Clare County Council

Waste Licence W0170-01

Annual Environmental Report for 2015

Name & location of facility: **Lisdeen Recycling Centre & Transfer Station, Cemetery Road, Lisdeen, Kilkee, Co. Clare**

Submitted by:

Environment Section, Clare County Council, New Road, Ennis, Co. Clare.

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Reporting Period

1/01/15 – 31/12/15

1) Details of Activity

The principal waste activity of the Transfer Station is the compaction of solid waste into 30 m^3 closed containers for subsequent disposal to landfill in accordance with Class 12 of the Third Schedule of the Waste Management Act, 1996. Other waste activity is the storage of non-recoverable waste received at the facility, prior to disposal at an appropriate facility in accordance with Class 13 of the Third Schedule.

Other waste recovery activities include recycling or reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes) in accordance with Class 2 of the Fourth Schedule, recycling or reclamation of metals and metal compounds in accordance with Class 3 of the Fourth Schedule, and recycling or reclamation of other inorganic materials in accordance with Class 4 of the Fourth Schedule. This covers the acceptance of waste oils, cooking oils, beverage cans, white goods, other metals, and glass at the facility.

3) Volume and composition of waste received during the reporting period.

The quantity of municipal solid waste accepted at the facility during the reporting period(s) was as follows:

Public Domestic Waste delivered to site	461.4	tonnes
Recyclable material delivered to site	255.2	tonnes
Total	716.6	tonnes

The quantity of waste materials accepted for subsequent recycling/recovery for 2015 is as outlined in Table 3.1 below

Table 3.1

Material Type	E.W.C. Code	Tonnage	
Domestic waste	20 00 00 20 03 01	461.4	483
Metals for recycling	20 01 40	25.76	19
Glass for recycling	20 01 02	13.83	
Aluminium Cans	15 01 04	0.55	4.4
Plastic bottles	20 01 39	10.7	4.2
Hard Plastics		24	18.8
Steel cans	15 01 04	5.42	5
Car Batteries	16 06 01*	1.1	1.1
Newspapers	20 01 01	30.5	27.6
Waste Engine Oil	13 02 00	0.99	
Cardboard	20 01 01	30.5	26
Tetrapak	15 01 01	0.591	
Timber	20 01 38	36.2	19.4
Textiles	20 01 11	1.95	
WEEE	20 01 36	54.21	
Batteries	16 06 04	0.522	
Oil filters	16 01 07	0.24	
Green waste	20 02 01	18.12	13.8

The quantities of waste allowed for acceptance the facility under Schedule A of the licence at are as outlined in Table 3.2 below:

Table 3.2:

Waste Type	Maximum (Tonnes per annum)
Municipal Waste	1,800
Wastes for recovery/recycling	200 Note4
Total	2,000

Note 4: The amount of wastes accepted for recovery/recycling may be altered as long as the total accepted at the facility does not exceed 2000 tonnes per annum.

4) Summary report on emissions, including wastes from silt traps and interception sumps.

No desludging of the septic tank has taken place since installation. Loading on the tank is quite small with one w.c. and sink as well as run-off from waste transfer area.

5) Foul Water Emissions

There is no direct foul water discharge. Foul water is diverted to a septic tank unit, which in turn is discharged to a reed bed. This foul water is collected from w.c., sink unit, the transfer station shed, from the compactor and the bin transverse area. It comprises wash water and rainwater falling on the contaminated areas.

6) Surface Water Emissions

Surface water runoff from site roads and uncontaminated surfaces discharges to the surface water drains. There are no other emissions of any environmental significance from the facility.

7) Summary of Results and Interpretation of Environmental Monitoring.

Table 7.1. Lisdeen Transfer Station (WL170-1) Monitoring Schedule

Schedule D	Monitoring
D.1	Monitoring Locations
D.2	Waste Water
D.3	Landfill Gas
D.4	Surface Water, Groundwater and Leachate

Monitoring was conducted at the specified locations and frequencies as indicated in each of the above referenced Schedules of the Waste Licence, unless otherwise noted in this report. Monitoring locations are shown in Appendix 1. Wastewater monitoring has not

been carried out to date as the discharge from the septic tank is directly to a percolation area. The reed bed system is now commissioned; however due to the low flow, it was not possible to obtain a sample from the system.

7.1. Landfill Gas

During this reporting period, landfill gas monitoring was carried out on a monthly basis at landfill gas wells L1 and L2. Monitoring was carried out in accordance with Schedule D.3 of the waste licence. Gas monitoring locations are shown in Appendix 1. Completed landfill gas monitoring forms for the period is available for inspection at the facility and can be forwarded if required. Landfill gas results for L1 and L2 are graphed in figures 7.1 and 7.2 below:

Figure 7.1:

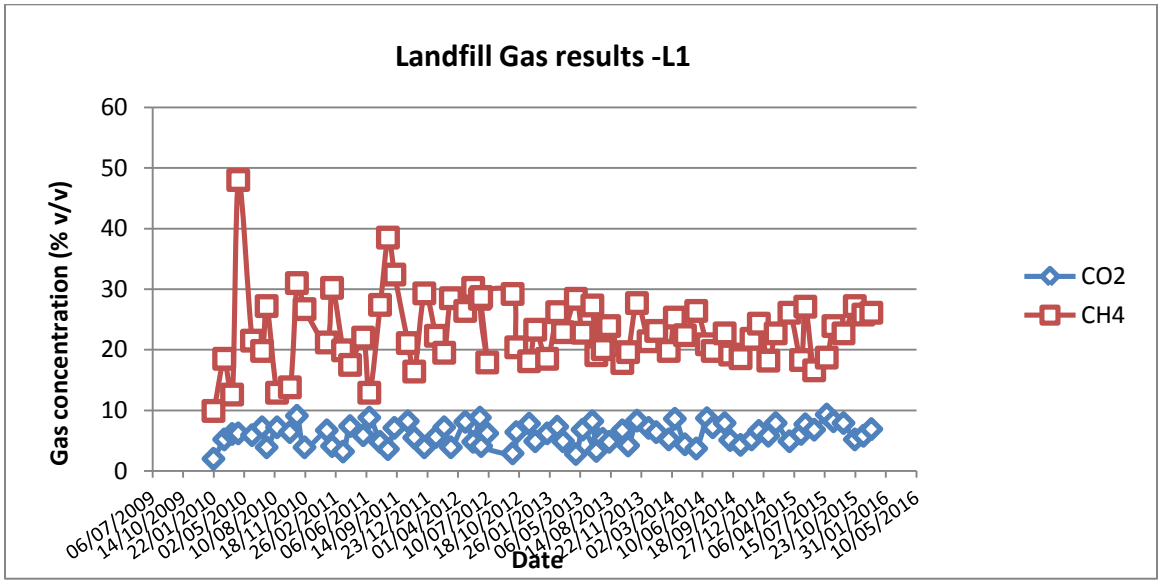
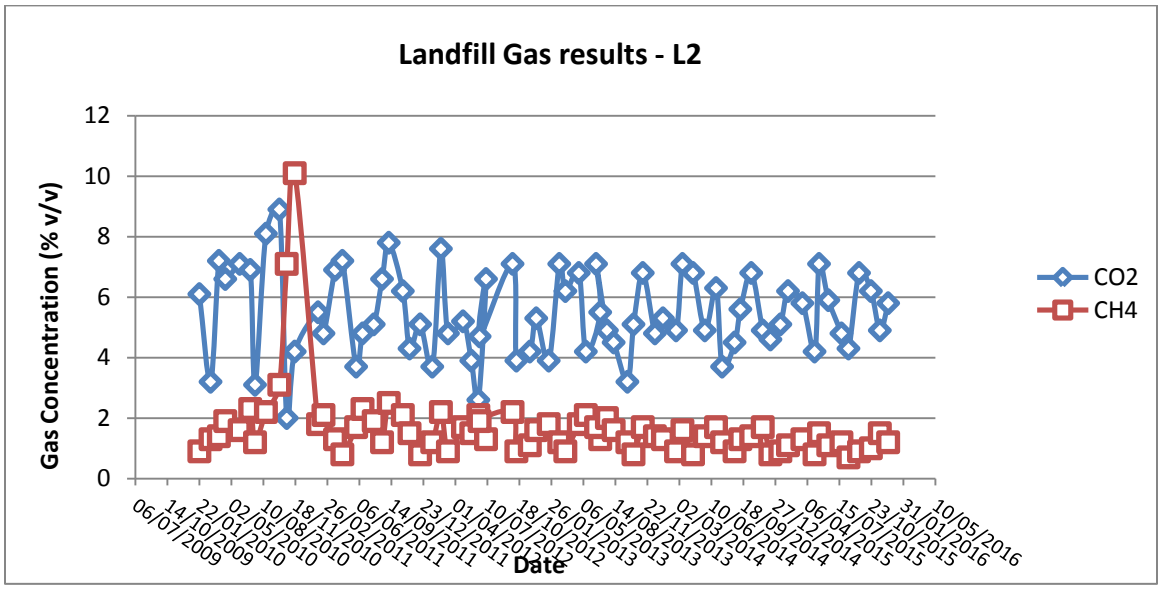


Figure 7.2:



Both gas wells are located in waste; L2 is located in the centre of the waste body and L1 is close to the northwest site boundary

The methane concentration at L1 is significantly higher than at L2. The trend during 2015 was in line with historic monitoring within the site. Carbon dioxide levels for the the year were similar at both locations with levels <10%v/v.

Landfill gas levels in the caretaker's office are continuously monitored using the online gas analyser. Methane and carbon dioxide levels during 2015 remained within trigger levels as stated in Condition 6.4.1 of Waste licence 170-1.

Surface Water, Groundwater and Leachate.

SNC-Lavalin Environment (SLE) was retained by Clare County Council to complete groundwater, surface water and leachate sampling at the Lisdeen Waste Recycling Centre (Lisdeen) located at Kilkee, Co. Clare. Sampling was conducted on the 15th June 2015.

7.2 Surface Water

7.2.1a Water Quality Standards and Trigger values used for comparison

Although water is not abstracted for drinking water use from these surface water locations, it is useful to provide a benchmark for comparison of monitoring results and therefore the measured results are compared to the Water Quality Standards as presented below.

PARAMETER	WATER QUALITY STANDARDS			
	SURFACE WATER REGULATIONS [1]			[2]
	A1 MAC	A2 MAC	A3 MAC	SALMONID REGULATIONS
Conductivity, µS/cm at 20^0C	1000	1000	1000	
Temperature, ^{0}C	25	25	25	NS
pH	5.5 – 8.5	5.5 – 9.0	5.5 – 9.0	> 6 < 9
Dissolved oxygen, mg/L	NS	NS	NS	NS
Dissolved oxygen, % Saturation	> 60%	> 50%	> 30%	50%, > 9 mg/l O2
BOD, mg/L O2	5	5	7	< 5
COD, mg/L O2	NS	NS	NS	NS
Total Ammonium, mg NH4/L	0.2	1.5	4.0	1.0
Suspended solids, mg/L	50	NS	NS	<25
Chloride, mg/L Cl	250	250	250	NS

Phosphates, mg/L P2O5	0.5	0.7	0.7	NS
Sulphates, ml/L SO4	200	200	200	NS

[1] EC (Quality of Surface Water Intended for the Abstraction of Drinking Water) Regulations, 1988 [S.I. No. 294 of 1989]

[2] EC (Quality of Salmonid Waters) Regulations, 1988 [S.I. No. 293 of 1988]

7.2.1b Trigger Levels

Clare County Council has proposed trigger levels for ammonia and BOD concentrations for the surface water monitoring locations around the site. These trigger levels are considered to highlight a significant change in water quality compared to normal results and require corrective action to be taken. The proposed trigger levels, which are yet to be agreed with the EPA are presented below in Table 7.2.1.

Table 7.2.1 Surface water trigger levels at Lisdeen Recycling Facility

Monitoring Location	**SW1**	**SW2**	**SW3**	**SW5**	**SW5a**	**SW7**
Ammonia Concentration (ppm)	2.5	-	10	12.5	-	1.2
BOD Concentration (ppm)	38	-	10	36	-	10

Evaluation of monitoring results

Annual sampling was completed at six (6) surface water sampling locations on the boundaries of the site and off site to determine any potential impacts the site may have had on surface water quality in the area.

Field monitoring (pH, dissolved oxygen, temperature and electrical conductivity) of all surface water samples was completed on June 15th, 2015.

Surface water pH ranged between 7.3 (SW1) and 8.3 (SW2). Electrical conductivity ranged between 413 µS/cm (SW5a) and 8,820 µS/cm (SW7).

Surface water temperatures on June 15th, 2015 ranged between 10.9oC (SW2) and 14.1oC (SW5).

Dissolved oxygen concentrations in surface water samples collected on June 15th, 2015 ranged between 71% saturation (SW1) and 83% saturation (SW5a).

The field parameter results indicated that surface water quality inside the site perimeter and at locations upstream and downstream from the site generally complied with the 2009 Surface Water Regulations and the applicable EPA surface water guidelines with the exception of significantly elevated electrical conductivity at locations SW3 and SW7. The elevated electrical conductivity is thought to be due to the tidal influence and resulting salinity influence on the sample locations.

Suspended Solids

Annual sampling was completed at all surface water sampling locations to assess concentrations of suspended solids. No standards are included in the 2009 Surface Water Regulations for suspended solids. Therefore, the results for the annual sampling programme were compared to the EPA surface water guideline. The analytical results for the surface water sampling events indicated the following:

Surface water samples submitted from sample locations SW3 (137 mg/l) and SW7 (108 mg/l) contained suspended solids concentrations greater than the EPA surface water guideline of 50mg/l.

All remaining surface water samples submitted contained suspended solids concentrations less than the EPA surface water guideline of 50mg/l. Results ranged between <10mg/l (SW1, SW2 and SW5a) and 15 mg/l (SW5).

The elevated concentration of suspended solids in surface water samples SW3 and SW7 were considered to be due to the suspension of fine sand in the tidal channel rather than from inputs from the Lisdeen site as can be seen from the on-site sample results that were all significantly lower.

Biochemical Oxygen Demand

Annual sampling was completed at all surface water locations to assess BOD concentrations in surface water inside and outside the site. The analysis results indicated the following:

Three (3) surface water samples collected from SW2 (<1 mg/l O2), SW5 (2 mg/l O2) and SW5a (<1 mg/l O2) contained BOD concentrations less than the 2009 surface water regulation standard of 2.6 mg/l O2.

The remaining 3 surface water samples (i.e. SW1 [3 mg/l], SW3 [5 mg/l] and SW7 [5 mg/l]) contained BOD concentrations greater than the 2009 surface water regulation standard of 2.6 mg/l O2 of 2mg/l O2 but were significantly less than the proposed trigger levels included in Table B.

The elevated BOD concentrations in surface water samples may be due to a number of agricultural and anthropogenic sources (e.g., landfill leachate, manure spreading and sewage from septic tanks). It should be noted that although the BOD concentrations in SW1, SW3 and SW7 exceeded the 2009 surface water standard all results were significantly less than the proposed concentration trigger levels for those surface water sample locations and were consistent with historic concentrations. Also, location SW1 is upstream of the landfill and therefore indicated anthropogenic/ natural impacts on BOD concentrations from outside the landfill area.

Chemical Oxygen Demand

Annual sampling was completed at all surface water locations to assess COD concentrations in surface water inside and outside the site. No standards are included in the 2009 Surface Water Regulations for COD. Therefore, the results for the annual sampling programme were compared to the EPA surface water guideline. The analysis results indicated the following:

The surface water samples collected from SW7 (117 mg/l), SW3 (302 mg/l) and SW1 (69 mg/l) contained COD concentrations greater than the EPA surface water guideline of 40 mg/l O2.

The 3 remaining surface water samples collected from SW2 (33 mg/l), SW5 (15 mg/l) and SW5a (10 mg/l) contained COD concentrations less than the EPA surface water

guideline of 40 mg/l O2.

Location SW1 is upstream from the landfill site and the sample collected from this location contained a COD concentration that exceeded the EPA surface water guideline of 40mg/l. This indicated that some sources outside the landfill (e.g. agriculture) may be contributing to the elevated COD concentrations in surface water in the area. However, SW3 closer to the landfill area contained more significant elevated concentrations of COD indicating that surface water quality may also be influenced by outputs from the landfill at the east and northeast boundaries.

Ammoniacal Nitrogen

Annual sampling was completed at all surface water locations to assess ammoniacal nitrogen (NH4-N) concentrations in surface water inside and outside the site. The analysis results indicated the following:

Two (2) samples collected from SW5 (3.16 mg/l) and SW7 (0.71 mg/l) contained concentrations of NH4-N greater than the 2009 Surface Water Regulation Standard of 0.14 mg/l.

All remaining samples contained NH4-N concentrations less than the 2009 surface water regulation standard.

The elevated NH4-N concentrations in surface water samples were at locations that were most probably impacted by migration of NH4-N from the landfill. It should be noted that although the NH4-N concentrations exceeded the 2009 Surface Water Standard for two of the collected samples, the concentrations were significantly less than the proposed concentration trigger levels for surface waters and were consistent with historic concentrations.

3.1.6. Boron

Annual sampling was completed at all surface water locations to assess boron concentrations in surface water inside and outside the site. No standards are included in the 2009 surface water regulations for boron. Therefore, the results for the annual

sampling programme were compared to the EPA surface water guideline. The analysis results indicated the following:

Two (2) samples collected from SW3 (3,110 µg/l) and SW7 (2,814 mg/l) contained concentrations of boron greater than the 2009 Surface Water Regulation Standard of 2,000 µg/l.

All other samples contained concentrations of boron less than the EPA surface water quality limit of 2,000 µg/l ranging between 30 µg/l (SW5a) and 129 µg/l (SW5).

The boron concentrations found in SW3 and SW7 are significantly higher than concentrations found at other locations. However, typical boron concentrations in seawater could be approximately 5 mg/l. Because both elevated concentrations were found in the tidal channel to the south of the site, elevated boron concentrations are most likely from seawater influence at those locations.

Total Metals

Annual sampling was completed at all surface water locations to assess total metals concentrations in surface water inside and outside the site. The analysis results indicated the following:

Two samples collected from SW3 (0.9 mg/l) and SW7 (0.8 mg/l) contained detectable concentrations of cadmium that could exceed the 2009 Surface Water Regulation Standards. The concentrations of all other metals were less than the 2009 Surface Water Regulation Standards.

Samples collected from all other surface water sampling locations contained total metals concentrations less than the 2009 Surface Water Regulation Standards and the applicable EPA surface water guidelines.

The elevated cadmium concentrations in SW3 and SW7 are located in the tidal channel. The regulatory limit is dependent on the total hardness of the water. It may prudent to include analysis for hardness in future samples if cadmium concentrations remain elevated to assess the potential effect of elevated cadmium on the environment.

Major Anions

Annual sampling was completed at all surface water locations to assess major anion (i.e. potassium, manganese, magnesium, sodium and calcium) concentrations in surface water inside and outside the site. The analysis results indicated the following:

The concentration of manganese in all surface water samples were less than the applicable EPA surface water guideline of 300 mg/l.

No limits exist in the 2009 Surface Water Regulation Standards or the applicable EPA surface water guidelines for calcium, magnesium, potassium or sodium;

The concentration of calcium in all surface water samples were less than 100 mg/l with the exception of samples SW3 (i.e., 378.5 mg/l) and SW7 (347.4 mg/l);

The concentration of magnesium in all surface water samples were less than 100 mg/l with the exception of samples SW3 (i.e., 1,016 mg/l) and SW7 (955.1 mg/l);

The concentration of potassium in all surface water samples were less than 40 mg/l with the exception of samples SW3 (i.e., 334.8 mg/l) and SW7 (301.9 mg/l); and

The concentration of sodium in all surface water samples were less than 150 mg/l with the exception of samples SW3 (i.e., 9,097 mg/l) and SW7 (i.e., 8,907 mg/l).

Although there are no guidelines and limits for the parameters listed above, sample locations SW3 and SW7 indicated elevated concentrations of anions from dissolved salts that are indicative of seawater influence due to the location of the sample locations (i.e. the tidal channel south of the site).

Chloride

Annual sampling was completed at all surface water locations to assess chloride concentrations in surface water at locations inside and outside the site. The analysis results indicated the following:

Samples collected from SW3 (15,536 mg/l) and SW7 (14,653 mg/l) contained concentrations of chloride greater than the applicable EPA surface water guideline of 250 mg/l.

All other submitted samples contained concentrations of chloride less than the applicable EPA surface water guideline.

The two (2) samples that contained elevated chloride concentrations were collected from the main tidal channel located to the north and east of the site (SW3 and SW7). The site is tidally influenced and the elevated chloride concentrations are considered to be due to estuarine water intrusion from the tide or chloride dissolved in the surface water from deposited salts on the channel floor. It is not considered that the elevated chloride concentrations at SW3 and SW7 were due to discharge from the Lisdeen site.

7.3 Groundwater

Groundwater wells BH1, BH3s, BH3d, BH4s and BH4d were sampled on the 19th April 2014. Monitoring locations are shown in Appendix 1.

Table 7.3.1 Groundwater water locations

Location Reference	Description of location
BH1	Artesian bedrock well located outside the site, adjacent to the northeast boundary.
BH3d	Bedrock well located close to BH3s, downgradient of the main waste body.
BH3s	Overburden well located within the landfill, close to the southern site boundary.
BH4d	Bedrock monitoring well located in waste and downgradient of the main waste body.
BH4s	Overburden well located within the landfill, close to the southern site boundary.

7.3.1 Water Quality Standards and Trigger Values used for comparison purposes

Table 7.3.2 Extracted from E.C. (Drinking Water) Regulations, 2007 SI No. 106 of 2007

Parameter	**Table [1]**	**Drinking Water Quality Standard**	**Deviations**
Temperature	Not Listed	-	N/A
Conductivity	Table C	2500 µS/cm @ 20ºC	none
pH	Table C	$6.5 \leq pH \leq 9.5$	none
Ammonium	Table C	0.23 mg/l N (0.30 mg/l NH_4)	See trigger levels below
Total Organic Carbon	Table C	No abnormal change	N/A
Cadmium	Table B	0.005 mg/l	none
Chromium	Table B	0.05 mg/l	none
Iron	Table B	0.2 mg/l	BH3, BH3s, BH4
Lead	Table B	0.010 mg/l	none
Manganese	Table B	**0.05 mg/l**	none
Nickel	Table B	**0.020 mg/l**	none
Sodium	Table B	**200 mg/l**	none

[1] The notes above quote the Table in the regulations from which parametric or limit values were obtained

N/A Not applicable.

Trigger Levels

Clare County Council has proposed trigger levels for ammonia concentrations for the monitoring wells located around the site. These trigger levels are considered to highlight a significant change in water quality compared to normal results and require corrective action to be taken. The proposed trigger levels, which are yet to be agreed with the EPA are presented below in Table 7.3.3.

Table 7.3.3 Groundwater trigger levels at Lisdeen Recycling Facility

Monitoring Well	**BH1**	**BH3**	**BH3s**	**BH4**
Ammonia Concentration (ppm)	0.5	1.7	1.0	0.5

7.3.2 Evaluation of results

Monitoring and sampling of all groundwater wells was completed on the 15th June 2015. The results of the site monitoring program indicated the following:

Two (2) bedrock wells (i.e., BH1 and BH4) were flowing artesian wells indicating that the deeper aquifer in the area of the site is confined and the water within the aquifer had not reached subterranean hydrostatic equilibrium.

The depth to groundwater (below ground surface [bgs]) at the remaining three (3) monitoring wells at Lisdeen on June 15th, 2015 were; 0.97m (BH3), 0.462m (BH3S) and 0.93m (BH4S) bgs; and

During the annual monitoring event completed on June 15th, 2015 groundwater pH ranged between 7.3 (BH3S & BH4S) and 7.6 (BH4). Electrical conductivity ranged between 535 µS/cm (BH4) and 699 µS/cm (BH3) and water temperature ranged between 12.0oC (BH3) and 13.1oC (BH4S);

All pH and electrical conductivity concentrations measured during the groundwater sampling event were within the applicable standards and guidelines included in section 2.3 of this report. The range in temperature was due to an increase in ambient temperature on site during sampling.

Background Wells

Monitoring well BH1 is located in the southwest corner of an agricultural field located immediately to the north of the entrance gate of the Lisdeen site. The monitoring well was located up gradient from the Lisdeen site and had artesian flow when the well cap was removed. Recent land improvement works had been completed in the vicinity of the well and the groundwater was turbid even after significant purging had been completed.

The analysis results for the submitted groundwater sample from BH1 indicated the following:

The ammoniacal nitrogen (NH4-N) concentration in the groundwater sample collected from monitoring well BH1 (i.e., 0.27 mg/l) exceeded the 2010 groundwater standard of 0.175 mg/l.

The concentrations of manganese (i.e., 464 µg/l) and total alkalinity (i.e., 322 mg/l) that exceeded the applicable EPA guideline values of 50µg/l and 200mg/l respectively. The concentrations of all other anions in the groundwater sample submitted from BH1 contained concentrations less than the 2010 groundwater standards and/or the applicable EPA guideline values.

The concentrations of dissolved metals in the submitted groundwater sample from BH1 were less than the 2010 groundwater standards and/or the applicable EPA guideline values.

Total alkalinity concentrations found in the sample collected from BH1 (i.e. 322 mg/l) exceeded the EPA guideline value of 200mg/l.

Although NH4-N concentrations in BH1 (i.e. 0.27 mg/l) exceeded the 2010 groundwater standard, they were below the proposed trigger level of 0.5 mg/l. Previous analytical results indicated that NH4-N concentrations in BH1 have fluctuated (i.e. 0.3mg/l in October, 2012, <0.03 mg/l in March, 2013 and 0.26 mg/l in February 2014) and it is considered that due to the upgradient location of the monitoring well the elevated NH4-N concentrations are due to sources other than the landfill.

The manganese concentration in BH1 exceeded the EPA guideline value of 50 µg/l but is consistent with previous results. The elevated concentration of manganese indicated that there may be a natural source of manganese in the area. The background well is located up gradient of the site and would not be considered to be influenced by historic activities at the Lisdeen site.

Manganese concentrations in 2015 are consistent with historic concentrations observed in BH1 during previous annual monitoring and sampling events. The EPA guideline value for manganese is set as an aesthetic objective for drinking water (i.e., staining of pipes and appliances) rather than as a concentration that would constitute a health impact.

However, the monitoring well is not used for potable water extraction and the application of the standard may be overly conservative.
The elevated total alkalinity concentration in the monitoring well indicated that the water contains higher concentrations of calcium carbonate (CaCO3) which may act as a buffer against significant pH changes within the groundwater aquifer.

Southern Area Wells
Monitoring wells BH3 and BH3S are located at the south of the site, and down gradient from the old landfill body, the analysis results for samples submitted from the monitoring wells indicated the following:
The concentrations of NH4-N in the sample collected from BH3 (0.41 mg/l) was greater than the 2010 groundwater standard of 0.175mg/l and the concentrations of NH4-N in the sample collected from BH3S (0.16 mg/l) was less than the 2010 groundwater standard of 0.175mg/l. Samples from both monitoring wells contained NH4-N concentrations less than the proposed trigger level of 1.7mg/l and 1mg/l, respectively.
Concentrations of manganese in BH3 (i.e., 563 µg/l) and BH3S (i.e., 285 µg/l) were greater than the applicable EPA guideline value of 50µg/l.
Total alkalinity concentrations in both BH3 (i.e., 366 mg/l) and BH3S (i.e., 384 mg/l), exceeded the applicable EPA guideline value of 200 mg/l;
Residue on evaporation concentrations were elevated in both samples collected from BH3S (i.e. 22,705 mg/l) and BH3 (i.e., 3,098 mg/l);
Dissolved metals and all other parameters analysed in submitted groundwater samples from BH3 and BH3S contained concentrations less than the applicable 2010 groundwater standards and/or the EPA guideline values.
An elevated NH4-N concentration was found in BH3 (i.e., 0.41 mg/l) that exceeded the 2010 groundwater standard but was below the proposed trigger levels (i.e. 1.7 mg/l). NH4-N concentrations have fluctuated in samples collected from BH3 as indicated by previous analytical results with concentrations of 0.43 mg/l in October 2012, 0.05 mg/l in March 2013 and 0.36 mg/l in February 2014. Analytical results indicated that NH4-N concentrations in BH3 are typical of historical concentrations for groundwater in that

monitoring well. NH4-N concentrations appear to be on a downward trend in BH3S (i.e. 0.41mg/l in October 2012, 0.24 mg/l in March 2013 and 0.18 mg/l in February 2014).

There has been a significant reduction of iron concentrations in BH3 and BH3S compared to concentrations found in October, 2012 (i.e., 4,061µg/l [BH3] and 19,160µg/l [BH3S]) to <20µg/l in both wells in March, 2013 and February, 2014. Iron concentrations continue to be significantly less than the EPA Guideline Value of 200 µg/l.

The concentrations of manganese in BH3 and BH3S were similar to the concentrations found in background monitoring well BH1 indicating that there may be natural sources of manganese in the area. However, it is possible that reducing conditions beneath the landfill may aid the liberation of manganese into groundwater. None of the monitoring wells are used for potable water extraction and the application of drinking water standards may be overly conservative.

The EPA guidelines are based on the 2000 drinking water standards for manganese.

The elevated total alkalinity concentration in both monitoring wells indicated that the water contains higher concentrations of calcium carbonate (CaCO3) which may act as a buffer against significant pH changes within the groundwater aquifer.

Southeast Area Wells

Monitoring wells BH4 and BH4S are located at the southeast of the site, and down gradient from the old landfill body. The analysis results for samples submitted from the monitoring wells indicated the following:

Concentrations of NH4-N in BH4 (i.e., 0.30 mg/l) and BH4S (i.e., 0.30 mg/l) exceeded the 2010 groundwater standard of 0.175mg/l;

Concentrations of manganese in BH4 (i.e., 395 µg/l) and BH4S (i.e., 450 µg/l) exceeded the EPA guideline value of 50µg/l;

Total alkalinity concentrations in both BH4 and BH4S (i.e. 338 mg/l and 328 mg/l, respectively) exceeded the applicable EPA guideline value of 200mg/l;

Residue on evaporation concentrations were less than the EPA guideline value of 1,000mg/l in BH4S (i.e., 328 mg/l) and BH4 (i.e., 338 mg/l);

Dissolved metals and all other parameters analysed in submitted groundwater samples from BH4 and BH4S contained concentrations less than the 2010 groundwater

standards and/or the applicable EPA guideline values.

Monitoring wells BH4 and BH4S are located to the southeast of the site, and down gradient from the old landfill body. The results of the annual sampling event in 2015 indicated that the concentrations of the majority of contaminants of concern for groundwater were below the applicable groundwater standards and/or the EPA guideline values in both monitoring wells with the exception of NH4-N, total alkalinity and manganese which are consistent with historic results.

The analytical results indicated that the concentration of NH4-N in both wells (i.e. 0.30 mg/l in BH4 and 0.30mg/l in BH4S) exceeded the 2010 groundwater standard but were below the proposed trigger levels (i.e., 0.5mg/l). The concentrations of NH4-N in these wells are consistent with previous analytical results and are similar to the concentration found in background monitoring well BH1.

The concentrations of manganese in BH4 and BH4S were lower than the concentrations found in background monitoring well BH1 indicating that there may be natural sources of manganese in the area. However, it is possible that reducing conditions beneath the landfill may aid the liberation of manganese into groundwater. None of the monitoring wells are used for potable water extraction and the application of drinking water standards may be overly conservative.

The EPA interim guidelines are based on the 2000 drinking water standards for manganese.

The elevated total alkalinity concentration in both monitoring wells indicated that the water contains higher concentrations of calcium carbonate (CaCO3) which may act as a buffer against significant pH changes within the groundwater aquifer.

7.4 Leachate

7.4.1 Evaluation of monitoring results

The leachate samples were collected from monitoring locations L1 and L2 on the 15th June 2015.

The results of the sampling programme are discussed below:

Electrical conductivity for the leachate sample collected from L1 was 462 µS/cm which was less than the 2010 groundwater standard of 1,875µS/cm and L2 was 2,680 µS/cm which was greater than the 2010 groundwater standard of 1,875µS/cm.
pH for the leachate samples collected from L1 was 7.1 and L2 was 6.6.
The concentration of NH4-N in both L1 and L2 (i.e., 0.66 mg/l and 146.67 mg/l, respectively) exceeded the 2010 groundwater standard of 0.175mg/l. The results indicated that limited decomposition of organic material is still taking place in the central area of the landfill.
Metals concentrations (i.e., chromium, copper, iron, lead, mercury, nickel and zinc) for samples collected in both leachate wells (L1 and L2) were all less than the 2010 groundwater standard and/or the applicable EPA guideline values.
The concentration of potassium in L2 (i.e. 96.7 mg/l) exceeded the EPA guideline value of 12mg/l and was below the EPA guideline value in L1 (i.e. 6.1 mg/l).
Concentrations of magnesium (7.1 mg/l) and sodium (24.7 mg/l) in well L1 were less than the applicable EPA guideline values and similar to previous results.
Concentrations of magnesium (140 mg/l) and sodium (259.8 mg/l) in well L2 were greater than the applicable EPA guideline values which were increased from the 2014 sampling event;
Results for earth metals (i.e., boron and calcium,) and major anions (i.e., fluoride, sulphate, total oxidised nitrogen and chloride) in wells L1 and L2 were all less than the applicable 2010 groundwater standards and/or EPA guideline values.
The concentration of manganese in L1 (i.e., 399 µg/l) and L2 (i.e., 1,478 µg/l) significantly exceeded the EPA guideline value of 50µg/l which is consistent with previous results.
Total alkalinity concentrations in L1 (i.e., 242 mg/l) and L2 (i.e., 1,818 mg/l) exceeded the EPA guideline value of 200µg/l which is consistent with previous results.
The concentrations of BOD in L1 (i.e., 13 mg/l O2) and L2 (i.e., 50 mg/l O2) were greater than the 2009 surface water regulation standard. BOD concentrations have increased in both wells compared to results obtained in February 2014 (i.e., 10 mg/l

O2 in L1 and 22 mg/l O2 in L2).

The concentration of COD in L1 (i.e., 18 mg/l O2) was below the EPA guideline value of 50mg/l and the concentration of COD in L2 (i.e., 129 mg/l O2) was greater than the EPA guideline value of 50mg/l. COD concentrations in L2 have shown an increase compared to previous analytical results (i.e., 42 mg/l O2 in February 2014, 89 mg/l O2 in March, 2013 and 103 mg/l O2 in October, 2012).

The analytical results indicated that the concentrations of NH4-N, manganese, magnesium, potassium, COD and total alkalinity were significantly higher in leachate well L2 (i.e., central area of the site) than in leachate well L1 (i.e., north western area of site). The concentrations of organic and inorganic contaminants, particularly in L2 are indicative of leachate from an historic landfill site (e.g., chloride, potassium and COD).

The slightly elevated total alkalinity concentration in both leachate wells indicated that the leachate contains higher concentrations of calcium carbonate (CaCO3) which may act as a buffer against significant pH changes. The elevated manganese may be partially attributed to naturally elevated manganese concentrations in the area (e.g. upgradient well BH1 has elevated manganese concentrations).

8) Resource Consumption Summary

Diesel

Fuel consumption was similar to that used in previous years.

Electricity

Electricity usage was similar to that in previous years.

Water

Water supply to the site is via a connection to the group water scheme. Water usage on site is mainly for power washing yards, transfer station apron and hopper. Average water usage is approximately 3,000 litres monthly, with an approximate total of 36,000 litres used in 2014.

9) Development works undertaken during the period and timescale for proposed works.

Clare County Council has received Part VIII Planning Permission to begin the remediation process. Clare County Council intend to begin works as soon as finances permit.

10) Full title and written summary of any procedures developed by the licensee during the previous year.

No procedures were developed during the past year.

11) Drum, Tank and Bund Testing.

An integrity test was carried out on the bund in May 2012.

12) Reported Incidents and Complaints Summaries.

There were no complaints received during the year and no incidents recorded at the facility.

13) Review of nuisance controls

No review of nuisance controls was carried out during 2015; no nuisances were noted at the facility during 2015, therefore a review was not considered to be necessary.

14) Schedule of Environmental Objectives and Targets

Objective 1

Comply with all aspects of the licence.

> Target 1.1 - Every effort will be made to comply with all conditions of the waste licence by the prescribed dates.

The Senior Engineer, Executive Engineer in charge, Deputy Site Manager, Executive Chemist and Environmental Patrol Warden have responsibility for implementing this objective.

Objective 2

Ensure that sufficient funds are available to comply with condition 12 of the licence.

Responsibility for ensuring compliance with this objective lies with the Finance Officer of Clare County Council.

Objective 3

Increase the quantity of waste collected for recycling at the facility.

Target 3.1-Increase the quantities of cardboard and newspaper collected at the Recycling Centre. Suitable containers for each waste type will be provided on site and the public will be informed by means of appropriate awareness campaigns.

Target 3.2-Increase the quantities of glass, aluminium cans, and steel cans collected at the Recycling Centre.

The Senior Engineer, Environmental Services has responsibility for implementing this objective with the assistance of the Executive Engineer in charge and the Environmental Awareness Officer in the Environment Dept.

Objective 4

Improve facilities at the facility.

Target 4.1 - Make facility more user-friendly by providing containers and providing clear instructions as to what these are for. This will allow for proper segregation of recyclable streams. All bulky wastes and hazardous wastes will be stored in one particular area of the facility and this area will be secured thus

allowing for greater supervision when these recyclable streams are being deposited. This will also eliminate traffic hazards. On occasion there is difficulty with turning/reversing manoeuvres at the facility due to large stockpiles of white goods and large recycling receptacles.

Target 4.2 - Provision of additional recyclable streams by year-end.

The Executive Engineer in charge has responsibility for implementing this objective.

Objective 5

Improve correspondence with the E.P.A.

Target 5.1 - Council will make every effort to reply to letters of correspondence received from the Agency by the requested dates.

The Executive Engineer in charge and Senior Staff Officer have responsibility for implementing this objective.

Objective 6

Comply with condition 3.10.1

Target 6.1 - Install by mid-2008 an interceptor as per condition 3.10.1 of the waste license, as part of overall landfill remediation programme.

This will be installed when funds become available.

The Executive Engineer in charge will have responsibility for implementing this objective.

Objective 7

Advance the Restoration and Aftercare Plan.

Target 7.1 - Implement the first phase of the Restoration and Aftercare plan as agreed with the Agency.

The Senior Executive Engineer, Executive Engineer, Finance Officer and Senior Staff Officer have responsibility for implementing this objective.

Time scale

A requisition for funding is with the DOEHLG at present. When this funding becomes available details of the Restoration and Aftercare plan will be submitted.

Designation of Responsibilities

The Senior Engineer, Environmental Services Section of Clare County Council has overall responsibility for the implementation of these objectives. The specific responsibilities for each objective are outlined in the description.

15) Progress of objectives and targets

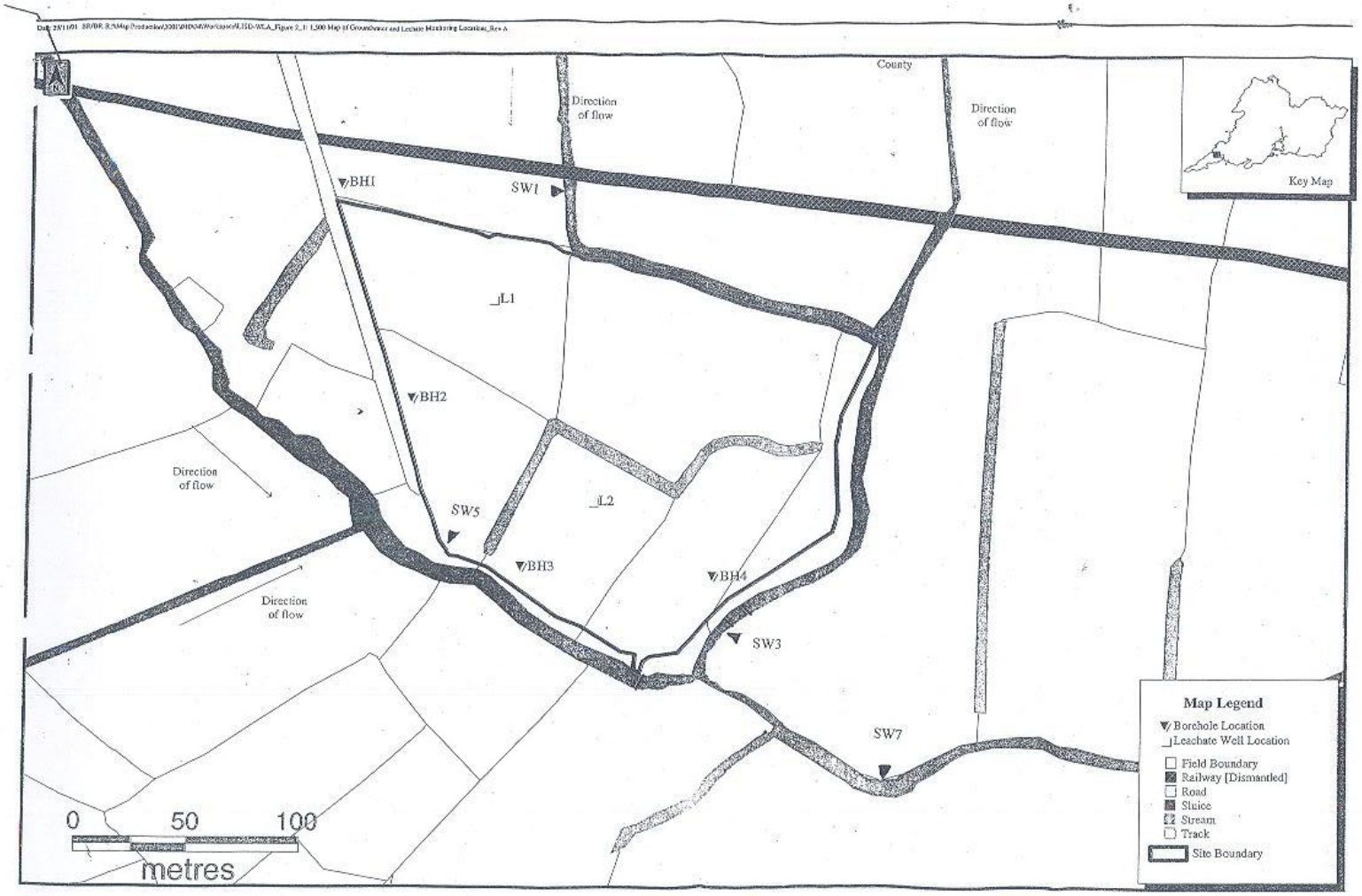
Objective 1	This is ongoing and mainly successful, the licensee will continue to aim for maximum compliance.
Objective 2	Funding has been made available and the licensee will continue to ensure funding is made available.
Objective 3	Recyclable material amounted to 50.3% of all waste accepted at the facility in 2012.
Objective 4	The licensee placed additional signage to improve user friendliness on the site. A new concrete base was installed in the main recycling area which

	improves greatly the safety and layout of the site. The licensee will continue to review the site layout in order to provide the best possible service. We introduced the following new waste streams: rigid plastics and flourescent tubes (WEEE).
Objective 5	Correspondence with EPA as set out by EPA is an ongoing objective, the licensee will continue to progress this objective.
Objective 6	Installation of the oil Interceptor will form part of the remediation project.
Objective 7	This project will proceed when funding becomes available

16) Financial Provision

A sum of €200,000 has been set aside in the 2015 Clare Co. Council Budget for the operation of the facility. Additional monies are being sought through grants from the Department of the Environment and Local Government for the capital works relating to the Restoration and Aftercare of the Site.

Appendix I
Location of Monitoring Points



Fehily Timoney & Company

1: 1,500 Map of Groundwater and Leachate Monitoring Locations

Figure 2

| PRTR# : W0170 | Facility Name : Lisdeen Recycling Centre & Transfer Station | Filename : w0170_2015(1).xls | Return Year : 2015 |

Environmental Protection Agency

Guidance to completing the PRTR workbook

PRTR Returns Workbook

Version 1.1.19

REFERENCE YEAR	2015

1. FACILITY IDENTIFICATION

Parent Company Name	Clare County Council
Facility Name	Lisdeen Recycling Centre & Transfer Station
PRTR Identification Number	W0170
Licence Number	W0170-01

Classes of Activity

No.	class_name
-	Refer to PRTR class activities below

Address 1	Cemetry Road
Address 2	Lisdeen
Address 3	Kilkee
Address 4	
	Clare
Country	Ireland
Coordinates of Location	-9.61238 52.6695
River Basin District	IEGBNISH
NACE Code	3821
Main Economic Activity	Treatment and disposal of non-hazardous waste
AER Returns Contact Name	Patrick Mullane
AER Returns Contact Email Address	pmullane@clarecoco.ie
AER Returns Contact Position	Enforcement Officer
AER Returns Contact Telephone Number	065-6846200
AER Returns Contact Mobile Phone Number	
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	0
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 ?	

| PRTR# : W0170 | Facility Name : Lisdeen Recycling Centre & Transfer Station | Filename : w0170_2015(1).xls | Return Year : 2015 |

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PRTR Identification Number	W0170
Licence Number	W0170-01

Classes of Activity

No.	class_name
-	Refer to PRTR class activities below

Address 1	Cemetry Road
Address 2	Lisdeen
Address 3	Kilkee
Address 4	
	Clare
Country	Ireland
Coordinates of Location	-9.61238 52.6695
River Basin District	IEGBNISH
NACE Code	3821
Main Economic Activity	Treatment and disposal of non-hazardous waste
AER Returns Contact Name	Patrick Mullane
AER Returns Contact Email Address	pmullane@clarecoco.ie
AER Returns Contact Position	Enforcement Officer
AER Returns Contact Telephone Number	065-6846200
AER Returns Contact Mobile Phone Number	
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	0
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 ?	

4.1 RELEASES TO AIR Link to previous years emissions data | PRTR# : W0170 | Facility Name : Lisdeen Recycling Centre & Transfer Station | Filename : w0170_2015(1).xls | Return Year : 2015 | 02/06/2016 12:41

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

* 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: Lisdeen Recycling Centre & Transfer Station

Please enter summary data on the quantities of methane flared and / or utilised	T (Total) kg/Year	M/C/E	Method Used		Facility Total Capacity m3 per hour	
			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	

4.2 RELEASES TO WATERS

Link to previous years emissions data

| PRTR# : W0170 | Facility Name : Lisdeen Recycling Centre & Transfer Station | Filename : w0170_2015(1).xls | Return Year : 2015 | 02/06/2016 12:41

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 onl

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

* 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
					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

4.3 RELEASES TO WASTEWATER OR SEWER

Link to previous years emissions data

[PRTR# : W0170 | Facility Name : Lisdeen Recycling Centre & Transfer Station | Filename : w0170_ 02/06/2016 12:41

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 | PRTR# : W0170 | Facility Name : Lisdeen Recycling Centre & Transfer Station | Filename : w0170_2015(1).xls | Return Year : 2015 | 02/06/2016 12:41

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

| PRTR# : W0170 | Facility Name : Lisdeen Recycling Centre & Transfer Station | Filename : w0170_2015(1).xls | Return Year : 2015 |

02/06/2016 12:41

3

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					
Within the Country	13 02 04	Yes	2.0	mineral-based chlorinated engine, gear and lubricating oils	R9	M	Weighed	Offsite in Ireland	Enva Irelamd,W0184-01	Portloalse ,Laoise,.,.,Ireland	Enva Ireland,W0184091,Portlaoise,Laoise,.,.,Ireland	Portlaoise,Laoise,.,.,Ireland
Within the Country	15 01 01	No	43.6	paper and cardboard packaging	R3	M	Weighed	Offsite in Ireland	Binman,W062-02	Kilmallock,Limerick,,.,Ireland		
Within the Country	15 01 02	No	23.0	plastic packaging	R3	M	Weighed	Offsite in Ireland	Clean Irl.,002/07/wpt/cl	Cree,Clare,.,.,Ireland		
Within the Country	15 01 05	No	0.994	composite packaging	R3	M	Weighed	Offsite in Ireland	Clean Irl.,002/07/wpt/cl	Cree,Clare,.,.,Ireland		
Within the Country	16 01 07	Yes	0.25	oil filters	R9	M	Weighed	Offsite in Ireland	Enva Irelamd,W0184-01	Portloalse ,Laoise,.,.,Ireland	Enva Ireland,W0184091,Portlaoise,Laoise,.,.,Ireland	Portlaoise,Laoise,.,.,Ireland
Within the Country	16 06 01	Yes	1.1	lead batteries	R4	M	Weighed	Offsite in Ireland	Enva Irelamd,W0184-01	Portloalse ,Laoise,.,.,Ireland	Enva Ireland,W0184091,Portlaoise,Laoise,.,.,Ireland	Portlaoise,Laoise,.,.,Ireland
Within the Country	16 06 04	No	1.05	alkaline batteries (except 16 06 03)	R4	M	Weighed	Offsite in Ireland	Enva Irelamd,W0184-01	Portloalse ,Laoise,.,.,Ireland		
Within the Country	20 01 01	No		paper and cardboard	R3	M	Weighed	Offsite in Ireland	Clean Irl.,002/07/wpt/cl	Cree,Clare,.,.,Ireland		
Within the Country	20 01 02	No	66.86	glass	R5	M	Weighed	Offsite in Ireland	Binman,W062-02	Kilmallock,Limerick,,.,Ireland		
To Other Countries	20 01 11	No	2.25	textiles	R3	M	Weighed	Abroad	All-Tex Recyclers,N/A	Ballycregagh Rd.,Ballymena,Antrim,.,Ireland		
Within the Country	20 01 36	No	68.5	discarded electrical and electronic equipment other than those mentioned in 20 01 21, 20 01 23 and 20 01 35	R4	M	Weighed	Offsite in Ireland	Enva Irelamd,W0184-01	Portloalse ,Laoise,.,.,Ireland		
Within the Country	20 01 38	No	19.4	wood other than that mentioned in 20 01 37	R3	M	Weighed	Offsite in Ireland	Clare Waste & Recycling,WFP/CE/08/002/01	Scarriff ,Clare ,.,.,Ireland		
Within the Country	20 01 40	No	28.4	metals	R4	M	Weighed	Offsite in Ireland	Clearcircle Environmental,WFP-LK-10-001-01	Ballysimon Road,Limerick,.,.,Ireland		
Within the Country	20 02 01	No	13.8	biodegradable waste	R3	M	Weighed	Offsite in Ireland	Clean Irl.,002/07/wpt/cl	Cree,Clare,.,.,Ireland		
Within the Country	20 03 01	No	483.0	mixed municipal waste	D1	M	Weighed	Offsite in Ireland	Clean Irl.,002/07/wpt/cl	Cree,Clare,.,.,Ireland		

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