

Appendix G Contamination test results

Contamination test results



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Analytical Report Number : 23-28329

Project / Site name:	Meadow School	Samples received on:	13/04/2023
Your job number:		Samples instructed on/ Analysis started on:	14/04/2023
Your order number:	PO25433	Analysis completed by:	21/04/2023
Report Issue Number:	1	Report issued on:	21/04/2023
Samples Analysed:	10 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

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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: 23-28329
Project / Site name: Meadow School

Lab Sample Number				2647893	2647894	2647895	2647896	2647897
Sample Reference				SA02	SA01	WS02	WS02	WS01
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.10	0.10	0.10	1.00	0.10
Date Sampled				11/04/2023	11/04/2023	12/04/2023	12/04/2023	12/04/2023
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	19	20	18	20
Total mass of sample received	kg	0.001	NONE	0.8	0.8	0.8	0.8	0.8

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	LFT	LFT	LFT	LFT	LFT

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	5.5	5.5	5.2	6	5.6
Free Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Water Soluble SO ₄ ²⁻ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.0055	0.0051	0.0045	0.0026	0.0047
Fraction Organic Carbon (FOC) Automated	N/A	0.001	MCERTS	0.025	0.017	0.019	0.0062	0.017

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	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	0.09	0.3	0.15	< 0.05	0.13
Anthracene	mg/kg	0.05	MCERTS	< 0.05	0.07	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	0.31	0.85	0.42	< 0.05	0.21
Pyrene	mg/kg	0.05	MCERTS	0.29	0.76	0.41	< 0.05	0.18
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.18	0.37	0.21	< 0.05	0.09
Chrysene	mg/kg	0.05	MCERTS	0.21	0.39	0.33	< 0.05	0.15
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	0.26	0.42	0.29	< 0.05	0.09
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	0.11	0.18	0.13	< 0.05	0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.21	0.35	0.3	< 0.05	0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.11	0.17	0.14	< 0.05	0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.12	0.18	0.17	< 0.05	0.07

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	1.89	4.04	2.55	< 0.80	1.12
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Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	8.2	8.7	9.6	13	9.4
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	0.67	0.66	0.78	1	0.75
Boron (water soluble)	mg/kg	0.2	MCERTS	0.7	0.9	0.4	0.4	0.7
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 (III)	mg/kg	1	NONE	17	18	19	29	20
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	18	18	21	29	21
Copper (aqua regia extractable)	mg/kg	1	MCERTS	20	17	20	18	19
Lead (aqua regia extractable)	mg/kg	1	MCERTS	61	47	73	18	59
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	0.4	< 0.3	< 0.3	< 0.3	0.4
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	12	12	15	20	14
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	31	31	36	47	36
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	49	50	64	49	62

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Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	0.10	0.10	0.10	1.00	0.10
Date Sampled	11/04/2023	11/04/2023	12/04/2023	12/04/2023	12/04/2023
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		

Monoaromatics & Oxygenates

Benzene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Toluene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Ethylbenzene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
p & m-xylene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
o-xylene	µg/kg	5	MCERTS	< 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	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16 EH_CU_ID_AL	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21 EH_CU_ID_AL	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35 EH_CU_ID_AL	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic >EC16 - EC35 EH_CU_ID_AL	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic > EC35 - EC44 EH_CU_ID_AL	mg/kg	8.4	NONE	< 8.4	< 8.4	< 8.4	< 8.4	< 8.4
TPH-CWG - Aliphatic (EC5 - EC35) EH_CU+HS_ID_AL	mg/kg	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic (EC5 - EC44) 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	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16 EH_CU_ID_AR	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aromatic >EC16 - EC21 EH_CU_ID_AR	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >EC21 - EC35 EH_CU_ID_AR	mg/kg	10	MCERTS	< 10	14	< 10	< 10	< 10
TPH-CWG - Aromatic > EC35 - EC44 EH_CU_ID_AR	mg/kg	8.4	NONE	< 8.4	< 8.4	< 8.4	< 8.4	< 8.4
TPH-CWG - Aromatic (EC5 - EC35) EH_CU+HS_ID_AR	mg/kg	10	NONE	< 10	20	< 10	< 10	< 10
TPH-CWG - Aromatic (EC5 - EC44) EH_CU+HS_ID_AR	mg/kg	10	NONE	< 10	20	< 10	< 10	< 10

TPH Total C5 - C44 EH_CU+HS_ID_TOTAL	mg/kg	10	NONE	< 10	20	< 10	< 10	< 10
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VOCs

Chloromethane	µg/kg	5	ISO 17025	-	-	< 5.0#	-	< 5.0
Chloroethane	µg/kg	5	NONE	-	-	< 5.0	-	< 5.0
Bromomethane	µg/kg	5	ISO 17025	-	-	< 5.0	-	< 5.0
Vinyl Chloride	µg/kg	5	NONE	-	-	< 5.0	-	< 5.0
Trichlorofluoromethane	µg/kg	5	NONE	-	-	< 5.0	-	< 5.0
1,1-Dichloroethene	µg/kg	5	NONE	-	-	< 5.0	-	< 5.0
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	5	NONE	-	-	< 5.0	-	< 5.0
Cis-1,2-dichloroethene	µg/kg	5	ISO 17025	-	-	< 5.0	-	< 5.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	NONE	-	-	< 5.0	-	< 5.0
1,1-Dichloroethane	µg/kg	5	ISO 17025	-	-	< 5.0	-	< 5.0
2,2-Dichloropropane	µg/kg	5	ISO 17025	-	-	< 5.0	-	< 5.0
Trichloromethane	µg/kg	5	ISO 17025	-	-	< 5.0	-	< 5.0
1,1,1-Trichloroethane	µg/kg	5	ISO 17025	-	-	< 5.0	-	< 5.0
1,2-Dichloroethane	µg/kg	5	ISO 17025	-	-	< 5.0	-	< 5.0
1,1-Dichloropropene	µg/kg	5	ISO 17025	-	-	< 5.0	-	< 5.0
Trans-1,2-dichloroethene	µg/kg	5	NONE	-	-	< 5.0	-	< 5.0
Benzene	µg/kg	5	MCERTS	-	-	< 5.0	-	< 5.0

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Sample Reference				SA02	SA01	WS02	WS02	WS01
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.10	0.10	0.10	1.00	0.10
Date Sampled				11/04/2023	11/04/2023	12/04/2023	12/04/2023	12/04/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Tetrachloromethane	µg/kg	5	NONE	-	-	< 5.0	-	< 5.0
1,2-Dichloropropane	µg/kg	5	ISO 17025	-	-	< 5.0	-	< 5.0
Trichloroethene	µg/kg	5	ISO 17025	-	-	< 5.0	-	< 5.0
Dibromomethane	µg/kg	5	ISO 17025	-	-	< 5.0	-	< 5.0
Bromodichloromethane	µg/kg	5	ISO 17025	-	-	< 5.0	-	< 5.0
Cis-1,3-dichloropropene	µg/kg	5	ISO 17025	-	-	< 5.0	-	< 5.0
Trans-1,3-dichloropropene	µg/kg	5	ISO 17025	-	-	< 5.0	-	< 5.0
Toluene	µg/kg	5	MCERTS	-	-	< 5.0	-	< 5.0
1,1,2-Trichloroethane	µg/kg	5	ISO 17025	-	-	< 5.0	-	< 5.0
1,3-Dichloropropane	µg/kg	5	ISO 17025	-	-	< 5.0	-	< 5.0
Dibromochloromethane	µg/kg	5	ISO 17025	-	-	< 5.0	-	< 5.0
Tetrachloroethene	µg/kg	5	NONE	-	-	< 5.0	-	< 5.0
1,2-Dibromoethane	µg/kg	5	ISO 17025	-	-	< 5.0	-	< 5.0
Chlorobenzene	µg/kg	5	ISO 17025	-	-	< 5.0	-	< 5.0
1,1,1,2-Tetrachloroethane	µg/kg	5	ISO 17025	-	-	< 5.0	-	< 5.0
Ethylbenzene	µg/kg	5	MCERTS	-	-	< 5.0	-	< 5.0
p & m-Xylene	µg/kg	5	MCERTS	-	-	< 5.0	-	< 5.0
Styrene	µg/kg	5	ISO 17025	-	-	< 5.0	-	< 5.0
Tribromomethane	µg/kg	5	NONE	-	-	< 5.0	-	< 5.0
o-Xylene	µg/kg	5	MCERTS	-	-	< 5.0	-	< 5.0
1,1,1,2,2-Tetrachloroethane	µg/kg	5	ISO 17025	-	-	< 5.0	-	< 5.0
Isopropylbenzene	µg/kg	5	ISO 17025	-	-	< 5.0	-	< 5.0
Bromobenzene	µg/kg	5	ISO 17025	-	-	< 5.0	-	< 5.0
n-Propylbenzene	µg/kg	5	ISO 17025	-	-	< 5.0	-	< 5.0
2-Chlorotoluene	µg/kg	5	ISO 17025	-	-	< 5.0	-	< 5.0
4-Chlorotoluene	µg/kg	5	ISO 17025	-	-	< 5.0	-	< 5.0
1,3,5-Trimethylbenzene	µg/kg	5	ISO 17025	-	-	< 5.0	-	< 5.0
tert-Butylbenzene	µg/kg	5	ISO 17025	-	-	< 5.0	-	< 5.0
1,2,4-Trimethylbenzene	µg/kg	5	ISO 17025	-	-	< 5.0	-	< 5.0
sec-Butylbenzene	µg/kg	5	ISO 17025	-	-	< 5.0	-	< 5.0
1,3-Dichlorobenzene	µg/kg	5	ISO 17025	-	-	< 5.0	-	< 5.0
p-Isopropyltoluene	µg/kg	5	ISO 17025	-	-	< 5.0	-	< 5.0
1,2-Dichlorobenzene	µg/kg	5	ISO 17025	-	-	< 5.0	-	< 5.0
1,4-Dichlorobenzene	µg/kg	5	ISO 17025	-	-	< 5.0	-	< 5.0
Butylbenzene	µg/kg	5	NONE	-	-	< 5.0	-	< 5.0
1,2-Dibromo-3-chloropropane	µg/kg	5	ISO 17025	-	-	< 5.0	-	< 5.0
1,2,4-Trichlorobenzene	µg/kg	5	ISO 17025	-	-	< 5.0	-	< 5.0
Hexachlorobutadiene	µg/kg	5	NONE	-	-	< 5.0	-	< 5.0
1,2,3-Trichlorobenzene	µg/kg	5	ISO 17025	-	-	< 5.0	-	< 5.0

SVOCs

Aniline	mg/kg	0.1	NONE	-	-	< 0.1	-	< 0.1
Phenol	mg/kg	0.2	ISO 17025	-	-	< 0.2	-	< 0.2
2-Chlorophenol	mg/kg	0.1	MCERTS	-	-	< 0.1	-	< 0.1
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	-	-	< 0.2	-	< 0.2
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	< 0.2	-	< 0.2
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	-	-	< 0.1	-	< 0.1
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	< 0.2	-	< 0.2
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	-	-	< 0.1	-	< 0.1
2-Methylphenol	mg/kg	0.3	MCERTS	-	-	< 0.3	-	< 0.3
Hexachloroethane	mg/kg	0.05	ISO 17025	-	-	< 0.05	-	< 0.05
Nitrobenzene	mg/kg	0.3	MCERTS	-	-	< 0.3	-	< 0.3
4-Methylphenol	mg/kg	0.2	NONE	-	-	< 0.2	-	< 0.2

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Date Sampled				11/04/2023	11/04/2023	12/04/2023	12/04/2023	12/04/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Isophorone	mg/kg	0.2	MCERTS	-	-	< 0.2	-	< 0.2
2-Nitrophenol	mg/kg	0.3	NONE	-	-	< 0.3	-	< 0.3
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	-	-	< 0.3	-	< 0.3
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	-	-	< 0.3	-	< 0.3
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	-	-	< 0.3	-	< 0.3
Naphthalene	mg/kg	0.05	MCERTS	-	-	< 0.05	-	< 0.05
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	-	-	< 0.3	-	< 0.3
4-Chloroaniline	mg/kg	0.1	NONE	-	-	< 0.1	-	< 0.1
Hexachlorobutadiene	mg/kg	0.1	MCERTS	-	-	< 0.1	-	< 0.1
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	-	-	< 0.1	-	< 0.1
2,4,6-Trichlorophenol	mg/kg	0.1	NONE	-	-	< 0.1	-	< 0.1
2,4,5-Trichlorophenol	mg/kg	0.2	NONE	-	-	< 0.2	-	< 0.2
2-Methylnaphthalene	mg/kg	0.1	NONE	-	-	< 0.1	-	< 0.1
2-Chloronaphthalene	mg/kg	0.1	MCERTS	-	-	< 0.1	-	< 0.1
Dimethylphthalate	mg/kg	0.1	MCERTS	-	-	< 0.1	-	< 0.1
2,6-Dinitrotoluene	mg/kg	0.1	NONE	-	-	< 0.1	-	< 0.1
Acenaphthylene	mg/kg	0.05	MCERTS	-	-	< 0.05	-	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	-	-	< 0.05	-	< 0.05
2,4-Dinitrotoluene	mg/kg	0.2	NONE	-	-	< 0.2	-	< 0.2
Dibenzofuran	mg/kg	0.2	MCERTS	-	-	< 0.2	-	< 0.2
4-Chlorophenyl phenyl ether	mg/kg	0.3	MCERTS	-	-	< 0.3	-	< 0.3
Diethyl phthalate	mg/kg	0.2	MCERTS	-	-	< 0.2	-	< 0.2
4-Nitroaniline	mg/kg	0.2	NONE	-	-	< 0.2	-	< 0.2
Fluorene	mg/kg	0.05	MCERTS	-	-	< 0.05	-	< 0.05
Azobenzene	mg/kg	0.3	NONE	-	-	< 0.3	-	< 0.3
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	-	-	< 0.2	-	< 0.2
Hexachlorobenzene	mg/kg	0.3	MCERTS	-	-	< 0.3	-	< 0.3
Phenanthrene	mg/kg	0.05	MCERTS	-	-	0.15	-	0.13
Anthracene	mg/kg	0.05	MCERTS	-	-	< 0.05	-	< 0.05
Carbazole	mg/kg	0.3	MCERTS	-	-	< 0.3	-	< 0.3
Dibutyl phthalate	mg/kg	0.2	NONE	-	-	< 0.2	-	< 0.2
Anthraquinone	mg/kg	0.3	NONE	-	-	< 0.3	-	< 0.3
Fluoranthene	mg/kg	0.05	MCERTS	-	-	0.42	-	0.21
Pyrene	mg/kg	0.05	MCERTS	-	-	0.41	-	0.18
Butyl benzyl phthalate	mg/kg	0.3	NONE	-	-	< 0.3	-	< 0.3
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	-	0.21	-	0.09
Chrysene	mg/kg	0.05	MCERTS	-	-	0.33	-	0.15
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	-	-	0.29	-	0.09
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	-	-	0.13	-	0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	-	0.3	-	0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-	-	0.14	-	0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	-	< 0.05	-	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	-	0.17	-	0.07

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

Analytical Report Number: 23-28329
Project / Site name: Meadow School

Lab Sample Number				2647898	2647899	2647900	2647901	2647902
Sample Reference				WS01	WS03	WS03	WS04	WS04
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.50	0.50	1.50	0.30	1.00
Date Sampled				12/04/2023	12/04/2023	12/04/2023	12/04/2023	12/04/2023
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	22	22	21	18	21
Total mass of sample received	kg	0.001	NONE	0.8	0.8	0.8	0.8	0.8

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	MLO	MLO	MLO	MLO	MLO

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	7.4	7.5	7.7	9	8
Free Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.015	0.24	0.054	0.053	0.16
Fraction Organic Carbon (FOC) Automated	N/A	0.001	MCERTS	0.0051	0.014	0.0032	0.014	0.0066

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	MCERTS	< 0.05	0.28	0.14	0.06	0.18
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	0.09	< 0.05	0.22	0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	0.15	< 0.05	0.11	0.06
Fluorene	mg/kg	0.05	MCERTS	< 0.05	0.12	< 0.05	0.07	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	1.2	0.09	1.4	0.12
Anthracene	mg/kg	0.05	MCERTS	< 0.05	0.25	< 0.05	0.38	0.05
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	2.5	0.07	3.9	0.34
Pyrene	mg/kg	0.05	MCERTS	< 0.05	2.6	0.07	4	0.48
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	0.94	< 0.05	1.8	0.2
Chrysene	mg/kg	0.05	MCERTS	< 0.05	0.95	< 0.05	1.6	0.24
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	1.3	< 0.05	3.1	0.59
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	0.5	< 0.05	1.5	0.26
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	1.3	< 0.05	3.1	0.53
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	0.85	< 0.05	2	0.3
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	0.12	< 0.05	0.43	0.07
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	1.1	< 0.05	2.8	0.38

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	< 0.80	14.2	< 0.80	26.3	3.85
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Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	13	23	17	19	19
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	1.1	4	2.9	3	2.5
Boron (water soluble)	mg/kg	0.2	MCERTS	0.5	2.1	2.9	0.4	1.9
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 (III)	mg/kg	1	NONE	30	29	33	20	29
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	30	30	33	20	30
Copper (aqua regia extractable)	mg/kg	1	MCERTS	16	44	29	70	33
Lead (aqua regia extractable)	mg/kg	1	MCERTS	23	97	24	440	600
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	21	47	40	30	31
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	50	100	79	52	62
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	49	72	53	120	96

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Project / Site name: Meadow School

Lab Sample Number	2647898	2647899	2647900	2647901	2647902
Sample Reference	WS01	WS03	WS03	WS04	WS04
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	0.50	0.50	1.50	0.30	1.00
Date Sampled	12/04/2023	12/04/2023	12/04/2023	12/04/2023	12/04/2023
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		

Monoaromatics & Oxygenates

Benzene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Toluene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Ethylbenzene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
p & m-xylene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
o-xylene	µg/kg	5	MCERTS	< 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	MCERTS	< 1.0	2.2	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16 EH_CU_ID_AL	mg/kg	2	MCERTS	< 2.0	8	< 2.0	< 2.0	4.7
TPH-CWG - Aliphatic >EC16 - EC21 EH_CU_ID_AL	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35 EH_CU_ID_AL	mg/kg	8	MCERTS	< 8.0	8.6	< 8.0	41	< 8.0
TPH-CWG - Aliphatic >EC16 - EC35 EH_CU_ID_AL	mg/kg	10	MCERTS	< 10	< 10	< 10	41	< 10
TPH-CWG - Aliphatic > EC35 - EC44 EH_CU_ID_AL	mg/kg	8.4	NONE	< 8.4	11	< 8.4	83	< 8.4
TPH-CWG - Aliphatic (EC5 - EC35) EH_CU+HS_ID_AL	mg/kg	10	NONE	< 10	22	< 10	49	< 10
TPH-CWG - Aliphatic (EC5 - EC44) EH_CU+HS_ID_AL	mg/kg	10	NONE	< 10	34	< 10	130	< 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	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16 EH_CU_ID_AR	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	3	< 2.0
TPH-CWG - Aromatic >EC16 - EC21 EH_CU_ID_AR	mg/kg	10	MCERTS	< 10	< 10	< 10	19	< 10
TPH-CWG - Aromatic >EC21 - EC35 EH_CU_ID_AR	mg/kg	10	MCERTS	< 10	17	< 10	110	14
TPH-CWG - Aromatic > EC35 - EC44 EH_CU_ID_AR	mg/kg	8.4	NONE	< 8.4	12	< 8.4	130	24
TPH-CWG - Aromatic (EC5 - EC35) EH_CU+HS_ID_AR	mg/kg	10	NONE	< 10	23	< 10	130	16
TPH-CWG - Aromatic (EC5 - EC44) EH_CU+HS_ID_AR	mg/kg	10	NONE	< 10	35	< 10	260	41

TPH Total C5 - C44 EH_CU+HS_ID_TOTAL	mg/kg	10	NONE	< 10	68	< 10	400	41
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VOCs

Chloromethane	µg/kg	5	ISO 17025	-	< 5.0#	< 5.0#	< 5.0#	< 5.0#
Chloroethane	µg/kg	5	NONE	-	< 5.0	< 5.0	< 5.0	< 5.0
Bromomethane	µg/kg	5	ISO 17025	-	< 5.0	< 5.0	< 5.0	< 5.0
Vinyl Chloride	µg/kg	5	NONE	-	< 5.0	< 5.0	< 5.0	< 5.0
Trichlorofluoromethane	µg/kg	5	NONE	-	< 5.0	< 5.0	< 5.0	< 5.0
1,1-Dichloroethene	µg/kg	5	NONE	-	< 5.0	< 5.0	< 5.0	< 5.0
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	5	NONE	-	< 5.0	< 5.0	< 5.0	< 5.0
Cis-1,2-dichloroethene	µg/kg	5	ISO 17025	-	< 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
1,1-Dichloroethane	µg/kg	5	ISO 17025	-	< 5.0	< 5.0	< 5.0	< 5.0
2,2-Dichloropropane	µg/kg	5	ISO 17025	-	< 5.0	< 5.0	< 5.0	< 5.0
Trichloromethane	µg/kg	5	ISO 17025	-	< 5.0	< 5.0	< 5.0	< 5.0
1,1,1-Trichloroethane	µg/kg	5	ISO 17025	-	< 5.0	< 5.0	< 5.0	< 5.0
1,2-Dichloroethane	µg/kg	5	ISO 17025	-	< 5.0	< 5.0	< 5.0	< 5.0
1,1-Dichloropropene	µg/kg	5	ISO 17025	-	< 5.0	< 5.0	< 5.0	< 5.0
Trans-1,2-dichloroethene	µg/kg	5	NONE	-	< 5.0	< 5.0	< 5.0	< 5.0
Benzene	µg/kg	5	MCERTS	-	< 5.0	< 5.0	< 5.0	< 5.0

Analytical Report Number: 23-28329
Project / Site name: Meadow School

Lab Sample Number				2647898	2647899	2647900	2647901	2647902
Sample Reference				WS01	WS03	WS03	WS04	WS04
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.50	0.50	1.50	0.30	1.00
Date Sampled				12/04/2023	12/04/2023	12/04/2023	12/04/2023	12/04/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Tetrachloromethane	µg/kg	5	NONE	-	< 5.0	< 5.0	< 5.0	< 5.0
1,2-Dichloropropane	µg/kg	5	ISO 17025	-	< 5.0	< 5.0	< 5.0	< 5.0
Trichloroethene	µg/kg	5	ISO 17025	-	< 5.0	< 5.0	< 5.0	< 5.0
Dibromomethane	µg/kg	5	ISO 17025	-	< 5.0	< 5.0	< 5.0	< 5.0
Bromodichloromethane	µg/kg	5	ISO 17025	-	< 5.0	< 5.0	< 5.0	< 5.0
Cis-1,3-dichloropropene	µg/kg	5	ISO 17025	-	< 5.0	< 5.0	< 5.0	< 5.0
Trans-1,3-dichloropropene	µg/kg	5	ISO 17025	-	< 5.0	< 5.0	< 5.0	< 5.0
Toluene	µg/kg	5	MCERTS	-	< 5.0	< 5.0	< 5.0	< 5.0
1,1,2-Trichloroethane	µg/kg	5	ISO 17025	-	< 5.0	< 5.0	< 5.0	< 5.0
1,3-Dichloropropane	µg/kg	5	ISO 17025	-	< 5.0	< 5.0	< 5.0	< 5.0
Dibromochloromethane	µg/kg	5	ISO 17025	-	< 5.0	< 5.0	< 5.0	< 5.0
Tetrachloroethene	µg/kg	5	NONE	-	< 5.0	< 5.0	< 5.0	< 5.0
1,2-Dibromoethane	µg/kg	5	ISO 17025	-	< 5.0	< 5.0	< 5.0	< 5.0
Chlorobenzene	µg/kg	5	ISO 17025	-	< 5.0	< 5.0	< 5.0	< 5.0
1,1,1,2-Tetrachloroethane	µg/kg	5	ISO 17025	-	< 5.0	< 5.0	< 5.0	< 5.0
Ethylbenzene	µg/kg	5	MCERTS	-	< 5.0	< 5.0	< 5.0	< 5.0
p & m-Xylene	µg/kg	5	MCERTS	-	< 5.0	< 5.0	< 5.0	< 5.0
Styrene	µg/kg	5	ISO 17025	-	< 5.0	< 5.0	< 5.0	< 5.0
Tribromomethane	µg/kg	5	NONE	-	< 5.0	< 5.0	< 5.0	< 5.0
o-Xylene	µg/kg	5	MCERTS	-	< 5.0	< 5.0	< 5.0	< 5.0
1,1,2,2-Tetrachloroethane	µg/kg	5	ISO 17025	-	< 5.0	< 5.0	< 5.0	< 5.0
Isopropylbenzene	µg/kg	5	ISO 17025	-	< 5.0	< 5.0	< 5.0	< 5.0
Bromobenzene	µg/kg	5	ISO 17025	-	< 5.0	< 5.0	< 5.0	< 5.0
n-Propylbenzene	µg/kg	5	ISO 17025	-	< 5.0	< 5.0	< 5.0	< 5.0
2-Chlorotoluene	µg/kg	5	ISO 17025	-	< 5.0	< 5.0	< 5.0	< 5.0
4-Chlorotoluene	µg/kg	5	ISO 17025	-	< 5.0	< 5.0	< 5.0	< 5.0
1,3,5-Trimethylbenzene	µg/kg	5	ISO 17025	-	< 5.0	< 5.0	< 5.0	< 5.0
tert-Butylbenzene	µg/kg	5	ISO 17025	-	< 5.0	< 5.0	< 5.0	< 5.0
1,2,4-Trimethylbenzene	µg/kg	5	ISO 17025	-	< 5.0	< 5.0	< 5.0	< 5.0
sec-Butylbenzene	µg/kg	5	ISO 17025	-	< 5.0	< 5.0	< 5.0	< 5.0
1,3-Dichlorobenzene	µg/kg	5	ISO 17025	-	< 5.0	< 5.0	< 5.0	< 5.0
p-Isopropyltoluene	µg/kg	5	ISO 17025	-	< 5.0	< 5.0	< 5.0	< 5.0
1,2-Dichlorobenzene	µg/kg	5	ISO 17025	-	< 5.0	< 5.0	< 5.0	< 5.0
1,4-Dichlorobenzene	µg/kg	5	ISO 17025	-	< 5.0	< 5.0	< 5.0	< 5.0
Butylbenzene	µg/kg	5	NONE	-	< 5.0	< 5.0	< 5.0	< 5.0
1,2-Dibromo-3-chloropropane	µg/kg	5	ISO 17025	-	< 5.0	< 5.0	< 5.0	< 5.0
1,2,4-Trichlorobenzene	µg/kg	5	ISO 17025	-	< 5.0	< 5.0	< 5.0	< 5.0
Hexachlorobutadiene	µg/kg	5	NONE	-	< 5.0	< 5.0	< 5.0	< 5.0
1,2,3-Trichlorobenzene	µg/kg	5	ISO 17025	-	< 5.0	< 5.0	< 5.0	< 5.0

SVOCs

Aniline	mg/kg	0.1	NONE	-	< 0.1	< 0.1	< 0.1	< 0.1
Phenol	mg/kg	0.2	ISO 17025	-	< 0.2	< 0.2	< 0.2	< 0.2
2-Chlorophenol	mg/kg	0.1	MCERTS	-	< 0.1	< 0.1	< 0.1	< 0.1
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	-	< 0.2	< 0.2	< 0.2	< 0.2
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	-	< 0.2	< 0.2	< 0.2	< 0.2
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	-	< 0.1	< 0.1	< 0.1	< 0.1
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	-	< 0.2	< 0.2	< 0.2	< 0.2
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	-	< 0.1	< 0.1	< 0.1	< 0.1
2-Methylphenol	mg/kg	0.3	MCERTS	-	< 0.3	< 0.3	< 0.3	< 0.3
Hexachloroethane	mg/kg	0.05	ISO 17025	-	< 0.05	< 0.05	< 0.05	< 0.05
Nitrobenzene	mg/kg	0.3	MCERTS	-	< 0.3	< 0.3	< 0.3	< 0.3
4-Methylphenol	mg/kg	0.2	NONE	-	< 0.2	< 0.2	< 0.2	< 0.2

Analytical Report Number: 23-28329
Project / Site name: Meadow School

Lab Sample Number				2647898	2647899	2647900	2647901	2647902
Sample Reference				WS01	WS03	WS03	WS04	WS04
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.50	0.50	1.50	0.30	1.00
Date Sampled				12/04/2023	12/04/2023	12/04/2023	12/04/2023	12/04/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Isophorone	mg/kg	0.2	MCERTS	-	< 0.2	< 0.2	< 0.2	< 0.2
2-Nitrophenol	mg/kg	0.3	NONE	-	< 0.3	< 0.3	< 0.3	< 0.3
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	-	< 0.3	< 0.3	< 0.3	< 0.3
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	-	< 0.3	< 0.3	< 0.3	< 0.3
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	-	< 0.3	< 0.3	< 0.3	< 0.3
Naphthalene	mg/kg	0.05	MCERTS	-	0.28	0.14	0.06	0.18
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	-	< 0.3	< 0.3	< 0.3	< 0.3
4-Chloroaniline	mg/kg	0.1	NONE	-	< 0.1	< 0.1	< 0.1	< 0.1
Hexachlorobutadiene	mg/kg	0.1	MCERTS	-	< 0.1	< 0.1	< 0.1	< 0.1
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	-	< 0.1	< 0.1	< 0.1	< 0.1
2,4,6-Trichlorophenol	mg/kg	0.1	NONE	-	< 0.1	< 0.1	< 0.1	< 0.1
2,4,5-Trichlorophenol	mg/kg	0.2	NONE	-	< 0.2	< 0.2	< 0.2	< 0.2
2-Methylnaphthalene	mg/kg	0.1	NONE	-	0.1	< 0.1	< 0.1	< 0.1
2-Chloronaphthalene	mg/kg	0.1	MCERTS	-	< 0.1	< 0.1	< 0.1	< 0.1
Dimethylphthalate	mg/kg	0.1	MCERTS	-	< 0.1	< 0.1	< 0.1	< 0.1
2,6-Dinitrotoluene	mg/kg	0.1	NONE	-	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	mg/kg	0.05	MCERTS	-	0.09	< 0.05	0.22	0.05
Acenaphthene	mg/kg	0.05	MCERTS	-	0.15	< 0.05	0.11	0.06
2,4-Dinitrotoluene	mg/kg	0.2	NONE	-	< 0.2	< 0.2	< 0.2	< 0.2
Dibenzofuran	mg/kg	0.2	MCERTS	-	< 0.2	< 0.2	< 0.2	< 0.2
4-Chlorophenyl phenyl ether	mg/kg	0.3	MCERTS	-	< 0.3	< 0.3	< 0.3	< 0.3
Diethyl phthalate	mg/kg	0.2	MCERTS	-	< 0.2	< 0.2	< 0.2	< 0.2
4-Nitroaniline	mg/kg	0.2	NONE	-	< 0.2	< 0.2	< 0.2	< 0.2
Fluorene	mg/kg	0.05	MCERTS	-	0.12	< 0.05	0.07	< 0.05
Azobenzene	mg/kg	0.3	NONE	-	< 0.3	< 0.3	< 0.3	< 0.3
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	-	< 0.2	< 0.2	< 0.2	< 0.2
Hexachlorobenzene	mg/kg	0.3	MCERTS	-	< 0.3	< 0.3	< 0.3	< 0.3
Phenanthrene	mg/kg	0.05	MCERTS	-	1.2	0.09	1.4	0.12
Anthracene	mg/kg	0.05	MCERTS	-	0.25	< 0.05	0.38	0.05
Carbazole	mg/kg	0.3	MCERTS	-	< 0.3	< 0.3	< 0.3	< 0.3
Dibutyl phthalate	mg/kg	0.2	NONE	-	< 0.2	< 0.2	< 0.2	< 0.2
Anthraquinone	mg/kg	0.3	NONE	-	< 0.3	< 0.3	< 0.3	< 0.3
Fluoranthene	mg/kg	0.05	MCERTS	-	2.5	0.07	3.9	0.34
Pyrene	mg/kg	0.05	MCERTS	-	2.6	0.07	4	0.48
Butyl benzyl phthalate	mg/kg	0.3	NONE	-	< 0.3	< 0.3	< 0.3	< 0.3
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	0.94	< 0.05	1.8	0.2
Chrysene	mg/kg	0.05	MCERTS	-	0.95	< 0.05	1.6	0.24
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	-	1.3	< 0.05	3.1	0.59
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	-	0.5	< 0.05	1.5	0.26
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	1.3	< 0.05	3.1	0.53
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-	0.85	< 0.05	2	0.3
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	0.12	< 0.05	0.43	0.07
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	1.1	< 0.05	2.8	0.38

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

Analytical Report Number : 23-28329

Project / Site name: Meadow School

* 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 *
2647893	SA02	None Supplied	0.1	Brown loam and clay with gravel and vegetation.
2647894	SA01	None Supplied	0.1	Brown loam and clay with gravel and vegetation.
2647895	WS02	None Supplied	0.1	Brown loam and clay with gravel and vegetation.
2647896	WS02	None Supplied	1	Brown clay and sand with gravel and vegetation.
2647897	WS01	None Supplied	0.1	Brown loam and clay with gravel and vegetation.
2647898	WS01	None Supplied	0.5	Brown clay and sand with gravel and vegetation.
2647899	WS03	None Supplied	0.5	Grey clay and sand with gravel.
2647900	WS03	None Supplied	1.5	Brown clay and sand with gravel.
2647901	WS04	None Supplied	0.3	Brown gravelly sand with rubble.
2647902	WS04	None Supplied	1	Brown clay and sand with gravel.

Analytical Report Number : 23-28329

Project / Site name: Meadow School

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	MCERTS
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
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
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	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	MCERTS
TPH Chromatogram in Soil	TPH Chromatogram in Soil.	In-house method	L064-PL	D	NONE
Cr (III) in soil	In-house method by calculation from total Cr and Cr VI.	In-house method by calculation	L080-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	MCERTS
TPH in (Soil)	Determination of TPH bands by HS-GC-MS/GC-FID	In-house method, TPH with carbon banding and silica gel split/cleanup.	L076-PL	D	MCERTS

Analytical Report Number : 23-28329

Project / Site name: Meadow School

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
Fraction Organic Carbon FOC Automated	Determination of fraction of organic carbon in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method	L009	D	MCERTS
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

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

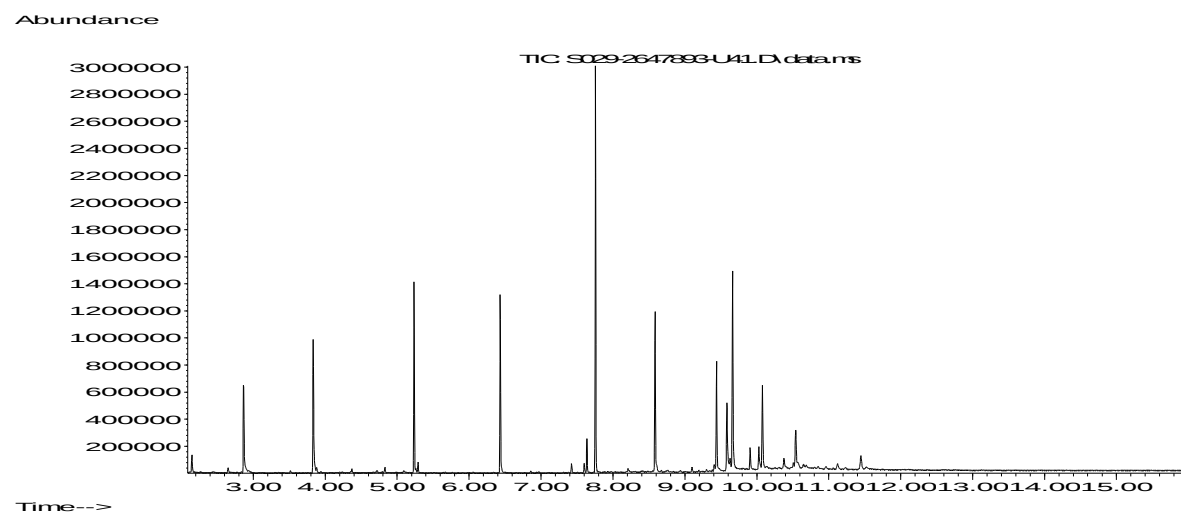
Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

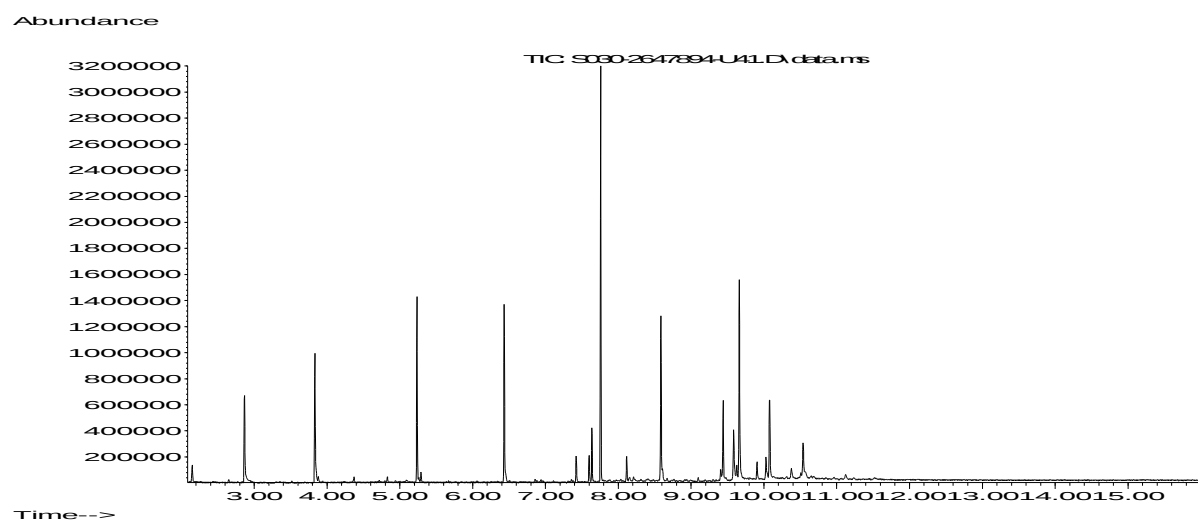
Information in Support of Analytical Results

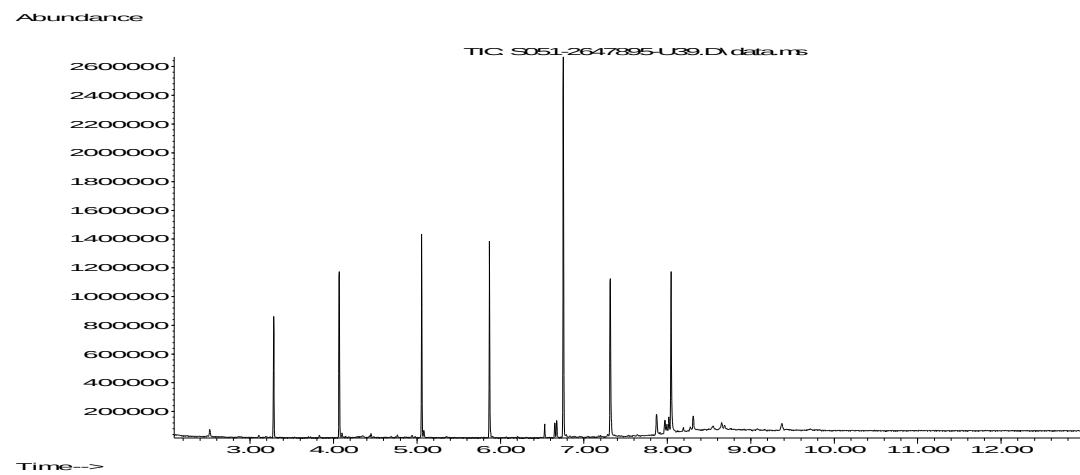
List of HWOL Acronyms and Operators

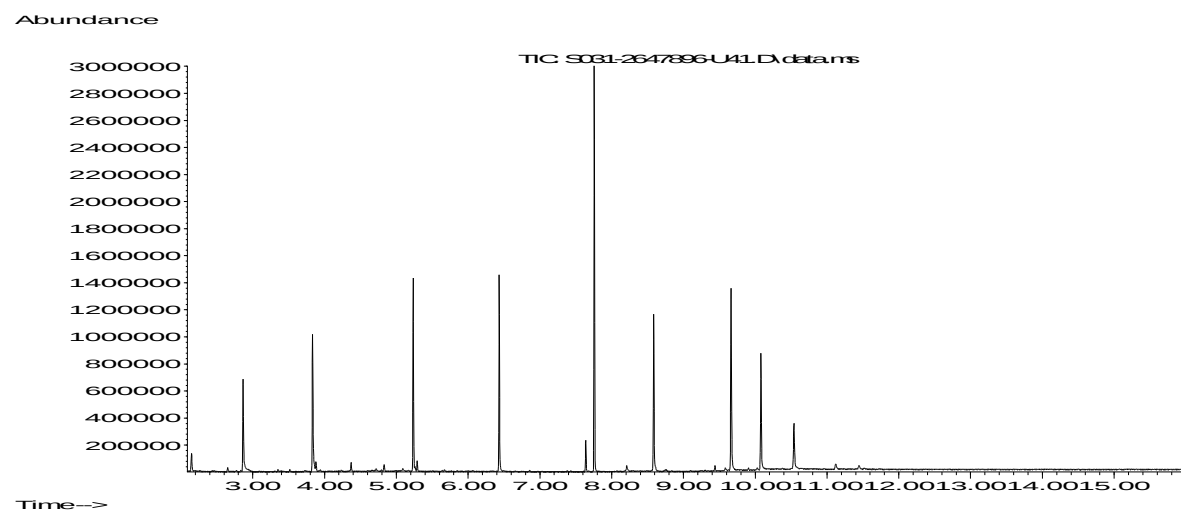
Acronym	Descriptions
HS	Headspace Analysis
MS	Mass spectrometry
FID	Flame Ionisation Detector
GC	Gas Chromatography
EH	Extractable Hydrocarbons (i.e. everything extracted by the solvent(s))
CU	Clean-up - e.g. by Florisil®, silica gel
1D	GC - Single coil/column gas chromatography
2D	GC-GC - Double coil/column 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

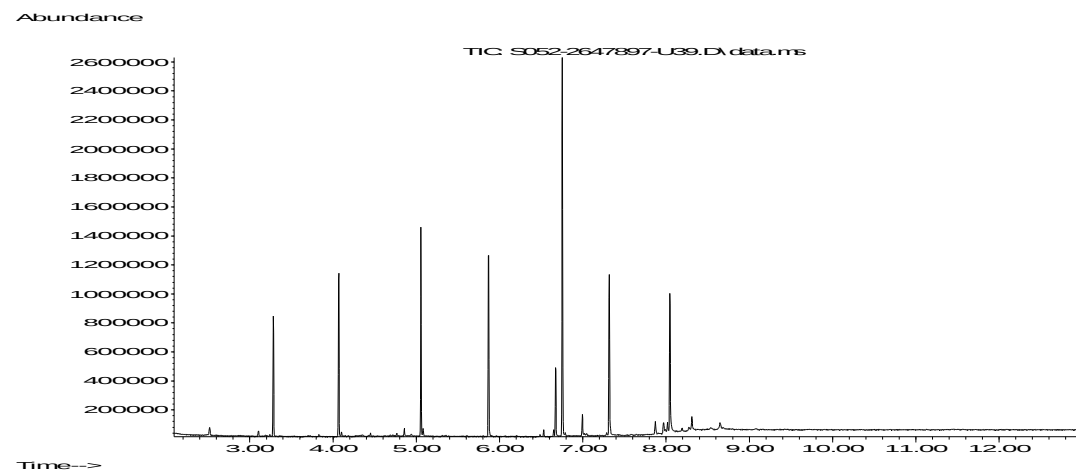
Data reported unaccredited due to quality control parameter failure associated with this result; other checks applied prior to reporting the data have been accepted. The result should be considered as being deviating and may be compromised.

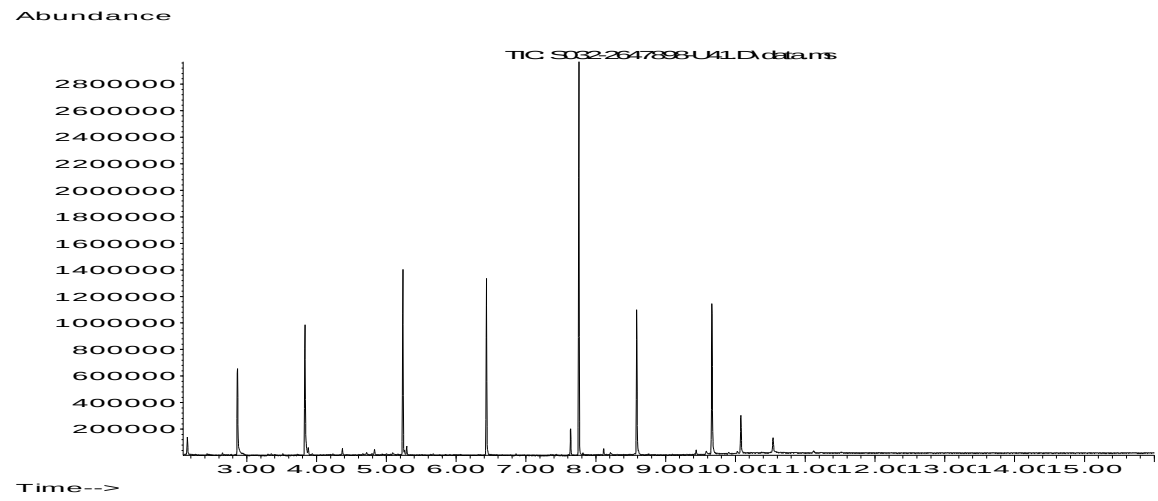


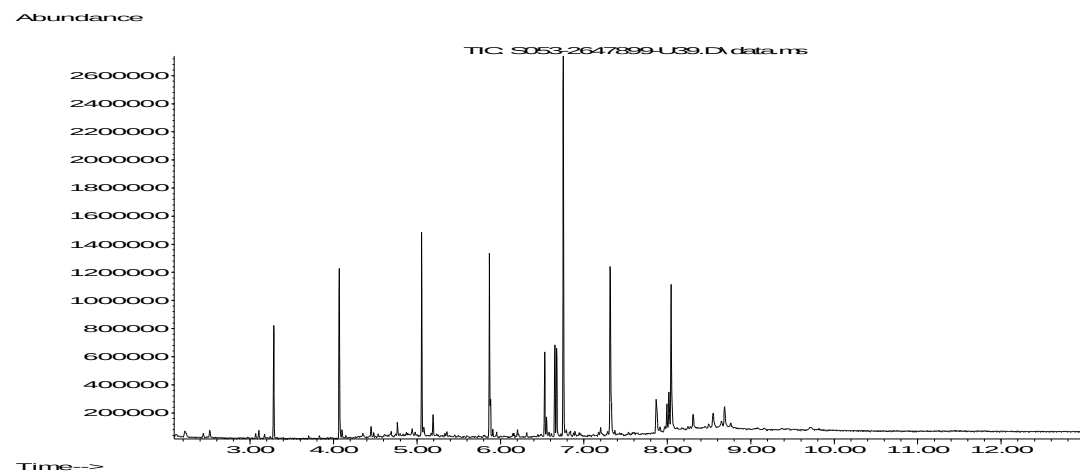


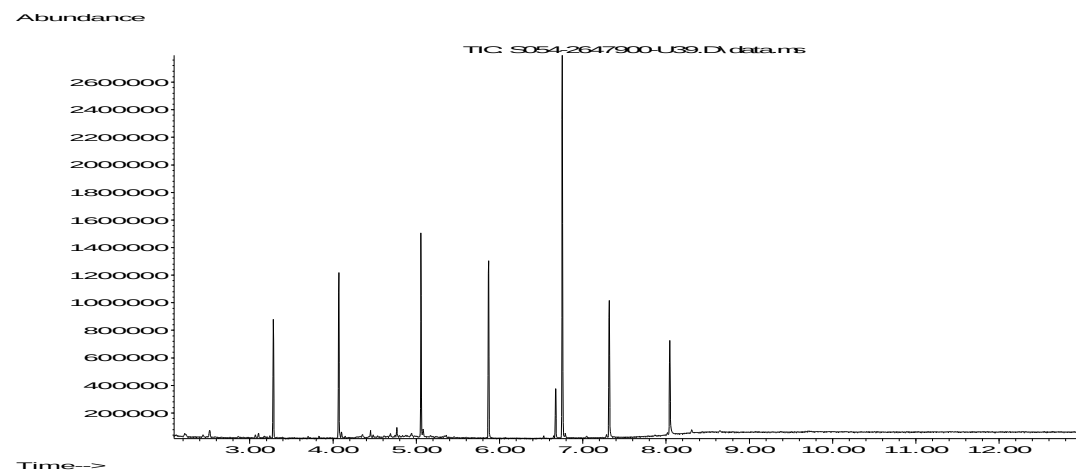


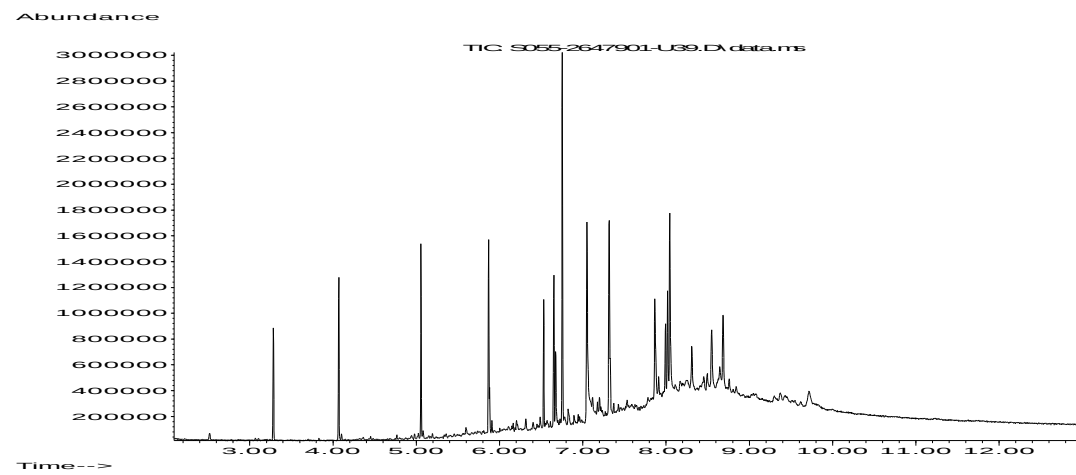


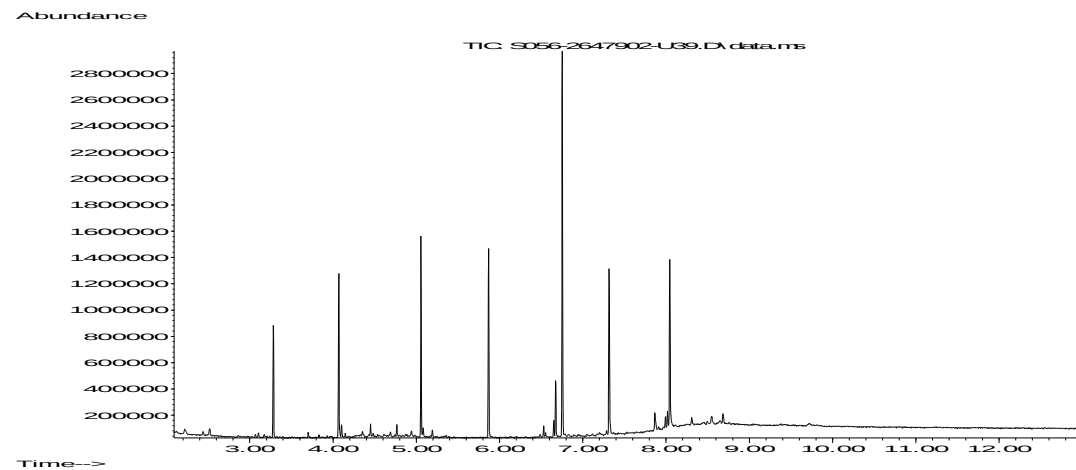












Assessment of Chemicals of Potential Concern to Human Health

Risk parameter: Client: ISG Construction Site: Meadow High School Job no.: 27834 Lab. report no(s).: 0														Default - Human Health - POSresi (1%SOM)														Data Filters														All MG 0.1 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Assessment of Chemicals of Potential Concern to Human Health

Risk parameter:		Default - Human Health - POSresi (1%SOM)																							
Client:		ISG Construction												Data Filters											
Site:		Meadow High School												Zone											
Job no.:		27834												Strata											
Lab. report no(s).:		0												Depth Min (m bgl)											
														Depth Max (m bgl)											

Assessment of Chemicals of Potential Concern to Human Health

Risk parameter:		Default - Human Health - POSresi (1%SOM)																										
Client:		ISG Construction												Data Filters														
Site:		Meadow High School												Zone		All												
Job no.:		27834												Strata		MG												
Lab. report no(s).:		0												Depth Min (m bgl)		0.1												
														Depth Max (m bgl)		1.5												
														Dataset mean SOM%		2.49												
														Scenario SOM%		1												
All values in mg/kg unless otherwise stated																												
CAS No / P Code	Chemical of Potential Concern	Units	LoD	No. Samples	Min. Value	Max. Value	Mean	Median	Standard Deviation	No. Samples >= GAC & > LoD	Soil Saturation Limit @1% SOM	GAC	GAC Source	Strata	MG	NAT	MG	NAT	MG	MG	NAT	NAT	MG	MG				
156-60-5	Trans 1,2 Dichloroethene	mg/kg	1	4	0.01	0.01	0.01	0.01	0.00	0	3420	3900	Hydrock Derived				0.005		0.005		+	+	0.005	0.005				
75-09-2	Dichloromethane	mg/kg		0																								
78-87-5	1,2-Dichloropropane	mg/kg	1	4	0.01	0.01	0.01	0.01	0.00	0	1193	1700	Hydrock Derived				0.005		0.005		+	+	0.005	0.005				
67-72-1	Hexachloroethane	mg/kg	0.05	4	0.05	0.05	0.05	0.05	0.00	0	8	120	Hydrock Derived				0.05		0.05		+	+	0.05	0.05				
127-18-4	Tetrachloroethene	mg/kg	1	4	0.01	0.01	0.01	0.01	0.00	0	424	3200	C4SL - CL:AIRE 2021				0.005		0.005		+	+	0.005	0.005				
630-20-6	1,1,1,2-Tetrachloroethane	mg/kg	1	4	0.01	0.01	0.01	0.01	0.00	0	2596	1400	Hydrock Derived				0.005		0.005		+	+	0.005	0.005				
79-34-5	1,1,2,2-Tetrachloroethane	mg/kg	1	4	0.01	0.01	0.01	0.01	0.00	0	2666	1400	Hydrock Derived				0.005		0.005		+	+	0.005	0.005				
56-23-5	Tetrachloromethane	mg/kg	1	4	0.01	0.01	0.01	0.01	0.00	0	1516	890	Hydrock Derived				0.005		0.005		+	+	0.005	0.005				
79-01-6	Trichloroethene	mg/kg	1	4	0.01	0.01	0.01	0.01	0.00	0	1536	76	C4SL - CL:AIRE 2021				0.005		0.005		+	+	0.005	0.005				
71-55-6	1,1,1-Trichloroethane	mg/kg	1	4	0.01	0.01	0.01	0.01	0.00	0	1425	140000	Hydrock Derived				0.005		0.005		+	+	0.005	0.005				
79-00-5	1,1,2 Trichloroethane	mg/kg	1	4	0.01	0.01	0.01	0.01	0.00	0	4028	990	Hydrock Derived				0.005		0.005		+	+	0.005	0.005				
67-66-3	Trichloromethane	mg/kg	1	4	0.01	0.01	0.01	0.01	0.00	0	5156	2500	Hydrock Derived				0.005		0.005		+	+	0.005	0.005				
o	Other phenols & chlorophenols																											
108-95-2	Phenol	mg/kg	0.2	4	0.20	0.20	0.20	0.20	0.00	0	24237	440	Hydrock Derived				0.2		0.2		+	+	0.2	0.2				
95-57-8	2-Chlorophenol	mg/kg	0.1	4	0.10	0.10	0.10	0.10	0.00	0	56247	610	Hydrock Derived				0.1		0.1		+	+	0.1	0.1				
120-83-2	2,4-Dichlorophenol	mg/kg	0.3	4	0.30	0.30	0.30	0.30	0.00	0	4914	610	Hydrock Derived				0.3		0.3		+	+	0.3	0.3				
105-67-9	2,4-Dimethylphenol	mg/kg	0.3	4	0.30	0.30	0.30	0.30	0.00	0	1381	5000	Hydrock Derived				0.3		0.3		+	+	0.3	0.3				
95-48-7	2-Methylphenol	mg/kg	0.3	4	0.30	0.30	0.30	0.30	0.00	0	15025	25000	Hydrock Derived				0.3		0.3		+	+	0.3	0.3				
108-39-4	3-Methylphenol	mg/kg		0																								
106-44-5	4-Methylphenol	mg/kg	0.2	4	0.20	0.20	0.20	0.20	0.00	0	27393	25000	Hydrock Derived				0.2		0.2		+	+	0.2	0.2				
87-86-5	Pentachlorophenol	mg/kg		0																								
88-06-2	2,3,4,6-Tetrachlorophenol	mg/kg		0																								
88-06-2	2,4,6-Trichlorophenol	mg/kg	0.1	4	0.10	0.10	0.10	0.10	0.00	0	879	610	Hydrock Derived				0.1		0.1		+	+	0.1	0.1				
o	Phthalates																											
117-81-7	Bis (2-ethylhexyl) phthalate	mg/kg		0																								
85-68-7	Butyl benzyl phthalate	mg/kg	0.3	4	0.30	0.30	0.30	0.30	0.00	0	26	130000	Hydrock Derived				0.3		0.3		+	+	0.3	0.3				
84-66-2	Diethyl Phthalate	mg/kg	0.2	4	0.20	0.20	0.20	0.20	0.00	0	14	49000	Hydrock Derived				0.2		0.2		+	+	0.2	0.2				
84-74-2	Di-n-butyl phthalate	mg/kg	0.2	4	0.20	0.20	0.20	0.20	0.00	0	5	1300	Hydrock Derived				0.2		0.2		+	+	0.2	0.2				
117-84-0	Di-n-octyl phthalate	mg/kg		0																								
o	Pesticides																											
309-00-2	Aldrin	mg/kg		0																								
1912-24-9	Atrazine	mg/kg		0																								
72-54-8	DDD	mg/kg		0																								
75-55-9	DDE	mg/kg		0																								
50-29-3	DDT	mg/kg		0																								
62-73-7	Dichlorvos	mg/kg		0																								
60-57-1	Dieldrin	mg/kg		0																								
959-98-8	Endosulfan - alpha	mg/kg		0																								
33213-65-9	Endosulfan - beta	mg/kg		0																								
319-84-6	Hexachlorocyclohexanes - alpha (inc. Lindane)	mg/kg		0																								
319-85-7	Hexachlorocyclohexanes - beta (inc. Lindane)	mg/kg		0																								
58-89-9	Hexachlorocyclohexanes - gamma (inc. Lindane)	mg/kg		0																								
o	Non-dioxin-like PCBs																											
7012-37-5	PCB-28	mg/kg	0.001	0																								
35693-99-3	PCB-52	mg/kg	0.001	0																								
37680-73-2	PCB-101	mg/kg	0.001	0																								
31508-00-6	PCB-118	mg/kg	0.001	0																								
35065-28-2	PCB-138	mg/kg	0.001	0																								
35065-27-1	PCB-153	mg/kg	0.001	0																								
35065-29-3	PCB-180	mg/kg	0.001	0																								
1336-36-6	Total PCB (ICES7)	mg/kg	0.001	0																								
o	Explosives																											
2691-41-0	HMX	mg/kg		0																								
121-82-4	RDX	mg/kg		0																								

Assessment of Chemicals of Potential Concern to Human Health

Risk parameter: Client: Site: Job no.: Lab. report no(s):														Default - Human Health - POSresi (1%SOM)										Data Filters										Hydrock										SA02 @ 0.1SA01 @ 0.1WS02 @ 0.1WS02 @ 1WS01 @ 0.1WS01 @ 0.5WS03 @ 0.5WS03 @ 1.5WS04 @ 0.3WS04 @ 1									
														Zone: All										Strata: MG										Depth Min (m bgl): 0.1										Depth Max (m bgl): 1.5									
														Dataset mean SOM%: 2.49										Scenario SOM%: 1																													
All values in mg/kg unless otherwise stated																																																					
CAS No / P Code	Chemical of Potential Concern	Units	LoD	No. Samples	Min. Value	Max. Value	Mean	Median	Standard Deviation	No. Samples >= GAC & > LoD	Soil Saturation Limit @1% SOM	GAC	GAC Source	Strata	MG	NAT	MG	NAT	MG	MG	NAT	NAT	MG	MG																													
118-96-7	2,4,6-Trinitrotoluene	mg/kg		0																																																	
o	Other inorganics																																																				
7440-36-0	Antimony	mg/kg		0																																																	
7440-39-3	Barium	mg/kg		0																																																	
P2220	Mercury, elemental	mg/kg		0																																																	
7439-98-7	Molybdenum	mg/kg		0																																																	
302-04-5	Thiocyanate	mg/kg		0																																																	
o	Other organics																																																				
P1967	Biphenyl	mg/kg		0																																																	
75-15-0	Carbon disulphide	mg/kg		0																																																	
121-14-2	2,4-Dinitrotoluene	mg/kg	0.2	4	0.20	0.20	0.20	0.20	0.00	0	141	500	Hydrock Derived				0.2		0.2		+	+	0.2	0.2																													
606-20-2	2,6-Dinitrotoluene	mg/kg	0.1	4	0.10	0.10	0.10	0.10	0.00	0	287	250	Hydrock Derived				0.1		0.1		+	+	0.1	0.1																													
87-68-3	Hexachloro-1,3-butadiene	mg/kg	1	4	0.01	0.01	0.01	0.01	0.00	0	307	25	Hydrock Derived				0.005		0.005		+	+	0.005	0.005																													
P2222	Mercury, methyl	mg/kg		0																																																	
100-42-5	Styrene	mg/kg	1	4	0.01	0.01	0.01	0.01	0.00	0	626	3000	Hydrock Derived				0.005		0.005		+	+	0.005	0.005																													
56-35-9	Tributyl tin oxide	mg/kg		0																																																	
91-58-7	2-Chloronaphthalene	mg/kg	0.1	4	0.10	0.10	0.10	0.10	0.00	0	114	7500	Hydrock Derived				0.1		0.1		+	+	0.1	0.1																													
o	Other VOC Suite Substances which do not have a GAC																																																				
74-83-9	Bromomethane	mg/kg	1	4	0.01	0.01	0.01	0.01	0.00			-					0.005		0.005		+	+	0.005	0.005																													
75-69-4	Trichlorofluoromethane	mg/kg	1	4	0.01	0.01	0.01	0.01	0.00			-					0.005		0.005		+	+	0.005	0.005																													
76-13-1	1,1,2-Trichloro 1,2,2-Trifluoroethane	mg/kg	1	4	0.01	0.01	0.01	0.01	0.00			-					0.005		0.005		+	+	0.005	0.005																													
594-20-7	2,2-Dichloropropane	mg/kg	1	4	0.01	0.01	0.01	0.01	0.00			-					0.005		0.005		+	+	0.005	0.005																													
563-58-6	1,1-Dichloropropene	mg/kg	1	4	0.01	0.01	0.01	0.01	0.00			-					0.005		0.005		+	+	0.005	0.005																													
74-95-3	Dibromomethane	mg/kg	1	4	0.01	0.01	0.01	0.01	0.00			-					0.005		0.005		+	+	0.005	0.005																													
10061-01-5	Cis-1,3-dichloropropene	mg/kg	1	4	0.01	0.01	0.01	0.01	0.00			-					0.005		0.005		+	+	0.005	0.005																													
10061-02-6	Trans-1,3-dichloropropene	mg/kg	1	4	0.01	0.01	0.01	0.01	0.00			-					0.005		0.005		+	+	0.005	0.005																													
142-28-9	1,3-Dichloropropane	mg/kg	1	4	0.01	0.01	0.01	0.01	0.00			-					0.005		0.005		+	+	0.005	0.005																													
124-48-1	Dibromochloromethane	mg/kg	1	4	0.01	0.01	0.01	0.01	0.00			-					0.005		0.005		+	+	0.005	0.005																													
106-93-4	1,2-Dibromoethane	mg/kg	1	4	0.01	0.01	0.01	0.01	0.00			-					0.005		0.005		+	+	0.005	0.005																													
98-82-8	Isopropylbenzene	mg/kg	1	4	0.01	0.01	0.01	0.01	0.00			-					0.005		0.005		+	+	0.005	0.005																													
95-49-8	2-Chlorotoluene	mg/kg	1	4	0.01	0.01	0.01	0.01	0.00			-					0.005		0.005		+	+	0.005	0.005																													
106-43-4	4-Chlorotoluene	mg/kg	1	4	0.01	0.01	0.01	0.01	0.00			-					0.005		0.005		+	+	0.005	0.005																													
98-06-6	tert butylbenzene	mg/kg	1	4	0.01	0.01	0.01	0.01	0.00			-					0.005		0.005		+	+	0.005	0.005																													
135-98-8	sec butylbenzene	mg/kg	1	4	0.01	0.01	0.01	0.01	0.00			-					0.005		0.005		+	+	0.005	0.005																													
99-87-6	Isopropyltoluene	mg/kg	1	4	0.01	0.01	0.01	0.01	0.00			-					0.005		0.005		+	+	0.005	0.005																													
104-51-8	n butylbenzene	mg/kg	1	4	0.01	0.01	0.01	0.01	0.00			-					0.005		0.005		+	+	0.005	0.005																													
96-12-8	1,2-Dibromo-3-chloropropane	mg/kg	1	4	0.01	0.01	0.01	0.01	0.00			-					0.005		0.005		+	+	0.005	0.005																													
o	Other SVOC Suite Substances whch do not have a GAC																																																				
62-53-3	Aniline	mg/kg	0.1	4	0.10	0.10	0.10	0.10	0.00			-				0.1		0.1		+	+	0.1	0.1																														
111-44-4	Bis(2-chloroethyl)ether	mg/kg	0.2	4	0.20	0.20	0.20	0.20	0.00			-				0.2		0.2		+	+	0.2	0.2																														
39638-32-9	Bis(2-chloroisopropyl)ether	mg/kg	0.1	4	0.10	0.10	0.10	0.10	0.00			-				0.1		0.1		+	+	0.1	0.1																														
98-95-3	Nitrobenzene	mg/kg	0.3	4	0.30	0.30	0.30	0.30	0.00			-				0.3		0.3		+	+	0.3	0.3																														
78-59-1	Isophorone	mg/kg	0.2	4	0.20	0.20	0.20	0.20	0.00			-				0.2		0.2		+	+	0.2	0.2																														

Assessment of Chemicals of Potential Concern to Human Health

Risk parameter: Client: Site: Job no.: Lab. report no(s).:														Default - Human Health - POSresi (1%SOM)										Data Filters		Hydrock													
														Zone		All																							
														Strata		MG																							
														Depth Min (m bgl)		0.1																							
														Depth Max (m bgl)		1.5																							
														Dataset mean SOM%		2.49																							
														Scenario SOM%		1																							
All values in mg/kg unless otherwise stated																																							
CAS No / P Code	Chemical of Potential Concern	Units	LoD	No. Samples	Min. Value	Max. Value	Mean	Median	Standard Deviation	No. Samples >= GAC & > LoD	Soil Saturation Limit @1% SOM	GAC	GAC Source	Strata	MG	NAT	MG	NAT	MG	MG	NAT	NAT	MG	MG															
0	Insufficient data to derive GAC																																						
90-12-0	1-Methylnaphthalene	mg/kg		0																																			
P1022	Sulfur (elemental)	mg/kg		0																																			
0	Additional Substances																																						
0	Other 1	mg/kg		0																																			
0	Other 2	mg/kg		0																																			
0	Other 3	mg/kg		0																																			
0	Other 4	mg/kg		0																																			
0	Other 5	mg/kg		0																																			
0	Other 6	mg/kg		0																																			
0	Other 7	mg/kg		0																																			
0	Other 8	mg/kg		0																																			
0	Other 9	mg/kg		0																																			
0	Other 10	mg/kg		0																																			
	TPH Additivity Check		HAZARD QUOTIENTS FOR EACH FRACTION																																				
														Considered additive		Aliphatics >EC8-EC10	7.69231E-08		7.69231E-08		7.69231E-08	7.69231E-08			7.69231E-08	7.69231E-08													
																Aliphatics >EC10-EC12	7.69231E-05		7.69231E-05		7.69231E-05	7.69231E-05			7.69231E-05	7.69231E-05													
																Aliphatics >EC12-EC16	0.000153846		0.000153846		0.000153846	0.000153846			0.000153846	0.000361538													
														Considered additive		Aromatics >EC8-EC10	0.0000002		0.0000002		0.0000002	0.0000002			0.0000002	0.0000002													
																Aromatics >EC10-EC12	0.0002		0.0002		0.0002	0.0002			0.0002	0.0002													
																Aromatics >EC12-EC16	0.0004		0.0004		0.0004	0.0004			0.0006	0.0004													
														Considered additive		Aromatics >EC16-EC21	0.002631579		0.002631579		0.002631579	0.002631579			0.005	0.002631579													
																Aromatics >EC21-EC35	0.002631579		0.002631579		0.002631579	0.002631579			0.028947368	0.003684211													
														Hazard Index table - HI or HQ greater than 1 highlighted with orange shading.										Hazard Index for ali>C8-C16	0.000230846		0.000230846		0.000230846	0.000230846			0.000230846	0.000438538					
																								Hazard Index for aro>C8-C16	0.0006002		0.0006002		0.0006002	0.0006002			0.0008002	0.0006002					
																								Hazard Index for aro>C16-C35	0.005263158		0.005263158		0.005263158	0.005263158			0.033947368	0.006315789					
Legend:														MG	Made Ground	<0.02	Value below the laboratory reporting limit and are considered as being at the detection limit for the purposes of statistical analysis, as a conservative estimate.										0.02	Value greater than, or equal to, the generic assessment criterion (GAC).											
														HH	Holt Heath Sand and Gravel	64.00	Value exceed saturation limit and substance is liquid or solid at ambient temperature																						
														XX	XX Other Codes	*<10	Value excluded from statistical analysis																						
														Y			Text result																						
														-			Represents a determinand that was not tested.																						
														•			represents a data point that is not included in the current filter settings																						
Template Version:																																							
1.05: 11/04/23																																							

Summary of Remedial Targets Methodology Screening



Hydrock Scenario: Scenario D - DWS & EQS (inland)											2013/39/EU Annex I	
RTM Level: RTM Level 1 - Soil Zone Assessment - perched water samples											P = priority substance	
Water body receptor(s): Groundwater and surface water											PH = priority hazardous substances.	
Secondary receptor(s): Human health (abstraction)											WFD Designation (2015 Directions)	
Data set: Groundwater / Leachate / Perched water / Surface water [as appropriate]											OP = Other substance identical to previous legislation	
Client: ISG											SP = Specific Pollutant	
Construction											JAGDAG Hazardous Substances Determination (UK)	
Site: Meadow School											H Hazardous substance	
Job no: 27834											NP Non-hazardous pollutant	
Test Certificate(s): 19-xxxxx											(blank) Not included in assessment	
Dataset ALL ZONES												

CAS / AGS Number	Chemicals of Potential Concern (concentrations in µg/l)	WFD Designation	Hazardous Substance Status	Summary of Sample Data						Value Being Compared to Target = Maximum Value	Water Quality Target (Exceeded if Red)		No. Samples Exceeding Water Quality Target		No. Samples above LoD Exceeding Water		Notes
				No. of Samples	No. of Samples > LoD	Limit of Detection	Minimum Value	Maximum Value	95-%ile Value		DWS	Inland Waters EQS	DWS	Inland Waters EQS	DWS	Inland Waters EQS	
P1133	Hardness as mg/l CaCO ₃			-	-	-	10	-	-	-	-	-	-	-	-	-	Representative hardness of receiving surface water environment used in some inland EQS
7440-22-4	Silver (Ag) (dissolved)			12	0	0.05	<0.05	<0.05	<0.05	<0.05	n/a	0.05		0		0	
7429-90-5	Aluminium (Al) (dissolved)			0							200	n/a					
7440-38-2	Arsenic (As) (dissolved)	SP	H	12	12	0.15	0.21	1.89	1.3125	1.89	10	50	0	0	0	0	
7440-42-8	Boron (B) (dissolved)		NP	12	12	10	120	300	261.5	300	1000	2000	0	0	0	0	
7440-39-3	Barium (Ba) (dissolved)			12	12	0.06	39	120	108.45	120	1300	n/a	0	0	0	0	
7440-43-9	Cadmium (Cd) (dissolved)	PH	NP	12	11	0.02	<0.02	0.09	0.0735	0.09	5	0.08	0	1	0	1	EQS (inland) dependent on hardness of receiving surface water environment
7440-48-4	Cobalt (Co) (dissolved)		NP	12	12	0.2	0.6	6.6	5.39	6.6	n/a	3		3		3	
18540-29-9	Chromium (VI) (Cr) (dissolved)	SP	H	12	0	5	<5	<5	<5	<5	n/a	3.4		12		0	
16065-83-1	Chromium (III) (Cr) (dissolved)	SP		12	0	5	<5	<5	<5	<5	n/a	4.7		12		0	
7440-47-3	Chromium (Cr) (total) (dissolved)			12	0	0.2	<0.2	<0.2	<0.2	<0.2	50	n/a	0		0		
7440-50-8	Copper (Cu) (dissolved)	SP	NP	12	12	0.5	1.1	4.6	4.16	4.6	2000	1	0	12	0	12	Bioavailable EQS (inland)
7439-89-6	Iron (Fe) (dissolved)	SP		12	11	0.004	<0.004	0.32	0.2485	0.32	200	1000	0	0	0	0	
7439-97-6	Mercury (Hg) (dissolved)	PH	H	0							1	0.07					
P1286	Manganese (Mn) (dissolved)	SP		12	12	0.05	26	810	562.5	810	50	123	10	6	10	6	Bioavailable EQS (inland)
7440-23-5	Sodium (Na) (dissolved)			12	12	0.01	46	130	130	130	200000	n/a	0	0	0	0	
7440-02-0	Nickel (Ni) (dissolved)	P	NP	12	12	0.5	2	5.4	5.29	5.4	20	4	0	3	0	3	Bioavailable EQS (inland)
7439-92-1	Lead (Pb) (dissolved)	P	H	12	0	0.2	<0.2	<0.2	<0.2	<0.2	10	1.2	0	0	0	0	Bioavailable EQS (inland)
7440-36-0	Antimony (Sb) (dissolved)		NP	12	12	0.4	0.5	1.6	1.545	1.6	5	n/a	0	0	0	0	
7782-49-2	Selenium (Se) (dissolved)		NP	12	5	0.6	<0.6	1.6	1.545	1.6	10	n/a	0	0	0	0	
7440-31-5	Tin (Sn) (dissolved)			12	5	0.2	<0.2	0.43	0.3915	0.43	n/a	25		0	0	0	
7440-62-2	Vanadium (V) (dissolved)			12	5	0.2	<0.2	3.9	3.845	3.9	n/a	20		0	0	0	EQS (inland) dependent on hardness of receiving surface water environment
7440-66-6	Zinc (Zn) (dissolved)	SP	NP	12	12	0.5	1.5	9.9	8.965	9.9	n/a	12.3		0	0	0	Bioavailable EQS (inland) + ambient background concentration (ABC)
P1095	Cyanide (free) (hydrogen cyanide)	SP	NP	0							n/a	1					
57-12-5	Cyanide (total)			0							50	n/a					
P1140	Ammonium (NH ₄ ⁺)		NP	12	12	15	29	200	178	200	500	n/a	0		0	0	
P1238	Ammoniacal Nitrogen (as N)		NP	0							n/a	300					
P1720	Ammonia (unionised) (NH ₃ as N) (free ammonia)	SP	NP	0							n/a	n/a					
15541-45-4	Bromate (BrO ₃ ⁻)			12	1	0.002	<0.002	0.009	0.00515	0.009	10	n/a	0	0	0	0	
16887-00-6	Chloride (Cl ⁻)			12	12	0.15	79	230	208	230	250000	250000	0	0	0	0	
16984-48-8	Fluoride (F ⁻)			12	12	50	110	410	382.5	410	1500	1000	0	0	0	0	EQS (inland) dependent on hardness of receiving surface water environment
P1348	Nitrate (NO ₃ ⁻)			12	12	0.05	0.41	14.6	14.215	14.6	50000	n/a	0	0	0	0	
P1349	Nitrite (NO ₂ ⁻)			12	12	5	18	480	452.5	480	500	n/a	0	0	0	0	
14808-79-8	Sulfate (SO ₄ ²⁻)			12	12	45	41100	169000	166250	169000	250000	400000	0	0	0	0	
P1134	pH (min.) (su)			12	12	0	6.9	7.9	7.9	7.9	6.5	6	0	0	0	0	
P1134	pH (max.) (su)			12	12	0	6.9	7.9	7.9	7.9	9.5	9	0	0	0	0	
P1287	Electrical conductivity (µS/cm)			12	12	10	580	1100	1045	1100	2500	n/a	0	0	0	0	
120-12-7	Anthracene	PH	H	12	0	0.01	<0.01	<0.01	<0.01	<0.01	n/a	0.1		0	0	0	
50-32-8	Benzo(a)pyrene	PH	H														Benzo(a)pyrene EQS used as marker substance for the group of benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(g,h,i)perylene & indeno(1,2,3-cd)pyrene
206-44-0	Fluoranthene	P	H	12	0	0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.00017	0	12	0	0	
91-20-3	Naphthalene	P	NP	12	0	0.01	<0.01	<0.01	<0.01	<0.01	n/a	0.0063		12	0	0	
GRP01	PAHs = sum of benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(ghi)perylene, indeno(1,2,3-cd)pyrene	P	H									2		0	0	0	
P1877	Phenol	SP	NP	0							0.1	n/a					
P1407	AlI >EC5-EC6			12	0	1	<1	<1	<1	<1	15000	10	0	0	0	0	n-hexane fall within this fraction
P1408	AlI >EC6-EC8			12	0	1	<1	<1	<1	<1	15000	10	0	0	0	0	n-heptane falls within this fraction
P1409	AlI >EC8-EC10			12	0	1	<1	<1	<1	<1	300	10	0	0	0	0	n-octane and n-nonane fall within this fraction
P1410	AlI >EC10-EC12			12	0	10	<10	<10	<10	<10	300	10	0	0	0	0	
P1411	AlI >EC12-EC16			12	0	10	<10	<10	<10	<10	300	10	0	0	0	0	
P1938	AlI >EC16-EC35			12	0	10	<10	<10	<10	<10	n/a	10		0	0	0	
P1415	AlI >EC35-EC44			12	0	10	<10	<10	<10	<10	n/a	10		0	0	0	
P1441	Aro >EC5-EC7			12	0	1	<1	<1	<1	<1	1	10	0	0	0	0	Benzene wholly representative of this fraction
P1355	Aro >EC7-EC8			12	0	1	<1	<1	<1	<1	700	10	0	0	0	0	Toluene wholly representative of this fraction
P1356	Aro >EC8-EC10			12	0	1	<1	<1	<1	<1	300	10	0	0	0	0	Ethylbenzene / xylene / trimethylbenzene representative of this range
P1357	Aro >EC10-EC12			12	0	10	<10	<10	<10	<10	90	10	0	0	0	0	Naphthalene often forms a reasonable percentage of this fraction
P1358	Aro > EC12-EC16			12	0	10	<10	<10	<10	<10	90	10	0	0	0	0	2-methylnaphthalene, acenaphthylene, acenaphthene falls within this fraction
P1359	Aro >EC16-EC21			12	0	10	<10	<10	<10	<10	90	10	0	0	0	0	fluorene, anthracene, phenanthrene, pyrene falls within this range
P1360	Aro >EC21-EC35																Benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(ghi)perylene, indeno(cd)pyrene fall within this fraction
P1362	Aro >EC35-EC44			12	0	10	<10	<10	<10	<10	90	10	0	0	0	0	
71-43-2	Benzene	P	H	12	0	3	<3	<3	<3	<3	n/a	10		12	0	0	
108-88-3	Toluene	SP	H	12	0	3	<3	<3	<3	<3	700	74	0	0	0	0	

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CAS / AGS Number	Chemicals of Potential Concern (concentrations in µg/l)	WFD Designation	Hazardous Substance Status	Summary of Sample Data						Value Being Compared to Target = Maximum Value	Water Quality Target (Exceeded if Red)		No. Samples Exceeding Water Quality Target		No. Samples above LoD Exceeding Water		Notes
				No. of Samples	No. of Samples > LoD	Limit of Detection	Minimum Value	Maximum Value	95-%ile Value		DWS	Inland Waters EQS	DWS	Inland Waters EQS	DWS	Inland Waters EQS	
100-41-4	Ethylbenzene		H	12	0	3	<3	<3	<3	<3	300	20	0	0	0	0	EQS compared to dissolved metals as an initial screen, with no adjustment for bioavailability or ABC.
95-47-6	o-Xylene		H	12	0	3	<3	<3	<3	<3	500	30	0	0	0	0	Proposed EQS for Ethylbenzene in Water, R&D Technical Report P2-115/TR4. EA 2001
P1374	m,p-Xylene		H	12	0	3	<3	<3	<3	<3	500	30	0	0	0	0	DWS/EQS for total xylene
1634-04-04	Methyl tertiary butyl ether (MTBE)		NP	12	0	3	<3	<3	<3	<3	15	n/a	0		0		DWS/EQS for total xylene
71-55-6	1,1,1-Trichloroethane		NP	0							n/a	100					Non health based value - WHO odour threshold
79-00-5	1,1,2-Trichloroethane		NP	0							n/a	400					
96-12-8	1,2-Dibromo-3-chloropropane		H	0							0.1	n/a					
106-93-4	1,2-Dibromoethane		H	0							0.4	n/a					
95-50-1	1,2-Dichlorobenzene		H	0							1000	20					
107-06-2	1,2-Dichloroethane (EDC)	P	NP	0							3	10					
156-59-2	cis 1,2-Dichloroethene (cis 1,2 DCE)		NP	0							50	n/a					DWS is for combined isomers
156-60-5	trans 1,2-Dichloroethene (trans 1,2 DCE)		NP	0							50	n/a					DWS is for combined isomers
78-87-5	1,2-Dichloropropane		H	0							40	n/a					
10061-01-5	cis 1,3-Dichloropropene		H	0							0.1	n/a					DWS is for combined isomers
10061-02-6	trans 1,3-Dichloropropene		H	0							0.1	n/a					DWS is for combined isomers
106-46-7	1,4-Dichlorobenzene		H	0							300	20					
75-27-4	Bromodichloromethane		H	0							60	n/a					
75-01-4	Chloroethene (vinyl chloride)		H	0							0.5	n/a					
124-48-1	Dibromochloromethane		H	0							100	n/a					
25321-22-6	Dichlorobenzenes (1,2-, 1,3- & 1,4-)			0							n/a	20					
75-09-2	Dichloromethane	P	NP	0							20	20					
87-68-3	Hexachlorobutadiene (HCBD)	PH	H	0							0.1	0.6					
100-42-5	Styrene		H	0							20	50					
25322-20-7	Tetrachloroethane (PCA)	SP	NP	0							n/a	140					
127-18-4	Tetrachloroethene (PCE)	OP	NP	0							10	10					UK DWS applies to sum of tetrachloroethene and trichloroethene
GRP02	Tetrachloroethene (PCE) and trichloroethene (TCE)			0							10	n/a					UK DWS applies to sum of tetrachloroethene and trichloroethene
56-23-5	Tetrachloromethane (Carbon Tetrachloride)	OP	H	0							3	12					
75-25-2	Tribromomethane (bromoform)		H	0							100	n/a					
12002-48-1	Trichlorobenzenes	P	NP	0							n/a	0.4					
79-01-6	Trichloroethene	OP	H	0							10	10					UK DWS applies to sum of tetrachloroethene and trichloroethene
67-66-3	Trichloromethane (chloroform)	P	H	0							100	2.5					
GRP03	Trihalomethanes, sum of trichloromethane, tribromomethane, dibromochloromethane & bromodichloromethane			0							100	n/a					
88-06-2	2,4,6-Trichlorophenol		H	0							200	n/a					
120-83-2	2,4-Dichlorophenol	SP	H	0							n/a	4.2					
95-57-8	2-Chlorophenol		H	0							n/a	50					
554-00-7	3,4-Dichloroaniline	SP	H	0							n/a	0.2					
108-43-0	3-Chlorophenol		H	0							n/a	50					
59-50-7	4-Chloro, 3-methylphenol		H	0							n/a	40					
106-48-9	4-Chlorophenol		H	0							n/a	50					
85-68-7	Benzyl butyl phthalate	SP	NP	0							n/a	7.5					
117-81-7	Di(2-ethylhexyl)phthalate (DEHP)	PH	NP	0							8	1.3					
84-74-2	Dibutyl phthalate		NP	0							n/a	8					
84-66-2	Diethyl phthalate (DEP)			0							n/a	200					
131-11-3	Dimethyl phthalate (DMP)			0							n/a	800					
117-84-0	Diethyl phthalates			0							n/a	20					
118-74-1	Hexachlorobenzene	PH	H	0							0.1	0.05					
104-40-5	Nonylphenol (4-Nonylphenol)	PH	H	0							n/a	0.3					
140-66-9	Octylphenol ((4-(1,1', 3,3'-tetramethylbutyl)-phenol))	P		0							n/a	0.1					
608-93-5	Pentachlorobenzene	PH	H	0							n/a	0.007					
123-91-1	1,4-dioxane		H	0							50	n/a					
79-06-1	Acrylamide		H	0							0.1	n/a					
92-52-4	Biphenyl (cyclochlorocyclohexane)		H	0							n/a	25					
32534-81-9	Brominated diphenylethers (Sum congeners)	PH	H	0							n/a	0.14					
85535-84-8	Chloroalkanes C10-C13	PH	H	0							n/a	0.4					
25567-68-4	Chloronitrotoluenes		H	0							n/a	10					
3252-43-5	Dibromacetone		H	0							70	n/a					

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CAS / AGS Number	Chemicals of Potential Concern (concentrations in µg/l)	WFD Designation	Hazardous Substance Status	Summary of Sample Data					Value Being Compared to Target = Maximum Value	Water Quality Target (Exceeded if Red)		No. Samples Exceeding Water Quality Target		No. Samples above LoD Exceeding Water		Notes
				No. of Samples	No. of Samples > LoD	Limit of Detection	Minimum Value	Maximum Value		95-%ile Value	DWS	Inland Waters EQS	DWS	Inland Waters EQS	DWS	
13425-80-4	Dichloroacetate			0						50	n/a					
3018-12-0	Dichloroacetonitrile			0						20	n/a					
GRP04	Dioxins and dioxin-like compounds	PH		0						n/a	n/a					
3194-55-6	Hexabromocyclododecanes (HBCDD)	PH	H	0						n/a	0.0016					
2163-68-0	Hydroxyatrazine			0						200	n/a					
101043-37-2	Microcystin-LR			0						1	n/a					
62-75-9	N-nitrosodimethylamine			0						0.1	n/a					
1763-23-1	Perfluorooctane sulfonic acid (PFOS) & derivatives	PH	H	0						0.01	0.00065					DWS represents DWI (2021) Tier 2 action value (commence monitoring).
335-67-1	Perfluorooctanoic Acid (PFOA)	PH		0						0.01	n/a					DWS represents DWI (2021) Tier 2 action value (commence monitoring).
1336-36-3	Polychlorinated Biphenyls (PCB)		H	0						n/a	n/a					
2893-78-9	Sodium dichloroisoxyanurate			0						50000	n/a					
126-73-8	Tributyl phosphate		H	0						n/a	50					
3380-34-5	Triclosan	SP		0						n/a	0.1					
7726-95-6	Bromine (Br)			0						n/a	2					
7782-50-5	Chlorine (total free available)	SP	NP	0						200	2					
14866-68-3	Chlorate			0						700	n/a					
14998-27-7	Chlorite			0						700	n/a					
60-00-4	EDTA (edetic acid)			0						600	400					
106-89-8	Epichlorohydrin		H	0						0.1	n/a					
569-64-2	Malachite green		H	0						n/a	0.5					
10599-90-3	Monochloramine			0						3000	n/a					
79-11-8	Monochloroacetate (Chloroacetic Acid)			0						20	n/a					
139-13-9	NTA (nitrilotriacetic acid)			0						200	1000					
76-03-9	Trichloroethanoic acid (trichloroacetate)			0						200	n/a					
7440-61-1	U (dissolved)			0						30	n/a					
36643-28-4	Tributyl tin compounds	PH	H	0						n/a	0.0002					
7783-06-4	Hydrogen Sulphide			0						n/a	0.25					
14797-73-0	Perchlorate			0						70	n/a					
GRP06	Total anions			0						n/a	250000					
93-76-5	2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)		H	0						0.1	n/a					
94-75-7	2,4-D (2,4-Dichlorophenoxyacetic acid)	SP		0						0.1	0.3					
94-82-6	2,4-DB (4-(2,4-dichlorophenoxy)butyric acid)			0						0.1	n/a					
71751-41-2	Abamectin			0						0.1	0.01					
74070-46-5	Adinofen	P		0						0.1	0.12					
15972-60-8	Alachlor	P	H	0						0.1	0.3					
116-06-3	Aldicarb		NP	0						0.1	n/a					
309-00-2	Aldrin		H	0						0.03	n/a					
GRP07	Aldrin & dieldrin		H	0						0.03	n/a					
1912-24-9	Atrazine	P	H	0						0.1	0.6					
35575-96-3	Azamethiphos			0						0.1	n/a					
2642-71-9	Azinphos ethyl		H	0						0.1	n/a					
86-50-0	Azinphos-methyl		H	0						0.1	0.01					
25057-89-0	Bentazone		NP	0						0.1	500					
42576-02-3	Bifenox	P	H	0						0.1	0.012					
1689-84-5	Bromoxynil		H	0						0.1	100					
10605-21-7	Carbendazim	SP	H	0						0.1	0.15					
1563-66-2	Carbofuran		NP	0						0.1	n/a					
57-74-9	Chlordane		H	0						0.1	n/a					
470-90-6	Chlorofenvinphos	P	H	0						0.1	0.1					
101-21-3	Chloroproprham		H	0						0.1	10					
2921-88-2	Chloropyrifos	P	H	0						0.1	0.03					
1897-45-6	Chlorothalipil	SP	H	0						0.1	0.035					
15545-48-9	Chlorotoluron		H	0						0.1	2					
GRP08	Cyclodiene pesticides, sum of Aldrin, Dieldrin, Endrin, Isodrin	OP	H	0						0.03	0.01					
56-72-4	Coumaphos		H	0						0.1	0.01					
21725-46-2	Cyanazine		H	0						0.1	n/a					
28159-98-0	Cybutryne	P		0						0.1	0.0025					
68359-37-5	Cyfluthrin			0						0.1	0.001					
52315-07-8	Cypermethrin	P	H	0						0.1	0.00008					
GRP09	DDT total (dichlorodiphenyltrichloroethane)	OP	H	0						0.1	0.025					

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8065-48-3	Demeton		H	0						0.1	0.5					
333-41-5	Diazinon (sheep dip)	SP	H	0						0.1	0.01					
120-36-5	Dichloroprop		H	0						0.1	n/a					
62-73-7	Dichlorvos	P	H	0						0.1	0.0006					
115-32-2	Dicofol	PH	H	0						0.1	0.0013					
60-57-1	Dieldrin		H	0						0.03	n/a					
35367-38-5	Diffubenzuron		H	0						0.1	0.001					
60-51-5	Dimethoate	SP	H	0						0.1	0.48					
330-54-1	Diuron	P	H	0						0.1	0.2					
117704-25-3	Doramectin		H	0						n/a	0.001					
115-29-7	Endosulfan	PH	H	0						0.1	0.005					
72-20-8	Endrin		H	0						0.1	n/a					
299-84-3	Fenchlorphos		H	0						0.1	0.03					
122-14-5	Fenitrothion		H	0						0.1	0.01					
93-72-1	Fenoprop ((2,4,5-trichlorophenoxy)propionic acid)		H													
55-38-9	Fenthion		H	0						0.1	n/a					
370-50-3	Flucifuron			0						0.1	1					
50-00-0	Formaldehyde (methanal)		NP	0						0.1	5					
38641-94-0	Glyphosate	SP		0						0.1	196					
76-44-8	Heptachlor		H	0						0.03	2E-07					
GRP10	Heptachlor & Heptachlor epoxide	PH	H													
				0						0.03	2E-07					
1024-57-3	Heptachlor epoxide			0						0.03	2E-07					
608-73-1	Hexachlorocyclohexane (includes lindane)	PH	H	0						0.1	0.02					
1689-83-4	Ioxynil		H	0						0.1	10					
465-73-6	Isodrin		H	0						0.1	n/a					
34123-69-6	Isoproturon	P	NP	0						0.1	0.3					
70288-86-7	Ivermectin			0						n/a	0.0001					
330-55-2	Linuron	SP	H	0						0.1	0.5					
121-75-5	Malathion		H	0						0.1	0.01					
8018-01-07	Mancozeb		NP	0						0.1	2					
12427-38-2	Maneb		NP	0						0.1	3					
94-74-6	MCPA (4-(2-methyl-4-chlorophenoxy acetic acid))			0						0.1	12					EQS inland dependant on pH. Default 12µg/l as conservative approach
93-65-2	Mecoprop	SP	NP	0						0.1	18					
2032-65-7	Methiocarb	SP	NP	0						0.1	0.01					
72-43-5	Methoxychlor			0						0.1	n/a					
51218-45-2	Metolachlor			0						0.1	n/a					
7786-34-7	Mevinphos		H	0						0.1	0.02					
2212-67-1	Molinate			0						0.1	n/a					
1113-02-6	Omethoate		H	0						0.1	0.01					
50-29-3	para-para-DDT	OP	H	0						0.1	0.01					
56-38-2	Parathion		H	0						0.1	n/a					
298-00-0	Parathion-methyl		H	0						0.1	n/a					
GRP11	PCSDs (cyfluthrin, sulcofuron, flucifuron and permethrin)			0						n/a	0.05					
40487-42-1	Pendimethalin	SP	NP	0						0.1	0.3					
87-86-5	Pentachlorophenol	P	H	0						0.1	0.4					
52645-53-1	Permethrin	SP	H	0						0.1	0.001					
GRP12	Pesticides (individual) (other than aldrin, dieldrin, heptachlor & heptachlor epoxide)			0						0.1	n/a					
GRP13	Pesticides (total)			0						0.5	n/a					
23103-98-2	Pirimicarb		NP	0						0.1	1					
29232-93-7	Pirimiphos - methyl		H	0						0.1	0.015					
67747-09-5	Prochloraz		H	0						0.1	4					
31218-83-4	Propetamphos		H	0						0.1	0.03					
23950-58-5	Propyzamide		H	0						0.1	100					
95737-68-1	Pyriproxyfen			0						0.1	n/a					
124495-18-7	Quinoxifen	PH		0						0.1	0.15					
122-34-9	Simazine	P	H	0						0.1	1					
3567-25-7	Sulcofuron			0						0.1	25					
117-18-0	Tecnazene (total)			0						0.1	1					
886-50-0	Tertbutryn	P	NP	0						0.1	0.065					
5915-41-3	Tertbutylazine		H	0						0.1	n/a					
148-79-8	Thiabendazole		NP	0						0.1	5					
2303-17-5	Triallate		H	0						0.1	0.25					
24017-47-8	Triazaphos		H	0						0.1	0.005					
1582-09-8	Trifluralin	PH	H	0						0.1	0.03					

Summary of Remedial Targets Methodology Screening



RTM Level: RTM Level 1 - Soil Zone Assessment - perched water samples Water body receptor(s): Groundwater and surface water Secondary receptor(s): Human health (abstraction) Data set: Groundwater / Leachate / Perched water / Surface water (as appropriate) Client: ISG Construction Site: Meadow School Job no: 27834 Test Certificates(s): 19-xxxxx Dataset ALL ZONES										PNEC calculated (inland EQS)		P = priority substance PH = priority hazardous substances. WFD Designation (2015 Directions) OP = Other substance identical to previous legislation SP = Specific Pollutant JAGDAG Hazardous Substances Determination (UK) H Hazardous substance NP Non-hazardous pollutant (blank) Not included in assessment					
CAS / AGS Number	Chemicals of Potential Concern (concentrations in µg/l)	WFD Designation	Hazardous Substance Status	Summary of Sample Data						Value Being Compared to Target = Maximum Value	Water Quality Target (Exceeded if Red)		No. Samples Exceeding Water Quality Target		No. Samples above LoD Exceeding Water		Notes
				No. of Samples	No. of Samples > LoD	Limit of Detection	Minimum Value	Maximum Value	95-%ile Value		DWS	Inland Waters EQS	DWS	Inland Waters EQS	DWS	Inland Waters EQS	
1262-21-1	Triphenyltin and derivatives		H	0							0.1	0.02					EQS compared to dissolved metals as an initial screen, with no adjustment for bioavailability or ABC.

GAC derivation

Background

Initially, the Hydrock GAC were derived following the publishing of soil guideline values (SGV), toxicological (TOX) reports and associated publications by the Environment Agency (EA) in 2009 referenced under Science Report SC050021 (EA, 2009a, b, c, d). The Hydrock GAC have then been periodically updated following publication of new information on toxicological, physico-chemical, land use or receptor parameters, namely:

- » LQM/CIEH, 2009. LQM/CIEH Generic Assessment Criteria for Human Health Risk Assessment, second edition. Nathaniel, C. P., McCaffrey, C., Ashmore, M., Cheng, Y., Gillet, A. G., Ogden, R. C. and Scott, D.
- » CL:AIRE, 2010. 'The EIC/AGS/CL:AIRE Soil Generic Assessment Criteria for Human Health Risk Assessment'. Environmental Industries Commission, The Association of Geotechnical and Geoenvironmental Specialists and Contaminated Land: Applications in Real Environment.
- » CL:AIRE, 2014. 'Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination', Revision 2, DEFRA research project SP1010. Contaminated Land: Applications in Real Environment.
- » LQM/CIEH, 2015. 'The LQM/CIEH S4ULs for Human Health Risk Assessment'. Nathaniel, C. P., McCaffrey, C., Gillet, A. G., Ogden, R. C. and Nathaniel, J. F.
- » CL:AIRE, 2021. 'C4SL Phase 2 Technical Reports'. Contaminated Land: Applications in Real Environment.

Land use scenarios

Hydrock has derived generic assessment criteria (GAC) for human health based on the six exposure scenarios defined in CL:AIRE (2014) using generic default assumptions from published guidance. GAC for each exposure scenario have been derived for three soil organic matter (SOM) contents, 1%, 2.5% and 6%.

All GAC have been rounded to two significant figures.

Exposure parameters

The exposure parameters used for the Hydrock GAC are the default parameters stated in SR3, unless updated in CL:AIRE (2014) where the CL:AIRE (2014) values have been adopted.

Approach to consumption rates

Hydrock have adopted the 90th percentile consumption rates from Table 3.4 of CL:AIRE (2014) for all produce types. This is noted to be more conservative than the "top two" approach taken in the derivation of C4SLs.

Approach to plant uptake for GAC omitted in CL:AIRE (2010)

Plant uptake factors were not identified in CL:AIRE (2010) for antimony, barium and molybdenum. Hydrock has sourced the required parameter values from ORNL (1984) in order to derive GAC that are inclusive of the homegrown produce exposure pathway.

Chemical and toxicity parameters

The chemical and toxicity parameters have been adopted based on the following documents:

- » IRIS, 2016. 'Toxicological Review of Trimethylbenzenes'. Integrated Risk Information System, National Centre for Environmental Assessment, office of Research and Development, U.S. Environmental Protection Agency.
- » LQM/CIEH, 2015.

- » ORNL, 1984. 'ORNL-5786. A Review and Analysis of Parameters for Assessing Transport of Environmentally released Radionuclides through Agriculture'. Oak Ridge National Laboratory.
- » CL:AIRE, 2010.
- » RIVM, 2001. RIVM Report 711701 025 'HCV Re-evaluation of human-toxicological maximum-permissible risk levels'. National Institute of Public Health and the Environment.
- » LQM/CIEH, 2009.
- » EA, 2009a.

Approach to Cyanide GAC

The Hydrock GAC for free cyanide have been derived based on ingestion of a bolus of contaminated soil. The GAC are derived for acute exposure of a child (0-6 years old) for all land uses except commercial, where the GAC are derived for acute exposure of an adult (16-65 years old). For the purpose of GQRA, the child value may be adopted for all land use scenarios.

For complex cyanide, the GAC have been derived based on chronic exposure, using the default exposure scenarios but excluding the consumption of homegrown produce, soil attached to homegrown produce, indoor vapour and outdoor vapour pathways. The chronic health criteria value (HCV) for complex cyanide is based on the EA (2009a) HCV for free cyanide and the ratio of toxicity between free and complex cyanide proposed by RIVM (2001).

Approach to Phenol GAC

In accordance with the EA Science Report SC050021 / Phenol SGV, a $GAC_{ing/inh}$ has been derived for ingested and inhaled phenol using the CLEA model, with a GAC_{derm} derived for dermal contact using Equation 5.7 within SR3. The lower of the $GAC_{ing/inh}$ and GAC_{derm} has been adopted as the final GAC.

Approach to PCB GAC

GAC for assessing the non-dioxin-like risk from PCBs have been based on the "Dutch 7". As the TDI used by the authors of the Dutch guidance is for the sum of the 7 individual congeners, the TDI has been divided by 7 to create a TDI for each congener. The non-dioxin-like risk from PCBs is therefore assessed using a Hazard Index approach as for total petroleum hydrocarbons (TPH).

Sub-surface soil to indoor air correction factors

Reflecting the approach taken by the Environment Agency in the development of revised SGV in 2009 for BTEX, a sub-surface soil to indoor air correction factor of 10 has been applied for petroleum hydrocarbons in order to account for over-prediction of vapour intrusion into building using the Johnson and Ettinger approach.

The correction factor of 10 has been applied to the following petroleum hydrocarbons (it makes negligible difference to less volatile TPH and PAH compounds):

- » TPHCWG fractions, namely aliphatic EC>5-44 and aromatic EC>6-44;
- » PAHs (acenaphthene, acenaphthylene, anthracene, benzo(a)anthracene), benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenz(a,h)anthracene, fluoranthene, fluorene, indeno(1,2,3-c,d)pyrene, naphthalene, phenanthrene, pyrene);
- » BTEX;
- » Isopropylbenzene;
- » Propylbenzene;
- » 1,2,4- and 1,3,5-trimethylbenzene; and
- » Styrene.

Approach to saturation limits

The CLEA model includes a traffic light colour system to highlight when saturated soil conditions have potentially been exceeded for the vapour pathways during calculation of assessment criteria. The colours represent:

- » Green: the assessment criteria do not exceed the saturated soil concentration.
- » Amber: the assessment criteria exceed the saturated soil concentration but the contribution of the indoor and outdoor vapour pathway to total exposure is less than 10% and will not significantly affect the assessment criteria.
- » Red: the assessment criteria exceed the saturated soil concentration and the contribution of the indoor and outdoor vapour pathway to total exposure is greater than 10% and will significantly affect the assessment criteria.

Hydrock have not applied any further calculations or assessment in relation to saturation limits during GAC derivation, with the CLEA-modelled GAC being presented as the GAC. Consideration of saturation limits is undertaken during the data assessment stage.

References

CL:AIRE, 2010. 'The EIC/AGS/CL:AIRE Soil Generic Assessment Criteria for Human Health Risk Assessment'. Environmental Industries Commission, The Association of Geotechnical and Geoenvironmental Specialists and Contaminated Land: Applications in Real Environment.

CL:AIRE, 2014. 'Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination', Revision 2, DEFRA research project SP1010. Contaminated Land: Applications in Real Environment

CL:AIRE, 2021. C4SL Phase 2 Technical Reports for tetrachloroethene, trichloroethene and vinyl chloride. Contaminated Land: Applications in Real Environment.

EA, 2009a. 'Science Reports SC050021 – SGV and TOX reports for: benzene, toluene, ethylbenzene, xylene, arsenic, nickel, mercury, selenium, cadmium, inorganic cyanide, phenol, dioxins, furans and dioxin-like PCBs'; 'Supplementary information for the derivation of SGV for: benzene, toluene, ethylbenzene, xylene, arsenic, nickel, mercury, selenium, cadmium, inorganic cyanide, phenol, dioxins, furans and dioxin-like PCBs'; and 'Contaminants in soil: updated collation of toxicological data and intake values for humans: benzene, toluene, ethylbenzene, xylene, arsenic, nickel, mercury, selenium, cadmium, inorganic cyanide, phenol, dioxins, furans and dioxin-like PCBs'. Environment Agency.

EA, 2009b. 'Science Report – SC050021/SR2. Human health toxicological assessment of contaminants in soil'. Environment Agency.

EA, 2009c. 'Science Report – SC050021/SR3. Updated technical background to the CLEA model'. Environment Agency.

EA, 2009d. 'Science Report – SC050021/SR4. CLEA Software (version 1.05) Handbook'. Environment Agency.

IRIS, 2016. 'Toxicological Review of Trimethylbenzenes'. Integrated Risk Information System, National Centre for Environmental Assessment, office of Research and Development, U.S. Environmental Protection Agency.

LQM/CIEH, 2009. LQM/CIEH Generic Assessment Criteria for Human Health Risk Assessment, second edition. Nathaniel, C. P., McCaffrey, C., Ashmore, M., Cheng, Y., Gillet, A. G., Ogden, R. C. and Scott, D.

LQM/CIEH, 2015. 'The LQM/CIEH S4ULs for Human Health Risk Assessment'. Nathaniel, C. P., McCaffrey, C., Gillet, A. G., Ogden, R. C. and Nathaniel, J. F.

ORNL, 1984. 'ORNL-5786. A Review and Analysis of Parameters for Assessing Transport of Environmentally released Radionuclides through Agriculture'. Oak Ridge National Laboratory.

RIVM, 2001. RIVM Report 711701 025 'HCV Re-evaluation of human-toxicological maximum-permissible risk levels'. National Institute of Public Health and the Environment.

Appendix H Waste assessment

HazWasteOnline™ assessment

Waste Classification Report

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

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



WX4SZ-QU1QS-Q2H61

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

Job name

27834-GELO

Description/Comments

Project

Meadow Special High School

Site

Meadow Special High School

Classified by

Name:

Kurt Gilmore

Date:

07 Jun 2023 10:29 GMT

Telephone:

Company:

Hydrock Consultants Ltd

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

HazWasteOnline™ Certification:

CERTIFIED

Course

Hazardous Waste Classification

Date

08 Sep 2020

Next 3 year Refresher due by Sep 2023

Purpose of classification

2 - Material Characterisation

Address of the waste

Meadow High School, Royal Lane, Uxbridge

Post Code UB8 3QU

SIC for the process giving rise to the waste

Description of industry/producer giving rise to the waste

Ground Investigation

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

Ground Investigation

Description of the waste

Soil

Job summary

#	Sample name	Depth [m]	Classification Result	Hazard properties	Page
1	SA02	0.10	Non Hazardous		3
2	SA01	0.10	Non Hazardous		6
3	WS02	0.10	Non Hazardous		9
4	WS02[2]	1.00	Non Hazardous		12
5	WS01	0.10	Non Hazardous		15
6	WS01[2]	0.50	Non Hazardous		18
7	WS03	0.50	Non Hazardous		21
8	WS03[2]	1.50	Non Hazardous		24
9	WS04	0.30	Non Hazardous		27
10	WS04[2]	1.00	Non Hazardous		30

Related documents

#	Name	Description
1	Hydrock Standard plus Cresol (ammended Lead)	waste stream template used to create this Job

Report

Created by: Kurt Gilmore

Created date: 07 Jun 2023 10:29 GMT

Appendices	Page
Appendix A: Classifier defined and non GB MCL determinands	33
Appendix B: Rationale for selection of metal species	34
Appendix C: Version	35

Classification of sample: SA02

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

Sample details

Sample name:	SA02	LoW Code:	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	0.10 m	Entry:		17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number									
1	acenaphthene	201-469-6	133-32-9		0.05	mg/kg		0.05	mg/kg	0.000005 %		
2	acenaphthylene	205-917-1	208-96-8		0.05	mg/kg		0.05	mg/kg	0.000005 %		
3	anthracene	204-371-1	120-12-7		0.05	mg/kg		0.05	mg/kg	0.000005 %		
4	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3	8.2	mg/kg	1.32	10.827	mg/kg	0.00108 %		
5	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	0.18	mg/kg		0.18	mg/kg	0.000018 %		
6	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	0.21	mg/kg		0.21	mg/kg	0.000021 %		
7	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	0.26	mg/kg		0.26	mg/kg	0.000026 %		
8	benzo[ghi]perylene	205-883-8	191-24-2		0.12	mg/kg		0.12	mg/kg	0.000012 %		
9	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	0.11	mg/kg		0.11	mg/kg	0.000011 %		
10	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9	0.67	mg/kg	2.775	1.859	mg/kg	0.000186 %		
11	boron { boron tribromide/trichloride/trifluoride (combined) }		10294-33-4, 10294-34-5, 7637-07-2		0.7	mg/kg	13.43	9.401	mg/kg	0.00094 %		
12	cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	0.2	mg/kg	1.285	0.257	mg/kg	0.00002 %		
13	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }	215-160-9	1308-38-9		17	mg/kg	1.462	24.846	mg/kg	0.00248 %		
14	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0	1.8	mg/kg	1.923	3.462	mg/kg	0.000346 %		
15	chrysene	601-048-00-0	205-923-4	218-01-9	0.21	mg/kg		0.21	mg/kg	0.000021 %		

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
16	copper { dicopper oxide; copper (I) oxide }				20 mg/kg	1.126	22.518 mg/kg	0.00225 %			
	029-002-00-X	215-270-7	1317-39-1								
17	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				1 mg/kg	1.884	1.884 mg/kg	0.000188 %			
	006-007-00-5										
18	dibenz[a,h]anthracene				0.05 mg/kg		0.05 mg/kg	0.000005 %			
	601-041-00-2	200-181-8	53-70-3								
19	diesel petroleum group		68334-30-5, 68476-34-6, 94114-59-7, 1159170-26-9		26 mg/kg		26 mg/kg	0.0026 %			
20	ethylbenzene				5 mg/kg		5 mg/kg	0.0005 %			
	601-023-00-4	202-849-4	100-41-4								
21	fluoranthene				0.31 mg/kg		0.31 mg/kg	0.000031 %			
		205-912-4	206-44-0								
22	fluorene				0.05 mg/kg		0.05 mg/kg	0.000005 %			
		201-695-5	86-73-7								
23	indeno[123-cd]pyrene				0.11 mg/kg		0.11 mg/kg	0.000011 %			
		205-893-2	193-39-5								
24	lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	61 mg/kg		61 mg/kg	0.0061 %			
	082-001-00-6										
25	mercury { mercury dichloride }				0.4 mg/kg	1.353	0.541 mg/kg	0.0000541 %			
	080-010-00-X	231-299-8	7487-94-7								
26	naphthalene				0.05 mg/kg		0.05 mg/kg	0.000005 %			
	601-052-00-2	202-049-5	91-20-3								
27	nickel { nickel dihydroxide }				12 mg/kg	1.579	18.954 mg/kg	0.0019 %			
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]								
28	pH		PH		5.5 pH		5.5 pH	5.5 pH			
29	phenanthrene				0.09 mg/kg		0.09 mg/kg	0.000009 %			
		201-581-5	85-01-8								
30	phenol				1 mg/kg		1 mg/kg	0.0001 %			
	604-001-00-2	203-632-7	108-95-2								
31	pyrene				0.29 mg/kg		0.29 mg/kg	0.000029 %			
		204-927-3	129-00-0								
32	TPH (C6 to C40) petroleum group				44.405 mg/kg		44.405 mg/kg	0.00444 %			
			TPH								
33	zinc { zinc oxide }				49 mg/kg	1.245	60.991 mg/kg	0.0061 %			
	030-013-00-7	215-222-5	1314-13-2								
Total:									0.0295 %		

Key

	User supplied data
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 2: Oxidizing "waste which may, generally by providing oxygen, cause or contribute to the combustion of other materials"

Force this Hazardous property to non hazardous because Limit of detection.

Hazard Statements hit:

Ox. Sol. 1; H271 "May cause fire or explosion; strong oxidiser."

Because of determinand:

chromium(VI) oxide: (compound conc.: 0.00034%)

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

Force this Hazardous property to non hazardous because Sample is not liquid.

Hazard Statements hit:

Flam. Liq. 2; H225 "Highly flammable liquid and vapour."

Because of determinand:

ethylbenzene: (conc.: 0.0005%)

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

Because of determinands:

diesel petroleum group: (conc.: 0.0026%)

TPH (C6 to C40) petroleum group: (conc.: 0.00444%)

Classification of sample: SA01

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

Sample details

Sample name:	LoW Code:
SA01	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0.10 m	

Hazard properties

None identified

Determinands

Moisture content: **0% No Moisture Correction applied (MC)**

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number									
1	acenaphthene	201-469-6	83-32-9		0.05	mg/kg		0.05	mg/kg	0.000005 %		
2	acenaphthylene	205-917-1	208-96-8		0.05	mg/kg		0.05	mg/kg	0.000005 %		
3	anthracene	204-371-1	120-12-7		0.07	mg/kg		0.07	mg/kg	0.000007 %		
4	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3	8.7	mg/kg	1.32	11.487	mg/kg	0.00115 %		
5	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	0.37	mg/kg		0.37	mg/kg	0.000037 %		
6	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	0.35	mg/kg		0.35	mg/kg	0.000035 %		
7	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	0.42	mg/kg		0.42	mg/kg	0.000042 %		
8	benzo[ghi]perylene	205-883-8	191-24-2		0.18	mg/kg		0.18	mg/kg	0.000018 %		
9	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	0.18	mg/kg		0.18	mg/kg	0.000018 %		
10	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9	0.66	mg/kg	2.775	1.832	mg/kg	0.000183 %		
11	boron { boron tribromide/trichloride/trifluoride (combined) }		10294-33-4, 10294-34-5, 7637-07-2		0.9	mg/kg	13.43	12.087	mg/kg	0.00121 %		
12	cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	0.2	mg/kg	1.285	0.257	mg/kg	0.00002 %	
13	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }	215-160-9	1308-38-9		18	mg/kg	1.462	26.308	mg/kg	0.00263 %		
14	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0	1.8	mg/kg	1.923	3.462	mg/kg	0.000346 %		
15	chrysene	601-048-00-0	205-923-4	218-01-9	0.39	mg/kg		0.39	mg/kg	0.000039 %		

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
16	copper { dicopper oxide; copper (I) oxide }				17 mg/kg	1.126	19.14 mg/kg	0.00191 %		
	029-002-00-X	215-270-7	1317-39-1							
17	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				1 mg/kg	1.884	1.884 mg/kg	0.000188 %		
	006-007-00-5									
18	dibenz[a,h]anthracene				0.05 mg/kg		0.05 mg/kg	0.000005 %		
	601-041-00-2	200-181-8	53-70-3							
19	diesel petroleum group		68334-30-5, 68476-34-6, 94114-59-7, 1159170-26-9		27.333 mg/kg		27.333 mg/kg	0.00273 %		
20	ethylbenzene				5 mg/kg		5 mg/kg	0.0005 %		
	601-023-00-4	202-849-4	100-41-4							
21	fluoranthene				0.85 mg/kg		0.85 mg/kg	0.000085 %		
		205-912-4	206-44-0							
22	fluorene				0.05 mg/kg		0.05 mg/kg	0.000005 %		
		201-695-5	86-73-7							
23	indeno[123-cd]pyrene				0.17 mg/kg		0.17 mg/kg	0.000017 %		
		205-893-2	193-39-5							
24	lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	47 mg/kg		47 mg/kg	0.0047 %		
	082-001-00-6									
25	mercury { mercury dichloride }				0.3 mg/kg	1.353	0.406 mg/kg	0.0000406 %		
	080-010-00-X	231-299-8	7487-94-7							
26	naphthalene				0.05 mg/kg		0.05 mg/kg	0.000005 %		
	601-052-00-2	202-049-5	91-20-3							
27	nickel { nickel dihydroxide }				12 mg/kg	1.579	18.954 mg/kg	0.0019 %		
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]							
28	pH		PH		5.5 pH		5.5 pH	5.5 pH		
29	phenanthrene				0.3 mg/kg		0.3 mg/kg	0.00003 %		
		201-581-5	85-01-8							
30	phenol				1 mg/kg		1 mg/kg	0.0001 %		
	604-001-00-2	203-632-7	108-95-2							
31	pyrene				0.76 mg/kg		0.76 mg/kg	0.000076 %		
		204-927-3	129-00-0							
32	TPH (C6 to C40) petroleum group				48.405 mg/kg		48.405 mg/kg	0.00484 %		
			TPH							
33	zinc { zinc oxide }				50 mg/kg	1.245	62.236 mg/kg	0.00622 %		
	030-013-00-7	215-222-5	1314-13-2							
Total:								0.0291 %		

Key

	User supplied data
•	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 2: Oxidizing "waste which may, generally by providing oxygen, cause or contribute to the combustion of other materials"

Force this Hazardous property to non hazardous because Limit of detection.

Hazard Statements hit:

Ox. Sol. 1; H271 "May cause fire or explosion; strong oxidiser."

Because of determinand:

chromium(VI) oxide: (compound conc.: 0.00034%)

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

Force this Hazardous property to non hazardous because Sample is not liquid.

Hazard Statements hit:

Flam. Liq. 2; H225 "Highly flammable liquid and vapour."

Because of determinand:

ethylbenzene: (conc.: 0.0005%)

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

Because of determinands:

diesel petroleum group: (conc.: 0.00273%)

TPH (C6 to C40) petroleum group: (conc.: 0.00484%)

Classification of sample: WS02

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

Sample details

Sample name:	LoW Code:
WS02	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.10 m	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number									
1	acenaphthene	201-469-6	33-32-9		0.05	mg/kg		0.05	mg/kg	0.000005 %		
2	acenaphthylene	205-917-1	208-96-8		0.05	mg/kg		0.05	mg/kg	0.000005 %		
3	anthracene	204-371-1	120-12-7		0.05	mg/kg		0.05	mg/kg	0.000005 %		
4	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3	9.6	mg/kg	1.32	12.675	mg/kg	0.00127 %		
5	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	0.21	mg/kg		0.21	mg/kg	0.000021 %		
6	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	0.3	mg/kg		0.3	mg/kg	0.00003 %		
7	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	0.29	mg/kg		0.29	mg/kg	0.000029 %		
8	benzo[ghi]perylene	205-883-8	191-24-2		0.17	mg/kg		0.17	mg/kg	0.000017 %		
9	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	0.13	mg/kg		0.13	mg/kg	0.000013 %		
10	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9	0.78	mg/kg	2.775	2.165	mg/kg	0.000216 %		
11	boron { boron tribromide/trichloride/trifluoride (combined) }		10294-33-4, 10294-34-5, 7637-07-2		0.4	mg/kg	13.43	5.372	mg/kg	0.000537 %		
12	cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	0.2	mg/kg	1.285	0.257	mg/kg	0.00002 %		
13	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }	215-160-9	1308-38-9		19	mg/kg	1.462	27.77	mg/kg	0.00278 %		
14	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0	1.8	mg/kg	1.923	3.462	mg/kg	0.000346 %		
15	chrysene	601-048-00-0	205-923-4	218-01-9	0.33	mg/kg		0.33	mg/kg	0.000033 %		

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
16	copper { dicopper oxide; copper (I) oxide }				20 mg/kg	1.126	22.518 mg/kg	0.00225 %			
	029-002-00-X	215-270-7	1317-39-1								
17	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				1 mg/kg	1.884	1.884 mg/kg	0.000188 %			
	006-007-00-5										
18	dibenz[a,h]anthracene				0.05 mg/kg		0.05 mg/kg	0.000005 %			
	601-041-00-2	200-181-8	53-70-3								
19	diesel petroleum group		68334-30-5, 68476-34-6, 94114-59-7, 1159170-26-9		26 mg/kg		26 mg/kg	0.0026 %			
20	ethylbenzene				5 mg/kg		5 mg/kg	0.0005 %			
	601-023-00-4	202-849-4	100-41-4								
21	fluoranthene				0.42 mg/kg		0.42 mg/kg	0.000042 %			
		205-912-4	206-44-0								
22	fluorene				0.05 mg/kg		0.05 mg/kg	0.000005 %			
		201-695-5	86-73-7								
23	indeno[123-cd]pyrene				0.14 mg/kg		0.14 mg/kg	0.000014 %			
		205-893-2	193-39-5								
24	lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	73 mg/kg		73 mg/kg	0.0073 %			
	082-001-00-6										
25	mercury { mercury dichloride }				0.3 mg/kg	1.353	0.406 mg/kg	0.0000406 %			
	080-010-00-X	231-299-8	7487-94-7								
26	naphthalene				0.05 mg/kg		0.05 mg/kg	0.000005 %			
	601-052-00-2	202-049-5	91-20-3								
27	nickel { nickel dihydroxide }				15 mg/kg	1.579	23.692 mg/kg	0.00237 %			
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]								
28	pH		PH		5.2 pH		5.2 pH	5.2 pH			
29	phenanthrene				0.15 mg/kg		0.15 mg/kg	0.000015 %			
		201-581-5	85-01-8								
30	phenol				1 mg/kg		1 mg/kg	0.0001 %			
	604-001-00-2	203-632-7	108-95-2								
31	pyrene				0.41 mg/kg		0.41 mg/kg	0.000041 %			
		204-927-3	129-00-0								
32	TPH (C6 to C40) petroleum group				44.405 mg/kg		44.405 mg/kg	0.00444 %			
			TPH								
33	zinc { zinc oxide }				64 mg/kg	1.245	79.662 mg/kg	0.00797 %			
	030-013-00-7	215-222-5	1314-13-2								
Total:									0.0332 %		

Key

	User supplied data
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 2: Oxidizing "waste which may, generally by providing oxygen, cause or contribute to the combustion of other materials"

Force this Hazardous property to non hazardous because Limit of detection.

Hazard Statements hit:

Ox. Sol. 1; H271 "May cause fire or explosion; strong oxidiser."

Because of determinand:

chromium(VI) oxide: (compound conc.: 0.00034%)

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

Force this Hazardous property to non hazardous because Sample is not liquid.

Hazard Statements hit:

Flam. Liq. 2; H225 "Highly flammable liquid and vapour."

Because of determinand:

ethylbenzene: (conc.: 0.0005%)

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

Because of determinands:

diesel petroleum group: (conc.: 0.0026%)

TPH (C6 to C40) petroleum group: (conc.: 0.00444%)

Classification of sample: WS02[2]

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

Sample details

Sample name:	LoW Code:
WS02[2]	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
1.00 m	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: **0% No Moisture Correction applied (MC)**

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number									
1	acenaphthene	201-469-6	83-32-9		0.05	mg/kg		0.05	mg/kg	0.000005 %		
2	acenaphthylene	205-917-1	208-96-8		0.05	mg/kg		0.05	mg/kg	0.000005 %		
3	anthracene	204-371-1	120-12-7		0.05	mg/kg		0.05	mg/kg	0.000005 %		
4	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3	13	mg/kg	1.32	17.164	mg/kg	0.00172 %		
5	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	0.05	mg/kg		0.05	mg/kg	0.000005 %		
6	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	0.05	mg/kg		0.05	mg/kg	0.000005 %		
7	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	0.05	mg/kg		0.05	mg/kg	0.000005 %		
8	benzo[ghi]perylene	205-883-8	191-24-2		0.05	mg/kg		0.05	mg/kg	0.000005 %		
9	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	0.05	mg/kg		0.05	mg/kg	0.000005 %		
10	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9	1	mg/kg	2.775	2.775	mg/kg	0.000278 %		
11	boron { boron tribromide/trichloride/trifluoride (combined) }		10294-33-4, 10294-34-5, 7637-07-2		0.4	mg/kg	13.43	5.372	mg/kg	0.000537 %		
12	cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	0.2	mg/kg	1.285	0.257	mg/kg	0.00002 %	
13	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }	215-160-9	1308-38-9		29	mg/kg	1.462	42.385	mg/kg	0.00424 %		
14	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0	1.8	mg/kg	1.923	3.462	mg/kg	0.000346 %		
15	chrysene	601-048-00-0	205-923-4	218-01-9	0.05	mg/kg		0.05	mg/kg	0.000005 %		

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
16	copper { dicopper oxide; copper (I) oxide }				18 mg/kg	1.126	20.266 mg/kg	0.00203 %			
	029-002-00-X	215-270-7	1317-39-1								
17	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				1 mg/kg	1.884	1.884 mg/kg	0.000188 %			
	006-007-00-5										
18	dibenz[a,h]anthracene				0.05 mg/kg		0.05 mg/kg	0.000005 %			
	601-041-00-2	200-181-8	53-70-3								
19	diesel petroleum group		68334-30-5, 68476-34-6, 94114-59-7, 1159170-26-9		26 mg/kg		26 mg/kg	0.0026 %			
20	ethylbenzene				5 mg/kg		5 mg/kg	0.0005 %			
	601-023-00-4	202-849-4	100-41-4								
21	fluoranthene				0.05 mg/kg		0.05 mg/kg	0.000005 %			
		205-912-4	206-44-0								
22	fluorene				0.05 mg/kg		0.05 mg/kg	0.000005 %			
		201-695-5	86-73-7								
23	indeno[123-cd]pyrene				0.05 mg/kg		0.05 mg/kg	0.000005 %			
		205-893-2	193-39-5								
24	lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	18 mg/kg		18 mg/kg	0.0018 %			
	082-001-00-6										
25	mercury { mercury dichloride }				0.3 mg/kg	1.353	0.406 mg/kg	0.0000406 %			
	080-010-00-X	231-299-8	7487-94-7								
26	naphthalene				0.05 mg/kg		0.05 mg/kg	0.000005 %			
	601-052-00-2	202-049-5	91-20-3								
27	nickel { nickel dihydroxide }				20 mg/kg	1.579	31.59 mg/kg	0.00316 %			
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]								
28	pH		PH		6 pH		6 pH	6pH			
29	phenanthrene				0.05 mg/kg		0.05 mg/kg	0.000005 %			
		201-581-5	85-01-8								
30	phenol				1 mg/kg		1 mg/kg	0.0001 %			
	604-001-00-2	203-632-7	108-95-2								
31	pyrene				0.05 mg/kg		0.05 mg/kg	0.000005 %			
		204-927-3	129-00-0								
32	TPH (C6 to C40) petroleum group		TPH		44.405 mg/kg		44.405 mg/kg	0.00444 %			
33	zinc { zinc oxide }				49 mg/kg	1.245	60.991 mg/kg	0.0061 %			
	030-013-00-7	215-222-5	1314-13-2								
Total:									0.0282 %		

Key

	User supplied data
•	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 2: Oxidizing "waste which may, generally by providing oxygen, cause or contribute to the combustion of other materials"

Force this Hazardous property to non hazardous because Limit of detection.

Hazard Statements hit:

Ox. Sol. 1; H271 "May cause fire or explosion; strong oxidiser."

Because of determinand:

chromium(VI) oxide: (compound conc.: 0.00034%)

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

Force this Hazardous property to non hazardous because Sample is not liquid.

Hazard Statements hit:

Flam. Liq. 2; H225 "Highly flammable liquid and vapour."

Because of determinand:

ethylbenzene: (conc.: 0.0005%)

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

Because of determinands:

diesel petroleum group: (conc.: 0.0026%)

TPH (C6 to C40) petroleum group: (conc.: 0.00444%)

Classification of sample: WS01

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

Sample details

Sample name:	LoW Code:
WS01	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.10 m	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number									
1	acenaphthene	201-469-6	33-32-9		0.05	mg/kg		0.05	mg/kg	0.000005 %		
2	acenaphthylene	205-917-1	208-96-8		0.05	mg/kg		0.05	mg/kg	0.000005 %		
3	anthracene	204-371-1	120-12-7		0.05	mg/kg		0.05	mg/kg	0.000005 %		
4	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3	9.4	mg/kg	1.32	12.411	mg/kg	0.00124 %		
5	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	0.09	mg/kg		0.09	mg/kg	0.000009 %		
6	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	0.1	mg/kg		0.1	mg/kg	0.00001 %		
7	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	0.09	mg/kg		0.09	mg/kg	0.000009 %		
8	benzo[ghi]perylene	205-883-8	191-24-2		0.07	mg/kg		0.07	mg/kg	0.000007 %		
9	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	0.05	mg/kg		0.05	mg/kg	0.000005 %		
10	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9	0.75	mg/kg	2.775	2.082	mg/kg	0.000208 %		
11	boron { boron tribromide/trichloride/trifluoride (combined) }		10294-33-4, 10294-34-5, 7637-07-2		0.7	mg/kg	13.43	9.401	mg/kg	0.00094 %		
12	cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	0.2	mg/kg	1.285	0.257	mg/kg	0.00002 %		
13	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }	215-160-9	1308-38-9		20	mg/kg	1.462	29.231	mg/kg	0.00292 %		
14	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0	1.8	mg/kg	1.923	3.462	mg/kg	0.000346 %		
15	chrysene	601-048-00-0	205-923-4	218-01-9	0.15	mg/kg		0.15	mg/kg	0.000015 %		

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
16	copper { dicopper oxide ; copper (I) oxide }				19 mg/kg	1.126	21.392 mg/kg	0.00214 %			
	029-002-00-X	215-270-7	1317-39-1								
17	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				1 mg/kg	1.884	1.884 mg/kg	0.000188 %			
	006-007-00-5										
18	dibenz[a,h]anthracene				0.05 mg/kg		0.05 mg/kg	0.000005 %			
	601-041-00-2	200-181-8	53-70-3								
19	diesel petroleum group		68334-30-5, 68476-34-6, 94114-59-7, 1159170-26-9		26 mg/kg		26 mg/kg	0.0026 %			
20	ethylbenzene				5 mg/kg		5 mg/kg	0.0005 %			
	601-023-00-4	202-849-4	100-41-4								
21	fluoranthene				0.21 mg/kg		0.21 mg/kg	0.000021 %			
		205-912-4	206-44-0								
22	fluorene				0.05 mg/kg		0.05 mg/kg	0.000005 %			
		201-695-5	86-73-7								
23	indeno[123-cd]pyrene				0.05 mg/kg		0.05 mg/kg	0.000005 %			
		205-893-2	193-39-5								
24	lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	59 mg/kg		59 mg/kg	0.0059 %			
	082-001-00-6										
25	mercury { mercury dichloride }				0.4 mg/kg	1.353	0.541 mg/kg	0.0000541 %			
	080-010-00-X	231-299-8	7487-94-7								
26	naphthalene				0.05 mg/kg		0.05 mg/kg	0.000005 %			
	601-052-00-2	202-049-5	91-20-3								
27	nickel { nickel dihydroxide }				14 mg/kg	1.579	22.113 mg/kg	0.00221 %			
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]								
28	pH		PH		5.6 pH		5.6 pH	5.6 pH			
29	phenanthrene				0.13 mg/kg		0.13 mg/kg	0.000013 %			
		201-581-5	85-01-8								
30	phenol				1 mg/kg		1 mg/kg	0.0001 %			
	604-001-00-2	203-632-7	108-95-2								
31	pyrene				0.18 mg/kg		0.18 mg/kg	0.000018 %			
		204-927-3	129-00-0								
32	TPH (C6 to C40) petroleum group				44.405 mg/kg		44.405 mg/kg	0.00444 %			
			TPH								
33	zinc { zinc oxide }				62 mg/kg	1.245	77.172 mg/kg	0.00772 %			
	030-013-00-7	215-222-5	1314-13-2								
Total:									0.0317 %		

Key

	User supplied data
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 2: Oxidizing "waste which may, generally by providing oxygen, cause or contribute to the combustion of other materials"

Force this Hazardous property to non hazardous because **Limit of detection.**

Hazard Statements hit:

Ox. Sol. 1; H271 "May cause fire or explosion; strong oxidiser."

Because of determinand:

chromium(VI) oxide: (compound conc.: 0.00034%)

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

Force this Hazardous property to non hazardous because Sample is not liquid.

Hazard Statements hit:

Flam. Liq. 2; H225 "Highly flammable liquid and vapour."

Because of determinand:

ethylbenzene: (conc.: 0.0005%)

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

Because of determinands:

diesel petroleum group: (conc.: 0.0026%)

TPH (C6 to C40) petroleum group: (conc.: 0.00444%)

Classification of sample: WS01[2]

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

Sample details

Sample name:	LoW Code:
WS01[2]	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0.50 m	

Hazard properties

None identified

Determinands

Moisture content: **0% No Moisture Correction applied (MC)**

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number									
1	acenaphthene	201-469-6	83-32-9		0.05	mg/kg		0.05	mg/kg	0.000005 %		
2	acenaphthylene	205-917-1	208-96-8		0.05	mg/kg		0.05	mg/kg	0.000005 %		
3	anthracene	204-371-1	120-12-7		0.05	mg/kg		0.05	mg/kg	0.000005 %		
4	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3	13	mg/kg	1.32	17.164	mg/kg	0.00172 %		
5	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	0.05	mg/kg		0.05	mg/kg	0.000005 %		
6	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	0.05	mg/kg		0.05	mg/kg	0.000005 %		
7	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	0.05	mg/kg		0.05	mg/kg	0.000005 %		
8	benzo[ghi]perylene	205-883-8	191-24-2		0.05	mg/kg		0.05	mg/kg	0.000005 %		
9	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	0.05	mg/kg		0.05	mg/kg	0.000005 %		
10	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9	1.1	mg/kg	2.775	3.053	mg/kg	0.000305 %		
11	boron { boron tribromide/trichloride/trifluoride (combined) }		10294-33-4, 10294-34-5, 7637-07-2		0.5	mg/kg	13.43	6.715	mg/kg	0.000672 %		
12	cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	0.2	mg/kg	1.285	0.257	mg/kg	0.00002 %	
13	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }	215-160-9	1308-38-9		30	mg/kg	1.462	43.847	mg/kg	0.00438 %		
14	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0	1.8	mg/kg	1.923	3.462	mg/kg	0.000346 %		
15	chrysene	601-048-00-0	205-923-4	218-01-9	0.05	mg/kg		0.05	mg/kg	0.000005 %		

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
16	copper { dicopper oxide; copper (I) oxide }				16 mg/kg	1.126	18.014 mg/kg	0.0018 %			
	029-002-00-X	215-270-7	1317-39-1								
17	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				1 mg/kg	1.884	1.884 mg/kg	0.000188 %			
	006-007-00-5										
18	dibenz[a,h]anthracene				0.05 mg/kg		0.05 mg/kg	0.000005 %			
	601-041-00-2	200-181-8	53-70-3								
19	diesel petroleum group		68334-30-5, 68476-34-6, 94114-59-7, 1159170-26-9		26 mg/kg		26 mg/kg	0.0026 %			
20	ethylbenzene				5 mg/kg		5 mg/kg	0.0005 %			
	601-023-00-4	202-849-4	100-41-4								
21	fluoranthene				0.05 mg/kg		0.05 mg/kg	0.000005 %			
		205-912-4	206-44-0								
22	fluorene				0.05 mg/kg		0.05 mg/kg	0.000005 %			
		201-695-5	86-73-7								
23	indeno[123-cd]pyrene				0.05 mg/kg		0.05 mg/kg	0.000005 %			
		205-893-2	193-39-5								
24	lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	23 mg/kg		23 mg/kg	0.0023 %			
	082-001-00-6										
25	mercury { mercury dichloride }				0.3 mg/kg	1.353	0.406 mg/kg	0.0000406 %			
	080-010-00-X	231-299-8	7487-94-7								
26	naphthalene				0.05 mg/kg		0.05 mg/kg	0.000005 %			
	601-052-00-2	202-049-5	91-20-3								
27	nickel { nickel dihydroxide }				21 mg/kg	1.579	33.169 mg/kg	0.00332 %			
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]								
28	pH		PH		7.4 pH		7.4 pH	7.4 pH			
29	phenanthrene				0.05 mg/kg		0.05 mg/kg	0.000005 %			
		201-581-5	85-01-8								
30	phenol				1 mg/kg		1 mg/kg	0.0001 %			
	604-001-00-2	203-632-7	108-95-2								
31	pyrene				0.05 mg/kg		0.05 mg/kg	0.000005 %			
		204-927-3	129-00-0								
32	TPH (C6 to C40) petroleum group				44.405 mg/kg		44.405 mg/kg	0.00444 %			
			TPH								
33	zinc { zinc oxide }				49 mg/kg	1.245	60.991 mg/kg	0.0061 %			
	030-013-00-7	215-222-5	1314-13-2								
Total:									0.0289 %		

Key

	User supplied data
•	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 2: Oxidizing "waste which may, generally by providing oxygen, cause or contribute to the combustion of other materials"

Force this Hazardous property to non hazardous because Limit of detection.

Hazard Statements hit:

Ox. Sol. 1; H271 "May cause fire or explosion; strong oxidiser."

Because of determinand:

chromium(VI) oxide: (compound conc.: 0.00034%)

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

Force this Hazardous property to non hazardous because Sample is not liquid.

Hazard Statements hit:

Flam. Liq. 2; H225 "Highly flammable liquid and vapour."

Because of determinand:

ethylbenzene: (conc.: 0.0005%)

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

Because of determinands:

diesel petroleum group: (conc.: 0.0026%)

TPH (C6 to C40) petroleum group: (conc.: 0.00444%)

Classification of sample: WS03

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

Sample details

Sample name:	LoW Code:
WS03	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.50 m	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
1	acenaphthene	201-469-6	133-32-9		0.15 mg/kg		0.15	mg/kg	0.000015 %		
2	acenaphthylene	205-917-1	208-96-8		0.09 mg/kg		0.09	mg/kg	0.000009 %		
3	anthracene	204-371-1	120-12-7		0.25 mg/kg		0.25	mg/kg	0.000025 %		
4	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3	23 mg/kg	1.32	30.367	mg/kg	0.00304 %		
5	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	0.94 mg/kg		0.94	mg/kg	0.000094 %		
6	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	1.3 mg/kg		1.3	mg/kg	0.00013 %		
7	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	1.3 mg/kg		1.3	mg/kg	0.00013 %		
8	benzo[ghi]perylene	205-883-8	191-24-2		1.1 mg/kg		1.1	mg/kg	0.00011 %		
9	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	0.5 mg/kg		0.5	mg/kg	0.00005 %		
10	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9	4 mg/kg	2.775	11.101	mg/kg	0.00111 %		
11	boron { boron tribromide/trichloride/trifluoride (combined) }		10294-33-4, 10294-34-5, 7637-07-2		2.1 mg/kg	13.43	28.203	mg/kg	0.00282 %		
12	cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	0.2 mg/kg	1.285	0.257	mg/kg	0.00002 %		
13	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }	215-160-9	1308-38-9		29 mg/kg	1.462	42.385	mg/kg	0.00424 %		
14	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0	1.8 mg/kg	1.923	3.462	mg/kg	0.000346 %		
15	chrysene	601-048-00-0	205-923-4	218-01-9	0.95 mg/kg		0.95	mg/kg	0.000095 %		

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
16	copper { dicopper oxide; copper (I) oxide }				44 mg/kg	1.126	49.539 mg/kg	0.00495 %			
	029-002-00-X	215-270-7	1317-39-1								
17	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				1 mg/kg	1.884	1.884 mg/kg	0.000188 %			
	006-007-00-5										
18	dibenz[a,h]anthracene				0.12 mg/kg		0.12 mg/kg	0.000012 %			
	601-041-00-2	200-181-8	53-70-3								
19	diesel petroleum group		68334-30-5, 68476-34-6, 94114-59-7, 1159170-26-9		35.533 mg/kg		35.533 mg/kg	0.00355 %			
20	ethylbenzene				5 mg/kg		5 mg/kg	0.0005 %			
	601-023-00-4	202-849-4	100-41-4								
21	fluoranthene				2.5 mg/kg		2.5 mg/kg	0.00025 %			
		205-912-4	206-44-0								
22	fluorene				0.12 mg/kg		0.12 mg/kg	0.000012 %			
		201-695-5	86-73-7								
23	indeno[123-cd]pyrene				0.85 mg/kg		0.85 mg/kg	0.000085 %			
		205-893-2	193-39-5								
24	lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	97 mg/kg		97 mg/kg	0.0097 %			
	082-001-00-6										
25	mercury { mercury dichloride }				0.3 mg/kg	1.353	0.406 mg/kg	0.0000406 %			
	080-010-00-X	231-299-8	7487-94-7								
26	naphthalene				0.28 mg/kg		0.28 mg/kg	0.000028 %			
	601-052-00-2	202-049-5	91-20-3								
27	nickel { nickel dihydroxide }				47 mg/kg	1.579	74.236 mg/kg	0.00742 %			
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]								
28	pH		PH		7.5 pH		7.5 pH	7.5 pH			
29	phenanthrene				1.2 mg/kg		1.2 mg/kg	0.00012 %			
		201-581-5	85-01-8								
30	phenol				1 mg/kg		1 mg/kg	0.0001 %			
	604-001-00-2	203-632-7	108-95-2								
31	pyrene				2.6 mg/kg		2.6 mg/kg	0.00026 %			
		204-927-3	129-00-0								
32	TPH (C6 to C40) petroleum group				61.705 mg/kg		61.705 mg/kg	0.00617 %			
			TPH								
33	zinc { zinc oxide }				72 mg/kg	1.245	89.619 mg/kg	0.00896 %			
	030-013-00-7	215-222-5	1314-13-2								
Total:									0.0546 %		

Key

	User supplied data
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 2: Oxidizing "waste which may, generally by providing oxygen, cause or contribute to the combustion of other materials"

Force this Hazardous property to non hazardous because **Limit of detection.**

Hazard Statements hit:

Ox. Sol. 1; H271 "May cause fire or explosion; strong oxidiser."

Because of determinand:

chromium(VI) oxide: (compound conc.: 0.00034%)

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

Force this Hazardous property to non hazardous because Sample is not liquid.

Hazard Statements hit:

Flam. Liq. 2; H225 "Highly flammable liquid and vapour."

Because of determinand:

ethylbenzene: (conc.: 0.0005%)

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

Because of determinands:

diesel petroleum group: (conc.: 0.00355%)

TPH (C6 to C40) petroleum group: (conc.: 0.00617%)

Classification of sample: WS03[2]

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

Sample details

Sample name:	LoW Code:
WS03[2]	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)
1.50 m	

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number									
1	acenaphthene	201-469-6	83-32-9		0.05	mg/kg		0.05	mg/kg	0.000005 %		
2	acenaphthylene	205-917-1	208-96-8		0.05	mg/kg		0.05	mg/kg	0.000005 %		
3	anthracene	204-371-1	120-12-7		0.05	mg/kg		0.05	mg/kg	0.000005 %		
4	arsenic { arsenic trioxide }	215-481-4	1327-53-3		17	mg/kg	1.32	22.446	mg/kg	0.00224 %		
5	benzo[a]anthracene	200-280-6	56-55-3		0.05	mg/kg		0.05	mg/kg	0.000005 %		
6	benzo[a]pyrene; benzo[def]chrysene	200-028-5	50-32-8		0.05	mg/kg		0.05	mg/kg	0.000005 %		
7	benzo[b]fluoranthene	205-911-9	205-99-2		0.05	mg/kg		0.05	mg/kg	0.000005 %		
8	benzo[ghi]perylene	205-883-8	191-24-2		0.05	mg/kg		0.05	mg/kg	0.000005 %		
9	benzo[k]fluoranthene	205-916-6	207-08-9		0.05	mg/kg		0.05	mg/kg	0.000005 %		
10	beryllium { beryllium oxide }	215-133-1	1304-56-9		2.9	mg/kg	2.775	8.048	mg/kg	0.000805 %		
11	boron { boron tribromide/trichloride/trifluoride (combined) }		10294-33-4, 10294-34-5, 7637-07-2		2.9	mg/kg	13.43	38.947	mg/kg	0.00389 %		
12	cadmium { cadmium sulfide }	215-147-8	1306-23-6	1	0.2	mg/kg	1.285	0.257	mg/kg	0.00002 %		
13	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }	215-160-9	1308-38-9		33	mg/kg	1.462	48.231	mg/kg	0.00482 %		
14	chromium in chromium(VI) compounds { chromium(VI) oxide }	215-607-8	1333-82-0		1.8	mg/kg	1.923	3.462	mg/kg	0.000346 %		
15	chrysene	205-923-4	218-01-9		0.05	mg/kg		0.05	mg/kg	0.000005 %		

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
16	copper { dicopper oxide; copper (I) oxide }				29 mg/kg	1.126	32.651 mg/kg	0.00327 %			
	029-002-00-X	215-270-7	1317-39-1								
17	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				1 mg/kg	1.884	1.884 mg/kg	0.000188 %			
	006-007-00-5										
18	dibenz[a,h]anthracene				0.05 mg/kg		0.05 mg/kg	0.000005 %			
	601-041-00-2	200-181-8	53-70-3								
19	diesel petroleum group		68334-30-5, 68476-34-6, 94114-59-7, 1159170-26-9		26 mg/kg		26 mg/kg	0.0026 %			
20	ethylbenzene				5 mg/kg		5 mg/kg	0.0005 %			
	601-023-00-4	202-849-4	100-41-4								
21	fluoranthene				0.07 mg/kg		0.07 mg/kg	0.000007 %			
		205-912-4	206-44-0								
22	fluorene				0.05 mg/kg		0.05 mg/kg	0.000005 %			
		201-695-5	86-73-7								
23	indeno[123-cd]pyrene				0.05 mg/kg		0.05 mg/kg	0.000005 %			
		205-893-2	193-39-5								
24	lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	24 mg/kg		24 mg/kg	0.0024 %			
	082-001-00-6										
25	mercury { mercury dichloride }				0.3 mg/kg	1.353	0.406 mg/kg	0.0000406 %			
	080-010-00-X	231-299-8	7487-94-7								
26	naphthalene				0.14 mg/kg		0.14 mg/kg	0.000014 %			
	601-052-00-2	202-049-5	91-20-3								
27	nickel { nickel dihydroxide }				40 mg/kg	1.579	63.18 mg/kg	0.00632 %			
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]								
28	pH		PH		7.7 pH		7.7 pH	7.7 pH			
29	phenanthrene				0.09 mg/kg		0.09 mg/kg	0.000009 %			
		201-581-5	85-01-8								
30	phenol				1 mg/kg		1 mg/kg	0.0001 %			
	604-001-00-2	203-632-7	108-95-2								
31	pyrene				0.07 mg/kg		0.07 mg/kg	0.000007 %			
		204-927-3	129-00-0								
32	TPH (C6 to C40) petroleum group				44.405 mg/kg		44.405 mg/kg	0.00444 %			
			TPH								
33	zinc { zinc oxide }				53 mg/kg	1.245	65.97 mg/kg	0.0066 %			
	030-013-00-7	215-222-5	1314-13-2								
Total:									0.0387 %		

Key

	User supplied data
•	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 2: Oxidizing "waste which may, generally by providing oxygen, cause or contribute to the combustion of other materials"

Force this Hazardous property to non hazardous because Limit of detection.

Hazard Statements hit:

Ox. Sol. 1; H271 "May cause fire or explosion; strong oxidiser."

Because of determinand:

chromium(VI) oxide: (compound conc.: 0.00034%)

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

Force this Hazardous property to non hazardous because Sample is not liquid.

Hazard Statements hit:

Flam. Liq. 2; H225 "Highly flammable liquid and vapour."

Because of determinand:

ethylbenzene: (conc.: 0.0005%)

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

Because of determinands:

diesel petroleum group: (conc.: 0.0026%)

TPH (C6 to C40) petroleum group: (conc.: 0.00444%)

Classification of sample: WS04

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

Sample details

Sample name:	LoW Code:
WS04	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.30 m	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: **0% No Moisture Correction applied (MC)**

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number									
1	acenaphthene	201-469-6	33-32-9		0.11	mg/kg		0.11	mg/kg	0.000011 %		
2	acenaphthylene	205-917-1	208-96-8		0.22	mg/kg		0.22	mg/kg	0.000022 %		
3	anthracene	204-371-1	120-12-7		0.38	mg/kg		0.38	mg/kg	0.000038 %		
4	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3	19	mg/kg	1.32	25.086	mg/kg	0.00251 %		
5	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	1.8	mg/kg		1.8	mg/kg	0.00018 %		
6	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	3.1	mg/kg		3.1	mg/kg	0.00031 %		
7	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	3.1	mg/kg		3.1	mg/kg	0.00031 %		
8	benzo[ghi]perylene	205-883-8	191-24-2		2.8	mg/kg		2.8	mg/kg	0.00028 %		
9	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	1.5	mg/kg		1.5	mg/kg	0.00015 %		
10	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9	3	mg/kg	2.775	8.326	mg/kg	0.000833 %		
11	boron { boron tribromide/trichloride/trifluoride (combined) }		10294-33-4, 10294-34-5, 7637-07-2		0.4	mg/kg	13.43	5.372	mg/kg	0.000537 %		
12	cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	0.2	mg/kg	1.285	0.257	mg/kg	0.00002 %		
13	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }	215-160-9	1308-38-9		20	mg/kg	1.462	29.231	mg/kg	0.00292 %		
14	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0	1.8	mg/kg	1.923	3.462	mg/kg	0.000346 %		
15	chrysene	601-048-00-0	205-923-4	218-01-9	1.6	mg/kg		1.6	mg/kg	0.00016 %		

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
16	copper { dicopper oxide; copper (I) oxide }				70 mg/kg	1.126	78.812 mg/kg	0.00788 %			
	029-002-00-X	215-270-7	1317-39-1								
17	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				1 mg/kg	1.884	1.884 mg/kg	0.000188 %			
	006-007-00-5										
18	dibenz[a,h]anthracene				0.43 mg/kg		0.43 mg/kg	0.000043 %			
	601-041-00-2	200-181-8	53-70-3								
19	diesel petroleum group		68334-30-5, 68476-34-6, 94114-59-7, 1159170-26-9		90 mg/kg		90 mg/kg	0.009 %			
20	ethylbenzene				5 mg/kg		5 mg/kg	0.0005 %			
	601-023-00-4	202-849-4	100-41-4								
21	fluoranthene				3.9 mg/kg		3.9 mg/kg	0.00039 %			
		205-912-4	206-44-0								
22	fluorene				0.07 mg/kg		0.07 mg/kg	0.000007 %			
		201-695-5	86-73-7								
23	indeno[123-cd]pyrene				2 mg/kg		2 mg/kg	0.0002 %			
		205-893-2	193-39-5								
24	lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	440 mg/kg		440 mg/kg	0.044 %			
	082-001-00-6										
25	mercury { mercury dichloride }				0.3 mg/kg	1.353	0.406 mg/kg	0.0000406 %			
	080-010-00-X	231-299-8	7487-94-7								
26	naphthalene				0.06 mg/kg		0.06 mg/kg	0.000006 %			
	601-052-00-2	202-049-5	91-20-3								
27	nickel { nickel dihydroxide }				30 mg/kg	1.579	47.385 mg/kg	0.00474 %			
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]								
28	pH		PH		9 pH		9 pH	9pH			
29	phenanthrene				1.4 mg/kg		1.4 mg/kg	0.00014 %			
		201-581-5	85-01-8								
30	phenol				1 mg/kg		1 mg/kg	0.0001 %			
	604-001-00-2	203-632-7	108-95-2								
31	pyrene				4 mg/kg		4 mg/kg	0.0004 %			
		204-927-3	129-00-0								
32	TPH (C6 to C40) petroleum group				283.505 mg/kg		283.505 mg/kg	0.0284 %			
			TPH								
33	zinc { zinc oxide }				120 mg/kg	1.245	149.366 mg/kg	0.0149 %			
	030-013-00-7	215-222-5	1314-13-2								
Total:									0.12 %		

Key

	User supplied data
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 2: Oxidizing "waste which may, generally by providing oxygen, cause or contribute to the combustion of other materials"

Force this Hazardous property to non hazardous because Limit of detection.

Hazard Statements hit:

Ox. Sol. 1; H271 "May cause fire or explosion; strong oxidiser."

Because of determinand:

chromium(VI) oxide: (compound conc.: 0.00034%)

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

Force this Hazardous property to non hazardous because Sample is not liquid.

Hazard Statements hit:

Flam. Liq. 2; H225 "Highly flammable liquid and vapour."

Because of determinand:

ethylbenzene: (conc.: 0.0005%)

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

Because of determinands:

diesel petroleum group: (conc.: 0.009%)

TPH (C6 to C40) petroleum group: (conc.: 0.0284%)

Classification of sample: WS04[2]

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

Sample details

Sample name:	LoW Code:
WS04[2]	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)
1.00 m	

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number									
1	acenaphthene	201-469-6	83-32-9		0.06	mg/kg		0.06	mg/kg	0.000006 %		
2	acenaphthylene	205-917-1	208-96-8		0.05	mg/kg		0.05	mg/kg	0.000005 %		
3	anthracene	204-371-1	120-12-7		0.05	mg/kg		0.05	mg/kg	0.000005 %		
4	arsenic { arsenic trioxide }	215-481-4	1327-53-3		19	mg/kg	1.32	25.086	mg/kg	0.00251 %		
5	benzo[a]anthracene	200-280-6	56-55-3		0.2	mg/kg		0.2	mg/kg	0.00002 %		
6	benzo[a]pyrene; benzo[def]chrysene	200-028-5	50-32-8		0.53	mg/kg		0.53	mg/kg	0.000053 %		
7	benzo[b]fluoranthene	205-911-9	205-99-2		0.59	mg/kg		0.59	mg/kg	0.000059 %		
8	benzo[ghi]perylene	205-883-8	191-24-2		0.38	mg/kg		0.38	mg/kg	0.000038 %		
9	benzo[k]fluoranthene	205-916-6	207-08-9		0.26	mg/kg		0.26	mg/kg	0.000026 %		
10	beryllium { beryllium oxide }	215-133-1	1304-56-9		2.5	mg/kg	2.775	6.938	mg/kg	0.000694 %		
11	boron { boron tribromide/trichloride/trifluoride (combined) }		10294-33-4, 10294-34-5, 7637-07-2		1.9	mg/kg	13.43	25.517	mg/kg	0.00255 %		
12	cadmium { cadmium sulfide }	215-147-8	1306-23-6	1	0.2	mg/kg	1.285	0.257	mg/kg	0.00002 %		
13	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }	215-160-9	1308-38-9		29	mg/kg	1.462	42.385	mg/kg	0.00424 %		
14	chromium in chromium(VI) compounds { chromium(VI) oxide }	215-607-8	1333-82-0		1.8	mg/kg	1.923	3.462	mg/kg	0.000346 %		
15	chrysene	205-923-4	218-01-9		0.24	mg/kg		0.24	mg/kg	0.000024 %		

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
16	copper { dicopper oxide; copper (I) oxide }				33 mg/kg	1.126	37.154 mg/kg	0.00372 %			
	029-002-00-X	215-270-7	1317-39-1								
17	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				1 mg/kg	1.884	1.884 mg/kg	0.000188 %			
	006-007-00-5										
18	dibenz[a,h]anthracene				0.07 mg/kg		0.07 mg/kg	0.000007 %			
	601-041-00-2	200-181-8	53-70-3								
19	diesel petroleum group		68334-30-5, 68476-34-6, 94114-59-7, 1159170-26-9		30.033 mg/kg		30.033 mg/kg	0.003 %			
20	ethylbenzene				5 mg/kg		5 mg/kg	0.0005 %			
	601-023-00-4	202-849-4	100-41-4								
21	fluoranthene				0.34 mg/kg		0.34 mg/kg	0.000034 %			
		205-912-4	206-44-0								
22	fluorene				0.05 mg/kg		0.05 mg/kg	0.000005 %			
		201-695-5	86-73-7								
23	indeno[123-cd]pyrene				0.3 mg/kg		0.3 mg/kg	0.00003 %			
		205-893-2	193-39-5								
24	lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	600 mg/kg		600 mg/kg	0.06 %			
	082-001-00-6										
25	mercury { mercury dichloride }				0.3 mg/kg	1.353	0.406 mg/kg	0.0000406 %			
	080-010-00-X	231-299-8	7487-94-7								
26	naphthalene				0.18 mg/kg		0.18 mg/kg	0.000018 %			
	601-052-00-2	202-049-5	91-20-3								
27	nickel { nickel dihydroxide }				31 mg/kg	1.579	48.964 mg/kg	0.0049 %			
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]								
28	pH		PH		8 pH		8 pH	8pH			
29	phenanthrene				0.12 mg/kg		0.12 mg/kg	0.000012 %			
		201-581-5	85-01-8								
30	phenol				1 mg/kg		1 mg/kg	0.0001 %			
	604-001-00-2	203-632-7	108-95-2								
31	pyrene				0.48 mg/kg		0.48 mg/kg	0.000048 %			
		204-927-3	129-00-0								
32	TPH (C6 to C40) petroleum group		TPH		58.905 mg/kg		58.905 mg/kg	0.00589 %			
33	zinc { zinc oxide }				96 mg/kg	1.245	119.493 mg/kg	0.0119 %			
	030-013-00-7	215-222-5	1314-13-2								
Total:									0.101 %		

Key

	User supplied data
•	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 2: Oxidizing "waste which may, generally by providing oxygen, cause or contribute to the combustion of other materials"

Force this Hazardous property to non hazardous because Limit of detection.

Hazard Statements hit:

Ox. Sol. 1; H271 "May cause fire or explosion; strong oxidiser."

Because of determinand:

chromium(VI) oxide: (compound conc.: 0.00034%)

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

Force this Hazardous property to non hazardous because Sample is not liquid.

Hazard Statements hit:

Flam. Liq. 2; H225 "Highly flammable liquid and vapour."

Because of determinand:

ethylbenzene: (conc.: 0.0005%)

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

Because of determinands:

diesel petroleum group: (conc.: 0.003%)

TPH (C6 to C40) petroleum group: (conc.: 0.00589%)

Appendix A: Classifier defined and non GB MCL determinands

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

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 17 Jul 2015

Hazard Statements: Eye Irrit. 2; H319, STOT SE 3; H335, Skin Irrit. 2; H315, Aquatic Acute 1; H400, Aquatic Chronic 1; H410, Aquatic Chronic 2; H411

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

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 17 Jul 2015

Hazard Statements: Acute Tox. 4; H302, Acute Tox. 1; H330, Acute Tox. 1; H310, Eye Irrit. 2; H319, STOT SE 3; H335, Skin Irrit. 2; H315

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

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 17 Jul 2015

Hazard Statements: Eye Irrit. 2; H319, STOT SE 3; H335, Skin Irrit. 2; H315, Skin Sens. 1; H317, Aquatic Acute 1; H400, Aquatic Chronic 1; H410

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

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 28/02/2015

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 23 Jul 2015

Hazard Statements: Aquatic Acute 1; H400, Aquatic Chronic 1; H410

• **boron tribromide/trichloride/trifluoride (combined)** (CAS Number: 10294-33-4, 10294-34-5, 7637-07-2)

Description/Comments: Combines the hazard statements and the average of the conversion factors for boron tribromide, boron trichloride and boron trifluoride

Data source: N/A

Data source date: 06 Aug 2015

Hazard Statements: EUH014, Acute Tox. 2; H330, Acute Tox. 2; H300, Skin Corr. 1A; H314, Skin Corr. 1B; H314

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

Description/Comments: Data from C&L Inventory Database

Data source: <https://echa.europa.eu/information-on-chemicals/cl-inventory-database/-/discli/details/33806>

Data source date: 17 Jul 2015

Hazard Statements: Acute Tox. 4; H332, Acute Tox. 4; H302, Eye Irrit. 2; H319, STOT SE 3; H335, Skin Irrit. 2; H315, Resp. Sens. 1; H334, Skin Sens. 1; H317, Repr. 1B; H360FD, Aquatic Acute 1; H400, Aquatic Chronic 1; H410

• **salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex**

GB MCL index number: 006-007-00-5

Description/Comments: Conversion factor based on a worst case compound: sodium cyanide

Additional Hazard Statement(s): EUH032 >= 0.2 %

Reason for additional Hazards Statement(s):

20 Nov 2021 - EUH032 >= 0.2 % hazard statement sourced from: WM3, Table C12.2

• **diesel petroleum group** (CAS Number: 68334-30-5, 68476-34-6, 94114-59-7, 1159170-26-9)

Description/Comments: Hazard statements taken from WM3 1st Edition 2015; Risk phrases: WM2 3rd Edition 2013

Data source: WM3 1st Edition 2015

Data source date: 25 May 2015

Hazard Statements: Flam. Liq. 3; H226, Skin Irrit. 2; H315, Acute Tox. 4; H332, Carc. 2; H351, Asp. Tox. 1; H304, STOT RE 2; H373, Aquatic Chronic 2; H411

• **ethylbenzene** (EC Number: 202-849-4, CAS Number: 100-41-4)

GB MCL index number: 601-023-00-4

Description/Comments:

Additional Hazard Statement(s): Carc. 2; H351

Reason for additional Hazards Statement(s):

20 Nov 2021 - Carc. 2; H351 hazard statement sourced from: IARC Group 2B (77) 2000

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

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 21 Aug 2015

Hazard Statements: Acute Tox. 4; H302, Aquatic Acute 1; H400, Aquatic Chronic 1; H410

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

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

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

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

■ **lead compounds with the exception of those specified elsewhere in this Annex**

GB MCL index number: 082-001-00-6
Description/Comments: Least-worst case: IARC considers lead compounds Group 2A; Probably carcinogenic to humans; Lead REACH Consortium, following MCL protocols, considers many simple lead compounds to be Carcinogenic category 2
Additional Hazard Statement(s): Carc. 2; H351
Reason for additional Hazards Statement(s):
20 Nov 2021 - Carc. 2; H351 hazard statement sourced from: IARC Group 2A (Sup 7, 87) 2006; Lead REACH Consortium
www.reach-lead.eu/substanceinformation.html. Review date 29/09/2015

■ **pH** (CAS Number: PH)

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

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

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

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

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

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

Description/Comments: Hazard statements taken from WM3 1st Edition 2015; Risk phrases: WM2 3rd Edition 2013
Data source: WM3 1st Edition 2015
Data source date: 25 May 2015
Hazard Statements: Flam. Liq. 3; H226 , Asp. Tox. 1; H304 , STOT RE 2; H373 , Muta. 1B; H340 , Carc. 1B; H350 , Repr. 2; H361d , Aquatic Chronic 2; H411

Appendix B: Rationale for selection of metal species

arsenic {arsenic trioxide}

Worst case species based on hazard statements

beryllium {beryllium oxide}

Worst case species based on hazard statements

boron {boron tribromide/trichloride/trifluoride (combined)}

Worst case species based on hazard statements

cadmium {cadmium sulfide}

Worst case species based on hazard statements

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

Worst case species based on hazard statements

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

Worst case species based on hazard statements

copper {dicopper oxide; copper (I) oxide}

Most likely common species

cyanides {salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex}

Worst case species

lead {lead compounds with the exception of those specified elsewhere in this Annex}

Worst case species based on hazard statements

mercury {mercury dichloride}

Worst case species based on hazard statements

nickel {nickel dihydroxide}

Worst case species based on hazard statements

zinc {zinc oxide}

Worst case species based on hazard statements

Appendix C: Version

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

HazWasteOnline Classification Engine Version: 2023.111.5569.10274 (22 Apr 2023)

HazWasteOnline Database: 2023.111.5569.10274 (22 Apr 2023)

This classification utilises the following guidance and legislation:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

The Waste and Environmental Permitting etc. (Legislative Functions and Amendment etc.) (EU Exit) Regulations 2020 - UK: 2020 No. 1540 of 16th December 2020

GB MCL List - version 1.1 of 09 June 2021

WAC data



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Analytical Report Number : 23-28681

Project / Site name:	Meadow School	Samples received on:	18/04/2023
Your job number:		Samples instructed on/ Analysis started on:	18/04/2023
Your order number:	PO25433	Analysis completed by:	24/04/2023
Report Issue Number:	1	Report issued on:	24/04/2023
Samples Analysed:	2 leachate samples - 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

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.

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Waste Acceptance Criteria Analytical Results							
Report No:	23-28681						
					Client: HYDROCK		
Location	Meadow School						
Lab Reference (Sample Number)	2649848 / 2649849				Landfill Waste Acceptance Criteria		
					Limits		
Sampling Date	12/04/2023				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID	WS03						
Depth (m)	0.50						
Solid Waste Analysis							
TOC (%)**	1.4				3%	5%	6%
Loss on Ignition (%) **	5.3				--	--	10%
BTEX (µg/kg) **	< 5.0				6000	--	--
Sum of PCBs (mg/kg) **	< 0.007				1	--	--
Mineral Oil (mg/kg) EH, ID, CU, AL	< 10				500	--	--
Total PAH (WAC-17) (mg/kg)	13.7				100	--	--
pH (units)**	7.5				--	>6	--
Acid Neutralisation Capacity (mmol / kg)	1.0				--	To be evaluated	To be evaluated
Eluate Analysis							
(BS EN 12457 - 2 preparation utilising end over end leaching procedure)	10:1			10:1	Limit values for compliance leaching test		
	mg/l			mg/kg	using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
Arsenic *	0.0063			0.0522	0.5	2	25
Barium *	0.0522			0.435	20	100	300
Cadmium *	< 0.0001			< 0.0008	0.04	1	5
Chromium *	< 0.0004			< 0.0040	0.5	10	70
Copper *	0.011			0.088	2	50	100
Mercury *	< 0.0005			< 0.0050	0.01	0.2	2
Molybdenum *	0.0502			0.418	0.5	10	30
Nickel *	0.0027			0.022	0.4	10	40
Lead *	0.0025			0.021	0.5	10	50
Antimony *	< 0.0017			< 0.017	0.06	0.7	5
Selenium *	< 0.0040			< 0.040	0.1	0.5	7
Zinc *	0.021			0.17	4	50	200
Chloride *	14			120	800	15000	25000
Fluoride*	0.41			3.4	10	150	500
Sulphate *	84			700	1000	20000	50000
TDS*	180			1500	4000	60000	100000
Phenol Index (Monohydric Phenols) *	< 0.010			< 0.10	1	-	-
DOC	19.4			162	500	800	1000
Leach Test Information							
Stone Content (%)	< 0.1						
Sample Mass (kg)	0.80						
Dry Matter (%)	78						
Moisture (%)	22						
Results are expressed on a dry weight basis, after correction for moisture content where applicable.							
* = UKAS accredited (liquid eluate analysis only)							
Stated limits are for guidance only and i2 cannot be held responsible for any discrepancies with current legislation							
** = MCERTS accredited							

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes as defined by the Waste (England and Wales) Regulations 2011 (as amended) and EA Guidance WM3.
This analysis is only applicable for landfill acceptance criteria (The Environmental Permitting (England and Wales) Regulations) and does not give any indication as to whether a waste may be hazardous or non-hazardous.

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Waste Acceptance Criteria Analytical Results							
Report No:	23-28681						
				Client: HYDROCK			
Location	Meadow School						
Lab Reference (Sample Number)	2649850 / 2649851			Landfill Waste Acceptance Criteria			
				Limits			
Sampling Date	12/04/2023			Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill	
Sample ID	WS04						
Depth (m)	0.30						
Solid Waste Analysis							
TOC (%)**	1.4				3%	5%	6%
Loss on Ignition (%) **	2.9				--	--	10%
BTEX (µg/kg) **	< 5.0				6000	--	--
Sum of PCBs (mg/kg) **	< 0.007				1	--	--
Mineral Oil (mg/kg) EH, ID, CU, AL	70				500	--	--
Total PAH (WAC-17) (mg/kg)	24.9				100	--	--
pH (units)**	9.0				--	>6	--
Acid Neutralisation Capacity (mmol / kg)	37				--	To be evaluated	To be evaluated
Eluate Analysis							
(BS EN 12457 - 2 preparation utilising end over end leaching procedure)	10:1			10:1	Limit values for compliance leaching test		
	mg/l			mg/kg	using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
Arsenic *	0.0094			0.0773	0.5	2	25
Barium *	0.0239			0.196	20	100	300
Cadmium *	< 0.0001			< 0.0008	0.04	1	5
Chromium *	0.0015			0.012	0.5	10	70
Copper *	0.0080			0.066	2	50	100
Mercury *	< 0.0005			< 0.0050	0.01	0.2	2
Molybdenum *	0.0024			0.0201	0.5	10	30
Nickel *	0.0006			0.0052	0.4	10	40
Lead *	0.023			0.19	0.5	10	50
Antimony *	< 0.0017			< 0.017	0.06	0.7	5
Selenium *	< 0.0040			< 0.040	0.1	0.5	7
Zinc *	0.0088			0.072	4	50	200
Chloride *	11			88	800	15000	25000
Fluoride*	0.37			3.1	10	150	500
Sulphate *	7.0			57	1000	20000	50000
TDS*	69			570	4000	60000	100000
Phenol Index (Monohydric Phenols) *	< 0.010			< 0.10	1	-	-
DOC	8.40			69.1	500	800	1000
Leach Test Information							
Stone Content (%)	< 0.1						
Sample Mass (kg)	0.80						
Dry Matter (%)	82						
Moisture (%)	18						
Results are expressed on a dry weight basis, after correction for moisture content where applicable.							
Stated limits are for guidance only and i2 cannot be held responsible for any discrepancies with current legislation							
** = UKAS accredited (liquid eluate analysis only)							
** = MCERTS accredited							

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes as defined by the Waste (England and Wales) Regulations 2011 (as amended) and EA Guidance WM3.
This analysis is only applicable for landfill acceptance criteria (The Environmental Permitting (England and Wales) Regulations) and does not give any indication as to whether a waste may be hazardous or non-hazardous.



Analytical Report Number : 23-28681

Project / Site name: Meadow School

* 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 *
2649848	WS03	None Supplied	0.5	Grey clay and sand with gravel.
2649850	WS04	None Supplied	0.3	Brown gravelly sand with rubble.

Analytical Report Number : 23-28681

Project / Site name: Meadow School

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
BS EN 12457-2 (10:1) Leachate Prep	10:1 (as recieved, moisture adjusted) end over end extraction with water for 24 hours. Eluate filtered prior to analysis.	In-house method based on BSEN12457-2.	L043-PL	W	NONE
Acid neutralisation capacity of soil	Determination of acid neutralisation capacity by addition of acid or alkali followed by electronic probe.	In-house method based on Guidance an Sampling and Testing of Wastes to Meet Landfill Waste Acceptance""	L046-PL	W	NONE
Loss on ignition of soil @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace.	In house method.	L047-PL	D	MCERTS
Mineral Oil (Soil) C10 - C40	Determination of mineral oil fraction extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method with silica gel split/clean up.	L076-PL	D	NONE
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Speciated WAC-17 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	MCERTS
PCB's By GC-MS in soil	Determination of PCB by extraction with acetone and hexane followed by GC-MS.	In-house method based on USEPA 8082	L027-PL	D	MCERTS
pH at 20oC in soil	Determination of pH in soil by addition of water followed by electrometric measurement.	In house method.	L005-PL	W	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 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 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	MCERTS
Total BTEX in soil (Poland)	Determination of BTEX in soil by headspace GC-MS. Individual components MCERTS accredited	In-house method based on USEPA8260	L073-PL	W	MCERTS
Metals in leachate by ICP-OES	Determination of metals in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
Chloride 10:1 WAC	Determination of Chloride colorimetrically by discrete analyser.	In house based on MEWAM Method ISBN 0117516260.	L082-PL	W	ISO 17025
Fluoride 10:1 WAC	Determination of fluoride in leachate by 1:1ratio with a buffer solution followed by Ion Selective Electrode.	In-house method based on Use of Total Ionic Strength Adjustment Buffer for Electrode Determination"	L033B-PL	W	ISO 17025
Sulphate 10:1 WAC	Determination of sulphate in leachate by ICP-OES	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
Total dissolved solids 10:1 WAC	Determination of total dissolved solids in water by EC probe using a factor of 0.6.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L031	W	ISO 17025

Analytical Report Number : 23-28681

Project / Site name: Meadow School

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
Monohydric phenols 10:1 WAC	Determination of phenols in leachate by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	ISO 17025
Dissolved organic carbon 10:1 WAC	Determination of dissolved inorganic carbon in leachate by TOC/DOC NDIR Analyser.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037-PL	W	NONE

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

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

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

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

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

Information in Support of Analytical Results

List of HWOL Acronyms and Operators

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

Appendix I Preliminary geotechnical risk register

Geotechnical hazard identification – desk study stage

Potential geotechnical hazards have been assessed in accordance with the general requirements of ICE/DETR Document 'Managing Geotechnical Risk' and the HE documents HD 41/15 and CD 622. The following pages set out the identified geotechnical risks and hazards which are associated with the proposed development and establish the approach which is to be taken to manage the risks including the geotechnical input and analysis.

Table J.1 is a preliminary assessment of possible geotechnical hazards at the site at Desk Study stage. This information is used to assist with ground investigation design.

Table J.1: Possible geotechnical hazards

Hazard	Comment	Hazard status based on desk study	
		Could be present and / or affect site (i.e. Plausible)	Unlikely to be present and/or affect site
Uncontrolled Made Ground (variable strength and compressibility).		✓	-
Soft / loose compressible ground (low strength and high settlement potential).		✓	-
Shrink swell of the clay fraction of soils under the influence of vegetation.		✓	-
Variable lateral and vertical changes in ground conditions.		✓	-
High sulphates present in the soils.		✓	-
Adverse chemical ground conditions, (e.g. expansive slag).		-	✓
Obstructions.		✓	-
Existing below ground structures to remain (foundations, underground services).		✓	-
Shallow groundwater.		✓	-

Changing groundwater conditions.		✓	-
Loose Made Ground, leading to difficulty with excavation and collapse of side walls.		✓	-
Risk from flooding.		✓	-
Running sands and / or loose Made Ground, leading to difficulty with excavation and collapse of side walls.		-	✓
Slope stability issues – general slopes.		-	✓
Slope stability issues – retaining walls.		-	✓
Earthworks – settlement (due to placement of fill on soft / loose ground).		✓	-
Earthworks – poor bearing capacity of new fill.		✓	-
Earthworks – unsuitability of site won material to be reused as fill.		✓	-
Solution features in Chalk.		✓	-
Cavities in the Superficial Deposits due to solution features.		-	✓
Dissolution (associated with “wet rock head”).		-	✓
Brine extraction.		-	✓
Mining.		-	✓
Cambered ground with gulls possibly present.		-	✓
Relict Slip Surfaces.		-	✓
Solifluction.		-	✓

Problematic soils (silts and rewetting etc.).

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| ✓

Geotechnical Hazard Identification – Following Ground Investigation

The preliminary Geotechnical Risk Register following Ground Investigation is set out in Table J.3.

The probability and impact of a hazard have been judged on a qualitative scale as set out in Table J.2. The degree of risk (R) is determined by combining an assessment of the probability (P) of the hazard occurring with an assessment of the impact (I) of the hazard and associated mitigation it will require if it occurs ($R = P \times I$).

Table J.2: Qualitative assessment of hazards and risks

P = Probability		I = Impact		R = Risk Rating (P x I)	
1	Very unlikely (VU)	1	Very Low	1 – 4	None / negligible
2	Unlikely (U)	2	Low	5 – 9	Minor
3	Plausible (P)	3	Medium	10 – 14	Moderate
4	Likely (Lk)	4	High	15 – 19	Substantial
5	Very Likely (VLk)	5	Very High	20 – 25	Severe

Hazard	Comments	Who is at Risk	Consequence	Risk Before Mitigation			Actions Required
				P	I	R	
Uncontrolled Made Ground (variable	There is Made Ground due to historical	School Building	Bearing capacity failure, settlement (total and differential).	3	4	12	Design foundations to found below Made Ground or on Made Ground which has been improved.
			Floor slab failure.	3	4	12	Design floor slabs as suspended.

strength and compressibility).	construction activity at the site. The Made Ground is up to 1.2m thick.	Roads and Pavements.	Settlement (total and differential) of roads and pavements.	3	2	6	Design roads and pavements using suitable geotechnical parameters and increase the sub-base and use geo-grids as appropriate.
		Services.	Settlement (differential), causing damage to services.	3	2	6	Anticipated settlements are significant with regard to services. There is a requirement to improve the Made Ground prior to installation of services. It is also advisable to steepen falls in drainage to prevent back fall and use rocker boxes and flexible couplings.
		Landscaping	Settlement (differential), in landscaping.	2	2	4	It is unlikely that settlements will be significant with regard to landscaping.
		Construction staff, vehicles and plant operators.	Trafficking of the site in temporary conditions. Overturning of plant during construction.	2	3	6	Where soft spots encountered, over-excavation and replacement with suitable fill. Outline design of working platform to include geo-grid. Site inspection and watching brief by Contractor to review working platform frequently and regularly.
Soft / loose ground (low strength and high settlement potential).	The shallow natural soils comprise River Terrace Deposits, which consist of soft clay and sand and gravel with a loose relative density.	School Building	Foundation bearing capacity failure, settlement (total and differential).	2	4	8	Design foundations to found below any loose relative density sand and gravel or soft clay, or improve the River Terrace Deposits prior to founding.
			Floor slab failure.	2	4	8	Design floor slab as suspended.
		Roads and Pavements.	Settlement (total and differential), of roads and pavements.	2	3	6	Design roads and pavements using suitable geotechnical parameters and increase the sub-base and use geo-grids as appropriate. If anticipated settlements are significant, and cannot be mitigated by design, over-excavate and replace soft soils.

		Services.	Settlement (differential), causing damage to services.	2	3	6	Ground levels are remaining at approximately current levels. Settlements are not anticipated to be significant. No additional design requirements envisaged.
		Landscaping	Settlement (differential), in landscaping.	2	3	6	
		Construction staff, vehicles and plant operators.	Trafficking of the site in temporary conditions. Overturning of plant during construction.	2	3	6	Where soft spots encountered, over-excavate and replace with suitable fill. Design working platform to suit the ground conditions. Site inspection and watching brief by Contractor to review working platform frequently and regularly.
Shrinkage / swelling of the clay fraction of soils under the influence of vegetation.	The clays of the Langley Silt Member are medium heave potential.	Foundations.	Shrinkage or heave of soils and associated damage to foundations.	4	3	12	Deepen foundations due to trees as appropriate.
		Floor slabs.	Floor slab failure.	4	4	16	Design floor slab as suspended with a void, unless the warranty provider is satisfied the soil is not desiccated, or slabs are constructed when soils are not seasonally desiccated (i.e. during winter and spring).
Variable lateral and vertical changes in ground conditions.	The Made Ground soils vary laterally and vertically, both in composition and strength.	School Building	Foundation bearing capacity failure, settlement (total and differential).	2	4	8	Design foundations to found below Made Ground or on Made Ground which has been improved. Design foundations to found below any loose relative density sand and gravel or soft clay, or improve the River Terrace Deposits prior to founding.
			Floor slab failure.	2	4	8	Design floor slab as suspended.
	The shallow soils comprise River Terrace Deposits, which vary laterally and vertically	Roads and Pavements.	Settlement (total and differential), of roads and pavements.	2	3	6	Design roads and pavements using suitable geotechnical parameters and increase the sub-base and use geo-grids as appropriate.

Sulphates present in the soils.	between soft clay and sand and gravel with a loose relative density.						If anticipated settlements are significant, and cannot be mitigated by design, over-excavate and replace unsuitable soils.
		Services.	Settlement (differential), causing damage to services.	2	3	6	Settlements are not anticipated to be significant with regard to services. No additional design requirements envisaged.
		Landscaping	Settlement (differential), in gardens.	2	3	6	It is unlikely that settlements will be significant with respect to gardens.
		Construction staff, vehicles and plant operators.	Trafficking of the site in temporary conditions. Overturning of plant during construction.	2	3	6	Where soft spots encountered, over-excavate and replace with suitable fill. Design working platform to suit the ground conditions. Site inspection and watching brief by Contractor to review working platform frequently and regularly.
	The ground investigation has proven that there is the potential for expansive sulphate bearing soils to be present.	Attack of buried concrete.	Damage to concrete and reduction in strength.	4	4	16	Classify concrete in accordance with BRE SD1 and design concrete accordingly.
		Earthworks.	Sulphate heave following the use of hydraulic binders.	4	4	16	Supplementary sulphate testing in accordance with BRE guidelines to be undertaken during earthworks. Before the use of hydraulic binders is approved, comprehensive testing and design will need to be completed by a Specialist Contractor to satisfy both themselves and the Engineer of the suitability of the soils for treatment, and confirm that the requisite end-performance of the material is achievable. The use of modification / stabilisation to be restricted to suitable materials following laboratory trials. In all instances where improvement by the inclusion of binders is considered, a mix design is required and as part of this

Obstructions.	There is a potential for obstructions to be present due to historical construction activity, or unknown fill in Made Ground.						design, samples should be checked for swelling, even where very low sulphate values are recorded.
		Construction staff, vehicles and plant operators.	Risk of collapse of excavation as obstructions are pulled out.	4	3	12	Allow for a breaker to be present during construction and remove obstructions where encountered during construction.
		Roads and Pavements.	Hard spots in externals and roads / pavements.	4	2	8	
Existing below ground structures to remain (foundations, underground services).	There is an existing school building immediately to the south of the proposed building.	Adjacent Building.	Foundation bearing capacity failure, settlement (differential).	3	4	12	Undertake geotechnical design to ensure the proposed structures do not place additional load on the existing structures / not result in settlement of the existing foundations. Design to be undertaken in accordance with EC7. Contractor to appoint competent Temporary Works Designer to design temporary works, in accordance with BS 5975:2008+A1:2011. Temporary Works Design to include recommendations for inspection of excavations. No person entry to unsupported excavations.
Shallow groundwater.	Monitoring during the ground investigations has proven a shallow perched water table at <1.0m bgl.	Construction staff, vehicles and plant operators.	Difficulty with excavation. Limit state failure, excessive deformation, trafficking of site plant, inability to place and compact fill.	3	2	6	Contractor to appoint competent Temporary Works Designer to design temporary works, in accordance with BS 5975:2008+A1:2011. Temporary Works Designer to consider in their analysis the impact of, and requirements for, de-watering of excavations. Any water that collects at the base of excavations to be removed as soon as practicable.

Changing groundwater conditions.	Monitoring during the ground investigations has proven a shallow perched water table at <1.0m bgl.	Construction staff, vehicles and plant operators.	Difficulty with excavation. Limit state failure, excessive deformation, trafficking of site plant, inability to place and compact fill.	3	2	6	Contractor to appoint competent Temporary Works Designer to design temporary works as required, in accordance with BS 5975:2008+A1:2011. Temporary Works Designer to consider in their analysis the impact of a variable water table.
Loose Made Ground, leading to difficulty with excavation and collapse of side walls.	There is Made Ground due to historical construction activity at the site. The Made Ground is up to 1.2m thick.	Construction staff, vehicles and plant operators.	Difficulty with excavation. Overturning of plant during construction. Collapse of side walls	2	4	8	Temporary trench support, or battering of excavation sides, is recommended for all excavations that are to be left open for any length of time and where man entry is required.
Earthworks – Settlement (due to placement of fill on soft / loose ground / Deep Made Ground).	Final site levels are still to be confirmed, however significant cut and fill is not proposed at the time of writing.	School Building	Foundation bearing capacity failure, settlement (total and differential).	3	4	12	Design foundations to found below the Made Ground
			Floor slab failure.	3	4	12	Design floor slab as suspended.
		Roads and Pavements.	Settlement (total and differential), of roads and pavements.	3	2	6	Design roads and pavements using suitable geotechnical parameters and increase the sub-base and use geo-grids as appropriate. Undertake ground improvement (pre-load and surcharge / rolling dynamic compaction / dynamic compaction / over-excavation and replacement) to reduce settlements.

Earthworks – poor bearing capacity and / or settlement of new fill.	Final site levels are still to be confirmed, however significant cut and fill is not proposed at the time of writing.	Services.	Settlement (differential), causing damage to services.	3	2	6	Settlements are not anticipated to be significant with regard to services. No additional design requirements envisaged. Detailed design works are required to assess the impact and design mitigation measures.
		Landscaping	Settlement (differential), in gardens.	2	2	4	Assess the use of geogrids as part of the design process. Undertake ground improvement (pre-load and surcharge / rolling dynamic compaction / dynamic compaction / over-excavation and replacement) to reduce settlements.
		Construction staff, vehicles and plant operators.	Trafficking of the site in temporary conditions. Overturning of plant during construction.	2	3	6	Where soft spots encountered, over-excavate and replace with suitable fill. Design working platform to suit the ground conditions. Site inspection and watching brief by Contractor to review working platform frequently and regularly.
		School Building	Foundation bearing capacity failure, settlement (total and differential).	3	4	12	Design foundations to found below the Made Ground / new fill i.e. piled foundations.
			Floor slab failure.	3	4	12	Design floor slab as suspended.
		Roads and Pavements.	Settlement (total and differential).	3	2	6	Minimum engineering performance to be defined in an Earthworks Specification.
		Services.	Settlement (differential), causing damage to services.	3	2	6	Earthworks to be designed in accordance with 1) Manual of Contract Documents for Highway Works (MCHW), Volume 1; 2) Specification for Highway Works (SHW) Series 600; 3) 6031:2009, Code of practice for earthworks; and
		Gardens.	Settlement (differential), in gardens.	2	2	4	

		Construction staff, vehicles and plant operators.	Trafficking of the site in temporary conditions. Overturning of plant during construction.	2	3	6	4) BS 8000-1, workmanship on building sites. Site testing to be undertaken to confirm the works are in accordance with the design. A suitable watching brief and independent verification.
Earthworks – Unsuitability of site won material to be reused as fill.	Final site levels are still to be confirmed, however significant cut and fill is not proposed at the time of writing.	Earthworks control, inability to place and compact fill.	Service limit state failure, excessive and intolerable total and differential settlement.	2	3	6	The design is to describe the processes required to produce suitable fill for reuse. Contractor to design site control measures, plant, equipment and arrangement to comply with processing requirements. Site testing to be undertaken to confirm the works are in accordance with the design.
		Project Budgets - Insufficient fill to complete earthworks.	Additional Costs, due to importation of fill or having to modify designs.	2	2	4	A suitable watching brief and independent verification. Adequate investigation required of soil types and characterisation of the soils to be undertaken during investigation. Some fill may be unsuitable for use.
Unforeseen ground conditions - risk associated with limited data.	Ground investigation has been undertaken. However, additional information will be obtained during construction. Ground conditions are only defined at exploratory hole locations.	All aspects of the development		3	4	12	Designers to be contacted if conditions encountered are different to those identified during investigation. Regular inspections of excavations and earthworks for evidence of stability. Adequate investigation required to characterise the site and understand the potential risks.

Whilst the probability and impact of the hazard occurring can be reduced to a minimum by geotechnical design, the impact cannot be reduced below very low. The risk register will need to be up-dated, as necessary, to reflect design, additional information, data and experience as it is gained through the construction process.

Impacts of the design with regard to health and Safety considerations will need to be included by the designer at design stage.

Appendix J Plausible source-pathway-receptor contaminant linkages

Summary of potential contaminant linkages

Table K.2 lists the plausible contaminant linkages which have been identified. These are considered as potentially unacceptable risks in line with guidelines published in LCRM (2019) and additional risk assessment is required.

Source – Pathway – Receptor Linkages have been assessed in general accordance with guidance in CIRIA Report C552 (Rudland *et al* 2001) but modified to add a 'no linkage' category and to remove low/moderate risk (See Table K.1).

It should be noted that whilst the risk assessment process undertaken in this report may identify potential risks to site demolition and redevelopment workers, consideration of occupational health and safety issues is beyond the scope of this report and need to be considered separately in the Construction Phase Health and Safety Plan.

Table K.1: Consequence versus probability assessment.

Probability	Consequence				
		Severe	Medium	Mild	Minor
	High Likelihood	Very high risk	High risk	Moderate risk	Low risk
	Likely	High risk	Moderate risk	Low risk	Very low risk
	Low Likelihood	Moderate risk	Low risk	Low risk	Very low risk
	Unlikely	Low risk	Very low risk	Very low risk	Very low risk
	No Linkage	No risk			

Table K.2: Exposure model – final source-pathway-receptor contaminant linkages

Sources	Possible Pathways	Receptors	Probability	Consequence	Risk Level	Comments	
Made Ground, associated with historical construction	Ingestion, inhalation or direct contact.	Site users.	Low likelihood	Medium	Low	There is Made Ground below the hardstanding adjacent to the school building.	There were no exceedances of the GAC for any chemicals of potential concern identified during the

activities and imported fill, possibly including elevated concentrations of metals, metalloids, asbestos fibres, Asbestos Containing Materials, PAH and petroleum hydrocarbons (Po1).	Inhalation of fugitive dust.	Neighbours	Low likelihood	Medium	Low		ground investigation. Therefore, no mitigation measures are proposed.
	Leaching through unsaturated zone.	Groundwater and possible abstractors	Low likelihood	Medium	Low	There is Made Ground below the entire site.	The risk of significant generation of dust is likely only during site development process and can therefore be controlled. Elevated concentrations of Cobalt, Copper, Manganese, Cadmium and Nickel were identified in the groundwater samples, however there is no evidence of artificial accumulations of these substances on site or within the Made Ground. It would be technically challenging and probably disproportionately costly to remove these natural contaminants from the water or to prevent further infiltration. Therefore, no mitigation measures are proposed.
	Surface run-off.	Aquatic ecosystems. Surface water and possible abstractors	Low likelihood	Medium	Low	The site currently has an open playing field in the west between the proposed development and the River Pinn which will remain on site. This will therefore prevent surface run-off directly into the surface water.	
	Base flow from		Low likelihood	Medium	Low	Perched water was identified on site at	Elevated concentrations of Cobalt, Copper, Manganese Cadmium and

	contaminated groundwater.					depths of between 0.4m to 0.8m bgl.	Nickel were identified in the groundwater samples, however there is no evidence of artificial accumulations of these substances on site or within the Made Ground. It would be technically challenging and probably disproportionately costly to remove these natural contaminants from the water or to prevent further infiltration. Therefore, no mitigation measures are proposed.
Hydrocarbon fuels, elevated concentrations of metals and metalloids associated with former tanks of unknown use on site (S02).	Ingestion, inhalation or direct contact.	Site users.	Low likelihood	Medium	Low	There is Made Ground below the hardstanding adjacent to the school building.	The tanks were located in areas that have already been developed adjacent to the current proposed development and there are no exceedances of the GAC identified during the ground investigation.
	Inhalation of fugitive dust.	Neighbours	Low likelihood	Medium	Low	The risk of significant generation of dust is likely only during site development process and can therefore be controlled.	
	Leaching through unsaturated zone.	Groundwater and possible abstractors	Low likelihood	Medium	Low	There is Made Ground below the entire site, and there are metals excess of the GAC.	Elevated concentrations of Cobalt, Copper, Manganese, Cadmium and Nickel were identified in the groundwater samples, however there is no evidence of artificial accumulations of these substances on site or within the Made Ground. It would be technically challenging and probably disproportionately

							costly to remove these natural contaminants from the water or to prevent further infiltration. Therefore, no mitigation measures are proposed.
	Surface run-off.	Aquatic ecosystems. Surface water and possible abstractors	Low likelihood	Medium	Low	The site currently has an open playing field in the west between the proposed development and the River Pinn which will remain on site. This will therefore prevent surface run-off directly into the surface water.	
	Base flow from contaminated groundwater.		Low likelihood	Medium	Low	Perched water was identified on site at depths of between 0.4m to 0.8m bgl.	Elevated concentrations of Cobalt, Copper, Manganese, Cadmium and Nickel were identified in the groundwater samples, however there is no evidence of artificial accumulations of these substances on site or within the Made Ground. It would be technically challenging and probably disproportionately costly to remove these natural contaminants from the water or to prevent further infiltration. Therefore, no mitigation measures are proposed.
Ground gases (carbon dioxide and methane) from organic materials in the	Migration, build up and asphyxiation	Site users	Unlikely	Medium to severe	Very low to low	Ground gas monitoring conducted indicates CS1 conditions. Based on the data no mitigation measures are required in respect to hazardous ground gases.	
		Neighbours					
		Site users					

Made Ground (S03).	Migration, build up and explosion	Neighbours Development end use				
Hydrocarbon vapours from potential VOC and petroleum hydrocarbon spillages/leaks (S04).	Ingestion, inhalation or direct contact.	Site users.	Unlikely	Medium	Very low	There were no exceedances of petroleum hydrocarbons, VOC's or SVOC's in any of the laboratory results.
	Inhalation of fugitive dust.	Neighbours	Unlikely	Medium	Very low	
	Leaching through unsaturated zone.	Groundwater and possible abstractors	Unlikely	Medium	Very low	There is Made Ground below the entire site. Elevated concentrations of Cobalt, Copper, Manganese, Cadmium and Nickel were identified in the groundwater samples, however there is no evidence of artificial accumulations of these substances on site or within the Made Ground. It would be technically challenging and probably disproportionately costly to remove these natural contaminants from the water or to prevent further infiltration. Therefore, no mitigation measures are proposed.

	Surface run-off.	Aquatic ecosystems. Surface water and possible abstractors	Unlikely	Medium	Very low	There were no exceedances of petroleum hydrocarbons, VOC's or SVOC's in any of the laboratory results.	
	Base flow from contaminated groundwater.		Unlikely	Medium	Very low	Perched water was identified on site at depths of between 0.4m to 0.8m bgl.	Elevated concentrations of Cobalt, Copper, Manganese, Cadmium and Nickel were identified in the groundwater samples, however there is no evidence of artificial accumulations of these substances on site or within the Made Ground. It would be technically challenging and probably disproportionately costly to remove these natural contaminants from the water or to prevent further infiltration. Therefore, no mitigation measures are proposed.
Naturally occurring elevated concentrations of metal (Lead) within soils (S05).	Ingestion, inhalation or direct contact.	Site users.	Low likelihood	Medium	Low		There were no exceedances of the GAC for any chemicals of potential concern identified during the ground investigation. Therefore, no mitigation measures are proposed.
	Inhalation of fugitive dust.	Neighbours	Low likelihood	Medium	Low		The risk of significant generation of dust is likely only during site development process and can therefore be controlled.

	Leaching through unsaturated zone.	Groundwater and possible abstractors	Low likelihood	Medium	Low		Elevated concentrations of Cobalt, Copper, Manganese, Cadmium and Nickel were identified in the groundwater samples, however there is no evidence of artificial accumulations of these substances on site or within the Made Ground. It would be technically challenging and probably disproportionately costly to remove these natural contaminants from the water or to prevent further infiltration. Therefore, no mitigation measures are proposed.
	Surface run-off.	Aquatic ecosystems. Surface water and possible abstractors	Low likelihood	Medium	Low		The site currently has an open playing field in the west between the proposed development and the River Pinn which will remain on site. This will therefore prevent surface run-off directly into the surface water.
	Base flow from contaminated groundwater.		Low likelihood	Medium	Low	Perched water was identified on site at depths of between 0.4m to 0.8m bgl.	Elevated concentrations of Cobalt, Copper, Manganese, Cadmium and Nickel were identified in the groundwater samples, however there is no evidence of artificial accumulations of these substances on site or within the Made Ground. It would be technically challenging and probably disproportionately costly to remove these natural contaminants from the water or to prevent further infiltration.

							Therefore, no mitigation measures are proposed.
Leachate from Made Ground associated with historical construction activities and unspecified surface ground workings on the northern boundary of the site, possibly including elevated concentrations of metals, metalloids, asbestos fibres, Asbestos Containing Materials, PAH and petroleum hydrocarbons (S06).	Ingestion, inhalation or direct contact.	Site users.	Low likelihood	Medium	Low	There were no exceedances of the GAC for any chemicals of potential concern identified during the ground investigation.	No mitigation measures required.
	Inhalation of fugitive dust.	Neighbours	Low likelihood	Medium	Low		The risk of significant generation of dust is likely only during site development process and can therefore be controlled.
	Leaching through unsaturated zone.	Groundwater and possible abstractors	Low likelihood	Medium	Low	The Made Ground across the site has an average thickness of 0.75m and is underlain by impermeable Langley silt, therefore it is unlikely that leachate from Made Ground will occur.	Elevated concentrations of Cobalt, Copper, Manganese, Cadmium and Nickel were identified in the groundwater samples, however there is no evidence of artificial accumulations of these substances on site or within the Made Ground. It would be technically challenging and probably disproportionately costly to remove these natural contaminants from the water or to prevent further infiltration. Therefore, no mitigation measures are proposed.

	Surface run-off.	Aquatic ecosystems. Surface water and possible abstractors	Low likelihood	Medium	Low	The site currently has an open playing field in the west between the proposed development and the River Pinn which will remain on site. This will therefore prevent surface run-off directly into the surface water. Furthermore, the Made Ground is underlain by impermeable Langley Silt.	
	Base flow from contaminated groundwater.		Low likelihood	Medium	Low	Perched water was identified on site at depths of between 0.4m to 0.8m bgl.	Elevated concentrations of Cobalt, Copper, Manganese, Cadmium and Nickel were identified in the groundwater samples, however there is no evidence of artificial accumulations of these substances on site or within the Made Ground. It would be technically challenging and probably disproportionately costly to remove these natural contaminants from the water or to prevent further infiltration. Therefore, no mitigation measures are proposed.
Ground gases (carbon dioxide and methane) from organic materials in the Made Ground associated with unspecified surface ground workings on the northern boundary of the site (So8).	Migration, build up and asphyxiation	Site users	Unlikely	Medium to severe	Very low to low	Ground gas monitoring conducted indicates CS1 conditions. Based on the data no mitigation measures are required in respect to hazardous ground gases.	
		Neighbours					
	Migration, build up and explosion	Site users					
		Neighbours					
		Development end use					

