Annual Environmental Report

DRUMABODEN LANDFILL SITE
(Waste Licence Ref. W0063-1)

By
Donegal County Council
For
Environmental Protection Agency

Reporting Period: January 2012 to December 2012

May 2013

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1. INTRODUCTION

1.1 This Annual Environmental Report (AER) has been prepared to meet the requirements of Condition 2.4 of Waste Licence W0063-1 for Drumabodan Landfill and includes the information listed in Schedule A of the Waste Licence. This report provides an environmental review of the site from January 2012 to December 2012.

1.2 Waste Licence Requirements

Donegal County Council ceased operational activity at Drumabodan in April 1999. On the 29th of June 2001 the Environmental Protection Agency granted the Council a Waste Licence (registration number W0063-1) 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 was only permitted to accept inert waste at the facility for the purpose of restoration and aftercare of the site. The quantity of inert waste to be accepted was limited to 40,000 tonnes. The Licence requires the Council to manage the facility to ensure that activities do not cause environmental pollution and carry out regular environmental monitoring and submit all monitoring results and reports.

During 2011 the Agency required that the Licence for this site be reviewed under the Environmental Objectives (Surface Water) Regulations 2009 SI No 272. An application for the review of this Licence was submitted to the Agency in September 2011.

1.3 Nature of the Facility

Drumabodan Landfill is an unlined landfill, historically operated on the 'dilute and disperse' principle, whereby leachate generated by rainfall infiltration and the decomposition of the landfilled wastes is allowed to disperse into the surrounding environment. The landfill is situated on blanket bog and is bounded to the north by the River Leannon and to the south by the R249 (see site layout plan 5234.60/06). A peripheral leachate cut-off drain has been provided to intercept seepage of leachate from the landfill mass. The leachate is then pumped from the cut-off drain into a leachate treatment system (puraflo). The facility was fully restored during 2007.

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 disposal of inert waste only and leachate treatment at the facility.
- **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 shall be accepted for the purposes of remediation, rehabilitation, enhancement and restoration of the facility. The maximum total of inert waste to be disposed of at the site is 40,000 tonnes. The quantities of waste received during previous years at the facility are presented in Table 3.1.

3.2 The total capacity of Drumabodan landfill is 128,000 tonnes and this amount of waste has already been landfilled. The site is closed and no more waste will be accepted.

3.3 Restoration of the landfill was carried out during 2007 and the quantity of inert material imported that year is shown in the following table. No waste has been accepted at the facility since closure in 1999.

Table 3.1 Waste quantities accepted (tonnes)

	1998	1999	2000	2001	2002	2003	2004	2005
Total (tonnes)	5596	1515	0	0	0	0	0	0
	2006	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	
Total (tonnes)	0	85,716*	0	0	0	0	0	

* = inert material imported for restoration.

4. SUMMARY REPORT OF EMISSIONS

4.1 Introduction

The following is a general description of the results of monitoring for each media type with regard to the extent of emissions. Detailed results of monitoring are presented in Appendix A.

4.2 Groundwater

The two upstream wells are GW1 & GW5. GW1 again shows signs of contamination whereas GW5 is virtually clear of contamination. Downstream, GW6 is almost clear of contamination and GW7 show signs of low-level contamination. Overall levels are similar those reported during the last period. It should be noted that all groundwater wells are located close to the edge of the waste body.

4.3 Surface Water

The are no instances of surface water quality above MAC. The River Leannon has good assimilative capacity and this combined with the Puraflo system treating leachate on the site suggests that the landfill is not having a negative impact on the surface water environment in terms of leachate emissions.

4.4 Leachate

Leachate is collected via a cut-off channel and pumped into a Puraflo treatment system. The Puraflo system (which is marketed in Ireland by Bord na Mona) is a package system containing peat fibre media that filters the leachate. Leachate is monitored at the intake and discharge points and the results are contained in Tables 5.1 & 5.2, & Appendix A. The results show that the discharge effluent exceeded parameter limits for ammonia during this period (ELV as stated in the Waste Licence). The system had been achieving improved reductions in ammonia levels by the end of 2010, however given the persistent exceedance of the ELV a major overhaul of the system was carried out early in 2012 even though ammonia levels being discharged are not impacting on the local surface water environment. Further investigations and maintenance works were carried out this period (see Section 12) in order to improve the performance of the puraflo system.

4.5 Landfill Gas

Passive gas vents allow landfill gas to disperse to the atmosphere at Drumaboden. In addition to the vents, gas monitoring wells have been installed both within waste in the body of the landfill (LG1,2,3&5), and as peripheral wells on the road verge outside the landfill (LG6,7&8). The wells within waste show levels of methane from 0% to 9.8%; and CO_2 from 0% to 5.8%. The peripheral wells showed no exceedances for methane but exceedances in LG7 for CO_2.

4.6 Dust

Dust monitoring was not undertaken at the site prior to restoration due to the absence of operational activity. Monitoring plans were in place as required during the restoration contract. Contingency arrangements were not deployed during the project. Since restoration dust levels are inspected during monitoring and a management system can be deployed if required.

5. RESULTS & INTERPRETATIONS OF MONITORING INCLUDING PLANS & UPDATES OF MONITORING LOCATIONS.

5.1 Monitoring Locations, Parameters and Frequencies

Monitoring locations are shown on drawing numbers 5234.60/103 & /06. Also contained on these drawings are the location coordinates for each monitoring point (where available). The required parameters to be monitored and frequencies are listed in Schedule D5 of the Waste Licence. All results from the monitoring programme are contained in Appendix A together with graphical representations of key parameters.

5.2. Groundwater

Groundwater is monitored at locations GW1, GW5, GW6, GW7 (refer to drg. no. 5234.60/06). GW1 and GW5 are representative of groundwater upstream of the landfill and GW6 and GW7 are representative of downstream conditions, although all wells are close to the waste body. Wells labelled GW2, GW3 and GW4 are located within waste and are only used to monitor groundwater / leachate levels.

Results from monitoring of these wells are contained in graphical and tabular format. These results have been compared to EC Quality of Water Intended for Human Consumption Regulations, 1988, the European communities (Drinking Water) Regulations, 2000 and the EPA Interim Report, Towards Setting Guidelines Values for the Protection of Groundwater in Ireland. The majority of the parameters measured were below the MAC's.

Ammoniacal nitrogen was detected in excess of MAC at all groundwater locations, with the highest level present in GW1 with 6.17mg/l recorded.

5.3 Surface Water

Surface water is monitored at locations SW1, SW2, SW4, SW5 & SW6. SW1 is located upstream of the landfill, with SW2, SW4, SW5 & SW6 being downstream. Condition 9 and Schedule D of the licence requires the licensee to monitor surface water at six locations in the vicinity of the site on a quarterly and annual basis. Monitoring point S3 as indicated in the

licence is no longer monitored as the Puraflo treatment system does not discharge at this point.

These results have been compared to EC (Quality of Surface Water Intended for the Abstraction of Drinking Water) Regulations, 1989. Allparameters were below the recommended limits (Surface Water Quality Standards, (SWQS)) for A1 category surface water.

5.4 Leachate

Leachate quality can vary during the lifetime of a landfill site depending on the phase of decomposition of the waste. Leachate results and graphs for the reporting period are presented in Appendix A and some of the characteristic parameters of the leachate are listed in Table 5.1 below. Table 5.2 illustrates the maximum and minimum concentrations for both Raw and Treated Leachate.

Table 5.1: Raw Leachate Concentrations 2012

	Drumaboden Landfill Site		From 30 samples from UK/Irish landfills accepting domestic waste Results in mg/l		
PARAMETER	**Min.Conc**	**Max.Conc**	**Min.Conc**	**Max.Conc**	**Mean**
Ammonia (mg/N)	81	81	<0.2	1700	491
BOD	7.76	7.76	4.5	>4800	>834
COD	122	122	<10	33,700	3078
Chloride (mg/l)	155	155	27	3410	1256
Iron (mg/l)	NA	NA	0.4	664	54.4
Potassium (mg/l)	NA	NA	2.7	1480	491
TON (mg/l N)	<0.01	<0.0.	/	/	/
Conductivity (mS/cm)	2130	2130	503	19,200	7789
pH	6.83	6.83	6.4	8	7.2

NA = not available

Table 5.2: Leachate Concentrations Comparison 2012

	Raw Leachate		Treated Leachate	
PARAMETER	**Min.Conc**	**Max.Conc**	**Min.Conc**	**Max.Conc**
Ammonia (mg/N)	81	81	82	82
BOD (mg/l)	7.76	7.76	3.44	3.44
COD (mg/l)	122	122	91	91
Chloride (mg/l)	155	155	170	170
TON (mg/l N)	<0.01	<0.01	1.60	1.60
Conductivity (mS/cm)	2130	2130	1858	1858
pH	6.83	6.83	7.67	7.67

Raw leachate parameters have been compared to "Typical Leachate Composition of 30 Samples from UK/Irish Landfills accepting mainly Domestic Waste" (Landfill Operational Practices). All parameters are consistent with typical leachate composition.

Although reduction in ammonia levels is being achieved, and there is not any impact on the local surface water environment, since the ELV was not being achieved by the puraflo system further investigations and maintenance works were carried out during 2012 to improve performance of the system.

5.5 Landfill Gas

Gas is monitored at locations LG1 to LG8 inclusive. LG4 has since been lost (covered over). Wells LG1, LG2, LG3 & LG5 are located in waste. Wells LG6, LG7 and LG8 are peripheral gas wells.

Well LG1 is producing landfill gas. Levels are lower in the other wells in waste this period as was the case last period. However, gas monitoring on the mature waste body is indicative of methanogenic gas processes that would be occurring under anaerobic conditions. Maximum and minimum levels recorded for each piezometer are shown below in Table 5.3.

In peripheral wells there were no exceedances of methane. Carbon dioxide exceeded MAC at LG7 (max 2.4%).

Table 5.3: Range of gas concentrations from wells in waste

	Methane (CH_4)		Carbon Dioxide (CO_2)	
PIEZOMETER	**Min.Conc %**	**Max.Conc %**	**Min.Conc %**	**Max.Conc %**
LG1	9.8	9.0	2.4	3.9
LG2	0	1.3	0.8	2.2
LG3	0	0.7	5.2	5.8
LG5	0	0.2	0	0.2

5.6 Dust

See Section 4.6.

6. VOLUME OF LEACHATE PRODUCED AND VOLUME DISCHARGED

As previously stated a leachate cut off channel has been installed along part of the western site boundary to intercept seepage of leachate from the landfill mass. The raw leachate is treated through the "Puraflo" peat filtration bed. A water balance calculation has been undertaken and is shown in Appendix B. This estimates that the volume of leachate being generated at the site for the reporting period is 4653m^3.

7. REPORTED INCIDENTS AND COMPLAINTS SUMMARIES

7.1 Donegal County Council reports on an on-going basis all instances where either surface waters or groundwaters are found to contain in excess of 0.2mg/l ammonia, or where perimeter gas wells are found to contain greater than either 1% methane or 1.5% carbon dioxide. These are reported as incidents quarterly when the results become available.

7.2 Apart from the on-going emissions exceedances reporting referred to above, no incidents have been reported to the Environmental Protection Agency during this reporting period.

7.3 No complaints where received during this reporting period.

8. REVIEW OF NUISANCE CONTROLS

The facility is no longer operational and all areas formerly used for the placement of municipal waste have been fully restored. Accordingly no incidence of nuisance has been recorded during the reporting period. The appropriate control systems (as outlined in the EMS) will be deployed should any sign of nuisance, in the form of vermin, litter, odour, dust or birds, be detected in the course of the regular site inspections.

9. MANAGEMENT STRUCTURE OF SITE

9.1 Management Structure

The management of the landfill site is as follows.

9.2 Management Responsibility

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.

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

Executive Environmental Officer: Responsible for overall compliance with EPA Licence.

Scientific Officers: Carry out environmental inspections, monitoring, analysis and reporting in accordance with licence requirements.

10. PROGRAMME FOR PUBLIC INFORMATION

A public communication programme has been included in the EMS 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 Environment Section in Donegal County Council Headquarters in Lifford. Details regarding this are contained in Section 2 of the Environmental Management System Manual.

A public information / consultation programme was run prior to restoration works commencing.

11. CAPPING AND RESTORATION OF THE SITE.

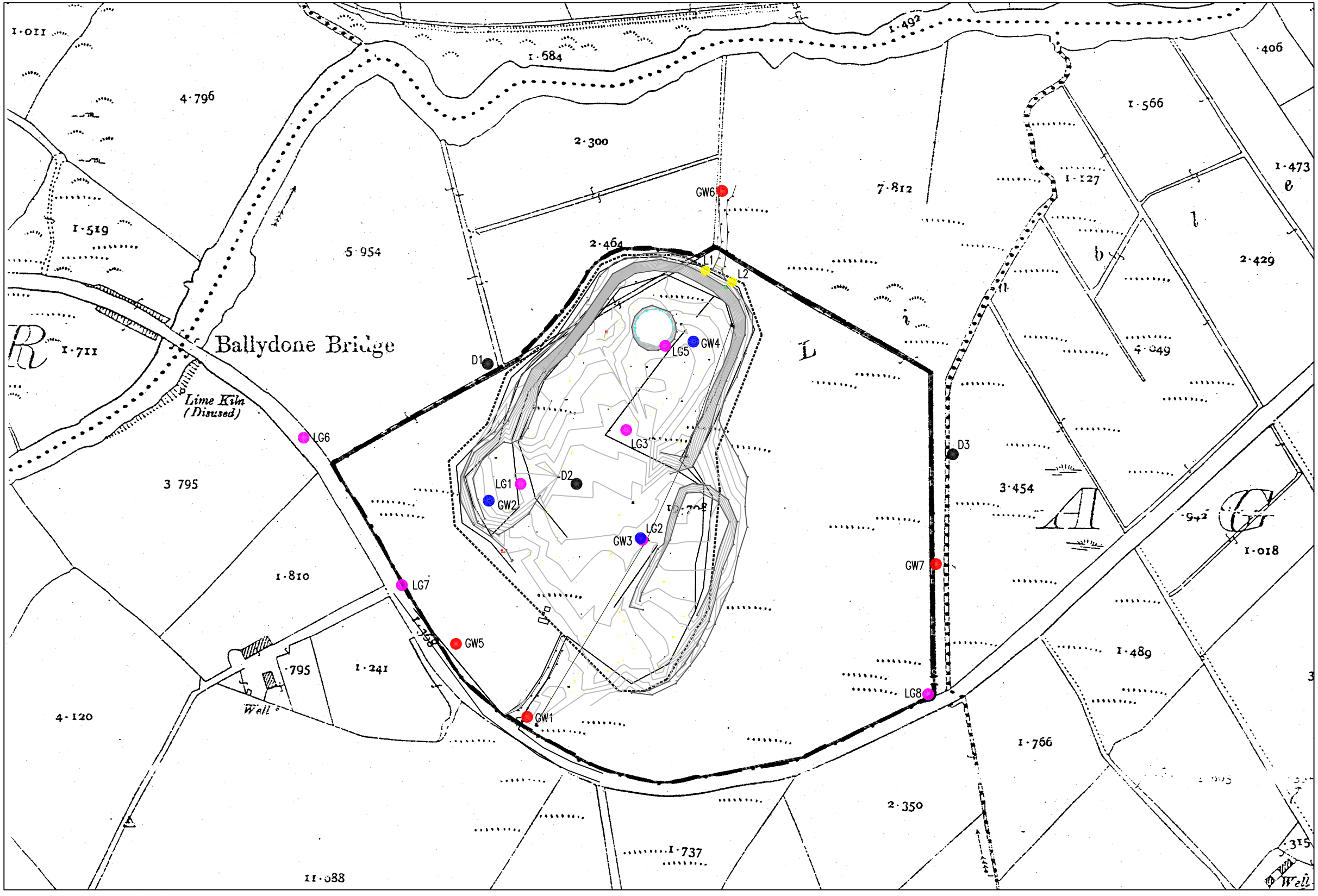
The site was fully restored during 2007 - 2008 (works commenced April 2007 and works were substantially complete in January 2008).

12. REPORT ON DEVELOPMENT WORK UNDERTAKEN DURING THE REPORTING PERIOD, AND A TIME SCALE FOR THOSE PROPOSED DURING THE COMING YEAR.

During 2009, the monitoring programme highlighted the fact that the treatment system was not delivering the reductions in ammonia levels in leachate previously achieved. The situation was investigated in conjunction with the proprietors of the system, Bord na Mona, and some investigations carried out. The peat filtration media was inspected by Bord na Mona and found to be in good enough condition to facilitate treatment. It was concluded that the system was overgrown and pipework clogged. An overhaul of the system was carried out during the reporting period clearing vegetation. By the end of 2010 the performance of the system had improved but was not yet optimal.

Further investigations were carried out during 2011 into the lack of performance of the system and by the end of the period it had been decided to replace the pipe distribution network and all the peat fibre media. This work was started early in 2012 and is now complete.

Effluent quality from the newly refurbished peat filters was monitored following the work but sufficient improvement in quality was not being realised. The reason for this was investigated during 2012 and eventually collapsed underground inlet pipes and blocked outlet drains were discovered. Towards the end of the period works were undertaken to repair the pipes and drains and the system was once again functional hydraulically. Monitoring data will now be reviewed to ensure that ammonia levels are achieving sufficient reductions.



NOTES

1. GRID REFERENCE SITE ENTRANCE: 216663 421703

SITE BOUNDARY
GROUNDWATER MONITORING BOREHOLES
LEACHATE LEVEL LOCATION
GAS MONITORING LOCATIONS
GAS VENT LOCATIONS
LEACHATE SAMPLING LOCATIONS
DUST SAMPLING LOCATIONS

MONITORING TYPE	REF NO	GRID REFERENCE
GROUNDWATER	GW1	216671 421703
	GW5	216628 421747
	GW6	216790 422024
	GW7	216920 421796
LEACHATE LEVELS	GW2	216648 421834
	GW3	216740 421812
	GW4	216772 421931
GAS MONITORING LOCATIONS	LG1	216668 421845
	LG2	216742 421811
	LG3	216732 421878
	LG4	NOT AVAILABLE
	LG5	216756 421929
	LG6	216535 421873
	LG7	216595 421783
	LG8	216916 421717
LEACHATE SAMPLING LOCATIONS	L1	216780 421975
	L2	216796 421968
DUST MONITORING LOCATIONS	D1	216648 421918
	D2	216702 421845
	D3	216931 421863

GRID COORDINATES DETERMINIED FROM SITE SURVEY

REV	DESCRIPTION	BY DATE	CHECK DATE
A	UPDATED GRID COORDINATES MONITORING POINTS ADDED	JD JULY 05	AMcG JULY 05

DRAWN BY KD DATE NOV 04	CHECK BY AMcG DATE NOV 04	APPROVED DATE
BASE DRAWING SCALE 1:2500	SCHEDULE SHEETS	

CLIENT
DONEGAL COUNTY COUNCIL

PROJECT
DRUMNABODAN RESTORATION AND AFTERCARE

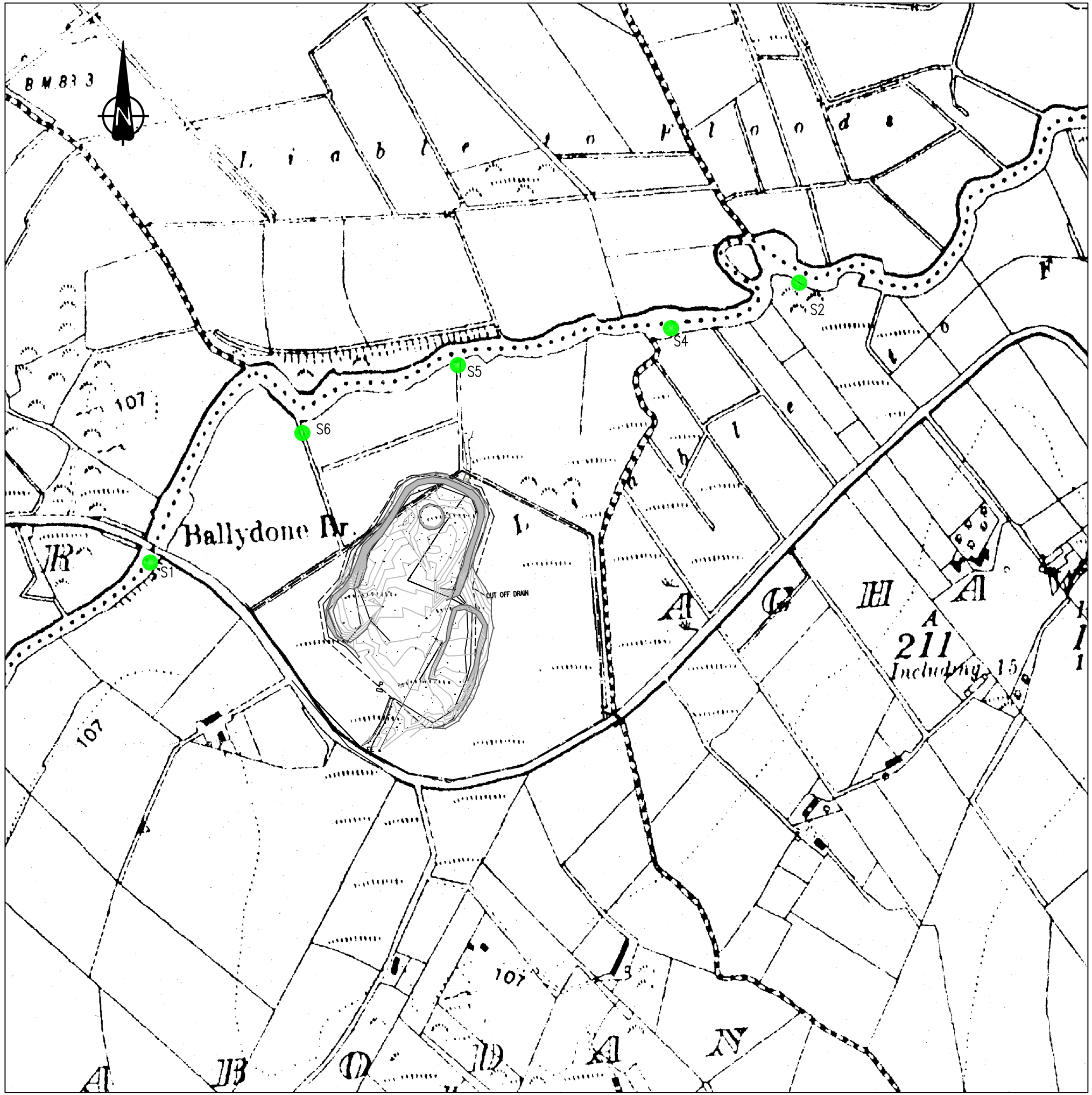
TITLE
MONITORING POINTS PLAN

RPS Kirk McClure Morton
CONSULTING ENGINEERS
ELMWOOD HOUSE
74 BOUCHER ROAD
BELFAST BT12 6RZ
TEL: 028 9066 7914
FAX: 028 9066 8286
www.kirkmcluremorton.com

ARCHITECT		DWG. STATUS
DRAWING No.	5234.60/06	PRELIM. ●
REVISION	A	TENDER
		CONST.
		RECORD

100mm
100mm

A3C–REV 1



100mm

100mm

NOTES

1. GRID REFERENCE SITE ENTRANCE: 216663 421703

SITE BOUNDARY

S1 SURFACE WATER MONITORING LOCATIONS

MONITORING TYPE	REF NO	GRID REFERENCE
SURFACE WATER	S1	NOT AVAILABLE
	S2	NOT AVAILABLE
	S3	NOT AVAILABLE
	S4	NOT AVAILABLE
	S5	NOT AVAILABLE
	S6	NOT AVAILABLE

REV	DESCRIPTION	BY DATE	CHECK DATE
A	UPDATED GRID COORDINATES	JD JULY 05	AMcG JULY 05

DRAWN BY JD DATE AUG 03	CHECK BY DD DATE AUG 03	APPROVED DD DATE AUG 03
PLOT SCALE NTS	SCHEDULES	SHEET SIZE A3

CLIENT
DONEGAL COUNTY COUNCIL

PROJECT
DRUMABODEN LANDFILL SITE

TITLE
SURFACE WATER MONITORING LOCATIONS

RPS Kirk McClure Morton
CONSULTING ENGINEERS
TEL: 074 916 1927 Email@info.kmm.eu.com
FAX:074 916 1928
THE ENTERPRISE FUND BUSINESS CENTRE BALLYRAINE
LETTERKENNY CO DONEGAL

		DWG. STATUS	
ARCHITECT		PRELIM.	
DRAWING No.	5234.60/103	TENDER	
REVISION	A	CONST.	●
		RECORD	

APPENDIX A

RESULTS OF MONITORING

Location		*Drumaboden, Kilmacrennan, Co Donegal*											
Sample Type		surface water											
Site No		SW1											
Date of Sample		Jan 12	FEB 12	MAR 12	APR 12	MAY 12	JUN 12	JUL 12	AUG 12	SEPT 12	OCT 12	NOV 12	DEC 12
Lab No			1231			2520			3914			5675	
pH			7.33			6.79			6.33			7.49	
Temp	C		8.60			10.27			16,3			8.40	
Electrical Conductivity	uS/cm		103			101			92			72	
Ammonical Nitrogen	mg/l		0.01			0.03			<0.01			0.01	
COD	mg/l		24						63			47	
BOD	mg/l		0.61			0.80			2.88			4.14	
Dissolved Oxygen	mg/l		11.42			11.22			9.56			12.58	
SS	mg/l		<1			<1			12			9	
Residue on Evaporator	mg/l												
Calcium	mg/l												
Cadmium	mg/l												
Chromium	mg/l												
Chloride	mg/l		24			20			20			19	
Chlorine	mg/l												
Copper	mg/l												
Cyanide	mg/l												
Total Iron	mg/l												
Lead	mg/l												
Magnesium	mg/l												
Manganese	mg/l												
Mercury	mg/l												
Nickel	mg/l												
Potassium	mg/l												
Sodium	mg/l												
Sulphate as S	mg/l												
Zinc	mg/l												
Total Alkalinity as CaCO3	mg/l												
Total Organic Carbon	mg/l												
Total Oxidised Nitrogen	mg/l		0.14			0.09			0.21			0.08	
Arsenic	mg/l												
Barium	mg/l												
Boron	mg/l												
Flouride	mg/l												
Phenol	mg/l												
Phosphorous	mg/l												
Selenium	mg/l												
Silver	mg/l												
Mircrotox	Toxic Units												
Microtox	Toxic Units												
Nitrite	mg/l												
Nitrate	mg/l												
Phosphate - ORTHO	mg/l												
Phosphate - TOTAL	mg/l												
Total Coliforms													
Facel Coliforms													
Depth	m												

--- not applicable

Location		*Drumaboden, Kilmacrennan, Co Donegal*											
Sample Type		surface water											
Site No		SW2											
Date of Sample		JAN 12	FEB 12	MAR 12	APR 12	MAY 12	JUN 12	JUL 12	AUG 12	SEPT 12	OCT 12	NOV 12	DEC 12
Lab No			1232			2521			3915			5676	
pH			7.22			7.00			6.40			7.51	
Temp			8.10			10.60			15.80			8.50	
Electrical Conductivity	C		103			99			90			74	
Ammonical Nitrogen	uS/cm		0.02			0.03			0.56			0.06	
COD	mg/l		22						62			42	
BOD	mg/l		0.70			0.74			1.72			2.28	
Dissolved Oxygen	mg/l		11.46			11.18			9.55			12.54	
SS	mg/l		<1			<1			7.0			9.0	
Residue on Evaporator	mg/l												
Calcium	mg/l												
Cadmium	mg/l												
Chromium	mg/l												
Chloride	mg/l		22			22			20			18	
Chlorine	mg/l												
Copper	mg/l												
Cyanide	mg/l												
Total Iron	mg/l												
Lead	mg/l												
Magnesium	mg/l												
Manganese	mg/l												
Mercury	mg/l												
Nickel	mg/l												
Potassium	mg/l												
Sodium	mg/l												
Sulphate as S	mg/l												
Zinc	mg/l												
Total Alkalinity as CaCO3	mg/l												
Total Organic Carbon	mg/l												
Total Oxidised Nitrogen	mg/l		0.14			0.07			0.09			0.07	
Arsenic	mg/l												
Barium	mg/l												
Boron	mg/l												
Flouride	mg/l												
Phenol	mg/l												
Phosphorous	mg/l												
Selenium	mg/l												
Silver	mg/l												
Mircrotox	mg/l												
Microtox	Toxic Units												
Nitrite	Toxic Units												
Nitrate	mg/l												
Phosphate - ORTHO	mg/l												
Phosphate - TOTAL	mg/l												
Total Coliforms	mg/l												
Facel Coliforms													
Depth													
	m												

--- not applicable

Location		*Drumaboden, Kilmacrennan, Co Donegal*											
Sample Type		surface water											
Site No		SW4											
Date of Sample		JAN 12	FEB 12	MAR 12	APR 12	MAY 12	JUN 12	JUL 12	AUG 12	SEPT 12	OCT 12	NOV 12	DEC 12
Lab No			1233			2522			3916			5677	
pH			7.23			6.99			6.49			7.47	
Temp			8.20			10.43			16,0			8.60	
Electrical Conductivity	C		114			99			91			72	
Ammonical Nitrogen	uS/cm		0.02			0.02			<0.01			0.01	
COD	mg/l		19			0			78			44	
BOD	mg/l		0.63			0.72			0.76			1.12	
Dissolved Oxygen	mg/l		11.61			11.14			9.51			12.25	
SS	mg/l		<1			1.5			16.0			3.0	
Residue on Evaporator	mg/l												
Calcium	mg/l												
Cadmium	mg/l												
Chromium	mg/l												
Chloride	mg/l		21			18			21			20	
Chlorine	mg/l												
Copper	mg/l												
Cyanide	mg/l												
Total Iron	mg/l												
Lead	mg/l												
Magnesium	mg/l												
Manganese	mg/l												
Mercury	mg/l												
Nickel	mg/l												
Potassium	mg/l												
Sodium	mg/l												
Sulphate as S	mg/l												
Zinc	mg/l												
Total Alkalinity as CaCO3	mg/l												
Total Organic Carbon	mg/l												
Total Oxidised Nitrogen	mg/l		0.14			0.08			0.17			0.06	
Arsenic	mg/l												
Barium	mg/l												
Boron	mg/l												
Flouride	mg/l												
Phenol	mg/l												
Phosphorous	mg/l												
Selenium	mg/l												
Silver	mg/l												
Mircrotox	mg/l												
Microtox	Toxic Units												
Nitrite	Toxic Units												
Nitrate	mg/l												
Phosphate - ORTHO	mg/l												
Phosphate - TOTAL	mg/l												
Total Coliforms	mg/l												
Facel Coliforms													
Depth													

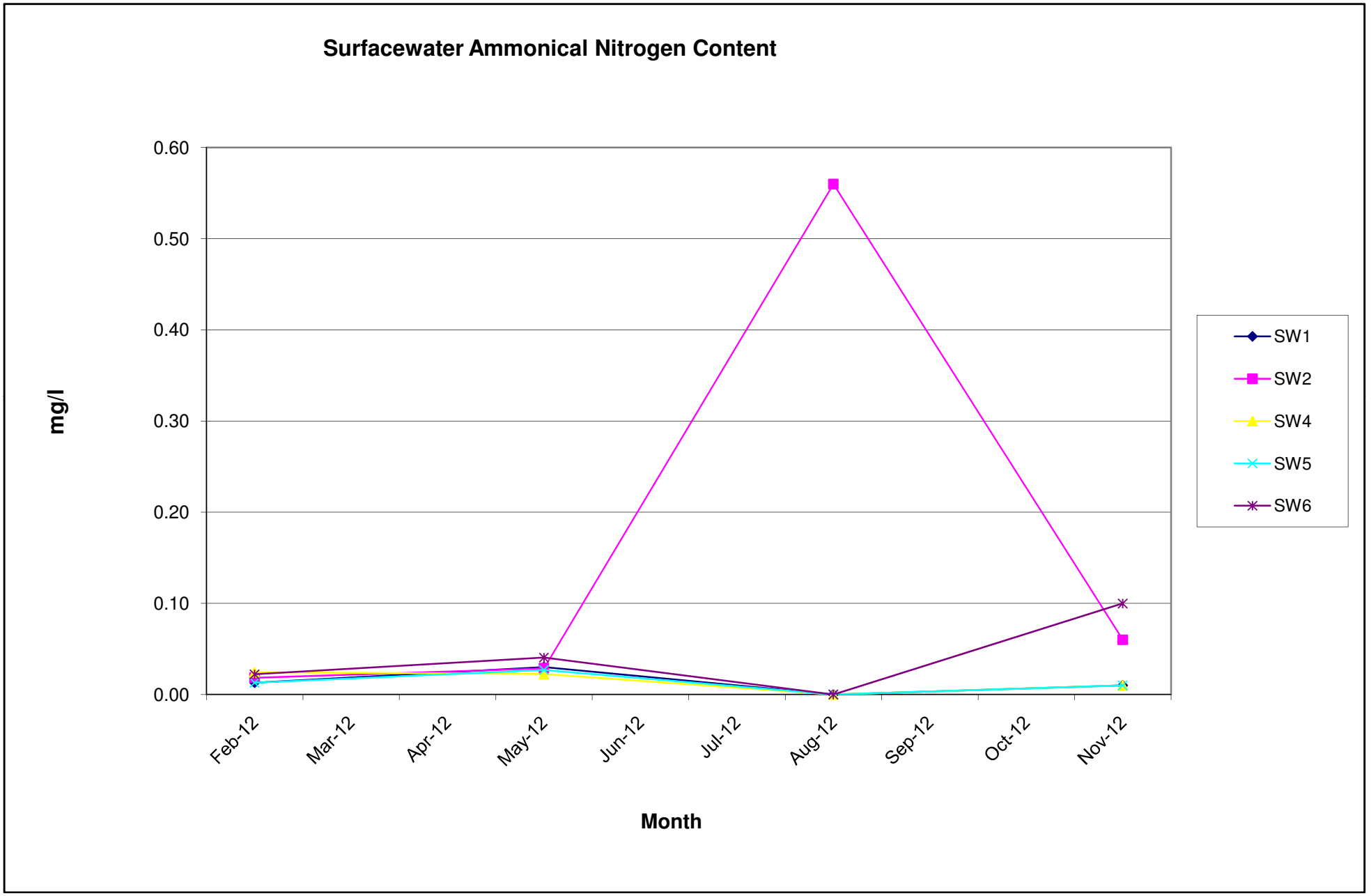
--- not applicable

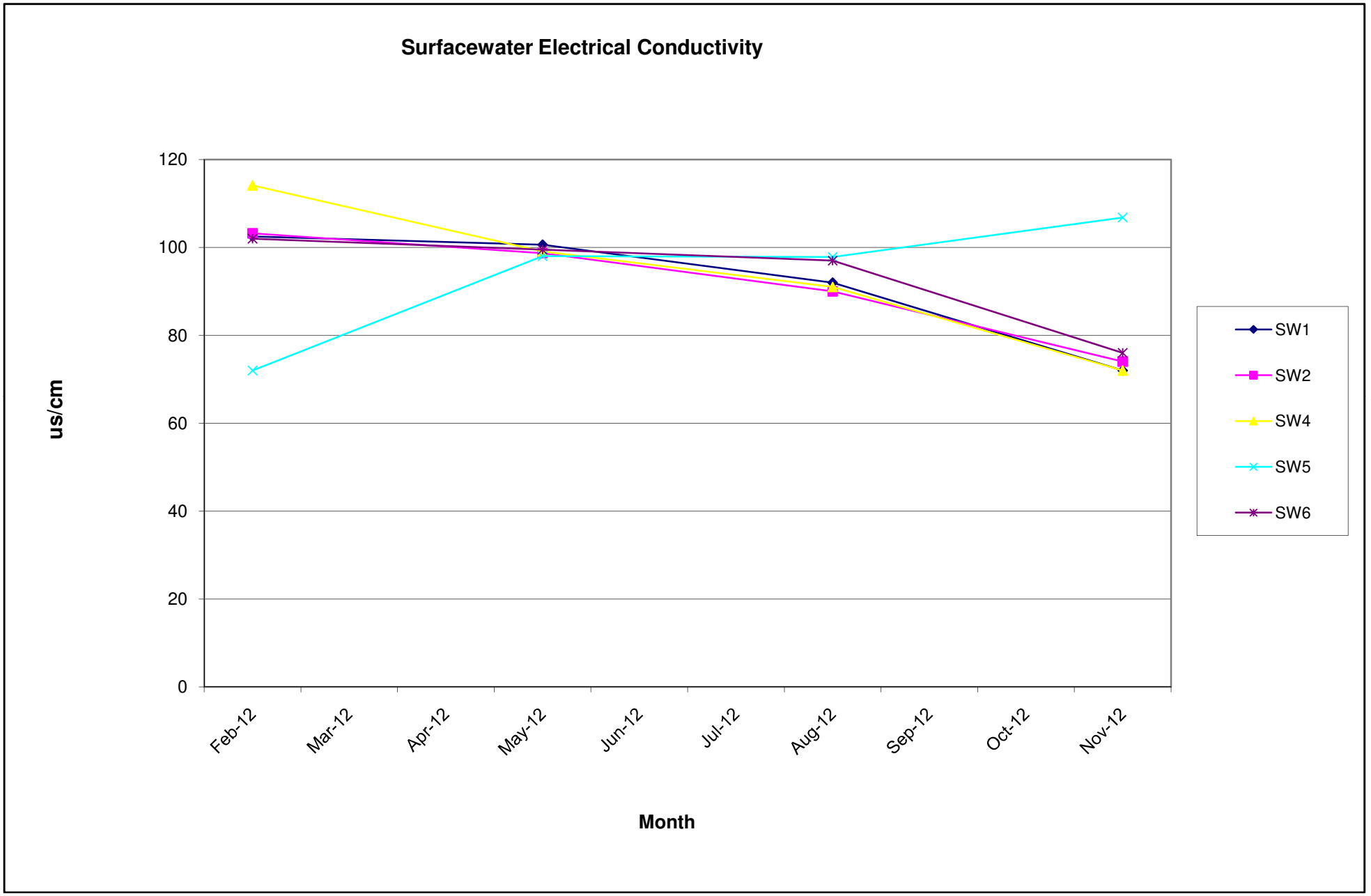
Location		*Drumaboden, Kilmacrennan, Co Donegal*											
Sample Type		surface water											
Site No		SW5											
Date of Sample		JAN 12	FEB 12	MAR 12	APR 12	MAY 12	JUN 12	JUL 12	AUG 12	SEPT 12	OCT 12	NOV 12	DEC 12
Lab No			1234			2523			3917			5678	
pH			6.98			7.02			6.53			7.45	
Temp	C		8.70			10.35			16.10			8.50	
Electrical Conductivity	uS/cm		107			98			98			72	
Ammonical Nitrogen	mg/l		0.01			0.03			<0.01			0.01	
COD	mg/l		26						55			49	
BOD	mg/l		0.71			0.85			1.54			0.97	
Dissolved Oxygen	mg/l		11.72			11.34			9.45			12.19	
SS	mg/l		<1			<1			21.0			11.0	
Residue on Evaporator	mg/l												
Calcium	mg/l												
Cadmium	mg/l												
Chromium	mg/l												
Chloride	mg/l		22			18			23			18	
Chlorine	mg/l												
Copper	mg/l												
Cyanide	mg/l												
Total Iron	mg/l												
Lead	mg/l												
Magnesium	mg/l												
Manganese	mg/l												
Mercury	mg/l												
Nickel	mg/l												
Potassium	mg/l												
Sodium	mg/l												
Sulphate as S	mg/l												
Zinc	mg/l												
Total Alkalinity as CaCO3	mg/l												
Total Organic Carbon	mg/l												
Total Oxidised Nitrogen	mg/l		0.11			0.06			0.18			0.08	
Arsenic	mg/l												
Barium	mg/l												
Boron	mg/l												
Flouride	mg/l												
Phenol	mg/l												
Phosphorous	mg/l												
Selenium	mg/l												
Silver	mg/l												
Mircrotox	Toxic Units												
Microtox	Toxic Units												
Nitrite	mg/l												
Nitrate	mg/l												
Phosphate - ORTHO	mg/l												
Phosphate - TOTAL	mg/l												
Total Coliforms													
Facel Coliforms													
Depth	m												

--- not applicable

Location		*Drumaboden, Kilmacrennan, Co Donegal*											
Sample Type		**surface water**											
Site No		**SW6**											
Date of Sample		JAN 12	FEB 12	MAR 12	APR 12	MAY 12	JUN 12	JUL 12	AUG 12	SEPT 12	OCT 12	NOV 12	DEC 12
Lab No			1235			2524			3918			5679	
pH			7.35			7.43			6.57			7.42	
Temp	**C**		8.0			10.3			16.0			8.6	
Electrical Conductivity	**uS/cm**		102			100			97			76	
Ammonical Nitrogen	**mg/l**		0.02			0.04			<0.01			0.10	
COD	**mg/l**		20						58			43	
BOD	**mg/l**		0.64			3.30			2.01			1.18	
Dissolved Oxygen	**mg/l**		11.68			11.30			9.25			11.96	
SS	**mg/l**		1.5			<1			16.0			14.0	
Residue on Evaporator	**mg/l**												
Calcium	**mg/l**												
Cadmium	**mg/l**												
Chromium	**mg/l**												
Chloride	**mg/l**		20			19			21			20	
Chlorine	**mg/l**												
Copper	**mg/l**												
Cyanide	**mg/l**												
Total Iron	**mg/l**												
Lead	**mg/l**												
Magnesium	**mg/l**												
Manganese	**mg/l**												
Mercury	**mg/l**												
Nickel	**mg/l**												
Potassium	**mg/l**												
Sodium	**mg/l**												
Sulphate as S	**mg/l**												
Zinc	**mg/l**												
Total Alkalinity as CaCO3	**mg/l**												
Total Organic Carbon	**mg/l**												
Total Oxidised Nitrogen	**mg/l**		0.13			<0.01			0.18			0.07	
Arsenic	**mg/l**												
Barium	**mg/l**												
Boron	**mg/l**												
Flouride	**mg/l**												
Phenol	**mg/l**												
Phosphorous	**mg/l**												
Selenium	**mg/l**												
Silver	**mg/l**												
Mircrotox	**Toxic Units**												
Microtox	**Toxic Units**												
Nitrite	**mg/l**												
Nitrate	**mg/l**												
Phosphate - ORTHO	**mg/l**												
Phosphate - TOTAL	**mg/l**												
Total Coliforms													
Facel Coliforms													
Depth	**m**												

--- not applicable


Surfacewater Ammonical Nitrogen Content
mg/l
0.60
0.50
0.40
0.30
0.20
0.10
0.00
Feb-12
Mar-12
Apr-12
May-12
Jun-12
Jul-12
Aug-12
Sep-12
Oct-12
Nov-12
Month
SW1
SW2
SW4
SW5
SW6


Surfacewater Electrical Conductivity
us/cm
120
100
80
60
40
20
0
Feb-12
Mar-12
Apr-12
May-12
Jun-12
Jul-12
Aug-12
Sep-12
Oct-12
Nov-12
Month
SW1
SW2
SW4
SW5
SW6

Location		*Drumaboden, Kilmacrennan, Co Donegal*											
Sample Type		groundwater											
Site No		GW1											
Date of Sample		JAN 12	FEB 12	MAR 12	APR 12	MAY 12	JUN 12	JUL 12	AUG 12	SEPT 12	OCT 12	NOV 12	DEC 12
Lab No			1553			2525			3919			5608	
pH			6.99			6.75			6.80			6.96	
Temp	C		11.20			10.02			14.90			10.50	
Electrical Conductivity	uS/cm		377			414			413			350	
Ammonical Nitrogen	mg/l		6.17			0.09			0.11			1.01	
COD	mg/l												
BOD	mg/l												
Dissolved Oxygen	mg/l		4.41			4.20			3.40			4.10	
SS	mg/l												
Residue on Evaporator	mg/l												
Calcium	mg/l												
Cadmium	mg/l												
Chromium	mg/l												
Chloride	mg/l		22			20			30			27	
Chlorine	mg/l												
Copper	mg/l												
Cyanide	mg/l												
Total Iron	mg/l												
Lead	mg/l												
Magnesium	mg/l												
Manganese	mg/l												
Mercury	mg/l												
Nickel	mg/l												
Potassium	mg/l		<2.34			<2.34			<2.34			<2.34	
Sodium	mg/l		16.6			16.5			17.3			15.6	
Sulphate as S	mg/l					<2			<2			<2	
Zinc	mg/l												
Total Alkalinity as CaCO3	mg/l												
Total Organic Carbon	mg/l												
Total Oxidised Nitrogen	mg/l		0.02			0.44			0.02			0.25	
Arsenic	mg/l												
Barium	mg/l												
Boron	mg/l												
Flouride	mg/l												
Phenol	mg/l		<0.002			<0.002			<0.002			<0.025	
Phosphorous	mg/l												
Selenium	mg/l												
Silver	mg/l												
Mircrotox	Toxic Units												
Microtox	Toxic Units												
Nitrite	mg/l												
Nitrate	mg/l												
Phosphate - ORTHO	mg/l												
Phosphate - TOTAL	mg/l												
Total Coliforms													
Facel Coliforms													
Depth	m		0.30			0.30			0.40			1.20	

--- not applicable

Location		*Drumaboden, Kilmacrennan, Co Donegal*											
Sample Type		**groundwater**											
Site No		**GW5**											
Date of Sample		JAN 12	FEB 12	MAR 12	APR 12	MAY 12	JUN 12	JUL 12	AUG 12	SEPT 12	OCT 12	NOV 12	DEC 12
Lab No			1554			2526			3920			***	
pH			8.74			7.55			7.51			***	
Temp	**C**		11.50			10.06			15.10			***	
Electrical Conductivity	**uS/cm**		192			249			250			***	
Ammonical Nitrogen	**mg/l**		0.36			0.35			0.44			***	
COD	**mg/l**												
BOD	**mg/l**												
Dissolved Oxygen	**mg/l**		2.67			1.76			2.56			***	
SS	**mg/l**												
Residue on Evaporator	**mg/l**												
Calcium	**mg/l**												
Cadmium	**mg/l**												
Chromium	**mg/l**												
Chloride	**mg/l**		35			40			40			***	
Chlorine	**mg/l**												
Copper	**mg/l**												
Cyanide	**mg/l**												
Total Iron	**mg/l**												
Lead	**mg/l**												
Magnesium	**mg/l**												
Manganese	**mg/l**												
Mercury	**mg/l**												
Nickel	**mg/l**												
Potassium	**mg/l**		<2.34			<2.34			<2.34			***	
Sodium	**mg/l**		40.50			37.00			38.00			***	
Sulphate as S	**mg/l**												
Zinc	**mg/l**												
Total Alkalinity as CaCO3	**mg/l**												
Total Organic Carbon	**mg/l**												
Total Oxidised Nitrogen	**mg/l**		0.02			1.07			1.07			***	
Arsenic	**mg/l**												
Barium	**mg/l**												
Boron	**mg/l**												
Flouride	**mg/l**												
Phenol	**mg/l**		<0.002			<0.002			<0.002			***	
Phosphorous	**mg/l**												
Selenium	**mg/l**												
Silver	**mg/l**												
Mircrotox	**Toxic Units**												
Microtox	**Toxic Units**												
Nitrite	**mg/l**												
Nitrate	**mg/l**												
Phosphate - ORTHO	**mg/l**												
Phosphate - TOTAL	**mg/l**												
Total Coliforms													
Facel Coliforms													
Depth	**m**		0.40			0.40			0.50			***	

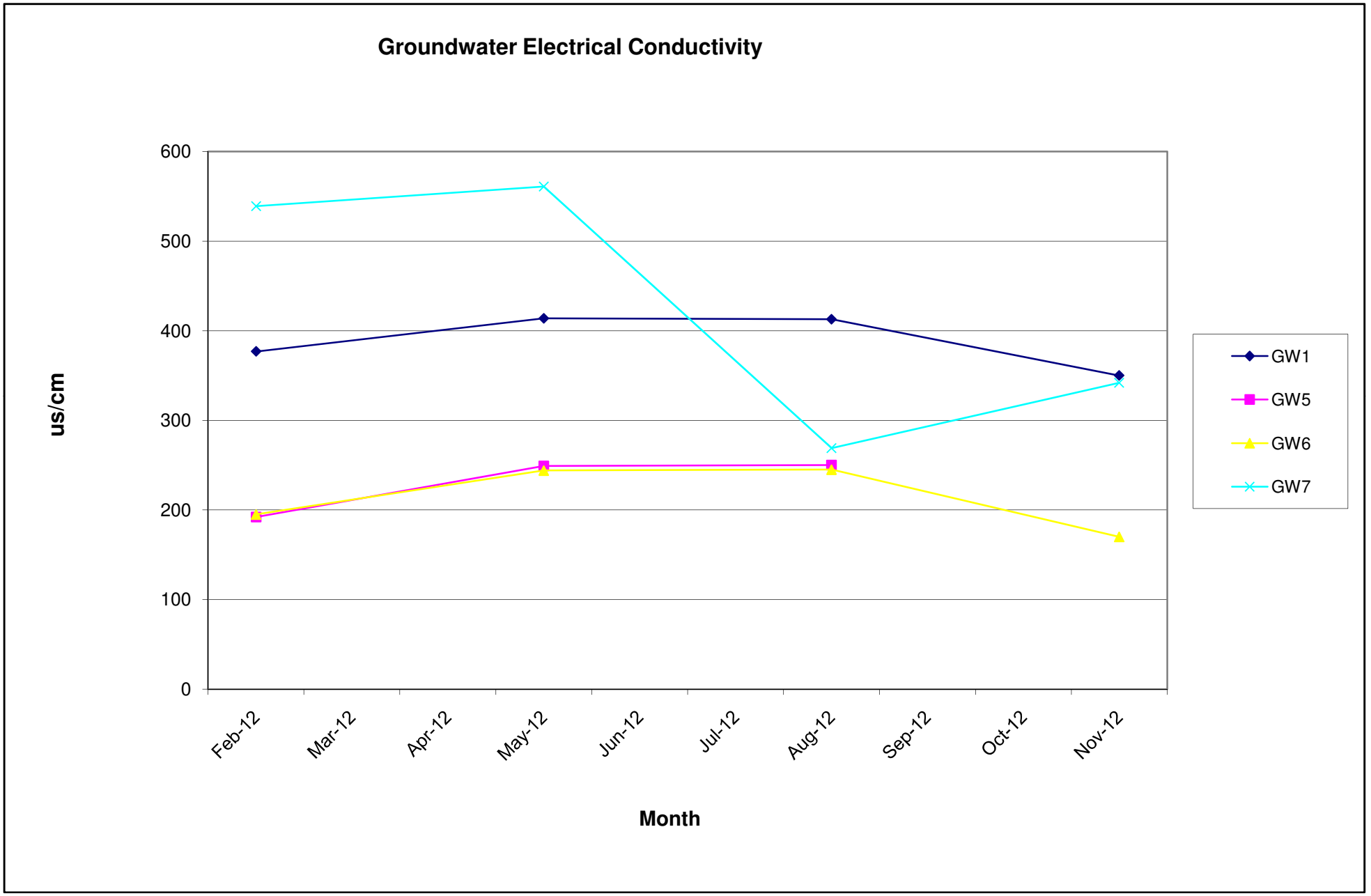
--- not applicable

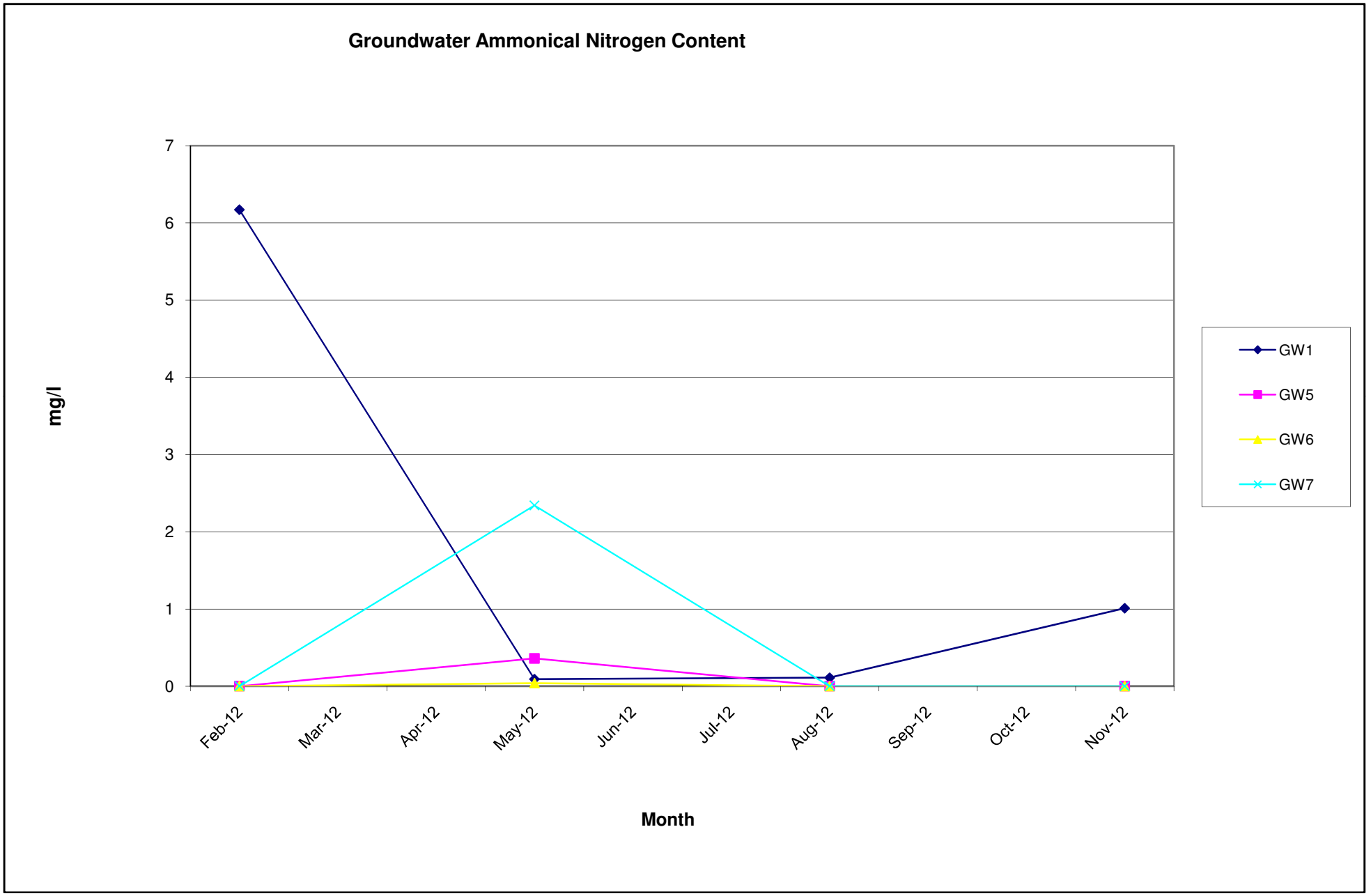
Location		*Drumaboden, Kilmacrennan, Co Donegal*											
Sample Type		groundwater											
Site No		GW6											
Date of Sample		JAN 12	FEB 12	MAR 12	APR 12	MAY 12	JUN 12	JUL 12	AUG 12	SEPT 12	OCT 12	NOV 12	DEC 12
Lab No			1555			2527			3921			5609	
pH			6.91			6.85			6.90			6.78	
Temp	C		11.10			10.08			15.40			10.10	
Electrical Conductivity	uS/cm		195			244			245			170	
Ammonical Nitrogen	mg/l		0.04			0.01			0.18			0.16	
COD	mg/l												
BOD	mg/l												
Dissolved Oxygen	mg/l		3.32			2.48			2.36			3.70	
SS	mg/l												
Residue on Evaporator	mg/l												
Calcium	mg/l												
Cadmium	mg/l												
Chromium	mg/l												
Chloride	mg/l		27			31			34			34	
Chlorine	mg/l												
Copper	mg/l												
Cyanide	mg/l												
Total Iron	mg/l												
Lead	mg/l												
Magnesium	mg/l												
Manganese	mg/l												
Mercury	mg/l												
Nickel	mg/l												
Potassium	mg/l		<2.34			<2.34			<2.34			<2.34	
Sodium	mg/l		15.90			17			17			13.3000	
Sulphate as S	mg/l												
Zinc	mg/l												
Total Alkalinity as CaCO3	mg/l												
Total Organic Carbon	mg/l												
Total Oxidised Nitrogen	mg/l		0.77			0.01			0.01			0.02	
Arsenic	mg/l												
Barium	mg/l												
Boron	mg/l												
Flouride	mg/l												
Phenol	mg/l		<0.002			<0.002			<0.002			<0.025	
Phosphorous	mg/l												
Selenium	mg/l												
Silver	mg/l												
Mircrotox	Toxic Units												
Microtox	Toxic Units												
Nitrite	mg/l												
Nitrate	mg/l												
Phosphate - ORTHO	mg/l												
Phosphate - TOTAL	mg/l												
Total Coliforms													
Facel Coliforms													
Depth	m		0.70			0.70			0.80			0.90	

--- not applicable

Location		*Drumaboden, Kilmacrennan, Co Donegal*											
Sample Type		groundwater											
Site No		GW7											
Date of Sample		JAN 12	FEB 12	MAR 12	APR 12	MAY 12	JUN 12	JUL 12	AUG 12	SEPT 12	OCT 12	NOV 12	DEC 12
Lab No			1556			2528			3922			5610	
pH			6.94			6.92			6.95			6.49	
Temp	C		11.30			10.16			15.20			10.40	
Electrical Conductivity	uS/cm		539			561			269			342	
Ammonical Nitrogen	mg/l		2.34			1.92			2.07			0.73	
COD	mg/l												
BOD	mg/l												
Dissolved Oxygen	mg/l		2.78			1.50			2.22			3.90	
SS	mg/l												
Residue on Evaporator	mg/l												
Calcium	mg/l												
Cadmium	mg/l												
Chromium	mg/l												
Chloride	mg/l		24			33			35			36	
Chlorine	mg/l												
Copper	mg/l												
Cyanide	mg/l												
Total Iron	mg/l												
Lead	mg/l												
Magnesium	mg/l												
Manganese	mg/l												
Mercury	mg/l												
Nickel	mg/l												
Potassium	mg/l		3.87			3.3			<2.34			<2.34	
Sodium	mg/l		13.60			12.2			12.9			8.31	
Sulphate as S	mg/l												
Zinc	mg/l												
Total Alkalinity as CaCO3	mg/l												
Total Organic Carbon	mg/l												
Total Oxidised Nitrogen	mg/l		0.02			0.27			0.27			0.02	
Arsenic	mg/l												
Barium	mg/l												
Boron	mg/l												
Flouride	mg/l												
Phenol	mg/l		<0.002			<0.002			<0.002			<0.025	
Phosphorous	mg/l												
Selenium	mg/l												
Silver	mg/l												
Mircrotox	Toxic Units												
Microtox	Toxic Units												
Nitrite	mg/l												
Nitrate	mg/l												
Phosphate - ORTHO	mg/l												
Phosphate - TOTAL	mg/l												
Total Coliforms													
Facel Coliforms													
Depth	m		0.30			0.35			0.40			1.70	

--- not applicable


Groundwater Electrical Conductivity
us/cm
600
500
400
300
200
100
0
Feb-12
Mar-12
Apr-12
May-12
Jun-12
Jul-12
Aug-12
Sep-12
Oct-12
Nov-12
Month
GW1
GW5
GW6
GW7


Groundwater Ammonical Nitrogen Content
mg/l
7
6
5
4
3
2
1
0
Feb-12
Mar-12
Apr-12
May-12
Jun-12
Jul-12
Aug-12
Sep-12
Oct-12
Nov-12
Month
GW1
GW5
GW6
GW7

Location		*Drumaboden, Kilmacrennan, Co Donegal*											
Sample Type		leachate											
Site No		L2 (Intake)											
Date of Sample		JAN 12	FEB 12	MAR 12	APR 12	MAY 12	JUN 12	JUL 12	AUG 12	SEPT 12	OCT 12	NOV 12	DEC 12
Lab No												5665	
pH												6.83	
Temp	C											9.40	
Electrical Conductivity	uS/cm											2130	
Ammonical Nitrogen	mg/l											81	
COD	mg/l											122	
BOD	mg/l											7.76	
Dissolved Oxygen	mg/l											3.80	
SS	mg/l												
Residue on Evaporator	mg/l												
Calcium	mg/l												
Cadmium	mg/l												
Chromium	mg/l												
Chloride	mg/l											155	
Chlorine	mg/l												
Copper	mg/l												
Cyanide	mg/l												
Total Iron	mg/l												
Lead	mg/l												
Magnesium	mg/l												
Manganese	mg/l												
Mercury	mg/l												
Nickel	mg/l												
Potassium	mg/l												
Sodium	mg/l												
Sulphate as S	mg/l												
Zinc	mg/l												
Total Alkalinity as CaCO3	mg/l												
Total Organic Carbon	mg/l												
Total Oxidised Nitrogen	mg/l											<0.01	
Arsenic	mg/l												
Barium	mg/l												
Boron	mg/l												
Flouride	mg/l												
Phenol	mg/l												
Phosphorous	mg/l												
Selenium	mg/l												
Silver	mg/l												
Mircrotox	Toxic Units												
Microtox	Toxic Units												
Nitrite	mg/l												
Nitrate	mg/l												
Phosphate - ORTHO	mg/l												
Phosphate - TOTAL	mg/l												
Total Coliforms													
Facel Coliforms													
Depth	m												

--- not applicable

Location		*Drumaboden, Kilmacrennan, Co Donegal*											
Sample Type		leachate											
Site No		L1 (Outlet)											
Date of Sample		JAN 12	FEB 12	MAR 12	APR 12	MAY 12	JUN 12	JUL 12	AUG 12	SEPT 12	OCT 12	NOV 12	DEC 12
Lab No												5666	
pH												7.67	
Temp	C											8.80	
Electrical Conductivity	uS/cm											1858	
Ammonical Nitrogen	mg/l											82	
COD	mg/l											91	
BOD	mg/l											3.44	
Dissolved Oxygen	mg/l												
SS	mg/l												
Residue on Evaporator	mg/l												
Calcium	mg/l												
Cadmium	mg/l												
Chromium	mg/l												
Chloride	mg/l											170	
Chlorine	mg/l												
Copper	mg/l												
Cyanide	mg/l												
Total Iron	mg/l												
Lead	mg/l												
Magnesium	mg/l												
Manganese	mg/l												
Mercury	mg/l												
Nickel	mg/l												
Potassium	mg/l												
Sodium	mg/l												
Sulphate as S	mg/l												
Zinc	mg/l												
Total Alkalinity as CaCO3	mg/l												
Total Organic Carbon	mg/l												
Total Oxidised Nitrogen	mg/l											1.60	
Arsenic	mg/l												
Barium	mg/l												
Boron	mg/l												
Flouride	mg/l												
Phenol	mg/l												
Phosphorous	mg/l												
Selenium	mg/l												
Silver	mg/l												
Mircrotox	Toxic Units												
Microtox	Toxic Units												
Nitrite	mg/l												
Nitrate	mg/l												
Phosphate - ORTHO	mg/l												
Phosphate - TOTAL	mg/l												
Total Coliforms													
Facel Coliforms													
Depth	m												

--- not applicable

Location		*Drumabodan Landfill, Kilmacrennan Co Donegal*											
Sample Type		Landfill Gas levels											
Site No		LG1											
Date of Sample													
Parameters	**Units**	**Date**	**Date**	**Date**	**Date**	**Date**	**Date**	**Date**	**Date**	**Date**	**Date**	**Date**	**Date**
		Jan	Feb	March	April	May	June	July	Aug	Spt	Oct	Nov	Dec
Methane	**%**		9.8			8.4	9.2			8.9			9.0
Carbon Dioxide	**%**		2.4			3.9	3.4			3.7			3.7
Oxygen	**%**		18.6			19.1	18.4			18.8			28.6
Atmos. Pressure	**mBar**		1006			1021	999			1004			989

Location		*Drumabodan Landfill, Kilmacrennan Co Donegal*											
Sample Type		**Landfill Gas levels**											
Site No		**LG2**											
Date of Sample													
Parameters	**Units**	**Date**	**Date**	**Date**	**Date**	**Date**	**Date**	**Date**	**Date**	**Date**	**Date**	**Date**	**Date**
		Jan	Feb	March	April	May	June	July	Aug	Spt	Oct	Nov	Dec
Methane	**%**		0.0			0.9	0.8			1.1			1.3
Carbon Dioxide	**%**		0.8			2.1	1.8			2.1			2.2
Oxygen	**%**		22.3			19.4	19.0			18.9			18.9
Atmos. Pressure	**mBar**		1006			1021	999			1004			989

Location		*Drumabodan Landfill, Kilmacrennan Co Donegal*											
Sample Type		**Landfill Gas levels**											
Site No		**LG3**											
Date of Sample													
Parameters	**Units**	**Date**	**Date**	**Date**	**Date**	**Date**	**Date**	**Date**	**Date**	**Date**	**Date**	**Date**	**Date**
		Jan	Feb	March	April	May	June	July	Aug	Spt	Oct	Nov	Dec
Methane	**%**					0.0	0.0			0.0			0.7
Carbon Dioxide	**%**					5.2	5.8			5.4			5.8
Oxygen	**%**					15.7	16.4			15.9			15.1
Atmos. Pressure	**mBar**					1021	999			1004			989

Location		*Drumabodan Landfill, Kilmacrennan Co Donegal*											
Sample Type		**Landfill Gas levels**											
Site No		**LG5**											
Date of Sample													
Parameters	**Units**	**Date**	**Date**	**Date**	**Date**	**Date**	**Date**	**Date**	**Date**	**Date**	**Date**	**Date**	**Date**
		Jan	Feb	March	April	May	June	July	Aug	Spt	Oct	Nov	Dec
Methane	**%**		0.0			0.0	0.0			0.2			0.1
Carbon Dioxide	**%**		0.0			0.1	0.2			0.2			0.2
Oxygen	**%**		22.1			20.9	20.7			20.1			20.2
Atmos. Pressure	**mBar**		1006			1021	999			1004			989

Location		*Drumabodan Landfill, Kilmacrennan Co Donegal*											
Sample Type		Landfill Gas levels											
Site No		LG6											
Date of Sample													
Parameters	**Units**	**Date**	**Date**	**Date**	**Date**	**Date**	**Date**	**Date**	**Date**	**Date**	**Date**	**Date**	**Date**
		Jan	Feb	March	April	May	June	July	Aug	Spt	Oct	Nov	Dec
Methane	**%**		0.0			0.0	0.0			0.0			0.0
Carbon Dioxide	**%**		0.0			0.0	0.0			0.1			0.2
Oxygen	**%**		21.4			21.6	20.8			20.8			20.7
Atmos. Pressure	**mBar**		1006			1021	999			1004			989

Location		*Drumabodan Landfill, Kilmacrennan Co Donegal*											
Sample Type		**Landfill Gas levels**											
Site No		**LG7**											
Date of Sample													
Parameters	**Units**	**Date**	**Date**	**Date**	**Date**	**Date**	**Date**	**Date**	**Date**	**Date**	**Date**	**Date**	**Date**
		Jan	Feb	March	April	May	June	July	Aug	Spt	Oct	Nov	Dec
Methane	**%**		0.0			0.0	0.0			0.0			0.0
Carbon Dioxide	**%**		2.1			2.4	2.1			2.1			2.0
Oxygen	**%**		19.4			19.9	19.4			19.1			19.2
Atmos. Pressure	**mBar**		1006			1021	999			1004			989

Location		*Drumabodan Landfill, Kilmacrennan Co Donegal*											
Sample Type		**Landfill Gas levels**											
Site No		**LG8**											
Date of Sample													
Parameters	**Units**	**Date**	**Date**	**Date**	**Date**	**Date**	**Date**	**Date**	**Date**	**Date**	**Date**	**Date**	**Date**
		Jan	Feb	March	April	May	June	July	Aug	Spt	Oct	Nov	Dec
Methane	**%**		0.0			0.2	0.0			0.0			0.0
Carbon Dioxide	**%**		0.8			0.4	0.4			0.2			0.6
Oxygen	**%**		21.1			19.2	20.5			20.7			20.1
Atmos. Pressure	**mBar**		1006			1021	999			1004			989

APPENDIX B

WATER BALANCE CALCULATION

DRUMABODEN WATER BALANCE CALCULATION

Year	Active Phase	Rainfall (mm)	Temp Restored area	Temp Restored area infiltration IRCA(m3)	Restored area RCA(m2)	Restored area infiltration IRCA(m3)	Leachate produced Lo(m3)
2012	Closed	1,149	0	0	40,500	4,653	4,653
Total		1,149					4,653

Assumptions

IRCA=	Fully Capped/Restored area infiltration of rainfall estimated (2-10%),EPA Manual		10%	%
Landfill area	Area of landfill site.		40,500	m2
Rainfall Data	Data taken from Met Eireann Station Malin Head, Total Rainfall used.		1148.8	mm

APPENDIX C

E-PRTR Regulations

(AER Electronic Reporting System)

Environmental Protection Agency

Guidance to completing the PRTR workbook

AER Returns Workbook

Version 1.1.16

REFERENCE YEAR	2012

1. FACILITY IDENTIFICATION

Parent Company Name	Donegal County Council
Facility Name	Drumabodan Landfill Site
PRTR Identification Number	W0063
Licence Number	W0063-01

Waste or IPPC Classes of Activity

No.	class_name
3.1	The initial melting or production of iron and steel
3.13	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.

Address 1	Kilmacrenan
Address 2	Co Donegal
Address 3	
Address 4	
	Donegal
Country	Ireland
Coordinates of Location	-7.73872 55.0436
River Basin District	GBNIIENW
NACE Code	3821
Main Economic Activity	Treatment and disposal of non-hazardous waste
AER Returns Contact Name	Don Smith
AER Returns Contact Email Address	don.smith@donegalcoco.ie
AER Returns Contact Position	Enviromental Technician
AER Returns Contact Telephone Number	0749122787
AER Returns Contact Mobile Phone Number	0876860295
AER Returns Contact Fax Number	0749162304
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	
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) ?	

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

SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

RELEASES TO AIR					Please enter all quantities in this section in KGs			
POLLUTANT		METHOD			QUANTITY			
			Method Used					
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

RELEASES TO AIR					Please enter all quantities in this section in KGs			
POLLUTANT		METHOD			QUANTITY			
			Method Used					
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
01	Methane (CH4)	C	OTH	Landgem-v302	0.0	151200.0	0.0	151200.0
02	Carbon monoxide (CO)	C	OTH	Landgem-v302	0.0	73.94	0.0	73.94
03	Carbon dioxide (CO2)	C	OTH	Landgem-v302	0.0	414900.0	0.0	414900.0
21	Mercury and compounds (as Hg)	C	OTH	Landgem-v302	0.0	0.001097	0.0	0.001097
34	1,2-dichloroethane (EDC)	C	OTH	Landgem-v302	0.0	0.765	0.0	0.765
35	Dichloromethane (DCM)	C	OTH	Landgem-v302	0.0	22.42	0.0	22.42
55	1,1,1-trichloroethane	C	OTH	Landgem-v302	0.0	1.207	0.0	1.207
56	1,1,2,2-tetrachloroethane	C	OTH	Landgem-v302	0.0	3.481	0.0	3.481
60	Vinyl chloride	C	OTH	Landgem-v302	0.0	8.603	0.0	8.603
62	Benzene	C	OTH	Landgem-v302	0.0	2.798	0.0	2.798
73	Toluene	C	OTH	Landgem-v302	0.0	67.75	0.0	67.75
78	**Xylenes**	C	OTH	Landgem-v302	0.0	24.02	0.0	24.02

* 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)

RELEASES TO AIR					Please enter all quantities in this section in KGs			
POLLUTANT		METHOD			QUANTITY			
			Method Used					
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: Drumabodan Landfill Site

Please enter summary data on the quantities of methane flared and / or utilised			Method Used			
	T (Total) kg/Year	**M/C/E**	**Method Code**	**Designation or Description**	**Facility Total Capacity m3 per hour**	
Total estimated methane generation (as per site model)	151200.0	C	OTH	Landgem-v302	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)	151200.0	C	OTH	Landgem-v302	N/A	

4.2 RELEASES TO WATERS

Link to previous years emissions data

SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

Data on ambient monitoring of storm/surface water or groundwater, conducted as part of your licence requirements, should NOT be submitted under AER / PRTR Reporting as this only concerns Releases from your facility

RELEASES TO WATERS					Please enter all quantities in this section in KGs			
POLLUTANT					QUANTITY			
			Method Used					
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

RELEASES TO WATERS					Please enter all quantities in this section in KGs			
POLLUTANT					QUANTITY			
			Method Used					
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
79	**Chlorides (as Cl)**	M	OTH	DCC-SOP	893.0	893.0	0.0	0.0

* 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)

RELEASES TO WATERS					Please enter all quantities in this section in KGs			
POLLUTANT					QUANTITY			
			Method Used					
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
303	BOD	M	OTH	DCC-SOP	18.08	18.08	0.0	0.0
306	COD	M	OTH	DCC-SOP	278.0	278.0	0.0	0.0
238	Ammonia (as N)	M	OTH	DCC-SOP	430.0	430.0	0.0	0.0
327	Nitrate (as N)	M	OTH	DCC-SOP	5.78	5.78	0.0	0.0
372	Nitrite (as N)	M	OTH	DCC-SOP	2.62	2.62	0.0	0.0

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

4.3 RELEASES TO WASTEWATER OR SEWER

Link to previous years emissions data

SECTION A : PRTR POLLUTANTS

OFFSITE TRANSFER OF POLLUTANTS DESTINED FOR WASTE-WATER TREATMENT OR SEWER					Please enter all quantities in this section in KGs			
POLLUTANT		METHOD			QUANTITY			
			Method Used					
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 POLLUTANT EMISSIONS (as required in your Licence)

OFFSITE TRANSFER OF POLLUTANTS DESTINED FOR WASTE-WATER TREATMENT OR SEWER					Please enter all quantities in this section in KGs			
POLLUTANT		METHOD			QUANTITY			
			Method Used					
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

4.4 RELEASES TO LAND

Link to previous years emissions data

SECTION A : PRTR POLLUTANTS

RELEASES TO LAND					Please enter all quantities in this section in KGs		
POLLUTANT		METHOD			QUANTITY		
			Method Used				
No. Annex II	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year
					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 POLLUTANT EMISSIONS (as required in your Licence)

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

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

5. ONSITE TREATMENT & OFFSITE TRANSFERS OF WASTE

Please enter all quantities on this sheet in Tonnes

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: Name and Licence/Permit No of Recover/Disposer	Haz Waste : Address of Next Destination Facility Non Haz Waste: Address of Recover/Disposer	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)
						M/C/E	Method Used					

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

Link to previous years waste data
Link to previous years waste summary data & percentage change