

1 EIAR

1.1 EIAR – Appendix A.10.4 Groundwater Quality Monitoring Report

A formatting error occurred in Table A3 of Appendix A.10.4 of the EIAR, which meant that some of the data values were listed incorrectly against parameters for the Lough Corrib Fen 1 (Menlough) groundwater body. A corrected Table A3 is presented below. The individual water quality analyses presented in Appendix 10.4 and the assessments in the EIAR remain correct and are unaffected by this formatting error.

The last three columns in Table A3 on page 7 - 9 have been edited as below.

Amended Table A3: Limestone groundwater

			Clarinbridge			Lough Corrib Fen 1 (Menlough)		
		Number of samples	12			18		
Parameter	Units	Detection limit	Max	Min	Average	Max	Min	Average
TDS (gravimetric)	mg/l	n/a	493	98	320	20-708	15-108	17-328
Suspended Solids	mg/l	2	2417	2	596	395-23	130-2	270-9
COD	mg/l	10	90	10	23	89-14	3-10	34-13
BOD	mg/l	1	1	1	1	89-0	3-0	34-0
EC (Field)	µS/cm	0.01	0.95	0.57	0.75	31.60-0.81	0.44 0.41	6.69-0.57
pH (Field)	pH Units	0.0	8.0	6.8	7.5	0.1-8.2	0.0-7.1	0.0-7.7
pH (Lab)	pH Units	0.0	7.5	6.9	7.1	29.8-7.5	5.0-6.7	14.0-7.1
Temperature (Field)	°C	n/a	13.9	11.2	12.4	140.0-13.6	68.3-8.6	102.4-11.5

			Clarínbridge			Lough Corrib Fen 1 (Menlough)		
		Number of samples	12			18		
Parameter	Units	Detection limit	Max	Min	Average	Max	Min	Average
Temperature (Lab)	°C	n/a	19.9	15.2	16.5	6.0 19.8	2.1 15.3	4.0 16.8
Alkalinity	mg/l CaCO ₃	10	818	221	403	2 395	1 130	2 270
E coli (Filtration) (Environmental Waters)	cfu/100ml	0	139	0	53	18 89	12 3	15 34
Coliforms (Filtration) (Environmental Waters)	cfu/100ml	0	139	0	53	0 89	0 3	0 34
Nitrate as NO ₃	mg/l	0.44	39.90	0.58	9.36	28.60 31.6	15.30 0.48	23.57 7.06
Phosphorus as PO ₄ -P	mg/l	0.01	0.20	0.01	0.06	472.00 0.1	10.00 0.01	96.84 0.06
Sulphate	mg/l	5.00	37.20	5.00	18.54	1002.00 29.8	2.77 5.29	67.27 14.5
Calcium	mg/l	0.69	484.00	83.00	174.17	10.00 140	10.00 69.3	10.00 102.44
Magnesium	mg/l	0.14	23.00	3.00	8.58	10.00 6	10.00 2.1	10.00 4.05
Potassium	mg/l	0.09	23.00	1.00	6.50	10.00 2.22	10.00 0.9	10.00 1.54
Sodium	mg/l	0.29	43.00	14.00	26.00	0.00 18.3	0.00 12	#DIV/0! 15.42
Ammonia as NH ₃ -N	mg/l	0.01	0.55	0.01	0.06	130.00 0.03	65.00 0.01	74.57 0.02
Chloride	mg/l	22.40	63.60	15.90	35.23	0.50 28.6	0.50 15.3	0.50 23.57
Iron	ug/l	10	18361	12	2491	2 4.72	1 11	1 114
Manganese	ug/l	5	766	5	202	1 1002	1 3	1 192

			Clarinbridge			Lough Corrib Fen 1 (Menlough)		
		Number of samples	12			18		
Parameter	Units	Detection limit	Max	Min	Average	Max	Min	Average
PRO Water	ug/l	10	10	10	10	17 <10	7 <10	11
MTBE	ug/l	10	10	10	10	3 <10	1 <10	1
BTEX	ug/l	10	10	10	10	0 <10	0 <10	0
Extractable Hydrocarbons Water	ug/l	10	0	0		3 <10	1 <10	1
Mineral Oil		10	130	65	117	5 <10	5 <10	5
Cadmium	ug/l	0.09	2.00	0.50	0.90	6.00 0	0.12 0	2.34
Copper	ug/l	1.00	21.00	1.00	10.20	0.10 2	0.04 1	0.08 1.5
Arsenic	ug/l	0.50	3.00	0.50	1.22	2.06 0.7	0.50 0.7	1.12 0.7
Barium	ug/l	0.78	110.00	16.00	65.60	5.00 17	0.50 7	2.30 11.14
Chromium	ug/l	0.50	14.00	0.50	5.00	3.19 3	0.50 0.5	1.80 1.5
Chromium hexavalent in water	mg/l	0.00	0.01	0.00	0.00	0.01	0.01	0.01
Nickel	ug/l	3.00	44.00	0.60	19.92	3.00	0.50	1.33
Zinc	ug/l	5.00	79.00	5.00	38.60	0.00	0.00	
Lead	ug/l	0.12	21.00	0.50	8.70	3.00	0.26	1.63
Mercury	ug/l	0.04	0.20	0.10	0.12	0.00	0.00	
Antimony as Sb	ug/l	1.20	1.00	0.50	0.72	0.00	0.00	
Molybdenum	ug/l	3.00	2.00	0.50	0.82	0.00	0.00	
Selenium	ug/l	0.80	4.00	0.50	1.70	3.19	1.00	2.12

1.2 EIAR – Appendix A.10.6 Hydraulic Calculations

The data presented in Table 1 of Appendix A.10.6 of the EIAR incorrectly shows drawdown values for construction and operation phases for the rows below. In fact, no drawdown is occurring in this area and the data values are therefore incorrect. A corrected Table 1 is listed below. The presentation of the cuttings in the main body of the EIAR are correct (Section 10.4 and Table 10.17).

Table 1 have been edited as below between Ch. 8+500 and 10+300.

Amended Extract from Table 1

Ch.	Ground level mOD	Construct Dewater. level mOD	Operat. Dewatering level mOD	Embank./ Cutting/ Tunnel	Depth of cutting m BGL	Construction Phase Drawdown		Operation Phase Drawdown	
						Vertical m	Radius from design footprint m	Vertical m	Radius from design footprint m
8500	27.6	24.6	24.6	Embankment	0.0	0.0	0.0	0.0	0.0
8600	23.9	20.9	20.9	Embankment	0.0	2.1 0	13.6 0	2.1 0	13.6 0
8700	25.1	22.1	22.1	Embankment	0.0	0.9 0	5.8 0	0.9 0	5.8 0
8800	27.0	24.0	24.0	Embankment	0.0	0.0	0.0	0.0	0.0
8900	14.8	11.8	11.8	Embankment	0.0	2.7 0	98.7 0	2.7 0	98.7 0
9000	15.7	12.7	12.7	Embankment	0.0	3.0 0	110.7 0	3.0 0	110.7 0
9100	16.4	13.4	13.4	Embankment	0.0	1.0 0	38.0 0	1.0 0	38.0 0
9200	10.6	7.6	7.6	Embankment	0.0	2.6 0	94.2 0	2.6 0	94.2 0
9300	5.9	2.9	2.9	Embankment	0.0	3.4 0	0.0	3.4 0	0.0
9400	6.0	3.0	3.0	Embankment	0.0	3.3 0	0.0	3.3 0	0.0
9500	13.3	10.3	10.3	Embankment	0.0	1.0 0	34.9 0	1.0 0	34.9 0
9600	12.9	9.9	9.9	Embankment	0.0	1.3 0	46.6 0	1.3 0	46.6 0

Ch.	Ground level mOD	Construct Dewater. level mOD	Operat. Dewatering level mOD	Embank./ Cutting/ Tunnel	Depth of cutting m BGL	Construction Phase Drawdown		Operation Phase Drawdown	
						Vertical m	Radius from design footprint m	Vertical m	Radius from design footprint m
9700	16.6	13.6	13.6	Embankment	0.0	0.0	0.0	0.0	0.0
9800	9.7	6.7	6.7	Embankment	0.0	0.0	0.0	0.0	0.0
9900	11.9	8.9	8.9	Embankment	0.0	0.3-0	10.1-0	0.3-0	10.1-0
10000	19.5	16.5	16.5	Embankment	0.0	0.0	0.0	0.0	0.0
10100	20.0	17.0	17.0	Embankment	0.0	0.0	0.0	0.0	0.0
10200	22.9	19.9	19.9	Embankment	0.0	0.0	0.0	0.0	0.0
10300	10.8	7.8	7.8	Embankment	0.0	0.4-0	13.9-0	0.4-0	13.9-0