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Cardiff City Council
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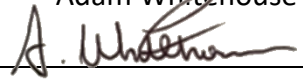
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Certificate of Analysis Number: 6035

Project/Site name:	Ferry Road	Samples Taken:	26/08/2022
Quotation Number:	DS220404	Samples Received:	26/08/2022
Order Number:	-	Date Instructed:	26/08/2022
Sample Matrix:	Surface water, Groundwater, Treated Effluent	Analysis Complete:	16/09/2022
		Report Issued:	20/09/2022
		Sampled By:	Client

Amendment Records:

None

Approved by: Adam Whitehouse
Signature: 
Title: Laboratory Manager



4303

Client: Cardiff City Council
FAO: Matthew Long

CERTIFICATE OF ANALYSIS 6035

Results of analysis of 29 samples received
on the 26/08/22

Report Date
20th September 2022

Code	Determinand	Units	*	Sample Identification			
Laboratory Sample Number:				270822001	270822002	-	-
Client Sample Reference:				Pumping Station C	Pumping Station D	-	-
Sample Date:				26/08/2022	26/08/2022	-	-
Sample Matrix:				Effluent Water	Effluent Water	-	-
INORG-L12	Ammonia	mg.l ⁻¹ as N	A	198	296	-	-
INORG-L11	Nitrate	mg.l ⁻¹ as NO ₃	A	5.9	7.5	-	-
INORG-L14	Nitrite	mg.l ⁻¹ as NO ₂	A	1.8	2.5	-	-
1455	Arsenic	µg.l ⁻¹	S-A	2.2	4.3	-	-
1455	Mercury	µg.l ⁻¹	S-A	<0.05	<0.05	-	-
METALS-L	Barium	µg.l ⁻¹	A	466	393	-	-
METALS-L	Boron	µg.l ⁻¹	A	8230	10100	-	-
METALS-L	Cadmium	µg.l ⁻¹	A	<0.9	<0.9	-	-
METALS-L	Chromium	µg.l ⁻¹	A	12.1	10.4	-	-
METALS-L	Copper	µg.l ⁻¹	A	9.9	4.8	-	-
METALS-L	Iron	µg.l ⁻¹	A	295	325	-	-
METALS-L	Lead	µg.l ⁻¹	A	6.5	<4.1	-	-
METALS-L	Manganese	µg.l ⁻¹	A	193	261	-	-
METALS-L	Nickel	µg.l ⁻¹	A	7.5	11.6	-	-
METALS-L	Zinc	µg.l ⁻¹	A	<1.1	11.1	-	-
METALS-L	Potassium	mg.l ⁻¹	A	122	166	-	-
INORG-L37	Hexavalent Chromium	mg.l ⁻¹	N	<0.1	<0.1	-	-
INORG-L01	pH	pH units	A	7.7	7.6	-	-
INORG-L13	Chloride	mg.l ⁻¹	A	1810	529	-	-
INORG-L18	TOC	mg.l ⁻¹	A	38.5	35.6	-	-
METALS-L	Sulphate	mg.l ⁻¹	A	5.6	21.1	-	-
ORG-L17	Mecoprop	µg.l ⁻¹	N	<0.1	<0.1	-	-
ORG-L01	TPH	mg.l ⁻¹	N	<0.2	0.4	-	-
ORG-L02	Naphthalene	µg.l ⁻¹	N	<0.10	0.64	-	-
ORG-L02	Acenaphthene	µg.l ⁻¹	N	<0.10	4.2	-	-
ORG-L02	Fluorene	µg.l ⁻¹	N	0.89	2.2	-	-
ORG-L02	Phenanthrene	µg.l ⁻¹	N	0.70	0.32	-	-
ORG-L02	Anthracene	µg.l ⁻¹	N	<0.10	<0.10	-	-
ORG-L02	Fluoranthene	µg.l ⁻¹	N	<0.10	<0.10	-	-
ORG-L02	Pyrene	µg.l ⁻¹	N	<0.10	<0.10	-	-
ORG-L02	Benza(a)anthracene	µg.l ⁻¹	N	<0.10	<0.10	-	-
1630	Dissolved Methane	mg.l ⁻¹	S-N	<0.050	<0.050	-	-

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Client Sample Reference:				Pumping Station C	Pumping Station D	-	-
Sample Date:				26/08/2022	26/08/2022	-	-
Sample Matrix:				Effluent Water	Effluent Water	-	-
ORG-L02	Chrysene	µg.l ⁻¹	N	<0.10	<0.10	-	-
ORG-L02	Benzo(b)fluoranthene	µg.l ⁻¹	N	<0.10	<0.10	-	-
ORG-L02	Benzo(a)pyrene	µg.l ⁻¹	N	<0.10	<0.10	-	-
ORG-L02	Indeno(123-cd)pyrene	µg.l ⁻¹	N	<0.10	<0.10	-	-
ORG-L02	Dibenza(ah)anthracene	µg.l ⁻¹	N	<0.10	<0.10	-	-
ORG-L02	Benzo(ghi)perylene	µg.l ⁻¹	N	<0.10	<0.10	-	-

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Code	Determinand	Units	*	Sample Identification			
Laboratory Sample Number:				270822003	270822004	270822005	270822006
Client Sample Reference:				River Sample Under Bypass	River Sample Mid A	River Sample – Outfall A	River Under Rail Bridge
Sample Date:				26/08/2022	26/08/2022	26/08/2022	26/08/2022
Sample Matrix:				Surface Water	Surface Water	Surface Water	Surface Water
INORG-L12	Ammonia	mg.l ⁻¹ as N	A	0.48	0.54	1.0	0.18
INORG-L11	Nitrate	mg.l ⁻¹ as NO ₃	A	11.2	11.5	19.4	15.8
INORG-L14	Nitrite	mg.l ⁻¹ as NO ₂	A	0.45	0.58	0.16	0.11
1455	Arsenic	µg.l ⁻¹	S-A	1.4	1.8	1.0	1.1
1455	Mercury	µg.l ⁻¹	S-A	<0.05	<0.05	<0.05	<0.05
METALS-L	Barium	µg.l ⁻¹	A	98.0	101	99.2	79.3
METALS-L	Boron	µg.l ⁻¹	A	211	74.4	52.8	<6.5
METALS-L	Cadmium	µg.l ⁻¹	A	<0.9	<0.9	<0.9	<0.9
METALS-L	Chromium	µg.l ⁻¹	A	6.8	5.5	7.5	9.2
METALS-L	Copper	µg.l ⁻¹	A	29.6	36.1	31.5	4.4
METALS-L	Iron	µg.l ⁻¹	A	135	188	128	90.1
METALS-L	Lead	µg.l ⁻¹	A	<4.1	6.3	7.4	<4.1
METALS-L	Manganese	µg.l ⁻¹	A	38.7	36.5	16.6	17.2
METALS-L	Nickel	µg.l ⁻¹	A	6.2	2.9	2.4	<1.5
METALS-L	Zinc	µg.l ⁻¹	A	16.0	17.7	14.8	2.6
METALS-L	Potassium	mg.l ⁻¹	A	7.4	8.1	6.9	6.3
INORG-L37	Hexavalent Chromium	mg.l ⁻¹	N	<0.1	<0.1	<0.1	<0.1
INORG-L01	pH	pH units	A	7.3	7.3	7.6	7.7
INORG-L13	Chloride	mg.l ⁻¹	A	31.6	32.2	31.6	30.7
INORG-L18	TOC	mg.l ⁻¹	A	27.9	33.3	36.9	42.7
METALS-L	Sulphate	mg.l ⁻¹	A	30.5	31.3	31.2	29.1
ORG-L17	Mecoprop	µg.l ⁻¹	N	<0.1	<0.1	<0.1	<0.1
ORG-L01	TPH	mg.l ⁻¹	N	<0.2	<0.2	<0.2	<0.2
ORG-L02	Naphthalene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	1.0
ORG-L02	Acenaphthene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	<0.10
ORG-L02	Fluorene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	<0.10
ORG-L02	Phenanthrene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	<0.10
ORG-L02	Anthracene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	<0.10
ORG-L02	Fluoranthene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	<0.10
ORG-L02	Pyrene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	<0.10
ORG-L02	Benza(a)anthracene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	<0.10

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Laboratory Sample Number:				270822003	270822004	270822005	270822006
Client Sample Reference:				River Sample Under Bypass	River Sample Mid A	River Sample – Outfall A	River Under Rail Bridge
Sample Date:				26/08/2022	26/08/2022	26/08/2022	26/08/2022
Sample Matrix:				Surface Water	Surface Water	Surface Water	Surface Water
ORG-L02	Chrysene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	<0.10
ORG-L02	Benzo(b)fluoranthene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	<0.10
ORG-L02	Benzo(a)pyrene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	<0.10
ORG-L02	Indeno(123-cd)pyrene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	<0.10
ORG-L02	Dibenza(ah)anthracene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	<0.10
ORG-L02	Benzo(ghi)perylene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	<0.10

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Code	Determinand	Units	*	Sample Identification			
Laboratory Sample Number:				270822007	270822008	270822009	270822010
Client Sample Reference:				FR1	OW01	OW02	OW03
Sample Date:				26/08/2022	26/08/2022	26/08/2022	26/08/2022
Sample Matrix:				Groundwater	Groundwater	Groundwater	Groundwater
INORG-L12	Ammonia	mg.l ⁻¹ as N	A	0.07	145	61.7	176
INORG-L11	Nitrate	mg.l ⁻¹ as NO ₃	A	19.5	0.66	0.31	<0.3
INORG-L14	Nitrite	mg.l ⁻¹ as NO ₂	A	<0.003	0.28	<0.003	0.15
1455	Arsenic	µg.l ⁻¹	S-A	1.5	1.1	0.97	1.0
1455	Mercury	µg.l ⁻¹	S-A	<0.05	<0.05	<0.05	<0.05
METALS-L	Barium	µg.l ⁻¹	A	15.2	796	1850	940
METALS-L	Boron	µg.l ⁻¹	A	974	10000	4600	6300
METALS-L	Cadmium	µg.l ⁻¹	A	<0.9	<0.9	<0.9	<0.9
METALS-L	Chromium	µg.l ⁻¹	A	8.4	4.4	3.6	3.9
METALS-L	Copper	µg.l ⁻¹	A	4.7	16.8	1.9	3.1
METALS-L	Iron	µg.l ⁻¹	A	66.6	559	716	345
METALS-L	Lead	µg.l ⁻¹	A	<4.1	<4.1	<4.1	11.9
METALS-L	Manganese	µg.l ⁻¹	A	4.0	1330	1440	1530
METALS-L	Nickel	µg.l ⁻¹	A	1.8	10.3	3.3	1.6
METALS-L	Zinc	µg.l ⁻¹	A	<1.1	3.8	<1.1	<1.1
METALS-L	Potassium	mg.l ⁻¹	A	28.2	84.9	41.0	81.8
INORG-L37	Hexavalent Chromium	mg.l ⁻¹	N	<0.1	<0.1	<0.1	<0.1
INORG-L01	pH	pH units	A	7.1	7.3	7.0	7.0
INORG-L13	Chloride	mg.l ⁻¹	A	275	260	171	578
INORG-L18	TOC	mg.l ⁻¹	A	40.8	43.5	36.9	35.4
METALS-L	Sulphate	mg.l ⁻¹	A	72.5	2.6	39.2	7.2
ORG-L17	Mecoprop	µg.l ⁻¹	N	<0.1	<0.1	<0.1	<0.1
ORG-L01	TPH	mg.l ⁻¹	N	<0.2	<0.2	<0.2	0.2
ORG-L02	Naphthalene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	<0.10
ORG-L02	Acenaphthene	µg.l ⁻¹	N	<0.10	2.8	<0.10	0.98
ORG-L02	Fluorene	µg.l ⁻¹	N	<0.10	1.6	<0.10	<0.10
ORG-L02	Phenanthrene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	<0.10
ORG-L02	Anthracene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	<0.10
ORG-L02	Fluoranthene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	<0.10
ORG-L02	Pyrene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	<0.10
ORG-L02	Benza(a)anthracene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	<0.10

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Code	Determinand	Units	*	Sample Identification			
Laboratory Sample Number:				270822007	270822008	270822009	270822010
Client Sample Reference:				FR1	OW01	OW02	OW03
Sample Date:				26/08/2022	26/08/2022	26/08/2022	26/08/2022
Sample Matrix:				Groundwater	Groundwater	Groundwater	Groundwater
ORG-L02	Chrysene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	<0.10
ORG-L02	Benzo(b)fluoranthene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	<0.10
ORG-L02	Benzo(a)pyrene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	<0.10
ORG-L02	Indeno(123-cd)pyrene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	<0.10
ORG-L02	Dibenza(ah)anthracene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	<0.10
ORG-L02	Benzo(ghi)perylene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	<0.10

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Code	Determinand	Units	*	Sample Identification			
Laboratory Sample Number:				270822011	270822012	270822013	270822014
Client Sample Reference:				LW4	OW05	OW06	OW07
Sample Date:				26/08/2022	26/08/2022	26/08/2022	26/08/2022
Sample Matrix:				Groundwater	Groundwater	Groundwater	Groundwater
INORG-L12	Ammonia	mg.l ⁻¹ as N	A	112	132	323	413
INORG-L11	Nitrate	mg.l ⁻¹ as NO ₃	A	2.6	0.31	1.3	0.57
INORG-L14	Nitrite	mg.l ⁻¹ as NO ₂	A	<0.003	0.30	0.36	0.089
1455	Arsenic	µg.l ⁻¹	S-A	1.4	1.3	1.8	1.9
1455	Mercury	µg.l ⁻¹	S-A	<0.05	<0.05	<0.05	<0.05
METALS-L	Barium	µg.l ⁻¹	A	1350	900	552	493
METALS-L	Boron	µg.l ⁻¹	A	4500	4000	7200	9900
METALS-L	Cadmium	µg.l ⁻¹	A	<0.9	<0.9	<0.9	<0.9
METALS-L	Chromium	µg.l ⁻¹	A	4.9	4.9	5.9	6.2
METALS-L	Copper	µg.l ⁻¹	A	39.7	64.3	34.4	43.2
METALS-L	Iron	µg.l ⁻¹	A	287	313	321	396
METALS-L	Lead	µg.l ⁻¹	A	<4.1	7.9	7.6	<4.1
METALS-L	Manganese	µg.l ⁻¹	A	992	1400	457	606
METALS-L	Nickel	µg.l ⁻¹	A	37.8	33.7	39.4	16.8
METALS-L	Zinc	µg.l ⁻¹	A	42.1	65.7	187	42.8
METALS-L	Potassium	mg.l ⁻¹	A	77.5	82.5	135	161
INORG-L37	Hexavalent Chromium	mg.l ⁻¹	N	<0.1	<0.1	<0.1	<0.1
INORG-L01	pH	pH units	A	7.2	7.1	7.3	7.4
INORG-L13	Chloride	mg.l ⁻¹	A	7200	2030	1260	867
INORG-L18	TOC	mg.l ⁻¹	A	31.3	30.7	32.8	33.5
METALS-L	Sulphate	mg.l ⁻¹	A	3.3	3.1	5.1	7.3
ORG-L17	Mecoprop	µg.l ⁻¹	N	21.7	<0.1	<0.1	<0.1
ORG-L01	TPH	mg.l ⁻¹	N	0.8	0.6	1.1	0.8
ORG-L02	Naphthalene	µg.l ⁻¹	N	0.63	<0.10	<0.10	<0.10
ORG-L02	Acenaphthene	µg.l ⁻¹	N	4.0	2.7	<0.10	1.9
ORG-L02	Fluorene	µg.l ⁻¹	N	1.3	0.8	<0.10	0.83
ORG-L02	Phenanthrene	µg.l ⁻¹	N	0.45	<0.10	<0.10	<0.10
ORG-L02	Anthracene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	<0.10
ORG-L02	Fluoranthene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	<0.10
ORG-L02	Pyrene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	<0.10
ORG-L02	Benza(a)anthracene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	<0.10

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Sample Date:				26/08/2022	26/08/2022	26/08/2022	26/08/2022
Sample Matrix:				Groundwater	Groundwater	Groundwater	Groundwater
ORG-L02	Chrysene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	<0.10
ORG-L02	Benzo(b)fluoranthene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	<0.10
ORG-L02	Benzo(a)pyrene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	<0.10
ORG-L02	Indeno(123-cd)pyrene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	<0.10
ORG-L02	Dibenza(ah)anthracene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	<0.10
ORG-L02	Benzo(ghi)perylene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	<0.10

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Code	Determinand	Units	*	Sample Identification			
Laboratory Sample Number:				270822015	270822016	270822017	270822018
Client Sample Reference:				OW08	OW09	OW10	OW11
Sample Date:				26/08/2022	26/08/2022	26/08/2022	26/08/2022
Sample Matrix:				Groundwater	Groundwater	Groundwater	Groundwater
INORG-L12	Ammonia	mg.l ⁻¹ as N	A	321	316	371	0.98
INORG-L11	Nitrate	mg.l ⁻¹ as NO ₃	A	2.6	1.5	<0.3	0.62
INORG-L14	Nitrite	mg.l ⁻¹ as NO ₂	A	0.61	<0.003	1.4	0.72
1455	Arsenic	µg.l ⁻¹	S-A	2.0	2.4	2.3	2.3
1455	Mercury	µg.l ⁻¹	S-A	<0.05	<0.05	<0.05	<0.05
METALS-L	Barium	µg.l ⁻¹	A	593	522	483	574
METALS-L	Boron	µg.l ⁻¹	A	10100	12200	11800	12700
METALS-L	Cadmium	µg.l ⁻¹	A	<0.9	<0.9	1.0	0.9
METALS-L	Chromium	µg.l ⁻¹	A	7.0	7.4	7.3	6.9
METALS-L	Copper	µg.l ⁻¹	A	90.0	141	18.0	15.4
METALS-L	Iron	µg.l ⁻¹	A	258	345	453	445
METALS-L	Lead	µg.l ⁻¹	A	5.5	10.6	<4.1	<4.1
METALS-L	Manganese	µg.l ⁻¹	A	661	1030	482	598
METALS-L	Nickel	µg.l ⁻¹	A	37.7	38.9	11.6	12.0
METALS-L	Zinc	µg.l ⁻¹	A	87.5	104	19.2	<1.1
METALS-L	Potassium	mg.l ⁻¹	A	171	169	176	184
INORG-L37	Hexavalent Chromium	mg.l ⁻¹	N	<0.1	<0.1	<0.1	<0.1
INORG-L01	pH	pH units	A	7.4	7.4	7.4	7.2
INORG-L13	Chloride	mg.l ⁻¹	A	745	428	408	477
INORG-L18	TOC	mg.l ⁻¹	A	35.6	50.4	45.2	36.7
METALS-L	Sulphate	mg.l ⁻¹	A	9.2	8.0	7.8	7.7
ORG-L17	Mecoprop	µg.l ⁻¹	N	<0.1	<0.1	<0.1	<0.1
ORG-L01	TPH	mg.l ⁻¹	N	0.4	1.1	1.2	0.4
ORG-L02	Naphthalene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	<0.10
ORG-L02	Acenaphthene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	<0.10
ORG-L02	Fluorene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	<0.10
ORG-L02	Phenanthrene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	<0.10
ORG-L02	Anthracene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	<0.10
ORG-L02	Fluoranthene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	<0.10
ORG-L02	Pyrene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	<0.10
ORG-L02	Benza(a)anthracene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	<0.10

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Report Date
20th September 2022

Code	Determinand	Units	*	Sample Identification			
Laboratory Sample Number:				270822015	270822016	270822017	270822018
Client Sample Reference:				OW08	OW09	OW10	OW11
Sample Date:				26/08/2022	26/08/2022	26/08/2022	26/08/2022
Sample Matrix:				Groundwater	Groundwater	Groundwater	Groundwater
ORG-L02	Chrysene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	<0.10
ORG-L02	Benzo(b)fluoranthene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	<0.10
ORG-L02	Benzo(a)pyrene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	<0.10
ORG-L02	Indeno(123-cd)pyrene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	<0.10
ORG-L02	Dibenza(ah)anthracene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	<0.10
ORG-L02	Benzo(ghi)perylene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	<0.10

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Code	Determinand	Units	*	Sample Identification			
Laboratory Sample Number:				270822019	270822020	270822021	270822022
Client Sample Reference:				OW12	OW13	OW14	LW14
Sample Date:				26/08/2022	26/08/2022	26/08/2022	26/08/2022
Sample Matrix:				Groundwater	Groundwater	Groundwater	Groundwater
INORG-L12	Ammonia	mg.l ⁻¹ as N	A	339	257	0.90	0.92
INORG-L11	Nitrate	mg.l ⁻¹ as NO ₃	A	1.1	0.75	0.40	3.1
INORG-L14	Nitrite	mg.l ⁻¹ as NO ₂	A	0.32	0.68	0.13	3.7
1455	Arsenic	µg.l ⁻¹	S-A	2.3	1.9	4.4	2.9
1455	Mercury	µg.l ⁻¹	S-A	<0.05	<0.05	<0.05	<0.05
METALS-L	Barium	µg.l ⁻¹	A	642	520	481	575
METALS-L	Boron	µg.l ⁻¹	A	12900	15000	8400	10500
METALS-L	Cadmium	µg.l ⁻¹	A	<0.9	0.9	<0.9	<0.9
METALS-L	Chromium	µg.l ⁻¹	A	7.2	7.2	10.0	8.4
METALS-L	Copper	µg.l ⁻¹	A	74.6	8.7	3.6	51.9
METALS-L	Iron	µg.l ⁻¹	A	304	341	412	339
METALS-L	Lead	µg.l ⁻¹	A	9.0	9.8	6.5	<4.1
METALS-L	Manganese	µg.l ⁻¹	A	580	487	645	444
METALS-L	Nickel	µg.l ⁻¹	A	17.5	8.4	11.4	24.3
METALS-L	Zinc	µg.l ⁻¹	A	102	<1.1	2.2	68.6
METALS-L	Potassium	mg.l ⁻¹	A	198	151	189	221
INORG-L37	Hexavalent Chromium	mg.l ⁻¹	N	<0.1	<0.1	<0.1	<0.1
INORG-L01	pH	pH units	A	7.1	7.5	7.4	7.4
INORG-L13	Chloride	mg.l ⁻¹	A	656	292	440	696
INORG-L18	TOC	mg.l ⁻¹	A	28.9	29.9	31.8	30.7
METALS-L	Sulphate	mg.l ⁻¹	A	11.5	6.8	8.2	11.2
ORG-L17	Mecoprop	µg.l ⁻¹	N	<0.1	<0.1	<0.1	<0.1
ORG-L01	TPH	mg.l ⁻¹	N	1.5	1.1	0.8	0.7
ORG-L02	Naphthalene	µg.l ⁻¹	N	<0.10	<0.10	0.67	<0.10
ORG-L02	Acenaphthene	µg.l ⁻¹	N	<0.10	<0.10	5.8	<0.10
ORG-L02	Fluorene	µg.l ⁻¹	N	<0.10	<0.10	3.5	<0.10
ORG-L02	Phenanthrene	µg.l ⁻¹	N	<0.10	<0.10	0.32	<0.10
ORG-L02	Anthracene	µg.l ⁻¹	N	<0.10	<0.10	0.15	<0.10
ORG-L02	Fluoranthene	µg.l ⁻¹	N	<0.10	<0.10	0.30	<0.10
ORG-L02	Pyrene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	<0.10
ORG-L02	Benza(a)anthracene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	<0.10

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Code	Determinand	Units	*	Sample Identification			
Laboratory Sample Number:				270822019	270822020	270822021	270822022
Client Sample Reference:				OW12	OW13	OW14	LW14
Sample Date:				26/08/2022	26/08/2022	26/08/2022	26/08/2022
Sample Matrix:				Groundwater	Groundwater	Groundwater	Groundwater
ORG-L02	Chrysene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	<0.10
ORG-L02	Benzo(b)fluoranthene	µg.l ⁻¹	N	1.1	0.14	<0.10	<0.10
ORG-L02	Benzo(a)pyrene	µg.l ⁻¹	N	0.70	<0.10	<0.10	<0.10
ORG-L02	Indeno(123-cd)pyrene	µg.l ⁻¹	N	1.4	1.1	<0.10	<0.10
ORG-L02	Dibenza(ah)anthracene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	<0.10
ORG-L02	Benzo(ghi)perylene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	<0.10

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Code	Determinand	Units	*	Sample Identification			
Laboratory Sample Number:				270822023	270822024	270822025	270822026
Client Sample Reference:				OW15	OW16	OW17	OW18
Sample Date:				26/08/2022	26/08/2022	26/08/2022	26/08/2022
Sample Matrix:				Groundwater	Groundwater	Groundwater	Groundwater
INORG-L12	Ammonia	mg.l ⁻¹ as N	A	254	0.67	347	242
INORG-L11	Nitrate	mg.l ⁻¹ as NO ₃	A	0.62	0.71	0.79	<0.3
INORG-L14	Nitrite	mg.l ⁻¹ as NO ₂	A	0.45	0.56	<0.003	0.43
1455	Arsenic	µg.l ⁻¹	S-A	1.4	3.3	1.6	0.94
1455	Mercury	µg.l ⁻¹	S-A	<0.05	<0.05	<0.05	<0.05
METALS-L	Barium	µg.l ⁻¹	A	930	772	692	502
METALS-L	Boron	µg.l ⁻¹	A	6100	13200	14100	9300
METALS-L	Cadmium	µg.l ⁻¹	A	<0.9	<0.9	<0.9	<0.9
METALS-L	Chromium	µg.l ⁻¹	A	8.6	7.6	9.4	6.2
METALS-L	Copper	µg.l ⁻¹	A	19.8	40.8	14.3	7.4
METALS-L	Iron	µg.l ⁻¹	A	233	472	484	267
METALS-L	Lead	µg.l ⁻¹	A	<4.1	9.5	<4.1	10.4
METALS-L	Manganese	µg.l ⁻¹	A	826	325	471	525
METALS-L	Nickel	µg.l ⁻¹	A	13.3	21.6	15.7	11.2
METALS-L	Zinc	µg.l ⁻¹	A	92.4	22.8	21.0	<1.1
METALS-L	Potassium	mg.l ⁻¹	A	146	250	211	158
INORG-L37	Hexavalent Chromium	mg.l ⁻¹	N	<0.1	<0.1	<0.1	<0.1
INORG-L01	pH	pH units	A	7.4	7.5	7.4	7.7
INORG-L13	Chloride	mg.l ⁻¹	A	342	1100	731	420
INORG-L18	TOC	mg.l ⁻¹	A	30.0	29.8	52.4	46.7
METALS-L	Sulphate	mg.l ⁻¹	A	7.0	12.3	9.5	5.1
ORG-L17	Mecoprop	µg.l ⁻¹	N	<0.1	<0.1	<0.1	<0.1
ORG-L01	TPH	mg.l ⁻¹	N	1.0	0.5	0.7	1.4
ORG-L02	Naphthalene	µg.l ⁻¹	N	<0.10	<0.10	0.43	<0.10
ORG-L02	Acenaphthene	µg.l ⁻¹	N	<0.10	<0.10	1.5	<0.10
ORG-L02	Fluorene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	<0.10
ORG-L02	Phenanthrene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	<0.10
ORG-L02	Anthracene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	<0.10
ORG-L02	Fluoranthene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	<0.10
ORG-L02	Pyrene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	<0.10
ORG-L02	Benza(a)anthracene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	<0.10

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Code	Determinand	Units	*	Sample Identification			
Laboratory Sample Number:				270822023	270822024	270822025	270822026
Client Sample Reference:				OW15	OW16	OW17	OW18
Sample Date:				26/08/2022	26/08/2022	26/08/2022	26/08/2022
Sample Matrix:				Groundwater	Groundwater	Groundwater	Groundwater
ORG-L02	Chrysene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	<0.10
ORG-L02	Benzo(b)fluoranthene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	<0.10
ORG-L02	Benzo(a)pyrene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	<0.10
ORG-L02	Indeno(123-cd)pyrene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	<0.10
ORG-L02	Dibenza(ah)anthracene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	<0.10
ORG-L02	Benzo(ghi)perylene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	<0.10

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Code	Determinand	Units	*	Sample Identification			
Laboratory Sample Number:				270822027	270822028	270822029	-
Client Sample Reference:				OW19	Pumping Station T1	Outfall A – Ferry Court	-
Sample Date:				26/08/2022	26/08/2022	26/08/2022	-
Sample Matrix:				Groundwater	Effluent	Surface Water	-
INORG-L12	Ammonia	mg.l ⁻¹ as N	A	98.9	170	5.0	-
INORG-L11	Nitrate	mg.l ⁻¹ as NO ₃	A	1.5	1.1	0.53	-
INORG-L14	Nitrite	mg.l ⁻¹ as NO ₂	A	0.20	0.24	1.0	-
1455	Arsenic	µg.l ⁻¹	S-A	1.7	1.8	0.81	-
1455	Mercury	µg.l ⁻¹	S-A	<0.05	<0.05	<0.05	-
METALS-L	Barium	µg.l ⁻¹	A	373	893	238	-
METALS-L	Boron	µg.l ⁻¹	A	2100	7200	582	-
METALS-L	Cadmium	µg.l ⁻¹	A	<0.9	<0.9	<0.9	-
METALS-L	Chromium	µg.l ⁻¹	A	2.7	5.0	2.3	-
METALS-L	Copper	µg.l ⁻¹	A	13.3	4.8	32.6	-
METALS-L	Iron	µg.l ⁻¹	A	353	482	2400	-
METALS-L	Lead	µg.l ⁻¹	A	<4.1	<4.1	9.8	-
METALS-L	Manganese	µg.l ⁻¹	A	1130	803	226	-
METALS-L	Nickel	µg.l ⁻¹	A	9.6	5.3	3.1	-
METALS-L	Zinc	µg.l ⁻¹	A	4.7	<1.1	30.8	-
METALS-L	Potassium	mg.l ⁻¹	A	72.0	112	6.4	-
INORG-L37	Hexavalent Chromium	mg.l ⁻¹	N	<0.1	<0.1	<0.1	-
INORG-L01	pH	pH units	A	7.3	7.6	7.5	-
INORG-L13	Chloride	mg.l ⁻¹	A	198	2200	54.5	-
INORG-L18	TOC	mg.l ⁻¹	A	40.5	47.5	44.4	-
METALS-L	Sulphate	mg.l ⁻¹	A	1.4	5.1	11.5	-
ORG-L17	Mecoprop	µg.l ⁻¹	N	<0.1	17.5	<0.1	-
ORG-L01	TPH	mg.l ⁻¹	N	0.3	0.7	<0.2	-
ORG-L02	Naphthalene	µg.l ⁻¹	N	<0.10	0.71	<0.10	-
ORG-L02	Acenaphthene	µg.l ⁻¹	N	1.6	3.2	<0.10	-
ORG-L02	Fluorene	µg.l ⁻¹	N	0.74	1.3	<0.10	-
ORG-L02	Phenanthrene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	-
ORG-L02	Anthracene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	-
ORG-L02	Fluoranthene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	-
ORG-L02	Pyrene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	-
ORG-L02	Benza(a)anthracene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	-

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Code	Determinand	Units	*	Sample Identification			
Laboratory Sample Number:				270822027	270822028	270822029	-
Client Sample Reference:				OW19	Pumping Station T1	Outfall A – Ferry Court	-
Sample Date:				26/08/2022	26/08/2022	26/08/2022	-
Sample Matrix:				Groundwater	Effluent	Surface Water	-
ORG-L02	Chrysene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	-
ORG-L02	Benzo(b)fluoranthene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	-
ORG-L02	Benzo(a)pyrene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	-
ORG-L02	Indeno(123-cd)pyrene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	-
ORG-L02	Dibenza(ah)anthracene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	-
ORG-L02	Benzo(ghi)perylene	µg.l ⁻¹	N	<0.10	<0.10	<0.10	-

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Analytical Method	Method Code	Accreditation Status
Determination of pH in waters by discrete analyser ECM unit (In-house method)	INORG-L01	ISO 17025
Determination of ammonia in waters by discrete analyser (In-house method)	INORG-L12	ISO 17025
Determination of chloride by discrete analyser (In-house method)	INORG-L13	ISO 17025
Determination of metals in waters by ICP-OES (In-house method)	METALS-L	ISO 17025
Determination of mecoprop in waters by GS-MS (In-house method)	ORG-L17	None
Determination of total organic carbon in waters by photometer (In-house method)	INORG-L18	ISO 17025
Determination of PAHs in water by GC-MS (In-house method)	ORG-L02	None
Determination of TPH in Water by GC-MS (In-house method)	ORG-L01	None
Determination of metals in waters by ICP-MS (Sub-Contracted method)	1455	None
Determination of nitrate in water by discrete analyser (In-house method)	INORG-L11	ISO 17025
Determination of nitrite in water by discrete analyser (In-house method)	INORG-L14	ISO 17025

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Disposal Times:

All water samples will be retained for a period of two weeks and all soil samples retained for a period of one month following the date of the issued certificate.

All results only relate to the items tested.

This report supersedes any previous versions issued by the laboratory.

A full list of determinants relating to abbreviations such as PAHs, VOCs, SVOCs, PCBs etc. is available upon request.

Where results have been labelled as deviating for any reason, the data may not be representative of the sample at the point of sampling:

[I/S]: Insufficient Sample

[U/S]: Unsuitable Sample

[A]: Date of Sampling not supplied

[B]: Sample age exceeds recommended storage time

[C]: Samples not received in appropriate containers

[D]: Broken Container

< "Less Than"

> "Greater Than"

Where any sub-contracted results have been noted as deviating by the laboratory in question, their deviations codes will be applied and detailed.

Accreditation statements are correct at the time of issue.

This report shall not be reproduced in part without the approval of Decus Research Ltd, nor used in any way as to lead to misrepresentation of the results or their implications.

Uncertainties of measurement values are available upon request.

*****END OF REPORT*****

*** Accreditation Status**

Tests marked 'A' hold UKAS accreditation

Tests marked 'N' do not hold UKAS accreditation

Tests marked 'S - A' were sub-contracted to an approved laboratory with accreditation on the specific method

Tests marked 'S - N' were sub-contracted to an approved laboratory without accreditation on the specific method

Any comments or interpretations are beyond the scope of UKAS accreditation



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