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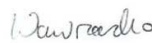
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Analytical Report Number : 21-86295

Replaces Analytical Report Number: 21-86295, issue no. 1
Additional analysis undertaken.

Project / Site name:	Castlefield Viaduct NT	Samples received on:	09/07/2021
Your job number:	PC2387	Samples instructed on/ Analysis started on:	12/07/2021
Your order number:	PC2387 103 100	Analysis completed by:	28/07/2021
Report Issue Number:	2	Report issued on:	28/07/2021
Samples Analysed:	22 leachate samples - 10 other samples - 11 soil samples - 1 water sample		

Signed:



Joanna Wawrzeczko
Technical Reviewer (Reporting Team)
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: 21-86295
Project / Site name: Castlefield Viaduct NT
Your Order No: PC2387 103 100

Lab Sample Number				1934531	1934532	1934533	1934534	1934535
Sample Reference				HP101	HP102	HP103	HP104	HP105
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.00-0.25	0.00-0.30	0.00-0.15	0.00-0.30	0.00-0.20
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)				Units	Limit of detection	Accreditation Status		
Stone Content				%	0.1	NONE	< 0.1	< 0.1
Moisture Content				%	0.01	NONE	13	10
Total mass of sample received				kg	0.001	NONE	2.0	2.0

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
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General Inorganics

pH - Automated	pH Units	N/A	MCERTS	7.7	8.0	7.8	8.0	7.9
Ammoniacal Nitrogen as N	mg/kg	0.5	MCERTS	< 0.5	< 0.5	0.8	< 0.5	1.0
Total Organic Carbon (TOC)	%	0.1	MCERTS	6.3	6.0	8.1	4.8	4.8

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	2.7	1.8	2.4	2.3	1.4
Acenaphthylene	mg/kg	0.05	MCERTS	0.61	< 0.05	1.3	0.27	0.59
Acenaphthene	mg/kg	0.05	MCERTS	7.4	1.6	6.2	3.6	2.9
Fluorene	mg/kg	0.05	MCERTS	5.2	1.0	3.7	2.0	1.7
Phenanthrene	mg/kg	0.05	MCERTS	49	13	54	20	24
Anthracene	mg/kg	0.05	MCERTS	13	3.3	16	4.2	6.5
Fluoranthene	mg/kg	0.05	MCERTS	81	24	170	29	65
Pyrene	mg/kg	0.05	MCERTS	78	23	170	26	67
Benzo(a)anthracene	mg/kg	0.05	MCERTS	41	14	97	14	39
Chrysene	mg/kg	0.05	MCERTS	39	12	94	14	33
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	44	14	130	16	46
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	16	5.3	97	5.9	16
Benzo(a)pyrene	mg/kg	0.05	MCERTS	37	12	62	13	39
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	14	5.8	42	5.9	17
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	4.4	1.4	12	1.8	4.3
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	17	6.5	46	6.4	19

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	448	140	996	164	382
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Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	62	69	51	66	44
Barium (aqua regia extractable)	mg/kg	1	MCERTS	310	230	610	220	330
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	1.7	1.9	1.5	1.3	1.2
Boron (water soluble)	mg/kg	0.2	MCERTS	1.1	0.7	0.7	0.5	0.6
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	2.4	3.1	2.6	2.7	1.6
Chromium (hexavalent)	mg/kg	1.2	MCERTS	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
Chromium (III)	mg/kg	1	NONE	58	69	63	60	57
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	58	69	63	61	57
Copper (aqua regia extractable)	mg/kg	1	MCERTS	330	310	230	250	210
Lead (aqua regia extractable)	mg/kg	1	MCERTS	1200	550	4400	520	1400
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	67	80	150	61	55
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	67	70	65	68	67
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	680	290	500	320	320

Monoaromatics & Oxygenates

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Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.00-0.25	0.00-0.30	0.00-0.15	0.00-0.30	0.00-0.20
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	18	< 2.0	12	< 2.0	7.2
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	35	< 8.0	21	< 8.0	28
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	180	320	92	210	340
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	230	320	130	210	370

TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	4.4	5.6	11	6.9	4.6
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	30	27	42	24	26
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	210	73	410	81	170
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	380	200	790	200	430
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	630	310	1300	310	630

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Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.00-0.25	0.00-0.30	0.00-0.15	0.00-0.30	0.00-0.20
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					

VOCs

Chloromethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl Chloride	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichlorofluoromethane	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloromethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloropropene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloromethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromomethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichloropropane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromochloromethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromoethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-Xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Styrene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tribromomethane	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
n-Propylbenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Chlorotoluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Chlorotoluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
tert-Butylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
sec-Butylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p-Isopropyltoluene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Butylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

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Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.00-0.25	0.00-0.30	0.00-0.15	0.00-0.30	0.00-0.20
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Hexachlorobutadiene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

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Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)				Units	Limit of detection	Accreditation Status		

SVOCs

Aniline	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenol	mg/kg	0.2	ISO 17025	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
2-Chlorophenol	mg/kg	0.1	MCERTS	< 0.1	< 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	< 0.2
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	< 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	< 0.1
2-Methylphenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Hexachloroethane	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nitrobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
4-Methylphenol	mg/kg	0.2	NONE	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Isophorone	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
2-Nitrophenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	< 0.3	< 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	< 0.3
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Naphthalene	mg/kg	0.05	MCERTS	2.7	1.8	2.4	2.3	1.4
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
4-Chloroaniline	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Hexachlorobutadiene	mg/kg	0.1	MCERTS	< 0.1	< 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	< 0.1
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
2-Methylnaphthalene	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Chloronaphthalene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dimethylphthalate	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	mg/kg	0.05	MCERTS	0.61	< 0.05	1.3	0.27	0.59
Acenaphthene	mg/kg	0.05	MCERTS	7.4	1.6	6.2	3.6	2.9
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Dibenzofuran	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Diethyl phthalate	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
4-Nitroaniline	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Fluorene	mg/kg	0.05	MCERTS	5.2	1.0	3.7	2.0	1.7
Azobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Hexachlorobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Phenanthrene	mg/kg	0.05	MCERTS	49	13	54	20	24
Anthracene	mg/kg	0.05	MCERTS	13	3.3	16	4.2	6.5
Carbazole	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Dibutyl phthalate	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Anthraquinone	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Fluoranthene	mg/kg	0.05	MCERTS	81	24	170	29	65
Pyrene	mg/kg	0.05	MCERTS	78	23	170	26	67
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Benzo(a)anthracene	mg/kg	0.05	MCERTS	41	14	97	14	39
Chrysene	mg/kg	0.05	MCERTS	39	12	94	14	33
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	44	14	130	16	46
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	16	5.3	97	5.9	16
Benzo(a)pyrene	mg/kg	0.05	MCERTS	37	12	62	13	39

Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT
Your Order No: PC2387 103 100

Lab Sample Number				1934531	1934532	1934533	1934534	1934535
Sample Reference				HP101	HP102	HP103	HP104	HP105
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.00-0.25	0.00-0.30	0.00-0.15	0.00-0.30	0.00-0.20
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	14	5.8	42	5.9	17
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	4.4	1.4	12	1.8	4.3
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	17	6.5	46	6.4	19

Acid Herbicides

2,3,6-TBA	µg/kg	50	NONE	< 50	< 50	< 50	-	-
2,4,5-T	µg/kg	10	NONE	< 10	< 10	< 10	-	-
2,4,5-TP (Fenoprop)	µg/kg	10	NONE	< 10	< 10	< 10	-	-
2,4-D	µg/kg	10	NONE	< 10	< 10	< 10	-	-
2,4-DB	µg/kg	10	NONE	< 10	< 10	< 10	-	-
4-CPA	µg/kg	20	NONE	< 20	< 20	< 20	-	-
Bromacil	µg/kg	10	NONE	< 10	< 10	< 10	-	-
Bromoxynil	µg/kg	10	NONE	< 10	< 10	< 10	-	-
Clopyralid	µg/kg	100	NONE	< 100	< 100	< 100	-	-
Dicamba	µg/kg	20	NONE	< 20	< 20	< 20	-	-
Diclofop	µg/kg	10	NONE	< 10	< 10	< 10	-	-
Dichlorprop	µg/kg	10	NONE	< 10	< 10	< 10	-	-
Dinoseb	µg/kg	10	NONE	< 10	< 10	< 10	-	-
Flamprop	µg/kg	50	NONE	< 50	< 50	< 50	-	-
Flamprop-Isopropyl	µg/kg	10	NONE	< 10	< 10	< 10	-	-
Ioxynil	µg/kg	10	NONE	< 10	< 10	< 10	-	-
MCPA	µg/kg	10	NONE	< 10	< 10	< 10	-	-
MCPB	µg/kg	20	NONE	< 20	< 20	< 20	-	-
MCPP (Mecoprop)	µg/kg	10	NONE	< 10	< 10	< 10	-	-
Picloram	µg/kg	50	NONE	< 50	< 50	< 50	-	-

U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT
Your Order No: PC2387 103 100

Lab Sample Number				1934536	1934537	1934538	1934539	1934540
Sample Reference				HP106	HP107	HP108	HP109	HP110
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.00-0.30	0.00-0.30	0.00-0.30	0.00-0.15	0.00-0.10
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)				Units	Limit of detection	Accreditation Status		
Stone Content				%	0.1	NONE	< 0.1	< 0.1
Moisture Content				%	0.01	NONE	11	9.6
Total mass of sample received				kg	0.001	NONE	2.0	2.0

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
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General Inorganics

pH - Automated	pH Units	N/A	MCERTS	7.9	7.8	7.7	8.0	7.8
Ammoniacal Nitrogen as N	mg/kg	0.5	MCERTS	2.3	< 0.5	< 0.5	1.4	< 0.5
Total Organic Carbon (TOC)	%	0.1	MCERTS	6.3	5.8	8.1	6.4	7.4

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	1.1	3.3	0.91	0.58	18
Acenaphthylene	mg/kg	0.05	MCERTS	0.69	0.95	0.35	< 0.05	28
Acenaphthene	mg/kg	0.05	MCERTS	3.1	11	1.4	2.0	85
Fluorene	mg/kg	0.05	MCERTS	1.9	6.3	0.97	1.2	50
Phenanthrene	mg/kg	0.05	MCERTS	22	68	12	11	540
Anthracene	mg/kg	0.05	MCERTS	5.1	17	3.3	2.4	130
Fluoranthene	mg/kg	0.05	MCERTS	43	140	28	17	760
Pyrene	mg/kg	0.05	MCERTS	42	130	29	16	710
Benzo(a)anthracene	mg/kg	0.05	MCERTS	22	83	15	6.7	320
Chrysene	mg/kg	0.05	MCERTS	22	64	14	6.3	270
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	24	94	19	7.3	310
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	11	23	7.6	2.9	150
Benzo(a)pyrene	mg/kg	0.05	MCERTS	22	72	16	6.4	320
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	9.8	31	8.2	2.8	150
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	2.7	9.5	2.2	0.74	32
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	11	35	9.3	3.3	180

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	243	781	166	86.1	4040
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Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	76	66	83	16	60
Barium (aqua regia extractable)	mg/kg	1	MCERTS	330	410	310	56	360
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	1.8	1.9	1.4	1.2	1.7
Boron (water soluble)	mg/kg	0.2	MCERTS	1.0	0.3	0.9	1.3	0.8
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	3.4	2.8	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	1.2	MCERTS	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
Chromium (III)	mg/kg	1	NONE	63	64	81	44	56
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	64	64	82	45	56
Copper (aqua regia extractable)	mg/kg	1	MCERTS	320	290	340	38	330
Lead (aqua regia extractable)	mg/kg	1	MCERTS	1100	2100	1200	59	1400
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	70	70	73	39	60
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	85	82	76	69	71
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	390	480	460	110	990

Monoaromatics & Oxygenates

Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT
Your Order No: PC2387 103 100

Lab Sample Number				1934536	1934537	1934538	1934539	1934540
Sample Reference				HP106	HP107	HP108	HP109	HP110
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.00-0.30	0.00-0.30	0.00-0.30	0.00-0.15	0.00-0.10
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	9.9
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	14	< 2.0	< 2.0	27
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	16	59	21	< 8.0	81
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	270	290	330	< 8.0	480
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	290	360	350	< 10	600

TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	3.8	5.1	< 1.0	< 1.0	46
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	19	31	8.3	23	230
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	110	340	78	52	1200
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	270	680	270	86	1000
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	400	1100	360	160	2500

Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT
Your Order No: PC2387 103 100

Lab Sample Number				1934536	1934537	1934538	1934539	1934540
Sample Reference				HP106	HP107	HP108	HP109	HP110
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.00-0.30	0.00-0.30	0.00-0.30	0.00-0.15	0.00-0.10
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
VOCs								
Chloromethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl Chloride	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichlorofluoromethane	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloromethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloropropene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloromethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromomethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichloropropane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromochloromethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromoethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-Xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Styrene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tribromomethane	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
n-Propylbenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Chlorotoluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Chlorotoluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
tert-Butylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
sec-Butylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p-Isopropyltoluene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Butylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Analytical Report Number: 21-86295
 Project / Site name: Castlefield Viaduct NT
 Your Order No: PC2387 103 100

Lab Sample Number				1934536	1934537	1934538	1934539	1934540
Sample Reference				HP106	HP107	HP108	HP109	HP110
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.00-0.30	0.00-0.30	0.00-0.30	0.00-0.15	0.00-0.10
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Hexachlorobutadiene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT
Your Order No: PC2387 103 100

Lab Sample Number				1934536	1934537	1934538	1934539	1934540
Sample Reference				HP106	HP107	HP108	HP109	HP110
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.00-0.30	0.00-0.30	0.00-0.30	0.00-0.15	0.00-0.10
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
SVOCs								
Aniline	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenol	mg/kg	0.2	ISO 17025	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
2-Chlorophenol	mg/kg	0.1	MCERTS	< 0.1	< 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	< 0.2
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	< 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	< 0.1
2-Methylphenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Hexachloroethane	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nitrobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
4-Methylphenol	mg/kg	0.2	NONE	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Isophorone	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
2-Nitrophenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	< 0.3	< 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	< 0.3
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Naphthalene	mg/kg	0.05	MCERTS	1.1	3.3	0.91	0.58	18
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
4-Chloroaniline	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Hexachlorobutadiene	mg/kg	0.1	MCERTS	< 0.1	< 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	< 0.1
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
2-Methylnaphthalene	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	29
2-Chloronaphthalene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dimethylphthalate	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	mg/kg	0.05	MCERTS	0.69	0.95	0.35	< 0.05	28
Acenaphthene	mg/kg	0.05	MCERTS	3.1	11	1.4	2.0	85
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Dibenzofuran	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	25
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Diethyl phthalate	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
4-Nitroaniline	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Fluorene	mg/kg	0.05	MCERTS	1.9	6.3	0.97	1.2	50
Azobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Hexachlorobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Phenanthrene	mg/kg	0.05	MCERTS	22	68	12	11	540
Anthracene	mg/kg	0.05	MCERTS	5.1	17	3.3	2.4	130
Carbazole	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Dibutyl phthalate	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Anthraquinone	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Fluoranthene	mg/kg	0.05	MCERTS	43	140	28	17	760
Pyrene	mg/kg	0.05	MCERTS	42	130	29	16	710
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Benzo(a)anthracene	mg/kg	0.05	MCERTS	22	83	15	6.7	320
Chrysene	mg/kg	0.05	MCERTS	22	64	14	6.3	270
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	24	94	19	7.3	310
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	11	23	7.6	2.9	150
Benzo(a)pyrene	mg/kg	0.05	MCERTS	22	72	16	6.4	320

Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT
Your Order No: PC2387 103 100

Lab Sample Number				1934536	1934537	1934538	1934539	1934540
Sample Reference				HP106	HP107	HP108	HP109	HP110
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.00-0.30	0.00-0.30	0.00-0.30	0.00-0.15	0.00-0.10
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	9.8	31	8.2	2.8	150
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	2.7	9.5	2.2	0.74	32
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	11	35	9.3	3.3	180

Acid Herbicides

2,3,6-TBA	µg/kg	50	NONE	-	-	-	-	-
2,4,5-T	µg/kg	10	NONE	-	-	-	-	-
2,4,5-TP (Fenoprop)	µg/kg	10	NONE	-	-	-	-	-
2,4-D	µg/kg	10	NONE	-	-	-	-	-
2,4-DB	µg/kg	10	NONE	-	-	-	-	-
4-CPA	µg/kg	20	NONE	-	-	-	-	-
Bromacil	µg/kg	10	NONE	-	-	-	-	-
Bromoxynil	µg/kg	10	NONE	-	-	-	-	-
Clopyralid	µg/kg	100	NONE	-	-	-	-	-
Dicamba	µg/kg	20	NONE	-	-	-	-	-
Diclofop	µg/kg	10	NONE	-	-	-	-	-
Dichlorprop	µg/kg	10	NONE	-	-	-	-	-
Dinoseb	µg/kg	10	NONE	-	-	-	-	-
Flamprop	µg/kg	50	NONE	-	-	-	-	-
Flamprop-Isopropyl	µg/kg	10	NONE	-	-	-	-	-
Ioxynil	µg/kg	10	NONE	-	-	-	-	-
MCPA	µg/kg	10	NONE	-	-	-	-	-
MCPB	µg/kg	20	NONE	-	-	-	-	-
MCPP (Mecoprop)	µg/kg	10	NONE	-	-	-	-	-
Picloram	µg/kg	50	NONE	-	-	-	-	-

U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT
Your Order No: PC2387 103 100

Lab Sample Number				1934541
Sample Reference				HP Dup 1
Sample Number				None Supplied
Depth (m)				None Supplied
Date Sampled				08/07/2021
Time Taken				None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status	
Stone Content	%	0.1	NONE	< 0.1
Moisture Content	%	0.01	NONE	15
Total mass of sample received	kg	0.001	NONE	1.3

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected
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General Inorganics

pH - Automated	pH Units	N/A	MCERTS	7.9
Ammoniacal Nitrogen as N	mg/kg	0.5	MCERTS	< 0.5
Total Organic Carbon (TOC)	%	0.1	MCERTS	7.1

Total Phenols

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

Naphthalene	mg/kg	0.05	MCERTS	12
Acenaphthylene	mg/kg	0.05	MCERTS	23
Acenaphthene	mg/kg	0.05	MCERTS	73
Fluorene	mg/kg	0.05	MCERTS	44
Phenanthrene	mg/kg	0.05	MCERTS	450
Anthracene	mg/kg	0.05	MCERTS	100
Fluoranthene	mg/kg	0.05	MCERTS	660
Pyrene	mg/kg	0.05	MCERTS	600
Benzo(a)anthracene	mg/kg	0.05	MCERTS	310
Chrysene	mg/kg	0.05	MCERTS	220
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	310
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	96
Benzo(a)pyrene	mg/kg	0.05	MCERTS	280
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	130
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	28
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	160

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	3490
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Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	62
Barium (aqua regia extractable)	mg/kg	1	MCERTS	280
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	1.5
Boron (water soluble)	mg/kg	0.2	MCERTS	0.8
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2
Chromium (hexavalent)	mg/kg	1.2	MCERTS	< 1.2
Chromium (III)	mg/kg	1	NONE	51
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	51
Copper (aqua regia extractable)	mg/kg	1	MCERTS	310
Lead (aqua regia extractable)	mg/kg	1	MCERTS	1000
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	61
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	70
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	790

Monoaromatics & Oxygenates

Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT
Your Order No: PC2387 103 100

Lab Sample Number					1934541
Sample Reference					HP Dup 1
Sample Number					None Supplied
Depth (m)					None Supplied
Date Sampled					08/07/2021
Time Taken					None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		
Benzene	µg/kg	1	MCERTS	< 1.0	
Toluene	µg/kg	1	MCERTS	< 1.0	
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	
p & m-xylene	µg/kg	1	MCERTS	< 1.0	
o-xylene	µg/kg	1	MCERTS	< 1.0	
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	10	
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	23	
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	110	
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	730	
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	870	

TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	23	
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	170	
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	1300	
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	1300	
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	2700	

Analytical Report Number: 21-86295
 Project / Site name: Castlefield Viaduct NT
 Your Order No: PC2387 103 100

Lab Sample Number				1934541
Sample Reference				HP Dup 1
Sample Number				None Supplied
Depth (m)				None Supplied
Date Sampled				08/07/2021
Time Taken				None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status	
VOCs				
Chloromethane	µg/kg	1	ISO 17025	< 1.0
Chloroethane	µg/kg	1	NONE	< 1.0
Bromomethane	µg/kg	1	ISO 17025	< 1.0
Vinyl Chloride	µg/kg	1	NONE	< 1.0
Trichlorofluoromethane	µg/kg	1	NONE	< 1.0
1,1-Dichloroethene	µg/kg	1	NONE	< 1.0
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	< 1.0
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0
1,1-Dichloroethane	µg/kg	1	MCERTS	< 1.0
2,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0
Trichloromethane	µg/kg	1	MCERTS	< 1.0
1,1,1-Trichloroethane	µg/kg	1	MCERTS	< 1.0
1,2-Dichloroethane	µg/kg	1	MCERTS	< 1.0
1,1-Dichloropropene	µg/kg	1	MCERTS	< 1.0
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0
Benzene	µg/kg	1	MCERTS	< 1.0
Tetrachloromethane	µg/kg	1	MCERTS	< 1.0
1,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0
Trichloroethene	µg/kg	1	MCERTS	< 1.0
Dibromomethane	µg/kg	1	MCERTS	< 1.0
Bromodichloromethane	µg/kg	1	MCERTS	< 1.0
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0
1,1,2-Trichloroethane	µg/kg	1	MCERTS	< 1.0
1,3-Dichloropropane	µg/kg	1	ISO 17025	< 1.0
Dibromochloromethane	µg/kg	1	ISO 17025	< 1.0
Tetrachloroethene	µg/kg	1	NONE	< 1.0
1,2-Dibromoethane	µg/kg	1	ISO 17025	< 1.0
Chlorobenzene	µg/kg	1	MCERTS	< 1.0
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0
p & m-Xylene	µg/kg	1	MCERTS	< 1.0
Styrene	µg/kg	1	MCERTS	< 1.0
Tribromomethane	µg/kg	1	NONE	< 1.0
o-Xylene	µg/kg	1	MCERTS	< 1.0
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0
Isopropylbenzene	µg/kg	1	MCERTS	< 1.0
Bromobenzene	µg/kg	1	MCERTS	< 1.0
n-Propylbenzene	µg/kg	1	ISO 17025	< 1.0
2-Chlorotoluene	µg/kg	1	MCERTS	< 1.0
4-Chlorotoluene	µg/kg	1	MCERTS	< 1.0
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0
tert-Butylbenzene	µg/kg	1	MCERTS	< 1.0
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0
sec-Butylbenzene	µg/kg	1	MCERTS	< 1.0
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	< 1.0
p-Isopropyltoluene	µg/kg	1	ISO 17025	< 1.0
1,2-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0
1,4-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0
Butylbenzene	µg/kg	1	MCERTS	< 1.0

Analytical Report Number: 21-86295
 Project / Site name: Castlefield Viaduct NT
 Your Order No: PC2387 103 100

Lab Sample Number					1934541
Sample Reference					HP Dup 1
Sample Number					None Supplied
Depth (m)					None Supplied
Date Sampled					08/07/2021
Time Taken					None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	< 1.0	
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	< 1.0	
Hexachlorobutadiene	µg/kg	1	MCERTS	< 1.0	
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	< 1.0	

Analytical Report Number: 21-86295
 Project / Site name: Castlefield Viaduct NT
 Your Order No: PC2387 103 100

Lab Sample Number				1934541
Sample Reference				HP Dup 1
Sample Number				None Supplied
Depth (m)				None Supplied
Date Sampled				08/07/2021
Time Taken				None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status	
SVOCs				
Aniline	mg/kg	0.1	NONE	< 0.1
Phenol	mg/kg	0.2	ISO 17025	< 0.2
2-Chlorophenol	mg/kg	0.1	MCERTS	< 0.1
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	< 0.2
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	< 0.1
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	< 0.1
2-Methylphenol	mg/kg	0.3	MCERTS	< 0.3
Hexachloroethane	mg/kg	0.05	MCERTS	< 0.05
Nitrobenzene	mg/kg	0.3	MCERTS	< 0.3
4-Methylphenol	mg/kg	0.2	NONE	< 0.2
Isophorone	mg/kg	0.2	MCERTS	< 0.2
2-Nitrophenol	mg/kg	0.3	MCERTS	< 0.3
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	< 0.3
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	< 0.3
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	< 0.3
Naphthalene	mg/kg	0.05	MCERTS	12
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	< 0.3
4-Chloroaniline	mg/kg	0.1	NONE	< 0.1
Hexachlorobutadiene	mg/kg	0.1	MCERTS	< 0.1
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	< 0.1
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	< 0.1
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	< 0.2
2-Methylnaphthalene	mg/kg	0.1	NONE	24
2-Chloronaphthalene	mg/kg	0.1	MCERTS	< 0.1
Dimethylphthalate	mg/kg	0.1	MCERTS	< 0.1
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	< 0.1
Acenaphthylene	mg/kg	0.05	MCERTS	23
Acenaphthene	mg/kg	0.05	MCERTS	73
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	< 0.2
Dibenzofuran	mg/kg	0.2	MCERTS	22
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	< 0.3
Diethyl phthalate	mg/kg	0.2	MCERTS	< 0.2
4-Nitroaniline	mg/kg	0.2	MCERTS	< 0.2
Fluorene	mg/kg	0.05	MCERTS	44
Azobenzene	mg/kg	0.3	MCERTS	< 0.3
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	< 0.2
Hexachlorobenzene	mg/kg	0.3	MCERTS	< 0.3
Phenanthrene	mg/kg	0.05	MCERTS	450
Anthracene	mg/kg	0.05	MCERTS	100
Carbazole	mg/kg	0.3	MCERTS	< 0.3
Dibutyl phthalate	mg/kg	0.2	MCERTS	< 0.2
Anthraquinone	mg/kg	0.3	MCERTS	< 0.3
Fluoranthene	mg/kg	0.05	MCERTS	660
Pyrene	mg/kg	0.05	MCERTS	600
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	< 0.3
Benzo(a)anthracene	mg/kg	0.05	MCERTS	310
Chrysene	mg/kg	0.05	MCERTS	220
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	310
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	96
Benzo(a)pyrene	mg/kg	0.05	MCERTS	280

Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT
Your Order No: PC2387 103 100

Lab Sample Number					1934541
Sample Reference					HP Dup 1
Sample Number					None Supplied
Depth (m)					None Supplied
Date Sampled					08/07/2021
Time Taken					None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS		130
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS		28
Benzo(ghi)perylene	mg/kg	0.05	MCERTS		160

Acid Herbicides

2,3,6-TBA	µg/kg	50	NONE	-
2,4,5-T	µg/kg	10	NONE	-
2,4,5-TP (Fenoprop)	µg/kg	10	NONE	-
2,4-D	µg/kg	10	NONE	-
2,4-DB	µg/kg	10	NONE	-
4-CPA	µg/kg	20	NONE	-
Bromacil	µg/kg	10	NONE	-
Bromoxynil	µg/kg	10	NONE	-
Clopyralid	µg/kg	100	NONE	-
Dicamba	µg/kg	20	NONE	-
Diclofop	µg/kg	10	NONE	-
Dichlorprop	µg/kg	10	NONE	-
Dinoseb	µg/kg	10	NONE	-
Flamprop	µg/kg	50	NONE	-
Flamprop-Isopropyl	µg/kg	10	NONE	-
Ioxynil	µg/kg	10	NONE	-
MCPA	µg/kg	10	NONE	-
MCPB	µg/kg	20	NONE	-
MCPB (Mecoprop)	µg/kg	10	NONE	-
Picloram	µg/kg	50	NONE	-

U/S = Unsuitable Sample I/S = Insufficient Sample



Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT

Your Order No: PC2387 103 100

Lab Sample Number				1934564
Sample Reference				SW101
Sample Number				None Supplied
Depth (m)				None Supplied
Date Sampled				08/07/2021
Time Taken				None Supplied
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status	

General Inorganics

pH	pH Units	N/A	ISO 17025	7.6
Sulphate as SO ₄	mg/l	0.045	ISO 17025	16.3
Ammoniacal Nitrogen as N	µg/l	15	ISO 17025	120
Dissolved Organic Carbon (DOC)	mg/l	0.1	ISO 17025	4.16
Alkalinity as CaCO ₃	mg/l	3	ISO 17025	54

Phenols by GC-MS

Phenol	µg/l	0.05	NONE	< 0.05
2,4,5-Trichlorophenol	µg/l	0.05	NONE	< 0.05
2,4,6-Trichlorophenol	µg/l	0.05	NONE	< 0.05
2,4-Dichlorophenol	µg/l	0.05	NONE	< 0.05
2,4-Dimethylphenol	µg/l	0.05	NONE	< 0.05
2-Chlorophenol	µg/l	0.05	NONE	< 0.05
2-Methylphenol	µg/l	0.05	NONE	< 0.05
2-Nitrophenol	µg/l	0.05	NONE	< 0.05
4-Chloro-3-methylphenol	µg/l	0.05	NONE	< 0.05
4-Methylphenol	µg/l	0.05	NONE	< 0.05

Total Phenols

Total Phenols (GC-MS)	µg/l	0.5	NONE	< 0.5
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Heavy Metals / Metalloids

Boron (dissolved)	µg/l	10	ISO 17025	120
Calcium (dissolved)	mg/l	0.012	ISO 17025	21
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0
Chromium (III)	µg/l	1	NONE	1.4

Arsenic (dissolved)	µg/l	0.15	ISO 17025	2.71
Barium (dissolved)	µg/l	0.06	ISO 17025	60
Beryllium (dissolved)	µg/l	0.1	ISO 17025	< 0.1
Cadmium (dissolved)	µg/l	0.02	ISO 17025	< 0.02
Chromium (dissolved)	µg/l	0.2	ISO 17025	1.4
Copper (dissolved)	µg/l	0.5	ISO 17025	8.8
Lead (dissolved)	µg/l	0.2	ISO 17025	8.4
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05
Nickel (dissolved)	µg/l	0.5	ISO 17025	2.5
Selenium (dissolved)	µg/l	0.6	ISO 17025	< 0.6
Vanadium (dissolved)	µg/l	0.2	ISO 17025	1.4
Zinc (dissolved)	µg/l	0.5	ISO 17025	25

Monoaromatics & Oxygenates

Benzene	µg/l	1	ISO 17025	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0
p & m-xylene	µg/l	1	ISO 17025	< 1.0
o-xylene	µg/l	1	ISO 17025	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0



Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT

Your Order No: PC2387 103 100

Lab Sample Number				1934564
Sample Reference				SW101
Sample Number				None Supplied
Depth (m)				None Supplied
Date Sampled				08/07/2021
Time Taken				None Supplied
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status	

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >C5 - C6	µg/l	1	ISO 17025	< 1.0
TPH-CWG - Aliphatic >C6 - C8	µg/l	1	ISO 17025	< 1.0
TPH-CWG - Aliphatic >C8 - C10	µg/l	1	ISO 17025	< 1.0
TPH-CWG - Aliphatic >C10 - C12	µg/l	10	NONE	< 10
TPH-CWG - Aliphatic >C12 - C16	µg/l	10	NONE	< 10
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	NONE	< 10
TPH-CWG - Aliphatic >C21 - C35	µg/l	10	NONE	< 10
TPH-CWG - Aliphatic (C5 - C35)	µg/l	10	NONE	< 10

TPH-CWG - Aromatic >C5 - C7	µg/l	1	ISO 17025	< 1.0
TPH-CWG - Aromatic >C7 - C8	µg/l	1	ISO 17025	< 1.0
TPH-CWG - Aromatic >C8 - C10	µg/l	1	ISO 17025	< 1.0
TPH-CWG - Aromatic >C10 - C12	µg/l	10	NONE	< 10
TPH-CWG - Aromatic >C12 - C16	µg/l	10	NONE	< 10
TPH-CWG - Aromatic >C16 - C21	µg/l	10	NONE	< 10
TPH-CWG - Aromatic >C21 - C35	µg/l	10	NONE	< 10
TPH-CWG - Aromatic (C5 - C35)	µg/l	10	NONE	< 10



Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT

Your Order No: PC2387 103 100

Lab Sample Number				1934564
Sample Reference				SW101
Sample Number				None Supplied
Depth (m)				None Supplied
Date Sampled				08/07/2021
Time Taken				None Supplied
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status	

VOCs

Chloromethane	µg/l	1	ISO 17025	< 1.0
Chloroethane	µg/l	1	ISO 17025	< 1.0
Bromomethane	µg/l	1	ISO 17025	< 1.0
Vinyl Chloride	µg/l	1	NONE	< 1.0
Trichlorofluoromethane	µg/l	1	NONE	< 1.0
1,1-Dichloroethene	µg/l	1	ISO 17025	< 1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	1	ISO 17025	< 1.0
Cis-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0
1,1-Dichloroethane	µg/l	1	ISO 17025	< 1.0
2,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0
Trichloromethane	µg/l	1	ISO 17025	< 1.0
1,1,1-Trichloroethane	µg/l	1	ISO 17025	< 1.0
1,2-Dichloroethane	µg/l	1	ISO 17025	< 1.0
1,1-Dichloropropene	µg/l	1	ISO 17025	< 1.0
Trans-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0
Benzene	µg/l	1	ISO 17025	< 1.0
Tetrachloromethane	µg/l	1	ISO 17025	< 1.0
1,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0
Trichloroethene	µg/l	1	ISO 17025	< 1.0
Dibromomethane	µg/l	1	ISO 17025	< 1.0
Bromodichloromethane	µg/l	1	ISO 17025	< 1.0
Cis-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0
Trans-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0
1,1,2-Trichloroethane	µg/l	1	ISO 17025	< 1.0
1,3-Dichloropropane	µg/l	1	ISO 17025	< 1.0
Dibromochloromethane	µg/l	1	ISO 17025	< 1.0
Tetrachloroethene	µg/l	1	ISO 17025	< 1.0
1,2-Dibromoethane	µg/l	1	ISO 17025	< 1.0
Chlorobenzene	µg/l	1	ISO 17025	< 1.0
1,1,1,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0
p & m-Xylene	µg/l	1	ISO 17025	< 1.0
Styrene	µg/l	1	ISO 17025	< 1.0
Tribromomethane	µg/l	1	ISO 17025	< 1.0
o-Xylene	µg/l	1	ISO 17025	< 1.0
1,1,2,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0
Isopropylbenzene	µg/l	1	ISO 17025	< 1.0
Bromobenzene	µg/l	1	ISO 17025	< 1.0
n-Propylbenzene	µg/l	1	ISO 17025	< 1.0
2-Chlorotoluene	µg/l	1	ISO 17025	< 1.0
4-Chlorotoluene	µg/l	1	ISO 17025	< 1.0
1,3,5-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0
tert-Butylbenzene	µg/l	1	ISO 17025	< 1.0
1,2,4-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0
sec-Butylbenzene	µg/l	1	ISO 17025	< 1.0
1,3-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0
p-Isopropyltoluene	µg/l	1	ISO 17025	< 1.0
1,2-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0
1,4-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0
Butylbenzene	µg/l	1	ISO 17025	< 1.0



Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT

Your Order No: PC2387 103 100

Lab Sample Number					1934564
Sample Reference					SW101
Sample Number					None Supplied
Depth (m)					None Supplied
Date Sampled					08/07/2021
Time Taken					None Supplied
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status		
1,2-Dibromo-3-chloropropane	µg/l	1	ISO 17025	< 1.0	
1,2,4-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	
Hexachlorobutadiene	µg/l	1	ISO 17025	< 1.0	
1,2,3-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	



Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT

Your Order No: PC2387 103 100

Lab Sample Number				1934564
Sample Reference				SW101
Sample Number				None Supplied
Depth (m)				None Supplied
Date Sampled				08/07/2021
Time Taken				None Supplied
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status	

SVOCs

Aniline	µg/l	0.05	NONE	< 0.05
Phenol	µg/l	0.05	NONE	< 0.05
2-Chlorophenol	µg/l	0.05	NONE	< 0.05
Bis(2-chloroethyl)ether	µg/l	0.05	NONE	< 0.05
1,3-Dichlorobenzene	µg/l	0.05	NONE	< 0.05
1,2-Dichlorobenzene	µg/l	0.05	NONE	< 0.05
1,4-Dichlorobenzene	µg/l	0.05	NONE	< 0.05
Bis(2-chloroisopropyl)ether	µg/l	0.05	NONE	< 0.05
2-Methylphenol	µg/l	0.05	NONE	< 0.05
Hexachloroethane	µg/l	0.05	NONE	< 0.05
Nitrobenzene	µg/l	0.05	NONE	< 0.05
4-Methylphenol	µg/l	0.05	NONE	< 0.05
Isophorone	µg/l	0.05	NONE	< 0.05
2-Nitrophenol	µg/l	0.05	NONE	< 0.05
2,4-Dimethylphenol	µg/l	0.05	NONE	< 0.05
Bis(2-chloroethoxy)methane	µg/l	0.05	NONE	< 0.05
1,2,4-Trichlorobenzene	µg/l	0.05	NONE	< 0.05
Naphthalene	µg/l	0.01	ISO 17025	< 0.01
2,4-Dichlorophenol	µg/l	0.05	NONE	< 0.05
4-Chloroaniline	µg/l	0.05	NONE	< 0.05
Hexachlorobutadiene	µg/l	0.05	NONE	< 0.05
4-Chloro-3-methylphenol	µg/l	0.05	NONE	< 0.05
2,4,6-Trichlorophenol	µg/l	0.05	NONE	< 0.05
2,4,5-Trichlorophenol	µg/l	0.05	NONE	< 0.05
2-Methylnaphthalene	µg/l	0.05	NONE	< 0.05
2-Chloronaphthalene	µg/l	0.05	NONE	< 0.05
Dimethylphthalate	µg/l	0.05	NONE	< 0.05
2,6-Dinitrotoluene	µg/l	0.05	NONE	< 0.05
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	0.02
2,4-Dinitrotoluene	µg/l	0.05	NONE	< 0.05
Dibenzofuran	µg/l	0.05	NONE	< 0.05
4-Chlorophenyl phenyl ether	µg/l	0.05	NONE	< 0.05
Diethyl phthalate	µg/l	0.05	NONE	< 0.05
4-Nitroaniline	µg/l	0.05	NONE	< 0.05
Fluorene	µg/l	0.01	ISO 17025	0.03
Azobenzene	µg/l	0.05	NONE	< 0.05
Bromophenyl phenyl ether	µg/l	0.05	NONE	< 0.05
Hexachlorobenzene	µg/l	0.05	NONE	< 0.05
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01
Carbazole	µg/l	0.05	NONE	< 0.05
Dibutyl phthalate	µg/l	0.05	NONE	< 0.05
Anthraquinone	µg/l	0.05	NONE	< 0.05
Fluoranthene	µg/l	0.01	ISO 17025	0.02
Pyrene	µg/l	0.01	ISO 17025	0.01
Butyl benzyl phthalate	µg/l	0.05	NONE	< 0.05
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01



Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT

Your Order No: PC2387 103 100

Lab Sample Number					1934564
Sample Reference					SW101
Sample Number					None Supplied
Depth (m)					None Supplied
Date Sampled					08/07/2021
Time Taken					None Supplied
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status		
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	

3&4-Methylphenol	µg/l	0.1	NONE	< 0.10	
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Environmental Forensics

Fluoranthene (low level)	µg/l	0.002	NONE	0.020	
Benzo(b)fluoranthene (low level)	µg/l	0.002	NONE	< 0.002	
Benzo(k)fluoranthene (low level)	µg/l	0.002	NONE	< 0.002	
Benzo(a)pyrene (low level)	µg/l	0.002	NONE	< 0.002	
Indeno(1,2,3-cd)pyrene (low level)	µg/l	0.002	NONE	< 0.002	
Benzo(ghi)perylene (low level)	µg/l	0.002	NONE	< 0.002	
Naphthalene (low level)	µg/l	0.002	NONE	< 0.0020	
Acenaphthylene (low level)	µg/l	0.002	NONE	< 0.0020	
Acenaphthene (low level)	µg/l	0.002	NONE	0.020	
Fluorene (low level)	µg/l	0.002	NONE	0.030	
Phenanthrene (low level)	µg/l	0.002	NONE	< 0.0020	
Antracene (low level)	µg/l	0.002	NONE	< 0.0020	
Pyrene (low level)	µg/l	0.002	NONE	0.010	
Benzo(a)anthracene (low level)	µg/l	0.002	NONE	< 0.0020	
Chrysene (low level)	µg/l	0.002	NONE	< 0.0020	
Di-benzo(a,h)anthracene (low level)	µg/l	0.002	NONE	< 0.0020	

U/S = Unsuitable Sample I/S = Insufficient Sample



Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT

Your Order No: PC2387 103 100

Lab Sample Number	1934552	1934553	1934554	1934555	1934556
Sample Reference	HP101	HP102	HP103	HP104	HP105
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	0.00-0.25	0.00-0.30	0.00-0.15	0.00-0.30	0.00-0.20
Date Sampled	08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status		

General Inorganics

pH	pH Units	N/A	ISO 17025	7.7	7.9	8.0	8.0	7.9
Sulphate as SO4	mg/l	0.1	ISO 17025	4.2	3.0	3.5	3.0	4.5
Ammoniacal Nitrogen as N	µg/l	15	NONE	34	35	< 15	< 15	< 15
Alkalinity as CaCO3	mg/l	3	ISO 17025	86	56	69	110	77

Phenols by GC-MS

Phenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4,5-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4,6-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4-Dichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4-Dimethylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Chlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Nitrophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chloro-3-methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05

Total Phenols

Total Phenols (GC-MS)	µg/l	0.5	NONE	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
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Heavy Metals / Metalloids

Arsenic (dissolved)	µg/l	1	ISO 17025	2.8	< 1.0	4.2	< 1.0	< 1.0
Barium (dissolved)	µg/l	0.05	ISO 17025	92	45	130	95	140
Beryllium (dissolved)	µg/l	0.2	ISO 17025	< 0.2	< 0.2	0.4	< 0.2	0.4
Boron (dissolved)	µg/l	10	ISO 17025	28	16	18	23	17
Cadmium (dissolved)	µg/l	0.08	ISO 17025	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chromium (III)	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chromium (dissolved)	µg/l	0.4	ISO 17025	0.4	< 0.4	< 0.4	0.6	0.4
Copper (dissolved)	µg/l	0.7	ISO 17025	24	20	6.8	8.2	6.7
Lead (dissolved)	µg/l	1	ISO 17025	5.6	2.3	5.2	2.1	9.6
Mercury (dissolved)	µg/l	0.5	ISO 17025	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Nickel (dissolved)	µg/l	0.3	ISO 17025	3.7	1.6	2.7	2.6	2.6
Selenium (dissolved)	µg/l	4	ISO 17025	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Vanadium (dissolved)	µg/l	1.7	ISO 17025	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7
Zinc (dissolved)	µg/l	0.4	ISO 17025	28	6.0	3.8	4.3	3.4

Monoaromatics & Oxygenates

Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10



Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT

Your Order No: PC2387 103 100

Lab Sample Number				1934552	1934553	1934554	1934555	1934556
Sample Reference				HP101	HP102	HP103	HP104	HP105
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.00-0.25	0.00-0.30	0.00-0.15	0.00-0.30	0.00-0.20
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status					

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >C5 - C6	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C6 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C16	µg/l	10	NONE	-	-	-	-	-
TPH-CWG - Aliphatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic (C5 - C35)	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10

TPH-CWG - Aromatic >C5 - C7	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C16	µg/l	10	NONE	-	-	-	-	-
TPH-CWG - Aromatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C10 - C16	µg/l	10	NONE	-	-	-	-	-
TPH-CWG - Aromatic >C10 - C35	µg/l	10	NONE	-	-	-	-	-
TPH-CWG - Aromatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (C5 - C35)	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10

Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT

Your Order No: PC2387 103 100

Lab Sample Number				1934552	1934553	1934554	1934555	1934556
Sample Reference				HP101	HP102	HP103	HP104	HP105
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.00-0.25	0.00-0.30	0.00-0.15	0.00-0.30	0.00-0.20
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status					

VOCs

Chloromethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl Chloride	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-dichloroethene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,2-dichloroethene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-dichloroethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,2-Dichloropropane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloromethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-dichloroethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloropropene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,2-dichloroethene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloromethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-dichloropropane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromomethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,3-dichloropropene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,3-dichloropropene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichloropropane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromochloromethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromoethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Styrene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tri bromomethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromobenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
n-Propylbenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Chlorotoluene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Chlorotoluene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
ter-Butylbenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
sec-Butylbenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-dichlorobenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
P-Isopropyltoluene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-dichlorobenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-dichlorobenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Butylbenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromo-3-chloropropane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0



Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT

Your Order No: PC2387 103 100

Lab Sample Number				1934552	1934553	1934554	1934555	1934556
Sample Reference				HP101	HP102	HP103	HP104	HP105
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.00-0.25	0.00-0.30	0.00-0.15	0.00-0.30	0.00-0.20
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status					
1,2,4-Trichlorobenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Hexachlorobutadiene	µg/l	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,2,3-Trichlorobenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0



Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT

Your Order No: PC2387 103 100

Lab Sample Number				1934552	1934553	1934554	1934555	1934556
Sample Reference				HP101	HP102	HP103	HP104	HP105
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.00-0.25	0.00-0.30	0.00-0.15	0.00-0.30	0.00-0.20
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status					

SVOCs

Aniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Chlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bis(2-chloroethyl)ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,3-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,2-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,4-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bis(2-chloroisopropyl)ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Hexachloroethane	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nitrobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Isophorone	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Nitrophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4-Dimethylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bis(2-chloroethoxy)methane	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,2,4-Trichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Naphthalene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2,4-Dichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chloroaniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobutadiene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chloro-3-methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4,6-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4,5-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Methylnaphthalene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Chloronaphthalene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dimethylphthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,6-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	µg/l	0.01	NONE	< 0.01	< 0.01	0.02	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	NONE	0.07	0.07	0.10	0.05	0.12
2,4-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dibenzofuran	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chlorophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Diethyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Nitroaniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	µg/l	0.01	NONE	0.08	0.07	0.07	0.05	0.06
Azobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bromophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Phenanthrene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	0.09
Anthracene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	0.06
Carbazole	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dibutyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Anthraquinone	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	µg/l	0.01	NONE	0.16	0.08	0.39	0.03	0.14
Pyrene	µg/l	0.01	NONE	0.16	0.07	0.40	0.03	0.16
Butyl benzyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)anthracene	µg/l	0.01	NONE	0.07	0.04	0.13	< 0.01	0.11
Chrysene	µg/l	0.01	NONE	0.05	0.02	0.12	< 0.01	0.07
Benzo(b)fluoranthene	µg/l	0.01	NONE	0.05	< 0.01	0.12	< 0.01	0.11
Benzo(k)fluoranthene	µg/l	0.01	NONE	0.03	< 0.01	0.05	< 0.01	0.10
Benzo(a)pyrene	µg/l	0.01	NONE	0.05	< 0.01	0.10	< 0.01	0.14



Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT

Your Order No: PC2387 103 100

Lab Sample Number				1934552	1934553	1934554	1934555	1934556
Sample Reference				HP101	HP102	HP103	HP104	HP105
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.00-0.25	0.00-0.30	0.00-0.15	0.00-0.30	0.00-0.20
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status					
Indeno(1,2,3-cd)pyrene	µg/l	0.01	NONE	< 0.01	< 0.01	0.04	< 0.01	0.07
Dibenz(a,h)anthracene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	0.02
Benzo(ghi)perylene	µg/l	0.01	NONE	< 0.01	< 0.01	0.07	< 0.01	0.10

Phenyl Urea Pesticides

Benazolin	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	-	-
Bromoxynil	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	-	-
Clopyralid	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	-	-

Environmental Forensics

Fluoranthene (low level)	µg/l	0.002	NONE	0.16	0.080	0.39	0.030	0.14
Benzo(b)fluoranthene (low level)	µg/l	0.002	NONE	0.050	< 0.002	0.12	< 0.002	0.11
Benzo(k)fluoranthene (low level)	µg/l	0.002	NONE	0.030	< 0.002	0.050	< 0.002	0.10
Benzo(a)pyrene (low level)	µg/l	0.002	NONE	0.050	< 0.002	0.10	< 0.002	0.14
Indeno(1,2,3-cd)pyrene (low level)	µg/l	0.002	NONE	< 0.002	< 0.002	0.040	< 0.002	0.070
Benzo(ghi)perylene (low level)	µg/l	0.002	NONE	< 0.002	< 0.002	0.070	< 0.002	0.10
Naphthalene (low level)	µg/l	0.002	NONE	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Acenaphthylene (low level)	µg/l	0.002	NONE	< 0.0020	< 0.0020	0.020	< 0.0020	< 0.0020
Acenaphthene (low level)	µg/l	0.002	NONE	0.070	0.070	0.10	0.050	0.12
Fluorene (low level)	µg/l	0.002	NONE	0.080	0.070	0.070	0.050	0.060
Phenanthrene (low level)	µg/l	0.002	NONE	< 0.0020	< 0.0020	< 0.0020	< 0.0020	0.090
Antracene (low level)	µg/l	0.002	NONE	< 0.0020	< 0.0020	< 0.0020	< 0.0020	0.060
Pyrene (low level)	µg/l	0.002	NONE	0.16	0.070	0.40	0.030	0.16
Benzo(a)anthracene (low level)	µg/l	0.002	NONE	0.070	0.040	0.13	< 0.0020	0.11
Chrysene (low level)	µg/l	0.002	NONE	0.050	0.020	0.12	< 0.0020	0.070
Di-benzo(a,h)anthracene (low level)	µg/l	0.002	NONE	< 0.0020	< 0.0020	< 0.0020	< 0.0020	0.020

Acid Herbicides

2,4,5-T	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	-	-
2,4,5-TP	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	-	-
2,4-D	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	-	-
2,4-DB	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	-	-
Dicamba	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	-	-
Dichlorprop	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	-	-
Dinoseb	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	-	-
MCPA	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	-	-
MCPB	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	-	-
MCPB (Mecoprop)	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	-	-
Picloram	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	-	-
Bentazone	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	-	-

U/S = Unsuitable Sample I/S = Insufficient Sample



Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT

Your Order No: PC2387 103 100

Lab Sample Number	1934557				1934558	1934559	1934560	1934561
Sample Reference	HP106				HP107	HP108	HP109	HP110
Sample Number	None Supplied				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	0.00-0.30				0.00-0.30	0.00-0.30	0.00-0.15	0.00-0.10
Date Sampled	08/07/2021				08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken	None Supplied				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status					

General Inorganics

pH	pH Units	N/A	ISO 17025	8.1	8.1	7.9	7.9	8.0
Sulphate as SO4	mg/l	0.1	ISO 17025	2.5	2.4	2.5	3.5	7.6
Ammoniacal Nitrogen as N	µg/l	15	NONE	< 15	< 15	42	< 15	16
Alkalinity as CaCO3	mg/l	3	ISO 17025	81	66	77	110	72

Phenols by GC-MS

Phenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4,5-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4,6-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4-Dichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4-Dimethylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Chlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Nitrophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chloro-3-methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05

Total Phenols

Total Phenols (GC-MS)	µg/l	0.5	NONE	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
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Heavy Metals / Metalloids

Arsenic (dissolved)	µg/l	1	ISO 17025	< 1.0	< 1.0	5.4	5.5	< 1.0
Barium (dissolved)	µg/l	0.05	ISO 17025	93	110	73	180	95
Beryllium (dissolved)	µg/l	0.2	ISO 17025	0.4	0.3	< 0.2	< 0.2	< 0.2
Boron (dissolved)	µg/l	10	ISO 17025	18	16	21	20	18
Cadmium (dissolved)	µg/l	0.08	ISO 17025	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chromium (III)	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chromium (dissolved)	µg/l	0.4	ISO 17025	0.5	0.5	0.6	< 0.4	0.5
Copper (dissolved)	µg/l	0.7	ISO 17025	5.2	11	17	7.2	9.1
Lead (dissolved)	µg/l	1	ISO 17025	2.6	7.7	7.0	4.1	5.9
Mercury (dissolved)	µg/l	0.5	ISO 17025	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Nickel (dissolved)	µg/l	0.3	ISO 17025	1.8	2.7	2.4	2.6	2.2
Selenium (dissolved)	µg/l	4	ISO 17025	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Vanadium (dissolved)	µg/l	1.7	ISO 17025	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7
Zinc (dissolved)	µg/l	0.4	ISO 17025	3.4	3.8	8.5	3.7	6.8

Monoaromatics & Oxygenates

Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10



Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT

Your Order No: PC2387 103 100

Lab Sample Number				1934557	1934558	1934559	1934560	1934561
Sample Reference				HP106	HP107	HP108	HP109	HP110
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.00-0.30	0.00-0.30	0.00-0.30	0.00-0.15	0.00-0.10
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status					

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >C5 - C6	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C6 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C16	µg/l	10	NONE	-	-	-	-	-
TPH-CWG - Aliphatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic (C5 - C35)	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10

TPH-CWG - Aromatic >C5 - C7	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C16	µg/l	10	NONE	-	-	-	-	-
TPH-CWG - Aromatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C10 - C16	µg/l	10	NONE	-	-	-	-	-
TPH-CWG - Aromatic >C10 - C35	µg/l	10	NONE	-	-	-	-	-
TPH-CWG - Aromatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (C5 - C35)	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10

Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT

Your Order No: PC2387 103 100

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Sample Reference				HP106	HP107	HP108	HP109	HP110
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.00-0.30	0.00-0.30	0.00-0.30	0.00-0.15	0.00-0.10
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status					

VOCs

Chloromethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl Chloride	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-dichloroethene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,2-dichloroethene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-dichloroethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,2-Dichloropropane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloromethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-dichloroethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloropropene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,2-dichloroethene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloromethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-dichloropropane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromomethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,3-dichloropropene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,3-dichloropropene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichloropropane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromochloromethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromoethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Styrene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tribromomethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromobenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
n-Propylbenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Chlorotoluene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Chlorotoluene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
ter-Butylbenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
sec-Butylbenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-dichlorobenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
P-Isopropyltoluene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-dichlorobenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-dichlorobenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Butylbenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromo-3-chloropropane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0



Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT

Your Order No: PC2387 103 100

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Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.00-0.30	0.00-0.30	0.00-0.30	0.00-0.15	0.00-0.10
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status					
1,2,4-Trichlorobenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Hexachlorobutadiene	µg/l	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,2,3-Trichlorobenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0



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Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.00-0.30	0.00-0.30	0.00-0.30	0.00-0.15	0.00-0.10
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status		

SVOCs

Aniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Chlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bis(2-chloroethyl)ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,3-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,2-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,4-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bis(2-chloroisopropyl)ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Hexachloroethane	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nitrobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Isophorone	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Nitrophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4-Dimethylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bis(2-chloroethoxy)methane	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,2,4-Trichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Naphthalene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2,4-Dichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chloroaniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobutadiene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chloro-3-methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4,6-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4,5-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Methylnaphthalene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Chloronaphthalene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dimethylphthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,6-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	NONE	0.07	0.08	0.05	0.24	0.04
2,4-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dibenzofuran	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chlorophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Diethyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Nitroaniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	µg/l	0.01	NONE	0.05	0.06	0.05	0.10	0.03
Azobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bromophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Phenanthrene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	0.46	< 0.01
Anthracene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	0.14	< 0.01
Carbazole	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dibutyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Anthraquinone	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	µg/l	0.01	NONE	0.11	0.62	0.08	1.6	0.21
Pyrene	µg/l	0.01	NONE	0.12	0.72	0.08	1.8	0.20
Butyl benzyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)anthracene	µg/l	0.01	NONE	0.05	0.27	< 0.01	0.58	0.09
Chrysene	µg/l	0.01	NONE	0.05	0.30	< 0.01	0.60	0.07
Benzo(b)fluoranthene	µg/l	0.01	NONE	0.05	0.34	< 0.01	0.89	0.11
Benzo(k)fluoranthene	µg/l	0.01	NONE	0.03	0.18	< 0.01	0.36	0.05
Benzo(a)pyrene	µg/l	0.01	NONE	0.05	0.32	< 0.01	0.81	0.11



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Your Order No: PC2387 103 100

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Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.00-0.30	0.00-0.30	0.00-0.30	0.00-0.15	0.00-0.10
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status					
Indeno(1,2,3-cd)pyrene	µg/l	0.01	NONE	< 0.01	0.14	< 0.01	0.42	0.09
Dibenz(a,h)anthracene	µg/l	0.01	NONE	< 0.01	0.05	< 0.01	0.14	< 0.01
Benzo(ghi)perylene	µg/l	0.01	NONE	< 0.01	0.22	< 0.01	0.64	0.13

Phenyl Urea Pesticides

Benazolin	µg/l	0.01	NONE	-	-	-	-	-
Bromoxynil	µg/l	0.01	NONE	-	-	-	-	-
Clopyralid	µg/l	0.01	NONE	-	-	-	-	-

Environmental Forensics

Fluoranthene (low level)	µg/l	0.002	NONE	0.11	0.62	0.080	1.6	0.21
Benzo(b)fluoranthene (low level)	µg/l	0.002	NONE	0.050	0.34	< 0.002	0.89	0.11
Benzo(k)fluoranthene (low level)	µg/l	0.002	NONE	0.030	0.18	< 0.002	0.36	0.050
Benzo(a)pyrene (low level)	µg/l	0.002	NONE	0.050	0.32	< 0.002	0.81	0.11
Indeno(1,2,3-cd)pyrene (low level)	µg/l	0.002	NONE	< 0.002	0.14	< 0.002	0.42	0.090
Benzo(ghi)perylene (low level)	µg/l	0.002	NONE	< 0.002	0.22	< 0.002	0.64	0.13
Naphthalene (low level)	µg/l	0.002	NONE	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Acenaphthylene (low level)	µg/l	0.002	NONE	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Acenaphthene (low level)	µg/l	0.002	NONE	0.070	0.080	0.050	0.24	0.040
Fluorene (low level)	µg/l	0.002	NONE	0.050	0.060	0.050	0.10	0.030
Phenanthrene (low level)	µg/l	0.002	NONE	< 0.0020	< 0.0020	< 0.0020	0.46	< 0.0020
Antracene (low level)	µg/l	0.002	NONE	< 0.0020	< 0.0020	< 0.0020	0.14	< 0.0020
Pyrene (low level)	µg/l	0.002	NONE	0.12	0.72	0.080	1.8	0.20
Benzo(a)anthracene (low level)	µg/l	0.002	NONE	0.050	0.27	< 0.0020	0.58	0.090
Chrysene (low level)	µg/l	0.002	NONE	0.050	0.30	< 0.0020	0.60	0.070
Di-benzo(a,h)anthracene (low level)	µg/l	0.002	NONE	< 0.0020	0.050	< 0.0020	0.14	< 0.0020

Acid Herbicides

2,4,5-T	µg/l	0.02	NONE	-	-	-	-	-
2,4,5-TP	µg/l	0.02	NONE	-	-	-	-	-
2,4-D	µg/l	0.02	NONE	-	-	-	-	-
2,4-DB	µg/l	0.02	NONE	-	-	-	-	-
Dicamba	µg/l	0.02	NONE	-	-	-	-	-
Dichlorprop	µg/l	0.02	NONE	-	-	-	-	-
Dinoseb	µg/l	0.02	NONE	-	-	-	-	-
MCPA	µg/l	0.02	NONE	-	-	-	-	-
MCPB	µg/l	0.02	NONE	-	-	-	-	-
MCPP (Mecoprop)	µg/l	0.02	NONE	-	-	-	-	-
Picloram	µg/l	0.02	NONE	-	-	-	-	-
Bentazone	µg/l	0.02	NONE	-	-	-	-	-

U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT

Your Order No: PC2387 103 100

Lab Sample Number	1934562	1934563	1935614	1935615	1935616
Sample Reference	HP Dup 1	HP Dup Ballast	HP101 B	HP102 B	HP103 B
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	None Supplied	None Supplied	0.00-0.25	0.00-0.30	0.00-0.15
Date Sampled	08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status		

General Inorganics

pH	pH Units	N/A	ISO 17025	8.0	7.5	7.3	7.7	7.4
Sulphate as SO4	mg/l	0.1	ISO 17025	7.7	0.9	1.1	1.1	1.6
Ammoniacal Nitrogen as N	µg/l	15	NONE	< 15	26	35	33	42
Alkalinity as CaCO3	mg/l	3	ISO 17025	71	6.5	< 3.0	6.5	< 3.0

Phenols by GC-MS

Phenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4,5-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4,6-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4-Dichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4-Dimethylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Chlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Nitrophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chloro-3-methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05

Total Phenols

Total Phenols (GC-MS)	µg/l	0.5	NONE	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
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Heavy Metals / Metalloids

Arsenic (dissolved)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Barium (dissolved)	µg/l	0.05	ISO 17025	94	11	16	11	32
Beryllium (dissolved)	µg/l	0.2	ISO 17025	0.3	0.5	0.4	0.4	0.5
Boron (dissolved)	µg/l	10	ISO 17025	16	< 10	< 10	< 10	< 10
Cadmium (dissolved)	µg/l	0.08	ISO 17025	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chromium (III)	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	1.1
Chromium (dissolved)	µg/l	0.4	ISO 17025	0.6	0.4	0.5	0.6	1.1
Copper (dissolved)	µg/l	0.7	ISO 17025	12	1.6	7.2	3.7	5.9
Lead (dissolved)	µg/l	1	ISO 17025	5.5	4.7	9.8	1.4	23
Mercury (dissolved)	µg/l	0.5	ISO 17025	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Nickel (dissolved)	µg/l	0.3	ISO 17025	2.8	2.4	3.5	2.5	3.4
Selenium (dissolved)	µg/l	4	ISO 17025	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Vanadium (dissolved)	µg/l	1.7	ISO 17025	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7
Zinc (dissolved)	µg/l	0.4	ISO 17025	6.9	5.7	13	4.5	13

Monoaromatics & Oxygenates

Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10



Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT

Your Order No: PC2387 103 100

Lab Sample Number				1934562	1934563	1935614	1935615	1935616
Sample Reference				HP Dup 1	HP Dup Ballast	HP101 B	HP102 B	HP103 B
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	0.00-0.25	0.00-0.30	0.00-0.15
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status					

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >C5 - C6	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C6 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C16	µg/l	10	NONE	< 10	-	-	-	-
TPH-CWG - Aliphatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic (C5 - C35)	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10

TPH-CWG - Aromatic >C5 - C7	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C16	µg/l	10	NONE	< 10	-	-	-	-
TPH-CWG - Aromatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C10 - C16	µg/l	10	NONE	< 10	-	-	-	-
TPH-CWG - Aromatic >C10 - C35	µg/l	10	NONE	< 10	-	-	-	-
TPH-CWG - Aromatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (C5 - C35)	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10



Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT

Your Order No: PC2387 103 100

Lab Sample Number				1934562	1934563	1935614	1935615	1935616
Sample Reference				HP Dup 1	HP Dup Ballast	HP101 B	HP102 B	HP103 B
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	0.00-0.25	0.00-0.30	0.00-0.15
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status					

VOCs

Chloromethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl Chloride	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-dichloroethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,2-dichloroethene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-dichloroethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,2-Dichloropropane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloromethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-dichloroethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloropropene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,2-dichloroethene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloromethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-dichloropropane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromomethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,3-dichloropropene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,3-dichloropropene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichloropropane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromochloromethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromoethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Styrene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tribromomethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromobenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
n-Propylbenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Chlorotoluene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Chlorotoluene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
ter-Butylbenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
sec-Butylbenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-dichlorobenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
P-Isopropyltoluene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-dichlorobenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-dichlorobenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Butylbenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromo-3-chloropropane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0



Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT

Your Order No: PC2387 103 100

Lab Sample Number				1934562	1934563	1935614	1935615	1935616
Sample Reference				HP Dup 1	HP Dup Ballast	HP101 B	HP102 B	HP103 B
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	0.00-0.25	0.00-0.30	0.00-0.15
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status					
1,2,4-Trichlorobenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Hexachlorobutadiene	µg/l	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,2,3-Trichlorobenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Analytical Report Number: 21-86295
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Lab Sample Number				1934562	1934563	1935614	1935615	1935616
Sample Reference				HP Dup 1	HP Dup Ballast	HP101 B	HP102 B	HP103 B
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	0.00-0.25	0.00-0.30	0.00-0.15
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status					

SVOCs

Aniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Chlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bis(2-chloroethyl)ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,3-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,2-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,4-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bis(2-chloroisopropyl)ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Hexachloroethane	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nitrobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Isophorone	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Nitrophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4-Dimethylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bis(2-chloroethoxy)methane	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,2,4-Trichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Naphthalene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2,4-Dichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chloroaniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobutadiene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chloro-3-methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4,6-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4,5-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Methylnaphthalene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Chloronaphthalene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dimethylphthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,6-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	NONE	0.03	0.04	0.04	0.02	0.06
2,4-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dibenzofuran	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chlorophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Diethyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Nitroaniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	µg/l	0.01	NONE	0.02	0.03	0.03	0.02	0.03
Azobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bromophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Phenanthrene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Anthracene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Carbazole	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dibutyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Anthraquinone	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	µg/l	0.01	NONE	0.06	0.02	0.04	0.01	0.06
Pyrene	µg/l	0.01	NONE	0.08	0.02	0.04	0.02	0.07
Butyl benzyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)anthracene	µg/l	0.01	NONE	0.07	< 0.01	< 0.01	< 0.01	0.04
Chrysene	µg/l	0.01	NONE	0.07	< 0.01	< 0.01	< 0.01	0.02
Benzo(b)fluoranthene	µg/l	0.01	NONE	0.09	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	NONE	0.07	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	NONE	0.09	< 0.01	< 0.01	< 0.01	< 0.01



Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT

Your Order No: PC2387 103 100

Lab Sample Number				1934562	1934563	1935614	1935615	1935616
Sample Reference				HP Dup 1	HP Dup Ballast	HP101 B	HP102 B	HP103 B
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	0.00-0.25	0.00-0.30	0.00-0.15
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status					
Indeno(1,2,3-cd)pyrene	µg/l	0.01	NONE	0.05	< 0.01	< 0.01	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	NONE	0.07	< 0.01	< 0.01	< 0.01	< 0.01

Phenyl Urea Pesticides

Benazolin	µg/l	0.01	NONE	-	-	-	-	-
Bromoxynil	µg/l	0.01	NONE	-	-	-	-	-
Clopyralid	µg/l	0.01	NONE	-	-	-	-	-

Environmental Forensics

Fluoranthene (low level)	µg/l	0.002	NONE	0.060	0.020	0.040	0.010	0.060
Benzo(b)fluoranthene (low level)	µg/l	0.002	NONE	0.090	< 0.002	< 0.002	< 0.002	< 0.002
Benzo(k)fluoranthene (low level)	µg/l	0.002	NONE	0.070	< 0.002	< 0.002	< 0.002	< 0.002
Benzo(a)pyrene (low level)	µg/l	0.002	NONE	0.090	< 0.002	< 0.002	< 0.002	< 0.002
Indeno(1,2,3-cd)pyrene (low level)	µg/l	0.002	NONE	0.050	< 0.002	< 0.002	< 0.002	< 0.002
Benzo(ghi)perylene (low level)	µg/l	0.002	NONE	0.070	< 0.002	< 0.002	< 0.002	< 0.002
Naphthalene (low level)	µg/l	0.002	NONE	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Acenaphthylene (low level)	µg/l	0.002	NONE	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Acenaphthene (low level)	µg/l	0.002	NONE	0.030	0.040	0.040	0.020	0.060
Fluorene (low level)	µg/l	0.002	NONE	0.020	0.030	0.030	0.020	0.030
Phenanthrene (low level)	µg/l	0.002	NONE	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Antracene (low level)	µg/l	0.002	NONE	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Pyrene (low level)	µg/l	0.002	NONE	0.080	0.020	0.040	0.020	0.070
Benzo(a)anthracene (low level)	µg/l	0.002	NONE	0.070	< 0.0020	< 0.0020	< 0.0020	0.040
Chrysene (low level)	µg/l	0.002	NONE	0.070	< 0.0020	< 0.0020	< 0.0020	0.020
Di-benzo(a,h)anthracene (low level)	µg/l	0.002	NONE	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020

Acid Herbicides

2,4,5-T	µg/l	0.02	NONE	-	-	-	-	-
2,4,5-TP	µg/l	0.02	NONE	-	-	-	-	-
2,4-D	µg/l	0.02	NONE	-	-	-	-	-
2,4-DB	µg/l	0.02	NONE	-	-	-	-	-
Dicamba	µg/l	0.02	NONE	-	-	-	-	-
Dichlorprop	µg/l	0.02	NONE	-	-	-	-	-
Dinoseb	µg/l	0.02	NONE	-	-	-	-	-
MCPA	µg/l	0.02	NONE	-	-	-	-	-
MCPB	µg/l	0.02	NONE	-	-	-	-	-
MCPP (Mecoprop)	µg/l	0.02	NONE	-	-	-	-	-
Picloram	µg/l	0.02	NONE	-	-	-	-	-
Bentazone	µg/l	0.02	NONE	-	-	-	-	-

U/S = Unsuitable Sample I/S = Insufficient Sample



Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT

Your Order No: PC2387 103 100

Lab Sample Number	1935617	1935618	1935619	1935620	1935621
Sample Reference	HP104 B	HP105 B	HP106 B	HP107 B	HP108 B
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	0.00-0.30	0.00-0.20	0.00-0.30	0.00-0.30	0.00-0.30
Date Sampled	08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status		

General Inorganics

pH	pH Units	N/A	ISO 17025	7.4	7.2	7.6	7.8	7.8
Sulphate as SO4	mg/l	0.1	ISO 17025	0.9	1.8	0.8	1.0	1.2
Ammoniacal Nitrogen as N	µg/l	15	NONE	29	48	19	38	50
Alkalinity as CaCO3	mg/l	3	ISO 17025	8.0	7.4	3.9	6.5	< 3.0

Phenols by GC-MS

Phenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4,5-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4,6-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4-Dichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4-Dimethylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Chlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Nitrophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chloro-3-methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05

Total Phenols

Total Phenols (GC-MS)	µg/l	0.5	NONE	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
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Heavy Metals / Metalloids

Arsenic (dissolved)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Barium (dissolved)	µg/l	0.05	ISO 17025	9.8	17	8.8	17	14
Beryllium (dissolved)	µg/l	0.2	ISO 17025	0.3	0.2	< 0.2	< 0.2	< 0.2
Boron (dissolved)	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10
Cadmium (dissolved)	µg/l	0.08	ISO 17025	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chromium (III)	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chromium (dissolved)	µg/l	0.4	ISO 17025	0.4	0.9	< 0.4	0.5	0.9
Copper (dissolved)	µg/l	0.7	ISO 17025	3.2	4.2	2.6	3.2	3.9
Lead (dissolved)	µg/l	1	ISO 17025	3.1	30	1.9	13	15
Mercury (dissolved)	µg/l	0.5	ISO 17025	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Nickel (dissolved)	µg/l	0.3	ISO 17025	2.5	2.4	2.4	1.8	2.5
Selenium (dissolved)	µg/l	4	ISO 17025	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Vanadium (dissolved)	µg/l	1.7	ISO 17025	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7
Zinc (dissolved)	µg/l	0.4	ISO 17025	7.2	7.3	12	11	14

Monoaromatics & Oxygenates

Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10



Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT

Your Order No: PC2387 103 100

Lab Sample Number				1935617	1935618	1935619	1935620	1935621
Sample Reference				HP104 B	HP105 B	HP106 B	HP107 B	HP108 B
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.00-0.30	0.00-0.20	0.00-0.30	0.00-0.30	0.00-0.30
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status					

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >C5 - C6	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C6 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C16	µg/l	10	NONE	-	-	-	-	-
TPH-CWG - Aliphatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic (C5 - C35)	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10

TPH-CWG - Aromatic >C5 - C7	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C16	µg/l	10	NONE	-	-	-	-	-
TPH-CWG - Aromatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C10 - C16	µg/l	10	NONE	-	-	-	-	-
TPH-CWG - Aromatic >C10 - C35	µg/l	10	NONE	-	-	-	-	-
TPH-CWG - Aromatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (C5 - C35)	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10

Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT

Your Order No: PC2387 103 100

Lab Sample Number				1935617	1935618	1935619	1935620	1935621
Sample Reference				HP104 B	HP105 B	HP106 B	HP107 B	HP108 B
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.00-0.30	0.00-0.20	0.00-0.30	0.00-0.30	0.00-0.30
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status					

VOCs

Chloromethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl Chloride	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-dichloroethene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,2-dichloroethene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-dichloroethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,2-Dichloropropane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloromethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-dichloroethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloropropene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,2-dichloroethene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloromethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-dichloropropane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromomethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,3-dichloropropene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,3-dichloropropene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichloropropane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromochloromethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromoethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Styrene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tribromomethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromobenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
n-Propylbenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Chlorotoluene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Chlorotoluene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
ter-Butylbenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
sec-Butylbenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-dichlorobenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
P-Isopropyltoluene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-dichlorobenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-dichlorobenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Butylbenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromo-3-chloropropane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0



Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT

Your Order No: PC2387 103 100

Lab Sample Number				1935617	1935618	1935619	1935620	1935621
Sample Reference				HP104 B	HP105 B	HP106 B	HP107 B	HP108 B
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.00-0.30	0.00-0.20	0.00-0.30	0.00-0.30	0.00-0.30
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status					
1,2,4-Trichlorobenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Hexachlorobutadiene	µg/l	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,2,3-Trichlorobenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0



Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT

Your Order No: PC2387 103 100

Lab Sample Number				1935617	1935618	1935619	1935620	1935621
Sample Reference				HP104 B	HP105 B	HP106 B	HP107 B	HP108 B
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.00-0.30	0.00-0.20	0.00-0.30	0.00-0.30	0.00-0.30
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status					

SVOCs

Aniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Chlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bis(2-chloroethyl)ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,3-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,2-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,4-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bis(2-chloroisopropyl)ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Hexachloroethane	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nitrobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Isophorone	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Nitrophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4-Dimethylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bis(2-chloroethoxy)methane	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,2,4-Trichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Naphthalene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2,4-Dichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chloroaniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobutadiene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chloro-3-methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4,6-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4,5-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Methylnaphthalene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Chloronaphthalene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dimethylphthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,6-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	NONE	0.02	0.06	0.03	0.02	0.02
2,4-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dibenzofuran	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chlorophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Diethyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Nitroaniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	µg/l	0.01	NONE	0.02	0.04	0.03	0.02	0.03
Azobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bromophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Phenanthrene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Anthracene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Carbazole	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dibutyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Anthraquinone	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	µg/l	0.01	NONE	0.02	0.06	0.02	0.05	0.02
Pyrene	µg/l	0.01	NONE	0.02	0.07	0.02	0.05	0.03
Butyl benzyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)anthracene	µg/l	0.01	NONE	< 0.01	0.04	< 0.01	< 0.01	< 0.01
Chrysene	µg/l	0.01	NONE	< 0.01	0.02	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01



Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT

Your Order No: PC2387 103 100

Lab Sample Number				1935617	1935618	1935619	1935620	1935621
Sample Reference				HP104 B	HP105 B	HP106 B	HP107 B	HP108 B
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.00-0.30	0.00-0.20	0.00-0.30	0.00-0.30	0.00-0.30
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status					
Indeno(1,2,3-cd)pyrene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01

Phenyl Urea Pesticides

Benazolin	µg/l	0.01	NONE	-	-	-	-	-
Bromoxynil	µg/l	0.01	NONE	-	-	-	-	-
Clopyralid	µg/l	0.01	NONE	-	-	-	-	-

Environmental Forensics

Fluoranthene (low level)	µg/l	0.002	NONE	0.020	0.060	0.020	0.050	0.020
Benzo(b)fluoranthene (low level)	µg/l	0.002	NONE	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Benzo(k)fluoranthene (low level)	µg/l	0.002	NONE	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Benzo(a)pyrene (low level)	µg/l	0.002	NONE	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Indeno(1,2,3-cd)pyrene (low level)	µg/l	0.002	NONE	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Benzo(ghi)perylene (low level)	µg/l	0.002	NONE	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Naphthalene (low level)	µg/l	0.002	NONE	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Acenaphthylene (low level)	µg/l	0.002	NONE	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Acenaphthene (low level)	µg/l	0.002	NONE	0.020	0.060	0.030	0.020	0.020
Fluorene (low level)	µg/l	0.002	NONE	0.020	0.040	0.030	0.020	0.030
Phenanthrene (low level)	µg/l	0.002	NONE	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Antracene (low level)	µg/l	0.002	NONE	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Pyrene (low level)	µg/l	0.002	NONE	0.20	0.070	0.020	0.050	0.030
Benzo(a)anthracene (low level)	µg/l	0.002	NONE	< 0.0020	0.040	< 0.0020	< 0.0020	< 0.0020
Chrysene (low level)	µg/l	0.002	NONE	< 0.0020	0.020	< 0.0020	< 0.0020	< 0.0020
Di-bezno(a,h)anthracene (low level)	µg/l	0.002	NONE	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020

Acid Herbicides

2,4,5-T	µg/l	0.02	NONE	-	-	-	-	-
2,4,5-TP	µg/l	0.02	NONE	-	-	-	-	-
2,4-D	µg/l	0.02	NONE	-	-	-	-	-
2,4-DB	µg/l	0.02	NONE	-	-	-	-	-
Dicamba	µg/l	0.02	NONE	-	-	-	-	-
Dichlorprop	µg/l	0.02	NONE	-	-	-	-	-
Dinoseb	µg/l	0.02	NONE	-	-	-	-	-
MCPA	µg/l	0.02	NONE	-	-	-	-	-
MCPB	µg/l	0.02	NONE	-	-	-	-	-
MCPP (Mecoprop)	µg/l	0.02	NONE	-	-	-	-	-
Picloram	µg/l	0.02	NONE	-	-	-	-	-
Bentazone	µg/l	0.02	NONE	-	-	-	-	-

U/S = Unsuitable Sample I/S = Insufficient Sample



Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT

Your Order No: PC2387 103 100

Lab Sample Number				1935622	1935623
Sample Reference				HP109 B	HP110 B
Sample Number				None Supplied	None Supplied
Depth (m)				0.00-0.15	0.00-0.10
Date Sampled				08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status		

General Inorganics

pH	pH Units	N/A	ISO 17025	7.8	8.1
Sulphate as SO4	mg/l	0.1	ISO 17025	1.4	1.1
Ammoniacal Nitrogen as N	µg/l	15	NONE	43	45
Alkalinity as CaCO3	mg/l	3	ISO 17025	< 3.0	4.8

Phenols by GC-MS

Phenol	µg/l	0.05	NONE	< 0.05	< 0.05
2,4,5-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05
2,4,6-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05
2,4-Dichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05
2,4-Dimethylphenol	µg/l	0.05	NONE	< 0.05	< 0.05
2-Chlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05
2-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05
2-Nitrophenol	µg/l	0.05	NONE	< 0.05	< 0.05
4-Chloro-3-methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05
4-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05

Total Phenols

Total Phenols (GC-MS)	µg/l	0.5	NONE	< 0.5	< 0.5
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Heavy Metals / Metalloids

Arsenic (dissolved)	µg/l	1	ISO 17025	< 1.0	< 1.0
Barium (dissolved)	µg/l	0.05	ISO 17025	32	22
Beryllium (dissolved)	µg/l	0.2	ISO 17025	< 0.2	< 0.2
Boron (dissolved)	µg/l	10	ISO 17025	< 10	< 10
Cadmium (dissolved)	µg/l	0.08	ISO 17025	< 0.08	< 0.08
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0
Chromium (III)	µg/l	1	NONE	< 1.0	< 1.0
Chromium (dissolved)	µg/l	0.4	ISO 17025	0.9	0.9
Copper (dissolved)	µg/l	0.7	ISO 17025	4.7	7.5
Lead (dissolved)	µg/l	1	ISO 17025	19	7.9
Mercury (dissolved)	µg/l	0.5	ISO 17025	< 0.5	< 0.5
Nickel (dissolved)	µg/l	0.3	ISO 17025	3.3	2.8
Selenium (dissolved)	µg/l	4	ISO 17025	< 4.0	< 4.0
Vanadium (dissolved)	µg/l	1.7	ISO 17025	< 1.7	< 1.7
Zinc (dissolved)	µg/l	0.4	ISO 17025	11	9.6

Monoaromatics & Oxygenates

Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0
p & m-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0
o-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	10	NONE	< 10	< 10



Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT

Your Order No: PC2387 103 100

Lab Sample Number				1935622	1935623
Sample Reference				HP109 B	HP110 B
Sample Number				None Supplied	None Supplied
Depth (m)				0.00-0.15	0.00-0.10
Date Sampled				08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status		

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >C5 - C6	µg/l	1	ISO 17025	< 1.0	< 1.0
TPH-CWG - Aliphatic >C6 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C16	µg/l	10	NONE	-	-
TPH-CWG - Aliphatic >C10 - C12	µg/l	10	NONE	< 10	< 10
TPH-CWG - Aliphatic >C12 - C16	µg/l	10	NONE	< 10	< 10
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	NONE	< 10	< 10
TPH-CWG - Aliphatic >C21 - C35	µg/l	10	NONE	< 10	< 10
TPH-CWG - Aliphatic (C5 - C35)	µg/l	10	NONE	< 10	< 10

TPH-CWG - Aromatic >C5 - C7	µg/l	1	ISO 17025	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C16	µg/l	10	NONE	-	-
TPH-CWG - Aromatic >C10 - C12	µg/l	10	NONE	< 10	< 10
TPH-CWG - Aromatic >C10 - C16	µg/l	10	NONE	-	-
TPH-CWG - Aromatic >C10 - C35	µg/l	10	NONE	-	-
TPH-CWG - Aromatic >C12 - C16	µg/l	10	NONE	< 10	< 10
TPH-CWG - Aromatic >C16 - C21	µg/l	10	NONE	< 10	< 10
TPH-CWG - Aromatic >C21 - C35	µg/l	10	NONE	< 10	< 10
TPH-CWG - Aromatic (C5 - C35)	µg/l	10	NONE	< 10	< 10



Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT

Your Order No: PC2387 103 100

Lab Sample Number				1935622	1935623
Sample Reference				HP109 B	HP110 B
Sample Number				None Supplied	None Supplied
Depth (m)				0.00-0.15	0.00-0.10
Date Sampled				08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status		

VOCs

Chloromethane	µg/l	1	NONE	< 1.0	< 1.0
Chloroethane	µg/l	1	NONE	< 1.0	< 1.0
Bromomethane	µg/l	1	NONE	< 1.0	< 1.0
Vinyl Chloride	µg/l	1	NONE	< 1.0	< 1.0
1,1-dichloroethene	µg/l	1	NONE	< 1.0	< 1.0
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/l	1	NONE	< 1.0	< 1.0
Cis-1,2-dichloroethene	µg/l	1	NONE	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	NONE	< 1.0	< 1.0
1,1-dichloroethane	µg/l	1	NONE	< 1.0	< 1.0
2,2-Dichloropropane	µg/l	1	NONE	< 1.0	< 1.0
Trichloromethane	µg/l	1	NONE	< 1.0	< 1.0
1,1,1-Trichloroethane	µg/l	1	NONE	< 1.0	< 1.0
1,2-dichloroethane	µg/l	1	NONE	< 1.0	< 1.0
1,1-Dichloropropene	µg/l	1	NONE	< 1.0	< 1.0
Trans-1,2-dichloroethene	µg/l	1	NONE	< 1.0	< 1.0
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0
Tetrachloromethane	µg/l	1	NONE	< 1.0	< 1.0
1,2-dichloropropane	µg/l	1	NONE	< 1.0	< 1.0
Trichloroethene	µg/l	1	NONE	< 1.0	< 1.0
Dibromomethane	µg/l	1	NONE	< 1.0	< 1.0
Bromodichloromethane	µg/l	1	NONE	< 1.0	< 1.0
Cis-1,3-dichloropropene	µg/l	1	NONE	< 1.0	< 1.0
Trans-1,3-dichloropropene	µg/l	1	NONE	< 1.0	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/l	1	NONE	< 1.0	< 1.0
1,3-Dichloropropane	µg/l	1	NONE	< 1.0	< 1.0
Dibromochloromethane	µg/l	1	NONE	< 1.0	< 1.0
Tetrachloroethene	µg/l	1	NONE	< 1.0	< 1.0
1,2-Dibromoethane	µg/l	1	NONE	< 1.0	< 1.0
Chlorobenzene	µg/l	1	NONE	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	µg/l	1	NONE	< 1.0	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0
p & m-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0
Styrene	µg/l	1	NONE	< 1.0	< 1.0
Tri bromomethane	µg/l	1	NONE	< 1.0	< 1.0
o-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/l	1	NONE	< 1.0	< 1.0
Isopropylbenzene	µg/l	1	NONE	< 1.0	< 1.0
Bromobenzene	µg/l	1	NONE	< 1.0	< 1.0
n-Propylbenzene	µg/l	1	NONE	< 1.0	< 1.0
2-Chlorotoluene	µg/l	1	NONE	< 1.0	< 1.0
4-Chlorotoluene	µg/l	1	NONE	< 1.0	< 1.0
1,3,5-Trimethylbenzene	µg/l	1	NONE	< 1.0	< 1.0
ter-Butylbenzene	µg/l	1	NONE	< 1.0	< 1.0
1,2,4-Trimethylbenzene	µg/l	1	NONE	< 1.0	< 1.0
sec-Butylbenzene	µg/l	1	NONE	< 1.0	< 1.0
1,3-dichlorobenzene	µg/l	1	NONE	< 1.0	< 1.0
P-Isopropyltoluene	µg/l	1	NONE	< 1.0	< 1.0
1,2-dichlorobenzene	µg/l	1	NONE	< 1.0	< 1.0
1,4-dichlorobenzene	µg/l	1	NONE	< 1.0	< 1.0
Butylbenzene	µg/l	1	NONE	< 1.0	< 1.0
1,2-Dibromo-3-chloropropane	µg/l	1	NONE	< 1.0	< 1.0



Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT

Your Order No: PC2387 103 100

Lab Sample Number				1935622	1935623
Sample Reference				HP109 B	HP110 B
Sample Number				None Supplied	None Supplied
Depth (m)				0.00-0.15	0.00-0.10
Date Sampled				08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status		
1,2,4-Trichlorobenzene	µg/l	1	NONE	< 1.0	< 1.0
Hexachlorobutadiene	µg/l	0.1	NONE	< 0.1	< 0.1
1,2,3-Trichlorobenzene	µg/l	1	NONE	< 1.0	< 1.0



Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT

Your Order No: PC2387 103 100

Lab Sample Number				1935622	1935623
Sample Reference				HP109 B	HP110 B
Sample Number				None Supplied	None Supplied
Depth (m)				0.00-0.15	0.00-0.10
Date Sampled				08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status		

SVOCs

Aniline	µg/l	0.05	NONE	< 0.05	< 0.05
Phenol	µg/l	0.05	NONE	< 0.05	< 0.05
2-Chlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05
Bis(2-chloroethyl)ether	µg/l	0.05	NONE	< 0.05	< 0.05
1,3-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05
1,2-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05
1,4-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05
Bis(2-chloroisopropyl)ether	µg/l	0.05	NONE	< 0.05	< 0.05
2-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05
Hexachloroethane	µg/l	0.05	NONE	< 0.05	< 0.05
Nitrobenzene	µg/l	0.05	NONE	< 0.05	< 0.05
4-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05
Isophorone	µg/l	0.05	NONE	< 0.05	< 0.05
2-Nitrophenol	µg/l	0.05	NONE	< 0.05	< 0.05
2,4-Dimethylphenol	µg/l	0.05	NONE	< 0.05	< 0.05
Bis(2-chloroethoxy)methane	µg/l	0.05	NONE	< 0.05	< 0.05
1,2,4-Trichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05
Naphthalene	µg/l	0.01	NONE	< 0.01	< 0.01
2,4-Dichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05
4-Chloroaniline	µg/l	0.05	NONE	< 0.05	< 0.05
Hexachlorobutadiene	µg/l	0.05	NONE	< 0.05	< 0.05
4-Chloro-3-methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05
2,4,6-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05
2,4,5-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05
2-Methylnaphthalene	µg/l	0.05	NONE	< 0.05	< 0.05
2-Chloronaphthalene	µg/l	0.05	NONE	< 0.05	< 0.05
Dimethylphthalate	µg/l	0.05	NONE	< 0.05	< 0.05
2,6-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	< 0.05
Acenaphthylene	µg/l	0.01	NONE	0.50	0.06
Acenaphthene	µg/l	0.01	NONE	0.30	0.06
2,4-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	< 0.05
Dibenzofuran	µg/l	0.05	NONE	< 0.05	< 0.05
4-Chlorophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	< 0.05
Diethyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05
4-Nitroaniline	µg/l	0.05	NONE	< 0.05	< 0.05
Fluorene	µg/l	0.01	NONE	0.10	0.03
Azobenzene	µg/l	0.05	NONE	< 0.05	< 0.05
Bromophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	< 0.05
Hexachlorobenzene	µg/l	0.02	NONE	< 0.02	< 0.02
Phenanthrene	µg/l	0.01	NONE	< 0.01	< 0.01
Anthracene	µg/l	0.01	NONE	< 0.01	< 0.01
Carbazole	µg/l	0.05	NONE	< 0.05	< 0.05
Dibutyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05
Anthraquinone	µg/l	0.05	NONE	< 0.05	< 0.05
Fluoranthene	µg/l	0.01	NONE	0.10	0.06
Pyrene	µg/l	0.01	NONE	0.10	0.06
Butyl benzyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05
Benzo(a)anthracene	µg/l	0.01	NONE	0.10	0.10
Chrysene	µg/l	0.01	NONE	0.07	0.05
Benzo(b)fluoranthene	µg/l	0.01	NONE	0.10	0.07
Benzo(k)fluoranthene	µg/l	0.01	NONE	0.06	0.04
Benzo(a)pyrene	µg/l	0.01	NONE	0.09	0.07



Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT

Your Order No: PC2387 103 100

Lab Sample Number				1935622	1935623
Sample Reference				HP109 B	HP110 B
Sample Number				None Supplied	None Supplied
Depth (m)				0.00-0.15	0.00-0.10
Date Sampled				08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status		
Indeno(1,2,3-cd)pyrene	µg/l	0.01	NONE	0.04	0.04
Dibenz(a,h)anthracene	µg/l	0.01	NONE	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	NONE	0.08	0.05

Phenyl Urea Pesticides

Benazolin	µg/l	0.01	NONE	-	-
Bromoxynil	µg/l	0.01	NONE	-	-
Clopyralid	µg/l	0.01	NONE	-	-

Environmental Forensics

Fluoranthene (low level)	µg/l	0.002	NONE	0.10	0.060
Benzo(b)fluoranthene (low level)	µg/l	0.002	NONE	0.10	0.070
Benzo(k)fluoranthene (low level)	µg/l	0.002	NONE	0.060	0.040
Benzo(a)pyrene (low level)	µg/l	0.002	NONE	0.090	0.070
Indeno(1,2,3-cd)pyrene (low level)	µg/l	0.002	NONE	0.040	0.040
Benzo(ghi)perylene (low level)	µg/l	0.002	NONE	0.080	0.050
Naphthalene (low level)	µg/l	0.002	NONE	< 0.0020	< 0.0020
Acenaphthylene (low level)	µg/l	0.002	NONE	0.050	0.060
Acenaphthene (low level)	µg/l	0.002	NONE	0.30	0.060
Fluorene (low level)	µg/l	0.002	NONE	0.10	0.030
Phenanthrene (low level)	µg/l	0.002	NONE	< 0.0020	< 0.0020
Anthracene (low level)	µg/l	0.002	NONE	< 0.0020	< 0.0020
Pyrene (low level)	µg/l	0.002	NONE	0.10	0.060
Benzo(a)anthracene (low level)	µg/l	0.002	NONE	0.10	0.10
Chrysene (low level)	µg/l	0.002	NONE	0.070	0.050
Di-benzo(a,h)anthracene (low level)	µg/l	0.002	NONE	< 0.0020	< 0.0020

Acid Herbicides

2,4,5-T	µg/l	0.02	NONE	-	-
2,4,5-TP	µg/l	0.02	NONE	-	-
2,4-D	µg/l	0.02	NONE	-	-
2,4-DB	µg/l	0.02	NONE	-	-
Dicamba	µg/l	0.02	NONE	-	-
Dichlorprop	µg/l	0.02	NONE	-	-
Dinoseb	µg/l	0.02	NONE	-	-
MCPA	µg/l	0.02	NONE	-	-
MCPB	µg/l	0.02	NONE	-	-
MCPP (Mecoprop)	µg/l	0.02	NONE	-	-
Picloram	µg/l	0.02	NONE	-	-
Bentazone	µg/l	0.02	NONE	-	-

U/S = Unsuitable Sample I/S = Insufficient Sample



Analytical Report Number: 21-86295
 Project / Site name: Castlefield Viaduct NT
 Your Order No: PC2387 103 100

Lab Sample Number				1934542	1934543	1934544	1934545	1934546
Sample Reference				PS101	PS102	PS103	PS104	PS105
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter	Units	Limit of detection	Accreditation Status					

Heavy Metals / Metalloids

Cadmium (aqua regia extractable in "other")	mg/kg	0.2	NONE	6.6	4.1	< 0.2	4.5	10
Chromium (aqua regia extractable in "other")	mg/kg	1	NONE	190	130	120	290	310
Lead (aqua regia extractable in "other")	mg/kg	1	NONE	62000	55000	57000	57000	61000
Nickel (aqua regia extractable in "other")	mg/kg	1	NONE	30	22	13	25	15
Zinc (aqua regia extractable in "other")	mg/kg	1	NONE	4800	5400	1200	5800	4600

U/S = Unsuitable Sample I/S = Insufficient Sample



Analytical Report Number: 21-86295
 Project / Site name: Castlefield Viaduct NT
 Your Order No: PC2387 103 100

Lab Sample Number				1934547	1934548	1934549	1934550	1934551
Sample Reference				PS106	PS107	PS108	PS109	PS110
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter	Units	Limit of detection	Accreditation Status					

Heavy Metals / Metalloids

Cadmium (aqua regia extractable in "other")	mg/kg	0.2	NONE	2.1	3.0	2.6	5.7	3.0
Chromium (aqua regia extractable in "other")	mg/kg	1	NONE	110	220	200	250	240
Lead (aqua regia extractable in "other")	mg/kg	1	NONE	59000	61000	62000	58000	66000
Nickel (aqua regia extractable in "other")	mg/kg	1	NONE	12	18	22	15	20
Zinc (aqua regia extractable in "other")	mg/kg	1	NONE	1200	2200	2400	6500	1500

U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number : 21-86295

Project / Site name: Castlefield Viaduct NT

* 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 *
1934531	HP101	None Supplied	0.00-0.25	Brown loam with gravel and vegetation.
1934532	HP102	None Supplied	0.00-0.30	Brown loam with gravel and vegetation.
1934533	HP103	None Supplied	0.00-0.15	Brown loam with gravel and vegetation.
1934534	HP104	None Supplied	0.00-0.30	Brown loam with gravel and vegetation.
1934535	HP105	None Supplied	0.00-0.20	Brown loam with gravel and vegetation.
1934536	HP106	None Supplied	0.00-0.30	Brown loam with gravel and vegetation.
1934537	HP107	None Supplied	0.00-0.30	Brown loam with gravel and vegetation.
1934538	HP108	None Supplied	0.00-0.30	Brown loam with gravel and vegetation.
1934539	HP109	None Supplied	0.00-0.15	Brown clay and loam with gravel and vegetation.
1934540	HP110	None Supplied	0.00-0.10	Brown clay and loam with gravel and vegetation.
1934541	HP Dup 1	None Supplied	None Supplied	Brown clay and loam with gravel and vegetation.

Analytical Report Number : 21-86295

Project / Site name: Castlefield Viaduct NT

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
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
Metals in water by ICP-OES (dissolved)	Determination of metals in water by acidification followed by ICP-OES. Accredited Matrices: SW, GW, PW, PrW.(Al, Cu,Fe,Zn).	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Metals in water by ICP-MS (dissolved)	Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.	In-house method based on USEPA Method 6020 & 200.8 *for the determination of trace elements in water by ICP-MS.	L012-PL	W	ISO 17025
BS EN 12457-1 (2:1) Leachate Prep	2:1 (as recieved, moisture adjusted) end over end extraction with water for 24 hours. Eluate filtered prior to analysis.	In-house method based on BSEN12457-1.	L043-PL	W	NONE
TPHCWG (Leachates)	Determination of dichloromethane extractable hydrocarbons in leachate by GC-MS.	In-house method	L070-PL	W	NONE
Phenols, speciated, in leachate, by GCMS	Determination of speciated phenols in leachate by extraction in hexane followed by GC-MS.	In-house method based on USEPA 8270	L070-PL	W	NONE
Phenols, speciated, in water, by GCMS	Determination of speciated phenols in water by extraction in hexane followed by GC-MS.	In-house method based on USEPA 8270	L070-PL	W	NONE
Alkalinity in Leachate	Determination of Alkalinity by discreet analyser (colorimetry).	In house method based on MEWAM & USEPA Method 310.2.	L082-PL	W	ISO 17025
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Metals by ICP-OES in leachate	Determination of metals in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Boron in leachate	Determination of boron in leachate. Sample acidified and followed by ICP-OES.	In-house method based on MEWAM	L039-PL	W	ISO 17025
Boron in water	Determination of boron in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW	In-house method based on MEWAM	L039-PL	W	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
Hexavalent chromium in leachate	Determination of hexavalent chromium in leachate by acidification, addition of 1,5 diphenylcarbazine followed by colorimetry.	In-house method	L080-PL	W	ISO 17025
Hexavalent chromium in soil (Lower Level)	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazine followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Hexavalent chromium in water	Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazine followed by colorimetry.	In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.	L080-PL	W	ISO 17025
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE

Analytical Report Number : 21-86295

Project / Site name: Castlefield Viaduct NT

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
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
pH at 20oC in leachate	Determination of pH in leachate by electrometric measurement.	In house method.	L005-PL	W	ISO 17025
Sulphate in water	Determination of sulphate in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW, PrW.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
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 leachate	Determination of semi-volatile organic compounds in leachate by extraction in dichloromethane followed by GC-MS.	In-house method based on USEPA 8270	L070-PL	W	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
Semi-volatile organic compounds in water	Determination of semi-volatile organic compounds in leachate by extraction in dichloromethane followed by GC-MS.	In-house method based on USEPA 8270	L102B-PL	W	NONE
TPHCWG (Waters)	Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.	In-house method	L070-PL	W	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
Volatile organic compounds in leachate	Determination of volatile organic compounds in leachate by headspace GC-MS	In-house method based on USEPA8260	L073B-PL	W	NONE
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
Volatile organic compounds in water	Determination of volatile organic compounds in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025
Dissolved Organic Carbon in water	Determination of dissolved inorganic carbon in water by TOC/DOC NDIR Analyser.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037-PL	W	ISO 17025
BTEX and MTBE in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS
BTEX and MTBE in water (Monoaromatics)	Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025

Analytical Report Number : 21-86295

Project / Site name: Castlefield Viaduct NT

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
BTEX and MTBE in leachates (Monoaromatics)	Determination of BTEX and MTBE in leachates by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	ISO 17025
Ammoniacal Nitrogen as N in leachate	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the discrete analyser (colorimetric) salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammoniacal Nitrogen as N in soil	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the discrete analyser (colorimetric) salicylate/nitroprusside method,10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
Ammoniacal Nitrogen as N in water	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the discrete analyser (colorimetric) salicylate/nitroprusside method. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Metals in "other" type samples by ICP-OES	Determination of metals in "other" type sample 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	NONE
Cr (III) in water	In-house method by calculation from total Cr and Cr VI.	In-house method by calculation	L080-PL	W	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
Cr (III) in leachate	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
TO - Acid herbs in leachate by LC-MS/MS	Determination of Acid herbicides in leachates by LC-MS/MS	In-house method		W	NONE
Phenyl Urea Pesticides in leachates	Not to be used until confirmed with TP/CS	Subcontracted analysis		W	NONE
pH at 20oC in water (automated)	Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW	In house method.	L099-PL	W	ISO 17025
low level PAHs in water	Determination of low level PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards.	In-house method	L102B-PL	W	NONE
low level PAHs in leachate	Determination of low level PAH compounds in leachate by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards.	In-house method	L102B-PL	W	NONE
Acid Herbicides by LC-MS	Determination of Acid Herbicides by LC MS	In-house method	L057B-PL	W	NONE
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil"	L039-PL	W	ISO 17025
D.O. for Gravimetric Quant if Screen/ID positive	Dependent option for Gravimetric Quant if Screen/ID positive scheduled.	In house asbestos methods A001 & A006.	A006-PL	D	NONE

Analytical Report Number : 21-86295

Project / Site name: Castlefield Viaduct NT

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Alkalinity in Water (by discrete analyser)	Determination of Alkalinity by discrete analyser (colorimetry). Accredited matrices: SW, PW, GW.	In house method based on MEWAM & USEPA Method 310.2.	L082-PL	W	ISO 17025

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

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

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

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

Sample Deviation Report



Analytical Report Number : 21-86295
Project / Site name: Castlefield Viaduct NT

Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
HP Dup 1	None Supplied	L	1934562	b	low level PAHs in leachate	L102B-PL	b
HP Dup Ballast	None Supplied	L	1934563	b	low level PAHs in leachate	L102B-PL	b
HP101	None Supplied	L	1934552	b	low level PAHs in leachate	L102B-PL	b
HP101 B	None Supplied	L	1935614	b	low level PAHs in leachate	L102B-PL	b
HP102	None Supplied	L	1934553	b	low level PAHs in leachate	L102B-PL	b
HP102 B	None Supplied	L	1935615	b	low level PAHs in leachate	L102B-PL	b
HP103	None Supplied	L	1934554	b	low level PAHs in leachate	L102B-PL	b
HP103 B	None Supplied	L	1935616	b	low level PAHs in leachate	L102B-PL	b
HP104	None Supplied	L	1934555	b	low level PAHs in leachate	L102B-PL	b
HP104 B	None Supplied	L	1935617	b	low level PAHs in leachate	L102B-PL	b
HP105	None Supplied	L	1934556	b	low level PAHs in leachate	L102B-PL	b
HP105 B	None Supplied	L	1935618	b	low level PAHs in leachate	L102B-PL	b
HP106	None Supplied	L	1934557	b	low level PAHs in leachate	L102B-PL	b
HP106 B	None Supplied	L	1935619	b	low level PAHs in leachate	L102B-PL	b
HP107	None Supplied	L	1934558	b	low level PAHs in leachate	L102B-PL	b
HP107 B	None Supplied	L	1935620	b	low level PAHs in leachate	L102B-PL	b
HP108	None Supplied	L	1934559	b	low level PAHs in leachate	L102B-PL	b
HP108 B	None Supplied	L	1935621	b	low level PAHs in leachate	L102B-PL	b
HP109	None Supplied	L	1934560	b	low level PAHs in leachate	L102B-PL	b
HP109 B	None Supplied	L	1935622	b	low level PAHs in leachate	L102B-PL	b
HP110	None Supplied	L	1934561	b	low level PAHs in leachate	L102B-PL	b
HP110 B	None Supplied	L	1935623	b	low level PAHs in leachate	L102B-PL	b
SW101	None Supplied	W	1934564	c	Ammoniacal Nitrogen as N in water	L082-PL	c
SW101	None Supplied	W	1934564	c	pH at 20oC in water (automated)	L099-PL	c