

## Buttonderry Waste Management Facility – Groundwater Results

January 2019

| No. samples required by EPL: 22<br>No. samples collected: 20 |               | Field Parameters     |                          |                                 |                                |            |              |                   | Inorganics |                               |      |                             | Alkalinity                  |                                   |                                 |                                 | Nutrients    |                |                |                           | Metals          |
|--|---------------|----------------------|--------------------------|---------------------------------|--------------------------------|------------|--------------|-------------------|------------|-------------------------------|------|-----------------------------|-----------------------------|-----------------------------------|---------------------------------|---------------------------------|--------------|----------------|----------------|---------------------------|-----------------|
|  |               | Depth to groundwater | Dissolved Oxygen (Field) | Electrical Conductivity (Field) | Oxygen Redox Potential (Field) | pH (Field) | Temp (Field) | Turbidity (Field) | pH (Lab)   | Electrical Conductivity (Lab) | TOC  | Nonpurgeable Organic Carbon | Alkalinity (total) as CaCO3 | Alkalinity (Bicarbonate as CaCO3) | Alkalinity (Carbonate as CaCO3) | Alkalinity (Hydroxide) as CaCO3 | Ammonia as N | Nitrate (as N) | Nitrite (as N) | Nitrogen (Total Oxidised) | Iron (Filtered) |
| Field ID   | Sampling date | mBTOC                | mg/L                     | uS/cm                           | mV                             | pH Units   | oC           | NTU               | pH_Units   | uS/cm                         | mg/L | mg/L                        | mg/L                        | mg/L                              | mg/L                            | mg/L                            | mg/L         | mg/L           | mg/L           | mg/L                      | mg/L            |
| 101S (22)  | 24/01/2019    | 4.40                 | 3.4                      | 15167                           | 168.2                          | 6.26       | 20.0         | -                 | 5.6        | 1235                          | <1   | -                           | 25                          | 25                                | <1                              | <1                              | 0.03         | <0.01          | 0.02           | 0.02                      | 0.12            |
| 102 S (23)   | 23/01/2019    | 5.49                 | 5.49                     | 6915                            | 18.6                           | 5.17       | 18.3         | -                 | 5.9        | 8670                          | 18   | -                           | 68                          | 68                                | <1                              | <1                              | 0.13         | 0.01           | <0.01          | 0.01                      | 1.64            |
| 103 D (24)   | 23/01/2019    | 10.5                 | 3.76                     | 4767                            | 130.1                          | 5.52       | 20.8         | -                 | 6.01       | 5140                          | 31   | -                           | 474                         | 474                               | <1                              | <1                              | 0.14         | 0.01           | 0.1            | 0.11                      | 0.08            |
| 104S (25)  | 23/01/2019    | 5.2                  | 3.10                     | 1678                            | 102.7                          | 7.12       | 22.1         | -                 | 7.47       | 1820                          | 52   | -                           | 162                         | 162                               | <1                              | <1                              | 0.28         | <0.01          | 0.63           | 0.63                      | <0.05           |
| 105 S (26)   | 23/01/2019    | 4.02                 | 2.85                     | 1562                            | 42.3                           | 6.20       | 19.9         | -                 | 6.87       | 1020                          | 24   | -                           | 194                         | 194                               | <1                              | <1                              | 0.39         | <0.01          | <0.01          | <0.01                     | 46.4            |
| 106 S (27)   | 23/01/2019    | 4.7                  | 2.34                     | 9964                            | 51.9                           | 6.04       | 19.2         | -                 | 6.59       | 12100                         | 12   | -                           | 240                         | 240                               | <1                              | <1                              | 0.6          | <0.01          | 0.01           | 0.01                      | 0.08            |
| 107 S (28)   | 23/01/2019    | 4.70                 | 1.22                     | 15220                           | 38.5                           | 6.18       | 20.0         | -                 | 6.29       | 1340                          | 17   | -                           | 625                         | 625                               | <1                              | <1                              | 0.03         | <0.01          | <0.01          | <0.01                     | <0.05           |
| 707 (30)   | 24/01/2019    | 5.56                 | 2.30                     | 11256                           | 96.1                           | 6.60       | 18.6         | -                 | 6.6        | 13700                         | <1   | -                           | <1                          | <1                                | <1                              | <1                              | 0.09         | <0.01          | <0.01          | <0.01                     | 5.08            |
| 110 D (31)   | 24/01/2019    | 4.70                 | 0.26                     | 11115                           | 123.4                          | 6.33       | 18.9         | -                 | 3.94       | 17700                         | 7    | -                           | 328                         | 360                               | <1                              | 31                              | 0.02         | <0.01          | <0.01          | <0.01                     | <0.05           |
| 111 S (32)   | 24/01/2019    | 5.12                 | 1.11                     | 15622                           | 196.2                          | 3.97       | 17.9         | -                 | 6.52       | 15000                         | 8    | -                           | 28                          | 28                                | <1                              | <1                              | 0.13         | <0.01          | <0.01          | <0.01                     | 10.9            |
| 112 D (33)   | 23/01/2019    | 3.86                 | 0.36                     | 9653                            | 115.6                          | 4.95       | 19.9         | -                 | 5.59       | 14200                         | 14   | -                           | 207                         | 207                               | <1                              | <1                              | 0.31         | <0.01          | 0.04           | 0.04                      | 0.1             |
| 113 S (34)   | 23/01/2019    | 4.37                 | 2.55                     | 2078                            | 42.2                           | 6.12       | 20.4         | -                 | 6.19       | 2310                          | 27   | -                           | 119                         | 119                               | <1                              | <1                              | 0.4          | <0.01          | <0.01          | <0.01                     | 39.6            |
| B (14)   | 23/01/2019    | 3.83                 | 1.23                     | 6.49                            | 27.9                           | 27.9       | 19.4         | -                 | 5.97       | 13300                         | <1   | -                           | 161                         | 161                               | <1                              | <1                              | 0.46         | <0.01          | <0.01          | <0.01                     | 31.4            |
| BT3 (11)   | 24/01/2019    | 2.37                 | 4.01                     | 11330                           | 50.6                           | 5.89       | 19.6         | -                 | 6.07       | 14900                         | 4    | -                           | 194                         | 194                               | <1                              | <1                              | 0.35         | <0.01          | <0.01          | <0.01                     | 1.07            |
| BT4 (9)  | 24/01/2019    | 1.75                 | 1.70                     | 12600                           | 46.1                           | 6.05       | 18.4         | -                 | 6.94       | 14500                         | <10  | -                           | 695                         | 695                               | <1                              | <1                              | 0.05         | <0.01          | <0.01          | <0.01                     | 0.06            |
| BT16 (7)   | 23/01/2019    | 2.72                 | 0.87                     | 11444                           | 14.1                           | 6.60       | 18.1         | -                 | 7.58       | 11700                         | <1   | -                           | 592                         | 592                               | <1                              | <1                              | 0.02         | <0.01          | <0.01          | <0.01                     | <0.05           |
| BT17 (6)   | 23/01/2019    | 3.02                 | 3.48                     | 15555                           | 15.0                           | 6.59       | 18.5         | -                 | 7.54       | 14300                         | 2    | -                           | 389                         | 389                               | <1                              | <1                              | 0.13         | <0.01          | 0.16           | 0.16                      | <0.05           |
| BT19 (5)   | 23/01/2019    | 0.93                 | 4.78                     | 10451                           | 23.0                           | 6.50       | 18.1         | -                 | 7.38       | 10600                         | 11   | -                           | 585                         | 585                               | <1                              | <1                              | 0.12         | <0.01          | <0.01          | <0.01                     | <0.05           |
| BT20   | 23/01/2019    | 1.03                 | 1.20                     | 10623                           | 16.6                           | 6.57       | 17.4         | -                 | 7.54       | 12800                         | <1   | -                           | 815                         | 815                               | <1                              | <1                              | 4.37         | <0.01          | 0.02           | 0.02                      | 0.06            |
| TB1 (12)   | 23/01/2019    | 1.2                  | 1.83                     | 1592                            | 114.5                          | 7.19       | 22.1         | -                 | 7.75       | 1570                          | 28   | -                           | 309                         | 309                               | <1                              | <1                              | 0.2          | <0.01          | <0.01          | <0.01                     | <0.05           |
| TB2 (13)   | 32/01/2019    | 1.35                 | 4.64                     | 11670                           | 150.9                          | 6.67       | 19.3         | -                 | 7.4        | 13800                         | 2    | -                           | 25                          | 25                                | <1                              | <1                              | 0.03         | <0.01          | 0.02           | 0.02                      | <0.05           |