Appendix 12B

Groundwater and Surface Water Analytical Results

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Groundwater monitoring data summary Round 1 - Round 4

r	Location	Derrygreenagh SWM	M & GWM 2023						1	Hostel Wel			BHOB2			BH111a			BHSS04			BH	SS(M)07			BH11	7
	Round									Round 2 Ro	und 3 Round 4		Round 2 Round 3			Round 2 Roun			Round 2 Rou			Round 2	Round 3				Round 3 Ro
Determinand Total Alkalinity (as CaCO3)	Units MD mg/l		ter. DWS - Ireland	Source	CW/WE Water. GTV - Ireland	Source	CW/WE Water. Aquatic Toxicity - Ireland - Freshwater	Source			7/2023 25/07/2023 ns ulated for Re		29/05/2023 05/07/2023	25/07/2023 1 ns			2023 25/07/2023 5 463.4		29/05/2023 05/0 ns 56					25/07/2023 424.4		9/05/2023 ns	05/07/2023 25/0 280.9 4
Chromium (VI)	mg/l	0.01							<0.01	ns	ns -	<0.01	- ns	ns	ns	ns -	-	ns	ns		ns	ns	-		ns	ns	
Cyanid, total Chromium	mg/l mg/l (0.01	0.05	DWS Ireland 2014	0.0375	Ireland GTVs 2016	0.0034	EU Env. Objectives Regs 2009. (Ire) AA-EQS Fresh	<0.01	ns ns		<0.01 0.008	- ns 0.00105 ns			ns <0.0	- <0.01	ns	ns <		ns	ns	<0.01	-	ns	ns	<0.01
Chromium III	mg/l	0.01							<0.01	ns	ns -	<0.01	- ns			ns -	- 6 1450	ns			ns	ns	- 1570	36240	ns	ns	- 24 2
Total suspended solids (TSS) Chemical oxygen demand (COD)	mg/l mg/l	8							2	ns ns		168	- ns - ns		ns	ns 46 ns 20		ns ns		400 1785 400 3380	ns	ns	410	1490	ns	ns	<8
Dissolved oxygen	mg/i	1	250	DWS Ireland 2014	197.5	Iroland GTVr 2016	200	(G) (Impand 2002 (EQS)	7.42	ns	ns -	5.54 22.514	- ns	ns	ns	ns 10.4	45 8.68	ns ns	ns	<1 7.98 <1 17.8	ns	ns	<1	2.42	ns	ns ns	10.17
Sulphate Orthophosphate-P	mg/l mg/l	0.05	0.03	IGV Ireland 2003	<u>187.5</u> 0.03	Ireland GTVs 2016 IGV Ireland 2004	200	IGV Ireland 2003 (EQS)	0.019	ns	ns -	0.073	- ns		ns	ns <0.0	<0.05	ns	ns <	0.05 <0.05	ns	ns	<0.05	5.202	ns	ns	0.312 <
Fluoride Chloride	mg/l mg/l	0.2	0.8	DWS Ireland 2014 DWS Ireland 2014	<u>0.8</u> 24 - 18.75	DWS Ireland 2015 Ireland GTVs 2016	0.5	EU Env. Objectives Regs 2009. (Ire) AA-EQS Fresh IGV Ireland 2003 (EQS)	0.331 32.327		ns -	0.179 14.292	- ns	ns ns		ns 0.1 ns 11		ns	ns <	0.2 0.2 <5 17.3	ns	ns	0.8	23.9 18.7	ns	ns	0.4
Ammonia	mg/l	0.05	0.15	IGV Ireland 2003	0.15	IGV Ireland 2003	0.3	WFD (N.Ire) 2015. Freshwater Standards	< 0.05	ns	ns -	< 0.05	- ns	<u>ns</u>	ns	ns <0.0	<0.05	ns	ns <	0.05 <u>6.07</u>	ns	ns	1.83	3.7	ns	ns	<0.05
Nitrate (as N) Toluene	mg/l mg/l	2	50	DWS Ireland 2014	37.5	Ireland GTVs 2016	50	IGV Ireland 2003 (EQS)	3.178		ns - ns -	2.023	- ns - ns	ns ns		ns <1	<1	ns	ns -	a a a a	ns	ns	<1 <2	2.323	ns	ns	<1 <2
Xylene -m	mg/l	2							<2	ns	ns -	-2	- ns		ns	ns <2	<2	ns	ns	2 2	ns	ns	<2	<2	ns	ns	<2
Xylene -p Dichloromethane	mg/l mg/l	2							<2	ns	ns -	<2	- ns - ns	ns		ns <	<		ns ·	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	ns	ns	<2	<2	ns	ns	<2
n-Hexane	mg/l	2							<2	ns	ns -	2	- ns	ns	ns	ns <	2	ns	ns	2 2	ns	ns	<2	<2	ns	ns ns	2
Isopropyl acetate Cyclopentanone	mg/l mg/l	2							<2	ns	ns -	2	- ns - ns	ns	ns	ns <	2	ns ns	ns	2 2	ns	ns	<2	<2	ns	ns	<2
Butylmethyl ether	mg/l	2							<2 0.032	ns		2	- ns - ns			ns <	<2	ns ns	ns	2 2	ns	ns	<2	<2	ns	ns	<2
Amyl acetate Ethyl acetate	mg/l mg/l	2							<2	ns ns	ns -	2	- ns			ns d	<	ns		2 2	ns	ns	<2	<2	ns	ns	<2
Isoamyl alcohol Ethanol	mg/l	5							<5	ns ns	ns -	6	- ns		ns ns	ns <	5	ns ns	ns ns	S S	ns	ns	<5	<5	ns	ns ns	<5
1-Butanol	mg/l mg/l	5							<5	ns	ns -	6	- ns - ns	ns	ns	ns <	5	ns	ns	6 6	ns	ns	-5	-5	ns	ns	<5
Triethylamine Acetonitril	mg/l mg/l	2							<2	ns ns	ns -	2	- ns - ns	ns	ns	ns <	<	ns	ns -	a a a a	ns	ns	<2 <2	<2 <2	ns	ns	<2 <2
Cyclohexane	mg/l	2	13	USEPA RSL (tapwater) [NOV 2021]					<2	ns	ns -	4	- ns	ns	ns	ns 🧠	<2	ns	ns	2 2	ns	ns	<2	<2	ns	ns	<2
Heptane tertiar-Butanol	mg/l mg/l	2							<2	ns ns	ns - ns -	2	- ns - ns			ns <	2	ns ns	ns -	 4 4	ns	ns	<2 <2	<2 <2	ns	ns ns	<2 <2
Tetrahydrofurane	mg/l	2							<2	ns	ns -	2	- ns	ns	ns	ns <	<2	ns	ns	2 2	ns	ns	<2	<2	ns	ns	<2
Xylenes (sum) tert-Amylalcohol	mg/l mg/l	5							<2 <5	ns ns	ns -	- 2 - 5	- ns - ns		ns ns	ns <	<2	ns ns	ns ns	< < < <	ns	ns	<2 <5	<2 <5	ns	ns ns	<5
acetone	mg/l	2							<2	ns	ns -	2	- ns	ns	ns	ns <2	<2	ns	ns	2 2	ns	ns	2	<2	ns	ns	<2
Di-isopropylether 1-Butyl Alcohol	mg/l mg/l	2							<2	ns	ns - ns -	4	- ns - ns	ns ns	ns ns	ns <	<2		ns	4 <2 <2 <2 <2	ns	ns	<2	<2	ns	ns ns	<2
Methyl ethyl ketone peroxide Methanol	mg/l	2							<2	ns ns	ns -	4	- ns - ns	ns	ns	ns <	<2	ns	ns	2 <2	ns	ns ns	<2	<2	ns	ns ns	<2
2-Propanol	mg/l mg/l	2							3	ns	ns -	3	- ns - ns		ns	ns 🧠	<	ns	ns ns	2 2	ns	ns	~	~	ns	ns ns	<2
o-Xylene Temperature	mg/l	2							<2		ns - ns -	<2 0	- ns - ns	ns		ns <	. <2	ns	ns -	<2 <2	ns	ns	<2	<2	ns	ns	<2
Arsenic	°С µg/I	0.2	10	DWS Ireland 2014	<u>7.5</u>	Ireland GTVs 2016	25	EU Env. Objectives Regs 2009. (Ire) AA-EQS Fresh	-	ns	ns -	-	- ns	ns	ns ns	ns 0.6	5 0.81	ns ns	ns <u>17</u>	.071 10.908	ns	ns	2.857	3.941	ns	ns	0.352 0
Barium Beryllium	μg/l μg/l	1.77	100	IGV Ireland 2003 WHO DWG 2017	100	IGV Ireland 2003 WHO DWG 2017	100	IGV Ireland 2003 (EQS)	-	ns	ns - ns -	· ·	- ns - ns	ns ns	ns ns	ns <u>104.8</u>	<u>110.056</u>	ns	ns 27 ns	.464 <u>605.493</u>	ns	ns ns		174.247	ns	ns	26.613 1
Boron	mg/l	0.21	1	DWS Ireland 2014	0.75	Ireland GTVs 2010	2	IGV Ireland 2003 (EQS)	1	ns	ns -	•	- ns	ns	ns	ns <1 ns <0.1	<0.21	ns	ns <	0.21 <0.21	ns	ns	< 0.21	<0.21	ns	ns	<0.21 <
Cadmium Copper	μg/l mg/l (0.1	5	DWS Ireland 2014 DWS Ireland 2014	<u>3.75</u> <u>1.5</u>	Ireland GTVs 2010 Ireland GTVs 2010				ns	ns - ns -		- ns - ns	ns		ns 3.04 ns <0.0	45 3.301 03 <0.003	ns ns	ns < ns <0	0.1 1.755 .003 <0.003	ns	ns	<0.003	0.203 <0.003	ns	ns	1.364 0 <0.003 <1
Lead	μg/l	0.5	10	DWS Ireland 2014	7.5	Ireland GTVs 2016			-	ns	ns -	•	- ns	ns	ns	ns <0.	5 <0.5	ns	ns <	0.5 0.705	ns	ns	<0.5	<0.5	ns	ns	<0.5
Mercury Nickel	μg/l μg/l	0.05	20	DWS Ireland 2014 DWS Ireland 2014	0.75	Ireland GTVs 2016 Ireland GTVs 2010			1	ns ns	ns -		- ns - ns	ns ns			35 0.127 79 26.052	ns	ns < ns 12	0.03 0.071 .994 31.084	ns	ns	0.091 51.847	0.082 64.628	ns	ns	0.075 0 67.115 3
Selenium	μg/I	0.2	10	DWS Ireland 2014	10	DWS Ireland 2014				ns	ns -	•	- ns	ns	ns	ns 0.48	87 0.389	ns	ns 1.	011 9.687	ns	ns	0.56	<0.2	ns	ns	<0.2 0
Vanadium Zinc	μg/l μg/l	1	86 75	USEPA RSL (tapwater) [NOV 2021] Ireland GTVs 2016	75	USEPA RSL (tapwater) [NOV 2021] Ireland GTVs 2016				ns ns	ns -	-	- ns - ns		ns ns	ns <1 ns 33	26.2 5 0.453	ns	ns 36 ns 6	8.6 38	ns	ns	2.888 80.8	74.4	ns	ns	318 4
Arsenic - dissolved Barium - dissolved	μg/l		10 100	DWS Ireland 2014 IGV Ireland 2003	7.5	Ireland GTVs 2016	25 100		0.322	ns	ns -	0.78	0.266 ns	ns				ns	ns 17	.071 15.843	ns	ns	2.857	2.312 120.766	ns	ns ns	318 0.352 0 26.612 14
Beryllium - dissolved	μg/l μg/l		12	WHO DWG 2017	<u>100</u> <u>12</u>	IGV Ireland 2003 WHO DWG 2017	100		<1		ns -	0.446		ns	ns	ns <u><0</u>	333 <u>96.142</u>	ns	ns 27 ns	<u>d</u> d	ns	ns	<u>167.266</u>	<1	ns	ns	26.613 10 <1
Boron - dissolved Cadmium - dissolved	mg/l		1 5	DWS Ireland 2014 DWS Ireland 2014	0.75	Ireland GTVs 2010 Ireland GTVs 2010	2		0.012	ns	ns -	0.019	<0.21 ns 0.156 ns	ns	ns ns	ns <0.3	<0.21 <0.21	ns ns	ns <	0.21 <0.21 0.1 0.316	ns	ns ns	<0.21 0.629	<0.21 0.137	ns	ns	<u><0.21</u> < 1.364 ·
Copper - dissolved	μg/l mg/l		2	DWS Ireland 2014	15	Ireland GTVs 2010			0.001	ns ns	ns -	0.003	0.009 ns		ns	ns <0.0	15 1.321 03 <0.003	ns	ns <0	.003 <0.003	ns	ns	<0.003	<0.003	ns	ns	<0.003 <
Lead - dissolved Mercury - dissolved	μg/l μg/l		10	DWS Ireland 2014 DWS Ireland 2014	0.75	Ireland GTVs 2016 Ireland GTVs 2016			0.091	ns ns	ns -	3.47 0.063	<0.51 ns <0.03 ns	ns	ns ns	ns <u><0.</u> ns 0.03	5 <0.51 85 <0.03			0.5 <0.51 0.03 <0.03	ns	ns	<u><0.5</u> 0.091	< 0.51	ns	ns	<u><0.5</u> < 0.075 <
Nickel - dissolved	μg/l μg/l		20	DWS Ireland 2014	15	Ireland GTVs 2010			2.1	ns	ns -	11.415	3.032 ns	ns	ns	ns <u>33.0</u>	79 22.195	ns	ns 12	.994 15.898	ns	ns	51.847	13.727	ns	ns	67.115 3
Selenium - dissolved Vanadium - dissolved	μg/l μg/l		10 86	DWS Ireland 2014 USEPA RSL (tapwater) [NOV 2021]	10 86	DWS Ireland 2014 USEPA RSL (tapwater) [NOV 2021]			0.603	ns ns	ns - ns -	2.327	1.778 ns <1 ns			ns 0.48	37 0.627 <1	ns	ns 1. ns 36	011 3.719 .377 91.886	ns	ns	0.56	0.407 <1	ns	ns	<0.2 0
Zinc - dissolved	μg/l		75	Ireland GTVs 2016	75	Ireland GTVs 2016			9.202	ns	ns -	33.182	35.287 ns	ns	ns	ns 33	30.7	ns	ns 6	8.6 11	ns	ns	80.8	15.7	ns	ns	318
pH, 1 dec Conductivity	μS/cm	100							7.9 634.7			667.2			ns ns	ns 7.3	5 6.8 00 740	ns	ns é ns 8	5.6 6.5 386 840	ns	ns	2.857 592	6.9 690	ns	ns ns	7.6 3280
TPH Sum	μg/l	0.1							<0.1	ns	ns -	<0.1	- ns	ns	ns	ns <0.	1 <10	ns	ns <	0.1 <10	ns	ns	<0.1	<10	ns	ns	<0.1
Oil hydrocarbons >C10-C21 Oil hydrocarbons >C21-C40	μg/l μg/l	0.1							<0.1	ns	ns - ns -	<0.1	- ns - ns	ns	ns	ns <0. ns <0.	1 <0.1	ns ns	ns <	0.1 <0.1	ns	ns	<0.1	<0.1	ns	ns ns	<0.1
TPH >C6-C10 Benzene	µg/l µg/l	10							<10	ns	ns - ns -	<10	- ns - ns	ns	ns ns	ns <1 ns <1	0 <0.1	ns ns	ns <	<10 <0.1	ns	ns ns	<10	<0.1	ns	ns ns	<10
Toluene	μg/l	1							<1	ns	ns -	4	- ns	ns	ns	ns <	<1	ns	ns	<1 <1	ns	ns	<1	<1	ns	ns	<1
Ethylbenzene m-/-p-Xylene	μg/I μg/I	1							<1 <1	ns	ns - ns -	0 0	- ns - ns			ns <		ns ns	ns -	a a	ns	ns	<1 <1	<1 <1	ns	ns ns	<1
o-Xylene	μg/l	1	10	N/C 0 2010 / C					<1	ns	ns -	4	- ns	ns	ns	ns <	<1	ns	ns	<1 <1	ns	ns	<1	<1	ns	ns	<1
Perfluorooctanoic acid (PFOA) Perfluorooctane sulphonic acid (PFOS	ng/l ng/l	0.2	10	WS Regs 2016 (Eng/Wal)					<u> </u>	ns ns	ns -		- ns - ns	ns	ns ns	ns - ns -	-	ns ns	ns <	0.2 -	ns	ns	1.3 <0.20		ns	ns ns	-
Phenol	μg/l	0.2							<0.2	ns	ns -	<0.2	- ns	ns	ns	ns <0.	2 <0.2	ns	ns <	0.2 <0.2	ns	ns	<0.2	< 0.2	ns	ns	0.22
Thymol o-Cresol	μg/l μg/l	0.3							<0.3	ns ns	ns -	<0.3	- ns - ns	ns	ns	ns <0.0	3 <0.3	ns	ns <	0.3 <0.3	ns	ns	<0.01	<0.2	ns	ns ns	<0.3
2,3/3,5-Dimethylphenol + 4-Ethylphen 2,4-Dimethylphenol	μg/l μg/l	0.02							<0.02	ns	ns -	<0.02	- ns	ns	ns	ns <0.0)2 <0.02)2 <0.02	ns	ns <	0.02 <0.02	ns	ns	0.029 <0.02	<0.02	ns	ns	<0.02 <
2,5-Dimethylphenol	μg/l	0.02							<0.02		ns -	<0.02	- ns			ns <0.0	0.02	ns		0.02 <0.02	ns	ns	<0.02	<0.02	ns	ns	<0.02 <
2,6-Dimethylphenol 3,4-Dimethylphenol	μg/l μg/l	0.03			├				<0.03	ns ns	ns - ns -	<0.03	- ns - ns		ns ns	ns <0.0	0.03 <0.03 02 <0.02	ns ns	ns <	0.03 <0.03	ns	ns	<0.03	<0.03	ns	ns ns	<0.03 <
Cresols (sum)		-							<0.8	ns	ns -	<0.8	- ns	ns	ns	ns <0.	8 <0.8	ns	ns <	0.8 <0.8	ns	ns	<0.8	<0.8	ns	ns	3.5
	μg/1								<0.3	ns ns		<0.3 <0.02	- ns - ns		ns ns	ns <0.0	s <0.3 02 <0.02	ns ns	ns < ns <	0.3 <0.3	ns	ns	<0.3	<0.3	ns ns	ns ns	<0.3
m-Cresol	μg/1 μg/1 μg/1	0.3										<0.02	- ns												ns		<0.03 <
m-Cresol m-Ethylphenol o-Ethylphenol	µg/1 µg/1 µg/1 µg/1	0.3 0.02 0.03							<0.03	ns	ns -	<0.03			ns	ns <0.0	03 <0.03	ns	ns <	0.03 <0.03	ns	ns	0.25	<0.03		ns	25
m-Cresol m-Ethylphenol o-Ethylphenol p-Cresol Benzo-(a)-pyrene	μg/I μg/I μg/I μg/I μg/I μg/I	0.3 0.02 0.03 0.2 0.03							<0.03 <0.2 <0.03	ns ns ns	ns - ns -	<0.03	- ns - ns	ns ns	ns ns	ns <0. ns <0.0	03 <0.03 2 <0.2 03 <0.03	ns ns ns	ns < ns < ns <	0.03 <0.03 0.2 <0.2 0.03 <0.03	ns ns	ns ns	0.25 <0.2 <0.03	<0.03 <0.2 <0.03	ns ns	ns ns	3.5 · · · · · · · · · · · · · · · · · · ·
m-Cresol m-Ethylphenol o-Ethylphenol p-Cresol Benzo-(a)-pyrene Fluorene	μg/1 μg/1 μg/1 μg/1 μg/1 μg/1 μg/1	0.3 0.02 0.03 0.2 0.03 0.03 0.01							<0.03 <0.2 <0.03 <0.01 <0.02	ns ns ns ns	ns - ns - ns -	<0.03 <0.2 <0.03 <0.01 <0.02	- ns - ns - ns	ns ns	ns ns	ns <0. ns <0.0 ns <0.0	03 <0.03	ns ns ns	ns ns ns ns	0.03 <0.03 0.2 <0.2 0.03 <0.03 0.01 <0.01 0.02 <0.02	ns ns ns	ns ns ns	0.25 <0.2 <0.03 <0.01 <0.02	<0.03 <0.2 <0.03 <0.01 <0.02	ns ns ns	ns ns ns	
m-Cresol m-Ethylphenol o-Ethylphenol p-Cresol Benzo-(a)-pyrene Fluorene Phenanthrene Anthracene	<u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> µg/1 µg/1	0.3 0.02 0.03 0.03 0.01 0.02 0.01 0.01							<0.03 <0.2 <0.03 <0.01 <0.02 <0.01	ns ns ns ns ns ns	ns - ns - ns - ns - ns -	<0.03 <0.03 <0.01 <0.02 <0.01 <0.01	- ns - ns - ns - ns - ns	ns ns ns ns	ns ns ns ns ns	ns <0. ns <0.0	03 <0.03	ns ns ns ns ns ns	ns < ns	0.03 <0.03	ns ns ns ns ns	ns ns ns ns ns	0.25 <0.2 <0.03 <0.01 <0.02 <0.01	<0.03 <0.2 <0.03 <0.01 <0.02 <0.01	ns n	ns n	
m-Cresol m-Ethylphenol o-Ethylphenol p-Cresol Benzo-(a)-pyrene Fluorene Phenanthrene Anthracene Fluoranthene	<u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u>	0.3 0.02 0.03 0.2 0.03 0.01 0.02 0.01 0.02 0.01 0.02							<0.03 <0.2 <0.03 <0.01 <0.02 <0.01 <0.02 <0.02 <0.06	ns ns ns ns ns ns ns ns	ns - ns - ns - ns - ns - ns -	<0.03 <0.2 <0.03 <0.01 <0.02 <0.01 <0.02 <0.02	- ns - ns - ns - ns - ns - ns - ns	ns ns ns ns ns	ns ns ns ns ns ns	ns <0. ns <0.0	03 <0.03	ns ns ns ns ns ns ns	ns	0.03 <0.03	ns ns ns ns ns ns	ns ns ns ns ns ns	0.25 <0.2 <0.03 <0.01 <0.02 <0.01 <0.02 <0.02 <0.06	<0.03 <0.2 <0.03 <0.01 <0.02 <0.01 <0.02 <0.02 <0.06	ns ns ns ns ns ns	ns n	
m-Cresol m-Ethylphenol o-Ethylphenol p-Cresol Renzo-(a)-pyrene Fluorene Phenanthrene Anthracene Fluoranthene Pyrene	<u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> µg/1	0.3 0.02 0.03 0.2 0.03 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01							<0.03 <0.2 <0.03 <0.01 <0.02 <0.01 <0.02 <0.02 <0.06 <0.04	ns ns ns ns ns ns ns ns ns ns ns ns ns	ns - ns - ns - ns - ns - ns - ns - ns - ns - ns -	<0.03 <0.2 <0.03 <0.01 <0.02 <0.01 <0.02 <0.06 <0.06	- ns - ns - ns - ns - ns - ns - ns - ns	ns ns ns ns ns ns ns ns ns ns	ns n	ns <0. ns <0.0	33 <0.03	ns ns ns ns ns ns ns ns ns ns ns	ns	0.03 <0.03 0.2 <0.2 0.03 <0.02 0.01 <0.01 0.02 <0.02 0.01 <0.01 0.02 <0.02 0.06 <0.05 0.04 <0.04	ns ns ns ns ns ns ns ns ns	ns ns ns ns ns ns ns ns	0.25 <0.2 <0.03 <0.01 <0.02 <0.01 <0.02 <0.06 <0.04	<0.03 <0.2 <0.03 <0.01 <0.02 <0.01 <0.02 <0.06 <0.04	ns ns ns ns ns ns ns ns ns ns	ns n	
m-Cresol m-Cresol of Ethylphenol of Ethylphenol p-Cresol Benzo-(a)pyrene Fluorene Phenanthrene Anthracene Fluoranthrene Pyrene Benzo-(a)anthracene Chrysene Chrysene	<u>н</u> <u>р</u> // <u>н</u> <u>р</u> //	0.3 0.02 0.03 0.2 0.03 0.01 0.02 0.01 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.03 0.02 0.03 0.02 0.03 0.02 0.03 0.02 0.03 0.02 0.03 0.02 0.03 0.02 0.03 0.02 0.03 0.02 0.03 0.02 0.02 0.02 0.02 0.02 0.03 0.02 0.04 0.02 0.02 0.02 0.04 0.02 0.04 0.02 0.04 0.04 0.02 0.04 0.							<0.03 <0.2 <0.03 <0.01 <0.02 <0.01 <0.02 <0.06 <0.04 <0.04	ns ns ns ns ns ns ns ns ns ns ns ns	ns - ns - ns - ns - ns - ns - ns - ns -	<0.03 <0.03 <0.01 <0.02 <0.01 <0.02 <0.06 <0.04 <0.04	- ns - ns - ns - ns - ns - ns - ns - ns	ns ns ns ns ns ns ns ns ns ns ns ns	ns n	ns <0. ns <0.0	33 <0.03	ns ns ns ns ns ns ns ns ns ns ns ns	ns d ns	.0.3 <0.03	ns ns ns ns ns ns ns ns ns ns ns	ns ns ns ns ns ns ns ns ns	0.25 <0.2 <0.03 <0.01 <0.02 <0.01 <0.02 <0.06 <0.06 <0.04 <0.02 <0.04	<0.03 <0.2 <0.03 <0.01 <0.02 <0.01 <0.02 <0.06 <0.04 <0.04	ns ns ns ns ns ns ns ns ns ns	ns n	
m-Cresol m-Chrychenol o-Chrychpenol p-Cresol Benzo-(4)-pyrene Fluorante Fluorante Fluorantene Fluoranthene Pyrene Benzo-(4)-anthracene Chrycane Indero-(1,2,3-cd)-pyrene Debenzo-(4)-anthracene	нд// нд//	0.3 0.02 0.3 0.2 0.3 0.03 0.01 0.03 0.01 0.02 0.01 0.02 0.04 0.04							<0.03 <0.2 <0.03 <0.01 <0.02 <0.02 <0.02 <0.02 <0.04 <0.04 <0.04 <0.04 <0.04 <0.04	ns ns ns ns ns ns ns ns ns ns ns ns ns n	ns -	<pre><0.03 <0.02 <0.03 <0.01 <0.02 <0.01 <0.02 <0.06 <0.04 <0.02 <0.04 <0.02 <0.04 <0.02 <0.04 <0.02 <0.04 <0.02 <0.04 <0.02 <0.04 <</pre>	- ns - ns - ns - ns - ns - ns - ns - ns	ns ns ns ns ns ns ns ns ns ns ns ns ns n	ns n	ns <0. ns <0.1	33 <0.03	ns ns ns ns ns ns ns ns ns ns ns ns ns n	ns d	0.03 <0.03	ns ns ns ns ns ns ns ns ns ns ns ns ns n	ns ns ns ns ns ns ns ns ns ns ns ns	0.25 <0.2 <0.03 <0.01 <0.02 <0.01 <0.02 <0.01 <0.02 <0.04 <0.04 <0.04 <0.04 <0.04 <0.04 <0.04	<0.03 <0.2 <0.03 <0.01 <0.02 <0.01 <0.02 <0.01 <0.02 <0.04 <0.04 <0.02 <0.04 <0.04 <0.04 <0.04 <0.04 <0.04 <0.04 <0.04 <0.04 <0.04 <0.04 <0.04 <0.04 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0 0 0 0 0 0	ns	ns ns	
m-Cresol m-Cresol m-Cresol p-Cresol p-Cresol p-Cresol Benzo(-b-)prene Fluorene Phenanthrene Anthracene Fluoranthrene Phoren Benzo(-b-)-anthracene Chrysene Didero(-1,2,3-cd)-pyrene Didero(-1,3,3-cd)-pyrene Didero(-1,3,3-cd	<u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u> <u>µg/1</u>	0.3 0.02 0.03 0.2 0.03 0.03 0.03 0.03 0.03 0.02 0.02 0.02 0.05 0.02 0.04 0.04 0.04 0.04 0.04 0.03 0.04 0.04 0.04 0.04 0.05 0.04 0.04 0.04 0.05 0.04 0.05 0.04 0.05 0.04 0.05 0.04 0.05 0.							<0.03 <0.2 <0.03 <0.01 <0.02 <0.01 <0.02 <0.06 <0.04 <0.04 <0.04 <0.04	ns	ns -	 <0.03 <0.03 <0.01 <0.02 <0.01 <0.02 <0.04 <0.04 <0.04 <0.03 <0.04 	- ns - ns - ns - ns - ns - ns - ns - ns	ns ns ns ns ns ns ns ns ns ns ns ns ns n	ns ns ns ns ns ns ns ns	ns <0.0 ns <0.1	33 <0.03	ns ns ns ns ns ns ns ns ns ns ns ns ns n	ns dd	.0.03 <0.03	ns ns ns ns ns ns ns ns ns ns ns ns	ns ns ns ns ns ns ns ns ns ns ns	0.25 <0.2 <0.03 <0.01 <0.01 <0.02 <0.06 <0.04 <0.04 <0.04 <0.04 <0.03 <0.04	<0.03 <0.2 <0.03 <0.01 <0.02 <0.01 <0.02 <0.04 <0.04 <0.04 <0.04 <0.04 <0.03 <0.04	ns	ns	<0.03
m-Cresol m-Cresol m-Cresol p-Cresol p-Cresol p-Cresol p-Cresol p-Cresol p-Cresol p-Cresol p-Cresol p-Parameter p-P	µg/i	0.3 0.02 0.03 0.03 0.03 0.03 0.03 0.03 0.03 0.04 0.04 0.04 0.04 0.03 0.04 0.03 0.04 0.03 0.04 0.03 0.04 0.03 0.04 0.03 0.04 0.04 0.04 0.04 0.04 0.05 0							 <0.03 <0.2 <0.03 <0.01 <0.02 <0.02 <0.06 <0.06 <0.04 <0.03 <0.04 <0.04 <0.04 <0.04 <0.05 	ns	NS -	 <0.03 <0.01 <0.01 <0.02 <0.01 <0.02 <0.06 <0.04 <0.03 <0.04 <0.03 <0.04 <0.03 <0.04 <0.04 	- ns - ns - ns - ns - ns - ns - ns - ns	ns ns ns ns ns ns ns ns ns ns ns ns ns n	ns n	ns ⊲0. ns ⊲0.1 ns ⊲0.1	33 <0.03	ns ns ns ns ns ns ns ns ns ns ns ns ns n	ns d	.0.03 <0.03	ns ns ns ns ns ns ns ns ns ns ns ns ns n	ns ns ns ns ns ns ns ns ns ns ns ns ns n	0.25 <0.2 <0.03 <0.01 <0.02 <0.01 <0.02 <0.04 <0.04 <0.04 <0.04 <0.04 <0.04 <0.04 <0.04 <0.04 <0.04 <0.04 <0.04 <0.04 <0.04 <0.04 <0.04 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.0	<0.03 <0.2 <0.03 <0.01 <0.02 <0.01 <0.02 <0.04 <0.04 <0.04 <0.04 <0.04 <0.04 <0.04 <0.04 <0.04 <0.04 <0.04 <0.04 <0.04 <0.03 <0.04 <0.03 <0.04 <0.03 <0.04 <0.04 <0.05 <0.04 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <	ns ns	ns n	<0.03
m-Cresol m-Cresol m-Cresol o-Cthylphenol o-Cthylphenol p-Cresol Benzo-(b-)pyrene Fluoranteree Pheavantree Pheavantree Phoranteree Phoranteree Benzo-(b-)anthracene Chrysene Indero-(1,2,3-cd)-pyrene Debenzo-(ah)-anthracene Benzo-(ah)-anthracene	µg/i	03 002 003 003 003 003 003 003 003 003 0							 <0.03 <0.2 <0.03 <0.01 <0.02 <0.02 <0.06 <0.06 <0.07 <0.08 <0.04 <0.03 <0.04 <0.91 <0.05 	ns ns	NS - MS -	 <0.03 <0.01 <0.01 <0.02 <0.01 <0.02 <0.06 <0.04 <0.02 <0.04 <0.03 <0.04 <0.03 <0.04 <0.03 <0.04 <0.03 <0.04 <0.03 <0.04 <0.05 	- ns - ns - ns - ns - ns - ns - ns - ns	ns ns ns ns ns ns ns ns ns ns ns ns ns n	ns n	ns <0. ns <0.0	33 <0.03	ns ns ns ns ns ns ns ns ns ns ns ns ns n	ns d ns ns d	.0.03 <0.03	ns ns ns ns ns ns ns ns ns ns ns ns ns n	ns ns ns ns ns ns ns ns ns ns ns ns ns n	0.25 <0.2 <0.03 <0.01 <0.02 <0.02 <0.04 <0.02 <0.04 <0.04 <0.04 <0.03 <0.04 <0.04 <0.04 <0.01 <0.03 <0.04 <0.03 <0.04 <0.03 <0.04 <0.03 <0.04 <0.03 <0.04 <0.03 <0.04 <0.03 <0.04 <0.03 <0.04 <0.03 <0.04 <0.03 <0.04 <0.05 <0.04 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.0	<0.03	ns	ns n	<0.03

Surface Water summary PPA Round 1 - Round 4

mmm mm m		Location				De	rrygreenagh SWM & GWM 2023				SW	_M3			SW	_M1	
BODY BOD BOD </th <th></th> <th>Round</th> <th></th> <th>CW/WE Water DWS</th> <th></th> <th>CW/WE Water GTV</th> <th></th> <th>CW/WE Water Aquatic Toxicity</th> <th></th> <th>Round 1</th> <th>Round 2</th> <th>Round 3</th> <th>Round 4</th> <th>Round 1</th> <th>Round 2</th> <th>Round 3</th> <th>Round 4</th>		Round		CW/WE Water DWS		CW/WE Water GTV		CW/WE Water Aquatic Toxicity		Round 1	Round 2	Round 3	Round 4	Round 1	Round 2	Round 3	Round 4
Norm Norm Norm Norm	Determinand	Units	MDL		Source		Source		Source	19/04/2023	29/05/2023	05/07/2023	25/07/2023	19/04/2023	29/05/2023	05/07/2023	25/07/2023
DADE DADE <thdade< th=""> <thdade< th=""> DADE D</thdade<></thdade<>													314.9				321.5
Data Data <thdata< th=""> Data Data <th< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td><2</td><td></td><td></td><td></td><td></td><td>-</td></th<></thdata<>												<2					-
Subsection Subsection Subsection Subsecti				0.05	DWS Ireland 2014	0.0375	Ireland GTVs 2016	0.0034	U Env. Objectives Regs 2009. (Ire) AA-EQS Fres				-				< 0.005
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bbs bit b																	59.85
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Meer Bit Bit Descender Descender <t< td=""><td>Copper</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>< 0.003</td><td>0.012</td><td>< 0.003</td><td></td><td></td><td><0.003</td><td>< 0.003</td><td>< 0.003</td></t<>	Copper									< 0.003	0.012	< 0.003			<0.003	< 0.003	< 0.003
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Data Desc		μg/I		75	Ireland GTVs 2016	<u>/5</u>	Ireland GIVs 2016										<1 7.9
Ohydender-12-0 is is<		μS/cm	100								-			ns			630
Bubble Bubble </td <td></td> <td>-</td> <td></td> <td>-</td> <td></td> <td>-</td>													-		-		-
Pick-GOM Wit No No No No <			0.1												-		-
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mp j< j< j< j< j< j< j< <thj< td=""><td></td><td>μg/l</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>-</td><td></td><td></td><td></td><td>-</td><td></td><td><u> </u></td></thj<>		μg/l									-				-		<u> </u>
m/ p																	-
object gal l<	m-/-p-Xylene	μg/l	1														-
Performant Main Part Main		μg/l			WC D 2016 / E 6++ 1						-						-
Pend Implicitimplicit<				10	wo kegs 2010 (Eng/Wal)						-		-		-		-
observed jub 0.0 jub 0.0	Phenol	ug/l	0.2							<0.2	-	-		ns		-	-
2)Aj. Sponethylendi - 4: W 02 M		μg/l	0.01												-		-
24-0emtylenoly/l0.022.50 (10)1.50 (10)1.50 (10)1.50 (10)1.50 (10)1.50 (10)1.50 (10)1.50 (10)1.50 (10)1.50 (10)1.50 (10)1.50 (10)1.50 (10)1.50 (10)1.50 (10)1.50 (10)1.50 (10)1.50 (10)1.50 (10)<											-				-		-
$\lambda = 0$	2,4-Dimethylphenol	μg/l	0.02							<0.2	-	-	-	ns	-	-	-
jA-0 cresk jundupl000.0 <th< td=""><td></td><td></td><td></td><td></td><td></td><td> </td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>-</td><td></td><td>-</td></th<>															-		-
Credis (un) mcFsolUni															-		-
ne-frequend extry berty p-Cesolupl upl0.2Image upl0.3Image upl0.4 <td>Cresols (sum)</td> <td>μg/l</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td><0.8</td> <td>-</td> <td>-</td> <td></td> <td>ns</td> <td></td> <td>-</td> <td>-</td>	Cresols (sum)	μg/l								<0.8	-	-		ns		-	-
behy behy<											-		-		-		-
Pcoselµgl0.20.20.40.40.50.6 <th< td=""><td></td><td>ug/l</td><td>0.03</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>-</td><td></td><td>-</td><td></td><td>-</td><td></td><td>-</td></th<>		ug/l	0.03								-		-		-		-
Benzo(s)-pyreneμg/l0.03-0.01-0.0-0.0-0.0-0.0-0.0 <t< td=""><td>p-Cresol</td><td>μg/l</td><td>0.2</td><td></td><td></td><td></td><td></td><td></td><td></td><td><0.2</td><td>-</td><td></td><td></td><td>ns</td><td></td><td></td><td>-</td></t<>	p-Cresol	μg/l	0.2							<0.2	-			ns			-
Phenathreneup/l0.020.020.020.010.020.010.020.010.020.010.020.010.020.010.02 <td></td> <td>μg/l</td> <td>0.03</td> <td></td> <td></td> <td> </td> <td></td> <td></td> <td></td> <td></td> <td>-</td> <td></td> <td></td> <td></td> <td>-</td> <td></td> <td>-</td>		μg/l	0.03								-				-		-
Antrace Hy/y/ly/l0.01ns <td></td> <td>μg/I μg/I</td> <td></td> <td></td> <td></td> <td> </td> <td></td> <td></td> <td></td> <td></td> <td>-</td> <td></td> <td></td> <td></td> <td>-</td> <td></td> <td>-</td>		μg/I μg/I									-				-		-
Index 1000.000.01<	Anthracene	μg/l	0.01							<0.01	-	-	-	ns	-	-	-
Banz-(a)-anthraceneyuf0.40.40.40.40.40.40.5 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>-</td></t<>																	-
Independent Implie 0.02 0.02 0.04 0.04 0.04 0.04 0.05 </td <td></td> <td></td> <td></td> <td></td> <td></td> <td> </td> <td></td> <td>-</td>																	-
Indenciupli0.40.40.40.40.40.5<	Chrysene	μg/l	0.02							< 0.02							-
Barbor	Indeno-(1,2,3-cd)-pyrene	μg/l									-				-		-
Aceanaphthylen [2] yg/l 0.4 0.4 0.4 0.4 0.5 0.6<		μg/l μσ/l															-
Accomplete ydl 0.1	Acenaphthylene [2]		0.04												-		-
Benzo(b+k)fluoranthene μg/l 0.05 9.05 9.05 9.05 9.05 9.05 9.05 9.05	Acenaphthene	μg/l	0.1										-		-		
			0.05														-
napritaiene µg/ v.4 ns	Naphtalene	μg/i μg/l	0.05							<0.4	-	-	-	ns	-	-	-

Surface Water summary EGC Round 1 - Round 4

	Location		I			Derrygreenagh SWM & GW	AA 2022				W E1			SW U1			SW R1				SW/ V1				SW/ V	2		1	51	W C1		1	cw/	0	
	Round					Derrygreenagit Swivi & Gv			Round 1			Round 4	Round 1 Ro	und 2 Round 3	Round 4	Round 1			tound 4 Ro	und 1 Ro	ound 2 Rou	ound 3 R	Round 4 R	ound 1	Round 2	Round 3	Round 4	Round 1			Round 4	Round 1	Round 2	Round 3	Round 4
Determinand	Units	MDI	CW/WE Water. DWS - Ireland	Source	CW/WE Water. GTV - Ireland	Source	CW/WE Water. Aquatic Toxicity - Ireland - Freshwater	Source	19/04/2023	29/05/202	05/07/2023	25/07/2023	19/04/2023 29/0	5/2023 05/07/202	3 25/07/2023	19/04/2023 2	29/05/2023 05	5/07/2023 25/	/07/2023 19/0	4/2023 29/	05/2023 05/0	17/2023 25	/07/2023 19	/04/2023 2	9/05/2023	15/07/2023	25/07/2023	19/04/2023	29/05/2023	3 05/07/2023	3 25/07/2023	19/04/2023	29/05/2023	05/07/2023 2	5/07/2023
Total Alkalinity (as CaCO3)		30							314.1		141.8	177.7		02.8 58.1		313.9	276.3	232.4		1				. ,	307.8	ns					281.7	ns	315.1	166.9	260.1
Chromium (VI) Cyanid, total	mg/l	0.01							<0.01	<0.01	<0.05	<0.01	<0.01 <	0.01 <0.01	<0.01	<0.01	<0.01	<0.01	<0.01 <	0.01	<0.01 <0	:0.01	<0.01	<0.01	<0.01	ns	<0.01	<0.01	<0.01	<0.01	-	ns	-	<2	-
Chromium	mg/l	0.005	0.05	DWS Ireland 2014	0.0375	Ireland GTVs 2016	0.0034	EU Env. Objectives Regs 2009. (Ire) AA-EQS Fresh	< 0.005	< 0.005	< 0.005	< 0.005	<0.005 <0	0.005 <0.005	<0.005	<0.005	<0.005	<0.005 <	<0.005 <0	0.005 <	:0.005 <0	0.005	<0.005	<0.005	3.05	ns	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	ns	2.23	<0.005	< 0.005
Chromium III Total suspended solids (TSS)	mg/l mg/l	0.01							<0.01	- 29			<0.01	· ·	- 10	<0.01 10	- 16	- 40	- <	<5	<0.01 <0	<5	<0.01	<0.01	<0.01 432	ns	- <5	<0.01		<5	- <5	ns	- 48	<0.01	- 161
Chemical oxygen demand (COE									18			23		12 14	37	20	13	15	45					46	210	ns	57	32	26	27	55	ns	<8	365	78
Dissolved oxygen Sulphate	mg/l mg/l		250	DWS Ireland 2014	187.5	Ireland GTVs 2016	200	IGV Ireland 2003 (EQS)	9.29 21.888	7.9		8.76 14.9		0.24 10.58 1.537 16.4		8.89 21.055	6.58 26.229				9.72 10 89.87 8				8.67 85.533	ns ns		9.13 63.594	9.73 76.233		8.77 66.1	ns	8.3 19.849	9.87	8.28 34.4
Orthophosphate-P	mg/l	0.05	0.03	IGV Ireland 2003	0.03	IGV Ireland 2004			< 0.05	<0.05	< 0.05	<0.05	<0.05 <	0.05 <0.05	0.061	0.011	0.027	<0.05	<0.05 <	0.05	<0.05 <0	0.05	< 0.05	<0.05	< 0.05	ns	< 0.05	< 0.05	0.043	< 0.05	< 0.05	ns	0.029	< 0.05	0.086
Fluoride Chloride	mg/l mg/l	0.2	0.8	DWS Ireland 2014 DWS Ireland 2014	<u>0.8</u> 24 - 18.75	DWS Ireland 2015 Ireland GTVs 2016	0.5	EU Env. Objectives Regs 2009. (Ire) AA-EQS Fresh IGV Ireland 2003 (EQS)	0.211 17.177			<0.2 16.1	<0.2 · · · · · · · · · · · · · · · · · · ·	:0.2 <0.2 3.679 <u>19.4</u>	0.3	0.182		0.2 19					0.2	<0.2 15.281	0.196	ns ns	0.2 20.3	0.195	0.151 13.696	0.2	0.2	ns	0.217 12.314	0.2	0.2
Ammonia	mg/l	0.05	0.15	IGV Ireland 2003	0.15	IGV Ireland 2003	0.3	WFD (N.Ire) 2015. Freshwater Standards	< 0.05	< 0.05	1.33	< 0.05		.236 <0.05	0.09		0.159	0.05	0.14 0).06 (0.111 <	0.05	< 0.05	< 0.05		ns	< 0.05		0.552	< 0.05	0.23	ns		0.15	0.19
Nitrate (as N) Toluene	mg/l mg/l		50	DWS Ireland 2014	37.5	Ireland GTVs 2016	50	IGV Ireland 2003 (EQS)	3.997 <2	1.58	<1	<1	<1 <2	<1 <1 <2 <2	2.439	2.328	<1	<2.296	<1 3	.671	<2 1.	.927	2.543	3.143	2.506	ns ns	<u>206.595</u>	3.1/6	1.725		<2.146	ns ns	1.379 <2	1.413	<2
Xylene -m	mg/l	2							<2	<2	<2	<2	<2	2 2	<2	2	<2	<2	<2	2	<2 .	<2	<2	<2	<2	ns	<2	<2	<2	<2	<2	ns	<2	<2	<2
Xylene -p Dichloromethane	mg/l mg/l								<2	<2	<2	<2	<2	< <u> </u>	<2	~2	<2	<2	<2	<2	<2 .	<2	<2	<2	<2	ns ns	<2	<2	<2	<2	<2	ns	<2 <2	<2	<2
n-Hexane	mg/l	2							<2	<2	<2	<2	<2	<2 <2	<2	<2	<2		<2	<2	<2	<2	<2	<2	<2	ns	<2	<2	<2	<2	<2	ns	<2	<2	<2
Isopropyl acetate Cyclopentanone	mg/l mg/l								<2	~ ~	<2	2	<2	Q Q Q Q	2	2	<2	<2	<2	2	<2 .	2	<2	<2	<2	ns ns	<2 <2	<2 <2	2	<2	<2	ns ns	<2 <2	2	<2
Butylmethyl ether	mg/l	2							<2	<2	<2	<2	<2	<2 <2	<2	<2	<2	<2	<2	<2	<2 .	<2	<2	<2	<2	ns	<2	<2	<2	<2	<2	ns	<2	<2	<2
Amyl acetate Ethyl acetate	mg/l mg/l	2							<2	<2	<2	<2	<2 <2	a a a a	<2 <2	2	<2 <2	<2 <2	<2 <2	<2	<2 .	<2 <2	<2 <2	<2	<2	ns ns	<2 <2	<2	<2 <2	<2	<2	ns ns	<2 <2	<2 <2	<2
Isoamyl alcohol	mg/l	5							<5	<5	<5	<5	<5	5 5	<5	-5	<5	<5	<5	<5	<5	-5	<5	<5	-5	ns	<5	<5	<5	<5	<5	ns	<5	<5	<5
Ethanol 1-Butanol	mg/l mg/l	5							<5	-5	<	5	-5	6 6	5	6	<	<	<	5	< .	6	5	<5	-5	ns ns	<5	<5	5	<5	<5	ns ns	<5 <5	<5	<5
Triethylamine	mg/l	2							<2	<2	<2	<2	<2	2 2	<2	2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ns	<2	<2	<2	<2	<2	ns	<2	<2	<2
Acetonitril Cyclohexane	mg/l mg/l	2	13	PA RSL (tapwater) [NOV 2	2021]				<2	<2	<2	<2	<2	2 Q Q Q	<2	2	<2	<2	<2	2	<2 .	2	<2	<2	~2	ns ns	<2	<2	<2	<2	<2	ns ns	<2 <2	<2	<2
Heptane	mg/l	2							<2	2	<2	<2	<2	2 2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ns	<2	<2	<2	<2	<2	ns	<2	<2	<2
tertiar-Butanol Tetrahydrofurane	mg/l	2							<2	<2	<2	<2	<2	Q Q	<2	<2	<2	~2	<2	<2	<2 ·	<2	<2	<2	<2	ns ns	<2	<2	<2	<2	<2	ns ns	<2	<2	<2
Xylenes (sum)	mg/l mg/l	2							<2	2	<2	<2	<2	2 2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ns	<2	<2	<2	<2	<2	ns	<2	<2	<2
tert-Amylalcohol acetone	mg/l	5							<5	<5	<5	<5	<5	S S	<5	-5	<5	<5	<5	<5	< ·	5	<5	<5	<5	ns ns	<5	<5	<5	<5	<5	ns ns	<5	<5	<5
Di-isopropylether	mg/l mg/l	2							<2	<2	<2	<2	<2	4 42	<2	<2	<2	<2	<2	2	<2 0	<2	<2	<2	<2	ns	<2	<2	<2	<2	<2	ns	<2	<2	<2
1-Butyl Alcohol Methyl ethyl ketone peroxide	mg/l mg/l	2							<2	<2	<2	<2	<2	2 2	<2	<2	<2	2	-2	<2	2 .	<2	<2	<2	<2	ns ns	<2	<2	~ ~	<2	<2	ns	<2	<2	<2
Methanol	mg/l								<5	<5	<5	<5	<5	5 5	<5	6	<5	<5	<5	<5	<5	5	<5	<5	<5	ns	<5	<5	<5	<5	<5	ns	<5	<5	<5
2-Propanol o-Xylene	mg/l	2							<2	<2	<2	<2	<2	2 2	<2	2	<2	<2	<2	<2	<2 ·	2	<2	<2	<2	ns ns	<2	<2	<2	<2	<2	ns	<2	<2	<2
Temperature	mg/l *C								0	0	•2	•2	0	0 -		0	0	•			0		•	-	•	ns	-	-	-	-	-	ns	-	-	• 2
Arsenic	μg/I	0.2	10	DWS Ireland 2014	7.5	Ireland GTVs 2016	25	EU Env. Objectives Regs 2009. (Ire) AA-EQS Fresh	0.538		1.893 184.216			.008 0.808 5.936 40.513		0.309 62.796										ns	1.032		1.702		2.293	ns	1.409		1.631
Barium Beryllium	μg/l μg/l	1.77	100 12	IGV Ireland 2003 WHO DWG 2017	<u>100</u> <u>12</u>	IGV Ireland 2003 WHO DWG 2017	100	IGV Ireland 2003 (EQS)	<1	<1	<1	41.06	<u>106.445</u> 46 <0.21 <	0.21 <1	1.276	<1			94.042 15 1.357	<1 1	70.305 183	<1 1	<1 140.256 <u>1</u>	⊴	<1	ns ns	<u>134.632</u> <1	<u>155.142</u>	<1	<1	<u>138.688</u> <1	ns	<1	<u>113.643</u> <1	<1
Boron	mg/l	0.21	1	DWS Ireland 2014 DWS Ireland 2014	0.75	Ireland GTVs 2010	2	IGV Ireland 2003 (EQS)	<0.21	<0.21 0.735	<0.21	<0.21	<0.21 <	0.21 <0.21	<0.21	<0.21	<0.21	<0.21	<0.21 <	0.21 •	<0.21 <0	:0.21	<0.21	<0.21	<0.21	ns ns	<0.21	<0.21	<0.21	<0.21	<0.21	ns	<0.21	<0.21	<0.21 0.239
Cadmium Copper	μg/l mg/l	0.1	2	DWS Ireland 2014 DWS Ireland 2014	<u>1.5</u>	Ireland GTVs 2010 Ireland GTVs 2010			<0.003	0.003	<0.003	<0.003	<0.003 <0	0.003 <u><0.003</u>	0.178 <0.003	<0.003	<0.003	<0.003	0.159 <	0.1	0.003 <0	0.003	<0.003	<0.003	0.011	ns	<0.003	<0.003	<0.003	<0.003	<0.003	ns	<0.003	<0.003	<0.003
Lead	μg/I	0.5	10	DWS Ireland 2014 DWS Ireland 2014	7.5 0.75	Ireland GTVs 2016			< 0.5	<0.5	< 0.5	20.5	-0.5	3.0 - 3.0		20.5	-0.5	<0.5	<0.5	-0 E	<0.5	< 0.5	< 0.5	< 0.5	1.031	ns	< 0.5	×0.5	<0.5	< 0.5	< 0.5	ns	< 0.5	<0.5	<0.5 0.041
Mercury Nickel	μg/I μg/I		1						-0.02			-0.5	-0.02	0.5 0.5	< 0.5	-0.02	0.00	0.050	0.000	.0.5	-0.02	0.00		-0.00	0.000		0.007	-0.02	~0.5	-0.02	-0.02				
Selenium		0.5	20		15	Ireland GTVs 2016 Ireland GTVs 2010			<0.03 2.444	<0.03	<0.063	<0.03		.037 <0.03 .892 0.824	<0.5 0.083 1.638	<0.03 0.831			0.065 <	0.03	40.03 <0 8.756 8	:0.03 8.34	<0.03 7.094	<0.03 8.179	0.226	ns	0.037 7.148	<0.03 <0.03 3.422	<0.03 3.886	<0.03 3.964	<0.03 3.292	ns	<0.03 2.756	3.212	
Vanadium Zinc	μg/l	0.5	10	DWS Ireland 2014 DWS Ireland 2014	<u>0.75</u> 15 10	Ireland GTVs 2010 DWS Ireland 2014			<0.03 2.444 0.577			<0.03 <0.03 1.109 0.243	0.698 0	0.5 0.5 .037 <0.03 .892 0.824 0.24 <0.2			0.965	<0.5	2.4 9		40.03 < 0 40.03 8.756 8 0.927 0. 4			0.701	21.517 0.782	ns ns ns	7.148	<0.3 <0.03 3.422 0.466	<0.03 <0.03 3.886 0.438	<0.03 3.964 0.287	<0.03 3.292 0.513	ns			3.052 0.365
pH, 1 dec	μg/I	0.2		DWS Ireland 2014 DWS Ireland 2014 PA RSL (tapwater) [NOV 2	<u>15</u> <u>10</u> <u>86</u> 75	Ireland GTVs 2010 DWS Ireland 2014 USEPA RSL (tapwater) [NOV 2021]			0.577 <1	0.235	<0.5 <0.2 <1		0.698 0 0.154 0 <1	.892 0.824	1.638		0.965 0.202 <1	<0.5 0.279 0	2.4 9 0.605 0	0.84 (<1	0.927 0. <1	1.707 <1	0.736	0.701 <1	21.517 0.782 4.221	ns ns	7.148 0.61 <1	0.466			0.513 <1			0.389 <1	3.052 0.365 <1
	μg/l μg/l	0.2 1 1	10 86	DWS Ireland 2014 DWS Ireland 2014	<u>15</u> <u>10</u> <u>86</u> <u>75</u>	Ireland GTVs 2010 DWS Ireland 2014			0.577 <1 4.229 8.2	0.235 2.683 36.616 7.7	<0.5 <0.2 <1 7.05 8.2	0.243 <1 <1 7.9	0.698 0 0.154 0 <1 3.101 8	892 0.824 0.24 <0.2	1.638 0.752 <1 1.9 7.8	0.359 <1 4.89 7.9	0.965 0.202 <1 <u><1</u> 7.6	<0.5 0.279 (<1 5.48 7.9	2.4 9 0.605 0 <1	0.84 (<1 .763 8.2	0.927 0. <1 · <1 · · · · · · · · · · · · · · · · · · ·	0.707 <1 5.72 7.8	0.736 <1 3.84 7.7	0.701 <1 4.474 7.9	21.517 0.782 4.221 15.056 7.9	ns ns ns ns ns ns	7.148 0.61 <1 3.68 7.3	0.466 <1 2.427 8.1	0.438 <1 <1 8	0.287 <1 7.43 7.9	0.513 <1 1.03 7.5	ns ns ns ns	0.372 1.338 <u><1</u> 7.9	0.389 <1 9.54 7.5	3.052 0.365 <1 8.74 7
Conductivity TPH Sum	μg/l μg/l μS/cm	0.2 1 1 100	10 86	DWS Ireland 2014 DWS Ireland 2014 PA RSL (tapwater) [NOV 2	0.75 15 10 86 75	Ireland GTVs 2010 DWS Ireland 2014 USEPA RSL (tapwater) [NOV 2021]			0.577 <1 4.229	0.235 2.683 36.616 7.7	<0.5 <0.2 <1 7.05 8.2	0.243 <1 <1	0.698 0 0.154 0 <1 3.101 8	892 0.824 0.24 <0.2 <1 <1 <1 <1	1.638 0.752 <1 1.9 7.8	0.359 <1 4.89	0.965 0.202 <1 <u><1</u> 7.6	<0.5 0.279 (<1 5.48 7.9	2.4 9 0.605 0 <1 1 1.71 4 7.4 3	0.84 (<1 .763 8.2	0.927 0. <1 · <1 · · · · · · · · · · · · · · · · · · ·	0.707 <1 5.72 7.8	0.736 <1 3.84 7.7	0.701 <1 4.474 7.9	21.517 0.782 4.221 15.056	ns ns ns ns ns	7.148 0.61 <1 3.68	0.466 <1 2.427	0.438 <1 <1 <1 8	0.287 <1 7.43 7.9	0.513 <1 1.03	ns ns ns	0.372 1.338 <u><1</u> 7.9	0.389 <1 9.54	3.052 0.365 <1
Conductivity TPH Sum Oil hydrocarbons >C10-C21	μg/l μg/l μS/cm μg/l μg/l	0.2 1 1 100 0.1 0.1	10 86	DWS Ireland 2014 DWS Ireland 2014 PA RSL (tapwater) [NOV 2	0.75 15 10 86 75	Ireland GTVs 2010 DWS Ireland 2014 USEPA RSL (tapwater) [NOV 2021]			0.577 <1 4.229 8.2	0.235 2.683 36.616 7.7	<0.5 <0.2 <1 7.05 8.2	0.243 <1 <1 7.9	0.698 0 0.154 0 <1 3.101 8	892 0.824 0.24 <0.2 <1 <1 <1 <1 8.1 7.9	1.638 0.752 <1 1.9 7.8	0.359 <1 4.89 7.9	0.965 0.202 <1 <u><1</u> 7.6	<0.5 0.279 (<1 5.48 7.9	2.4 9 0.605 0 <1 1 1.71 4 7.4 3	0.84 (<1 .763 8.2	0.927 0. <1 · <1 · · · · · · · · · · · · · · · · · · ·	0.707 <1 5.72 7.8	0.736 <1 3.84 7.7	0.701 <1 4.474 7.9	21.517 0.782 4.221 15.056 7.9	ns ns ns ns ns ns ns ns ns ns ns ns ns	7.148 0.61 <1 3.68 7.3	0.466 <1 2.427 8.1	0.438 <1 <1 8	0.287 <1 7.43 7.9	0.513 <1 1.03 7.5	ns ns ns ns ns ns ns	0.372 1.338 <u><1</u> 7.9	0.389 <1 9.54 7.5	3.052 0.365 <1 8.74 7
Conductivity TPH Sum	μg/I μg/I μS/cm μg/I μg/I μg/I	0.2 1 1 100 0.1 0.1 0.1	10 86	DWS Ireland 2014 DWS Ireland 2014 PA RSL (tapwater) [NOV 2	0.72 15 10 86 75	Ireland GTVs 2010 DWS Ireland 2014 USEPA RSL (tapwater) [NOV 2021]			0.577 <1 4.229 8.2	0.235 2.683 36.616 7.7	<0.5 <0.2 <1 7.05 8.2	0.243 <1 <1 7.9	0.698 0 0.154 0 <1 3.101 8	892 0.824 0.24 <0.2 <1 <1 <1 <1 8.1 7.9	1.638 0.752 <1 1.9 7.8	0.359 <1 4.89 7.9	0.965 0.202 <1 <u><1</u> 7.6	<0.5 0.279 (<1 5.48 7.9	2.4 9 0.605 0 <1 1 1.71 4 7.4 3	0.84 (<1 .763 8.2	0.927 0. <1 · <1 · · · · · · · · · · · · · · · · · · ·	0.707 <1 5.72 7.8	0.736 <1 3.84 7.7	0.701 <1 4.474 7.9	21.517 0.782 4.221 15.056 7.9	ns ns ns ns ns ns ns ns ns ns	7.148 0.61 <1 3.68 7.3	0.466 <1 2.427 8.1	0.438 <1 <1 8	0.287 <1 7.43 7.9	0.513 <1 1.03 7.5	ns ns ns ns ns ns	0.372 1.338 <u><1</u> 7.9	0.389 <1 9.54 7.5	3.052 0.365 <1 8.74 7
Conductivity TPH Sum Oil hydrocarbons >C10-C21 Oil hydrocarbons >C21-C40 TPH >C6-C10 Benzene	μg/i μg/i μS/cm μg/i μg/i μg/i μg/i μg/i	0.2 1 1 100 0.1 0.1 0.1 10 1 10 1 10 1 10 1 1 1 1 1 1 1 1 1 1 1 1 1	10 86	DWS Ireland 2014 DWS Ireland 2014 PA RSL (tapwater) [NOV 2	<u>0.73</u> 15 10 86 75	Ireland GTVs 2010 DWS Ireland 2014 USEPA RSL (tapwater) [NOV 2021]			0.577 <1 4.229 8.2	0.235 2.683 36.616 7.7	<0.5 <0.2 <1 7.05 8.2	0.243 <1 <1 7.9	0.698 0 0.154 0 <1 3.101 8	892 0.824 0.24 <0.2 <1 <1 <1 <1 8.1 7.9	1.638 0.752 <1 1.9 7.8	0.359 <1 4.89 7.9	0.965 0.202 <1 <u><1</u> 7.6	<0.5 0.279 (<1 5.48 7.9	2.4 9 0.605 0 <1 1 1.71 4 7.4 3	0.84 (<1 .763 8.2	0.927 0. <1 · <1 · · · · · · · · · · · · · · · · · · ·	0.707 <1 5.72 7.8	0.736 <1 3.84 7.7	0.701 <1 4.474 7.9	21.517 0.782 4.221 15.056 7.9	ns ns ns ns ns ns ns ns ns ns ns ns ns n	7.148 0.61 <1 3.68 7.3	0.466 <1 2.427 8.1	0.438 <1 <1 8	0.287 <1 7.43 7.9	0.513 <1 1.03 7.5	ns ns ns ns ns ns ns ns ns ns ns ns	0.372 1.338 <u><1</u> 7.9	0.389 <1 9.54 7.5	3.052 0.365 <1 8.74 7
Conductivity TPH Sum Oil hydrocarbons >C10-C21 Oil hydrocarbons >C21-C40 TPH >C6-C10	μg/i μg/i μS/cm μg/i μg/i μg/i μg/i μg/i	0.2 1 100 0.1 0.1 100 11 10 1 1	10 86	DWS Ireland 2014 DWS Ireland 2014 PA RSL (tapwater) [NOV 2	0.75 15 10 86 75 75	Ireland GTVs 2010 DWS Ireland 2014 USEPA RSL (tapwater) [NOV 2021]			0.577 <1 4.229 8.2	0.235 2.683 36.616 7.7	<0.5 <0.2 <1 7.05 8.2	0.243 <1 <1 7.9	0.698 0 0.154 0 <1 3.101 8	892 0.824 0.24 <0.2 <1 <1 <1 <1 8.1 7.9	1.638 0.752 <1 1.9 7.8	0.359 <1 4.89 7.9	0.965 0.202 <1 <u><1</u> 7.6	<0.5 0.279 (<1 5.48 7.9	2.4 9 0.605 0 <1 1 1.71 4 7.4 3	0.84 (<1 .763 8.2	0.927 0. <1 · <1 · · · · · · · · · · · · · · · · · · ·	0.707 <1 5.72 7.8	0.736 <1 3.84 7.7	0.701 <1 4.474 7.9	21.517 0.782 4.221 15.056 7.9	ns ns ns ns ns ns ns ns ns ns ns ns ns n	7.148 0.61 <1 3.68 7.3	0.466 <1 2.427 8.1	0.438 <1 <1 8	0.287 <1 7.43 7.9	0.513 <1 1.03 7.5	ns ns ns ns ns ns ns ns ns ns	0.372 1.338 <u><1</u> 7.9	0.389 <1 9.54 7.5	3.052 0.365 <1 8.74 7
Conductivity TPH Sum Oil hydrocarbons >C10-C21 Oil hydrocarbons >C21-C40 TPH >C6-C10 Benzene Toluene Ethylbenzene m-f-p-Xylene	μ <u>g</u> /l μ <u>g</u> /l	0.2 1 1 100 0.1 0.1 10 1 1 1 1 1 1	10 86	DWS Ireland 2014 DWS Ireland 2014 PA RSL (tapwater) [NOV 2	0.75 15 10 86 75 75	Ireland GTVs 2010 DWS Ireland 2014 USEPA RSL (tapwater) [NOV 2021]			0.577 <1 4.229 8.2	0.235 2.683 36.616 7.7	<0.5 <0.2 <1 7.05 8.2	0.243 <1 <1 7.9	0.698 0 0.154 0 <1 3.101 8	892 0.824 0.24 <0.2 <1 <1 <1 <1 8.1 7.9	1.638 0.752 <1 1.9 7.8	0.359 <1 4.89 7.9	0.965 0.202 <1 <u><1</u> 7.6	<0.5 0.279 (<1 5.48 7.9	2.4 9 0.605 0 <1 1 1.71 4 7.4 3	0.84 (<1 .763 8.2	0.927 0. <1 · <1 · · · · 1 ·<br <th>0.707 <1 5.72 7.8</th> <th>0.736 <1 3.84 7.7</th> <th>0.701 <1 4.474 7.9</th> <th>21.517 0.782 4.221 15.056 7.9</th> <th>ns ns ns ns ns ns ns ns ns ns ns ns ns n</th> <th>7.148 0.61 <1 3.68 7.3</th> <th>0.466 <1 2.427 8.1</th> <th>0.438 <1 <1 8</th> <th>0.287 <1 7.43 7.9</th> <th>0.513 <1 1.03 7.5</th> <th>ns ns ns ns ns ns ns ns ns ns ns ns ns n</th> <th>0.372 1.338 <u><1</u> 7.9</th> <th>0.389 <1 9.54 7.5</th> <th>3.052 0.365 <1 8.74 7</th>	0.707 <1 5.72 7.8	0.736 <1 3.84 7.7	0.701 <1 4.474 7.9	21.517 0.782 4.221 15.056 7.9	ns ns ns ns ns ns ns ns ns ns ns ns ns n	7.148 0.61 <1 3.68 7.3	0.466 <1 2.427 8.1	0.438 <1 <1 8	0.287 <1 7.43 7.9	0.513 <1 1.03 7.5	ns ns ns ns ns ns ns ns ns ns ns ns ns n	0.372 1.338 <u><1</u> 7.9	0.389 <1 9.54 7.5	3.052 0.365 <1 8.74 7
Conductivity TPH Sum Oil hydrocarbons >C10-C21 Oil hydrocarbons >C21-C40 TPH >C6-C40 Benzene Toluene Ethylbenzene m./p-Xylene o-Xylene Perfluorooctanoic axid (PC0A)	μg/l	0.2 1 1 100 0.1 0.1 10 1 1 1 1 1 0.3	10 86 75	DWS Ireland 2014 DWS Ireland 2014 PA RSL (tapwater) [NOV 2	15 10 86 75	Ireland GTVs 2010 DWS Ireland 2014 USEPA RSL (tapwater) [NOV 2021]			0.577 <1 4.229 8.2	0.235 2.683 36.616 7.7	<0.5 <0.2 <1 7.05 8.2	0.243 <1 <1 7.9	0.698 0 0.154 0 <1 3.101 8	892 0.824 0.24 <0.2 <1 <1 <1 <1 8.1 7.9	1.638 0.752 <1 1.9 7.8	0.359 <1 4.89 7.9	0.965 0.202 <1 <u><1</u> 7.6	<0.5 0.279 (<1 5.48 7.9	2.4 9 0.605 0 <1 1 1.71 4 7.4 3	0.84 (<1 .763 8.2	0.927 0. <1 · <1 · · · · 1 ·<br <th>0.707 <1 5.72 7.8</th> <th>0.736 <1 7.7 580</th> <th>0.701 <1 4.474 7.9</th> <th>21.517 0.782 4.221 15.056 7.9</th> <th>ns ns ns ns ns ns ns ns ns ns ns ns ns n</th> <th>7.148 0.61 <1 3.68 7.3</th> <th>0.466 <1 2.427 8.1</th> <th>0.438 <1 <1 8</th> <th>0.287 <1 7.43 7.9</th> <th>0.513 <1 1.03 7.5</th> <th>ns ns ns ns ns ns ns ns ns ns ns ns ns n</th> <th>0.372 1.338 <u><1</u> 7.9</th> <th>0.389 <1 9.54 7.5</th> <th>3.052 0.365 <1 8.74 7</th>	0.707 <1 5.72 7.8	0.736 <1 7.7 580	0.701 <1 4.474 7.9	21.517 0.782 4.221 15.056 7.9	ns ns ns ns ns ns ns ns ns ns ns ns ns n	7.148 0.61 <1 3.68 7.3	0.466 <1 2.427 8.1	0.438 <1 <1 8	0.287 <1 7.43 7.9	0.513 <1 1.03 7.5	ns ns ns ns ns ns ns ns ns ns ns ns ns n	0.372 1.338 <u><1</u> 7.9	0.389 <1 9.54 7.5	3.052 0.365 <1 8.74 7
Conductivity TPH Sum Oil hydrocarbons >C10-C21 Oil hydrocarbons >C21-C40 TPH >C6-C10 Benzene Toluene Ethylbenzene m/r_/-p.2xylene o.Xylene	μg/i η η η η η η η η η η η η η	0.2 1 1 100 0.1 0.1 10 1 1 1 1 0.3 0.2	10 86 75	DWS Ireland 2014 DWS Ireland 2014 PA RSL (tapwater) [NOV : Ireland GTVs 2016	15 10 86 75	Ireland GTVs 2010 DWS Ireland 2014 USEPA RSL (tapwater) [NOV 2021]			0.577 <1 4.229 8.2	0.235 2.683 36.616 7.7	<0.5 <0.2 <1 7.05 8.2	0.243 <1 <1 7.9	0.698 0 0.154 0 <1 3.101 8	892 0.824 0.24 <0.2 <1 <1 <1 <1 8.1 7.9	1.638 0.752 <1 1.9 7.8	0.359 <1 4.89 7.9	0.965 0.202 <1 <u><1</u> 7.6	<0.5 0.279 (<1 5.48 7.9	2.4 9 0.605 0 <1 1 1.71 4 7.4 3	0.84 (<1 .763 8.2	0.927 0. <1 · <1 · · · · · · · · · · · · · · · · · · ·	0.707 <1 5.72 7.8	0.736 <1 7.7 580	0.701 <1 4.474 7.9 641.6 <0.1 <0.1 <0.1 <0.1 <10 <1 <1 <1 <1 <1 <1	21.517 0.782 4.221 15.056 7.9	ns ns ns ns ns ns ns ns ns ns ns ns ns n	7.148 0.61 <1 3.68 7.3	0.466 <1 2.427 8.1	0.438 <1 <1 8	0.287 <1 7.43 7.9	0.513 <1 1.03 7.5	ns ns ns ns ns ns ns ns ns ns ns ns ns n	0.372 1.338 <u><1</u> 7.9	0.389 <1 9.54 7.5	3.052 0.365 <1 8.74 7
Conductivity TPH Sum OII hydrocarbons >C10-C21 OII hydrocarbons >C21-C40 TPH >C6-C10 Benzene Toluene Ethylbenzene m/-p-Xylene Perfluorocatanoi acid (PFOA) Perfluorocatanoi acid (PFOA) Perfluorocatanoi acid Phenol Thymol	μg/l	$\begin{array}{c} 0.2 \\ 1 \\ 1 \\ 100 \\ 0.1 \\ 0.1 \\ 0.1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 0.3 \\ 0.2 \\ 0.01 \\ \end{array}$	10 86 75	DWS Ireland 2014 DWS Ireland 2014 PA RSL (tapwater) [NOV : Ireland GTVs 2016	15 10 86 75	Ireland GTVs 2010 DWS Ireland 2014 USEPA RSL (tapwater) [NOV 2021]			0.577 <1 4.229 8.2	0.235 2.683 36.616 7.7	<0.5 <0.2 <1 7.05 8.2	0.243 <1 <1 7.9	0.698 0 0.154 0 <1 3.101 8	892 0.824 0.24 <0.2 <1 <1 <1 <1 8.1 7.9	1.638 0.752 <1 1.9 7.8	0.359 <1 4.89 7.9	0.965 0.202 <1 <u><1</u> 7.6	<0.5 0.279 (<1 5.48 7.9	2.4 9 0.605 0 <1 1 1.71 4 7.4 3	0.84 (<1 .763 8.2	0.927 0. <1 · <1 · · · · · · · · · · · · · · · · · · ·	0.707 <1 5.72 7.8	0.736 <1 7.7 580	0.701 <1 4.474 7.9 641.6 <0.1 <0.1 <0.1 <0.1 <10 <1 <1 <1 <1 <1 <1	21.517 0.782 4.221 15.056 7.9	ns ns ns ns ns ns ns ns ns ns ns ns ns n	7.148 0.61 <1 3.68 7.3	0.466 <1 2.427 8.1	0.438 <1 <1 8	0.287 <1 7.43 7.9	0.513 <1 1.03 7.5	ns ns ns ns ns ns ns ns ns ns ns ns ns n	0.372 1.338 <u><1</u> 7.9	0.389 <1 9.54 7.5	3.052 0.365 <1 8.74 7
Conductivity TPH Sum Oil hydrocarbons >C10-C21 Oil hydrocarbons >C21-C21 Oil hydrocarbons >C21-C40 TPH >C5-C40 Benzene Ethylbenzene m/p=Xylene o-Xylene perfluorocatanoic acid (PFOA) Perfluorocatanoic acid (PFOA) Perfluorocatanoic acid (PFOA) Perfluorocatanoic acid Phenol Thymol o-Cresol	μg/l	$\begin{array}{c} 0.2\\ 1\\ 1\\ 1\\ \end{array}$	10 86 75	DWS Ireland 2014 DWS Ireland 2014 PA RSL (tapwater) [NOV : Ireland GTVs 2016	15 10 86 75	Ireland GTVs 2010 DWS Ireland 2014 USEPA RSL (tapwater) [NOV 2021]			0.577 <1 4.229 8.2	0.235 2.683 36.616 7.7	<0.5 <0.2 <1 7.05 8.2	0.243 <1 <1 7.9	0.698 0 0.154 0 <1 3.101 8	892 0.824 0.24 <0.2 <1 <1 <1 <1 8.1 7.9	1.638 0.752 <1 1.9 7.8	0.359 <1 4.89 7.9	0.965 0.202 <1 <u><1</u> 7.6	<0.5 0.279 (<1 5.48 7.9	2.4 9 0.605 0 <1 1 1.71 4 7.4 3	0.84 (<1 .763 8.2	0.927 0. <1 · <1 · · · · · · · · · · · · · · · · · · ·	0.707 <1 5.72 7.8	0.736 <1 7.7 580	0.701 <1 4.474 7.9 641.6 <0.1 <0.1 <0.1 <0.1 <10 <1 <1 <1 <1 <1 <1	21.517 0.782 4.221 15.056 7.9	ns ns ns ns ns ns ns ns ns ns ns ns ns n	7.148 0.61 <1 3.68 7.3	0.466 <1 2.427 8.1	0.438 <1 <1 8	0.287 <1 7.43 7.9	0.513 <1 1.03 7.5	ns	0.372 1.338 <u><1</u> 7.9	0.389 <1 9.54 7.5	3.052 0.365 <1 8.74 7
Conductivity TPH Sum Oil hydrocarbons >C10-C21 Oil hydrocarbons >C21-C21 Oil hydrocarbons >C21-C40 TPH >C5C-C40 Benzene Ethylbenzene m/p Xylene o-Xylene Perfluorocatanoic acid (PFOA) Perfluorocatanoic acid (PFOA) Perfluorocatanoic acid PFOA Phenol Thymol o-Cresol C-Cresol	μg/1	0.2 1 1 100 0.1 0.1 1 1 1 1 1 1 1 1 1 0.3 0.2 0.01 0.3 0.02 0.02	10 86 75	DWS Ireland 2014 DWS Ireland 2014 PA RSL (tapwater) [NOV : Ireland GTVs 2016	15 10 86 75	Ireland GTVs 2010 DWS Ireland 2014 USEPA RSL (tapwater) [NOV 2021]			0.577 <1 4.229 8.2	0.235 2.683 36.616 7.7	<0.5 <0.2 <1 7.05 8.2	0.243 <1 <1 7.9	0.698 0 0.154 0 <1 3.101 8	892 0.824 0.24 <0.2 <1 <1 <1 <1 8.1 7.9	1.638 0.752 <1 1.9 7.8	0.359 <1 4.89 7.9	0.965 0.202 <1 <u><1</u> 7.6	<0.5 0.279 (<1 5.48 7.9	2.4 9 0.605 0 <1 1 1.71 4 7.4 3	0.84 (<1 .763 8.2	0.927 0. <1 · <1 · · · · · · · · · · · · · · · · · · ·	0.707 <1 5.72 7.8	0.736 <1 3.84 7.7 580 - - - - - - - - - - - - -	0.701 <1 4.474 7.9 641.6 <0.1 <0.1 <0.1 <0.1 <10 <1 <1 <1 <1 <1 <1	21.517 0.782 4.221 15.056 7.9	ns ns ns ns ns ns ns ns ns ns ns ns ns n	7.148 0.61 <1 3.68 7.3	0.466 <1 2.427 8.1	0.438 <1 <1 8	0.287 <1 7.43 7.9	0.513 <1 1.03 7.5	ns	0.372 1.338 <u><1</u> 7.9	0.389 <1 9.54 7.5	3.052 0.365 <1 8.74 7
Conductivity TPH Sum Oil hydrocarbons >C10-C21 Oil hydrocarbons >C21-C40 TPH >C6-C10 Benzene Toluene Ethyfbenzene Dyflene o-Xylene perfluorooctanois acid (PFOA) Perfluorooctanois acid (PFOA) Phenol Thymol o-Cresol Thymol -S-Solimethyfphenol 4.2-Einmethyfphenol 2.5-Dimethyfphenol	μg/l	$\begin{array}{c} 0.2 \\ 1 \\ 1 \\ 1 \\ 0.1 \\ 0.1 \\ 0.1 \\ 0.1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 0.2 \\ 0.2 \\ 0.0$	10 86 75	DWS Ireland 2014 DWS Ireland 2014 PA RSL (tapwater) [NOV : Ireland GTVs 2016	15 10 86 75	Ireland GTVs 2010 DWS Ireland 2014 USEPA RSL (tapwater) [NOV 2021]			0.577 <1 4.229 8.2	0.235 2.683 36.616 7.7	<0.5 <0.2 <1 7.05 8.2	0.243 <1 <1 7.9	0.698 0 0.154 0 <1 3.101 8	892 0.824 0.24 <0.2 <1 <1 <1 <1 8.1 7.9	1.638 0.752 <1 1.9 7.8	0.359 <1 4.89 7.9	0.965 0.202 <1 <u><1</u> 7.6	<0.5 0.279 (<1 5.48 7.9	2.4 9 0.605 0 <1 1 1.71 4 7.4 3	0.84 (<1 .763 8.2	0.927 0. <1 · <1 · · · · · · · · · · · · · · · · · · ·	0.707 <1 5.72 7.8	0.736 <1 3.84 7.7 580 - - - - - - - - - - - - -	0.701 <1 4.474 7.9 641.6 <0.1 <0.1 <0.1 <0.1 <10 <1 <1 <1 <1 <1 <1	21.517 0.782 4.221 15.056 7.9	ns ns ns ns ns ns ns ns ns ns ns ns ns n	7.148 0.61 <1 3.68 7.3	0.466 <1 2.427 8.1	0.438 <1 <1 8	0.287 <1 7.43 7.9	0.513 <1 1.03 7.5	ns	0.372 1.338 <u><1</u> 7.9	0.389 <1 9.54 7.5	3.052 0.365 <1 8.74 7
Conductivity TPH Sum Oil hydrocarbons X-21-0-21 Oil hydrocarbons X-21-C40 TPH >C6-C10 Benzene Tolucne Ethylbenzene Ethylbenzene Ethylbenzene Aylene o-Xylene o-Xylene Aylene Aylene O-Cresol 2.3/3,5-Dimethylphenol 2.5-Dimethylphenol 3,4-Dimethylphenol 3,4-Dimethylphenol	μg/l	$\begin{array}{c} 0.2 \\ 1 \\ 1 \\ 1 \\ 0.1 \\ 0.1 \\ 0.1 \\ 0.1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\$	10 86 75	DWS Ireland 2014 DWS Ireland 2014 PA RSL (tapwater) [NOV : Ireland GTVs 2016	15 10 86 75	Ireland GTVs 2010 DWS Ireland 2014 USEPA RSL (tapwater) [NOV 2021]			0.577 <1 4.229 8.2	0.235 2.683 36.616 7.7	<0.5 <0.2 <1 7.05 8.2	0.243 <1 <1 7.9	0.698 0 0.154 0 <1 3.101 8	892 0.824 0.24 <0.2 <1 <1 <1 <1 8.1 7.9	1.638 0.752 <1 1.9 7.8	0.359 <1 4.89 7.9	0.965 0.202 <1 <u><1</u> 7.6	<0.5 0.279 (<1 5.48 7.9	2.4 9 0.605 0 <1 1 1.71 4 7.4 3	0.84 (<1 .763 8.2	0.927 0. <1 · <1 · · · · · · · · · · · · · · · · · · ·	0.707 <1 5.72 7.8	0.736 <1 3.84 7.7 580 - - - - - - - - - - - - -	0.701 <1 4.474 7.9 641.6 <0.1 <0.1 <0.1 <0.1 <10 <1 <1 <1 <1 <1 <1	21.517 0.782 4.221 15.056 7.9	ns ns ns ns ns ns ns ns ns ns ns ns ns n	7.148 0.61 <1 3.68 7.3	0.466 <1 2.427 8.1	0.438 <1 <1 8	0.287 <1 7.43 7.9	0.513 <1 1.03 7.5	ns	0.372 1.338 <u><1</u> 7.9	0.389 <1 9.54 7.5	3.052 0.365 <1 8.74 7
Conductivity TPH Sum Oil hydrocarbons >C10-C21 Oil hydrocarbons >C21-C40 Oil hydrocarbons >C21-C40 TPH >C6-C40 Benzene Ethybenzene m/-p-Pylene Perfluorooctanoic acid (PFOA) Perfluorooctanoic acid (PFOA) Perfluoroocta	μg/1	0.2 1 1 100 0.1 0.1 0.1 1 1 1 1 1 1 1 1 1 1 1 0.3 0.2 0.01 0.3 0.2 0.01 0.3 0.2 0.01 0.3 0.2 0.01 0.3 0.2 0.0 0.3 0.2 0.3 0.2 0.3 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	10 86 75	DWS Ireland 2014 DWS Ireland 2014 PA RSL (tapwater) [NOV : Ireland GTVs 2016	15 10 86 75	Ireland GTVs 2010 DWS Ireland 2014 USEPA RSL (tapwater) [NOV 2021]			0.577 <1 4.229 8.2	0.235 2.683 36.616 7.7	<0.5 <0.2 <1 7.05 8.2	0.243 <1 <1 7.9	0.698 0 0.154 0 <1 3.101 8	892 0.824 0.24 <0.2 <1 <1 <1 <1 8.1 7.9	1.638 0.752 <1 1.9 7.8	0.359 <1 4.89 7.9	0.965 0.202 <1 <u><1</u> 7.6	<0.5 0.279 (<1 5.48 7.9	2.4 9 0.605 0 <1 1 1.71 4 7.4 3	0.84 (<1 .763 8.2	0.927 0. <1 · <1 · · · · · · · · · · · · · · · · · · ·	0.707 <1 5.72 7.8	0.736 <1 3.84 7.7 580 - - - - - - - - - - - - -	0.701 <1 4.474 7.9 641.6 <0.1 <0.1 <0.1 <0.1 <10 <1 <1 <1 <1 <1 <1	21.517 0.782 4.221 15.056 7.9	ns	7.148 0.61 <1 3.68 7.3	0.466 <1 2.427 8.1	0.438 <1 <1 8	0.287 <1 7.43 7.9	0.513 <1 1.03 7.5	ns	0.372 1.338 <u><1</u> 7.9	0.389 <1 9.54 7.5	3.052 0.365 <1 8.74 7
Conductivity TPH Sum OII hydrocarbons >C10-C21 OII hydrocarbons >C21-C40 TPH >C6-C10 Benzene Tolucene Ethylbenzene Ethylbenzene Ethylbenzene Ethylbenzene Chylene o-Xylene o-Xylene o-Xylene O-Xylene CFESO 2,3/3,5-Dimethylphenol 2,5-Dimethylphenol 2,5-Dimethylphenol 3,4-Dimethylphenol 3,4-Dimethylphenol 3,4-Dimethylphenol 3,4-Dimethylphenol 3,4-Dimethylphenol 3,4-Dimethylphenol 3,4-Dimethylphenol 3,4-Dimethylphenol 3,4-Dimethylphenol 3,4-Dimethylphenol X-erosol	μg/1	$\begin{array}{c} 0.2\\ 1\\ 1\\ 1\\ 0.1\\ 0.1\\ 0.1\\ 0.1\\ 1\\ 1\\ 1\\ 1\\ 1\\ 1\\ 1\\ 1\\ 1\\ 1\\ 1\\ 0.3\\ 0.2\\ 0.01\\ 0.3\\ 0.02\\ 0$	10 86 75	DWS Ireland 2014 DWS Ireland 2014 PA RSL (tapwater) [NOV : Ireland GTVs 2016	15 10 86 75	Ireland GTVs 2010 DWS Ireland 2014 USEPA RSL (tapwater) [NOV 2021]			0.577 <1 4.229 8.2	0.235 2.683 36.616 7.7	<0.5 <0.2 <1 7.05 8.2	0.243 <1 <1 7.9	0.698 0 0.154 0 <1 3.101 8	892 0.824 0.24 <0.2 <1 <1 <1 <1 8.1 7.9	1.638 0.752 <1 1.9 7.8	0.359 <1 4.89 7.9	0.965 0.202 <1 <u><1</u> 7.6	<0.5 0.279 (<1 5.48 7.9	2.4 9 0.605 0 <1 1 1.71 4 7.4 3	0.84 (<1 .763 8.2	0.927 0. <1 · <1 · · · · · · · · · · · · · · · · · · ·	0.707 <1 5.72 7.8	0.736 <1 3.84 7.7 580 - - - - - - - - - - - - -	0.701 <1 4.474 7.9 641.6 <0.1 <0.1 <0.1 <0.1 <10 <1 <1 <1 <1 <1 <1	21.517 0.782 4.221 15.056 7.9	ns ns ns ns ns ns ns ns ns ns ns ns ns n	7.148 0.61 <1 3.68 7.3	0.466 <1 2.427 8.1	0.438 <1 <1 8	0.287 <1 7.43 7.9	0.513 <1 1.03 7.5	ns	0.372 1.338 <u><1</u> 7.9	0.389 <1 9.54 7.5	3.052 0.365 <1 8.74 7
Conductivity TPH Sum Oil hydrocarbons >C10-C21 Oil hydrocarbons >C21-C20 TPH >C6-C10 Benzene Toluene Ethylbenzene Ethylbenzene Ethylbenzene Avjene o-Sylene o-Sylene o-Sylene O-Cresol Z-Dimethylphenol Z-Dimethylphenol Z-Dimethylphenol Z-Dimethylphenol Z-Dimethylphenol Z-Cresol Sum) m-Cresol M-Cresol M-Cresol M-Dimethylphenol Z-Dimethylphenol Z-Cresol M-Cres	μg/1	0.2 1 1 100 0.1 0.1 100 1 1 1 1 1 1 1 1 1 1 1 1 1	10 86 75	DWS Ireland 2014 DWS Ireland 2014 PA RSL (tapwater) [NOV : Ireland GTVs 2016	15 10 86 75	Ireland GTVs 2010 DWS Ireland 2014 USEPA RSL (tapwater) [NOV 2021]			0.577 <1 4.229 8.2	0.235 2.683 36.616 7.7	<0.5 <0.2 <1 7.05 8.2	0.243 <1 <1 7.9	0.698 0 0.154 0 <1 3.101 8	892 0.824 0.24 <0.2 <1 <1 <1 <1 8.1 7.9	1.638 0.752 <1 1.9 7.8	0.359 <1 4.89 7.9	0.965 0.202 <1 <u><1</u> 7.6	<0.5 0.279 (<1 5.48 7.9	2.4 9 0.605 0 <1 1 1.71 4 7.4 3	0.84 (<1 .763 8.2	0.927 0. <1 · <1 · · · · · · · · · · · · · · · · · · ·	0.707 <1 5.72 7.8	0.736	0.701 4.474 4.474 4.474 5.9 641.6 4.1 4.0.1 4.0.1 4.0 4.1 4.1 4.1 4.1 4.1 4.1 4.1 4.1 4.1 4.1	21.517 0.782 4.221 15.056 7.9	ns	7.148 0.61 <1 3.68 7.3	0.466 <1 2.427 8.1	0.438 <1 <1 8	0.287 <1 7.43 7.9	0.513 <1 1.03 7.5	ns ns	0.372 1.338 <u><1</u> 7.9	0.389 <1 9.54 7.5	3.052 0.365 <1 8.74 7
Conductivity TPH Sum Oil hydrocarbons >C10-C21 Oil hydrocarbons >C21-C21 Oil hydrocarbons >C21-C40 TPH >C6-C40 Benzene Ethybenzene m/-p-Pylene >Churene Perfluorooctanei zaid (PFOA) Perfluorooctanei sulphonic acid Phenol Perfluorooctane sulphonic acid Phenol Perfluorooctane sulphonic acid Phenol Cresol Cresol 2,5-Dimethylphenol 2,5-Dimethylphenol 2,5-Dimethylphenol Cresol Cresol Cresol Cresol Cresol Cresol Cresol Minethylphenol	нg/1 µg/1	$\begin{array}{c} 0.2\\ 0.2\\ 1\\ 1\\ 1\\ 0.1\\ 0.1\\ 0.1\\ 0.1\\ 1\\ 1\\ 1\\ 1\\ 1\\ 1\\ 1\\ 1\\ 1\\ 0.3\\ 0.2\\ 0.01\\ 0.02\\ 0.02\\ 0.02\\ 0.02\\ 0.02\\ 0.02\\ 0.03\\ 0.02\\ 0.03\\ 0.02\\ 0.03\\ 0.02\\ 0.03\\ 0.02\\ 0.03\\ 0.02\\ 0.03\\ 0.02\\ 0.03\\ 0.02\\ 0.03\\ 0.02\\ 0.03\\ 0.02\\ 0.03\\ 0.02\\ 0.03\\ 0.02\\ 0.03\\ 0.02\\ 0.03\\ 0.02\\ 0.03\\ 0$	10 86 75	DWS Ireland 2014 DWS Ireland 2014 PA RSL (tapwater) [NOV : Ireland GTVs 2016	15 10 86 75	Ireland GTVs 2010 DWS Ireland 2014 USEPA RSL (tapwater) [NOV 2021]			0.577 <1 4.229 8.2	0.235 2.683 36.616 7.7	<0.5 <0.2 <1 7.05 8.2	0.243 <1 <1 7.9	0.698 0 0.154 0 <1 3.101 8	892 0.824 0.24 <0.2 <1 <1 <1 <1 8.1 7.9	1.638 0.752 <1 1.9 7.8	0.359 <1 4.89 7.9	0.965 0.202 <1 <u><1</u> 7.6	<0.5 0.279 (<1 5.48 7.9	2.4 9 0.605 0 <1 1 1.71 4 7.4 3	0.84 (<1 .763 8.2	0.927 0. <1 · <1 · · · · 1 ·<br <th>0.707 <1 5.72 7.8</th> <th>0.736</th> <th>0.701 4.474 4.474 4.474 5.9 641.6 4.1 4.0.1 4.0.1 4.0 4.1 4.1 4.1 4.1 4.1 4.1 4.1 4.1 4.1 4.1</th> <th>21.517 0.782 0.782 4.221 15.056 7.9 669.7 - - - <td-< th=""><th>ns ns ns</th><th>7.148 0.61 <1 3.68 7.3</th><th>0.466 <1 2.427 8.1</th><th>0.438 <1 <1 8</th><th>0.287 <1 7.43 7.9</th><th>0.513 <1 1.03 7.5</th><th>ns ns ns</th><th>0.372 1.338 -1.338 -1. -7.9 -568.4 - - - - - - - - - - - - -</th><th>0.389 <1 9.54 7.5</th><th>3.052 0.365 <1 8.74 7</th></td-<></th>	0.707 <1 5.72 7.8	0.736	0.701 4.474 4.474 4.474 5.9 641.6 4.1 4.0.1 4.0.1 4.0 4.1 4.1 4.1 4.1 4.1 4.1 4.1 4.1 4.1 4.1	21.517 0.782 0.782 4.221 15.056 7.9 669.7 - - - <td-< th=""><th>ns ns ns</th><th>7.148 0.61 <1 3.68 7.3</th><th>0.466 <1 2.427 8.1</th><th>0.438 <1 <1 8</th><th>0.287 <1 7.43 7.9</th><th>0.513 <1 1.03 7.5</th><th>ns ns ns</th><th>0.372 1.338 -1.338 -1. -7.9 -568.4 - - - - - - - - - - - - -</th><th>0.389 <1 9.54 7.5</th><th>3.052 0.365 <1 8.74 7</th></td-<>	ns	7.148 0.61 <1 3.68 7.3	0.466 <1 2.427 8.1	0.438 <1 <1 8	0.287 <1 7.43 7.9	0.513 <1 1.03 7.5	ns ns	0.372 1.338 -1.338 -1. -7.9 -568.4 - - - - - - - - - - - - -	0.389 <1 9.54 7.5	3.052 0.365 <1 8.74 7
Conductivity TPH Sum Oil hydrocarbons >C10-C21 Oil hydrocarbons >C21-C40 Oil hydrocarbons >C21-C40 TPH >C6-C40 Benzene Ethybenzene m/_P >Nylene Perfluorocatanei zaid (PFOA) Perfluorocatanei sulphonic acid Phenol Perfluorocatanei sulphonic acid Phenol Cresol Cresol Schmethybenol 2,5-Dimethybenol 2,5-Dimethybenol 2,5-Dimethybenol 2,5-Dimethybenol Cresol Cresol Cresol m.Ethybenol o-Cresol m.Ethybenol p-Cresol m.Ethybenol p-Cresol m.Ethybenol p-Cresol m.Ethybenol p-Cresol p-Cresol m.Ethybenol p-Cresol m.Ethybenol p-Cresol P-Cresol m.Ethybenol p-Cresol P-Creso	нд μд	0.2 0.2 1 1 100 0.1 0.1 0.1 101 101 1 1 1 1 1 1 1 1 1 1 1 1 1	10 86 75	DWS Ireland 2014 DWS Ireland 2014 PA RSL (tapwater) [NOV : Ireland GTVs 2016	15 10 86 75	Ireland GTVs 2010 DWS Ireland 2014 USEPA RSL (tapwater) [NOV 2021]			0.577	0.235 2.683 36.616 7.7	<0.5 <0.2 <1 7.05 8.2	0.243 <1 <1 7.9	0.698 0 0.154 0 <1 3.101 8	892 0.824 0.24 <0.2 <1 <1 <1 <1 8.1 7.9	1.638 0.752 <1 1.9 7.8	0.359 <1 4.89 7.9	0.965 0.202 <1 <u><1</u> 7.6	<0.5 0.279 (<1 5.48 7.9	2.4 9 0.605 0 <1 1 1.71 4 7.4 3	0.84 (<1 .763 8.2	0.927 0. <1 · <1 · · · · 1 ·<br <th>0.707 <1 5.72 7.8</th> <th>0.736</th> <th>0.701 (-1)</th> <th>21.517 0.782 0.782 4.221 15.056 7.9 669.7 - - - <td-< th=""><th>ns ns ns</th><th>7.148 0.61 <1 3.68 7.3</th><th>0.466 0.466 <1 2.427 8.1 639.4 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0</th><th>0.438 <1 <1 8</th><th>0.287 <1 7.43 7.9</th><th>0.513 <1 1.03 7.5</th><th>ns ns ns</th><th>0.372 1.338 -1.338 -1. -7.9 -568.4 - - - - - - - - - - - - -</th><th>0.389 <1 9.54 7.5</th><th>3.052 0.365 <1 8.74 7</th></td-<></th>	0.707 <1 5.72 7.8	0.736	0.701 (-1)	21.517 0.782 0.782 4.221 15.056 7.9 669.7 - - - <td-< th=""><th>ns ns ns</th><th>7.148 0.61 <1 3.68 7.3</th><th>0.466 0.466 <1 2.427 8.1 639.4 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0</th><th>0.438 <1 <1 8</th><th>0.287 <1 7.43 7.9</th><th>0.513 <1 1.03 7.5</th><th>ns ns ns</th><th>0.372 1.338 -1.338 -1. -7.9 -568.4 - - - - - - - - - - - - -</th><th>0.389 <1 9.54 7.5</th><th>3.052 0.365 <1 8.74 7</th></td-<>	ns	7.148 0.61 <1 3.68 7.3	0.466 0.466 <1 2.427 8.1 639.4 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0	0.438 <1 <1 8	0.287 <1 7.43 7.9	0.513 <1 1.03 7.5	ns	0.372 1.338 -1.338 -1. -7.9 -568.4 - - - - - - - - - - - - -	0.389 <1 9.54 7.5	3.052 0.365 <1 8.74 7
Conductivity TPH Sum Oil hydrocarbons >C10-C21 Oil hydrocarbons >C21-C40 Oil hydrocarbons >C21-C40 TPH >C5C-C10 Benzene Ethybenzene m/_P >Nylene Perfluorocatanei zaid (PFOA) Perfluorocatanei sulphonic acid Phenol Perfluorocatanei sulphonic acid Phenol 2,2/3,5-Dimethylphenol 4,2-Dimethylphenol 2,5-Dimethylphenol 2,5-Dimethylphenol 2,5-Dimethylphenol 2,5-Dimethylphenol 3,4-Dimethylphenol Cresol m.Ethylphenol o cTresol m.Ethylphenol p.Tcresol m.Ethylphenol p.Tcresol m.Ethylphenol p.Tcresol P.Tc	ñg µg/ µg/ µg/	$\begin{array}{c} 0.2\\ 0.2\\ 1\\ 1\\ 1\\ 0.1\\ 0.1\\ 0.1\\ 0.1\\ 0.1\\ 1\\ 1\\ 1\\ 1\\ 1\\ 1\\ 1\\ 1\\ 1\\ 0.2\\ 0.2\\ 0.02\\ 0.02\\ 0.02\\ 0.02\\ 0.03\\ 0.02\\ 0.03\\ 0.02\\ 0.03\\ 0.02\\ 0.03\\ 0.02\\ 0.03\\ 0.02\\ 0.03\\ 0.02\\ 0.03\\ 0.02\\ 0.03\\ 0.01\\ 0.02\\ 0.03\\ 0.01\\ 0.$	10 86 75	DWS Ireland 2014 DWS Ireland 2014 PA RSL (tapwater) [NOV : Ireland GTVs 2016	15 10 86 75	Ireland GTVs 2010 DWS Ireland 2014 USEPA RSL (tapwater) [NOV 2021]			0.577	0.235 2.683 36.616 7.7	<0.5 <0.2 <1 7.05 8.2	0.243 <1 <1 7.9	0.698 0 0.154 0 <1 3.101 8	892 0.824 0.24 <0.2 <1 <1 <1 <1 8.1 7.9	1.638 0.752 <1 1.9 7.8	0.359 <1 4.89 7.9	0.965 0.202 <1 <u><1</u> 7.6	<0.5 0.279 (<1 5.48 7.9	2.4 9 0.605 0 <1 1 1.71 4 7.4 3	0.84 (<1 .763 8.2	0.927 0. <1 · <1 · · · · 1 ·<br <th>0.707 <1 5.72 7.8</th> <th>0.736</th> <th>0.701 4.474 7.9 641.6 7.9 641.6 0.1 6.0.1 6.0.1 6.0.1 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0</th> <th>21.517 0.782 0.782 4.221 15.056 7.9 669.7 - - - <td-< th=""><th>ns ns ns</th><th>7.148 0.61 <1 3.68 7.3</th><th>0.466 0.466 <1 2.427 8.1 639.4 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0</th><th>0.438 <1 <1 8</th><th>0.287 <1 7.43 7.9</th><th>0.513 <1 1.03 7.5</th><th>ns ns ns</th><th>0.372 1.338 -1.338 -1. -7.9 -568.4 - - - - - - - - - - - - -</th><th>0.389 <1 9.54 7.5</th><th>3.052 0.365 <1 8.74 7</th></td-<></th>	0.707 <1 5.72 7.8	0.736	0.701 4.474 7.9 641.6 7.9 641.6 0.1 6.0.1 6.0.1 6.0.1 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	21.517 0.782 0.782 4.221 15.056 7.9 669.7 - - - <td-< th=""><th>ns ns ns</th><th>7.148 0.61 <1 3.68 7.3</th><th>0.466 0.466 <1 2.427 8.1 639.4 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0</th><th>0.438 <1 <1 8</th><th>0.287 <1 7.43 7.9</th><th>0.513 <1 1.03 7.5</th><th>ns ns ns</th><th>0.372 1.338 -1.338 -1. -7.9 -568.4 - - - - - - - - - - - - -</th><th>0.389 <1 9.54 7.5</th><th>3.052 0.365 <1 8.74 7</th></td-<>	ns	7.148 0.61 <1 3.68 7.3	0.466 0.466 <1 2.427 8.1 639.4 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0	0.438 <1 <1 8	0.287 <1 7.43 7.9	0.513 <1 1.03 7.5	ns ns	0.372 1.338 -1.338 -1. -7.9 -568.4 - - - - - - - - - - - - -	0.389 <1 9.54 7.5	3.052 0.365 <1 8.74 7
Conductivity TPH Sum Oil hydrocarbons >C10-C21 Oil hydrocarbons >C21-C21 Oil hydrocarbons >C21-C40 TPH >C56-C10 Benzene Ethylenesene Toluene Ethylenesene m*/p >Vylene o-Xylene o-Xylene Perfluorocatanic acid (PFOA) Perfluorocatanic acid (PFOA) Perfl	нg/1 нg/1 µg/1	$\begin{array}{c} 0.2 \\ 0.2 \\ 1 \\ 1 \\ 1 \\ 0.1 \\ 0.1 \\ 0.1 \\ 0.1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\$	10 86 75	DWS Ireland 2014 DWS Ireland 2014 PA RSL (tapwater) [NOV : Ireland GTVs 2016	15 10 86 75	Ireland GTVs 2010 DWS Ireland 2014 USEPA RSL (tapwater) [NOV 2021]			0.577 <1 <1 82 620.8 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <1 <1 <1 <1 <1 <1 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.3 <0.03 <0.03 <0.01	0.235 2.683 36.616 7.7	<0.5 <0.2 <1 7.05 8.2	0.243 <1 <1 7.9	0.698 0.0 0.154 0 <1 - 3.101 8 433.90 3 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <1 <1 <1 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.3 <0.01 <0.03 <0.01 <0.02 <0.03 <0.01 <0.02	892 0.824 0.24 <0.2 <1 <1 <1 <1 8.1 7.9	1.638 0.752 <1 1.9 7.8	0.359 0.359 0.359 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	0.965 0.202 <1 <u><1</u> 7.6	<0.5 0.279 (<1 5.48 7.9	2.4 9 0.665 C d1 1 1.71 4 7.6 C 640 6 - C -	8.84 0 < 7.763 8.2 7.761 0.01 0.01 0.01	0.927 0. <1 · <1 · · · · · · · · · · · · · · · · · · ·	0.707 <1 5.72 7.8	0.736 (-1) 3.84 7.7 580	0.701 < < 4.474 7.9 661.6	21.517 0.782 0.782 4.221 15.056 7.9 669.7 - - - <td-< th=""><th>ns ns ns</th><th>7.148 0.61 <1 3.68 7.3</th><th>0.466</th><th>0.438 <1 <1 8</th><th>0.287 <1 7.43 7.9</th><th>0.513 <1 1.03 7.5</th><th>ns ns ns</th><th>0.372 0.372 0.372 0.372 0.372 0.37 0.37 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3</th><th>0.389 <1 9.54 7.5</th><th>3.052 0.365 <1 8.74 7</th></td-<>	ns ns	7.148 0.61 <1 3.68 7.3	0.466	0.438 <1 <1 8	0.287 <1 7.43 7.9	0.513 <1 1.03 7.5	ns ns	0.372 0.372 0.372 0.372 0.372 0.37 0.37 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3	0.389 <1 9.54 7.5	3.052 0.365 <1 8.74 7
Conductivity TPH Sum Oil hydrocarbons >C10-C21 Oil hydrocarbons >C21-C40 TPH >C6-C10 Benzene Toluene Ethylbenzene Ethylbenzene Ethylbenzene Aylene o-Xylene o-Xylene o-Xylene Ayrene Anthracene Fluoranthene Ayrene	Ма Ма Ча	$\begin{array}{c} 0.2\\ 0.1\\ 1\\ 1\\ 1\\ 0.1\\ 0.1\\ 0.1\\ 0.1\\ 0.1\\$	10 86 75	DWS Ireland 2014 DWS Ireland 2014 PA RSL (tapwater) [NOV : Ireland GTVs 2016	15 10 86 75	Ireland GTVs 2010 DWS Ireland 2014 USEPA RSL (tapwater) [NOV 2021]			0.577	0.235 2.683 36.616 7.7	<0.5 <0.2 <1 7.05 8.2	0.243 <1 <1 7.9	0.698 0 0.154 0 <1 3.101 8	892 0.824 0.24 <0.2 <1 <1 <1 <1 8.1 7.9	1.638 0.752 <1 1.9 7.8	0.359 <1 4.89 7.9	0.965 0.202 <1 <u><1</u> 7.6	<0.5 0.279 (<1 5.48 7.9	2.4 9 0.665 C d1 1 1.71 4 7.6 C 640 6 - C -	0.84 (<1 .763 8.2	0.927 0. <1 · <1 · · · · · · · · · · · · · · · · · · ·	0.707 <1 5.72 7.8	0.736 (-1)	0.701 (-1)	21.517 0.782 0.782 4.221 15.056 7.9 669.7 - - - <td-< th=""><th>ns ns ns</th><th>7.148 0.61 <1 3.68 7.3</th><th>0.466 0.466 <1 2.427 8.1 639.4 <0.1 <0.1 <0.1 <0.1 <0.1 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0</th><th>0.438 <1 <1 8</th><th>0.287 <1 7.43 7.9</th><th>0.513 <1 1.03 7.5</th><th>ns ns ns</th><th>0.372 0.372 0.372 0.372 0.372 0.37 0.37 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3</th><th>0.389 <1 9.54 7.5</th><th>3.052 0.365 <1 8.74 7</th></td-<>	ns	7.148 0.61 <1 3.68 7.3	0.466 0.466 <1 2.427 8.1 639.4 <0.1 <0.1 <0.1 <0.1 <0.1 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0	0.438 <1 <1 8	0.287 <1 7.43 7.9	0.513 <1 1.03 7.5	ns ns	0.372 0.372 0.372 0.372 0.372 0.37 0.37 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3	0.389 <1 9.54 7.5	3.052 0.365 <1 8.74 7
Conductivity TPH Sum Oll hydrocarbons >C10-C21 Oll hydrocarbons >C21-C40 Oll hydrocarbons >C21-C40 TPH >C6-C40 Benzene Ethybenzene m/_P >Viene Perfluorocatanoiz acid (PFOA) Perfluorocatanoiz acid (PFOA) 2,2-5,2-5, Dimethylphenol 2,2-6, Dimethylphenol 2,2-6, Dimethylphenol 2,2-6, Dimethylphenol 2,2-6, Dimethylphenol 2,2-6, Dimethylphenol 2,2-6, Dimethylphenol 0,2-6, Dimethylphenol 0,2-6, Dimethylphenol 0,2-6, Dimethylphenol 0,2-6, Dimethylphenol 0,2-6, Dimethylphenol 0,2-6, Dimethylphenol 0,2-6, Dimethylphenol 0,2-6, Dimethylphenol 0,2-6, Dimethylphenol 0,2-7, Dimethylphenol	нg/1 µg/1	$\begin{array}{c} 0.2\\ 0.2\\ 1\\ 1\\ 1\\ 0.1\\ 0.1\\ 0.1\\ 0.1\\ 0.1\\ 0.1\\$	10 86 75	DWS Ireland 2014 DWS Ireland 2014 PA RSL (tapwater) [NOV : Ireland GTVs 2016	15 10 86 75	Ireland GTVs 2010 DWS Ireland 2014 USEPA RSL (tapwater) [NOV 2021]			0.577 <1 <1 82 620.8 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <1 <1 <1 <1 <1 <1 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.3 <0.03 <0.03 <0.01	0.235 2.683 36.616 7.7	<0.5 <0.2 <1 7.05 8.2	0.243 <1 <1 7.9	0.698 0.0 0.154 0 <1 - 3.101 8 433.90 3 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <1 <1 <1 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.3 <0.01 <0.03 <0.01 <0.02 <0.03 <0.01 <0.02	892 0.824 0.24 <0.2 <1 <1 <1 <1 8.1 7.9	1.638 0.752 <1 1.9 7.8	0.359 0.359 0.359 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	0.965 0.202 <1 <u><1</u> 7.6	<0.5 0.279 (<1 5.48 7.9	2.4 9 0.665 C d1 1 1.71 4 7.6 C 640 6 - C -	8.84 0 < 7.763 8.2 7.761 0.01 0.01 0.01	0.927 0. <1 · <1 · · · · · · · · · · · · · · · · · · ·	0.707 <1 5.72 7.8	0.736 Cl	0.701 0.701 - - - - - - - 641.6 - - - 641.6 - - - - -	21.517 0.782 0.782 4.221 15.056 7.9 669.7 - - - <td-< th=""><th>ns ns ns</th><th>7.148 0.61 <1 3.68 7.3</th><th>0.466</th><th>0.438 <1 <1 8</th><th>0.287 <1 7.43 7.9</th><th>0.513 <1 1.03 7.5</th><th>ns ns ns</th><th>0.372 0.372 0.372 0.372 0.372 0.37 0.37 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3</th><th>0.389 <1 9.54 7.5</th><th>3.052 0.365 <1 8.74 7</th></td-<>	ns ns	7.148 0.61 <1 3.68 7.3	0.466	0.438 <1 <1 8	0.287 <1 7.43 7.9	0.513 <1 1.03 7.5	ns ns	0.372 0.372 0.372 0.372 0.372 0.37 0.37 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3	0.389 <1 9.54 7.5	3.052 0.365 <1 8.74 7
Conductivity TPH Sum Oll hydrocarbons >C10-C21 Oll hydrocarbons >C21-C21 Oll hydrocarbons >C21-C40 TPH >C5C-C10 Ethylbenzene m/p-Xylene Derfluorocatanoic acid (PFOA) Perfluorocatanoic acid (PFOA) 2,5-Dimethylphenol 2,5-Dimethylphenol 2,5-Dimethylphenol Cresol Sum) m-Ethylphenol Defresol Benzo-(a)-pyrene Fluoranthene Pyrene Benzo-(a)-anthracene	ндп	0.2 1 1 100 0.1 0.1 0.1 1 1 1 1 1 1 1 1 1 1 1 1 1	10 86 75	DWS Ireland 2014 DWS Ireland 2014 PA RSL (tapwater) [NOV : Ireland GTVs 2016	15 10 86 75	Ireland GTVs 2010 DWS Ireland 2014 USEPA RSL (tapwater) [NOV 2021]			0.577 <1 <1 82 620.8 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <1 <1 <1 <1 <1 <1 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.3 <0.03 <0.03 <0.01	0.235 2.683 36.616 7.7	<0.5 <0.2 <1 7.05 8.2	0.243 <1 <1 7.9	0.698 0.0 0.154 0 <1 - 3.101 8 433.90 3 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <1 <1 <1 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.3 <0.01 <0.03 <0.01 <0.02 <0.03 <0.01 <0.02	892 0.824 0.24 <0.2 <1 <1 <1 <1 8.1 7.9	1.638 0.752 <1 1.9 7.8	0.359 0.359 0.359 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	0.965 0.202 <1 <u><1</u> 7.6	<0.5 0.279 (<1 5.48 7.9	2.4 9 0.665 C d1 1 1.71 4 7.6 C 640 6 - C -	8.84 0 < 7.763 8.2 7.761 0.01 0.01 0.01	0.927 0. <1 · <1 · · · 1 ·<br <th>0.707 <1 5.72 7.8</th> <th>0.736 Cl</th> <th>0.701 4 4 7 9 4 4 7 9 4 4 4 4 4 4 4 4 4 4 4 4</th> <th>21.517 0.782 0.782 4.221 15.056 7.9 669.7 - - - <td-< th=""><th>HS HS HS</th><th>7.148 0.61 <1 3.68 7.3</th><th>0.466</th><th>0.438 <1 <1 8</th><th>0.287 <1 7.43 7.9</th><th>0.513 <1 1.03 7.5</th><th>ns ns ns</th><th>0.372 0.372 0.372 0.372 0.372 0.37 0.37 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3</th><th>0.389 <1 9.54 7.5</th><th>3.052 0.365 <1 8.74 7</th></td-<></th>	0.707 <1 5.72 7.8	0.736 Cl	0.701 4 4 7 9 4 4 7 9 4 4 4 4 4 4 4 4 4 4 4 4	21.517 0.782 0.782 4.221 15.056 7.9 669.7 - - - <td-< th=""><th>HS HS HS</th><th>7.148 0.61 <1 3.68 7.3</th><th>0.466</th><th>0.438 <1 <1 8</th><th>0.287 <1 7.43 7.9</th><th>0.513 <1 1.03 7.5</th><th>ns ns ns</th><th>0.372 0.372 0.372 0.372 0.372 0.37 0.37 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3</th><th>0.389 <1 9.54 7.5</th><th>3.052 0.365 <1 8.74 7</th></td-<>	HS HS	7.148 0.61 <1 3.68 7.3	0.466	0.438 <1 <1 8	0.287 <1 7.43 7.9	0.513 <1 1.03 7.5	ns ns	0.372 0.372 0.372 0.372 0.372 0.37 0.37 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3	0.389 <1 9.54 7.5	3.052 0.365 <1 8.74 7
Conductivity TPH Sum Oll hydrocarbors >C10-C21 Oll hydrocarbors >C21-C21 Oll hydrocarbors >C21-C21 Oll hydrocarbors >C21-C40 TPH >C5C-C10 Benzene Ethylbenzene m/p Xylene o Xylene perfluorocatanic acid (PFOA) Perfluorocatanic acid (PFOA) 2,3-50imethylphenol 2,5-50imethylphenol 2,5-50imethylphenol 2,5-50imethylphenol p-Cresol Benzo-(a)pyrene Fluoranthene Pyrene Phenanthene Pyrene Dibenzo-(a)-pyrene Dibenzo-(a)-pyrene Dibenzo-(a)-pyrene Dibenzo-(a)-pyrene	нд	0.2 1 1 1 100 0.1 0.1 10 1 1 1 1 1 1 1 1 1 1 1 1 0.2 0.3 0.02 0.03 0.02 0.03 0.02 0.03 0.02 0.03 0.02 0.04 0.04 0.04	10 86 75	DWS Ireland 2014 DWS Ireland 2014 PA RSL (tapwater) [NOV : Ireland GTVs 2016	15 10 86 75	Ireland GTVs 2010 DWS Ireland 2014 USEPA RSL (tapwater) [NOV 2021]			0.577 <1 <1 82 620.8 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <1 <1 <1 <1 <1 <1 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.3 <0.03 <0.03 <0.01	0.235 2.683 36.616 7.7	<0.5 <0.2 <1 7.05 8.2	0.243 <1 <1 7.9	0.698 0.0 0.154 0 <1 - 3.101 8 433.90 3 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <1 <1 <1 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.3 <0.01 <0.03 <0.01 <0.02 <0.03 <0.01 <0.02	892 0.824 0.24 <0.2 <1 <1 <1 <1 8.1 7.9	1.638 0.752 <1 1.9 7.8	0.359 0.359 0.359 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	0.965 0.202 <1 <u><1</u> 7.6	<0.5 0.279 (<1 5.48 7.9	2.4 9 0.665 C d1 1 1.71 4 7.6 C 640 6 - C -	8.84 0 < 7.763 8.2 7.761 0.01 0.01 0.01	0.927 0. <1 · <1 · · · 1 ·<br <th>0.707 <1 5.72 7.8</th> <th>0.736 (-1) (-1) 3.84 - 7.7 580 580</th> <th>0.701 4 4 7 9 4 4 7 9 4 4 7 9 4 1 4 1 4 1 4 1 4 1 4 1 4 1 4 1 4 1 4</th> <th>21.517 0.782 0.782 4.221 15.056 7.9 669.7 - - - <td-< th=""><th>ns ns ns</th><th>7.148 0.61 <1 3.68 7.3</th><th>0.466</th><th>0.438 <1 <1 8</th><th>0.287 <1 7.43 7.9</th><th>0.513 <1 1.03 7.5</th><th>ns ns ns</th><th>0.372 0.372 0.372 0.372 0.372 0.37 0.37 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3</th><th>0.389 <1 9.54 7.5</th><th>3.052 0.365 <1 8.74 7</th></td-<></th>	0.707 <1 5.72 7.8	0.736 (-1) (-1) 3.84 - 7.7 580 580	0.701 4 4 7 9 4 4 7 9 4 4 7 9 4 1 4 1 4 1 4 1 4 1 4 1 4 1 4 1 4 1 4	21.517 0.782 0.782 4.221 15.056 7.9 669.7 - - - <td-< th=""><th>ns ns ns</th><th>7.148 0.61 <1 3.68 7.3</th><th>0.466</th><th>0.438 <1 <1 8</th><th>0.287 <1 7.43 7.9</th><th>0.513 <1 1.03 7.5</th><th>ns ns ns</th><th>0.372 0.372 0.372 0.372 0.372 0.37 0.37 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3</th><th>0.389 <1 9.54 7.5</th><th>3.052 0.365 <1 8.74 7</th></td-<>	ns ns	7.148 0.61 <1 3.68 7.3	0.466	0.438 <1 <1 8	0.287 <1 7.43 7.9	0.513 <1 1.03 7.5	ns ns	0.372 0.372 0.372 0.372 0.372 0.37 0.37 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3	0.389 <1 9.54 7.5	3.052 0.365 <1 8.74 7
Conductivity TPH Sum Oil hydrocarbons >C10-C21 Oil hydrocarbons >C21-C21 Oil hydrocarbons >C21-C21 Oil hydrocarbons >C21-C40 TPH >C5C-C10 Benzene Ethylbenzene m/p-Xylene o-Xylene o-Xylene o-Xylene Aprilourooctanoic acid (PFOA) Perfluorooctanoic acid (PFOA) Portootanoic acid (PFOA) April Denoit acid (PFOA) Phenol Cresols (um) m-Ethylphenol C-Stellylphenol Perfluoranthene Phoreanthene Phoreanthene Phyrene Benzo (a)-pyrene Didenzo (a)-pyrene Didenz	нд	0.2 1 10 10 0.1 0.1 0.1 10 1 1 1 1 1 1 1 1 1 1 1 1 1	10 86 75	DWS Ireland 2014 DWS Ireland 2014 PA RSL (tapwater) [NOV : Ireland GTVs 2016	15 10 86 75	Ireland GTVs 2010 DWS Ireland 2014 USEPA RSL (tapwater) [NOV 2021]			0.577 <1 <1 82 620.8 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <1 <1 <1 <1 <1 <1 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.3 <0.03 <0.03 <0.01	0.235 2.683 36.616 7.7	<0.5 <0.2 <1 7.05 8.2	0.243 <1 <1 7.9	0.698 0.0 0.154 0 <1 - 3.101 8 433.90 3 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <1 <1 <1 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.3 <0.01 <0.03 <0.01 <0.02 <0.03 <0.01 <0.02	892 0.824 0.24 <0.2 <1 <1 <1 <1 8.1 7.9	1.638 0.752 <1 1.9 7.8	0.359 0.359 0.359 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	0.965 0.202 <1 <u><1</u> 7.6	<0.5 0.279 (<1 5.48 7.9	2.4 9 0.665 C d1 1 1.71 4 7.6 C 640 6 - C -	8.84 0 < 7.763 8.2 7.761 0.01 0.01 0.01	0.927 0. <1 · <1 · · · · · · · · · · · · · · · · · · ·	0.707 <1 5.72 7.8	0.736 (-1) (-1) 3.84 - 7.7 580 580	0.701 0.701 - - - - - - - - - - - - - <	21.517 0.782 0.782 4.221 15.056 7.9 669.7 - - - <td-< th=""><th>ns ns ns</th><th>7.148 0.61 <1 3.68 7.3</th><th>0.466</th><th>0.438 <1 <1 8</th><th>0.287 <1 7.43 7.9</th><th>0.513 <1 1.03 7.5</th><th>ns ns ns</th><th>0.372 0.372 0.372 0.372 0.372 0.37 0.37 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3</th><th>0.389 <1 9.54 7.5</th><th>3.052 0.365 <1 8.74 7</th></td-<>	ns ns	7.148 0.61 <1 3.68 7.3	0.466	0.438 <1 <1 8	0.287 <1 7.43 7.9	0.513 <1 1.03 7.5	ns ns	0.372 0.372 0.372 0.372 0.372 0.37 0.37 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3	0.389 <1 9.54 7.5	3.052 0.365 <1 8.74 7
Conductivity TPH Sum Oil hydrocarbons >C10-C21 Oil hydrocarbons >C21-C20 TPH >C6-C10 Benzone Toluene Ethylbenzene Ethylbenzene Ethylbenzene Arje-Xielene o-Xylene Perfluorooctanoi acid (PCOA) Perfluorooctanoi acid (PCOA) Portoroottanoi acid (PCOA) Portoroottanoi acid (PCOA) Portoroottanoi acid (PCOA) 2.5-Dimethylphenol 2.5-Dimethylphenol 3.4-Dimethylphenol 0.5-thylphen	Рад μg/	0.2 1 10 10 0.1 0.1 0.1 0.1 1 1 1 1 1 1 1 1 1 1 1 1 1	10 86 75	DWS Ireland 2014 DWS Ireland 2014 PA RSL (tapwater) [NOV : Ireland GTVs 2016	15 10 86 75	Ireland GTVs 2010 DWS Ireland 2014 USEPA RSL (tapwater) [NOV 2021]			0.577 <1 <1 82 620.8 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <1 <1 <1 <1 <1 <1 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.3 <0.03 <0.03 <0.01	0.235 2.683 36.616 7.7	<0.5 <0.2 <1 7.05 8.2	0.243 <1 <1 7.9	0.698 0.0 0.154 0 <1 - 3.101 8 433.90 3 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <1 <1 <1 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.3 <0.01 <0.03 <0.01 <0.02 <0.03 <0.01 <0.02	892 0.824 0.24 <0.2 <1 <1 <1 <1 8.1 7.9	1.638 0.752 <1 1.9 7.8	0.359 0.359 0.359 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	0.965 0.202 <1 <u><1</u> 7.6	<0.5 0.279 (<1 5.48 7.9	2.4 9 0.665 C d1 1 1.71 4 7.6 C 640 6 - C -	8.84 0 < 7.763 8.2 7.761 0.01 0.01 0.01	0.927 0. <1 · <1 · · · · · · · · · · · · · · · · · · ·	0.707 <1 5.72 7.8	0.736 (-1) (-1) 3.84 - 7.7 580 580	0.701 4 4 7 9 4 4 7 9 4 4 7 9 4 1 4 1 4 1 4 1 4 1 4 1 4 1 4 1 4 1 4	21.517 0.782 0.782 4.221 15.056 7.9 669.7 - - - <td-< th=""><th>HS HS HS</th><th>7.148 0.61 <1 3.68 7.3</th><th>0.466</th><th>0.438 <1 <1 8</th><th>0.287 <1 7.43 7.9</th><th>0.513 <1 1.03 7.5</th><th>ns ns ns</th><th>0.372 0.372 0.372 0.372 0.372 0.37 0.37 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3</th><th>0.389 <1 9.54 7.5</th><th>3.052 0.365 <1 8.74 7</th></td-<>	HS HS	7.148 0.61 <1 3.68 7.3	0.466	0.438 <1 <1 8	0.287 <1 7.43 7.9	0.513 <1 1.03 7.5	ns ns	0.372 0.372 0.372 0.372 0.372 0.37 0.37 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3	0.389 <1 9.54 7.5	3.052 0.365 <1 8.74 7
Conductivity TPH Sum Oil hydrocarbons >C10-C21 Oil hydrocarbons >C21-C21 Oil hydrocarbons >C21-C21 Oil hydrocarbons >C21-C40 TPH >C5C-C10 Benzene Ethylbenzene m/p-Xylene o-Xylene o-Xylene o-Xylene Aprilourooctanoic acid (PFOA) Perfluorooctanoic acid (PFOA) Portootanoic acid (PFOA) April Denoit acid (PFOA) Phenol Cresols (um) m-Ethylphenol C-Stellylphenol Perfluoranthene Phoreanthene Phoreanthene Phyrene Benzo (a)-pyrene Didenzo (a)-pyrene Didenz	Рад μg/	0.2 1 1 1 100 0.1 0.1 10 1 1 1 1 1 1 1 1 1 1 0.2 0.3 0.2 0.3 0.02 0.02 0.03 0.02 0.03 0.02 0.03 0.02 0.04 0.04 0.052 0.04 0.04 0.03 0.04 0.03	10 86 75	DWS Ireland 2014 DWS Ireland 2014 PA RSL (tapwater) [NOV : Ireland GTVs 2016	15 10 86 75	Ireland GTVs 2010 DWS Ireland 2014 USEPA RSL (tapwater) [NOV 2021]			0.577 <1	0.235 0.235 2.683 36.616 7.7 496.1 - - - - - - - - - - - - -	-0.5 -0.2 -0.2 -0.2 -1 -0.2 -2 <td>0.243 <1 <1 7.9</td> <td>0.698 0.0 0.154 0 <1</td> - 3.101 8 433.90 3 <0.1	0.243 <1 <1 7.9	0.698 0.0 0.154 0 <1	982 0.824 0.22 24 <0.2	1.638 0.752 <1 1.9 7.8	0.359 0.359 0.359 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	0.955 0.202 cl	<0.5 0.279 (<1 5.48 7.9	2.4 9 0.6055 C cl - cl - 7.4 - 640 6 - - -	8.84 0 <	0.927 0. <1 · <1 · · · · · · · · · · · · · · · · · · ·	0.707 <1 5.72 7.8	0.736 Cl 0.736 Cl 0.737 S80	0.701 4 4 7 9 4 4 7 9 4 4 7 9 4 1 4 1 4 1 4 1 4 1 4 1 4 1 4 1 4 1 4	21.517 0.782 0.782 4.221 15.056 7.9 669.7 - - - <td-< td=""><td>HS HS HS</td><td>7.148 0.61 <1 3.68 7.3 7.3 7.3 7 7 7 7 7 7 7 7 7 7 7 7 7 7</td><td>0.466</td><td>0.438 0.438 0.438 0.438 0.438 0.43 0.43 0.44 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.</td><td>0.287 <1 7.43 7.9</td><td>0.513 <1 1.03 7.5</td><td>ns ns ns</td><td>0.372 0.372 0.372 0.372 0.372 0.372 0.372 0.37 0.3 0.37 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3</td><td>0.389 <1 9.54 7.5</td><td>3.052 0.365 <1 8.74 7</td></td-<>	HS HS	7.148 0.61 <1 3.68 7.3 7.3 7.3 7 7 7 7 7 7 7 7 7 7 7 7 7 7	0.466	0.438 0.438 0.438 0.438 0.438 0.43 0.43 0.44 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.	0.287 <1 7.43 7.9	0.513 <1 1.03 7.5	ns ns	0.372 0.372 0.372 0.372 0.372 0.372 0.372 0.37 0.3 0.37 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3	0.389 <1 9.54 7.5	3.052 0.365 <1 8.74 7

Laboratory Certificates - Round 1 (19 April 2023)



Eurofins Environment Testing Ireland Hoffman Park, Inchera Cork T45 PC80 Ireland T: 0818 252526 Web: www.eurofins.ie Email: ASTsupport@etuki.eurofins.com



Client: **AECOM Infrastructure & Environment Ireland** Limited 4th Floor, Adelphi Plaza, George's Street Upper, Dun Laoghaire, **Dublin** A96 T927 **IRELAND**

Certificate Code: AR-23-M3-017840-01 Page Number: Page 1 of 54 **PO reference:**

10/05/2023

Certificate of Analysis

Sample number Your sample reference Sample Matrix Sample Condition on Arrival	966-2023-00020091 SW_E1 Surface water Satisfactory	Received on Analysis started on Sample Date	21/04/2023 23/04/2023 19/04/2023	
Test Code Analyte	SUB ⁵ Analysis I Started	Method LOQ ³ SPEC ²	Result	Units ACCRED ⁴
Alkalinity as CAC03 [BB005] Alkalinity as CAC03	* 25/04/23 09:00	30	314.1	mg/l C6
Phenols (10) and Cresols (3) [F65	361			0
2,3/3,5-Dimethylphenol + 4-Ethylphenol	* 24/04/23 14:36	0.02	<0.02	μg/l
2,4-Dimethylphenol	* 24/04/23 14:36	0.02	<0.02	μg/l
2,5-Dimethylphenol	* 24/04/23 14:36	0.02	<0.02	μg/l
2,6-Dimethylphenol	* 24/04/23 14:36	0.03	<0.03	μg/l
3,4-Dimethylphenol	* 24/04/23 14:36	0.02	<0.02	μg/l
Cresols (sum)	* 24/04/23 14:36		<0.8	μg/l
m-Cresol	* 24/04/23 14:36	0.3	<0.3	μg/l
m-Ethylphenol	* 24/04/23 14:36	0.02	<0.02	μg/l
o-Cresol	* 24/04/23 14:36	0.3	<0.3	μg/l
o-Ethylphenol	* 24/04/23 14:36	0.03	<0.03	μg/l
p-Cresol	* 24/04/23 14:36	0.2	<0.2	μg/l
Phenol	* 24/04/23 14:36	0.2	<0.2	μg/l
Thymol	* 24/04/23 14:36	0.01	<0.01	μg/l
PAH (16 EPA) [F8126]				

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C6

10/05/2023

Client:	Limited 4th Floor, Adelp	ucture & Environment	Ireland	Certificate Code:	AR-23-M3-017840-01
		hi Plaza		Page Number:	Page 2 of 54
	George's Stree Dun Laoghaire Dublin A96 T927 IRELAND	et Upper,		PO reference:	
Acenaphthe	ene	* 24/04/23 14:36	0.1		<0.1 µg/l
Acenaphth	ylene	* 24/04/23 14:36	0.04	<	:0.04 μg/l
Anthracene	9	* 24/04/23 14:36	0.01	<	0.01 μg/l
Benz(a)ant	hracene	* 24/04/23 14:36	0.04	<	0.04 μg/l
Benzo(a)py	yrene	* 24/04/23 14:36	0.03	<	0.03 μg/l
Benzo(b+k)fluoranthene	* 24/04/23 14:36	0.05	<	0.05 μg/l
Benzo(g,h,	i)perylene	* 24/04/23 14:36	0.03	<	0.03 μg/l
Chrysene		* 24/04/23 14:36	0.02	<	0.02 μg/l
Dibenz(a,h)anthracene	* 24/04/23 14:36	0.04	<	0.04 μg/l
Fluoranthe	ne	* 24/04/23 14:36	0.02	<	0.02 μg/l
Fluorene		* 24/04/23 14:36	0.01	<	0.01 μg/l
Indeno(1,2	,3-cd)pyrene	* 24/04/23 14:36	0.04	<	0.04 μg/l
Naphthaler	ne	* 24/04/23 14:36	0.4		<0.4 µg/l
PAH 16 EP	A (sum)	* 24/04/23 14:36			<0.9 µg/l
Phenanthre	ene	* 24/04/23 14:36	0.02	<	0.02 μg/l
Pyrene		* 24/04/23 14:36	0.06	<	0.06 µg/l
Chromium	t chromium [IX02U] (VI) ides [IX479]	* 21/04/23 19:06	0.01	<	0.01 mg/l
Cyanide, to		* 28/04/23 07:29	0.01	<	0.01 mg/l
Chromium		* 21/04/23 19:06	0.005	<	0.005 mg/l
Chromium	111	* 21/04/23 19:06	0.01	<	0.01 mg/l
Suspended	d Solids [M3002] d Solids	24/04/23 08:39	EW013 5		<5 mg/l

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Client:	AECOM Infrastructure	& Environment Ire	eland		Certificate Code:	AR-23-M3-017	840-01	
	Limited 4th Floor, Adelphi Plaz	2			Page Number:	Page 3 of 54		
	George's Street Upp Dun Laoghaire, Dublin A96 T927 IRELAND				PO reference:			
Chemical (Oxygen Demand (COD) [M3	004]						
Chemical o	xygen demand (COD)	24/04/23 09:23	EW094	8		18	mg/l	C6
Dissolved	Oxygen [M3005]							
Dissolved c	oxygen	28/04/23 18:44 ^{7A}	EW043	1		9.29	mg/l	
Sulphate n	ng/L - Gallery [M300N]							
Sulphate m	g/L - Gallery	26/04/23 10:49	EW175	1		21.9	mg/l	C6
Phosphate	e (Ortho/MRP) as P - Gallery	[M300P]						
Gallery	(Ortho/MRP) as P -	26/04/23 10:49 ^{7A}	EW175	0.05		<0.05	mg/l	
	g/L - Gallery	26/04/23 10:49	EW175	0.2		0.2	mg/l	C6
	ng/L - Gallery [M300S]	20/04/20 10.40	LWING	0.2		0.2	ilig/i	
	g/L - Gallery	26/04/23 10:49	EW175	5		17.2	mg/l	C6
	as N - Gallery [M300Z]							
	s N - Gallery	26/04/23 10:49	EW175	0.05		<0.05	mg/l	C6
	N) - Gallery [M301A]						0	
Nitrate (as	N) - Gallery	26/04/23 10:49 ^{7A}	EW175	1		3.997	mg/l	
GCFID-Org	anic Solvents (Head Space	e) [M3027]						
Acetone		05/05/23 16:04	EO089			<2	mg/l	
Acetonitrile		05/05/23 16:04	EO089			<2	mg/l	
Amyl aceta	te	05/05/23 16:04	EO089			<2	mg/l	
Cyclohexar	ne	05/05/23 16:04	EO089			<2	mg/l	
Cyclopenta	none	05/05/23 16:04	EO089			<2	mg/l	
Dichlorome	thane	05/05/23 16:04	EO089			<2	mg/l	
Ethanol		05/05/23 16:04	EO089			<5	mg/l	
Ethyl Aceta	te	05/05/23 16:04	EO089			<2	mg/l	
Heptane		05/05/23 16:04	EO089			<2	mg/l	
							-	

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Client:	AECOM Infrastructure Limited 4th Floor, Adelphi Pla George's Street Upp Dun Laoghaire, Dublin A96 T927 IRELAND	za,	reland		Certificate Code: Page Number: PO reference:	AR-23-M3- Page 4 of \$		
IPA (2-Prop	anol)	05/05/23 16:04	EO089			<2	mg/l	
Iso-Amyl al	cohol	05/05/23 16:04	EO089			<5	mg/l	
Isopropyl a	cetate	05/05/23 16:04	EO089			<2	mg/l	
Isopropyl E	ther	05/05/23 16:04	EO089			<2	mg/l	
Methanol		05/05/23 16:04	EO089			<5	mg/l	
Methyl Ethy	/I Ketone	05/05/23 16:04	EO089			<2	mg/l	
n-Butyl Alco	phol.(Butanol)	05/05/23 16:04	EO089			<2	mg/l	
n-Hexane		05/05/23 16:04	EO089			<2	mg/l	
sec-Butyl A	lcohol	05/05/23 16:04	EO089			<2	mg/l	
tert-Amylalo	cohol	05/05/23 16:04	EO089			<5	mg/l	
Tert-Butanc	bl	05/05/23 16:04	EO089			<5	mg/l	
tert-Butyl M	lethyl Ether	05/05/23 16:04	EO089			<2	mg/l	
Tetrahydrof	uran	05/05/23 16:04	EO089			<2	mg/l	
Toluene		05/05/23 16:04	EO089			<2	mg/l	
Triethylamir	ne	05/05/23 16:04	EO089			<2	mg/l	
Xylene -p		05/05/23 16:04	EO089			<2	mg/l	
Xylene-M		05/05/23 16:04	EO089			<2	mg/l	
Xylene-O		05/05/23 16:04	EO089			<2	mg/l	
Xylenes-Tot	tal	05/05/23 16:04	EO089			<2	mg/l	
Temperatu	re (Site) [M3036]							
Temperatur	e	27/04/23 16:25	Site Test			N/A	°C	
Arsenic - T	race [M3236]							
Arsenic		28/04/23 13:21		0.2		0.538	μg/l	C6
	race [M3237]							
Barium		28/04/23 13:21		1.77	1	53.198	µg/l	C6
Beryllium -	- Trace [M3238]							

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10/05/2023

Client:	AECOM Infrastructure Limited 4th Floor, Adelphi Plaz George's Street Upp Dun Laoghaire, Dublin A96 T927 IRELAND	a,	eland		Certificate Code: Page Number: PO reference:	AR-23-M3-017 Page 5 of 54	840-01	
Beryllium		28/04/23 13:21		1		<1	µg/l	C6
Boron - Tra	ace [M3239]							
Boron		28/04/23 13:21		0.21		<0.21	mg/l	C6
Cadmium -	- Trace [M3240]							
Cadmium		28/04/23 13:21		0.1		<0.1	µg/l	C6
	race [M3244]							
Copper (Cu		28/04/23 13:21		0.003	<	<0.003	mg/l	C6
Lead - Trac	ce [M3246]							
Lead (Pb)		28/04/23 13:21		0.5		<0.5	µg/l	C6
-	Frace [M3249]							
Mercury		28/04/23 13:21		0.03		<0.03	µg/l	C6
	ace [M3251]	28/04/23 13:21		0.5		2.444		C6
Nickel (Ni)	Troop [M2255]	20/04/23 13.21		0.5	4	2.444	µg/l	0
Selenium (S	Trace [M3255]	28/04/23 13:21		0.2	(0.577	µg/l	C6
-	- Trace [M3268]	20/04/20 10.21		0.2	,	0.011	µ9/1	00
Vanadium (28/04/23 13:21		1		<1	µg/l	C6
Zinc - Trac							1.2.	
Zinc (Zn)		28/04/23 13:21	EW188	1		4.23	µg/l	C6
pH [M3282]	1							
рН		23/04/23 12:21 ^{7A}	EW158			8.2		
Conductivi	ity [M3283]							
Conductivity	у	23/04/23 12:21	EW153	100	(620.8	µS/cm	C6
TPH 3 Ban	d (C6-10-21-40) in water [M	502B]						
TPH >C10-	C21 *	24/04/23 14:25		0.1		<0.1	µg/l	
TPH >C21-	C40 *	24/04/23 14:25		0.1		<0.1	µg/l	
TPH >C6-C	*10 *	24/04/23 14:25		0.1		<0.1	µg/l	

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Client: **AECOM Infrastructure & Environment Ireland** Certificate Code: AR-23-M3-017840-01 Limited Page Number: Page 6 of 54 4th Floor, Adelphi Plaza, George's Street Upper, **PO reference:** Dun Laoghaire, **Dublin** A96 T927 **IRELAND** 24/04/23 14:25 TPH Total >C6-C40 10 YA <10 µg/l Btex in water [M50A7] 24/04/23 14:25 YA Benzene 1 <1 µg/l Ethylbenzene 24/04/23 14:25 YA 1 <1 µg/l 24/04/23 14:25 m-/-p-Xylene 1 <1 µg/l YA 24/04/23 14:25 YA o-Xylene 1 <1 µg/l Toluene 24/04/23 14:25 YA 1 <1 µg/l

⁴ Accreditiation Information

C6: ISO/IEC 17025:2017 INAB 138-T

SS: ISO/IEC 17025:2017 SWEDAC 1977

YA: Accredited (External Subcontractor)

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Client:	AECOM Infrastru	cture & Environment Ire	land	Certificate Code:	AR-23-M3-017	840-01	
	Limited	: Diana		Page Number:	Page 7 of 54		
	4th Floor, Adelph George's Street			PO reference:	-		
	Dun Laoghaire,						
	Dublin						
	A96 T927						
	IRELAND						
Sample nu	mber	966-2023-00020092	Received or	ז 2	21/04/2023		
			Analysis sta		23/04/2023		
Your sampl	e reference	SW_U1					
Sample Ma		Surface water					
Sample Co	ndition on Arrival	Satisfactory	Sample Dat		19/04/2023		
Test Code		SUB ⁵ Analysis	Method LOQ ³	SPEC ²	Result	Units	ACCRED ⁴
Analyte		Started					
Alkalinity a	as CAC03 [BB005]						
Alkalinity as	s CAC03	* 25/04/23 09:00	30		228.6	mg/l	C6
Phenols (1	0) and Cresols (3) [F6	536]					
2,3/3,5-Dim 4-Ethylpher	nethylphenol + nol	* 24/04/23 14:36	0.02		<0.02	µg/l	
2,4-Dimeth		* 24/04/23 14:36	0.02		<0.02	µg/l	
2,5-Dimeth	ylphenol	* 24/04/23 14:36	0.02		<0.02	µg/l	
2,6-Dimeth	ylphenol	* 24/04/23 14:36	0.03		<0.03	µg/l	
3,4-Dimeth	ylphenol	* 24/04/23 14:36	0.02		<0.02	µg/l	
Cresols (su	ım)	* 24/04/23 14:36			<0.8	µg/l	
m-Cresol		* 24/04/23 14:36	0.3		<0.3	µg/l	
m-Ethylphe	enol	* 24/04/23 14:36	0.02		<0.02	µg/l	
o-Cresol		* 24/04/23 14:36	0.3		<0.3	µg/l	
o-Ethylphei	nol	* 24/04/23 14:36	0.03		<0.03	µg/l	
p-Cresol		* 24/04/23 14:36	0.2		<0.2	µg/l	
Phenol		* 24/04/23 14:36	0.2		<0.2	µg/l	
Thymol		* 24/04/23 14:36	0.01		<0.01	µg/l	
PAH (16 E	PA) [F8126]						
Acenaphthe	ene	* 24/04/23 14:36	0.1		<0.1	µg/l	
Acenaphthy	ylene	* 24/04/23 14:36	0.04		<0.04	µg/l	
		٨	101				
		10	int Wal				
	Signed:	-			10/05	/2023	

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Client:	AECOM Infrastruct Limited 4th Floor, Adelphi George's Street I Dun Laoghaire, Dublin A96 T927 IRELAND	Plaza,	ironment l	reland		<i>Certificate Code: Page Number: PO reference:</i>	AR-23- Page 8	M3-017840-01 of 54	
Anthracene		* 24/04	/23 14:36		0.01		<0.01	µg/l	
Benz(a)ant	hracene	* 24/04	/23 14:36		0.04		<0.04	μg/l	
Benzo(a)py	rene	* 24/04	/23 14:36		0.03		<0.03	μg/l	
Benzo(b+k)	fluoranthene	* 24/04	/23 14:36		0.05		<0.05	µg/l	
Benzo(g,h,i)perylene	* 24/04	/23 14:36		0.03		<0.03	µg/l	
Chrysene		* 24/04	/23 14:36		0.02		<0.02	µg/l	
Dibenz(a,h)	anthracene	* 24/04	/23 14:36		0.04		<0.04	μg/l	
Fluoranther	ne	* 24/04	/23 14:36		0.02		<0.02	μg/l	
Fluorene		* 24/04	/23 14:36		0.01		<0.01	μg/l	
Indeno(1,2,	3-cd)pyrene	* 24/04	/23 14:36		0.04		<0.04	μg/l	
Naphthalen	e	* 24/04	/23 14:36		0.4		<0.4	µg/l	
PAH 16 EP	A (sum)	* 24/04	/23 14:36				<0.9	µg/l	
Phenanthre	ne	* 24/04	/23 14:36		0.02		<0.02	µg/l	
Pyrene		* 24/04	/23 14:36		0.06		<0.06	µg/l	
Hexavalen	t chromium [IX02U]								
Chromium	(VI)	* 21/04	/23 19:47		0.01		<0.01	mg/l	
Total cyani	des [IX479]								
Cyanide, to	tal	* 28/04	/23 07:29		0.01		<0.01	mg/l	
	(Cr) [IX80U]								
Chromium	(Cr)	* 21/04	/23 19:47		0.005	•	<0.005	mg/l	
	hromium [IXCR0]								
Chromium		* 21/04	/23 19:47		0.01		<0.01	mg/l	
-	d Solids [M3002]								
Suspended			/23 08:39	EW013	5		<5	mg/l	C6
	Dxygen Demand (COD) xygen demand (COD)		/23 09:23	EW094	8		11	mg/l	C6
	. ,							-	

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Client:	AECOM Infrastructure Limited 4th Floor, Adelphi Plaz George's Street Upp Dun Laoghaire,	a,	eland		Certificate Code: Page Number: PO reference:	AR-23-M3-017 Page 9 of 54	840-01	
	Dublin A96 T927 IRELAND							
Dissolved o	Oxygen [M3005]	28/04/23 18:44 ^{7A}	EW043	1		8.13	mg/l	
	ng/L - Gallery [M300N]	20/04/23 10.44	LVV043	I		0.15	ing/i	
	g/L - Gallery	26/04/23 10:49	EW175	1		15.5	mg/l	C6
	(Ortho/MRP) as P - Gallery						0	
	(Ortho/MRP) as P -	26/04/23 10:49 ^{7A}	EW175	0.05		<0.05	mg/l	
Gallery	g/L - Gallery [M300Q]							
Fluoride mg		26/04/23 10:49	EW175	0.2		<0.2	mg/l	
-	g/L - Gallery [M300S]						5	
Chloride mg		26/04/23 10:49	EW175	5		18.3	mg/l	C6
Ammonia a	as N - Gallery [M300Z]							
Ammonia a	s N - Gallery	26/04/23 10:49	EW175	0.05		<0.05	mg/l	C6
Nitrate (as	N) - Gallery [M301A]							
Nitrate (as I	N) - Gallery	26/04/23 10:49 ^{7A}	EW175	1		<1	mg/l	
GCFID-Org	anic Solvents (Head Space) [M3027]						
Acetone		05/05/23 16:04	EO089			<2	mg/l	
Acetonitrile		05/05/23 16:04	EO089			<2	mg/l	
Amyl acetat	te	05/05/23 16:04	EO089			<2	mg/l	
Cyclohexan	e	05/05/23 16:04	EO089			<2	mg/l	
Cyclopenta	none	05/05/23 16:04	EO089			<2	mg/l	
Dichlorome	thane	05/05/23 16:04	EO089			<2	mg/l	
Ethanol		05/05/23 16:04	EO089			<5	mg/l	
Ethyl Acetat	te	05/05/23 16:04	EO089			<2	mg/l	
Heptane		05/05/23 16:04	EO089			<2	mg/l	
IPA (2-Prop	anol)	05/05/23 16:04	EO089			<2	mg/l	
Iso-Amyl alo	cohol	05/05/23 16:04	EO089			<5	mg/l	

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10/05/2023

Client:	AECOM Infrastructur Limited 4th Floor, Adelphi Pla George's Street Up	aza,	reland		Certificate Code: Page Number: PO reference:	AR-23-N Page 10	//3-017840-01) of 54	
	Dun Laoghaire, Dublin A96 T927 IRELAND	, ,						
Isopropyl a	cetate	05/05/23 16:04	EO089			<2	mg/l	
Isopropyl E	ther	05/05/23 16:04	EO089			<2	mg/l	
Methanol		05/05/23 16:04	EO089			<5	mg/l	
Methyl Ethy	/I Ketone	05/05/23 16:04	EO089			<2	mg/l	
n-Butyl Alco	phol.(Butanol)	05/05/23 16:04	EO089			<2	mg/l	
n-Hexane		05/05/23 16:04	EO089			<2	mg/l	
sec-Butyl A	lcohol	05/05/23 16:04	EO089			<2	mg/l	
tert-Amylalo	cohol	05/05/23 16:04	EO089			<5	mg/l	
Tert-Butanc	bl	05/05/23 16:04	EO089			<5	mg/l	
tert-Butyl M	lethyl Ether	05/05/23 16:04	EO089			<2	mg/l	
Tetrahydrof	uran	05/05/23 16:04	EO089			<2	mg/l	
Toluene		05/05/23 16:04	EO089			<2	mg/l	
Triethylamir	ne	05/05/23 16:04	EO089			<2	mg/l	
Xylene -p		05/05/23 16:04	EO089			<2	mg/l	
Xylene-M		05/05/23 16:04	EO089			<2	mg/l	
Xylene-O		05/05/23 16:04	EO089			<2	mg/l	
Xylenes-Tot	tal	05/05/23 16:04	EO089			<2	mg/l	
Temperatu	re (Site) [M3036]							
Temperatur	e	27/04/23 16:26	Site Test			N/A	°C	
Arsenic - T	race [M3236]							
Arsenic		28/04/23 13:21		0.2		0.74	µg/l	C6
Barium - Ti	race [M3237]							
Barium		28/04/23 13:21		1.77	1	06.445	µg/l	C6
-	- Trace [M3238]							
Beryllium		28/04/23 13:21		1		<1	µg/l	C6
Boron - Tra	ace [M3239]							

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Client:	AECOM Infrastructure Limited 4th Floor, Adelphi Plaz George's Street Upp Dun Laoghaire, Dublin A96 T927 IRELAND	a,	eland		Certificate Code: Page Number: PO reference:	AR-23-M3-017 Page 11 of 54	840-01	
Boron		28/04/23 13:21		0.21		<0.21	mg/l	C6
Cadmium -	Trace [M3240]							
Cadmium		28/04/23 13:21		0.1		<0.1	µg/l	C6
	ace [M3244]							
Copper (Cu)	28/04/23 13:21		0.003		<0.003	mg/l	C6
Lead - Trac	e [M3246]							
Lead (Pb)		28/04/23 13:21		0.5		<0.5	µg/l	C6
	race [M3249]							
Mercury		28/04/23 13:21		0.03		<0.03	µg/l	C6
Nickel - Tra	ice [M3251]			<u> </u>		0.000		00
Nickel (Ni)	-	28/04/23 13:21		0.5		0.698	µg/l	C6
	Trace [M3255]	20/04/22 12:21		0.2		<0.2		C6
Selenium (S	• Trace [M3268]	28/04/23 13:21		0.2		<0.2	µg/l	00
Vanadium (28/04/23 13:21		1		<1	µg/l	C6
Zinc - Trace	,	20/04/20 10.21		•			P9/1	
Zinc (Zn)		28/04/23 13:21	EW188	1		3.10	µg/l	C6
pH [M3282]	l						15	
pН		23/04/23 12:21 ^{7A}	EW158			8.0		
Conductivi	ty [M3283]							
Conductivity	/	23/04/23 12:21	EW153	100		433.9	µS/cm	C6
TPH 3 Ban	d (C6-10-21-40) in water [M5	502B]						
TPH >C10-0	C21 *	24/04/23 14:25		0.1		<0.1	µg/l	
TPH >C21-0	C40 *	24/04/23 14:25		0.1		<0.1	µg/l	
TPH >C6-C	10 *	24/04/23 14:25		0.1		<0.1	µg/l	
TPH Total >	C6-C40 *	24/04/23 14:25		10		<10	µg/l	YA
Btex in wat	er [M50A7]							

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Client:	AECOM Infrastructure Limited 4th Floor, Adelphi Plaza George's Street Uppo	а,		Certificate Code: Page Number: PO reference:	AR-23-M3-0178 Page 12 of 54		
	Dun Laoghaire, Dublin A96 T927 IRELAND						
Benzene	*	24/04/23 14:25	1		<1	µg/l	YA
Ethylbenzer	1e *	24/04/23 14:25	1		<1	µg/l	YA
m-/-p-Xylen	e *	24/04/23 14:25	1		<1	µg/l	YA
o-Xylene	*	24/04/23 14:25	1		<1	µg/l	YA
Toluene	*	24/04/23 14:25	1		<1	µg/l	YA

⁴ Accreditiation Information

C6: ISO/IEC 17025:2017 INAB 138-T

SS: ISO/IEC 17025:2017 SWEDAC 1977

YA: Accredited (External Subcontractor)

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Client:	AECOM Infrastruc	cture & Environment Ireland	Certificate			
	4th Floor, Adelphi	Plaza,	Page Numb	er: Page 13 of	54	
	George's Street Dun Laoghaire, Dublin A96 T927 IRELAND	Upper,	PO referenc	ce:		
Sample nu	mber	966-2023-00020093	Received on	21/04/2023		
Marine and I			Analysis started on	23/04/2023		
Sample Ma	e reference	SW_R1 Surface water				
	ndition on Arrival	Satisfactory	Sample Date	19/04/2023		
Test Code		SUB ⁵ Analysis Method	I LOQ ³ SPEC ²	Result	Units	ACCRED ⁴
Analyte		Started				
Alkalinity a	as CAC03 [BB005]					
Alkalinity as	s CAC03	* 25/04/23 09:00	30	313.9	mg/l	C6
•	0) and Cresols (3) [F6					
2,3/3,5-Dim 4-Ethylpher	nethylphenol + nol	* 24/04/23 14:36	0.02	<0.02	µg/l	
2,4-Dimeth		* 24/04/23 14:36	0.02	<0.02	µg/l	
2,5-Dimeth	ylphenol	* 24/04/23 14:36	0.02	<0.02	μg/l	
2,6-Dimeth	ylphenol	* 24/04/23 14:36	0.03	<0.03	μg/l	
3,4-Dimeth	ylphenol	* 24/04/23 14:36	0.02	<0.02	μg/l	
Cresols (su	ım)	* 24/04/23 14:36		<0.8	μg/l	
m-Cresol		* 24/04/23 14:36	0.3	<0.3	μg/l	
m-Ethylphe	enol	* 24/04/23 14:36	0.02	<0.02	μg/l	
o-Cresol		* 24/04/23 14:36	0.3	<0.3	µg/l	
o-Ethylphei	nol	* 24/04/23 14:36	0.03	<0.03	µg/l	
p-Cresol		* 24/04/23 14:36	0.2	<0.2	µg/l	
Phenol		* 24/04/23 14:36	0.2	<0.2	μg/l	
Thymol		* 24/04/23 14:36	0.01	<0.01	µg/l	
PAH (16 EF	PA) [F8126]					
Acenaphthe	ene	* 24/04/23 14:36	0.1	<0.1	µg/l	
Acenaphthy	ylene	* 24/04/23 14:36	0.04	<0.04	µg/l	
		1100				
		lant way		40)/05/2023	
	Signed:			IC	00012020	

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10/05/2023

Anthracene * 24/04/23 14:36 0.01 <0.01	
Benzo(a)pyrene * 24/04/23 14:36 0.03 <0.03 μg/l	
Benzo(b+k)fluoranthene * 24/04/23 14:36 0.05 <0.05 μg/l	
Benzo(g,h,i)perylene * 24/04/23 14:36 0.03 <0.03 μg/l	
Chrysene * 24/04/23 14:36 0.02 <0.02 μg/l	
Dibenz(a,h)anthracene * 24/04/23 14:36 0.04 <0.04 µg/l	
Fluoranthene * 24/04/23 14:36 0.02 <0.02 µg/l	
Fluorene * 24/04/23 14:36 0.01 <0.01 µg/l	
Indeno(1,2,3-cd)pyrene * 24/04/23 14:36 0.04 <0.04 µg/l	
Naphthalene * 24/04/23 14:36 0.4 <0.4 μg/l	
PAH 16 EPA (sum) * 24/04/23 14:36 <0.9 µg/l	
Phenanthrene * 24/04/23 14:36 0.02 <0.02 μg/l	
Pyrene * 24/04/23 14:36 0.06 <0.06 μg/l	
Hexavalent chromium [IX02U]	
Chromium (VI) * 21/04/23 19:20 0.01 <0.01 mg/l	
Total cyanides [IX479]	
Cyanide, total * 28/04/23 07:29 0.01 <0.01 mg/l	
Chromium (Cr) [IX80U] * 21/04/23 19:20 0.005 <0.005 mg/l	
Trivalent chromium [IXCR0] Chromium III * 21/04/23 19:20 0.01 <0.01	
Suspended Solids [M3002] Suspended Solids 24/04/23 08:39 EW013 5 10 mg/l	C6
Chemical Oxygen Demand (COD) [M3004]	
Chemical oxygen demand (COD) 24/04/23 09:23 EW094 8 20 mg/l	C6

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Client:	AECOM Infrastructure Limited 4th Floor, Adelphi Plaz George's Street Upp Dun Laoghaire, Dublin A96 T927 IRELAND	a,	eland		Certificate Code: Page Number: PO reference:	AR-23-M3-017 Page 15 of 54		
Dissolved	Oxygen [M3005]							
Dissolved o	xygen	28/04/23 18:44 ^{7A}	EW043	1		8.89	mg/l	
Sulphate m	ng/L - Gallery [M300N]							
Sulphate m	g/L - Gallery	26/04/23 10:49	EW175	1		21.1	mg/l	C6
Phosphate	(Ortho/MRP) as P - Gallery	[M300P]						
Gallery	(Ortho/MRP) as P - g/L - Gallery [M300Q]	26/04/23 10:49 ^{7A}	EW175	0.05		<0.05	mg/l	
Fluoride mg		26/04/23 10:49	EW175	0.2		<0.2	mg/l	
Chloride m	g/L - Gallery [M300S]							
Chloride mo	g/L - Gallery	26/04/23 10:49	EW175	5		17.2	mg/l	C6
Ammonia a	as N - Gallery [M300Z]							
Ammonia a	s N - Gallery	26/04/23 10:49	EW175	0.05		0.06	mg/l	C6
Nitrate (as	N) - Gallery [M301A]							
Nitrate (as I	N) - Gallery	26/04/23 10:49 ^{7A}	EW175	1	:	2.328	mg/l	
GCFID-Org	anic Solvents (Head Space) [M3027]						
Acetone		05/05/23 16:04	EO089			<2	mg/l	
Acetonitrile		05/05/23 16:04	EO089			<2	mg/l	
Amyl acetat	te	05/05/23 16:04	EO089			<2	mg/l	
Cyclohexan	e	05/05/23 16:04	EO089			<2	mg/l	
Cyclopenta	none	05/05/23 16:04	EO089			<2	mg/l	
Dichlorome	thane	05/05/23 16:04	EO089			<2	mg/l	
Ethanol		05/05/23 16:04	EO089			<5	mg/l	
Ethyl Aceta	te	05/05/23 16:04	EO089			<2	mg/l	
Heptane		05/05/23 16:04	EO089			<2	mg/l	
IPA (2-Prop	anol)	05/05/23 16:04	EO089			<2	mg/l	
Iso-Amyl al	cohol	05/05/23 16:04	EO089			<5	mg/l	
-							-	

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Client:	AECOM Infrastructu Limited 4th Floor, Adelphi Pl George's Street Up Dun Laoghaire, Dublin A96 T927 IRELAND	laza,	reland		Certificate Code: Page Number: PO reference:	AR-23-I Page 10	M3-017840-01 6 of 54	
Isopropyl a	cetate	05/05/23 16:04	EO089			<2	mg/l	
Isopropyl E	ther	05/05/23 16:04	EO089			<2	mg/l	
Methanol		05/05/23 16:04	EO089			<5	mg/l	
Methyl Ethy	/I Ketone	05/05/23 16:04	EO089			<2	mg/l	
n-Butyl Alco	phol.(Butanol)	05/05/23 16:04	EO089			<2	mg/l	
n-Hexane		05/05/23 16:04	EO089			<2	mg/l	
sec-Butyl A	lcohol	05/05/23 16:04	EO089			<2	mg/l	
tert-Amylalo	cohol	05/05/23 16:04	EO089			<5	mg/l	
Tert-Butanc	bl	05/05/23 16:04	EO089			<5	mg/l	
tert-Butyl M	lethyl Ether	05/05/23 16:04	EO089			<2	mg/l	
Tetrahydrof	uran	05/05/23 16:04	EO089			<2	mg/l	
Toluene		05/05/23 16:04	EO089			<2	mg/l	
Triethylamir	ne	05/05/23 16:04	EO089			<2	mg/l	
Xylene -p		05/05/23 16:04	EO089			<2	mg/l	
Xylene-M		05/05/23 16:04	EO089			<2	mg/l	
Xylene-O		05/05/23 16:04	EO089			<2	mg/l	
Xylenes-Tot	tal	05/05/23 16:04	EO089			<2	mg/l	
Temperatu	re (Site) [M3036]							
Temperatur	e	27/04/23 16:26	Site Test			N/A	°C	
Arsenic - T	race [M3236]							
Arsenic		28/04/23 13:21		0.2		0.309	µg/l	C6
Barium - Ti	race [M3237]							
Barium		28/04/23 13:21		1.77	e e	62.796	µg/l	C6
-	- Trace [M3238]							
Beryllium		28/04/23 13:21		1		<1	µg/l	C6
Boron - Tra	ace [M3239]							

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Client:	AECOM Infrastructure Limited 4th Floor, Adelphi Plaz George's Street Upp Dun Laoghaire, Dublin A96 T927 IRELAND	za,	land		Certificate Code: Page Number: PO reference:	AR-23-M3-017 Page 17 of 54	840-01	
Boron		28/04/23 13:21		0.21		<0.21	mg/l	C6
Cadmium -	Trace [M3240]							
Cadmium		28/04/23 13:21		0.1		<0.1	µg/l	C6
Copper - Tr	race [M3244]							
Copper (Cu)	28/04/23 13:21		0.003	•	<0.003	mg/l	C6
Lead - Trac	e [M3246]							
Lead (Pb)		28/04/23 13:21		0.5		<0.5	µg/l	C6
Mercury - T	Frace [M3249]							
Mercury		28/04/23 13:21		0.03		<0.03	µg/l	C6
	ace [M3251]							
Nickel (Ni)		28/04/23 13:21		0.5		0.831	µg/l	C6
	Trace [M3255]							
Selenium (S		28/04/23 13:21		0.2		0.359	µg/l	C6
	- Trace [M3268]	00/04/00 40 04		4		.4		00
Vanadium (28/04/23 13:21		1		<1	µg/l	C6
Zinc - Trace	e [M3269]	28/04/23 13:21	EW188	1		4.89		C6
Zinc (Zn) pH [M3282]		20/04/23 13.21	EVVIOO	I		4.09	µg/l	00
pH [WI3202] pH	1	23/04/23 12:21 7A	EW158			7.9		
Conductivi	tv [M3283]	20/04/20 12.21	LWIGO			1.5		
Conductivity		23/04/23 12:21	EW153	100		604.9	µS/cm	C6
	, d (C6-10-21-40) in water [M		211100	100		001.0	poron	
TPH >C10-(· · · ·	* 24/04/23 14:25		0.1		<0.1	µg/l	
TPH >C21-(C40	* 24/04/23 14:25		0.1		<0.1	μg/l	
TPH >C6-C		* 24/04/23 14:25		0.1		<0.1	µg/l	
TPH Total >		* 24/04/23 14:25		10		<10	µg/l	YA
Btex in wat				-			10	
	•							

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Eurofins Environment Testing Ireland Hoffman Park, Inchera Cork T45 PC80 Ireland T: 0818 252526 Web: www.eurofins.ie Email: ASTsupport@etuki.eurofins.com



Client:	AECOM Infrastructure Limited 4th Floor, Adelphi Plaza George's Street Uppo Dun Laoghaire, Dublin A96 T927 IRELAND	a,		<i>Certificate Code: Page Number: PO reference:</i>	AR-23-M3-0178 Page 18 of 54	340-01	
Benzene	*	24/04/23 14:25	1		<1	µg/l	YA
Ethylbenzer	าย *	24/04/23 14:25	1		<1	µg/l	YA
m-/-p-Xylen	e *	24/04/23 14:25	1		<1	µg/l	YA
o-Xylene	*	24/04/23 14:25	1		<1	µg/l	YA
Toluene	*	24/04/23 14:25	1		<1	µg/l	YA

⁴ Accreditiation Information

C6: ISO/IEC 17025:2017 INAB 138-T

SS: ISO/IEC 17025:2017 SWEDAC 1977

YA: Accredited (External Subcontractor)

Signed:

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10/05/2023

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Client: AECOM Infrastru Limited 4th Floor, Adelph George's Stree Dun Laoghaire, Dublin A96 T927 IRELAND	t Upper,	Certificate Page Numb PO referen	ber: Page 19 of		
Sample number	966-2023-00020094	Received on Analysis started on	21/04/2023 23/04/2023		
Your sample reference	SW_Y1				
Sample Matrix	Surface water	Osmula Data	40/04/0000		
Sample Condition on Arrival	Satisfactory	Sample Date	19/04/2023		
Test Code Analyte	SUB ⁵ Analysis Method Started	d LOQ ³ SPEC ²	Result	Units	ACCRED ⁴
Alkalinity as CAC03 [BB005]					
Alkalinity as CAC03	* 25/04/23 09:00	30	297.0	mg/l	C6
Phenols (10) and Cresols (3) [F	-				
2,3/3,5-Dimethylphenol + 4-Ethylphenol	* 24/04/23 14:36	0.02	<0.02	µg/l	
2,4-Dimethylphenol	* 24/04/23 14:36	0.02	<0.02	µg/l	
2,5-Dimethylphenol	* 24/04/23 14:36	0.02	<0.02	µg/l	
2,6-Dimethylphenol	* 24/04/23 14:36	0.03	<0.03	µg/l	
3,4-Dimethylphenol	* 24/04/23 14:36	0.02	<0.02	µg/l	
Cresols (sum)	* 24/04/23 14:36		<0.8	µg/l	
m-Cresol	* 24/04/23 14:36	0.3	<0.3	µg/l	
m-Ethylphenol	* 24/04/23 14:36	0.02	<0.02	µg/l	
o-Cresol	* 24/04/23 14:36	0.3	<0.3	µg/l	
o-Ethylphenol	* 24/04/23 14:36	0.03	<0.03	µg/l	
p-Cresol	* 24/04/23 14:36	0.2	<0.2	µg/l	
Phenol	* 24/04/23 14:36	0.2	<0.2	µg/l	
Thymol	* 24/04/23 14:36	0.01	<0.01	µg/l	
PAH (16 EPA) [F8126]					
Acenaphthene	* 24/04/23 14:36	0.1	<0.1	μg/l	
Acenaphthylene	* 24/04/23 14:36	0.04	<0.04	µg/l	
Signed:	New Pad	9	1	0/05/2023	

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Client:	AECOM Infrastruct Limited 4th Floor, Adelphi George's Street I Dun Laoghaire, Dublin A96 T927 IRELAND	Plaza,	vironment I	reland		<i>Certificate Code: Page Number: PO reference:</i>	AR-23-M Page 20 (3-017840-01 of 54	
Anthracene		* 24/04	4/23 14:36		0.01		<0.01	µg/l	
Benz(a)ant	hracene	* 24/04	4/23 14:36		0.04		<0.04	µg/l	
Benzo(a)py	rene	* 24/04	4/23 14:36		0.03		<0.03	µg/l	
Benzo(b+k))fluoranthene	* 24/04	4/23 14:36		0.05		<0.05	µg/l	
Benzo(g,h,i	i)perylene	* 24/04	4/23 14:36		0.03		<0.03	µg/l	
Chrysene		* 24/04	4/23 14:36		0.02		<0.02	µg/l	
Dibenz(a,h))anthracene	* 24/04	4/23 14:36		0.04		<0.04	µg/l	
Fluoranther	ne	* 24/04	4/23 14:36		0.02		<0.02	µg/l	
Fluorene		* 24/04	4/23 14:36		0.01		<0.01	µg/I	
Indeno(1,2,	,3-cd)pyrene	* 24/04	4/23 14:36		0.04		<0.04	µg/I	
Naphthalen	ie	* 24/04	4/23 14:36		0.4		<0.4	µg/I	
PAH 16 EP	A (sum)	* 24/04	4/23 14:36				<0.9	µg/I	
Phenanthre	ene	* 24/04	4/23 14:36		0.02		<0.02	µg/I	
Pyrene		* 24/04	4/23 14:36		0.06		<0.06	µg/I	
Hexavalen	t chromium [IX02U]								
Chromium	(VI)	* 21/04	4/23 19:48		0.01		<0.02	mg/l	
Total cyani	ides [IX479]								
Cyanide, to		* 03/0	5/23 08:13		0.01		<0.01	mg/l	
Chromium Chromium	(Cr) [IX80U] (Cr)	* 21/0	4/23 19:48		0.005	<	<0.005	mg/l	
Trivalent c Chromium	hromium [IXCR0] III	* 21/04	4/23 19:48		0.01	Non	calculable	mg/l	
Suspended Suspended	d Solids [M3002] I Solids	24/0	4/23 08:39	EW013	5		<5	mg/l	C6
Chemical (Oxygen Demand (COD)	[M3004]							
Chemical o	xygen demand (COD)	24/0	4/23 09:23	EW094	8		38	mg/l	C6

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Client:	AECOM Infrastructure Limited 4th Floor, Adelphi Plaz George's Street Upp Dun Laoghaire, Dublin A96 T927 IRELAND	a,	land		Certificate Code: Page Number: PO reference:	AR-23-M3-017 Page 21 of 54	840-01	
Dissolved	Oxygen [M3005]							
Dissolved o	xygen	28/04/23 18:44 ^{7A}	EW043	1		9.22	mg/l	
Sulphate m	ng/L - Gallery [M300N]							
Sulphate m	g/L - Gallery	26/04/23 10:49	EW175	1		85.4	mg/l	C6
	(Ortho/MRP) as P - Gallery							
Phosphate Gallery	(Ortho/MRP) as P -	26/04/23 10:49 ^{7A}	EW175	0.05		<0.05	mg/l	
	g/L - Gallery [M300Q]							
Fluoride mg	ı/L - Gallery	26/04/23 10:49	EW175	0.2		<0.2	mg/l	
Chloride m	g/L - Gallery [M300S]							
Chloride mg	g/L - Gallery	26/04/23 10:49	EW175	5		16.1	mg/l	C6
Ammonia a	as N - Gallery [M300Z]							
Ammonia a	s N - Gallery	26/04/23 10:49	EW175	0.05		0.06	mg/l	C6
Nitrate (as	N) - Gallery [M301A]							
Nitrate (as I	N) - Gallery	26/04/23 10:49 ^{7A}	EW175	1		3.671	mg/l	
-	anic Solvents (Head Space							
Acetone		05/05/23 16:04	EO089			<2	mg/l	
Acetonitrile		05/05/23 16:04	EO089			<2	mg/l	
Amyl acetat	e	05/05/23 16:04	EO089			<2	mg/l	
Cyclohexan	e	05/05/23 16:04	EO089			<2	mg/l	
Cyclopenta	none	05/05/23 16:04	EO089			<2	mg/l	
Dichlorome	thane	05/05/23 16:04	EO089			<2	mg/l	
Ethanol		05/05/23 16:04	EO089			<5	mg/l	
Ethyl Acetat	te	05/05/23 16:04	EO089			<2	mg/l	
Heptane		05/05/23 16:04	EO089			<2	mg/l	
IPA (2-Prop	anol)	05/05/23 16:04	EO089			<2	mg/l	
Iso-Amyl alo	cohol	05/05/23 16:04	EO089			<5	mg/l	

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Client:	AECOM Infrastructur Limited 4th Floor, Adelphi Pl George's Street Up Dun Laoghaire, Dublin A96 T927 IRELAND	aza,	reland		Certificate Code: Page Number: PO reference:	AR-23-M Page 22	M3-017840-01 2 of 54	
Isopropyl a	cetate	05/05/23 16:04	EO089			<2	mg/l	
Isopropyl E	ther	05/05/23 16:04	EO089			<2	mg/l	
Methanol		05/05/23 16:04	EO089			<5	mg/l	
Methyl Ethy	/I Ketone	05/05/23 16:04	EO089			<2	mg/l	
n-Butyl Alco	ohol.(Butanol)	05/05/23 16:04	EO089			<2	mg/l	
n-Hexane		05/05/23 16:04	EO089			<2	mg/l	
sec-Butyl A	lcohol	05/05/23 16:04	EO089			<2	mg/l	
tert-Amylalo	cohol	05/05/23 16:04	EO089			<5	mg/l	
Tert-Butano	bl	05/05/23 16:04	EO089			<5	mg/l	
tert-Butyl M	lethyl Ether	05/05/23 16:04	EO089			<2	mg/l	
Tetrahydrof	uran	05/05/23 16:04	EO089			<2	mg/l	
Toluene		05/05/23 16:04	EO089			<2	mg/l	
Triethylamir	ne	05/05/23 16:04	EO089			<2	mg/l	
Xylene -p		05/05/23 16:04	EO089			<2	mg/l	
Xylene-M		05/05/23 16:04	EO089			<2	mg/l	
Xylene-O		05/05/23 16:04	EO089			<2	mg/l	
Xylenes-To	tal	05/05/23 16:04	EO089			<2	mg/l	
Temperatu	re (Site) [M3036]							
Temperatur	e	27/04/23 16:26	Site Test			N/A	°C	
Arsenic - T	race [M3236]							
Arsenic		28/04/23 13:21		0.2		0.882	µg/l	C6
	race [M3237]							
Barium		28/04/23 13:21		1.77	1	58.871	µg/l	C6
-	- Trace [M3238]					. 4		00
Beryllium		28/04/23 13:21		1		<1	µg/l	C6
Boron - Tra	ace [M3239]							

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Client:	AECOM Infrastructure Limited 4th Floor, Adelphi Plaz George's Street Upp Dun Laoghaire, Dublin A96 T927 IRELAND	a,	land		Certificate Code: Page Number: PO reference:	AR-23-M3-017 Page 23 of 54	840-01		
Boron		28/04/23 13:21		0.21		<0.21	mg/l	C6	
Cadmium -	Trace [M3240]								
Cadmium		28/04/23 13:21		0.1		<0.1	µg/l	C6	
	race [M3244]								
Copper (Cu)	28/04/23 13:21		0.003		0.003	mg/l	C6	
Lead - Trac	e [M3246]								
Lead (Pb)		28/04/23 13:21		0.5		<0.5	µg/l	C6	
-	Frace [M3249]							00	
Mercury		28/04/23 13:21		0.03		<0.03	µg/l	C6	
Nickel - Ira Nickel (Ni)	ace [M3251]	28/04/23 13:21		0.5		9.126	ug/l	C6	
. ,	Trace [M3255]	20/04/23 13.21		0.5		9.120	µg/l	00	
Selenium (S		28/04/23 13:21		0.2		0.84	µg/l	C6	
-	- Trace [M3268]	20/04/20 10:21		0.2		0.04	P9/1		
Vanadium (28/04/23 13:21		1		<1	µg/l	C6	
Zinc - Trace							10		
Zinc (Zn)		28/04/23 13:21	EW188	1		4.76	µg/l	C6	
pH [M3282]]								
pН		23/04/23 12:21 7A	EW158			8.2			
Conductivi	ty [M3283]								
Conductivity	ý	23/04/23 12:21	EW153	100		673.1	µS/cm	C6	
TPH 3 Band	d (C6-10-21-40) in water [M	502B]							
TPH >C10-0	C21 *	24/04/23 14:25		0.1		<0.1	µg/l		
TPH >C21-0	C40 *	24/04/23 14:25		0.1		<0.1	µg/l		
TPH >C6-C	*10 *	24/04/23 14:25		0.1		<0.1	µg/l		
TPH Total >	•C6-C40 *	24/04/23 14:25		10		<10	µg/l	YA	
Btex in water [M50A7]									

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Client:	 AECOM Infrastructure & Environment Ireland Limited 4th Floor, Adelphi Plaza, George's Street Upper, Dun Laoghaire, Dublin A96 T927 IRELAND 			<i>Certificate Code: Page Number: PO reference:</i>	AR-23-M3-0178 Page 24 of 54	840-01	
Benzene	*	24/04/23 14:25	1		<1	µg/l	YA
Ethylbenzer	ne *	24/04/23 14:25	1		<1	µg/l	YA
m-/-p-Xylen	e *	24/04/23 14:25	1		<1	µg/l	YA
o-Xylene	*	24/04/23 14:25	1		<1	µg/l	YA
Toluene	*	24/04/23 14:25	1		<1	µg/l	YA

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Client:	AECOM Infrastru	cture & Environment Irelan	d Certificat	te Code: AR-23-M3-0 ⁴	17840-01	
	Limited 4th Floor, Adelph George's Street	t Upper,	-	Page Number: Page 25 of 54 PO reference:		
	Dun Laoghaire, Dublin A96 T927 IRELAND					
Sample nur	mber	966-2023-00020095	Received on	21/04/2023		
			Analysis started on	23/04/2023		
	e reference	SW_Y2				
Sample Ma	ndition on Arrival	Surface water Satisfactory	Sample Date	19/04/2023		
	nation on Anvai	,				
Test Code Analyte		SUB ⁵ Analysis Me Started	ethod LOQ ³ SPEC ²	Result	Units ACCRED ⁴	
	as CAC03 [BB005]					
Alkalinity as	s CAC03	* 25/04/23 09:00	30	285.4	mg/l C6	
	0) and Cresols (3) [F					
2,3/3,5-Dim 4-Ethylpher	nethylphenol + nol	* 24/04/23 14:36	0.02	<0.02	µg/l	
2,4-Dimeth		* 24/04/23 14:36	0.02	<0.02	µg/l	
2,5-Dimeth	ylphenol	* 24/04/23 14:36	0.02	<0.02	μg/l	
2,6-Dimeth	ylphenol	* 24/04/23 14:36	0.03	<0.03	µg/l	
3,4-Dimeth	ylphenol	* 24/04/23 14:36	0.02	<0.02	µg/l	
Cresols (su	ım)	* 24/04/23 14:36		<0.8	µg/l	
m-Cresol		* 24/04/23 14:36	0.3	<0.3	µg/l	
m-Ethylphe	enol	* 24/04/23 14:36	0.02	<0.02	μg/l	
o-Cresol		* 24/04/23 14:36	0.3	<0.3	μg/l	
o-Ethylpher	nol	* 24/04/23 14:36	0.03	<0.03	μg/l	
p-Cresol		* 24/04/23 14:36	0.2	<0.2	μg/l	
Phenol		* 24/04/23 14:36	0.2	<0.2	µg/l	
Thymol		* 24/04/23 14:36	0.01	<0.01	μg/l	
PAH (16 EF	PA) [F8126]					
Acenaphthe	ene	* 24/04/23 14:36	0.1	<0.1	μg/l	
Acenaphthy	ylene	* 24/04/23 14:36	0.04	<0.04	μg/I	
		<u> </u>	$\left(\right) $			
		Lavy	Wan	10/	/05/2023	
	Signed:					

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Client:	AECOM Infrastructu Limited 4th Floor, Adelphi P George's Street U Dun Laoghaire, Dublin A96 T927 IRELAND	laz			Certificate Code: Page Number: PO reference:	AR-23-M Page 26	3-017840-01 of 54	
Anthracene)	*	24/04/23 14:36	0.01		<0.01	μg/l	
Benz(a)ant	hracene	*	24/04/23 14:36	0.04		<0.04	µg/l	
Benzo(a)py	rene	*	24/04/23 14:36	0.03		<0.03	µg/l	
Benzo(b+k))fluoranthene	*	24/04/23 14:36	0.05		<0.05	μg/l	
Benzo(g,h,i	i)perylene	*	24/04/23 14:36	0.03		<0.03	μg/l	
Chrysene		*	24/04/23 14:36	0.02		<0.02	μg/l	
Dibenz(a,h))anthracene	*	24/04/23 14:36	0.04		<0.04	μg/l	
Fluoranther	ne	*	24/04/23 14:36	0.02		<0.02	μg/l	
Fluorene		*	24/04/23 14:36	0.01		<0.01	µg/l	
Indeno(1,2,	,3-cd)pyrene	*	24/04/23 14:36	0.04		<0.04	µg/l	
Naphthalen	ie	*	24/04/23 14:36	0.4		<0.4	μg/l	
PAH 16 EP	A (sum)	*	24/04/23 14:36			<0.9	µg/l	
Phenanthre	ene	*	24/04/23 14:36	0.02		<0.02	μg/l	
Pyrene		*	24/04/23 14:36	0.06		<0.06	μg/l	
Hexavalen	t chromium [IX02U]							
Chromium	(VI)	*	21/04/23 19:34	0.01		<0.02	mg/l	
-	ides [IX479]							
Cyanide, to		*	28/04/23 07:29	0.01		<0.01	mg/l	
	(Cr) [IX80U]			0.005		.0.005	"	
Chromium		*	21/04/23 19:34	0.005	<	<0.005	mg/l	
	hromium [IXCR0]	*	24/04/22 10:24	0.01		-0.01	m a //	
Chromium	nn fluorooctanoic acid) [LW		21/04/23 19:34	0.01		<0.01	mg/l	
-	fluorooctanoic acid) [LW		=] 21/04/23 19:34	0.3		0.63	ng/l	SS
-	fluorooctanesulfonic aci			0.0		0.00		50
	fluorooctanesulfonic acid)			0.2		<0.20	ng/l	SS

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Client:	AECOM Infrastructure Limited 4th Floor, Adelphi Plaz George's Street Upp Dun Laoghaire, Dublin A96 T927 IRELAND	Certificate Code: Page Number: PO reference:	AR-23-M3-017 Page 27 of 54	840-01				
Suspended	d Solids [M3002]							
Suspended	Solids	24/04/23 08:39	EW013	5		<5	mg/l	C6
Chemical C	Oxygen Demand (COD) [M30	004]						
Chemical of	xygen demand (COD)	24/04/23 09:23	EW094	8		46	mg/l	C6
	Oxygen [M3005]							
Dissolved o	xygen	28/04/23 18:44 ^{7A}	EW043	1		9.1	mg/l	C6
	ng/L - Gallery [M300N]							
Sulphate mg/L - Gallery 26		26/04/23 10:49	EW175	1		75.6	mg/l	C6
	(Ortho/MRP) as P - Gallery							
Gallery	(Ortho/MRP) as P - g/L - Gallery [M300Q]	26/04/23 10:49 ^{7A}	EW175	0.05		<0.05	mg/l	
Fluoride mg		26/04/23 10:49	EW175	0.2		<0.2	mg/l	
-	g/L - Gallery [M300S]						5	
	g/L - Gallery	26/04/23 10:49	EW175	5		15.3	mg/l	C6
Ammonia a	as N - Gallery [M300Z]						-	
Ammonia a	s N - Gallery	26/04/23 10:49	EW175	0.05		<0.05	mg/l	C6
Nitrate (as	N) - Gallery [M301A]							
Nitrate (as I	N) - Gallery	26/04/23 10:49 ^{7A}	EW175	1	:	3.143	mg/l	
GCFID-Org	anic Solvents (Head Space) [M3027]						
Acetone		05/05/23 16:04	EO089			<2	mg/l	
Acetonitrile		05/05/23 16:04	EO089			<2	mg/l	
Amyl acetat	te	05/05/23 16:04	EO089			<2	mg/l	
Cyclohexan	e	05/05/23 16:04	EO089			<2	mg/l	
Cyclopenta	none	05/05/23 16:04	EO089			<2	mg/l	
Dichlorome	thane	05/05/23 16:04	EO089			<2	mg/l	
Ethanol		05/05/23 16:04	EO089			<5	mg/l	

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Ethyl Acetat	te	05/05/23 16:04	EO089			<2	mg/l
Heptane		05/05/23 16:04	EO089			<2	mg/l
IPA (2-Prop	anol)	05/05/23 16:04	EO089			<2	mg/l
Iso-Amyl alo	cohol	05/05/23 16:04	EO089			<5	mg/l
Isopropyl ad	cetate	05/05/23 16:04	EO089			<2	mg/l
Isopropyl Et	ther	05/05/23 16:04	EO089			<2	mg/l
Methanol		05/05/23 16:04	EO089			<5	mg/l
Methyl Ethy	I Ketone	05/05/23 16:04	EO089			<2	mg/l
n-Butyl Alco	ohol.(Butanol)	05/05/23 16:04	EO089			<2	mg/l
n-Hexane		05/05/23 16:04	EO089			<2	mg/l
sec-Butyl Al	lcohol	05/05/23 16:04	EO089			<2	mg/l
tert-Amylalo	cohol	05/05/23 16:04	EO089			<5	mg/l
Tert-Butano	I	05/05/23 16:04	EO089			<5	mg/l
tert-Butyl M	ethyl Ether	05/05/23 16:04	EO089			<2	mg/l
Tetrahydrof	uran	05/05/23 16:04	EO089			<2	mg/l
Toluene		05/05/23 16:04	EO089			<2	mg/l
Triethylamir	ne	05/05/23 16:04	EO089			<2	mg/l
Xylene -p		05/05/23 16:04	EO089			<2	mg/l
Xylene-M		05/05/23 16:04	EO089			<2	mg/l
Xylene-O		05/05/23 16:04	EO089			<2	mg/l
Xylenes-Tot	al	05/05/23 16:04	EO089			<2	mg/l
Temperatu	re (Site) [M3036]						
Temperatur	е	27/04/23 16:26	Site Test			N/A	°C
Arsenic - T	race [M3236]						
Arsenic		28/04/23 13:21		0.2		0.988	µg/l
Barium - Tr	race [M3237]						

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7C. Sample not received in appropriate containers, therefore results may be compromised.

7D. This result is comprised as the sample was received by the laboratory outside of the holding time.

C6

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Client:	AECOM Infrastructure Limited 4th Floor, Adelphi Pla George's Street Up Dun Laoghaire, Dublin A96 T927 IRELAND	iza,	land		Certificate Code: Page Number: PO reference:	AR-23-M3- Page 29 of		
Barium		28/04/23 13:21		1.77	15	51.711	µg/l	C6
Beryllium -	Trace [M3238]							
Beryllium		28/04/23 13:21		1		<1	µg/l	C6
Boron - Tra	ace [M3239]							
Boron		28/04/23 13:21		0.21	<	:0.21	mg/l	C6
Cadmium -	Trace [M3240]							
Cadmium		28/04/23 13:21		0.1		<0.1	µg/l	C6
Copper - Ti	race [M3244]							
Copper (Cu)	28/04/23 13:21		0.003	<	0.003	mg/l	C6
Lead - Trac	e [M3246]							
Lead (Pb)		28/04/23 13:21		0.5		<0.5	µg/l	C6
Mercury - 1	Frace [M3249]							
Mercury		28/04/23 13:21		0.03	<	:0.03	µg/l	C6
Nickel - Tra	ace [M3251]							
Nickel (Ni)		28/04/23 13:21		0.5	8	8.179	µg/l	C6
Selenium -	Trace [M3255]							
Selenium (S	Se)	28/04/23 13:21		0.2	C).701	µg/l	C6
	- Trace [M3268]							
Vanadium (28/04/23 13:21		1		<1	µg/l	C6
Zinc - Trac	e [M3269]							
Zinc (Zn)		28/04/23 13:21	EW188	1		4.47	µg/l	C6
рН [М3282]]							
рН		23/04/23 12:21 74	EW158			7.9		
Conductivi		00/04/00 40 04		100				00
Conductivity	·	23/04/23 12:21	EW153	100	6	641.6	µS/cm	C6
	d (C6-10-21-40) in water [N			0.4		-0.4		
TPH >C10-	621	* 24/04/23 14:25		0.1		<0.1	µg/l	
	Signed:	(ionth Wal			1	0/05/2023	

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Client: AECOM Infrastructure & Environment Ireland Limited 4th Floor, Adelphi Plaza, George's Street Upper, Dun Laoghaire, Dublin A96 T927 IRELAND		d	Certificate Code: Page Number: PO reference:	AR-23-M3- Page 30 of			
TPH >C21-C4	* 0	24/04/23 14:25	0.1		<0.1	µg/l	
TPH >C6-C10	*	24/04/23 14:25	0.1		<0.1	µg/l	
TPH Total >C6	6-C40 *	24/04/23 14:25	10		<10	µg/l	YA
Btex in water	[M50A7]						
Benzene	*	24/04/23 14:25	1		<1	µg/l	YA
Ethylbenzene	*	24/04/23 14:25	1		<1	µg/l	YA
m-/-p-Xylene	*	24/04/23 14:25	1		<1	µg/l	YA
o-Xylene	*	24/04/23 14:25	1		<1	μg/l	YA
Toluene		24/04/23 14:25	1		<1	µg/l	YA

⁴ Accreditiation Information

C6: ISO/IEC 17025:2017 INAB 138-T

SS: ISO/IEC 17025:2017 SWEDAC 1977 YA: Accredited (External Subcontractor)

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Client: AEC	OM Infrastructur	e & Environment	Ireland		Certificate Code	e: AR-23-M3	-017840-01	
Geo	Floor, Adelphi Pla orge's Street Up				Page Number: PO reference:	Page 31 o	f 54	
Dub A96	n Laoghaire, blin 5 T927 LAND							
Sample number		966-2023-000200	96	Received on	L	21/04/2023		
				Analysis star	rted on	23/04/2023		
Your sample refere	ence	SW_C1						
Sample Matrix Sample Condition	on Arrival	Surface water Satisfactory		Sample Date	_	19/04/2023		
			Mada ad		SPEC ²		Linter	4000504
Test Code Analyte	5	UB ⁵ Analysis Started	Method	LOQ ³	SPEC -	Result	Units	ACCRED ⁴
Alkalinity as CAC	C03 [BB005]							
Alkalinity as CACC)3	* 25/04/23 09:00		30		291.4	mg/l	C6
Phenols (10) and	Cresols (3) [F6536]							
2,3/3,5-Dimethylpl 4-Ethylphenol	henol +	* 24/04/23 14:36		0.02		<0.02	µg/l	
2,4-Dimethylpheno	ol	* 24/04/23 14:36		0.02		<0.02	µg/l	
2,5-Dimethylphene	ol	* 24/04/23 14:36		0.02		<0.02	µg/l	
2,6-Dimethylphene	ol	* 24/04/23 14:36		0.03		<0.03	µg/l	
3,4-Dimethylphene	ol	* 24/04/23 14:36		0.02		<0.02	µg/l	
Cresols (sum)		* 24/04/23 14:36				<0.8	µg/l	
m-Cresol		* 24/04/23 14:36		0.3		<0.3	µg/l	
m-Ethylphenol		* 24/04/23 14:36		0.02		<0.02	µg/l	
o-Cresol		* 24/04/23 14:36		0.3		<0.3	µg/l	
o-Ethylphenol		* 24/04/23 14:36		0.03		<0.03	µg/l	
p-Cresol		* 24/04/23 14:36		0.2		<0.2	µg/l	
Phenol		* 24/04/23 14:36		0.2		<0.2	µg/l	
Thymol		* 24/04/23 14:36		0.01		<0.01	µg/l	
PAH (16 EPA) [F8	3126]							
Acenaphthene		* 24/04/23 14:36		0.1		<0.1	µg/l	
Acenaphthylene		* 24/04/23 14:36		0.04		<0.04	µg/l	
			100					
			ing way				10/05/2002	
Si	gned:						10/05/2023	

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Client:	AECOM Infrastructu Limited 4th Floor, Adelphi Pl George's Street Up Dun Laoghaire, Dublin A96 T927 IRELAND	laz			Certificate Code: Page Number: PO reference:	AR-23-M3-017 Page 32 of 54		
Anthracene		*	24/04/23 14:36	0.01	•	<0.01	µg/l	
Benz(a)antl	nracene	*	24/04/23 14:36	0.04	•	<0.04	µg/l	
Benzo(a)py	rene	*	24/04/23 14:36	0.03	•	<0.03	µg/l	
Benzo(b+k)	fluoranthene	*	24/04/23 14:36	0.05	•	<0.05	µg/l	
Benzo(g,h,i)perylene	*	24/04/23 14:36	0.03	•	<0.03	µg/l	
Chrysene		*	24/04/23 14:36	0.02	•	<0.02	µg/l	
Dibenz(a,h)	anthracene	*	24/04/23 14:36	0.04	•	<0.04	µg/l	
Fluoranther	ne	*	24/04/23 14:36	0.02	•	<0.02	µg/l	
Fluorene		*	24/04/23 14:36	0.01	•	<0.01	µg/l	
Indeno(1,2,	3-cd)pyrene	*	24/04/23 14:36	0.04	•	<0.04	µg/l	
Naphthalen	e	*	24/04/23 14:36	0.4		<0.4	µg/l	
PAH 16 EP	A (sum)	*	24/04/23 14:36			<0.9	µg/l	
Phenanthre	ne	*	24/04/23 14:36	0.02	•	<0.02	µg/l	
Pyrene		*	24/04/23 14:36	0.06	•	<0.06	µg/l	
Hexavalen	t chromium [IX02U]							
Chromium ((VI)	*	21/04/23 19:13	0.01	•	<0.02	mg/l	
Total cyani	des [IX479]							
Cyanide, to		*	03/05/23 08:13	0.01	•	<0.01	mg/l	
	(Cr) [IX80U]							
Chromium (,	*	21/04/23 19:13	0.005	<	0.005	mg/l	
	hromium [IXCR0]	*	21/04/22 10:12	0.01	Non	aalaulahla	m a /l	
Chromium I			21/04/20 10:10	0.01	INON (calculable	mg/l	
	fluorooctanoic acid) [LW luorooctanoic acid)		=] 21/04/23 19:13	0.3		<0.30	ng/l	SS
``	fluorooctanesulfonic aci			0.0		0.00	'' ' ''	50
	luorooctanesulfonic acid)		-	0.2	-	<0.20	ng/l	SS
(. •						-	J.	

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Suspended	d Solids [M3002]							
Suspended	Solids	24/04/23 08:39	EW013	5		<5	mg/l	C6
Chemical C	Oxygen Demand (COD) [M30	004]						
Chemical of	xygen demand (COD)	24/04/23 09:23	EW094	8		32	mg/l	C6
	Oxygen [M3005]							
Dissolved o	xygen	28/04/23 18:44 ^{7A}	EW043	1		9.13	mg/l	
	ng/L - Gallery [M300N]							
•	g/L - Gallery	26/04/23 10:49	EW175	1		63.6	mg/l	C6
	(Ortho/MRP) as P - Gallery							
Gallery	(Ortho/MRP) as P - g/L - Gallery [M300Q]	26/04/23 10:49 ^{7A}	EW175	0.05		<0.05	mg/l	
Fluoride mg		26/04/23 10:49	EW175	0.2		<0.2	mg/l	
-	g/L - Gallery [M300S]						5	
	g/L - Gallery	26/04/23 10:49	EW175	5		15.6	mg/l	C6
Ammonia a	as N - Gallery [M300Z]						-	
Ammonia a	s N - Gallery	26/04/23 10:49	EW175	0.05		0.48	mg/l	C6
Nitrate (as	N) - Gallery [M301A]							
Nitrate (as I	N) - Gallery	26/04/23 10:49 ^{7A}	EW175	1		3.176	mg/l	
GCFID-Org	anic Solvents (Head Space) [M3027]						
Acetone		05/05/23 16:04	EO089			<2	mg/l	
Acetonitrile		05/05/23 16:04	EO089			<2	mg/l	
Amyl acetat	te	05/05/23 16:04	EO089			<2	mg/l	
Cyclohexan	e	05/05/23 16:04	EO089			<2	mg/l	
Cyclopenta	none	05/05/23 16:04	EO089			<2	mg/l	
Dichlorome	thane	05/05/23 16:04	EO089			<2	mg/l	
Ethanol		05/05/23 16:04	EO089			<5	mg/l	

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Ethyl Aceta	te	05/05/23 16:04	EO089			<2	mg/l
Heptane		05/05/23 16:04	EO089			<2	mg/l
IPA (2-Prop	anol)	05/05/23 16:04	EO089			<2	mg/l
Iso-Amyl al	cohol	05/05/23 16:04	EO089			<5	mg/l
Isopropyl ad	cetate	05/05/23 16:04	EO089			<2	mg/l
Isopropyl E	ther	05/05/23 16:04	EO089			<2	mg/l
Methanol		05/05/23 16:04	EO089			<5	mg/l
Methyl Ethy	l Ketone	05/05/23 16:04	EO089			<2	mg/l
n-Butyl Alco	ohol.(Butanol)	05/05/23 16:04	EO089			<2	mg/l
n-Hexane		05/05/23 16:04	EO089			<2	mg/l
sec-Butyl A	lcohol	05/05/23 16:04	EO089			<2	mg/l
tert-Amylalo	cohol	05/05/23 16:04	EO089			<5	mg/l
Tert-Butano	I	05/05/23 16:04	EO089			<5	mg/l
tert-Butyl M	ethyl Ether	05/05/23 16:04	EO089			<2	mg/l
Tetrahydrof	uran	05/05/23 16:04	EO089			<2	mg/l
Toluene		05/05/23 16:04	EO089			<2	mg/l
Triethylamir	ne	05/05/23 16:04	EO089			<2	mg/l
Xylene -p		05/05/23 16:04	EO089			<2	mg/l
Xylene-M		05/05/23 16:04	EO089			<2	mg/l
Xylene-O		05/05/23 16:04	EO089			<2	mg/l
Xylenes-Tot	al	05/05/23 16:04	EO089			<2	mg/l
Temperatu	re (Site) [M3036]						
Temperatur		27/04/23 16:26	Site Test			N/A	°C
	race [M3236]						
Arsenic		28/04/23 13:21		0.2		1.478	µg/l
Barium - Ti	ace [M3237]						

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NOTES

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7C. Sample not received in appropriate containers, therefore results may be compromised.



Eurofins Environment Testing Ireland Hoffman Park, Inchera Cork T45 PC80 Ireland T: 0818 252526 Web: www.eurofins.ie Email: ASTsupport@etuki.eurofins.com



Client:	ent: AECOM Infrastructure & Environment Ireland Limited 4th Floor, Adelphi Plaza, George's Street Upper, Dun Laoghaire, Dublin A96 T927 IRELAND				Certificate Code: Page Number: PO reference:	AR-23-M3-01 Page 35 of 54		
Barium		28/04/23 13:21		1.77	15	55.142	µg/l	C6
Beryllium -	Trace [M3238]							
Beryllium		28/04/23 13:21		1		<1	µg/l	C6
Boron - Tra	ace [M3239]							
Boron		28/04/23 13:21		0.21	<	<0.21	mg/l	C6
Cadmium -	Trace [M3240]							
Cadmium		28/04/23 13:21		0.1		<0.1	µg/l	C6
Copper - Tr	race [M3244]							
Copper (Cu)	28/04/23 13:21		0.003	<	0.003	mg/l	C6
Lead - Trac	e [M3246]							
Lead (Pb)		28/04/23 13:21		0.5		<0.5	µg/l	C6
Mercury - T	Frace [M3249]							
Mercury		28/04/23 13:21		0.03	<	<0.03	µg/l	C6
Nickel - Tra	ace [M3251]							
Nickel (Ni)		28/04/23 13:21		0.5	3	3.422	µg/l	C6
	Trace [M3255]							
Selenium (S		28/04/23 13:21		0.2	(0.466	µg/l	C6
	- Trace [M3268]							
Vanadium (,	28/04/23 13:21		1		<1	µg/l	C6
Zinc - Trace	e [M3269]							
Zinc (Zn)		28/04/23 13:21	EW188	1		2.43	µg/l	C6
рН [М3282]]	00/01/00 10 01 74				. .		
рН		23/04/23 12:21 ^{7A}	EW158			8.1		
Conductivi		00/04/00 40 04	514/150	400		200.4	01	00
Conductivity		23/04/23 12:21	EW153	100	t	639.4	µS/cm	C6
	d (C6-10-21-40) in water [M	-						
TPH >C10-0	C21 *	4 24/04/23 14:25		0.1		<0.1	µg/l	
	Signed:	(int Wal			10/0	05/2023	

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	AECOM Infrastructure & Limited Ath Floor, Adelphi Plaza George's Street Uppe Dun Laoghaire, Dublin A96 T927 RELAND	a,	d	Certificate Code: Page Number: PO reference:	AR-23-N Page 36	//3-017840-01	
TPH >C21-C4	* 0	24/04/23 14:25	0.1		<0.1	µg/l	
TPH >C6-C10	*	24/04/23 14:25	0.1		<0.1	µg/l	
TPH Total >C	6-C40 *	24/04/23 14:25	10		<10	µg/l	YA
Btex in water	[M50A7]						
Benzene	*	24/04/23 14:25	1		<1	µg/l	YA
Ethylbenzene	*	24/04/23 14:25	1		<1	µg/l	YA
m-/-p-Xylene	*	24/04/23 14:25	1		<1	µg/l	YA
o-Xylene	*	24/04/23 14:25	1		<1	µg/l	YA
Toluene	*	24/04/23 14:25	1		<1	µg/l	YA

⁴ Accreditiation Information

C6: ISO/IEC 17025:2017 INAB 138-T

SS: ISO/IEC 17025:2017 SWEDAC 1977 YA: Accredited (External Subcontractor)

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Client: AECOM Infrastru Limited 4th Floor, Adelph George's Stree Dun Laoghaire, Dublin A96 T927 IRELAND	t Upper,	Certificate Co Page Number PO reference	Page 37 of 5		
Sample number	966-2023-00020097	Received on	21/04/2023		
Your sample reference	SW M3	Analysis started on	23/04/2023		
Sample Matrix	Surface water				
Sample Condition on Arrival	Satisfactory	Sample Date	20/04/2023		
Test Code Analyte	SUB ⁵ Analysis Method Started	LOQ ³ SPEC ²	Result	Units	ACCRED ⁴
Alkalinity as CAC03 [BB005]					
Alkalinity as CAC03	* 25/04/23 09:00	30	303.6	mg/l	C6
Phenols (10) and Cresols (3) [F					
2,3/3,5-Dimethylphenol + 4-Ethylphenol	* 24/04/23 14:36	0.02	<0.02	µg/l	
2,4-Dimethylphenol	* 24/04/23 14:36	0.02	<0.02	µg/l	
2,5-Dimethylphenol	* 24/04/23 14:36	0.02	<0.02	µg/l	
2,6-Dimethylphenol	* 24/04/23 14:36	0.03	<0.03	µg/l	
3,4-Dimethylphenol	* 24/04/23 14:36	0.02	<0.02	µg/l	
Cresols (sum)	* 24/04/23 14:36		<0.8	µg/l	
m-Cresol	* 24/04/23 14:36	0.3	<0.3	µg/l	
m-Ethylphenol	* 24/04/23 14:36	0.02	<0.02	µg/l	
o-Cresol	* 24/04/23 14:36	0.3	<0.3	µg/l	
o-Ethylphenol	* 24/04/23 14:36	0.03	<0.03	µg/l	
p-Cresol	* 24/04/23 14:36	0.2	<0.2	µg/l	
Phenol	* 24/04/23 14:36	0.2	<0.2	µg/l	
Thymol	* 24/04/23 14:36	0.01	<0.01	µg/l	
PAH (16 EPA) [F8126]					
Acenaphthene	* 24/04/23 14:36	0.1	<0.1	µg/l	
Acenaphthylene	* 24/04/23 14:36	0.04	<0.04	µg/l	
Signed:	New Wal		_ 10/	05/2023	

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Client:	AECOM Infrastructur Limited 4th Floor, Adelphi Pl George's Street Up Dun Laoghaire, Dublin A96 T927 IRELAND		Ind	Certificate Code: Page Number: PO reference:	AR-23-M3 Page 38 c	3-017840-01 of 54	
Anthracene		* 24/04/23 14:36	0.01	<	0.01	µg/l	
Benz(a)ant	hracene	* 24/04/23 14:36	0.04	<	0.04	µg/l	
Benzo(a)py	rene	* 24/04/23 14:36	0.03	<	0.03	µg/l	
Benzo(b+k)	fluoranthene	* 24/04/23 14:36	0.05	<	0.05	µg/l	
Benzo(g,h,i)perylene	* 24/04/23 14:36	0.03	<	0.03	μg/l	
Chrysene		* 24/04/23 14:36	0.02	<	0.02	µg/l	
Dibenz(a,h)	anthracene	* 24/04/23 14:36	0.04	<	0.04	μg/l	
Fluoranther	ne	* 24/04/23 14:36	0.02	<	0.02	μg/l	
Fluorene		* 24/04/23 14:36	0.01	<	0.01	µg/l	
Indeno(1,2,	3-cd)pyrene	* 24/04/23 14:36	0.04	<	0.04	µg/l	
Naphthalen	e	* 24/04/23 14:36	0.4		<0.4	µg/l	
PAH 16 EP	A (sum)	* 24/04/23 14:36			<0.9	µg/l	
Phenanthre	ene	* 24/04/23 14:36	0.02	<	0.02	µg/l	
Pyrene		* 24/04/23 14:36	0.06	<	0.06	μg/l	
Hexavalen	t chromium [IX02U]						
Chromium	(VI)	* 21/04/23 19:28	0.01	<	0.02	mg/l	
Total cyani	ides [IX479]						
Cyanide, to	tal	* 28/04/23 07:29	0.01	<	0.01	mg/l	
	(Cr) [IX80U]						
Chromium		* 21/04/23 19:28	0.005	<	0.005	mg/l	
	hromium [IXCR0]						
Chromium		* 21/04/23 19:28	0.01	<	0.01	mg/l	
	fluorooctanoic acid) [LW		0.0		2.04	15 cr //	~~~
-	iluorooctanoic acid)	* 21/04/23 19:28	0.3		0.64	ng/l	SS
	fluorooctanesulfonic acio fluorooctanesulfonic acid)		0.2	<	0.20	ng/l	SS

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Client:	AECOM Infrastructure Limited 4th Floor, Adelphi Plaz George's Street Uppe Dun Laoghaire, Dublin A96 T927 IRELAND	a,	land		<i>Certificate Code: Page Number: PO reference:</i>	AR-23-M3-017 Page 39 of 54	840-01	
Suspended	d Solids [M3002]							
Suspended	Solids	24/04/23 08:39	EW013	5		<5	mg/l	C6
Chemical C	Oxygen Demand (COD) [M30	004]						
Chemical of	xygen demand (COD)	24/04/23 09:23	EW094	8		22	mg/l	C6
	Oxygen [M3005]							
Dissolved o	xygen	28/04/23 18:44 ^{7A}	EW043	1		9.26	mg/l	
	ng/L - Gallery [M300N]							
-	g/L - Gallery	26/04/23 10:49	EW175	1		59.5	mg/l	C6
	(Ortho/MRP) as P - Gallery							
Gallery	(Ortho/MRP) as P - g/L - Gallery [M300Q]	26/04/23 10:49 ^{7A}	EW175	0.05		<0.05	mg/l	
Fluoride mg		26/04/23 10:49	EW175	0.2		<0.2	mg/l	
-	g/L - Gallery [M300S]						5	
	g/L - Gallery	26/04/23 10:49	EW175	5		19.2	mg/l	C6
Ammonia a	as N - Gallery [M300Z]						-	
Ammonia a	s N - Gallery	26/04/23 10:49	EW175	0.05		<0.05	mg/l	C6
Nitrate (as	N) - Gallery [M301A]							
Nitrate (as I	N) - Gallery	26/04/23 10:49 ^{7A}	EW175	1		2.649	mg/l	
GCFID-Org	anic Solvents (Head Space)) [M3027]						
Acetone		05/05/23 16:04	EO089			<2	mg/l	
Acetonitrile		05/05/23 16:04	EO089			<2	mg/l	
Amyl acetat	te	05/05/23 16:04	EO089			<2	mg/l	
Cyclohexan	e	05/05/23 16:04	EO089			<2	mg/l	
Cyclopenta	none	05/05/23 16:04	EO089			<2	mg/l	
Dichlorome	thane	05/05/23 16:04	EO089			<2	mg/l	
Ethanol		05/05/23 16:04	EO089			<5	mg/l	
							-	

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Client:	AECOM Infrastruct Limited 4th Floor, Adelphi F George's Street L Dun Laoghaire, Dublin A96 T927 IRELAND		reland		Certificate Code: Page Number: PO reference:	AR-23-I Page 40	M3-017840-01) of 54
Ethyl Aceta	te	05/05/23 16:04	EO089			<2	mg/l
Heptane		05/05/23 16:04	EO089			<2	mg/l
IPA (2-Prop	anol)	05/05/23 16:04	EO089			<2	mg/l
Iso-Amyl al	cohol	05/05/23 16:04	EO089			<5	mg/l
Isopropyl ad	cetate	05/05/23 16:04	EO089			<2	mg/l
Isopropyl E	ther	05/05/23 16:04	EO089			<2	mg/l
Methanol		05/05/23 16:04	EO089			<5	mg/l
Methyl Ethy	/I Ketone	05/05/23 16:04	EO089			<2	mg/l
n-Butyl Alco	ohol.(Butanol)	05/05/23 16:04	EO089			<2	mg/l
n-Hexane		05/05/23 16:04	EO089			<2	mg/l
sec-Butyl A	lcohol	05/05/23 16:04	EO089			<2	mg/l
tert-Amylalo	cohol	05/05/23 16:04	EO089			<5	mg/l
Tert-Butano	I	05/05/23 16:04	EO089			<5	mg/l
tert-Butyl M	ethyl Ether	05/05/23 16:04	EO089			<2	mg/l
Tetrahydrof	uran	05/05/23 16:04	EO089			<2	mg/l
Toluene		05/05/23 16:04	EO089			<2	mg/l
Triethylamir	ne	05/05/23 16:04	EO089			<2	mg/l
Xylene -p		05/05/23 16:04	EO089			<2	mg/l
Xylene-M		05/05/23 16:04	EO089			<2	mg/l
Xylene-O		05/05/23 16:04	EO089			<2	mg/l
Xylenes-Tot	tal	05/05/23 16:04	EO089			<2	mg/l
Temperatu	re (Site) [M3036]						
Temperatur	е	27/04/23 16:26	Site Test			N/A	°C
	race [M3236]						
Arsenic		28/04/23 13:21		0.2		0.623	µg/l
Barium - Ti	race [M3237]						

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7D. This result is comprised as the sample was received by the laboratory outside of the holding time.

C6

10/05/2023



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Client:	AECOM Infrastructure Limited 4th Floor, Adelphi Plaz George's Street Upp Dun Laoghaire, Dublin A96 T927 IRELAND	za,	eland		Certificate Code: Page Number: PO reference:	AR-23-M3-017 Page 41 of 54		
Barium		28/04/23 13:21		1.77	6	68.235	µg/l	C6
Beryllium -	Trace [M3238]							
Beryllium		28/04/23 13:21		1		<1	µg/l	C6
Boron - Tra	ace [M3239]							
Boron		28/04/23 13:21		0.21		<0.21	mg/l	C6
Cadmium -	Trace [M3240]							
Cadmium		28/04/23 13:21		0.1		<0.1	µg/l	C6
Copper - Tr	race [M3244]							
Copper (Cu)	28/04/23 13:21		0.003	<	<0.003	mg/l	C6
Lead - Trac	e [M3246]							
Lead (Pb)		28/04/23 13:21		0.5		<0.5	µg/l	C6
Mercury - T	Frace [M3249]							
Mercury		28/04/23 13:21		0.03		<0.03	µg/l	C6
Nickel - Tra	ace [M3251]							
Nickel (Ni)		28/04/23 13:21		0.5		4.953	µg/l	C6
	Trace [M3255]							
Selenium (S	Se)	28/04/23 13:21		0.2		1.349	µg/l	C6
	- Trace [M3268]							
Vanadium (,	28/04/23 13:21		1		<1	µg/l	C6
Zinc - Trace	e [M3269]							
Zinc (Zn)		28/04/23 13:21	EW188	1		3.10	µg/l	C6
рН [М3282]		00/04/00 40 04 74				0.0		
pH	6- IM00001	23/04/23 12:21 74	EW158			8.0		
Conductivity		23/04/23 12:21	EW153	100		656.8	µS/cm	C6
			EVV155	100		030.0	µ0/cm	0
TPH > C10-0	d (C6-10-21-40) in water [M	⁵ 24/04/23 14:25		0.1		<0.1	µg/l	
		27/07/20 17.20		0.1		-0.1	P9/1	
	Signadi		leart Warf			10/05	5/2023	

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	AECOM Infrastructure & Limited 4th Floor, Adelphi Plaza George's Street Uppe Dun Laoghaire, Dublin A96 T927 IRELAND	a,		<i>Certificate Code: Page Number: PO reference:</i>	AR-23-M3-017 Page 42 of 54	840-01	
TPH >C21-C4	40 *	24/04/23 14:25	0.1		<0.1	µg/l	
TPH >C6-C1	0 *	24/04/23 14:25	0.1		<0.1	µg/l	
TPH Total >C	*6-C40 *	24/04/23 14:25	10		<10	µg/l	YA
Btex in wate	r [M50A7]						
Benzene	*	24/04/23 14:25	1		<1	µg/l	YA
Ethylbenzene	*	24/04/23 14:25	1		<1	µg/l	YA
m-/-p-Xylene	*	24/04/23 14:25	1		<1	µg/l	YA
o-Xylene	*	24/04/23 14:25	1		<1	µg/l	YA
Toluene	*	24/04/23 14:25	1		<1	µg/l	YA

⁴ Accreditiation Information

C6: ISO/IEC 17025:2017 INAB 138-T

SS: ISO/IEC 17025:2017 SWEDAC 1977 YA: Accredited (External Subcontractor)

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Li 4t G D D A	Limited 4th Floor, Adelphi Plaza, George's Street Upper, Dun Laoghaire, Dublin A96 T927 IRELAND				Certificate Coo Page Number: PO reference:			
Sample numbe	r	966-2023-00020	098	Received on		21/04/2023		
Your sample re Sample Matrix	ference	Hostel Well Ground water		Analysis sta	rted on	23/04/2023		
Sample Conditi	ion on Arrival	Satisfactory		Sample Date	e	20/04/2023		
Test Code Analyte		SUB ⁵ Analysis Started	Method	LOQ ³	SPEC ²	Result	Units	ACCRED ⁴
-	AC03 [BB005]	+ 05/04/00 00 00		00		001.1		00
Alkalinity as CA		* 25/04/23 09:00		30		301.1	mg/l	C6
2,3/3,5-Dimethy 4-Ethylphenol	ind Cresols (3) [F6 ylphenol +	* 24/04/23 14:36		0.02		<0.02	µg/l	
2,4-Dimethylph	enol	* 24/04/23 14:36		0.02		<0.02	µg/l	
2,5-Dimethylph	enol	* 24/04/23 14:36		0.02		<0.02	µg/l	
2,6-Dimethylph	enol	* 24/04/23 14:36		0.03		<0.03	µg/I	
3,4-Dimethylph	enol	* 24/04/23 14:36		0.02		<0.02	µg/l	
Cresols (sum)		* 24/04/23 14:36				<0.8	µg/l	
m-Cresol		* 24/04/23 14:36		0.3		<0.3	µg/l	
m-Ethylphenol		* 24/04/23 14:36		0.02		<0.02	µg/l	
o-Cresol		* 24/04/23 14:36		0.3		<0.3	µg/l	
o-Ethylphenol		* 24/04/23 14:36		0.03		<0.03	µg/l	
p-Cresol		* 24/04/23 14:36		0.2		<0.2	µg/l	
Phenol		* 24/04/23 14:36		0.2		<0.2	µg/l	
Thymol		* 24/04/23 14:36		0.01		<0.01	µg/l	
PAH (16 EPA)	[F8126]							
Acenaphthene		* 24/04/23 14:36		0.1		<0.1	µg/l	
Acenaphthylen	e	* 24/04/23 14:36		0.04		<0.04	µg/l	
	Signed:		New Wal			1	10/05/2023	

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Client:	AECOM Infrastruct Limited 4th Floor, Adelphi George's Street I Dun Laoghaire, Dublin A96 T927 IRELAND		reland		<i>Certificate Code: Page Number: PO reference:</i>	AR-23- Page 4	M3-017840-01 4 of 54	
Anthracene	9	* 24/04/23 14:36		0.01		<0.01	µg/l	
Benz(a)ant	hracene	* 24/04/23 14:36		0.04		<0.04	µg/l	
Benzo(a)py	/rene	* 24/04/23 14:36		0.03		<0.03	µg/l	
Benzo(b+k))fluoranthene	* 24/04/23 14:36		0.05		<0.05	µg/l	
Benzo(g,h,i	i)perylene	* 24/04/23 14:36		0.03		<0.03	µg/l	
Chrysene		* 24/04/23 14:36		0.02		<0.02	µg/l	
Dibenz(a,h))anthracene	* 24/04/23 14:36		0.04		<0.04	μg/l	
Fluoranthe	ne	* 24/04/23 14:36		0.02		<0.02	µg/l	
Fluorene		* 24/04/23 14:36		0.01		<0.01	µg/l	
Indeno(1,2,	,3-cd)pyrene	* 24/04/23 14:36		0.04		<0.04	µg/l	
Naphthalen	ne	* 24/04/23 14:36		0.4		<0.4	µg/l	
PAH 16 EP	A (sum)	* 24/04/23 14:36				<0.9	µg/l	
Phenanthre	ene	* 24/04/23 14:36		0.02		<0.02	µg/l	
Pyrene		* 24/04/23 14:36		0.06		<0.06	µg/l	
Hexavalen	t chromium [IX02U]							
Chromium	(VI)	* 21/04/23 20:01		0.01		<0.01	mg/l	
Total cyan	ides [IX479]							
Cyanide, to	otal	* 28/04/23 07:29		0.01		<0.01	mg/l	
Chromium Chromium	(Cr) [IX80U] (Cr)	* 21/04/23 20:01		0.005		<0.005	mg/l	
	hromium [IXCR0]							
Chromium		* 21/04/23 20:01		0.01		<0.01	mg/l	
	d Solids [M3002]							
Suspended		24/04/23 08:39	EW013	5		<5	mg/l	C6
	Oxygen Demand (COD)			6				<u> </u>
Chemical o	oxygen demand (COD)	24/04/23 09:23	EW094	8		<8	mg/l	C6

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Client:	AECOM Infrastructure Limited 4th Floor, Adelphi Plaz George's Street Uppo Dun Laoghaire, Dublin A96 T927 IRELAND	s Street Upper, oghaire, 27 D			Certificate Code: Page Number: PO reference:	AR-23-M3-017 Page 45 of 54	840-01	
Dissolved	Oxygen [M3005]							
Dissolved o	xygen	28/04/23 18:44 ^{7A}	EW043	1		7.42	mg/l	
Sulphate m	ng/L - Gallery [M300N]							
Sulphate m	g/L - Gallery	26/04/23 10:49	EW175	1		11.8	mg/l	C6
	(Ortho/MRP) as P - Gallery							
Gallery	(Ortho/MRP) as P - g/L - Gallery [M300Q]	26/04/23 10:49 ^{7A}	EW175	0.05		<0.05	mg/l	
Fluoride mg		26/04/23 10:49	EW175	0.2		0.3	mg/l	C6
-	ig/L - Gallery [M300S]	20/04/23 10:43		0.2		0.5	ilig/i	00
Chloride mg		26/04/23 10:49	EW175	5		32.3	mg/l	C6
-	as N - Gallery [M300Z]	20/04/20 10.40	LWING	Ũ		02.0	mg/i	
	s N - Gallery	26/04/23 10:49	EW175	0.05		<0.05	mg/l	C6
	N) - Gallery [M301A]						5	
Nitrate (as I		26/04/23 10:49 ^{7A}	EW175	1	;	3.178	mg/l	
	anic Solvents (Head Space) [M3027]					-	
Acetone		05/05/23 16:04	EO089			<2	mg/l	
Acetonitrile		05/05/23 16:04	EO089			<2	mg/l	
Amyl acetat	e	05/05/23 16:04	EO089			<2	mg/l	
Cyclohexan	e	05/05/23 16:04	EO089			<2	mg/l	
Cyclopenta	none	05/05/23 16:04	EO089			<2	mg/l	
Dichlorome	thane	05/05/23 16:04	EO089			<2	mg/l	
Ethanol		05/05/23 16:04	EO089			<5	mg/l	
Ethyl Acetat	te	05/05/23 16:04	EO089			<2	mg/l	
Heptane		05/05/23 16:04	EO089			<2	mg/l	
' IPA (2-Prop	anol)	05/05/23 16:04	EO089			<2	mg/l	
Iso-Amyl al	,	05/05/23 16:04	EO089			<5	mg/l	
							<u>с</u> .	

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Client:	AECOM Infrastructur Limited 4th Floor, Adelphi Pl George's Street Up Dun Laoghaire, Dublin A96 T927 IRELAND	aza,	reland		Certificate Code: Page Number: PO reference:	AR-23-N Page 46	M3-017840-01 5 of 54	
Isopropyl a		05/05/23 16:04	EO089			<2	mg/l	
Isopropyl E	ther	05/05/23 16:04	EO089			<2	mg/l	
Methanol		05/05/23 16:04	EO089			<5	mg/l	
Methyl Ethy	/I Ketone	05/05/23 16:04	EO089			<2	mg/l	
n-Butyl Alco	phol.(Butanol)	05/05/23 16:04	EO089			<2	mg/l	
n-Hexane		05/05/23 16:04	EO089			<2	mg/l	
sec-Butyl A	lcohol	05/05/23 16:04	EO089			<2	mg/l	
tert-Amylalo	cohol	05/05/23 16:04	EO089			<5	mg/l	
Tert-Butanc	bl	05/05/23 16:04	EO089			<5	mg/l	
tert-Butyl M	lethyl Ether	05/05/23 16:04	EO089			<2	mg/l	
Tetrahydrof	uran	05/05/23 16:04	EO089			<2	mg/l	
Toluene		05/05/23 16:04	EO089			<2	mg/l	
Triethylamir	ne	05/05/23 16:04	EO089			<2	mg/l	
Xylene -p		05/05/23 16:04	EO089			<2	mg/l	
Xylene-M		05/05/23 16:04	EO089			<2	mg/l	
Xylene-O		05/05/23 16:04	EO089			<2	mg/l	
Xylenes-To	tal	05/05/23 16:04	EO089			<2	mg/l	
Temperatu	re (Site) [M3036]							
Temperatur	e	27/04/23 16:26	Site Test			N/A	°C	
Arsenic - T	race [M3236]							
Arsenic		28/04/23 13:21		0.2		0.322	μg/l	C6
Barium - Ti	race [M3237]							
Barium		28/04/23 13:21		1.77		17.744	μg/l	C6
-	- Trace [M3238]							
Beryllium		28/04/23 13:21		1		<1	µg/l	C6
Boron - Tra	ace [M3239]							

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Client:	AECOM Infrastructure Limited 4th Floor, Adelphi Plaz George's Street Upp Dun Laoghaire, Dublin A96 T927 IRELAND	a,	eland		Certificate Code: Page Number: PO reference:	AR-23-M3-017 Page 47 of 54	840-01	
Boron		28/04/23 13:21		0.21		<0.21	mg/l	C6
Cadmium -	Trace [M3240]							
Cadmium		28/04/23 13:21		0.1		0.15	µg/l	C6
	race [M3244]							
Copper (Cu		28/04/23 13:21		0.003		<0.003	mg/l	C6
Lead - Trac	e [M3246]							
Lead (Pb)		28/04/23 13:21		0.5		<0.5	µg/l	C6
-	Trace [M3249]	00/04/00 40 04		0.00		-0.00		00
Mercury	IN20541	28/04/23 13:21		0.03		<0.03	µg/l	C6
Nickel (Ni)	ice [M3251]	28/04/23 13:21		0.5		2.1	µg/l	C6
	Trace [M3255]	20/04/20 10.21		0.0		2.1	μg/i	00
Selenium (S		28/04/23 13:21		0.2		0.603	µg/l	C6
-	- Trace [M3268]						1.3	
Vanadium (28/04/23 13:21		1		<1	µg/l	C6
Zinc - Trace	e [M3269]							
Zinc (Zn)		28/04/23 13:21	EW188	1		9.20	µg/l	C6
рН [М3282]	l							
рН		23/04/23 12:21 7A	EW158			7.9		
Conductivi	ty [M3283]							
Conductivity	/	23/04/23 12:21	EW153	100		634.7	µS/cm	C6
	d (C6-10-21-40) in water [M							
TPH >C10-0		24/04/23 14:25		0.1		<0.1	µg/l	
TPH >C21-0		24/04/23 14:25		0.1		<0.1	µg/l	
TPH >C6-C	10 *	24/04/20 14:20		0.1		<0.1	µg/l	
TPH Total >		24/04/23 14:25		10		<10	µg/l	YA
Btex in wat	ter [M50A7]							

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Client:	AECOM Infrastructure	& Environment Ireland	Cer	tificate Code:	: AR-23-M3-017840-01		
	Limited 4th Floor, Adelphi Plaz	а	Pag	je Number:	Page 48 of 54		
	George's Street Upp Dun Laoghaire, Dublin A96 T927 IRELAND	· · · · · · · · · · · · · · · · · · ·	PO	reference:			
Benzene	*	24/04/23 14:25	1		<1	µg/l	YA
Ethylbenze	ne *	24/04/23 14:25	1		<1	µg/l	YA
m-/-p-Xylen	ie *	24/04/23 14:25	1		<1	µg/l	YA
o-Xylene	*	24/04/23 14:25	1		<1	µg/l	YA
Toluene	*	24/04/23 14:25	1		<1	µg/l	YA

⁴ Accreditiation Information

C6: ISO/IEC 17025:2017 INAB 138-T

SS: ISO/IEC 17025:2017 SWEDAC 1977

YA: Accredited (External Subcontractor)

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Client: AECOM Infrastru Limited 4th Floor, Adelph George's Street Dun Laoghaire, Dublin A96 T927 IRELAND	Upper,	Certificate (Page Numb PO referenc	Page 49 of		
Sample number	966-2023-00020099	Received on Analysis started on	21/04/2023 23/04/2023		
Your sample reference	OB2	Analysis staned on	23/04/2023		
Sample Matrix	Ground water				
Sample Condition on Arrival	Satisfactory	Sample Date	20/04/2023		
Test Code Analyte	SUB ⁵ Analysis Method Started	LOQ ³ SPEC ²	Result	Units	ACCRED ⁴
Alkalinity as CAC03 [BB005]					
Alkalinity as CAC03	* 25/04/23 09:00	30	353.3	mg/l	C6
Phenols (10) and Cresols (3) [Fe					
2,3/3,5-Dimethylphenol + 4-Ethylphenol	* 24/04/23 14:36	0.02	<0.02	µg/l	
2,4-Dimethylphenol	* 24/04/23 14:36	0.02	<0.02	µg/l	
2,5-Dimethylphenol	* 24/04/23 14:36	0.02	<0.02	µg/l	
2,6-Dimethylphenol	* 24/04/23 14:36	0.03	<0.03	µg/l	
3,4-Dimethylphenol	* 24/04/23 14:36	0.02	<0.02	µg/l	
Cresols (sum)	* 24/04/23 14:36		<0.8	µg/l	
m-Cresol	* 24/04/23 14:36	0.3	<0.3	µg/l	
m-Ethylphenol	* 24/04/23 14:36	0.02	<0.02	µg/l	
o-Cresol	* 24/04/23 14:36	0.3	<0.3	µg/l	
o-Ethylphenol	* 24/04/23 14:36	0.03	<0.03	µg/l	
p-Cresol	* 24/04/23 14:36	0.2	<0.2	µg/l	
Phenol	* 24/04/23 14:36	0.2	<0.2	µg/l	
Thymol	* 24/04/23 14:36	0.01	<0.01	µg/l	
PAH (16 EPA) [F8126]					
Acenaphthene	* 24/04/23 14:36	0.1	<0.1	µg/l	
Acenaphthylene	* 24/04/23 14:36	0.04	<0.04	µg/l	
Signed:	New Wal	1	10	0/05/2023	

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10/05/2023

Limited 4th Flo Georg	or, Adelphi Plaza, e's Street Upper aoghaire, a 927		eland		Certificate Code: Page Number: PO reference:	AR-23-M Page 50	3-017840-01 of 54	
Anthracene	*	24/04/23 14:36		0.01		<0.01	µg/l	
Benz(a)anthracene	*	24/04/23 14:36		0.04		<0.04	µg/l	
Benzo(a)pyrene	*	24/04/23 14:36		0.03		<0.03	µg/l	
Benzo(b+k)fluoranthe	ne *	24/04/23 14:36		0.05		<0.05	µg/l	
Benzo(g,h,i)perylene	*	24/04/23 14:36		0.03		<0.03	µg/l	
Chrysene	*	24/04/23 14:36		0.02		<0.02	μg/l	
Dibenz(a,h)anthracer	e *	24/04/23 14:36		0.04		<0.04	μg/l	
Fluoranthene	*	24/04/23 14:36		0.02		<0.02	μg/l	
Fluorene	*	24/04/23 14:36		0.01		<0.01	μg/l	
Indeno(1,2,3-cd)pyrei	ne *	24/04/23 14:36		0.04		<0.04	μg/l	
Naphthalene	*	24/04/23 14:36		0.4		<0.4	µg/l	
PAH 16 EPA (sum)	*	24/04/23 14:36				<0.9	µg/l	
Phenanthrene	*	24/04/23 14:36		0.02		<0.02	µg/l	
Pyrene	*	24/04/23 14:36		0.06		<0.06	μg/l	
Hexavalent chromiu	m [IX02U]							
Chromium (VI)	*	21/04/23 18:34		0.01		<0.01	mg/l	
Total cyanides [IX47	9]							
Cyanide, total	*	28/04/23 07:29		0.01		<0.01	mg/l	
Chromium (Cr) [IX80 Chromium (Cr)		21/04/23 18:34		0.005		0.008	mg/l	
Trivalent chromium								
Chromium III		21/04/23 18:34		0.01		<0.01	mg/l	
Suspended Solids [-			_		400		
Suspended Solids		24/04/23 08:39	EW013	5		168	mg/l	C6
Chemical Oxygen D Chemical oxygen der		4] 24/04/23 09:23	EW094	8		<8	mg/l	C6

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10/05/2023

Client:	AECOM Infrastructure & Environment Ireland Limited 4th Floor, Adelphi Plaza, George's Street Upper, Dun Laoghaire, Dublin A96 T927 IRELAND Oxygen [M3005]				<i>Certificate Code: Page Number: PO reference:</i>	AR-23-M3-017 Page 51 of 54	840-01	
Dissolved	Oxygen [M3005]							
Dissolved o	xygen	28/04/23 18:44 ^{7A}	EW043	1		5.54	mg/l	
Sulphate m	ng/L - Gallery [M300N]							
Sulphate m	g/L - Gallery	26/04/23 10:49	EW175	1		22.5	mg/l	C6
	(Ortho/MRP) as P - Gallery							
Phosphate Gallery	(Ortho/MRP) as P -	26/04/23 10:49 ^{7A}	EW175	0.05	(0.073	mg/l	
,	g/L - Gallery [M300Q]							
Fluoride mg	ı/L - Gallery	26/04/23 10:49	EW175	0.2		<0.2	mg/l	
Chloride m	g/L - Gallery [M300S]							
Chloride mg	g/L - Gallery	26/04/23 10:49	EW175	5		14.3	mg/l	C6
Ammonia a	as N - Gallery [M300Z]							
Ammonia as	s N - Gallery	26/04/23 10:49	EW175	0.05	•	<0.05	mg/l	C6
	N) - Gallery [M301A]							
Nitrate (as N		26/04/23 10:49 ^{7A}	EW175	1		2.023	mg/l	
-	anic Solvents (Head Space							
Acetone		08/05/23 10:41	EO089			<2	mg/l	
Acetonitrile		08/05/23 10:41	EO089			<2	mg/l	
Amyl acetat	te	08/05/23 10:41	EO089			<2	mg/l	
Cyclohexan	e	08/05/23 10:41	EO089			<2	mg/l	
Cyclopentar	none	08/05/23 10:41	EO089			<2	mg/l	
Dichloromet	thane	08/05/23 10:41	EO089			<2	mg/l	
Ethanol		08/05/23 10:41	EO089			<5	mg/l	
Ethyl Acetat	te	08/05/23 10:41	EO089			<2	mg/l	
Heptane		08/05/23 10:41	EO089			<2	mg/l	
IPA (2-Prop	anol)	08/05/23 10:41	EO089			<2	mg/l	
Iso-Amyl ald	cohol	08/05/23 10:41	EO089			<5	mg/l	

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10/05/2023

Client:	AECOM Infrastructur Limited 4th Floor, Adelphi Pla George's Street Up Dun Laoghaire, Dublin A96 T927 IRELAND	aza,	reland		Certificate Code: Page Number: PO reference:	AR-23- Page 5	M3-017840-01 2 of 54	
	INCLAND							
Isopropyl a	cetate	08/05/23 10:41	EO089			<2	mg/l	
Isopropyl E	ther	08/05/23 10:41	EO089			<2	mg/l	
Methanol		08/05/23 10:41	EO089			<5	mg/l	
Methyl Ethy	/I Ketone	08/05/23 10:41	EO089			<2	mg/l	
n-Butyl Alco	ohol.(Butanol)	08/05/23 10:41	EO089			<2	mg/l	
n-Hexane		08/05/23 10:41	EO089			<2	mg/l	
sec-Butyl A	Icohol	08/05/23 10:41	EO089			<2	mg/l	
tert-Amylalo	cohol	08/05/23 10:41	EO089			<5	mg/l	
Tert-Butano	bl	08/05/23 10:41	EO089			<5	mg/l	
tert-Butyl M	ethyl Ether	08/05/23 10:41	EO089			<2	mg/l	
Tetrahydrof	uran	08/05/23 10:41	EO089			<2	mg/l	
Toluene		08/05/23 10:41	EO089			<2	mg/l	
Triethylamir	ne	08/05/23 10:41	EO089			<2	mg/l	
Xylene -p		08/05/23 10:41	EO089			<2	mg/l	
Xylene-M		08/05/23 10:41	EO089			<2	mg/l	
Xylene-O		08/05/23 10:41	EO089			<2	mg/l	
Xylenes-To	tal	08/05/23 10:41	EO089			<2	mg/l	
Temperatu	re (Site) [M3036]							
Temperatur	e	27/04/23 16:26	Site Test			N/A	°C	
Arsenic - T	race [M3236]							
Arsenic		28/04/23 13:21		0.2		0.78	μg/l	C6
	race [M3237]							
Barium		28/04/23 13:21		1.77	2	25.626	µg/l	C6
-	Trace [M3238]							00
Beryllium		28/04/23 13:21		1		<1	µg/I	C6
Boron - Tra	ace [M3239]							

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Client:	AECOM Infrastructure Limited 4th Floor, Adelphi Pla George's Street Upp Dun Laoghaire, Dublin A96 T927 IRELAND	za,	eland		Certificate Code: Page Number: PO reference:	AR-23-M3-017 Page 53 of 54		
Boron		28/04/23 13:21		0.21		<0.21	mg/l	C6
Cadmium -	Trace [M3240]							
Cadmium		28/04/23 13:21		0.1		0.448	µg/l	C6
	race [M3244]							
Copper (Cu	,	28/04/23 13:21		0.003		0.003	mg/l	C6
Lead - Trac	e [M3246]							
Lead (Pb)		28/04/23 13:21		0.5		3.47	µg/l	C6
	Trace [M3249]							
Mercury		28/04/23 13:21		0.03		0.063	µg/l	C6
	ace [M3251]	00/01/00 10 01		<u> </u>				00
Nickel (Ni)	-	28/04/23 13:21		0.5		11.415	µg/l	C6
	Trace [M3255]	00/04/02 42:04		0.2		4 004		C6
Selenium (S	- Trace [M3268]	28/04/23 13:21		0.2		1.824	µg/l	00
Vanadium (28/04/23 13:21		1		2.327	µg/l	C6
Zinc - Trace	•	20/04/20 10:21				2.521	рул	00
Zinc - mace	e [105203]	28/04/23 13:21	EW188	1		33.2	µg/l	C6
pH [M3282]	1	20/01/20 10:21	211100	·		00.2	P9/1	
pH [1	23/04/23 12:21 ^{7A}	EW158			7.7		C6
Conductivi	tv [M3283]							
Conductivity		23/04/23 12:21	EW153	100		667.2	µS/cm	C6
-	d (C6-10-21-40) in water [N	1502B]						
TPH >C10-0	C21	* 24/04/23 14:49		0.1		<0.1	µg/l	
TPH >C21-0	C40	* 24/04/23 14:49		0.1		<0.1	µg/l	
TPH >C6-C	10	* 24/04/23 14:49		0.1		<0.1	µg/l	
TPH Total >	·C6-C40	* 24/04/23 14:49		10		<10	µg/l	YA
Btex in wat	ter [M50A7]						-	

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Client:	Client: AECOM Infrastructure & Environment Ireland Limited 4th Floor, Adelphi Plaza,			Certificate Code: Page Number:	AR-23-M3-017840-01 Page 54 of 54		
	George's Street Upp Dun Laoghaire, Dublin A96 T927 IRELAND		PO reference:				
Benzene	*	24/04/23 14:49	1		<1	µg/l	YA
Ethylbenzer	ne *	24/04/23 14:49	1		<1	µg/l	YA
m-/-p-Xylen	e *	24/04/23 14:49	1		<1	µg/l	YA
o-Xylene	*	24/04/23 14:49	1		<1	µg/l	YA
Toluene	*	24/04/23 14:49	1		<1	µg/l	YA

⁴ Accreditiation Information

C6: ISO/IEC 17025:2017 INAB 138-T

SS: ISO/IEC 17025:2017 SWEDAC 1977

YA: Accredited (External Subcontractor)

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Laboratory Certificates - Round 2 (25 May 2023)



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Client: **AECOM Infrastructure & Environment Ireland** Limited 4th Floor, Adelphi Plaza, George's Street Upper, Dun Laoghaire, **Dublin** A96 T927 **IRELAND**

Certificate Code:	AR-23-M3-024299-01
Page Number:	Page 1 of 47
PO reference:	60699676

Certificate of Analysis

				-			
Sample number	966-2023-0002634	5	Received on		02/06/2023		
			Analysis star	rted on	02/06/2023		
Your sample reference	SW_M1						
Sample Matrix	Surface water						
Sample Condition on Arrival	Satisfactory		Sample Date	e	29/05/2023		
Test Code	SUB ⁵ Analysis	Method	LOQ ³	SPEC ²	Result	Units	ACCRED ⁴
Analyte	Started						
Alkalinity as CAC03 [BB005]							
Alkalinity as CAC03	* 06/06/23 14:44		30		347.7	mg/l	
Hexavalent chromium [IX02T]							
Chromium Cr 6+	* 12/06/23 09:47		10		<10.0	µg/l	
Total cyanides [IX226]							
Cyanide, total	* 02/06/23 17:34		10		<10.0	µg/l	
Chromium (Cr) [IXBXU]							
Chromium (Cr)	* 12/06/23 09:47		1		<1.00	µg/l	
Trivalent chromium [IXBXX]							
Chromium (III)	* 12/06/23 09:47		10		Non calculable	µg/l	
Suspended Solids [M3002]							
Suspended Solids	06/06/23 09:03 ^{7A}	EW013	5		<5	mg/l	
Chemical Oxygen Demand (COD)) [M3004]						
Chemical oxygen demand (COD)	09/06/23 16:44	EW094	8		12	mg/l	
Dissolved Oxygen [M3005]							

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11/07/2023

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Client:	AECOM Infrastructure	& Environment Ire	eland		Certificate Code:	AR-23-M3-0	24299-01
	Limited 4th Floor, Adelphi Plaz	72			Page Number:	Page 2 of 47	,
	George's Street Upp Dun Laoghaire, Dublin A96 T927 IRELAND				PO reference:	60699676	
Dissolved o	xygen	03/06/23 16:06 ^{7A}	EW043	1	1	0.41.	mg/l
Sulphate m	ig/L - Gallery [M300N]						
Sulphate m	g/L - Gallery	12/06/23 13:01	EW175	1		42.0	mg/l
Phosphate	(Ortho/MRP) as P - Gallery	/ [M300P]					
Gallery	(Ortho/MRP) as P -	12/06/23 13:01 ^{7A}	EW175	0.05		<0.05	mg/l
	g/L - Gallery [M300Q]						
Fluoride mg		12/06/23 13:01	EW175	0.2		<0.2	mg/l
	g/L - Gallery [M300S]	10/00/00 10:01		F		04.0	···· ·· //
Chloride mg	•	12/06/23 13:01	EW175	5		21.0	mg/l
	IS N - Gallery [M300Z]	10/00/00 10:01		0.05		-0.05	···· ·· //
	s N - Gallery	12/06/23 13:01	EW175	0.05	·	<0.05	mg/l
Nitrate (as Nitrate (as N	N) - Gallery [M301A]	12/06/23 13:01 ^{7A}	EW175	1		3.323	mg/l
	anic Solvents (Head Space			I	·	5.525	ilig/i
Acetone		07/07/23 09:23	EO089			<2	mg/l
Acetonitrile		07/07/23 09:23	EO089			<2	mg/l
Amyl acetat	٩	07/07/23 09:23	EO089			<2	mg/l
Cyclohexan		07/07/23 09:23	EO089			<2	mg/l
Cyclopentar		07/07/23 09:23	EO089			<2	mg/l
Dichloromet		07/07/23 09:23	EO089			<2	-
Ethanol		07/07/23 09:23	EO089 EO089			<2 <5	mg/l
							mg/l
Ethyl Acetat	e	07/07/23 09:23	EO089			<2	mg/l
Heptane		07/07/23 09:23	EO089			<2	mg/l

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11/07/2023

Client:	AECOM Infrastructure Limited 4th Floor, Adelphi Plaz George's Street Upp Dun Laoghaire, Dublin A96 T927 IRELAND	za,	reland		Certificate Code: Page Number: PO reference:	AR-23-M3-024 Page 3 of 47 60699676	299-01
IPA (2-Prop	anol)	07/07/23 09:23	EO089			<2	mg/l
Iso-Amyl alo	cohol	07/07/23 09:23	EO089			<5	mg/l
Isopropyl ad	cetate	07/07/23 09:23	EO089			<2	mg/l
Isopropyl Et	ther	07/07/23 09:23	EO089			<2	mg/l
Methanol		07/07/23 09:23	EO089			<5	mg/l
Methyl Ethy	I Ketone	07/07/23 09:23	EO089			<2	mg/l
n-Butyl Alco	bhol.(Butanol)	07/07/23 09:23	EO089			<2	mg/l
n-Hexane		07/07/23 09:23	EO089			<2	mg/l
sec-Butyl Al	lcohol	07/07/23 09:23	EO089			<2	mg/l
tert-Amylalo	cohol	07/07/23 09:23	EO089			<5	mg/l
Tert-Butano	I	07/07/23 09:23	EO089			<5	mg/l
tert-Butyl M	ethyl Ether	07/07/23 09:23	EO089			<2	mg/l
Tetrahydrof	uran	07/07/23 09:23	EO089			<2	mg/l
Toluene		07/07/23 09:23	EO089			<2	mg/l
Triethylamir	ne	07/07/23 09:23	EO089			<2	mg/l
Xylene -p		07/07/23 09:23	EO089			<2	mg/l
Xylene-M		07/07/23 09:23	EO089			<2	mg/l
Xylene-O		07/07/23 09:23	EO089			<2	mg/l
Xylenes-Tot	al	07/07/23 09:23	EO089			<2	mg/l
Temperatu	re (Site) [M3036]						
Temperatur	е	16/06/23 11:11	Site Test			N/A	°C
Arsenic - T	race [M3236]						
Arsenic		06/06/23 12:11		0.2		0.53	µg/l

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11/07/2023

Client:	AECOM Infrastructure &	& Environment Ire	land		Certificate Code:	AR-23-M3-0242	99-01
	Limited 4th Floor, Adelphi Plaza				Page Number:	Page 4 of 47	
	George's Street Uppe Dun Laoghaire, Dublin A96 T927 IRELAND				PO reference:	60699676	
Barium - Tra	ace [M3237]						
Barium		06/06/23 12:11		1.77	6	60.947	µg/l
Beryllium -	Trace [M3238]						
Beryllium		06/06/23 12:11		1		<1	µg/l
Boron - Tra	ce [M3239]						
Boron		06/06/23 12:11		0.21		<0.21	mg/l
Cadmium -	Trace [M3240]						
Cadmium		06/06/23 12:11		0.1		<0.1	µg/l
	ace [M3244]						
Copper (Cu)		06/06/23 12:11	(0.003	•	<0.003	mg/l
Lead - Trac	e [M3246]						
Lead (Pb)		06/06/23 12:11		0.5		<0.5	µg/l
-	race [M3249]	00/00/00 40-44		0.00		-0.02	
Mercury	[110054]	06/06/23 12:11		0.03		<0.03	µg/l
Nickel - Tra	Ce [M3251]	06/06/23 12:11		0.5		4.449	ug/l
Nickel (Ni)	Trace [M3255]	00/00/23 12.11		0.5		4.449	µg/l
Selenium (S		06/06/23 12:11		0.2		1.346	µg/l
•	Trace [M3268]	00/00/20 12:11		0.2		1.040	P9/1
Vanadium (\		06/06/23 12:11		1		<1	µg/l
Zinc - Trace	•						1.5
Zinc (Zn)		06/06/23 12:11	EW188	1		<1	µg/l
pH [M3282]							
рН		02/06/23 17:41 ^{7A}	EW158			8.3	

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Eurofins Environment Testing Ireland Hoffman Park, Inchera Cork T45 PC80 Ireland T: 0818 252526 Web: www.eurofins.ie Email: ASTsupport@etuki.eurofins.com



Client: AECOM Infrastructure & Environment Ireland Certificate Code: AR-23-M3-024299-01 Limited Page Number: Page 5 of 47 4th Floor, Adelphi Plaza, George's Street Upper, **PO reference:** 60699676 Dun Laoghaire, **Dublin** A96 T927 **IRELAND** Conductivity [M3283] Conductivity 02/06/23 17:41 EW153 100 649.2 µS/cm C6 ⁴ Accreditiation Information C6: ISO/IEC 17025:2017 INAB 138-T

Signed:

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- 9. Report is issued as per out standard T&C of sale.



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Certificate Code: AR-23-M3-024299-01



Cheft: AECOM Intrastructure & Environment Ireland				Certificate Co	de: AR-23-1013-02	4233-01	
	Plaza			Page Number:	Page 6 of 47		
ge's Street Upp Laoghaire, in T927				PO reference:	60699676		
	966-2023-0002634	16	Received on		02/06/2023		
			Analysis star	rted on	02/06/2023		
ice	SW_M3						
	Surface water						
n Arrival	Satisfactory		Sample Date	Э	29/05/2023		
S	UB ⁵ Analysis Started	Method	LOQ ³	SPEC ²	Result	Units	ACCRED ⁴
3 [BB005]							
	* 06/06/23 14:44		30		343.4	mg/l	
ium [IX02T]							
	* 12/06/23 09:47		10		<10.0	µg/l	
226]							
	* 02/06/23 17:34		10		<10.0	µg/l	
BXU]							
	* 12/06/23 09:47		1		<1.00	µg/l	
n [IXBXX]							
	* 12/06/23 09:47		10		Non calculable	µg/l	
[M3002]							
	06/06/23 09:02 ^{7A}	EW013	5		<5	mg/l	
Demand (COD) [M	3004]						
	09/06/23 16:44	EW094	8		20	mg/l	
[M3005]						-	
•	03/06/23 16:05 7A	EW043	1		9.99	mg/l	
	00/00/20 10.00				0.00	mg/i	
	rge's Street Up Laoghaire, in T927 AND nce on Arrival S 3 [BB005] 3 ium [IX02T] 226] BXU] m [IXBXX] 5 [M3002]	Ioor, Adelphi Plaza, rge's Street Upper, Laoghaire, in T927 AND 966-2023-0002634 Ince SW_M3 Surface water Satisfactory Surface water Satisfactory SUB ⁵ Analysis Started Started D3 [BB005] * 06/06/23 14:44 ium [IX02T] * 12/06/23 09:47 SEU * 02/06/23 17:34 BXU] * 12/06/23 09:47 m [IXBXX] * 12/06/23 09:47 Image: Second (COD) [M3004] 09/06/23 16:44 Image: Second (COD) [M3005] 09/06/23 16:44	loor, Adelphi Plaza, 'ge's Street Upper, Laoghaire, in T927 AND 966-2023-00026346 SW_M3 Surface water Suface water Satisfactory Method Started Net	Noor, Adelphi Plaza, rge's Street Upper, Laoghaire, in T927 AND 966-2023-00026346 Received on Analysis state Analysis state nce SW_M3 Surface water surface water Sample Date on Arrival Satisfactory Sample Date 03 [BB005] 3 * 06/06/23 14:44 30 03 [BB005] 3 * 06/06/23 14:44 30 03 [BB005] 4 * 02/06/23 17:34 10 226] * (M3002] * 12/06/23 09:47 1 * 12/06/23 09:47 1 m [IXBXX] * (M3002] * 12/06/23 09:02 7A EW013 5 Demand (COD) 09/06/23 16:44 EW094 8 [M3005]	Ioor, Adelphi Plaza, Page Number: rge's Street Upper, PO reference: Laoghaire, 966-2023-00026346 Received on AND 966-2023-00026346 Received on AND Surface water Analysis started on on Arrival Satisfactory Sample Date SUB ⁵ Analysis Method LOQ ³ SPEC ² 33 EB005] Started 10 10 33 * 06/06/23 14:44 30 10 10 33 * 06/06/23 17:34 10 10 10 226] * 02/06/23 09:47 10 10 10 BXU] * 12/06/23 09:47 10 10 10 EXUI * 12/06/23 09:47 10 10 10 F(M3002] 06/06/23 09:02 ^{7A} EW013 5 5 Demand (COD) [M3004] emand (COD) 09/06/23 16:44 EW094 8 10	Noor, Adelphi Plaza, ge's Street Upper, Laoghaire, in 1927, AND P6 - 2023 - 00026346 Received on Analysis started on 02/06/2023 02/06/2023 noce SW_M3 Surface water 966-2023 - 00026346 Received on Analysis started on 02/06/2023 02/06/2023 noce SW_M3 Surface water 92/05/2023 29/05/2023 SUB ⁵ Analysis Started Method LOQ ³ SPEC ² Result 33 (BB005] 3 06/06/23 14:44 30 343.4 ium [IX02T] * 12/06/23 09:47 10 <10.0	Inoc, Adelphi Plaza, ge's Street Upper, Laoghaire, in 1927 AND PO reference: 60699676 966-2023-00026346 Received on Analysis started on Surface water 02/06/2023 noce SW_M3 Surface water 29/05/2023 surface water 29/05/2023 No Arrival Satisfactory Sample Date SUB ⁶ Analysis Started Method LOQ ³ SPEC ² Result Units 31 [BB005] Started 10 <10.0

Signed: .

11/07/2023

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11/07/2023

Client:	AECOM Infrastructure	& Environment Ire	and		Certificate Code:	AR-23-M3-024	299-01
	Limited 4th Floor, Adelphi Plaz	2			Page Number:	Page 7 of 47	
	George's Street Upp Dun Laoghaire, Dublin A96 T927 IRELAND				PO reference:	60699676	
Sulphate mg	g/L - Gallery	12/06/23 13:01	EW175	1		50.5	mg/l
Phosphate	(Ortho/MRP) as P - Gallery	[M300P]					
Gallery	Ortho/MRP) as P - g/L - Gallery [M300Q]	12/06/23 13:01 ^{7A}	EW175	0.05	~	<0.05	mg/l
Fluoride mg		12/06/23 13:01	EW175	0.2		0.3	mg/l
	g/L - Gallery [M300S]						-
Chloride mg	/L - Gallery	12/06/23 13:01	EW175	5		21.5	mg/l
Ammonia a	s N - Gallery [M300Z]						
Ammonia as	s N - Gallery	12/06/23 13:01	EW175	0.05		0.20	mg/l
	N) - Gallery [M301A]						
Nitrate (as N	l) - Gallery	12/06/23 13:01 ^{7A}	EW175	1	2	2.331	mg/l
GCFID-Org	anic Solvents (Head Space						
Acetone		07/07/23 09:23	EO089			<2	mg/l
Acetonitrile		07/07/23 09:23	EO089			<2	mg/l
Amyl acetat	e	07/07/23 09:23	EO089			<2	mg/l
Cyclohexan	e	07/07/23 09:23	EO089			<2	mg/l
Cyclopentar	none	07/07/23 09:23	EO089			<2	mg/l
Dichloromet	hane	07/07/23 09:23	EO089			<2	mg/l
Ethanol		07/07/23 09:23	EO089			<5	mg/l
Ethyl Acetat	e	07/07/23 09:23	EO089			<2	mg/l
Heptane		07/07/23 09:23	EO089			<2	mg/l
IPA (2-Propa	anol)	07/07/23 09:23	EO089			<2	mg/l
Iso-Amyl alo	cohol	07/07/23 09:23	EO089			<5	mg/l

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11/07/2023

Client:	AECOM Infrastructure Limited 4th Floor, Adelphi Plaz George's Street Upp Dun Laoghaire, Dublin A96 T927 IRELAND	za,	reland		Certificate Code: Page Number: PO reference:	AR-23-M3-024 Page 8 of 47 60699676	1299-01
Isopropyl ad	cetate	07/07/23 09:23	EO089			<2	mg/l
Isopropyl Et	ther	07/07/23 09:23	EO089			<2	mg/l
Methanol		07/07/23 09:23	EO089			<5	mg/l
Methyl Ethy	l Ketone	07/07/23 09:23	EO089			<2	mg/l
n-Butyl Alco	ohol.(Butanol)	07/07/23 09:23	EO089			<2	mg/l
n-Hexane		07/07/23 09:23	EO089			<2	mg/l
sec-Butyl Al	lcohol	07/07/23 09:23	EO089			<2	mg/l
tert-Amylalo	cohol	07/07/23 09:23	EO089			<5	mg/l
Tert-Butano	I	07/07/23 09:23	EO089			<5	mg/l
tert-Butyl M	ethyl Ether	07/07/23 09:23	EO089			<2	mg/l
Tetrahydrof	uran	07/07/23 09:23	EO089			<2	mg/l
Toluene		07/07/23 09:23	EO089			<2	mg/l
Triethylamir	ne	07/07/23 09:23	EO089			<2	mg/l
Xylene -p		07/07/23 09:23	EO089			<2	mg/l
Xylene-M		07/07/23 09:23	EO089			<2	mg/l
Xylene-O		07/07/23 09:23	EO089			<2	mg/l
Xylenes-Tot	al	07/07/23 09:23	EO089			<2	mg/l
Temperatu	re (Site) [M3036]						
Temperatur	e	16/06/23 11:11	Site Test			N/A	°C
Arsenic - T	race [M3236]						
Arsenic		06/06/23 12:11		0.2	9	9.673	µg/l
	ace [M3237]						
Barium		06/06/23 12:11		1.77	4	52.05	µg/l

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Client:						AR-23-M3-024	299-01
	Limited 4th Floor, Adelphi Plaza	a			Page Number:	Page 9 of 47	
	George's Street Uppe Dun Laoghaire, Dublin A96 T927 IRELAND				PO reference:	60699676	
Beryllium -	Trace [M3238]						
Beryllium		06/06/23 12:11		1		<1	µg/l
Boron - Tra	ce [M3239]						
Boron		06/06/23 12:11		0.21		0.264	mg/l
	Trace [M3240]						
Cadmium		06/06/23 12:11		0.1		<0.1	µg/I
	ace [M3244]						
Copper (Cu		06/06/23 12:11		0.003		0.012	mg/l
Lead - Trac	e [M3246]			o =		0.000	
Lead (Pb)		06/06/23 12:11		0.5		2.299	µg/l
Mercury - I Mercury	race [M3249]	06/06/23 12:11		0.03		0.292	
Nickel - Tra	co [M2251]	00/00/23 12.11		0.03		0.292	µg/l
Nickel (Ni)		06/06/23 12:11		0.5		8.707	µg/l
. ,	Trace [M3255]	00,00,20 12.11		0.0			P9/1
Selenium (S		06/06/23 12:11		0.2		2.075	µg/l
· ·	Trace [M3268]						10
Vanadium (V		06/06/23 12:11		1		7.891	µg/l
Zinc - Trace	e [M3269]						
Zinc (Zn)		06/06/23 12:11	EW188	1		<1	µg/l
рН [М3282]							
рН		02/06/23 17:41 ^{7A}	EW158			8.0	
Conductivi	ty [M3283]						
Conductivity	1	02/06/23 17:41	EW153	100		683.3	µS/cm

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Client: AECOM Infrastructure & Environment Ireland Limited 4th Floor, Adelphi Plaza, George's Street Upper, Dun Laoghaire, **Dublin** A96 T927 **IRELAND**

Certificate Code: Page Number: **PO reference:**

AR-23-M3-024299-01 Page 10 of 47 60699676

⁴ Accreditiation Information

C6: ISO/IEC 17025:2017 INAB 138-T

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- 9. Report is issued as per out standard T&C of sale.



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Client:	t: AECOM Infrastructure & Environment Ireland Limited 4th Floor, Adelphi Plaza,				Certificate Co Page Number		: AR-23-M3-024299-01 Page 11 of 47		
	George's Street I Dun Laoghaire, Dublin A96 T927 IRELAND	Jpper,			PO reference	c 60699676			
Sample nu	mber	966-2023-0002634	47	Received on Analysis star	ted on	02/06/2023 02/06/2023			
Your sampl	e reference	SW_Y1		· · · · · · · · · · · · · · · · · · ·					
Sample Ma	ıtrix	Surface water							
Sample Co	ndition on Arrival	Satisfactory		Sample Date		29/05/2023			
Test Code Analyte		SUB ⁵ Analysis Started	Method	LOQ ³	SPEC ²	Result	Units	ACCRED ⁴	
Alkalinity a	as CAC03 [BB005]								
Alkalinity as	s CAC03	* 06/06/23 14:44		30		309.6	mg/l		
Hexavalen	t chromium [IX02T]								
Chromium	Cr 6+	* 19/06/23 06:50		10		<10.0	µg/l		
	ides [IX226]								
Cyanide, to	tal	* 02/06/23 17:34		10		<10.0	µg/l		
	(Cr) [IXBXU]								
Chromium		* 19/06/23 06:50		1		<1.00	µg/l		
	hromium [IXBXX]	* 19/06/23 06·50		10			"		
Chromium	()	* 19/06/23 06:50		10		Non calculable	µg/l		
Suspended	d Solids [M3002]	06/06/23 09:02 ^{7A}	EW013	5		10	mg/l		
•			EVVOIS	5		10	mg/i		
	Oxygen Demand (COD) xygen demand (COD)	09/06/23 16:44	EW094	8		37	mg/l		
	Oxygen [M3005]	00/00/20 10.44		0		01	iiig/i		
Dissolved of		03/06/23 16:01 ^{7A}	EW043	1		9.72	mg/l		
	ng/L - Gallery [M300N]	00,00,20 .0.01							

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Client:	AECOM Infrastructure	& Environment Ire	and		Certificate Code:	AR-23-M3-024299-01	
	Limited 4th Floor, Adelphi Plaz	22		Page Number:	Page 12 of 47		
	George's Street Upp Dun Laoghaire, Dublin A96 T927 IRELAND				PO reference:	60699676	
Sulphate mg	g/L - Gallery	12/06/23 13:01	EW175	1		89.9	mg/l
Phosphate	(Ortho/MRP) as P - Gallery	[M300P]					
Gallery	(Ortho/MRP) as P - g/L - Gallery [M300Q]	12/06/23 13:01 ^{7A}	EW175	0.05		<0.05	mg/l
Fluoride mg		12/06/23 13:01	EW175	0.2		<0.2	mg/l
	g/L - Gallery [M300S]						-
Chloride mg	ı/L - Gallery	12/06/23 13:01	EW175	5		16.4	mg/l
Ammonia a	is N - Gallery [M300Z]						
Ammonia as	s N - Gallery	12/06/23 13:01	EW175	0.05		0.11	mg/l
	N) - Gallery [M301A]						
Nitrate (as N	N) - Gallery	12/06/23 13:01 ^{7A}	EW175	1	2	2.432	mg/l
•	anic Solvents (Head Space						
Acetone		07/07/23 09:23	EO089			<2	mg/l
Acetonitrile		07/07/23 09:23	EO089			<2	mg/l
Amyl acetat	e	07/07/23 09:23	EO089			<2	mg/l
Cyclohexan	е	07/07/23 09:23	EO089			<2	mg/l
Cyclopentar	none	07/07/23 09:23	EO089			<2	mg/l
Dichloromet	hane	07/07/23 09:23	EO089			<2	mg/l
Ethanol		07/07/23 09:23	EO089			<5	mg/l
Ethyl Acetat	e	07/07/23 09:23	EO089			<2	mg/l
Heptane		07/07/23 09:23	EO089			<2	mg/l
IPA (2-Propa	anol)	07/07/23 09:23	EO089			<2	mg/l
Iso-Amyl ald	cohol	07/07/23 09:23	EO089			<5	mg/l

Signed:

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11/07/2023

Client:	AECOM Infrastructure Limited 4th Floor, Adelphi Plaz George's Street Upp Dun Laoghaire, Dublin A96 T927 IRELAND	za,	reland		Certificate Code: Page Number: PO reference:	AR-23-M3-024 Page 13 of 47 60699676	299-01
Isopropyl ac	cetate	07/07/23 09:23	EO089			<2	mg/l
Isopropyl Et	ther	07/07/23 09:23	EO089			<2	mg/l
Methanol		07/07/23 09:23	EO089			<5	mg/l
Methyl Ethy	l Ketone	07/07/23 09:23	EO089			<2	mg/l
n-Butyl Alco	hol.(Butanol)	07/07/23 09:23	EO089			<2	mg/l
n-Hexane		07/07/23 09:23	EO089			<2	mg/l
sec-Butyl Al	cohol	07/07/23 09:23	EO089			<2	mg/l
tert-Amylalo	cohol	07/07/23 09:23	EO089			<5	mg/l
Tert-Butano	I	07/07/23 09:23	EO089			<5	mg/l
tert-Butyl M	ethyl Ether	07/07/23 09:23	EO089			<2	mg/l
Tetrahydrofu	uran	07/07/23 09:23	EO089			<2	mg/l
Toluene		07/07/23 09:23	EO089			<2	mg/l
Triethylamir	ne	07/07/23 09:23	EO089			<2	mg/l
Xylene -p		07/07/23 09:23	EO089			<2	mg/l
Xylene-M		07/07/23 09:23	EO089			<2	mg/l
Xylene-O		07/07/23 09:23	EO089			<2	mg/l
Xylenes-Tot	al	07/07/23 09:23	EO089			<2	mg/l
Temperatu	re (Site) [M3036]						
Temperature	e	16/06/23 11:11	Site Test			N/A	°C
Arsenic - T	race [M3236]						
Arsenic		06/06/23 12:11		0.2	(0.854	µg/l
	ace [M3237]						
Barium		06/06/23 12:11		1.77	17	70.305	µg/l

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Limited 4th Flo Georg	d or, Adelphi Plaza e's Street Uppe aoghaire, 1 927		land		Certificate Code: Page Number: PO reference:	AR-23-M3-024 Page 14 of 47 60699676	299-01
Beryllium - Trace [M	3238]						
Beryllium		06/06/23 12:11		1		<1	µg/l
Boron - Trace [M323 Boron	9]	06/06/23 12:11		0.21		<0.21	m a /l
	22401	06/06/23 12:11		0.21		<0.21	mg/l
Cadmium - Trace [M Cadmium	3240]	06/06/23 12:11		0.1		<0.1	µg/l
Copper - Trace [M32	44]						
Copper (Cu)	-	06/06/23 12:11		0.003		0.003	mg/l
Lead - Trace [M3246	1						
Lead (Pb)		06/06/23 12:11		0.5		<0.5	µg/l
Mercury - Trace [M3	249]						
Mercury		06/06/23 12:11		0.03		<0.03	µg/l
Nickel - Trace [M325	1]						
Nickel (Ni)		06/06/23 12:11		0.5		8.756	µg/l
Selenium - Trace [M	3255]						
Selenium (Se)		06/06/23 12:11		0.2		0.927	µg/l
Vanadium - Trace [N	13268]						
Vanadium (V)		06/06/23 12:11		1		<1	µg/l
Zinc - Trace [M3269]		06/06/22 12:11	EW188	1		-1	
Zinc (Zn)		06/06/23 12:11		1		<1	µg/l
рН [M3282] рН		02/06/23 17:41 74	EW158			8.1	
Conductivity [M328	81	52/00/20 11.71	_***100			0.1	
Conductivity	-1	02/06/23 17:41	EW153	100		673.9	µS/cm

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Signed:

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Eurofins Environment Testing Ireland Hoffman Park, Inchera Cork T45 PC80 Ireland T: 0818 252526 Web: www.eurofins.ie Email: ASTsupport@etuki.eurofins.com



Client: AECOM Infrastructure & Environment Ireland Limited 4th Floor, Adelphi Plaza, George's Street Upper, Dun Laoghaire, **Dublin** A96 T927 **IRELAND**

Certificate Code: Page Number: **PO reference:**

AR-23-M3-024299-01 Page 15 of 47 60699676

⁴ Accreditiation Information

C6: ISO/IEC 17025:2017 INAB 138-T

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Eurofins Environment Testing Ireland Hoffman Park, Inchera Cork T45 PC80 Ireland T: 0818 252526 Web: www.eurofins.ie Email: ASTsupport@etuki.eurofins.com

Certificate Code: AR-23-M3-024299-01

11/07/2023



Limited	ture & Environment in	Certificate Code: AR-25-IN-5-024299-01					
4th Floor, Adelphi	Plaza,			Page Number:	Page 16 of 47		
George's Street Dun Laoghaire, Dublin A96 T927 IRELAND	Upper,			PO reference:	60699676		
Sample number	966-2023-0002634	8	Received on		02/06/2023		
			Analysis star	ted on	02/06/2023		
Your sample reference	SW_Y2						
Sample Matrix	Surface water						
Sample Condition on Arrival	Satisfactory		Sample Date	9	29/05/2023		
Test Code Analyte	SUB ⁵ Analysis Started	Method	LOQ ³	SPEC ²	Result	Units	ACCRED ⁴
Alkalinity as CAC03 [BB005]							
Alkalinity as CAC03	* 06/06/23 14:44		30		307.8	mg/l	
Hexavalent chromium [IX02T]							
Chromium Cr 6+	* 12/06/23 09:47		10		<10.0	µg/l	
Total cyanides [IX226]							
Cyanide, total	* 02/06/23 17:34		10		<10.0	µg/l	
Chromium (Cr) [IXBXU]							
Chromium (Cr)	* 12/06/23 09:47		1		3.05	µg/l	
Trivalent chromium [IXBXX]							
Chromium (III)	* 12/06/23 09:47		10		<10	µg/l	
Suspended Solids [M3002]							
Suspended Solids	06/06/23 09:04 ^{7A}	EW013	5		432	mg/l	
Chemical Oxygen Demand (COD) [M3004]					-	
Chemical oxygen demand (COD)	16/06/23 16:19	EW094	8		210	mg/l	
Dissolved Oxygen [M3005]						-	
Dissolved oxygen	03/06/23 16:02 74	EW043	1		8.67	mg/l	
Sulphate mg/L - Gallery [M300N]						0	
in the second second second second							

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Client: AECOM Infrastructure & Environment Ireland Limited					Certificate Code:	AR-23-M3-024299-01	
		2			Page Number:	Page 17 of 47	
	4th Floor, Adelphi Plaz George's Street Upp Dun Laoghaire, Dublin A96 T927 IRELAND				PO reference:	60699676	
Sulphate m	g/L - Gallery	12/06/23 13:01	EW175	1		85.5	mg/l
Phosphate	(Ortho/MRP) as P - Gallery	[M300P]					
Gallery	Ortho/MRP) as P - g/L - Gallery [M300Q]	12/06/23 13:01 ^{7A}	EW175	0.05	~	0.05	mg/l
Fluoride mg		12/06/23 13:01	EW175	0.2		<0.2	mg/l
Chloride m	g/L - Gallery [M300S]						
Chloride mg	/L - Gallery	12/06/23 13:01	EW175	5		15.6	mg/l
Ammonia a	is N - Gallery [M300Z]						
Ammonia as	s N - Gallery	12/06/23 13:01	EW175	0.05		0.22	mg/l
Nitrate (as	N) - Gallery [M301A]						
Nitrate (as N	N) - Gallery	12/06/23 13:01 ^{7A}	EW175	1	2	2.506	mg/l
GCFID-Org	anic Solvents (Head Space						
Acetone		07/07/23 09:23	EO089			<2	mg/l
Acetonitrile		07/07/23 09:23	EO089			<2	mg/l
Amyl acetat	e	07/07/23 09:23	EO089			<2	mg/l
Cyclohexan	е	07/07/23 09:23	EO089			<2	mg/l
Cyclopentar	none	07/07/23 09:23	EO089			<2	mg/l
Dichloromet	hane	07/07/23 09:23	EO089			<2	mg/l
Ethanol		07/07/23 09:23	EO089			<5	mg/l
Ethyl Acetat	e	07/07/23 09:23	EO089			<2	mg/l
Heptane		07/07/23 09:23	EO089			<2	mg/l
IPA (2-Propa	anol)	07/07/23 09:23	EO089			<2	mg/l
Iso-Amyl ald	cohol	07/07/23 09:23	EO089			<5	mg/l

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Client:	AECOM Infrastructure Limited 4th Floor, Adelphi Plaz George's Street Upp Dun Laoghaire, Dublin A96 T927 IRELAND	za,	reland		Certificate Code: Page Number: PO reference:	AR-23-M3-024 Page 18 of 47 60699676	299-01
Isopropyl ac	cetate	07/07/23 09:23	EO089			<2	mg/l
Isopropyl Et	ther	07/07/23 09:23	EO089			<2	mg/l
Methanol		07/07/23 09:23	EO089			<5	mg/l
Methyl Ethy	l Ketone	07/07/23 09:23	EO089			<2	mg/l
n-Butyl Alco	hol.(Butanol)	07/07/23 09:23	EO089			<2	mg/l
n-Hexane		07/07/23 09:23	EO089			<2	mg/l
sec-Butyl Al	cohol	07/07/23 09:23	EO089			<2	mg/l
tert-Amylalo	cohol	07/07/23 09:23	EO089			<5	mg/l
Tert-Butano	I	07/07/23 09:23	EO089			<5	mg/l
tert-Butyl M	ethyl Ether	07/07/23 09:23	EO089			<2	mg/l
Tetrahydrofu	uran	07/07/23 09:23	EO089			<2	mg/l
Toluene		07/07/23 09:23	EO089			<2	mg/l
Triethylamir	ne	07/07/23 09:23	EO089			<2	mg/l
Xylene -p		07/07/23 09:23	EO089			<2	mg/l
Xylene-M		07/07/23 09:23	EO089			<2	mg/l
Xylene-O		07/07/23 09:23	EO089			<2	mg/l
Xylenes-Tot	al	07/07/23 09:23	EO089			<2	mg/l
Temperatu	re (Site) [M3036]						
Temperature	e	16/06/23 11:11	Site Test			N/A	°C
Arsenic - T	race [M3236]						
Arsenic		06/06/23 12:11		0.2	:	3.954	µg/l
	ace [M3237]						
Barium		06/06/23 12:11		1.77	3	58.717	µg/l

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Client:	AECOM Infrastructure a Limited 4th Floor, Adelphi Plaza George's Street Uppe Dun Laoghaire, Dublin A96 T927 IRELAND	a,	land		<i>Certificate Code Page Number: PO reference:</i>	AR-23-M3-024 Page 19 of 47 60699676	299-01
-	Trace [M3238]						
Beryllium	[140000]	06/06/23 12:11		1		<1	µg/l
Boron - Ira Boron	ce [M3239]	06/06/23 12:11		0.21		<0.21	mg/l
	Trace [M3240]	00/00/23 12.11		0.21		<0.21	ilig/i
Cadmium		06/06/23 12:11		0.1		0.428	µg/l
Copper - Tr	ace [M3244]						
Copper (Cu)	06/06/23 12:11		0.003		0.011	mg/l
Lead - Trac	e [M3246]						
Lead (Pb)		06/06/23 12:12		0.5		1.031	µg/l
Mercury - T	race [M3249]						
Mercury		06/06/23 12:12		0.03		0.226	µg/l
Nickel - Tra	ce [M3251]						
Nickel (Ni)		06/06/23 12:12		0.5		21.517	µg/l
	Trace [M3255]	00/00/00 40-40		0.2		0.700	
Selenium (S		06/06/23 12:12		0.2		0.782	µg/l
Vanadium (• Trace [M3268]	06/06/23 12:12		1		4.221	µg/l
Zinc - Trace	,	00/00/23 12.12		I		4.221	μg/i
Zinc (Zn)	[moreo]	06/06/23 12:12	EW188	1		15.1	µg/l
pH [M3282]							1.9.
pН		02/06/23 17:41 ^{7A}	EW158			7.9	
Conductivi	ty [M3283]						
Conductivity	/	02/06/23 17:41	EW153	100		669.7	µS/cm

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Client: AECOM Infrastructure & Environment Ireland Limited 4th Floor, Adelphi Plaza, George's Street Upper, Dun Laoghaire, **Dublin** A96 T927 **IRELAND**

Certificate Code: Page Number: **PO reference:**

AR-23-M3-024299-01 Page 20 of 47 60699676

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C6: ISO/IEC 17025:2017 INAB 138-T

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Client:	AECOM Infrastruct Limited 4th Floor, Adelphi George's Street I Dun Laoghaire,		Ireland		Certificate Coo Page Number: PO reference:			
	Dublin A96 T927 IRELAND							
Sample nu	mber	966-2023-000263	349	Received on Analysis star	ted on	02/06/2023 02/06/2023		
Your sampl	e reference	Sw_R1		, that yold otal		02,00,2020		
Sample Ma		Surface water						
Sample Co	ndition on Arrival	Satisfactory		Sample Date		29/05/2023		
Test Code Analyte		SUB ⁵ Analysis Started	Method	LOQ ³	SPEC ²	Result	Units	ACCRED ⁴
Alkalinity a	as CAC03 [BB005]							
Alkalinity as	s CAC03	* 06/06/23 14:44		30		276.3	mg/l	
	t chromium [IX02T]							
Chromium		* 12/06/23 09:47		10		<10.0	µg/l	
Cyanide, to	ides [IX226]	* 02/06/23 17:34		10		<10.0	µg/l	
-	(Cr) [IXBXU]	02/00/25 17.54		10		\$10.0	μg/i	
Chromium		* 12/06/23 09:47		1		<1.00	µg/l	
Trivalent c	hromium [IXBXX]							
Chromium	(111)	* 12/06/23 09:47		10	1	lon calculable	μg/l	
	d Solids [M3002]	_						
Suspended		06/06/23 09:0274	EW013	5		16	mg/l	
	Oxygen Demand (COD)			0		10	ma =: //	
	oxygen demand (COD)	09/06/23 16:44	EW094	8		13	mg/l	
Dissolved Dissolved of	Oxygen [M3005]	03/06/23 16:04 74	EW043	1		6.58	mg/l	
	ng/L - Gallery [M300N]	00,00,20 10.04	2			3.00		
	• 7 • • • • • •							

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11/07/2023

Client:	AECOM Infrastructure	& Environment Ire	and		Certificate Code:	AR-23-M3-024299-01	
	Limited 4th Floor, Adelphi Plaz	22		Page Number:	Page 22 of 47		
	George's Street Upp Dun Laoghaire, Dublin A96 T927 IRELAND				PO reference:	60699676	
Sulphate mg	g/L - Gallery	12/06/23 13:01	EW175	1		26.2	mg/l
Phosphate	(Ortho/MRP) as P - Gallery	[M300P]					
Gallery	Ortho/MRP) as P - g/L - Gallery [M300Q]	12/06/23 13:01 ^{7A}	EW175	0.05		<0.05	mg/l
Fluoride mg		12/06/23 13:01	EW175	0.2		<0.2	mg/l
	g/L - Gallery [M300S]						-
Chloride mg	/L - Gallery	12/06/23 13:01	EW175	5		18.4	mg/l
Ammonia a	s N - Gallery [M300Z]						
Ammonia as	s N - Gallery	12/06/23 13:01	EW175	0.05		0.16	mg/l
	N) - Gallery [M301A]						
Nitrate (as N	l) - Gallery	12/06/23 13:01 ^{7A}	EW175	1		<1	mg/l
•	anic Solvents (Head Space						
Acetone		07/07/23 09:23	EO089			<2	mg/l
Acetonitrile		07/07/23 09:23	EO089			<2	mg/l
Amyl acetat	e	07/07/23 09:23	EO089			<2	mg/l
Cyclohexan	e	07/07/23 09:23	EO089			<2	mg/l
Cyclopentar	none	07/07/23 09:23	EO089			<2	mg/l
Dichloromet	hane	07/07/23 09:23	EO089			<2	mg/l
Ethanol		07/07/23 09:23	EO089			<5	mg/l
Ethyl Acetat	e	07/07/23 09:23	EO089			<2	mg/l
Heptane		07/07/23 09:23	EO089			<2	mg/l
IPA (2-Propa	anol)	07/07/23 09:23	EO089			<2	mg/l
Iso-Amyl alo	cohol	07/07/23 09:23	EO089			<5	mg/l

Signed:

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Client:	AECOM Infrastructure Limited 4th Floor, Adelphi Plaz George's Street Upp Dun Laoghaire, Dublin A96 T927 IRELAND	za,	reland		Certificate Code: Page Number: PO reference:	AR-23-M3-024 Page 23 of 47 60699676	
Isopropyl ad	cetate	07/07/23 09:23	EO089			<2	mg/l
Isopropyl Et	ther	07/07/23 09:23	EO089			<2	mg/l
Methanol		07/07/23 09:23	EO089			<5	mg/l
Methyl Ethy	l Ketone	07/07/23 09:23	EO089			<2	mg/l
n-Butyl Alco	ohol.(Butanol)	07/07/23 09:23	EO089			<2	mg/l
n-Hexane		07/07/23 09:23	EO089			<2	mg/l
sec-Butyl Al	lcohol	07/07/23 09:23	EO089			<2	mg/l
tert-Amylalo	cohol	07/07/23 09:23	EO089			<5	mg/l
Tert-Butano	I	07/07/23 09:23	EO089			<5	mg/l
tert-Butyl M	ethyl Ether	07/07/23 09:23	EO089			<2	mg/l
Tetrahydrof	uran	07/07/23 09:23	EO089			<2	mg/l
Toluene		07/07/23 09:23	EO089			<2	mg/l
Triethylamir	ne	07/07/23 09:23	EO089			<2	mg/l
Xylene -p		07/07/23 09:23	EO089			<2	mg/l
Xylene-M		07/07/23 09:23	EO089			<2	mg/l
Xylene-O		07/07/23 09:23	EO089			<2	mg/l
Xylenes-Tot	al	07/07/23 09:23	EO089			<2	mg/l
Temperatu	re (Site) [M3036]						
Temperatur	е	16/06/23 11:11	Site Test			N/A	°C
Arsenic - T	race [M3236]						
Arsenic		06/06/23 12:12		0.2	(0.508	µg/l
Barium - Tr	race [M3237]						
Barium		06/06/23 12:12		1.77	5	60.595	µg/l

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Client:	AECOM Infrastructure	& Environment Ire	Environment Ireland			AR-23-M3-024	AR-23-M3-024299-01	
	Limited 4th Floor, Adelphi Plaz	a			Page Number:	Page 24 of 47		
	George's Street Uppe Dun Laoghaire, Dublin A96 T927 IRELAND				PO reference:	60699676		
Beryllium -	Trace [M3238]							
Beryllium		06/06/23 12:12		1		<1	µg/l	
Boron - Tra	ce [M3239]							
Boron		06/06/23 12:12		0.21		<0.21	mg/l	
	Trace [M3240]							
Cadmium		06/06/23 12:12		0.1		<0.1	µg/l	
	ace [M3244]	06/06/23 12:12		0.003		<0.003	m a /l	
Copper (Cu		00/00/23 12.12		0.003		<0.003	mg/l	
Lead - Trac Lead (Pb)	e [W3246]	06/06/23 12:12		0.5		<0.5	µg/l	
	race [M3249]	00/00/20 12:12		0.0		-0.0	P9/1	
Mercury		06/06/23 12:12		0.03		0.111	µg/l	
Nickel - Tra	ce [M3251]						10	
Nickel (Ni)		06/06/23 12:12		0.5		0.965	µg/l	
Selenium -	Trace [M3255]							
Selenium (S	Se)	06/06/23 12:12		0.2		0.202	µg/l	
	Trace [M3268]							
Vanadium (,	06/06/23 12:12		1		<1	µg/l	
Zinc - Trace	e [M3269]		=14/400					
Zinc (Zn)		06/06/23 12:12	EW188	1		<1	µg/l	
рН [M3282] рН		02/06/23 17:41 7A	EW158			7.6		
p⊓ Conductivi	ty [M3283]	02/00/23 17.41				7.0		
Conductivity		02/06/23 17:41	EW153	100		515.6	µS/cm	

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Signed:

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Client: AECOM Infrastructure & Environment Ireland Limited 4th Floor, Adelphi Plaza, George's Street Upper, Dun Laoghaire, **Dublin** A96 T927 **IRELAND**

Certificate Code: Page Number: **PO reference:**

AR-23-M3-024299-01 Page 25 of 47 60699676

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⁴ Accreditiation Information

C6: ISO/IEC 17025:2017 INAB 138-T

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Client: AECOM Infrastructu	re & Environment Ir	eland		Certificate C	ode: AR-23-N	13-024299-01	
Limited 4th Floor, Adelphi Pl		Page Numbe	er: Page 26	of 47			
George's Street Up Dun Laoghaire, Dublin A96 T927 IRELAND				PO reference	e: 6069967	6	
Sample number	966-2023-0002635	0	Received on Analysis star		02/06/2023 02/06/2023		
Your sample reference Sample Matrix	Sw_C1 Surface water						
Sample Condition on Arrival	Satisfactory		Sample Date		29/05/2023		
Test Code Analyte	SUB ⁵ Analysis Started	Method	LOQ ³	SPEC ²	Result	Units	ACCRED ⁴
Alkalinity as CAC03 [BB005]							
Alkalinity as CAC03	* 06/06/23 14:44		30		334.8	mg/l	
Hexavalent chromium [IX02T]							
Chromium Cr 6+	* 12/06/23 09:47		10		<10.0	µg/l	
Total cyanides [IX226] Cyanide, total	* 02/06/23 17:34		10		<10.0	µg/l	
Chromium (Cr) [IXBXU]	02/00/20 11:04		10		10.0	P9/1	
Chromium (Cr)	* 12/06/23 09:47		1		<1.00	μg/l	
Trivalent chromium [IXBXX]							
Chromium (III)	* 12/06/23 09:47		10		Non calculable	μg/l	
Suspended Solids [M3002]			_		_		
Suspended Solids	06/06/23 09:02 ^{7A}	EW013	5		<5	mg/l	
Chemical Oxygen Demand (COD) [I Chemical oxygen demand (COD)	09/06/23 16:44	EW094	8		26	mg/l	
Dissolved Oxygen [M3005]	03/00/23 10.44		0		20	ing/i	
Dissolved oxygen	03/06/23 16:02 74	EW043	1		9.73	mg/l	
Sulphate mg/L - Gallery [M300N]						-	

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Client:	AECOM Infrastructure	Certificate Code:	AR-23-M3-024299-01				
	Limited 4th Floor, Adelphi Plaz				Page Number:	Page 27 of 47	
	George's Street Upp Dun Laoghaire, Dublin A96 T927 IRELAND				PO reference:	60699676	
Sulphate mo	g/L - Gallery	12/06/23 13:01	EW175	1		76.2	mg/l
Phosphate	(Ortho/MRP) as P - Gallery	[M300P]					
Gallery	(Ortho/MRP) as P - g/L - Gallery [M300Q]	12/06/23 13:01 ^{7A}	EW175	0.05		<0.05	mg/l
Fluoride mg		12/06/23 13:01	EW175	0.2		<0.2	mg/l
Chloride m	g/L - Gallery [M300S]						-
Chloride mg	ı/L - Gallery	12/06/23 13:01	EW175	5		13.7	mg/l
Ammonia a	is N - Gallery [M300Z]						
Ammonia as	s N - Gallery	12/06/23 13:01	EW175	0.05		0.55	mg/l
Nitrate (as	N) - Gallery [M301A]						
Nitrate (as N	N) - Gallery	12/06/23 13:01 ^{7A}	EW175	1		1.725	mg/l
GCFID-Org	anic Solvents (Head Space) [M3027]					
Acetone		07/07/23 09:23	EO089			<2	mg/l
Acetonitrile		07/07/23 09:23	EO089			<2	mg/l
Amyl acetat	e	07/07/23 09:23	EO089			<2	mg/l
Cyclohexan	e	07/07/23 09:23	EO089			<2	mg/l
Cyclopentar	none	07/07/23 09:23	EO089			<2	mg/l
Dichloromet	hane	07/07/23 09:23	EO089			<2	mg/l
Ethanol		07/07/23 09:23	EO089			<5	mg/l
Ethyl Acetat	e	07/07/23 09:23	EO089			<2	mg/l
Heptane		07/07/23 09:23	EO089			<2	mg/l
IPA (2-Propa	anol)	07/07/23 09:23	EO089			<2	mg/l
Iso-Amyl ald	cohol	07/07/23 09:23	EO089			<5	mg/l

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Client:	AECOM Infrastructure Limited 4th Floor, Adelphi Plaz George's Street Upp Dun Laoghaire, Dublin A96 T927 IRELAND	za,	reland		Certificate Code: Page Number: PO reference:	AR-23-M3-024 Page 28 of 47 60699676	
Isopropyl ad	cetate	07/07/23 09:23	EO089			<2	mg/l
Isopropyl Et	ther	07/07/23 09:23	EO089			<2	mg/l
Methanol		07/07/23 09:23	EO089			<5	mg/l
Methyl Ethy	I Ketone	07/07/23 09:23	EO089			<2	mg/l
n-Butyl Alco	ohol.(Butanol)	07/07/23 09:23	EO089			<2	mg/l
n-Hexane		07/07/23 09:23	EO089			<2	mg/l
sec-Butyl Al	lcohol	07/07/23 09:23	EO089			<2	mg/l
tert-Amylalo	cohol	07/07/23 09:23	EO089			<5	mg/l
Tert-Butano	I	07/07/23 09:23	EO089			<5	mg/l
tert-Butyl M	ethyl Ether	07/07/23 09:23	EO089			<2	mg/l
Tetrahydrof	uran	07/07/23 09:23	EO089			<2	mg/l
Toluene		07/07/23 09:23	EO089			<2	mg/l
Triethylamir	ne	07/07/23 09:23	EO089			<2	mg/l
Xylene -p		07/07/23 09:23	EO089			<2	mg/l
Xylene-M		07/07/23 09:23	EO089			<2	mg/l
Xylene-O		07/07/23 09:23	EO089			<2	mg/l
Xylenes-Tot	al	07/07/23 09:23	EO089			<2	mg/l
Temperatu	re (Site) [M3036]						
Temperatur	е	16/06/23 11:11	Site Test			N/A	°C
Arsenic - T	race [M3236]						
Arsenic		06/06/23 12:12		0.2		1.702	µg/l
Barium - Tr	race [M3237]						
Barium		06/06/23 12:12		1.77	2	211.46	µg/l

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Client:	AECOM Infrastructure a Limited 4th Floor, Adelphi Plaza George's Street Uppe Dun Laoghaire, Dublin A96 T927	а,	land		Certificate Code: Page Number: PO reference:	AR-23-M3-024 Page 29 of 47 60699676	299-01
	IRELAND						
Beryllium -	Trace [M3238]						
Beryllium		06/06/23 12:12		1		<1	µg/l
Boron - Tra	ce [M3239]						
Boron		06/06/23 12:12		0.21		<0.21	mg/l
Cadmium - Cadmium	Trace [M3240]	06/06/23 12:12		0.1		-0.1	
	ace [M3244]	00/00/23 12.12		0.1		<0.1	µg/l
Copper - II		06/06/23 12:12		0.003		<0.003	mg/l
Lead - Trac							
Lead (Pb)		06/06/23 12:12		0.5		<0.5	µg/l
Mercury - T	race [M3249]						
Mercury		06/06/23 12:12		0.03		<0.03	µg/l
Nickel - Tra	ce [M3251]						
Nickel (Ni)		06/06/23 12:12		0.5		3.886	µg/l
	Trace [M3255]	00/00/00 40 40		0.2		0.400	
Selenium (S	e) · Trace [M3268]	06/06/23 12:12		0.2		0.438	µg/l
Vanadium (06/06/23 12:12		1		<1	µg/l
Zinc - Trace	,	00,00,20 12112					P-9/1
Zinc (Zn)		06/06/23 12:12	EW188	1		<1	µg/l
рН [М3282]							
pН		02/06/23 17:41 ^{7A}	EW158			8.0	
Conductivi							
Conductivity	1	02/06/23 17:41	EW153	100		685.9	µS/cm

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Client: AECOM Infrastructure & Environment Ireland Limited 4th Floor, Adelphi Plaza, George's Street Upper, Dun Laoghaire, **Dublin** A96 T927 **IRELAND**

Certificate Code: Page Number: **PO reference:**

AR-23-M3-024299-01 Page 30 of 47 60699676

⁴ Accreditiation Information

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mg/l

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Client: **Certificate Code:** AR-23-M3-024299-01 **AECOM Infrastructure & Environment Ireland** Limited Page Number: Page 31 of 47 4th Floor, Adelphi Plaza, George's Street Upper, **PO reference:** 60699676 Dun Laoghaire, **Dublin** A96 T927 **IRELAND** Received on 02/06/2023 Sample number 966-2023-00026351 Analysis started on 02/06/2023 Your sample reference SW C2 Surface water Sample Matrix Sample Condition on Arrival Satisfactory Sample Date 29/05/2023 SUB⁵ Analysis LOQ³ SPEC² ACCRED⁴ **Test Code** Method Result Units Started Analyte Alkalinity as CAC03 [BB005] Alkalinity as CAC03 06/06/23 14:44 30 315.1 mg/l Hexavalent chromium [IX02T] Chromium Cr 6+ 12/06/23 09:47 10 <10.0 µg/l Total cyanides [IX226] 02/06/23 17:34 Cyanide, total 10 <10.0 µq/l Chromium (Cr) [IXBXU] 12/06/23 09:47 2.23 Chromium (Cr) 1 µg/l Trivalent chromium [IXBXX] Chromium (III) 12/06/23 09:47 10 <10 µg/l Suspended Solids [M3002] 06/06/23 09:02 74 Suspended Solids FW013 5 48 mg/l Chemical Oxygen Demand (COD) [M3004] Chemical oxygen demand (COD) 09/06/23 17:24 EW094 8 <8 mg/l **Dissolved Oxygen [M3005]**

Sulphate mg/L - Gallery [M300N]

Dissolved oxygen

EW043

1

03/06/23 16:01 74

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Client:	AECOM Infrastructure	Certificate Code:	AR-23-M3-024299-01				
	Limited 4th Floor, Adelphi Plaz	•			Page Number:	Page 32 of 47	
	George's Street Upp Dun Laoghaire, Dublin A96 T927 IRELAND				PO reference:	60699676	
Sulphate mo	g/L - Gallery	12/06/23 13:01	EW175	1		19.8	mg/l
Phosphate	(Ortho/MRP) as P - Gallery	[M300P]					
Gallery	Ortho/MRP) as P - g/L - Gallery [M300Q]	12/06/23 13:01 ^{7A}	EW175	0.05		<0.05	mg/l
Fluoride mg		12/06/23 13:01	EW175	0.2		0.2	mg/l
Chloride m	g/L - Gallery [M300S]						-
Chloride mg	/L - Gallery	12/06/23 13:01	EW175	5		12.3	mg/l
Ammonia a	s N - Gallery [M300Z]						
Ammonia as	s N - Gallery	12/06/23 13:01	EW175	0.05		0.43	mg/l
Nitrate (as	N) - Gallery [M301A]						
Nitrate (as N	I) - Gallery	12/06/23 13:01 ^{7A}	EW175	1		1.379	mg/l
GCFID-Org	anic Solvents (Head Space) [M3027]					
Acetone		07/07/23 09:23	EO089			<2	mg/l
Acetonitrile		07/07/23 09:23	EO089			<2	mg/l
Amyl acetat	e	07/07/23 09:23	EO089			<2	mg/l
Cyclohexan	e	07/07/23 09:23	EO089			<2	mg/l
Cyclopentar	none	07/07/23 09:23	EO089			<2	mg/l
Dichloromet	hane	07/07/23 09:23	EO089			<2	mg/l
Ethanol		07/07/23 09:23	EO089			<5	mg/l
Ethyl Acetat	e	07/07/23 09:23	EO089			<2	mg/l
Heptane		07/07/23 09:23	EO089			<2	mg/l
IPA (2-Propa	anol)	07/07/23 09:23	EO089			<2	mg/l
Iso-Amyl alo	cohol	07/07/23 09:23	EO089			<5	mg/l

Signed:

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11/07/2023

Client:	AECOM Infrastructure Limited 4th Floor, Adelphi Plaz George's Street Upp Dun Laoghaire, Dublin A96 T927 IRELAND	za,	reland		Certificate Code: Page Number: PO reference:	AR-23-M3-024 Page 33 of 47 60699676	299-01
Isopropyl ac	cetate	07/07/23 09:23	EO089			<2	mg/l
Isopropyl Et	ther	07/07/23 09:23	EO089			<2	mg/l
Methanol		07/07/23 09:23	EO089			<5	mg/l
Methyl Ethy	l Ketone	07/07/23 09:23	EO089			<2	mg/l
n-Butyl Alco	hol.(Butanol)	07/07/23 09:23	EO089			<2	mg/l
n-Hexane		07/07/23 09:23	EO089			<2	mg/l
sec-Butyl Al	cohol	07/07/23 09:23	EO089			<2	mg/l
tert-Amylalo	cohol	07/07/23 09:23	EO089			<5	mg/l
Tert-Butano	I	07/07/23 09:23	EO089			<5	mg/l
tert-Butyl M	ethyl Ether	07/07/23 09:23	EO089			<2	mg/l
Tetrahydrofu	uran	07/07/23 09:23	EO089			<2	mg/l
Toluene		07/07/23 09:23	EO089			<2	mg/l
Triethylamir	ne	07/07/23 09:23	EO089			<2	mg/l
Xylene -p		07/07/23 09:23	EO089			<2	mg/l
Xylene-M		07/07/23 09:23	EO089			<2	mg/l
Xylene-O		07/07/23 09:23	EO089			<2	mg/l
Xylenes-Tot	al	07/07/23 09:23	EO089			<2	mg/l
Temperatu	re (Site) [M3036]						
Temperature	e	16/06/23 11:11	Site Test			N/A	°C
Arsenic - T	race [M3236]						
Arsenic		06/06/23 12:12		0.2		1.409	µg/l
	ace [M3237]						
Barium		06/06/23 12:12		1.77	1;	32.867	µg/l

Signed:

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Eurofins Environment Testing Ireland Hoffman Park, Inchera Cork T45 PC80 Ireland T: 0818 252526 Web: www.eurofins.ie Email: ASTsupport@etuki.eurofins.com



Client:	AECOM Infrastructure a Limited 4th Floor, Adelphi Plaza George's Street Uppe Dun Laoghaire, Dublin	а,	land		Certificate Code: Page Number: PO reference:	AR-23-M3-024 Page 34 of 47 60699676	
	A96 T927 IRELAND						
Beryllium -	Trace [M3238]						
Beryllium		06/06/23 12:12		1		<1	µg/l
Boron - Tra	ce [M3239]						
Boron		06/06/23 12:12		0.21		<0.21	mg/l
	Trace [M3240]						
Cadmium		06/06/23 12:12		0.1		0.182	µg/l
	ace [M3244]	00/00/00 40-40		0.003		0.000	
Copper (Cu		06/06/23 12:12		0.003		0.003	mg/l
Lead - Trac Lead (Pb)	e [WI3246]	06/06/23 12:12		0.5		0.597	µg/l
	race [M3249]	00/00/20 12.12		0.0		0.001	μg/i
Mercury		06/06/23 12:12		0.03		0.213	µg/l
Nickel - Tra	ce [M3251]						10
Nickel (Ni)		06/06/23 12:12		0.5		2.756	µg/l
Selenium -	Trace [M3255]						
Selenium (S	Se)	06/06/23 12:12		0.2		0.372	µg/l
	Trace [M3268]						
Vanadium (V	V)	06/06/23 12:12		1		1.338	µg/l
Zinc - Trace	ə [M3269]						
Zinc (Zn)		06/06/23 12:12	EW188	1		<1	µg/l
рН [М3282]		00/00/00 47 44 74	E14/4 E 0			7.0	
pH Conductivit	h. [M2000]	02/06/23 17:41 74	EW158			7.9	
Conductivity Conductivity		02/06/23 17:41	EW153	100		568.4	μS/cm

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Eurofins Environment Testing Ireland Hoffman Park, Inchera Cork T45 PC80 Ireland T: 0818 252526 Web: www.eurofins.ie Email: ASTsupport@etuki.eurofins.com



Client: AECOM Infrastructure & Environment Ireland Limited 4th Floor, Adelphi Plaza, George's Street Upper, Dun Laoghaire, **Dublin** A96 T927 **IRELAND**

Certificate Code: Page Number: **PO reference:**

AR-23-M3-024299-01 Page 35 of 47 60699676

⁴ Accreditiation Information

C6: ISO/IEC 17025:2017 INAB 138-T

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Certificate Code: AR-23-M3-024299-01



Limited	ucture & Environment I	leianu		Certificate Cot			
4th Floor, Adelp	hi Plaza,			Page Number:	Page 36 of 47	,	
George's Stree Dun Laoghaire Dublin A96 T927 IRELAND	et Upper,			PO reference:	60699676		
Sample number	966-2023-000263	52	Received on		02/06/2023		
			Analysis star	rted on	02/06/2023		
Your sample reference	SW_E1						
Sample Matrix	Surface water						
Sample Condition on Arrival	Satisfactory		Sample Date		29/05/2023		
Test Code Analyte	SUB ⁵ Analysis Started	Method	LOQ ³	SPEC ²	Result	Units	ACCRED ⁴
Alkalinity as CAC03 [BB005]							
Alkalinity as CAC03	* 06/06/23 14:44		30		297.7	mg/l	
Hexavalent chromium [IX02T]							
Chromium Cr 6+	* 12/06/23 09:47		10		<20.0	µg/l	
Total cyanides [IX226]							
Cyanide, total	* 02/06/23 17:34		10		<10.0	µg/l	
Chromium (Cr) [IXBXU]							
Chromium (Cr)	* 12/06/23 09:47		1		<1.00	µg/l	
Trivalent chromium [IXBXX]							
Chromium (III)	* 12/06/23 09:47		10	1	Non calculable	µg/l	
Suspended Solids [M3002]							
Suspended Solids	06/06/23 09:02 ^{7A}	EW013	5		29	mg/l	
Chemical Oxygen Demand (CO	DD) [M3004]						
Chemical oxygen demand (COD) 16/06/23 16:20	EW094	8		260	mg/l	
Dissolved Oxygen [M3005]							
Dissolved oxygen	03/06/23 16:06 74	EW043	1		7.9	mg/l	
Sulphate mg/L - Gallery [M300	NIT						

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11/07/2023

Client:	AECOM Infrastructure	Certificate Code:	AR-23-M3-024299-01				
	Limited 4th Floor, Adelphi Plaz	2			Page Number:	Page 37 of 47	
	George's Street Upp Dun Laoghaire, Dublin A96 T927 IRELAND				PO reference:	60699676	
Sulphate mo	g/L - Gallery	12/06/23 13:01	EW175	1		7.74	mg/l
Phosphate	(Ortho/MRP) as P - Gallery	[M300P]					
Gallery	(Ortho/MRP) as P - g/L - Gallery [M300Q]	12/06/23 13:01 ^{7A}	EW175	0.05		<0.05	mg/l
Fluoride mg		12/06/23 13:01	EW175	0.2		0.2	mg/l
Chloride m	g/L - Gallery [M300S]						-
Chloride mg	ı/L - Gallery	12/06/23 13:01	EW175	5		12.8	mg/l
Ammonia a	is N - Gallery [M300Z]						
Ammonia as	s N - Gallery	12/06/23 13:01	EW175	0.05	•	<0.05	mg/l
Nitrate (as	N) - Gallery [M301A]						
Nitrate (as N	N) - Gallery	12/06/23 13:01 ^{7A}	EW175	1		1.58	mg/l
GCFID-Org	anic Solvents (Head Space	e) [M3027]					
Acetone		07/07/23 09:23	EO089			<2	mg/l
Acetonitrile		07/07/23 09:23	EO089			<2	mg/l
Amyl acetat	e	07/07/23 09:23	EO089			<2	mg/l
Cyclohexan	е	07/07/23 09:23	EO089			<2	mg/l
Cyclopentar	none	07/07/23 09:23	EO089			<2	mg/l
Dichloromet	hane	07/07/23 09:23	EO089			<2	mg/l
Ethanol		07/07/23 09:23	EO089			<5	mg/l
Ethyl Acetat	e	07/07/23 09:23	EO089			<2	mg/l
Heptane		07/07/23 09:23	EO089			<2	mg/l
IPA (2-Propa	anol)	07/07/23 09:23	EO089			<2	mg/l
Iso-Amyl ald	cohol	07/07/23 09:23	EO089			<5	mg/l

Signed:

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11/07/2023

Client:	AECOM Infrastructure Limited 4th Floor, Adelphi Plaz George's Street Upp Dun Laoghaire, Dublin A96 T927 IRELAND	za,	reland		Certificate Code: Page Number: PO reference:	AR-23-M3-024 Page 38 of 47 60699676	299-01
Isopropyl ac	cetate	07/07/23 09:23	EO089			<2	mg/l
Isopropyl Et	ther	07/07/23 09:23	EO089			<2	mg/l
Methanol		07/07/23 09:23	EO089			<5	mg/l
Methyl Ethy	l Ketone	07/07/23 09:23	EO089			<2	mg/l
n-Butyl Alco	hol.(Butanol)	07/07/23 09:23	EO089			<2	mg/l
n-Hexane		07/07/23 09:23	EO089			<2	mg/l
sec-Butyl Al	cohol	07/07/23 09:23	EO089			<2	mg/l
tert-Amylalo	cohol	07/07/23 09:23	EO089			<5	mg/l
Tert-Butano	I	07/07/23 09:23	EO089			<5	mg/l
tert-Butyl M	ethyl Ether	07/07/23 09:23	EO089			<2	mg/l
Tetrahydrofu	uran	07/07/23 09:23	EO089			<2	mg/l
Toluene		07/07/23 09:23	EO089			<2	mg/l
Triethylamir	ne	07/07/23 09:23	EO089			<2	mg/l
Xylene -p		07/07/23 09:23	EO089			<2	mg/l
Xylene-M		07/07/23 09:23	EO089			<2	mg/l
Xylene-O		07/07/23 09:23	EO089			<2	mg/l
Xylenes-Tot	al	07/07/23 09:23	EO089			<2	mg/l
Temperatu	re (Site) [M3036]						
Temperature	e	16/06/23 11:11	Site Test			N/A	°C
Arsenic - T	race [M3236]						
Arsenic		06/06/23 12:12		0.2		5.296	µg/l
	ace [M3237]						
Barium		06/06/23 12:13		1.77	2	68.603	µg/l

Signed:

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Client:	AECOM Infrastructure a Limited 4th Floor, Adelphi Plaza		land		Certificate Code: Page Number:	AR-23-M3-024 Page 39 of 47	299-01
	George's Street Uppe Dun Laoghaire, Dublin A96 T927 IRELAND				PO reference:	60699676	
Beryllium -	Trace [M3238]						
Beryllium		06/06/23 12:13		1		<1	µg/l
	ce [M3239]						
Boron		06/06/23 12:13		0.21		<0.21	mg/l
	Trace [M3240]						
Cadmium		06/06/23 12:13		0.1		0.735	µg/l
Copper - Ir Copper (Cu	ace [M3244]	06/06/23 12:13		0.003		0.003	ma/l
Lead - Trac		00/00/23 12.13		0.003		0.003	mg/l
Lead (Pb)	e [W3240]	06/06/23 12:13		0.5		4.716	µg/l
. ,	race [M3249]	00/00/20 12:10		0.0		4.710	P3/1
Mercury		06/06/23 12:13		0.03		0.16	µg/l
Nickel - Tra	ce [M3251]						10
Nickel (Ni)		06/06/23 12:13		0.5		5.479	µg/l
Selenium -	Trace [M3255]						
Selenium (S	Se)	06/06/23 12:13		0.2		0.235	µg/l
	Trace [M3268]						
Vanadium (,	06/06/23 12:13		1		2.683	µg/l
Zinc - Trace	e [M3269]						
Zinc (Zn)		06/06/23 12:13	EW188	1		36.6	µg/l
рН [М3282]		00/00/00 47 44 74					
pH	L. [140000]	02/06/23 17:41 74	EW158			7.7	
Conductivity Conductivity		02/06/23 17:41	EW153	100		496.1	µS/cm
Jonadouvity		52/00/20 11.71		100			μ0/011

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Client: AECOM Infrastructure & Environment Ireland Limited 4th Floor, Adelphi Plaza, George's Street Upper, Dun Laoghaire, **Dublin** A96 T927 **IRELAND**

Certificate Code: Page Number: **PO reference:**

AR-23-M3-024299-01 Page 40 of 47 60699676

⁴ Accreditiation Information

C6: ISO/IEC 17025:2017 INAB 138-T

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- 9. Report is issued as per out standard T&C of sale.



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	Infrastructure & Environment	Ireland		Certificate Code	AR-23-M3-0	24299-01	
Limited	, Adelphi Plaza,			Page Number:	Page 41 of 4	47	
	s Street Upper, oghaire, 7			PO reference:	60699676		
Sample number	966-2023-00026	353	Received on Analysis start	ed on	02/06/2023 02/06/2023		
Your sample reference Sample Matrix	SW_U1 Surface water		·				
Sample Condition on A	rival Satisfactory		Sample Date		29/05/2023		
Test Code Analyte	SUB ⁵ Analysis Started	Method	LOQ ³	SPEC ²	Result	Units	ACCRED ⁴
Alkalinity as CAC03 [E	B005]						
Alkalinity as CAC03	* 06/06/23 14:44		30		202.8	mg/l	
Hexavalent chromium							
Chromium Cr 6+	* 12/06/23 09:47		10		<10.0	µg/l	
Total cyanides [IX226] Cyanide, total	* 02/06/23 17:34		10		<10.0	µg/l	
Chromium (Cr) [IXBXL			10		< 10.0	μg/i	
Chromium (Cr)	* 12/06/23 09:47		1		<1.00	µg/l	
Trivalent chromium [I]	(BXX]						
Chromium (III)	* 12/06/23 09:47		10	No	on calculable	µg/l	
Suspended Solids [M3	-						
Suspended Solids	06/06/23 09:00 7	^{7A} EW013	5		<5	mg/l	
Chemical Oxygen Den Chemical oxygen dema		EW094	8		12	mg/l	
Dissolved Oxygen [M3			0		12	ing/i	
Dissolved oxygen	03/06/23 16:03 7	^{7A} EW043	1		9.24	mg/l	
Sulphate mg/L - Galler	y [M300N]					-	

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11/07/2023

Client: AECOM Infrastructure & Environment Ireland					Certificate Code:	AR-23-M3-024299-01	
	Limited 4th Floor, Adelphi Plaz	2			Page Number:	Page 42 of 47	
	George's Street Upp Dun Laoghaire, Dublin A96 T927 IRELAND				PO reference:	60699676	
Sulphate mg	g/L - Gallery	12/06/23 13:01	EW175	1		14.5	mg/l
Phosphate	(Ortho/MRP) as P - Gallery	[M300P]					
Gallery	(Ortho/MRP) as P - g/L - Gallery [M300Q]	12/06/23 13:01 ^{7A}	EW175	0.05		<0.05	mg/l
Fluoride mg		12/06/23 13:01	EW175	0.2		<0.2	mg/l
	g/L - Gallery [M300S]						-
Chloride mg	ı/L - Gallery	12/06/23 13:01	EW175	5		18.7	mg/l
Ammonia a	is N - Gallery [M300Z]						
Ammonia as	s N - Gallery	12/06/23 13:01	EW175	0.05		0.24	mg/l
	N) - Gallery [M301A]						
Nitrate (as N	N) - Gallery	12/06/23 13:01 ^{7A}	EW175	1		<1	mg/l
•	anic Solvents (Head Space						
Acetone		07/07/23 09:23	EO089			<2	mg/l
Acetonitrile		07/07/23 09:23	EO089			<2	mg/l
Amyl acetat	e	07/07/23 09:23	EO089			<2	mg/l
Cyclohexan	е	07/07/23 09:23	EO089			<2	mg/l
Cyclopentar	none	07/07/23 09:23	EO089			<2	mg/l
Dichloromet	hane	07/07/23 09:23	EO089			<2	mg/l
Ethanol		07/07/23 09:23	EO089			<5	mg/l
Ethyl Acetat	e	07/07/23 09:23	EO089			<2	mg/l
Heptane		07/07/23 09:23	EO089			<2	mg/l
IPA (2-Propa	anol)	07/07/23 09:23	EO089			<2	mg/l
Iso-Amyl alo	cohol	07/07/23 09:23	EO089			<5	mg/l

Signed:

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Eurofins Environment Testing Ireland Hoffman Park, Inchera Cork T45 PC80 Ireland T: 0818 252526 Web: www.eurofins.ie Email: ASTsupport@etuki.eurofins.com



11/07/2023

Client:	AECOM Infrastructure Limited 4th Floor, Adelphi Plaz George's Street Upp Dun Laoghaire, Dublin A96 T927 IRELAND	za,	reland		Certificate Code: Page Number: PO reference:	AR-23-M3-024 Page 43 of 47 60699676	299-01
Isopropyl ad	cetate	07/07/23 09:23	EO089			<2	mg/l
Isopropyl Et	ther	07/07/23 09:23	EO089			<2	mg/l
Methanol		07/07/23 09:23	EO089			<5	mg/l
Methyl Ethy	I Ketone	07/07/23 09:23	EO089			<2	mg/l
n-Butyl Alco	ohol.(Butanol)	07/07/23 09:23	EO089			<2	mg/l
n-Hexane		07/07/23 09:23	EO089			<2	mg/l
sec-Butyl Alcohol		07/07/23 09:23	EO089			<2	mg/l
tert-Amylalcohol		07/07/23 09:23	EO089			<5	mg/l
Tert-Butanol		07/07/23 09:23	EO089			<5	mg/l
tert-Butyl M	ethyl Ether	07/07/23 09:23	EO089			<2	mg/l
Tetrahydrof	uran	07/07/23 09:23	EO089			<2	mg/l
Toluene		07/07/23 09:23	EO089			<2	mg/l
Triethylamine		07/07/23 09:23	EO089			<2	mg/l
Xylene -p		07/07/23 09:23	EO089			<2	mg/l
Xylene-M		07/07/23 09:23	EO089			<2	mg/l
Xylene-O		07/07/23 09:23	EO089			<2	mg/l
Xylenes-Tot	al	07/07/23 09:23	EO089			<2	mg/l
Temperatu	re (Site) [M3036]						
Temperatur	e	16/06/23 11:11	Site Test			N/A	°C
Arsenic - T	race [M3236]						
Arsenic		06/06/23 12:13		0.2		1.008	µg/l
	race [M3237]						
Barium		06/06/23 12:13		1.77	4	6.936	µg/l

Signed:

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Client:	AECOM Infrastructure	Certificate Code:	AR-23-M3-024299-01				
	Limited 4th Floor, Adelphi Plaza	Page Number:	Page 44 of 47				
	George's Street Uppe Dun Laoghaire, Dublin A96 T927 IRELAND				PO reference:	60699676	
Beryllium -	Trace [M3238]						
Beryllium		06/06/23 12:13		1		<1	µg/l
Boron - Tra	ce [M3239]						
Boron		06/06/23 12:13		0.21		<0.21	mg/l
	Trace [M3240]						
Cadmium		06/06/23 12:13		0.1		<0.1	µg/l
	ace [M3244]						
Copper (Cu)		06/06/23 12:13		0.003		<0.003	mg/l
Lead - Trace [M3246]		00/00/00 40-40		0.5		-0 F	· · • //
Lead (Pb)	waaa [M2240]	06/06/23 12:13		0.5		<0.5	µg/l
Mercury - I Mercury	race [M3249]	06/06/23 12:13		0.03		0.037	µg/l
Nickel - Trace [M3251]		00/00/20 12:10		0.00		0.007	μg/i
Nickel (Ni)		06/06/23 12:13		0.5		0.892	µg/l
. ,	Trace [M3255]						10
Selenium (S		06/06/23 12:13		0.2		0.24	µg/l
Vanadium -	Trace [M3268]						
Vanadium (V	√)	06/06/23 12:13		1		<1	µg/l
Zinc - Trace	e [M3269]						
Zinc (Zn)		06/06/23 12:13	EW188	1		<1	µg/l
рН [М3282]							
рН		02/06/23 17:41 ^{7A}	EW158			8.1	
Conductivity [M3283]							
Conductivity	1	02/06/23 17:41	EW153	100		380.5	µS/cm

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11/07/2023

C6

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Client: AECOM Infrastructure & Environment Ireland Limited 4th Floor, Adelphi Plaza, George's Street Upper, Dun Laoghaire, **Dublin** A96 T927 **IRELAND**

Certificate Code: Page Number: **PO reference:**

AR-23-M3-024299-01 Page 45 of 47 60699676

⁴ Accreditiation Information

C6: ISO/IEC 17025:2017 INAB 138-T

Signed:

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Environment Testing

Eurofins Environment Testing Ireland Hoffman Park, Inchera Cork T45 PC80 Ireland T: 0818 252526 Web: www.eurofins.ie Email: ASTsupport@etuki.eurofins.com



Client:	AECOM Infrastruc Limited 4th Floor, Adelphi George's Street Dun Laoghaire, Dublin A96 T927 IRELAND		reland		Certificate Coo Page Number: PO reference:	Page 46 o		
Sample num	hber	966-2023-0002635	54	Received on Analysis star		02/06/2023 06/06/2023		
Your sample Sample Mat		OB2 Ground water		Analysis sta	neu on	00/00/2023		
Sample Con	dition on Arrival	Satisfactory		Sample Date	e	29/05/2023		
Test Code Analyte		SUB ⁵ Analysis Started	Method	LOQ ³	SPEC ²	Result	Units	ACCRED ⁴
Arsenic - Di Arsenic	issolved [M3159]	06/06/23 12:07	EW188			0.266	µg/l	
Barium - Di Barium (Ba)	ssolved [M3160]	06/06/23 12:07	EW188	1.77		20.673	μg/l	
Beryllium - Beryllium (B	Dissolved [M3161] e)	06/06/23 12:07	EW188			<1	μg/l	
Boron - Dis Boron (B)	solved [M3163]	06/06/23 12:07	EW188	0.21		<0.21	mg/l	
Cadmium (C		06/06/23 12:07	EW188			0.156	µg/l	
Chromium (Chromium (- Dissolved [M3166] Cr)	06/06/23 12:07	EW188			1.05	µg/l	

0.003

0.51

Copper - Dissolved [M3168] Copper (Cu) 06/06/23 12:07 EW188 Lead - Dissolved [M3173] Lead (Pb) 06/06/23 12:07 EW188 Mercury - Dissolved [M3176]

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11/07/2023

mg/l

µg/l

0.009

< 0.51

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Client:	 AECOM Infrastructure & Environment Ireland Limited 4th Floor, Adelphi Plaza, George's Street Upper, Dun Laoghaire, Dublin A96 T927 IRELAND 				<i>Certificate Code: Page Number: PO reference:</i>	AR-23-M3-024299-01 Page 47 of 47 60699676	
Mercury		06/06/23 12:07	EW188	0.03		<0.03	μg/l
Nickel - Dis	solved [M3178]						
Nickel (Ni)		06/06/23 12:07	EW188			3.032	µg/l
Selenium -	Dissolved [M3182]						
Selenium (S	Se)	06/06/23 12:07	EW188			1.778	μg/l
Vanadium -	- Dissolved [M3193]						
Vanadium (V)	06/06/23 12:07	EW188			<1	µg/l
Zinc - Diss	olved [M3194]						
Zinc (Zn)		06/06/23 12:07	EW188	1		35.3	µg/l

⁴ Accreditiation Information

C6: ISO/IEC 17025:2017 INAB 138-T

Signed:

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11/07/2023

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Laboratory Certificates - Round 3 (04 J uly 2023)



Eurofins Environment Testing Ireland Hoffman Park, Inchera Cork T45 PC80 Ireland 0818 252526 Т Web: www.eurofins.ie Email: ASTsupport@etuki.eurofins.com



Client: AECOM Infrastructure & Environment Ireland Limited 4th Floor, Adelphi Plaza, George's Street Upper, Dun Laoghaire, **Dublin** A96 T927 **IRELAND**

Certificate Code: PR-23-M3-000277-01 Page Number: Page 1 of 5 **PO reference:**

Preliminary Certificate of Analysis

This is a preliminary Certificate of Analysis and cannot be fully verified until all results have been validated

Sample number	966-2023-000308	82	Received on	07/07/2023		
	5110001		Analysis started on	07/07/2023		
Your sample reference	BHSS04					
Sample Matrix	Ground water					
Sample Condition on Arrival	Satisfactory		Sample Date	05/07/2023		
Test Code Analyte	SUB ⁵ Analysis Started	Method	LOQ ³ SPEC ²	Result	Units	ACCRED ⁴
Alkalinity as CAC03 [BB005]						
Alkalinity as CAC03	* 10/07/23 15:06		30	564.5	mg/l	
Hexavalent chromium [IX02U]						
Chromium (VI)	* 07/07/23 19:31		0.01	non mesuré	mg/l	
Total cyanides [IX479]						
Cyanide, total	* 13/07/23 17:03		0.01	<0.01	mg/l	
Chromium (Cr) [IX80U]						
Chromium (Cr)	* 07/07/23 19:31		0.005	non mesuré	mg/l	
Trivalent chromium [IXCR0]						
Chromium III	* 07/07/23 19:31		0.01	Non calculable	mg/l	
Suspended Solids [M3002]						
Suspended Solids	10/07/23 09:34	EW013	5	43460	mg/l	
Chemical Oxygen Demand (COD)	[M3004]					
Chemical oxygen demand (COD)	10/07/23 10:30	EW094	8	3400	mg/l	
		Kennie Herren		1	0/08/2023	
Signed:	Louise Morrow - null Fur	ofins Environm	nent Testing Ireland Limited			

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10/08/2023

LimitedPage Number:Page 2 of 54th Floor, Adelphi Plaza,Po reference:George's Street Upper,PO reference:	
George's Street Upper, PO reference:	
Dun Laoghaire, Dublin A96 T927 IRELAND	
Dissolved Oxygen [M3005]	
Dissolved oxygen 13/07/23 12:27 ^{7A} EW043 1 <1 mg	Ί
Sulphate mg/L - Gallery [M300N]	
Sulphate mg/L - Gallery 10/07/23 13:05 EW175 1 <1 mg	1
Phosphate (Ortho/MRP) as P - Gallery [M300P]	
Phosphate (Ortho/MRP) as P - 10/07/23 13:05 ^{7A} EW175 0.05 <0.05 mg Gallery Fluoride mg/L - Gallery [M300Q]	Ί
Fluoride mg/L - Gallery 10/07/23 13:05 EW175 0.2 <0.2 mg	'I
Chloride mg/L - Gallery [M300S]	
Chloride mg/L - Gallery 10/07/23 13:05 EW175 5 <5 mg	1
Ammonia as N - Gallery [M300Z]	
Ammonia as N - Gallery 10/07/23 13:05 EW175 0.05 <0.05 mg	Ί
Nitrate (as N) - Gallery [M301A]	
Nitrate (as N) - Gallery 10/07/23 13:05 TA EW175 1 <1 mg	Ί
GCFID-Organic Solvents (Head Space) [M3027]	
Acetone 18/07/23 16:39 EO089 <2 mg	1
Acetonitrile 18/07/23 16:39 EO089 <2 mg	Ί
Amyl acetate 18/07/23 16:39 EO089 <2 mg	Ί
Cyclohexane 18/07/23 16:39 EO089 <2 mg	Ί
Cyclopentanone 18/07/23 16:39 EO089 <2 mg	1
Dichloromethane 18/07/23 16:39 EO089 <2 mg	1
Ethanol 18/07/23 16:39 EO089 <5 mg	Ί
Ethyl Acetate 18/07/23 16:39 EO089 <2 mg	1

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Client:	AECOM Infrastructure Limited 4th Floor, Adelphi Plaz George's Street Upp Dun Laoghaire, Dublin A96 T927 IRELAND	Certificate Code: Page Number: PO reference:	PR-23-M3-000 Page 3 of 5	277-01		
Heptane		18/07/23 16:39	EO089		<2	mg/l
IPA (2-Prop	anol)	18/07/23 16:39	EO089		<2	mg/l
Iso-Amyl alo	cohol	18/07/23 16:39	EO089		<5	mg/l
Isopropyl ad	cetate	18/07/23 16:39	EO089		<2	mg/l
Isopropyl Et	ther	18/07/23 16:39	EO089		<2	mg/l
Methanol		18/07/23 16:39	EO089		<5	mg/l
Methyl Ethy	l Ketone	18/07/23 16:39	EO089		<2	mg/l
n-Butyl Alco	hol.(Butanol)	18/07/23 16:39	EO089		<2	mg/l
n-Hexane		18/07/23 16:39	EO089		<2	mg/l
sec-Butyl Al	cohol	18/07/23 16:39	EO089		<2	mg/l
tert-Amylalo	cohol	18/07/23 16:39	EO089		<5	mg/l
Tert-Butano	I	18/07/23 16:39	EO089		<5	mg/l
tert-Butyl M	ethyl Ether	18/07/23 16:39	EO089		<2	mg/l
Tetrahydrof	uran	18/07/23 16:39	EO089		<2	mg/l
Toluene		18/07/23 16:39	EO089		<2	mg/l
Triethylamir	ne	18/07/23 16:39	EO089		<2	mg/l
Xylene -p		18/07/23 16:39	EO089		<2	mg/l
Xylene-M		18/07/23 16:39	EO089		<2	mg/l
Xylene-O		18/07/23 16:39	EO089		<2	mg/l
Xylenes-Tot	al	18/07/23 16:39	EO089		<2	mg/l
Temperatu	re (Site) [M3036]					
Temperatur	e	11/07/23 19:04	Site Test		na	°C
Arsenic - T	race [M3236]					

Signed:

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10/08/2023

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Client:	AECOM Infrastructure Limited 4th Floor, Adelphi Pla George's Street Upp Dun Laoghaire, Dublin A96 T927 IRELAND	za,	eland	Certificate Code: Page Number: PO reference:	PR-23-M3-000 Page 4 of 5	277-01
Arsenic		10/07/23 09:59	0.2	2	17.071	µg/l
Barium - Ti	ace [M3237]					
Barium		10/07/23 09:59	1.7	7	28.464	µg/l
Beryllium -	Trace [M3238]					
Beryllium		10/07/23 09:59	1		<1	µg/l
Boron - Tra	ice [M3239]					
Boron		10/07/23 09:59	0.2	1	<0.21	mg/l
	Trace [M3240]					
Cadmium		10/07/23 09:59	0.1	1	<0.1	µg/l
	race [M3244]					
Copper (Cu	,	10/07/23 09:59	0.00)3	<0.003	mg/l
Lead - Trac	e [M3246]			_		
Lead (Pb)		10/07/23 09:59	0.5	D	<0.5	µg/l
-	Trace [M3249]			•		
Mercury		10/07/23 09:59	0.0	3	<0.03	µg/l
	ice [M3251]	10/07/23 09:59	0.9	-	12.994	ug/l
Nickel (Ni)	Trace [M3255]	10/07/23 09.39	0)	12.994	µg/l
Selenium (S		10/07/23 09:59	0.2	2	1.011	µg/l
·	- Trace [M3268]	10/01/20 00:00	0.2	-	1.011	P9/1
Vanadium (10/07/23 09:59	1	:	36.377	µg/l
Zinc - Trac						. 0
Zinc (Zn)		10/07/23 09:59	EW188 1		68.6	µg/l
pH [M3282]	l					

Signed:

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10/08/2023

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Client:	AECOM Infrastructure & Environment Ireland				Certificate Code:	PR-23-M3-000277-01			
	Limited 4th Floor, Adelphi Pla	272				Page Number:	Page 5 of 5		
	George's Street Up Dun Laoghaire, Dublin A96 T927 IRELAND					PO reference:			
рН			07/07/23 20:30 ^{7A}	EW158			6.6		
Conductivi	ity [M3283]								
Conductivity	y		07/07/23 20:30	EW153	100		886	µS/cm	C6
TPH 3 Ban	d (C6-10-21-40) in water [l	M50	02B]						
TPH >C10-	C21	*	08/07/23 13:02		0.1		<0.1	µg/l	
TPH >C21-	C40	*	08/07/23 13:02		0.1		<0.1	µg/l	
TPH >C6-C	:10	*	08/07/23 13:02		0.1		<0.1	µg/l	
TPH Total >	·C6-C40	*	08/07/23 13:02		10		<10	µg/l	YA
Btex in wat	ter [M50A7]								
Benzene		*	08/07/23 13:02		1		<1	µg/l	
Ethylbenzer	ne	*	08/07/23 13:02		1		<1	µg/l	
m-/-p-Xylen	e	*	08/07/23 13:02		1		<1	µg/l	
o-Xylene		*	08/07/23 13:02		1		<1	µg/l	
Toluene		*	08/07/23 13:02		1		<1	µg/l	

Results to follow:

PAH 16 according EPA [F8126] Phenoles [F6536]

⁴ Accreditiation Information

C6: ISO/IEC 17025:2017 INAB 138-T YA: Accredited (External Subcontractor)

10/08/2023

Signed: .

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Eurofins Environment Testing Ireland Hoffman Park, Inchera Cork T45 PC80 Ireland 0818 252526 Т Web: www.eurofins.ie Email: ASTsupport@etuki.eurofins.com



Client: AECOM Infrastructure & Environment Ireland Limited 4th Floor, Adelphi Plaza, George's Street Upper, Dun Laoghaire, **Dublin** A96 T927 **IRELAND**

Certificate Code: PR-23-M3-000278-01 Page Number: Page 1 of 5 **PO reference:**

Preliminary Certificate of Analysis

This is a preliminary Certificate of Analysis and cannot be fully verified until all results have been validated

Sample number	966-2023-000308	70	Received on		07/07/2023		
			Analysis star	ted on	07/07/2023		
Your sample reference	SW_E1						
Sample Matrix	Surface water						
Sample Condition on Arrival	Satisfactory		Sample Date		04/07/2023		
Test Code	SUB ⁵ Analysis	Method	LOQ ³	SPEC ²	Result	Units	ACCRED ⁴
Analyte	Started						
Alkalinity as CAC03 [BB005]							
Alkalinity as CAC03	* 10/07/23 15:06		30		141.8	mg/l	
Hexavalent chromium [IX02U]							
Chromium (VI)	* 07/07/23 19:29		0.01		non mesuré	mg/l	
Total cyanides [IX479]							
Cyanide, total	* 13/07/23 17:03		0.01		<0.01	mg/l	
Chromium (Cr) [IX80U]							
Chromium (Cr)	* 07/07/23 19:29		0.005		non mesuré	mg/l	
Trivalent chromium [IXCR0]							
Chromium III	* 07/07/23 19:29		0.01		Non calculable	mg/l	
Suspended Solids [M3002]							
Suspended Solids	10/07/23 09:33	EW013	5		<5	mg/l	
Chemical Oxygen Demand (COD)) [M3004]						
Chemical oxygen demand (COD)	10/07/23 10:30	EW094	8		56	mg/l	
		1.1					
		haute Malks					
Signed:					1	0/08/2023	
	Louise Morrow - null Eur	ofins Environr	nent Testing Irela	and Limited			

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10/08/2023

Client: AECOM Infrastructure & Environment Ireland Limited 4th Floor, Adelphi Plaza,			eland		Certificate Code: Page Number:	PR-23-M3-0002 Page 2 of 5	278-01
	George's Street Upp Dun Laoghaire, Dublin A96 T927 IRELAND				PO reference:		
	Oxygen [M3005]	40/07/00 40 04 74	ENV040	4		<u>.</u>	
Dissolved of		13/07/23 12:21 ^{7A}	EW043	1		6.6	mg/l
Sulphate m	ig/L - Gallery [M300N]	08/07/23 15:27	EW175	1		<1	mg/l
	(Ortho/MRP) as P - Gallery		LWINJ	I			ilig/i
Phosphate (Gallery	(Ortho/MRP) as P - g/L - Gallery [M300Q]	08/07/23 15:27 ^{7A}	EW175	0.05		<0.05	mg/l
Fluoride mg		08/07/23 15:27	EW175	0.2		0.3	mg/l
0	g/L - Gallery [M300S]	00/01/20 10:21	2000	0.2		0.0	ing/i
Chloride mg	• • •	08/07/23 15:27	EW175	5		15.0	mg/l
Ammonia a	s N - Gallery [M300Z]						-
Ammonia as	s N - Gallery	08/07/23 15:27	EW175	0.05		1.33	mg/l
Nitrate (as	N) - Gallery [M301A]						
Nitrate (as N	N) - Gallery	08/07/23 15:27 ^{7A}	EW175	1		<1	mg/l
GCFID-Org	anic Solvents (Head Space) [M3027]					
Acetone		18/07/23 16:39 ^{7A}	EO089			<2	mg/l
Acetonitrile		18/07/23 16:39 ^{7A}	EO089			<2	mg/l
Amyl acetat	е	18/07/23 16:39 ^{7A}	EO089			<2	mg/l
Cyclohexan	е	18/07/23 16:39 ^{7A}	EO089			<2	mg/l
Cyclopentar	none	18/07/23 16:39 ^{7A}	EO089			<2	mg/l
Dichloromet	hane	18/07/23 16:39 ^{7A}	EO089			<2	mg/l
Ethanol		18/07/23 16:39 ^{7A}	EO089			<5	mg/l
Ethyl Acetat	е	18/07/23 16:39 ^{7A}	EO089			<2	mg/l

Signed:

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Eurofins Environment Testing Ireland Hoffman Park, Inchera Cork T45 PC80 Ireland T: 0818 252526 Web: www.eurofins.ie Email: ASTsupport@etuki.eurofins.com



Client:	AECOM Infrastructure Limited 4th Floor, Adelphi Plaz George's Street Upp Dun Laoghaire, Dublin A96 T927 IRELAND	a,	eland	Certificate Code: Page Number: PO reference:	PR-23-M3-000 Page 3 of 5	278-01
Heptane		18/07/23 16:39 ^{7A}	EO089		<2	mg/l
IPA (2-Prop	anol)	18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Iso-Amyl alo	cohol	18/07/23 16:39 ^{7A}	EO089		<5	mg/l
Isopropyl ad	cetate	18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Isopropyl Et	ther	18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Methanol		18/07/23 16:39 ^{7A}	EO089		<5	mg/l
Methyl Ethy	l Ketone	18/07/23 16:39 ^{7A}	EO089		<2	mg/l
n-Butyl Alco	hol.(Butanol)	18/07/23 16:39 ^{7A}	EO089		<2	mg/l
n-Hexane		18/07/23 16:39 ^{7A}	EO089		<2	mg/l
sec-Butyl Al	cohol	18/07/23 16:39 ^{7A}	EO089		<2	mg/l
tert-Amylalo	cohol	18/07/23 16:39 ^{7A}	EO089		<5	mg/l
Tert-Butano	I	18/07/23 16:39 ^{7A}	EO089		<5	mg/l
tert-Butyl M	ethyl Ether	18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Tetrahydrof	uran	18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Toluene		18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Triethylamir	ne	18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Xylene -p		18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Xylene-M		18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Xylene-O		18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Xylenes-Tot	al	18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Temperatu	re (Site) [M3036]					
Temperatur	e	11/07/23 19:04	Site Test		na	°C
Arsenic - T	race [M3236]					

Signed:

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Client:	AECOM Infrastructur Limited 4th Floor, Adelphi Pla George's Street Up Dun Laoghaire, Dublin A96 T927 IRELAND	aza,	eland		Certificate Code: Page Number: PO reference:	PR-23-M3-000 Page 4 of 5	278-01
Arsenic		10/07/23 09:59		0.2	1	.893	µg/l
Barium - Ti	ace [M3237]						
Barium		10/07/23 09:59		1.77	18	34.216	µg/l
Beryllium -	Trace [M3238]						
Beryllium		10/07/23 09:59		1		<1	µg/l
Boron - Tra	ice [M3239]						
Boron		10/07/23 09:59	(0.21	<	0.21	mg/l
	Trace [M3240]						
Cadmium		10/07/23 09:59		0.1		<0.1	µg/l
	race [M3244]						
Copper (Cu	,	10/07/23 09:59	0	.003	<	0.003	mg/l
Lead - Trac	e [M3246]						
Lead (Pb)		10/07/23 09:59		0.5		<0.5	µg/l
-	Trace [M3249]	40/07/00 00 50	,				
Mercury		10/07/23 09:59	l	0.03	ŭ	0.063	µg/l
Nickel (Ni)	ice [M3251]	10/07/23 09:59		0.5		<0.5	ug/l
. ,	Trace [M3255]	10/07/23 09:59		0.5		<0.5	µg/l
Selenium (S		10/07/23 09:59		0.2		<0.2	µg/l
	- Trace [M3268]	10/01/20 00:00		0.2		-0.2	µg/i
Vanadium (10/07/23 09:59		1		<1	µg/l
Zinc - Trac	,			-		-	"O"
Zinc (Zn)	- [10/07/23 09:59	EW188	1		7.05	µg/l
pH [M3282]	L						1.0
	•						

Signed:

10/08/2023

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Client: AECOM Infrastructure & Environment Ireland Certificate Code: PR-23-M3-000278-01 Limited Page 5 of 5 Page Number: 4th Floor, Adelphi Plaza, George's Street Upper, **PO reference:** Dun Laoghaire, **Dublin** A96 T927 **IRELAND** 07/07/23 20:37 7A pН EW158 82 Conductivity [M3283] Conductivity 07/07/23 20:37 C6 EW153 100 1507 µS/cm ⁴ Accreditiation Information

C6: ISO/IEC 17025:2017 INAB 138-T

Signed:

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- 9. Report is issued as per out standard T&C of sale.

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Client: AECOM Infrastructure & Environment Ireland Limited 4th Floor, Adelphi Plaza, George's Street Upper, Dun Laoghaire, **Dublin** A96 T927 **IRELAND**

Certificate Code: PR-23-M3-000291-01 Page Number: Page 1 of 5 **PO reference:**

Preliminary Certificate of Analysis

This is a preliminary Certificate of Analysis and cannot be fully verified until all results have been validated

Sample number	966-2023-000308	71	Received on		07/07/2023		
Your sample reference	SW U1		Analysis start	ed on	07/07/2023		
Sample Matrix	Surface water						
Sample Condition on Arrival	Satisfactory		Sample Date		04/07/2023		
Test Code Analyte	SUB ⁵ Analysis Started	Method	LOQ ³	SPEC ²	Result	Units	ACCRED ⁴
Alkalinity as CAC03 [BB005]							
Alkalinity as CAC03	* 10/07/23 15:06		30		58.10	mg/l	
Hexavalent chromium [IX02U]							
Chromium (VI)	* 07/07/23 19:29		0.01		non mesuré	mg/l	
Total cyanides [IX479]							
Cyanide, total	* 13/07/23 17:03		0.01		<0.01	mg/l	
Chromium (Cr) [IX80U]							
Chromium (Cr)	* 07/07/23 19:29		0.005		non mesuré	mg/l	
Trivalent chromium [IXCR0]							
Chromium III	* 07/07/23 19:29		0.01		Non calculable	mg/l	
Suspended Solids [M3002]							
Suspended Solids	11/07/23 09:41 ^{7A}	EW013	5		<5	mg/l	
Chemical Oxygen Demand (COD)) [M3004]						
Chemical oxygen demand (COD)	10/07/23 10:45	EW094	8		14	mg/l	
		1					
		Kunte Horsel					
Signed:		inder V			1	0/08/2023	
	Louise Morrow - null Eur	ofins Environr	nent Testing Irela	nd Limited			

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10/08/2023

Client:						PR-23-M3-000	291-01
	Limited 4th Floor, Adelphi Plaz	а			Page Number:	Page 2 of 5	
	George's Street Upp Dun Laoghaire, Dublin A96 T927 IRELAND				PO reference:		
Dissolved (Dxygen [M3005]						
Dissolved of	kygen	13/07/23 12:28 ^{7A}	EW043	1	1	10.58	mg/l
Sulphate m	g/L - Gallery [M300N]						
Sulphate mo	g/L - Gallery	10/07/23 13:05	EW175	1		16.4	mg/l
Phosphate	(Ortho/MRP) as P - Gallery	[M300P]					
Gallery	Ortho/MRP) as P - g/L - Gallery [M300Q]	10/07/23 13:05 ^{7A}	EW175	0.05	•	<0.05	mg/l
Fluoride mg		10/07/23 13:05	EW175	0.2		<0.2	mg/l
Chloride m	g/L - Gallery [M300S]						-
Chloride mg	/L - Gallery	10/07/23 13:05	EW175	5		19.4	mg/l
Ammonia a	s N - Gallery [M300Z]						
Ammonia as	s N - Gallery	10/07/23 13:05	EW175	0.05	•	<0.05	mg/l
Nitrate (as	N) - Gallery [M301A]						
Nitrate (as N	l) - Gallery	10/07/23 13:05 ^{7A}	EW175	1		<1	mg/l
GCFID-Org	anic Solvents (Head Space) [M3027]					
Acetone		18/07/23 16:39 ^{7A}	EO089			<2	mg/l
Acetonitrile		18/07/23 16:39 ^{7A}	EO089			<2	mg/l
Amyl acetat	e	18/07/23 16:39 ^{7A}	EO089			<2	mg/l
Cyclohexan	e	18/07/23 16:39 ^{7A}	EO089			<2	mg/l
Cyclopentar	none	18/07/23 16:39 ^{7A}	EO089			<2	mg/l
Dichloromet	hane	18/07/23 16:39 ^{7A}	EO089			<2	mg/l
Ethanol		18/07/23 16:39 ^{7A}	EO089			<5	mg/l
Ethyl Acetat	е	18/07/23 16:39 ^{7A}	EO089			<2	mg/l

Signed:

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Client:	AECOM Infrastructure Limited 4th Floor, Adelphi Plaz George's Street Upp Dun Laoghaire, Dublin A96 T927 IRELAND	a,	eland	Certificate Code: Page Number: PO reference:	PR-23-M3-000 Page 3 of 5	291-01
Heptane		18/07/23 16:39 ^{7A}	EO089		<2	mg/l
IPA (2-Prop	anol)	18/07/23 16:39 ^{7A}	E0089		<2	mg/l
Iso-Amyl alo	cohol	18/07/23 16:39 ^{7A}	E0089		<5	mg/l
Isopropyl ac	cetate	18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Isopropyl Et	ther	18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Methanol		18/07/23 16:39 ^{7A}	EO089		<5	mg/l
Methyl Ethy	l Ketone	18/07/23 16:39 ^{7A}	EO089		<2	mg/l
n-Butyl Alco	ohol.(Butanol)	18/07/23 16:39 ^{7A}	EO089		<2	mg/l
n-Hexane		18/07/23 16:39 ^{7A}	EO089		<2	mg/l
sec-Butyl Al	lcohol	18/07/23 16:39 ^{7A}	EO089		<2	mg/l
tert-Amylalo	cohol	18/07/23 16:39 ^{7A}	EO089		<5	mg/l
Tert-Butano	I	18/07/23 16:39 ^{7A}	EO089		<5	mg/l
tert-Butyl M	ethyl Ether	18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Tetrahydrof	uran	18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Toluene		18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Triethylamir	ne	18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Xylene -p		18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Xylene-M		18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Xylene-O		18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Xylenes-Tot	al	18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Temperatu	re (Site) [M3036]					
Temperatur	e	11/07/23 19:04	Site Test		na	°C
Arsenic - T	race [M3236]					

Signed:

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Client:	AECOM Infrastructur Limited 4th Floor, Adelphi Pla George's Street Up Dun Laoghaire, Dublin A96 T927 IRELAND	aza,	eland	Certificate Code: Page Number: PO reference:	PR-23-M3-0002 Page 4 of 5	291-01
Arsenic		10/07/23 09:59	0.2	0	.808	µg/l
Barium - Tr	ace [M3237]					
Barium		10/07/23 09:59	1.77	40	0.513	µg/l
	Trace [M3238]					
Beryllium		10/07/23 09:59	1		<1	µg/l
	ice [M3239]					
Boron		10/07/23 09:59	0.21	<	0.21	mg/l
	Trace [M3240]					
Cadmium		10/07/23 09:59	0.1	•	<0.1	µg/l
	race [M3244]		0.000			
Copper (Cu	,	10/07/23 09:59	0.003	<	0.003	mg/l
Lead - Trac	e [M3246]	10/07/23 09:59	0.5		<0.5	
Lead (Pb)		10/07/23 09:59	0.5		<0.5	µg/l
Mercury - I	Frace [M3249]	10/07/23 09:59	0.03		0.03	µg/l
	ice [M3251]	10/07/23 09.39	0.03		0.03	μg/i
Nickel (Ni)		10/07/23 09:59	0.5	0	.824	µg/l
. ,	Trace [M3255]	10/01/20 00:00	0.0	Ŭ	.021	P9/1
Selenium (S		10/07/23 09:59	0.2		<0.2	µg/l
	- Trace [M3268]					1.5
Vanadium (10/07/23 09:59	1		<1	µg/l
Zinc - Trac	,					
Zinc (Zn)		10/07/23 09:59	EW188 1	4	4.70	µg/l
pH [M3282]	l					

Signed:

10/08/2023

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2. SPEC = Allowable limit or parametric value.

3. LOQ = Limit of Quantification or lowest value that can be reported ACCRED = Indicates accreditation for the test, a blank field indicates not accredited
 "*" indicates the test was sub-contracted

6. No date of sampling was supplied, sample stability cannot be assessed, results may be compromised.

7A. This result is compromised as it was tested outside of stability times.

7C. Sample not received in appropriate containers, therefore results may be compromised.7D. This result is comprised as the sample was received by the laboratory outside of the holding time.

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Eurofins Environment Testing Ireland Hoffman Park, Inchera Cork T45 PC80 Ireland T: 0818 252526 Web: www.eurofins.ie Email: ASTsupport@etuki.eurofins.com



Client:	AECOM Infrastructure	Certificate Code:	PR-23-M3-000291-01					
	Limited 4th Floor, Adelphi Plaz				Page Number:	Page 5 of 5		
	George's Street Upp Dun Laoghaire, Dublin A96 T927 IRELAND			PO reference:				
рН		07/07/23 20:33 ^{7A}	EW158			7.9		
Conductivi	ty [M3283]							
Conductivity	1	07/07/23 20:33	EW153	100		350	µS/cm	C6
⁴ Accreditiat	tion Information							

C6: ISO/IEC 17025:2017 INAB 138-T

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Signed:

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Client: AECOM Infrastructure & Environment Ireland Limited 4th Floor, Adelphi Plaza, George's Street Upper, Dun Laoghaire, **Dublin** A96 T927 **IRELAND**

Certificate Code: PR-23-M3-000292-01 Page 1 of 5 Page Number: **PO reference:**

Preliminary Certificate of Analysis

This is a preliminary Certificate of Analysis and cannot be fully verified until all results have been validated

Sample number	966-2023-0003087	2	Received on		07/07/2023		
			Analysis star	ed on	07/07/2023		
Your sample reference	SW_R1						
Sample Matrix	Surface water						
Sample Condition on Arrival	Satisfactory		Sample Date		04/07/2023		
Test Code Analyte	SUB ⁵ Analysis Started	Method	LOQ ³	SPEC ²	Result	Units	ACCRED ⁴
Alkalinity as CAC03 [BB005]							
Alkalinity as CAC03	* 10/07/23 15:06		30		232.4	mg/l	
Hexavalent chromium [IX02U]							
Chromium (VI)	* 07/07/23 19:29		0.01		non mesuré	mg/l	
Total cyanides [IX479]							
Cyanide, total	* 13/07/23 17:03		0.01		<0.01	mg/l	
Chromium (Cr) [IX80U]							
Chromium (Cr)	* 07/07/23 19:29		0.005		non mesuré	mg/l	
Trivalent chromium [IXCR0]							
Chromium III	* 07/07/23 19:29		0.01		Non calculable	mg/l	
Suspended Solids [M3002]							
Suspended Solids	11/07/23 09:41 ^{7A}	EW013	5		40	mg/l	
Chemical Oxygen Demand (COD)) [M3004]						
Chemical oxygen demand (COD)	10/07/23 10:45	EW094	8		15	mg/l	
		Kause Happen				- /	
Signed:	Louise Morrow - null Euro				1	0/08/2023	

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10/08/2023

Limited dth Floor, Adelphi Plaza, George's Street Upper, Dun Laoghaire, Dublin A96 T927 IRELAND Dissolved oxygen [M3005] Dissolved oxygen [M3005] Dissolved oxygen [M3005] Dissolved oxygen [M3007] Sulphate mg/L - Gallery [M3007] Sulphate mg/L - Gallery [M3007] Phosphate (Ortho/MRP) as P - Gallery [M3007] Phosphate (Ortho/MRP) as P - Gallery [M3007] Phosphate (Ortho/MRP) as P - Gallery [M3007] Fluoride mg/L - Gallery [M3003] Fluoride mg/L - Gallery [M3005] Fluoride mg/L - Gallery [M3007] Fluoride	Client:	AECOM Infrastructure		Certificate Code:	PR-23-M3-000	292-01		
George's Street Upper, Dun Laoghaire, Dublin A96 17927, IRELANDPPO reference:Disolved Oxygen [M3005]Disolved oxygen [M3005]Disolved oxygen [M3007]Sulphate mg/L - Gallery [M300N]Sulphate mg/L - Gallery [M300N]Sulphate mg/L - Gallery [M300P]Phosphate (Ortho/MRP) as P - Gallery [M300P]Chloride mg/L - Gallery [M300P]Mitrate (as N - Gallery [M300P]Mitrate (as N) - Gallery [M3012]Mitrate (as N) - Gallery [M3012]Mitrate (as N) - Gallery [M302]Mitrate (a.			Page Number:	Page 2 of 5	
Dissolved oxygen 13/07/23 12:23 ^{7A} EW043 1 9.99 mg/l Sulphate mg/L - Gallery [M300N] Sulphate mg/L - Gallery [M300P] Nmg/l 13.0 mg/l Phosphate (Ortho/MRP) as P - Gallery [M300P] EW175 1 13.0 mg/l Phosphate (Ortho/MRP) as P - Gallery [M300Q] EW175 0.05 <0.05 mg/l Fluoride mg/L - Gallery [M300Q] EW175 0.2 0.2 mg/l Fluoride mg/L - Gallery [M300Q] EW175 0.2 0.2 mg/l Chloride mg/L - Gallery [M300Q] EW175 0.2 0.2 mg/l Chloride mg/L - Gallery [M300Z] EW175 0.2 0.2 mg/l Ammonia as N - Gallery [M300Z] EW175 5 19.0 mg/l Ammonia as N - Gallery [M301A] EW175 0.05 0.05 mg/l Nitrate (as N) - Gallery [M301A] EW175 1 2.296 mg/l Cetone 18/07/23 16:37 A EW175 1 2.296 mg/l Acetone (Hag0T/23 16:39 TA EO089 <2		George's Street Upp Dun Laoghaire, Dublin A96 T927				PO reference:		
Sulphate mg/L - Gallery [M300N] mg/L Sulphate mg/L - Gallery [M300P] 13.0 mg/L Phosphate (Ortho/MRP) as P - Gallery [M300P] 13.0 mg/L Phosphate (Ortho/MRP) as P - Gallery [M300P] 13.0 mg/L Fluoride mg/L - Gallery [M300Q] EW175 0.05 <0.05 mg/L Fluoride mg/L - Gallery [M300Q] EW175 0.2 0.2 mg/L Chloride mg/L - Gallery [M300S] EW175 0.2 0.2 mg/L Chloride mg/L - Gallery [M300S] EW175 5 19.0 mg/L Ammonia as N - Gallery [M300Z] EW175 0.05 0.05 mg/L Armonia as N - Gallery [M301A] EW175 0.05 0.05 mg/L Nitrate (as N) - Gallery [M301A] EW175 1 2.296 mg/L GCFID-Organic Solvents (Head Space) [M3027] EW175 1 2.296 mg/L Acetone 18/07/23 16:37 ^{TA} EO089 <2 mg/L Acetonitrile 18/07/23 16:39 ^{TA} EO089 <2 mg/L Cyclohexane	Dissolved (Oxygen [M3005]						
Sulphate mg/L - Gallery 10/07/23 13:05 EW175 1 13.0 mg/l Phosphate (Ortho/MRP) as P - Gallery [M300P] Phosphate (Ortho/MRP) as P - 10/07/23 13:05 7A EW175 0.05 <0.05 <0.05 mg/l Fluoride mg/L - Gallery [M300Q] Fluoride mg/L - Gallery [M300S] EW175 0.2 0.2 mg/l Chloride mg/L - Gallery [M300S] EW175 0.2 0.2 0.2 mg/l Ammonia as N - Gallery [M300S] EW175 0.2 0.2 0.2 mg/l Ammonia as N - Gallery [M300S] EW175 0.2 0.2 0.2 mg/l Ammonia as N - Gallery [M300Z] EW175 0.5 19.0 mg/l Ammonia as N - Gallery [M30DZ] EW175 0.05 0.05 mg/l Nitrate (as N) - Gallery [M30DZ] EW175 1 2.296 mg/l GCFID-Organic Solvents (Head Space) [M30Z] EW175 1 2.296 mg/l Acetone 18/07/23 16:39 TA EO089 2 mg/l Acetonitrile 18/07/23 16:39 TA EO089	Dissolved of	xygen	13/07/23 12:23 ^{7A}	EW043	1		9.99	mg/l
Phosphate (Ortho/MRP) as P - Gallery [M300P] I//07/23 13:05 ^{TA} EW175 0.05 <0.05 mg/l Fluoride mg/L - Gallery [M300Q] Fluoride mg/L - Gallery [M300Q] 10/07/23 13:05 EW175 0.2 0.2 mg/l Fluoride mg/L - Gallery [M300S] T 0.07/23 13:05 EW175 0.2 0.2 mg/l Chloride mg/L - Gallery [M300S] T T T T Chloride mg/L - Gallery [M300S] T T T T Chloride mg/L - Gallery [M300S] T T T T Chloride mg/L - Gallery [M300S] T T T T Ammonia as N - Gallery [M300Z] T T T T Ammonia as N - Gallery [M301A] T T T T Nitrate (as N) - Gallery [M301A] T T T T T T T Corporatic Solvents (Head Space) [M302T] T T T T T T T T T T T T T T <td>Sulphate m</td> <td>ig/L - Gallery [M300N]</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Sulphate m	ig/L - Gallery [M300N]						
Phosphate (Ortho/MRP) as P - Gallery 10/07/23 13:05 ^{TA} EW175 0.05 <0.05 mg/l Fluoride mg/L - Gallery [M300Q] 10/07/23 13:05 EW175 0.2 0.2 mg/l Chloride mg/L - Gallery [M300S] 10/07/23 13:05 EW175 0.2 0.2 mg/l Chloride mg/L - Gallery [M300S] 10/07/23 13:05 EW175 5 19.0 mg/l Ammonia as N - Gallery [M300Z] 10/07/23 13:05 EW175 0.05 0.05 mg/l Ammonia as N - Gallery [M300Z] 10/07/23 13:05 TA EW175 0.05 0.05 mg/l Nitrate (as N) - Gallery [M301A] 10/07/23 13:05 TA EW175 1 2.296 mg/l GCFID-Organic Solvents (Head Space) [M302T] EW175 1 2.296 mg/l Acetonitrile 18/07/23 16:39 TA EO089 <2	Sulphate mo	g/L - Gallery	10/07/23 13:05	EW175	1		13.0	mg/l
Gallery Fluoride mg/L - Gallery [M300Q] Fluoride mg/L - Gallery 10/07/23 13:05 EW175 0.2 0.2 mg/l Chloride mg/L - Gallery [M300S] Chloride mg/L - Gallery [M300S] Chloride mg/L - Gallery [M300Z] Ammonia as N - Gallery [M300Z] Ammonia as N - Gallery [M301A]		· · · ·						
Fluoride mg/L - Gallery 10/07/23 13:05 EW175 0.2 0.2 mg/l Chloride mg/L - Gallery [M300S] 10/07/23 13:05 EW175 5 19.0 mg/l Ammonia as N - Gallery [M300Z] EW175 0.05 0.05 mg/l Ammonia as N - Gallery [M300Z] EW175 0.05 0.05 mg/l Nitrate (as N) - Gallery [M301A] EW175 0.05 0.05 mg/l Nitrate (as N) - Gallery [M301A] EW175 1 2.296 mg/l GCFID-Organic Solvents (Head Space) [M3027] EW175 1 2.296 mg/l Acetone 18/07/23 16:39 TA EO089 <2 mg/l Acetonitrile 18/07/23 16:39 TA EO089 <2 mg/l Anyl acetate 18/07/23 16:39 TA EO089 <2 mg/l Cyclohexane 18/07/23 16:39 TA EO089 <2 mg/l Cyclohexane 18/07/23 16:39 TA EO089 <2 mg/l Cyclohexane 18/07/23 16:39 TA EO089 <2 mg/l Dichloromethane 18/07/23 16:39 TA EO089 <2 mg	Gallery	,	10/07/23 13:05 ^{7A}	EW175	0.05	•	<0.05	mg/l
Chloride mg/L - Gallery 10/07/23 13:05 EW175 5 19.0 mg/l Ammonia as N - Gallery [M300Z] Ammonia as N - Gallery 10/07/23 13:05 EW175 0.05 0.05 mg/l Nitrate (as N) - Gallery [M301A] EW175 1 2.296 mg/l OCFID-Organic Solvents (Head Space) [M3027] EW175 1 2.296 mg/l Acetone 18/07/23 16:39 ^{7A} EO089 <2	Fluoride mg	/L - Gallery	10/07/23 13:05	EW175	0.2		0.2	mg/l
Ammonia as N - Gallery [M300Z] 10/07/23 13:05 EW175 0.05 0.05 mg/l Nitrate (as N) - Gallery [M301A] mg/l Nitrate (as N) - Gallery [M301A] 2.296 mg/l OCFID-Organic Solvents (Head Space) [M3027] Acetone 18/07/23 16:39 ^{TA} EO089 <2	Chloride m	g/L - Gallery [M300S]						
Ammonia as N - Gallery 10/07/23 13:05 EW175 0.05 0.05 mg/l Nitrate (as N) - Gallery [M301A] 10/07/23 13:05 TA EW175 1 2.296 mg/l Nitrate (as N) - Gallery 10/07/23 16:39 TA EW175 1 2.296 mg/l GCFID-Organic Solvents (Head Space) [M3027] Acetone 18/07/23 16:39 TA EO089 2 mg/l Acetonitrile 18/07/23 16:39 TA EO089 mg/l Amyl acetate 18/07/23 16:39 TA EO089 mg/l Cyclohexane 18/07/23 16:39 TA EO089 mg/l Cyclohexane 18/07/23 16:39 TA EO089 mg/l Cyclohexane 18/07/23 16:39 TA EO089 mg/l Dichloromethane 18/07/23 16:39 TA EO089 mg/l Dichloromethane 18/07/23 16:39 TA EO089 mg/l Dichloromethane 18/07/23 16:39 TA EO089 <td< td=""><td>Chloride mg</td><td>ı/L - Gallery</td><td>10/07/23 13:05</td><td>EW175</td><td>5</td><td></td><td>19.0</td><td>mg/l</td></td<>	Chloride mg	ı/L - Gallery	10/07/23 13:05	EW175	5		19.0	mg/l
Nitrate (as N) - Gallery [M301A] 10/07/23 13:05 ^{7A} EW175 1 2.296 mg/l Mitrate (as N) - Gallery 10/07/23 13:05 ^{7A} EW175 1 2.296 mg/l GCFID-Organic Solvents (Head Space) [M3027] E0089 <2	Ammonia a	is N - Gallery [M300Z]						
Nitrate (as N) - Gallery 10/07/23 13:05 ^{7A} EW175 1 2.296 mg/l GCFID-Organic Solvents (Head Space) [M3027] EO089 <2 mg/l Acetone 18/07/23 16:39 ^{7A} EO089 <2 mg/l Acetonitrile 18/07/23 16:39 ^{7A} EO089 <2 mg/l Amyl acetate 18/07/23 16:39 ^{7A} EO089 <2 mg/l Cyclohexane 18/07/23 16:39 ^{7A} EO089 <2 mg/l Cyclopentanone 18/07/23 16:39 ^{7A} EO089 <2 mg/l Dichloromethane 18/07/23 16:39 ^{7A} EO089 <2 mg/l Dichloromethane 18/07/23 16:39 ^{7A} EO089 <2 mg/l Dichloromethane 18/07/23 16:39 ^{7A} EO089 <2 mg/l Ethanol 18/07/23 16:39 ^{7A} EO089 <2 mg/l Ethanol 18/07/23 16:39 ^{7A} EO089 <2 mg/l Ethanol 18/07/23 16:39 ^{7A} EO089 <5 mg/l	Ammonia as	s N - Gallery	10/07/23 13:05	EW175	0.05		0.05	mg/l
GCFID-Organic Solvents (Head Space) [M3027] Acetone 18/07/23 16:39 ^{7A} EO089 <2	Nitrate (as	N) - Gallery [M301A]						
Acetone 18/07/23 16:39 * EO089 <2	Nitrate (as N	N) - Gallery	10/07/23 13:05 ^{7A}	EW175	1	2	2.296	mg/l
Acetonitrile 18/07/23 16:39 TA EO089 <2	GCFID-Org	anic Solvents (Head Space						
Amyl acetate 18/07/23 16:39 * EO089 <2	Acetone		18/07/23 16:39 ^{7A}	EO089			<2	mg/l
Cyclohexane 18/07/23 16:39 ^{7A} EO089 <2 mg/l Cyclopentanone 18/07/23 16:39 ^{7A} EO089 <2	Acetonitrile		18/07/23 16:39 ^{7A}	EO089			<2	mg/l
Cyclopentanone 18/07/23 16:39 * EO089 <2 mg/l Dichloromethane 18/07/23 16:39 * EO089 <2	Amyl acetat	е	18/07/23 16:39 ^{7A}	EO089			<2	mg/l
Dichloromethane 18/07/23 16:39 TA EO089 <2 mg/l Ethanol 18/07/23 16:39 TA EO089 <5	Cyclohexan	е	18/07/23 16:39 ^{7A}	EO089			<2	mg/l
Ethanol 18/07/23 16:39 ^{7A} EO089 <5 mg/l	Cyclopentar	none	18/07/23 16:39 ^{7A}	EO089			<2	mg/l
5	Dichloromet	hane	18/07/23 16:39 ^{7A}	EO089			<2	mg/l
Ethyl Acetate 18/07/23 16:39 ^{7A} EO089 <2 mg/l	Ethanol		18/07/23 16:39 ^{7A}	EO089			<5	mg/l
	Ethyl Acetat	е	18/07/23 16:39 ^{7A}	EO089			<2	mg/l

Signed:

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Client:	AECOM Infrastructure Limited 4th Floor, Adelphi Plaz George's Street Upp Dun Laoghaire, Dublin A96 T927 IRELAND	a,	eland	<i>Certificate Code: Page Number: PO reference:</i>	PR-23-M3-000 Page 3 of 5	0292-01
Heptane		18/07/23 16:39 ^{7A}	EO089		<2	mg/l
IPA (2-Prop	anol)	18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Iso-Amyl al	cohol	18/07/23 16:39 ^{7A}	EO089		<5	mg/l
Isopropyl ad	cetate	18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Isopropyl E	ther	18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Methanol		18/07/23 16:39 ^{7A}	EO089		<5	mg/l
Methyl Ethy	/I Ketone	18/07/23 16:39 ^{7A}	EO089		<2	mg/l
n-Butyl Alco	ohol.(Butanol)	18/07/23 16:39 ^{7A}	EO089		<2	mg/l
n-Hexane		18/07/23 16:39 ^{7A}	EO089		<2	mg/l
sec-Butyl A	lcohol	18/07/23 16:39 ^{7A}	EO089		<2	mg/l
tert-Amylalo	cohol	18/07/23 16:39 ^{7A}	EO089		<5	mg/l
Tert-Butano	I	18/07/23 16:39 ^{7A}	EO089		<5	mg/l
tert-Butyl M	ethyl Ether	18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Tetrahydrof	uran	18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Toluene		18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Triethylamir	ne	18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Xylene -p		18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Xylene-M		18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Xylene-O		18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Xylenes-Tot	tal	18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Temperatu	re (Site) [M3036]					
Temperatur	e	11/07/23 19:04	Site Test		na	°C
Arsenic - T	race [M3236]					

Signed:

Louise Morrow - null Eurofins Environment Testing Ireland Limited

10/08/2023

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Client:	AECOM Infrastructu Limited 4th Floor, Adelphi P George's Street Up Dun Laoghaire, Dublin A96 T927 IRELAND	laza,	eland	Certificate Code: Page Number: PO reference:	PR-23-M3-000 Page 4 of 5	292-01
Arsenic		10/07/23 09:59	0.2	0	.229	µg/l
Barium - Tr	ace [M3237]					
Barium		10/07/23 09:59	1.77	68	8.344	µg/l
	Trace [M3238]					
Beryllium		10/07/23 09:59	1	1	.365	µg/l
	ice [M3239]					
Boron		10/07/23 09:59	0.21	<	:0.21	mg/l
	Trace [M3240]		0.4		-0.4	
Cadmium		10/07/23 09:59	0.1	•	<0.1	µg/l
Copper - II Copper (Cu	race [M3244]	10/07/23 09:59	0.003	-1	0.003	ma/l
	,	10/07/23 09:59	0.005		0.003	mg/l
Lead - Trac Lead (Pb)	e [W3246]	10/07/23 09:59	0.5		<0.5	µg/l
	Trace [M3249]	10/01/20 00:00	0.0		-0.0	P9/1
Mercury		10/07/23 09:59	0.03	0	0.069	µg/l
	ice [M3251]					1.2
Nickel (Ni)		10/07/23 09:59	0.5		<0.5	µg/l
Selenium -	Trace [M3255]					
Selenium (S	Se)	10/07/23 09:59	0.2	0	.279	µg/l
Vanadium -	- Trace [M3268]					
Vanadium ('	V)	10/07/23 09:59	1		<1	µg/l
Zinc - Trac	e [M3269]					
Zinc (Zn)		10/07/23 09:59	EW188 1	Ę	5.48	µg/l
pH [M3282]	l					

Signed:

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Client: AECOM Infrastructure & Environment Ireland Certificate Code: PR-23-M3-000292-01 Limited Page 5 of 5 Page Number: 4th Floor, Adelphi Plaza, George's Street Upper, **PO reference:** Dun Laoghaire, **Dublin** A96 T927 **IRELAND** 07/07/23 20:32 7A pН EW158 79 Conductivity [M3283] Conductivity 07/07/23 20:32 C6 EW153 100 606 µS/cm ⁴ Accreditiation Information

C6: ISO/IEC 17025:2017 INAB 138-T

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- 9. Report is issued as per out standard T&C of sale.

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Client: AECOM Infrastructure & Environment Ireland Limited 4th Floor, Adelphi Plaza, George's Street Upper, Dun Laoghaire, **Dublin** A96 T927 **IRELAND**

Certificate Code: PR-23-M3-000293-01 Page Number: Page 1 of 5 **PO reference:**

Preliminary Certificate of Analysis

This is a preliminary Certificate of Analysis and cannot be fully verified until all results have been validated

Sample number	966-2023-000308	74	Received on		07/07/2023		
			Analysis star	ted on	07/07/2023		
Your sample reference	SW_M1						
Sample Matrix	Surface water						
Sample Condition on Arrival	Satisfactory		Sample Date	•	04/07/2023		
Test Code	SUB ⁵ Analysis	Method	LOQ ³	SPEC ²	Result	Units	ACCRED
Analyte	Started						
Alkalinity as CAC03 [BB005]							
Alkalinity as CAC03	* 10/07/23 15:06		30		239.2	mg/l	
Hexavalent chromium [IX02U]							
Chromium (VI)	* 07/07/23 19:29		0.01		non mesuré	mg/l	
Total cyanides [IX479]							
Cyanide, total	* 13/07/23 17:03		0.01		<0.01	mg/l	
Chromium (Cr) [IX80U]							
Chromium (Cr)	* 07/07/23 19:29		0.005		non mesuré	mg/l	
Trivalent chromium [IXCR0]							
Chromium III	* 07/07/23 19:29		0.01		Non calculable	mg/l	
Suspended Solids [M3002]							
Suspended Solids	11/07/23 09:40 ^{7A}	EW013	5		<5	mg/l	
Chemical Oxygen Demand (COD) [M3004]						
Chemical oxygen demand (COD)	10/07/23 10:45	EW094	8		22	mg/l	
		1.1					
		haute Markes					
Signed:					1	0/08/2023	

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Environment Testing

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10/08/2023

Client:	AECOM Infrastructure & Limited 4th Floor, Adelphi Plaza George's Street Uppe Dun Laoghaire, Dublin A96 T927 IRELAND	a,	land		Certificate Code: Page Number: PO reference:	PR-23-M3-0002 Page 2 of 5	293-01
	Dxygen [M3005]		514/0.40			40.70	
Dissolved ox		13/07/23 12:25 74	EW043	1		10.78	mg/l
	g/L - Gallery [M300N]	10/07/00 10:05		4		40.0	···· ··· //
Sulphate mg		10/07/23 13:05	EW175	1		46.0	mg/l
Phosphate (Gallery	(Ortho/MRP) as P - Gallery Ortho/MRP) as P - g/L - Gallery [M300Q]	10/07/23 13:05 ^{7A}	EW175	0.05		<0.05	mg/l
Fluoride mg		10/07/23 13:05	EW175	0.2		<0.2	mg/l
-	g/L - Gallery [M300S]						
Chloride mg		10/07/23 13:05	EW175	5		21.8	mg/l
Ammonia a	s N - Gallery [M300Z]						-
Ammonia as	s N - Gallery	10/07/23 13:05	EW175	0.05		<0.05	mg/l
Nitrate (as I	N) - Gallery [M301A]						
Nitrate (as N	I) - Gallery	10/07/23 13:05 ^{7A}	EW175	1		3.149	mg/l
GCFID-Orga	anic Solvents (Head Space)	[M3027]					
Acetone		18/07/23 16:39 ^{7A}	EO089			<2	mg/l
Acetonitrile		18/07/23 16:39 ^{7A}	EO089			<2	mg/l
Amyl acetate	e	18/07/23 16:39 ^{7A}	EO089			<2	mg/l
Cyclohexan	e	18/07/23 16:39 ^{7A}	EO089			<2	mg/l
Cyclopentar	ione	18/07/23 16:39 ^{7A}	EO089			<2	mg/l
Dichloromet	hane	18/07/23 16:39 ^{7A}	EO089			<2	mg/l
Ethanol		18/07/23 16:39 ^{7A}	EO089			<5	mg/l
Ethyl Acetate	e	18/07/23 16:39 ^{7A}	EO089			<2	mg/l

Signed:

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Client:	AECOM Infrastructure Limited 4th Floor, Adelphi Plaz George's Street Upp Dun Laoghaire, Dublin A96 T927 IRELAND	a,	eland	Certificate Code: Page Number: PO reference:	PR-23-M3-000 Page 3 of 5	293-01
Heptane		18/07/23 16:39 ^{7A}	EO089		<2	mg/l
IPA (2-Prop	anol)	18/07/23 16:39 ^{7A}	EO089		<2	mg/l
lso-Amyl al	cohol	18/07/23 16:39 ^{7A}	EO089		<5	mg/l
Isopropyl a	cetate	18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Isopropyl E	ther	18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Methanol		18/07/23 16:39 ^{7A}	EO089		<5	mg/l
Methyl Ethy	/I Ketone	18/07/23 16:39 ^{7A}	EO089		<2	mg/l
n-Butyl Alco	ohol.(Butanol)	18/07/23 16:39 ^{7A}	EO089		<2	mg/l
n-Hexane		18/07/23 16:39 ^{7A}	EO089		<2	mg/l
sec-Butyl A	lcohol	18/07/23 16:39 ^{7A}	EO089		<2	mg/l
tert-Amylalo	cohol	18/07/23 16:39 ^{7A}	EO089		<5	mg/l
Tert-Butanc	I	18/07/23 16:39 ^{7A}	EO089		<5	mg/l
tert-Butyl M	ethyl Ether	18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Tetrahydrof	uran	18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Toluene		18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Triethylamir	ne	18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Xylene -p		18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Xylene-M		18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Xylene-O		18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Xylenes-To	tal	18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Temperatu	re (Site) [M3036]					
Temperatur	e	11/07/23 19:04	Site Test		na	°C
Arsenic - T	race [M3236]					

Signed:

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Client:	AECOM Infrastructure Limited 4th Floor, Adelphi Plaz George's Street Uppe Dun Laoghaire, Dublin A96 T927 IRELAND	a,	eland	Certificate Code: Page Number: PO reference:	PR-23-M3-0002 Page 4 of 5	293-01
Arsenic		11/07/23 10:17	0.2	C).521	µg/l
Barium - Tr	ace [M3237]					
Barium		11/07/23 10:17	1.77	58	8.868	µg/l
Beryllium -	Trace [M3238]					
Beryllium		11/07/23 10:17	1		<1	µg/l
Boron - Tra	ice [M3239]					
Boron		11/07/23 10:17	0.21	<	<0.21	mg/l
Cadmium -	Trace [M3240]					
Cadmium		11/07/23 10:17	0.1		<0.1	µg/l
	ace [M3244]					
Copper (Cu)	11/07/23 10:17	0.003	<	0.003	mg/l
Lead - Trac	e [M3246]					
Lead (Pb)		11/07/23 10:17	0.5		<0.5	µg/l
-	race [M3249]					
Mercury		11/07/23 10:17	0.03	<	<0.03	µg/l
	ce [M3251]					
Nickel (Ni)		11/07/23 10:17	0.5	4	1.555	µg/l
	Trace [M3255]					
Selenium (S		11/07/23 10:17	0.2	C	0.912	µg/l
	- Trace [M3268]	44/07/00 40:47	<u>,</u>		-1	
Vanadium (,	11/07/23 10:17	1		<1	µg/l
Zinc - Trace	e [M3269]	11/07/23 10:17	EW188 1		3.56	ug/l
Zinc (Zn)		11/07/23 10.17		·	3.30	µg/l
pH [M3282]						

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Client: AECOM Infrastructure & Environment Ireland Certificate Code: PR-23-M3-000293-01 Limited Page 5 of 5 Page Number: 4th Floor, Adelphi Plaza, George's Street Upper, **PO reference:** Dun Laoghaire, **Dublin** A96 T927 **IRELAND** 07/07/23 20:34 7A pН EW158 74 Conductivity [M3283] Conductivity 07/07/23 20:34 C6 EW153 100 428 µS/cm ⁴ Accreditiation Information

C6: ISO/IEC 17025:2017 INAB 138-T

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Client: AECOM Infrastructure & Environment Ireland Limited 4th Floor, Adelphi Plaza, George's Street Upper, Dun Laoghaire, **Dublin** A96 T927 **IRELAND**

Certificate Code: PR-23-M3-000294-01 Page Number: Page 1 of 5 **PO reference:**

Preliminary Certificate of Analysis

This is a preliminary Certificate of Analysis and cannot be fully verified until all results have been validated

Sample number	966-2023-000308	75	Received on	1	07/07/2023		
Your sample reference	SW C1		Analysis starte	a on	07/07/2023		
Sample Matrix	Surface water						
Sample Condition on Arrival	Satisfactory		Sample Date		04/07/2023		
Test Code Analyte	SUB ⁵ Analysis Started	Method	LOQ ³	SPEC ²	Result	Units	ACCRED ⁴
Alkalinity as CAC03 [BB005]							
Alkalinity as CAC03	* 10/07/23 15:06		30		198.2	mg/l	
Hexavalent chromium [IX02U]							
Chromium (VI)	* 07/07/23 19:29		0.01		non mesuré	mg/l	
Total cyanides [IX479]							
Cyanide, total	* 13/07/23 17:03		0.01		<0.01	mg/l	
Chromium (Cr) [IX80U]							
Chromium (Cr)	* 07/07/23 19:29		0.005		non mesuré	mg/l	
Trivalent chromium [IXCR0]							
Chromium III	* 07/07/23 19:29		0.01		Non calculable	mg/l	
Suspended Solids [M3002]							
Suspended Solids	10/07/23 09:31	EW013	5		<5	mg/l	
Chemical Oxygen Demand (COD)) [M3004]						
Chemical oxygen demand (COD)	10/07/23 10:30	EW094	8		27	mg/l	
		Variale House 1					
Signadi		A NOT NOT			1	0/08/2023	
Signed:	Louise Morrow - null Eur	ofine Environr	nent Testing Irolar	d Limited			

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10/08/2023

Client:						PR-23-M3-000294-01	
	Limited 4th Floor, Adelphi Plaz	а		Page Number:	Page 2 of 5		
	George's Street Upp				PO reference:		
	Dun Laoghaire,						
	Dublin						
	A96 T927 IRELAND						
	INCLAND						
Dissolved (Oxygen [M3005]						
Dissolved of	xygen	13/07/23 12:22 ^{7A}	EW043	1		9.11	mg/l
Sulphate m	ig/L - Gallery [M300N]						
Sulphate mo	g/L - Gallery	08/07/23 15:27	EW175	1		87.5	mg/l
	(Ortho/MRP) as P - Gallery						
Phosphate (Gallery	(Ortho/MRP) as P -	08/07/23 15:27 ^{7A}	EW175	0.05		<0.05	mg/l
,	g/L - Gallery [M300Q]						
Fluoride mg	/L - Gallery	08/07/23 15:27	EW175	0.2		0.2	mg/l
Chloride m	g/L - Gallery [M300S]						
Chloride mg	ı/L - Gallery	08/07/23 15:27	EW175	5		12.2	mg/l
Ammonia a	is N - Gallery [M300Z]						
Ammonia as	s N - Gallery	08/07/23 15:27	EW175	0.05		<0.05	mg/l
	N) - Gallery [M301A]						
Nitrate (as N	, ,	08/07/23 15:27 ^{7A}	EW175	1		1.543	mg/l
•	anic Solvents (Head Space						
Acetone		18/07/23 16:39 ^{7A}	EO089			<2	mg/l
Acetonitrile		18/07/23 16:39 ^{7A}	EO089			<2	mg/l
Amyl acetat	e	18/07/23 16:39 ^{7A}	EO089			<2	mg/l
Cyclohexan	e	18/07/23 16:39 ^{7A}	EO089			<2	mg/l
Cyclopentar	none	18/07/23 16:39 ^{7A}	EO089			<2	mg/l
Dichloromet	hane	18/07/23 16:39 ^{7A}	EO089			<2	mg/l
Ethanol		18/07/23 16:39 ^{7A}	EO089			<5	mg/l
Ethyl Acetat	e	18/07/23 16:39 ^{7A}	EO089			<2	mg/l

Signed:

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Eurofins Environment Testing Ireland Hoffman Park, Inchera Cork T45 PC80 Ireland T: 0818 252526 Web: www.eurofins.ie Email: ASTsupport@etuki.eurofins.com



Client:	AECOM Infrastructure Limited 4th Floor, Adelphi Plaz George's Street Upp Dun Laoghaire, Dublin A96 T927 IRELAND	za,	eland	<i>Certificate Code: Page Number: PO reference:</i>	PR-23-M3-000 Page 3 of 5	294-01
Heptane		18/07/23 16:39 ^{7A}	EO089		<2	mg/l
IPA (2-Prop	anol)	18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Iso-Amyl al	cohol	18/07/23 16:39 ^{7A}	EO089		<5	mg/l
Isopropyl a	cetate	18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Isopropyl E	ther	18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Methanol		18/07/23 16:39 ^{7A}	EO089		<5	mg/l
Methyl Ethy	/I Ketone	18/07/23 16:39 ^{7A}	EO089		<2	mg/l
n-Butyl Alco	ohol.(Butanol)	18/07/23 16:39 ^{7A}	EO089		<2	mg/l
n-Hexane		18/07/23 16:39 ^{7A}	EO089		<2	mg/l
sec-Butyl A	lcohol	18/07/23 16:39 ^{7A}	EO089		<2	mg/l
tert-Amylalo	cohol	18/07/23 16:39 ^{7A}	EO089		<5	mg/l
Tert-Butanc	I	18/07/23 16:39 ^{7A}	EO089		<5	mg/l
tert-Butyl M	ethyl Ether	18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Tetrahydrof	uran	18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Toluene		18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Triethylamir	ne	18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Xylene -p		18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Xylene-M		18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Xylene-O		18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Xylenes-To	tal	18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Temperatu	re (Site) [M3036]					
Temperatur	е	11/07/23 19:04	Site Test		na	°C
Arsenic - T	race [M3236]					

Signed:

Louise Morrow - null Eurofins Environment Testing Ireland Limited

10/08/2023

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Eurofins Environment Testing Ireland Hoffman Park, Inchera Cork T45 PC80 Ireland T: 0818 252526 Web: www.eurofins.ie Email: ASTsupport@etuki.eurofins.com



Client:	AECOM Infrastructur Limited 4th Floor, Adelphi Pla George's Street Up Dun Laoghaire, Dublin A96 T927 IRELAND	aza,	eland	<i>Certificate Code: Page Number: PO reference:</i>	PR-23-M3-000 Page 4 of 5	294-01
Arsenic		10/07/23 09:59	0.2		1.716	µg/l
Barium - Ti	ace [M3237]					
Barium		10/07/23 09:59	1.77	2	55.318	µg/l
-	Trace [M3238]					
Beryllium		10/07/23 09:59	1		<1	µg/l
	ice [M3239]					
Boron		10/07/23 09:59	0.21		<0.21	mg/l
	Trace [M3240]					
Cadmium		10/07/23 09:59	0.1		<0.1	µg/l
	race [M3244]			•		
Copper (Cu	,	10/07/23 09:59	0.00	3 <	0.003	mg/l
Lead - Trac	e [M3246]	40/07/00 00 50	0.5		-0.5	
Lead (Pb)		10/07/23 09:59	0.5		<0.5	µg/l
-	Trace [M3249]	10/07/23 09:59	0.03		<0.03	
Mercury	00 IM22541	10/07/23 09.59	0.03		<0.03	µg/l
Nickel (Ni)	ice [M3251]	10/07/23 09:59	0.5		3.964	µg/l
. ,	Trace [M3255]	10/01/20 00:00	0.0		0.004	μg/i
Selenium (S		10/07/23 09:59	0.2		0.287	µg/l
	- Trace [M3268]	10/01/20 00:00	0.2		0.201	P9/1
Vanadium (10/07/23 09:59	1		<1	µg/l
Zinc - Trac	,					10
Zinc (Zn)		10/07/23 09:59	EW188 1		7.43	µg/l
pH [M3282]						
-						

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Client: AECOM Infrastructure & Environment Ireland Certificate Code: PR-23-M3-000294-01 Limited Page Number: Page 5 of 5 4th Floor, Adelphi Plaza, George's Street Upper, **PO reference:** Dun Laoghaire, **Dublin** A96 T927 **IRELAND** 07/07/23 20:37 7A pН EW158 79 Conductivity [M3283] Conductivity 07/07/23 20:37 C6 EW153 100 645 µS/cm ⁴ Accreditiation Information

C6: ISO/IEC 17025:2017 INAB 138-T

10/08/2023

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Client: AECOM Infrastructure & Environment Ireland Limited 4th Floor, Adelphi Plaza, George's Street Upper, Dun Laoghaire, **Dublin** A96 T927 **IRELAND**

Certificate Code: PR-23-M3-000295-01 Page 1 of 5 Page Number: **PO reference:**

Preliminary Certificate of Analysis

This is a preliminary Certificate of Analysis and cannot be fully verified until all results have been validated

Sample number	966-2023-0003087	6	Received on		07/07/2023 07/07/2023		
Your sample reference	SW M3		Analysis star	ed on	07/07/2023		
Sample Matrix	Surface water						
Sample Condition on Arrival	Satisfactory		Sample Date		04/07/2023		
Test Code Analyte	SUB ⁵ Analysis Started	Method	LOQ ³	SPEC ²	Result	Units	ACCRED ⁴
Alkalinity as CAC03 [BB005]							
Alkalinity as CAC03	* 10/07/23 15:06		30		219.2	mg/l	
Hexavalent chromium [IX02U]							
Chromium (VI)	* 07/07/23 19:30		0.01		non mesuré	mg/l	
Total cyanides [IX479]							
Cyanide, total	* 13/07/23 17:03		0.01		<0.01	mg/l	
Chromium (Cr) [IX80U]							
Chromium (Cr)	* 07/07/23 19:30		0.005		non mesuré	mg/l	
Trivalent chromium [IXCR0]							
Chromium III	* 07/07/23 19:30		0.01		Non calculable	mg/l	
Suspended Solids [M3002]							
Suspended Solids	11/07/23 09:41 ^{7A}	EW013	5		<5	mg/l	
Chemical Oxygen Demand (COD) [M3004]						
Chemical oxygen demand (COD)	10/07/23 10:45	EW094	8		28	mg/l	
Signed:		Kenik Kerrsy			1	0/08/2023	

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Client:	AECOM Infrastructure	Certificate Code:	PR-23-M3-0002	295-01			
	Limited 4th Floor, Adelphi Plaz	a			Page Number:	Page 2 of 5	
	George's Street Upp				PO reference:		
	Dun Laoghaire,	·					
	Dublin						
	A96 T927 IRELAND						
	IRELAND						
Dissolved (Oxygen [M3005]						
Dissolved of	xygen	13/07/23 12:24 ^{7A}	EW043	1		10.66	mg/l
Sulphate m	g/L - Gallery [M300N]						
Sulphate mg/L - Gallery		10/07/23 13:05	EW175	1		73.7	mg/l
	(Ortho/MRP) as P - Gallery						
Phosphate (Gallery	(Ortho/MRP) as P -	10/07/23 13:05 ^{7A}	EW175	0.05		<0.05	mg/l
,	g/L - Gallery [M300Q]						
Fluoride mg	/L - Gallery	10/07/23 13:05	EW175	0.2		0.2	mg/l
Chloride m	g/L - Gallery [M300S]						
Chloride mg	ı/L - Gallery	10/07/23 13:05	EW175	5		19.3	mg/l
Ammonia a	is N - Gallery [M300Z]						
Ammonia as	s N - Gallery	10/07/23 13:05	EW175	0.05	·	<0.05	mg/l
	N) - Gallery [M301A]						
Nitrate (as N	, ,	10/07/23 13:05 ^{7A}	EW175	1		1.444	mg/l
•	anic Solvents (Head Space						
Acetone		18/07/23 16:39 ^{7A}	EO089			<2	mg/l
Acetonitrile		18/07/23 16:39 ^{7A}	EO089			<2	mg/l
Amyl acetat	e	18/07/23 16:39 ^{7A}	EO089			<2	mg/l
Cyclohexan	е	18/07/23 16:39 ^{7A}	EO089			<2	mg/l
Cyclopentar	none	18/07/23 16:39 ^{7A}	EO089			<2	mg/l
Dichloromet	hane	18/07/23 16:39 ^{7A}	EO089			<2	mg/l
Ethanol		18/07/23 16:39 ^{7A}	EO089			<5	mg/l
Ethyl Acetat	e	18/07/23 16:39 ^{7A}	EO089			<2	mg/l

Signed:

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Client:	AECOM Infrastructure Limited 4th Floor, Adelphi Plaz George's Street Upp Dun Laoghaire, Dublin A96 T927 IRELAND	a,	eland	Certificate Code: Page Number: PO reference:	PR-23-M3-000 Page 3 of 5	295-01
Heptane		18/07/23 16:39 ^{7A}	EO089		<2	mg/l
IPA (2-Prop	anol)	18/07/23 16:39 ^{7A}	EO089		<2	mg/l
lso-Amyl al	cohol	18/07/23 16:39 ^{7A}	EO089		<5	mg/l
Isopropyl ad	cetate	18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Isopropyl E	ther	18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Methanol		18/07/23 16:39 ^{7A}	EO089		<5	mg/l
Methyl Ethy	/I Ketone	18/07/23 16:39 ^{7A}	EO089		<2	mg/l
n-Butyl Alco	ohol.(Butanol)	18/07/23 16:39 ^{7A}	EO089		<2	mg/l
n-Hexane		18/07/23 16:39 ^{7A}	EO089		<2	mg/l
sec-Butyl A	lcohol	18/07/23 16:39 ^{7A}	EO089		<2	mg/l
tert-Amylalo	cohol	18/07/23 16:39 ^{7A}	EO089		<5	mg/l
Tert-Butano	I	18/07/23 16:39 ^{7A}	EO089		<5	mg/l
tert-Butyl M	ethyl Ether	18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Tetrahydrof	uran	18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Toluene		18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Triethylamir	ne	18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Xylene -p		18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Xylene-M		18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Xylene-O		18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Xylenes-Tot	tal	18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Temperatu	re (Site) [M3036]					
Temperatur	e	11/07/23 19:04	Site Test		na	°C
Arsenic - T	race [M3236]					

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Client:	AECOM Infrastructur Limited 4th Floor, Adelphi Pla George's Street Up Dun Laoghaire, Dublin A96 T927 IRELAND	aza,	eland	Certificate Code: Page Number: PO reference:	PR-23-M3-000 Page 4 of 5	295-01
Arsenic		11/07/23 10:17	0.2		0.74	µg/l
Barium - Ti	ace [M3237]					
Barium		11/07/23 10:17	1.77	7	77.05	µg/l
-	Trace [M3238]					
Beryllium		11/07/23 10:17	1		<1	µg/l
	ice [M3239]					
Boron		11/07/23 10:17	0.21	•	<0.21	mg/l
	Trace [M3240]					
Cadmium		11/07/23 10:17	0.1		<0.1	µg/l
	race [M3244]		0.000		0.000	
Copper (Cu	,	11/07/23 10:17	0.003	<	0.003	mg/l
Lead - Trac	e [M3246]	44/07/00 40.47	0.5		-0 F	
Lead (Pb)		11/07/23 10:17	0.5		<0.5	µg/l
Mercury - I Mercury	Frace [M3249]	11/07/23 10:17	0.03		<0.03	µg/l
	ice [M3251]	11/07/23 10.17	0.03		-0.03	μg/i
Nickel (Ni)		11/07/23 10:17	0.5	2	1.764	µg/l
. ,	Trace [M3255]	11/01/20 10:11	0.0			P9/1
Selenium (S		11/07/23 10:17	0.2	().956	µg/l
	- Trace [M3268]					10
Vanadium (11/07/23 10:17	1		<1	µg/l
Zinc - Trac	,					
Zinc (Zn)		11/07/23 10:17	EW188 1		4.51	µg/l
pH [M3282]	I					

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pН		07/07/23 20:33 ^{7A}	EW158			7.7		
Conductivit	y [M3283]							
Conductivity		07/07/23 20:33	EW153	100		663	µS/cm	C6
⁴ Accreditiat	ion Information							

C6: ISO/IEC 17025:2017 INAB 138-T

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Client: AECOM Infrastructure & Environment Ireland Limited 4th Floor, Adelphi Plaza, George's Street Upper, Dun Laoghaire, **Dublin** A96 T927 **IRELAND**

Certificate Code: PR-23-M3-000296-01 Page Number: Page 1 of 5 **PO reference:**

Preliminary Certificate of Analysis

This is a preliminary Certificate of Analysis and cannot be fully verified until all results have been validated

Sample number	966-2023-000308	77	Received on	07/07/2023		
Your sample reference	SW Y1		Analysis started	on 07/07/2023		
Sample Matrix	Sw_11 Surface water					
Sample Condition on Arrival	Satisfactory		Sample Date	04/07/2023		
Test Code Analyte	SUB ⁵ Analysis Started	Method	LOQ ³ S	SPEC ² Result	Units	ACCRED ⁴
Alkalinity as CAC03 [BB005]						
Alkalinity as CAC03	* 10/07/23 15:06		30	199.0	mg/l	
Hexavalent chromium [IX02U]						
Chromium (VI)	* 07/07/23 19:30		0.01	non mesuré	mg/l	
Total cyanides [IX479]						
Cyanide, total	* 13/07/23 17:03		0.01	<0.01	mg/l	
Chromium (Cr) [IX80U]						
Chromium (Cr)	* 07/07/23 19:30		0.005	non mesuré	mg/l	
Trivalent chromium [IXCR0]						
Chromium III	* 07/07/23 19:30		0.01	Non calculable	mg/l	
Suspended Solids [M3002]						
Suspended Solids	10/07/23 09:35	EW013	5	<5	mg/l	
Chemical Oxygen Demand (COD)) [M3004]					
Chemical oxygen demand (COD)	10/07/23 10:30	EW094	8	31	mg/l	
		1.1				
		Kaute Halles				
Signed:		···· v			10/08/2023	
	Louise Morrow - null Eur	ofins Environr	nent Testing Ireland	Limited		

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10/08/2023

Client: AECOM Infrastructure & Environment Ireland					Certificate Code:	PR-23-M3-000296-01	
	Limited 4th Floor, Adelphi Plaz	a			Page Number:	Page 2 of 5	
	George's Street Upp Dun Laoghaire, Dublin A96 T927 IRELAND				PO reference:		
Dissolved (Oxygen [M3005]						
Dissolved of		13/07/23 12:28 ^{7A}	EW043	1		10.61	mg/l
Sulphate m	g/L - Gallery [M300N]						-
Sulphate m	g/L - Gallery	08/07/23 15:27	EW175	1		89.3	mg/l
Phosphate	(Ortho/MRP) as P - Gallery	[M300P]					
Gallery	(Ortho/MRP) as P -	08/07/23 15:27 ^{7A}	EW175	0.05	•	<0.05	mg/l
Fluoride mg	g/L - Gallery [M300Q]	08/07/23 15:27	EW175	0.2		0.2	mg/l
0	g/L - Gallery [M300S]	00/01/20 10:21		0.2		0.2	iiig/i
Chloride mg		08/07/23 15:27	EW175	5		15.8	mg/l
	is N - Gallery [M300Z]			-			
Ammonia as		08/07/23 15:27	EW175	0.05		<0.05	mg/l
Nitrate (as	N) - Gallery [M301A]						-
Nitrate (as N	N) - Gallery	08/07/23 15:27 ^{7A}	EW175	1		1.927	mg/l
GCFID-Org	anic Solvents (Head Space) [M3027]					
Acetone		18/07/23 16:39 ^{7A}	EO089			<2	mg/l
Acetonitrile		18/07/23 16:39 ^{7A}	EO089			<2	mg/l
Amyl acetat	e	18/07/23 16:39 ^{7A}	EO089			<2	mg/l
Cyclohexan	e	18/07/23 16:39 ^{7A}	EO089			<2	mg/l
Cyclopentar	none	18/07/23 16:39 ^{7A}	EO089			<2	mg/l
Dichloromet	hane	18/07/23 16:39 ^{7A}	EO089			<2	mg/l
Ethanol		18/07/23 16:39 ^{7A}	EO089			<5	mg/l
Ethyl Acetat	e	18/07/23 16:39 ^{7A}	EO089			<2	mg/l

Signed:

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Client:	AECOM Infrastructure Limited 4th Floor, Adelphi Plaz George's Street Upp Dun Laoghaire, Dublin A96 T927 IRELAND	a,	eland	Certificate Code: Page Number: PO reference:	PR-23-M3-000 Page 3 of 5	296-01
Heptane		18/07/23 16:39 ^{7A}	EO089		<2	mg/l
IPA (2-Prop	anol)	18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Iso-Amyl al	cohol	18/07/23 16:39 ^{7A}	EO089		<5	mg/l
Isopropyl ad	cetate	18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Isopropyl E	ther	18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Methanol		18/07/23 16:39 ^{7A}	EO089		<5	mg/l
Methyl Ethy	/I Ketone	18/07/23 16:39 ^{7A}	EO089		<2	mg/l
n-Butyl Alco	ohol.(Butanol)	18/07/23 16:39 ^{7A}	EO089		<2	mg/l
n-Hexane		18/07/23 16:39 ^{7A}	EO089		<2	mg/l
sec-Butyl A	Icohol	18/07/23 16:39 ^{7A}	EO089		<2	mg/l
tert-Amylalo	cohol	18/07/23 16:39 ^{7A}	EO089		<5	mg/l
Tert-Butano	l	18/07/23 16:39 ^{7A}	EO089		<5	mg/l
tert-Butyl M	ethyl Ether	18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Tetrahydrof	uran	18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Toluene		18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Triethylamir	ne	18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Xylene -p		18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Xylene-M		18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Xylene-O		18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Xylenes-Tot	tal	18/07/23 16:39 ^{7A}	EO089		<2	mg/l
Temperatu	re (Site) [M3036]					
Temperatur	e	11/07/23 19:04	Site Test		na	°C
Arsenic - T	race [M3236]					

Signed:

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Client:	AECOM Infrastructu Limited 4th Floor, Adelphi P George's Street U Dun Laoghaire, Dublin A96 T927 IRELAND	laza,	eland	<i>Certificate Code: Page Number: PO reference:</i>	PR-23-M3-000 Page 4 of 5	296-01
Arsenic		10/07/23 09:59	0.2	(0.85	µg/l
	ace [M3237]					
Barium		10/07/23 09:59	1.77	18	3.104	µg/l
	Trace [M3238]					
Beryllium		10/07/23 09:59	1		<1	µg/l
	ice [M3239]					
Boron		10/07/23 09:59	0.21	<	0.21	mg/l
	Trace [M3240]		0.4		-0.4	0
Cadmium		10/07/23 09:59	0.1	•	<0.1	µg/l
Copper - II Copper (Cu	race [M3244]	10/07/23 09:59	0.003	-1	0.003	ma/l
	,	10/07/23 09.59	0.003		5.003	mg/l
Lead - Trac Lead (Pb)	e [wi5246]	10/07/23 09:59	0.5		<0.5	µg/l
	Trace [M3249]	10/01/20 00:00	0.0		-0.0	P9/1
Mercury		10/07/23 09:59	0.03	<	0.03	µg/l
	ice [M3251]					1.2.1
Nickel (Ni)		10/07/23 09:59	0.5	8	3.34	µg/l
Selenium -	Trace [M3255]					
Selenium (S	Se)	10/07/23 09:59	0.2	0	.707	µg/l
Vanadium -	- Trace [M3268]					
Vanadium ('	V)	10/07/23 09:59	1		<1	µg/l
Zinc - Trac	e [M3269]					
Zinc (Zn)		10/07/23 09:59	EW188 1	Ę	5.72	µg/l
pH [M3282]	l					

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Client: AECOM Infrastructure & Environment Ireland Certificate Code: PR-23-M3-000296-01 Limited Page 5 of 5 Page Number: 4th Floor, Adelphi Plaza, George's Street Upper, **PO reference:** Dun Laoghaire, **Dublin** A96 T927 **IRELAND** 07/07/23 20:30 7A pН EW158 78 Conductivity [M3283] Conductivity 07/07/23 20:30 C6 EW153 100 664 µS/cm ⁴ Accreditiation Information

C6: ISO/IEC 17025:2017 INAB 138-T

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- 9. Report is issued as per out standard T&C of sale.



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Client: AECOM Infrastructure & Environment Ireland Limited 4th Floor, Adelphi Plaza, George's Street Upper, Dun Laoghaire, **Dublin** A96 T927 **IRELAND**

Certificate Code: PR-23-M3-000297-01 Page Number: Page 1 of 7 **PO reference:**

10/08/2023

Preliminary Certificate of Analysis

This is a preliminary Certificate of Analysis and cannot be fully verified until all results have been validated

			iy vermea a			100	
Sample number	966-2023-0003087	78	Received on		07/07/2023		
Your sample reference Sample Matrix	BHSSMO7 Surface water		Analysis star		07/07/2023		
Sample Condition on Arrival	Satisfactory		Sample Date	•	05/07/2023		
Test Code Analyte	SUB ⁵ Analysis Started	Method	LOQ ³	SPEC ²	Result	Units	ACCRED ⁴
Alkalinity as CAC03 [BB005]							
Alkalinity as CAC03	* 10/07/23 15:06		30		2357	mg/l	
Phenols (10) and Cresols (3) [F6536]						
2,3/3,5-Dimethylphenol + 4-Ethylphenol	* 10/07/23 18:12		0.02		0.029	µg/l	
2,4-Dimethylphenol	* 10/07/23 18:12		0.02		<0.02	µg/l	
2,5-Dimethylphenol	* 10/07/23 18:12		0.02		<0.02	µg/l	
2,6-Dimethylphenol	* 10/07/23 18:12		0.03		<0.03	µg/l	
3,4-Dimethylphenol	* 10/07/23 18:12		0.02		<0.02	µg/l	
Cresols (sum)	* 10/07/23 18:12		0.8		<0.8	µg/l	
m-Cresol	* 10/07/23 18:12		0.3		<0.3	µg/l	
m-Ethylphenol	* 10/07/23 18:12		0.02		<0.02	μg/l	
o-Cresol	* 10/07/23 18:12		0.3		<0.3	µg/l	
o-Ethylphenol	* 10/07/23 18:12		0.03		<0.03	µg/l	

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Client:	AECOM Infrastructu Limited 4th Floor, Adelphi P George's Street U Dun Laoghaire, Dublin A96 T927 IRELAND	laza			Certificate Code: Page Number: PO reference:	PR-23-M3-0002 Page 2 of 7	297-01
p-Cresol		*	10/07/23 18:12	0.2		0.25	µg/l
Phenol		*	10/07/23 18:12	0.2		<0.2	µg/l
Thymol		*	10/07/23 18:12	0.01	•	<0.01	µg/l
PAH (16 EP							
Acenaphthe	ne	*	10/07/23 18:12	0.1		<0.1	µg/l
Acenaphthy	lene	*	10/07/23 18:12	0.04	•	<0.04	µg/l
Anthracene		*	10/07/23 18:12	0.01	•	<0.01	µg/l
Benz(a)anth	nracene	*	10/07/23 18:12	0.04	•	<0.04	µg/l
Benzo(a)py	rene	*	10/07/23 18:12	0.03		<0.03	µg/l
Benzo(b+k)	fluoranthene	*	10/07/23 18:12	0.05		<0.05	µg/l
Benzo(g,h,i)	perylene	*	10/07/23 18:12	0.03		<0.03	µg/l
Chrysene		*	10/07/23 18:12	0.02	•	<0.02	µg/l
Dibenz(a,h)	anthracene	*	10/07/23 18:12	0.04		<0.04	µg/l
Fluoranthen	e	*	10/07/23 18:12	0.02		<0.02	µg/l
Fluorene		*	10/07/23 18:12	0.01		<0.01	µg/l
Indeno(1,2,3	3-cd)pyrene	*	10/07/23 18:12	0.04		<0.04	µg/l
Naphthalen	e	*	10/07/23 18:12	0.4		<0.4	µg/l
PAH 16 EPA	A (sum)	*	10/07/23 18:12	0.91		<0.91	µg/l
Phenanthre	ne	*	10/07/23 18:12	0.02		<0.02	µg/l
Pyrene		*	10/07/23 18:12	0.06		<0.06	µg/l
Hexavalent	chromium [IX02U]						
Chromium (VI)	*	07/07/23 19:30	0.01	non	mesuré	mg/l
Total cyani	des [IX479]						

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Client:	AECOM Infrastructure Limited 4th Floor, Adelphi Pla George's Street Upp Dun Laoghaire, Dublin A96 T927 IRELAND	za,	eland		<i>Certificate Code: Page Number: PO reference:</i>	PR-23-M3-000 Page 3 of 7	297-01	
Cyanide, to		* 13/07/23 17:03		0.01	<	0.01	mg/l	
	(Cr) [IX80U]			0.005		,		
Chromium ((),	* 07/07/23 19:30		0.005	non	mesuré	mg/l	
	hromium [IXCR0]	* 07/07/23 19:30		0.04	Non	alavdabla	···· ·· //	
Chromium I		01/01/20 10:00		0.01	NON C	alculable	mg/l	
	fluorooctanoic acid) [LW1: iluorooctanoic acid)	3⊏] * 07/07/23 19:30		0.3		1.3	ng/l	SS
`	fluorooctanesulfonic acid)			0.5		1.5	ng/i	00
	luorooctanesulfonic acid)			0.2	<	:0.20	ng/l	SS
	d Solids [M3002]	01/01/20 10:00		0.2		0.20	iig/i	
Suspended		10/07/23 09:37	EW013	5		1570	mg/l	
•	Dxygen Demand (COD) [M						0	
	xygen demand (COD)	10/07/23 10:38	EW094	8		410	mg/l	
	Oxygen [M3005]						-	
Dissolved o	xygen	13/07/23 12:24 ^{7A}	EW043	1		<1	mg/l	
Sulphate m	ng/L - Gallery [M300N]							
Sulphate m	g/L - Gallery	10/07/23 13:05	EW175	1		<1	mg/l	
Phosphate	(Ortho/MRP) as P - Galler	y [M300P]						
Gallery	(Ortho/MRP) as P - g/L - Gallery [M300Q]	10/07/23 13:05 ^{7A}	EW175	0.05	<	:0.05	mg/l	
Fluoride mg		10/07/23 13:05	EW175	0.2		0.8	mg/l	
Chloride m	g/L - Gallery [M300S]							
Chloride mo	g/L - Gallery	10/07/23 13:05	EW175	5		15.9	mg/l	
Ammonia a	as N - Gallery [M300Z]							

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10/08/2023

Client:	AECOM Infrastructure	& Environment Ire	land		Certificate Code:	PR-23-M3-000	297-01
	Limited 4th Floor, Adelphi Plaza				Page Number:	Page 4 of 7	
	George's Street Uppe Dun Laoghaire, Dublin A96 T927 IRELAND				PO reference:		
Ammonia as	s N - Gallery	10/07/23 13:05	EW175	0.05		1.83	mg/l
Nitrate (as	N) - Gallery [M301A]						
Nitrate (as N	N) - Gallery	10/07/23 13:05 ^{7A}	EW175	1		<1	mg/l
GCFID-Org	anic Solvents (Head Space)	[M3027]					
Acetone		18/07/23 16:39	EO089			<2	mg/l
Acetonitrile		18/07/23 16:39	EO089			<2	mg/l
Amyl acetat	e	18/07/23 16:39	EO089			<2	mg/l
Cyclohexan	e	18/07/23 16:39	EO089			<2	mg/l
Cyclopentar	none	18/07/23 16:39	EO089			<2	mg/l
Dichloromet	hane	18/07/23 16:39	EO089			<2	mg/l
Ethanol		18/07/23 16:39	EO089			<5	mg/l
Ethyl Acetat	e	18/07/23 16:39	EO089			<2	mg/l
Heptane		18/07/23 16:39	EO089			<2	mg/l
IPA (2-Propa	anol)	18/07/23 16:39	EO089			<2	mg/l
Iso-Amyl ald	cohol	18/07/23 16:39	EO089			<5	mg/l
Isopropyl ac	etate	18/07/23 16:39	EO089			<2	mg/l
Isopropyl Et	her	18/07/23 16:39	EO089			<2	mg/l
Methanol		18/07/23 16:39	EO089			<5	mg/l
Methyl Ethy	l Ketone	18/07/23 16:39	EO089			<2	mg/l
n-Butyl Alco	hol.(Butanol)	18/07/23 16:39	EO089			<2	mg/l
n-Hexane		18/07/23 16:39	EO089			<2	mg/l
sec-Butyl Al	cohol	18/07/23 16:39	EO089			<2	mg/l
tert-Amylalc	ohol	18/07/23 16:39	EO089			<5	mg/l
n-Hexane sec-Butyl Al	cohol	18/07/23 16:39 18/07/23 16:39	EO089 EO089			<2 <2	mg/l mg/l

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Tert-Butano	l	18/07/23 16:39	EO089			<5	mg/l
tert-Butyl M	ethyl Ether	18/07/23 16:39	EO089			<2	mg/l
Tetrahydrofu	uran	18/07/23 16:39	EO089			<2	mg/l
Toluene		18/07/23 16:39	EO089			<2	mg/l
Triethylamir	ne	18/07/23 16:39	EO089			<2	mg/l
Xylene -p		18/07/23 16:39	EO089			<2	mg/l
Xylene-M		18/07/23 16:39	EO089			<2	mg/l
Xylene-O		18/07/23 16:39	EO089			<2	mg/l
Xylenes-Tot	al	18/07/23 16:39	EO089			<2	mg/l
Temperatu	re (Site) [M3036]						
Temperature	e	11/07/23 19:04	Site Test			na	°C
	race [M3236]						
Arsenic		10/07/23 09:59		0.2	:	2.857	µg/l
	ace [M3237]						
Barium		10/07/23 09:59		1.77	16	67.266	µg/l
-	Trace [M3238]						
Beryllium		10/07/23 09:59		1		<1	µg/l
	ce [M3239]	40/07/00 00 50		0.04		-0.04	
Boron	T	10/07/23 09:59		0.21	•	<0.21	mg/l
Cadmium - Cadmium	Trace [M3240]	10/07/23 09:59		0.1		0.629	ug/l
	1000 [M2244]	10/07/23 09.59		0.1	(0.029	µg/l
Copper - In Copper (Cu	ace [M3244]	10/07/23 09:59		0.003	-	0.003	mg/l
Lead - Trac	•	10/01/20 00.00		0.000		0.000	iiig/i
Leau - IIdC	6 [W3240]						

Signed:

10/08/2023

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10/08/2023

Limited 4th Floor, Adelphi Plaza, George's Street Upper, Dun Laoghaire, Dublin A96 T927 IRELANDPage Number: PO reference:Page 6 of 7Lead (Pb)10/07/23 09:590.5<0.5µg/lMercury - Trace [M3249] Mercury10/07/23 09:590.030.091µg/l
George's Street Upper, Dun Laoghaire, Dublin A96 T927 IRELAND PO reference: Lead (Pb) 10/07/23 09:59 0.5 <0.5 µg/l Mercury - Trace [M3249]
Mercury - Trace [M3249]
Mercury 10/07/23 09:59 0.03 0.091 μg/l
Nickel - Trace [M3251]
Nickel (Ni) 10/07/23 09:59 0.5 51.846 µg/l
Selenium - Trace [M3255]
Selenium (Se) 10/07/23 09:59 0.2 0.56 µg/l
Vanadium - Trace [M3268]
Vanadium (V) 10/07/23 09:59 1 2.888 µg/l
Zinc - Trace [M3269]
Zinc (Zn) 10/07/23 09:59 EW188 1 80.8 µg/l
pH [M3282]
pH 07/07/23 20:32 ^{7A} EW158 7.4
Conductivity [M3283]
Conductivity 07/07/23 20:32 EW153 100 592 µS/cm C6
TPH 3 Band (C6-10-21-40) in water [M502B] TPH >C10-C21 * 08/07/23 13:02 0.1 <0.10
TPH >C21-C40 * 08/07/23 13:02 0.1 <0.1 μg/l
TPH >C6-C10 * 08/07/23 13:02 0.1 <0.1 μg/l
TPH Total >C6-C40 * 08/07/23 13:02 10 <10 μg/l YA
Btex in water [M50A7]
Benzene * 08/07/23 13:02 1 <1 μg/l
Ethylbenzene * 08/07/23 13:02 1 <1 μg/l
m-/-p-Xylene * 08/07/23 13:02 1 <1 μg/l

Signed:

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NOTES

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Eurofins Environment Testing Ireland Hoffman Park, Inchera Cork T45 PC80 Ireland T: 0818 252526 Web: www.eurofins.ie Email: ASTsupport@etuki.eurofins.com



Client: AECOM Infrastructure & Environment Ireland Certificate Code: PR-23-M3-000297-01 Limited Page Number: Page 7 of 7 4th Floor, Adelphi Plaza, George's Street Upper, **PO reference:** Dun Laoghaire, **Dublin** A96 T927 **IRELAND** * 08/07/23 13:02 o-Xylene 1 <1 µg/l Toluene 08/07/23 13:02 1 <1 µg/l ⁴ Accreditiation Information

C6: ISO/IEC 17025:2017 INAB 138-T SS: ISO/IEC 17025:2017 SWEDAC 1977 YA: Accredited (External Subcontractor)

Signed:

Louise Morrow - null Eurofins Environment Testing Ireland Limited

10/08/2023

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Client: AECOM Infrastructure & Environment Ireland Limited 4th Floor, Adelphi Plaza, George's Street Upper, Dun Laoghaire, **Dublin** A96 T927 **IRELAND**

Certificate Code: PR-23-M3-000298-01 Page Number: Page 1 of 7 **PO reference:**

Preliminary Certificate of Analysis

This is a preliminary Certificate of Analysis and cannot be fully verified until all results have been validated

	ioute of / maryore and e	annot be fully vermed a		andated	
Sample number	966-2023-0003087	79 Received or	07/07/2023		
		Analysis sta	rted on 07/07/2023		
Your sample reference	BH117				
Sample Matrix	Ground water	Osmula Dat	05/07/0000		
Sample Condition on Arrival	Satisfactory	Sample Date			
Test Code Analyte	SUB ⁵ Analysis Started	Method LOQ ³	SPEC ² Result	Units	ACCRED ⁴
Alkalinity as CAC03 [BB005]					
Alkalinity as CAC03	* 10/07/23 15:06	30	280.9	mg/l	
Phenols (10) and Cresols (3) [I	F6536]				
2,3/3,5-Dimethylphenol + 4-Ethylphenol	* 10/07/23 18:12	0.02	<0.02	μg/l	
2,4-Dimethylphenol	* 10/07/23 18:12	0.02	<0.02	µg/l	
2,5-Dimethylphenol	* 10/07/23 18:12	0.02	<0.02	µg/l	
2,6-Dimethylphenol	* 10/07/23 18:12	0.03	<0.03	µg/l	
3,4-Dimethylphenol	* 10/07/23 18:12	0.02	<0.02	μg/l	
Cresols (sum)	* 10/07/23 18:12	0.8	3.5	µg/l	
m-Cresol	* 10/07/23 18:12	0.3	<0.3	µg/l	
m-Ethylphenol	* 10/07/23 18:12	0.02	<0.02	µg/l	
o-Cresol	* 10/07/23 18:12	0.3	<0.3	µg/l	
o-Ethylphenol	* 10/07/23 18:12	0.03	<0.03	µg/l	

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Signed:

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Eurofins Environment Testing Ireland Hoffman Park, Inchera Cork T45 PC80 Ireland T: 0818 252526 Web: www.eurofins.ie Email: ASTsupport@etuki.eurofins.com



10/08/2023

Client:	AECOM Infrastructu Limited 4th Floor, Adelphi P George's Street U Dun Laoghaire, Dublin A96 T927 IRELAND	laza			<i>Certificate Code: Page Number: PO reference:</i>	PR-23-M3-000 Page 2 of 7	298-01
p-Cresol		*	10/07/23 18:12	0.2		3.5	µg/l
Phenol		*	10/07/23 18:12	0.2		0.22	µg/l
Thymol		*	10/07/23 18:12	0.01	<	<0.01	µg/l
PAH (16 EP	A) [F8126]						
Acenaphthe	ne	*	10/07/23 18:12	0.1		<0.1	µg/l
Acenaphthy	lene	*	10/07/23 18:12	0.04	<	<0.04	µg/l
Anthracene		*	10/07/23 18:12	0.01	<	<0.01	µg/l
Benz(a)anth	iracene	*	10/07/23 18:12	0.04	<	<0.04	µg/l
Benzo(a)pyı	rene	*	10/07/23 18:12	0.03	<	<0.03	µg/l
Benzo(b+k)	fluoranthene	*	10/07/23 18:12	0.05	<	<0.05	µg/l
Benzo(g,h,i)	perylene	*	10/07/23 18:12	0.03	<	<0.03	µg/l
Chrysene		*	10/07/23 18:12	0.02	<	<0.02	µg/l
Dibenz(a,h)	anthracene	*	10/07/23 18:12	0.04	<	<0.04	µg/l
Fluoranthen	e	*	10/07/23 18:12	0.02	<	<0.02	µg/l
Fluorene		*	10/07/23 18:12	0.01	<	<0.01	µg/l
Indeno(1,2,3	3-cd)pyrene	*	10/07/23 18:12	0.04	<	<0.04	µg/l
Naphthalene	e	*	10/07/23 18:12	0.4		<0.4	µg/l
PAH 16 EPA	A (sum)	*	10/07/23 18:12	0.91	<	<0.91	µg/l
Phenanthre	ne	*	10/07/23 18:12	0.02	<	<0.02	µg/l
Pyrene		*	10/07/23 18:12	0.06	<	<0.06	µg/l
Hexavalent	chromium [IX02U]						
Chromium (VI)	*	07/07/23 19:30	0.01	non	mesuré	mg/l
Total cyani	des [IX479]						

Signed:

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Client: AECOM Infrastructure & Environment Ireland						Certificate Code:	PR-23-M3-	000298-01
Limited 4th Floor, Adelphi Plaza,						Page Number:	Page 3 of 3	7
	George's Street U Dun Laoghaire, Dublin A96 T927 IRELAND					PO reference:		
Cyanide, tot	al	*	13/07/23 17:03		0.01	<	:0.01	mg/l
Chromium	(Cr) [IX80U]							
Chromium (Cr)	*	07/07/23 19:30		0.005	non	mesuré	mg/l
Trivalent ch	nromium [IXCR0]							
Chromium I	I	*	07/07/23 19:30		0.01	Non c	alculable	mg/l
Suspended	Solids [M3002]							
Suspended Solids 10/07/23 09:33			EW013	5		24	mg/l	
Chemical C	Chemical Oxygen Demand (COD) [M3004]							
Chemical ox	(COD) (vygen demand		10/07/23 10:30	EW094	8		<8	mg/l
Dissolved (Dxygen [M3005]							
Dissolved or	xygen		13/07/23 12:28 ^{7A}	EW043	1	1	0.17	mg/l
Sulphate m	g/L - Gallery [M300N]							
Sulphate mo	g/L - Gallery		10/07/23 13:05	EW175	1		15.2	mg/l
Phosphate	(Ortho/MRP) as P - Galle	əry	[M300P]					
Gallery	Ortho/MRP) as P -		10/07/23 13:05 ^{7A}	EW175	0.05	0	.312	mg/l
	g/L - Gallery [M300Q]							
Fluoride mg			10/07/23 13:05	EW175	0.2		0.4	mg/l
	g/L - Gallery [M300S]							
Chloride mg	-		10/07/23 13:05	EW175	5		11.9	mg/l
	s N - Gallery [M300Z]							
Ammonia as			10/07/23 13:05	EW175	0.05	<	0.05	mg/l
•	N) - Gallery [M301A]							
Nitrate (as N	l) - Gallery		10/07/23 13:05 ^{7A}	EW175	1		<1	mg/l
GCFID-Org	anic Solvents (Head Spa	ice)	[M3027]					

GCFID-Organic Solvents (Head Space) [M3027]

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10/08/2023

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10/08/2023

Client:	AECOM Infrastructure of Limited 4th Floor, Adelphi Plaza George's Street Uppe Dun Laoghaire, Dublin A96 T927 IRELAND	a,	land	Certificate Code: Page Number: PO reference:	PR-23-M3-000 Page 4 of 7	298-01
Acetone		18/07/23 16:39	EO089		<2	mg/l
Acetonitrile		18/07/23 16:39	EO089		<2	mg/l
Amyl acetat	e	18/07/23 16:39	EO089		<2	mg/l
Cyclohexan	e	18/07/23 16:39	EO089		<2	mg/l
Cyclopentar	none	18/07/23 16:39	EO089		<2	mg/l
Dichloromet	thane	18/07/23 16:39	EO089		<2	mg/l
Ethanol		18/07/23 16:39	EO089		<5	mg/l
Ethyl Acetat	e	18/07/23 16:39	EO089		<2	mg/l
Heptane		18/07/23 16:39	EO089		<2	mg/l
IPA (2-Propa	anol)	18/07/23 16:39	EO089		<2	mg/l
Iso-Amyl alo	cohol	18/07/23 16:39	EO089		<5	mg/l
Isopropyl ac	cetate	18/07/23 16:39	EO089		<2	mg/l
Isopropyl Et	her	18/07/23 16:39	EO089		<2	mg/l
Methanol		18/07/23 16:39	EO089		<5	mg/l
Methyl Ethy	l Ketone	18/07/23 16:39	EO089		<2	mg/l
n-Butyl Alco	hol.(Butanol)	18/07/23 16:39	EO089		<2	mg/l
n-Hexane		18/07/23 16:39	EO089		<2	mg/l
sec-Butyl Al	cohol	18/07/23 16:39	EO089		<2	mg/l
tert-Amylalc	ohol	18/07/23 16:39	EO089		<5	mg/l
Tert-Butano	I	18/07/23 16:39	EO089		<5	mg/l
tert-Butyl M	ethyl Ether	18/07/23 16:39	EO089		<2	mg/l
Tetrahydrofu	uran	18/07/23 16:39	EO089		<2	mg/l
Toluene		18/07/23 16:39	EO089		<2	mg/l

Signed:

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Client:	AECOM Infrastructure Limited 4th Floor, Adelphi Plaz George's Street Uppe Dun Laoghaire, Dublin A96 T927 IRELAND	a,	eland		Certificate Code: Page Number: PO reference:	PR-23-M3-000 Page 5 of 7	298-01
Triethylamir	ie	18/07/23 16:39	EO089			<2	mg/l
Xylene -p		18/07/23 16:39	EO089			<2	mg/l
Xylene-M		18/07/23 16:39	EO089			<2	mg/l
Xylene-O		18/07/23 16:39	EO089			<2	mg/l
Xylenes-Tot	al	18/07/23 16:39	EO089			<2	mg/l
Temperatu	re (Site) [M3036]						
Temperatur	e	11/07/23 19:04	Site Test			na	°C
Arsenic - T	race [M3236]						
Arsenic		10/07/23 09:59		0.2		0.352	µg/l
Barium - Tr	ace [M3237]						
Barium		10/07/23 09:59		1.77	2	26.613	µg/l
-	Trace [M3238]						
Beryllium		10/07/23 09:59		1		<1	µg/l
	ce [M3239]						
Boron		10/07/23 09:59		0.21		<0.21	mg/l
	Trace [M3240]			.			
Cadmium		10/07/23 09:59		0.1		1.364	µg/l
	ace [M3244]	40/07/00 00.50		0.000		-0.000	
Copper (Cu		10/07/23 09:59		0.003		<0.003	mg/l
Lead - Trac Lead (Pb)	e [WI3246]	10/07/23 09:59		0.5		<0.5	ug/l
. ,	race [M3249]	10/07/23 09.39		0.5		<0.5	µg/l
Mercury - I	1806 [WI3243]	10/07/23 09:59		0.03		0.075	µg/l
	ice [M3251]	10/01/20 00:09		0.00		0.070	MA.1
NUCKEI - IId							

Signed:

10/08/2023

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Client:	AECOM Infrastructur Limited 4th Floor, Adelphi Pl George's Street Up Dun Laoghaire, Dublin A96 T927 IRELAND	az	a,	eland		Certificate Code: Page Number: PO reference:	PR-23-M3-000 Page 6 of 7	298-01	
Nickel (Ni)			10/07/23 09:59		0.5		67.115	µg/l	
Selenium -	Trace [M3255]								
Selenium (S	Se)		10/07/23 09:59		0.2		<0.2	µg/l	
	Trace [M3268]								
Vanadium (,		10/07/23 09:59		1		<1	µg/l	
Zinc - Trace	e [M3269]								
Zinc (Zn)			10/07/23 09:59	EW188	1		318	µg/l	
рН [М3282]			07/07/00 00 04 74	=14/4.50			7.0		
pH			07/07/23 20:34 74	EW158			7.6		
Conductivit			07/07/23 20:34	EW153	100		3280	u Clam	C6
Conductivity				EVV155	100		3200	µS/cm	00
TPH 3 Band TPH >C10-0	d (C6-10-21-40) in water ^21		028]		0.1		<0.1	µg/l	
TPH >C21-0		*	08/07/23 13:02		0.1		<0.1	μg/l	
TPH >C6-C		*	08/07/23 13:02		0.1		<0.1	μg/l	
TPH Total >		*	08/07/23 13:02		10		<10	μg/l	YA
Btex in wat			00/07/23 13:02		10			μg/i	
Benzene		*	08/07/23 13:02		1		<1	µg/l	
Ethylbenzer	ne	*	08/07/23 13:02		1		<1	µg/l	
m-/-p-Xylen		*	08/07/23 13:02		1		<1	µg/l	
o-Xylene		*	08/07/23 13:02		1		<1	µg/l	
Toluene		*	08/07/23 13:02		1		<1	μg/l	
							-	F.9''	

Signed:

Louise Morrow - null Eurofins Environment Testing Ireland Limited

10/08/2023

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Eurofins Environment Testing Ireland Hoffman Park, Inchera Cork T45 PC80 Ireland T: 0818 252526 Web: www.eurofins.ie ASTsupport@etuki.eurofins.com Email[.]



Client: AECOM Infrastructure & Environment Ireland Limited 4th Floor, Adelphi Plaza, George's Street Upper, Dun Laoghaire, **Dublin** A96 T927 **IRELAND**

Certificate Code: Page Number: **PO reference:**

PR-23-M3-000298-01 Page 7 of 7

10/08/2023

⁴ Accreditiation Information

C6: ISO/IEC 17025:2017 INAB 138-T YA: Accredited (External Subcontractor)

Signed:

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Client: AECOM Infrastructure & Environment Ireland Limited 4th Floor, Adelphi Plaza, George's Street Upper, Dun Laoghaire, **Dublin** A96 T927 **IRELAND**

Certificate Code: PR-23-M3-000299-01 Page 1 of 5 Page Number: **PO reference:**

Preliminary Certificate of Analysis

This is a preliminary Certificate of Analysis and cannot be fully verified until all results have been validated

Sample number	966-2023-000308	80	Received on		07/07/2023 07/07/2023		
Your sample reference	BH104		Analysis start	ed on	07/07/2023		
Sample Matrix	Ground water						
Sample Condition on Arrival	Satisfactory		Sample Date		05/07/2023		
		Mathaul	LOQ ³	SPEC ²		11-16-	4000504
Test Code Analyte	SUB ⁵ Analysis Started	Method	LUQ	SPEC	Result	Units	ACCRED ⁴
Alkalinity as CAC03 [BB005]							
Alkalinity as CAC03	* 10/07/23 15:06		30		367.8	mg/l	
Hexavalent chromium [IX02U]							
Chromium (VI)	* 07/07/23 19:30		0.01		non mesuré	mg/l	
Total cyanides [IX479]							
Cyanide, total	* 13/07/23 17:03		0.01		<0.01	mg/l	
Chromium (Cr) [IX80U]							
Chromium (Cr)	* 07/07/23 19:30		0.005		non mesuré	mg/l	
Trivalent chromium [IXCR0]							
Chromium III	* 07/07/23 19:30		0.01		Non calculable	mg/l	
Chemical Oxygen Demand (COD) [M3004]						
Chemical oxygen demand (COD)	10/07/23 10:30	EW094	8		140	mg/l	
Dissolved Oxygen [M3005]							
Dissolved oxygen	13/07/23 12:27 ^{7A}	EW043	1		9.17	mg/l	
		Kente Herrsd					
Signed:					1	10/08/2023	
	Louise Morrow - null Eur	rofins Environr	ment Testing Irela	and Limited			

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Eurofins Environment Testing Ireland Hoffman Park, Inchera Cork T45 PC80 Ireland T: 0818 252526 Web: www.eurofins.ie Email: ASTsupport@etuki.eurofins.com



10/08/2023

Client: AECOM Infrastructure & Environment Ireland					Certificate Code:	PR-23-M3-000299-01	
	Limited 4th Floor, Adelphi Plaz	a			Page Number:	Page 2 of 5	
	George's Street Upp Dun Laoghaire, Dublin A96 T927 IRELAND	· ·			PO reference:		
Sulphate m	g/L - Gallery [M300N]						
Sulphate mo	g/L - Gallery	10/07/23 13:05	EW175	1	:	27.9	mg/l
Phosphate	(Ortho/MRP) as P - Gallery	[M300P]					
Gallery	Ortho/MRP) as P - g/L - Gallery [M300Q]	10/07/23 13:05 ^{7A}	EW175	0.05	C	0.631	mg/l
Fluoride mg		10/07/23 13:05	EW175	0.2		1.5	mg/l
Chloride m	g/L - Gallery [M300S]						
Chloride mg	/L - Gallery	10/07/23 13:05	EW175	5		15.4	mg/l
Ammonia a	s N - Gallery [M300Z]						
Ammonia as	s N - Gallery	10/07/23 13:05	EW175	0.05	<	<0.05	mg/l
Nitrate (as	N) - Gallery [M301A]						
Nitrate (as N	I) - Gallery	10/07/23 13:05 ^{7A}	EW175	1	ç	9.085	mg/l
GCFID-Org	anic Solvents (Head Space	e) [M3027]					
Acetone		18/07/23 16:39	EO089			<2	mg/l
Acetonitrile		18/07/23 16:39	EO089			<2	mg/l
Amyl acetat	e	18/07/23 16:39	EO089			<2	mg/l
Cyclohexan	e	18/07/23 16:39	EO089			<2	mg/l
Cyclopentar	none	18/07/23 16:39	EO089			<2	mg/l
Dichloromet	hane	18/07/23 16:39	EO089			<2	mg/l
Ethanol		18/07/23 16:39	EO089			<5	mg/l
Ethyl Acetat	е	18/07/23 16:39	EO089			<2	mg/l
Heptane		18/07/23 16:39	EO089			<2	mg/l
IPA (2-Propa	anol)	18/07/23 16:39	EO089			<2	mg/l

Signed:

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Client:	AECOM Infrastructure Limited 4th Floor, Adelphi Plaz George's Street Uppe Dun Laoghaire, Dublin A96 T927 IRELAND	a,	reland		Certificate Code: Page Number: PO reference:	PR-23-M3-000 Page 3 of 5	299-01
Iso-Amyl ald	cohol	18/07/23 16:39	EO089			<5	mg/l
Isopropyl ac	etate	18/07/23 16:39	EO089			<2	mg/l
Isopropyl Et	her	18/07/23 16:39	EO089			<2	mg/l
Methanol		18/07/23 16:39	EO089			<5	mg/l
Methyl Ethy	l Ketone	18/07/23 16:39	EO089			<2	mg/l
n-Butyl Alco	hol.(Butanol)	18/07/23 16:39	EO089			<2	mg/l
n-Hexane		18/07/23 16:39	EO089			<2	mg/l
sec-Butyl Al	cohol	18/07/23 16:39	EO089			<2	mg/l
tert-Amylalc	ohol	18/07/23 16:39	EO089			<5	mg/l
Tert-Butano	l	18/07/23 16:39	EO089			<5	mg/l
tert-Butyl Me	ethyl Ether	18/07/23 16:39	EO089			<2	mg/l
Tetrahydrofu	uran	18/07/23 16:39	EO089			<2	mg/l
Toluene		18/07/23 16:39	EO089			<2	mg/l
Triethylamin	e	18/07/23 16:39	EO089			<2	mg/l
Xylene -p		18/07/23 16:39	EO089			<2	mg/l
Xylene-M		18/07/23 16:39	EO089			<2	mg/l
Xylene-O		18/07/23 16:39	EO089			<2	mg/l
Xylenes-Tot	al	18/07/23 16:39	EO089			<2	mg/l
Temperatu	re (Site) [M3036]						
Temperature	e	11/07/23 19:04	Site Test			na	°C
	race [M3236]						
Arsenic		10/07/23 09:59		0.2	(0.943	µg/l
Barium - Tr	ace [M3237]						

Signed:

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Barium		10/07/23 09:59		1.77		22.99	µg/l
Beryllium -	Trace [M3238]						
Beryllium		10/07/23 09:59		1		<1	µg/l
	ace [M3239]						
Boron		10/07/23 09:59		0.21		<0.21	mg/l
	Trace [M3240]						
Cadmium		10/07/23 09:59		0.1		1.586	µg/l
	race [M3244]						
Copper (Cu	,	10/07/23 09:59		0.003		0.017	mg/l
Lead - Trac	e [M3246]	40/07/00 00 50		0.5		0.400	
Lead (Pb)		10/07/23 09:59		0.5		8.192	µg/l
-	Frace [M3249]	10/07/23 09:59		0.03		0.262	
Mercury	- IN20541	10/07/23 09:59		0.03		0.202	µg/l
Nickel (Ni)	ace [M3251]	10/07/23 09:59		0.5		11.757	ua/l
. ,	Trace [M3255]	10/07/23 09.39		0.5		11.757	µg/l
Selenium (S		10/07/23 09:59		0.2		7.936	µg/l
-	- Trace [M3268]	10/01/20 00:00		0.2		1.000	P9/1
Vanadium (10/07/23 09:59		1		1.088	µg/l
Zinc - Trac	,						1.5
Zinc (Zn)		10/07/23 09:59	EW188	1		45.2	µg/l
pH [M3282]	1						
pН	-	07/07/23 20:30 ^{7A}	EW158			6.9	
Conductivi	ty [M3283]						

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	Client: AECOM Infrastructure & Environment Ireland					Certificate Code: PR-23-M3-000299-01			
		Limited 4th Floor, Adelphi Pla	70	Page Number:	Page 5 o	f 5			
		George's Street Upp				PO reference:			
	Dun Laoghaire,								
		Dublin							
		A96 T927							
		IRELAND							
C	Conductivity	y	07/07/23 20:30	EW153	100		663	μS/cm	C6
٦	TPH 3 Ban	d (C6-10-21-40) in water [N	1502B]						
٦	TPH >C10-	C21	* 08/07/23 13:02		0.1		<0.1	μg/l	
٦	TPH >C21-	C40	* 08/07/23 13:02		0.1		<0.1	μg/l	
٦	TPH >C6-C	:10	* 08/07/23 13:02		0.1		<0.1	µg/l	
٦	TPH Total >	·C6-C40	* 08/07/23 13:02		10		<10	µg/l	YA
E	Btex in wat	ter [M50A7]							
E	Benzene		* 08/07/23 13:02		1		<1	μg/l	
E	Ethylbenzer	ne	* 08/07/23 13:02		1		<1	μg/l	
r	m-/-p-Xylen	e	* 08/07/23 13:02		1		<1	μg/l	
c	o-Xylene		* 08/07/23 13:02		1		<1	μg/l	
٦	Toluene		* 08/07/23 13:02		1		<1	μg/l	

Results to follow:

PAH 16 according EPA [F8126] Phenoles [F6536]

⁴ Accreditiation Information

C6: ISO/IEC 17025:2017 INAB 138-T YA: Accredited (External Subcontractor)

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Certificate Code: PR-23-M3-000300-01 Page Number: Page 1 of 7 **PO reference:**

Preliminary Certificate of Analysis

This is a preliminary Certificate of Analysis and cannot be fully verified until all results have been validated

	iouto or r maryoro and o	annot be rany vermea a		on randatoa	
Sample number	966-2023-0003088	Received or	07/07	/2023	
		Analysis sta	rted on 07/07	/2023	
Your sample reference	BH111A				
Sample Matrix	Ground water		0.5.105	10000	
Sample Condition on Arrival	Satisfactory	Sample Date		/2023	
Test Code Analyte	SUB ⁵ Analysis Started	Method LOQ ³	SPEC ² Res	ult Units	ACCRED ⁴
Alkalinity as CAC03 [BB005]					
Alkalinity as CAC03	* 10/07/23 15:06	30	878	5 mg/l	
Phenols (10) and Cresols (3) [F	⁻ 6536]				
2,3/3,5-Dimethylphenol + 4-Ethylphenol	* 10/07/23 18:12	0.02	<0.0	2 µg/l	
2,4-Dimethylphenol	* 10/07/23 18:12	0.02	<0.0	2 µg/l	
2,5-Dimethylphenol	* 10/07/23 18:12	0.02	<0.0	2 µg/l	
2,6-Dimethylphenol	* 10/07/23 18:12	0.03	<0.0	3 µg/l	
3,4-Dimethylphenol	* 10/07/23 18:12	0.02	<0.0	2 µg/l	
Cresols (sum)	* 10/07/23 18:12	0.8	<0.	β μg/l	
m-Cresol	* 10/07/23 18:12	0.3	<0.	3 µg/l	
m-Ethylphenol	* 10/07/23 18:12	0.02	<0.0	2 µg/l	
o-Cresol	* 10/07/23 18:12	0.3	<0.	3 μg/l	
o-Ethylphenol	* 10/07/23 18:12	0.03	<0.0	3 µg/l	

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p-Cresol	* 10/07/23 18:12	0.2		<0.2 µg/l
Phenol	* 10/07/23 18:12	0.2		<0.2 µg/l
Thymol	* 10/07/23 18:12	0.01	<	:0.01 μg/l
PAH (16 EPA) [F8126]				
Acenaphthene	* 10/07/23 18:12	0.1		<0.1 µg/l
Acenaphthylene	* 10/07/23 18:12	0.04	<	:0.04 µg/l
Anthracene	* 10/07/23 18:12	0.01	<	:0.01 µg/l
Benz(a)anthracene	* 10/07/23 18:12	0.04	<	:0.04 µg/l
Benzo(a)pyrene	* 10/07/23 18:12	0.03	<	:0.03 μg/l
Benzo(b+k)fluoranthene	* 10/07/23 18:12	0.05	<	:0.05 μg/l
Benzo(g,h,i)perylene	* 10/07/23 18:12	0.03	<	:0.03 μg/l
Chrysene	* 10/07/23 18:12	0.02	<	:0.02 μg/l
Dibenz(a,h)anthracene	* 10/07/23 18:12	0.04	<	:0.04 µg/l
Fluoranthene	* 10/07/23 18:12	0.02	(0.04 µg/l
Fluorene	* 10/07/23 18:12	0.01	<	:0.01 µg/l
Indeno(1,2,3-cd)pyrene	* 10/07/23 18:12	0.04	<	:0.04 µg/l
Naphthalene	* 10/07/23 18:12	0.4		<0.4 µg/l
PAH 16 EPA (sum)	* 10/07/23 18:12	0.91	<	:0.91 µg/l
Phenanthrene	* 10/07/23 18:12	0.02	<	:0.02 µg/l
Pyrene	* 10/07/23 18:12	0.06	<	:0.06 µg/l
Hexavalent chromium [IX02U] Chromium (VI) Total cyanides [IX479]	* 07/07/23 19:30	0.01	non	mesuré mg/l

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Lii 4ti Ge Du Du As	ECOM Infrastructur mited h Floor, Adelphi Pl eorge's Street Up un Laoghaire, ublin 96 T927 ELAND	aza,	invironment Ire	eland		Certificate Code: Page Number: PO reference:	PR-23-M3-000 Page 3 of 7	300-01
Cyanide, total		* 13	3/07/23 17:03		0.01	<	0.01	mg/l
Chromium (Cr)	[IX80U]							
Chromium (Cr)		* 07	7/07/23 19:30		0.005	non	mesuré	mg/l
Trivalent chron	nium [IXCR0]							
Chromium III		* 07	7/07/23 19:30		0.01	Non c	alculable	mg/l
Suspended Solids [M3002]								
• • • • • • • • • • • • • • • • • • • •					5		466	mg/l
	jen Demand (COD) [I							
,,	n demand (COD)	10	0/07/23 10:43	EW094	8	:	200	mg/l
Dissolved Oxy								
Dissolved oxyge		13	3/07/23 12:26 ^{7A}	EW043	1	1	0.45	mg/l
	- Gallery [M300N]							
Sulphate mg/L -	Gallery	10	0/07/23 13:05	EW175	1	ć	39.0	mg/l
Phosphate (Or	tho/MRP) as P - Galle	ery [M3	300P]					
Phosphate (Orth Gallery	,	10	0/07/23 13:05 ^{7A}	EW175	0.05	<	0.05	mg/l
•	- Gallery [M300Q]							
Fluoride mg/L -		10	0/07/23 13:05	EW175	0.2		0.2	mg/l
-	- Gallery [M300S]							
Chloride mg/L -		10	0/07/23 13:05	EW175	5		11.6	mg/l
	- Gallery [M300Z]							
Ammonia as N -	- Gallery	10	0/07/23 13:05	EW175	0.05	<	0.05	mg/l
Nitrate (as N) -	Gallery [M301A]							
Nitrate (as N) - (Gallery	10	0/07/23 13:05 ^{7A}	EW175	1		<1	mg/l
GCFID-Organic	Solvents (Head Spa	ce) [M	3027]					

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Acetone		18/07/23 16:39	EO089		<2	mg/l
Acetonitrile		18/07/23 16:39	EO089		<2	mg/l
Amyl acetat		18/07/23 16:39	EO089		<2	mg/l
Cyclohexan		18/07/23 16:39	EO089		<2	mg/l
Cyclopentar		18/07/23 16:39	EO089		<2	mg/l
Dichloromet	thane	18/07/23 16:39	EO089		<2	mg/l
Ethanol		18/07/23 16:39	EO089		<5	mg/l
Ethyl Acetat	e	18/07/23 16:39	EO089		<2	mg/l
Heptane		18/07/23 16:39	EO089		<2	mg/l
IPA (2-Propa		18/07/23 16:39	EO089		<2	mg/l
Iso-Amyl alo	cohol	18/07/23 16:39	EO089		<5	mg/l
Isopropyl ac	cetate	18/07/23 16:39	EO089		<2	mg/l
Isopropyl Et	her	18/07/23 16:39	EO089		<2	mg/l
Methanol		18/07/23 16:39	EO089		<5	mg/l
Methyl Ethy	I Ketone	18/07/23 16:39	EO089		<2	mg/l
n-Butyl Alco	hol.(Butanol)	18/07/23 16:39	EO089		<2	mg/l
n-Hexane		18/07/23 16:39	EO089		<2	mg/l
sec-Butyl Al	cohol	18/07/23 16:39	EO089		<2	mg/l
tert-Amylalc	ohol	18/07/23 16:39	EO089		<5	mg/l
Tert-Butano	I	18/07/23 16:39	EO089		<5	mg/l
tert-Butyl M	ethyl Ether	18/07/23 16:39	EO089		<2	mg/l
Tetrahydrofu	uran	18/07/23 16:39	EO089		<2	mg/l
Toluene		18/07/23 16:39	EO089		<2	mg/l

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Triethylamir	ne	18/07/23 16:39	EO089			<2	mg/l
Xylene -p		18/07/23 16:39	EO089			<2	mg/l
Xylene-M		18/07/23 16:39	EO089			<2	mg/l
Xylene-O		18/07/23 16:39	EO089			<2	mg/l
Xylenes-Tot	al	18/07/23 16:39	EO089			<2	mg/l
Temperature (Site) [M3036]							
Temperatur	e	11/07/23 19:04	Site Test			na	°C
Arsenic - T	race [M3236]						
Arsenic		10/07/23 09:59		0.2		0.6	µg/l
Barium - Ti	ace [M3237]						
Barium		10/07/23 09:59		1.77	1	04.833	µg/l
-	Trace [M3238]						
Beryllium		10/07/23 09:59		1		<1	µg/l
	ice [M3239]						
Boron	-	10/07/23 09:59		0.21		<0.21	mg/l
	Trace [M3240]	10/07/02 00.50		0.1		2.045	
Cadmium	1000 [M2244]	10/07/23 09:59		0.1		3.045	µg/l
Copper - II Copper (Cu	race [M3244]	10/07/23 09:59		0.003		<0.003	mg/l
Lead - Trac	,	10/07/23 09:39		0.005		0.000	ing/i
Lead (Pb)	e [m5240]	10/07/23 09:59		0.5		<0.5	µg/l
. ,	Frace [M3249]			0.0		0.0	r9''
Mercury	race future (a)	10/07/23 09:59		0.03		0.035	µg/l
	ice [M3251]						1.5

Signed: .

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10/08/2023

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Client:	AECOM Infrastructu Limited 4th Floor, Adelphi P George's Street U Dun Laoghaire, Dublin A96 T927 IRELAND	а,	Certificate Code: Page Number: PO reference:	PR-23-M3-0 Page 6 of 7				
Nickel (Ni)			10/07/23 09:59		0.5	3	3.079	µg/l
	Trace [M3255]							
Selenium (Se)			10/07/23 09:59		0.2	().487	µg/l
Vanadium - Trace [M3268] Vanadium (V)			10/07/23 09:59		1		<1	ug/l
Zinc - Trace [M3269]			10/07/23 09.39		I			µg/l
Zinc (Zn)	- [W3203]		10/07/23 09:59	EW188	1		33.0	µg/l
pH [M3282]	l							15
рН			07/07/23 20:33 ^{7A}	EW158			7.5	
Conductivi	ty [M3283]							
Conductivity	/		07/07/23 20:33	EW153	100	2	27200	µS/cm
	d (C6-10-21-40) in water	[M5	-					
TPH >C10-0	C21	*	08/07/23 13:02		0.1		<0.1	µg/l
TPH >C21-0	C40	*	08/07/23 13:02		0.1		<0.1	µg/l
TPH >C6-C	10	*	08/07/23 13:02		0.1		<0.1	µg/l
TPH Total >	C6-C40	*	08/07/23 13:02		10		<10	µg/l
Btex in wat	er [M50A7]							
Benzene		*	08/07/23 13:02		1		<1	µg/l
Ethylbenzer	ne	*	08/07/23 13:02		1		<1	µg/l
m-/-p-Xylen	e	*	08/07/23 13:02		1		<1	µg/l
o-Xylene		*	08/07/23 13:02		1		<1	µg/l
Toluene		*	08/07/23 13:02		1		<1	µg/l

10/08/2023

YA

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- 9. Report is issued as per out standard T&C of sale.



Eurofins Environment Testing Ireland Hoffman Park, Inchera Cork T45 PC80 Ireland T: 0818 252526 Web: www.eurofins.ie Email: ASTsupport@etuki.eurofins.com

Client: AECOM Infrastructure & Environment Ireland Limited 4th Floor, Adelphi Plaza, George's Street Upper, Dun Laoghaire, **Dublin** A96 T927 **IRELAND**

Certificate Code: Page Number: **PO reference:**

PR-23-M3-000300-01 Page 7 of 7

⁴ Accreditiation Information

YA: Accredited (External Subcontractor)

Signed: .

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Certificate Code: PR-23-M3-000301-01 Page 1 of 5 Page Number: **PO reference:**

Preliminary Certificate of Analysis

This is a preliminary Certificate of Analysis and cannot be fully verified until all results have been validated

	•		Received on					
Sample number	966-2023-000308	/3		tod on	07/07/2023 07/07/2023			
Your sample reference	SW C2		Analysis star		07/07/2023			
Sample Matrix	Surface water							
Sample Condition on Arrival	Satisfactory		Sample Date		04/07/2023			
Test Code	SUB ⁵ Analysis	Method	LOQ ³	SPEC ²	Result	Units	ACCRED ⁴	
Analyte	Started	method	Loq	01 20	Result	onito	ROOKED	
Alkalinity as CAC03 [BB005]								
Alkalinity as CAC03	* 10/07/23 15:06		30		166.9	mg/l		
Hexavalent chromium [IX02U]								
Chromium (VI)	* 07/07/23 19:29		0.01		non mesuré	mg/l		
Total cyanides [IX479]								
Cyanide, total	* 13/07/23 17:03		0.01		<0.01	mg/l		
Chromium (Cr) [IX80U]								
Chromium (Cr)	* 07/07/23 19:29		0.005		non mesuré	mg/l		
Trivalent chromium [IXCR0]								
Chromium III	* 07/07/23 19:29		0.01		Non calculable	mg/l		
Suspended Solids [M3002]								
Suspended Solids	10/07/23 09:37	EW013	5		59	mg/l		
Chemical Oxygen Demand (COD)	[M3004]							
Chemical oxygen demand (COD)	10/07/23 10:43	EW094	8		365	mg/l		
		1.1.						
		hunte Malles						
Signed:					1	0/08/2023		
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10/08/2023

Client:	AECOM Infrastructure	& Environment Ire	land		Certificate Code: PR-23-M3-00030		
	Limited 4th Floor, Adelphi Plaz	a			Page Number:	Page 2 of 5	
	George's Street Upp Dun Laoghaire, Dublin A96 T927 IRELAND				PO reference:		
Dissolved (Dxygen [M3005]						
Dissolved ox	xygen	13/07/23 12:22 ^{7A}	EW043	1		9.87	mg/l
Phosphate	(Ortho/MRP) as P - Gallery	[M300P]					
Gallery	Ortho/MRP) as P - g/L - Gallery [M300Q]	08/07/23 15:27 ^{7A}	EW175	0.05		<0.05	mg/l
Fluoride mg/L - Gallery		08/07/23 15:27	EW175	0.2		0.2	mg/l
Chloride mg/L - Gallery [M300S]							
Chloride mg	/L - Gallery	08/07/23 15:27	EW175	5		17.1	mg/l
Ammonia a	s N - Gallery [M300Z]						
Ammonia as	s N - Gallery	08/07/23 15:27	EW175	0.05		0.15	mg/l
Nitrate (as l	N) - Gallery [M301A]						
Nitrate (as N	l) - Gallery	08/07/23 15:27 ^{7A}	EW175	1		1.413	mg/l
GCFID-Org	anic Solvents (Head Space) [M3027]					
Acetone		18/07/23 16:39 ^{7A}	EO089			<2	mg/l
Acetonitrile		18/07/23 16:39 ^{7A}	EO089			<2	mg/l
Amyl acetate	e	18/07/23 16:39 ^{7A}	EO089			<2	mg/l
Cyclohexan	e	18/07/23 16:39 ^{7A}	EO089			<2	mg/l
Cyclopentar	none	18/07/23 16:39 ^{7A}	EO089			<2	mg/l
Dichloromet	hane	18/07/23 16:39 ^{7A}	EO089			<2	mg/l
Ethanol		18/07/23 16:39 ^{7A}	EO089			<5	mg/l
Ethyl Acetat	e	18/07/23 16:39 ^{7A}	EO089			<2	mg/l
Heptane		18/07/23 16:39 ^{7A}	EO089			<2	mg/l
IPA (2-Propa	anol)	18/07/23 16:39 ^{7A}	EO089			<2	mg/l

Signed:

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Client:	AECOM Infrastructure & Environment Ireland Limited 4th Floor, Adelphi Plaza, George's Street Upper, Dun Laoghaire, Dublin A96 T927 IRELAND			Pag	tificate Code: e Number: reference:	PR-23-M3-000 Page 3 of 5	301-01
Iso-Amyl ald	cohol	18/07/23 16:39 ^{7A}	EO089			<5	mg/l
Isopropyl ac	cetate	18/07/23 16:39 ^{7A}	EO089			<2	mg/l
Isopropyl Et	ther	18/07/23 16:39 ^{7A}	EO089			<2	mg/l
Methanol		18/07/23 16:39 ^{7A}	EO089			<5	mg/l
Methyl Ethy	l Ketone	18/07/23 16:39 ^{7A}	EO089			<2	mg/l
n-Butyl Alco	hol.(Butanol)	18/07/23 16:39 ^{7A}	EO089			<2	mg/l
n-Hexane		18/07/23 16:39 ^{7A}	EO089			<2	mg/l
sec-Butyl Al	cohol	18/07/23 16:39 ^{7A}	EO089			<2	mg/l
tert-Amylalo	cohol	18/07/23 16:39 ^{7A}	EO089			<5	mg/l
Tert-Butano	I	18/07/23 16:39 ^{7A}	EO089			<5	mg/l
tert-Butyl M	ethyl Ether	18/07/23 16:39 ^{7A}	EO089			<2	mg/l
Tetrahydrofu	uran	18/07/23 16:39 ^{7A}	EO089			<2	mg/l
Toluene		18/07/23 16:39 ^{7A}	EO089			<2	mg/l
Triethylamir	ne	18/07/23 16:39 ^{7A}	EO089			<2	mg/l
Xylene -p		18/07/23 16:39 ^{7A}	EO089			<2	mg/l
Xylene-M		18/07/23 16:39 ^{7A}	EO089			<2	mg/l
Xylene-O		18/07/23 16:39 ^{7A}	EO089			<2	mg/l
Xylenes-Tot	al	18/07/23 16:39 ^{7A}	EO089			<2	mg/l
Temperatu	re (Site) [M3036]						
Temperature	e	11/07/23 19:04	Site Test			na	°C
	race [M3236]						
Arsenic		10/07/23 09:59		0.2	1	1.845	µg/l
Barium - Tr	ace [M3237]						

Signed:

10/08/2023

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Client:	AECOM Infrastructu Limited 4th Floor, Adelphi F George's Street U Dun Laoghaire, Dublin A96 T927 IRELAND		Certificate Code: Page Number: PO reference:	Page 4 of 5			
Barium		10/07/23 09:59		1.77	11	13.643	µg/l
-	Trace [M3238]						
Beryllium		10/07/23 09:59		1		<1	µg/l
Boron - Tra	ice [M3239]						
Boron		10/07/23 09:59		0.21	<	<0.21	mg/l
	Trace [M3240]						
Cadmium		10/07/23 09:59		0.1		<0.1	µg/l
	ace [M3244]			0.000		0.000	
Copper (Cu		10/07/23 09:59		0.003	<	0.003	mg/l
Lead - Trac	e [M3246]	40/07/00 00.50		0.5		<0.5	
Lead (Pb)		10/07/23 09:59		0.5		<0.5	µg/l
Mercury - I Mercury	race [M3249]	10/07/23 09:59		0.03		<0.03	µg/l
•	ce [M3251]	10/07/20 00:00		0.00		-0.00	μg/i
Nickel (Ni)		10/07/23 09:59		0.5	2	3.212	µg/l
	Trace [M3255]			010			P-3/
Selenium (S		10/07/23 09:59		0.2	C	0.389	µg/l
-	Trace [M3268]						10
Vanadium ('		10/07/23 09:59		1		<1	µg/l
Zinc - Trace	e [M3269]						
Zinc (Zn)		10/07/23 09:59	EW188	1		9.54	µg/l
рН [М3282]	l						
рН		07/07/23 20:33 ^{7A}	EW158			7.5	
Conductivi	ty [M3283]						

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Client: AECOM Infrastructure & Environment Ireland Certificate Code: PR-23-M3-000301-01 Limited Page Number: Page 5 of 5 4th Floor, Adelphi Plaza, George's Street Upper, **PO reference:** Dun Laoghaire, **Dublin** A96 T927 **IRELAND** 07/07/23 20:33 C6 Conductivity EW153 100 492 µS/cm **Results to follow:** Sulphate from M3114 [M300N] ⁴ Accreditiation Information

C6: ISO/IEC 17025:2017 INAB 138-T

Signed: .

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Laboratory Certificates - Round 4 (25 J uly 2023)



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Client: **AECOM Infrastructure & Environment Ireland** Limited 4th Floor, Adelphi Plaza, George's Street Upper, Dun Laoghaire, **Dublin** A96 T927 **IRELAND**

Certificate Code:	PR-23-M3-000275-01
Page Number:	Page 1 of 40
PO reference:	60699676

10/08/2023

Preliminary Certificate of Analysis

This is a preliminary Certificate of Analysis and cannot be fully verified until all results have been validated

					have been vanda		
Sample number	966-2023-00032746	3	Received on		26/07/2023		
			Analysis start	ed on	26/07/2023		
Your sample reference	SWM3						
Sample Matrix	Surface water						
Sample Condition on Arrival	Satisfactory		Sample Date		25/07/2023		
Time Sampled	11:13						
Test Code	SUB ⁵ Analysis	Method	LOQ ³	SPEC ²	Result	Units	ACCRED ⁴
Analyte	Started						
Alkalinity as CAC03 [BB005]							
Alkalinity as CAC03	* 28/07/23 15:31		30		314.9	mg/l	C6
Suspended Solids [M3002]							
Suspended Solids	27/07/23 09:32	EW013	5		<5	mg/l	C6
Chemical Oxygen Demand (COD)	[M3004]						
Chemical oxygen demand (COD)	27/07/23 13:18	EW094	8		44	mg/l	C6
Dissolved Oxygen [M3005]							
Dissolved oxygen	28/07/23 14:47 ^{7D}	EW043	1		8.75	mg/l	
Sulphate mg/L - Gallery [M300N]							
Sulphate mg/L - Gallery	27/07/23 08:15	EW175	1		64.4	mg/l	C6
Phosphate (Ortho/MRP) as P - Ga	llery [M300P]						
Phosphate (Ortho/MRP) as P - Gallery	27/07/23 08:15 ^{7D}	EW175	0.05		<0.05	mg/l	

Signed:

Niamh Ward - Senior Laboratory Analyst

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Client:		AECOM Infrastructure & Environment Ireland				PR-23-M3-000275-01		
	Limited 4th Floor, Adelphi Plaz	2			Page Number:	Page 2 of 40		
	George's Street Upp Dun Laoghaire, Dublin A96 T927 IRELAND				PO reference:	60699676		
Fluoride m	g/L - Gallery [M300Q]							
Fluoride mg	J/L - Gallery	27/07/23 08:15	EW175	0.2		0.2	mg/l	C6
Chloride m	ig/L - Gallery [M300S]							
Chloride mg	g/L - Gallery	27/07/23 08:15	EW175	5		18.4	mg/l	C6
	as N - Gallery [M300Z]							
	s N - Gallery	27/07/23 08:15	EW175	0.05		0.05	mg/l	C6
	N) - Gallery [M301A]							
Nitrate (as I		27/07/23 08:15 ^{7D}	EW175	1		1.995	mg/l	
•	anic Solvents (Head Space		50000			-0		
Acetone		31/07/23 16:38	EO089			<2	mg/l	
Acetonitrile	L-	31/07/23 16:38	EO089			<2 <2	mg/l	
Amyl acetat		31/07/23 16:38	EO089				mg/l	
Cyclohexan		31/07/23 16:38	EO089			<2	mg/l	
Cyclopenta		31/07/23 16:38	EO089			<2	mg/l	
Dichlorome	thane	31/07/23 16:38	EO089			<2	mg/l	
Ethanol		31/07/23 16:38	EO089			<5	mg/l	
Ethyl Acetat	te	31/07/23 16:38	EO089			<2	mg/l	
Heptane		31/07/23 16:38	EO089			<2	mg/l	
IPA (2-Prop	anol)	31/07/23 16:38	EO089			<2	mg/l	
Iso-Amyl alo	cohol	31/07/23 16:38	EO089			<5	mg/l	
Isopropyl ad	cetate	31/07/23 16:38	EO089			<2	mg/l	
Isopropyl Et	ther	31/07/23 16:38	EO089			<2	mg/l	
Methanol		31/07/23 16:38	EO089			<5	mg/l	

Signed: .

Niamh Ward - Senior Laboratory Analyst

10/08/2023

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Eurofins Environment Testing Ireland Hoffman Park, Inchera Cork T45 PC80 Ireland T: 0818 252526 Web: www.eurofins.ie Email: ASTsupport@etuki.eurofins.com



10/08/2023

Client:	AECOM Infrastructure & Environment Ireland Limited 4th Floor, Adelphi Plaza, George's Street Upper, Dun Laoghaire, Dublin A96 T927 IRELAND				Certificate Code: Page Number: PO reference:	PR-23-M3-000 Page 3 of 40 60699676		
Methyl Ethy						<2	mg/l	
	bhol.(Butanol)	31/07/23 16:38	EO089			<2	mg/l	
n-Hexane		31/07/23 16:38	EO089			<2	mg/l	
sec-Butyl A		31/07/23 16:38	EO089			<2	mg/l	
tert-Amylalo		31/07/23 16:38	EO089			<5	mg/l	
Tert-Butanc		31/07/23 16:38	EO089			<5	mg/l	
tert-Butyl M	-	31/07/23 16:38	EO089			<2	mg/l	
Tetrahydrof	uran	31/07/23 16:38	EO089			<2	mg/l	
Toluene		31/07/23 16:38	EO089			<2	mg/l	
Triethylamir	ne	31/07/23 16:38	EO089			<2	mg/l	
Xylene -p		31/07/23 16:38	EO089			<2	mg/l	
Xylene-M		31/07/23 16:38	EO089			<2	mg/l	
Xylene-O		31/07/23 16:38	EO089			<2	mg/l	
Xylenes-Tot	tal	31/07/23 16:38	EO089			<2	mg/l	
Temperatu	re (Site) [M3036]							
Temperatur	e	31/07/23 16:25	Site Test			na	°C	
pH (Roboti pH	c Method) [M3051]	26/07/23 15:40 ^{7D}	EW152R	4		7.4		
Conductivit	i ty at 20°C (Robotic Method y at 20°C) [M3052] 26/07/23 15:40	EW152R	5		640	µS/cm	C6
Arsenic - T	race [M3236]							
Arsenic		27/07/23 11:39		0.2	(0.842	µg/l	C6
Barium - Ti	race [M3237]							

Signed: .

Niamh Ward - Senior Laboratory Analyst

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10/08/2023

Client:		AECOM Infrastructure & Environment Ireland Limited			Certificate Code:	PR-23-M3-000275-01		
	4th Floor, Adelphi Pl	aza.			Page Number:	Page 4 of 40		
	George's Street Up Dun Laoghaire, Dublin A96 T927 IRELAND				PO reference:	60699676		
Barium		27/07/23 11:39		1.77	6	3.781	µg/l	C6
Beryllium -	Trace [M3238]							
Beryllium		27/07/23 11:39		1		<1	µg/l	C6
Boron - Tra	ice [M3239]							
Boron		27/07/23 11:39		0.21		<0.21	mg/l	C6
Cadmium -	Trace [M3240]							
Cadmium		27/07/23 11:39		0.1		<0.1	µg/l	C6
Copper - Tr	race [M3244]							
Copper (Cu)	27/07/23 11:39		0.003	<	0.003	mg/l	C6
Lead - Trac	e [M3246]							
Lead (Pb)		27/07/23 11:39		0.5		<0.5	µg/l	C6
Mercury - T	Trace [M3249]							
Mercury		27/07/23 11:39		0.03	•	<0.03	µg/l	C6
Nickel - Tra	ice [M3251]							
Nickel (Ni)		27/07/23 11:39		0.5	(6.766	µg/l	C6
Selenium -	Trace [M3255]							
Selenium (S	Se)	27/07/23 11:39		0.2	2	2.096	µg/l	C6
Vanadium ·	- Trace [M3268]							
Vanadium (V)	27/07/23 11:39		1		<1	µg/l	C6
Zinc - Trace	e [M3269]							
Zinc (Zn)		27/07/23 11:39	EW188	1		12.1	µg/l	C6

Niamh Ward - Senior Laboratory Analyst

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Client: **AECOM Infrastructure & Environment Ireland** Limited 4th Floor, Adelphi Plaza, George's Street Upper, Dun Laoghaire, **Dublin** A96 T927 **IRELAND**

Certificate Code: Page Number: **PO reference:**

PR-23-M3-000275-01 Page 5 of 40 60699676

Results to follow:

Chromium (Cr) from IXG5A [IX80U] Chromium VI [IX02U] Total cyanides [IX226] Total cyanides [IX479] Trivalent chromium [IXCR0]

⁴ Accreditiation Information

C6: ISO/IEC 17025:2017 INAB 138-T PP: COFRAC TESTING 1-0685

Signed:

Niamh Ward - Senior Laboratory Analyst

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10/08/2023

Limited 4th Floor, Adelphi George's Street Dun Laoghaire, Dublin A96 T927 IRELAND		eland		Certificate Cod Page Number: PO reference:	e: PR-23-M3- Page 6 of 60699676		
Sample number Your sample reference Sample Matrix	966-2023-0003274 SWY1 Surface water	7	Received on Analysis star		26/07/2023 26/07/2023		
Sample Condition on Arrival Time Sampled	Satisfactory 11:51		Sample Date)	25/07/2023		
Test Code Analyte	SUB ⁵ Analysis Started	Method	LOQ ³	SPEC ²	Result	Units	ACCRED ⁴
Alkalinity as CAC03 [BB005] Alkalinity as CAC03	* 28/07/23 15:31		30		288.3	mg/l	C6
Hexavalent chromium [IX02U]	20/01/20 10:01		50		200.0	mg/i	00
Chromium (VI)	* 26/07/23 15:46		0.01	I	non mesuré	mg/l	PP
Total cyanides [IX479] Cyanide, total Chromium (Cr) [IX80U]	* 08/08/23 06:55		0.01	1	non mesuré	mg/l	PP
Chromium (Cr) Trivalent chromium [IXCR0]	* 26/07/23 15:46		0.005		<0.005	mg/l	
Chromium III Suspended Solids [M3002]	* 26/07/23 15:46		0.01	Ν	on calculable	mg/l	
Suspended Solids	27/07/23 09:31	EW013	5		<5	mg/l	C6
Chemical Oxygen Demand (COD)							
Chemical oxygen demand (COD)	27/07/23 13:18	EW094	8		50	mg/l	C6
Dissolved Oxygen [M3005] Dissolved oxygen	28/07/23 14:47 ^{7D}	EW043	1		8.83	mg/l	

Signed: .

Niamh Ward - Senior Laboratory Analyst

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10/08/2023

Client:	AECOM Infrastructure	& Environment Ire		Certificate Code:	PR-23-M3-000	275-01		
	Limited 4th Floor, Adelphi Pla	79			Page Number:	Page 7 of 40		
	George's Street Upp Dun Laoghaire, Dublin A96 T927 IRELAND				PO reference:	60699676		
Sulphate n	ng/L - Gallery [M300N]							
Sulphate m	g/L - Gallery	27/07/23 08:15	EW175	1		68.7	mg/l	C6
Phosphate	e (Ortho/MRP) as P - Galler	y [M300P]						
Gallery	(Ortho/MRP) as P -	27/07/23 08:15 ^{7D}	EW175	0.05		<0.05	mg/l	
	g/L - Gallery	27/07/23 08:15	EW175	0.2		0.2	mg/l	C6
	ng/L - Gallery [M300S]			0.2		0.2		
	g/L - Gallery	27/07/23 08:15	EW175	5		14.7	mg/l	C6
Ammonia	as N - Gallery [M300Z]						-	
Ammonia a	s N - Gallery	27/07/23 08:15	EW175	0.05		<0.05	mg/l	C6
Nitrate (as	N) - Gallery [M301A]							
Nitrate (as	N) - Gallery	27/07/23 08:15 ^{7D}	EW175	1		2.543	mg/l	
GCFID-Org	anic Solvents (Head Spac	e) [M3027]						
Acetone		31/07/23 16:38	EO089			<2	mg/l	
Acetonitrile		31/07/23 16:38	EO089			<2	mg/l	
Amyl aceta	te	31/07/23 16:38	EO089			<2	mg/l	
Cyclohexar	ne	31/07/23 16:38	EO089			<2	mg/l	
Cyclopenta	none	31/07/23 16:38	EO089			<2	mg/l	
Dichlorome	thane	31/07/23 16:38	EO089			<2	mg/l	
Ethanol		31/07/23 16:38	EO089			<5	mg/l	
Ethyl Aceta	te	31/07/23 16:38	EO089			<2	mg/l	
Heptane		31/07/23 16:38	EO089			<2	mg/l	
IPA (2-Prop	anol)	31/07/23 16:38	EO089			<2	mg/l	

Signed: .

Niamh Ward - Senior Laboratory Analyst

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10/08/2023

Client:	AECOM Infrastructure Limited 4th Floor, Adelphi Plaz George's Street Uppe Dun Laoghaire, Dublin A96 T927 IRELAND	a,	eland		Certificate Code: Page Number: PO reference:	PR-23-M3-000 Page 8 of 40 60699676	275-01
Iso-Amyl ald	cohol	31/07/23 16:38	EO089			<5	mg/l
Isopropyl ac	cetate	31/07/23 16:38	EO089			<2	mg/l
Isopropyl Et	her	31/07/23 16:38	EO089			<2	mg/l
Methanol		31/07/23 16:38	EO089			<5	mg/l
Methyl Ethy	l Ketone	31/07/23 16:38	EO089			<2	mg/l
n-Butyl Alco	hol.(Butanol)	31/07/23 16:38	EO089			<2	mg/l
n-Hexane		31/07/23 16:38	EO089			<2	mg/l
sec-Butyl Al	cohol	31/07/23 16:38	EO089			<2	mg/l
tert-Amylalo	ohol	31/07/23 16:38	EO089			<5	mg/l
Tert-Butano	l	31/07/23 16:38	EO089			<5	mg/l
tert-Butyl M	ethyl Ether	31/07/23 16:38	EO089			<2	mg/l
Tetrahydrofu	uran	31/07/23 16:38	EO089			<2	mg/l
Toluene		31/07/23 16:38	EO089			<2	mg/l
Triethylamir	ne	31/07/23 16:38	EO089			<2	mg/l
Xylene -p		31/07/23 16:38	EO089			<2	mg/l
Xylene-M		31/07/23 16:38	EO089			<2	mg/l
Xylene-O		31/07/23 16:38	EO089			<2	mg/l
Xylenes-Tot	al	31/07/23 16:38	EO089			<2	mg/l
Temperatu	re (Site) [M3036]						
Temperature	e	31/07/23 16:25	Site Test			na	°C
pH (Roboti	c Method) [M3051]						
рН		26/07/23 15:40 ^{7D}	EW152R	4		7.7	
Conductivi	ty at 20°C (Robotic Method)) [M3052]					

Signed: .

Niamh Ward - Senior Laboratory Analyst

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10/08/2023

Client:	Client: AECOM Infrastructure & Environment Ireland Limited				Certificate Code:	PR-23-M3-000275-01		
	4th Floor, Adelph	i Plaza,			Page Number:	Page 9 o	of 40	
	George's Street Dun Laoghaire, Dublin A96 T927 IRELAND	Upper,			PO reference:	6069967	6	
Conductivity	∕ at 20°C	26/07/23 15:40	EW152R	5		580	μS/cm	C6
Arsenic - T	race [M3236]							
Arsenic		27/07/23 11:39		0.2	(0.806	μg/l	C6
Barium - Tr	ace [M3237]							
Barium		27/07/23 11:39		1.77	14	40.256	μg/l	C6
Beryllium -	Trace [M3238]							
Beryllium		27/07/23 11:39		1		<1	μg/l	C6
Boron - Tra	ice [M3239]							
Boron		27/07/23 11:39		0.21		<0.21	mg/l	C6
Cadmium -	Trace [M3240]							
Cadmium		27/07/23 11:39		0.1		<0.1	μg/l	C6
Copper - Tr	race [M3244]							
Copper (Cu)	27/07/23 11:39		0.003	<	0.003	mg/l	C6
Lead - Trac	e [M3246]							
Lead (Pb)		27/07/23 11:39		0.5		<0.5	µg/l	C6
-	race [M3249]							
Mercury		27/07/23 11:39		0.03		<0.03	µg/l	C6
	ice [M3251]							
Nickel (Ni)		27/07/23 11:39		0.5	-	7.094	µg/l	C6
	Trace [M3255]							
Selenium (S	,	27/07/23 11:39		0.2	(0.736	µg/l	C6
	- Trace [M3268]							
Vanadium (27/07/23 11:39		1		<1	µg/l	C6
Zinc - Trace	e [M3269]							

Zinc - Trace [M3269]

Signed:

Niamh Ward - Senior Laboratory Analyst

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Hoffman Park, Inchera
Cork
T45 PC80
Ireland
T: 0818 252526
Web: www.eurofins.ie
Email: ASTsupport@etuki.eurofins.com



Client: AECOM Infrastructure & Environment Ireland **Certificate Code:** PR-23-M3-000275-01 Limited Page Number: Page 10 of 40 4th Floor, Adelphi Plaza, George's Street Upper, **PO reference:** 60699676 Dun Laoghaire, **Dublin** A96 T927 **IRELAND** 27/07/23 11:39 C6 Zinc (Zn) FW188 3.84 1 µg/l **Results to follow:** Total cyanides [IX226] ⁴ Accreditiation Information

C6: ISO/IEC 17025:2017 INAB 138-T PP: COFRAC TESTING 1-0685

Signed: .

Niamh Ward - Senior Laboratory Analyst

10/08/2023

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10/08/2023

Limited	Limited 4th Floor, Adelphi Plaza,			Certificate C Page Numb			
George's Stree Dun Laoghaire Dublin A96 T927 IRELAND	t Upper,			PO referenc	e: 60699676		
Sample number	966-2023-0003274	8	Received on		26/07/2023		
Your sample reference	SWY2		Analysis sta	rted on	26/07/2023		
Sample Matrix	Surface water						
Sample Condition on Arrival	Satisfactory		Sample Date	Э	25/07/2023		
Time Sampled	12:12						
Test Code	SUB ⁵ Analysis	Method	LOQ ³	SPEC ²	Result	Units	ACCRED ⁴
Analyte	Started						
Alkalinity as CAC03 [BB005]							
Alkalinity as CAC03	* 28/07/23 15:31		30		248.7	mg/l	C6
Hexavalent chromium [IX02U]							
Chromium (VI)	* 26/07/23 15:46		0.01		non mesuré	mg/l	PP
Total cyanides [IX479]							
Cyanide, total	* 08/08/23 06:55		0.01		non mesuré	mg/l	PP
Chromium (Cr) [IX80U]							
Chromium (Cr)	* 26/07/23 15:46		0.005		<0.005	mg/l	
Trivalent chromium [IXCR0]							
Chromium III	* 26/07/23 15:46		0.01		Non calculable	mg/l	
Suspended Solids [M3002]							
Suspended Solids	27/07/23 09:38	EW013	5		<5	mg/l	C6
Chemical Oxygen Demand (CO							
Chemical oxygen demand (COD)	27/07/23 13:18	EW094	8		57	mg/l	C6
Dissolved Oxygen [M3005]							
Dissolved oxygen	28/07/23 14:47 ^{7D}	EW043	1		8.75	mg/l	

Signed: .

Niamh Ward - Senior Laboratory Analyst

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10/08/2023

Client:	AECOM Infrastructure	& Environment Ire	eland		Certificate Code:	PR-23-M3-000	275-01	
	Limited 4th Floor, Adelphi Plaz				Page Number:	Page 12 of 40		
	George's Street Upp Dun Laoghaire, Dublin A96 T927 IRELAND				PO reference:	60699676		
Sulphate n	ng/L - Gallery [M300N]							
Sulphate m	g/L - Gallery	27/07/23 08:15	EW175	1		211	mg/l	
Phosphate	(Ortho/MRP) as P - Gallery	/ [M300P]						
Gallery	(Ortho/MRP) as P -	27/07/23 08:15 ^{7D}	EW175	0.05		<0.05	mg/l	
	g/L - Gallery	27/07/23 08:15	EW175	0.2		0.2	mg/l	C6
	ng/L - Gallery [M300S]						0	
	g/L - Gallery	27/07/23 08:15	EW175	5		20.3	mg/l	C6
Ammonia	as N - Gallery [M300Z]							
Ammonia a	s N - Gallery	27/07/23 08:15	EW175	0.05		<0.05	mg/l	C6
Nitrate (as	N) - Gallery [M301A]							
Nitrate (as	N) - Gallery	27/07/23 08:15 ^{7D}	EW175	1	20	06.595	mg/l	
GCFID-Org	anic Solvents (Head Space	e) [M3027]						
Acetone		31/07/23 16:38	EO089			<2	mg/l	
Acetonitrile		31/07/23 16:38	EO089			<2	mg/l	
Amyl aceta	te	31/07/23 16:38	EO089			<2	mg/l	
Cyclohexar	ne	31/07/23 16:38	EO089			<2	mg/l	
Cyclopenta	none	31/07/23 16:38	EO089			<2	mg/l	
Dichlorome	thane	31/07/23 16:38	EO089			<2	mg/l	
Ethanol		31/07/23 16:38	EO089			<5	mg/l	
Ethyl Aceta	te	31/07/23 16:38	EO089			<2	mg/l	
Heptane		31/07/23 16:38	EO089			<2	mg/l	
IPA (2-Prop	anol)	31/07/23 16:38	EO089			<2	mg/l	

Signed: .

Niamh Ward - Senior Laboratory Analyst

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10/08/2023

Client:	AECOM Infrastructure & Environment Ireland Limited 4th Floor, Adelphi Plaza, George's Street Upper, Dun Laoghaire, Dublin A96 T927 IRELAND				Certificate Code: Page Number: PO reference:	PR-23-M3-000 Page 13 of 40 60699676	275-01
Iso-Amyl ald	cohol	31/07/23 16:38	EO089			<5	mg/l
Isopropyl ac	cetate	31/07/23 16:38	EO089			<2	mg/l
Isopropyl Et	her	31/07/23 16:38	EO089			<2	mg/l
Methanol		31/07/23 16:38	EO089			<5	mg/l
Methyl Ethy	l Ketone	31/07/23 16:38	EO089			<2	mg/l
n-Butyl Alco	hol.(Butanol)	31/07/23 16:38	EO089			<2	mg/l
n-Hexane		31/07/23 16:38	EO089			<2	mg/l
sec-Butyl Al	cohol	31/07/23 16:38	EO089			<2	mg/l
tert-Amylalc	ohol	31/07/23 16:38	EO089			<5	mg/l
Tert-Butano	l	31/07/23 16:38	EO089			<5	mg/l
tert-Butyl Me	ethyl Ether	31/07/23 16:38	EO089			<2	mg/l
Tetrahydrofu	uran	31/07/23 16:38	EO089			<2	mg/l
Toluene		31/07/23 16:38	EO089			<2	mg/l
Triethylamin	ne	31/07/23 16:38	EO089			<2	mg/l
Xylene -p		31/07/23 16:38	EO089			<2	mg/l
Xylene-M		31/07/23 16:38	EO089			<2	mg/l
Xylene-O		31/07/23 16:38	EO089			<2	mg/l
Xylenes-Tot	al	31/07/23 16:38	EO089			<2	mg/l
Temperatu	re (Site) [M3036]						
Temperature	e	31/07/23 16:25	Site Test			na	°C
pH (Roboti	c Method) [M3051]						
рН		26/07/23 15:40 ^{7D}	EW152R	4		7.3	
Conductivi	ty at 20°C (Robotic Method)) [M3052]					

Signed: .

Niamh Ward - Senior Laboratory Analyst

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Client:	AECOM Infrastructure	Certificate Code:	PR-23-M3-000275-01					
Limited 4th Floor, Adelphi Plaza,					Page Number:	Page 14 of 40		
	George's Street Up Dun Laoghaire, Dublin A96 T927 IRELAND				PO reference:	60699676		
Conductivity	y at 20°C	26/07/23 15:40	EW152R	5		570	µS/cm	C6
Arsenic - T	race [M3236]							
Arsenic		27/07/23 11:39		0.2		1.032	µg/l	C6
Barium - Tr	race [M3237]							
Barium		27/07/23 11:39		1.77	1:	34.632	µg/l	C6
Beryllium -	Trace [M3238]							
Beryllium		27/07/23 11:39		1		<1	µg/l	C6
Boron - Tra	ace [M3239]							
Boron		27/07/23 11:39		0.21	·	<0.21	mg/l	C6
Cadmium -	Trace [M3240]							
Cadmium		27/07/23 11:39		0.1		<0.1	µg/l	C6
	race [M3244]							
Copper (Cu	,	27/07/23 11:39		0.003	<	0.003	mg/l	C6
Lead - Trac	e [M3246]							
Lead (Pb)		27/07/23 11:39		0.5		<0.5	µg/l	C6
-	Frace [M3249]							
Mercury		27/07/23 11:39		0.03	(0.037	µg/l	C6
	ace [M3251]			<u> </u>				00
Nickel (Ni)		27/07/23 11:39		0.5		7.148	µg/l	C6
	Trace [M3255]	07/07/00 44 00				0.04	,	00
Selenium (S		27/07/23 11:39		0.2		0.61	µg/l	C6
	- Trace [M3268]	07/07/00 44.00		4		-1		06
Vanadium ('	,	27/07/23 11:39		1		<1	µg/l	C6
Zinc - Trace	e [M3269]							

Signed:

Niamh Ward - Senior Laboratory Analyst

10/08/2023

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Client: AECOM Infrastructure & Environment Ireland Certificate Code: PR-23-M3-000275-01 Limited Page Number: Page 15 of 40 4th Floor, Adelphi Plaza, George's Street Upper, **PO reference:** 60699676 Dun Laoghaire, **Dublin** A96 T927 **IRELAND** 27/07/23 11:39 C6 Zinc (Zn) FW188 3.68 1 µg/l ⁴ Accreditiation Information C6: ISO/IEC 17025:2017 INAB 138-T PP: COFRAC TESTING 1-0685

Signed:

Niamh Ward - Senior Laboratory Analyst

10/08/2023

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Certificate Code:



PR-23-M3-000275-01

10/08/2023

AECOM Infrastructure & Environment Ireland Limited Page Number: Page 16 of 40 4th Floor, Adelphi Plaza, George's Street Upper, **PO reference:** 60699676 Dun Laoghaire, **Dublin** A96 T927 **IRELAND** 966-2023-00032749 Received on 26/07/2023 Sample number Analysis started on 26/07/2023 Your sample reference SWC1 Surface water Sample Matrix Sample Condition on Arrival Satisfactory Sample Date 25/07/2023 **Time Sampled** 12:30 SUB⁵ Analysis LOQ³ SPEC² **Test Code** Method Result Units ACCRED⁴ Started Analyte Alkalinity as CAC03 [BB005] Alkalinity as CAC03 * 28/07/23 15:31 30 281 7 C6 mg/l Hexavalent chromium [IX02U] Chromium (VI) 26/07/23 16:00 0.01 non mesuré mg/l PP Total cyanides [IX479] 08/08/23 06:55 0.01 PP Cyanide, total non mesuré mg/l Chromium (Cr) [IX80U] 0.005 <0.005 Chromium (Cr) 26/07/23 16:00 mg/l Trivalent chromium [IXCR0] 26/07/23 16:00 0.01 Non calculable Chromium III mg/l Suspended Solids [M3002] Suspended Solids 27/07/23 09:31 EW013 5 <5 C6 mg/l Chemical Oxygen Demand (COD) [M3004] Chemical oxygen demand (COD) 27/07/23 13:18 EW094 8 55 mg/l C6 **Dissolved Oxygen [M3005]** 28/07/23 14:48 TD Dissolved oxygen FW/043 8 77 mg/l 1

Signed: _

Niamh Ward - Senior Laboratory Analyst

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10/08/2023

Client:	AECOM Infrastructure	& Environment Ire	eland		Certificate Code:	PR-23-M3-000275-01		
	Limited 4th Floor, Adelphi Plaz	20			Page Number:	Page 17 of 40		
	George's Street Upp Dun Laoghaire, Dublin A96 T927 IRELAND				PO reference:	60699676		
Sulphate n	ng/L - Gallery [M300N]							
Sulphate m	ng/L - Gallery	27/07/23 08:15	EW175	1		66.1	mg/l	C6
Phosphate	e (Ortho/MRP) as P - Gallery	[M300P]						
Gallery	(Ortho/MRP) as P -	27/07/23 08:15 ^{7D}	EW175	0.05		<0.05	mg/l	
	g/L - Gallery	27/07/23 08:15	EW175	0.2		0.2	mg/l	C6
Chloride m	ng/L - Gallery [M300S]						•	
Chloride m	g/L - Gallery	27/07/23 08:15	EW175	5		12.0	mg/l	C6
Ammonia	as N - Gallery [M300Z]							
Ammonia a	as N - Gallery	27/07/23 08:15	EW175	0.05		0.23	mg/l	C6
Nitrate (as	N) - Gallery [M301A]							
Nitrate (as	N) - Gallery	27/07/23 08:15 ^{7D}	EW175	1	:	2.146	mg/l	
GCFID-Org	ganic Solvents (Head Space	e) [M3027]						
Acetone		31/07/23 16:38	EO089			<2	mg/l	
Acetonitrile	9	31/07/23 16:38	EO089			<2	mg/l	
Amyl aceta	te	31/07/23 16:38	EO089			<2	mg/l	
Cyclohexar	ne	31/07/23 16:38	EO089			<2	mg/l	
Cyclopenta	inone	31/07/23 16:38	EO089			<2	mg/l	
Dichlorome	ethane	31/07/23 16:38	EO089			<2	mg/l	
Ethanol		31/07/23 16:38	EO089			<5	mg/l	
Ethyl Aceta	ite	31/07/23 16:38	EO089			<2	mg/l	
Heptane		31/07/23 16:38	EO089			<2	mg/l	
IPA (2-Prop	banol)	31/07/23 16:38	EO089			<2	mg/l	

Signed: .

Niamh Ward - Senior Laboratory Analyst

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Client:	AECOM Infrastructure & Environment Ireland Limited 4th Floor, Adelphi Plaza, George's Street Upper, Dun Laoghaire, Dublin A96 T927 IRELAND				Certificate Code: Page Number: PO reference:	PR-23-M3-000 Page 18 of 40 60699676	275-01
Iso-Amyl ald	cohol	31/07/23 16:38	EO089			<5	mg/l
Isopropyl ac	cetate	31/07/23 16:38	EO089			<2	mg/l
Isopropyl Et	her	31/07/23 16:38	EO089			<2	mg/l
Methanol		31/07/23 16:38	EO089			<5	mg/l
Methyl Ethy	l Ketone	31/07/23 16:38	EO089			<2	mg/l
n-Butyl Alco	hol.(Butanol)	31/07/23 16:38	EO089			<2	mg/l
n-Hexane		31/07/23 16:38	EO089			<2	mg/l
sec-Butyl Al	cohol	31/07/23 16:38	EO089			<2	mg/l
tert-Amylalo	ohol	31/07/23 16:38	EO089			<5	mg/l
Tert-Butano	l	31/07/23 16:38	EO089			<5	mg/l
tert-Butyl M	ethyl Ether	31/07/23 16:38	EO089			<2	mg/l
Tetrahydrofu	uran	31/07/23 16:38	EO089			<2	mg/l
Toluene		31/07/23 16:38	EO089			<2	mg/l
Triethylamir	ne	31/07/23 16:38	EO089			<2	mg/l
Xylene -p		31/07/23 16:38	EO089			<2	mg/l
Xylene-M		31/07/23 16:38	EO089			<2	mg/l
Xylene-O		31/07/23 16:38	EO089			<2	mg/l
Xylenes-Tot	al	31/07/23 16:38	EO089			<2	mg/l
Temperatu	re (Site) [M3036]						
Temperature	e	31/07/23 16:25	Site Test			na	°C
pH (Roboti	c Method) [M3051]						
рН		26/07/23 15:40 ^{7D}	EW152R	4		7.5	
Conductivi	ty at 20°C (Robotic Method)) [M3052]					

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10/08/2023

Client:	AECOM Infrastructure	Certificate Code:	PR-23-M3-000	PR-23-M3-000275-01				
	Limited 4th Floor, Adelphi Pla	172			Page Number:	Page 19 of 40		
	George's Street Up Dun Laoghaire, Dublin A96 T927 IRELAND				PO reference:	60699676		
Conductivity	y at 20°C	26/07/23 15:40	EW152R	5		520	µS/cm	C6
Arsenic - T	race [M3236]							
Arsenic		27/07/23 11:39		0.2	:	2.293	µg/l	C6
Barium - Tr	race [M3237]							
Barium		27/07/23 11:39		1.77	1:	38.688	µg/l	C6
Beryllium -	Trace [M3238]							
Beryllium		27/07/23 11:39		1		<1	µg/l	C6
Boron - Tra	ace [M3239]							
Boron		27/07/23 11:39		0.21	·	<0.21	mg/l	C6
Cadmium -	Trace [M3240]							
Cadmium		27/07/23 11:39		0.1		<0.1	µg/l	C6
	race [M3244]							
Copper (Cu	,	27/07/23 11:39		0.003	<	0.003	mg/l	C6
Lead - Trac	e [M3246]							
Lead (Pb)		27/07/23 11:39		0.5		<0.5	µg/l	C6
-	Frace [M3249]							
Mercury		27/07/23 11:39		0.03	•	<0.03	µg/l	C6
	ace [M3251]	0=10=100,11,00		<u> </u>				00
Nickel (Ni)		27/07/23 11:39		0.5	;	3.292	µg/l	C6
	Trace [M3255]	07/07/00 44 00					,	00
Selenium (S		27/07/23 11:39		0.2		0.513	µg/l	C6
	- Trace [M3268]	27/07/23 11:39		1		<1		C6
Vanadium (,	21/01/23 11:39		1		~1	µg/l	0
Zinc - Trace	e [พวรคล]							

Signed:

Niamh Ward - Senior Laboratory Analyst

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Hoffman Park, Inchera
Cork
T45 PC80
Ireland
T: 0818 252526
Web: www.eurofins.ie
Email: ASTsupport@etuki.eurofins.com



Client: AECOM Infrastructure & Environment Ireland Certificate Code: PR-23-M3-000275-01 Limited Page Number: Page 20 of 40 4th Floor, Adelphi Plaza, George's Street Upper, **PO reference:** 60699676 Dun Laoghaire, **Dublin** A96 T927 **IRELAND** 27/07/23 11:39 C6 Zinc (Zn) EW188 1.03 1 µg/l ⁴ Accreditiation Information C6: ISO/IEC 17025:2017 INAB 138-T PP: COFRAC TESTING 1-0685

Signed: .

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10/08/2023

Client:	AECOM Infrastruct Limited 4th Floor, Adelphi George's Street I Dun Laoghaire, Dublin A96 T927 IRELAND		eland		Certificate C Page Numbe PO referenc	er: Page 21 o		
Sample nur	mber	966-2023-0003275	0	Received on		26/07/2023		
				Analysis star	rted on	26/07/2023		
Your sample		SWR1 Surface water						
Sample Ma	ndition on Arrival	Satisfactory		Sample Date	_	25/07/2023		
Time Samp		12:55		Sample Date	3	25/07/2023		
Test Code Analyte		SUB ⁵ Analysis Started	Method	LOQ ³	SPEC ²	Result	Units	ACCRED ⁴
Alkalinity a	as CAC03 [BB005]							
Alkalinity as	s CAC03	* 28/07/23 15:31		30		339.5	mg/l	C6
Hexavalen	t chromium [IX02U]							
Chromium ((VI)	* 26/07/23 15:46		0.01		non mesuré	mg/l	PP
Total cyani	ides [IX479]							
Cyanide, to	tal	* 08/08/23 06:55		0.01		non mesuré	mg/l	PP
Chromium	(Cr) [IX80U]							
Chromium ((Cr)	* 26/07/23 15:46		0.005		<0.005	mg/l	
Trivalent c	hromium [IXCR0]							
Chromium I	111	* 26/07/23 15:46		0.01		Non calculable	mg/l	
Suspended	d Solids [M3002]							
Suspended	Solids	27/07/23 09:31	EW013	5		40	mg/l	C6
	Oxygen Demand (COD)	[M3004]						
Chemical o	xygen demand (COD)	27/07/23 13:18	EW094	8		45	mg/l	C6
Dissolved	Oxygen [M3005]							
Dissolved of	oxygen	28/07/23 14:48 ^{7D}	EW043	1		8.65	mg/l	

Signed: .

Niamh Ward - Senior Laboratory Analyst

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Eurofins Environment Testing Ireland Hoffman Park, Inchera Cork T45 PC80 Ireland T: 0818 252526 Web: www.eurofins.ie Email: ASTsupport@etuki.eurofins.com



10/08/2023

Client:	AECOM Infrastructure	& Environment Ire	and		Certificate Code:	PR-23-M3-000275-01		
	Limited 4th Floor, Adelphi Plaz				Page Number:	Page 22 of 40		
	George's Street Upp Dun Laoghaire, Dublin A96 T927 IRELAND				PO reference:	60699676		
Sulphate n	ng/L - Gallery [M300N]							
Sulphate m	g/L - Gallery	27/07/23 08:15	EW175	1		31.7	mg/l	C6
Phosphate	e (Ortho/MRP) as P - Gallery	[M300P]						
Gallery	(Ortho/MRP) as P -	27/07/23 08:15 ^{7D}	EW175	0.05		<0.05	mg/l	
	g/L - Gallery	27/07/23 08:15	EW175	0.2		0.6	mg/l	C6
Chloride m	ng/L - Gallery [M300S]							
Chloride m	g/L - Gallery	27/07/23 08:15	EW175	5		18.4	mg/l	C6
Ammonia a	as N - Gallery [M300Z]							
Ammonia a	s N - Gallery	27/07/23 08:15	EW175	0.05		0.14	mg/l	C6
Nitrate (as	N) - Gallery [M301A]							
Nitrate (as	N) - Gallery	27/07/23 08:15 ^{7D}	EW175	1		<1	mg/l	
GCFID-Org	anic Solvents (Head Space) [M3027]						
Acetone		31/07/23 16:38	EO089			<2	mg/l	
Acetonitrile		31/07/23 16:38	EO089			<2	mg/l	
Amyl aceta	te	31/07/23 16:38	EO089			<2	mg/l	
Cyclohexar	ne	31/07/23 16:38	EO089			<2	mg/l	
Cyclopenta	none	31/07/23 16:38	EO089			<2	mg/l	
Dichlorome	thane	31/07/23 16:38	EO089			<2	mg/l	
Ethanol		31/07/23 16:38	EO089			<5	mg/l	
Ethyl Aceta	te	31/07/23 16:38	EO089			<2	mg/l	
Heptane		31/07/23 16:38	EO089			<2	mg/l	
IPA (2-Prop	anol)	31/07/23 16:38	EO089			<2	mg/l	

Signed: .

Niamh Ward - Senior Laboratory Analyst

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Client:	AECOM Infrastructure & Environment Ireland Limited 4th Floor, Adelphi Plaza, George's Street Upper, Dun Laoghaire, Dublin A96 T927 IRELAND				Certificate Code: Page Number: PO reference:	PR-23-M3-000 Page 23 of 40 60699676	275-01
Iso-Amyl ald	cohol	31/07/23 16:38	EO089			<5	mg/l
Isopropyl ac	cetate	31/07/23 16:38	EO089			<2	mg/l
Isopropyl Et	her	31/07/23 16:38	EO089			<2	mg/l
Methanol		31/07/23 16:38	EO089			<5	mg/l
Methyl Ethy	l Ketone	31/07/23 16:38	EO089			<2	mg/l
n-Butyl Alco	hol.(Butanol)	31/07/23 16:38	EO089			<2	mg/l
n-Hexane		31/07/23 16:38	EO089			<2	mg/l
sec-Butyl Al	cohol	31/07/23 16:38	EO089			<2	mg/l
tert-Amylalo	ohol	31/07/23 16:38	EO089			<5	mg/l
Tert-Butano	l	31/07/23 16:38	EO089			<5	mg/l
tert-Butyl M	ethyl Ether	31/07/23 16:38	EO089			<2	mg/l
Tetrahydrofu	uran	31/07/23 16:38	EO089			<2	mg/l
Toluene		31/07/23 16:38	EO089			<2	mg/l
Triethylamir	ne	31/07/23 16:38	EO089			<2	mg/l
Xylene -p		31/07/23 16:38	EO089			<2	mg/l
Xylene-M		31/07/23 16:38	EO089			<2	mg/l
Xylene-O		31/07/23 16:38	EO089			<2	mg/l
Xylenes-Tot	al	31/07/23 16:38	EO089			<2	mg/l
Temperatu	re (Site) [M3036]						
Temperature	e	31/07/23 16:25	Site Test			na	°C
pH (Roboti	c Method) [M3051]						
рН		26/07/23 15:40 ^{7D}	EW152R	4		7.4	
Conductivi	ty at 20°C (Robotic Method)) [M3052]					

Signed: .

Niamh Ward - Senior Laboratory Analyst

10/08/2023

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10/08/2023

<i>Client:</i> AECOM Infrastructure & Environment Ireland Limited 4th Floor, Adelphi Plaza,				Certificate Code: Page Number:	PR-23-M3-000275-01 Page 24 of 40			
	George's Street Upp Dun Laoghaire, Dublin A96 T927 IRELAND				PO reference:	60699676		
Conductivity	y at 20°C	26/07/23 15:40	EW152R	5		640	µS/cm	C6
Arsenic - T	race [M3236]							
Arsenic		27/07/23 11:39		0.2		0.569	µg/l	C6
	race [M3237]							
Barium		27/07/23 11:39		1.77	(94.042	µg/l	C6
-	Trace [M3238]							
Beryllium		27/07/23 11:39		1		1.357	µg/l	C6
	ace [M3239]	07/07/00 44 00		0.04				00
Boron	T	27/07/23 11:39		0.21		<0.21	mg/l	C6
Cadmium - Cadmium	Trace [M3240]	27/07/23 11:39		0.1		0.159	ua/I	C6
	race [M3244]	21101123 11.39		0.1		0.159	µg/l	0
Copper - II		27/07/23 11:39		0.003		0.005	mg/l	C6
Lead - Trac		21/01/20 11:00		0.000		0.000		
Lead (Pb)		27/07/23 11:39		0.5		<0.5	µg/l	C6
. ,	Frace [M3249]							
Mercury		27/07/23 11:39		0.03		0.065	µg/l	C6
Nickel - Tra	ace [M3251]							
Nickel (Ni)		27/07/23 11:39		0.5		2.4	µg/l	C6
Selenium -	Trace [M3255]							
Selenium (S	Se)	27/07/23 11:39		0.2		0.605	µg/l	C6
Vanadium	- Trace [M3268]							
Vanadium (V)	27/07/23 11:39		1		<1	µg/l	C6
Zinc - Trac	e [M3269]							

Signed:

Niamh Ward - Senior Laboratory Analyst

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Eurofins Environment Testing Ireland Hoffman Park, Inchera Cork T45 PC80 Ireland T: 0818 252526 Web: www.eurofins.ie Email: ASTsupport@etuki.eurofins.com



Client: AECOM Infrastructure & Environment Ireland Certificate Code: PR-23-M3-000275-01 Limited Page Number: Page 25 of 40 4th Floor, Adelphi Plaza, George's Street Upper, **PO reference:** 60699676 Dun Laoghaire, **Dublin** A96 T927 **IRELAND** 27/07/23 11:39 C6 Zinc (Zn) FW188 1 171 µg/l ⁴ Accreditiation Information C6: ISO/IEC 17025:2017 INAB 138-T PP: COFRAC TESTING 1-0685

Signed:

Niamh Ward - Senior Laboratory Analyst

10/08/2023

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10/08/2023

	AECOM Infrastruc Limited 4th Floor, Adelphi George's Street Dun Laoghaire, Dublin A96 T927 IRELAND		eland		Certificate Page Numb PO referenc	Page 26 of		
Sample numb	ber	966-2023-0003275	1	Received on Analysis sta		26/07/2023 26/07/2023		
Your sample r		SWE1						
Sample Matrix		Surface water						
	lition on Arrival	Satisfactory		Sample Date	9	25/07/2023		
Time Sampled	a	14:15			2			
Test Code Analyte		SUB ⁵ Analysis Started	Method	LOQ ³	SPEC ²	Result	Units	ACCRED ⁴
Alkalinity as	CAC03 [BB005]							
Alkalinity as C	CAC03	* 28/07/23 15:31		30		177.7	mg/l	C6
Hexavalent c	hromium [IX02U]							
Chromium (V	I)	* 26/07/23 16:00		0.01		non mesuré	mg/l	PP
Total cyanide	es [IX479]							
Cyanide, total	I	* 08/08/23 06:55		0.01		non mesuré	mg/l	PP
Chromium (C	Cr) [IX80U]							
Chromium (C	r)	* 26/07/23 16:00		0.005		<0.005	mg/l	
	omium [IXCR0]							
Chromium III		* 26/07/23 16:00		0.01		Non calculable	mg/l	
	Solids [M3002]							
Suspended S	olids	27/07/23 09:31	EW013	5		<5	mg/l	C6
Chemical Ox	ygen Demand (COD)) [M3004]						
Chemical oxy	gen demand (COD)	27/07/23 13:18	EW094	8		23	mg/l	C6
Dissolved Ox	xygen [M3005]							
Dissolved oxy	/gen	28/07/23 14:48 ^{7D}	EW043	1		8.76	mg/l	

Signed: .

Niamh Ward - Senior Laboratory Analyst

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Client:	AECOM Infrastructure	& Environment li	reland		Certificate Code:	PR-23-M3-000275-01		
	Limited 4th Floor, Adelphi Pla	70			Page Number:	Page 27 of 40		
	George's Street Upp Dun Laoghaire, Dublin A96 T927 IRELAND				PO reference:	60699676		
Sulphate n	ng/L - Gallery [M300N]							
Sulphate m	g/L - Gallery	27/07/23 08:15	EW175	1		14.9	mg/l	C6
Phosphate	(Ortho/MRP) as P - Gallery	y [M300P]						
Gallery	(Ortho/MRP) as P - g/L - Gallery [M300Q]	27/07/23 08:15	EW175	0.05		<0.05	mg/l	C6
	g/L - Gallery	27/07/23 08:15	EW175	0.2		<0.2	mg/l	
Chloride m	ng/L - Gallery [M300S]						-	
Chloride m	g/L - Gallery	27/07/23 08:15	EW175	5		16.1	mg/l	C6
Ammonia a	as N - Gallery [M300Z]							
Ammonia a	s N - Gallery	27/07/23 08:15	EW175	0.05		<0.05	mg/l	C6
Nitrate (as	N) - Gallery [M301A]							
Nitrate (as	N) - Gallery	27/07/23 08:15	EW175	1		<1	mg/l	C6
GCFID-Org	anic Solvents (Head Space	e) [M3027]						
Acetone		31/07/23 16:38	EO089			<2	mg/l	
Acetonitrile		31/07/23 16:38	EO089			<2	mg/l	
Amyl aceta	te	31/07/23 16:38	EO089			<2	mg/l	
Cyclohexar	ne	31/07/23 16:38	EO089			<2	mg/l	
Cyclopenta	none	31/07/23 16:38	EO089			<2	mg/l	
Dichlorome	thane	31/07/23 16:38	EO089			<2	mg/l	
Ethanol		31/07/23 16:38	EO089			<5	mg/l	
Ethyl Aceta	te	31/07/23 16:38	EO089			<2	mg/l	
Heptane		31/07/23 16:38	EO089			<2	mg/l	
IPA (2-Prop	anol)	31/07/23 16:38	EO089			<2	mg/l	

Signed: .

Niamh Ward - Senior Laboratory Analyst

10/08/2023

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Client:	AECOM Infrastructure Limited 4th Floor, Adelphi Plaz George's Street Uppe Dun Laoghaire, Dublin A96 T927 IRELAND	a,	eland		Certificate Code: Page Number: PO reference:	PR-23-M3-000 Page 28 of 40 60699676	275-01
Iso-Amyl ald	cohol	31/07/23 16:38	EO089			<5	mg/l
Isopropyl ac	cetate	31/07/23 16:38	EO089			<2	mg/l
Isopropyl Et	her	31/07/23 16:38	EO089			<2	mg/l
Methanol		31/07/23 16:38	EO089			<5	mg/l
Methyl Ethy	l Ketone	31/07/23 16:38	EO089			<2	mg/l
n-Butyl Alco	hol.(Butanol)	31/07/23 16:38	EO089			<2	mg/l
n-Hexane		31/07/23 16:38	EO089			<2	mg/l
sec-Butyl Al	cohol	31/07/23 16:38	EO089			<2	mg/l
tert-Amylalo	ohol	31/07/23 16:38	EO089			<5	mg/l
Tert-Butano	l	31/07/23 16:38	EO089			<5	mg/l
tert-Butyl M	ethyl Ether	31/07/23 16:38	EO089			<2	mg/l
Tetrahydrofu	uran	31/07/23 16:38	EO089			<2	mg/l
Toluene		31/07/23 16:38	EO089			<2	mg/l
Triethylamir	ne	31/07/23 16:38	EO089			<2	mg/l
Xylene -p		31/07/23 16:38	EO089			<2	mg/l
Xylene-M		31/07/23 16:38	EO089			<2	mg/l
Xylene-O		31/07/23 16:38	EO089			<2	mg/l
Xylenes-Tot	al	31/07/23 16:38	EO089			<2	mg/l
Temperatu	re (Site) [M3036]						
Temperature	e	31/07/23 16:25	Site Test			na	°C
pH (Roboti	c Method) [M3051]						
рН		26/07/23 15:40 ^{7D}	EW152R	4		7.9	
Conductivi	ty at 20°C (Robotic Method)) [M3052]					

Signed: .

Niamh Ward - Senior Laboratory Analyst

10/08/2023

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10/08/2023

Client:	Limited 4th Floor, Adelphi Plaza,				Certificate Code: Page Number:	PR-23-M3-000 Page 29 of 40	-M3-000275-01 29 of 40	
	George's Street Up Dun Laoghaire, Dublin A96 T927 IRELAND				PO reference:	60699676		
Conductivity	y at 20°C	26/07/23 15:40	EW152R	5		340	µS/cm	C6
Arsenic - T	race [M3236]							
Arsenic		27/07/23 11:39		0.2		0.869	µg/l	C6
	race [M3237]							
Barium		27/07/23 11:39		1.77		41.08	µg/l	C6
-	Trace [M3238]							
Beryllium		27/07/23 11:39		1		<1	µg/l	C6
	ace [M3239]							
Boron	_	27/07/23 11:39		0.21		<0.21	mg/l	C6
	Trace [M3240]	07/07/00 44 00		0.4		-0.4		00
Cadmium		27/07/23 11:39		0.1		<0.1	µg/l	C6
Copper - II Copper (Cu	race [M3244]	27/07/23 11:39		0.003		<0.003	ma/l	C6
Lead - Trac		21/01/25 11.59		0.005		<0.003	mg/l	00
Lead - Had	,e [WJ240]	27/07/23 11:39		0.5		<0.5	µg/l	C6
. ,	Frace [M3249]	21/01/20 11:00		0.0			P9/1	
Mercury		27/07/23 11:39		0.03		<0.03	µg/l	C6
	ace [M3251]						1.2,	
Nickel (Ni)		27/07/23 11:39		0.5		1.109	µg/l	C6
. ,	Trace [M3255]							
Selenium (S		27/07/23 11:39		0.2		0.243	µg/l	C6
Vanadium	- Trace [M3268]							
Vanadium (V)	27/07/23 11:39		1		<1	µg/l	C6
Zinc - Trac	e [M3269]							

Signed:

Niamh Ward - Senior Laboratory Analyst

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Client: AECOM Infrastructure & Environment Ireland **Certificate Code:** PR-23-M3-000275-01 Limited Page Number: Page 30 of 40 4th Floor, Adelphi Plaza, George's Street Upper, **PO reference:** 60699676 Dun Laoghaire, **Dublin** A96 T927 **IRELAND** 27/07/23 11:39 C6 Zinc (Zn) FW188 1 <1 µg/l ⁴ Accreditiation Information C6: ISO/IEC 17025:2017 INAB 138-T PP: COFRAC TESTING 1-0685

Signed:

Niamh Ward - Senior Laboratory Analyst

10/08/2023

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- 9. Report is issued as per out standard T&C of sale.



Eurofins Environment Testing Ireland Hoffman Park, Inchera Cork T45 PC80 Ireland T: 0818 252526 Web: www.eurofins.ie Email: ASTsupport@etuki.eurofins.com



10/08/2023

Client:	AECOM Infrastruc	ture & Environment Ir	& Environment Ireland				3-000275-01	
	4th Floor, Adelphi George's Street Dun Laoghaire, Dublin A96 T927 IRELAND				Page Numb PO referent	•		
Sample nur	nber	966-2023-0003275	2	Received on		26/07/2023		
Your sampl	a reference	SWU1		Analysis star	rted on	26/07/2023		
Sample Ma		Sw01 Surface water						
	ndition on Arrival	Satisfactory		Sample Date	.	25/07/2023		
Time Samp		14:43		Sampio Sam		20/01/2020		
Test Code		SUB ⁵ Analysis	Method	LOQ ³	SPEC ²	Result	Units	ACCRED ⁴
Analyte		Started						
Alkalinity a	as CAC03 [BB005]							
Alkalinity as	s CAC03	* 28/07/23 15:31		30		320.7	mg/l	C6
Hexavalen	t chromium [IX02U]							
Chromium	(VI)	* 26/07/23 15:46		0.01		non mesuré	mg/l	PP
Total cyani	ides [IX479]							
Cyanide, to	tal	* 08/08/23 06:55		0.01		non mesuré	mg/l	PP
Chromium	(Cr) [IX80U]							
Chromium	(Cr)	* 26/07/23 15:46		0.005		<0.005	mg/l	
Trivalent c	hromium [IXCR0]							
Chromium	111	* 26/07/23 15:46		0.01		Non calculable	mg/l	
Suspended	d Solids [M3002]							
Suspended	Solids	27/07/23 09:30	EW013	5		10	mg/l	C6
	Oxygen Demand (COD)) [M3004]						
Chemical o	xygen demand (COD)	27/07/23 13:18	EW094	8		37	mg/l	C6
	Oxygen [M3005]							
Dissolved c	oxygen	28/07/23 14:49 ^{7D}	EW043	1		8.74	mg/l	

Signed: .

Niamh Ward - Senior Laboratory Analyst

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10/08/2023

Client: AECOM Infrastructure & Environment Ireland					Certificate Code:	PR-23-M3-000275-01		
	Limited 4th Floor, Adelphi Pla	70			Page Number:	Page 32 of 40		
	George's Street Upp Dun Laoghaire, Dublin A96 T927 IRELAND				PO reference:	60699676		
Sulphate n	ng/L - Gallery [M300N]							
Sulphate m	ıg/L - Gallery	27/07/23 08:15	EW175	1		27.9	mg/l	C6
Phosphate	e (Ortho/MRP) as P - Galler	y [M300P]						
Gallery	(Ortho/MRP) as P -	27/07/23 08:15	EW175	0.05		0.061	mg/l	C6
	g/L - Gallery	27/07/23 08:15	EW175	0.2		0.3	mg/l	C6
-	ng/L - Gallery [M300S]			0.2				
	g/L - Gallery	27/07/23 08:15	EW175	5		12.7	mg/l	C6
	as N - Gallery [M300Z]						0	
Ammonia a	is N - Gallery	27/07/23 08:15	EW175	0.05		0.09	mg/l	C6
Nitrate (as	N) - Gallery [M301A]							
Nitrate (as	N) - Gallery	27/07/23 08:15	EW175	1		2.439	mg/l	C6
GCFID-Org	ganic Solvents (Head Spac	e) [M3027]						
Acetone		31/07/23 16:38	EO089			<2	mg/l	
Acetonitrile		31/07/23 16:38	EO089			<2	mg/l	
Amyl aceta	te	31/07/23 16:38	EO089			<2	mg/l	
Cyclohexar	ne	31/07/23 16:38	EO089			<2	mg/l	
Cyclopenta	none	31/07/23 16:38	EO089			<2	mg/l	
Dichlorome	thane	31/07/23 16:38	EO089			<2	mg/l	
Ethanol		31/07/23 16:38	EO089			<5	mg/l	
Ethyl Aceta	te	31/07/23 16:38	EO089			<2	mg/l	
Heptane		31/07/23 16:38	EO089			<2	mg/l	
IPA (2-Prop	oanol)	31/07/23 16:38	EO089			<2	mg/l	

Signed: .

Niamh Ward - Senior Laboratory Analyst

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Client:	AECOM Infrastructure Limited 4th Floor, Adelphi Plaz George's Street Uppe Dun Laoghaire, Dublin A96 T927 IRELAND	a,	eland		Certificate Code: Page Number: PO reference:	PR-23-M3-000 Page 33 of 40 60699676	275-01
Iso-Amyl ald	cohol	31/07/23 16:38	EO089			<5	mg/l
Isopropyl ac	cetate	31/07/23 16:38	EO089			<2	mg/l
Isopropyl Et	her	31/07/23 16:38	EO089			<2	mg/l
Methanol		31/07/23 16:38	EO089			<5	mg/l
Methyl Ethy	l Ketone	31/07/23 16:38	EO089			<2	mg/l
n-Butyl Alco	hol.(Butanol)	31/07/23 16:38	EO089			<2	mg/l
n-Hexane		31/07/23 16:38	EO089			<2	mg/l
sec-Butyl Al	cohol	31/07/23 16:38	EO089			<2	mg/l
tert-Amylalc	ohol	31/07/23 16:38	EO089			<5	mg/l
Tert-Butano	l	31/07/23 16:38	EO089			<5	mg/l
tert-Butyl M	ethyl Ether	31/07/23 16:38	EO089			<2	mg/l
Tetrahydrofu	uran	31/07/23 16:38	EO089			<2	mg/l
Toluene		31/07/23 16:38	EO089			<2	mg/l
Triethylamin	ie	31/07/23 16:38	EO089			<2	mg/l
Xylene -p		31/07/23 16:38	EO089			<2	mg/l
Xylene-M		31/07/23 16:38	EO089			<2	mg/l
Xylene-O		31/07/23 16:38	EO089			<2	mg/l
Xylenes-Tot	al	31/07/23 16:38	EO089			<2	mg/l
Temperatu	re (Site) [M3036]						
Temperature	e	31/07/23 16:25	Site Test			na	°C
pH (Roboti	c Method) [M3051]						
рН		26/07/23 15:40 ^{7D}	EW152R	4		7.8	
Conductivi	ty at 20°C (Robotic Method)) [M3052]					

Signed: .

Niamh Ward - Senior Laboratory Analyst

10/08/2023

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10/08/2023

Client:	AECOM Infrastructure	e & Environment I	Certificate Code:	PR-23-M3-000275-01				
	Limited 4th Floor, Adelphi Pla	70			Page Number:	Page 34 of 40		
	George's Street Up Dun Laoghaire, Dublin A96 T927 IRELAND				PO reference:	60699676		
Conductivity	y at 20°C	26/07/23 15:40	EW152R	5		590	µS/cm	C6
Arsenic - T	race [M3236]							
Arsenic		27/07/23 11:39		0.2		0.985	µg/l	C6
Barium - Tr	race [M3237]							
Barium		27/07/23 11:39		1.77	1	52.887	µg/l	C6
Beryllium -	Trace [M3238]							
Beryllium		27/07/23 11:39		1		1.276	µg/l	C6
Boron - Tra	ace [M3239]							
Boron		27/07/23 11:39		0.21		<0.21	mg/l	C6
Cadmium -	Trace [M3240]							
Cadmium		27/07/23 11:39		0.1		0.178	µg/l	C6
	race [M3244]							
Copper (Cu	,	27/07/23 11:39		0.003	<	0.003	mg/l	C6
Lead - Trac	e [M3246]							
Lead (Pb)		27/07/23 11:39		0.5		<0.5	µg/l	C6
-	Frace [M3249]							
Mercury		27/07/23 11:39		0.03		0.083	µg/l	C6
	ace [M3251]			o -				00
Nickel (Ni)		27/07/23 11:39		0.5		1.638	µg/l	C6
	Trace [M3255]	07/07/00 44 00					,	00
Selenium (S		27/07/23 11:39		0.2		0.752	µg/l	C6
	- Trace [M3268]	27/07/23 11:39		1		<1		C6
Vanadium (,	21/01/23 11:39		1		~1	µg/l	0
Zinc - Trace	e [W3269]							

Signed:

Niamh Ward - Senior Laboratory Analyst

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Eurofins Environment Testing Ireland Hoffman Park, Inchera Cork T45 PC80 Ireland T: 0818 252526 Web: www.eurofins.ie Email: ASTsupport@etuki.eurofins.com



Client: AECOM Infrastructure & Environment Ireland **Certificate Code:** PR-23-M3-000275-01 Limited Page Number: Page 35 of 40 4th Floor, Adelphi Plaza, George's Street Upper, **PO reference:** 60699676 Dun Laoghaire, **Dublin** A96 T927 **IRELAND** 27/07/23 11:39 C6 Zinc (Zn) FW188 1 1 90 µg/l ⁴ Accreditiation Information C6: ISO/IEC 17025:2017 INAB 138-T PP: COFRAC TESTING 1-0685

Signed:

Niamh Ward - Senior Laboratory Analyst

10/08/2023

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10/08/2023

Client:	Limited 4th Floor, Adelphi George's Street Dun Laoghaire, Dublin A96 T927 IRELAND		eland		Certificate C Page Numbe PO reference	er: Page 36 o	-000275-01 f 40	
Sample nun	nber	966-2023-0003275	3	Received on		26/07/2023 26/07/2023		
Your sample Sample Mat Sample Cor Time Sampl	trix ndition on Arrival	SWM1 Surface water Satisfactory 15:47		Analysis star Sample Date		25/07/2023		
Test Code Analyte		SUB ⁵ Analysis Started	Method	LOQ ³	SPEC ²	Result	Units	ACCRED ⁴
Alkalinity a	IS CAC03 [BB005]							
Alkalinity as	CAC03	* 28/07/23 15:31		30		321.5	mg/l	C6
Hexavalent	t chromium [IX02U]							
Chromium ((VI)	* 26/07/23 15:47		0.01		non mesuré	mg/l	PP
-	des [IX479]							
Cyanide, to		* 08/08/23 06:55		0.01		non mesuré	mg/l	PP
	(Cr) [IX80U]	* 26/07/23 15·47		0.005		-0.005		
Chromium (hromium [IXCR0]	* 26/07/23 15:47		0.005		<0.005	mg/l	
Chromium I		* 26/07/23 15:47		0.01		Non calculable	mg/l	
	Solids [M3002]	20/01/20 10111		0.01				
Suspended		27/07/23 09:31	EW013	5		<5	mg/l	C6
	Dxygen Demand (COD)) [M3004]					-	
Chemical ox	xygen demand (COD)	27/07/23 13:18	EW094	8		37	mg/l	C6
Dissolved	Oxygen [M3005]							
Dissolved o	xygen	28/07/23 14:49 ^{7D}	EW043	1		8.95	mg/l	
DISSOIVED O	xygen	28/07/23 14:49	EVVU43	1		8.95	rng/I	

Signed: .

Niamh Ward - Senior Laboratory Analyst

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10/08/2023

Client: AECOM Infrastructure & Environment Ireland					Certificate Code:	PR-23-M3-000275-01		
	Limited 4th Floor, Adelphi Pla:	70			Page Number:	Page 37 of 40		
	George's Street Upp Dun Laoghaire, Dublin A96 T927 IRELAND				PO reference:	60699676		
Sulphate n	ng/L - Gallery [M300N]							
Sulphate m	g/L - Gallery	27/07/23 08:15	EW175	1		58.1	mg/l	C6
Phosphate	(Ortho/MRP) as P - Gallery	y [M300P]						
Gallery	(Ortho/MRP) as P - g/L - Gallery [M300Q]	27/07/23 08:15	EW175	0.05		<0.05	mg/l	C6
	j/L - Gallery	27/07/23 08:15	EW175	0.2		0.2	mg/l	C6
	ig/L - Gallery [M300S]						-	
Chloride m	g/L - Gallery	27/07/23 08:15	EW175	5		17.0	mg/l	C6
Ammonia a	as N - Gallery [M300Z]							
Ammonia a	s N - Gallery	27/07/23 08:15	EW175	0.05		0.05	mg/l	C6
Nitrate (as	N) - Gallery [M301A]							
Nitrate (as	N) - Gallery	27/07/23 08:15	EW175	1	:	2.547	mg/l	C6
GCFID-Org	anic Solvents (Head Space	e) [M3027]						
Acetone		31/07/23 16:38	EO089			<2	mg/l	
Acetonitrile		31/07/23 16:38	EO089			<2	mg/l	
Amyl aceta	te	31/07/23 16:38	EO089			<2	mg/l	
Cyclohexar	e	31/07/23 16:38	EO089			<2	mg/l	
Cyclopenta	none	31/07/23 16:38	EO089			<2	mg/l	
Dichlorome	thane	31/07/23 16:38	EO089			<2	mg/l	
Ethanol		31/07/23 16:38	EO089			<5	mg/l	
Ethyl Aceta	te	31/07/23 16:38	EO089			<2	mg/l	
Heptane		31/07/23 16:38	EO089			<2	mg/l	
IPA (2-Prop	anol)	31/07/23 16:38	EO089			<2	mg/l	

Signed: .

Niamh Ward - Senior Laboratory Analyst

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Client:	AECOM Infrastructure Limited 4th Floor, Adelphi Plaz George's Street Uppe Dun Laoghaire, Dublin A96 T927 IRELAND	a,	eland		Certificate Code: Page Number: PO reference:	PR-23-M3-000 Page 38 of 40 60699676	275-01
Iso-Amyl ald	cohol	31/07/23 16:38	EO089			<5	mg/l
Isopropyl ac	cetate	31/07/23 16:38	EO089			<2	mg/l
Isopropyl Et	her	31/07/23 16:38	EO089			<2	mg/l
Methanol		31/07/23 16:38	EO089			<5	mg/l
Methyl Ethy	l Ketone	31/07/23 16:38	EO089			<2	mg/l
n-Butyl Alco	hol.(Butanol)	31/07/23 16:38	EO089			<2	mg/l
n-Hexane		31/07/23 16:38	EO089			<2	mg/l
sec-Butyl Al	cohol	31/07/23 16:38	EO089			<2	mg/l
tert-Amylalc	ohol	31/07/23 16:38	EO089			<5	mg/l
Tert-Butano	l	31/07/23 16:38	EO089			<5	mg/l
tert-Butyl Me	ethyl Ether	31/07/23 16:38	EO089			<2	mg/l
Tetrahydrofu	uran	31/07/23 16:38	EO089			<2	mg/l
Toluene		31/07/23 16:38	EO089			<2	mg/l
Triethylamin	ne	31/07/23 16:38	EO089			<2	mg/l
Xylene -p		31/07/23 16:38	EO089			<2	mg/l
Xylene-M		31/07/23 16:38	EO089			<2	mg/l
Xylene-O		31/07/23 16:38	EO089			<2	mg/l
Xylenes-Tot	al	31/07/23 16:38	EO089			<2	mg/l
Temperatu	re (Site) [M3036]						
Temperature	e	31/07/23 16:25	Site Test			na	°C
pH (Roboti	c Method) [M3051]						
рН		26/07/23 15:40 ^{7D}	EW152R	4		7.9	
Conductivi	ty at 20°C (Robotic Method)) [M3052]					

Signed: .

Niamh Ward - Senior Laboratory Analyst

10/08/2023

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10/08/2023

Client:	AECOM Infrastructure	e & Environment I	Certificate Code:	PR-23-M3-000275-01				
	Limited 4th Floor, Adelphi Pla	73			Page Number:	Page 39 of 40)	
	George's Street Upp Dun Laoghaire, Dublin A96 T927 IRELAND				PO reference:	60699676		
Conductivity	y at 20°C	26/07/23 15:40	EW152R	5		630	µS/cm	C6
Arsenic - T	race [M3236]							
Arsenic		27/07/23 11:39		0.2		0.628	µg/l	C6
Barium - Tr	race [M3237]							
Barium		27/07/23 11:39		1.77		59.85	µg/l	C6
Beryllium -	Trace [M3238]							
Beryllium		27/07/23 11:39		1		<1	µg/l	C6
Boron - Tra	ace [M3239]							
Boron		27/07/23 11:39		0.21		<0.21	mg/l	C6
	Trace [M3240]							
Cadmium		27/07/23 11:39		0.1		<0.1	µg/l	C6
	race [M3244]							
Copper (Cu	,	27/07/23 11:39		0.003		<0.003	mg/l	C6
Lead - Trac	e [M3246]							
Lead (Pb)		27/07/23 11:39		0.5		<0.5	µg/l	C6
-	Frace [M3249]	07/07/00 44 00		0.00				C6
Mercury		27/07/23 11:39		0.03		<0.03	µg/l	60
	ace [M3251]	07/07/00 44-00		0.5		C 445		C6
Nickel (Ni)	T	27/07/23 11:39		0.5		6.145	µg/l	0
Selenium - Selenium (S	Trace [M3255]	27/07/23 11:39		0.2		1.805	ug/l	C6
-		21/01/23 11.39		0.2		1.605	µg/l	00
Vanadium (- Trace [M3268]	27/07/23 11:39		1		<1	µg/l	C6
Zinc - Trace	,	21101120 11.00				- 1	MA.1	00
Zine - Iraci	e [mozoa]							

Signed:

Niamh Ward - Senior Laboratory Analyst

NOTES

1. This Report shall not be reproduced, except in full, without the permission of the Laboratory and only relates to the items tested.

2. SPEC = Allowable limit or parametric value.

3. LOQ = Limit of Quantification or lowest value that can be reported ACCRED = Indicates accreditation for the test, a blank field indicates not accredited
 "*" indicates the test was sub-contracted

6. No date of sampling was supplied, sample stability cannot be assessed, results may be compromised.

7A. This result is compromised as it was tested outside of stability times.

7C. Sample not received in appropriate containers, therefore results may be compromised.7D. This result is comprised as the sample was received by the laboratory outside of the holding time.

8. This notification is based on the numerical result for the test without consideration of the uncertainty of measurement of the result, unless otherwise agreed in writing. Uncertainty of measurement has been calculated for all INAB accredited tests and is available upon request



Eurofins Environment Testing Ireland Hoffman Park, Inchera Cork T45 PC80 Ireland T: 0818 252526 Web: www.eurofins.ie Email: ASTsupport@etuki.eurofins.com



Client: AECOM Infrastructure & Environment Ireland **Certificate Code:** PR-23-M3-000275-01 Limited Page Number: Page 40 of 40 4th Floor, Adelphi Plaza, George's Street Upper, **PO reference:** 60699676 Dun Laoghaire, **Dublin** A96 T927 **IRELAND** 27/07/23 11:39 C6 Zinc (Zn) FW188 1 <1 µg/l ⁴ Accreditiation Information C6: ISO/IEC 17025:2017 INAB 138-T PP: COFRAC TESTING 1-0685

Signed:

Niamh Ward - Senior Laboratory Analyst

10/08/2023

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