

Data Summary Statistics

Site:	Castlefield Viaduct	Project No:	PC2387
Data Description:	Surface Water		
Land Use:	EQS	Completed By:	KD
Receptor:	Controlled Waters	Checked By:	PP

Assessment Criteria Key

- a) WFD inland surface waters 2015
b) EQS Freshwater (older EQS values)
c) M-BAT Tool

Contaminant	Units	Method Detection Limit	Assess-ment Criteria (AC)	Source (see key)	Summary Statistics							Sample Identifiers and Analytical Data			
					Total Number of Samples	Results Above Detection Limit	Minimum	Maximum	Arithmetic Mean	Standard Deviation	Number of results >AC	SW101			
												08/07/2021			
pH	pH Units	N/A	6 to 9	a	1	1	7.6	7.6	7.6	-	0	7.6			
Sulphate as SO4	mg/l	0.045	-		1	1	16.3	16.3	16.3	-	-	16.3			
Ammoniacal Nitrogen as N	µg/l	15	200	a	1	1	120	120	120	-	0	120			
Dissolved Organic Carbon (DOC)	mg/l	0.1	-		1	1	4.16	4.16	4.16	-	-	4.16			
Alkalinity as CaCO3	mg/l	3	-		1	1	54	54	54	-	-	54			
			-												
Phenol	µg/l	0.05	7.7	a	1	0	0.05	0.05	-	-	0	< 0.05			
2,4,5-Trichlorophenol	µg/l	0.05	-		1	0	0.05	0.05	-	-	-	< 0.05			
2,4,6-Trichlorophenol	µg/l	0.05	-		1	0	0.05	0.05	-	-	-	< 0.05			
2,4-Dichlorophenol	µg/l	0.05	0.3	a	1	0	0.05	0.05	-	-	0	< 0.05			
2,4-Dimethylphenol	µg/l	0.05	-		1	0	0.05	0.05	-	-	-	< 0.05			
2-Chlorophenol	µg/l	0.05	50	a	1	0	0.05	0.05	-	-	0	< 0.05			
2-Methylphenol	µg/l	0.05	-		1	0	0.05	0.05	-	-	-	< 0.05			
2-Nitrophenol	µg/l	0.05	-		1	0	0.05	0.05	-	-	-	< 0.05			
4-Chloro-3-methylphenol	µg/l	0.05	40	a	1	0	0.05	0.05	-	-	0	< 0.05			
4-Methylphenol	µg/l	0.05	-		1	0	0.05	0.05	-	-	-	< 0.05			
			-												
Total Phenols (GC-MS)	µg/l	0.5	-		1	0	0.5	0.5	-	-	-	< 0.5			
			-												
Boron (dissolved)	µg/l	10	2000	a	1	1	120	120	120	-	0	120			
Calcium (dissolved)	mg/l	0.012	-		1	1	21	21	21	-	-	21			
Chromium (hexavalent)	µg/l	5	3.4	a	1	0	5	5	-	-	1	< 5.0			
Chromium (III)	µg/l	1	4.7	a	1	1	1.4	1.4	1.4	-	0	1.4			
			-												
Arsenic (dissolved)	µg/l	0.15	50	a	1	1	2.71	2.71	2.71	-	0	2.71			
Barium (dissolved)	µg/l	0.06	-		1	1	60	60	60	-	-	60			
Beryllium (dissolved)	µg/l	0.1	-		1	0	0.1	0.1	-	-	-	< 0.1			
Cadmium (dissolved)	µg/l	0.02	0.08	a	1	0	0.02	0.02	-	-	0	< 0.02			
Chromium (dissolved)	µg/l	0.2	-		1	1	1.4	1.4	1.4	-	-	1.4			
Copper (dissolved)	µg/l	0.5	17.1	c	1	1	8.8	8.8	8.8	-	0	8.8			
Lead (dissolved)	µg/l	0.2	4.99	c	1	1	8.4	8.4	8.4	-	1	8.4			
Mercury (dissolved)	µg/l	0.05	0.07	b	1	0	0.05	0.05	-	-	0	< 0.05			
Nickel (dissolved)	µg/l	0.5	9.58	c	1	1	2.5	2.5	2.5	-	0	2.5			
Selenium (dissolved)	µg/l	0.6	-		1	0	0.6	0.6	-	-	-	< 0.6			
Vanadium (dissolved)	µg/l	0.2	20	a	1	1	1.4	1.4	1.4	-	0	1.4			
Zinc (dissolved)	µg/l	0.5	24.66	c	1	1	25	25	25	-	1	25			
			-												
Benzene	µg/l	1	10	a	1	0	1	1	-	-	0	< 1.0			
Toluene	µg/l	1	74	a	1	0	1	1	-	-	0	< 1.0			
Ethylbenzene	µg/l	1	20	a	1	0	1	1	-	-	0	< 1.0			
p & m-xylene	µg/l	1	30	a	1	0	1	1	-	-	0	< 1.0			
o-xylene	µg/l	1	30	a	1	0	1	1	-	-	0	< 1.0			
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
			-												
TPH-CWG - Aliphatic >C5 - C6	µg/l	1	10	a	1	0	1	1	-	-	0	< 1.0			
TPH-CWG - Aliphatic >C6 - C8	µg/l	1	10	a	1	0	1	1	-	-	0	< 1.0			
TPH-CWG - Aliphatic >C8 - C10	µg/l	1	10	a	1	0	1	1	-	-	0	< 1.0			
TPH-CWG - Aliphatic >C10 - C12	µg/l	10	10	a	1	0	10	10	-	-	0	< 10			
TPH-CWG - Aliphatic >C12 - C16	µg/l	10	10	a	1	0	10	10	-	-	0	< 10			
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	10	a	1	0	10	10	-	-	0	< 10			
TPH-CWG - Aliphatic >C21 - C35	µg/l	10	10	a	1	0	10	10	-	-	0	< 10			
TPH-CWG - Aliphatic (C5 - C35)	µg/l	10	-		1	0	10	10	-	-	-	< 10			
			-												
TPH-CWG - Aromatic >C5 - C7	µg/l	1	10	a	1	0	1	1	-	-	0	< 1.0			
TPH-CWG - Aromatic >C7 - C8	µg/l	1	10	a	1	0	1	1	-	-	0	< 1.0			
TPH-CWG - Aromatic >C8 - C10	µg/l	1	10	a	1	0	1	1	-	-	0	< 1.0			
TPH-CWG - Aromatic >C10 - C12	µg/l	10	10	a	1	0	10	10	-	-	0	< 10			
TPH-CWG - Aromatic >C12 - C16	µg/l	10	10	a	1	0	10	10	-	-	0	< 10			
TPH-CWG - Aromatic >C16 - C21	µg/l	10	10	a	1	0	10	10	-	-	0	< 10			
TPH-CWG - Aromatic >C21 - C35	µg/l	10	10	a	1	0	10	10	-	-	0	< 10			
TPH-CWG - Aromatic (C5 - C35)	µg/l	10	-		1	0	10	10	-	-	-	< 10			
			-												
Chloromethane	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
Chloroethane	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
Bromomethane	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
Vinyl Chloride	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
Trichlorofluoromethane	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
1,1-Dichloroethene	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
Cis-1,2-dichloroethene	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			

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Contaminant	Units	Method Detection Limit	Assess- ment Criteria (AC)	Source (see key)	Summary Statistics							Sample Identifiers and Analytical Data			
					Total Number of Samples	Results Above Detection Limit	Minimum	Maximum	Arithmetic Mean	Standard Deviation	Number of results >AC	SW101			
												08/07/2021			
1,1-Dichloroethane	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
2,2-Dichloropropane	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
Trichloromethane	µg/l	1	2.5	a	1	0	1	1	-	-	0	< 1.0			
1,1,1-Trichloroethane	µg/l	1	100	a	1	0	1	1	-	-	0	< 1.0			
1,2-Dichloroethane	µg/l	1	10	a	1	0	1	1	-	-	0	< 1.0			
1,1-Dichloropropene	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
Trans-1,2-dichloroethene	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
Benzene	µg/l	1	10	a	1	0	1	1	-	-	0	< 1.0			
Tetrachloromethane	µg/l	1	12	a	1	0	1	1	-	-	0	< 1.0			
1,2-Dichloropropane	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
Trichloroethene	µg/l	1	10	a	1	0	1	1	-	-	0	< 1.0			
Dibromomethane	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
Bromodichloromethane	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
Cis-1,3-dichloropropene	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
Trans-1,3-dichloropropene	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
Toluene	µg/l	1	74	a	1	0	1	1	-	-	0	< 1.0			
1,1,2-Trichloroethane	µg/l	1	400	a	1	0	1	1	-	-	0	< 1.0			
1,3-Dichloropropane	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
Dibromochloromethane	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
Tetrachloroethene	µg/l	1	10	a	1	0	1	1	-	-	0	< 1.0			
1,2-Dibromoethane	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
Chlorobenzene	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
1,1,1,2-Tetrachloroethane	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
Ethylbenzene	µg/l	1	20	a	1	0	1	1	-	-	0	< 1.0			
p & m-Xylene	µg/l	1	30	a	1	0	1	1	-	-	0	< 1.0			
Styrene	µg/l	1	50	a	1	0	1	1	-	-	0	< 1.0			
Tribromomethane	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
o-Xylene	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
1,1,2,2-Tetrachloroethane	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
Isopropylbenzene	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
Bromobenzene	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
n-Propylbenzene	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
2-Chlorotoluene	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
4-Chlorotoluene	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
1,3,5-Trimethylbenzene	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
tert-Butylbenzene	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
1,2,4-Trimethylbenzene	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
sec-Butylbenzene	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
1,3-Dichlorobenzene	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
p-Isopropyltoluene	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
1,2-Dichlorobenzene	µg/l	1	20	a	1	0	1	1	-	-	0	< 1.0			
1,4-Dichlorobenzene	µg/l	1	20	a	1	0	1	1	-	-	0	< 1.0			
Butylbenzene	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
1,2-Dibromo-3-chloropropane	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
1,2,4-Trichlorobenzene	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
Hexachlorobutadiene	µg/l	1	0.6	a	1	0	1	1	-	-	1	< 1.0			
1,2,3-Trichlorobenzene	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
			-												
Aniline	µg/l	0.05	-		1	0	0.05	0.05	-	-	-	< 0.05			
Phenol	µg/l	0.05	7.7	a	1	0	0.05	0.05	-	-	0	< 0.05			
2-Chlorophenol	µg/l	0.05	50	a	1	0	0.05	0.05	-	-	0	< 0.05			
Bis(2-chloroethyl)ether	µg/l	0.05	-		1	0	0.05	0.05	-	-	-	< 0.05			
1,3-Dichlorobenzene	µg/l	0.05	-		1	0	0.05	0.05	-	-	-	< 0.05			
1,2-Dichlorobenzene	µg/l	0.05	20	a	1	0	0.05	0.05	-	-	0	< 0.05			
1,4-Dichlorobenzene	µg/l	0.05	20	a	1	0	0.05	0.05	-	-	0	< 0.05			
Bis(2-chloroisopropyl)ether	µg/l	0.05	-		1	0	0.05	0.05	-	-	-	< 0.05			
2-Methylphenol	µg/l	0.05	-		1	0	0.05	0.05	-	-	-	< 0.05			
Hexachloroethane	µg/l	0.05	-		1	0	0.05	0.05	-	-	-	< 0.05			
Nitrobenzene	µg/l	0.05	-		1	0	0.05	0.05	-	-	-	< 0.05			
4-Methylphenol	µg/l	0.05	-		1	0	0.05	0.05	-	-	-	< 0.05			
Isophorone	µg/l	0.05	-		1	0	0.05	0.05	-	-	-	< 0.05			
2-Nitrophenol	µg/l	0.05	-		1	0	0.05	0.05	-	-	-	< 0.05			
2,4-Dimethylphenol	µg/l	0.05	-		1	0	0.05	0.05	-	-	-	< 0.05			
Bis(2-chloroethoxy)methane	µg/l	0.05	-		1	0	0.05	0.05	-	-	-	< 0.05			
1,2,4-Trichlorobenzene	µg/l	0.05	-		1	0	0.05	0.05	-	-	-	< 0.05			
Naphthalene	µg/l	0.01	2	a	1	0	0.01	0.01	-	-	0	< 0.01			
2,4-Dichlorophenol	µg/l	0.05	0.3	a	1	0	0.05	0.05	-	-	0	< 0.05			
4-Chloroaniline	µg/l	0.05	-		1	0	0.05	0.05	-	-	-	< 0.05			
Hexachlorobutadiene	µg/l	0.05	0.6	a	1	0	0.05	0.05	-	-	0	< 0.05			
4-Chloro-3-methylphenol	µg/l	0.05	40	a	1	0	0.05	0.05	-	-	0	< 0.05			
2,4,6-Trichlorophenol	µg/l	0.05	-		1	0	0.05	0.05	-	-	-	< 0.05			

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												08/07/2021			
2,4,5-Trichlorophenol	µg/l	0.05	-		1	0	0.05	0.05	-	-	-	< 0.05			
2-Methylnaphthalene	µg/l	0.05	-		1	0	0.05	0.05	-	-	-	< 0.05			
2-Chloronaphthalene	µg/l	0.05	-		1	0	0.05	0.05	-	-	-	< 0.05			
Dimethylphthalate	µg/l	0.05	800	a	1	0	0.05	0.05	-	-	0	< 0.05			
2,6-Dinitrotoluene	µg/l	0.05	-		1	0	0.05	0.05	-	-	-	< 0.05			
Acenaphthylene	µg/l	0.01	-		1	0	0.01	0.01	-	-	-	< 0.01			
Acenaphthene	µg/l	0.01	-		1	1	0.02	0.02	0.02	-	-	0.02			
2,4-Dinitrotoluene	µg/l	0.05	-		1	0	0.05	0.05	-	-	-	< 0.05			
Dibenzofuran	µg/l	0.05	-		1	0	0.05	0.05	-	-	-	< 0.05			
4-Chlorophenyl phenyl ether	µg/l	0.05	-		1	0	0.05	0.05	-	-	-	< 0.05			
Diethyl phthalate	µg/l	0.05	200	a	1	0	0.05	0.05	-	-	0	< 0.05			
4-Nitroaniline	µg/l	0.05	-		1	0	0.05	0.05	-	-	-	< 0.05			
Fluorene	µg/l	0.01	-		1	1	0.03	0.03	0.03	-	-	0.03			
Azobenzene	µg/l	0.05	-		1	0	0.05	0.05	-	-	-	< 0.05			
Bromophenyl phenyl ether	µg/l	0.05	-		1	0	0.05	0.05	-	-	-	< 0.05			
Hexachlorobenzene	µg/l	0.05	0.05	a	1	0	0.05	0.05	-	-	0	< 0.05			
Phenanthrene	µg/l	0.01	-		1	0	0.01	0.01	-	-	-	< 0.01			
Anthracene	µg/l	0.01	0.1	a	1	0	0.01	0.01	-	-	0	< 0.01			
Carbazole	µg/l	0.05	-		1	0	0.05	0.05	-	-	-	< 0.05			
Dibutyl phthalate	µg/l	0.05	-		1	0	0.05	0.05	-	-	-	< 0.05			
Anthraquinone	µg/l	0.05	-		1	0	0.05	0.05	-	-	-	< 0.05			
Fluoranthene	µg/l	0.01	0.0063	a	1	1	0.02	0.02	0.02	-	1	0.02			
Pyrene	µg/l	0.01	-		1	1	0.01	0.01	0.01	-	-	0.01			
Butyl benzyl phthalate	µg/l	0.05	7.5	a	1	0	0.05	0.05	-	-	0	< 0.05			
Benzo(a)anthracene	µg/l	0.01	-		1	0	0.01	0.01	-	-	-	< 0.01			
Chrysene	µg/l	0.01	-		1	0	0.01	0.01	-	-	-	< 0.01			
Benzo(b)fluoranthene	µg/l	0.01	-		1	0	0.01	0.01	-	-	-	< 0.01			
Benzo(k)fluoranthene	µg/l	0.01	-		1	0	0.01	0.01	-	-	-	< 0.01			
Benzo(a)pyrene	µg/l	0.01	0.00017	a	1	0	0.01	0.01	-	-	1	< 0.01			
Indeno(1,2,3-cd)pyrene	µg/l	0.01	-		1	0	0.01	0.01	-	-	-	< 0.01			
Dibenz(a,h)anthracene	µg/l	0.01	-		1	0	0.01	0.01	-	-	-	< 0.01			
Benzo(ghi)perylene	µg/l	0.01	-		1	0	0.01	0.01	-	-	-	< 0.01			
			-												
3&4-Methylphenol	µg/l	0.1	-		1	0	0.1	0.1	-	-	-	< 0.10			
			-												
Fluoranthene (low level)	µg/l	0.002	0.0063	a	1	1	0.02	0.02	0.02	-	1	0.02			
Benzo(b)fluoranthene (low level)	µg/l	0.002	-		1	0	0.002	0.002	-	-	-	< 0.002			
Benzo(k)fluoranthene (low level)	µg/l	0.002	-		1	0	0.002	0.002	-	-	-	< 0.002			
Benzo(a)pyrene (low level)	µg/l	0.002	0.00017	a	1	0	0.002	0.002	-	-	1	< 0.002			
Indeno(1,2,3-cd)pyrene (low level)	µg/l	0.002	-		1	0	0.002	0.002	-	-	-	< 0.002			
Benzo(ghi)perylene (low level)	µg/l	0.002	-		1	0	0.002	0.002	-	-	-	< 0.002			
Naphthalene (low level)	µg/l	0.002	2	a	1	0	0.002	0.002	-	-	0	< 0.0020			
Acenaphthylene (low level)	µg/l	0.002	-		1	0	0.002	0.002	-	-	-	< 0.0020			
Acenaphthene (low level)	µg/l	0.002	-		1	1	0.02	0.02	0.02	-	-	0.02			
Fluorene (low level)	µg/l	0.002	-		1	1	0.03	0.03	0.03	-	-	0.03			
Phenanthrene (low level)	µg/l	0.002	-		1	0	0.002	0.002	-	-	-	< 0.0020			
Antracene (low level)	µg/l	0.002	0.1	a	1	0	0.002	0.002	-	-	0	< 0.0020			
Pyrene (low level)	µg/l	0.002	-		1	1	0.01	0.01	0.01	-	-	0.01			
Benzo(a)anthracene (low level)	µg/l	0.002	-		1	0	0.002	0.002	-	-	-	< 0.0020			
Chrysene (low level)	µg/l	0.002	-		1	0	0.002	0.002	-	-	-	< 0.0020			
Di-bezno(a,h)anthracene (low level)	µg/l	0.002	-		1	0	0.002	0.002	-	-	-	< 0.0020			