



## **APPENDIX 9-3**

***Groundwater Tabulated Results***

P1611-0 Cooloo Wind Farm, Co, Galway  
Appendix 9-3 Monitoring Well Sampling Results

| Parameters                                | Units    | BH1<br>22/08/2024   | BH2<br>22/08/2024   | Drinking Water<br>Regs<br>(S.I. 99/2023) | Groundwater Regs<br>(S.I. 9/2010 as<br>amended) |
|-------------------------------------------|----------|---------------------|---------------------|------------------------------------------|-------------------------------------------------|
| BOD                                       | mg/L     | <1                  | 1                   | -                                        | -                                               |
| COD                                       | mg/L     | <8                  | 78                  | -                                        | -                                               |
| Ammonia as N                              | mg/l N   | 0.073               | 0.074               | -                                        | -                                               |
| Ammonia as NH3                            | mg/l NH3 | 0.089               | 0.09                | 0.3                                      | 0.175                                           |
| Chloride                                  | mg/L     | <b>29.5</b>         | <b>26.2</b>         | 250                                      | 24 - 187.5                                      |
| Conductivity at 20C                       | µS/cm    | 560                 | 573                 | 2500                                     | 800 - 1875                                      |
| Iron (Dissolved)                          | mg/L     | <0.005              | <0.005              | 0.2                                      | -                                               |
| Magnesium (Dissolved)                     | mg/L     | 24.8                | 35                  | -                                        | -                                               |
| Manganese (Dissolved)                     | mg/L     | <b><u>0.123</u></b> | <b><u>0.338</u></b> | 0.05                                     | -                                               |
| Cadmium (Dissolved)                       | mg/L     | <0.0001             | <0.0001             | 0.005                                    | 0.00375                                         |
| Chromium (Dissolved)                      | mg/L     | <0.001              | <0.001              | 0.025                                    | 0.0375                                          |
| Copper (Dissolved)                        | mg/L     | <0.003              | <0.003              | 2                                        | 1.5                                             |
| Lead (Dissolved)                          | mg/L     | <0.00051            | <0.00051            | 0.01                                     | 0.0075                                          |
| Nickel (Dissolved)                        | mg/L     | 0.00917             | 0.00472             | 0.02                                     | 0.015                                           |
| Zinc (Dissolved)                          | mg/L     | 0.0156              | 0.0169              | -                                        | 0.075                                           |
| Mercury (Dissolved)                       | mg/L     | <0.00003            | <0.00003            | 0.001                                    | 0.00075                                         |
| Total Nitrogen                            | mg/l N   | <1                  | 1.64                | -                                        | -                                               |
| Nitrate as N                              | mg/l N   | <1                  | <1                  | -                                        | -                                               |
| Nitrate as NO3                            | mg/l NO3 | <4.4                | <4.4                | 50                                       | 37.5                                            |
| Nitrite as N                              | mg/l N   | <0.01               | <0.01               | -                                        | -                                               |
| Nitrite as NO2                            | mg/l NO2 | <0.033              | <0.033              | 0.5                                      | 0.375                                           |
| pH                                        | pH Units | 7.4                 | 7.2                 | 6.5 - 9.5                                | -                                               |
| Phosphate (Ortho) as P                    | mg/l P   | <0.01               | <b>0.045</b>        | -                                        | 0.035                                           |
| Potassium (Dissolved)                     | mg/L     | 1                   | 1.26                | -                                        | -                                               |
| Sodium(Dissolved)                         | mg/L     | 27.3                | 30.2                | 200                                      | -                                               |
| Sulphate                                  | mg/L     | 35.9                | 56.5                | 250                                      | 187.5                                           |
| Total Suspended Solids                    | mg/L     | 72                  | 262                 | -                                        | -                                               |
| Total Dissolved Soilds                    | mg/L     | 469                 | 472                 | -                                        | -                                               |
| TPH                                       | mg/L     | <10                 | <10                 | -                                        | 0.0075                                          |
| Total Oxidised Nitrogen (TON) as N        | mg/l N   | <1                  | <1                  | -                                        | -                                               |
| Total Kjeldahl Nitrogen-TKN (CalcGallery) | mg/l N   | 0                   | 1.64                | -                                        | -                                               |
|                                           |          |                     |                     |                                          |                                                 |

**Bold** - exceeds GW Regs (SI 9/2010 as amended) TV value  
**Bold Underlined** - exceeds Drinking Water Reg (SI 99/2023) paramter value