



# **ANNUAL ENVIRONMENTAL REPORT**

**For**

## **CHURCHTOWN LANDFILL SITE Co. Donegal**

**Waste Licence Reference: W0062-01**

**By**

**Donegal County Council**

**For**

**Environmental Protection Agency**

**Reporting Period:**

**January to December 2014**

**May 2015**

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## 1 Introduction

- 1.1 Donegal County Council holds Waste Licence ref. W0062-1 for Churchtown Landfill Site. The site closed on 31<sup>st</sup> August 2000. This report provides a review of environmental monitoring data collected for 2014.
- 1.2 The landfill facility at Churchtown occupies an area of approximately 9.7 hectares in the townland of Churchtown, near Lifford, Co. Donegal.
- 1.3 The site is located approximately 3km south west of Lifford and bordered to the northwest by the N15, the main Lifford to Ballybofey Road. The ground to the northeast and southwest of the site is the low lying and gently undulating flood plain of the River Finn both areas being used for grazing. The southeastern boundary is formed by the River Finn. Site Location and Layout are shown on plans IBR0697/007 and IBR0697/008.
- 1.4 A summary of Facility Information is provided in Table 1.1 below.

**Table 1.1 Facility Information Summary**

|                                  |                          |
|----------------------------------|--------------------------|
| <b>AER Reporting Year</b>        | 2014                     |
| <b>Licence Register Number</b>   | W0062-01                 |
| <b>Name of site</b>              | Churchtown Landfill Site |
| <b>Site Location</b>             | Lifford, County Donegal  |
| <b>NACE Code</b>                 | 3821                     |
| <b>Class/Classes of Activity</b> | Landfill                 |

## 2 Reporting Period

- 2.1 The reporting period for this Annual Environmental Report (AER) is from January 2014 to December 2014.

### 3 Waste Activities Carried Out at the Facility

- 3.1 In accordance with Condition 5.2 of the waste licence only 11,000 tonnes per annum of inert waste shall be disposed of or recovered at the facility for the purposes of restoration of the site.
- 3.2 The licensed waste disposal activities in accordance with the Third Schedule of the waste Management Act, 1996 are restricted to those listed as follows:
- **Class 1:** Deposit on, in or under land (including landfill)<sup>1</sup>.
  - **Class 4:** Surface impoundment, including placement of liquid or sludge discards into pits, ponds or lagoons.
  - **Class 13:** Storage prior to submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where the waste concerned is produced.

### 4 Quantity and Composition of Waste Received and Disposed of during the Reporting Period and each Previous Year

4.1 Only household solid municipal waste, commercial waste of a similar character to solid municipal waste and non-hazardous construction and demolition waste was accepted at the site prior to closure in August 2000. Since closure, the only material to be accepted at the site was a quantity of topsoil stored inside the facility to be used for the impending restoration of the landfill. This material originated from the development of the Stranorlar Civic Amenity Site and was approved by the EPA.

4.2 Table 4.1 shows waste data figures for Churchtown Landfill site from 1998 until 2013.

**Table 4.1 Waste quantities accepted (tonnes)**

| Waste Types                   | 1998    | 1999    | 2000    | 2001 | 2002 | 2003 | 2004 | 2005               |
|-------------------------------|---------|---------|---------|------|------|------|------|--------------------|
| Municipal Waste<br>(20 03 01) | 17,900* | 20,700* | 13,800* | 0    | 0    | 0    | 0    | 4.423 <sup>#</sup> |

\* Figures are estimates.

<sup>#</sup> Restoration materials stockpiled on site.

<sup>1</sup> This activity is limited to the disposal of inert waste only at the facility.

- 4.3 Waste data figures were estimated by means of assessment based on the category of vehicle depositing waste at the site.

## **5 Calculated Remaining Capacity of the Facility and Year in which Final Capacity is Expected to be Reached**

- 5.1 The site ceased operation on 31<sup>st</sup> August 2000. The only available capacity is for importation of inert, restoration materials (limited to 11,000 tonnes per annum).

## **6 Methods of Deposition of Waste**

- 6.1 Neither waste nor inert restoration materials were received at the Churchtown Landfill Site during the reporting period.
- 6.2 Donegal County Council shall obtain suitable inert material to facilitate the restoration of the landfill. This inert material shall, where possible, be obtained from large single point sources so that consistency of material can be maintained. It is envisaged that the main source of this material may be from large development sites or other construction activities.
- 6.3 On identification of inert material an inspection shall be carried out by Donegal County Council to assess its suitability as cover material (as specified in the Restoration and Aftercare Plan). Provided suitability is established initial acceptance shall be granted.
- 6.4 Materials will be initially stockpiled on the site, before being placed to form the capping system. Placement will be in accordance with the Restoration and Aftercare Plan.

## 7 Summary Report on Emissions, Results and Interpretation of Environmental Monitoring

### Environmental Monitoring Requirements

- 7.1 There is no continuous air, groundwater, surface water or wastewater (sewer) monitoring at Churchtown landfill site. Periodic / non-continuous monitoring of groundwater, surface water, leachate and landfill gas is carried out at the site as per Schedule F of the Waste Licence for the site. These are summarised in the tables contained in Appendix A. Monitoring locations are illustrated in drawing. no. IBR0697/008.

### Monitoring Results

- 7.2 Results of monitoring for the period for groundwater, surface water, leachate and gas are contained in tabular and graphical format in Appendix B.

### Groundwater

- 7.3 The groundwater results contained in this report were assessed against the following:
- EPA Interim guideline values<sup>2</sup> (IGV);
  - SI No 278 of 2007 EC (Drinking water) Regulations (DWR); and
  - SI No 9 of 2010 European Communities Environmental Objectives (Groundwater) Regulations 2010 as amended (GWR 2010).
- 7.4 Groundwater flows in a southeasterly direction towards the River Finn. Groundwater quality monitoring was originally carried out at four locations, BH1, BH2, BH3 and BH4 as listed in Table F.4.2 in the waste licence. These original wells were installed in August 1998, however wells BH1, BH2 & BH3 ceased to be used for groundwater monitoring, as they are located within waste. They now serve as leachate wells (L1, L2 & L3).
- 7.5 Three additional boreholes were required by the Waste Licence (Condition 4.11) and the installation work was undertaken in July 2001. BH1 (downstream) and BH3 (upstream) were successfully relocated. Difficulty was encountered in the installation of a second down gradient borehole. Despite four additional pits being started along the length of the landfilled boundary each location encountered waste and therefore were deemed inappropriate to be used as a groundwater borehole. It was not possible to move further down gradient due to

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<sup>2</sup>EPA (2003) Towards setting guideline values for the protection of groundwater in Ireland. Interim Report

the fact that the river is in such close proximity to the landfill site. As a result there is only one down gradient groundwater monitoring point (BH1).

- 7.6 Groundwater monitoring is now undertaken at BH1 and BH3 which were installed in July 2001 and BH4 installed in August 1998. BH3 and BH4 are representative of up gradient water quality and borehole BH1 is representative of down gradient water quality. BH4 has been damaged and is not accessible. This well was replaced late in 2014.

### **Upgradient**

- 7.7 The GWR guideline value for ammonia is 0.175 mg/l. One elevated concentration of ammonia relative to the screening value is recorded in up gradient borehole BH3 in September 2014 when a value of 0.2 mg/l N is recorded. Trends for ammonia in groundwater are provided in graph format in Appendix B.
- 7.8 No elevated concentrations in exceedance of the appropriate GWR or IGV values have been recorded for the remaining parameters measured throughout the monitoring period.

### **Down Gradient**

- 7.9 No elevated concentrations, relative to the appropriate screening values, of parameters measured are recorded down gradient of the site during the monitoring period. Trends for these parameters are provided in graph format in Appendix B.
- 7.10 Analysis of groundwater List I / II results recorded during this period show that all results except for Epichlorohydrin were less than the limit of detection for the methodology used. The World Health Organisation (WHO) provisional guideline value for Epichlorohydrin is 0.4 µg/l<sup>3</sup> and the following values were detected in borehole BH1 downgradient (0.3 µg/l) and BH3 upgradient (0.5 µg/l) in this monitoring period.
- 7.11 Groundwater results indicate that the site has no impact on the groundwater environment and the results are consistent with previous reporting periods.

## **Surface Water**

- 7.12 The surface water results contained in this report were assessed against the following:
- SI No 294 of 1989 European Communities (Quality of Surface Water Intended for the Abstraction of Drinking Water) Regulations (SWQS); and

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<sup>3</sup> World Health Organisation (2011) Guidelines for Drinking-water Quality, Fourth Edition. Table A3.3 Guideline values for chemicals that are of health significance in drinking-water.

- SI No 272 of 2009 European Communities Environmental Objectives (Surface Water) Regulations 2009 (EQS).

7.13 Churchtown Landfill Site is situated in the lower alluvial flood plain of the River Finn. The River forms the boundary to the south east of the site. Monitoring of surface water quality is carried out at seven locations (SW1 - SW7). SW7 (downstream) was added to surface water monitoring locations as required by Condition 4.13 of the Waste Licence. The land drains to each side of the waste are currently deemed to be surface water systems, however they effectively serve as leachate drains. Restoration works have now been undertaken on site.

7.14 Monitoring point SW1 is upstream of the waste body in a field drain that subsequently runs adjacent to the landfill along its north eastern boundary. SW6 is upstream of the facility within the River Finn which forms the south eastern boundary of the site. Mid and downstream locations in the River Finn are SW3, SW5 and SW7. SW2 and SW4 are located at the River Finn end of field drains that run along the two sides of the waste body.

#### **Upstream**

7.15 The EQS 2009 guideline value for ammonia for good status is 0.140 mg/l N. Elevated concentrations of ammonia relative to this screening value were recorded upstream of the site at surface water monitoring point SW6 during the monitoring period. These elevated concentrations ranged from 0.23 to 0.305 mg/l N.

7.16 The EQS 2009 guideline value for BOD for good status is 2.60 mg/l. One instance of an elevated concentration of BOD relative to this screening value, 3.4 mg/l, was recorded upstream of the site at surface water monitoring point SW1 during the monitoring period.

7.17 Analysis for metals in surface water were also undertaken during this monitoring period in Quarter 2 (June 2014). These results showed an elevated concentration of iron relative to the EQS 2009 guideline value of 200 µg/l when a value of 686.4 µg/l was recorded at surface water monitoring point SW6. In addition, an elevated concentration (51.3 µg/l) of manganese relative to the EQS 2009 guideline value of 50 µg/l was also recorded at SW6.

7.18 No elevated concentrations in exceedance of the appropriate EQS values have been recorded for the remaining parameters measured upstream throughout the monitoring period.



### Downstream

- 7.19 A number of parameters monitored downstream of the site exceed the appropriate screening value. These are summarised in Table 7.1 below and results are provided in table and graph format in Appendix B.

**Table 7.1 Surface Water Quality Downstream**

| Parameter            | SWQS  | EQS                | SW Monitoring Point |
|----------------------|-------|--------------------|---------------------|
| Ammonia (mg/l N)     |       | 0.14 (good status) | SW2, SW3, SW4, SW5  |
| BOD (mg/l)           |       | 2.6 (good status)  | SW4, SW5            |
| COD (mg/l)           | 40    |                    | SW3, SW4, SW5, SW7  |
| Conductivity (µS/cm) | 1,000 |                    | SW4                 |
| Iron (µg/l)          | 200   |                    | SW4                 |
| Manganese (µg/l)     | 50    |                    | SW3, SW4, SW7       |

#### Field Drains (SW2 and SW4)

- 7.20 Elevated concentrations of ammonia relative to the screening value were also recorded downstream of the site at surface water monitoring points SW2 and SW4, these side drains effectively serve as leachate drains. These elevated concentrations ranged from 0.386 mg/l N to 43.8 mg/l N. It should be noted that elevated concentrations above the EQS guideline value were also recorded upstream of the site during the monitoring period.
- 7.21 Elevated concentrations of electricity conductivity, BOD, COD iron and manganese relative to the screening values, as set out in Table 7.1 above, were recorded downstream of the site at surface water monitoring point SW4 in June. Electricity conductivity exceeded the screening value with a value of 2,054 µS/cm.
- 7.22 BOD and COD concentration was 8.74 mg/l and 188 mg/l respectively. It should be noted that elevated BOD concentrations above the EQS guideline value were also recorded upstream of the site during the monitoring period.
- 7.23 Iron and manganese concentration was 389.1 µg/l and 866.8 µg/l respectively. It should be noted that elevated concentrations above the SWQS guideline values were also recorded upstream of the site during the monitoring period.

#### Mid and Downstream Locations (SW3, SW5 and SW7)

- 7.24 Elevated concentrations of ammonia relative to the screening value were also recorded downstream of the site at surface water monitoring points SW3 and SW5. These elevated concentrations ranged from 0.149 mg/l N to 1.44 mg/l N. It should be noted that elevated

concentrations above the EQS guideline value were also recorded upstream of the site during the monitoring period.

- 7.25 One instance of an elevated concentration of BOD relative to the screening value was also recorded downstream of the site at surface water monitoring points SW5. This elevated concentration was recorded as 9.8 mg/l. It should be noted that elevated concentrations above the EQS guideline value were also recorded upstream of the site during the monitoring period.
- 7.26 Elevated concentrations of COD relative to the screening value were recorded downstream of the site at surface water monitoring points SW3, SW5 and SW7. These elevated concentrations ranged from 41 mg/l to 157 mg/l.
- 7.27 One instance of an elevated concentration of manganese relative to the screening value was also recorded downstream of the site in SW3, SW5 and SW7 with values ranging from 79.8 µg/l to 86.4 µg/l was recorded. It should be noted that elevated concentrations above the EQS guideline value were also recorded upstream of the site during the monitoring period .
- 7.28 Surface water results indicate that leachate is being released from the facility into land drains at the side of the waste body (as has previously been reported) but results continue to show that there is no significant contamination of the River Finn due to the large assimilative capacity of this water system. In addition, elevated concentrations may also be attributed to dry conditions at the time of sampling. Results are consistent with previous reporting periods. It should also be noted that the remediation of the site was completed at the end of the 2014 period.
- 7.29 Analysis of surface water List I / II results recorded during this period show that all results were less than the limit of detection for the methodology used.

### Leachate

- 7.30 Churchtown Landfill Site was designed on a dilute and disperse basis. However the boulder clay layer underlying the site functions as an aquitard preventing downward migration of leachate. No formal drainage system is provided on the site however the two land drains that run the length of the north-eastern and south-western sides of the landfill direct surface water, and any leachate emitting from the waste body, into the River Finn.
- 7.31 Monitoring of leachate was carried out at two locations on site at L2 and L3 as shown on drawing no. IBR0697/008. Well L1 is currently inaccessible and was replaced during 2014, and results for this location will be included in the 2015 monitoring period. Results are

presented in Appendix B. Some characteristic parameters have been compared with those of 'typical' raw leachate in Table 7.2 below.

**Table 7.2 Raw Leachate Concentrations 2014**

| PARAMETER            | Churchtown Landfill Site |          | From 30 samples from UK/Irish landfills accepting domestic waste<br>Results in mg/l |          |      |
|----------------------|--------------------------|----------|---|----------|------|
|                      | Min.Conc                 | Max.Conc | Min.Conc  | Max.Conc | Mean |
| Ammonia (mg/N)       | 1.53                     | 85       | <0.2  | 1700     | 491  |
| BOD                  | 0                        | 44       | 4.5   | >4800    | >834 |
| COD                  | 60                       | 98       | <10   | 33,700   | 3078 |
| Chloride (mg/l)      | 20                       | 63       | 27  | 3410     | 1256 |
| Iron (mg/l)          | 314                      | 1,868    | 0.4   | 664      | 54.4 |
| Potassium (mg/l)     | 22.1                     | 59.7     | 2.7   | 1480     | 491  |
| Sodium (mg/l)        | 11.7                     | 52.1     | 12  | 3000     | 904  |
| TON (mg/l N)         | <0.11                    | 3.4      | /   | /        | /    |
| Conductivity (µS/cm) | 300                      | 2,083    | 503   | 19,200   | 7789 |
| pH (pH units)        | 6.51                     | 6.78     | 6.4   | 8.0      | 7.2  |

7.32 Results remain within typical ranges for key leachate parameters (ref. typical parameter ranges for leachate as contained in EPA Manual 'Landfill Operational Practices' 1997) but show the leachate to be weak.

### Landfill Gas

7.33 It was previously discovered that a number of the monitoring wells were covered over and lost when the interim cap was topped up. The remaining wells became inaccessible or lost as a result of the restoration works. All these wells were replaced at the end of this reporting period.

7.34 Results for 2014 are available from 4 wells (LG2, LG5, LG6 and LG7). These wells are all in waste and show a variation in productivity with methane levels varying from 0% to 69.6%. All results are contained in Appendix B.

### Dust and Noise

7.35 There is currently no activity on site and as such no nuisance monitoring programme. Should any operational activity commence on site requirements for dust and noise control

and monitoring will be reviewed in line with the Licence and the Environmental Management System for the site.

## 8 Hydrogeological Risk Assessment

8.1 A hydrogeological risk assessment is currently being undertaken for Churchtown Landfill Site. This report is being on foot of a technical amendment to the waste licence by EPA: "Within eighteen months of the date of this technical amendment, the licensee shall carry out a risk screening and where necessary a technical assessment in accordance with the Guidance on the Authorisation of Discharges to Groundwater, published by the Environmental Protection Agency".

8.2 The objectives of this assessment will include the following:

- To consolidate all available geological, hydrogeological and hydrological data relating to the site and its immediate environs;
- To assess and interpret all available water quality data recorded to-date;
- To develop an appropriate Conceptual Site Model (CSM) for the site;
- To assess the level of risk posed to sensitive receptors; and
- To develop an appropriate compliance monitoring programme for the site.

8.3 This assessment will be submitted to EPA under a separate cover.

## 9 Proposed Development of the Site and Timescale of such Development

- 9.1 During the 2013 reporting period the Council, with support from the ANSWER Project, proposed to the Agency a bio-technology solution to restoring Churchtown LS involving the use of a willow crop and Integrated Constructed Wetlands (ICW) in combination for the treatment of leachate and a low permeability clay cap together with ancillary works. The SEW for this project was approved in January 2014 and Construction works to install a 0.5m depth clay cap and topsoil to restore Churchtown Landfill Site and the construction of Integrated Constructed Wetlands (ICWs) and associated works were certified as substantially complete on 17<sup>th</sup> December 2014.
- 9.2 The installation of M&E services and associated civil engineering accommodation works to facilitate distribution of leachate from the collection sumps are being procured as two separate sub-tenders. The first subtender (for civil engineering accommodation works) was issued to tenderers and returned on 16<sup>th</sup> April 2015. These works have now been awarded and will commence onsite in mid May 201 to be undertaken over a five week period and are expected to be complete by mid June 2015.
- 9.3 A separate specialist subtender for M&E works was issued to tenderers on 21<sup>st</sup> April 2015 and is due to be returned on 15<sup>th</sup> May 2015. It is intended that this contract will be awarded so that these works can be undertaken immediately following the completion of civil engineering accommodation works and is hoped to be completed by the end of July 2015 allowing the ICWs to become operational.

## 10 Volume of Leachate Produced and Volume of Leachate Transported / Discharged Off Site

- 10.1 A water balance calculation has been carried out, see Section 15 and Appendix C. Using this calculation the amount of leachate generated by the landfill has been estimated. The estimate for the year from the calculation is 25,475 m<sup>3</sup>. As there is no leachate collection infrastructure in place on the site, this quantity is all dispersed into the surrounding environment, in line with the original dilute and disperse design of the landfill. The planned bio-remediation of the site using willow (see Section 9) allows for the collection and storage of leachate prior to its spreading over the willow crop.

## **11 Report on the Restoration of Completed Cells / Phases**

- 11.1 At the time of closure intermediate capping of the site was undertaken with approximately 300mm of clay material placed using a tracked bulldozer and not rolled.
- 11.2 See Section 9 for information about restoration proposals and scheduling of the work.

## **12 Site Survey Showing Existing Levels of the Facility at the End of the Reporting Period**

A topographical survey of the site was carried out on 6th September 2000 following the restoration of the site and submitted to the Agency in April 2008. The latest site survey following latest works on site was undertaken on the 5<sup>th</sup> December 2014 and will be submitted to the EPA as part of the CQA report for the works.

## **13 Estimated Annual and Cumulative Quantities of Landfill Gas Emitted from the Site**

- 13.1 Gas emissions from the landfill were remodelled using GasSim in 2005. The revised model results are provided in Appendix D.
- 13.2 The estimate for total bulk landfill gas produced in 2014 is 525,600 m<sup>3</sup>.

## **14 Estimated Annual and Cumulative Quantity of Indirect Emissions from Groundwater**

- 14.1 Prior to restoration the site operated on a dilute and disperse basis and as such any leachate generated disperses into the surrounding environment. A water balance calculation is included in Appendix C. This indicates that the estimated volume of leachate being produced at the site for 2014 is approximately 25,475 m<sup>3</sup>.

## 15 Monthly Water Balance Calculation and Interpretation

- 15.1 The calculation for monthly water balance is as follows and is included in Appendix C. A summary of the results has been discussed in previous sections above.

$$Lo = [ER (A) + LW + IRCA + ER (I)] - [aW]$$

Where:

Lo = leachate produced (m<sup>3</sup>)

ER = effective rainfall

A = area of cell (m<sup>2</sup>)

LW = liquid waste

IRCA = infiltration through restored areas and capped areas (m)

a = absorptive capacity of waste (m<sup>3</sup>/t)

W = weight of waste deposited

I = surface area of lagoons (m<sup>2</sup>)

## 16 Schedule of Environmental Objectives and Targets for the Forthcoming Year

- 16.1 Please refer to Section 9.

## 17 Report on the Progress Towards Achievement of the Environmental Objectives and Targets Contained in the Previous Years Report

- 17.1 Progress towards meeting targets and objectives set down for the reporting period is outlined in Section 9.

## **18 Full Title and a Written Summary of any Procedures Developed by the Licensee in the Year, which relates to the Facility Operation**

18.1 Environmental Management Procedures have been developed for the purpose of maintaining and assessing the Environmental Management System. Operational procedures ensure that the routine operational tasks related to the environmental management of the facility are undertaken in a satisfactory manner as required to maintain effective control of the environmental aspects of the facility.

18.2 An Environmental Management System (EMS) was submitted to the EPA during 2004 and approved. During 2006 the document was reviewed and there was not deemed to be any need to revision of addition of any procedures. This remains the situation.

## **19 Reported Incidents and Complaints Summaries**

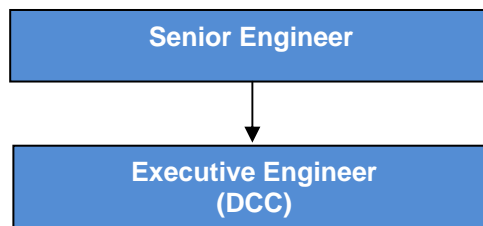
19.1 Other than the reporting of on-going emissions exceedances detected in the routine monitoring programme, no incidents occurred during the monitoring period and no complaints were received.



## 20 Report on Financial Provisions made under this Licence, Management and Staffing Structure of the Facility and a Programme for Public Information

20.1 Management of the landfill site is as follows.

**Figure 20.1 Management Structure**



Senior Engineer: Overall responsibility for the management of the site and maintenance of the Waste Licence. Delegation of authority and responsibility to ensure the effective management of the facility.

Executive Engineer: Responsible for the operational management of the facility as directed by the Senior Engineer.

20.2 A public communication programme has been initiated in accordance with Condition 2 of the Waste Licence to ensure that information concerning the environmental performance is available at reasonable times. The public may view environmental records at the Donegal County Council Headquarters in Lifford. Details regarding this are contained in Section 2 of the Environmental Management System Manual.

20.3 As a Local Authority, Donegal County Council is fully committed to the on-going investment as required by this facility to ensure that it is properly managed environmentally.

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## Appendix A - Monitoring Locations, Frequencies and Parameters

**Appendix A - Monitoring Locations, Frequencies and Parameters**

**Table A1 Groundwater Parameters and Monitoring Frequencies**

| Quarterly               | Annually             |
|-------------------------|----------------------|
| Temperature             | Boron                |
| Groundwater Level       | Cadmium              |
| Chloride                | Calcium              |
| Dissolved Oxygen        | Chromium             |
| Sodium                  | Copper               |
| TON                     | Cyanide              |
| TOC                     | Fluoride             |
| Phenols                 | Lead                 |
| Ammoniacal Nitrogen     | List I/II substances |
| Electrical Conductivity | Sulphate             |
| pH                      | Magnesium            |
| Potassium               | Manganese            |
| Nitrate                 | Mercury              |
| Iron                    | Total Alkalinity     |
| Nitrite                 | Orthophosphate       |
|                         | Zinc                 |
|                         | Faecal Coliforms     |
|                         | Total Coliforms      |

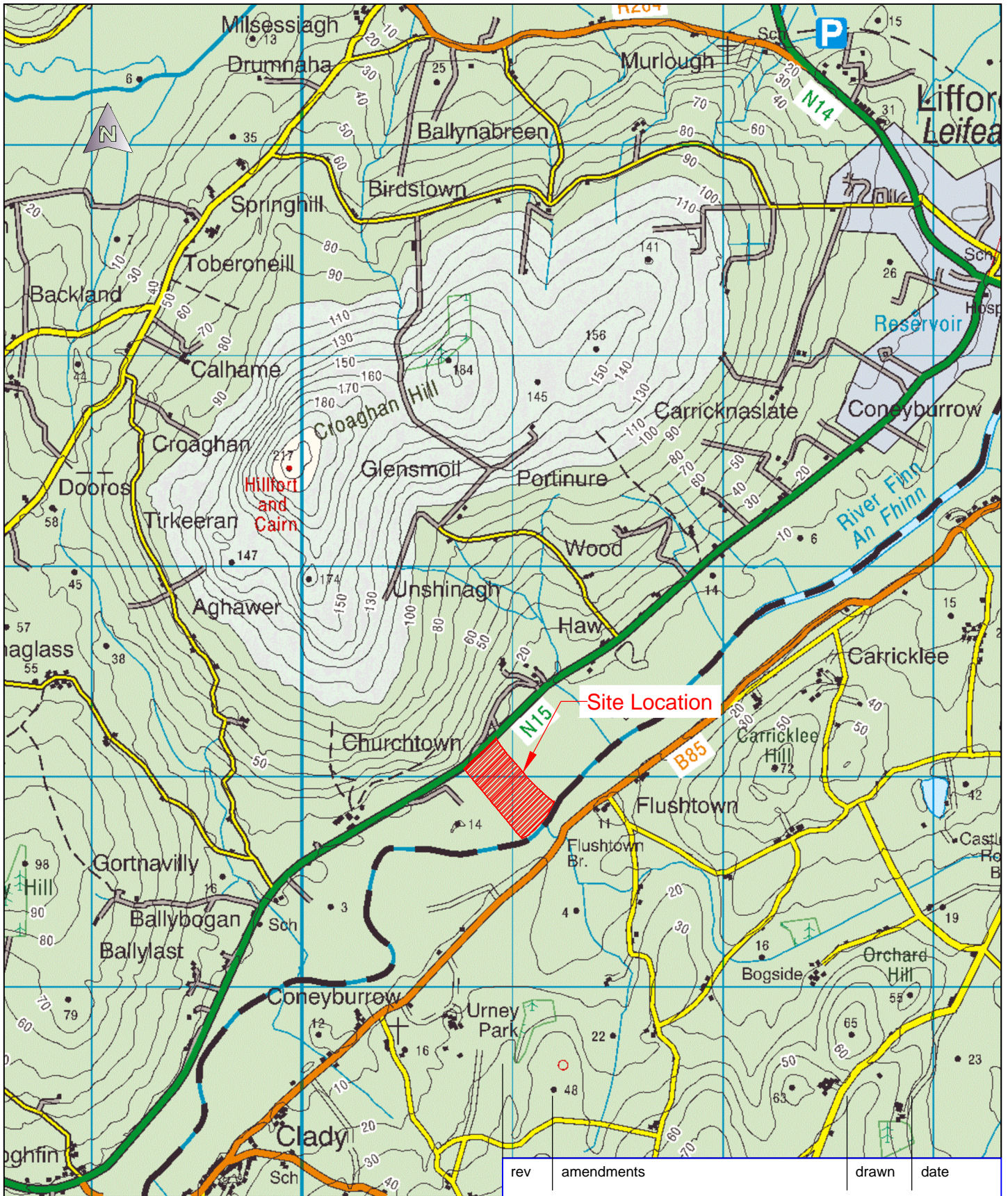
**Table A2 Surface Water Parameters and Monitoring Frequencies**

| Quarterly               | Annually             |
|-------------------------|----------------------|
| Temperature             | Iron                 |
| pH                      | Cadmium              |
| Ammoniacal Nitrogen     | Calcium              |
| BOD                     | Chromium             |
| Electrical Conductivity | Lead                 |
| TSS                     | List I/II substances |
| Chloride                | Magnesium            |
| Dissolved Oxygen        | Manganese            |
| COD                     | Mercury              |
| Zinc                    | Orthophosphate       |
| Phenols                 | Potassium            |
| Nitrite                 | TON                  |


|         |  |
|---------|--|
| Nitrate |  |
| Copper  |  |

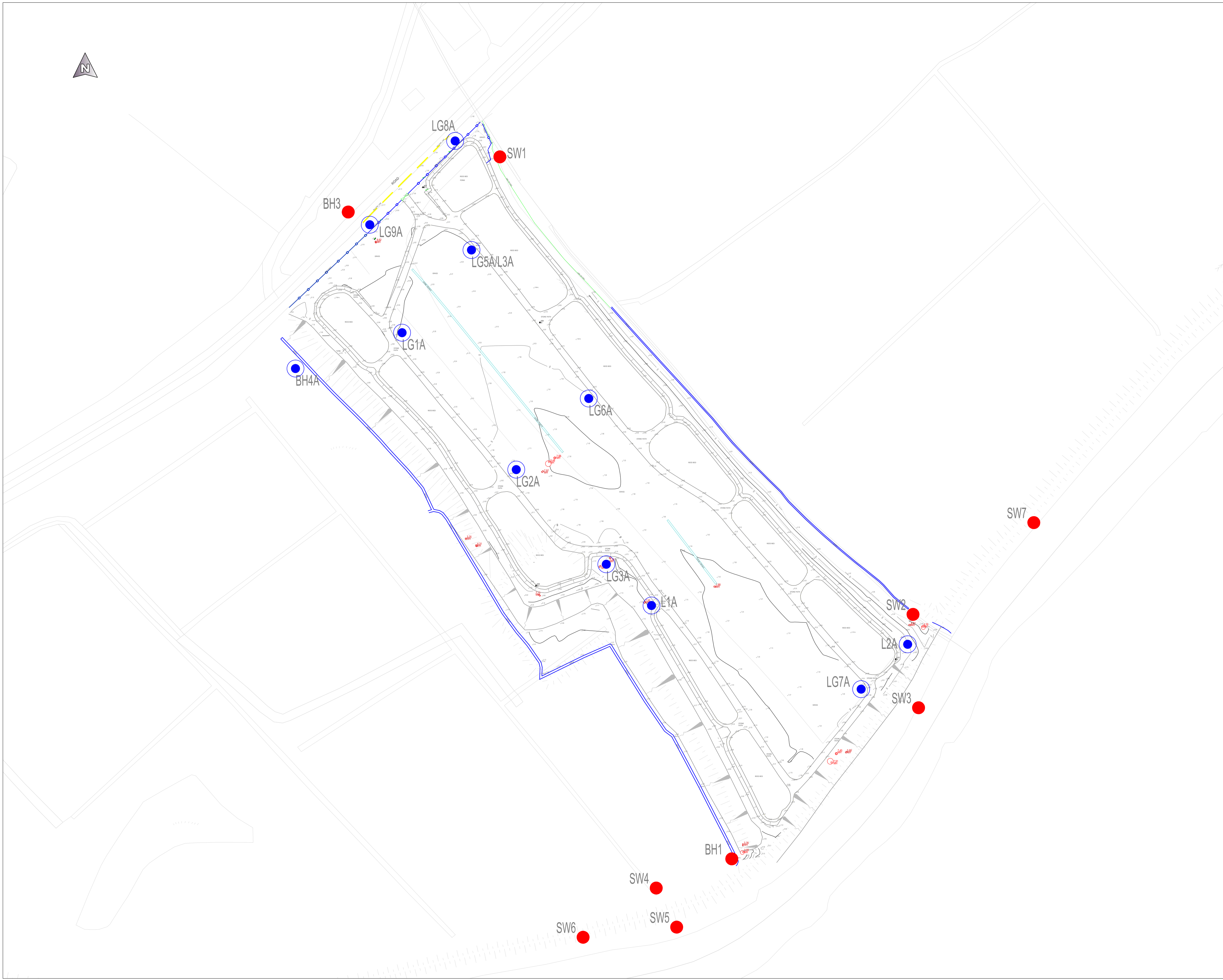
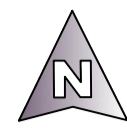
**Table A3      Landfill Gas Parameters and Monitoring Frequencies**

| Quarterly            |
|----------------------|
| Atmospheric Pressure |
| Carbon Dioxide       |
| Methane              |
| Oxygen               |



|     |            |       |      |
|-----|------------|-------|------|
| rev | amendments | drawn | date |
|-----|------------|-------|------|

|  |  |                           |   |                 |                 |                      |
|--|--|---------------------------|---|-----------------|-----------------|----------------------|
|  Elmwood House<br>74 Boucher Road<br>Belfast BT12 6RZ<br>T +44 (0) 28 90 667914<br>F +44 (0) 28 90 668286<br>W <a href="http://www.rpsgroup.com/ireland">www.rpsgroup.com/ireland</a><br>E ireland@rpsgroup.com | Drawing Number<br><h2 style="text-align: center;">IBR0697 / 007</h2>                 |                           | Rev<br><h2 style="text-align: center;">0</h2>                                   |                 |                 |                      |
|  | Project<br><h3 style="text-align: center;">Donegal Landfill Site Reporting 2015</h3> |                           | Title<br><h3 style="text-align: center;">Churchtown Landfill Site Location</h3> |                 |                 |                      |
| Client<br><h3 style="text-align: center;">Donegal County Council</h3>  |  | Architect                 |   |                 |                 |                      |
| Drawing Status<br>Preliminary  | Sheet Size<br>A4   | Drawing Scale<br>1:50,000 | Project Leader<br>AMcG  | Drawn By<br>AMB | Date<br>May '15 | Initial Review<br>CG |



**NOTES**

1. Verifying Dimensions.  
The contractor shall verify dimensions against such other drawings or site conditions as pertain to this part of the work.
2. Existing Services.  
Any information concerning the location of existing services indicated on this drawing is intended for general guidance only. It shall be the responsibility of the contractor to determine and verify the exact horizontal and vertical alignment of all cables, pipes, etc. (both underground and overhead) before work commences.
3. Issue of Drawings.  
Hard copies, dxf and pdf will form a controlled issue of the drawing. All other formats (dwg, dxf etc.) are deemed to be an uncontrolled issue and any work carried out based on these files is at the recipient's own risk. RPS will not accept any responsibility for any errors arising from the use of these files, either by human error by the recipient, listing of un-dimensioned measurements, compatibility issues with the recipient's software, and any errors arising when these files are used to aid the recipient's drawing production, or setting out on site.

4. Date Surveyed 05 December 2014 by LSS Survey Services

5. Keys
- Reed Bed Pond
  - Contour Major
  - Contour Minor
  - Ditch
  - Lines of Fers
  - New Fence
  - Old Fence
  - Yellow Line
  - Gate
  - Duct Chambers
  - Manholes
  - Boreholes
  - Spot Heights
  - BH1 Retained Monitoring Boreholes
  - LG7A New Monitoring Boreholes

**Monitoring Boreholes Information**

BH1 Historic Borehole (No change). Not surveyed (location indicative from historic surveys, located in existing fence line)

BH3 Historic Borehole (No change). Not surveyed (location indicative from historic surveys)

BH4A New borehole. Not surveyed (location indicative, readily identified by red standpipe cover in field). Note: high water level in borehole/flow under pressure

L1A New borehole. Red standpipe cover.

L2A New borehole. Red standpipe cover.

L3A New borehole. Red standpipe cover. Also functions as LG5A (TBC)

LG1A New borehole. Red standpipe cover.

LG2A New borehole. Red standpipe cover.

LG3A New borehole. Red standpipe cover. Adjacent to abandoned LG3 borehole which is at ground level with no steel cover.

LG4A New borehole. Red standpipe cover.

LG5A New borehole. Red standpipe cover. Also functions as L3A (TBC)

LG6A New borehole. Red standpipe cover.

LG7A New borehole. Red standpipe cover.

LG8A New borehole. Red standpipe cover. In layby to road.

LG9A New borehole. Red standpipe cover. In layby to road.

| rev | amendments | drawn | date |
|-----|------------|-------|------|
|     |            |       |      |

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Client  
**Donegal County Council**

Project  
**Donegal Landfill Reporting 2015**

Title  
**Churctown LFS - Monitoring Locations**

|                               |                  |                         |
|-------------------------------|------------------|-------------------------|
| Drawing Status<br>Preliminary | Sheet Size<br>A1 | Drawing Scale<br>1:1000 |
|-------------------------------|------------------|-------------------------|

|                                       |                 |
|---------------------------------------|-----------------|
| Drawing Number<br><b>IBR0697 /008</b> | Rev<br><b>0</b> |
|---------------------------------------|-----------------|

|                      |                |                 |                      |
|----------------------|----------------|-----------------|----------------------|
| Project Leader<br>JD | Drawn By<br>JD | Date<br>Dec '14 | Initial Review<br>JD |
|----------------------|----------------|-----------------|----------------------|

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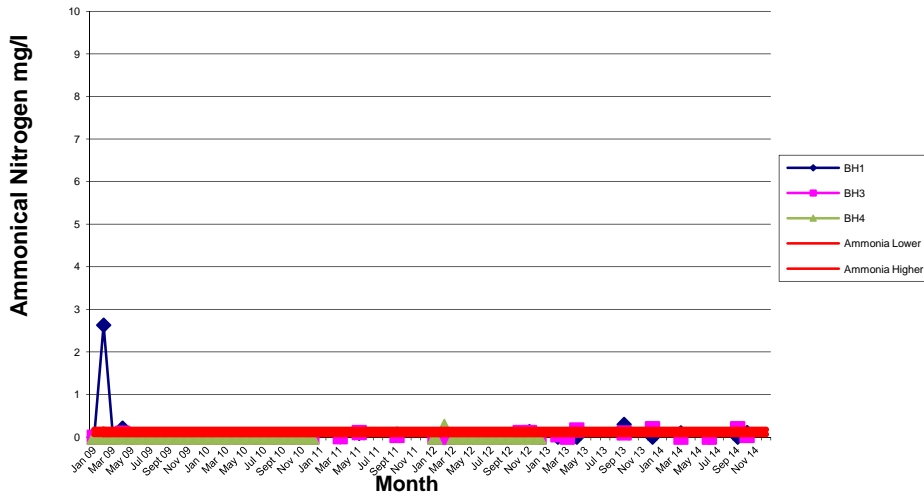
## Appendix B - Results of Monitoring

| Location                  |             | Churchtown, Lifford, Co Donegal |        |        |        |        |        |        |        |           |        |        |        |
|---------------------------|-------------|---------------------------------|--------|--------|--------|--------|--------|--------|--------|-----------|--------|--------|--------|
| Sample Type               |             | Groundwater                     |        |        |        |        |        |        |        |           |        |        |        |
| Site No                   |             | BH3                             |        |        |        |        |        |        |        |           |        |        |        |
| Date of Sample            |             | Jan-14                          | Feb-14 | Mar-14 | Apr-14 | May-14 | Jun-14 | Jul-14 | Aug-14 | Sep-14    | Oct-14 | Nov-14 | Dec-14 |
| Lab No                    |             |                                 |        |        |        |        |        |        |        | 142504684 |        |        |        |
| pH                        |             |                                 |        | 7.68   |        |        | 7.62   |        |        | 7.12      | 7.39   |        |        |
| Temp                      | C           |                                 |        | 11.4   |        |        | 25     |        |        | 15.6      | 12.1   |        |        |
| Electrical Conductivity   | uS/cm       |                                 |        | 476    |        |        | 490    |        |        | 484       | 490    |        |        |
| Ammonical Nitrogen        | mg/l        |                                 |        | <0.040 |        |        | <0.040 |        |        | 0.2       | 0.04   |        |        |
| COD                       | mg/l        |                                 |        |        |        |        |        |        |        |           |        |        |        |
| BOD                       | mg/l        |                                 |        |        |        |        |        |        |        |           |        |        |        |
| Dissolved Oxygen          | mg/l        |                                 |        | 7.86   |        |        | 6.33   |        |        | 7.5       | 6.5    |        |        |
| SS                        | mg/l        |                                 |        |        |        |        |        |        |        |           |        |        |        |
| Residue on Evaporator     | mg/l        |                                 |        |        |        |        |        |        |        |           |        |        |        |
| Calcium                   | ug/l        |                                 |        |        |        |        | 84.4   |        |        |           |        |        |        |
| Cadmium                   | ug/l        |                                 |        |        |        |        | <0.1   |        |        |           |        |        |        |
| Chromium                  | ug/l        |                                 |        |        |        |        | <1     |        |        |           |        |        |        |
| Chloride                  | mg/l        |                                 |        | 28     |        |        | 24     |        |        | 22        | 25     |        |        |
| Chlorine                  | mg/l        |                                 |        |        |        |        |        |        |        |           |        |        |        |
| Copper                    | ug/l        |                                 |        |        |        |        | 0.019  |        |        |           |        |        |        |
| Cyanide                   | mg/l        |                                 |        |        |        |        | <10    |        |        |           |        |        |        |
| Total Iron                | ug/l        |                                 |        | <20    |        |        | <20    |        |        | <20       | <20    |        |        |
| Lead                      | ug/l        |                                 |        |        |        |        | <0.3   |        |        |           |        |        |        |
| Magnesium                 | ug/l        |                                 |        |        |        |        | 11.4   |        |        |           |        |        |        |
| Manganese                 | ug/l        |                                 |        |        |        |        | <1     |        |        |           |        |        |        |
| Mercury                   | ug/l        |                                 |        |        |        |        | 0.11   |        |        |           |        |        |        |
| Nickel                    | mg/l        |                                 |        |        |        |        |        |        |        |           |        |        |        |
| Potassium                 | mg/l        |                                 |        | 7.3    |        |        | 2.6    |        |        | 1.7       | 2      |        |        |
| Sodium                    | mg/l        |                                 |        | 14.9   |        |        | 13.9   |        |        | 13.2      | 14.7   |        |        |
| Sulphate                  | mg/l        |                                 |        |        |        |        | 56.5   |        |        |           |        |        |        |
| Zinc                      | ug/l        |                                 |        |        |        |        | 10.3   |        |        |           |        |        |        |
| Total Alkalinity as CaCO3 | mg/l        |                                 |        |        |        |        | 194    |        |        |           |        |        |        |
| Total Organic Carbon      | mg/l        |                                 |        | 4      |        |        |        |        |        | 1.04      | AR     |        |        |
| Total Oxidised Nitrogen   | mg/l        |                                 |        | <0.11  |        |        | <0.110 |        |        | AR        | 0.131  |        |        |
| Arsenic                   | mg/l        |                                 |        |        |        |        |        |        |        |           |        |        |        |
| Barium                    | mg/l        |                                 |        |        |        |        |        |        |        |           |        |        |        |
| Boron                     | ug/l        |                                 |        |        |        |        | <0.02  |        |        |           |        |        |        |
| Fluoride                  | mg/l        |                                 |        |        |        |        | <0.1   |        |        |           |        |        |        |
| Total Phenols             | mg/l        |                                 |        | <0.15  |        |        |        |        |        | <0.15     | <0.15  |        |        |
| Phosphorous               | mg/l        |                                 |        |        |        |        |        |        |        |           |        |        |        |
| Selenium                  | mg/l        |                                 |        |        |        |        |        |        |        |           |        |        |        |
| Silver                    | mg/l        |                                 |        |        |        |        |        |        |        |           |        |        |        |
| Mircrotox                 | Toxic Units |                                 |        |        |        |        |        |        |        |           |        |        |        |
| Microtox                  | Toxic Units |                                 |        |        |        |        |        |        |        |           |        |        |        |
| Nitrite                   | mg/l        |                                 |        |        |        |        |        |        |        |           | <0.01  |        |        |
| Nitrate                   | mg/l        |                                 |        | 0.087  |        |        | <0.1   |        |        | 0.289     | 0.129  |        |        |
| Phosphate - ORTHO         | mg/l        |                                 |        |        |        |        | <0.01  |        |        |           |        |        |        |
| Phosphate - TOTAL         | mg/l        |                                 |        |        |        |        |        |        |        |           |        |        |        |
| Total Coliforms           |             |                                 |        |        |        |        | 3      |        |        |           |        |        |        |
| Facel Coliforms           |             |                                 |        |        |        |        | 1      |        |        |           |        |        |        |
| Depth                     | m           |                                 |        | NT     |        |        | 4      |        |        | 2.5       | 2      |        |        |

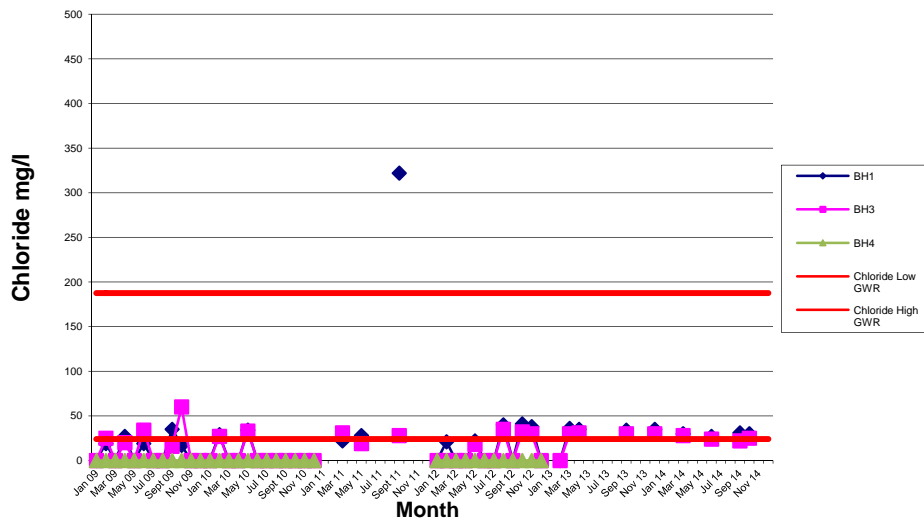


| Location                  |             | Churchtown, Lifford, Co Donegal |        |        |        |        |        |        |        |           |        |        |        |
|---------------------------|-------------|---------------------------------|--------|--------|--------|--------|--------|--------|--------|-----------|--------|--------|--------|
| Sample Type               |             | Groundwater                     |        |        |        |        |        |        |        |           |        |        |        |
| Site No                   |             | BH1                             |        |        |        |        |        |        |        |           |        |        |        |
| Date of Sample            |             | Jan-14                          | Feb-14 | Mar-14 | Apr-14 | May-14 | Jun-14 | Jul-14 | Aug-14 | Sep-14    | Oct-14 | Nov-14 | Dec-14 |
| Lab No                    |             |                                 |        |        |        |        |        |        |        | 142504683 |        |        |        |
| pH                        |             |                                 |        | 7.89   |        |        | 7.83   |        |        | 7.18      | 7.05   |        |        |
| Temp                      | C           |                                 |        | 9.4    |        |        | 25     |        |        | 15.8      | 12     |        |        |
| Electrical Conductivity   | uS/cm       |                                 |        | 296    |        |        | 311    |        |        | 319       | 318    |        |        |
| Ammonical Nitrogen        | mg/l        |                                 |        | 0.101  |        |        | <0.040 |        |        | <0.04     | 0.109  |        |        |
| COD                       | mg/l        |                                 |        |        |        |        |        |        |        |           |        |        |        |
| BOD                       | mg/l        |                                 |        |        |        |        |        |        |        |           |        |        |        |
| Dissolved Oxygen          | mg/l        |                                 |        | 9.75   |        |        | 7.77   |        |        | 8.3       | 8.14   |        |        |
| SS                        | mg/l        |                                 |        |        |        |        |        |        |        |           |        |        |        |
| Residue on Evaporator     | mg/l        |                                 |        |        |        |        |        |        |        |           |        |        |        |
| Calcium                   | ug/l        |                                 |        |        |        |        | 39.4   |        |        |           |        |        |        |
| Cadmium                   | ug/l        |                                 |        |        |        |        | <0.1   |        |        |           |        |        |        |
| Chromium                  | ug/l        |                                 |        |        |        |        | <1     |        |        |           |        |        |        |
| Chloride                  | mg/l        |                                 |        | 30     |        |        | 27     |        |        | 31        | 30     |        |        |
| Chlorine                  | mg/l        |                                 |        |        |        |        |        |        |        |           |        |        |        |
| Copper                    | ug/l        |                                 |        |        |        |        | 0.012  |        |        |           |        |        |        |
| Cyanide                   | mg/l        |                                 |        |        |        |        | <10    |        |        |           |        |        |        |
| Total Iron                | ug/l        |                                 |        | 54.3   |        |        | <20    |        |        | <20       | <20    |        |        |
| Lead                      | ug/l        |                                 |        |        |        |        | <0.3   |        |        |           |        |        |        |
| Magnesium                 | ug/l        |                                 |        |        |        |        | 8.4    |        |        |           |        |        |        |
| Manganese                 | ug/l        |                                 |        |        |        |        | 4.6    |        |        |           |        |        |        |
| Mercury                   | ug/l        |                                 |        |        |        |        | 0.08   |        |        |           |        |        |        |
| Nickel                    | mg/l        |                                 |        |        |        |        |        |        |        |           |        |        |        |
| Potassium                 | mg/l        |                                 |        | 5.6    |        |        | 4.5    |        |        | 4.2       | 4      |        |        |
| Sodium                    | mg/l        |                                 |        | 14.7   |        |        | 14     |        |        | 14.3      | 16     |        |        |
| Sulphate                  | mg/l        |                                 |        |        |        |        | 23.7   |        |        |           |        |        |        |
| Zinc                      | ug/l        |                                 |        |        |        |        | 14.4   |        |        |           |        |        |        |
| Total Alkalinity as CaCO3 | mg/l        |                                 |        |        |        |        | 100    |        |        |           |        |        |        |
| Total Organic Carbon      | mg/l        |                                 |        | 2      |        |        |        |        |        | 1.67      | AR     |        |        |
| Total Oxidised Nitrogen   | mg/l        |                                 |        | 0.556  |        |        | 1.32   |        |        | AR        | 1.48   |        |        |
| Arsenic                   | mg/l        |                                 |        |        |        |        |        |        |        |           |        |        |        |
| Barium                    | mg/l        |                                 |        |        |        |        |        |        |        |           |        |        |        |
| Boron                     | ug/l        |                                 |        |        |        |        | <0.02  |        |        |           |        |        |        |
| Fluoride                  | mg/l        |                                 |        |        |        |        | <0.1   |        |        |           |        |        |        |
| Total Phenols             | mg/l        |                                 |        | <0.15  |        |        |        |        |        | <0.15     | <0.15  |        |        |
| Phosphorous               | mg/l        |                                 |        |        |        |        |        |        |        |           |        |        |        |
| Selenium                  | mg/l        |                                 |        |        |        |        |        |        |        |           |        |        |        |
| Silver                    | mg/l        |                                 |        |        |        |        |        |        |        |           |        |        |        |
| Mircrotox                 | Toxic Units |                                 |        |        |        |        |        |        |        |           |        |        |        |
| Microtox                  | Toxic Units |                                 |        |        |        |        |        |        |        |           |        |        |        |
| Nitrite                   | mg/l        |                                 |        |        |        |        | 0.012  |        |        |           | 0.011  |        |        |
| Nitrate                   | mg/l        |                                 |        | 0.563  |        |        | 1.308  |        |        | 1.3       | 1.47   |        |        |
| Phosphate - ORTHO         | mg/l        |                                 |        |        |        |        | <0.01  |        |        |           |        |        |        |
| Phosphate - TOTAL         | mg/l        |                                 |        |        |        |        |        |        |        |           |        |        |        |
| Total Coliforms           |             |                                 |        |        |        |        | 1      |        |        |           |        |        |        |
| Facel Coliforms           |             |                                 |        |        |        |        | <1     |        |        |           |        |        |        |
| Depth                     | m           |                                 |        | NT     |        |        | 2      |        |        | 2.8       | 2.5    |        |        |

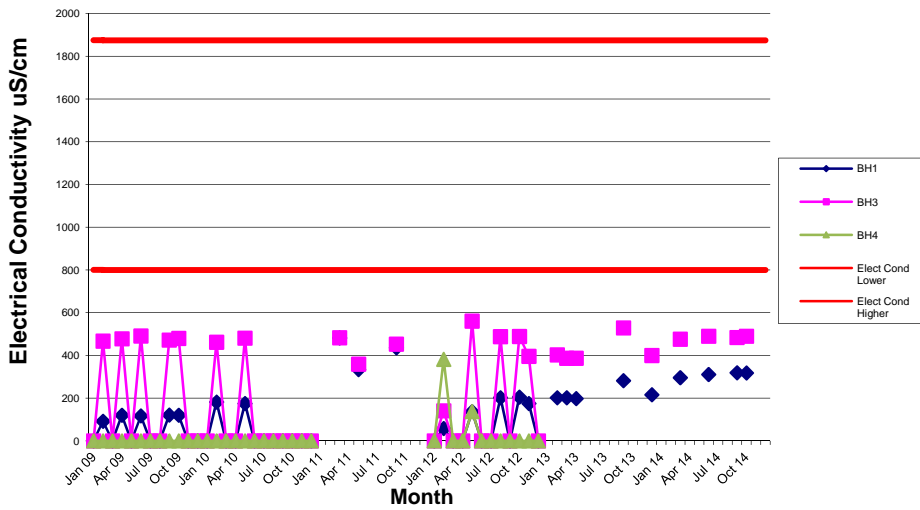
### Groundwater: Ammonical Nitrogen



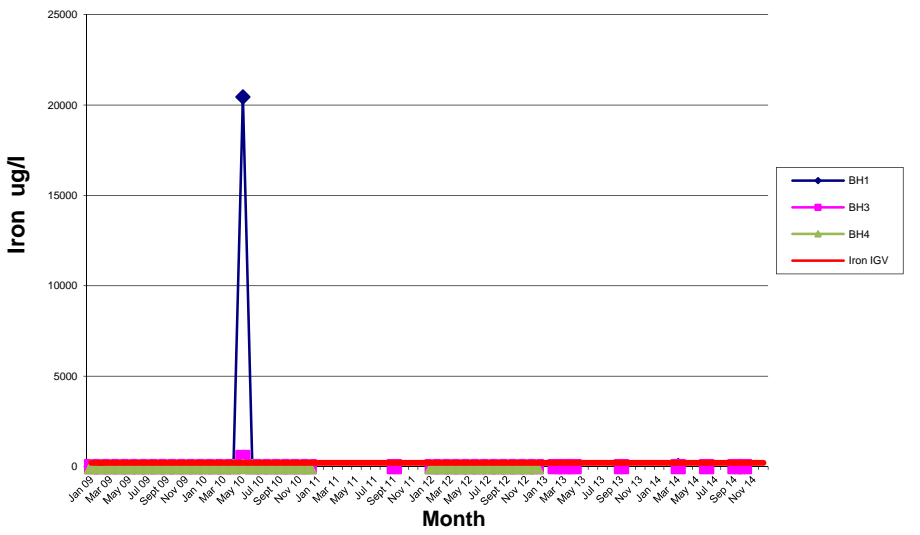
### Groundwater: Chloride



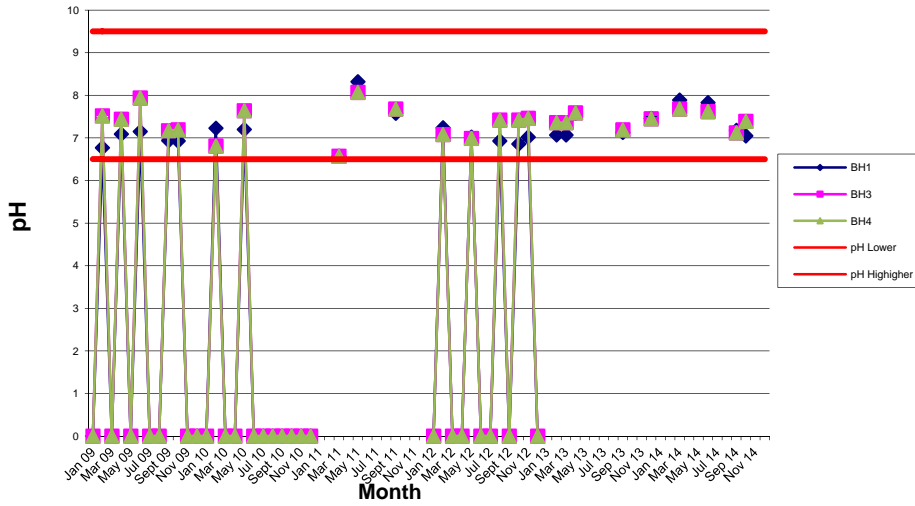
### Groundwater: Electrical Conductivity



### Groundwater: Iron



# Groundwater pH Levels











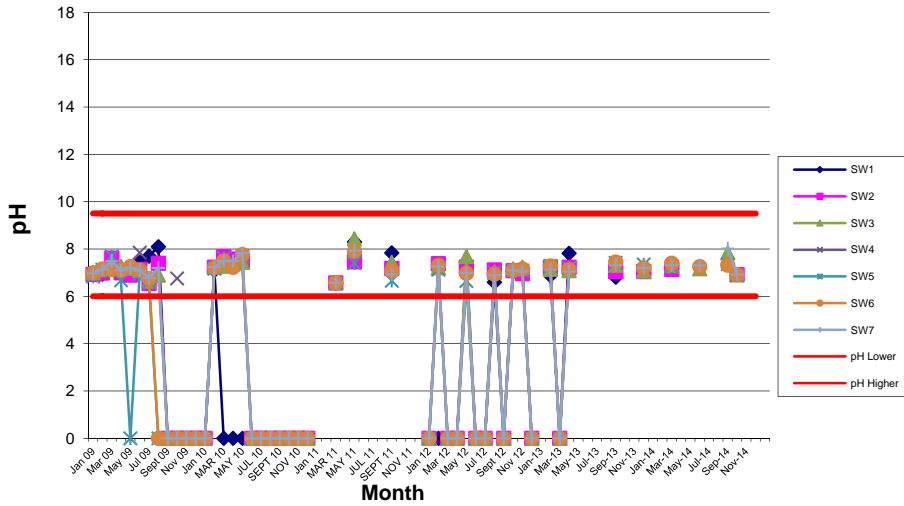




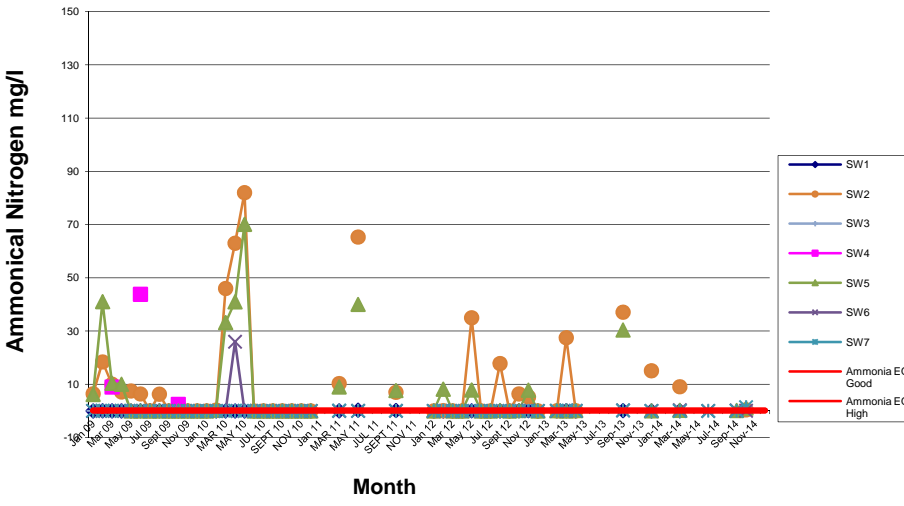




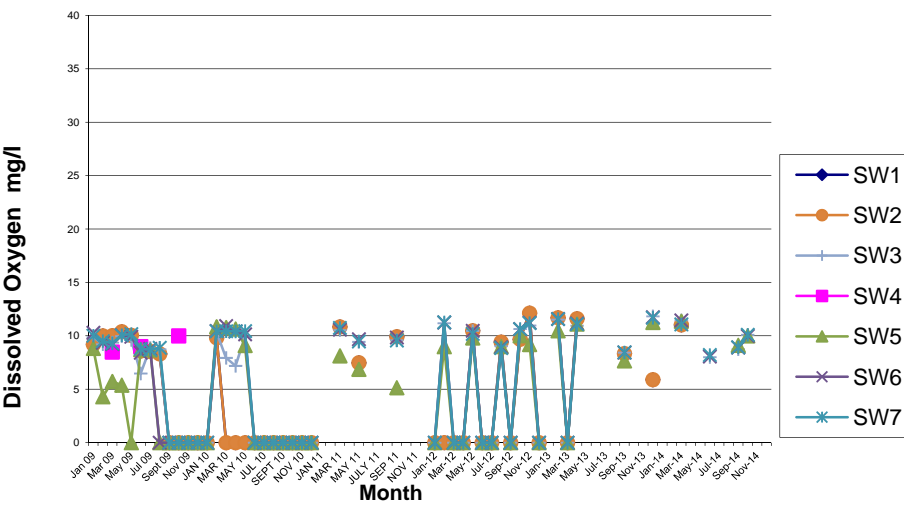
### Surface Water: pH Levels



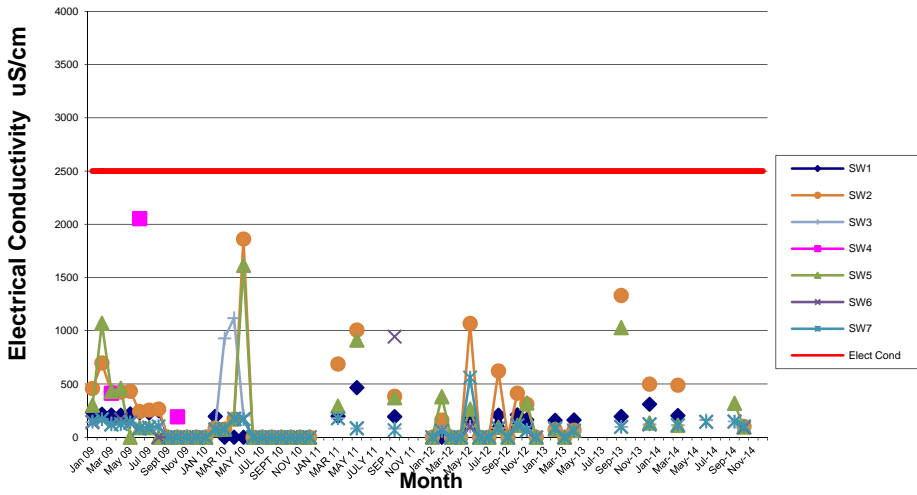
### Surface Water: Ammonical Nitrogen



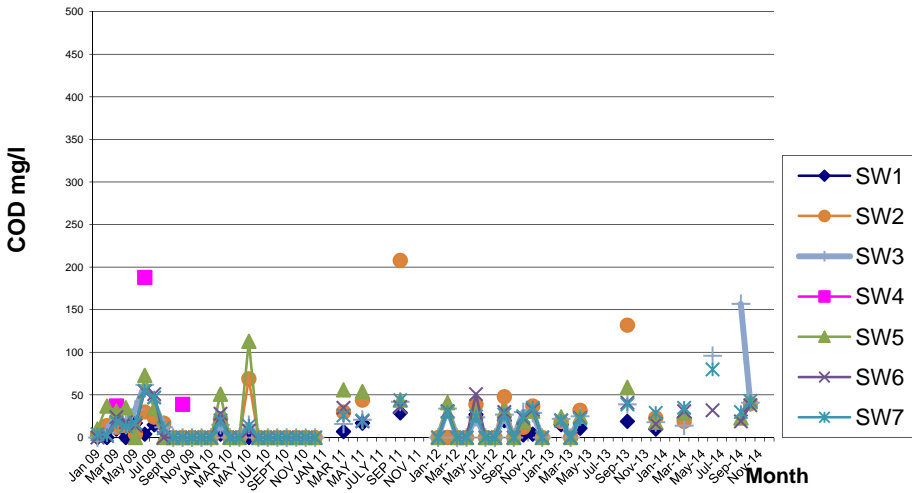
### Surface Water: Dissolved Oxygen



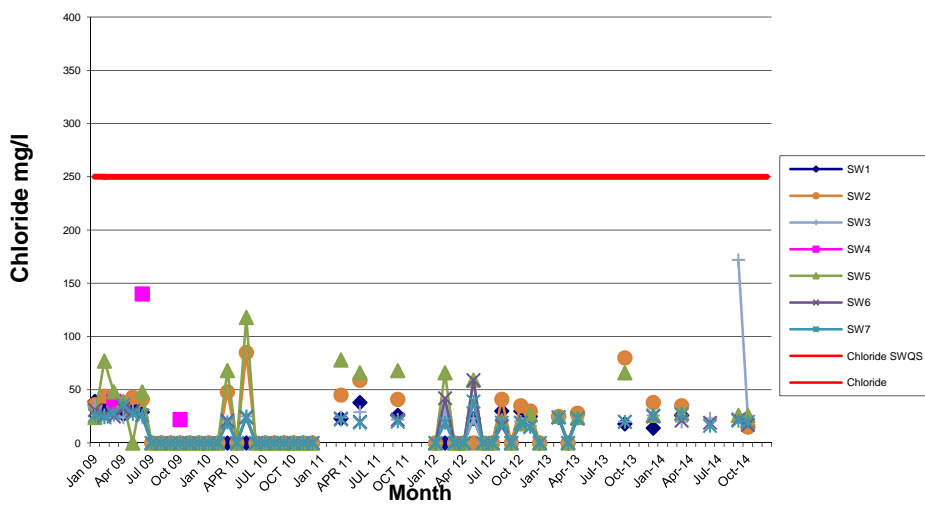
### Surface Water: Electrical Conductivity



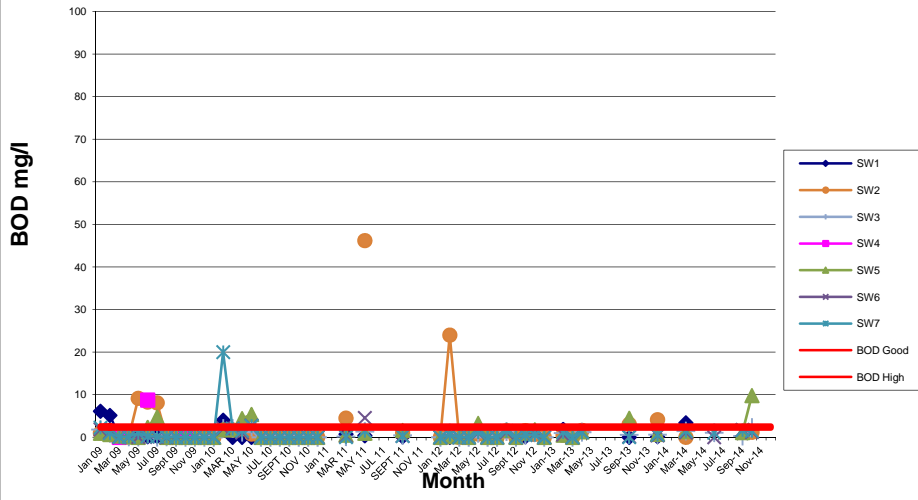
### Surface Water: COD



### Surface Water: Chloride



# Surface Water: BOD



| Location                  |             | Churchtown, Lifford, Co Donegal |        |        |        |        |        |        |        |        |        |        |        |
|---------------------------|-------------|---------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Sample Type               |             | Leachate                        |        |        |        |        |        |        |        |        |        |        |        |
| Site No                   |             | L2                              |        |        |        |        |        |        |        |        |        |        |        |
| Date of Sample            |             | Jan-14                          | Feb-14 | Mar-14 | Apr-14 | May-14 | Jun-14 | Jul-14 | Aug-14 | Sep-14 | Oct-14 | Nov-14 | Dec-14 |
| Lab No                    |             |                                 |        |        |        |        |        |        |        |        |        |        |        |
| pH                        |             |                                 |        | 6.78   |        |        | 6.51   |        |        |        |        |        |        |
| Temp                      | C           |                                 |        | 9.8    |        |        | 25     |        |        |        |        |        |        |
| Electrical Conductivity   | uS/cm       |                                 |        | 2083   |        |        | 1866   |        |        |        |        |        |        |
| Ammonical Nitrogen        | mg/l        |                                 |        | 85     |        |        | 71.5   |        |        |        |        |        |        |
| COD                       | mg/l        |                                 |        | 98     |        |        | 64     |        |        |        |        |        |        |
| BOD                       | mg/l        |                                 |        |        |        |        | 44     |        |        |        |        |        |        |
| Dissolved Oxygen          | mg/l        |                                 |        |        |        |        |        |        |        |        |        |        |        |
| SS                        | mg/l        |                                 |        |        |        |        |        |        |        |        |        |        |        |
| Residue on Evaporator     | mg/l        |                                 |        |        |        |        |        |        |        |        |        |        |        |
| Calcium                   | ug/l        |                                 |        |        |        |        | 155.9  |        |        |        |        |        |        |
| Cadmium                   | ug/l        |                                 |        |        |        |        | <0.1   |        |        |        |        |        |        |
| Chromium                  | ug/l        |                                 |        |        |        |        | 0.0029 |        |        |        |        |        |        |
| Chloride                  | mg/l        |                                 |        | 63     |        |        | 45     |        |        |        |        |        |        |
| Chlorine                  | mg/l        |                                 |        |        |        |        |        |        |        |        |        |        |        |
| Copper                    | ug/l        |                                 |        |        |        |        | <0.003 |        |        |        |        |        |        |
| Cyanide                   | mg/l        |                                 |        |        |        |        | <9     |        |        |        |        |        |        |
| Total Iron                | ug/l        |                                 |        | 314    |        |        | 1868   |        |        |        |        |        |        |
| Lead                      | ug/l        |                                 |        |        |        |        | <0.3   |        |        |        |        |        |        |
| Magnesium                 | ug/l        |                                 |        |        |        |        | 57.8   |        |        |        |        |        |        |
| Manganese                 | ug/l        |                                 |        |        |        |        | 859.2  |        |        |        |        |        |        |
| Mercury                   | ug/l        |                                 |        |        |        |        | 0.04   |        |        |        |        |        |        |
| Nickel                    | mg/l        |                                 |        |        |        |        |        |        |        |        |        |        |        |
| Potassium                 | mg/l        |                                 |        | 59.7   |        |        | 53.8   |        |        |        |        |        |        |
| Sodium                    | mg/l        |                                 |        | 52.1   |        |        | 43.8   |        |        |        |        |        |        |
| Sulphate                  | mg/l        |                                 |        |        |        |        | <5     |        |        |        |        |        |        |
| Zinc                      | ug/l        |                                 |        |        |        |        | 11.1   |        |        |        |        |        |        |
| Total Alkalinity as CaCO3 | mg/l        |                                 |        |        |        |        |        |        |        |        |        |        |        |
| Total Organic Carbon      | mg/l        |                                 |        |        |        |        |        |        |        |        |        |        |        |
| Total Oxidised Nitrogen   | mg/l        |                                 |        | 0.11   |        |        | <0.11  |        |        |        |        |        |        |
| Arsenic                   | mg/l        |                                 |        |        |        |        |        |        |        |        |        |        |        |
| Barium                    | mg/l        |                                 |        |        |        |        |        |        |        |        |        |        |        |
| Boron                     | ug/l        |                                 |        |        |        |        | 0.88   |        |        |        |        |        |        |
| Fluoride                  | mg/l        |                                 |        |        |        |        |        |        |        |        |        |        |        |
| Total Phenols             | mg/l        |                                 |        |        |        |        |        |        |        |        |        |        |        |
| Phosphorous               | mg/l        |                                 |        |        |        |        |        |        |        |        |        |        |        |
| Selenium                  | mg/l        |                                 |        |        |        |        |        |        |        |        |        |        |        |
| Silver                    | mg/l        |                                 |        |        |        |        |        |        |        |        |        |        |        |
| Mircrotox                 | Toxic Units |                                 |        |        |        |        |        |        |        |        |        |        |        |
| Microtox                  | Toxic Units |                                 |        |        |        |        |        |        |        |        |        |        |        |
| Nitrite                   | mg/l        |                                 |        |        |        |        | <0.01  |        |        |        |        |        |        |
| Nitrate                   | mg/l        |                                 |        |        |        |        | <0.1   |        |        |        |        |        |        |
| Phosphate - ORTHO         | mg/l        |                                 |        |        |        |        |        |        |        |        |        |        |        |
| Phosphate - TOTAL         | mg/l        |                                 |        |        |        |        |        |        |        |        |        |        |        |
| Total Coliforms           |             |                                 |        |        |        |        |        |        |        |        |        |        |        |
| Facel Coliforms           |             |                                 |        |        |        |        |        |        |        |        |        |        |        |
| Depth                     | m           |                                 |        |        |        |        | 5.00   |        |        |        |        |        |        |

| Location                  |             | Churchtown, Lifford, Co Donegal |        |        |        |        |        |        |        |        |        |        |        |
|---------------------------|-------------|---------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Sample Type               |             | Leachate                        |        |        |        |        |        |        |        |        |        |        |        |
| Site No                   |             | L3                              |        |        |        |        |        |        |        |        |        |        |        |
| Date of Sample            |             | Jan-14                          | Feb-14 | Mar-14 | Apr-14 | May-14 | Jun-14 | Jul-14 | Aug-14 | Sep-14 | Oct-14 | Nov-14 | Dec-14 |
| Lab No                    |             |                                 |        |        |        |        |        |        |        |        |        |        |        |
| pH                        |             |                                 |        | 6.37   |        |        | 6.57   |        |        |        |        |        |        |
| Temp                      | C           |                                 |        | 11.3   |        |        | 25     |        |        |        |        |        |        |
| Electrical Conductivity   | uS/cm       |                                 |        | 300    |        |        | 343    |        |        |        |        |        |        |
| Ammonical Nitrogen        | mg/l        |                                 |        | 5.74   |        |        | 1.53   |        |        |        |        |        |        |
| COD                       | mg/l        |                                 |        | 60     |        |        | 58     |        |        |        |        |        |        |
| BOD                       | mg/l        |                                 |        | 0      |        |        | 22     |        |        |        |        |        |        |
| Dissolved Oxygen          | mg/l        |                                 |        |        |        |        |        |        |        |        |        |        |        |
| SS                        | mg/l        |                                 |        |        |        |        |        |        |        |        |        |        |        |
| Residue on Evaporator     | mg/l        |                                 |        |        |        |        |        |        |        |        |        |        |        |
| Calcium                   | ug/l        |                                 |        |        |        |        | 35.5   |        |        |        |        |        |        |
| Cadmium                   | ug/l        |                                 |        |        |        |        | <0.1   |        |        |        |        |        |        |
| Chromium                  | ug/l        |                                 |        |        |        |        | 2.4    |        |        |        |        |        |        |
| Chloride                  | mg/l        |                                 |        | 32     |        |        | 20     |        |        |        |        |        |        |
| Chlorine                  | mg/l        |                                 |        |        |        |        |        |        |        |        |        |        |        |
| Copper                    | ug/l        |                                 |        |        |        |        | 0.012  |        |        |        |        |        |        |
| Cyanide                   | mg/l        |                                 |        |        |        |        | <9     |        |        |        |        |        |        |
| Total Iron                | ug/l        |                                 |        | 314    |        |        | 148.1  |        |        |        |        |        |        |
| Lead                      | ug/l        |                                 |        |        |        |        | <0.3   |        |        |        |        |        |        |
| Magnesium                 | ug/l        |                                 |        |        |        |        | 4.6    |        |        |        |        |        |        |
| Manganese                 | ug/l        |                                 |        |        |        |        | 344.9  |        |        |        |        |        |        |
| Mercury                   | ug/l        |                                 |        |        |        |        | 0.08   |        |        |        |        |        |        |
| Nickel                    | mg/l        |                                 |        |        |        |        |        |        |        |        |        |        |        |
| Potassium                 | mg/l        |                                 |        | 22.1   |        |        | 22.3   |        |        |        |        |        |        |
| Sodium                    | mg/l        |                                 |        | 11.7   |        |        | 11.8   |        |        |        |        |        |        |
| Sulphate                  | mg/l        |                                 |        |        |        |        | 24.6   |        |        |        |        |        |        |
| Zinc                      | ug/l        |                                 |        |        |        |        | 33.9   |        |        |        |        |        |        |
| Total Alkalinity as CaCO3 | mg/l        |                                 |        |        |        |        |        |        |        |        |        |        |        |
| Total Organic Carbon      | mg/l        |                                 |        |        |        |        |        |        |        |        |        |        |        |
| Total Oxidised Nitrogen   | mg/l        |                                 |        | 1.53   |        |        | 3.4    |        |        |        |        |        |        |
| Arsenic                   | mg/l        |                                 |        |        |        |        |        |        |        |        |        |        |        |
| Barium                    | mg/l        |                                 |        |        |        |        |        |        |        |        |        |        |        |
| Boron                     | ug/l        |                                 |        |        |        |        | 0.04   |        |        |        |        |        |        |
| Fluoride                  | mg/l        |                                 |        |        |        |        |        |        |        |        |        |        |        |
| Total Phenols             | mg/l        |                                 |        |        |        |        |        |        |        |        |        |        |        |
| Phosphorous               | mg/l        |                                 |        |        |        |        |        |        |        |        |        |        |        |
| Selenium                  | mg/l        |                                 |        |        |        |        |        |        |        |        |        |        |        |
| Silver                    | mg/l        |                                 |        |        |        |        |        |        |        |        |        |        |        |
| Mircrotox                 | toxic Units |                                 |        |        |        |        |        |        |        |        |        |        |        |
| Micrtox                   | toxic Units |                                 |        |        |        |        |        |        |        |        |        |        |        |
| Nitrite                   | mg/l        |                                 |        |        |        |        | <0.01  |        |        |        |        |        |        |
| Nitrate                   | mg/l        |                                 |        |        |        |        | <0.1   |        |        |        |        |        |        |
| Phosphate - ORTHO         | mg/l        |                                 |        |        |        |        | 0.13   |        |        |        |        |        |        |
| Phosphate - TOTAL         | mg/l        |                                 |        |        |        |        |        |        |        |        |        |        |        |
| Total Coliforms           |             |                                 |        |        |        |        |        |        |        |        |        |        |        |
| Facel Coliforms           |             |                                 |        |        |        |        |        |        |        |        |        |        |        |
| Depth                     | m           |                                 |        |        |        |        | 2.70   |        |        |        |        |        |        |



**Churchtown Landfill**

| StationName    | SamplePurpose                      | SampleDate | Atmospheric Pressure | Carbon Dioxide | Methane | Oxygen |
|----------------|------------------------------------|------------|----------------------|----------------|---------|--------|
| Churchtown LG2 | Landfill Monitoring - Landfill Gas | 26/03/2014 | 1010                 | 28.4           | 69.6    | 0.2    |
| Churchtown LG5 | Landfill Monitoring - Landfill Gas | 26/03/2014 | 1009                 | 21.1           | 56.2    | 0      |
| Churchtown LG6 | Landfill Monitoring - Landfill Gas | 26/03/2014 | 1009                 | 3.5            | 0       | 17.4   |
| Churchtown LG7 | Landfill Monitoring - Landfill Gas | 26/03/2014 | 1009                 | 21             | 48      | 3.2    |
| Churchtown LG3 | Landfill Monitoring - Landfill Gas | 18/06/2014 | 1028                 | 23.4           | 45.5    | 3      |
| Churchtown LG5 | Landfill Monitoring - Landfill Gas | 18/06/2014 | 1026                 | 24.6           | 21.5    | 0.1    |
| Churchtown LG6 | Landfill Monitoring - Landfill Gas | 18/06/2014 | NT                   | NT             | NT      | NT     |
| Churchtown LG7 | Landfill Monitoring - Landfill Gas | 18/06/2014 | NT                   | NT             | NT      | NT     |



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|                     |   |                              |                  |
|---------------------|---|------------------------------|------------------|
| <b>Contact Name</b> | Joe Ferry   | <b>Report Number</b>         | <b>76870 - 1</b> |
| <b>Address</b>      | Donegal County Council<br>Donegal County Council Central<br>Laboratory. | <b>Sample Number</b>         | 76870/001        |
| <b>Tel No</b>       | 074-9122787 / 9176274   | <b>Date of Receipt</b>       | 03/07/2014       |
| <b>Fax No</b>       |   | <b>Date Started</b>          | 03/07/2014       |
| <b>Customer PO</b>  | 240518780   | <b>Received or Collected</b> | TNT              |
| <b>Quotation No</b> | QN002578  | <b>Condition on Receipt</b>  | Good             |
| <b>Customer Ref</b> | 3094-BH1  | <b>Date of Report</b>        | 01/08/2014       |
|                     |   | <b>Sample Type</b>           | Ground Waters    |

### CERTIFICATE OF ANALYSIS

| TEST  | ANALYTE                                | SUB | METHOD   | LOQ   | SPEC | RESULT | UNITS | ACCRED. | OOS |
|---|--|-----|----------|-------|------|--------|-------|---------|-----|
| <b>AQ2-UP2</b>                                |  |     |          |       |      |        |       |         |     |
|   | Sulphate                               |     | EW154M-1 | 1.0   |      | 23.7   | mg/L  | INAB    |     |
| <b>Ion Chromatography</b>                     |  |     |          |       |      |        |       |         |     |
|   | Fluoride                               |     | EW137    | 0.1   |      | <0.1   | mg/L  | INAB    |     |
| <b>Metals-Dissolved</b>                       |  |     |          |       |      |        |       |         |     |
|   | Iron-Dissolved                         |     | EM130    | 20.0  |      | <20.0  | ug/L  | INAB    |     |
|   | Manganese-Dissolved                    |     | EM130    | 1.0   |      | 4.6    | ug/L  | INAB    |     |
|   | Boron-Dissolved                        |     | EM130    | 0.02  |      | <0.02  | mg/L  | INAB    |     |
|   | Cadmium-Dissolved                      |     | EM130    | 0.1   |      | <0.1   | ug/L  | INAB    |     |
|   | Calcium-Dissolved                      |     | EM130    | 1.0   |      | 39.4   | mg/L  | INAB    |     |
|   | Copper-Dissolved                       |     | EM130    | 0.003 |      | 0.012  | mg/L  | INAB    |     |
|   | Lead-Dissolved                         |     | EM130    | 0.3   |      | <0.3   | ug/L  | INAB    |     |
|   | Magnesium-Dissolved                    |     | EM130    | 0.3   |      | 8.4    | mg/L  | INAB    |     |
|   | Zinc-Dissolved                         |     | EM130    | 1.0   |      | 14.4   | ug/L  | INAB    |     |
|   | Mercury-Dissolved                      |     | EM130    | 0.02  |      | 0.08   | ug/L  | INAB    |     |
|   | Potassium-Dissolved                    |     | EM130    | 0.2   |      | 4.5    | mg/L  | INAB    |     |
|   | Sodium-Dissolved                       |     | EM130    | 0.5   |      | 14.0   | mg/L  | INAB    |     |
| <b>Metals-Total</b>                           |  |     |          |       |      |        |       |         |     |
|   | Chromium-Total                         |     | EM130    | 1.0   |      | <1.0   | ug/L  |         |     |
| <b>PhenolsTotal -Index (Sub1)</b>             |  |     |          |       |      |        |       |         |     |
|   | Phenols-Total                          | *   | Default  | 0.15  |      | <0.15  | mg/L  | YES     |     |
| <b>Residue on Evaporation (Tot Solids-TS)</b> |  |     |          |       |      |        |       |         |     |
|   | Residue on Evaporation (Tot Solids-TS) |     | EW060    | 10.0  |      | 200.0  | mg/L  |         |     |
| <b>SVOC (sub)</b>                             |  |     |          |       |      |        |       |         |     |
|   | 1,2,4-Trichlorobenzene                 | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|   | 1,2-Dichlorobenzene                    | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|   | 1,3-Dichlorobenzene                    | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|   | 1,4-Dichlorobenzene                    | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|   | 2,4,5-Trichlorophenol                  | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|   | 2,4,6-Trichlorophenol                  | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|   | 2,4-Dichlorophenol                     | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|   | 2,4-Dimethylphenol                     | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|   | 2,4-Dinitrotoluene                     | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|   | 2,6-Dinitrotoluene                     | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|   | 2-Chloronaphthalene                    | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|   | 2-Chlorophenol                         | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |

Signed : \_\_\_\_\_ 01/08/2014

**Technical Manager (or Deputy):** **Brendan Murray**

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DETAILED IN SCOPE REG NO.1117

|                     |   |                              |                  |
|---------------------|---|------------------------------|------------------|
| <b>Contact Name</b> | Joe Ferry   | <b>Report Number</b>         | <b>76870 - 1</b> |
| <b>Address</b>      | Donegal County Council<br>Donegal County Council Central<br>Laboratory. | <b>Sample Number</b>         | 76870/001        |
| <b>Tel No</b>       | 074-9122787 / 9176274   | <b>Date of Receipt</b>       | 03/07/2014       |
| <b>Fax No</b>       |   | <b>Date Started</b>          | 03/07/2014       |
| <b>Customer PO</b>  | 240518780   | <b>Received or Collected</b> | TNT              |
| <b>Quotation No</b> | QN002578  | <b>Condition on Receipt</b>  | Good             |
| <b>Customer Ref</b> | 3094-BH1  | <b>Date of Report</b>        | 01/08/2014       |
|                     |   | <b>Sample Type</b>           | Ground Waters    |

**CERTIFICATE OF ANALYSIS**

| TEST              | ANALYTE                     | SUB | METHOD  | LOQ | SPEC | RESULT | UNITS | ACCRED. | OOS |
|-------------------|-----------------------------|-----|---------|-----|------|--------|-------|---------|-----|
| <b>SVOC (sub)</b> |                             |     |         |     |      |        |       |         |     |
|                   | 2-Methylnaphthalene         | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | 2-Methylphenol              | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | 2-Nitrophenol               | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | 3&4-Methylphenol            | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | 4-Bromophenyl Phenyl Ether  | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | 4-Chloro-3-methylphenol     | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | 4-Chlorophenyl phenyl ether | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | 4-Nitrophenol               | *   | Default | 5.0 |      | <5.0   | ug/L  | YES     |     |
|                   | Acenaphthene                | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Acenaphthylene              | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Anthracene                  | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Benzo(a)anthracene          | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Benzo(a)pyrene              | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Benzo(b)fluoranthene        | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Benzo(g,h,i)perylene        | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Benzo(k)fluoranthene        | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Benzyl Butyl Phthalate      | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Bis(2-chloroethoxy)methane  | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Bis(2-chloroethyl)ether     | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Bis(2-chloroisopropyl)ether | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Bis(2-ethylhexyl)phthalate  | *   | Default | 5.0 |      | <5.0   | ug/L  | YES     |     |
|                   | Chrysene                    | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Dibenz(a,h)anthracene       | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Dibenzofuran                | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Diethylphthalate            | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Dimethylphthalate           | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | di-n-Butylphthalate         | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Di-n-octylphthalate         | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Diphenylamine               | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Fluoranthene                | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Fluorene                    | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Hexachlorobenzene           | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Hexachlorobutadiene         | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Hexachloroethane            | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Indeno(1,2,3-c,d)pyrene     | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Isophorone                  | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Naphthalene                 | *   | Default | 2.0 |      | <2.0   | ug/L  | YES     |     |

Signed :

01/08/2014

Technical Manager (or Deputy):

Brendan Murray

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|                     |   |                              |                  |
|---------------------|---|------------------------------|------------------|
| <b>Contact Name</b> | Joe Ferry   | <b>Report Number</b>         | <b>76870 - 1</b> |
| <b>Address</b>      | Donegal County Council<br>Donegal County Council Central<br>Laboratory. | <b>Sample Number</b>         | 76870/001        |
| <b>Tel No</b>       | 074-9122787 / 9176274   | <b>Date of Receipt</b>       | 03/07/2014       |
| <b>Fax No</b>       |   | <b>Date Started</b>          | 03/07/2014       |
| <b>Customer PO</b>  | 240518780   | <b>Received or Collected</b> | TNT              |
| <b>Quotation No</b> | QN002578  | <b>Condition on Receipt</b>  | Good             |
| <b>Customer Ref</b> | 3094-BH1  | <b>Date of Report</b>        | 01/08/2014       |
|                     |   | <b>Sample Type</b>           | Ground Waters    |

### CERTIFICATE OF ANALYSIS

| TEST   | ANALYTE                                | SUB | METHOD  | LOQ  | SPEC | RESULT | UNITS | ACCRED. | OOS |
|--|--|-----|---------|------|------|--------|-------|---------|-----|
| <b>SVOC (sub)</b>  |  |     |         |      |      |        |       |         |     |
|  | Nitrobenzene                           | *   | Default | 1.0  |      | <1.0   | ug/L  | YES     |     |
|  | n-Nitrosodi-n-propylamine              | *   | Default | 1.0  |      | <1.0   | ug/L  | YES     |     |
|  | Pentachlorophenol                      | *   | Default | 1.0  |      | <1.0   | ug/L  | YES     |     |
|  | Phenanthrene                           | *   | Default | 1.0  |      | <1.0   | ug/L  | YES     |     |
|  | Phenol                                 | *   | Default | 1.0  |      | <1.0   | ug/L  | YES     |     |
|  | Pyrene                                 | *   | Default | 1.0  |      | <1.0   | ug/L  | YES     |     |
| <b>Total Cyanide High (Sub)</b>  |  |     |         |      |      |        |       |         |     |
|  | Total Cyanide High                     | *   | Default | 10   |      | <10    | ug/L  | YES     |     |
| <b>VOC Full Suite</b>  |  |     |         |      |      |        |       |         |     |
|  | Epichlorohydrin                        |     | EO025   | 0.1  |      | 0.3    | ug/L  |         |     |
| <i>Due to quality failure for the following analytes - Allyl Chloride, 1,2,3, Trichloropropane - results are indicative for samples 76870/001-002.</i>                                 |  |     |         |      |      |        |       |         |     |
|  | Total THM (Calc)                       |     | EO025   | 5.0  |      | <5.0   | ug/L  |         |     |
|  | Dichlorodifluoromethane                |     | EO025   | 10.0 |      | <10.0  | ug/L  |         |     |
|  | Chloromethane                          |     | EO025   | 0.5  |      | <0.5   | ug/L  |         |     |
|  | Ethyl Chloride/Chloroethane            |     | EO025   | 0.5  |      | <0.5   | ug/L  |         |     |
|  | Vinyl Chloride                         |     | EO025   | 0.1  |      | <0.1   | ug/L  |         |     |
|  | Bromomethane                           |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|  | Trichloromonofluoromethane             |     | EO025   | 0.5  |      | <0.5   | ug/L  |         |     |
|  | Ethyl Ether/Diethyl Ether              |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|  | 1,1 Dichloroethene                     |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|  | Acetone                                |     | EO025   | 2.0  |      | <2.0   | ug/L  |         |     |
|  | Iodomethane/Methyl Iodide              |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|  | Carbon Disulphide                      |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|  | Allyl Chloride                         |     | EO025   | 0.5  |      | <0.5   | ug/L  |         |     |
| <i>Analyst QC Comment QC: Due to quality failure during this test run the following result is indicative Allyl Chloride, 1,2,3 Trichloropropane, 2,2 dichloropropane 76870/001-002</i> |  |     |         |      |      |        |       |         |     |
|  | Dichloromethane                        |     | EO025   | 5.0  |      | <5.0   | ug/L  | INAB    |     |
|  | Chlormethyl Cyanide/Chloroacetonitrile |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|  | Nitrobenzene                           |     | EO025   | 0.5  |      | <0.5   | ug/L  |         |     |
|  | Propanenitrile                         |     | EO025   | 10   |      | <10    | ug/L  |         |     |
|  | Hexachlorobutadiene                    |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|  | Trans-1,2 Dichloroethene               |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|  | MtBE                                   |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|  | 1,1-dichloroethane                     |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|  | 2,2-dichloropropane                    |     | EO025   | 0.5  |      | <0.5   | ug/L  |         |     |

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**Technical Manager (or Deputy):** **Brendan Murray**

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|                     |   |                              |                  |
|---------------------|---|------------------------------|------------------|
| <b>Contact Name</b> | Joe Ferry   | <b>Report Number</b>         | <b>76870 - 1</b> |
| <b>Address</b>      | Donegal County Council<br>Donegal County Council Central<br>Laboratory. | <b>Sample Number</b>         | 76870/001        |
| <b>Tel No</b>       | 074-9122787 / 9176274   | <b>Date of Receipt</b>       | 03/07/2014       |
| <b>Fax No</b>       |   | <b>Date Started</b>          | 03/07/2014       |
| <b>Customer PO</b>  | 240518780   | <b>Received or Collected</b> | TNT              |
| <b>Quotation No</b> | QN002578  | <b>Condition on Receipt</b>  | Good             |
| <b>Customer Ref</b> | 3094-BH1  | <b>Date of Report</b>        | 01/08/2014       |
|                     |   | <b>Sample Type</b>           | Ground Waters    |

**CERTIFICATE OF ANALYSIS**

| TEST                  | ANALYTE                   | SUB | METHOD | LOQ | SPEC | RESULT | UNITS | ACCRED. | OOS |
|-----------------------|---------------------------|-----|--------|-----|------|--------|-------|---------|-----|
| <b>VOC Full Suite</b> |                           |     |        |     |      |        |       |         |     |
|                       | cis-12 Dichloroethene     |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 2-Butanone                |     | EO025  | 5.0 |      | <5.0   | ug/L  |         |     |
|                       | Methyl Acrylate           |     | EO025  | 0.5 |      | 0.5    | ug/L  | INAB    |     |
|                       | Bromochloromethane        |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Methacrylonitrile         |     | EO025  | 5.0 |      | <5.0   | ug/L  |         |     |
|                       | Tetrahydrofuran           |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Chloroform                |     | EO025  | 1.0 |      | <1.0   | ug/L  | INAB    |     |
|                       | 1,1,1-trichloroethane     |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1-Chlorobutane            |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Carbon Tetrachloride      |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 11 Dichloropropene        |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Benzene                   |     | EO025  | 0.1 |      | <0.1   | ug/L  | INAB    |     |
|                       | 1,2 dicloroethane         |     | EO025  | 0.1 |      | <0.1   | ug/L  | INAB    |     |
|                       | Trichloroethene           |     | EO025  | 0.1 |      | <0.1   | ug/L  | INAB    |     |
|                       | 1,2-dichloropropane       |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Dibromomethane            |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Methyl Methacrylate       |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Bromodichloromethane      |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | 13 Dichloropropene,cis    |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | MIBK/4 Methyl 2 Pentanone |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | Toluene                   |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 13 Dichloropropene,trans  |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | Ethyl Methacrylate        |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | 112 Trichloroethane       |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Tetrachloroethene         |     | EO025  | 0.1 |      | <0.1   | ug/L  | INAB    |     |
|                       | 1,3-dichloropropane       |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 2-Hexanone                |     | EO025  | 1.0 |      | <1.0   | ug/L  | INAB    |     |
|                       | Dibromochloromethane      |     | EO025  | 1.0 |      | <1.0   | ug/L  | INAB    |     |
|                       | 1,2-dibromoethane         |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Chlorobenzene             |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,1,1,2-tetrachloroethane |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | Ethylbenzene              |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Xylene P&M                |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Xylene -o                 |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Styrene                   |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | Bromoform                 |     | EO025  | 1.0 |      | <1.0   | ug/L  | INAB    |     |
|                       | Isopropylbenzene          |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |

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01/08/2014

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Brendan Murray

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|                     |   |                              |                  |
|---------------------|---|------------------------------|------------------|
| <b>Contact Name</b> | Joe Ferry   | <b>Report Number</b>         | <b>76870 - 1</b> |
| <b>Address</b>      | Donegal County Council<br>Donegal County Council Central<br>Laboratory. | <b>Sample Number</b>         | 76870/001        |
| <b>Tel No</b>       | 074-9122787 / 9176274   | <b>Date of Receipt</b>       | 03/07/2014       |
| <b>Fax No</b>       |   | <b>Date Started</b>          | 03/07/2014       |
| <b>Customer PO</b>  | 240518780   | <b>Received or Collected</b> | TNT              |
| <b>Quotation No</b> | QN002578  | <b>Condition on Receipt</b>  | Good             |
| <b>Customer Ref</b> | 3094-BH1  | <b>Date of Report</b>        | 01/08/2014       |
|                     |   | <b>Sample Type</b>           | Ground Waters    |

### CERTIFICATE OF ANALYSIS

| TEST                  | ANALYTE                           | SUB | METHOD | LOQ | SPEC | RESULT | UNITS | ACCRED. | OOS |
|-----------------------|-----------------------------------|-----|--------|-----|------|--------|-------|---------|-----|
| <b>VOC Full Suite</b> |                                   |     |        |     |      |        |       |         |     |
|                       | Bromobenzene                      |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,1,2,2-tetrachloroethane         |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,2,3-trichloropropane            |     | EO025  | 2.0 |      | <2.0   | ug/L  |         |     |
|                       | Trans 1,4-Dichloro 2 Butene, tran |     | EO025  | 2.0 |      | <2.0   | ug/L  |         |     |
|                       | Propylbenzene                     |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 2-chlorotoluene                   |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 4-chlorotoluene                   |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,3,5-trimethylbenzene            |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Tert Butyl Benzene                |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,2,4-trimethylbenzene            |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | sec-butylbenzene                  |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,3-dichlorobenzene               |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | P Isopropyltoluene                |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,4-dichlorobenzene               |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,2-dichlorobenzene               |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | N Butyl Benzene                   |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Hexachloroethane                  |     | EO025  | 5.0 |      | <5.0   | ug/L  | INAB    |     |
|                       | 1,2-dibromo-3-chloropropane       |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | 1,2,4-trichlorobenzene            |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Naphthalene                       |     | EO025  | 2.0 |      | <2.0   | ug/L  |         |     |
|                       | 1,2,3-trichlorobenzene            |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |

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|                     |   |                              |                  |
|---------------------|---|------------------------------|------------------|
| <b>Contact Name</b> | Joe Ferry   | <b>Report Number</b>         | <b>76870 - 1</b> |
| <b>Address</b>      | Donegal County Council<br>Donegal County Council Central<br>Laboratory. | <b>Sample Number</b>         | 76870/002        |
| <b>Tel No</b>       | 074-9122787 / 9176274   | <b>Date of Receipt</b>       | 03/07/2014       |
| <b>Fax No</b>       |   | <b>Date Started</b>          | 03/07/2014       |
| <b>Customer PO</b>  | 240518780   | <b>Received or Collected</b> | TNT              |
| <b>Quotation No</b> | QN002578  | <b>Condition on Receipt</b>  | Good             |
| <b>Customer Ref</b> | 3095- BH3   | <b>Date of Report</b>        | 01/08/2014       |
|                     |   | <b>Sample Type</b>           | Ground Waters    |

**CERTIFICATE OF ANALYSIS**

| TEST  | ANALYTE                                | SUB | METHOD   | LOQ   | SPEC | RESULT | UNITS | ACCRED. | OOS |
|---|--|-----|----------|-------|------|--------|-------|---------|-----|
| <b>AQ2-UP2</b>                                |  |     |          |       |      |        |       |         |     |
|   | Sulphate                               |     | EW154M-1 | 1.0   |      | 56.5   | mg/L  | INAB    |     |
| <b>Ion Chromatography</b>                     |  |     |          |       |      |        |       |         |     |
|   | Fluoride                               |     | EW137    | 0.1   |      | <0.1   | mg/L  | INAB    |     |
| <b>Metals-Dissolved</b>                       |  |     |          |       |      |        |       |         |     |
|   | Iron-Dissolved                         |     | EM130    | 20.0  |      | <20.0  | ug/L  | INAB    |     |
|   | Manganese-Dissolved                    |     | EM130    | 1.0   |      | <1.0   | ug/L  | INAB    |     |
|   | Boron-Dissolved                        |     | EM130    | 0.02  |      | <0.02  | mg/L  | INAB    |     |
|   | Cadmium-Dissolved                      |     | EM130    | 0.1   |      | <0.1   | ug/L  | INAB    |     |
|   | Calcium-Dissolved                      |     | EM130    | 1.0   |      | 84.4   | mg/L  | INAB    |     |
|   | Copper-Dissolved                       |     | EM130    | 0.003 |      | 0.019  | mg/L  | INAB    |     |
|   | Lead-Dissolved                         |     | EM130    | 0.3   |      | <0.3   | ug/L  | INAB    |     |
|   | Magnesium-Dissolved                    |     | EM130    | 0.3   |      | 11.4   | mg/L  | INAB    |     |
|   | Zinc-Dissolved                         |     | EM130    | 1.0   |      | 10.3   | ug/L  | INAB    |     |
|   | Mercury-Dissolved                      |     | EM130    | 0.02  |      | 0.11   | ug/L  | INAB    |     |
|   | Potassium-Dissolved                    |     | EM130    | 0.2   |      | 2.6    | mg/L  | INAB    |     |
|   | Sodium-Dissolved                       |     | EM130    | 0.5   |      | 13.9   | mg/L  | INAB    |     |
| <b>Metals-Total</b>                           |  |     |          |       |      |        |       |         |     |
|   | Chromium-Total                         |     | EM130    | 1.0   |      | <1.0   | ug/L  |         |     |
| <b>PhenolsTotal -Index (Sub1)</b>             |  |     |          |       |      |        |       |         |     |
|   | Phenols-Total                          | *   | Default  | 0.15  |      | <0.15  | mg/L  | YES     |     |
| <b>Residue on Evaporation (Tot Solids-TS)</b> |  |     |          |       |      |        |       |         |     |
|   | Residue on Evaporation (Tot Solids-TS) |     | EW060    | 10.0  |      | 348.0  | mg/L  |         |     |
| <b>SVOC (sub)</b>                             |  |     |          |       |      |        |       |         |     |
|   | 1,2,4-Trichlorobenzene                 | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|   | 1,2-Dichlorobenzene                    | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|   | 1,3-Dichlorobenzene                    | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|   | 1,4-Dichlorobenzene                    | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|   | 2,4,5-Trichlorophenol                  | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|   | 2,4,6-Trichlorophenol                  | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|   | 2,4-Dichlorophenol                     | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|   | 2,4-Dimethylphenol                     | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|   | 2,4-Dinitrotoluene                     | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|   | 2,6-Dinitrotoluene                     | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|   | 2-Chloronaphthalene                    | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|   | 2-Chlorophenol                         | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|   | 2-Methylnaphthalene                    | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |

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| <b>Tel No</b>       | 074-9122787 / 9176274   | <b>Date of Receipt</b>       | 03/07/2014    |
| <b>Fax No</b>       |   | <b>Date Started</b>          | 03/07/2014    |
| <b>Customer PO</b>  | 240518780   | <b>Received or Collected</b> | TNT           |
| <b>Quotation No</b> | QN002578  | <b>Condition on Receipt</b>  | Good          |
| <b>Customer Ref</b> | 3095- BH3   | <b>Date of Report</b>        | 01/08/2014    |
|                     |   | <b>Sample Type</b>           | Ground Waters |

**CERTIFICATE OF ANALYSIS**

| TEST              | ANALYTE                     | SUB | METHOD  | LOQ | SPEC | RESULT | UNITS | ACCRED. | OOS |
|-------------------|-----------------------------|-----|---------|-----|------|--------|-------|---------|-----|
| <b>SVOC (sub)</b> |                             |     |         |     |      |        |       |         |     |
|                   | 2-Methylphenol              | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | 2-Nitrophenol               | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | 3&4-Methylphenol            | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | 4-Bromophenyl Phenyl Ether  | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | 4-Chloro-3-methylphenol     | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | 4-Chlorophenyl phenyl ether | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | 4-Nitrophenol               | *   | Default | 5.0 |      | <5.0   | ug/L  | YES     |     |
|                   | Acenaphthene                | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Acenaphthylene              | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Anthracene                  | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Benzo(a)anthracene          | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Benzo(a)pyrene              | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Benzo(b)fluoranthene        | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Benzo(g,h,i)perylene        | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Benzo(k)fluoranthene        | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Benzyl Butyl Phthalate      | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Bis(2-chloroethoxy)methane  | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Bis(2-chloroethyl)ether     | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Bis(2-chloroisopropyl)ether | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Bis(2-ethylhexyl)phthalate  | *   | Default | 5.0 |      | <5.0   | ug/L  | YES     |     |
|                   | Chrysene                    | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Dibenz(a,h)anthracene       | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Dibenzofuran                | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Diethylphthalate            | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Dimethylphthalate           | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | di-n-Butylphthalate         | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Di-n-octylphthalate         | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Diphenylamine               | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Fluoranthene                | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Fluorene                    | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Hexachlorobenzene           | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Hexachlorobutadiene         | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Hexachloroethane            | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Indeno(1,2,3-c,d)pyrene     | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Isophorone                  | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Naphthalene                 | *   | Default | 2.0 |      | <2.0   | ug/L  | YES     |     |
|                   | Nitrobenzene                | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |

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NOTES

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|                     |   |                              |                  |
|---------------------|---|------------------------------|------------------|
| <b>Contact Name</b> | Joe Ferry   | <b>Report Number</b>         | <b>76870 - 1</b> |
| <b>Address</b>      | Donegal County Council<br>Donegal County Council Central<br>Laboratory. | <b>Sample Number</b>         | 76870/002        |
| <b>Tel No</b>       | 074-9122787 / 9176274   | <b>Date of Receipt</b>       | 03/07/2014       |
| <b>Fax No</b>       |   | <b>Date Started</b>          | 03/07/2014       |
| <b>Customer PO</b>  | 240518780   | <b>Received or Collected</b> | TNT              |
| <b>Quotation No</b> | QN002578  | <b>Condition on Receipt</b>  | Good             |
| <b>Customer Ref</b> | 3095- BH3   | <b>Date of Report</b>        | 01/08/2014       |
|                     |   | <b>Sample Type</b>           | Ground Waters    |

### CERTIFICATE OF ANALYSIS

| TEST                            | ANALYTE                                | SUB | METHOD  | LOQ  | SPEC | RESULT | UNITS | ACCRED. | OOS |
|---------------------------------|--|-----|---------|------|------|--------|-------|---------|-----|
| <b>SVOC (sub)</b>               |  |     |         |      |      |        |       |         |     |
|                                 | n-Nitrosodi-n-propylamine              | *   | Default | 1.0  |      | <1.0   | ug/L  | YES     |     |
|                                 | Pentachlorophenol                      | *   | Default | 1.0  |      | <1.0   | ug/L  | YES     |     |
|                                 | Phenanthrene                           | *   | Default | 1.0  |      | <1.0   | ug/L  | YES     |     |
|                                 | Phenol                                 | *   | Default | 1.0  |      | <1.0   | ug/L  | YES     |     |
|                                 | Pyrene                                 | *   | Default | 1.0  |      | <1.0   | ug/L  | YES     |     |
| <b>Total Cyanide High (Sub)</b> |  |     |         |      |      |        |       |         |     |
|                                 | Total Cyanide High                     | *   | Default | 10   |      | <10    | ug/L  | YES     |     |
| <b>VOC Full Suite</b>           |  |     |         |      |      |        |       |         |     |
|                                 | Epichlorohydrin                        |     | EO025   | 0.1  |      | 0.5    | ug/L  |         |     |
|                                 | Total THM (Calc)                       |     | EO025   | 5.0  |      | <5.0   | ug/L  |         |     |
|                                 | Dichlorodifluoromethane                |     | EO025   | 10.0 |      | <10.0  | ug/L  |         |     |
|                                 | Chloromethane                          |     | EO025   | 0.5  |      | <0.5   | ug/L  |         |     |
|                                 | Ethyl Chloride/Chloroethane            |     | EO025   | 0.5  |      | <0.5   | ug/L  |         |     |
|                                 | Vinyl Chloride                         |     | EO025   | 0.1  |      | <0.1   | ug/L  |         |     |
|                                 | Bromomethane                           |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                                 | Trichloromonofluoromethane             |     | EO025   | 0.5  |      | <0.5   | ug/L  |         |     |
|                                 | Ethyl Ether/Diethyl Ether              |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                                 | 1,1 Dichloroethene                     |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                                 | Acetone                                |     | EO025   | 2.0  |      | <2.0   | ug/L  |         |     |
|                                 | Iodomethane/Methyl Iodide              |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                                 | Carbon Disulphide                      |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                                 | Allyl Chloride                         |     | EO025   | 0.5  |      | <0.5   | ug/L  |         |     |
|                                 | Dichloromethane                        |     | EO025   | 5.0  |      | <5.0   | ug/L  | INAB    |     |
|                                 | Chlormethyl Cyanide/Chloroacetonitrile |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                                 | Nitrobenzene                           |     | EO025   | 0.5  |      | <0.5   | ug/L  |         |     |
|                                 | Propanenitrile                         |     | EO025   | 10   |      | <10    | ug/L  |         |     |
|                                 | Hexachlorobutadiene                    |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                                 | Trans-1,2 Dichloroethene               |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                                 | MtBE                                   |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                                 | 1,1-dichloroethane                     |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                                 | 2,2-dichloropropane                    |     | EO025   | 0.5  |      | <0.5   | ug/L  |         |     |
|                                 | cis-1,2 Dichloroethene                 |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                                 | 2-Butanone                             |     | EO025   | 5.0  |      | <5.0   | ug/L  |         |     |
|                                 | Methyl Acrylate                        |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                                 | Bromochloromethane                     |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                                 | Methacrylonitrile                      |     | EO025   | 5.0  |      | <5.0   | ug/L  |         |     |

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|                     |   |                              |               |
|---------------------|---|------------------------------|---------------|
| <b>Contact Name</b> | Joe Ferry   | <b>Report Number</b>         | 76870 - 1     |
| <b>Address</b>      | Donegal County Council<br>Donegal County Council Central<br>Laboratory. | <b>Sample Number</b>         | 76870/002     |
| <b>Tel No</b>       | 074-9122787 / 9176274   | <b>Date of Receipt</b>       | 03/07/2014    |
| <b>Fax No</b>       |   | <b>Date Started</b>          | 03/07/2014    |
| <b>Customer PO</b>  | 240518780   | <b>Received or Collected</b> | TNT           |
| <b>Quotation No</b> | QN002578  | <b>Condition on Receipt</b>  | Good          |
| <b>Customer Ref</b> | 3095- BH3   | <b>Date of Report</b>        | 01/08/2014    |
|                     |   | <b>Sample Type</b>           | Ground Waters |

**CERTIFICATE OF ANALYSIS**

| TEST                  | ANALYTE                          | SUB | METHOD | LOQ | SPEC | RESULT | UNITS | ACCRED. | OOS |
|-----------------------|----------------------------------|-----|--------|-----|------|--------|-------|---------|-----|
| <b>VOC Full Suite</b> |                                  |     |        |     |      |        |       |         |     |
|                       | Tetrahydrofuran                  |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Chloroform                       |     | EO025  | 1.0 |      | <1.0   | ug/L  | INAB    |     |
|                       | 1,1,1-trichloroethane            |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1-Chlorobutane                   |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Carbon Tetrachloride             |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 11 Dichloropropene               |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Benzene                          |     | EO025  | 0.1 |      | <0.1   | ug/L  | INAB    |     |
|                       | 1,2 dicloroethane                |     | EO025  | 0.1 |      | <0.1   | ug/L  | INAB    |     |
|                       | Trichloroethene                  |     | EO025  | 0.1 |      | <0.1   | ug/L  | INAB    |     |
|                       | 1,2-dichloropropane              |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Dibromomethane                   |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Methyl Methacrylate              |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Bromodichloromethane             |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | 13 Dichloropropene,cis           |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | MIBK/4 Methyl 2 Pentanone        |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | Toluene                          |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 13 Dichloropropene,trans         |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | Ethyl Methacrylate               |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | 112 Trichloroethane              |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Tetrachloroethene                |     | EO025  | 0.1 |      | <0.1   | ug/L  | INAB    |     |
|                       | 1,3-dichloropropane              |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 2-Hexanone                       |     | EO025  | 1.0 |      | <1.0   | ug/L  | INAB    |     |
|                       | Dibromochloromethane             |     | EO025  | 1.0 |      | <1.0   | ug/L  | INAB    |     |
|                       | 1,2-dibromoethane                |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Chlorobenzene                    |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,1,1,2-tetrachloroethane        |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | Ethylbenzene                     |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Xylene P&M                       |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Xylene -o                        |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Styrene                          |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | Bromoform                        |     | EO025  | 1.0 |      | <1.0   | ug/L  | INAB    |     |
|                       | Isopropylbenzene                 |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Bromobenzene                     |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,1,2,2-tetrachloroethane        |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,2,3-trichloropropane           |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | Trans 14 Dichloro 2 Butene, tran |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | Propylbenzene                    |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |

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01/08/2014

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|                     |   |                              |               |
|---------------------|---|------------------------------|---------------|
| <b>Contact Name</b> | Joe Ferry   | <b>Report Number</b>         | 76870 - 1     |
| <b>Address</b>      | Donegal County Council<br>Donegal County Council Central<br>Laboratory. | <b>Sample Number</b>         | 76870/002     |
| <b>Tel No</b>       | 074-9122787 / 9176274   | <b>Date of Receipt</b>       | 03/07/2014    |
| <b>Fax No</b>       |   | <b>Date Started</b>          | 03/07/2014    |
| <b>Customer PO</b>  | 240518780   | <b>Received or Collected</b> | TNT           |
| <b>Quotation No</b> | QN002578  | <b>Condition on Receipt</b>  | Good          |
| <b>Customer Ref</b> | 3095- BH3   | <b>Date of Report</b>        | 01/08/2014    |
|                     |   | <b>Sample Type</b>           | Ground Waters |

### CERTIFICATE OF ANALYSIS

| TEST                  | ANALYTE                     | SUB | METHOD | LOQ | SPEC | RESULT | UNITS | ACCRED. | OOS |
|-----------------------|-----------------------------|-----|--------|-----|------|--------|-------|---------|-----|
| <b>VOC Full Suite</b> |                             |     |        |     |      |        |       |         |     |
|                       | 2-chlorotoluene             |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 4-chlorotoluene             |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,3,5-trimethylbenzene      |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Tert Butyl Benzene          |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,2,4-trimethylbenzene      |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | sec-butylbenzene            |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,3-dichlorobenzene         |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | P Isopropyltoluene          |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,4-dichlorobenzene         |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,2-dichlorobenzene         |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | N Butyl Benzene             |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Hexachloroethane            |     | EO025  | 5.0 |      | <5.0   | ug/L  | INAB    |     |
|                       | 1,2-dibromo-3-chloropropane |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | 1,2,4-trichlorobenzene      |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Naphthalene                 |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | 1,2,3-trichlorobenzene      |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |

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|                     |   |                              |                  |
|---------------------|---|------------------------------|------------------|
| <b>Contact Name</b> | Joe Ferry   | <b>Report Number</b>         | <b>76867 - 1</b> |
| <b>Address</b>      | Donegal County Council<br>Donegal County Council Central<br>Laboratory. | <b>Sample Number</b>         | 76867/001        |
| <b>Tel No</b>       | 074-9122787 / 9176274   | <b>Date of Receipt</b>       | 03/07/2014       |
| <b>Fax No</b>       |   | <b>Date Started</b>          | 03/07/2014       |
| <b>Customer PO</b>  | 240518780   | <b>Received or Collected</b> | TNT              |
| <b>Quotation No</b> | QN002578  | <b>Condition on Receipt</b>  | Good             |
| <b>Customer Ref</b> | 3089 - SW3  | <b>Date of Report</b>        | 01/08/2014       |
|                     |   | <b>Sample Type</b>           | Surface Waters   |

### CERTIFICATE OF ANALYSIS

| TEST                              | ANALYTE                    | SUB | METHOD   | LOQ   | SPEC | RESULT | UNITS | ACCRED. | OOS |
|-----------------------------------|----------------------------|-----|----------|-------|------|--------|-------|---------|-----|
| <b>AQ2-UP2</b>                    |                            |     |          |       |      |        |       |         |     |
|                                   | Sulphate                   |     | EW154M-1 | 1.0   |      | 7.7    | mg/L  | INAB    |     |
| <b>Metals-Total</b>               |                            |     |          |       |      |        |       |         |     |
|                                   | Chromium-Total             |     | EM130    | 1.0   |      | <1.0   | ug/L  |         |     |
| <b>Metals-Trace</b>               |                            |     |          |       |      |        |       |         |     |
|                                   | Cadmium                    |     | EM130    | 0.1   |      | <0.1   | ug/L  | INAB    |     |
|                                   | Iron                       |     | EM130    | 20.0  |      | 757.0  | ug/L  | INAB    |     |
|                                   | Mercury                    |     | EM130    | 0.02  |      | 0.04   | ug/L  | INAB    |     |
|                                   | Manganese                  |     | EM130    | 1.0   |      | 86.4   | ug/L  | INAB    |     |
|                                   | Lead                       |     | EM130    | 0.3   |      | <0.3   | ug/L  | INAB    |     |
|                                   | Zinc                       |     | EM130    | 1.0   |      | 13.4   | ug/L  | INAB    |     |
|                                   | Calcium                    |     | EM130    | 1.0   |      | 16.3   | mg/L  | INAB    |     |
|                                   | Copper                     |     | EM130    | 0.003 |      | <0.003 | mg/L  | INAB    |     |
|                                   | Potassium                  |     | EM130    | 0.2   |      | 6.5    | mg/L  | INAB    |     |
|                                   | Magnesium                  |     | EM130    | 0.3   |      | 2.8    | mg/L  | INAB    |     |
|                                   | Sodium                     |     | EM130    | 0.5   |      | 10.6   | mg/L  | INAB    |     |
| <b>PhenolsTotal -Index (Sub1)</b> |                            |     |          |       |      |        |       |         |     |
|                                   | Phenols-Total              | *   | Default  | 0.15  |      | <0.15  | mg/L  | YES     |     |
| <b>SVOC (sub)</b>                 |                            |     |          |       |      |        |       |         |     |
|                                   | 1,2,4-Trichlorobenzene     | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                                   | 1,2-Dichlorobenzene        | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                                   | 1,3-Dichlorobenzene        | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                                   | 1,4-Dichlorobenzene        | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                                   | 2,4,5-Trichlorophenol      | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                                   | 2,4,6-Trichlorophenol      | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                                   | 2,4-Dichlorophenol         | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                                   | 2,4-Dimethylphenol         | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                                   | 2,4-Dinitrotoluene         | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                                   | 2,6-Dinitrotoluene         | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                                   | 2-Chloronaphthalene        | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                                   | 2-Chlorophenol             | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                                   | 2-Methylnaphthalene        | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                                   | 2-Methylphenol             | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                                   | 2-Nitrophenol              | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                                   | 3&4-Methylphenol           | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                                   | 4-Bromophenyl Phenyl Ether | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |

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**Technical Manager (or Deputy):** **Brendan Murray**

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|                     |   |                              |                |
|---------------------|---|------------------------------|----------------|
| <b>Contact Name</b> | Joe Ferry   | <b>Report Number</b>         | 76867 - 1      |
| <b>Address</b>      | Donegal County Council<br>Donegal County Council Central<br>Laboratory. | <b>Sample Number</b>         | 76867/001      |
| <b>Tel No</b>       | 074-9122787 / 9176274   | <b>Date of Receipt</b>       | 03/07/2014     |
| <b>Fax No</b>       |   | <b>Date Started</b>          | 03/07/2014     |
| <b>Customer PO</b>  | 240518780   | <b>Received or Collected</b> | TNT            |
| <b>Quotation No</b> | QN002578  | <b>Condition on Receipt</b>  | Good           |
| <b>Customer Ref</b> | 3089 - SW3  | <b>Date of Report</b>        | 01/08/2014     |
|                     |   | <b>Sample Type</b>           | Surface Waters |

### CERTIFICATE OF ANALYSIS

| TEST              | ANALYTE                     | SUB | METHOD  | LOQ | SPEC | RESULT | UNITS | ACCRED. | OOS |
|-------------------|-----------------------------|-----|---------|-----|------|--------|-------|---------|-----|
| <b>SVOC (sub)</b> |                             |     |         |     |      |        |       |         |     |
|                   | 4-Chloro-3-methylphenol     | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | 4-Chlorophenyl phenyl ether | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | 4-Nitrophenol               | *   | Default | 5.0 |      | <5.0   | ug/L  | YES     |     |
|                   | Acenaphthene                | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Acenaphthylene              | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Anthracene                  | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Benzo(a)anthracene          | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Benzo(a)pyrene              | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Benzo(b)fluoranthene        | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Benzo(g,h,i)perylene        | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Benzo(k)fluoranthene        | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Benzyl Butyl Phthalate      | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Bis(2-chloroethoxy)methane  | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Bis(2-chloroethyl)ether     | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Bis(2-chloroisopropyl)ether | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Bis(2-ethylhexyl)phthalate  | *   | Default | 5.0 |      | <5.0   | ug/L  | YES     |     |
|                   | Chrysene                    | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Dibenz(a,h)anthracene       | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Dibenzofuran                | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Diethylphthalate            | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Dimethylphthalate           | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | di-n-Butylphthalate         | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Di-n-octylphthalate         | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Diphenylamine               | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Fluoranthene                | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Fluorene                    | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Hexachlorobenzene           | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Hexachlorobutadiene         | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Hexachloroethane            | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Indeno(1,2,3-c,d)pyrene     | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Isophorone                  | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Naphthalene                 | *   | Default | 2.0 |      | <2.0   | ug/L  | YES     |     |
|                   | Nitrobenzene                | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | n-Nitrosodi-n-propylamine   | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Pentachlorophenol           | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Phenanthrene                | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Phenol                      | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |

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|                     |   |                              |                  |
|---------------------|---|------------------------------|------------------|
| <b>Contact Name</b> | Joe Ferry   | <b>Report Number</b>         | <b>76867 - 1</b> |
| <b>Address</b>      | Donegal County Council<br>Donegal County Council Central<br>Laboratory. | <b>Sample Number</b>         | 76867/001        |
| <b>Tel No</b>       | 074-9122787 / 9176274   | <b>Date of Receipt</b>       | 03/07/2014       |
| <b>Fax No</b>       |   | <b>Date Started</b>          | 03/07/2014       |
| <b>Customer PO</b>  | 240518780   | <b>Received or Collected</b> | TNT              |
| <b>Quotation No</b> | QN002578  | <b>Condition on Receipt</b>  | Good             |
| <b>Customer Ref</b> | 3089 - SW3  | <b>Date of Report</b>        | 01/08/2014       |
|                     |   | <b>Sample Type</b>           | Surface Waters   |

**CERTIFICATE OF ANALYSIS**

| TEST  | ANALYTE                                | SUB | METHOD  | LOQ  | SPEC | RESULT | UNITS | ACCRED. | OOS |
|---|--|-----|---------|------|------|--------|-------|---------|-----|
| <b>SVOC (sub)</b>   |  |     |         |      |      |        |       |         |     |
|   | Pyrene                                 | *   | Default | 1.0  |      | <1.0   | ug/L  | YES     |     |
| <b>VOC Full Suite</b>   |  |     |         |      |      |        |       |         |     |
|   | Dichlorodifluoromethane                |     | EO025   | 10.0 |      | <10.0  | ug/L  |         |     |
| <i>Due to quality failure for the following analytes - Allyl Chloride, 1,2,3, Trichloropropane - results are indicative for samples 76867/001-005.</i>  |  |     |         |      |      |        |       |         |     |
|   | Chloromethane                          |     | EO025   | 0.5  |      | <0.5   | ug/L  |         |     |
|   | Ethyl Chloride/Chloroethane            |     | EO025   | 0.5  |      | <0.5   | ug/L  |         |     |
|   | Vinyl Chloride                         |     | EO025   | 0.5  |      | <0.5   | ug/L  |         |     |
|   | Bromomethane                           |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|   | Trichloromonofluoromethane             |     | EO025   | 0.5  |      | <0.5   | ug/L  |         |     |
|   | Ethyl Ether/Diethyl Ether              |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|   | 1,1 Dichloroethene                     |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|   | Acetone                                |     | EO025   | 2.0  |      | <2.0   | ug/L  |         |     |
|   | Iodomethane/Methyl Iodide              |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|   | Carbon Disulphide                      |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|   | Allyl Chloride                         |     | EO025   | 0.5  |      | <0.5   | ug/L  |         |     |
| <i>Analyst QC Comment QC:Due to quality failure during this test run the following result is indicative for samples Allyl Chloride, 1,2,3 Trichloropropane, 2,2 dichloropropane 76867/001-005</i> |  |     |         |      |      |        |       |         |     |
|   | Dichloromethane                        |     | EO025   | 5.0  |      | <5.0   | ug/L  | INAB    |     |
|   | Chlormethyl Cyanide/Chloroacetonitrile |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|   | Nitrobenzene                           |     | EO025   | 0.5  |      | <0.5   | ug/L  |         |     |
|   | Propanenitrile                         |     | EO025   | 10.0 |      | <10.0  | ug/L  |         |     |
|   | Hexachlorobutadiene                    |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|   | Trans-1,2 Dichloroethene               |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|   | MtBE                                   |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|   | 1,1-dichloroethane                     |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|   | 2,2-dichloropropane                    |     | EO025   | 0.5  |      | <0.5   | ug/L  |         |     |
|   | cis-1,2 Dichloroethene                 |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|   | 2-Butanone                             |     | EO025   | 5.0  |      | <5.0   | ug/L  |         |     |
|   | Methyl Acrylate                        |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|   | Bromochloromethane                     |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|   | Methacrylonitrile                      |     | EO025   | 5.0  |      | <5.0   | ug/L  |         |     |
|   | Tetrahydrofuran                        |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|   | Chloroform                             |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|   | 1,1,1-trichloroethane                  |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|   | 1-Chlorobutane                         |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|   | Carbon Tetrachloride                   |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |

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|                     |   |                              |                  |
|---------------------|---|------------------------------|------------------|
| <b>Contact Name</b> | Joe Ferry   | <b>Report Number</b>         | <b>76867 - 1</b> |
| <b>Address</b>      | Donegal County Council<br>Donegal County Council Central<br>Laboratory. | <b>Sample Number</b>         | 76867/001        |
| <b>Tel No</b>       | 074-9122787 / 9176274   | <b>Date of Receipt</b>       | 03/07/2014       |
| <b>Fax No</b>       |   | <b>Date Started</b>          | 03/07/2014       |
| <b>Customer PO</b>  | 240518780   | <b>Received or Collected</b> | TNT              |
| <b>Quotation No</b> | QN002578  | <b>Condition on Receipt</b>  | Good             |
| <b>Customer Ref</b> | 3089 - SW3  | <b>Date of Report</b>        | 01/08/2014       |
|                     |   | <b>Sample Type</b>           | Surface Waters   |

### CERTIFICATE OF ANALYSIS

| TEST                  | ANALYTE                          | SUB | METHOD | LOQ | SPEC | RESULT | UNITS | ACCRED. | OOS |
|-----------------------|----------------------------------|-----|--------|-----|------|--------|-------|---------|-----|
| <b>VOC Full Suite</b> |                                  |     |        |     |      |        |       |         |     |
| 11                    | Dichloropropene                  |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Benzene                          |     | EO025  | 0.1 |      | <0.1   | ug/L  | INAB    |     |
|                       | 1,2 dichloroethane               |     | EO025  | 0.1 |      | <0.1   | ug/L  | INAB    |     |
|                       | Trichloroethene                  |     | EO025  | 0.1 |      | <0.1   | ug/L  | INAB    |     |
|                       | 1,2-dichloropropane              |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Dibromomethane                   |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Methyl Methacrylate              |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Bromodichloromethane             |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
| 13                    | Dichloropropene,cis              |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | MIBK/4 Methyl 2 Pentanone        |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | Toluene                          |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
| 13                    | Dichloropropene,trans            |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | Ethyl Methacrylate               |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
| 112                   | Trichloroethane                  |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Tetrachloroethene                |     | EO025  | 0.1 |      | <0.1   | ug/L  | INAB    |     |
|                       | 1,3-dichloropropane              |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 2-Hexanone                       |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Dibromochloromethane             |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,2-dibromoethane                |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Chlorobenzene                    |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,1,1,2-tetrachloroethane        |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | Ethylbenzene                     |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Xylene P&M                       |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Xylene -o                        |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Styrene                          |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | Bromoforn                        |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Isopropylbenzene                 |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Bromobenzene                     |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,1,1,2-tetrachloroethane        |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,2,3-trichloropropane           |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | Trans 14 Dichloro 2 Butene, tran |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | Propylbenzene                    |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 2-chlorotoluene                  |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 4-chlorotoluene                  |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,3,5-trimethylbenzene           |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Tert Butyl Benzene               |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,2,4-trimethylbenzene           |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |

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**Technical Manager (or Deputy):** **Brendan Murray**

**NOTES**

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|                     |   |                              |                |
|---------------------|---|------------------------------|----------------|
| <b>Contact Name</b> | Joe Ferry   | <b>Report Number</b>         | 76867 - 1      |
| <b>Address</b>      | Donegal County Council<br>Donegal County Council Central<br>Laboratory. | <b>Sample Number</b>         | 76867/001      |
| <b>Tel No</b>       | 074-9122787 / 9176274   | <b>Date of Receipt</b>       | 03/07/2014     |
| <b>Fax No</b>       |   | <b>Date Started</b>          | 03/07/2014     |
| <b>Customer PO</b>  | 240518780   | <b>Received or Collected</b> | TNT            |
| <b>Quotation No</b> | QN002578  | <b>Condition on Receipt</b>  | Good           |
| <b>Customer Ref</b> | 3089 - SW3  | <b>Date of Report</b>        | 01/08/2014     |
|                     |   | <b>Sample Type</b>           | Surface Waters |

**CERTIFICATE OF ANALYSIS**

| TEST                  | ANALYTE                     | SUB | METHOD | LOQ | SPEC | RESULT | UNITS | ACCRED. | OOS |
|-----------------------|-----------------------------|-----|--------|-----|------|--------|-------|---------|-----|
| <b>VOC Full Suite</b> |                             |     |        |     |      |        |       |         |     |
|                       | sec-butylbenzene            |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,3-dichlorobenzene         |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | P Isopropyltoluene          |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,4-dichlorobenzene         |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,2-dichlorobenzene         |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | N Butyl Benzene             |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Hexachloroethane            |     | EO025  | 5.0 |      | <5.0   | ug/L  | INAB    |     |
|                       | 1,2-dibromo-3-chloropropane |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | 1,2,4-trichlorobenzene      |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Naphthalene                 |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | 1,2,3-trichlorobenzene      |     | EO025  | 0.5 |      | 0.6    | ug/L  | INAB    |     |

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|                     |   |                              |                  |
|---------------------|---|------------------------------|------------------|
| <b>Contact Name</b> | Joe Ferry   | <b>Report Number</b>         | <b>76867 - 1</b> |
| <b>Address</b>      | Donegal County Council<br>Donegal County Council Central<br>Laboratory. | <b>Sample Number</b>         | 76867/002        |
| <b>Tel No</b>       | 074-9122787 / 9176274   | <b>Date of Receipt</b>       | 03/07/2014       |
| <b>Fax No</b>       |   | <b>Date Started</b>          | 03/07/2014       |
| <b>Customer PO</b>  | 240518780   | <b>Received or Collected</b> | TNT              |
| <b>Quotation No</b> | QN002578  | <b>Condition on Receipt</b>  | Good             |
| <b>Customer Ref</b> | 3090 - SW4  | <b>Date of Report</b>        | 01/08/2014       |
|                     |   | <b>Sample Type</b>           | Surface Waters   |

### CERTIFICATE OF ANALYSIS

| TEST                              | ANALYTE                                | SUB | METHOD   | LOQ   | SPEC | RESULT | UNITS | ACCRED. | OOS |
|-----------------------------------|--|-----|----------|-------|------|--------|-------|---------|-----|
| <b>AQ2-UP2</b>                    |  |     |          |       |      |        |       |         |     |
|                                   | Sulphate                               |     | EW154M-1 | 1.0   |      | 25.4   | mg/L  | INAB    |     |
| <b>Metals-Trace</b>               |  |     |          |       |      |        |       |         |     |
|                                   | Cadmium                                |     | EM130    | 0.1   |      | <0.1   | ug/L  | INAB    |     |
|                                   | Iron                                   |     | EM130    | 20.0  |      | 389.1  | ug/L  | INAB    |     |
|                                   | Mercury                                |     | EM130    | 0.02  |      | 0.14   | ug/L  | INAB    |     |
|                                   | Manganese                              |     | EM130    | 1.0   |      | 866.8  | ug/L  | INAB    |     |
|                                   | Lead                                   |     | EM130    | 0.3   |      | <0.3   | ug/L  | INAB    |     |
|                                   | Zinc                                   |     | EM130    | 1.0   |      | 5.8    | ug/L  | INAB    |     |
|                                   | Calcium                                |     | EM130    | 1.0   |      | 91.6   | mg/L  | INAB    |     |
|                                   | Copper                                 |     | EM130    | 0.003 |      | 0.003  | mg/L  | INAB    |     |
|                                   | Potassium                              |     | EM130    | 0.2   |      | 91.5   | mg/L  | INAB    |     |
|                                   | Magnesium                              |     | EM130    | 0.3   |      | 47.6   | mg/L  | INAB    |     |
|                                   | Sodium                                 |     | EM130    | 0.5   |      | 131.8  | mg/L  | INAB    |     |
| <b>PhenolsTotal -Index (Sub1)</b> |  |     |          |       |      |        |       |         |     |
|                                   | Phenols-Total                          | *   | Default  | 0.15  |      | <0.15  | mg/L  | YES     |     |
| <b>VOC Full Suite</b>             |  |     |          |       |      |        |       |         |     |
|                                   | Dichlorodifluoromethane                |     | EO025    | 10.0  |      | <10.0  | ug/L  |         |     |
|                                   | Chloromethane                          |     | EO025    | 0.5   |      | <0.5   | ug/L  |         |     |
|                                   | Ethyl Chloride/Chloroethane            |     | EO025    | 0.5   |      | <0.5   | ug/L  |         |     |
|                                   | Vinyl Chloride                         |     | EO025    | 0.5   |      | <0.5   | ug/L  |         |     |
|                                   | Bromomethane                           |     | EO025    | 0.5   |      | <0.5   | ug/L  | INAB    |     |
|                                   | Trichloromonofluoromethane             |     | EO025    | 0.5   |      | <0.5   | ug/L  |         |     |
|                                   | Ethyl Ether/Diethyl Ether              |     | EO025    | 0.5   |      | <0.5   | ug/L  | INAB    |     |
|                                   | 1,1 Dichloroethene                     |     | EO025    | 0.5   |      | <0.5   | ug/L  | INAB    |     |
|                                   | Acetone                                |     | EO025    | 2.0   |      | <2.0   | ug/L  |         |     |
|                                   | Iodomethane/Methyl Iodide              |     | EO025    | 0.5   |      | <0.5   | ug/L  | INAB    |     |
|                                   | Carbon Disulphide                      |     | EO025    | 0.5   |      | <0.5   | ug/L  | INAB    |     |
|                                   | Allyl Chloride                         |     | EO025    | 0.5   |      | <0.5   | ug/L  |         |     |
|                                   | Dichloromethane                        |     | EO025    | 5.0   |      | <5.0   | ug/L  | INAB    |     |
|                                   | Chlormethyl Cyanide/Chloroacetonitrile |     | EO025    | 0.5   |      | <0.5   | ug/L  | INAB    |     |
|                                   | Nitrobenzene                           |     | EO025    | 0.5   |      | <0.5   | ug/L  |         |     |
|                                   | Propanenitrile                         |     | EO025    | 10.0  |      | <10.0  | ug/L  |         |     |
|                                   | Hexachlorobutadiene                    |     | EO025    | 0.5   |      | <0.5   | ug/L  | INAB    |     |
|                                   | Trans-1,2 Dichloroethene               |     | EO025    | 0.5   |      | <0.5   | ug/L  | INAB    |     |
|                                   | MtBE                                   |     | EO025    | 0.5   |      | <0.5   | ug/L  | INAB    |     |
|                                   | 1,1-dichloroethane                     |     | EO025    | 0.5   |      | <0.5   | ug/L  | INAB    |     |

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|                     |   |                              |                |
|---------------------|---|------------------------------|----------------|
| <b>Contact Name</b> | Joe Ferry   | <b>Report Number</b>         | 76867 - 1      |
| <b>Address</b>      | Donegal County Council<br>Donegal County Council Central<br>Laboratory. | <b>Sample Number</b>         | 76867/002      |
| <b>Tel No</b>       | 074-9122787 / 9176274   | <b>Date of Receipt</b>       | 03/07/2014     |
| <b>Fax No</b>       |   | <b>Date Started</b>          | 03/07/2014     |
| <b>Customer PO</b>  | 240518780   | <b>Received or Collected</b> | TNT            |
| <b>Quotation No</b> | QN002578  | <b>Condition on Receipt</b>  | Good           |
| <b>Customer Ref</b> | 3090 - SW4  | <b>Date of Report</b>        | 01/08/2014     |
|                     |   | <b>Sample Type</b>           | Surface Waters |

**CERTIFICATE OF ANALYSIS**

| TEST                  | ANALYTE                   | SUB | METHOD | LOQ | SPEC | RESULT | UNITS | ACCRED. | OOS |
|-----------------------|---------------------------|-----|--------|-----|------|--------|-------|---------|-----|
| <b>VOC Full Suite</b> |                           |     |        |     |      |        |       |         |     |
|                       | 2,2-dichloropropane       |     | EO025  | 0.5 |      | <0.5   | ug/L  |         |     |
|                       | cis-12 Dichloroethene     |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 2-Butanone                |     | EO025  | 5.0 |      | <5.0   | ug/L  |         |     |
|                       | Methyl Acrylate           |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Bromochloromethane        |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Methacrylonitrile         |     | EO025  | 5.0 |      | <5.0   | ug/L  |         |     |
|                       | Tetrahydrofuran           |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Chloroform                |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,1,1-trichloroethane     |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1-Chlorobutane            |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Carbon Tetrachloride      |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 11 Dichloropropene        |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Benzene                   |     | EO025  | 0.1 |      | <0.1   | ug/L  | INAB    |     |
|                       | 1,2 dicloroethane         |     | EO025  | 0.1 |      | <0.1   | ug/L  | INAB    |     |
|                       | Trichloroethene           |     | EO025  | 0.1 |      | <0.1   | ug/L  | INAB    |     |
|                       | 1,2-dichloropropane       |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Dibromomethane            |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Methyl Methacrylate       |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Bromodichloromethane      |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | 13 Dichloropropene,cis    |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | MIBK/4 Methyl 2 Pentanone |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | Toluene                   |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 13 Dichloropropene,trans  |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | Ethyl Methacrylate        |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | 112 Trichloroethane       |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Tetrachloroethene         |     | EO025  | 0.1 |      | <0.1   | ug/L  | INAB    |     |
|                       | 1,3-dichloropropane       |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 2-Hexanone                |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Dibromochloromethane      |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,2-dibromoethane         |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Chlorobenzene             |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,1,1,2-tetrachloroethane |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | Ethylbenzene              |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Xylene P&M                |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Xylene -o                 |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Styrene                   |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | Bromoform                 |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |

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|                     |   |                              |                |
|---------------------|---|------------------------------|----------------|
| <b>Contact Name</b> | Joe Ferry   | <b>Report Number</b>         | 76867 - 1      |
| <b>Address</b>      | Donegal County Council<br>Donegal County Council Central<br>Laboratory. | <b>Sample Number</b>         | 76867/002      |
| <b>Tel No</b>       | 074-9122787 / 9176274   | <b>Date of Receipt</b>       | 03/07/2014     |
| <b>Fax No</b>       |   | <b>Date Started</b>          | 03/07/2014     |
| <b>Customer PO</b>  | 240518780   | <b>Received or Collected</b> | TNT            |
| <b>Quotation No</b> | QN002578  | <b>Condition on Receipt</b>  | Good           |
| <b>Customer Ref</b> | 3090 - SW4  | <b>Date of Report</b>        | 01/08/2014     |
|                     |   | <b>Sample Type</b>           | Surface Waters |

### CERTIFICATE OF ANALYSIS

| TEST                  | ANALYTE                           | SUB | METHOD | LOQ | SPEC | RESULT | UNITS | ACCRED. | OOS |
|-----------------------|-----------------------------------|-----|--------|-----|------|--------|-------|---------|-----|
| <b>VOC Full Suite</b> |                                   |     |        |     |      |        |       |         |     |
|                       | Isopropylbenzene                  |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Bromobenzene                      |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,1,2,2-tetrachloroethane         |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,2,3-trichloropropane            |     | EO025  | 2.0 |      | <2.0   | ug/L  |         |     |
|                       | Trans 1,4 Dichloro 2 Butene, tran |     | EO025  | 2.0 |      | <2.0   | ug/L  |         |     |
|                       | Propylbenzene                     |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 2-chlorotoluene                   |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 4-chlorotoluene                   |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,3,5-trimethylbenzene            |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Tert Butyl Benzene                |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,2,4-trimethylbenzene            |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | sec-butylbenzene                  |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,3-dichlorobenzene               |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | P Isopropyltoluene                |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,4-dichlorobenzene               |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,2-dichlorobenzene               |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | N Butyl Benzene                   |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Hexachloroethane                  |     | EO025  | 5.0 |      | <5.0   | ug/L  | INAB    |     |
|                       | 1,2-dibromo-3-chloropropane       |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | 1,2,4-trichlorobenzene            |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Naphthalene                       |     | EO025  | 2.0 |      | <2.0   | ug/L  |         |     |
|                       | 1,2,3-trichlorobenzene            |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |

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|---------------------|---|------------------------------|----------------|
| <b>Contact Name</b> | Joe Ferry   | <b>Report Number</b>         | 76867 - 1      |
| <b>Address</b>      | Donegal County Council<br>Donegal County Council Central<br>Laboratory. | <b>Sample Number</b>         | 76867/003      |
| <b>Tel No</b>       | 074-9122787 / 9176274   | <b>Date of Receipt</b>       | 03/07/2014     |
| <b>Fax No</b>       |   | <b>Date Started</b>          | 03/07/2014     |
| <b>Customer PO</b>  | 240518780   | <b>Received or Collected</b> | TNT            |
| <b>Quotation No</b> | QN002578  | <b>Condition on Receipt</b>  | Good           |
| <b>Customer Ref</b> | 3091 - SW5  | <b>Date of Report</b>        | 01/08/2014     |
|                     |   | <b>Sample Type</b>           | Surface Waters |

### CERTIFICATE OF ANALYSIS

| TEST                              | ANALYTE                    | SUB | METHOD   | LOQ   | SPEC | RESULT | UNITS | ACCRED. | OOS |
|-----------------------------------|----------------------------|-----|----------|-------|------|--------|-------|---------|-----|
| <b>AQ2-UP2</b>                    |                            |     |          |       |      |        |       |         |     |
|                                   | Sulphate                   |     | EW154M-1 | 1.0   |      | 24.9   | mg/L  | INAB    |     |
| <b>Metals-Total</b>               |                            |     |          |       |      |        |       |         |     |
|                                   | Chromium-Total             |     | EM130    | 1.0   |      | 4.1    | ug/L  |         |     |
| <b>Metals-Trace</b>               |                            |     |          |       |      |        |       |         |     |
|                                   | Cadmium                    |     | EM130    | 0.1   |      | <0.1   | ug/L  | INAB    |     |
|                                   | Iron                       |     | EM130    | 20.0  |      | 633.0  | ug/L  | INAB    |     |
|                                   | Mercury                    |     | EM130    | 0.02  |      | 0.07   | ug/L  | INAB    |     |
|                                   | Manganese                  |     | EM130    | 1.0   |      | 701.8  | ug/L  | INAB    |     |
|                                   | Lead                       |     | EM130    | 0.3   |      | <0.3   | ug/L  | INAB    |     |
|                                   | Zinc                       |     | EM130    | 1.0   |      | 4.8    | ug/L  | INAB    |     |
|                                   | Calcium                    |     | EM130    | 1.0   |      | 87.8   | mg/L  | INAB    |     |
|                                   | Copper                     |     | EM130    | 0.003 |      | <0.003 | mg/L  | INAB    |     |
|                                   | Potassium                  |     | EM130    | 0.2   |      | 87.5   | mg/L  | INAB    |     |
|                                   | Magnesium                  |     | EM130    | 0.3   |      | 47.6   | mg/L  | INAB    |     |
|                                   | Sodium                     |     | EM130    | 0.5   |      | 131.1  | mg/L  | INAB    |     |
| <b>PhenolsTotal -Index (Sub1)</b> |                            |     |          |       |      |        |       |         |     |
|                                   | Phenols-Total              | *   | Default  | 0.15  |      | <0.15  | mg/L  | YES     |     |
| <b>SVOC (sub)</b>                 |                            |     |          |       |      |        |       |         |     |
|                                   | 1,2,4-Trichlorobenzene     | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                                   | 1,2-Dichlorobenzene        | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                                   | 1,3-Dichlorobenzene        | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                                   | 1,4-Dichlorobenzene        | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                                   | 2,4,5-Trichlorophenol      | *   | Default  | 1.0   |      | <2.0   | ug/L  | YES     |     |
|                                   | 2,4,6-Trichlorophenol      | *   | Default  | 1.0   |      | <2.0   | ug/L  | YES     |     |
|                                   | 2,4-Dichlorophenol         | *   | Default  | 1.0   |      | <2.0   | ug/L  | YES     |     |
|                                   | 2,4-Dimethylphenol         | *   | Default  | 1.0   |      | <2.0   | ug/L  | YES     |     |
|                                   | 2,4-Dinitrotoluene         | *   | Default  | 1.0   |      | <2.0   | ug/L  | YES     |     |
|                                   | 2,6-Dinitrotoluene         | *   | Default  | 1.0   |      | <2.0   | ug/L  | YES     |     |
|                                   | 2-Chloronaphthalene        | *   | Default  | 1.0   |      | <2.0   | ug/L  | YES     |     |
|                                   | 2-Chlorophenol             | *   | Default  | 1.0   |      | <2     | ug/L  | YES     |     |
|                                   | 2-Methylnaphthalene        | *   | Default  | 1.0   |      | <2.0   | ug/L  | YES     |     |
|                                   | 2-Methylphenol             | *   | Default  | 1.0   |      | <2.0   | ug/L  | YES     |     |
|                                   | 2-Nitrophenol              | *   | Default  | 1.0   |      | <2.0   | ug/L  | YES     |     |
|                                   | 3&4-Methylphenol           | *   | Default  | 1.0   |      | <2.0   | ug/L  | YES     |     |
|                                   | 4-Bromophenyl Phenyl Ether | *   | Default  | 1.0   |      | <2.0   | ug/L  | YES     |     |
|                                   | 4-Chloro-3-methylphenol    | *   | Default  | 1.0   |      | <2.0   | ug/L  | YES     |     |

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|                     |   |                              |                |
|---------------------|---|------------------------------|----------------|
| <b>Contact Name</b> | Joe Ferry   | <b>Report Number</b>         | 76867 - 1      |
| <b>Address</b>      | Donegal County Council<br>Donegal County Council Central<br>Laboratory. | <b>Sample Number</b>         | 76867/003      |
| <b>Tel No</b>       | 074-9122787 / 9176274   | <b>Date of Receipt</b>       | 03/07/2014     |
| <b>Fax No</b>       |   | <b>Date Started</b>          | 03/07/2014     |
| <b>Customer PO</b>  | 240518780   | <b>Received or Collected</b> | TNT            |
| <b>Quotation No</b> | QN002578  | <b>Condition on Receipt</b>  | Good           |
| <b>Customer Ref</b> | 3091 - SW5  | <b>Date of Report</b>        | 01/08/2014     |
|                     |   | <b>Sample Type</b>           | Surface Waters |

**CERTIFICATE OF ANALYSIS**

| TEST              | ANALYTE                     | SUB | METHOD  | LOQ | SPEC | RESULT | UNITS | ACCRED. | OOS |
|-------------------|-----------------------------|-----|---------|-----|------|--------|-------|---------|-----|
| <b>SVOC (sub)</b> |                             |     |         |     |      |        |       |         |     |
|                   | 4-Chlorophenyl phenyl ether | *   | Default | 1.0 |      | <2.0   | ug/L  | YES     |     |
|                   | 4-Nitrophenol               | *   | Default | 5.0 |      | <10.0  | ug/L  | YES     |     |
|                   | Acenaphthene                | *   | Default | 1.0 |      | <2.0   | ug/L  | YES     |     |
|                   | Acenaphthylene              | *   | Default | 1.0 |      | <2.0   | ug/L  | YES     |     |
|                   | Anthracene                  | *   | Default | 1.0 |      | <2.0   | ug/L  | YES     |     |
|                   | Benzo(a)anthracene          | *   | Default | 1.0 |      | <2.0   | ug/L  | YES     |     |
|                   | Benzo(a)pyrene              | *   | Default | 1.0 |      | <2.0   | ug/L  | YES     |     |
|                   | Benzo(b)fluoranthene        | *   | Default | 1.0 |      | <2.0   | ug/L  | YES     |     |
|                   | Benzo(g,h,i)perylene        | *   | Default | 1.0 |      | <2.0   | ug/L  | YES     |     |
|                   | Benzo(k)fluoranthene        | *   | Default | 1.0 |      | <2.0   | ug/L  | YES     |     |
|                   | Benzyl Butyl Phthalate      | *   | Default | 1.0 |      | <2.0   | ug/L  | YES     |     |
|                   | Bis(2-chloroethoxy)methane  | *   | Default | 1.0 |      | <2.0   | ug/L  | YES     |     |
|                   | Bis(2-chloroethyl)ether     | *   | Default | 1.0 |      | <2     | ug/L  | YES     |     |
|                   | Bis(2-chloroisopropyl)ether | *   | Default | 1.0 |      | <2.0   | ug/L  | YES     |     |
|                   | Bis(2-ethylhexyl)phthalate  | *   | Default | 5.0 |      | <10.0  | ug/L  | YES     |     |
|                   | Chrysene                    | *   | Default | 1.0 |      | <2.0   | ug/L  | YES     |     |
|                   | Dibenz(a,h)anthracene       | *   | Default | 1.0 |      | <2.0   | ug/L  | YES     |     |
|                   | Dibenzofuran                | *   | Default | 1.0 |      | <2.0   | ug/L  | YES     |     |
|                   | Diethylphthalate            | *   | Default | 1.0 |      | <2.0   | ug/L  | YES     |     |
|                   | Dimethylphthalate           | *   | Default | 1.0 |      | <2.0   | ug/L  | YES     |     |
|                   | di-n-Butylphthalate         | *   | Default | 1.0 |      | <2.0   | ug/L  | YES     |     |
|                   | Di-n-octylphthalate         | *   | Default | 1.0 |      | <2.0   | ug/L  | YES     |     |
|                   | Diphenylamine               | *   | Default | 1.0 |      | <2.0   | ug/L  | YES     |     |
|                   | Fluoranthene                | *   | Default | 1.0 |      | <2.0   | ug/L  | YES     |     |
|                   | Fluorene                    | *   | Default | 1.0 |      | <2.0   | ug/L  | YES     |     |
|                   | Hexachlorobenzene           | *   | Default | 1.0 |      | <2.0   | ug/L  | YES     |     |
|                   | Hexachlorobutadiene         | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Hexachloroethane            | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Indeno(1,2,3-c,d)pyrene     | *   | Default | 1.0 |      | <2.0   | ug/L  | YES     |     |
|                   | Isophorone                  | *   | Default | 1.0 |      | <2.0   | ug/L  | YES     |     |
|                   | Naphthalene                 | *   | Default | 2.0 |      | <2.0   | ug/L  | YES     |     |
|                   | Nitrobenzene                | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | n-Nitrosodi-n-propylamine   | *   | Default | 1.0 |      | <2.0   | ug/L  | YES     |     |
|                   | Pentachlorophenol           | *   | Default | 1.0 |      | <2.0   | ug/L  | YES     |     |
|                   | Phenanthrene                | *   | Default | 1.0 |      | <2.0   | ug/L  | YES     |     |
|                   | Phenol                      | *   | Default | 1.0 |      | <2     | ug/L  | YES     |     |
|                   | Pyrene                      | *   | Default | 1.0 |      | <2.0   | ug/L  | YES     |     |

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|---------------------|---|------------------------------|----------------|
| <b>Contact Name</b> | Joe Ferry   | <b>Report Number</b>         | 76867 - 1      |
| <b>Address</b>      | Donegal County Council<br>Donegal County Council Central<br>Laboratory. | <b>Sample Number</b>         | 76867/003      |
| <b>Tel No</b>       | 074-9122787 / 9176274   | <b>Date of Receipt</b>       | 03/07/2014     |
| <b>Fax No</b>       |   | <b>Date Started</b>          | 03/07/2014     |
| <b>Customer PO</b>  | 240518780   | <b>Received or Collected</b> | TNT            |
| <b>Quotation No</b> | QN002578  | <b>Condition on Receipt</b>  | Good           |
| <b>Customer Ref</b> | 3091 - SW5  | <b>Date of Report</b>        | 01/08/2014     |
|                     |   | <b>Sample Type</b>           | Surface Waters |

### CERTIFICATE OF ANALYSIS

| TEST                  | ANALYTE                                | SUB | METHOD | LOQ  | SPEC | RESULT | UNITS | ACCRED. | OOS |
|-----------------------|--|-----|--------|------|------|--------|-------|---------|-----|
| <b>VOC Full Suite</b> |  |     |        |      |      |        |       |         |     |
|                       | Dichlorodifluoromethane                |     | EO025  | 10.0 |      | <10.0  | ug/L  |         |     |
|                       | Chloromethane                          |     | EO025  | 0.5  |      | <0.5   | ug/L  |         |     |
|                       | Ethyl Chloride/Chloroethane            |     | EO025  | 0.5  |      | <0.5   | ug/L  |         |     |
|                       | Vinyl Chloride                         |     | EO025  | 0.5  |      | <0.5   | ug/L  |         |     |
|                       | Bromomethane                           |     | EO025  | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                       | Trichloromonofluoromethane             |     | EO025  | 0.5  |      | <0.5   | ug/L  |         |     |
|                       | Ethyl Ether/Diethyl Ether              |     | EO025  | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,1 Dichloroethene                     |     | EO025  | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                       | Acetone                                |     | EO025  | 2.0  |      | <2.0   | ug/L  |         |     |
|                       | Iodomethane/Methyl Iodide              |     | EO025  | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                       | Carbon Disulphide                      |     | EO025  | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                       | Allyl Chloride                         |     | EO025  | 0.5  |      | <0.5   | ug/L  |         |     |
|                       | Dichloromethane                        |     | EO025  | 5.0  |      | <5.0   | ug/L  | INAB    |     |
|                       | Chlormethyl Cyanide/Chloroacetonitrile |     | EO025  | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                       | Nitrobenzene                           |     | EO025  | 0.5  |      | <0.5   | ug/L  |         |     |
|                       | Propanenitrile                         |     | EO025  | 10.0 |      | <10.0  | ug/L  |         |     |
|                       | Hexachlorobutadiene                    |     | EO025  | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                       | Trans-1,2 Dichloroethene               |     | EO025  | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                       | MtBE                                   |     | EO025  | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,1-dichloroethane                     |     | EO025  | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                       | 2,2-dichloropropane                    |     | EO025  | 0.5  |      | <0.5   | ug/L  |         |     |
|                       | cis-1,2 Dichloroethene                 |     | EO025  | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                       | 2-Butanone                             |     | EO025  | 5.0  |      | <5.0   | ug/L  |         |     |
|                       | Methyl Acrylate                        |     | EO025  | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                       | Bromochloromethane                     |     | EO025  | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                       | Methacrylonitrile                      |     | EO025  | 5.0  |      | <5.0   | ug/L  |         |     |
|                       | Tetrahydrofuran                        |     | EO025  | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                       | Chloroform                             |     | EO025  | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,1,1-trichloroethane                  |     | EO025  | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                       | 1-Chlorobutane                         |     | EO025  | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                       | Carbon Tetrachloride                   |     | EO025  | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,1 Dichloropropene                    |     | EO025  | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                       | Benzene                                |     | EO025  | 0.1  |      | <0.1   | ug/L  | INAB    |     |
|                       | 1,2 dichloroethane                     |     | EO025  | 0.1  |      | <0.1   | ug/L  | INAB    |     |
|                       | Trichloroethene                        |     | EO025  | 0.1  |      | <0.1   | ug/L  | INAB    |     |
|                       | 1,2-dichloropropane                    |     | EO025  | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                       | Dibromomethane                         |     | EO025  | 0.5  |      | <0.5   | ug/L  | INAB    |     |

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| <b>Address</b>      | Donegal County Council<br>Donegal County Council Central<br>Laboratory. | <b>Sample Number</b>         | 76867/003      |
| <b>Tel No</b>       | 074-9122787 / 9176274   | <b>Date of Receipt</b>       | 03/07/2014     |
| <b>Fax No</b>       |   | <b>Date Started</b>          | 03/07/2014     |
| <b>Customer PO</b>  | 240518780   | <b>Received or Collected</b> | TNT            |
| <b>Quotation No</b> | QN002578  | <b>Condition on Receipt</b>  | Good           |
| <b>Customer Ref</b> | 3091 - SW5  | <b>Date of Report</b>        | 01/08/2014     |
|                     |   | <b>Sample Type</b>           | Surface Waters |

**CERTIFICATE OF ANALYSIS**

| TEST                  | ANALYTE                          | SUB | METHOD | LOQ | SPEC | RESULT | UNITS | ACCRED. | OOS |
|-----------------------|----------------------------------|-----|--------|-----|------|--------|-------|---------|-----|
| <b>VOC Full Suite</b> |                                  |     |        |     |      |        |       |         |     |
|                       | Methyl Methacrylate              |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Bromodichloromethane             |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | 13 Dichloropropene,cis           |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | MIBK/4 Methyl 2 Pentanone        |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | Toluene                          |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 13 Dichloropropene,trans         |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | Ethyl Methacrylate               |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | 112 Trichloroethane              |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Tetrachloroethene                |     | EO025  | 0.1 |      | <0.1   | ug/L  | INAB    |     |
|                       | 1,3-dichloropropane              |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 2-Hexanone                       |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Dibromochloromethane             |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,2-dibromoethane                |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Chlorobenzene                    |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,1,1,2-tetrachloroethane        |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | Ethylbenzene                     |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Xylene P&M                       |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Xylene -o                        |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Styrene                          |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | Bromoform                        |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Isopropylbenzene                 |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Bromobenzene                     |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,1,2,2-tetrachloroethane        |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,2,3-trichloropropane           |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | Trans 14 Dichloro 2 Butene, tran |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | Propylbenzene                    |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 2-chlorotoluene                  |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 4-chlorotoluene                  |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,3,5-trimethylbenzene           |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Tert Butyl Benzene               |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,2,4-trimethylbenzene           |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | sec-butylbenzene                 |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,3-dichlorobenzene              |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | P Isopropyltoluene               |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,4-dichlorobenzene              |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,2-dichlorobenzene              |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | N Butyl Benzene                  |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |

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|                     |   |                              |                  |
|---------------------|---|------------------------------|------------------|
| <b>Contact Name</b> | Joe Ferry   | <b>Report Number</b>         | <b>76867 - 1</b> |
| <b>Address</b>      | Donegal County Council<br>Donegal County Council Central<br>Laboratory. | <b>Sample Number</b>         | 76867/003        |
| <b>Tel No</b>       | 074-9122787 / 9176274   | <b>Date of Receipt</b>       | 03/07/2014       |
| <b>Fax No</b>       |   | <b>Date Started</b>          | 03/07/2014       |
| <b>Customer PO</b>  | 240518780   | <b>Received or Collected</b> | TNT              |
| <b>Quotation No</b> | QN002578  | <b>Condition on Receipt</b>  | Good             |
| <b>Customer Ref</b> | 3091 - SW5  | <b>Date of Report</b>        | 01/08/2014       |
|                     |   | <b>Sample Type</b>           | Surface Waters   |

**CERTIFICATE OF ANALYSIS**

| TEST                  | ANALYTE                     | SUB | METHOD | LOQ | SPEC | RESULT | UNITS | ACCRED. | OOS |
|-----------------------|-----------------------------|-----|--------|-----|------|--------|-------|---------|-----|
| <b>VOC Full Suite</b> |                             |     |        |     |      |        |       |         |     |
|                       | Hexachloroethane            |     | EO025  | 5.0 |      | <5.0   | ug/L  | INAB    |     |
|                       | 1,2-dibromo-3-chloropropane |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | 1,2,4-trichlorobenzene      |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Naphthalene                 |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | 1,2,3-trichlorobenzene      |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |

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01/08/2014

**Technical Manager (or Deputy):**

**Brendan Murray**

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|                     |   |                              |                  |
|---------------------|---|------------------------------|------------------|
| <b>Contact Name</b> | Joe Ferry   | <b>Report Number</b>         | <b>76867 - 1</b> |
| <b>Address</b>      | Donegal County Council<br>Donegal County Council Central<br>Laboratory. | <b>Sample Number</b>         | 76867/004        |
| <b>Tel No</b>       | 074-9122787 / 9176274   | <b>Date of Receipt</b>       | 03/07/2014       |
| <b>Fax No</b>       |   | <b>Date Started</b>          | 03/07/2014       |
| <b>Customer PO</b>  | 240518780   | <b>Received or Collected</b> | TNT              |
| <b>Quotation No</b> | QN002578  | <b>Condition on Receipt</b>  | Good             |
| <b>Customer Ref</b> | 3092 - SW6  | <b>Date of Report</b>        | 01/08/2014       |
|                     |   | <b>Sample Type</b>           | Surface Waters   |

**CERTIFICATE OF ANALYSIS**

| TEST                              | ANALYTE                    | SUB | METHOD   | LOQ   | SPEC | RESULT | UNITS | ACCRED. | OOS |
|-----------------------------------|----------------------------|-----|----------|-------|------|--------|-------|---------|-----|
| <b>AQ2-UP2</b>                    |                            |     |          |       |      |        |       |         |     |
|                                   | Sulphate                   |     | EW154M-1 | 1.0   |      | 7.5    | mg/L  | INAB    |     |
| <b>Metals-Total</b>               |                            |     |          |       |      |        |       |         |     |
|                                   | Chromium-Total             |     | EM130    | 1.0   |      | <1.0   | ug/L  |         |     |
| <b>Metals-Trace</b>               |                            |     |          |       |      |        |       |         |     |
|                                   | Cadmium                    |     | EM130    | 0.1   |      | <0.1   | ug/L  | INAB    |     |
|                                   | Iron                       |     | EM130    | 20.0  |      | 686.4  | ug/L  | INAB    |     |
|                                   | Mercury                    |     | EM130    | 0.02  |      | 0.05   | ug/L  | INAB    |     |
|                                   | Manganese                  |     | EM130    | 1.0   |      | 51.3   | ug/L  | INAB    |     |
|                                   | Lead                       |     | EM130    | 0.3   |      | <0.3   | ug/L  | INAB    |     |
|                                   | Zinc                       |     | EM130    | 1.0   |      | 4.1    | ug/L  | INAB    |     |
|                                   | Calcium                    |     | EM130    | 1.0   |      | 15.7   | mg/L  | INAB    |     |
|                                   | Copper                     |     | EM130    | 0.003 |      | <0.003 | mg/L  | INAB    |     |
|                                   | Potassium                  |     | EM130    | 0.2   |      | 1.7    | mg/L  | INAB    |     |
|                                   | Magnesium                  |     | EM130    | 0.3   |      | 2.9    | mg/L  | INAB    |     |
|                                   | Sodium                     |     | EM130    | 0.5   |      | 11.1   | mg/L  | INAB    |     |
| <b>PhenolsTotal -Index (Sub1)</b> |                            |     |          |       |      |        |       |         |     |
|                                   | Phenols-Total              | *   | Default  | 0.15  |      | <0.15  | mg/L  | YES     |     |
| <b>SVOC (sub)</b>                 |                            |     |          |       |      |        |       |         |     |
|                                   | 1,2,4-Trichlorobenzene     | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                                   | 1,2-Dichlorobenzene        | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                                   | 1,3-Dichlorobenzene        | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                                   | 1,4-Dichlorobenzene        | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                                   | 2,4,5-Trichlorophenol      | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                                   | 2,4,6-Trichlorophenol      | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                                   | 2,4-Dichlorophenol         | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                                   | 2,4-Dimethylphenol         | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                                   | 2,4-Dinitrotoluene         | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                                   | 2,6-Dinitrotoluene         | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                                   | 2-Chloronaphthalene        | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                                   | 2-Chlorophenol             | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                                   | 2-Methylnaphthalene        | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                                   | 2-Methylphenol             | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                                   | 2-Nitrophenol              | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                                   | 3&4-Methylphenol           | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                                   | 4-Bromophenyl Phenyl Ether | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                                   | 4-Chloro-3-methylphenol    | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |

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|---------------------|---|------------------------------|----------------|
| <b>Contact Name</b> | Joe Ferry   | <b>Report Number</b>         | 76867 - 1      |
| <b>Address</b>      | Donegal County Council<br>Donegal County Council Central<br>Laboratory. | <b>Sample Number</b>         | 76867/004      |
| <b>Tel No</b>       | 074-9122787 / 9176274   | <b>Date of Receipt</b>       | 03/07/2014     |
| <b>Fax No</b>       |   | <b>Date Started</b>          | 03/07/2014     |
| <b>Customer PO</b>  | 240518780   | <b>Received or Collected</b> | TNT            |
| <b>Quotation No</b> | QN002578  | <b>Condition on Receipt</b>  | Good           |
| <b>Customer Ref</b> | 3092 - SW6  | <b>Date of Report</b>        | 01/08/2014     |
|                     |   | <b>Sample Type</b>           | Surface Waters |

**CERTIFICATE OF ANALYSIS**

| TEST              | ANALYTE                     | SUB | METHOD  | LOQ | SPEC | RESULT | UNITS | ACCRED. | OOS |
|-------------------|-----------------------------|-----|---------|-----|------|--------|-------|---------|-----|
| <b>SVOC (sub)</b> |                             |     |         |     |      |        |       |         |     |
|                   | 4-Chlorophenyl phenyl ether | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | 4-Nitrophenol               | *   | Default | 5.0 |      | <5.0   | ug/L  | YES     |     |
|                   | Acenaphthene                | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Acenaphthylene              | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Anthracene                  | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Benzo(a)anthracene          | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Benzo(a)pyrene              | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Benzo(b)fluoranthene        | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Benzo(g,h,i)perylene        | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Benzo(k)fluoranthene        | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Benzyl Butyl Phthalate      | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Bis(2-chloroethoxy)methane  | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Bis(2-chloroethyl)ether     | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Bis(2-chloroisopropyl)ether | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Bis(2-ethylhexyl)phthalate  | *   | Default | 5.0 |      | <5.0   | ug/L  | YES     |     |
|                   | Chrysene                    | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Dibenz(a,h)anthracene       | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Dibenzofuran                | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Diethylphthalate            | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Dimethylphthalate           | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | di-n-Butylphthalate         | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Di-n-octylphthalate         | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Diphenylamine               | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Fluoranthene                | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Fluorene                    | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Hexachlorobenzene           | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Hexachlorobutadiene         | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Hexachloroethane            | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Indeno(1,2,3-c,d)pyrene     | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Isophorone                  | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Naphthalene                 | *   | Default | 2.0 |      | <2.0   | ug/L  | YES     |     |
|                   | Nitrobenzene                | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | n-Nitrosodi-n-propylamine   | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Pentachlorophenol           | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Phenanthrene                | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Phenol                      | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Pyrene                      | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |

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| <b>Address</b>      | Donegal County Council<br>Donegal County Council Central<br>Laboratory. | <b>Sample Number</b>         | 76867/004        |
| <b>Tel No</b>       | 074-9122787 / 9176274   | <b>Date of Receipt</b>       | 03/07/2014       |
| <b>Fax No</b>       |   | <b>Date Started</b>          | 03/07/2014       |
| <b>Customer PO</b>  | 240518780   | <b>Received or Collected</b> | TNT              |
| <b>Quotation No</b> | QN002578  | <b>Condition on Receipt</b>  | Good             |
| <b>Customer Ref</b> | 3092 - SW6  | <b>Date of Report</b>        | 01/08/2014       |
|                     |   | <b>Sample Type</b>           | Surface Waters   |

### CERTIFICATE OF ANALYSIS

| TEST                  | ANALYTE                                | SUB | METHOD | LOQ  | SPEC | RESULT | UNITS | ACCRED. | OOS |
|-----------------------|--|-----|--------|------|------|--------|-------|---------|-----|
| <b>VOC Full Suite</b> |  |     |        |      |      |        |       |         |     |
|                       | Dichlorodifluoromethane                |     | EO025  | 10.0 |      | <10.0  | ug/L  |         |     |
|                       | Chloromethane                          |     | EO025  | 0.5  |      | <0.5   | ug/L  |         |     |
|                       | Ethyl Chloride/Chloroethane            |     | EO025  | 0.5  |      | <0.5   | ug/L  |         |     |
|                       | Vinyl Chloride                         |     | EO025  | 0.5  |      | <0.5   | ug/L  |         |     |
|                       | Bromomethane                           |     | EO025  | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                       | Trichloromonofluoromethane             |     | EO025  | 0.5  |      | <0.5   | ug/L  |         |     |
|                       | Ethyl Ether/Diethyl Ether              |     | EO025  | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,1 Dichloroethene                     |     | EO025  | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                       | Acetone                                |     | EO025  | 2.0  |      | <2.0   | ug/L  |         |     |
|                       | Iodomethane/Methyl Iodide              |     | EO025  | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                       | Carbon Disulphide                      |     | EO025  | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                       | Allyl Chloride                         |     | EO025  | 0.5  |      | <0.5   | ug/L  |         |     |
|                       | Dichloromethane                        |     | EO025  | 5.0  |      | <5.0   | ug/L  | INAB    |     |
|                       | Chlormethyl Cyanide/Chloroacetonitrile |     | EO025  | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                       | Nitrobenzene                           |     | EO025  | 0.5  |      | <0.5   | ug/L  |         |     |
|                       | Propanenitrile                         |     | EO025  | 10.0 |      | <10.0  | ug/L  |         |     |
|                       | Hexachlorobutadiene                    |     | EO025  | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                       | Trans-1,2 Dichloroethene               |     | EO025  | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                       | MtBE                                   |     | EO025  | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,1-dichloroethane                     |     | EO025  | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                       | 2,2-dichloropropane                    |     | EO025  | 0.5  |      | <0.5   | ug/L  |         |     |
|                       | cis-1,2 Dichloroethene                 |     | EO025  | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                       | 2-Butanone                             |     | EO025  | 5.0  |      | <5.0   | ug/L  |         |     |
|                       | Methyl Acrylate                        |     | EO025  | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                       | Bromochloromethane                     |     | EO025  | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                       | Methacrylonitrile                      |     | EO025  | 5.0  |      | <5.0   | ug/L  |         |     |
|                       | Tetrahydrofuran                        |     | EO025  | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                       | Chloroform                             |     | EO025  | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,1,1-trichloroethane                  |     | EO025  | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                       | 1-Chlorobutane                         |     | EO025  | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                       | Carbon Tetrachloride                   |     | EO025  | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,1 Dichloropropene                    |     | EO025  | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                       | Benzene                                |     | EO025  | 0.1  |      | <0.1   | ug/L  | INAB    |     |
|                       | 1,2 dicloroethane                      |     | EO025  | 0.1  |      | <0.1   | ug/L  | INAB    |     |
|                       | Trichloroethene                        |     | EO025  | 0.1  |      | <0.1   | ug/L  | INAB    |     |
|                       | 1,2-dichloropropane                    |     | EO025  | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                       | Dibromomethane                         |     | EO025  | 0.5  |      | <0.5   | ug/L  | INAB    |     |

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| <b>Tel No</b>       | 074-9122787 / 9176274   | <b>Date of Receipt</b>       | 03/07/2014     |
| <b>Fax No</b>       |   | <b>Date Started</b>          | 03/07/2014     |
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| <b>Quotation No</b> | QN002578  | <b>Condition on Receipt</b>  | Good           |
| <b>Customer Ref</b> | 3092 - SW6  | <b>Date of Report</b>        | 01/08/2014     |
|                     |   | <b>Sample Type</b>           | Surface Waters |

### CERTIFICATE OF ANALYSIS

| TEST                  | ANALYTE                          | SUB | METHOD | LOQ | SPEC | RESULT | UNITS | ACCRED. | OOS |
|-----------------------|----------------------------------|-----|--------|-----|------|--------|-------|---------|-----|
| <b>VOC Full Suite</b> |                                  |     |        |     |      |        |       |         |     |
|                       | Methyl Methacrylate              |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Bromodichloromethane             |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | 13 Dichloropropene,cis           |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | MIBK/4 Methyl 2 Pentanone        |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | Toluene                          |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 13 Dichloropropene,trans         |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | Ethyl Methacrylate               |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | 112 Trichloroethane              |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Tetrachloroethene                |     | EO025  | 0.1 |      | <0.1   | ug/L  | INAB    |     |
|                       | 1,3-dichloropropane              |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 2-Hexanone                       |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Dibromochloromethane             |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,2-dibromoethane                |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Chlorobenzene                    |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,1,1,2-tetrachloroethane        |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | Ethylbenzene                     |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Xylene P&M                       |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Xylene -o                        |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Styrene                          |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | Bromoform                        |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Isopropylbenzene                 |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Bromobenzene                     |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,1,2,2-tetrachloroethane        |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,2,3-trichloropropane           |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | Trans 14 Dichloro 2 Butene, tran |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | Propylbenzene                    |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 2-chlorotoluene                  |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 4-chlorotoluene                  |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,3,5-trimethylbenzene           |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Tert Butyl Benzene               |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,2,4-trimethylbenzene           |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | sec-butylbenzene                 |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,3-dichlorobenzene              |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | P Isopropyltoluene               |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,4-dichlorobenzene              |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,2-dichlorobenzene              |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | N Butyl Benzene                  |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |

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|                     |   |                              |                  |
|---------------------|---|------------------------------|------------------|
| <b>Contact Name</b> | Joe Ferry   | <b>Report Number</b>         | <b>76867 - 1</b> |
| <b>Address</b>      | Donegal County Council<br>Donegal County Council Central<br>Laboratory. | <b>Sample Number</b>         | 76867/004        |
| <b>Tel No</b>       | 074-9122787 / 9176274   | <b>Date of Receipt</b>       | 03/07/2014       |
| <b>Fax No</b>       |   | <b>Date Started</b>          | 03/07/2014       |
| <b>Customer PO</b>  | 240518780   | <b>Received or Collected</b> | TNT              |
| <b>Quotation No</b> | QN002578  | <b>Condition on Receipt</b>  | Good             |
| <b>Customer Ref</b> | 3092 - SW6  | <b>Date of Report</b>        | 01/08/2014       |
|                     |   | <b>Sample Type</b>           | Surface Waters   |

**CERTIFICATE OF ANALYSIS**

| TEST                  | ANALYTE                     | SUB | METHOD | LOQ | SPEC | RESULT | UNITS | ACCRED. | OOS |
|-----------------------|-----------------------------|-----|--------|-----|------|--------|-------|---------|-----|
| <b>VOC Full Suite</b> |                             |     |        |     |      |        |       |         |     |
|                       | Hexachloroethane            |     | EO025  | 5.0 |      | <5.0   | ug/L  | INAB    |     |
|                       | 1,2-dibromo-3-chloropropane |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | 1,2,4-trichlorobenzene      |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Naphthalene                 |     | EO025  | 2.0 |      | <2.0   | ug/L  |         |     |
|                       | 1,2,3-trichlorobenzene      |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |

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|                     |   |                              |                  |
|---------------------|---|------------------------------|------------------|
| <b>Contact Name</b> | Joe Ferry   | <b>Report Number</b>         | <b>76867 - 1</b> |
| <b>Address</b>      | Donegal County Council<br>Donegal County Council Central<br>Laboratory. | <b>Sample Number</b>         | 76867/005        |
| <b>Tel No</b>       | 074-9122787 / 9176274   | <b>Date of Receipt</b>       | 03/07/2014       |
| <b>Fax No</b>       |   | <b>Date Started</b>          | 03/07/2014       |
| <b>Customer PO</b>  | 240518780   | <b>Received or Collected</b> | TNT              |
| <b>Quotation No</b> | QN002578  | <b>Condition on Receipt</b>  | Good             |
| <b>Customer Ref</b> | 3093 - SW7  | <b>Date of Report</b>        | 01/08/2014       |
|                     |   | <b>Sample Type</b>           | Surface Waters   |

### CERTIFICATE OF ANALYSIS

| TEST                | ANALYTE                     | SUB | METHOD   | LOQ   | SPEC | RESULT | UNITS | ACCRED. | OOS |
|---------------------|-----------------------------|-----|----------|-------|------|--------|-------|---------|-----|
| <b>AQ2-UP2</b>      |                             |     |          |       |      |        |       |         |     |
|                     | Sulphate                    |     | EW154M-1 | 1.0   |      | 7.5    | mg/L  | INAB    |     |
| <b>Metals-Trace</b> |                             |     |          |       |      |        |       |         |     |
|                     | Cadmium                     |     | EM130    | 0.1   |      | <0.1   | ug/L  | INAB    |     |
|                     | Iron                        |     | EM130    | 20.0  |      | 1190.4 | ug/L  | INAB    |     |
|                     | Mercury                     |     | EM130    | 0.02  |      | 0.04   | ug/L  | INAB    |     |
|                     | Manganese                   |     | EM130    | 1.0   |      | 79.8   | ug/L  | INAB    |     |
|                     | Lead                        |     | EM130    | 0.3   |      | <0.3   | ug/L  | INAB    |     |
|                     | Zinc                        |     | EM130    | 1.0   |      | 4.3    | ug/L  | INAB    |     |
|                     | Calcium                     |     | EM130    | 1.0   |      | 16.4   | mg/L  | INAB    |     |
|                     | Copper                      |     | EM130    | 0.003 |      | <0.003 | mg/L  | INAB    |     |
|                     | Potassium                   |     | EM130    | 0.2   |      | 1.7    | mg/L  | INAB    |     |
|                     | Magnesium                   |     | EM130    | 0.3   |      | 2.9    | mg/L  | INAB    |     |
|                     | Sodium                      |     | EM130    | 0.5   |      | 10.9   | mg/L  | INAB    |     |
| <b>SVOC (sub)</b>   |                             |     |          |       |      |        |       |         |     |
|                     | 1,2,4-Trichlorobenzene      | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                     | 1,2-Dichlorobenzene         | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                     | 1,3-Dichlorobenzene         | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                     | 1,4-Dichlorobenzene         | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                     | 2,4,5-Trichlorophenol       | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                     | 2,4,6-Trichlorophenol       | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                     | 2,4-Dichlorophenol          | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                     | 2,4-Dimethylphenol          | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                     | 2,4-Dinitrotoluene          | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                     | 2,6-Dinitrotoluene          | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                     | 2-Chloronaphthalene         | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                     | 2-Chlorophenol              | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                     | 2-Methylnaphthalene         | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                     | 2-Methylphenol              | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                     | 2-Nitrophenol               | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                     | 3&4-Methylphenol            | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                     | 4-Bromophenyl Phenyl Ether  | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                     | 4-Chloro-3-methylphenol     | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                     | 4-Chlorophenyl phenyl ether | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                     | 4-Nitrophenol               | *   | Default  | 5.0   |      | <5.0   | ug/L  | YES     |     |
|                     | Acenaphthene                | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                     | Acenaphthylene              | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |

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|                     |   |                              |                  |
|---------------------|---|------------------------------|------------------|
| <b>Contact Name</b> | Joe Ferry   | <b>Report Number</b>         | <b>76867 - 1</b> |
| <b>Address</b>      | Donegal County Council<br>Donegal County Council Central<br>Laboratory. | <b>Sample Number</b>         | 76867/005        |
| <b>Tel No</b>       | 074-9122787 / 9176274   | <b>Date of Receipt</b>       | 03/07/2014       |
| <b>Fax No</b>       |   | <b>Date Started</b>          | 03/07/2014       |
| <b>Customer PO</b>  | 240518780   | <b>Received or Collected</b> | TNT              |
| <b>Quotation No</b> | QN002578  | <b>Condition on Receipt</b>  | Good             |
| <b>Customer Ref</b> | 3093 - SW7  | <b>Date of Report</b>        | 01/08/2014       |
|                     |   | <b>Sample Type</b>           | Surface Waters   |

**CERTIFICATE OF ANALYSIS**

| TEST                  | ANALYTE                     | SUB | METHOD  | LOQ  | SPEC | RESULT | UNITS | ACCRED. | OOS |
|-----------------------|-----------------------------|-----|---------|------|------|--------|-------|---------|-----|
| <b>SVOC (sub)</b>     |                             |     |         |      |      |        |       |         |     |
|                       | Anthracene                  | *   | Default | 1.0  |      | <1.0   | ug/L  | YES     |     |
|                       | Benzo(a)anthracene          | *   | Default | 1.0  |      | <1.0   | ug/L  | YES     |     |
|                       | Benzo(a)pyrene              | *   | Default | 1.0  |      | <1.0   | ug/L  | YES     |     |
|                       | Benzo(b)fluoranthene        | *   | Default | 1.0  |      | <1.0   | ug/L  | YES     |     |
|                       | Benzo(g,h,i)perylene        | *   | Default | 1.0  |      | <1.0   | ug/L  | YES     |     |
|                       | Benzo(k)fluoranthene        | *   | Default | 1.0  |      | <1.0   | ug/L  | YES     |     |
|                       | Benzyl Butyl Phthalate      | *   | Default | 1.0  |      | <1.0   | ug/L  | YES     |     |
|                       | Bis(2-chloroethoxy)methane  | *   | Default | 1.0  |      | <1.0   | ug/L  | YES     |     |
|                       | Bis(2-chloroethyl)ether     | *   | Default | 1.0  |      | <1.0   | ug/L  | YES     |     |
|                       | Bis(2-chloroisopropyl)ether | *   | Default | 1.0  |      | <1.0   | ug/L  | YES     |     |
|                       | Bis(2-ethylhexyl)phthalate  | *   | Default | 5.0  |      | <5.0   | ug/L  | YES     |     |
|                       | Chrysene                    | *   | Default | 1.0  |      | <1.0   | ug/L  | YES     |     |
|                       | Dibenz(a,h)anthracene       | *   | Default | 1.0  |      | <1.0   | ug/L  | YES     |     |
|                       | Dibenzofuran                | *   | Default | 1.0  |      | <1.0   | ug/L  | YES     |     |
|                       | Diethylphthalate            | *   | Default | 1.0  |      | <1.0   | ug/L  | YES     |     |
|                       | Dimethylphthalate           | *   | Default | 1.0  |      | <1.0   | ug/L  | YES     |     |
|                       | di-n-Butylphthalate         | *   | Default | 1.0  |      | <1.0   | ug/L  | YES     |     |
|                       | Di-n-octylphthalate         | *   | Default | 1.0  |      | <1.0   | ug/L  | YES     |     |
|                       | Diphenylamine               | *   | Default | 1.0  |      | <1.0   | ug/L  | YES     |     |
|                       | Fluoranthene                | *   | Default | 1.0  |      | <1.0   | ug/L  | YES     |     |
|                       | Fluorene                    | *   | Default | 1.0  |      | <1.0   | ug/L  | YES     |     |
|                       | Hexachlorobenzene           | *   | Default | 1.0  |      | <1.0   | ug/L  | YES     |     |
|                       | Hexachlorobutadiene         | *   | Default | 1.0  |      | <1.0   | ug/L  | YES     |     |
|                       | Hexachloroethane            | *   | Default | 1.0  |      | <1.0   | ug/L  | YES     |     |
|                       | Indeno(1,2,3-c,d)pyrene     | *   | Default | 1.0  |      | <1.0   | ug/L  | YES     |     |
|                       | Isophorone                  | *   | Default | 1.0  |      | <1.0   | ug/L  | YES     |     |
|                       | Naphthalene                 | *   | Default | 2.0  |      | <2.0   | ug/L  | YES     |     |
|                       | Nitrobenzene                | *   | Default | 1.0  |      | <1.0   | ug/L  | YES     |     |
|                       | n-Nitrosodi-n-propylamine   | *   | Default | 1.0  |      | <1.0   | ug/L  | YES     |     |
|                       | Pentachlorophenol           | *   | Default | 1.0  |      | <1.0   | ug/L  | YES     |     |
|                       | Phenanthrene                | *   | Default | 1.0  |      | <1.0   | ug/L  | YES     |     |
|                       | Phenol                      | *   | Default | 1.0  |      | <1.0   | ug/L  | YES     |     |
|                       | Pyrene                      | *   | Default | 1.0  |      | <1.0   | ug/L  | YES     |     |
| <b>VOC Full Suite</b> |                             |     |         |      |      |        |       |         |     |
|                       | Dichlorodifluoromethane     |     | EO025   | 10.0 |      | <10.0  | ug/L  |         |     |
|                       | Chloromethane               |     | EO025   | 0.5  |      | <0.5   | ug/L  |         |     |
|                       | Ethyl Chloride/Chloroethane |     | EO025   | 0.5  |      | <0.5   | ug/L  |         |     |

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|                     |   |                              |                |
|---------------------|---|------------------------------|----------------|
| <b>Contact Name</b> | Joe Ferry   | <b>Report Number</b>         | 76867 - 1      |
| <b>Address</b>      | Donegal County Council<br>Donegal County Council Central<br>Laboratory. | <b>Sample Number</b>         | 76867/005      |
| <b>Tel No</b>       | 074-9122787 / 9176274   | <b>Date of Receipt</b>       | 03/07/2014     |
| <b>Fax No</b>       |   | <b>Date Started</b>          | 03/07/2014     |
| <b>Customer PO</b>  | 240518780   | <b>Received or Collected</b> | TNT            |
| <b>Quotation No</b> | QN002578  | <b>Condition on Receipt</b>  | Good           |
| <b>Customer Ref</b> | 3093 - SW7  | <b>Date of Report</b>        | 01/08/2014     |
|                     |   | <b>Sample Type</b>           | Surface Waters |

**CERTIFICATE OF ANALYSIS**

| TEST                  | ANALYTE                                | SUB | METHOD | LOQ  | SPEC | RESULT | UNITS | ACCRED. | OOS |
|-----------------------|--|-----|--------|------|------|--------|-------|---------|-----|
| <b>VOC Full Suite</b> |  |     |        |      |      |        |       |         |     |
|                       | Vinyl Chloride                         |     | EO025  | 0.5  |      | <0.5   | ug/L  |         |     |
|                       | Bromomethane                           |     | EO025  | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                       | Trichloromonofluoromethane             |     | EO025  | 0.5  |      | <0.5   | ug/L  |         |     |
|                       | Ethyl Ether/Diethyl Ether              |     | EO025  | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,1 Dichloroethene                     |     | EO025  | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                       | Acetone                                |     | EO025  | 2.0  |      | <2.0   | ug/L  |         |     |
|                       | Iodomethane/Methyl Iodide              |     | EO025  | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                       | Carbon Disulphide                      |     | EO025  | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                       | Allyl Chloride                         |     | EO025  | 0.5  |      | <0.5   | ug/L  |         |     |
|                       | Dichloromethane                        |     | EO025  | 5.0  |      | <5.0   | ug/L  | INAB    |     |
|                       | Chlormethyl Cyanide/Chloroacetonitrile |     | EO025  | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                       | Nitrobenzene                           |     | EO025  | 0.5  |      | <0.5   | ug/L  |         |     |
|                       | Propanenitrile                         |     | EO025  | 10.0 |      | <10.0  | ug/L  |         |     |
|                       | Hexachlorobutadiene                    |     | EO025  | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                       | Trans-1,2 Dichloroethene               |     | EO025  | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                       | MtBE                                   |     | EO025  | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,1-dichloroethane                     |     | EO025  | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                       | 2,2-dichloropropane                    |     | EO025  | 0.5  |      | <0.5   | ug/L  |         |     |
|                       | cis-1,2 Dichloroethene                 |     | EO025  | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                       | 2-Butanone                             |     | EO025  | 5.0  |      | <5.0   | ug/L  |         |     |
|                       | Methyl Acrylate                        |     | EO025  | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                       | Bromochloromethane                     |     | EO025  | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                       | Methacrylonitrile                      |     | EO025  | 5.0  |      | <5.0   | ug/L  |         |     |
|                       | Tetrahydrofuran                        |     | EO025  | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                       | Chloroform                             |     | EO025  | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,1,1-trichloroethane                  |     | EO025  | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                       | 1-Chlorobutane                         |     | EO025  | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                       | Carbon Tetrachloride                   |     | EO025  | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,1 Dichloropropene                    |     | EO025  | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                       | Benzene                                |     | EO025  | 0.1  |      | <0.1   | ug/L  | INAB    |     |
|                       | 1,2 dichloroethane                     |     | EO025  | 0.1  |      | <0.1   | ug/L  | INAB    |     |
|                       | Trichloroethene                        |     | EO025  | 0.1  |      | <0.1   | ug/L  | INAB    |     |
|                       | 1,2-dichloropropane                    |     | EO025  | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                       | Dibromomethane                         |     | EO025  | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                       | Methyl Methacrylate                    |     | EO025  | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                       | Bromodichloromethane                   |     | EO025  | 2.0  |      | <2.0   | ug/L  | INAB    |     |
|                       | 1,3 Dichloropropene,cis                |     | EO025  | 2.0  |      | <2.0   | ug/L  | INAB    |     |

Signed :

01/08/2014

Technical Manager (or Deputy):

Brendan Murray

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|                     |   |                              |                |
|---------------------|---|------------------------------|----------------|
| <b>Contact Name</b> | Joe Ferry   | <b>Report Number</b>         | 76867 - 1      |
| <b>Address</b>      | Donegal County Council<br>Donegal County Council Central<br>Laboratory. | <b>Sample Number</b>         | 76867/005      |
| <b>Tel No</b>       | 074-9122787 / 9176274   | <b>Date of Receipt</b>       | 03/07/2014     |
| <b>Fax No</b>       |   | <b>Date Started</b>          | 03/07/2014     |
| <b>Customer PO</b>  | 240518780   | <b>Received or Collected</b> | TNT            |
| <b>Quotation No</b> | QN002578  | <b>Condition on Receipt</b>  | Good           |
| <b>Customer Ref</b> | 3093 - SW7  | <b>Date of Report</b>        | 01/08/2014     |
|                     |   | <b>Sample Type</b>           | Surface Waters |

### CERTIFICATE OF ANALYSIS

| TEST                  | ANALYTE                          | SUB | METHOD | LOQ | SPEC | RESULT | UNITS | ACCRED. | OOS |
|-----------------------|----------------------------------|-----|--------|-----|------|--------|-------|---------|-----|
| <b>VOC Full Suite</b> |                                  |     |        |     |      |        |       |         |     |
|                       | MIBK/4 Methyl 2 Pentanone        |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | Toluene                          |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 13 Dichloropropene,trans         |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | Ethyl Methacrylate               |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | 112 Trichloroethane              |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Tetrachloroethane                |     | EO025  | 0.1 |      | <0.1   | ug/L  | INAB    |     |
|                       | 1,3-dichloropropane              |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 2-Hexanone                       |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Dibromochloromethane             |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,2-dibromoethane                |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Chlorobenzene                    |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,1,1,2-tetrachloroethane        |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | Ethylbenzene                     |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Xylene P&M                       |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Xylene -o                        |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Styrene                          |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | Bromoform                        |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Isopropylbenzene                 |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Bromobenzene                     |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,1,2,2-tetrachloroethane        |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,2,3-trichloropropane           |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | Trans 14 Dichloro 2 Butene, tran |     | EO025  | 2.0 |      | <2.0   | ug/L  |         |     |
|                       | Propylbenzene                    |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 2-chlorotoluene                  |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 4-chlorotoluene                  |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,3,5-trimethylbenzene           |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Tert Butyl Benzene               |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,2,4-trimethylbenzene           |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | sec-butylbenzene                 |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,3-dichlorobenzene              |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | P Isopropyltoluene               |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,4-dichlorobenzene              |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,2-dichlorobenzene              |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | N Butyl Benzene                  |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Hexachloroethane                 |     | EO025  | 5.0 |      | <5.0   | ug/L  | INAB    |     |
|                       | 1,2-dibromo-3-chloropropane      |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | 1,2,4-trichlorobenzene           |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |

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|                     |   |                              |                  |
|---------------------|---|------------------------------|------------------|
| <b>Contact Name</b> | Joe Ferry   | <b>Report Number</b>         | <b>76867 - 1</b> |
| <b>Address</b>      | Donegal County Council<br>Donegal County Council Central<br>Laboratory. | <b>Sample Number</b>         | 76867/005        |
| <b>Tel No</b>       | 074-9122787 / 9176274   | <b>Date of Receipt</b>       | 03/07/2014       |
| <b>Fax No</b>       |   | <b>Date Started</b>          | 03/07/2014       |
| <b>Customer PO</b>  | 240518780   | <b>Received or Collected</b> | TNT              |
| <b>Quotation No</b> | QN002578  | <b>Condition on Receipt</b>  | Good             |
| <b>Customer Ref</b> | 3093 - SW7  | <b>Date of Report</b>        | 01/08/2014       |
|                     |   | <b>Sample Type</b>           | Surface Waters   |

**CERTIFICATE OF ANALYSIS**

| TEST                  | ANALYTE                | SUB | METHOD | LOQ | SPEC | RESULT | UNITS | ACCRED. | OOS |
|-----------------------|------------------------|-----|--------|-----|------|--------|-------|---------|-----|
| <b>VOC Full Suite</b> |                        |     |        |     |      |        |       |         |     |
|                       | Naphthalene            |     | EO025  | 2.0 |      | <2.0   | ug/L  |         |     |
|                       | 1,2,3-trichlorobenzene |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |

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|                     |   |                              |                  |
|---------------------|---|------------------------------|------------------|
| <b>Contact Name</b> | Joe Ferry   | <b>Report Number</b>         | <b>76871 - 1</b> |
| <b>Address</b>      | Donegal County Council<br>Donegal County Council Central<br>Laboratory. | <b>Sample Number</b>         | 76871/001        |
| <b>Tel No</b>       | 074-9122787 / 9176274   | <b>Date of Receipt</b>       | 03/07/2014       |
| <b>Fax No</b>       |   | <b>Date Started</b>          | 03/07/2014       |
| <b>Customer PO</b>  | 240518780   | <b>Received or Collected</b> | TNT              |
| <b>Quotation No</b> | QN002578  | <b>Condition on Receipt</b>  | Good             |
| <b>Customer Ref</b> | 3097-L2   | <b>Date of Report</b>        | 01/08/2014       |
|                     |   | <b>Sample Type</b>           | Waste Water      |

### CERTIFICATE OF ANALYSIS

| TEST                      | ANALYTE                    | SUB | METHOD   | LOQ   | SPEC | RESULT | UNITS | ACCRED. | OOS |
|---------------------------|----------------------------|-----|----------|-------|------|--------|-------|---------|-----|
| <b>AQ2-UP2</b>            |                            |     |          |       |      |        |       |         |     |
|                           | Sulphate                   |     | EW154M-1 | 5.0   |      | <5.0   | mg/L  |         |     |
| <b>Ion Chromatography</b> |                            |     |          |       |      |        |       |         |     |
|                           | Fluoride                   |     | EW137    | 0.1   |      | <0.1   | mg/L  | INAB    |     |
| <b>Metals-Dissolved</b>   |                            |     |          |       |      |        |       |         |     |
|                           | Boron-Dissolved            |     | EM130    | 0.02  |      | 0.88   | ug/L  |         |     |
|                           | Calcium-Dissolved          |     | EM130    | 1.0   |      | 155.9  | mg/L  |         |     |
|                           | Iron-Dissolved             |     | EM130    | 20.0  |      | 1868.0 | ug/L  |         |     |
|                           | Magnesium-Dissolved        |     | EM130    | 0.3   |      | 57.8   | mg/L  |         |     |
|                           | Manganese-Dissolved        |     | EM130    | 1.0   |      | 859.2  | ug/L  |         |     |
|                           | Potassium-Dissolved        |     | EM130    | 0.2   |      | 53.8   | mg/L  |         |     |
|                           | Sodium-Dissolved           |     | EM130    | 0.5   |      | 43.8   | mg/L  |         |     |
|                           | Cadmium-Dissolved          |     | EM130    | 0.1   |      | <0.1   | ug/L  |         |     |
|                           | Copper-Dissolved           |     | EM130    | 0.003 |      | <0.003 | mg/L  |         |     |
|                           | Lead-Dissolved             |     | EM130    | 0.3   |      | <0.3   | ug/L  |         |     |
|                           | Zinc-Dissolved             |     | EM130    | 1.0   |      | 11.1   | ug/L  |         |     |
|                           | Mercury-Dissolved          |     | EM130    | 0.02  |      | 0.04   | ug/L  |         |     |
| <b>SVOC (sub)</b>         |                            |     |          |       |      |        |       |         |     |
|                           | 1,2,4-Trichlorobenzene     | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                           | 1,2-Dichlorobenzene        | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                           | 1,3-Dichlorobenzene        | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                           | 1,4-Dichlorobenzene        | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                           | 2,4,5-Trichlorophenol      | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                           | 2,4,6-Trichlorophenol      | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                           | 2,4-Dichlorophenol         | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                           | 2,4-Dimethylphenol         | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                           | 2,4-Dinitrotoluene         | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                           | 2,6-Dinitrotoluene         | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                           | 2-Chloronaphthalene        | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                           | 2-Chlorophenol             | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                           | 2-Methylnaphthalene        | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                           | 2-Methylphenol             | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                           | 2-Nitrophenol              | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                           | 3&4-Methylphenol           | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                           | 4-Bromophenyl Phenyl Ether | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                           | 4-Chloro-3-methylphenol    | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |

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**Contact Name** Joe Ferry  
**Address** Donegal County Council  
Donegal County Council Central  
Laboratory.  
**Tel No** 074-9122787 / 9176274  
**Fax No**  
**Customer PO** 240518780  
**Quotation No** QN002578  
**Customer Ref** 3097-L2

**Report Number** 76871 - 1  
**Sample Number** 76871/001  
**Date of Receipt** 03/07/2014  
**Date Started** 03/07/2014  
**Received or Collected** TNT  
**Condition on Receipt** Good  
**Date of Report** 01/08/2014  
**Sample Type** Waste Water

**CERTIFICATE OF ANALYSIS**

| TEST              | ANALYTE                     | SUB | METHOD  | LOQ | SPEC | RESULT | UNITS | ACCRED. | OOS |
|-------------------|-----------------------------|-----|---------|-----|------|--------|-------|---------|-----|
| <b>SVOC (sub)</b> |                             |     |         |     |      |        |       |         |     |
|                   | 4-Chlorophenyl phenyl ether | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | 4-Nitrophenol               | *   | Default | 5.0 |      | <5.0   | ug/L  | YES     |     |
|                   | Acenaphthene                | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Acenaphthylene              | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Anthracene                  | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Benzo(a)anthracene          | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Benzo(a)pyrene              | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Benzo(b)fluoranthene        | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Benzo(g,h,i)perylene        | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Benzo(k)fluoranthene        | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Benzyl Butyl Phthalate      | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Bis(2-chloroethoxy)methane  | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Bis(2-chloroethyl)ether     | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Bis(2-chloroisopropyl)ether | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Bis(2-ethylhexyl)phthalate  | *   | Default | 5.0 |      | <5.0   | ug/L  | YES     |     |
|                   | Chrysene                    | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Dibenz(a,h)anthracene       | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Dibenzofuran                | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Diethylphthalate            | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Dimethylphthalate           | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | di-n-Butylphthalate         | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Di-n-octylphthalate         | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Diphenylamine               | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Fluoranthene                | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Fluorene                    | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Hexachlorobenzene           | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Hexachlorobutadiene         | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Hexachloroethane            | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Indeno(1,2,3-c,d)pyrene     | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Isophorone                  | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Naphthalene                 | *   | Default | 2.0 |      | <2.0   | ug/L  | YES     |     |
|                   | Nitrobenzene                | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | n-Nitrosodi-n-propylamine   | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Pentachlorophenol           | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Phenanthrene                | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Phenol                      | *   | Default | 1.0 |      | 1.0    | ug/L  | YES     |     |
|                   | Pyrene                      | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |

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Technical Manager (or Deputy): **Brendan Murray**

NOTES

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Web: [www.irishwatertesting.com](http://www.irishwatertesting.com)



|                     |   |                              |             |
|---------------------|---|------------------------------|-------------|
| <b>Contact Name</b> | Joe Ferry   | <b>Report Number</b>         | 76871 - 1   |
| <b>Address</b>      | Donegal County Council<br>Donegal County Council Central<br>Laboratory. | <b>Sample Number</b>         | 76871/001   |
| <b>Tel No</b>       | 074-9122787 / 9176274   | <b>Date of Receipt</b>       | 03/07/2014  |
| <b>Fax No</b>       |   | <b>Date Started</b>          | 03/07/2014  |
| <b>Customer PO</b>  | 240518780   | <b>Received or Collected</b> | TNT         |
| <b>Quotation No</b> | QN002578  | <b>Condition on Receipt</b>  | Good        |
| <b>Customer Ref</b> | 3097-L2   | <b>Date of Report</b>        | 01/08/2014  |
|                     |   | <b>Sample Type</b>           | Waste Water |

### CERTIFICATE OF ANALYSIS

| TEST                            | ANALYTE                                | SUB | METHOD  | LOQ  | SPEC | RESULT | UNITS | ACCRED. | OOS |
|---------------------------------|--|-----|---------|------|------|--------|-------|---------|-----|
| <b>Total Cyanide High (Sub)</b> |  |     |         |      |      |        |       |         |     |
|                                 | Total Cyanide High                     | *   | Default | 9    |      | <9     | ug/L  | YES     |     |
| <b>VOC Full Suite</b>           |  |     |         |      |      |        |       |         |     |
|                                 | Epichlorohydrin                        |     | EO025   | 0.1  |      | 0.1    | ug/L  |         |     |
|                                 | Dichlorodifluoromethane                |     | EO025   | 10.0 |      | <10.0  | ug/L  |         |     |
|                                 | Chloromethane                          |     | EO025   | 0.5  |      | <0.5   | ug/L  |         |     |
|                                 | Ethyl Chloride/Chloroethane            |     | EO025   | 0.5  |      | <0.5   | ug/L  |         |     |
|                                 | Vinyl Chloride                         |     | EO025   | 0.5  |      | <0.5   | ug/L  |         |     |
|                                 | Bromomethane                           |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                                 | Trichloromonofluoromethane             |     | EO025   | 0.5  |      | <0.5   | ug/L  |         |     |
|                                 | Ethyl Ether/Diethyl Ether              |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                                 | 1,1 Dichloroethene                     |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                                 | Acetone                                |     | EO025   | 2.0  |      | <2.0   | ug/L  |         |     |
|                                 | Iodomethane/Methyl Iodide              |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                                 | Carbon Disulphide                      |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                                 | Allyl Chloride                         |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                                 | Dichloromethane                        |     | EO025   | 5.0  |      | <5.0   | ug/L  | INAB    |     |
|                                 | 2-Propenenitrile/Acrylonitrile         |     | EO025   | 2.0  |      | <2.0   | ug/L  | INAB    |     |
|                                 | Chlormethyl Cyanide/Chloroacetonitrile |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                                 | Nitrobenzene                           |     | EO025   | 0.5  |      | 0.7    | ug/L  |         |     |
|                                 | Propanenitrile                         |     | EO025   | 10.0 |      | <10.0  | ug/L  |         |     |
|                                 | Hexachlorobutadiene                    |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                                 | Trans-1,2 Dichloroethene               |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                                 | MtBE                                   |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                                 | 1,1-dichloroethane                     |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                                 | 2,2-dichloropropane                    |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                                 | cis-1,2 Dichloroethene                 |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                                 | 2-Butanone                             |     | EO025   | 5.0  |      | <5.0   | ug/L  |         |     |
|                                 | Methyl Acrylate                        |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                                 | Bromochloromethane                     |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                                 | Methacrylonitrile                      |     | EO025   | 5.0  |      | <5.0   | ug/L  |         |     |
|                                 | Tetrahydrofuran                        |     | EO025   | 5.0  |      | 8.0    | ug/L  | INAB    |     |
|                                 | Chloroform                             |     | EO025   | 1.0  |      | <1.0   | ug/L  | INAB    |     |
|                                 | 1,1,1-trichloroethane                  |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                                 | 1-Chlorobutane                         |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                                 | Carbon Tetrachloride                   |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                                 | 1,1 Dichloropropene                    |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                                 | Benzene                                |     | EO025   | 0.1  |      | <0.1   | ug/L  | INAB    |     |

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|                     |   |                              |                  |
|---------------------|---|------------------------------|------------------|
| <b>Contact Name</b> | Joe Ferry   | <b>Report Number</b>         | <b>76871 - 1</b> |
| <b>Address</b>      | Donegal County Council<br>Donegal County Council Central<br>Laboratory. | <b>Sample Number</b>         | 76871/001        |
| <b>Tel No</b>       | 074-9122787 / 9176274   | <b>Date of Receipt</b>       | 03/07/2014       |
| <b>Fax No</b>       |   | <b>Date Started</b>          | 03/07/2014       |
| <b>Customer PO</b>  | 240518780   | <b>Received or Collected</b> | TNT              |
| <b>Quotation No</b> | QN002578  | <b>Condition on Receipt</b>  | Good             |
| <b>Customer Ref</b> | 3097-L2   | <b>Date of Report</b>        | 01/08/2014       |
|                     |   | <b>Sample Type</b>           | Waste Water      |

**CERTIFICATE OF ANALYSIS**

| TEST                  | ANALYTE                          | SUB | METHOD | LOQ | SPEC | RESULT | UNITS | ACCRED. | OOS |
|-----------------------|----------------------------------|-----|--------|-----|------|--------|-------|---------|-----|
| <b>VOC Full Suite</b> |                                  |     |        |     |      |        |       |         |     |
|                       | 1,2 dicloroethane                |     | EO025  | 0.1 |      | <0.1   | ug/L  | INAB    |     |
|                       | Trichloroethene                  |     | EO025  | 0.1 |      | <0.1   | ug/L  | INAB    |     |
|                       | 1,2-dichloropropane              |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Dibromomethane                   |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Methyl Methacrylate              |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Bromodichloromethane             |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | 13 Dichloropropene,cis           |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | MIBK/4 Methyl 2 Pentanone        |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | Toluene                          |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 13 Dichloropropene,trans         |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | Ethyl Methacrylate               |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | 1,1,2-trichloroethane            |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Tetrachloroethene                |     | EO025  | 0.1 |      | <0.1   | ug/L  | INAB    |     |
|                       | 1,3-dichloropropane              |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 2-Hexanone                       |     | EO025  | 1.0 |      | <1.0   | ug/L  | INAB    |     |
|                       | Dibromochloromethane             |     | EO025  | 1.0 |      | <1.0   | ug/L  | INAB    |     |
|                       | 1,2-dibromoethane                |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Chlorobenzene                    |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,1,1,2-tetrachloroethane        |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | Ethylbenzene                     |     | EO025  | 0.5 |      | 1.1    | ug/L  | INAB    |     |
|                       | Xylene P&M                       |     | EO025  | 0.5 |      | 0.8    | ug/L  | INAB    |     |
|                       | Xylene -o                        |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Styrene                          |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | Bromoform                        |     | EO025  | 1.0 |      | <1.0   | ug/L  | INAB    |     |
|                       | Isopropylbenzene                 |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Bromobenzene                     |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,1,2,2-tetrachloroethane        |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,2,3-trichloropropane           |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | Trans 14 Dichloro 2 Butene, tran |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | Propylbenzene                    |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 2-chlorotoluene                  |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 4-chlorotoluene                  |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,3,5-trimethylbenzene           |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Tert Butyl Benzene               |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,2,4-trimethylbenzene           |     | EO025  | 0.5 |      | 0.7    | ug/L  | INAB    |     |
|                       | sec-butylbenzene                 |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,3-dichlorobenzene              |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |

Signed :

01/08/2014

Technical Manager (or Deputy):

Brendan Murray

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|                     |   |                              |             |
|---------------------|---|------------------------------|-------------|
| <b>Contact Name</b> | Joe Ferry   | <b>Report Number</b>         | 76871 - 1   |
| <b>Address</b>      | Donegal County Council<br>Donegal County Council Central<br>Laboratory. | <b>Sample Number</b>         | 76871/001   |
| <b>Tel No</b>       | 074-9122787 / 9176274   | <b>Date of Receipt</b>       | 03/07/2014  |
| <b>Fax No</b>       |   | <b>Date Started</b>          | 03/07/2014  |
| <b>Customer PO</b>  | 240518780   | <b>Received or Collected</b> | TNT         |
| <b>Quotation No</b> | QN002578  | <b>Condition on Receipt</b>  | Good        |
| <b>Customer Ref</b> | 3097-L2   | <b>Date of Report</b>        | 01/08/2014  |
|                     |   | <b>Sample Type</b>           | Waste Water |

### CERTIFICATE OF ANALYSIS

| TEST                  | ANALYTE                     | SUB | METHOD | LOQ | SPEC | RESULT | UNITS | ACCRED. | OOS |
|-----------------------|-----------------------------|-----|--------|-----|------|--------|-------|---------|-----|
| <b>VOC Full Suite</b> |                             |     |        |     |      |        |       |         |     |
|                       | P Isopropyltoluene          |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,4-dichlorobenzene         |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,2-dichlorobenzene         |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | N Butyl Benzene             |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Hexachloroethane            |     | EO025  | 5.0 |      | <5.0   | ug/L  | INAB    |     |
|                       | 1,2-dibromo-3-chloropropane |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | 1,2,4-trichlorobenzene      |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Naphthalene                 |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | 1,2,3-trichlorobenzene      |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |

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|                     |   |                              |             |
|---------------------|---|------------------------------|-------------|
| <b>Contact Name</b> | Joe Ferry   | <b>Report Number</b>         | 76871 - 1   |
| <b>Address</b>      | Donegal County Council<br>Donegal County Council Central<br>Laboratory. | <b>Sample Number</b>         | 76871/002   |
| <b>Tel No</b>       | 074-9122787 / 9176274   | <b>Date of Receipt</b>       | 03/07/2014  |
| <b>Fax No</b>       |   | <b>Date Started</b>          | 03/07/2014  |
| <b>Customer PO</b>  | 240518780   | <b>Received or Collected</b> | TNT         |
| <b>Quotation No</b> | QN002578  | <b>Condition on Receipt</b>  | Good        |
| <b>Customer Ref</b> | 3098 - L3   | <b>Date of Report</b>        | 01/08/2014  |
|                     |   | <b>Sample Type</b>           | Waste Water |

**CERTIFICATE OF ANALYSIS**

| TEST                      | ANALYTE                    | SUB | METHOD   | LOQ   | SPEC | RESULT | UNITS | ACCRED. | OOS |
|---------------------------|----------------------------|-----|----------|-------|------|--------|-------|---------|-----|
| <b>AQ2-UP2</b>            |                            |     |          |       |      |        |       |         |     |
|                           | Sulphate                   |     | EW154M-1 | 5.0   |      | 24.6   | mg/L  |         |     |
| <b>Ion Chromatography</b> |                            |     |          |       |      |        |       |         |     |
|                           | Fluoride                   |     | EW137    | 0.1   |      | <0.1   | mg/L  | INAB    |     |
| <b>Metals-Dissolved</b>   |                            |     |          |       |      |        |       |         |     |
|                           | Boron-Dissolved            |     | EM130    | 0.02  |      | 0.04   | ug/L  |         |     |
|                           | Calcium-Dissolved          |     | EM130    | 1.0   |      | 35.5   | mg/L  |         |     |
|                           | Iron-Dissolved             |     | EM130    | 20.0  |      | 148.1  | ug/L  |         |     |
|                           | Magnesium-Dissolved        |     | EM130    | 0.3   |      | 4.6    | mg/L  |         |     |
|                           | Manganese-Dissolved        |     | EM130    | 1.0   |      | 344.9  | ug/L  |         |     |
|                           | Potassium-Dissolved        |     | EM130    | 0.2   |      | 22.3   | mg/L  |         |     |
|                           | Sodium-Dissolved           |     | EM130    | 0.5   |      | 11.8   | mg/L  |         |     |
|                           | Cadmium-Dissolved          |     | EM130    | 0.1   |      | <0.1   | ug/L  |         |     |
|                           | Copper-Dissolved           |     | EM130    | 0.003 |      | 0.012  | mg/L  |         |     |
|                           | Lead-Dissolved             |     | EM130    | 0.3   |      | <0.3   | ug/L  |         |     |
|                           | Zinc-Dissolved             |     | EM130    | 1.0   |      | 33.9   | ug/L  |         |     |
|                           | Mercury-Dissolved          |     | EM130    | 0.02  |      | 0.08   | ug/L  |         |     |
| <b>Metals-Total</b>       |                            |     |          |       |      |        |       |         |     |
|                           | Chromium-Total             |     | EM130    | 1.0   |      | 2.4    | ug/L  |         |     |
| <b>SVOC (sub)</b>         |                            |     |          |       |      |        |       |         |     |
|                           | 1,2,4-Trichlorobenzene     | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                           | 1,2-Dichlorobenzene        | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                           | 1,3-Dichlorobenzene        | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                           | 1,4-Dichlorobenzene        | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                           | 2,4,5-Trichlorophenol      | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                           | 2,4,6-Trichlorophenol      | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                           | 2,4-Dichlorophenol         | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                           | 2,4-Dimethylphenol         | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                           | 2,4-Dinitrotoluene         | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                           | 2,6-Dinitrotoluene         | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                           | 2-Chloronaphthalene        | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                           | 2-Chlorophenol             | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                           | 2-Methylnaphthalene        | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                           | 2-Methylphenol             | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                           | 2-Nitrophenol              | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                           | 3&4-Methylphenol           | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |
|                           | 4-Bromophenyl Phenyl Ether | *   | Default  | 1.0   |      | <1.0   | ug/L  | YES     |     |

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DETAILED IN SCOPE REG NO.1117

|                     |   |                              |             |
|---------------------|---|------------------------------|-------------|
| <b>Contact Name</b> | Joe Ferry   | <b>Report Number</b>         | 76871 - 1   |
| <b>Address</b>      | Donegal County Council<br>Donegal County Council Central<br>Laboratory. | <b>Sample Number</b>         | 76871/002   |
| <b>Tel No</b>       | 074-9122787 / 9176274   | <b>Date of Receipt</b>       | 03/07/2014  |
| <b>Fax No</b>       |   | <b>Date Started</b>          | 03/07/2014  |
| <b>Customer PO</b>  | 240518780   | <b>Received or Collected</b> | TNT         |
| <b>Quotation No</b> | QN002578  | <b>Condition on Receipt</b>  | Good        |
| <b>Customer Ref</b> | 3098 - L3   | <b>Date of Report</b>        | 01/08/2014  |
|                     |   | <b>Sample Type</b>           | Waste Water |

**CERTIFICATE OF ANALYSIS**

| TEST              | ANALYTE                     | SUB | METHOD  | LOQ | SPEC | RESULT | UNITS | ACCRED. | OOS |
|-------------------|-----------------------------|-----|---------|-----|------|--------|-------|---------|-----|
| <b>SVOC (sub)</b> |                             |     |         |     |      |        |       |         |     |
|                   | 4-Chloro-3-methylphenol     | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | 4-Chlorophenyl phenyl ether | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | 4-Nitrophenol               | *   | Default | 5.0 |      | <5.0   | ug/L  | YES     |     |
|                   | Acenaphthene                | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Acenaphthylene              | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Anthracene                  | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Benzo(a)anthracene          | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Benzo(a)pyrene              | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Benzo(b)fluoranthene        | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Benzo(g,h,i)perylene        | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Benzo(k)fluoranthene        | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Benzyl Butyl Phthalate      | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Bis(2-chloroethoxy)methane  | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Bis(2-chloroethyl)ether     | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Bis(2-chloroisopropyl)ether | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Bis(2-ethylhexyl)phthalate  | *   | Default | 5.0 |      | <5.0   | ug/L  | YES     |     |
|                   | Chrysene                    | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Dibenz(a,h)anthracene       | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Dibenzofuran                | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Diethylphthalate            | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Dimethylphthalate           | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | di-n-Butylphthalate         | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Di-n-octylphthalate         | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Diphenylamine               | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Fluoranthene                | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Fluorene                    | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Hexachlorobenzene           | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Hexachlorobutadiene         | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Hexachloroethane            | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Indeno(1,2,3-c,d)pyrene     | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Isophorone                  | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Naphthalene                 | *   | Default | 2.0 |      | <2.0   | ug/L  | YES     |     |
|                   | Nitrobenzene                | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | n-Nitrosodi-n-propylamine   | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Pentachlorophenol           | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Phenanthrene                | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |
|                   | Phenol                      | *   | Default | 1.0 |      | <1.0   | ug/L  | YES     |     |

Signed :

01/08/2014

Technical Manager (or Deputy):

Brendan Murray

## NOTES

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|                     |   |                              |             |
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| <b>Address</b>      | Donegal County Council<br>Donegal County Council Central<br>Laboratory. | <b>Sample Number</b>         | 76871/002   |
| <b>Tel No</b>       | 074-9122787 / 9176274   | <b>Date of Receipt</b>       | 03/07/2014  |
| <b>Fax No</b>       |   | <b>Date Started</b>          | 03/07/2014  |
| <b>Customer PO</b>  | 240518780   | <b>Received or Collected</b> | TNT         |
| <b>Quotation No</b> | QN002578  | <b>Condition on Receipt</b>  | Good        |
| <b>Customer Ref</b> | 3098 - L3   | <b>Date of Report</b>        | 01/08/2014  |
|                     |   | <b>Sample Type</b>           | Waste Water |

### CERTIFICATE OF ANALYSIS

| TEST                            | ANALYTE                                | SUB | METHOD  | LOQ  | SPEC | RESULT | UNITS | ACCRED. | OOS |
|---------------------------------|--|-----|---------|------|------|--------|-------|---------|-----|
| <b>SVOC (sub)</b>               |  |     |         |      |      |        |       |         |     |
|                                 | Pyrene                                 | *   | Default | 1.0  |      | <1.0   | ug/L  | YES     |     |
| <b>Total Cyanide High (Sub)</b> |  |     |         |      |      |        |       |         |     |
|                                 | Total Cyanide High                     | *   | Default | 9    |      | <9     | ug/L  | YES     |     |
| <b>VOC Full Suite</b>           |  |     |         |      |      |        |       |         |     |
|                                 | Epichlorohydrin                        |     | EO025   | 0.1  |      | <0.1   | ug/L  |         |     |
|                                 | Dichlorodifluoromethane                |     | EO025   | 10.0 |      | <10.0  | ug/L  |         |     |
|                                 | Chloromethane                          |     | EO025   | 0.5  |      | 0.9    | ug/L  |         |     |
|                                 | Ethyl Chloride/Chloroethane            |     | EO025   | 0.5  |      | <0.5   | ug/L  |         |     |
|                                 | Vinyl Chloride                         |     | EO025   | 0.5  |      | <0.5   | ug/L  |         |     |
|                                 | Bromomethane                           |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                                 | Trichloromonofluoromethane             |     | EO025   | 0.5  |      | <0.5   | ug/L  |         |     |
|                                 | Ethyl Ether/Diethyl Ether              |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                                 | 1,1 Dichloroethene                     |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                                 | Acetone                                |     | EO025   | 2.0  |      | <2.0   | ug/L  |         |     |
|                                 | Iodomethane/Methyl Iodide              |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                                 | Carbon Disulphide                      |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                                 | Allyl Chloride                         |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                                 | Dichloromethane                        |     | EO025   | 5.0  |      | <5.0   | ug/L  | INAB    |     |
|                                 | 2-Propenenitrile/Acrylonitrile         |     | EO025   | 2.0  |      | <2.0   | ug/L  | INAB    |     |
|                                 | Chlormethyl Cyanide/Chloroacetonitrile |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                                 | Nitrobenzene                           |     | EO025   | 0.5  |      | 0.6    | ug/L  |         |     |
|                                 | Propanenitrile                         |     | EO025   | 10.0 |      | <10.0  | ug/L  |         |     |
|                                 | Hexachlorobutadiene                    |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                                 | Trans-1,2 Dichloroethene               |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                                 | MtBE                                   |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                                 | 1,1-dichloroethane                     |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                                 | 2,2-dichloropropane                    |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                                 | cis-1,2 Dichloroethene                 |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                                 | 2-Butanone                             |     | EO025   | 5.0  |      | <5.0   | ug/L  |         |     |
|                                 | Methyl Acrylate                        |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                                 | Bromochloromethane                     |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                                 | Methacrylonitrile                      |     | EO025   | 5.0  |      | <5.0   | ug/L  |         |     |
|                                 | Tetrahydrofuran                        |     | EO025   | 5.0  |      | <5.0   | ug/L  | INAB    |     |
|                                 | Chloroform                             |     | EO025   | 1.0  |      | <1.0   | ug/L  | INAB    |     |
|                                 | 1,1,1-trichloroethane                  |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |
|                                 | 1-Chlorobutane                         |     | EO025   | 0.5  |      | <0.5   | ug/L  | INAB    |     |

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**Technical Manager (or Deputy):** **Brendan Murray**

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**Contact Name** Joe Ferry  
**Address** Donegal County Council  
Donegal County Council Central  
Laboratory.  
**Tel No** 074-9122787 / 9176274  
**Fax No**  
**Customer PO** 240518780  
**Quotation No** QN002578  
**Customer Ref** 3098 - L3

**Report Number** 76871 - 1  
**Sample Number** 76871/002  
**Date of Receipt** 03/07/2014  
**Date Started** 03/07/2014  
**Received or Collected** TNT  
**Condition on Receipt** Good  
**Date of Report** 01/08/2014  
**Sample Type** Waste Water

**CERTIFICATE OF ANALYSIS**

| TEST                  | ANALYTE                          | SUB | METHOD | LOQ | SPEC | RESULT | UNITS | ACCRED. | OOS |
|-----------------------|----------------------------------|-----|--------|-----|------|--------|-------|---------|-----|
| <b>VOC Full Suite</b> |                                  |     |        |     |      |        |       |         |     |
|                       | Carbon Tetrachloride             |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 11 Dichloropropene               |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Benzene                          |     | EO025  | 0.1 |      | <0.1   | ug/L  | INAB    |     |
|                       | 1,2 dichloroethane               |     | EO025  | 0.1 |      | <0.1   | ug/L  | INAB    |     |
|                       | Trichloroethene                  |     | EO025  | 0.1 |      | <0.1   | ug/L  | INAB    |     |
|                       | 1,2-dichloropropane              |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Dibromomethane                   |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Methyl Methacrylate              |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Bromodichloromethane             |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | 13 Dichloropropene,cis           |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | MIBK/4 Methyl 2 Pentanone        |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | Toluene                          |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 13 Dichloropropene,trans         |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | Ethyl Methacrylate               |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | 1,1,2-trichloroethane            |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Tetrachloroethene                |     | EO025  | 0.1 |      | <0.1   | ug/L  | INAB    |     |
|                       | 1,3-dichloropropane              |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 2-Hexanone                       |     | EO025  | 1.0 |      | <1.0   | ug/L  | INAB    |     |
|                       | Dibromochloromethane             |     | EO025  | 1.0 |      | <1.0   | ug/L  | INAB    |     |
|                       | 1,2-dibromoethane                |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Chlorobenzene                    |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,1,1,2-tetrachloroethane        |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | Ethylbenzene                     |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Xylene P&M                       |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Xylene -o                        |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Styrene                          |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | Bromoform                        |     | EO025  | 1.0 |      | <1.0   | ug/L  | INAB    |     |
|                       | Isopropylbenzene                 |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Bromobenzene                     |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,1,1,2-tetrachloroethane        |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,2,3-trichloropropane           |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | Trans 14 Dichloro 2 Butene, tran |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | Propylbenzene                    |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 2-chlorotoluene                  |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 4-chlorotoluene                  |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,3,5-trimethylbenzene           |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Tert Butyl Benzene               |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |

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|                     |   |                              |             |
|---------------------|---|------------------------------|-------------|
| <b>Contact Name</b> | Joe Ferry   | <b>Report Number</b>         | 76871 - 1   |
| <b>Address</b>      | Donegal County Council<br>Donegal County Council Central<br>Laboratory. | <b>Sample Number</b>         | 76871/002   |
| <b>Tel No</b>       | 074-9122787 / 9176274   | <b>Date of Receipt</b>       | 03/07/2014  |
| <b>Fax No</b>       |   | <b>Date Started</b>          | 03/07/2014  |
| <b>Customer PO</b>  | 240518780   | <b>Received or Collected</b> | TNT         |
| <b>Quotation No</b> | QN002578  | <b>Condition on Receipt</b>  | Good        |
| <b>Customer Ref</b> | 3098 - L3   | <b>Date of Report</b>        | 01/08/2014  |
|                     |   | <b>Sample Type</b>           | Waste Water |

**CERTIFICATE OF ANALYSIS**

| TEST                  | ANALYTE                     | SUB | METHOD | LOQ | SPEC | RESULT | UNITS | ACCRED. | OOS |
|-----------------------|-----------------------------|-----|--------|-----|------|--------|-------|---------|-----|
| <b>VOC Full Suite</b> |                             |     |        |     |      |        |       |         |     |
|                       | 1,2,4-trimethylbenzene      |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | sec-butylbenzene            |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,3-dichlorobenzene         |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | P Isopropyltoluene          |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,4-dichlorobenzene         |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | 1,2-dichlorobenzene         |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | N Butyl Benzene             |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Hexachloroethane            |     | EO025  | 5.0 |      | <5.0   | ug/L  | INAB    |     |
|                       | 1,2-dibromo-3-chloropropane |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | 1,2,4-trichlorobenzene      |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |
|                       | Naphthalene                 |     | EO025  | 2.0 |      | <2.0   | ug/L  | INAB    |     |
|                       | 1,2,3-trichlorobenzene      |     | EO025  | 0.5 |      | <0.5   | ug/L  | INAB    |     |

Signed :

01/08/2014

Technical Manager (or Deputy):

Brendan Murray

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## Appendix C - Water Balance Calculation

**CHURCHSTOWN WATER BALANCE CALCULATION**

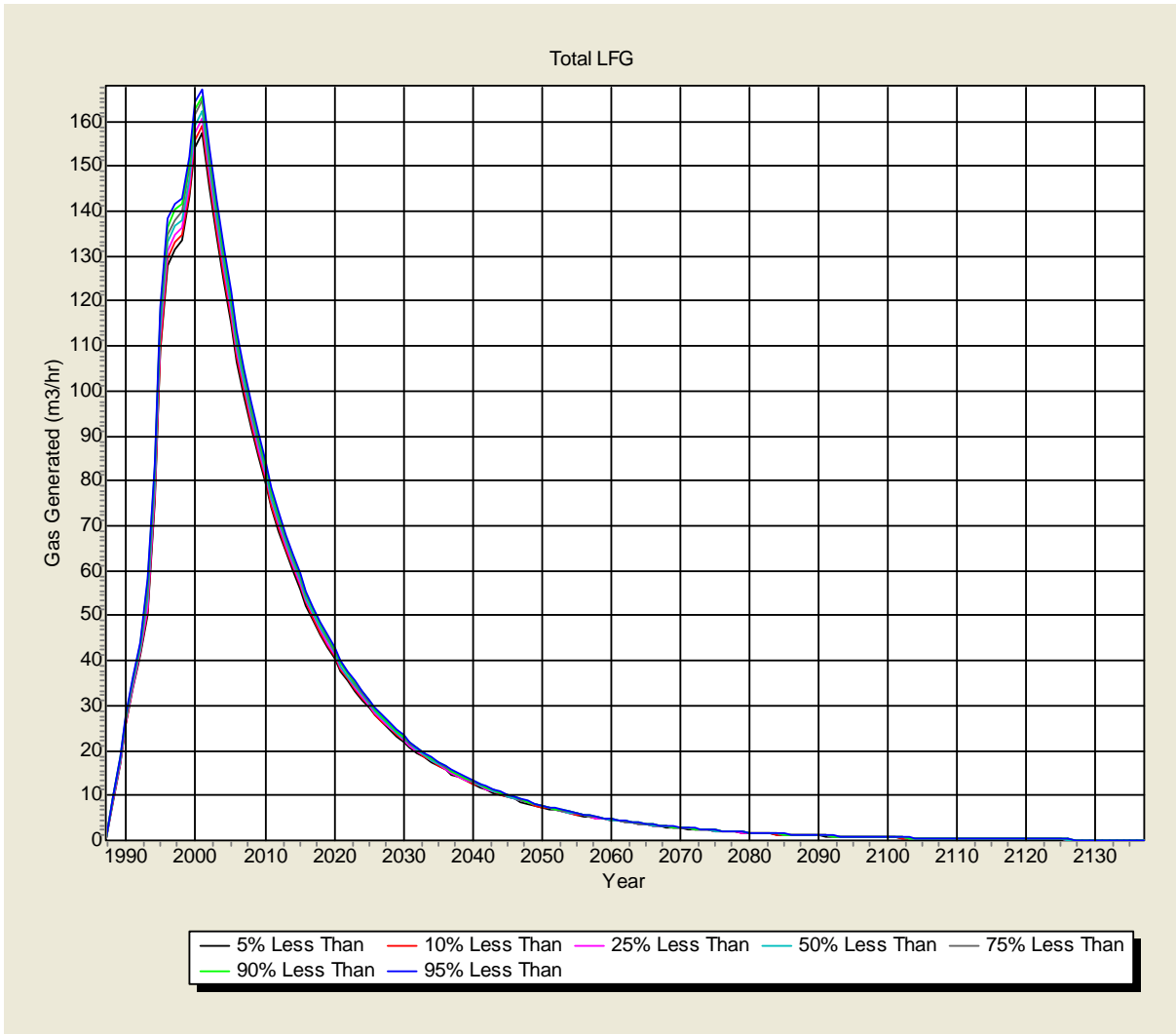
| Year         | Status | Rainfall (mm) | Restored area | Temp Restored area RCA(m <sup>2</sup> ) | Temp Restored area infiltration IRCA(m <sup>3</sup> ) | Total Water | Leachate produced Lo(m <sup>3</sup> ) |
|--------------|--------|---------------|---------------|---|---|-------------|---------------------------------------|
| 2014         | Closed | 1,213         |               | 70,000                                  | 25,475  | 25,475      | 25,475                                |
| <b>Total</b> |        | 1,213         |               |   |   |             | 25,475                                |

**Assumptions**

|                                |   |        |                |
|--------------------------------|---|--------|----------------|
| <b>IRCA=</b>                   | Temp restored area infiltration of rainfall estimated % (25-30% of annual rainfall,EPA Manual ) | 30%    | %              |
| <b>Temporary restored area</b> | Area of landfill site temporary restored.   | 70,000 | m <sup>2</sup> |
| <b>Rainfall Data</b>           | Data taken from Met Eireann Station Malin Head, Total Rainfall u                                | 1,213  | mm             |

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## Appendix D - Revised Gas Model Results



**Total Bulk Landfill Gas 1988-2026**

| Year | M3/hr  | Year | M3/hr  | Year | M3/hr |
|------|--------|------|--------|------|-------|
| 1988 | 9.2    | 2001 | 162.43 | 2014 | 61.84 |
| 1989 | 17.7   | 2002 | 149.97 | 2015 | 57.77 |
| 1990 | 26.69  | 2003 | 138.59 | 2016 | 54.00 |
| 1991 | 35.13  | 2004 | 128.20 | 2017 | 50.52 |
| 1992 | 42.63  | 2005 | 118.70 | 2018 | 47.30 |
| 1993 | 53.85  | 2006 | 110.01 | 2019 | 44.32 |
| 1994 | 79.32  | 2007 | 102.05 | 2020 | 41.56 |
| 1995 | 113.84 | 2008 | 94.75  | 2021 | 39.00 |
| 1996 | 133.15 | 2009 | 88.05  | 2022 | 36.62 |
| 1997 | 136.69 | 2010 | 81.91  | 2023 | 34.41 |
| 1998 | 138.12 | 2011 | 76.26  | 2024 | 32.35 |
| 1999 | 147.38 | 2012 | 71.05  | 2025 | 30.43 |
| 2000 | 159.09 | 2013 | 66.26  | 2026 | 28.64 |



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## **Appendix E - E-PRTR Regulations (AER Electronic Reporting System)**



Environmental Protection Agency

| PRTR# : W0062 | Facility Name : Churchtown Landfill | Filename : W0062\_2014.xls |  
Return Year : 2014 |

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[Guidance to completing the PRTR workbook](#)

## AER Returns Workbook

Version 1.1.18

|                       |      |
|-----------------------|------|
| <b>REFERENCE YEAR</b> | 2014 |
|-----------------------|------|

### 1. FACILITY IDENTIFICATION

|                            |                        |
|----------------------------|------------------------|
| Parent Company Name        | Donegal County Council |
| Facility Name              | Churchtown Landfill    |
| PRTR Identification Number | W0062                  |
| Licence Number             | W0062-01               |

Classes of Activity

| No. | class_name                           |
|-----|--------------------------------------|
| -   | Refer to PRTR class activities below |

|  |  |
|--|--|
| Address 1                                      | Churchtown   |
| Address 2                                      | Lifford  |
| Address 3                                      |  |
| Address 4                                      |  |
|  | Donegal  |
| Country  | Ireland  |
| Coordinates of Location                        | -7.51908 54.8105   |
| River Basin District                           | GBNIENW  |
| NACE Code                                      | 3821   |
| Main Economic Activity                         | Treatment and disposal of non-hazardous waste                    |
| <b>AER Returns Contact Name</b>                | Julie McMahon  |
| <b>AER Returns Contact Email Address</b>       | Julie.mcmahon@donegalcoco.ie                                     |
| <b>AER Returns Contact Position</b>            | Executive Engineer   |
| <b>AER Returns Contact Telephone Number</b>    | 0749122787   |
| <b>AER Returns Contact Mobile Phone Number</b> | 0872861096   |
| <b>AER Returns Contact Fax Number</b>          | 0749161304   |
| <b>Production Volume</b>                       | 0.0  |
| <b>Production Volume Units</b>                 |  |
| <b>Number of Installations</b>                 | 0  |
| <b>Number of Operating Hours in Year</b>       | 0  |
| <b>Number of Employees</b>                     | 1  |
| <b>User Feedback/Comments</b>                  | Gassim Model rerun for 2014. No changes made to input parameters |
| <b>Web Address</b>                             |  |

### 2. PRTR CLASS ACTIVITIES

| Activity Number | Activity Name |
|-----------------|---------------|
| 50.1            | General       |
| 50.1            | General       |

### 3. SOLVENTS REGULATIONS (S.I. No. 543 of 2002)

|   |  |
|---|--|
| Is it applicable?   |  |
| Have you been granted an exemption ?  |  |
| If applicable which activity class applies (as per Schedule 2 of the regulations) ? |  |
| Is the reduction scheme compliance route being used ?                               |  |

### 4. WASTE IMPORTED/ACCEPTED ONTO SITE

[Guidance on waste imported/accepted onto site](#)

|  |  |
|--|--|
| Do you import/accept waste onto your site for on-site treatment (either recovery or disposal activities) ? |  |
|--|--|

This question is only applicable if you are an IPPC or Quarry site

4.1 RELEASES TO AIR

[Link to previous years emissions data](#)

| PRTR# : W0062 | Facility Name : Churchtown Landfill | Filename : W0062\_2014.xls | Return Year : 2014 |

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**SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS**

| RELEASERS TO AIR |      | METHOD      |             |                            | Please enter all quantities in this section in KGs |                   |                        |                      |
|------------------|------|-------------|-------------|----------------------------|--|-------------------|------------------------|----------------------|
| POLLUTANT        |      | Method Used |             |                            | QUANTITY   |                   |                        |                      |
| No. Annex II     | Name | M/C/E       | Method Code | Designation or Description | Emission Point 1                                   | T (Total) KG/Year | A (Accidental) KG/Year | F (Fugitive) KG/Year |
|                  |      |             |             |                            | 0.0  | 0.0               | 0.0                    | 0.0                  |
|                  |      |             |             |                            | 0.0  | 0.0               | 0.0                    | 0.0                  |

\* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

**SECTION B : REMAINING PRTR POLLUTANTS**

| RELEASERS TO AIR |  | METHOD      |             |                            | Please enter all quantities in this section in KGs |                   |                        |                      |
|------------------|--|-------------|-------------|----------------------------|--|-------------------|------------------------|----------------------|
| POLLUTANT        |  | Method Used |             |                            | QUANTITY   |                   |                        |                      |
| No. Annex II     | Name   | M/C/E       | Method Code | Designation or Description | Emission Point 1                                   | T (Total) KG/Year | A (Accidental) KG/Year | F (Fugitive) KG/Year |
| 01               | Methane (CH4)                                  | C           | OTH         | GasSim 1.5                 | 0.0  | 163000.0          | 0.0                    | 163000.0             |
| 02               | Carbon monoxide (CO)                           | C           | OTH         | GasSim 1.5                 | 0.0  | 0.0773            | 0.0                    | 0.0773               |
| 03               | Carbon dioxide (CO2)                           | C           | OTH         | GasSim 1.5                 | 0.0  | 547000.0          | 0.0                    | 547000.0             |
| 07               | Non-methane volatile organic compounds (NMVOC) | C           | OTH         | GasSim 1.5                 | 0.0  | 0.191             | 0.0                    | 0.191                |
| 55               | 1,1,1-trichloroethane                          | C           | OTH         | GasSim 1.5                 | 0.0  | 0.239             | 0.0                    | 0.239                |
| 56               | 1,1,2,2-tetrachloroethane                      | C           | OTH         | GasSim 1.5                 | 0.0  | 0.00433           | 0.0                    | 0.00433              |
| 34               | 1,2-dichloroethane (EDC)                       | C           | OTH         | GasSim 1.5                 | 0.0  | 0.0               | 0.0                    | 0.0                  |
| 62               | Benzene  | C           | OTH         | GasSim 1.5                 | 0.0  | 0.00255           | 0.0                    | 0.00255              |
| 58               | Trichloromethane                               | C           | OTH         | GasSim 1.5                 | 0.0  | 0.00368           | 0.0                    | 0.00368              |
| 35               | Dichloromethane (DCM)                          | C           | OTH         | GasSim 1.5                 | 0.0  | 0.00518           | 0.0                    | 0.00518              |
| 73               | Toluene  | C           | OTH         | GasSim 1.5                 | 0.0  | 0.00924           | 0.0                    | 0.00924              |
| 60               | Vinyl chloride                                 | C           | OTH         | GasSim 1.5                 | 0.0  | 0.00793           | 0.0                    | 0.00793              |
| 78               | Xylenes  | C           | OTH         | GasSim 1.5                 | 0.0  | 0.0034            | 0.0                    | 0.0034               |
| 15               | Chlorofluorocarbons (CFCs)                     | C           | OTH         | GasSim 1.5                 | 0.0  | 0.295             | 0.0                    | 0.295                |
| 14               | Hydrochlorofluorocarbons (HCFCs)               | C           | OTH         | GasSim 1.5                 | 0.0  | 0.371             | 0.0                    | 0.371                |
| 52               | Tetrachloroethylene (PER)                      | C           | OTH         | GasSim 1.5                 | 0.0  | 0.00743           | 0.0                    | 0.00743              |
| 54               | Trichlorobenzenes (TCBs)(all isomers)          | C           | OTH         | GasSim 1.5                 | 0.0  | 0.00039           | 0.0                    | 0.00039              |

\* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

**SECTION C : REMAINING POLLUTANT EMISSIONS (As required in your Licence)**

| RELEASERS TO AIR |      | METHOD      |             |                            | Please enter all quantities in this section in KGs |                   |                        |                      |
|------------------|------|-------------|-------------|----------------------------|--|-------------------|------------------------|----------------------|
| POLLUTANT        |      | Method Used |             |                            | QUANTITY   |                   |                        |                      |
| Pollutant No.    | Name | M/C/E       | Method Code | Designation or Description | Emission Point 1                                   | T (Total) KG/Year | A (Accidental) KG/Year | F (Fugitive) KG/Year |
|                  |      |             |             |                            | 0.0  | 0.0               | 0.0                    | 0.0                  |

\* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

**Additional Data Requested from Landfill operators**

For the purposes of the National Inventory on Greenhouse Gases, landfill operators are requested to provide summary data on landfill gas (Methane) flared or utilised on their facilities to accompany the figures for total methane generated. Operators should only report their Net methane (CH4) emission to the environment under T(total) KG/yr for Section A: Sector specific PRTR pollutants above. Please complete the table below:

| Landfill:   |                   | Churchtown Landfill |             |                            |                                     |
|---|-------------------|---------------------|-------------|----------------------------|-------------------------------------|
| Please enter summary data on the quantities of methane flared and / or utilised |                   | Method Used         |             |                            | Facility Total Capacity m3 per hour |
|   | T (Total) kg/Year | M/C/E               | Method Code | Designation or Description |                                     |
| Total estimated methane generation (as per site model)                          | 0.0               |                     |             |                            | N/A                                 |
| Methane flared  | 0.0               |                     |             |                            | 0.0 (Total Flaring Capacity)        |
| Methane utilised in engine/s  | 0.0               |                     |             |                            | 0.0 (Total Utilising Capacity)      |
| Net methane emission (as reported in Section A above)                           | 0.0               |                     |             |                            | N/A                                 |