.56	0.05	0.05	0.05	0.50	0.39	0.61
Benzo(k)fluoranthene	mg/kg	0.05	3.1	1.4	1.9	0.45	0.33	0.05	0.05	0.05	0.05	0.11	0.20	0.18	0.05	0.05	0.05	0.14	0.35	0.28
Benzo(a)pyrene	mg/kg	0.05	4.4	2.8	2.9	0.67	0.43	0.05	0.05	0.05	0.05	0.23	0.44	0.31	0.05	0.05	0.05	0.41	0.43	0.55
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	3.6	2.4	2.3	0.56	0.26	0.05	0.05	0.05	0.05	0.05	0.31	0.05	0.05	0.05	0.05	0.05	0.34	0.33
Dibenzo(a,h)anthracene	mg/kg	0.05	1.1	0.75	0.84	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Benzo(ghi)perylene	mg/kg	0.05	4.0	3.1	0.05	0.72	0.31	0.05	0.05	0.05	0.05	0.05	0.37	0.05	0.05	0.05	0.05	0.05	0.51	0.33
Total PAH																				
Speciated Total EPA-16 PAHs	mg/kg	0.80	64	33	28	8.7	4.9	0.80	0.80	0.80	0.80	1.7	4.9	5.7	0.80	0.80	0.80	2.9	3.8	4.5
Heavy Metals / Metalloids																				
Antimony (aqua regia extractable)	mg/kg	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic (aqua regia extractable)	mg/kg	1.0	48	78	110	160	50	19	87	56	66	49	44	32	20	20	130	41	30	37
Barium (aqua regia extractable)	mg/kg	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium (aqua regia extractable)	mg/kg	0.06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Boron (water soluble)	mg/kg	0.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium (aqua regia extractable)	mg/kg	0.20	3.9	3.7	4.1	5.7	0.20	0.50	0.20	2.9	4.5	0.20	0.20	15	1.9	0.20	0.20	0.20	1.6	0.20
Chromium (hexavalent)	mg/kg	1.8	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Chromium (aqua regia extractable)	mg/kg	1.0	49	62	64	52	41	28	44	59	46	30	33	35	26	28	99	32	41	38
Copper (aqua regia extractable)	mg/kg	1.0	570	790	880	940	810	240	1400	2100	840	190	250	140	58	66	2400	410	240	160
Lead (aqua regia extractable)	mg/kg	1.0	2400	1500	1900	2500	1100	380	1300	2100	2000	730	1100	2200	560	430	4600	1300	550	870
Mercury (aqua regia extractable)	mg/kg	0.30	1.1	2.2	1.5	0.30	0.30	2.1	0.30	0.30	0.80	0.80	0.80	1.3	1.2	1.4	0.30	0.30	0.50	1.4
Molybdenum (aqua regia extractable)	mg/kg	0.25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel (aqua regia extractable)	mg/kg	1.0	81	100	100	150	60	22	92	75	86	64	47	33	24	26	180	56	41	37
Selenium (aqua regia extractable)	mg/kg	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Vanadium (aqua regia extractable)	mg/kg	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc (aqua regia extractable)	mg/kg	1.0	1900	1800	1800	1800	1500	380	1300	4000	1500	290	790	1300	170	170	4900	900	520	490
Monoaromatics & Oxygenates																				
Benzene	µg/kg	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	µg/kg	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	µg/kg	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
p & m-xylene	µg/kg	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
o-xylene	µg/kg	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Petroleum Hydrocarbons																				
TPH-CWG - Aliphatic >EC5 - EC6 HS ID AL	mg/kg	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TPH-CWG - Aliphatic >EC6 - EC8 HS ID AL	mg/kg	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TPH-CWG - Aliphatic >EC8 - EC10 HS ID AL	mg/kg	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TPH-CWG - Aliphatic >EC10 - EC12 EH CU ID AL	mg/kg	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TPH-CWG - Aliphatic >EC12 - EC16 EH CU ID AL	mg/kg	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TPH-CWG - Aliphatic >EC16 - EC21 EH CU ID AL	mg/kg	8.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TPH-CWG - Aliphatic >EC21 - EC35 EH CU ID AL	mg/kg	8.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TPH-CWG - Aliphatic (EC5 - EC35) EH CU+HS ID AL	mg/kg	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TPH-CWG - Aromatic >EC5 - EC7 HS ID AR	mg/kg	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TPH-CWG - Aromatic >EC7 - EC8 HS ID AR	mg/kg	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TPH-CWG - Aromatic >EC8 - EC10 HS ID AR	mg/kg	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TPH-CWG - Aromatic >EC10 - EC12 EH CU ID AR	mg/kg	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TPH-CWG - Aromatic >EC12 - EC16 EH CU ID AR	mg/kg	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TPH-CWG - Aromatic >EC16 - EC21 EH CU ID AR	mg/kg	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TPH-CWG - Aromatic >EC21 - EC35 EH CU ID AR	mg/kg	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TPH-CWG - Aromatic (EC5 - EC35) EH CU+HS ID AR	mg/kg	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total TPH (C10-C40)	mg/kg	10	310																	

MADE GROUND	Sample Ref.		TP101	TP102	TP103	BH09	BH11	BH11	BH1	BH3	BH10	BH12	BH13	BH14C	BH16A	BH17A	CBR2	CBR3	TP4	TP1
	Depth (m)		0.40	0.40	0.30	0.90	0.60	1.4	0.50	0.50	0.60	0.50	0.50	0.90	0.70	0.50	0.30	0.40	0.50	0.40
Analytical Parameter	Units	LoD	30/11/2021	30/11/2021	30/11/2021	30/11/2021	30/11/2021	30/11/2021	30/11/2021	30/11/2021	08/12/2021	08/12/2021	08/12/2021	08/12/2021	08/12/2021	08/12/2021	08/12/2021	08/12/2021	08/12/2021	08/12/2021
LEACHATES																				
Inorganics																				
Electrical Conductivity	uS/cm	10	-	-	-	-	-	-	-	-	210	-	-	350	-	-	260	-	-	-
Total Cyanide	ug/l	10	-	-	-	-	-	-	-	-	10	-	-	10	-	-	10	-	-	-
Ammoniacal Nitrogen as NH3	ug/l	15	-	-	-	-	-	-	-	-	54	-	-	40	-	-	380	-	-	-
Total Organic Carbon (TOC)	mg/l	0.10	-	-	-	-	-	-	-	-	6.5	-	-	3.3	-	-	8.3	-	-	-
Total Phenols																				
Total Phenols (monohydric)	ug/l	10	-	-	-	-	-	-	-	-	10	-	-	10	-	-	10	-	-	-
Speciated PAHs																				
Naphthalene	ug/l	0.01	-	-	-	-	-	-	-	-	0.01	-	-	0.01	-	-	0.01	-	-	-
Acenaphthylene	ug/l	0.01	-	-	-	-	-	-	-	-	0.01	-	-	0.01	-	-	0.01	-	-	-
Acenaphthene	ug/l	0.01	-	-	-	-	-	-	-	-	0.01	-	-	0.01	-	-	0.01	-	-	-
Fluorene	ug/l	0.01	-	-	-	-	-	-	-	-	0.01	-	-	0.01	-	-	0.01	-	-	-
Phenanthrene	ug/l	0.01	-	-	-	-	-	-	-	-	0.01	-	-	0.01	-	-	0.01	-	-	-
Anthracene	ug/l	0.01	-	-	-	-	-	-	-	-	0.01	-	-	0.01	-	-	0.01	-	-	-
Fluoranthene	ug/l	0.01	-	-	-	-	-	-	-	-	0.01	-	-	0.01	-	-	0.01	-	-	-
Pyrene	ug/l	0.01	-	-	-	-	-	-	-	-	0.01	-	-	0.01	-	-	0.01	-	-	-
Benzo(a)anthracene	ug/l	0.01	-	-	-	-	-	-	-	-	0.01	-	-	0.01	-	-	0.01	-	-	-
Chrysene	ug/l	0.01	-	-	-	-	-	-	-	-	0.01	-	-	0.01	-	-	0.01	-	-	-
Benzo(b)fluoranthene	ug/l	0.01	-	-	-	-	-	-	-	-	0.01	-	-	0.01	-	-	0.01	-	-	-
Benzo(k)fluoranthene	ug/l	0.01	-	-	-	-	-	-	-	-	0.01	-	-	0.01	-	-	0.01	-	-	-
Benzo(a)pyrene	ug/l	0.01	-	-	-	-	-	-	-	-	0.01	-	-	0.01	-	-	0.01	-	-	-
Indeno(1,2,3-cd)pyrene	ug/l	0.01	-	-	-	-	-	-	-	-	0.01	-	-	0.01	-	-	0.01	-	-	-
Dibenz(a,h)anthracene	ug/l	0.01	-	-	-	-	-	-	-	-	0.01	-	-	0.01	-	-	0.01	-	-	-
Benzo(ghi)perylene	ug/l	0.01	-	-	-	-	-	-	-	-	0.01	-	-	0.01	-	-	0.01	-	-	-
Total PAH																				
Speciated Total EPA-16 PAHs	mg/kg	0.80	-	-	-	-	-	-	-	-	0.20	-	-	0.20	-	-	0.20	-	-	-
Heavy Metals / Metalloids																				
Arsenic (Dissolved)	ug/l	1.0	-	-	-	-	-	-	-	-	28	-	-	8.9	-	-	16	-	-	-
Cadmium (Dissolved)	ug/l	0.08	-	-	-	-	-	-	-	-	0.16	-	-	0.53	-	-	0.08	-	-	-
Chromium (Dissolved)	ug/l	0.40	-	-	-	-	-	-	-	-	6.3	-	-	0.40	-	-	2.5	-	-	-
Copper (Dissolved)	ug/l	0.70	-	-	-	-	-	-	-	-	14	-	-	7.1	-	-	44	-	-	-
Lead (Dissolved)	ug/l	1.0	-	-	-	-	-	-	-	-	18	-	-	17	-	-	14	-	-	-
Mercury (Dissolved)	ug/l	0.50	-	-	-	-	-	-	-	-	0.50	-	-	0.50	-	-	0.50	-	-	-
Nickel (Dissolved)	ug/l	0.30	-	-	-	-	-	-	-	-	5.2	-	-	4.5	-	-	7.9	-	-	-
Selenium (Dissolved)	ug/l	4.0	-	-	-	-	-	-	-	-	4.0	-	-	4.0	-	-	6.4	-	-	-
Zinc (agua regia extractable)	ug/l	0.40	-	-	-	-	-	-	-	-	45	-	-	130	-	-	21	-	-	-
Petroleum Hydrocarbons																				
TPH (C9-C10)	ug/l	10	-	-	-	-	-	-	-	-	10	-	-	10	-	-	10	-	-	-
TPH (C10-C12)	ug/l	10	-	-	-	-	-	-	-	-	10	-	-	10	-	-	10	-	-	-
TPH (C12-C16)	ug/l	10	-	-	-	-	-	-	-	-	10	-	-	10	-	-	10	-	-	-
TPH (C16-C21)	ug/l	10	-	-	-	-	-	-	-	-	10	-	-	10	-	-	10	-	-	-
TPH (C21-C35)	ug/l	10	-	-	-	-	-	-	-	-	10	-	-	10	-	-	10	-	-	-

Project / Site name: Ashley Road

MADE GROUND	Sample Ref.		TP3	TP5	TP6	TP7	BH7	IT2	TP101A S1	TP101A S2	TP102A S1	TP102A S2	TP103A S1	TP103A S2	BH2	BH5	BH6	BH8	STP1	STP2
	Depth (m)		0.60	0.40	0.50	0.40	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.75	0.50	0.20-0.50	0.20-0.50
	Analytical Parameter	Units	LoD	08/12/2021	08/12/2021	08/12/2021	08/12/2021	08/12/2021	14/12/2021	04/05/2022	04/05/2022	03/05/2022	03/05/2022	05/05/2022	05/05/2022	29/10/2021	03/11/2021	04/11/2021	27/10/2021	04/05/2023
			MG	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG
Stone Content	%	0.10	0.10	0.10	18	0.10	53	0.10	0.10		32		34		0.10	0.10	0.10	0.10	0.10	0.10
Moisture Content	%	0.01	17	12	14	18	13	14	12		5.6		9.1		11	14	14	10	20	15
Total mass of sample received	kg	0.001	0.80	0.80	0.80	0.80	0.80	1.00	0.90		0.90		0.90		1.0	1.0	1.0	1.0	0.90	0.90
Asbestos																				
Asbestos on Soil Screen/Identification Name	Type	N/A	-	-	-	-	-	-	-	-	-	-	-	Chrysotile	-	-	-	-	-	-
Asbestos in Soil	Type	N/A	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected	Detected	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	-	-	-	-	-	-	-	-	-	-	-	0.001	-	-	-	-	-	-
Asbestos Quantification (Total)	%	0.001	-	-	-	-	-	-	-	-	-	-	-	0.001	-	-	-	-	-	-
Asbestos Analyst ID	N/A	N/A	DBU	DBU	DBU	DBU	DBU	KSZ	JSW	JSW	JSW	JSW	JSW	JSW	-	-	-	-	JBH	JBH
General Inorganics																				
pH - Automated	pH Units	N/A	9.3	10.2	8.2	8.4	11.4	8.4	7.8	-	9.4	-	9.4	-	8.9	9.3	10.2	9.8	7.4	7.6
Total Cyanide	mg/kg	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	-	1.5	-	1.0	-	1.0	1.0	1.0	1.0	1.0	1.0
Free Cyanide	mg/kg	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.0	1.0
Total Sulphate as SO4	mg/kg	50	1200	2300	800	790	3500	4300	6500	-	2300	-	4500	-	4500	3100	990	1100	1200	3100
Water Soluble Sulphate as SO4 16hr extraction (2:1)	mg/kg	2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	630	1600
Water Soluble SO4 16hr extraction (2:1)	g/l	0.00125	0.37	0.17	0.05	0.25	0.11	0.37	1.2	-	0.29	-	0.60	-	0.91	0.16	0.21	0.26	0.31	0.78
Water Soluble SO4 16hr extraction (2:1)	mg/l	1.25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	314	776
Sulphide	mg/kg	1.0	1.0	10	4.3	1.0	1.4	16	71	-	1600	-	120	-	38	9.1	1.0	1.0	1.9	6.0
Total Organic Carbon (TOC) - Automated	%	0.10	1.0	1.7	2.5	2.0	0.80	3.9	3.1	-	3.8	-	5.1	-	1.7	2.0	0.60	0.60	1.7	2.0
Water soluble Chloride (2:1)	mg/kg	1.0	27	85	1.0	32	240	170	460	-	250	-	220	-	180	60	80	500	-	-
Total Phenols																				
Total Phenols (monohydric)	mg/kg	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	-	1.0	-	1.0	-	1.0	1.0	1.0	1.0	1.0	1.0
Speciated PAHs																				
Naphthalene	mg/kg	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	-	0.05	-	0.05	-	0.05	0.05	0.05	0.05	0.05	0.05
Acenaphthylene	mg/kg	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	-	0.67	-	0.05	-	0.05	0.05	0.05	0.05	0.05	0.05
Acenaphthene	mg/kg	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	-	0.65	-	0.05	-	0.05	0.05	0.05	0.05	0.05	0.05
Fluorene	mg/kg	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	-	0.53	-	0.05	-	0.05	0.05	0.05	0.05	0.05	0.05
Phenanthrene	mg/kg	0.05	0.40	0.05	0.05	0.05	0.05	0.05	0.79	-	8.6	-	2.2	-	2.4	0.05	0.05	2.3	0.19	0.16
Anthracene	mg/kg	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	-	2.6	-	0.31	-	0.60	0.05	0.05	0.70	0.05	0.05
Fluoranthene	mg/kg	0.05	1.4	0.05	0.38	0.59	0.05	0.05	2.8	-	14	-	4.5	-	5.4	0.38	0.05	3.2	0.36	0.41
Pyrene	mg/kg	0.05	1.3	0.05	0.35	0.50	0.05	0.05	2.9	-	12	-	4.0	-	4.9	0.38	0.05	2.7	0.35	0.38
Benzo(a)anthracene	mg/kg	0.05	0.82	0.05	0.24	0.40	0.05	0.05	1.6	-	7.7	-	2.2	-	2.9	0.25	0.05	1.4	0.25	0.26
Chrysene	mg/kg	0.05	0.72	0.05	0.27	0.39	0.05	0.05	1.3	-	4.9	-	1.9	-	2.8	0.24	0.05	1.3	0.23	0.25
Benzo(b)fluoranthene	mg/kg	0.05	0.84	0.05	0.40	0.55	0.05	0.05	1.8	-	5.5	-	1.8	-	3.4	0.05	0.05	1.5	0.32	0.36
Benzo(k)fluoranthene	mg/kg	0.05	0.37	0.05	0.10	0.22	0.05	0.05	1.1	-	4.2	-	1.8	-	2.3	0.05	0.05	0.82	0.12	0.13
Benzo(a)pyrene	mg/kg	0.05	0.79	0.05	0.29	0.45	0.05	0.05	1.6	-	5.7	-	1.9	-	3.4	0.05	0.05	1.4	0.24	0.27
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	0.39	0.05	0.05	0.28	0.05	0.05	1.1	-	3.5	-	1.3	-	1.7	0.05	0.05	0.62	0.15	0.18
Dibenz(a,h)anthracene	mg/kg	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.29	-	1.0	-	0.31	-	0.41	0.05	0.05	0.05	0.05	0.05
Benzo(ghi)perylene	mg/kg	0.05	0.40	0.05	0.05	0.27	0.05	0.05	1.4	-	4.5	-	1.6	-	1.9	0.05	0.05	0.72	0.17	0.20
Total PAH																				
Speciated Total EPA-16 PAHs	mg/kg	0.80	7.5	0.80	2.0	3.7	0.80	0.80	17	-	76	-	24	-	32	1.3	0.80	17	2.4	2.6
Heavy Metals / Metalloids																				
Antimony (aqua regia extractable)	mg/kg	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.6	29
Arsenic (aqua regia extractable)	mg/kg	1.0	19	58	27	21	18	170	160	-	29	-	87	-	150	77	10	17	22	36
Barium (aqua regia extractable)	mg/kg	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	280	1000
Beryllium (aqua regia extractable)	mg/kg	0.06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.7	2.2
Boron (water soluble)	mg/kg	0.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.2	7.2
Cadmium (aqua regia extractable)	mg/kg	0.20	0.20	0.20	0.20	0.20	0.20	0.20	8.9	-	1.9	-	0.20	-	0.20	0.20	0.20	0.20	0.20	2.1
Chromium (hexavalent)	mg/kg	1.8	4.0	4.0	4.0	4.0	4.0	4.0	1.8	-	1.8	-	1.8	-	4.0	4.0	4.0	4.0	1.8	1.8
Chromium (aqua regia extractable)	mg/kg	1.0	31	38	29	27	26	72	95	-	43	-	55	-	120	47	33	26	26	41
Copper (aqua regia extractable)	mg/kg	1.0	64	290	74	65	130	2500	2200	-	230	-	760	-	3500	970	35	90	410	510
Lead (aqua regia extractable)	mg/kg	1.0	220	1000	440	380	260	1900	3500	-	530	-	2000	-	1600	2200	65	89	750	1100
Mercury (aqua regia extractable)	mg/kg	0.30	0.50	0.60	1.3	1.9	0.50	0.30	7.1	-	1.1	-	3.0	-	0.30	0.30	0.30	0.30	1.4	2.5
Molybdenum (aqua regia extractable)	mg/kg	0.25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.3	3.7</

Project / Site name: Ashley Road

MADE GROUND	Sample Ref.		TP3	TP5	TP6	TP7	BH7	IT2	TP101A S1	TP101A S2	TP102A S1	TP102A S2	TP103A S1	TP103A S2	BH2	BH5	BH6	BH8	STP1	STP2
	Depth (m)		0.60	0.40	0.50	0.40	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.75	0.50	0.20-0.50	0.20-0.50
Analytical Parameter	Units	LxD	08/12/2021	08/12/2021	08/12/2021	08/12/2021	08/12/2021	14/12/2021	04/05/2022	04/05/2022	03/05/2022	03/05/2022	05/05/2022	05/05/2022	29/10/2021	03/11/2021	04/11/2021	27/10/2021	04/05/2023	04/05/2023
LEACHATES																				
Inorganics																				
Electrical Conductivity	uS/cm	10	-	-	-	-	-	220	-	-	-	-	-	-	-	-	-	-	-	-
Total Cyanide	ug/l	10	-	-	-	-	-	10	-	-	-	-	-	-	-	-	-	-	-	-
Ammoniacal Nitrogen as NH3	ug/l	15	-	-	-	-	-	42	-	-	-	-	-	-	-	-	-	-	-	-
Total Organic Carbon (TOC)	mg/l	0.10	-	-	-	-	-	4.0	-	-	-	-	-	-	-	-	-	-	-	-
Total Phenols																				
Total Phenols (monohydric)	ug/l	10	-	-	-	-	-	10	-	-	-	-	-	-	-	-	-	-	-	-
Speciated PAHs																				
Naphthalene	ug/l	0.01	-	-	-	-	-	0.01	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthylene	ug/l	0.01	-	-	-	-	-	0.01	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthene	ug/l	0.01	-	-	-	-	-	0.01	-	-	-	-	-	-	-	-	-	-	-	-
Fluorene	ug/l	0.01	-	-	-	-	-	0.01	-	-	-	-	-	-	-	-	-	-	-	-
Phenanthrene	ug/l	0.01	-	-	-	-	-	0.01	-	-	-	-	-	-	-	-	-	-	-	-
Anthracene	ug/l	0.01	-	-	-	-	-	0.01	-	-	-	-	-	-	-	-	-	-	-	-
Fluoranthene	ug/l	0.01	-	-	-	-	-	0.01	-	-	-	-	-	-	-	-	-	-	-	-
Pyrene	ug/l	0.01	-	-	-	-	-	0.01	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)anthracene	ug/l	0.01	-	-	-	-	-	0.01	-	-	-	-	-	-	-	-	-	-	-	-
Chrysene	ug/l	0.01	-	-	-	-	-	0.01	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b)fluoranthene	ug/l	0.01	-	-	-	-	-	0.01	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(k)fluoranthene	ug/l	0.01	-	-	-	-	-	0.01	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)pyrene	ug/l	0.01	-	-	-	-	-	0.01	-	-	-	-	-	-	-	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	ug/l	0.01	-	-	-	-	-	0.01	-	-	-	-	-	-	-	-	-	-	-	-
Dibenz(a,h)anthracene	ug/l	0.01	-	-	-	-	-	0.01	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(ghi)perylene	ug/l	0.01	-	-	-	-	-	0.01	-	-	-	-	-	-	-	-	-	-	-	-
Total PAH																				
Speciated Total EPA-16 PAHs	mg/kg	0.80	-	-	-	-	-	0.20	-	-	-	-	-	-	-	-	-	-	-	-
Heavy Metals / Metalloids																				
Arsenic (Dissolved)	ug/l	1.0	-	-	-	-	-	11	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium (Dissolved)	ug/l	0.08	-	-	-	-	-	0.14	-	-	-	-	-	-	-	-	-	-	-	-
Chromium (Dissolved)	ug/l	0.40	-	-	-	-	-	2.7	-	-	-	-	-	-	-	-	-	-	-	-
Copper (Dissolved)	ug/l	0.70	-	-	-	-	-	15	-	-	-	-	-	-	-	-	-	-	-	-
Lead (Dissolved)	ug/l	1.0	-	-	-	-	-	16	-	-	-	-	-	-	-	-	-	-	-	-
Mercury (Dissolved)	ug/l	0.50	-	-	-	-	-	0.50	-	-	-	-	-	-	-	-	-	-	-	-
Nickel (Dissolved)	ug/l	0.30	-	-	-	-	-	6.7	-	-	-	-	-	-	-	-	-	-	-	-
Selenium (Dissolved)	ug/l	4.0	-	-	-	-	-	4.0	-	-	-	-	-	-	-	-	-	-	-	-
Zinc (aqua regia extractable)	ug/l	0.40	-	-	-	-	-	56	-	-	-	-	-	-	-	-	-	-	-	-
Petroleum Hydrocarbons																				
TPH (C8-C10)	ug/l	10	-	-	-	-	-	10	-	-	-	-	-	-	-	-	-	-	-	-
TPH (C10-C12)	ug/l	10	-	-	-	-	-	10	-	-	-	-	-	-	-	-	-	-	-	-
TPH (C12-C16)	ug/l	10	-	-	-	-	-	10	-	-	-	-	-	-	-	-	-	-	-	-
TPH (C16-C21)	ug/l	10	-	-	-	-	-	10	-	-	-	-	-	-	-	-	-	-	-	-
TPH (C21-C35)	ug/l	10	-	-	-	-	-	10	-	-	-	-	-	-	-	-	-	-	-	-

Project / Site name: Ashley Road

MADE GROUND	Sample Ref.		STP3	STP5	STP15	STP6	STP4	STP9	STP14	STP13	STP13	STP11	STP7	Statistical Summary			
	Depth (m)		0.20-0.40	0.25-0.50	0.40-0.60	0.50-0.90	0.20-0.30	0.50-1.00	0.50-1.00	0.30-0.80	1.50-1.90	0.20-0.50	0.20-0.60	Number	Minimum	Average	Maximum
Analytical Parameter	Units	LoD	04/05/2023	04/05/2023	04/05/2023	05/05/2023	05/05/2023	05/05/2023	05/05/2023	05/05/2023	05/05/2023	05/05/2023	05/05/2023				
Stone Content	%	0.10	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG	44	0.10	7.9	53
Moisture Content	%	0.01	14	14	11	8.2	8.2	18	13	11	25	17	17	44	5.6	13	25
Total mass of sample received	kg	0.001	0.90	0.90	0.90	0.70	0.70	1.0	1.0	1.0	1.0	1.0	1.0	44	0.30	0.88	1.0
Asbestos																	
Asbestos on Soil Screen/Identification Name	Type	N/A	-	-	-	-	-	-	-	-	-	-	-	3	N/A	N/A	N/A
Asbestos in Soil	Type	N/A	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected	41	N/A	N/A	N/A
Asbestos Quantification (Stage 2)	%	0.001	-	-	-	-	-	-	-	-	-	-	-	3	0.001	0.007	0.018
Asbestos Quantification (Total)	%	0.001	-	-	-	-	-	-	-	-	-	-	-	3	0.001	0.007	0.018
Asbestos Analyst ID	N/A	N/A	JBH	JBH	JBH	JBH	JBH	EWS	EWS	EWS	EWS	EWS	EWS	N/A	N/A	N/A	N/A
General Inorganics																	
pH - Automated	pH Units	N/A	7.4	10.0	8.0	9.5	10.7	7.7	7.6	8.7	7.4	7.3	7.9	44	7.3	8.9	11.4
Total Cyanide	mg/kg	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.6	1.0	44	1.0	2.5	61
Free Cyanide	mg/kg	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	13	1.0	1.0	1.0
Total Sulphate as SO4	mg/kg	50	1600	3800	5500	5700	12000	5600	5100	6500	5000	18000	19000	44	770	4198	19000
Water Soluble Sulphate as SO4 16hr extraction (2:1)	mg/kg	2.5	990	1800	3500	2900	3700	1700	1800	2600	2100	3300	3200	13	630	2294	3700
Water Soluble SO4 16hr extraction (2:1)	g/l	0.00125	0.50	0.92	1.70	1.4	1.9	0.83	0.90	1.3	1.0	1.6	1.6	44	0.05	0.68	3.5
Water Soluble SO4 16hr extraction (2:1)	mg/l	1.25	496	924	1740	1440	1870	831	899	1290	1040	1640	1590	13	314	1142	1870
Sulphide	mg/kg	1.0	1.0	2.3	14	25	17	30	33	30	33	45	25	44	1.0	96	1600
Total Organic Carbon (TOC) - Automated	%	0.10	1.3	1.3	1.3	1.5	1.4	3.9	3.5	1.5	6.9	3.1	2.5	44	0.60	2.3	6.9
Water soluble Chloride (2:1)	mg/kg	1.0	-	-	-	-	-	-	-	-	-	-	-	31	1.0	442	5100
Total Phenols																	
Total Phenols (monohydric)	mg/kg	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	44	1.0	1.0	1.0
Speciated PAHs																	
Naphthalene	mg/kg	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	44	0.05	0.05	0.05
Acenaphthylene	mg/kg	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.10	0.05	0.05	0.05	0.05	44	0.05	0.08	0.67
Acenaphthene	mg/kg	0.05	0.05	0.05	0.05	0.05	0.07	0.05	0.18	0.05	0.05	0.05	0.05	44	0.05	0.08	0.65
Fluorene	mg/kg	0.05	0.05	0.05	0.05	0.05	0.07	0.05	0.20	0.05	0.05	0.05	0.05	44	0.05	0.08	0.53
Phenanthrene	mg/kg	0.05	0.15	0.14	0.06	1.0	1.3	0.15	3.8	0.11	0.13	0.24	0.30	44	0.05	0.88	8.6
Anthracene	mg/kg	0.05	0.05	0.05	0.05	0.23	0.20	0.05	0.93	0.05	0.05	0.07	0.05	44	0.05	0.24	2.6
Fluoranthene	mg/kg	0.05	0.37	0.28	0.17	2.7	3.2	0.38	7.2	0.13	0.48	0.64	0.49	44	0.05	1.7	14
Pyrene	mg/kg	0.05	0.35	0.27	0.19	2.5	3.2	0.33	6.2	0.10	0.54	0.63	0.46	44	0.05	1.6	12
Benzo(a)anthracene	mg/kg	0.05	0.23	0.17	0.15	1.4	2.0	0.20	3.9	0.10	0.36	0.48	0.26	44	0.05	1.0	7.7
Chrysene	mg/kg	0.05	0.23	0.17	0.19	1.6	2.3	0.25	3.6	0.14	0.63	0.58	0.32	44	0.05	0.86	4.9
Benzo(b)fluoranthene	mg/kg	0.05	0.29	0.19	0.35	2.0	3.4	0.30	4.4	0.05	0.47	0.73	0.33	44	0.05	1.1	5.6
Benzo(k)fluoranthene	mg/kg	0.05	0.12	0.08	0.11	0.67	1.1	0.13	1.7	0.05	0.21	0.28	0.17	44	0.05	0.56	4.2
Benzo(a)pyrene	mg/kg	0.05	0.22	0.15	0.23	1.4	1.9	0.21	3.4	0.05	0.24	0.54	0.25	44	0.05	0.88	5.7
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	0.13	0.09	0.19	0.97	1.6	0.14	1.8	0.05	0.19	0.31	0.18	44	0.05	0.59	3.6
Dibenz(a,h)anthracene	mg/kg	0.05	0.05	0.05	0.05	0.27	0.47	0.05	0.43	0.05	0.05	0.05	0.05	44	0.05	0.17	1.1
Benzo(ghi)perylene	mg/kg	0.05	0.13	0.10	0.24	1.20	1.9	0.17	2.1	0.05	0.19	0.36	0.05	44	0.05	0.63	4.5
Total PAH																	
Speciated Total EPA-16 PAHs	mg/kg	0.80	2.2	1.6	1.9	16	23	2.3	40	0.80	3.4	4.9	2.8	44	0.80	10.3	76
Heavy Metals / Metalloids																	
Antimony (aqua regia extractable)	mg/kg	1.0	12	22	18	12	12	70	82	43	50	25	30	13	9.6	32	82
Arsenic (aqua regia extractable)	mg/kg	1.0	27	24	47	26	35	160	100	130	150	75	77	44	10	64	170
Barium (aqua regia extractable)	mg/kg	1.0	540	920	410	560	330	750	880	620	660	340	370	13	280	589	1000
Beryllium (aqua regia extractable)	mg/kg	0.06	1.8	1.6	3.4	2.4	1.6	13	8.0	8.8	13	4.9	6.3	13	1.60	5.3	13
Boron (water soluble)	mg/kg	0.20	4.7	1.8	4.9	5.4	1.2	6.6	6.1	4.3	11	12	23	13	1.2	7.1	23
Cadmium (aqua regia extractable)	mg/kg	0.20	0.20	1.4	0.20	1.1	1.7	0.20	0.20	0.20	0.20	0.20	0.20	44	0.20	1.5	15
Chromium (hexavalent)	mg/kg	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	44	1.8	3.2	4.0
Chromium (aqua regia extractable)	mg/kg	1.0	34	34	28	31	29	71	49	56	45	33	35	44	26	45	120
Copper (aqua regia extractable)	mg/kg	1.0	320	330	250	290	460	4700	1400	2700	640	360	500	44	35	824	4700
Lead (aqua regia extractable)	mg/kg	1.0	820	710	550	750	1600	1800	2400	1600	2600	890	940	44	65	1323	4600
Mercury (aqua regia extractable)	mg/kg	0.30	1.1	0.60	0.70	1.30	1.80	0.30	0.30	0.30	0.30	1.3	1.1	44	0.30	1.1	7.1
Molybdenum (aqua regia extractable)	mg/kg	0.25	3.1	2.2	6.2	4.8	3.3	24	14	16	22	9.3	12	13	2.20	9.5	24
Nickel (aqua regia extractable)	mg/kg	1.0	29	45	45	40	39	210	120	130	130	55	78	44	19	92	840
Selenium (aqua regia extractable)	mg/kg	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	44	1.0	1.0	1.0
Vanadium (aqua regia extractable)	mg/kg	1.0	58	46	60	54	71	140	93	98	120	79	83	13	46	77	140
Zinc (aqua regia extractable)	mg/kg	1.0	2000	1400	660	700	630	3300	2100	1700	1600	580	490	44	100	1323	4900
Monoaromatics & Oxygenates																	
Benzene	µg/kg	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	13	5.0	5.0	5.0
Toluene	µg/kg	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	13	5.0	5.0	5.0
Ethylbenzene	µg/kg	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	13	5.0	5.0	5.0
p & m-xylene	µg/kg	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	13	5.0	5.0	5.0
o-xylene	µg/kg	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	13	5.0	5.0	5.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0							

MADE GROUND	Sample Ref.		STP3	STP5	STP15	STP6	STP4	STP9	STP14	STP13	STP13	STP11	STP7	Statistical Summary			
	Depth (m)		0.20-0.40	0.25-0.50	0.40-0.60	0.50-0.90	0.20-0.30	0.50-1.00	0.50-1.00	0.30-0.80	1.50-1.90	0.20-0.50	0.20-0.60	Number	Minimum	Average	Maximum
Analytical Parameter	Units	LoD	04/05/2023	04/05/2023	04/05/2023	05/05/2023	05/05/2023	05/05/2023	05/05/2023	05/05/2023	05/05/2023	05/05/2023	05/05/2023				
LEACHATES																	
Inorganics																	
Electrical Conductivity	uS/cm	10						-	-	-	-	-	-	4	210	260	350
Total Cyanide	ug/l	10						-	-	-	-	-	-	4	10	10	10
Ammoniacal Nitrogen as NH3	ug/l	15						-	-	-	-	-	-	4	40	129	380
Total Organic Carbon (TOC)	mg/l	0.10						-	-	-	-	-	-	4	3.3	5.5	8.3
Total Phenols																	
Total Phenols (monohydric)	ug/l	10						-	-	-	-	-	-	4	10	10	10
Speciated PAHs																	
Naphthalene	ug/l	0.01						-	-	-	-	-	-	4	0.01	0.01	0.01
Acenaphthylene	ug/l	0.01						-	-	-	-	-	-	4	0.01	0.01	0.01
Acenaphthene	ug/l	0.01						-	-	-	-	-	-	4	0.01	0.01	0.01
Fluorene	ug/l	0.01						-	-	-	-	-	-	4	0.01	0.01	0.01
Phenanthrene	ug/l	0.01						-	-	-	-	-	-	4	0.01	0.01	0.01
Anthracene	ug/l	0.01						-	-	-	-	-	-	4	0.01	0.01	0.01
Fluoranthene	ug/l	0.01						-	-	-	-	-	-	4	0.01	0.01	0.01
Pyrene	ug/l	0.01						-	-	-	-	-	-	4	0.01	0.01	0.01
Benzo(a)anthracene	ug/l	0.01						-	-	-	-	-	-	4	0.01	0.01	0.01
Chrysene	ug/l	0.01						-	-	-	-	-	-	4	0.01	0.01	0.01
Benzo(b)fluoranthene	ug/l	0.01						-	-	-	-	-	-	4	0.01	0.01	0.01
Benzo(k)fluoranthene	ug/l	0.01						-	-	-	-	-	-	4	0.01	0.01	0.01
Benzo(a)pyrene	ug/l	0.01						-	-	-	-	-	-	4	0.01	0.01	0.01
Indeno(1,2,3-cd)pyrene	ug/l	0.01						-	-	-	-	-	-	4	0.01	0.01	0.01
Dibenz(a,h)anthracene	ug/l	0.01						-	-	-	-	-	-	4	0.01	0.01	0.01
Benzo(ghi)perylene	ug/l	0.01						-	-	-	-	-	-	4	0.01	0.01	0.01
Total PAH																	
Speciated Total EPA-16 PAHs	mg/kg	0.80						-	-	-	-	-	-	4	0.20	0.20	0.20
Heavy Metals / Metalloids																	
Arsenic (Dissolved)	ug/l	1.0						-	-	-	-	-	-	4	8.9	16	28
Cadmium (Dissolved)	ug/l	0.08						-	-	-	-	-	-	4	0.08	0.23	0.53
Chromium (Dissolved)	ug/l	0.40						-	-	-	-	-	-	4	0.40	3.0	6.3
Copper (Dissolved)	ug/l	0.70						-	-	-	-	-	-	4	7.1	20	44
Lead (Dissolved)	ug/l	1.0						-	-	-	-	-	-	4	14	16	18
Mercury (Dissolved)	ug/l	0.50						-	-	-	-	-	-	4	0.50	0.50	0.50
Nickel (Dissolved)	ug/l	0.30						-	-	-	-	-	-	4	4.5	6.1	7.9
Selenium (Dissolved)	ug/l	4.0						-	-	-	-	-	-	4	4.0	4.6	6.4
Zinc (aqua regia extractable)	ug/l	0.40						-	-	-	-	-	-	4	21	63	130
Petroleum Hydrocarbons																	
TPH (C9-C10)	ug/l	10						-	-	-	-	-	-	4	10	10	10
TPH (C10-C12)	ug/l	10						-	-	-	-	-	-	4	10	10	10
TPH (C12-C16)	ug/l	10						-	-	-	-	-	-	4	10	10	10
TPH (C16-C21)	ug/l	10						-	-	-	-	-	-	4	10	10	10
TPH (C21-C35)	ug/l	10						-	-	-	-	-	-	4	10	10	10

Project / Site name: Ashley Road

NATURAL GROUND			Sample Ref	BH3	BH10	BH17A	BH4	BH4	STP1	STP2	STP3	STP5	STP15	STP6	STP4	STP9	STP14	STP11	STP7	Statistical Summary			
Analytical Parameter	Depth (m)		2.0	1.5	2.4	1.0	1.5	1.20-1.50	1.30-1.50	1.00-1.40	1.00-1.20	1.00-1.40	1.20-1.50	1.00-1.20	1.00-1.20	1.50-1.70	1.70-2.00	0.80-1.10	1.20-1.40				
	Units	LoD	30/11/2021	08/12/2021	08/12/2021	08/12/2021	08/12/2021	04/05/2023	04/05/2023	04/05/2023	04/05/2023	04/05/2023	04/05/2023	05/05/2023	05/05/2023	05/05/2023	05/05/2023	05/05/2023	05/05/2023	Number	Minimum	Average	Maximum
			ES	ES	KPG	ES	KPG	ES	ES	ES	ES	ES	KPG	ES	ES	ES	ES	ES	ES				
Stone Content	%	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	16	0.10	0.1	0
Moisture Content	%	0.01	12	16	7.9	22	19	18	8.8	15	9.1	7.7	16	13	18	17	16	11	16	16	7.7	14	22
Total mass of sample received	kg	0.001	0.30	0.30	0.30	0.80	0.80	0.90	0.90	0.90	0.90	0.90	0.90	0.70	0.70	1.0	1.0	1.0	1.0	16	0.30	0.78	1.0
Asbestos																							
Asbestos on Soil Screen/Identification Name	Type	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	N/A	N/A	N/A	N/A
Asbestos in Soil	Type	N/A	-	-	-	Not-detected	Not-detected	-	-	-	-	-	-	-	-	-	-	-	-	2	N/A	N/A	N/A
Asbestos Quantification (Stage 2)	%	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	N/A	N/A	N/A
Asbestos Quantification (Total)	%	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	N/A	N/A	N/A
Asbestos Analyst ID	N/A	N/A	-	-		DBU	DBU	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
General Inorganics																							
pH - Automated	pH Units	N/A	8.9	8.5	8.7	7.9	8.3	6.8	7.8	6.7	6.8	7.7	7.3	7.3	8.1	6.8	7.6	7.8	7.4	16	6.7	7.7	8.9
Total Cyanide	mg/kg	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	16	1.0	1.0	1.0
Free Cyanide	mg/kg	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	1.0	1.0	1.0
Total Sulphate as SO4	mg/kg	50	620	1100	240	690	740	680	420	1200	700	270	630	730	800	840	1100	950	950	16	240	732	1200
Water Soluble Sulphate as SO4 16hr extraction (2:1)	mg/kg	2.5	-	-	-	-	-	400	310	710	510	210	400	440	430	660	710	670	670	11	210	495	710
Water Soluble SO4 16hr extraction (2:1)	g/l	0.00125	0.09	0.63	0.04	0.10	0.06	0.20	0.15	0.36	0.25	0.11	0.20	0.22	0.22	0.33	0.35	0.34	0.34	16	0.04	0.23	0.63
Water Soluble SO4 16hr extraction (2:1)	mg/l	1.25	-	-	-	-	-	198	154	357	253	106	201	220	217	328	354	337	337	11	106	248	357
Sulphide	mg/kg	1.0	48	50	16	6.2	49	1.0	1.0	1.0	1.0	1.1	1.0	1.0	1.0	1.0	1.0	1.0	36	16	1.0	13	50
Total Organic Carbon (TOC) - Automated	%	0.10	0.30	3.9	1.7	2.7	2.3	0.50	0.20	0.40	0.20	0.20	0.60	0.50	0.80	0.40	0.40	0.20	0.20	16	0.20	1.0	3.9
Water soluble Chloride (2:1)	mg/kg	1.0	27	380	35	49	54	-	-	-	-	-	-	-	-	-	-	-	-	5	27.0	109	380
Total Phenols																							

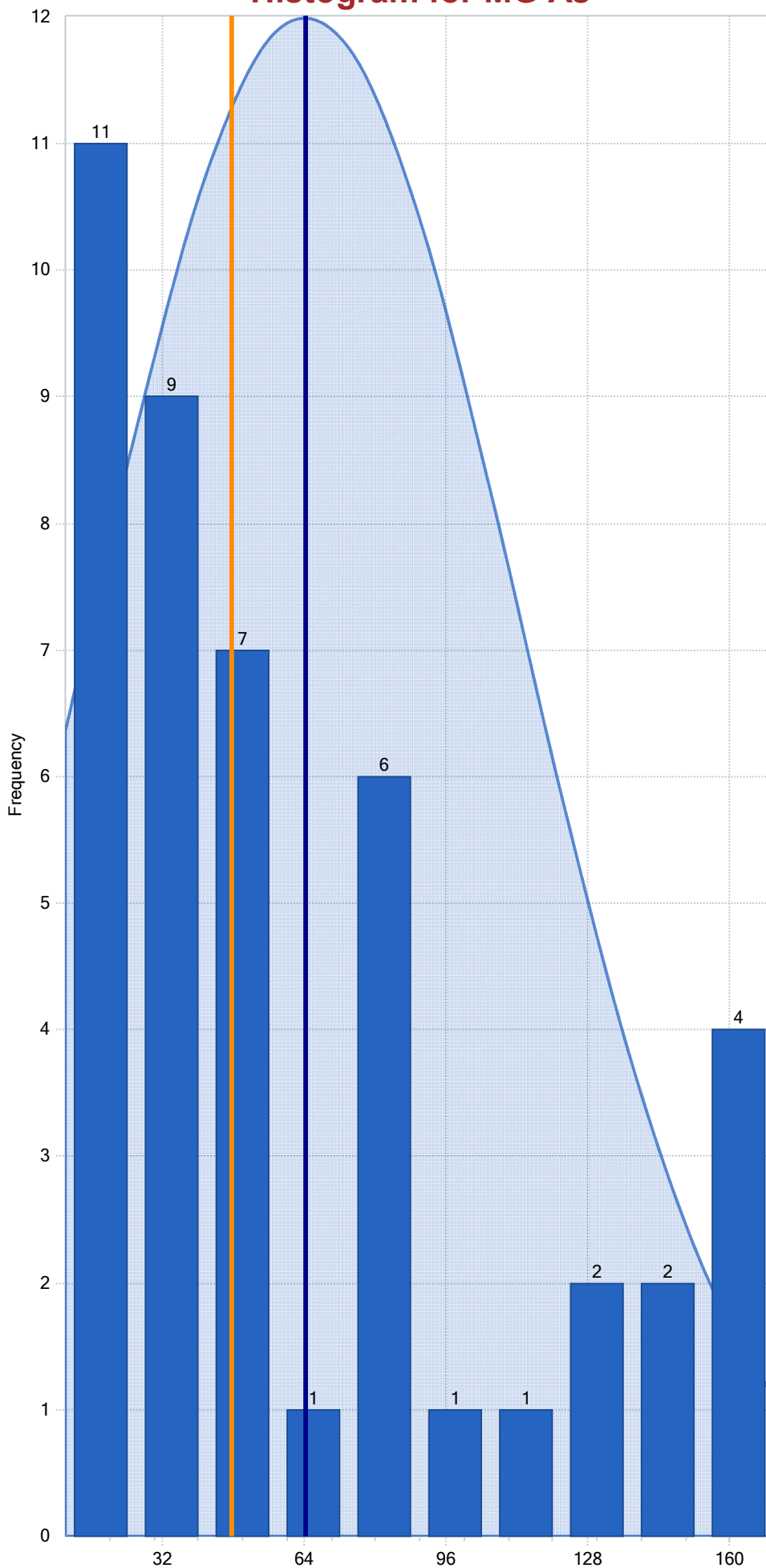
Project / Site name: Ashley Road

GROUNDWATER	Sample Ref		BH1	BH5	BH13	BH17		Statistical Summary		
	Depth (m)		0.40	0.40	0.30	0.90				
Analytical Parameter	Units	LoD	30/11/2021	30/11/2021	30/11/2021	30/11/2021	Number	Minimum	Average	Maximum
General Inorganics										
pH	pH Units	N/A	7.2	7.7	8.0	7.0	4	7.0	7.5	8.0
Electrical Conductivity	uS/cm	10	730	180	1200	650	4	180	690	1200
Sulphate as SO4	mg/l	0.05	157	12	190	110	4	11.8	117	190
Sulphide	ug/l	5.0	5.0	5.0	5.0	5.0	4	5.0	5.0	5.0
Chloride	mg/l	0.15	61	13	200	71	4	13	86	200
Ammoniacal Nitrogen as NH3	ug/l	15	26	490	74	27	4	26	154	490
Total Organic Carbon (TOC)	mg/l	0.10	1.8	4.3	16	8.4	4	1.8	7.7	16
Nitrate as N	mg/l	0.01	12	0.45	1.8	6.5	4	0.45	5.1	12
Nitrate as NO3	mg/l	0.05	52	2.0	8.1	29	4	2.0	23	52
Redox										
Redox Potential	mV	-800	76	71	126	152	4	71	106	152
Total Phenols										
Total Phenols (monohydric)	ug/l	10	10	10	10	10	4	10	10	10
Speciated PAHs										
Naphthalene	ug/l	0.01	0.01	0.01	0.01	0.01	4	0.01	0.01	0.01
Acenaphthylene	ug/l	0.01	0.01	0.01	0.01	0.01	4	0.01	0.01	0.01
Acenaphthene	ug/l	0.01	0.01	0.01	0.01	0.01	4	0.01	0.01	0.01
Fluorene	ug/l	0.01	0.01	0.01	0.01	0.01	4	0.01	0.01	0.01
Phenanthrene	ug/l	0.01	0.01	0.01	0.01	0.01	4	0.01	0.01	0.01
Anthracene	ug/l	0.01	0.01	0.01	0.01	0.01	4	0.01	0.01	0.01
Fluoranthene	ug/l	0.01	0.01	0.01	0.01	0.01	4	0.01	0.01	0.01
Pyrene	ug/l	0.01	0.01	0.01	0.01	0.01	4	0.01	0.01	0.01
Benzo(a)anthracene	ug/l	0.01	0.01	0.01	0.01	0.01	4	0.01	0.01	0.01
Chrysene	ug/l	0.01	0.01	0.01	0.01	0.01	4	0.01	0.01	0.01
Benzo(b)fluoranthene	ug/l	0.01	0.01	0.01	0.01	0.01	4	0.01	0.01	0.01
Benzo(k)fluoranthene	ug/l	0.01	0.01	0.01	0.01	0.01	4	0.01	0.01	0.01
Benzo(a)pyrene	ug/l	0.01	0.01	0.01	0.01	0.01	4	0.01	0.01	0.01
Indeno(1,2,3-cd)pyrene	ug/l	0.01	0.01	0.01	0.01	0.01	4	0.01	0.01	0.01
Dibenz(a,h)anthracene	ug/l	0.01	0.01	0.01	0.01	0.01	4	0.01	0.01	0.01
Benzo(ghi)perylene	ug/l	0.01	0.01	0.01	0.01	0.01	4	0.01	0.01	0.01
Total PAH										
Speciated Total EPA-16 PAHs	ug/l	0.16	0.16	0.16	0.16	0.16	4	0.16	0.16	0.16
Heavy Metals / Metalloids										
Arsenic (Dissolved)	ug/l	1.0	0.92	0.87	10	2.3	4	0.87	3.6	10
Cadmium (Dissolved)	ug/l	0.08	0.06	0.02	0.15	0.15	4	0.02	0.10	0.15
Chromium (Dissolved)	ug/l	0.40	2.3	1.1	2.8	1.3	4	1.1	1.9	2.8
Lead (Dissolved)	ug/l	1.0	0.20	0.50	1.5	0.40	4	0.20	0.65	1.5
Mercury (Dissolved)	ug/l	0.50	0.05	0.05	0.05	0.05	4	0.05	0.05	0.05
Nickel (Dissolved)	ug/l	0.30	17	4.4	36	37	4	4.4	24	37
Petroleum Hydrocarbons										
TPH (C8-C10)	ug/l	10	10	10	10	10	4	10	10	10
TPH (C10-C12)	ug/l	10	10	10	10	10	4	10	10	10
TPH (C12-C16)	ug/l	10	10	10	10	80	4	10	28	80
TPH (C16-C21)	ug/l	10	10	10	10	270	4	10	75	270
TPH (C21-C35)	ug/l	10	10	10	10	1800	4	10	458	1800



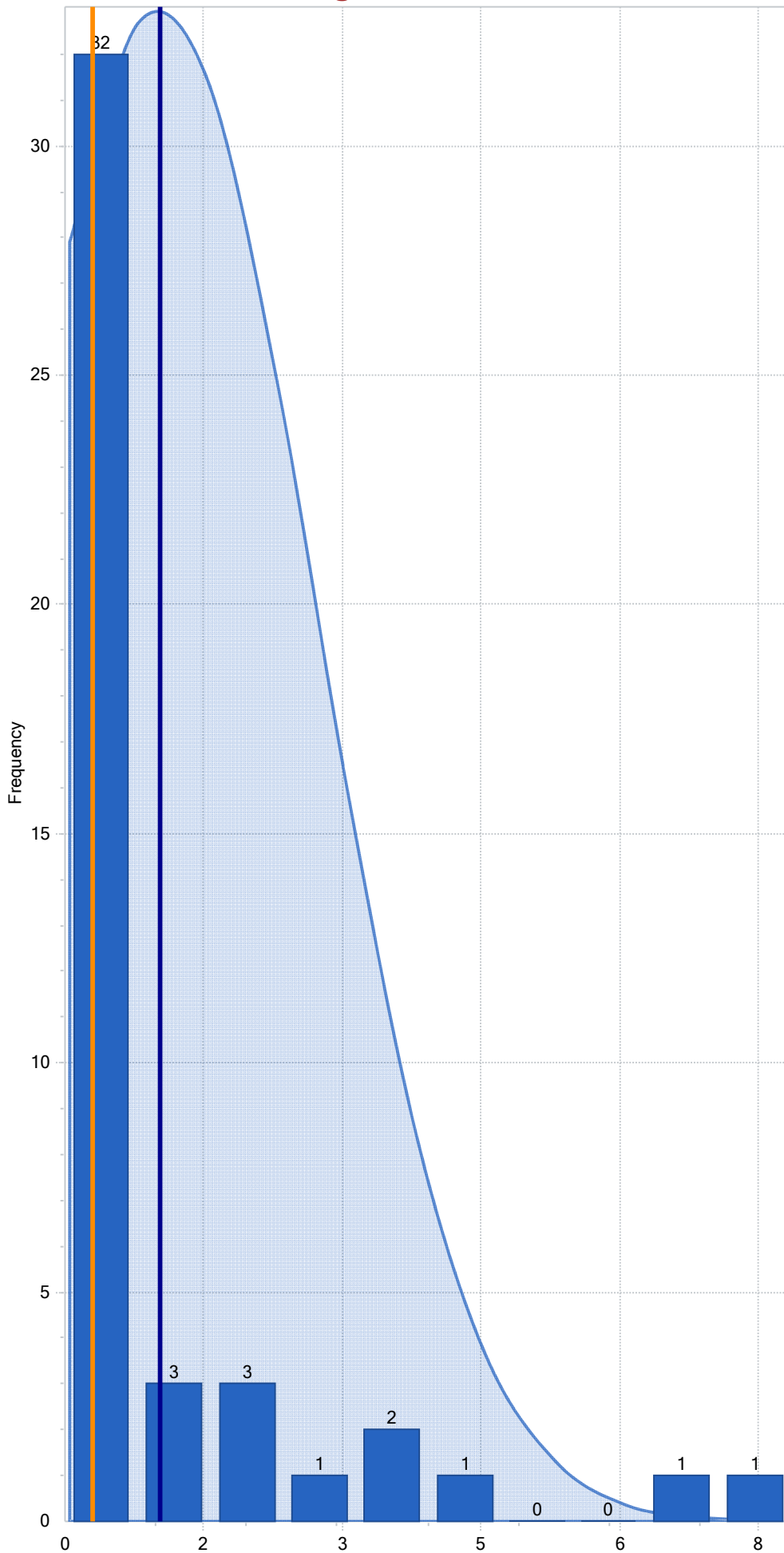
Appendix E Histograms (Made Ground).

Histogram for MG As



Number of Values	44
Minimum	10.00
Maximum	170.00
SD	48.18
Skewness	0.98
Kurtosis	-0.32
☒ Mean	64.30
☒ Median	47.50
☒ Normal Distribution	
☐ Less Bins	
☐ More Bins	

Histogram for MG BaA



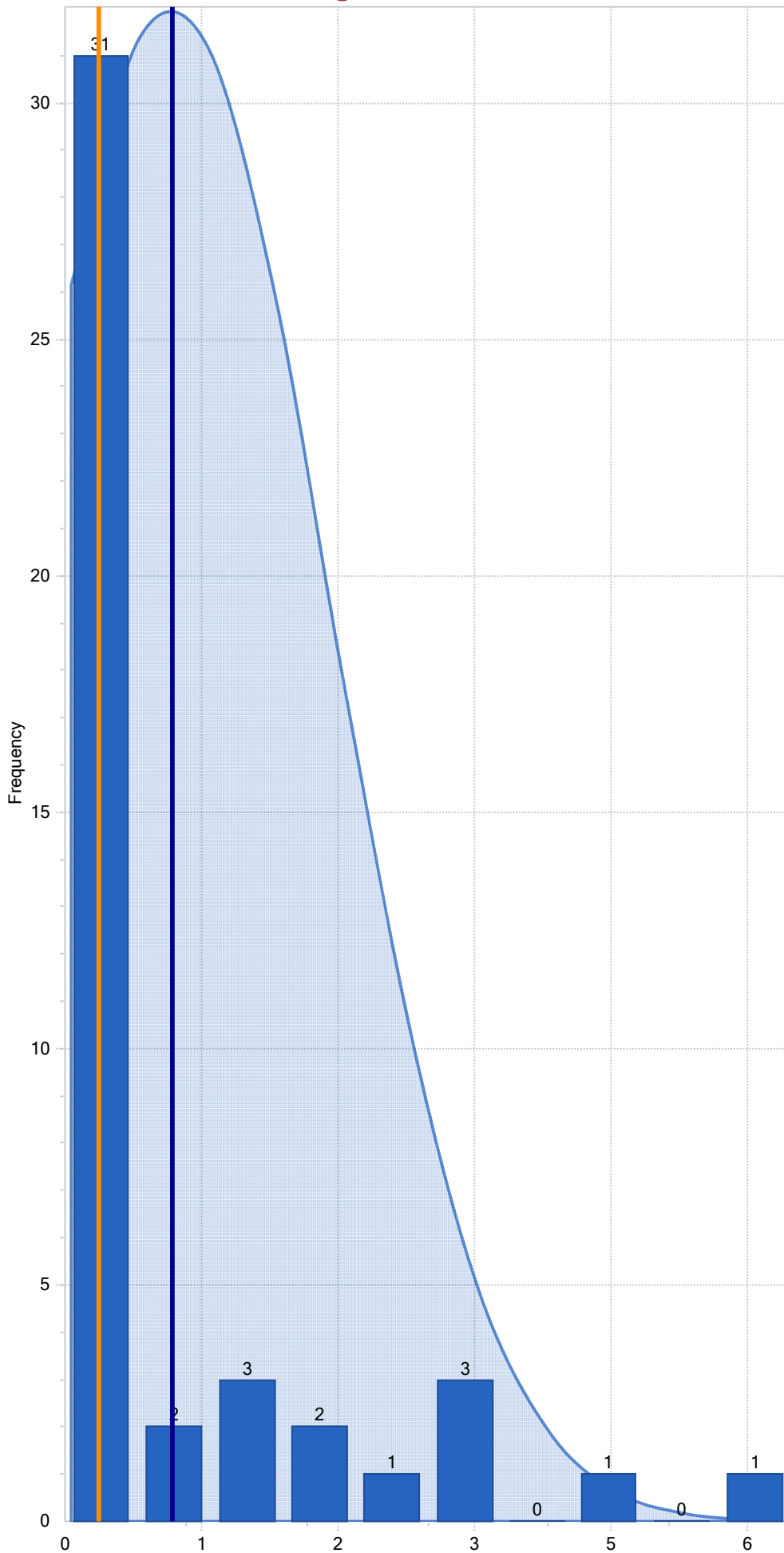
MG BaA

Number of Values	44
Minimum	0.05
Maximum	7.70
SD	1.72
Skewness	2.60
Kurtosis	7.01
☒ Mean	1.04
☒ Median	0.31
☒ Normal Distribution	

☐ Less Bins

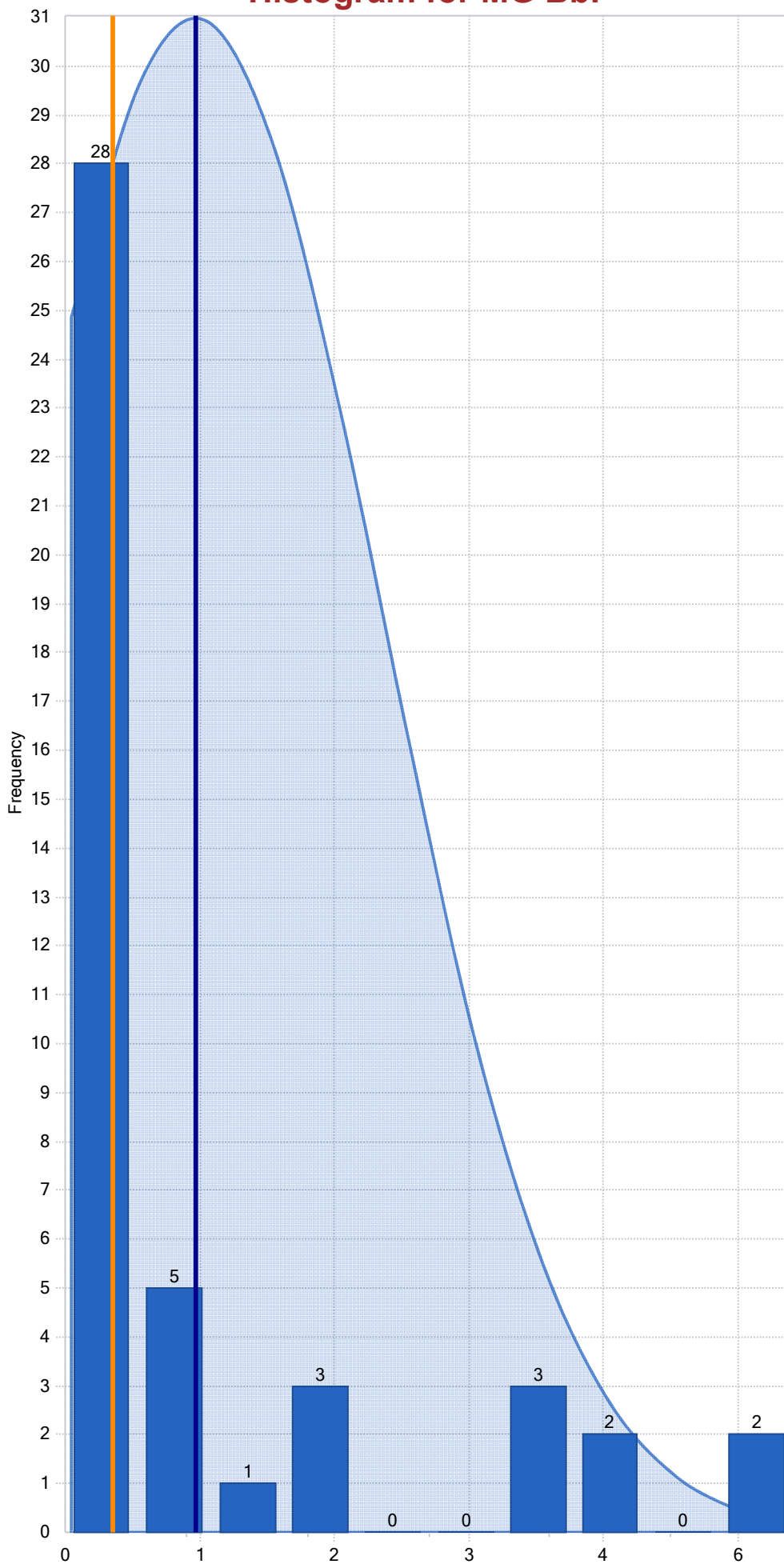
☐ More Bins

Histogram for MG BaP



Number of Values	44
Minimum	0.05
Maximum	5.70
SD	1.31
Skewness	2.10
Kurtosis	4.13
☒ Mean	0.88
☒ Median	0.28
☒ Normal Distribution	
☐ Less Bins	
☐ More Bins	

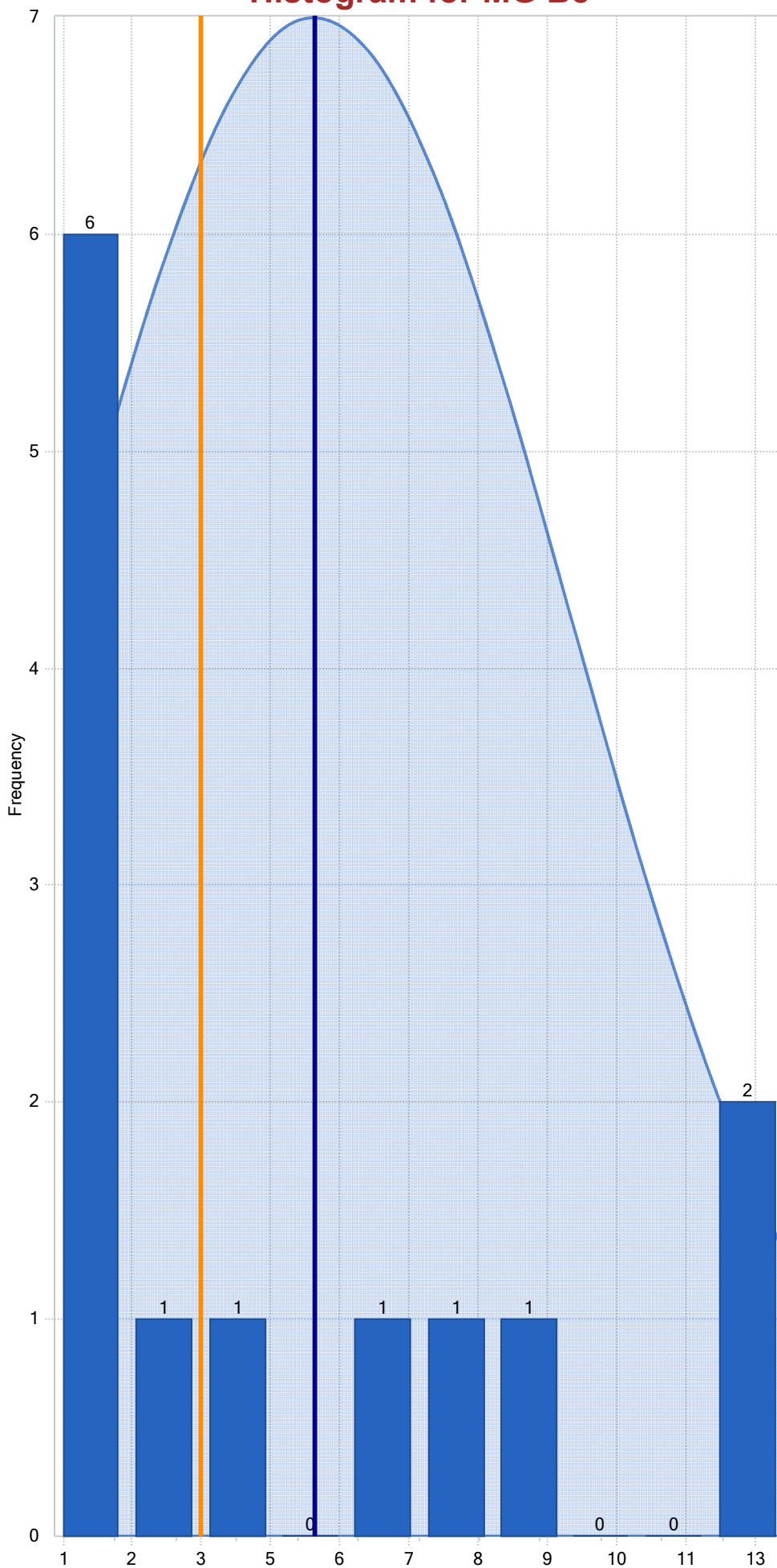
Histogram for MG BbF



Number of Values	44
Minimum	0.05
Maximum	5.60
SD	1.54
Skewness	1.81
Kurtosis	2.19
☒ Mean	1.07
☒ Median	0.40
☒ Normal Distribution	

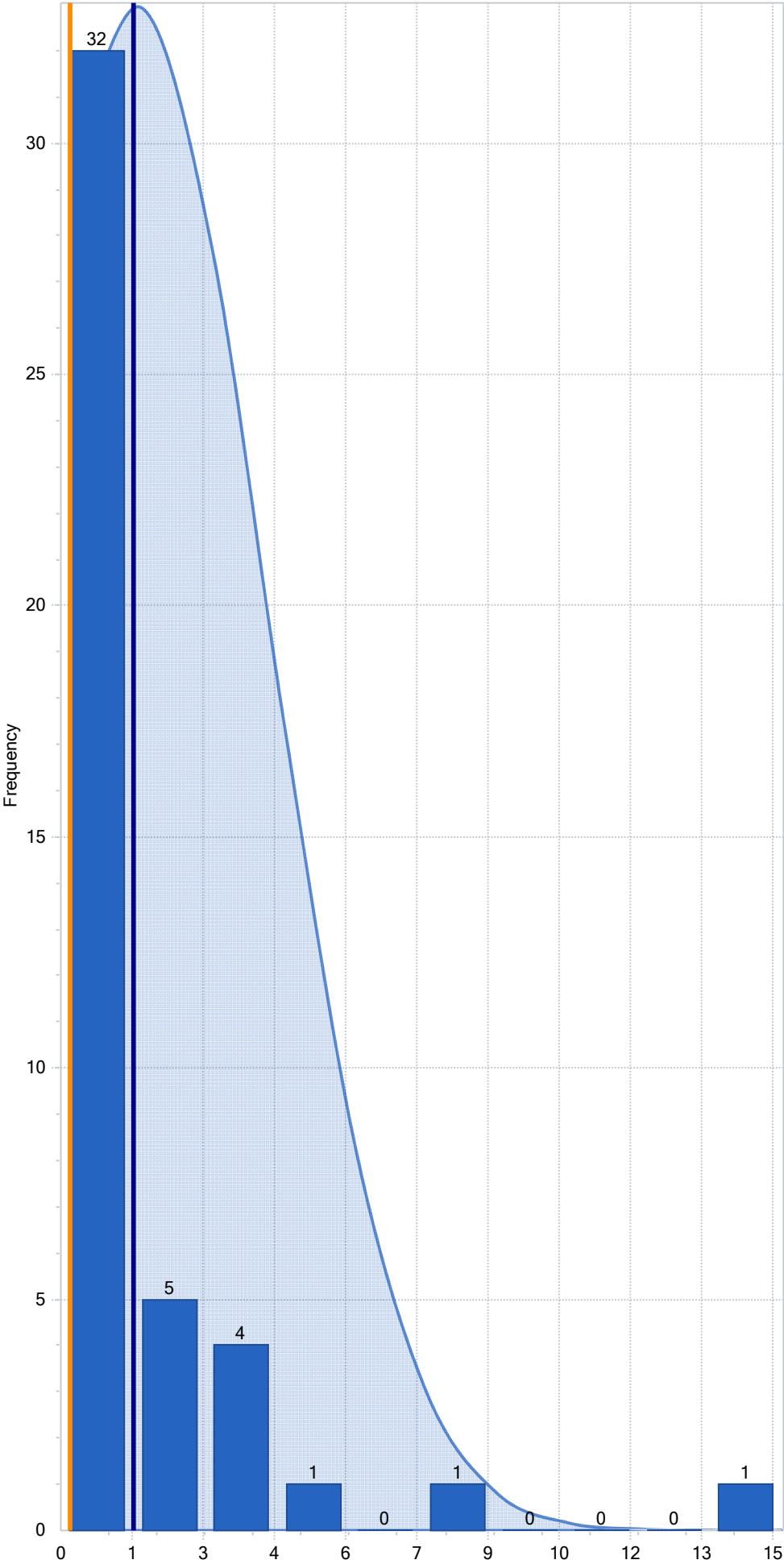
- ☐ Less Bins
- ☐ More Bins

Histogram for MG Be



Number of Values	13
Minimum	1.60
Maximum	13.00
SD	4.22
Skewness	0.96
Kurtosis	-0.38
☒ Mean	5.28
☒ Median	3.40
☒ Normal Distribution	
☐ Less Bins	
☐ More Bins	

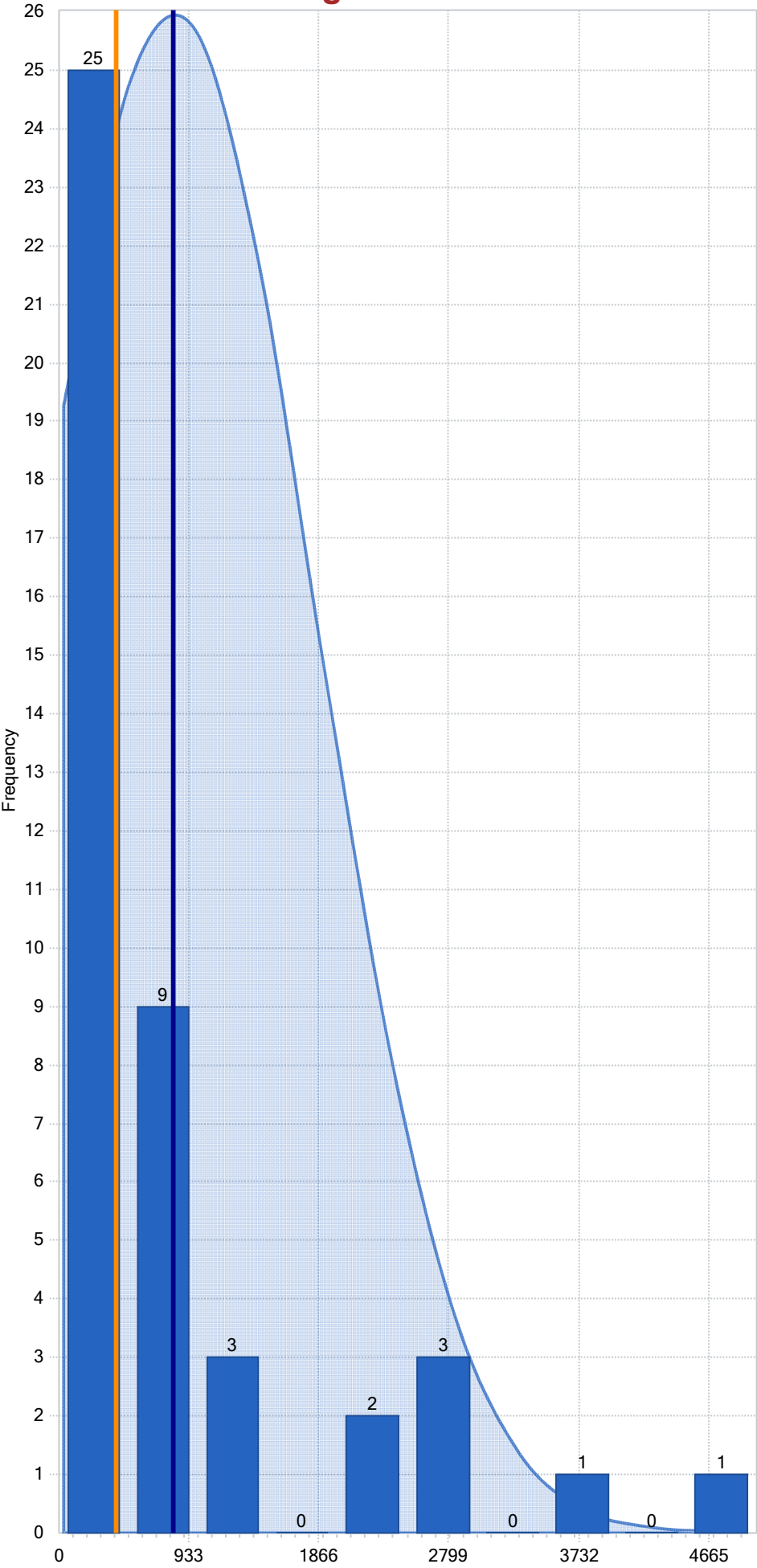
Histogram for MG Cd



Number of Values	44
Minimum	0.20
Maximum	15.00
SD	2.78
Skewness	3.33
Kurtosis	13.20
☒ Mean	1.51
☒ Median	0.20
☒ Normal Distribution	

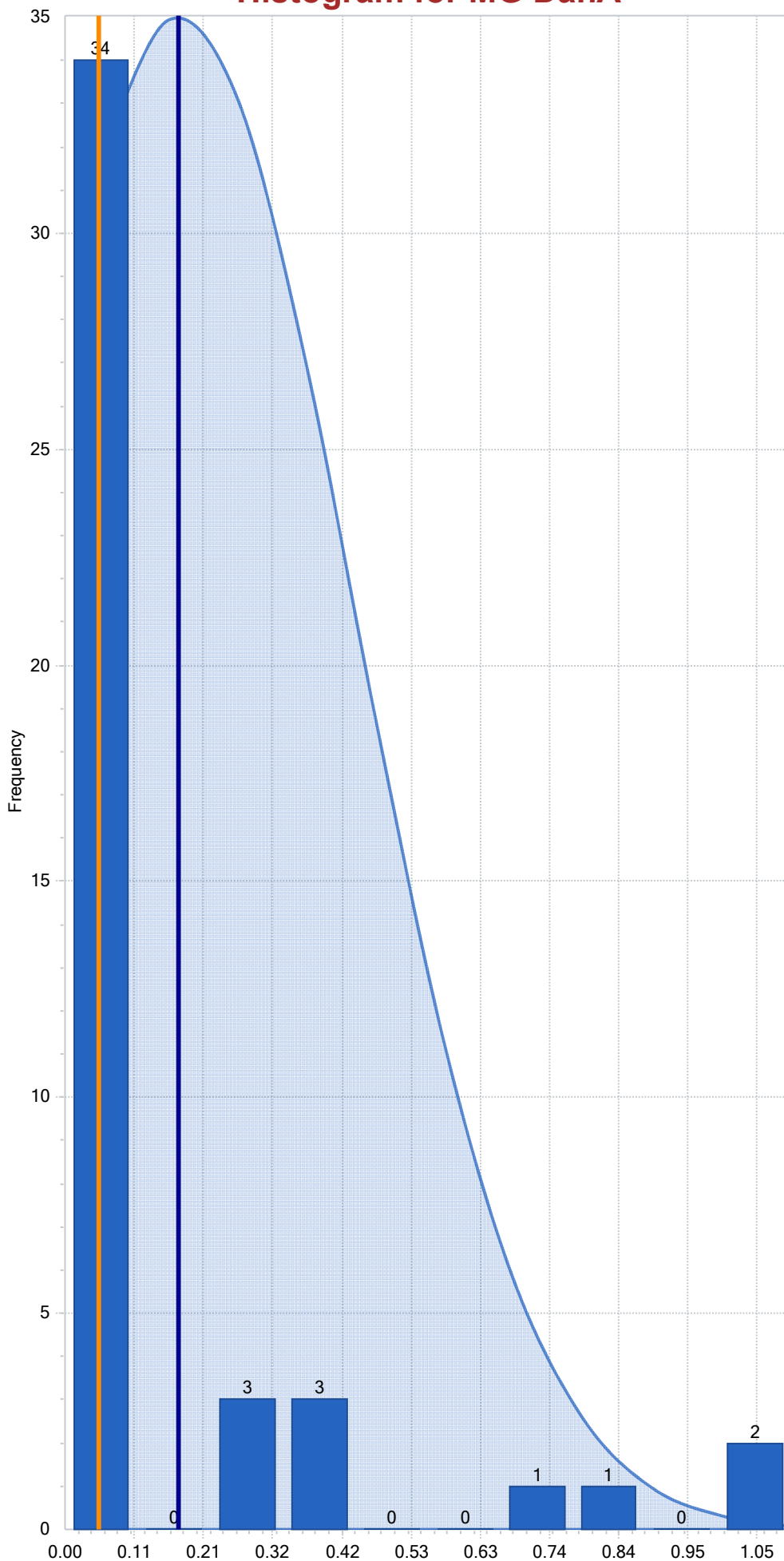
- ☐ Less Bins
- ☐ More Bins

Histogram for MG Cu



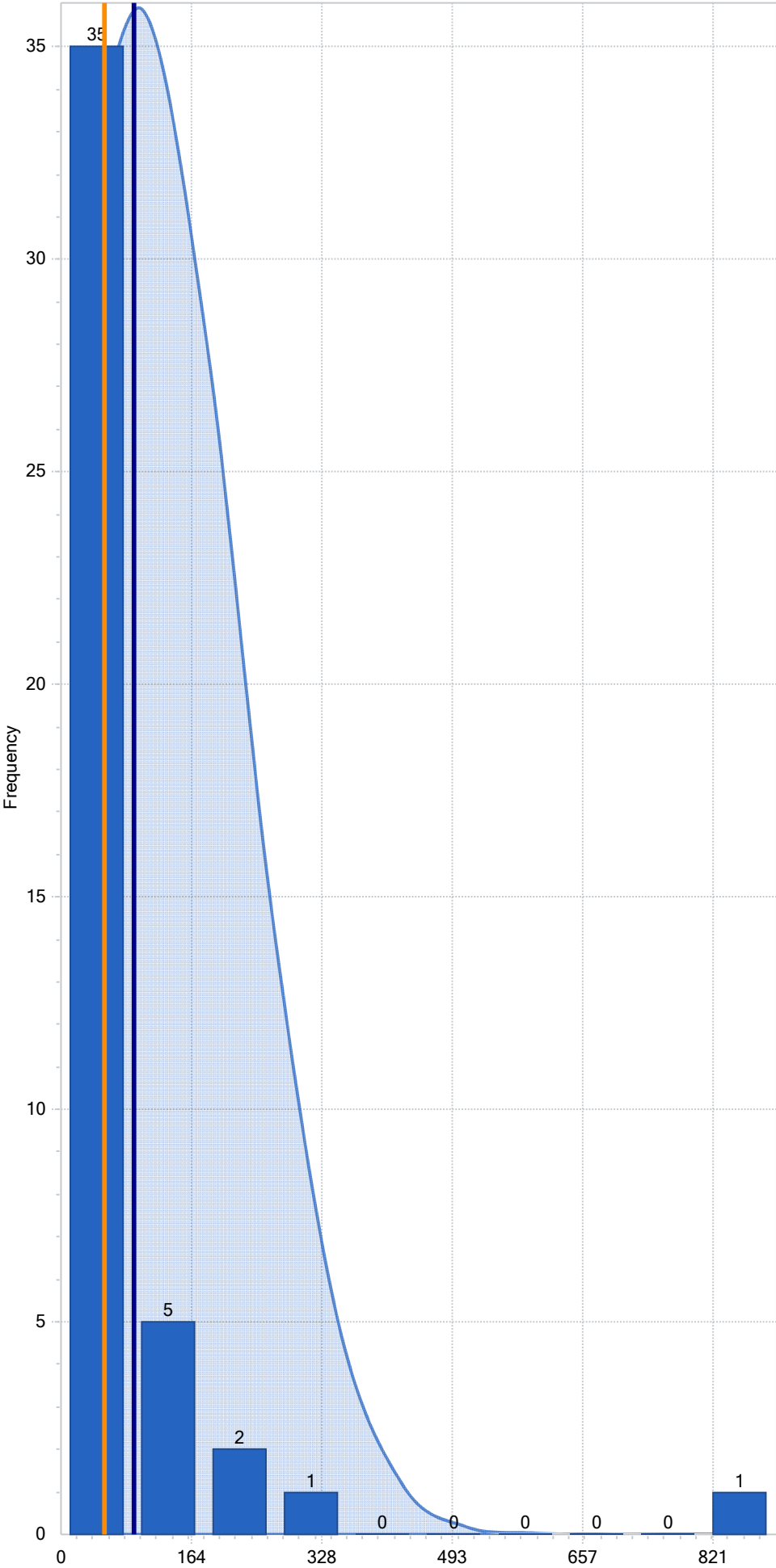
Number of Values	44
Minimum	35.00
Maximum	4,700.00
SD	1,020.84
Skewness	2.10
Kurtosis	4.51
☒ Mean	824.14
☒ Median	410.00
☒ Normal Distribution	
☐ Less Bins	
☐ More Bins	

Histogram for MG DahA



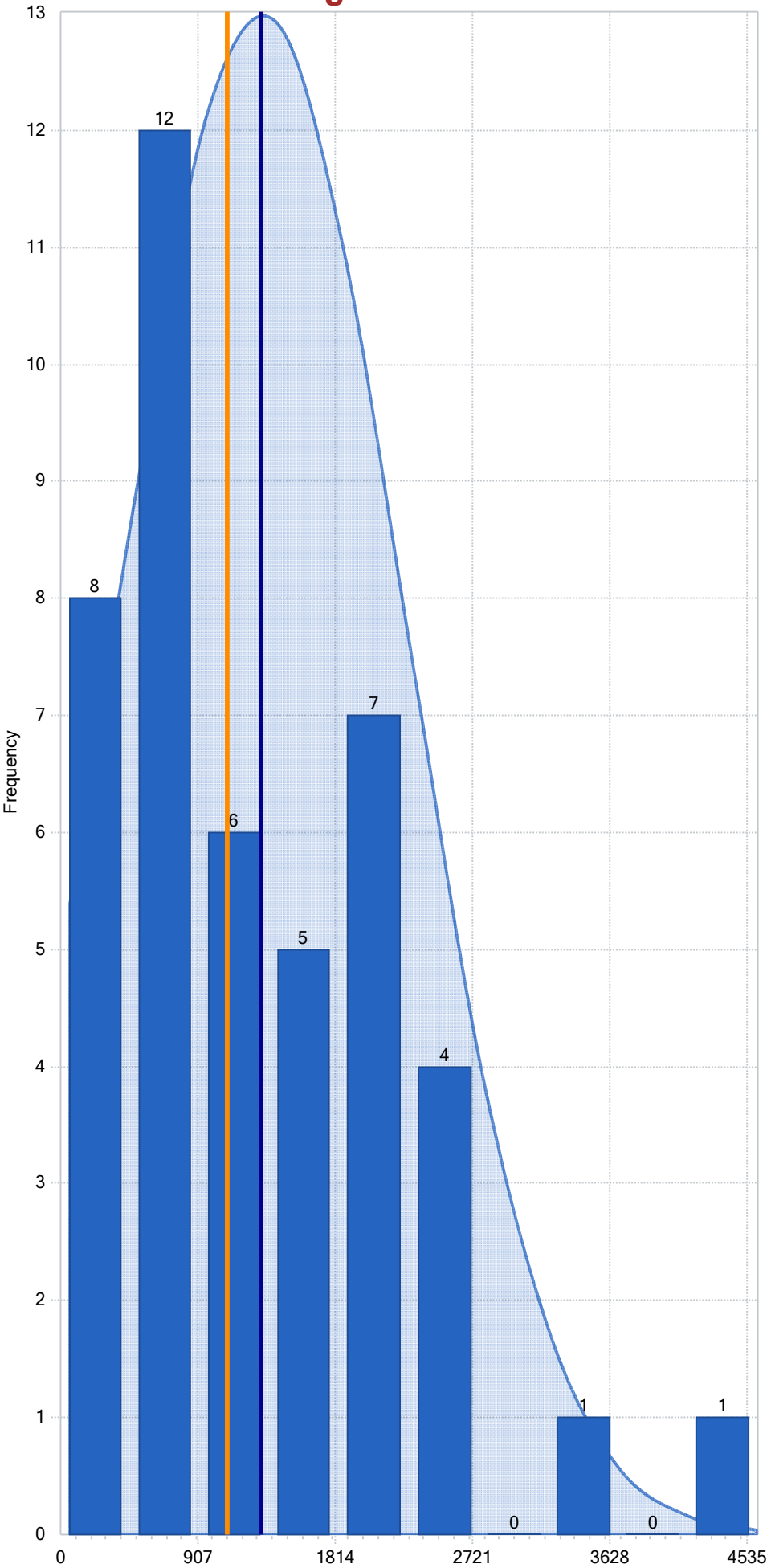
Number of Values	44
Minimum	0.05
Maximum	1.10
SD	0.27
Skewness	2.35
Kurtosis	4.79
☒ Mean	0.17
☒ Median	0.05
☒ Normal Distribution	
☐ Less Bins	
☐ More Bins	

Histogram for MG Ni



Number of Values	44
Minimum	19.00
Maximum	840.00
SD	129.25
Skewness	4.80
Kurtosis	27.03
☒ Mean	91.55
☒ Median	55.50
☒ Normal Distribution	
☐ Less Bins	
☐ More Bins	

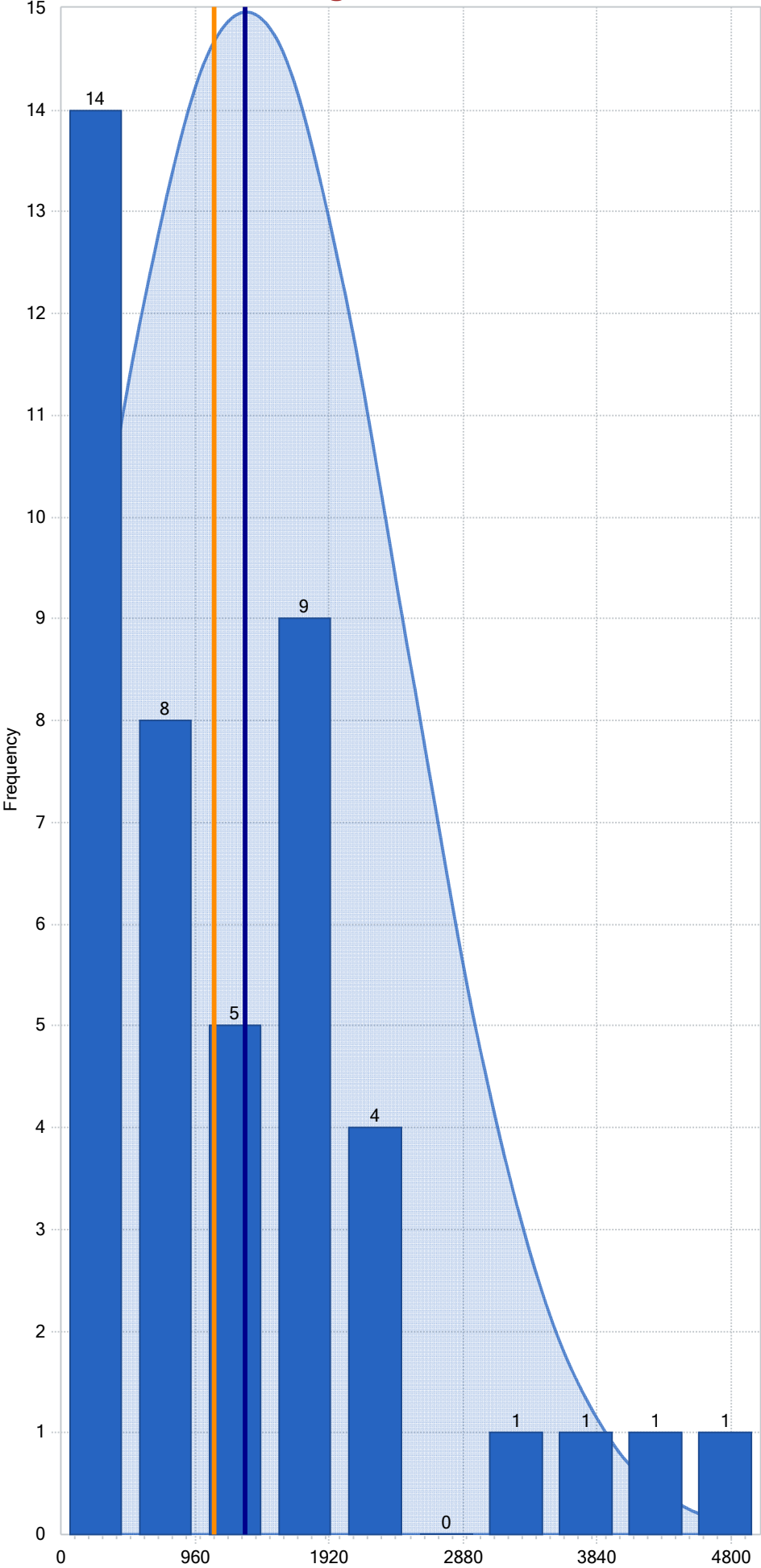
Histogram for MG Pb



Number of Values	44
Minimum	65.00
Maximum	4,600.00
SD	948.34
Skewness	1.20
Kurtosis	2.06
☒ Mean	1,323.05
☒ Median	1,100.00
☒ Normal Distribution	

- ☐ Less Bins
- ☐ More Bins

Histogram for MG Zn



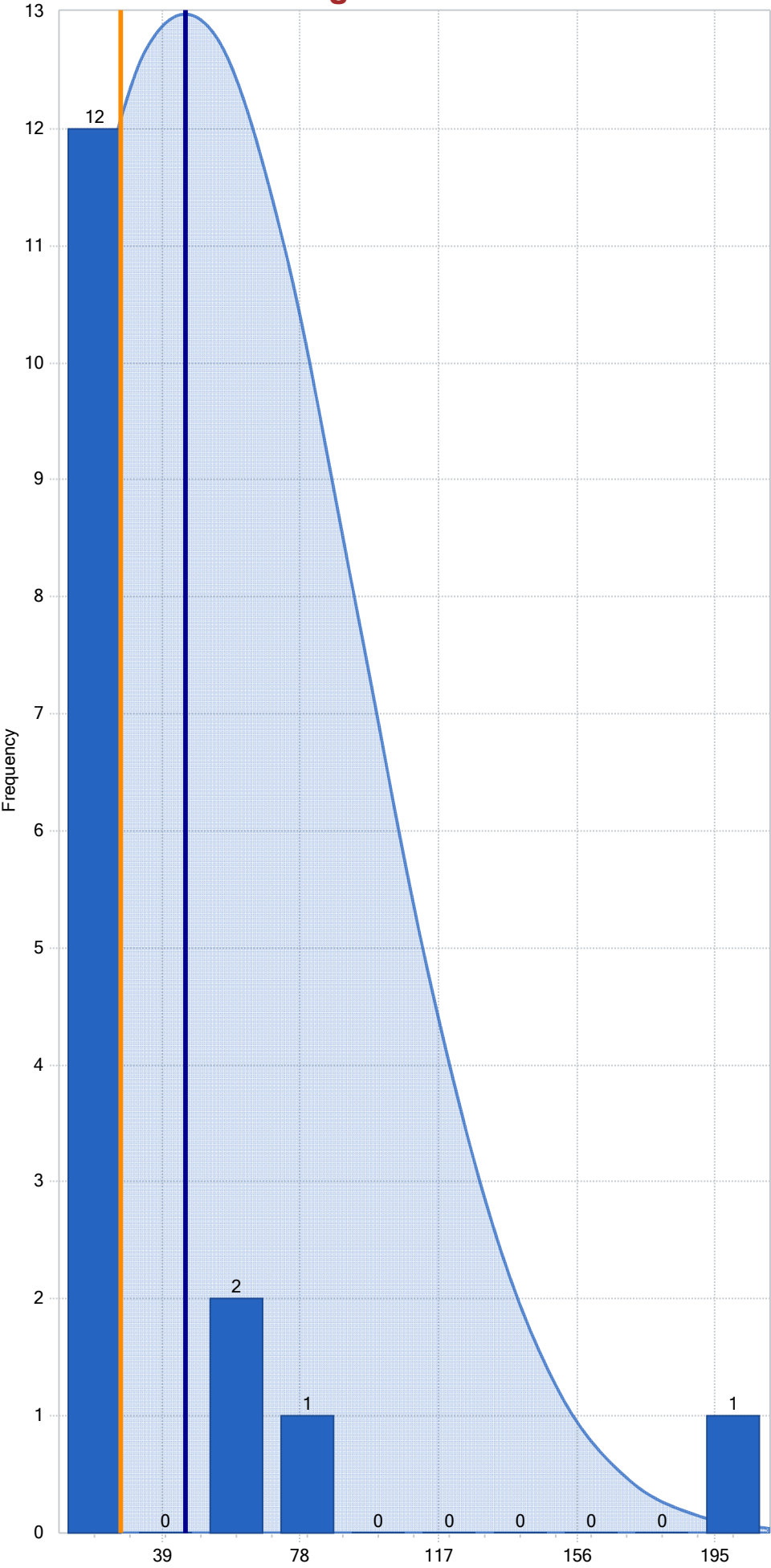
Number of Values	44
Minimum	100.00
Maximum	4,900.00
SD	1,107.97
Skewness	1.28
Kurtosis	1.74
☒ Mean	1,322.50
☒ Median	1,100.00
☒ Normal Distribution	

- ☐ Less Bins
- ☐ More Bins



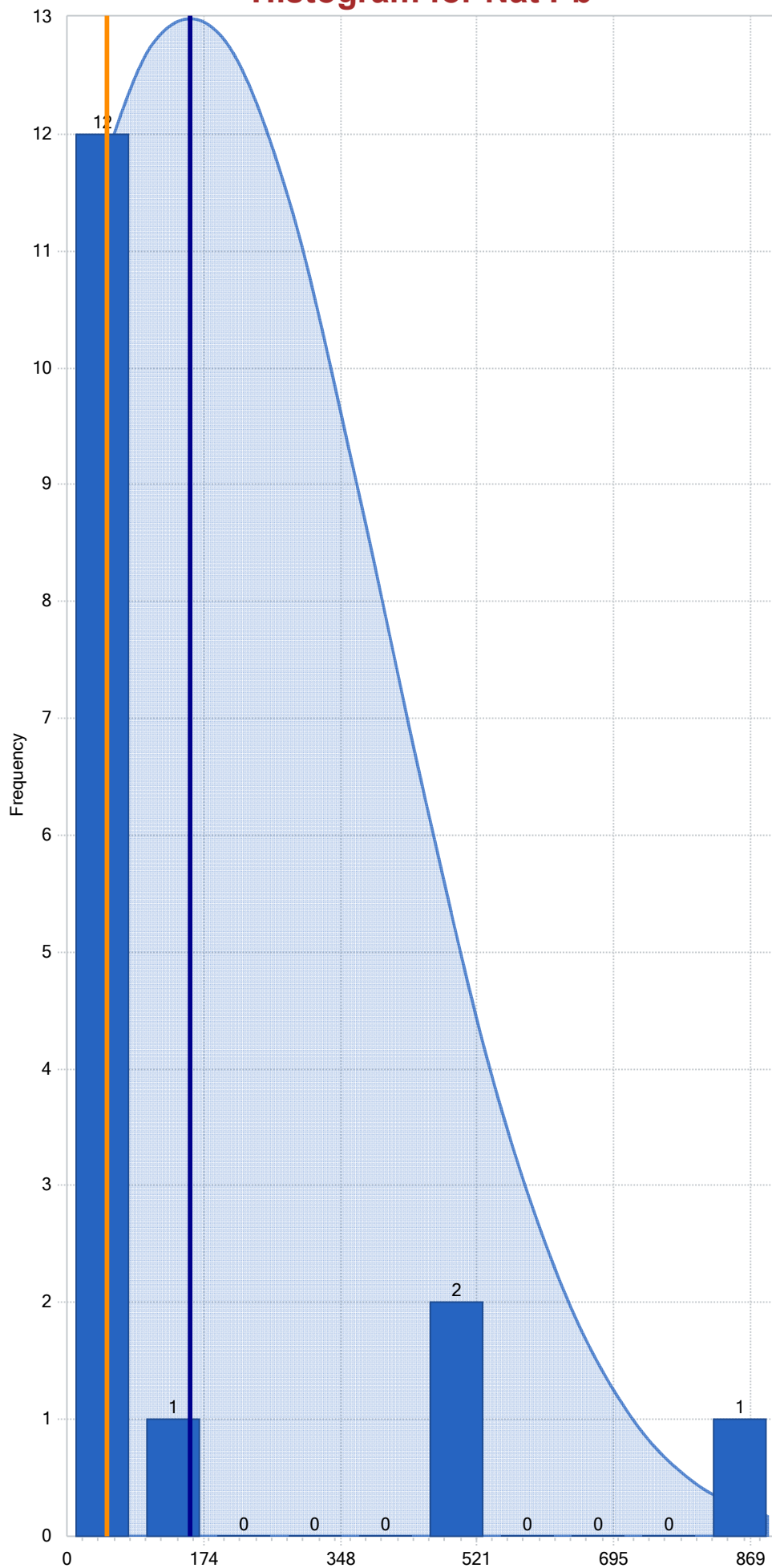
Appendix F Histograms (Natural Ground).

Histogram for Nat Cu



Number of Values	16
Minimum	15.00
Maximum	210.00
SD	48.44
Skewness	2.96
Kurtosis	9.67
☒ Mean	45.44
☒ Median	27.50
☒ Normal Distribution	
☐ Less Bins	
☐ More Bins	

Histogram for Nat Pb



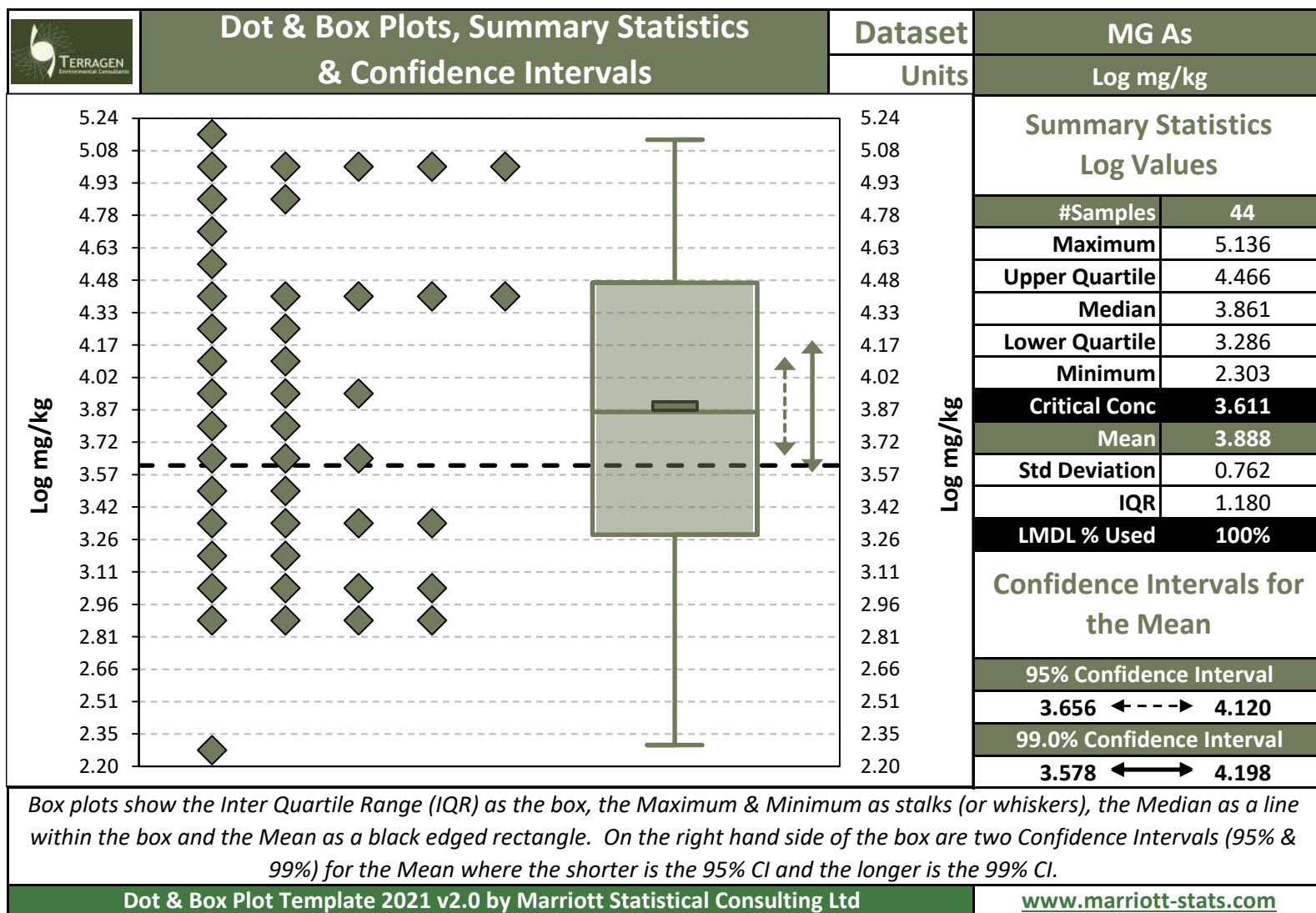
Number of Values	16
Minimum	21.00
Maximum	890.00
SD	248.59
Skewness	2.24
Kurtosis	4.60
☒ Mean	156.13
☒ Median	50.00
☒ Normal Distribution	

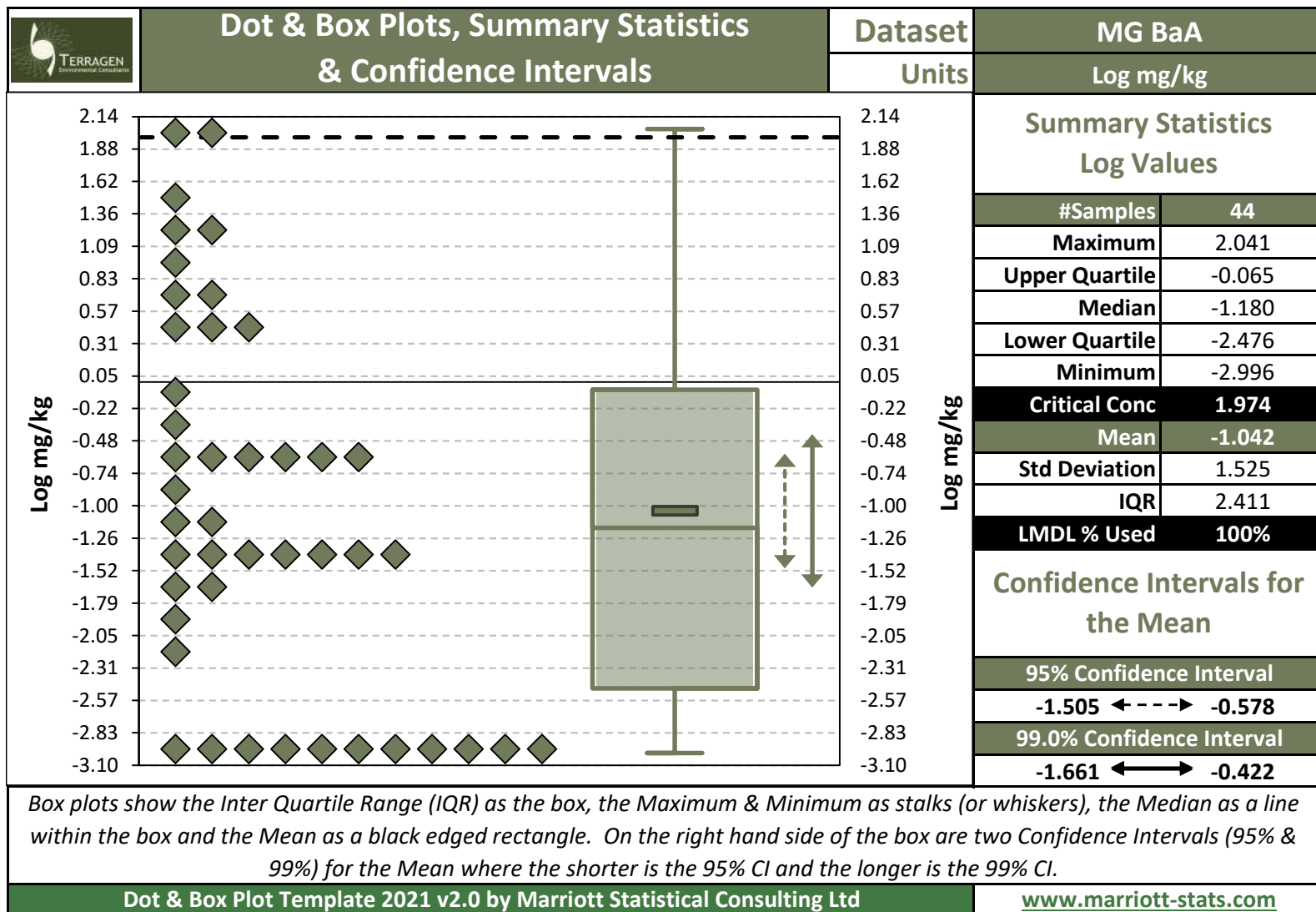
☐ Less Bins

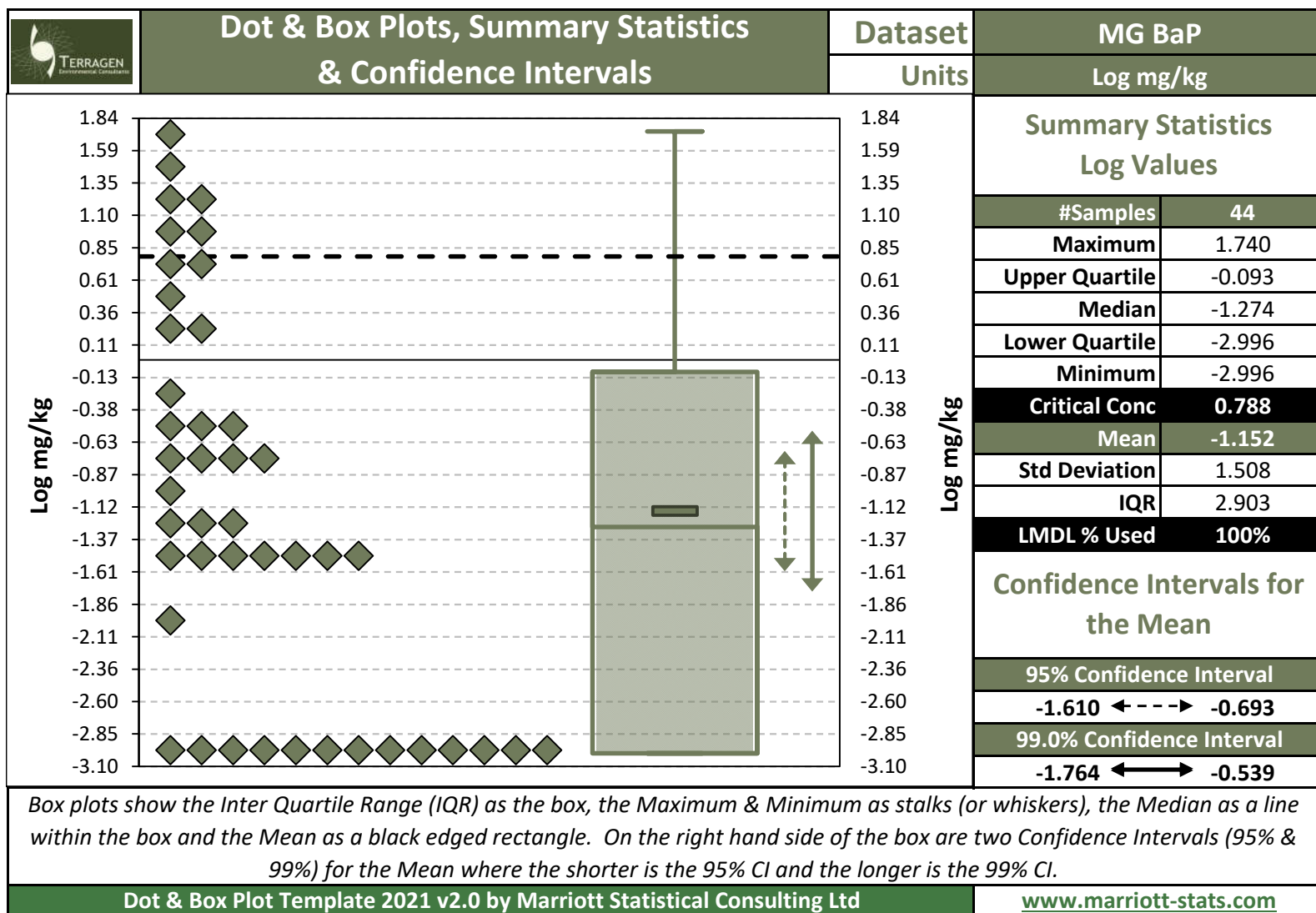
☐ More Bins

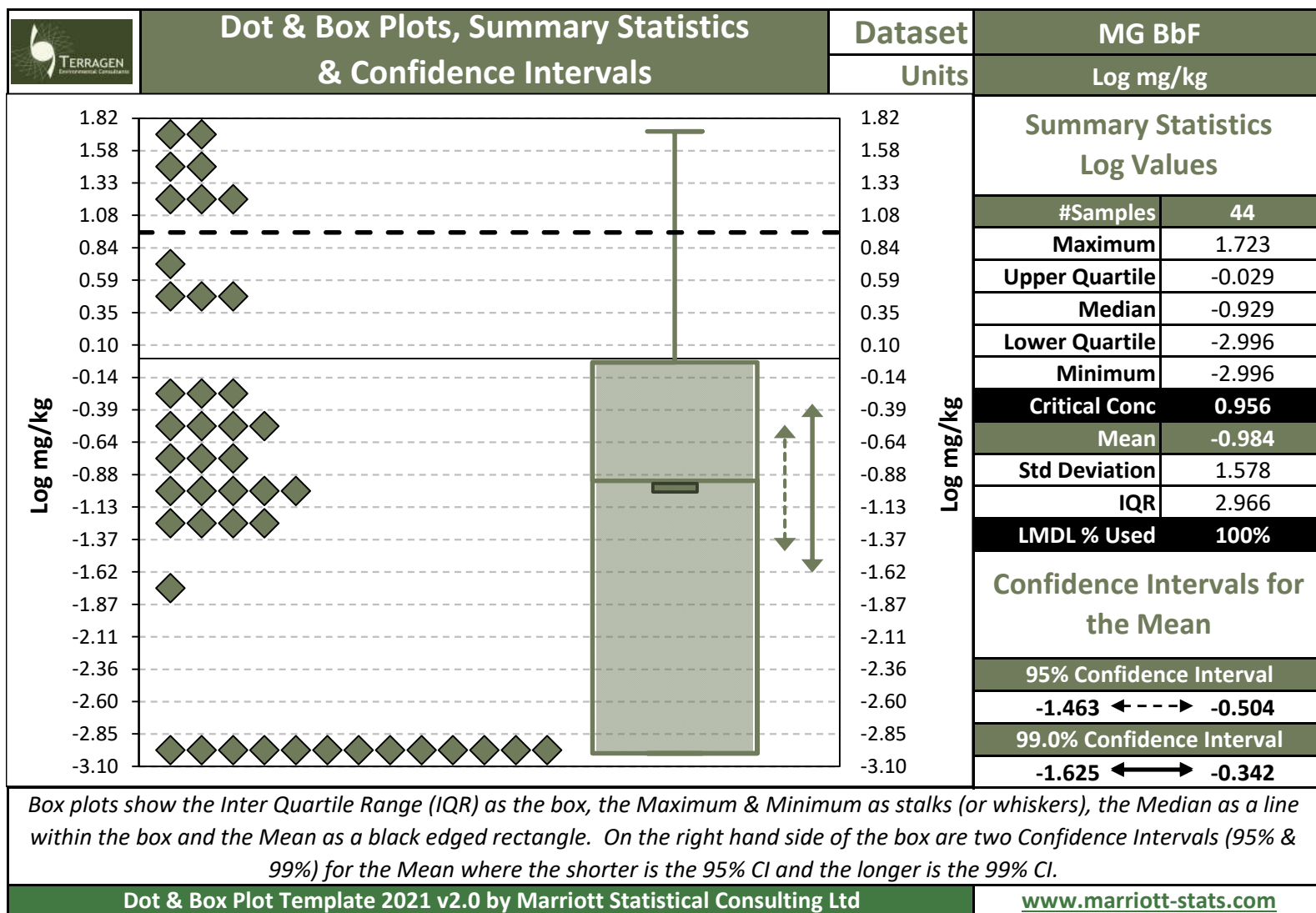


Appendix G Box Plots (Made Ground - Human Health).











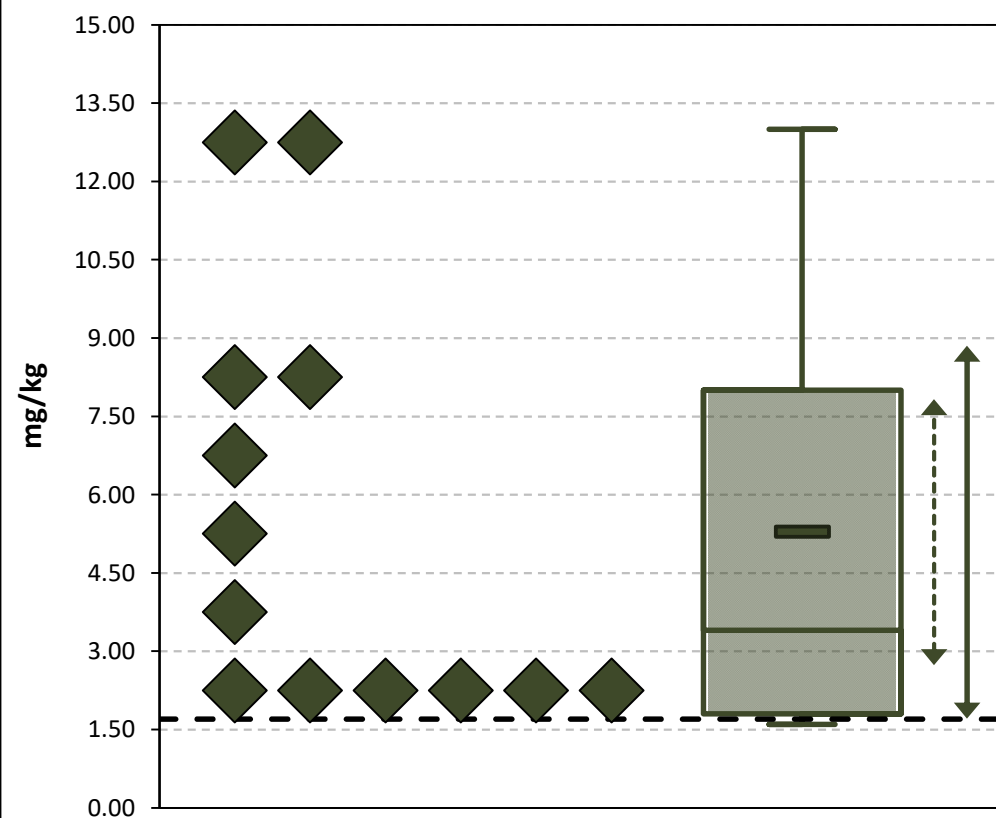
Dot & Box Plots, Summary Statistics & Confidence Intervals

Dataset

Units

MG Be

mg/kg



15.00

13.50

12.00

10.50

9.00

7.50

6.00

4.50

3.00

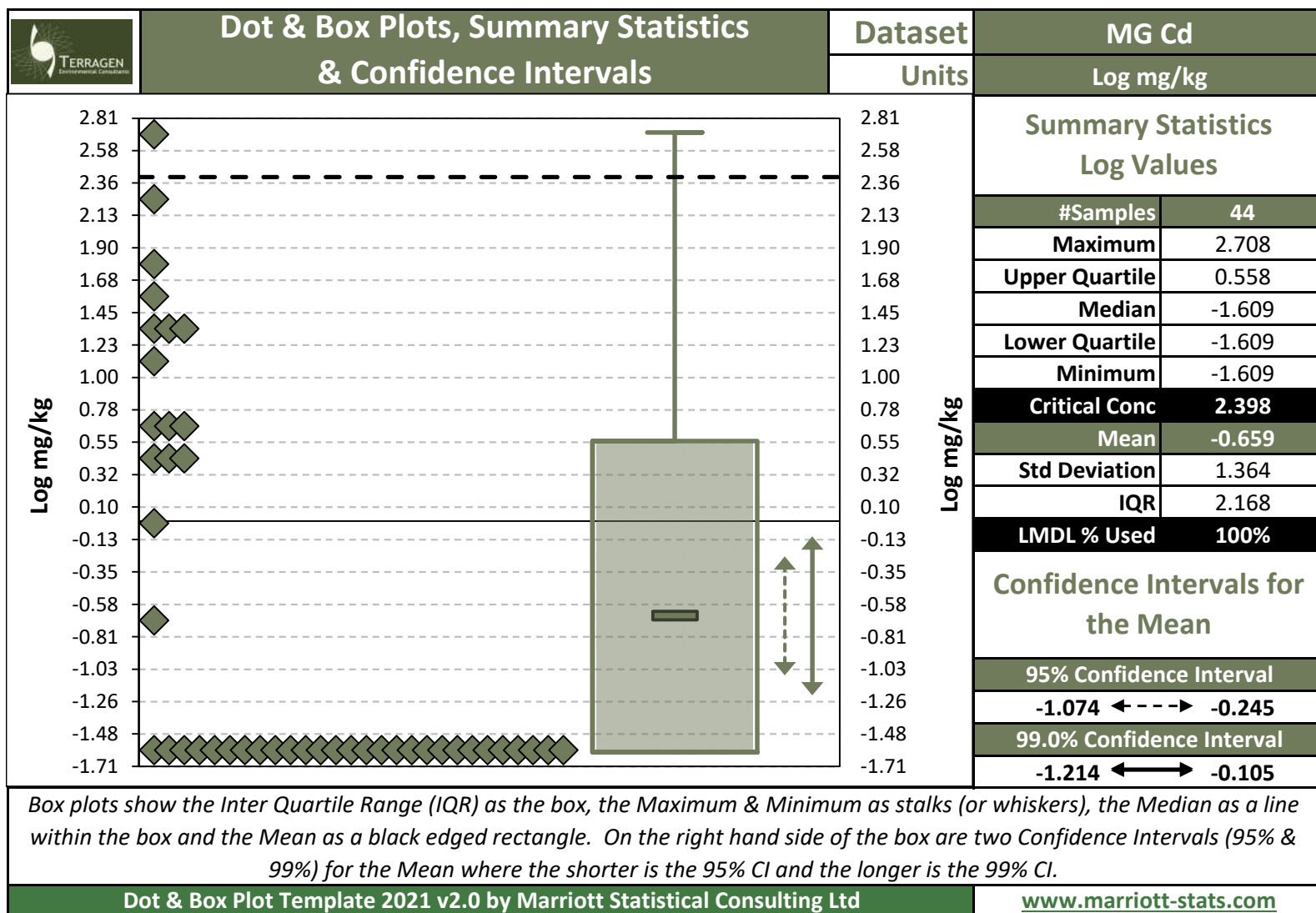
1.50

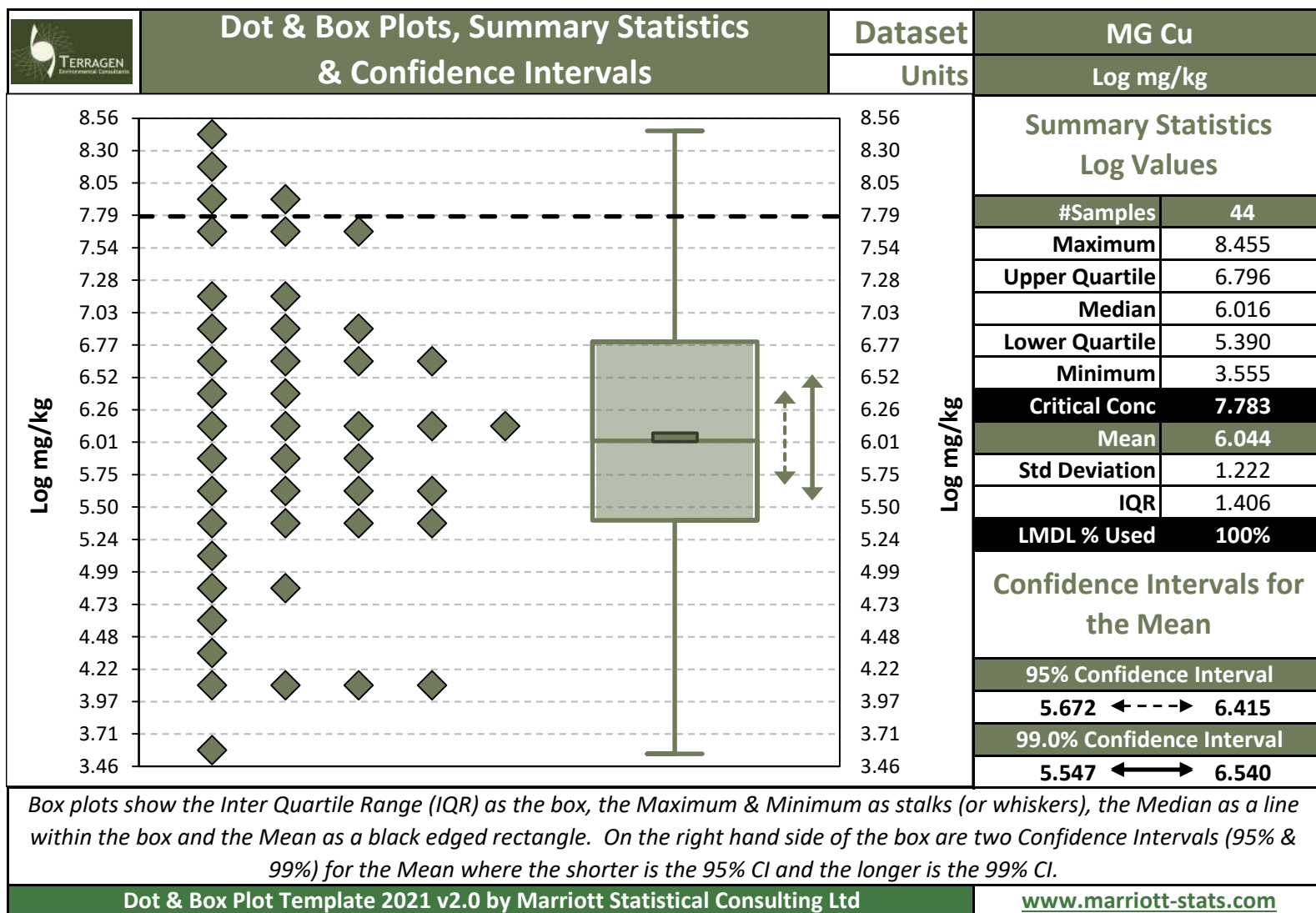
0.00

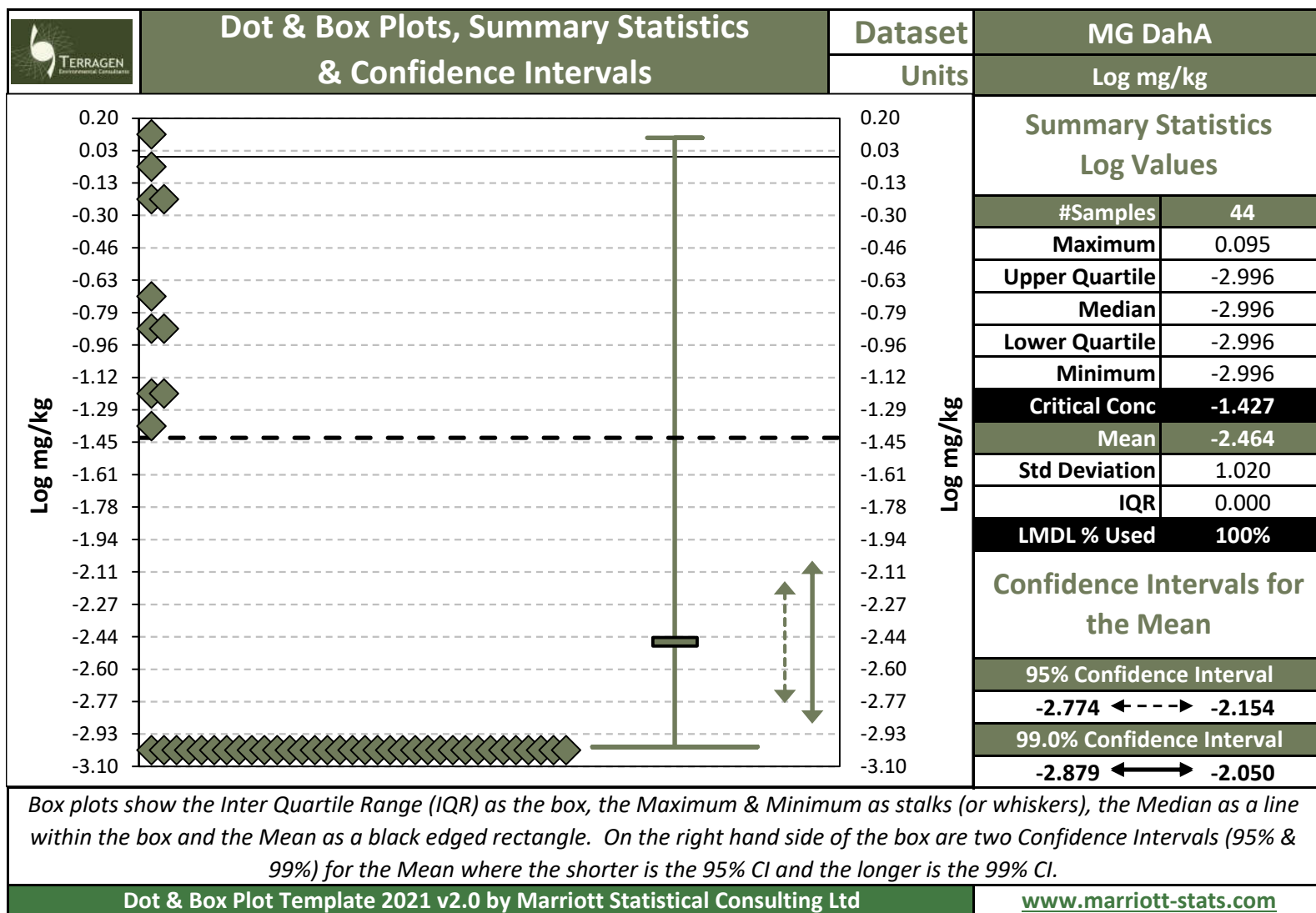
Summary Statistics Actual Values

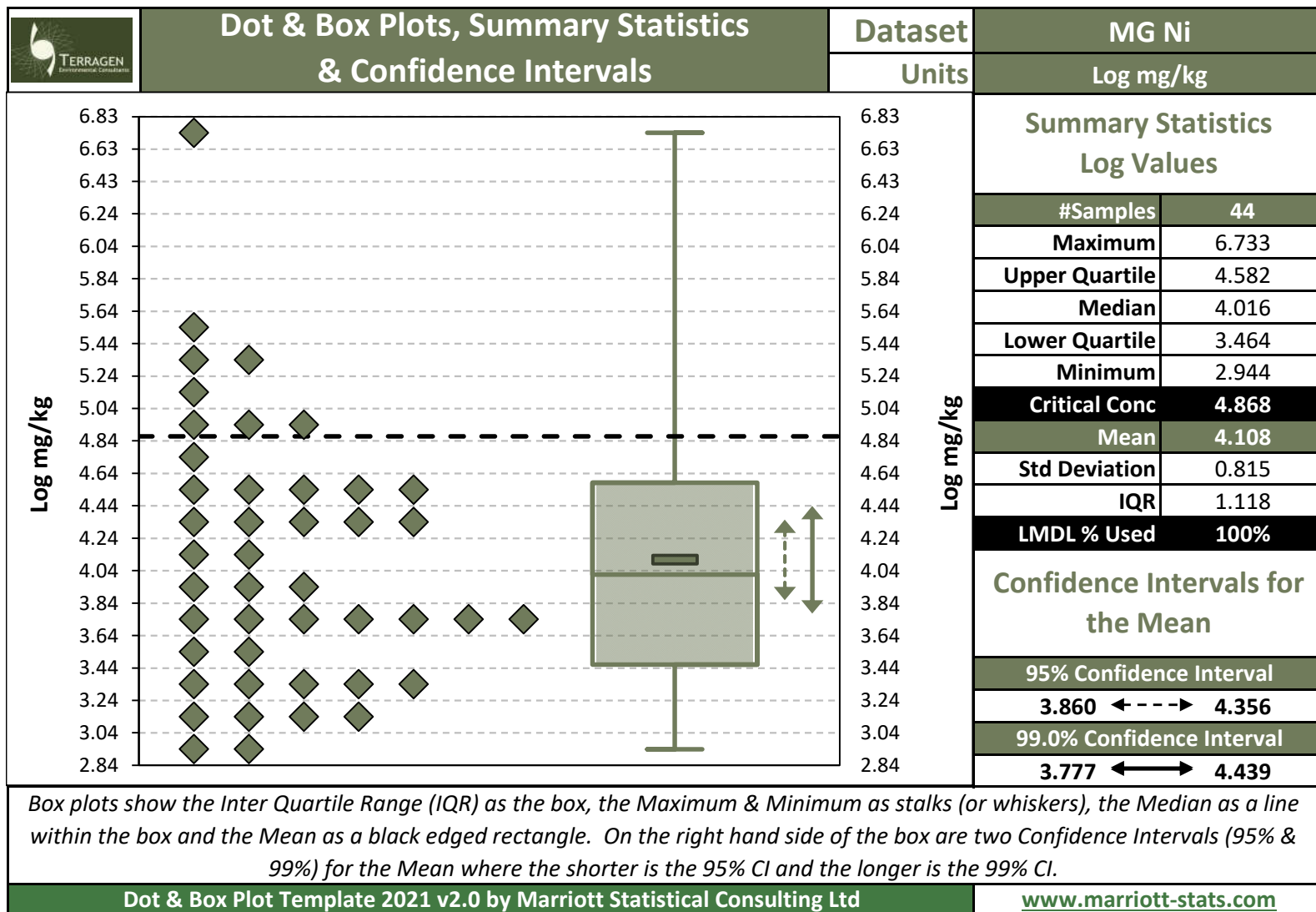
#Samples	13
Maximum	13.00
Upper Quartile	8.00
Median	3.40
Lower Quartile	1.80
Minimum	1.60
Critical Conc	1.70
Mean	5.28
Std Deviation	4.22
IQR	6.20
LMDL % Used	100%
Confidence Intervals for the Mean	
95% Confidence Interval	
2.74	← --- → 7.83
99.0% Confidence Interval	
1.71	↔ 8.86

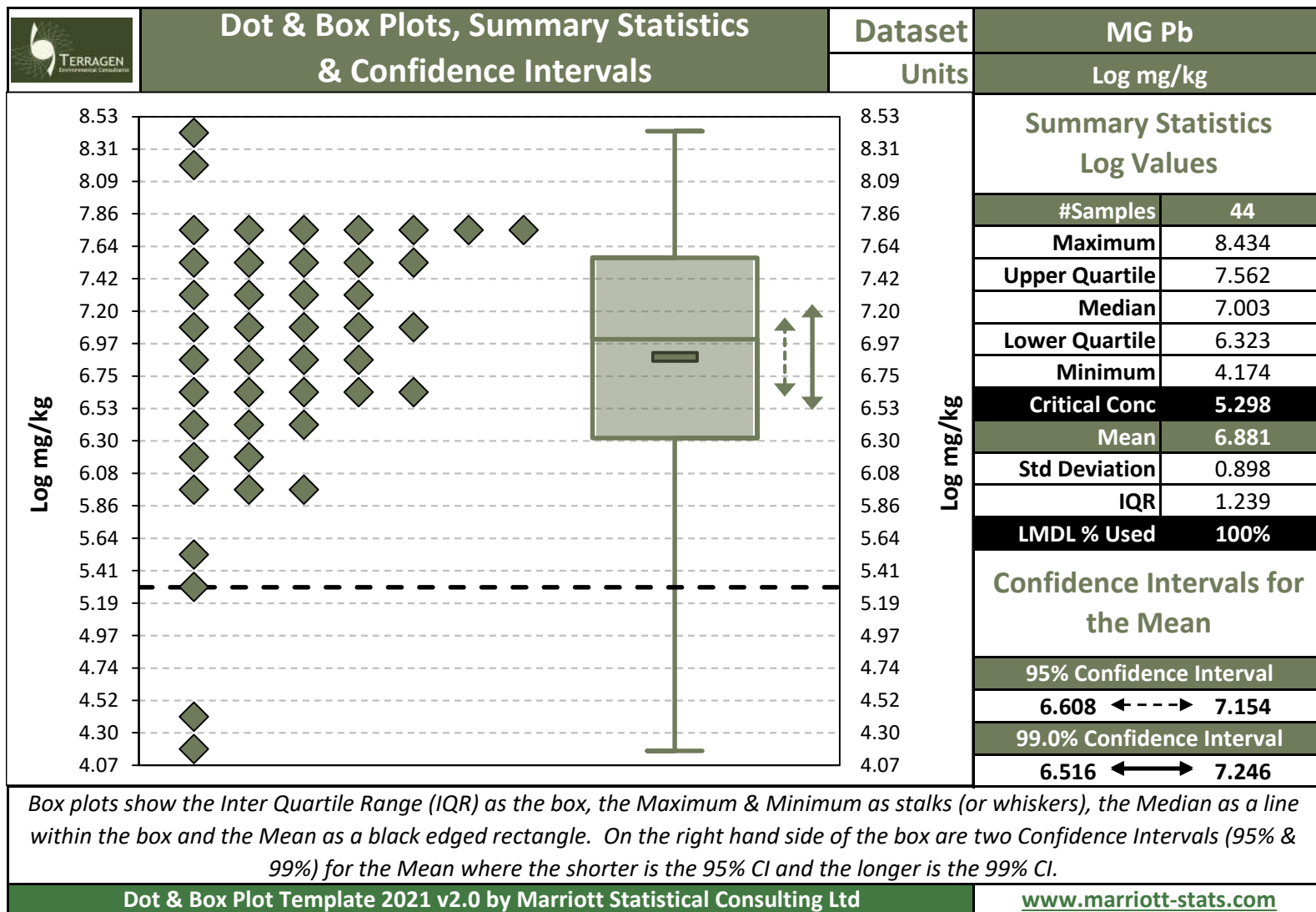
Box plots show the Inter Quartile Range (IQR) as the box, the Maximum & Minimum as stalks (or whiskers), the Median as a line within the box and the Mean as a black edged rectangle. On the right hand side of the box are two Confidence Intervals (95% & 99%) for the Mean where the shorter is the 95% CI and the longer is the 99% CI.

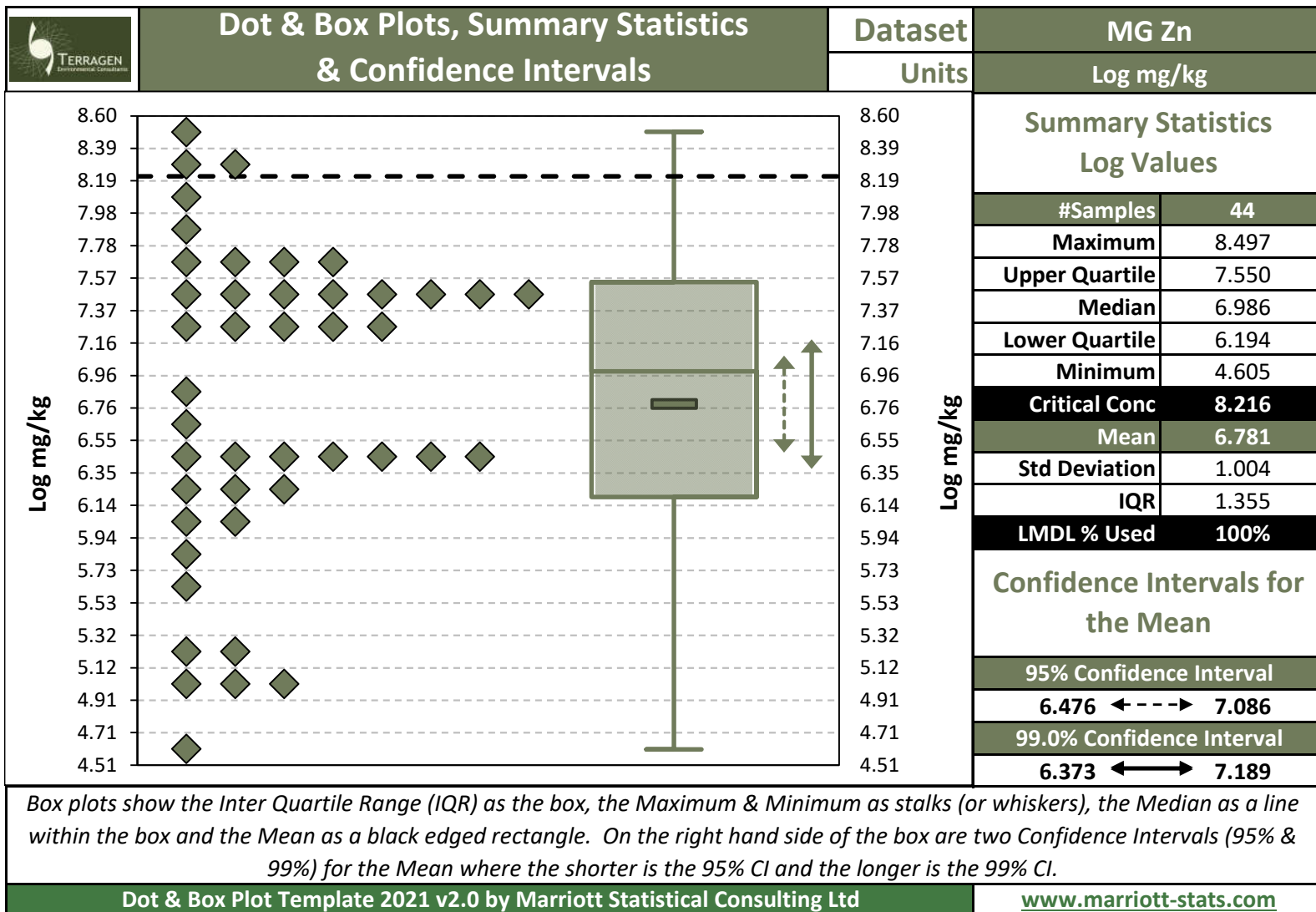






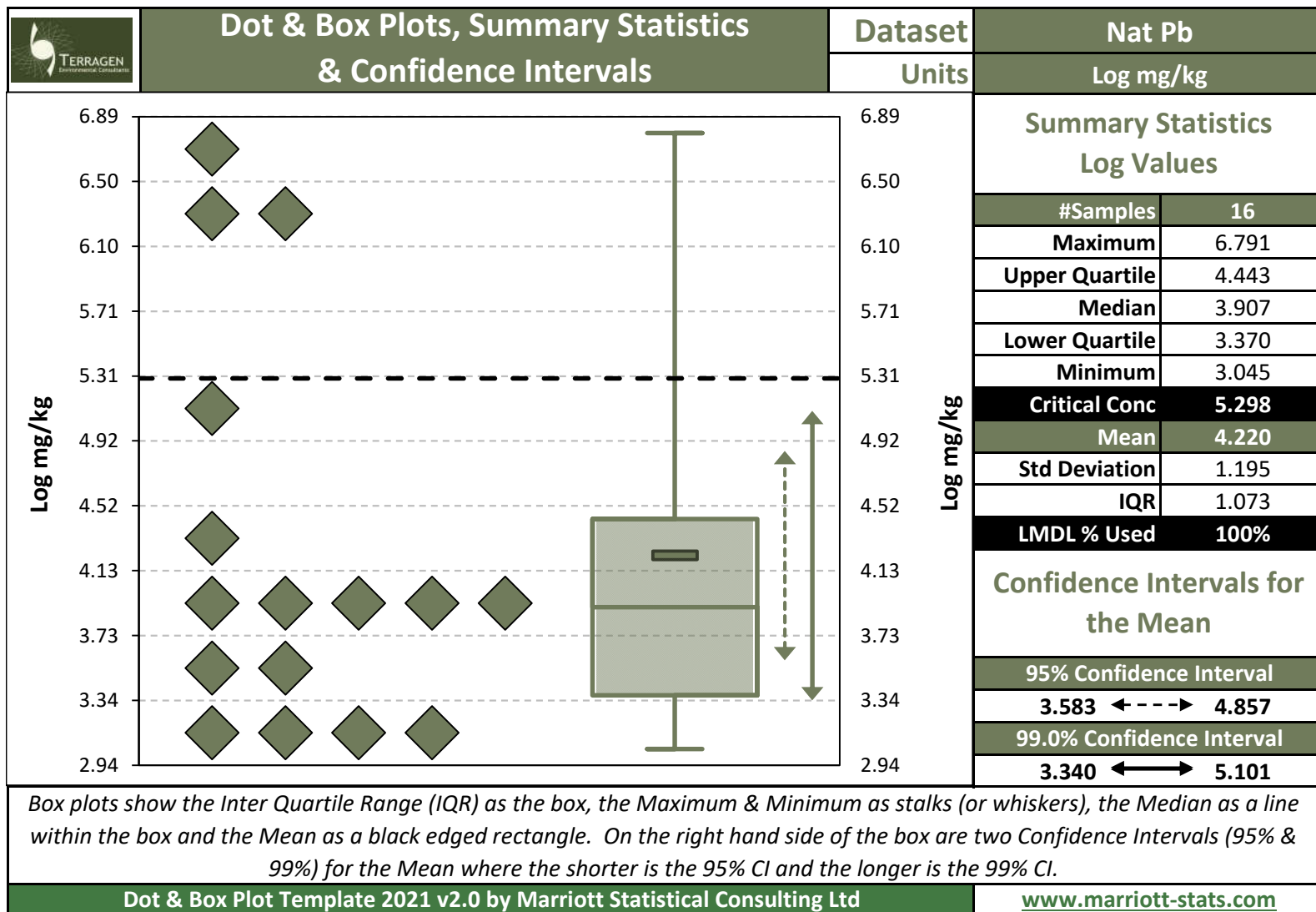






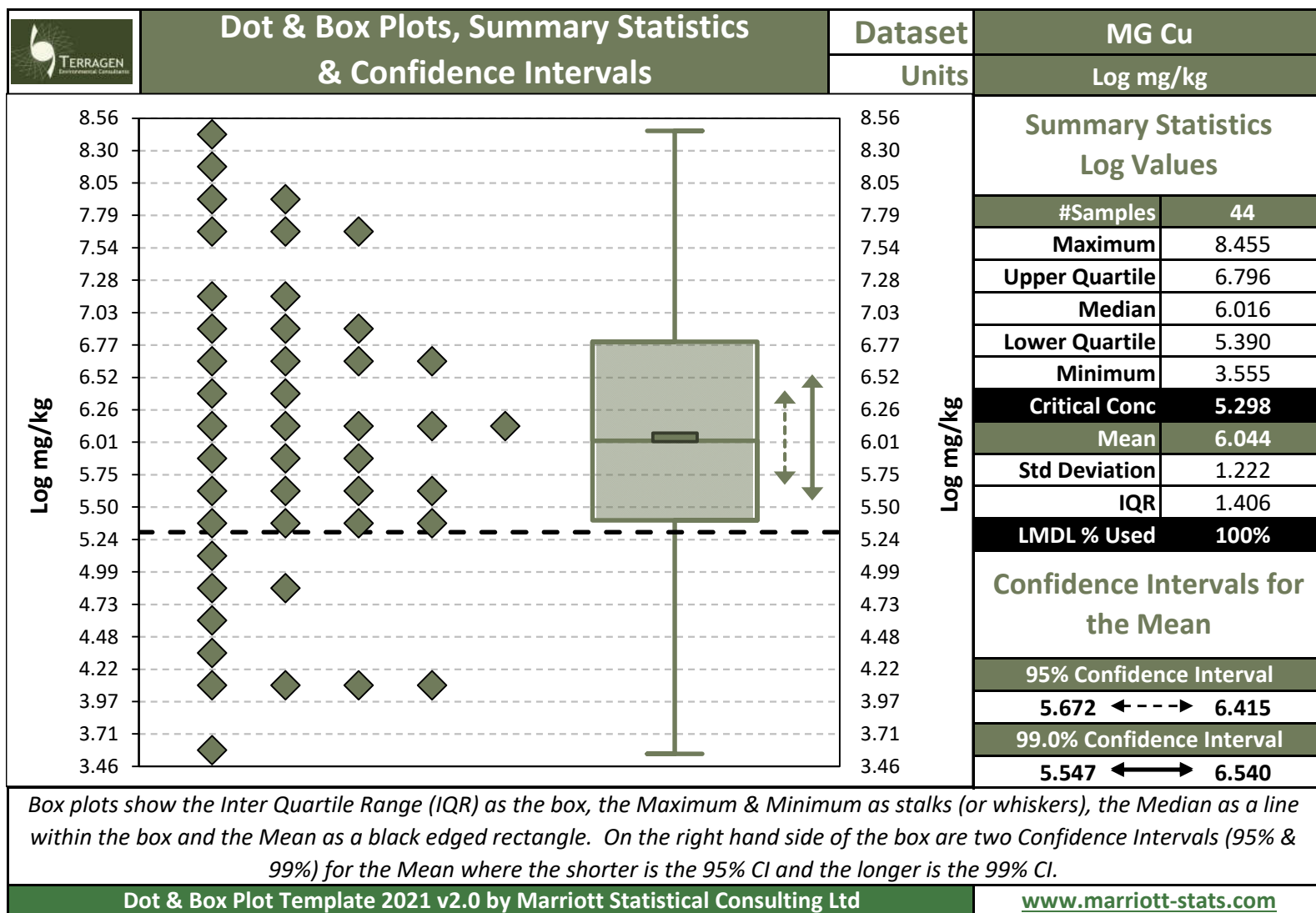


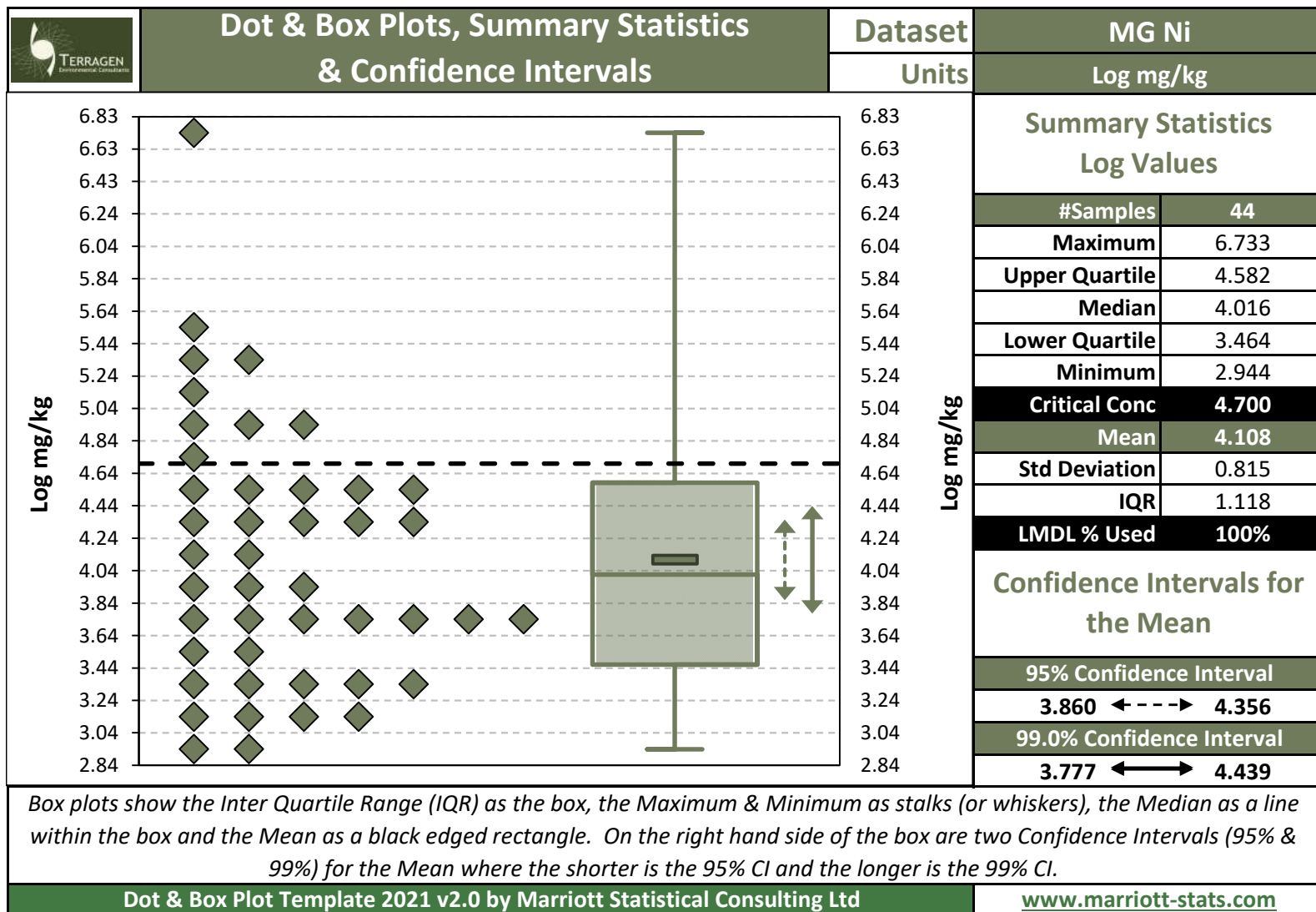
Appendix H Box Plots (Natural Ground - Human Health).

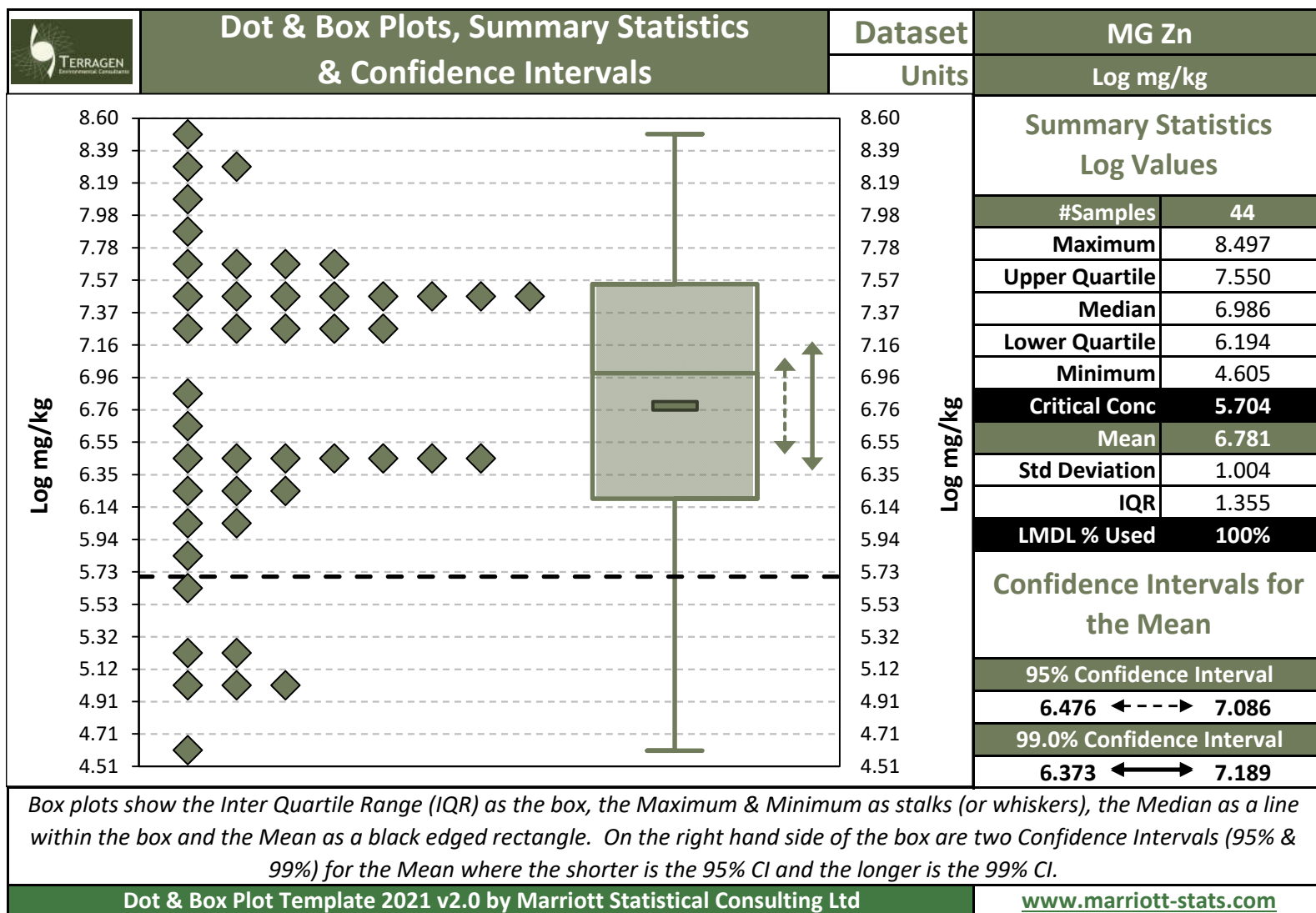




Appendix I Box Plots (Made Ground – Landscape Planting).









Appendix J Box Plots (Natural Ground – Landscape Planting).

