

EIAR Appendix 9.3 - Baseline Surface Water Hydro-Chemistry & Discharge Rate Database

(Minerex File Ref. 3188-011.xls)



<b>Sampling Event</b> (Date Sampled)	<b>LIMITS re EIA</b> (Ref. NRA) Indicative Limits Re.: Bathing, Drinking Surface Water reg's.
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Sample Details			SW1	SW2	SW3	SW4	SW5	SW6	
Sample ID	ALL								
Site	ALL		A1-Gortyrhilly	A1-Gortyrhilly	A1-Gortyrhilly	A1-Gortyrhilly	A1-Gortyrhilly	A1-Gortyrhilly	
Project COC Reference - SW R1	12/08/2020	Dry / Low Flow	3188-028-COC1	3188-028-COC1	3188-028-COC1	3188-028-COC1	3188-028-COC1	3188-028-COC1	
Project COC Reference - SW R2	26/08/2020	Wet / High Flow	3188-028-COC2	3188-028-COC2	3188-028-COC2	3188-028-COC2	3188-028-COC2	3188-028-COC2	
Project COC Reference - SW R3	24/02/2021	Wet / High Flow	3188-028-COC4	3188-028-COC4	3188-028-COC4	3188-028-COC4	3188-028-COC4	3188-028-COC4	
Project COC Reference - SW R4	16/03/2021	Dry / Low Flow	3188-028-COC3	3188-028-COC3	3188-028-COC3	3188-028-COC3	3188-028-COC3	3188-028-COC3	
Sample Type	ALL	Medium	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	
Grid Reference for Sampling Location	ALL	Irish Grid	518186.5, 574060.9	515498.5, 573621.5	516301.3, 573649.0	518367.5, 572233.5	518057.3, 571589.5	515347.3, 570560.8	
Field Data - Discharge									
Surface Water Feature	ALL	Type	Stream/River	Stream/River	Stream/River	Stream/River	Stream/River	Stream/River	
Description of sample location	ALL	Type	Road bridge	Alongside feature	Alongside feature	Road bridge	Road bridge	Road bridge	
Width of Water Body	ALL	m	4.0	2.0	1.5	1	6	1.75	
Depth (d)	ALL	m	<0.5	<0.5	<0.5	<0.3	<1.5	<1	
Total Rain 3 Days Prior (Table 9.11)	12/08/2020	mm/72hours				0.0			
Total Rain 3 Days Prior (Table 9.11)	26/08/2020	mm/72hours				59.7			
Total Rain 3 Days Prior (Table 9.11)	24/02/2021	mm/72hours				47.8			
Total Rain 3 Days Prior (Table 9.11)	16/03/2021	mm/72hours				8.1			
Estimated Discharge Rate (Q)	12/08/2020	l/sec	10 to 15	2 to 3	10 to 15	0.5 to 1.0	>75	>25	
Estimated Discharge Rate (Q)	26/08/2020	l/sec	50 to 60	8 to 10	60 to 70	8 to 10	>300	>150	
Estimated Discharge Rate (Q)	24/02/2021	l/sec	50 to 60	8 to 10	50 to 75	8 to 10	>300	>150	
Estimated Discharge Rate (Q)	16/03/2021	l/sec	10 to 15	2 to 3	10 to 15	2 to 3	>75	>25	
Laboratory Data - Hydrochemistry									
Alkalinity, Bicarbonate as CaCO3	12/08/2020	mg/l	19.3	21	16.5	22.5	19.5	22.9	
Alkalinity, Bicarbonate as CaCO3	26/08/2020	mg/l	14.2	21.9	24.1	10.3	12.7	7.5	
Alkalinity, Bicarbonate as CaCO3	24/02/2021	mg/l	5	4	6	12.5	5.5	5.5	
Alkalinity, Bicarbonate as CaCO3	16/03/2021	mg/l	13.7	8	12	16.5	11.5	12.7	
Alkalinity, Total as CaCO3	12/08/2020	mg/l	19.3	21	16.5	22.5	19.5	22.9	
Alkalinity, Total as CaCO3	26/08/2020	mg/l	14.2	21.9	24.1	10.3	12.7	7.5	
Alkalinity, Total as CaCO3	24/02/2021	mg/l	5	4	6	12.5	5.5	5.5	
Alkalinity, Total as CaCO3	16/03/2021	mg/l	13.7	8	12	16.5	11.5	12.7	
Ammoniacal Nitrogen as N (low level)	12/08/2020	mg/l	0.02	0.0431	0.0459	0.0173	0.0434	0.0616	0.029
Ammoniacal Nitrogen as N (low level)	26/08/2020	mg/l	0.02	0.0207	0.0372	0.0179	0.0168	0.0183	0.021
Ammoniacal Nitrogen as N (low level)	24/02/2021	mg/l	0.02	0.04	0.049	0.051	0.115	0.044	0.031
Ammoniacal Nitrogen as N (low level)	16/03/2021	mg/l	0.02	0.034	0.031	0.052	0.068	0.031	0.031
Apparent Colour	12/08/2020	mg/l Pt/Co	36	96.4	24.1	48.5	24.4	74.3	
Apparent Colour	26/08/2020	mg/l Pt/Co	44.8	151	31.4	88.5	45.1	65.9	
Apparent Colour	24/02/2021	mg/l Pt/Co	49.9	42.8	52.8	109	33.5	39.3	
Apparent Colour	16/03/2021	mg/l Pt/Co	23.7	24.8	12.7	62.7	20	11.2	
Conductivity @ 20 deg.C	12/08/2020	mS/cm	2.5	0.0736	0.128	0.0737	0.0869	0.0828	0.0678
Conductivity @ 20 deg.C	26/08/2020	mS/cm	2.5	0.0529	0.0763	0.0669	0.0516	0.0543	0.0499
Conductivity @ 20 deg.C	24/02/2021	mS/cm	2.5	0.036	0.0385	0.0402	0.0602	0.044	0.0396
Conductivity @ 20 deg.C	16/03/2021	mS/cm	2.5	0.0754	0.0627	0.0682	0.0885	0.0674	0.072
Nitrate as NO3	12/08/2020	mg/l	0.387	46.1	1.25	0.887	0.844	<0.3	
Nitrate as NO3	26/08/2020	mg/l	0.66	0.495	1.69	<0.3	0.84	0.369	
Nitrate as NO3	24/02/2021	mg/l	0.47	0.389	0.92	0.804	0.722	0.686	
Nitrate as NO3	16/03/2021	mg/l	0.787	0.428	1.8	0.891	0.69	1.19	
Nitrite as NO2	12/08/2020	mg/l	0.05	<0.05	<0.05	<0.05	<0.05	0.139	<0.05
Nitrite as NO2	26/08/2020	mg/l	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrite as NO2	24/02/2021	mg/l	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrite as NO2	16/03/2021	mg/l	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
pH	12/08/2020	pH Units	>6 & <9	7.15	4.87	7.05	7.69	7.17	7.12
pH	26/08/2020	pH Units	>6 & <9	6.69	6.63	6.69	6.25	6.8	6.64
pH	24/02/2021	pH Units	>6 & <9	6.87	6.81	6.87	6.94	6.9	6.86
pH	16/03/2021	pH Units	>6 & <9	7.52	7.26	7.5	7.65	7.49	7.23
Phosphate (Ortho as P)	12/08/2020	mg/l	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Phosphate (Ortho as P)	26/08/2020	mg/l	<0.02	0.0202	<0.02	<0.02	<0.02	<0.02	<0.02
Phosphate (Ortho as P)	24/02/2021	mg/l	<0.02	<0.02	0.0215	<0.02	<0.02	<0.02	<0.02
Phosphate (Ortho as P)	16/03/2021	mg/l	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Phosphorus (tot.unfilt)	12/08/2020	µg/l	<20	32	<20	<20	<20	<20	<20
Phosphorus (tot.unfilt)	26/08/2020	µg/l	<20	35.1	<20	<20	<20	<20	<20
Phosphorus (tot.unfilt)	24/02/2021	µg/l	<20	<20	31.5	38.7	<20	<20	<20
Phosphorus (tot.unfilt)	16/03/2021	µg/l	<20	<20	<20	28.2	<20	<20	<20
Suspended solids, Total	12/08/2020	mg/l	25	<2	<2	<4	7.02	<2	2.95
Suspended solids, Total	26/08/2020	mg/l	25	<2	<2	<2	<2	<2	<2
Suspended solids, Total	24/02/2021	mg/l	25	<2	<2	<2	6.9	<2	<2
Suspended solids, Total	16/03/2021	mg/l	25	<2	<2	<2	<2	<2	<2
True Colour	12/08/2020	mg/l Pt/Co	24	75.5	12.4	30.8	17.4	40.6	
True Colour	26/08/2020	mg/l Pt/Co	34.7	125	28.7	72.5	36.6	49.6	
True Colour	24/02/2021	mg/l Pt/Co	39.5	35.1	45	78.9	28.1	33.2	
True Colour	16/03/2021	mg/l Pt/Co	15.6	13.2	8.33	45.7	12.9	7.33	
Turbidity	12/08/2020	ntu	1.25	1.46	0.653	1.59	0.75	6.16	
Turbidity	26/08/2020	ntu	0.538	1.87	0.536	1.69	1.8	0.995	
Turbidity	24/02/2021	ntu	1.53	0.836	1.28	11.7	0.879	0.91	
Turbidity	16/03/2021	ntu	0.691	0.675	0.451	2.15	0.959	0.343	