

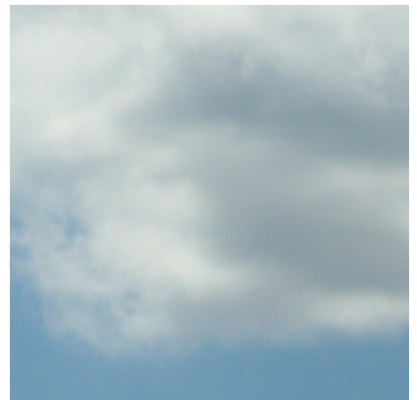
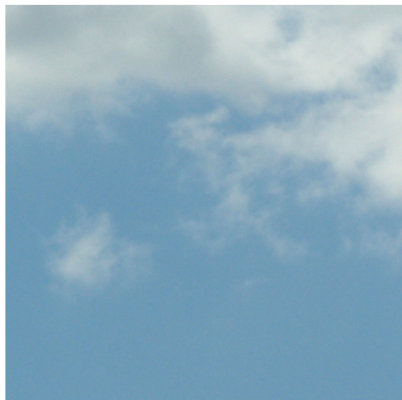
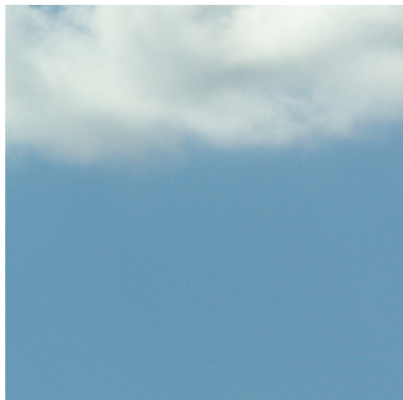
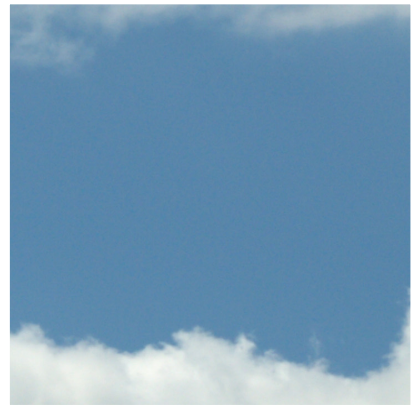
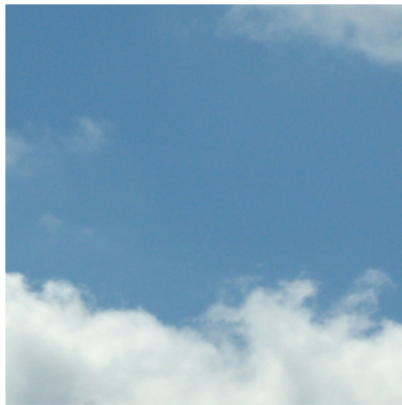
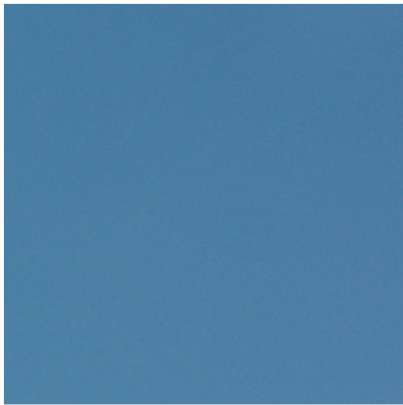
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Donegal County Council

Annual Environmental Report 2017

Glenalla Landfill Site

IBR1073 / April 2018



Document Control Sheet

Client	Donegal County Council					
Project Title	Annual Environmental Report 2017					
Document Title	Glenalla Landfill Site (W0125-01)					
Document No.	IBR1073					
This Document Comprises	DCS	TOC	Text	No. of Tables	No. of Figures	No. of Appendices
	1	1	17	7	1	5

Rev.	Status	Author(s)	Reviewed & Approved By	Issue Date
1.0	Final	<p><i>Ciara Devine</i></p> <p>_____ Ciara Devine, Graduate Scientist</p>	<p><i>Angela McGinley</i></p> <p>_____ Angela McGinley, Senior Scientist</p>	9 th April 2018

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1 Introduction

This Annual Environmental Report (AER) has been prepared to meet the requirements of Schedule E and F of Waste Licence W0125-1 for Glenalla Landfill. This report provides an environmental review of the site from January to December 2017.

On the 4th of December 2001 the Environmental Protection Agency granted the Council a Waste Licence (registration number W0125-1) for the orderly closure, capping and restoration of the landfill facility, in accordance with the Third Schedule of the Waste Management Act, 1996. Donegal County Council ceased operational activity at Glenalla Landfill Site after the Christmas period in December 2001. Subsequently, Donegal County Council was only permitted to accept inert waste for disposal for the purposes of restoration and aftercare of the site. The quantity of inert waste to be accepted is limited to 46,000 tonnes. The site was formally restored in 2005/6. The Council continues to manage the facility to ensure that activities have not caused environmental pollution and carries out regular environmental monitoring. All monitoring data is submitted to the EPA.

Glenalla Landfill is an unlined, capped facility, historically operated on the dilute and disperse principle, whereby leachate generated by rainfall infiltration and the decomposition of the landfilled waste is allowed to disperse into the surrounding environment. The landfill site is situated in a low-lying hollow that has been infilled by peat deposits constituting an area of blanket bog. These deposits can represent an effective hydraulic barrier to the downward percolation of leachate. The disposal of waste was undertaken by the landraise method, whereby tipping took place directly onto the stripped ground surface raising its level to form an elevated landform flanked by low graded banks. As mentioned above the site was formally restored in 2005/6.

The landfill is situated in a fully rural setting, some 4km east of Milford in an area of moderate relief that forms part of the upper catchment of the Glenalla River. This watercourse dissects the southwest boundary of the landfill site. The ground surface of the closed hollow in which the landfill is based generally falls in a south to south westerly direction under a shallow gradient towards the Glenalla River. The downstream extent of the landfill is therefore represented by a small area situated on the southern site boundary. The area to the north and northeast of the site represents the principal upstream area.

A summary of Facility Information is provided in Table 1.1 below.

Table 1.1 Facility Information Summary

AER Reporting Year	2017
Licence Register Number	W00125-01
Name of site	Glenalla Landfill Site
Site Location	Glenalla, Milford, County Donegal
NACE Code	3821
Class/Classes of Activity	Landfill

2 Waste Activities Carried Out at the Facility

2.1 Type of Waste

The licensed 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):** This activity is limited to the deposition of inert waste;
- **Class 4 Surface impoundment, including placement of liquid or sludge discards into pits, ponds or lagoons:** This activity is limited to leachate collection and treatment; and
- **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:** This activity is limited to leachate collection and storage prior to treatment.

3 Quantities and Composition of Waste

3.1 Quantities of Waste for Restoration

In accordance with Condition 1 of the waste licence only inert waste may be deposited at the facility. A maximum of 46,000 tonnes shall be accepted for the purposes of restoration and aftercare. The quantity of waste received during the reporting period and each previous year at the facility are presented in Table 3.1.

Glenalla landfill site was closed in 2001 and no material was imported or exported until restoration works commenced during 2005. The material imported during 2005 was inert and specifically for the purpose of restoring the site.

Table 3.1 Waste Quantities Accepted (Tonnes)

Waste Types	1998	1999	2000	2001	2002	2003	2004	2005
Total (tonnes)	550	1,565	5,722	10,093	0	0	0	34,474*

* = inert material imported for restoration.

4 Summary Report of Emissions

4.1 Environmental Monitoring Requirements

There is no continuous air, groundwater, surface water or wastewater (sewer) monitoring at Glenalla landfill site. Periodic / non-continuous monitoring of groundwater, surface water, leachate and landfill gas is carried out at the site as per the schedule, and as agreed with the EPA, as set out in Tables A1, A2, A3 and A4 of Appendix B. It should be noted that monitoring is reduced in frequency from quarterly to bi-annual and annual parameters are in abeyance as agreed with the Agency.

Details of the monitoring locations are shown on Drawing IBR1073/006.

4.2 Monitoring Results

Laboratory results certificates for groundwater, surface water, leachate and gas monitoring for the period are contained in Appendix C. Trend graphs for key parameters are also provided.

4.3 Groundwater

The groundwater results contained in this report were assessed against the following:

- EPA Interim Guideline Values¹ (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 Groundwater Threshold Values (GTV).

GW1 is located upgradient of the landfill and GW2 and GW3 are immediately downgradient. GW2 was re-drilled during 2006. The direction of groundwater flow is presented in Figure 4 in Appendix A. Parameters to be monitored and frequencies as required by the Waste Licence are listed in Appendix B. Since restoration the Agency has agreed to reduce monitoring frequency to bi-annual and the requirement to test for annual frequency parameters has been dropped. Laboratory certificates and results presented in graphical format are contained in Appendix C.

¹EPA (2003) Towards setting guideline values for the protection of groundwater in Ireland. Interim Report

4.3.1 Upgradient

The GTV for ammonium is 0.175 mg/l N. An elevated concentration of ammonia N was recorded upgradient of the site in GW1 in October (21.9 mg/l). Trends for ammonia in groundwater are provided in graph format in Appendix C.

No elevated concentrations relative to the appropriate guideline values for the remaining parameters measured bi-annually throughout the monitoring period were recorded upgradient of the site.

4.3.2 Downgradient

A number of parameters monitored bi-annually in the downgradient boreholes exceed the GTV and / or IGV guideline values. These are highlighted in Table 4.1 below and in graph format in Appendix C.

The GTV for ammonium is 0.175 mg/l N. Elevated concentrations of ammonia N above the GTV were recorded downgradient of the site in GW2 and GW3 throughout the monitoring period except GW3 in October (<0.005 mg/l). The highest concentration was 3.005 mg/l in GW2 in May. These results are consistent with previous results for these wells. It should also be noted that these groundwater wells are located in close proximity to the unlined waste body.

Elevated concentrations of iron above the IGV of 200 µg/l were recorded downgradient of the site in GW2 and GW3 throughout the monitoring period except GW3 in October (<20 µg/l). The highest concentration was 3,300 µg/l in GW2 in October. It should be noted that iron occurs naturally in Donegal groundwater as it is associated with naturally occurring conditions such as iron rich bedrock or the presence of reducing conditions, that is, anaerobic environment such as peat.

The IGV for TOC is 'No abnormal change'. An elevated concentration of TOC was detected in GW3 in May (18.84 mg/l).

pH level in GW3 in May (6.23) was below the IGV range of 6.5 to 9.5.

No elevated concentrations relative to the appropriate guideline values for the remaining parameters measured bi-annually throughout the monitoring period were recorded downgradient of the site.

Table 4.1 Groundwater Concentrations 2017

Station	Sample Date	Ammonia N	Chloride	Conductivity @ 20°C	Dissolved Oxygen	pH	Temperature	Iron	Potassium	Sodium	Depth	Total Organic Carbon	Phenols	Total Oxidised Nitrogen
		mg/l	mg/l	µS/cm	mg/l	pH units	DegC	µg/l	mg/l	mg/l	m	mg/l	µg/l	mg/l
GW 1	16-May	< 0.005	19.8	228	3.49	6.47	13.6	24	2.7	15.2	0.17	1.56	< 0.1	< 0.15
GW 2	16-May	3.005	21.8	370	2.55	7.3	14.2	780	3.3	17.4	0.69	2.24	< 0.1	< 0.15
GW 3	16-May	0.3	4.9	101	4.84	6.23	14.1	480	1.4	7.6	0.5	18.84	< 0.1	0.16
GW 1	20-Oct	21.9	21.83	287	4.93	6.68	12.5	< 20	3	21.9	0.31	2.42	< 0.1	< 0.15
GW 2	20-Oct	1.788	24.82	493	2.11	7.03	12.5	3300	3.3	26.1	0.46	3.38	< 0.1	< 0.15
GW 3	20-Oct	< 0.005	29.78	462	3.02	7.04	12.9	< 20	3.1	22.8	0.5	2	< 0.1	< 0.15
GTV		0.175	187.5	1875						150				
IGV			30	1000	NAC	6.5-9.5	25	200	5	150		NAC	0.5	NAC

*NAC = No Abnormal Change

4.3.3 Hydrogeological Risk Assessment

A hydrogeological risk assessment was undertaken in 2015 and submitted to the EPA. There is uncertainty about the information provided by the downstream wells (GW2 and GW3) for a number of reasons (integrity of the wells and their close proximity to the site). Ideally these wells should be replaced and more remote wells installed, however there are number of practical issues at this site with regards to installing new boreholes.

The Conceptual Site Model (CSM) identified a number of source-pathway-receptor (SPR) linkages ranging from Moderate to High risk to identified sensitive receptors. The main SPR linkages include the horizontal migration of leachate off-site via overtopping of the toe drains or leaks in the landfill cap to the Glenalla River and the horizontal migration of contaminated groundwater to the Glenalla River.

A series of proposed mitigation measures and additional investigation have been proposed to address the data gaps at the site, to facilitate a more detailed understanding of the hydrogeological regime and to assess the risk posed to downgradient receptors.

4.4 Surface Water

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 Surface Water Quality Standards (SWQS); and
- SI No 272 of 2009 European Communities Environmental Objectives (Surface Water) Regulations 2009 Environmental Quality Standards (EQS).

Surface water monitoring is carried out at SW1, SW2, SW3 and SW4² located in the Glenalla River. SW1 is reflective of the quality of the surface water upstream of the landfill site and SW4 reflective of downstream water quality. The parameters and frequencies of monitoring required by the Waste Licence are as listed in Appendix B, however since restoration of the site the Agency has agreed to a frequency of bi-annual monitoring and to drop the requirement for the annual parameters. The results of monitoring are highlighted in Table 4.2 below. Laboratory results certificates and trend graphs are provided in Appendix C.

² It was agreed with the EPA to locate a new surface water monitoring point further downstream of the landfill as both SW2 and SW3 are very close to the waste body. A location for SW4 was established in November 2008.

4.4.1 Upstream

The EQS for good status total ammonia is 0.140 mg N/l. Ammonia N concentrations were below the EQS upstream of the site at SW1. This reflects the baseline conditions of the surface water upstream of the site.

No elevated concentrations relative to the appropriate guideline values for the remaining parameters measured bi-annually throughout the monitoring period were recorded upstream of the site.

4.4.2 Downstream

Ammonia N concentrations were below the EQS for good status (0.14 mg N/l) downstream throughout the monitoring period except SW3 (6.445 mg/l) and SW4 (3.753 mg/l) in May. Concentrations ranged from 0.008 to 6.445 mg/l.

An elevated COD concentration above the SWQS of 40 mg/l was recorded in SW4 in May (46 mg/l).

No elevated concentrations relative to the appropriate guideline values for the remaining parameters measured bi-annually throughout the monitoring period were recorded downstream of the site.

4.4.3 Hydrogeological Risk Assessment

The hydrogeological risk assessment in 2015 found that the site is currently impacting on surface waters in the vicinity of the landfill. A number of pathways for leachate to migrate to Glenalla River exist and additional investigation and monitoring is recommended to ascertain the level of risk posed and to develop appropriate mitigation measures.

Table 4.2 Surface Water Concentrations 2017

Station	Sample Date	Ammonia N	BOD	Chloride	Conductivity @ 20°C	COD	Dissolved Oxygen	pH	Temperature	Suspended Solids
		mg/l	mg/l	mg/l	µS/cm	mg/l	mg/l	pH units	Degrees C	mg/l
SW 1	16-May	0.012	< 1	24.8	82.8	31	8.68	6.55	13.8	6
SW 2	16-May	0.008	< 1	14.8	84.3	28	8.92	7.13	14.3	6
SW 3	16-May	6.445	< 1	19.8	88.8	37	9.24	7.01	15	7.25
SW 4	16-May	3.753	< 1	9.9	93.3	46	9.25	7.25	14.6	6
SW 1	20-Oct	0.02	1	14.89	95.2	36	10.9	7.05	13	< 6
SW 2	20-Oct	0.012	1	17.87	104.7	37	1065	6.87	12.9	< 6
SW 3	20-Oct	0.009	1	19.85	93.8	34	1037	6.79	13	< 6
SW4	20-Oct	NM	NM	NM	NM	NM	NM	NM	NM	NM
EQS		0.140	2.6							
SWQS				250	1000	40		5.5-8.5	25	50

*NM = SW4 was not monitored in October as it was inaccessible due to poor road conditions.

4.5 Leachate

Leachate is monitored at L1 and at the leachate holding lagoon at the facility. Leachate quality varies during the lifetime of a landfill depending on the stage of decomposition of waste. Results are presented in Appendix C. Some characteristic parameters have been compared with those of 'typical' raw leachate in Table 4.3 below.

Table 4.3 Leachate Results 2017

PARAMETER	L 1		Leachate Holding Lagoon		From 30 samples from UK/Irish landfills accepting domestic waste Results in mg/l		
	16-May	20-Oct	16-May	20-Oct	Min.Conc	Max.Conc	Mean
Ammonia N	IS ³	4.933	30	11	<0.2	1700	491
Biological Oxygen Demand	IS	IS	< 1	< 1	4.5	>4800	>834
Chloride	IS	79.41	24.8	14.89	27	3410	1256
COD Chemical Oxygen Demand	IS	25	45	24	<10	33,700	3078
Conductivity @ 20°C	978	1109	628	452	503	19,200	7789
pH	8.38	7.28	6.78	7.76	6.4	8.0	7.2
Temperature	15.5	13	14.6	13.6	/	/	/
Total Oxidised Nitrogen N	IS	0.28	1.2	< 0.69	/	/	/

Table 4.3 compares raw leachate concentrations detected at Glenalla with 'typical leachate composition from 30 samples from UK/Irish Landfills accepting mainly domestic waste' (taken from EPA Manual for Landfill Operational Practices). Parameters measured are all consistent with typical leachate ranges shown and with the results issued last period. The leachate is weak.

4.6 Landfill Gas

Landfill gas is monitored at three locations at the facility, LG1, LG2, and LG3 which are all located in waste. Both LG1 and LG3 were replaced during restoration works. Maintenance works were carried out previously to secure access to these wells.

³ Insufficient Sample

Monitoring of the landfill gas was undertaken in May and October of the monitoring period and results are shown in Table 4.4 below.

The results show variable levels of methane and carbon dioxide % v/v during the monitoring period.

Table 4.4 Landfill Gas Results 2017

Station	Sample Date	Methane %v/v	Carbon Dioxide %v/v	Oxygen %v/v	Atmospheric Pressure
LG1	16-May	65.3	30	0	995
LG2	16-May	17.5	10.5	10.4	995
LG3	16-May	62.2	26.4	2.1	994
LG1	20-Oct	NM	NM	NM	NM
LG2	20-Oct	8.9	6.9	11.3	986
LG3	20-Oct	69.1	26.8	3.7	986

*NM = LG1 was not monitored in October as the pipe was flooded.

5 Volume of Leachate Produced and Volume of Leachate Discharged

A water balance calculation has been undertaken and is contained in Appendix D. This indicates that the estimated volume of leachate produced at the site for 2017 was approximately 2,362 m³.

Leachate is currently removed at a rate of three loads per week. This was introduced after problems with the sump pump were detected at the beginning of 2016 (refer to Section 14). Twice the estimated volume of leachate produced at the site is currently being removed offsite.

The total volume of leachate tankered during the reporting period was 4,382.2 m³. Table 5.1 below shows a breakdown of volumes tankered.

Table 5.1 Breakdown of Leachate Volumes by Month in 2017

Month	Leachate Volume (m ³)
January	375.4
February	346.5
March	468.2
April	278.6
May	460.0
June	373.0
July	367.7
August	394.4
September	369.3
October	301.7
November	467.0
December	180.3
Total	4382.2

6 Topographical Site Survey

A topographical survey of the site was carried out in June 2006 post restoration. Copies of the survey were forwarded to the Agency in March 2007.

7 Reported Incidents and Complaints Summaries

Other than the reporting of on-going emissions exceedances detected in the routine monitoring programme (2 on 16/05/17 and 1 on 20/10/17), no other incidents occurred during the monitoring period and no complaints were received.

Results are currently screened using the following regulations/guidance:

- SI No 9 of 2010 European Communities Environmental Objectives (Groundwater) Regulations Groundwater Threshold Values (GTV);
- EPA Interim Guideline Values (IGV);
- SI No 278 of 2007 EC (Drinking Water) Regulations (DWR);
- SI No 294 of 1989 European Communities (Quality of Surface Water Intended for the Abstraction of Drinking Water) Regulations Surface Water Quality Standards (SWQS);
- SI No 272 of 2009 European Communities Environmental Objectives (Surface Water) Regulations 2009 Environmental Quality Standards (EQS).

Revised screening levels for incident reporting based on a combination of compliance points derived from the hydrogeological review or standards as appropriate to each location were submitted to the EPA for approval for Glenalla. These were not approved by the Agency.

No audits or site visits were undertaken by the EPA in 2017. No observations or non-compliances were issued in 2017.

8 Review of Nuisance Controls

As the facility is non-operational and fully restored, programmes associated with the monitoring and control of potential nuisances are now in abeyance. Site inspections conducted during periodic monitoring check for any sign of nuisance and if any is detected then appropriate measures are taken as per the EMS for the site.

9 Management Structure of the Site

9.1 Organisation

The Management Structure of Glenalla Landfill site is set out in Figure 10.1 below.

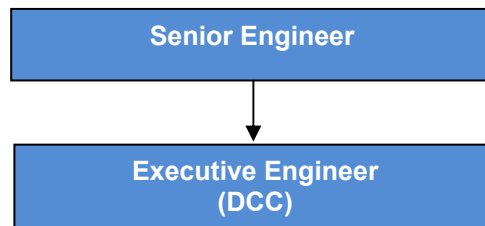


Figure 9.1 Management Structure

An Environmental Liability Risk Assessment has not been carried out at this facility as the landfill site is closed it is not a requirement of the licence.

9.2 Management Responsibility

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

Executive Engineer: Responsible for overall compliance with EPA Licence.

10 Programme for Public Information

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 Environmental Headquarters at Three Rivers Centre in Lifford. Details regarding this programme are contained in Section 2 of the Environmental Management System Manual.

11 Capping and Restoration of the Site

The site was fully restored in 2005/6 in accordance with the approved Restoration and Aftercare Plan dated May 2004.

It was agreed with the Agency in July 2006 that monitoring and reporting frequency would be reduced to bi-annually. It is hoped that when the benefits of restoration have been fully demonstrated that the Council can surrender the licence for this facility.

It was further agreed with the Agency in November 2009 that the annual parameters (including List I & II parameters) could be dispensed with on the restored sites such as Glenalla.

12 Report on Staff Training

No training has been undertaken as the facility is now closed and there are no operational personnel on the site.

13 Resources and Energy Consumption Summary

An energy efficiency audit has not been carried out at this facility as the landfill site is closed it is not a requirement of the licence. A total of 2,325 kWh of electricity was consumed in 2017.

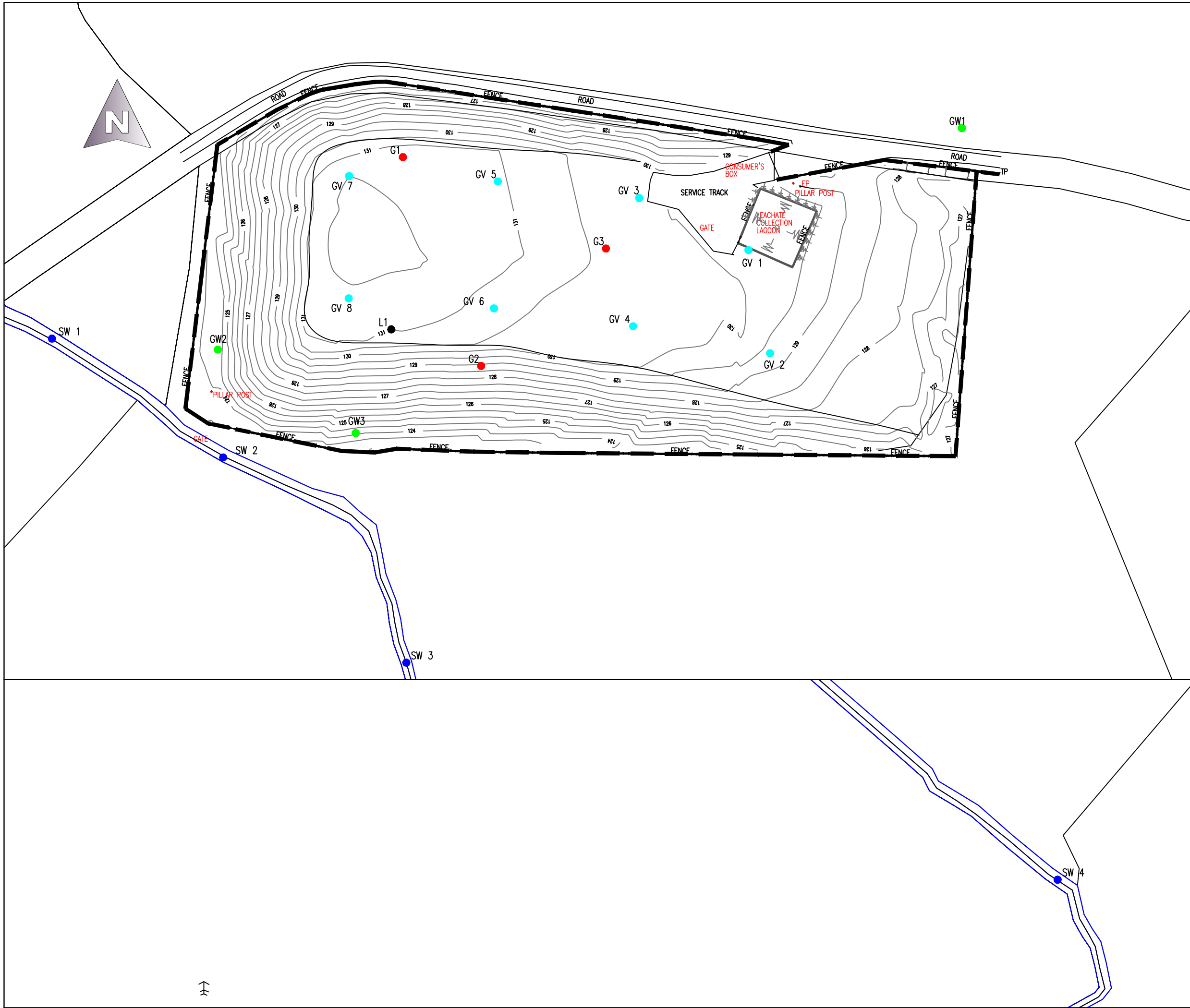
14 Report on Development Work Undertaken During the Reporting Period, and a Timescale for those Proposed During the Coming Year

Perimeter breakouts (particularly along the western boundary and portions of the northern and southern boundaries) have been investigated. Issues identified include the drainage of adjacent lands into the site which have now been rectified and high volumes of leachate in perimeter leachate toe drains as a result of pump downtime. The pumps have been repaired.

A purging exercise was undertaken in 5 boreholes onsite in April 2017 to determine whether the historical leachate levels within the site were the result of perched leachate. Given the difficulty in purging and reducing the level of leachate in boreholes and rapid recharge rates it is believed that the high leachate head levels recorded accurately reflect the leachate head within the site.

In order to understand whether leachate within the perimeter toe drain reaches the collection sump for abstraction a CCTV survey of the toe drain is recommended following drawdown of leachate head. Should there be no restriction on flows the pumping station should be used to remove leachate at least at the rate of generation in order to draw down leachate head within the site.

Appendix A Drawings



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, dwf 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 recipients 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 recipients drawing production, or setting out on site.

4. Datum:

5. Keys:
- GV Gas Vents
 - L1 Leachate Monitoring Point
 - G1 Gas Monitoring Point
 - SW1 Surface Water Monitoring Point
 - GW1 Ground Waster Monitoring Point

A	Monitoring points updated	MC	Nov 15
rev	amendments	drawn	date

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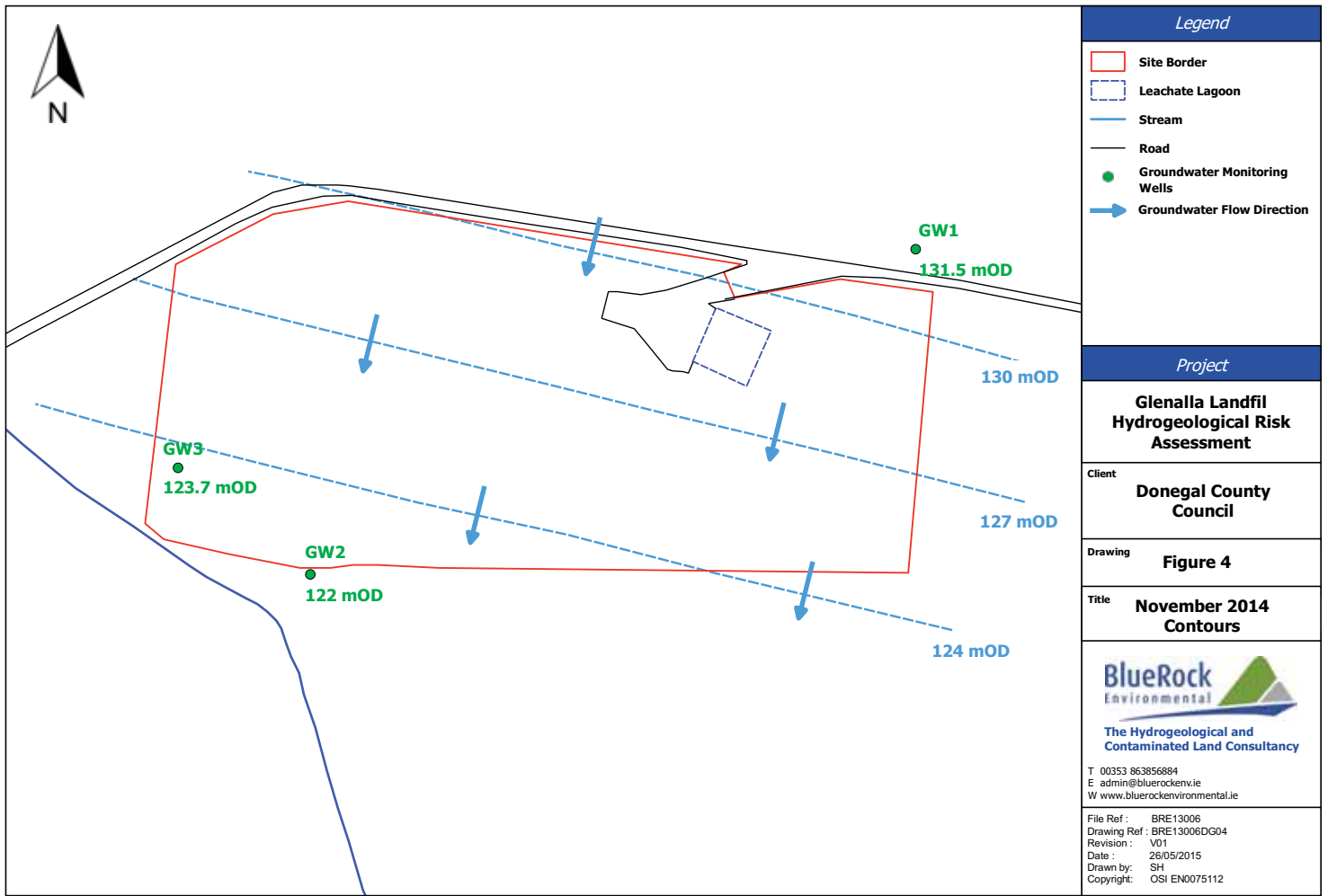
Title
Glenalla LFS - Monitoring Points

Drawing Status	Sheet Size	Drawing Scale
Preliminary	A3	1:1000

Drawing Number	Rev
IBR1073 /006	A

Project Leader	Drawn By	Date	Initial Review
DD	AMB	Apr '15	AMcG

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Appendix B

Monitoring Information

Table A1 Groundwater Parameters and Monitoring Frequencies

Bi-Annually
Visual Inspection
Temperature
Groundwater Level
pH
Electrical Conductivity
Ammoniacal Nitrogen
Dissolved Oxygen
Chloride
Iron
Potassium
TOC
TON
Phenols
Sodium

Table A2 Surface Water Parameters and Monitoring Frequencies

Bi-Annually
Visual Inspection
Temperature
Total Suspended Solids
pH
Electrical Conductivity
Ammoniacal Nitrogen
Dissolved Oxygen
Chloride
BOD
COD

Table A3 Leachate Parameters and Monitoring Frequencies

Bi-Annually
Visual Inspection
Leachate Level
Temperature
pH
Electrical Conductivity

Ammoniacal Nitrogen
COD
BOD
Chloride
TON

Table A4 Landfill Gas Parameters and Monitoring Frequencies

Bi-Annually
Atmospheric Pressure
Carbon Dioxide
Methane
Oxygen
Temperature

Table A5 Monitoring Locations Grid References.

Station_Purpose	Station_Name	Northing	Easting
Landfill Monitoring - Groundwater	GW1	427966	223321
Landfill Monitoring - Groundwater	GW2	427905	223116
Landfill Monitoring - Groundwater	GW3	427877	223153
Landfill Monitoring - Leachates	L1	427902	223169
Landfill Monitoring - Leachates	Leachate Holding Lagoon	427942	223278
Landfill Monitoring - Air Quality	LG1	427958	223167
Landfill Monitoring - Air Quality	LG2	427895	223190
Landfill Monitoring - Air Quality	LG3	427929	223224
Landfill Monitoring - Surface Water	SW at corner	427888	223122
Landfill Monitoring - Surface Water	SW1	427912	223060
Landfill Monitoring - Surface Water	SW2	427884	223109
Landfill Monitoring - Surface Water	SW3	427827	223168
Landfill Monitoring - Surface Water	SW4	427668	223333

Appendix C

Results of Monitoring



Comhairle Contae Dhún na nGall
Donegal County Council
Central Laboratory,
Stranorlar Wastewater Treatment Plant,
Railway Road, Stranorlar, Co. Donegal.

074-9153900

Sample No.: 172501330	Sample Date/Time: 16/05/2017 @ 11:10
Category: Landfill Monitoring	Sample Method: Grab
Entity: Glenalla Landfill	Sampled By: Fionnuala Bonner
Station: Gw 1	Laboratory: Donegal Co Council
Template: Glenalla Biannual GW	Analyst: Fionnuala Bonner

Sample Notes:

Customer Name: Landfill Monitoring Donegal Co. Council
Contact Details: Julie McMahon
 Central Lab
 The Kube, Magheranan
 Letterkenny
 0749122787: 0872861096
 julie.mcmahon@donegalcoco.ie
Customer Ref: Landfill Compliance Monitoring

Sample No. Laboratory: 172501330
Sample No. Customer:
Date Received: 16/05/2017
Mode Of Delivery: cooler box
Condition On Delivery: ok
Date Started: 16/05/2017
Report Date: 12/06/2017
Report Reference: 17DL232

Parameter/Unit	Test Method	Maximum Limit	Minimum Limit	Test Date	Test RESULT
Ammonia N mg/l	5.4P-TMC6	--	--	18/05/17	< 0.005 ***
Chloride mg/l	5.4P-TMC14	--	--	17/05/17	19.8
Conductivity @ 20°C µS/cm	5.4P-TMC2	--	--	16/05/17	228
Iron µg/l		--	--	18/05/17	24 ***
pH pH units	5.4P-TMC1	--	--	16/05/17	6.47
Potassium mg/l		--	--	18/05/17	2.7 ***
Sodium mg/l		--	--	18/05/17	15.2 ***
Total Organic Carbon mg/l	5.4P-TMC10	--	--	18/05/17	1.56 ***
Total Oxidised Nitrogen N mg/l	5.4P-TMC6	--	--	18/05/17	< 0.15 ***
Depth m	5.4P-TMC27	--	--	16/05/17	0.17
Dissolved Oxygen mg/l	5.4P-TMC18	--	--	16/05/17	3.49
Phenols µg/l		--	--	18/05/17	< 0.1 ***
Temperature Degrees C	5.4P-TMC1	--	--	16/05/17	13.6
Visual Inspection Descriptive	5.4P-TMC26	--	--	16/05/17	Nothing Observed
Phenols mg/l		--	--		
Iron Dissolved µg/l		--	--		

In RESULT column, unaccredited in-house test result - no asterisk, *inhouse accredited, **unaccredited. & subcontracted, *** accredited. & sub-cont.

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 Where "0" is reported, it means "None detected in volume tested."



Comhairle Contae Dhún na nGall
Donegal County Council
Central Laboratory,
Stranorlar Wastewater Treatment Plant,
Railway Road, Stranorlar, Co. Donegal.
 074-9153900

Sample No.:	172501331	Sample Date/Time:	16/05/2017 @ 10:20
Category:	Landfill Monitoring	Sample Method:	Grab
Entity:	Glenalla Landfill	Sampled By:	Fionnuala Bonner
Station:	Gw 2	Laboratory:	Donegal Co Council
Template:	Glenalla Biannual GW	Analyst:	Fionnuala Bonner

Sample Notes:

Customer Name: Landfill Monitoring Donegal Co. Council
Contact Details: Julie McMahon
 Central Lab
 The Kube, Magheranan
 Letterkenny
 0749122787: 0872861096
 julie.mcmahon@donegalcoco.ie
Customer Ref: Landfill Compliance Monitoring

Sample No. Laboratory: 172501331
Sample No. Customer:
Date Received: 16/05/2017
Mode Of Delivery: cooler box
Condition On Delivery: ok
Date Started: 16/05/2017
Report Date: 12/06/2017
Report Reference: 17DL232

Parameter/Unit	Test Method	Maximum Limit	Minimum Limit	Test Date	Test RESULT
Ammonia N mg/l	5.4P-TMC6	--	--	18/05/17	3.005 ***
Chloride mg/l	5.4P-TMC14	--	--	17/05/17	21.8
Conductivity @ 20°C µS/cm	5.4P-TMC2	--	--	16/05/17	370
Iron µg/l		--	--	18/05/17	780 ***
pH pH units	5.4P-TMC1	--	--	16/05/17	7.3
Potassium mg/l		--	--	18/05/17	3.3 ***
Sodium mg/l		--	--	18/05/17	17.4 ***
Total Organic Carbon mg/l	5.4P-TMC10	--	--	18/05/17	2.24 ***
Total Oxidised Nitrogen N mg/l	5.4P-TMC6	--	--	18/05/17	< 0.15 ***
Depth m	5.4P-TMC27	--	--	16/05/17	0.69
Dissolved Oxygen mg/l	5.4P-TMC18	--	--	16/05/17	2.55
Phenols µg/l		--	--	18/05/17	< 0.1 ***
Temperature Degrees C	5.4P-TMC1	--	--	16/05/17	14.2
Visual Inspection Descriptive	5.4P-TMC26	--	--	16/05/17	Nothing Observed
Phenols mg/l		--	--		
Iron Dissolved µg/l		--	--		

In RESULT column, unaccredited in-house test result - no asterisk, *inhouse accred., **unaccred. & subcontracted, *** accred. & sub-cont.

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**Comhairle Contae Dhún na nGall
Donegal County Council
Central Laboratory,
Stranorlar Wastewater Treatment Plant,
Railway Road, Stranorlar, Co. Donegal.
074-9153900**

Sample No.:	172501332	Sample Date/Time:	16/05/2017 @ 10:35
Category:	Landfill Monitoring	Sample Method:	Grab
Entity:	Glenalla Landfill	Sampled By:	Fionnuala Bonner
Station:	Gw 3	Laboratory:	Donegal Co Council
Template:	Glenalla Biannual GW	Analyst:	Fionnuala Bonner

Sample Notes:		Sample No. Laboratory:	172501332
Customer Name:	Landfill Monitoring Donegal Co. Council	Sample No. Customer:	
Contact Details:	Julie McMahon Central Lab The Kube, Magheranan Letterkenny 0749122787: 0872861096 julie.mcmahon@donegalcoco.ie	Date Received:	16/05/2017
		Mode Of Delivery:	cooler box
		Condition On Delivery:	ok
		Date Started:	16/05/2017
Customer Ref:	Landfill Compliance Monitoring	Report Date:	12/06/2017
		Report Reference:	17DL232

Parameter/Unit	Test Method	Maximum Limit	Minimum Limit	Test Date	Test RESULT
Ammonia N mg/l	5.4P-TMC6	--	--	18/05/17	0.3 ***
Chloride mg/l	5.4P-TMC14	--	--	17/05/17	4.9
Conductivity @ 20°C µS/cm	5.4P-TMC2	--	--	16/05/17	101
Iron µg/l		--	--	18/05/17	480 ***
pH pH units	5.4P-TMC1	--	--	16/05/17	6.23
Potassium mg/l		--	--	18/05/17	1.4 ***
Sodium mg/l		--	--	18/05/17	7.6 ***
Total Organic Carbon mg/l	5.4P-TMC10	--	--	18/05/17	18.84 ***
Total Oxidised Nitrogen N mg/l	5.4P-TMC6	--	--	18/05/17	0.16 ***
Depth m	5.4P-TMC27	--	--	16/05/17	0.5
Dissolved Oxygen mg/l	5.4P-TMC18	--	--	16/05/17	4.84
Phenols µg/l		--	--	18/05/17	< 0.1 ***
Temperature Degrees C	5.4P-TMC1	--	--	16/05/17	14.1
Visual Inspection Descriptive	5.4P-TMC26	--	--	16/05/17	Nothing Observed
Phenols mg/l		--	--		
Iron Dissolved µg/l		--	--		

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SIGNED *Fionnuala Bonner* **12/06/2017**
Dr. Joe Ferry, Laboratory Manager

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Comhairle Contae Dhún na nGall
Donegal County Council
Central Laboratory,
Stranorlar Wastewater Treatment Plant,
Railway Road, Stranorlar, Co. Donegal.
 074-9153900

Sample No.:	172501326	Sample Date/Time:	16/05/2017 @ 10:55
Category:	Landfill Monitoring	Sample Method:	Grab
Entity:	Glenalla Landfill	Sampled By:	Fionnuala Bonner
Station:	Sw 1	Laboratory:	Donegal Co Council
Template:	Glenalla Biannual SW	Analyst:	Fionnuala Bonner

Sample Notes:

Customer Name: Landfill Monitoring Donegal Co. Council
Contact Details: Julie McMahon
 Central Lab
 The Kube, Magheranan
 Letterkenny
 0749122787: 0872861096
 julie.mcmahon@donegalcoco.ie
Customer Ref: Landfill Compliance Monitoring

Sample No. Laboratory: 172501326
Sample No. Customer:
Date Received: 16/05/2017
Mode Of Delivery: cooler box
Condition On Delivery: ok
Date Started: 16/05/2017
Report Date: 12/06/2017
Report Reference: 17DL232

Parameter/Unit	Test Method	Maximum Limit	Minimum Limit	Test Date	Test RESULT
Ammonia N mg/l	5.4P-TMC5	--	--	18/05/17	0.012 ***
Chloride mg/l	5.4P-TMC14	--	--	17/05/17	24.8
Conductivity @ 20°C µS/cm	5.4P-TMC2	--	--	16/05/17	82.8
pH pH units	5.4P-TMC1	--	--	16/05/17	6.55
Suspended Solids mg/l	5.4P-TMC4	--	--	16/05/17	6
Biological Oxygen Demand mg/l	5.4P-TMC9	--	--	19/05/17	< 1 ***
Dissolved Oxygen mg/l	5.4P-TMC18	--	--	16/05/17	8.68
Temperature Degrees C	5.4P-TMC1	--	--	16/05/17	13.8
Visual Inspection Descriptive	5.4P-TMC26	--	--	16/05/17	Nothing Observed
COD Chemical Oxygen Demand mg/l	5.4P-TMC3	--	--	17/05/17	31

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Comhairle Contae Dhún na nGall
Donegal County Council
Central Laboratory,
Stranorlar Wastewater Treatment Plant,
Railway Road, Stranorlar, Co. Donegal.
 074-9153900

Sample No.:	172501327	Sample Date/Time:	16/05/2017 @ 10:26
Category:	Landfill Monitoring	Sample Method:	Grab
Entity:	Glenalla Landfill	Sampled By:	Fionnuala Bonner
Station:	Sw 2	Laboratory:	Donegal Co Council
Template:	Glenalla Biannual SW	Analyst:	Fionnuala Bonner

Customer Name:	Landfill Monitoring Donegal Co. Council	Sample No. Laboratory:	172501327
Contact Details:	Julie McMahon Central Lab The Kube, Magheranan Letterkenny 0749122787: 0872861096 julie.mcmahon@donegalcoco.ie	Sample No. Customer:	
Customer Ref:	Landfill Compliance Monitoring	Date Received:	16/05/2017
		Mode Of Delivery:	cooler box
		Condition On Delivery:	ok
		Date Started:	16/05/2017
		Report Date:	12/06/2017
		Report Reference:	17DL232

Parameter/Unit	Test Method	Maximum Limit	Minimum Limit	Test Date	Test RESULT
Ammonia N mg/l	5.4P-TMC5	--	--	18/05/17	0.008 ***
Chloride mg/l	5.4P-TMC14	--	--	17/05/17	14.8
Conductivity @ 20°C µS/cm	5.4P-TMC2	--	--	16/05/17	84.3
pH pH units	5.4P-TMC1	--	--	16/05/17	7.13
Suspended Solids mg/l	5.4P-TMC4	--	--	16/05/17	6
Biological Oxygen Demand mg/l	5.4P-TMC9	--	--	19/05/17	< 1 ***
Dissolved Oxygen mg/l	5.4P-TMC18	--	--	16/05/17	8.92
Temperature Degrees C	5.4P-TMC1	--	--	16/05/17	14.3
Visual Inspection Descriptive	5.4P-TMC26	--	--	16/05/17	Nothing Observed
COD Chemical Oxygen Demand mg/l	5.4P-TMC3	--	--	17/05/17	28

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Comhairle Contae Dhún na nGall
Donegal County Council
Central Laboratory,
Stranorlar Wastewater Treatment Plant,
Railway Road, Stranorlar, Co. Donegal.
 074-9153900

Sample No.:	172501328	Sample Date/Time:	16/05/2017 @ 10:30
Category:	Landfill Monitoring	Sample Method:	Grab
Entity:	Glenalla Landfill	Sampled By:	Fionnuala Bonner
Station:	Sw 3	Laboratory:	Donegal Co Council
Template:	Glenalla Biannual SW	Analyst:	Fionnuala Bonner

Sample Notes:

Customer Name: Landfill Monitoring Donegal Co. Council
Contact Details: Julie McMahon
 Central Lab
 The Kube, Magheranan
 Letterkenny
 0749122787: 0872861096
 julie.mcmahon@donegalcoco.ie
Customer Ref: Landfill Compliance Monitoring

Sample No. Laboratory: 172501328
Sample No. Customer:
Date Received: 16/05/2017
Mode Of Delivery: cooler box
Condition On Delivery: ok
Date Started: 16/05/2017
Report Date: 12/06/2017
Report Reference: 17DL232

Parameter/Unit	Test Method	Maximum Limit	Minimum Limit	Test Date	Test RESULT
Ammonia N mg/l	5.4P-TMC5	--	--	18/05/17	6.445 ***
Chloride mg/l	5.4P-TMC14	--	--	17/05/17	19.8
Conductivity @ 20°C µS/cm	5.4P-TMC2	--	--	16/05/17	88.8
pH pH units	5.4P-TMC1	--	--	16/05/17	7.01
Suspended Solids mg/l	5.4P-TMC4	--	--	16/05/17	7.25
Biological Oxygen Demand mg/l	5.4P-TMC9	--	--	19/05/17	< 1 ***
Dissolved Oxygen mg/l	5.4P-TMC18	--	--	16/05/17	9.24
Temperature Degrees C	5.4P-TMC1	--	--	16/05/17	15
Visual Inspection Descriptive	5.4P-TMC26	--	--	16/05/17	Nothing Observed
COD Chemical Oxygen Demand mg/l	5.4P-TMC3	--	--	17/05/17	37

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Fionnuala Bonner

12/06/2017

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Comhairle Contae Dhún na nGall
Donegal County Council
Central Laboratory,
Stranorlar Wastewater Treatment Plant,
Railway Road, Stranorlar, Co. Donegal.
 074-9153900

Sample No.:	172501329	Sample Date/Time:	16/05/2017 @ 10:40
Category:	Landfill Monitoring	Sample Method:	Grab
Entity:	Glenalla Landfill	Sampled By:	Fionnuala Bonner
Station:	Sw 4	Laboratory:	Donegal Co Council
Template:	Glenalla Biannual SW	Analyst:	Fionnuala Bonner

Sample Notes:

Customer Name: Landfill Monitoring Donegal Co. Council
Contact Details: Julie McMahon
 Central Lab
 The Kube, Magheranan
 Letterkenny
 0749122787; 0872861096
 julie.mcmahon@donegalcoco.ie
Customer Ref: Landfill Compliance Monitoring

Sample No. Laboratory: 172501329
Sample No. Customer:
Date Received: 16/05/2017
Mode Of Delivery: cooler box
Condition On Delivery: ok
Date Started: 16/05/2017
Report Date: 12/06/2017
Report Reference: 17DL232

Parameter/Unit	Test Method	Maximum Limit	Minimum Limit	Test Date	Test RESULT
Ammonia N mg/l	5.4P-TMC5	--	--	18/05/17	3.753 ***
Chloride mg/l	5.4P-TMC14	--	--	17/05/17	9.9
Conductivity @ 20°C µS/cm	5.4P-TMC2	--	--	16/05/17	93.3
pH pH units	5.4P-TMC1	--	--	16/05/17	7.25
Suspended Solids mg/l	5.4P-TMC4	--	--	16/05/17	6
Biological Oxygen Demand mg/l	5.4P-TMC9	--	--	19/05/17	< 1 ***
Dissolved Oxygen mg/l	5.4P-TMC18	--	--	16/05/17	9.25
Temperature Degrees C	5.4P-TMC1	--	--	16/05/17	14.6
Visual Inspection Descriptive	5.4P-TMC26	--	--	16/05/17	Nothing Observed
COD Chemical Oxygen Demand mg/l	5.4P-TMC3	--	--	17/05/17	46

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Comhairle Contae Dhún na nGall
Donegal County Council
Central Laboratory,
Stranorlar Wastewater Treatment Plant,
Railway Road, Stranorlar, Co. Donegal.
 074-9153900

Sample No.:	172501333	Sample Date/Time:	16/05/2017 @ 10:15
Category:	Landfill Monitoring	Sample Method:	Grab
Entity:	Glenalla Landfill	Sampled By:	Fionnuala Bonner
Station:	L 1	Laboratory:	Donegal Co Council
Template:	Glenalla Biannual Leachate	Analyst:	Fionnuala Bonner

Sample Notes:

Customer Name: Landfill Monitoring Donegal Co. Council
Contact Details: Julie McMahon
 Central Lab
 The Kube, Magheranan
 Letterkenny
 0749122787: 0872861096
 julie.mcmahon@donegalcoco.ie
Customer Ref: Landfill Compliance Monitoring

Sample No. Laboratory: 172501333
Sample No. Customer:
Date Received: 16/05/2017
Mode Of Delivery: cooler box
Condition On Delivery: ok
Date Started: 16/05/2017
Report Date: 12/06/2017
Report Reference: 17DL232

Parameter/Unit	Test Method	Maximum Limit	Minimum Limit	Test Date	Test RESULT
Ammonia N mg/l	5.4P-TMC6	--	--	16/05/17	--
Biological Oxygen Demand mg/l	5.4P-TMC9	--	--	17/05/17	--
Chloride mg/l	5.4P-TMC14	--	--	17/05/17	--
Conductivity @ 20°C µS/cm	5.4P-TMC2	--	--	16/05/17	978
pH pH units	5.4P-TMC1	--	--	16/05/17	8.38
Total Oxidised Nitrogen N mg/l	5.4P-TMC6	--	--	16/05/17	--
Depth m	5.4P-TMC27	--	--	16/05/17	6.89
Temperature Degrees C	5.4P-TMC1	--	--	16/05/17	15.5
Visual Inspection Descriptive	5.4P-TMC26	--	--	16/05/17	Nothing Observed
COD Chemical Oxygen Demand mg/l	5.4P-TMC3	--	--	16/05/17	--

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Comhairle Contae Dhún na nGall
Donegal County Council
Central Laboratory,
Stranorlar Wastewater Treatment Plant,
Railway Road, Stranorlar, Co. Donegal.
 074-9153900

Sample No.:	172501334	Sample Date/Time:	16/05/2017 @ 10:50
Category:	Landfill Monitoring	Sample Method:	Grab
Entity:	Glenalla Landfill	Sampled By:	Fionnuala Bonner
Station:	Leachate Holding Lagoon	Laboratory:	Donegal Co Council
Template:	Glenalla Biannual Leachate	Analyst:	Fionnuala Bonner

Sample Notes:

Customer Name: Landfill Monitoring Donegal Co. Council
Contact Details: Julie McMahon
 Central Lab
 The Kube, Magheranan
 Letterkenny
 0749122787: 0872861096
 julie.mcmahon@donegalcoco.ie
Customer Ref: Landfill Compliance Monitoring

Sample No. Laboratory: 172501334
Sample No. Customer:
Date Received: 16/05/2017
Mode Of Delivery: cooler box
Condition On Delivery: ok
Date Started: 16/05/2017
Report Date: 12/06/2017
Report Reference: 17DL232

Parameter/Unit	Test Method	Maximum Limit	Minimum Limit	Test Date	Test RESULT
Ammonia N mg/l	5.4P-TMC6	--	--	18/05/17	30 ***
Biological Oxygen Demand mg/l	5.4P-TMC9	--	--	19/05/17	< 1 ***
Chloride mg/l	5.4P-TMC14	--	--	17/05/17	24.8
Conductivity @ 20°C µS/cm	5.4P-TMC2	--	--	16/05/17	628
pH pH units	5.4P-TMC1	--	--	16/05/17	6.78
Total Oxidised Nitrogen N mg/l	5.4P-TMC6	--	--	18/05/17	1.2 ***
Depth m	5.4P-TMC27	--	--	16/05/17	1.3
Temperature Degrees C	5.4P-TMC1	--	--	16/05/17	14.6
Visual Inspection Descriptive	5.4P-TMC26	--	--	16/05/17	Nothing Observed
COD Chemical Oxygen Demand mg/l	5.4P-TMC3	--	--	17/05/17	45

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Comhairle Contae Dhún na nGall
Donegal County Council
Central Laboratory,
Stranorlar Wastewater Treatment Plant,
Railway Road, Stranorlar, Co. Donegal.
 074-9153900

Sample No.:	172501335	Sample Date/Time:	16/05/2017 @ 10:05
Category:	Landfill Monitoring	Sample Method:	Grab
Entity:	Glenalla Landfill	Sampled By:	Fionnuala Bonner
Station:	Lg1	Laboratory:	Donegal Co Council
Template:	Landfill Monitoring - Landfill Gas	Analyst:	Fionnuala Bonner

Customer Name:	Landfill Monitoring Donegal Co. Council	Sample No. Laboratory:	172501335
Contact Details:	Julie McMahon Central Lab The Kube, Magheranan Letterkenny 0749122787; 0872861096 julie.mcmahon@donegalcoco.ie	Sample No. Customer:	
Customer Ref:	Landfill Compliance Monitoring	Date Received:	16/05/2017
		Mode Of Delivery:	Field Test
		Condition On Delivery:	N/A
		Date Started:	16/05/2017
		Report Date:	23/05/2017
		Report Reference:	17DL232

Parameter/Unit	Test Method	Maximum Limit	Minimum Limit	Test Date	Test RESULT
Pressure mBar	5.4P-TMC23	--	--	16/05/17	995
Carbon Dioxide %	5.4P-TMC23	--	--	16/05/17	30
Methane %	5.4P-TMC23	--	--	16/05/17	65.3
Oxygen %	5.4P-TMC23	--	--	16/05/17	0

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Fionnuala Bonner

12/06/2017

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**Comhairle Contae Dhún na nGall
Donegal County Council
Central Laboratory,
Stranorlar Wastewater Treatment Plant,
Railway Road, Stranorlar, Co. Donegal.
074-9153900**

Sample No.:	172501336	Sample Date/Time:	16/05/2017 @ 10:00
Category:	Landfill Monitoring	Sample Method:	Grab
Entity:	Glenalla Landfill	Sampled By:	Fionnuala Bonner
Station:	Lg2	Laboratory:	Donegal Co Council
Template:	Landfill Monitoring - Landfill Gas	Analyst:	Fionnuala Bonner

Sample Notes:		Sample No. Laboratory:	172501336
Customer Name:	Landfill Monitoring Donegal Co. Council	Sample No. Customer:	
Contact Details:	Julie McMahon Central Lab The Kube, Magheranan Letterkenny 0749122787: 0872861096 julie.mcmahon@donegalcoco.ie	Date Received:	16/05/2017
		Mode Of Delivery:	Field Test
		Condition On Delivery:	N/A
		Date Started:	16/05/2017
Customer Ref:	Landfill Compliance Monitoring	Report Date:	23/05/2017
		Report Reference:	17DL232

Parameter/Unit	Test Method	Maximum Limit	Minimum Limit	Test Date	Test RESULT
Pressure mBar	5.4P-TMC23	--	--	16/05/17	995
Carbon Dioxide %	5.4P-TMC23	--	--	16/05/17	10.5
Methane %	5.4P-TMC23	--	--	16/05/17	17.5
Oxygen %	5.4P-TMC23	--	--	16/05/17	10.4

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Sample No.:	172501337	Sample Date/Time:	16/05/2017 @ 09:55
Category:	Landfill Monitoring	Sample Method:	Grab
Entity:	Glenalla Landfill	Sampled By:	Fionnuala Bonner
Station:	Lg3	Laboratory:	Donegal Co Council
Template:	Landfill Monitoring - Landfill Gas	Analyst:	Fionnuala Bonner

Sample Notes:

Customer Name: Landfill Monitoring Donegal Co. Council
Contact Details: Julie McMahon
 Central Lab
 The Kube, Magheranan
 Letterkenny
 0749122787: 0872861096
 julie.mcmahon@donegalcoco.ie
Customer Ref: Landfill Compliance Monitoring

Sample No. Laboratory: 172501337
Sample No. Customer:
Date Received: 16/05/2017
Mode Of Delivery: Field Test
Condition On Delivery: N/A
Date Started: 16/05/2017
Report Date: 23/05/2017
Report Reference: 17DL232

Parameter/Unit	Test Method	Maximum Limit	Minimum Limit	Test Date	Test RESULT
Pressure mBar	5.4P-TMC23	--	--	16/05/17	994
Carbon Dioxide %	5.4P-TMC23	--	--	16/05/17	26.4
Methane %	5.4P-TMC23	--	--	16/05/17	62.2
Oxygen %	5.4P-TMC23	--	--	16/05/17	2.1

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Railway Road, Stranorlar, Co. Donegal.
 074-9153900

Sample No.:	172503367	Sample Date/Time:	20/10/2017 @ 12:10
Category:	Landfill Monitoring	Sample Method:	Grab
Entity:	Glenalla Landfill	Sampled By:	Fionnuala Bonner
Station:	Gw 1	Laboratory:	Donegal Co Council
Template:	Glenalla Biannual GW	Analyst:	Fionnuala Bonner

Sample Notes:

Parameter/Unit	Test Method	Maximum Limit	Minimum Limit	Test Date	Test RESULT
Ammonia N mg/l	5.4P-TMC6	--	--	23/10/17	21.9 ***
Chloride mg/l	5.4P-TMC14	--	--	23/10/17	21.83
Conductivity @ 20°C µS/cm	5.4P-TMC2	--	--	20/10/17	287
Iron µg/l		--	--	27/10/17	< 20 ***
pH pH units	5.4P-TMC1	--	--	20/10/17	6.68
Potassium mg/l		--	--	27/10/17	3 ***
Sodium mg/l		--	--	27/10/17	21.9 ***
Total Organic Carbon mg/l	5.4P-TMC10	--	--	27/10/17	2.42 ***
Total Oxidised Nitrogen N mg/l	5.4P-TMC6	--	--	27/10/17	< 0.15 ***
Depth m	5.4P-TMC27	--	--	20/10/17	0.31
Dissolved Oxygen mg/l	5.4P-TMC18	--	--	20/10/17	4.93
Phenols µg/l		--	--	27/10/17	< 0.1 ***
Temperature Degrees C	5.4P-TMC1	--	--	20/10/17	12.5
Visual Inspection Descriptive	5.4P-TMC26	--	--	20/10/17	Nothing Observed
Phenols mg/l		--	--		
Iron Dissolved µg/l		--	--		

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J. Bonner

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Sample No.:	172503368	Sample Date/Time:	20/10/2017 @ 11:26
Category:	Landfill Monitoring	Sample Method:	Grab
Entity:	Glenalla Landfill	Sampled By:	Fionnuala Bonner
Station:	Gw 2	Laboratory:	Donegal Co Council
Template:	Glenalla Biannual GW	Analyst:	Fionnuala Bonner

Sample Notes:

Parameter/Unit	Test Method	Maximum Limit	Minimum Limit	Test Date	Test RESULT
Ammonia N mg/l	5.4P-TMC6	--	--	27/10/17	1.788
Chloride mg/l	5.4P-TMC14	--	--	23/10/17	24.82
Conductivity @ 20°C µS/cm	5.4P-TMC2	--	--	20/10/17	493
Iron µg/l		--	--	27/10/17	3300
pH pH units	5.4P-TMC1	--	--	20/10/17	7.03
Potassium mg/l		--	--	27/10/17	3.3 ***
Sodium mg/l		--	--	27/10/17	26.1 ***
Total Organic Carbon mg/l	5.4P-TMC10	--	--	27/10/17	3.38 ***
Total Oxidised Nitrogen N mg/l	5.4P-TMC6	--	--	27/10/17	< 0.15 ***
Depth m	5.4P-TMC27	--	--	20/10/17	0.46
Dissolved Oxygen mg/l	5.4P-TMC18	--	--	20/10/17	2.11
Phenols µg/l		--	--	27/10/17	< 0.1 ***
Temperature Degrees C	5.4P-TMC1	--	--	20/10/17	12.5
Visual Inspection Descriptive	5.4P-TMC26	--	--	20/10/17	Nothing Observed
Phenols mg/l		--	--		
Iron Dissolved µg/l		--	--		

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Sample No.:	172503369	Sample Date/Time:	20/10/2017 @ 11:05
Category:	Landfill Monitoring	Sample Method:	Grab
Entity:	Glenalla Landfill	Sampled By:	Fionnuala Bonner
Station:	Gw 3	Laboratory:	Donegal Co Council
Template:	Glenalla Biannual GW	Analyst:	Fionnuala Bonner

Sample Notes:

Parameter/Unit	Test Method	Maximum Limit	Minimum Limit	Test Date	Test RESULT
Ammonia N mg/l	5.4P-TMC6	--	--	23/10/17	< 0.005 ***
Chloride mg/l	5.4P-TMC14	--	--	23/10/17	29.78
Conductivity @ 20°C µS/cm	5.4P-TMC2	--	--	20/10/17	462
Iron µg/l		--	--	23/10/17	< 20 ***
pH pH units	5.4P-TMC1	--	--	20/10/17	7.04
Potassium mg/l		--	--	23/10/17	3.1 ***
Sodium mg/l		--	--	23/10/17	22.8 ***
Total Organic Carbon mg/l	5.4P-TMC10	--	--	23/10/17	2 ***
Total Oxidised Nitrogen N mg/l	5.4P-TMC6	--	--	23/10/17	< 0.15 ***
Depth m	5.4P-TMC27	--	--	20/10/17	0.5
Dissolved Oxygen mg/l	5.4P-TMC18	--	--	20/10/17	3.02
Phenols µg/l		--	--	23/10/17	< 0.1 ***
Temperature Degrees C	5.4P-TMC1	--	--	20/10/17	12.9
Visual Inspection Descriptive	5.4P-TMC26	--	--	20/10/17	Nothing Observed
Phenols mg/l		--	--		
Iron Dissolved µg/l		--	--		

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Sample No.:	172503363	Sample Date/Time:	20/10/2017 @ 12:05
Category:	Landfill Monitoring	Sample Method:	Grab
Entity:	Glenalla Landfill	Sampled By:	Fionnuala Bonner
Station:	Sw 1	Laboratory:	Donegal Co Council
Template:	Glenalla Biannual SW	Analyst:	Fionnuala Bonner

Sample Notes:

Parameter/Unit	Test Method	Maximum Limit	Minimum Limit	Test Date	Test RESULT
Ammonia N mg/l	5.4P-TMC5	--	--	23/10/17	0.02
Chloride mg/l	5.4P-TMC14	--	--	23/10/17	14.89
Conductivity @ 20°C µS/cm	5.4P-TMC2	--	--	20/10/17	95.2
pH pH units	5.4P-TMC1	--	--	20/10/17	7.05
Suspended Solids mg/l	5.4P-TMC4	--	--	23/10/17	< 6
Biological Oxygen Demand mg/l	5.4P-TMC9	--	--	25/10/17	1
Dissolved Oxygen mg/l	5.4P-TMC18	--	--	20/10/17	10.9
Temperature Degrees C	5.4P-TMC1	--	--	20/10/17	13
Visual Inspection Descriptive	5.4P-TMC26	--	--	20/10/17	Nothing Observed
COD Chemical Oxygen Demand mg/l	5.4P-TMC3	--	--	20/10/17	36

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Sample No.:	172503364	Sample Date/Time:	20/10/2017 @ 11:20
Category:	Landfill Monitoring	Sample Method:	Grab
Entity:	Glenalla Landfill	Sampled By:	Fionnuala Bonner
Station:	Sw 2	Laboratory:	Donegal Co Council
Template:	Glenalla Biannual SW	Analyst:	Fionnuala Bonner

Sample Notes:

Parameter/Unit	Test Method	Maximum Limit	Minimum Limit	Test Date	Test RESULT
Ammonia N mg/l	5.4P-TMC5	--	--	23/10/17	0.012
Chloride mg/l	5.4P-TMC14	--	--	23/10/17	17.87
Conductivity @ 20°C µS/cm	5.4P-TMC2	--	--	20/10/17	104.7
pH pH units	5.4P-TMC1	--	--	20/10/17	6.87
Suspended Solids mg/l	5.4P-TMC4	--	--	23/10/17	< 6
Biological Oxygen Demand mg/l	5.4P-TMC9	--	--	25/10/17	1
Dissolved Oxygen mg/l	5.4P-TMC18	--	--	20/10/17	1065
Temperature Degrees C	5.4P-TMC1	--	--	20/10/17	12.9
Visual Inspection Descriptive	5.4P-TMC26	--	--	20/10/17	Nothing Observed
COD Chemical Oxygen Demand mg/l	5.4P-TMC3	--	--	20/10/17	37

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Sample No.:	172503365	Sample Date/Time:	20/10/2017 @ 11:25
Category:	Landfill Monitoring	Sample Method:	Grab
Entity:	Glenalla Landfill	Sampled By:	Fionnuala Bonner
Station:	Sw 3	Laboratory:	Donegal Co Council
Template:	Glenalla Biannual SW	Analyst:	Fionnuala Bonner

Sample Notes:

Parameter/Unit	Test Method	Maximum Limit	Minimum Limit	Test Date	Test RESULT
Ammonia N mg/l	5.4P-TMC5	--	--	23/10/17	0.009
Chloride mg/l	5.4P-TMC14	--	--	23/10/17	19.85
Conductivity @ 20°C µS/cm	5.4P-TMC2	--	--	20/10/17	93.8
pH pH units	5.4P-TMC1	--	--	20/10/17	6.79
Suspended Solids mg/l	5.4P-TMC4	--	--	23/10/17	< 6
Biological Oxygen Demand mg/l	5.4P-TMC9	--	--	25/10/17	1
Dissolved Oxygen mg/l	5.4P-TMC18	--	--	20/10/17	1037
Temperature Degrees C	5.4P-TMC1	--	--	20/10/17	13
Visual Inspection Descriptive	5.4P-TMC26	--	--	20/10/17	Nothing Observed
COD Chemical Oxygen Demand mg/l	5.4P-TMC3	--	--	20/10/17	34

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Central Laboratory,
Stranorlar Wastewater Treatment Plant,
Railway Road, Stranorlar, Co. Donegal.
 074-9153900

Sample No.:	172503366	Sample Date/Time:	20/10/2017 @ 11:10
Category:	Landfill Monitoring	Sample Method:	Grab
Entity:	Glenalla Landfill	Sampled By:	Fionnuala Bonner
Station:	L 1	Laboratory:	Donegal Co Council
Template:	Glenalla Biannual Leachate	Analyst:	Fionnuala Bonner

Sample Notes:

Parameter/Unit	Test Method	Maximum Limit	Minimum Limit	Test Date	Test RESULT
Ammonia N mg/l	5.4P-TMC6	--	--	27/10/17	4.933
Biological Oxygen Demand mg/l	5.4P-TMC9	--	--	20/10/17	--
Chloride mg/l	5.4P-TMC14	--	--	23/10/17	79.41
Conductivity @ 20°C µS/cm	5.4P-TMC2	--	--	20/10/17	1109
pH pH units	5.4P-TMC1	--	--	20/10/17	7.28
Total Oxidised Nitrogen N mg/l	5.4P-TMC6	--	--	27/10/17	0.28 ***
Depth m	5.4P-TMC27	--	--	20/10/17	6.64
Temperature Degrees C	5.4P-TMC1	--	--	20/10/17	13
Visual Inspection Descriptive	5.4P-TMC26	--	--	20/10/17	Nothing Observed
COD Chemical Oxygen Demand mg/l	5.4P-TMC3	--	--	20/10/17	25

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Stranorlar Wastewater Treatment Plant,
Railway Road, Stranorlar, Co. Donegal.
 074-9153900

Sample No.:	172503370	Sample Date/Time:	20/10/2017 @ 11:32
Category:	Landfill Monitoring	Sample Method:	Grab
Entity:	Glenalla Landfill	Sampled By:	Fionnuala Bonner
Station:	Leachate Holding Lagoon	Laboratory:	Donegal Co Council
Template:	Glenalla Biannual Leachate	Analyst:	Fionnuala Bonner

Sample Notes:

Parameter/Unit	Test Method	Maximum Limit	Minimum Limit	Test Date	Test RESULT
Ammonia N mg/l	5.4P-TMC6	--	--	23/10/17	11
Biological Oxygen Demand mg/l	5.4P-TMC9	--	--	25/10/17	< 1
Chloride mg/l	5.4P-TMC14	--	--	23/10/17	14.89
Conductivity @ 20°C µS/cm	5.4P-TMC2	--	--	20/10/17	452
pH pH units	5.4P-TMC1	--	--	20/10/17	7.76
Total Oxidised Nitrogen N mg/l	5.4P-TMC6	--	--	23/10/17	< 0.69
Depth m	5.4P-TMC27	--	--	20/10/17	--
Temperature Degrees C	5.4P-TMC1	--	--	20/10/17	13.6
Visual Inspection Descriptive	5.4P-TMC26	--	--	20/10/17	Nothing Observed
COD Chemical Oxygen Demand mg/l	5.4P-TMC3	--	--	20/10/17	24

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Central Laboratory,
Stranorlar Wastewater Treatment Plant,
Railway Road, Stranorlar, Co. Donegal.
 074-9153900

Sample No.:	172503653	Sample Date/Time:	20/10/2017 @ 11:40
Category:	Landfill Monitoring	Sample Method:	Grab
Entity:	Glenalla Landfill	Sampled By:	Fionnuala Bonner
Station:	Lg1	Laboratory:	Donegal Co Council
Template:	Landfill Monitoring - Landfill Gas	Analyst:	Fionnuala Bonner

Sample Notes:

Parameter/Unit	Test Method	Maximum Limit	Minimum Limit	Test Date	Test RESULT
Pressure mBar	5.4P-TMC23	--	--	20/10/17	--
Carbon Dioxide %	5.4P-TMC23	--	--	20/10/17	--
Methane %	5.4P-TMC23	--	--	20/10/17	--
Oxygen %	5.4P-TMC23	--	--	20/10/17	--

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Railway Road, Stranorlar, Co. Donegal.
 074-9153900

Sample No.:	172503654	Sample Date/Time:	20/10/2017 @ 11:45
Category:	Landfill Monitoring	Sample Method:	Grab
Entity:	Glenalla Landfill	Sampled By:	Fionnuala Bonner
Station:	Lg2	Laboratory:	Donegal Co Council
Template:	Landfill Monitoring - Landfill Gas	Analyst:	Fionnuala Bonner

Sample Notes:

Parameter/Unit	Test Method	Maximum Limit	Minimum Limit	Test Date	Test RESULT
Pressure mBar	5.4P-TMC23	--	--	20/10/17	986
Carbon Dioxide %	5.4P-TMC23	--	--	20/10/17	6.9
Methane %	5.4P-TMC23	--	--	20/10/17	8.9
Oxygen %	5.4P-TMC23	--	--	20/10/17	11.3

In RESULT column, unaccredited in-house test result - no asterisk, *inhouse accred., **unaccred. & subcontracted, *** accred. & sub-cont.

SIGNED

f. Bonner

27/11/2017

Dr. Joe Ferry, Laboratory Manager

Any opinions, remarks and/or interpretations expressed above are outside the scope of accreditation
 Original Test Report, unless otherwise indicated by the insertion of Supplementary Test Report in Report Reference section
 Micro. parameters with units MPN/100mls are reported as zero for result of <1 MPN/100ml, i.e. none detected in volume tested
 Where "0" is reported, it means "None detected in volume tested."



Comhairle Contae Dhún na nGall
Donegal County Council
Central Laboratory,
Stranorlar Wastewater Treatment Plant,
Railway Road, Stranorlar, Co. Donegal.
 074-9153900

Sample No.:	172503655	Sample Date/Time:	20/10/2017 @ 11:55
Category:	Landfill Monitoring	Sample Method:	Grab
Entity:	Glenalla Landfill	Sampled By:	Fionnuala Bonner
Station:	Lg3	Laboratory:	Donegal Co Council
Template:	Landfill Monitoring - Landfill Gas	Analyst:	Fionnuala Bonner

Sample Notes:

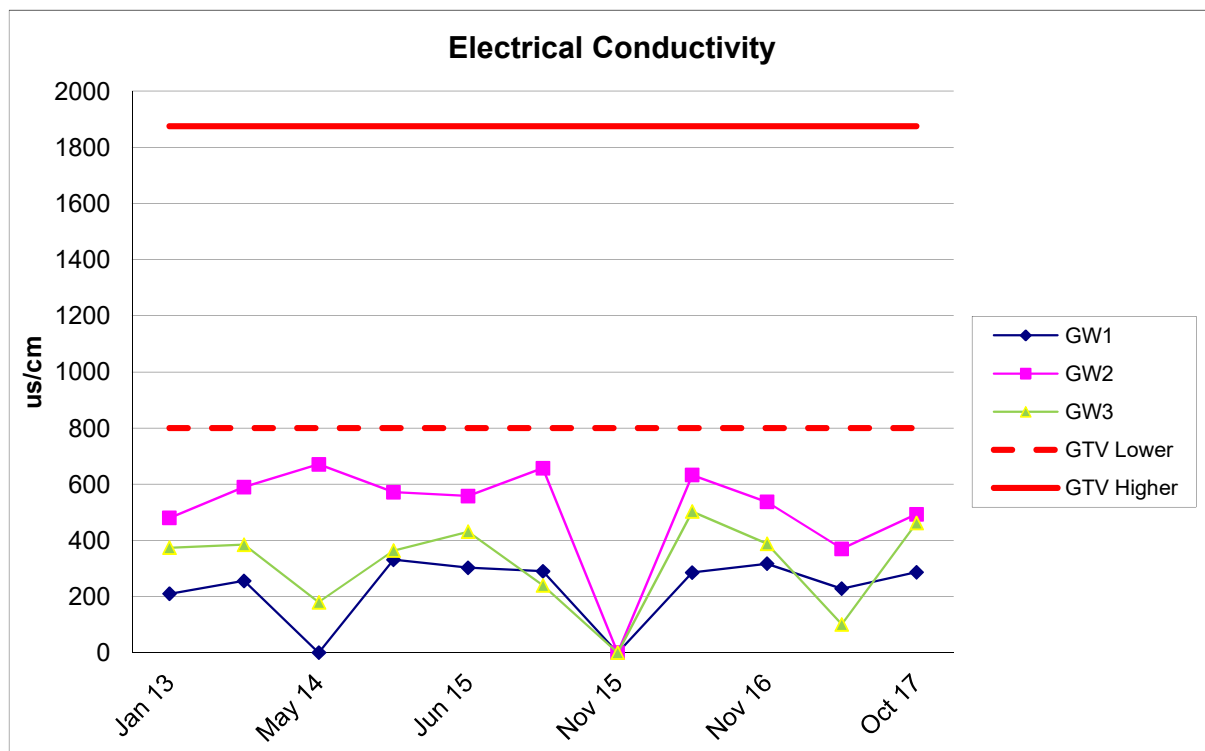
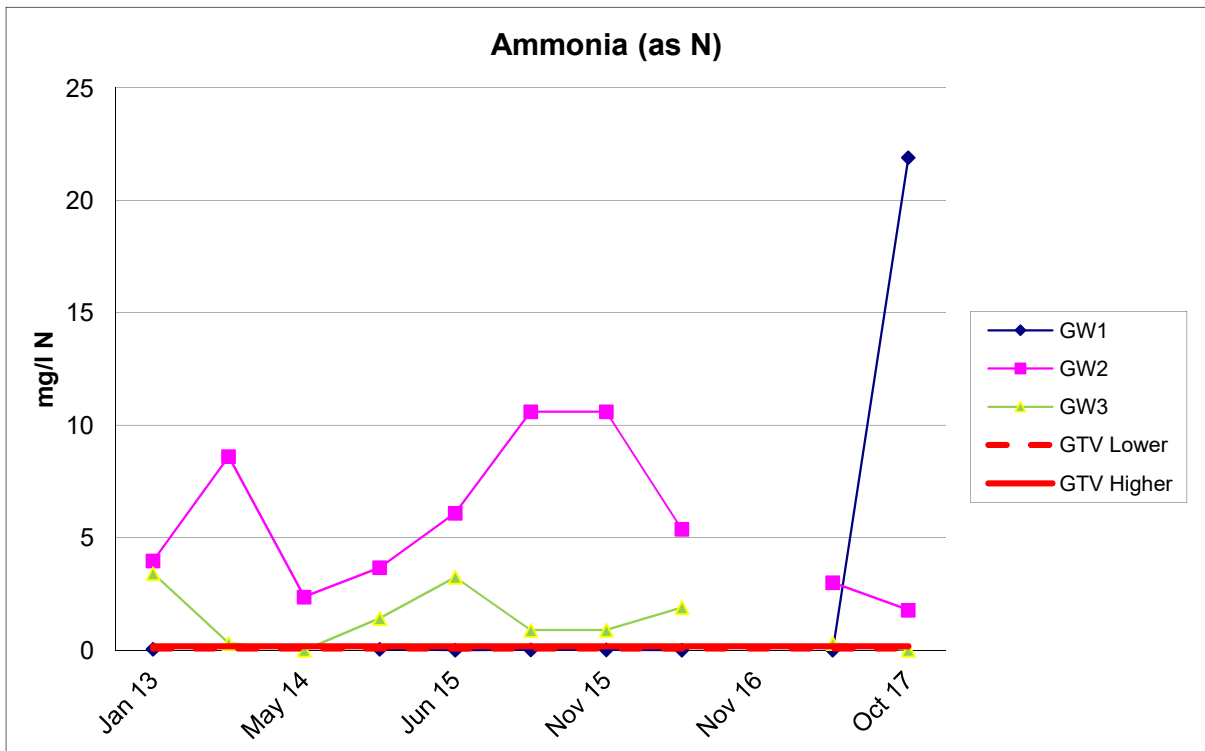
Parameter/Unit	Test Method	Maximum Limit	Minimum Limit	Test Date	Test RESULT
Pressure mBar	5.4P-TMC23	--	--	20/10/17	986
Carbon Dioxide %	5.4P-TMC23	--	--	20/10/17	26.8
Methane %	5.4P-TMC23	--	--	20/10/17	69.1
Oxygen %	5.4P-TMC23	--	--	20/10/17	3.7

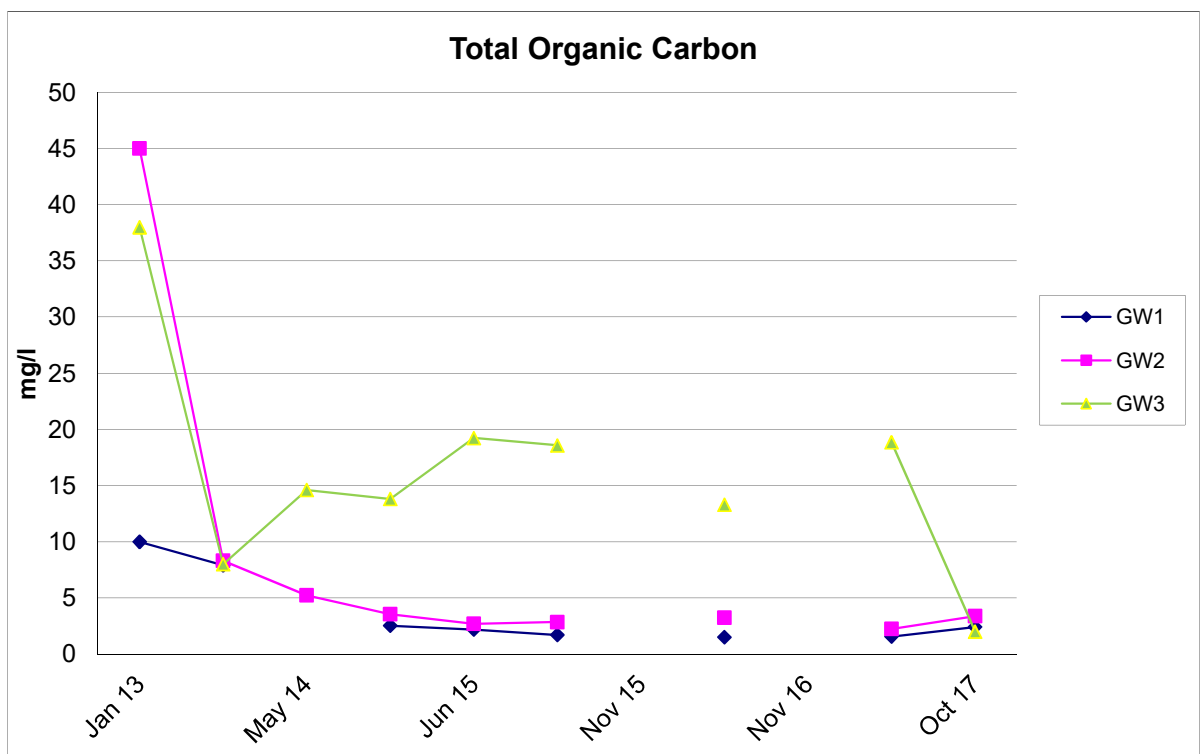
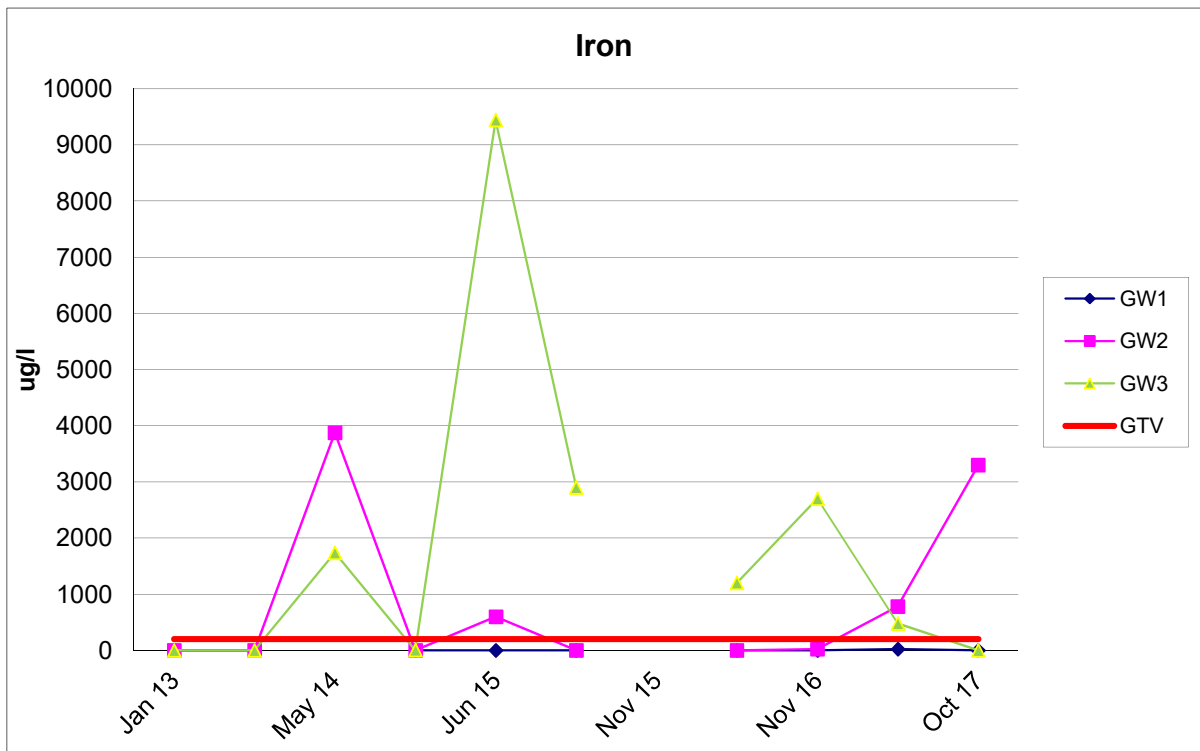
In RESULT column, unaccredited in-house test result - no asterisk, *inhouse accred., **unaccred. & subcontracted, *** accred. & sub-cont.

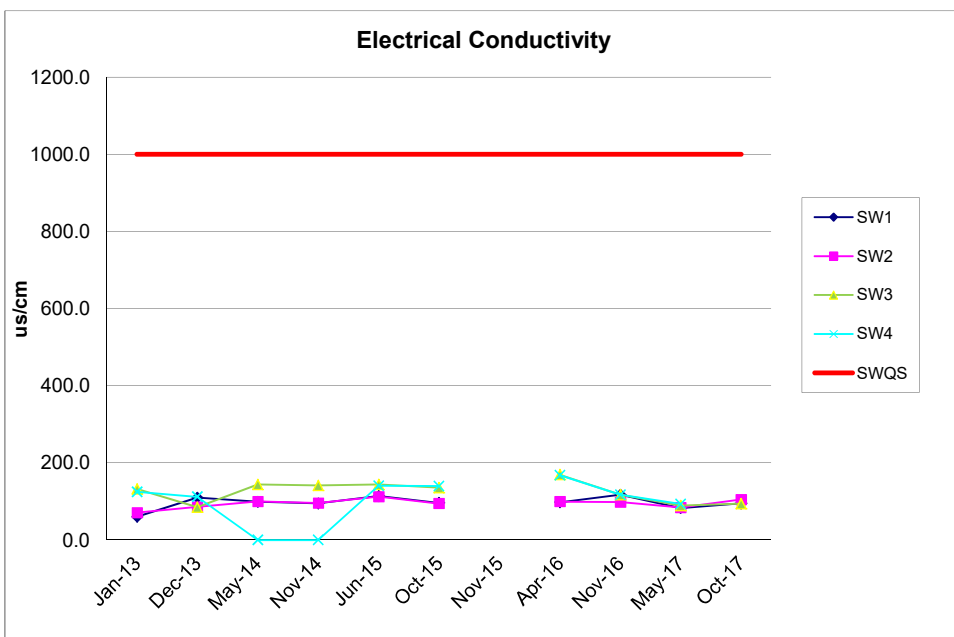
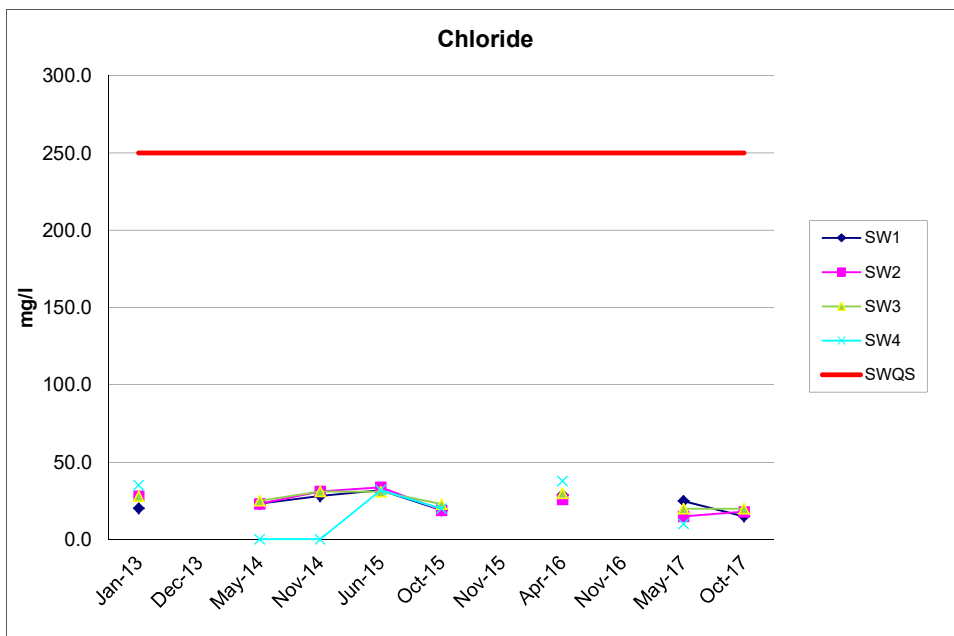
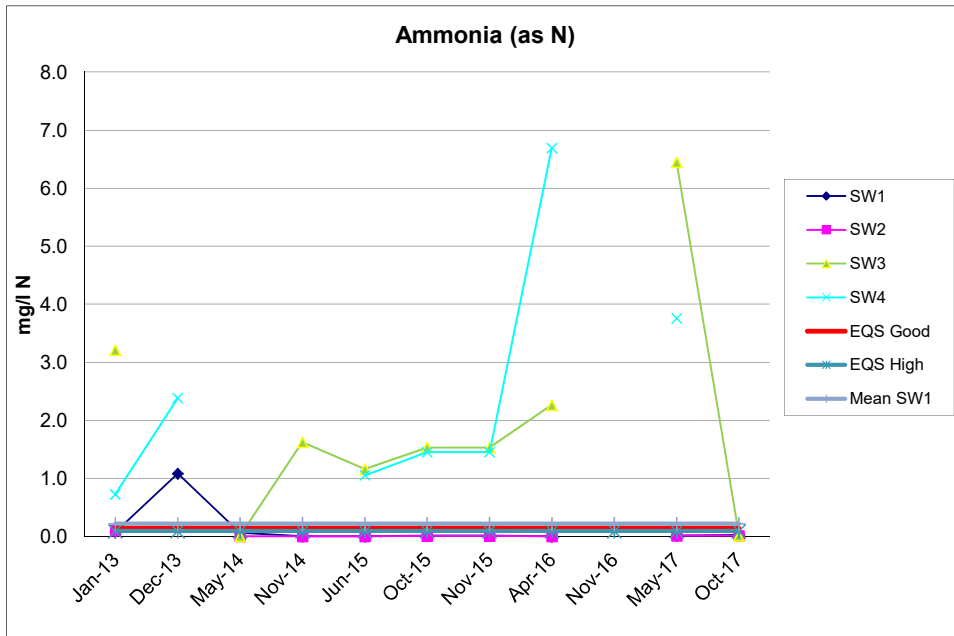
SIGNED
27/11/2017

Dr. Joe Ferry, Laboratory Manager

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 Original Test Report, unless otherwise indicated by the insertion of Supplementary Test Report in Report Reference section
 Micro. parameters with units MPN/100mls are reported as zero for result of <1 MPN/100ml, i.e. none detected in volume tested
 Where "0" is reported, it means "None detected in volume tested."







Appendix D

Water Balance Calculation and Meteorological Data

GLENNALLA WATER BALANCE CALCULATION

Year	Status	Rainfall (mm)	Temp Restored area Area	Temp Restored area infiltration IRCA(m3)	Restored area Area	Restored area infiltration IRCA(m3)	Total Water	Leachate produced Lo(m3)	Leachate Volume Tankered
2017	Closed	1,152			20,500	2,362	2,362	2,362	4382.24
Total		1,152						2,362	4382.24

Assumptions

IRCA=	Fully Capped/Restored area infiltration of rainfall estimated (2-10% of ER),EPA Manual	10%	%
Restored area	Area capped is 20,500.	20,500	m ²
Rainfall Data	Data taken from Met Eireann Station Malin Head, Total Rainfall used.	1152.1	mm

Total rainfall in millimetres for Malin_head	Year	2017	2016	2015	2014	2013	2012
	Jan	56.7	166.3	176.0	162.2	140.9	134.7
	Feb	85.1	130.7	85.8	189.9	74.1	68.1
	Mar	96.9	72.7	123.1	71.6	61.7	29.8
	Apr	41.1	52.9	64.7	33.4	61.6	46.3
	May	50.9	65.6	137.0	86.8	102.5	50.7
	Jun	77.7	72.4	56.1	48.6	85.5	141.1
	Jul	114.6	109.9	132.7	86.0	56.5	91.4
	Aug	172.5	79.9	111.0	95.3	92.6	87.3
	Sep	90.2	94.7	29.7	23.0	69.7	139.2
	Oct	111.9	37.6	71.9	131.4	103.8	123.5
	Nov	137.5	113.9	222.9	134.4	116.0	87.4
	Dec	117	76.0	272.9	150.5	178.6	149.3
	Annual	1152.1	1072.6	1483.8	1213.1	1143.5	1148.8

Appendix E

E-PRTR (AER Electronic Reporting System)



Environmental Protection Agency

| PRTR# : W0125 | Facility Name : Glenalla Landfill Site | Filename : W0125_2017.xls | Return Year : 2017

[Guidance to completing the PRTR workbook](#)

PRTR Returns Workbook

Version 1.1.19

REFERENCE YEAR	2017
-----------------------	------

1. FACILITY IDENTIFICATION

Parent Company Name	Donegal County Council
Facility Name	Glenalla Landfill Site
PRTR Identification Number	W0125
Licence Number	W0125-01

Classes of Activity

No.	class_name
-	Refer to PRTR class activities below

Address 1	Glenalla
Address 2	Milford
Address 3	
Address 4	
	Donegal
Country	Ireland
Coordinates of Location	-7.63731 55.0981
River Basin District	GBNIIENW
NACE Code	3821
Main Economic Activity	Treatment and disposal of non-hazardous waste
AER Returns Contact Name	Julie McMahon
AER Returns Contact Email Address	julie.mcmahon@donegalcoco.ie
AER Returns Contact Position	0749122787
AER Returns Contact Telephone Number	0872861096
AER Returns Contact Mobile Phone Number	0749161304
AER Returns Contact Fax Number	
Production Volume	0.0
Production Volume Units	
Number of Installations	0
Number of Operating Hours in Year	0
Number of Employees	1
User Feedback/Comments	50% variance in Releases to Air due to incorrect Trichloromethane value reported in 2016 (0.18) should have been 0.018. 1 new PRTR parameter in Releases to Air as Toluene value was not reported in 2016, should have been 17.96.
Web Address	

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) ?	
--	--

4.1 RELEASES TO AIR

[Link to previous years emissions data](#)

| PRTR#: W0125 | Facility Name : Glenalla Landfill Site | Filename : W0125_2017.xls | Return Year : 2017 |

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SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

POLLUTANT		METHOD			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

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

SECTION B : REMAINING PRTR POLLUTANTS

POLLUTANT		METHOD			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	Landgem-v302	0.0	38521.19	0.0	38521.19
03	Carbon dioxide (CO2)	C	OTH	Landgem-v302	0.0	105639.12	0.0	105639.12
02	Carbon monoxide (CO)	C	OTH	Landgem-v302	0.0	18.84	0.0	18.84
07	Non-methane volatile organic compounds (NMVOC)	C	OTH	Landgem-v302	0.0	248.36	0.0	248.36
55	1,1,1-trichloroethane	C	OTH	Landgem-v302	0.0	0.31	0.0	0.31
56	1,1,2,2-tetrachloroethane	C	OTH	Landgem-v302	0.0	0.89	0.0	0.89
34	1,2-dichloroethane (EDC)	C	OTH	Landgem-v302	0.0	0.19	0.0	0.19
62	Benzene	C	OTH	Landgem-v302	0.0	0.71	0.0	0.71
58	Trichloromethane	C	OTH	Landgem-v302	0.0	0.017	0.0	0.017
65	Ethyl benzene	C	OTH	Landgem-v302	0.0	2.35	0.0	2.35
73	Toluene	C	OTH	Landgem-v302	0.0	17.26	0.0	17.26
78	Xylenes	C	OTH	Landgem-v302	0.0	6.12	0.0	6.12
57	Trichloroethylene	C	OTH	Landgem-v302	0.0	1.77	0.0	1.77
60	Vinyl chloride	C	OTH	Landgem-v302	0.0	2.19	0.0	2.19
35	Dichloromethane (DCM)	C	OTH	Landgem-v302	0.0	5.71	0.0	5.71

* 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)

POLLUTANT		METHOD			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:

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	

5. ONSITE TREATMENT & OFFSITE TRANSFERS OF WASTE

| PRTR# : W0125 | Facility Name : Glenalla Landfill Site | Filename : W0125_2017.xls | Return Year : 2017 |

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Please enter all quantities on this sheet in Tonnes

3

Transfer Destination	European Waste Code	Hazardous	Quantity (Tonnes per Year)	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	Haz Waste - Name and Licence/Permit No of Next Destination Facility	Non	Haz Waste : Address of Next Destination Facility	Name and License / Permit No. and Address of Final Recoverer / Disposer (HAZARDOUS WASTE ONLY)	Actual Address of Final Destination i.e. Final Recovery / Disposal Site (HAZARDOUS WASTE ONLY)
						Haz Waste: Name and Licence/Permit No of Recover/Disposer	Non Haz Waste: Address of Recover/Disposer						
Within the Country	19 07 03	No	4382.24 in 19 07 02	landfill leachate other than those mentioned	D8	M	Weighed	Offsite in Ireland	Donegal County Council,D0009-01		Thorn rd, Magheranan ,Letterkenny WWTP,Letterkenny County Donegal,Ireland		

* Select a row by double-clicking the Description of Waste then click the delete button