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APPENDIX 7-3

GROUNDWATER QUALITY
DATA

Table 1
Groundwater Quality Data
Ballyquin, Co. Care

Parameter	Units	GW1 06/07/2023	GW2 06/07/2023	GW3 06/07/2023	GW4 06/07/2023	Drinking Water Regs (S.I. 99/2023)	Groundwater Regs (S.I. 287/2022)
Cadmium (Dissolved)	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	0.005	-
Copper (Dissolved)	mg/L	<0.003	<0.003	<0.003	<0.003	2	-
Iron (Dissolved)	mg/L	<0.005	0.006009	0.016326	<0.005	0.2	-
Lead (Dissolved)	mg/L	<0.00051	<0.00051	<0.00051	<0.00051	0.005	0.0075
Magnesium	mg/L	7.746	4.293	8.918	5.244	-	-
Manganese (Dissolved)	mg/L	<0.001	0.002555	<u>0.050945</u>	0.005182	0.05	-
Nickel (Dissolved)	mg/L	<0.0005	0.000583	0.002797	0.0005	0.02	-
Zinc (Dissolved)	mg/L	0.0124	0.00115	0.00171	0.00717	-	0.075
Boron	mg/L	<0.21	<0.21	<0.21	<0.21	1.5	0.75
EH >C6 - C40 (TPH)	µg/L	<10	<10	<10	<10	-	7.5
EH >C10 - C20 (PRO)	µg/L	<0.10	<0.10	<0.10	<0.10	-	-
EH >C20 - C40 (DRO)	µg/L	<0.10	<0.10	<0.10	<0.10	-	-
EH >C6 - C10	µg/L	<0.10	<0.10	<0.10	<0.10	-	-
Ammonia	mg/L as N	0.116	0.101	<0.005	0.012	0.5	0.175
COD	mg/L	<8	25	880	55	-	-
BOD	mg/L	5.8	9.6	326.4	20	-	-
Nitrate	mg/L as NO3	4.670	<4.43	<4.43	5.39	50	37.5
Nitrite	mg/L NO2	<0.01	<0.01	<0.01	<0.01	0.5	0.375
Nitrogen (Total as N)	mg/L as N	1.17	<1	3.24	1.47	-	-
pH	pH Units	6.7	7.4	7.6	6.7	6.5-9.5	-
Electrical Conductivity	uS/cm	219	197	297	186	2500	800-1875
Total Dissolved Solids @180C	mg/L	19	16	536	175	-	-
Orthophosphate (as P)	mg/L as P	<0.05	<0.05	<0.05	<0.05	-	0.035
Sulphate	mg/L	7.61	5.17	<1	12.9	250	187.5
Chloride	mg/L	15.6	8.02	<5	22.3	250	24 — 187.5
Total Phosphorus	mg/L	<0.2	0.26	0.49	0.3	-	-
Potassium	mg/L	2.31	1.704	1.53	0.781	-	-
Sodium	mg/L	10.897	6.221	16.919	11.4	200	-
Oils, Fats & Grease	mg/L	<50	<50	<40	<40	-	-
Escherichia coli	MPN/100ml	<1	2419.6	35.9	<1	0	-
Faecal Coliforms	CFU/100 ml	<1	<100	54	7	-	-
Coliforms	MPN/100ml	1	2420	165	3.1	-	-

Bold and italics - exceeds GW Regs (SI 287/2022) TV value

Bold Underlined - exceeds Drinking Water Reg (SI 99/2023) paramter value