



APPENDIX 9-3

GROUNDWATER QUALITY DATA

Table 1
Groundwater Quality Data
Clonberne WF, Co. Galway

Parameter	Units	Farm Well 07/04/22	Farm Well 29/03/23	BH1 07/04/22	BH1 29/03/23	BH2 07/04/22	BH2 29/03/23	Spring 07/04/22	Spring 29/03/23	Drinking Water Regs (S.I. 99 of 2023)	Groundwater Regs (S.I. 9 of 2010)
Aluminium (dissolved)	µg/L	<u>297.715</u>	-	24.131	-	36.928	-	<5	-	200	150
Arsenic (dissolved)	µg/L	<0.2	<1	6.979	<u>22.39</u>	<u>16.741</u>	<u>29.89</u>	0.446	0.332	10	7.5
Calcium (dissolved)	mg/L	186.871	-	120.497	-	106.055	-	141.976	-	-	-
Iron (dissolved)	µg/L	<u>2969.737</u>	<u>271.5</u>	<u>381.894</u>	<u>1392.4</u>	<u>3537.443</u>	<u>8795.5</u>	91.01	12.8	200	-
Magnesium (dissolved)	mg/L	12.964	13.8	10.543	8.62	11.351	3.78	5.685	5.02	-	-
Manganese (dissolved)	µg/L	34.87	<u>654.6</u>	<u>116.914</u>	<u>180.68</u>	<u>80.678</u>	<u>113.3</u>	3.547	1.57	50	-
Potassium (dissolved)	mg/L	4.4	-	2.25	-	4.749	-	3.091	-	-	-
Sodium (dissolved)	mg/L	13.507	-	10.577	-	21.467	-	9.182	-	200	150
Alkalinity	mg/L CaCO ₃	274	-	295	-	310	-	320	-	-	-
Ammonia (as N)	mg/L as N	<0.05	0.26	1.03	0.76	1.2	4.32	<0.05	<0.05	-	-
Chloride	mg/l	<u>25.93</u>	<u>55.4</u>	13.652	14.3	20.567	18.3	18.951	18.6	250	24 - 187.5
Nitrate (as NO ₃)	mg/L as NO ₃	<4.4	<4.4	<4.4	<4.4	<4.4	<4.4	<4.4	7.8	50	37.5
Nitrite (as NO ₂)	mg/L as NO ₂	<0.3284	<0.3284	<0.3284	<0.3284	<0.3284	<0.328	<0.3284	<0.3284	0.5	0.375
Orthophosphate (as P ₂ O ₅)	mg/L	<0.11	<0.05	<0.11	0.08	<0.11	<0.05	<0.11	<0.05	-	-
Sulphate	mg/L	85.063	34	4.815	<1	3.629	<1	11.599	8.74	250	187.5
Total Hardness (as CaCO ₃)	mg/L	520.0026	-	344.297	-	311.5628	-	377.9249	-	-	-
Electrical Conductivity**	µS/cm	678.1	670	545.7	535	590.5	690	641.8	610	2500	800-1875
pH**	pH Units	7	7.1	6.8	7.2	6.8	7	6.6	6.9	6.5-9.5	-
E.Coli	MPN/100ml	<u>4.1</u>	<1	<1	-	<1	-	<u>1</u>	<u>4</u>	0	-
Total Coliforms	MPN/100ml	<u>142.1</u>	<u>10</u>	<1	-	<1	-	<u>34.5</u>	<u>16.9</u>	0	-

Bold and underlined - exceeds Drinking Water Regs (SI 99/2023)

Bold - exceeds Groundwater Regs (S.I. 9/2010)

**Field Measurement using calibrated EC/pH probe