

# **ANNUAL ENVIRONMENTAL REPORT 2009**

**Waste Licence Registration No.:** W0076-1

**Licencee:** Limerick City Council

**Location of Activity:** Longpavement Landfill  
Longpavement  
Limerick

**Attention:** Ms Maria Lenihan  
Office Environmental Enforcement  
Environmental Protection Agency  
Regional Inspectorate,  
Inniscarra  
Co. Cork

**Submitted by:** Grainne Whelan,  
Environmental Scientist,  
Environment Department  
Limerick City Council  
City Hall  
Limerick

## 1.0 REPORTING PERIOD

The period of reporting for this Report is from January 2009 to December 2009.

## 2.0 REPORT ON RESTORATION OF COMPLETED CELLS / PHASES

In February 2006 Tobin Consulting, Civil and Structural Engineers, acting on behalf of Limerick City Council tendered the following contract: “**Longpavement Landfill Restoration Capping of Waste Body, including Gas Collection, Leachate Collection, Methane Stripping and Civil Engineering Works**”.

McSweeney Building & Civil Engineering Ltd won the tender and was appointed in July 2006 and the following site works are being undertaken:

- **Landfill Gas:** The collection and flaring of landfill gases being generated by the decomposition of the material contained within the landfill mass.
- **Leachate:** The collection and treatment of leachate generated throughout the site.
- **The permanent capping of the landfill:** This involves covering the landfill with a synthetic sealing material and soils to prevent rainwater seeping into the landfill.
- **Reshaping and profiling** of the landfill mass, associated civil engineering works and landscaping. The landscape design will have the objective of integrating the restored site into its surroundings and to leave finally an area which is of benefit to the people of Limerick. New wetlands areas will be constructed and existing wetlands will be enhanced.

The work involves a significant amount of earthworks in the capping of the landfill mass. As well as the landfill gas and leachate collection & treatment systems there will be a new control building together with a compound, fencing and an access road to the Longpavement Road. It will also involve the construction of pipelines, rising mains, manholes, a pumping station with associated mechanical and electrical aspects of the above elements. All these works were in progress throughout 2009.

### 3.0 WASTE ACTIVITIES CARRIED OUT AT THE FACILITY

Approximately 33,000 cubic meters of inert cover material were brought on site between January 2009 and December 2009. The main items of work undertaken during the reporting period were:

1. Lining and capping were completed
2. Top soiling of cap is substantially complete
3. Gas and leachate abstraction wells were installed
4. Gas transport and leachate collection pipe-work were installed.
5. Gas flare and methane stripper were installed on site and should be commissioned next month.
6. Wetlands were completed

### 4.0 SUMMARY OF RESULTS & INTERPRETATION OF ENVIRONMENTAL MONITORING

Drawing No. 2307-1004, contained in Appendix A of this Report, shows the locations of all the monitoring points at the Longpavement landfill facility. Monitoring was carried out by BHP Laboratories Ltd as part of compliance with EPA waste licence 76-1.

Tables 4.1 to 4.8 below indicate the parameters and frequencies to be monitored in accordance with the EPA licence 76-1.

**Table 4.1 Landfill Gas Monitoring and Parameters**

Parameter	Monitoring Frequency			Analysis Method <sup>Note 1</sup> / Technique <sup>Note 2</sup>
	Perimeter Boreholes <small>Note 3</small>	Other Boreholes/ Vents/Wells	Site Office	
<b>Methane (CH<sub>4</sub>) % v/v</b>	Weekly	Monthly	Weekly	Infrared analyser/flame ionisation detector
<b>Carbon dioxide (CO<sub>2</sub>)%v/v</b>	Weekly	Monthly	Weekly	Infrared analyser/ flame ionisation detector
<b>Oxygen(O<sub>2</sub>) %v/v</b>	Weekly	Monthly	Weekly	Electrochemical cell
<b>Atmospheric Pressure</b>	Weekly	Monthly	Weekly	Standard
<b>Temperature</b>	Weekly	Monthly	Weekly	Standard

Note 1: All monitoring equipment used should be intrinsically safe.

Note 2: Or other methods agreed in advance with the Agency.

Note 3: Weekly for first two months upon installation and monthly thereafter.

**Table 4.2 Dust/ PM<sub>10</sub> Monitoring Frequency**

Parameter (mg/m <sup>2</sup> /day)	Monitoring Frequency	Analysis Method/Technique
Dust	Three times a year <sup>Note 2</sup>	Standard Method <sup>Note 1</sup>
PM <sub>10</sub>	Quarterly	See <sup>Note 3</sup>

**Note 1:** Standard method VDI2119 (Measurement of Dustfall, Determination of Dustfall using Bergerhoff Instrument (Standard Method) German Engineering Institute). Any modifications to eliminate interference due to algae growth in the gauge should be reported to the Agency.

**Note 2:** Twice during the period May to September.

**Note 3:** As described in prEN12341 or an equivalent agreed with the Agency.

**Table 4.3 Noise Monitoring Frequency**

Parameter	Monitoring Frequency	Analysis Method/Technique
L(A) <sub>EQ</sub> [30 minutes]	Bi-Annual	Standard <sup>Note 1</sup>
L(A) <sub>10</sub> [30 minutes]	Bi-Annual	Standard <sup>Note 1</sup>
L(A) <sub>90</sub> [30 minutes]	Bi-Annual	Standard <sup>Note 1</sup>
Frequency Analysis(1/3 Octave band analysis)	Bi-Annual	Standard <sup>Note 1</sup>

**Note 1:** "International Standards Organisation. ISO 1996. Acoustics - description and Measurement of Environmental noise. Parts 1, 2 and 3."

**Table 4.5 Surface Water, Groundwater & Leachate – Parameters/Frequency**

Parameter <sup>Note 1</sup>	SURFACE WATER <sup>Note 2</sup> Monitoring Frequency	GROUNDWATER Monitoring Frequency	LEACHATE <sup>Note 3</sup> Monitoring Frequency
Visual Inspection/Odour <sup>Note 2</sup>	Weekly	Quarterly	Quarterly
Groundwater Level	Not Applicable	Monthly	Not Applicable
Leachate Level	Not Applicable	Not Applicable	Continuous
Ammoniacal Nitrogen	Quarterly	Quarterly	Annually
BOD	Quarterly	Not Applicable	Annually
COD	Quarterly	Not Applicable	Annually
Chloride	Quarterly	Quarterly	Annually
Dissolved Oxygen	Quarterly	Quarterly	Not Applicable
Electrical Conductivity	Quarterly	Quarterly	Annually
pH	Quarterly	Quarterly	Annually
Total Suspended Solids	Quarterly	Not Applicable	Not Applicable
Temperature	Quarterly	Quarterly	Quarterly
Metals / Non Metals <sup>Note 3</sup>	Annually	Annually	Annually
Cyanide (Total)	Not Applicable	Annually	Annually
Fluoride	Not Applicable	Annually	Annually
List I/II Organic Substances <sup>Note 4</sup>	Once off <sup>Note 5</sup>	Annually <sup>Note 5</sup>	Once off <sup>Note 5</sup>
Mercury	Annually	Annually	Annually
Sulphate	Annually	Annually	Annually
Total Alkalinity	Annually	Annually	Not applicable
Total P/Orthophosphate	Annually	Annually	Annually
Total Oxidised Nitrogen	Annually	Annually	Annually
Total Organic Carbon	Not Applicable	Quarterly	Not Applicable
Residue on evaporation	Not Applicable	Annually	Not Applicable
Biological Assessment	Annually <sup>Note 6</sup>	Not Applicable	Not Applicable

Note 1: All the analysis shall be carried out by a competent laboratory using standard and internationally accepted procedures.

Note 2: Where there is evident gross contamination of leachate, additional samples should be analysed.

Note 3: Metals and elements to be analysed by AA/ICP should include as a minimum: boron, cadmium, calcium, chromium (total), copper, iron, lead, magnesium, manganese, nickel, potassium, sodium and zinc.

Note 4: Samples screened for the presence of organic compounds using Gas Chromatography / Mass Spectrometry (GC/MS) or other appropriate techniques and using the list I/II Substances from EU Directive 76/464/EEC and 80/68/EEC as a guideline. Recommended analytical techniques include: volatiles (US Environmental Protection Agency method 524 or equivalent), semi-volatiles (USEPA method 525 or equivalent, and pesticides (USEPA method 608 or equivalent).

Note 5: 2 surface water locations, 3 groundwater locations and 2 leachate locations to be agreed with the Agency for these parameters.

Note 6: Appropriate biological methods (such as EPA Q-Rating System) to be used for the assessment of rivers and streams.

**Table 4.6 Landfill Gas Combustion Plant/ Enclosed Flare Parameters**

Parameter	Flare (enclosed) Monitoring Frequency	Utilisation Plant Monitoring Frequency	Analysis Method <sup>Note1</sup> /Technique <sup>Note2</sup>
Particulates	Not applicable	Annually	Isokinetic/Gravimetric
TA Luft Class I, II, III organics	Not applicable	Annually	Adsorption/Desorption /GC/GCMS <sup>Note 3</sup>
TOC	Annually	Not applicable	Flame ionisation
Hydrochloric acid	Annually	Annually	Impinger / Ion Chromatography
Hydrogen fluoride	Annually	Annually	Impinger / Ion Chromatography

Note 1: All monitoring equipment used should be intrinsically safe.

Note 2: Or other methods agreed in advance with the Agency.

Note 3: Test methods should be capable of detecting acetonitrile, dichloromethane, tetrachlorethylene and vinyl chloride as a minimum.

**Table 4.7 Monitoring of Emissions to Sewer**

Parameter	Monitoring Frequency	Analysis Method/Technique <sup>Note 1</sup>
Methane	Continuous	Dissolved Methane Probe /Headspace methane monitor

Note 1: To be agreed in advance with the Agency.

**Table 4.8 Monitoring of Emissions from On-Site Leachate Treatment Plant**

Parameter	Monitoring Frequency	Analysis Method/Technique <sup>Note 1</sup>
Flow	Continuous	Flow meter / recorder
pH	Continuous	pH meter / recorder
Biochemical Oxygen Demand	Twice Weekly	Standard Method <sup>Note 2</sup>
Chemical Oxygen Demand	Weekly	Standard Method <sup>Note 2</sup>
Total Nitrogen	Twice Weekly	Standard Method <sup>Note 2</sup>
Total P (as P)	Monthly	Standard Method <sup>Note 2</sup>
Suspended Solids	Weekly	Gravimetric

## **4.1 Landfill Gas**

In accordance with licence 76-1 requirements, landfill gas has been monitored on a monthly basis since February 2003. There are thirteen gas wells located in the vicinity of the landfill overall; eleven perimeter gas wells and two located within the waste mass of the pre-1984 landfill. Reports are submitted on a monthly basis to the EPA.

### ***4.1.1 Landfill Gas Wells***

Two landfill gas wells are monitored on the pre-1984 landfill site, LG13 and LG14. These two wells were drilled directly into the main waste pile. Exceedances in CO<sub>2</sub> (3.2% to 27.8%) and CH<sub>4</sub> (20.1% to 84.8%) were detected in both of these gas wells throughout the year.

### ***4.1.2 Perimeter Gas Wells***

There are eleven gas-monitoring points installed at perimeter locations in the vicinity of the landfill. These were installed to determine the degree, if any, of subsurface landfill gas migration. Nine of these wells were located in Moyross between the landfill and local housing estates. No exceedance in CH<sub>4</sub> was detected in any of the perimeter boreholes during the monitoring period. CO<sub>2</sub> exceedances were detected on a number of occasions ranging from 1.7% to 9.8%. Some of the boreholes were inaccessible at various times during the year due to flooding especially LG02, LG11 and LG12. LG09 was covered from June 2008 onwards while LG02 was flooded all year except for January 2009.

## **4.2 Dust Control - PM<sub>10</sub> Monitoring**

Dust monitoring was carried out at least three times in 2009 as per Schedule D.3 of the Waste Licence. High results are to be expected as the landfill is being recapped and until vegetative cover becomes established elevated dust deposition at the boundaries will occur.

PM<sub>10</sub> monitoring was carried out quarterly and reports submitted to the EPA. The concentrations of particulate matter are below stage 1 limit values of (50µm/m<sup>3</sup>). Monitoring

was changed from walk over surveys to 8-hour surveys at each location in mid 2008 in consultation with the EPA. The average concentrations of PM<sub>10</sub> are below stage 1 limit values (50µg/m<sup>3</sup>) expressed in the first daughter directive at all monitoring locations. All available dust Monitoring stations had low levels of deposition and were all below the above EPA limit of 350 mg/m<sup>2</sup>/day.

### **4.3 Noise Monitoring**

The landfill at Longpavement has been closed for the acceptance of waste since 2002 so the only noise on site is restoration/low level construction noise. Monitoring was carried out bi-annually. Results are presented in Appendix D. Under Licence No. 76-1 noise emission limits are as follows:

- Day: 55 dB (A) L<sub>Aeq</sub> (30 minutes)
- Night: 45 dB (A) L<sub>Aeq</sub> (15 minutes)

Reports were submitted for 2009. Excedances occurred at monitoring location N3 and N4, which was due to the proximity of these locations to the longpavement road and to the level crossing on the longpavement road. The noise consisted of heavy traffic and passing trains. No landfill activity was audible outside of restoration activity. Two surveys were conducted in April 2009 and December 2009. Noise levels at N3 were found to be 58.7 dB and 58.7 dB at N3 while levels of 56.8 dB and 56.8 dB were recorded for N4.

### **4.4 Surface Water**

Surface water sampling was carried out at 7 No. locations in the vicinity of the landfill boundary (SW-01, SW-02, SW-03, SW-04, SW-05, SW-06 and SW-07), refer to Drawing No 2307-1004 contained in Appendix A of this Report for exact locations. The quality of surface waters has been assessed against specific Environmental Quality Standards (EQS) listed in relevant legislation. Surface water limit concentrations have been evaluated against A1 – A3 quality standards in the surface water regulations 1989.

SW01 is classed as a category A3 water due to elevated BOD. The sampling located is opposite Sarsfield Gardens in Moyross, an area of stagnant water and the result is typical. All other parameters were at A1 level.

SW02 is classed as a category A2 water.



SW03 has poor water quality, (sub A3) with elevated ammonia readings. There is a strong likelihood that migrating leachate is impacting on the poor quality observed.

SW04 is classed as a category A2 water.

SW05 has poor water quality, (sub A3) with elevated ammonia readings. There is a strong likelihood that migrating leachate is impacting on the poor quality observed.

SW06 on the river Shannon is a category A1 water.

SW07 is classed as a category A2 water.

Overall surface waters SW03 and SW01 have the poorest water quality all being classed as A3 or sub A3. The volumes being discharged are low and this is not resulting in a deterioration in water quality in the receiving watercourses where water quality at SW06 was classed as A1 quality. The issue is localised to the boundary of the landfill.

#### **4.5 Groundwater**

There are 6 No. Groundwater monitoring wells at the Longpavement landfill facility, GW-01, GW-02, GW-03, GW-04, GW-05 and GW-06. Groundwater quality has been monitored on a quarterly and annual basis.

GW01D and GW01S have been buried and are no longer accessible. No sampling was possible.

GW02S have been buried and are no longer accessible. No sampling was possible. GW02D was found to have an elevated ammonia, conductivity and chloride content throughout the year. All other parameters were inside the EPA limit.

GW03D and GW03S had all parameters inside the EPA limit outside of elevated ammonia at both locations and elevated chloride at GW03S.

GW04D and GW04S have been buried and are no longer accessible. No sampling was possible.

GW05D exceeded the guideline values for chloride in Quarter 4. GW05S was not available in Quarter 4.

Most wells exhibited contamination with elevated ammonia and chloride with resultant elevated conductivity. This does suggest that the groundwater in the vicinity of the landfill is possibly being influenced by migrating leachate.

#### **4.6 Leachate**

There are 7 No. Leachate monitoring wells at the Longpavement landfill facility, which are currently 100mm in diameter. All available wells were sampled. These wells have been identified as L05 to L07 and are located on the landfill as shown on Drawing No. 2307-1004, contained in Appendix A of this Report.

7 leachate samples were available in quarter 4. All had a characteristic leachate odour and colour. The results from the annual monitoring indicate that the leachate is typical of a young/medium aged landfill.

#### **4.7 Meteorological Monitoring**

Meteorological monitoring data for Shannon Airport is available can be submitted to the Agency if required.

#### **4.8 Landfill Gas Combustion Plant/Enclosed Flare Monitoring**

A gas flare and methane stripper were installed on site and should be commissioned in 2010.

#### **4.9 Monitoring of Emissions to Sewer**

There are no emissions to sewer from the facility. However all emissions to sewer will be monitored when the treated leachate will be discharged from the treatment plant.

#### **4.10 Monitoring of Emissions from onsite Leachate Treatment Plant**

Leachate collection pipes were installed.

### **5.0 VOLUME OF LEACHATE PRODUCED & VOLUME OF LEACHATE TRANSPORTED / DISCHARGED OFF-SITE**

#### **5.1 Leachate Abstraction Wells**

An existing network of 7 No. leachate abstraction wells are present on the site. These wells were drilled in September of 2003 and completed with HDPE plastic liners with an internal diameter of 100mm.

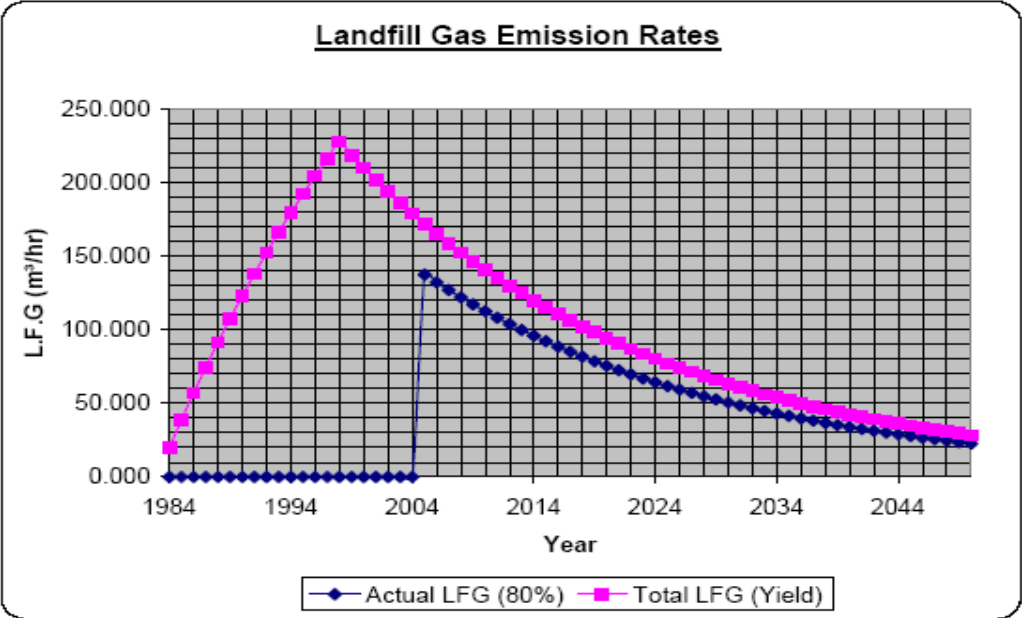
**6.0 SITE SURVEY SHOWING EXISTING LEVELS OF THE FACILITY AT THE END OF THE REPORTING PERIOD**

Extensive leveling and grading of the landfill was carried out during 2008. Appendix A of this Report shows details of the topographical survey carried out.

**7.0 ESTIMATED ANNUAL & CUMULATIVE QUANTITIES OF LANDFILL GAS EMITTED FROM THE FACILITY**

The installation of a landfill gas flare will form part of the rehabilitation proposals. It is proposed to install a permanent gas collection and treatment system at the site. A series of vertical gas extraction wells are being installed to actively extract gas from the waste body. A horizontal gas drainage/equalizing layer consisting of a synthetic material will be placed underneath the final cap.

A computer model was used to estimate the landfill gas production and extraction rates for the Longpavement landfill site. Full details of the computer model are given in Section 3.2.5 of the Longpavement Landfill Rehabilitation Design Report (April 2005) and the Design Report Addendum (July 2005).



**Figure 7.1: Projected Landfill Gas Emission Rates**

The results of the model are presented in Figure 7.1 This model shows that in the course of the lifetime of the site that landfill gas production peaked in 1988 and that approx. 137m<sup>3</sup>/hr

is theoretically available for extraction. It is estimated that gas production is on a downward cycle decreasing to 92m<sup>3</sup>/hr in 2015 and approx. 75m<sup>3</sup>/hr in 2020.

## **8.0 REPORT ON THE PROGRESS TOWARDS ACHIEVEMENT OF THE ENVIRONMENTAL OBJECTIVES & TARGETS CONTAINED IN PREVIOUS YEAR'S REPORT**

The objective for the previous year has been achieved through the appointment of contractors and the commencement of restoration works on site which commenced in September 2006.

The main items of work undertaken during the reporting period were:

1. Lining and capping were completed
2. Top soiling of cap is substantially complete
3. Gas and leachate abstraction wells were installed
4. Gas transport and leachate collection pipe-work were installed.
5. Gas flare and methane stripper were installed on site and should be commissioned next month.
6. Wetlands were completed

## **9.0 SCHEDULE OF ENVIRONMENT OBJECTIVES & TARGETS FOR THE FORTHCOMING YEAR**

The Design Report submitted to the EPA in April 2005 and the subsequent Design Report Addendum clarifying a number of issues submitted in July 2005 outline the rehabilitation proposals for the landfill. Following approval from the EPA of the rehabilitation proposals the detailed design and contract documents were prepared and details of Specified Engineering Works were submitted for approval. The objective for the coming year includes:

1. Complete the restoration of the landfill as per license conditions
2. Continue monitoring programme of leachate, landfill gas, surface water, groundwater, dust and noise as per licence conditions
3. Provision of a new gas collection system and flare

## **10.0 REPORTED INCIDENTS & COMPLAINT SUMMARIES**

No complaints were received during the period from January 2009 to the December 2009.

## **11.0 REVIEW OF NUISANCE CONTROLS**

Since September 2006 the site is under the direct control of the contractor and together with the Resident Engineer, nuisance controls are continually reviewed and improved as required. Documentation of the weekly inspections are held on file.

### **11.1 Pest Control**

Limerick City Council employed Curtin Pest Control in July 2003 to install pest controls at the sit. The contract includes eight service visits in twelve months to thirty-five locations throughout the site. Records of all visits are held on site.

### **11.2 Bird Control**

There is no evidence of bird nuisance at the landfill site. The site has closed for the acceptance of waste since March 1998.

## **12.0 REPORTS ON FINANCIAL PROVISION MADE UNDER THIS LICENCE, MANAGEMENT & STAFFING STRUCTURE OF THE FACILITY, & A PROGRAMME FOR PUBLIC INFORMATION**

The contract value for the restoration works is €4.25m. 75% of the 2008 expenditure is grant aided by the Department of the Environment Heritage and Local Government. A grant application is being made for similar financial assistance in 2009. The remaining 25% is funded by Limerick City Councils internal capital fund.

The contractors McSweeney Building & Civil Engineering Ltd are responsible for the restoration works and associated staff. Joe Harte, Senior Executive Engineer Limerick City Council oversees the works at the facility along with an Environmental Scientist and an Environmental Awareness Officer. Ms Tara Flanagan BE (appointed in 2006) is the Resident

Engineer for the works. A programme for public information prepared by Limerick City Council is in place.

# **PRTR RETURN 2009**



# AER Returns Worksheet

Version 1.1.10

<b>REFERENCE YEAR</b>	2009
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## 1. FACILITY IDENTIFICATION

Parent Company Name	Limerick City Council
Facility Name	Longpavement
PRTR Identification Number	W0076
Licence Number	W0076-01

### Waste or IPPC Classes of Activity

No.	class_name
4.4	Recycling or reclamation of other inorganic materials.
3.4	Surface impoundment, including placement of liquid or sludge discards into pits, ponds or lagoons.
3.7	#####
4.1	Solvent reclamation or regeneration.
4.9	Use of any waste principally as a fuel or other means to generate energy.
Address 1	Monabraher
Address 2	Limerick
Address 3	
Address 4	
Country	Ireland



Coordinates of Location	-8.6335 52.6832
River Basin District	IEGBNISH
NACE Code	3832
Main Economic Activity	Recovery of sorted materials
<b>AER Returns Contact Name</b>	Carmel Lynch (W0076)
<b>AER Returns Contact Email Address</b>	gwhelan@limerickcity.ie
<b>AER Returns Contact Position</b>	Senior Executive Engineer
<b>AER Returns Contact Telephone Number</b>	061 407354
<b>AER Returns Contact Mobile Phone Number</b>	
<b>AER Returns Contact Fax Number</b>	
<b>Production Volume</b>	0.0
<b>Production Volume Units</b>	
<b>Number of Installations</b>	1
<b>Number of Operating Hours in Year</b>	1820
<b>Number of Employees</b>	1
<b>User Feedback/Comments</b>	
<b>Web Address</b>	

## 2. PRTR CLASS ACTIVITIES

Activity Number	Activity Name
50.1	General
5(c)	Installations for the disposal of non-hazardous waste
50.1	General

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

Is it applicable?	No
Have you been granted an exemption ?	No
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

SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

RELEASES TO AIR					ADD EMISSION POINT			
POLLUTANT		METHOD			QUANTITY			
No. Annex II	Name	M/C/E	Method Used		Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
			Method Code	Designation or Description				
01	Methane (CH4)	C	476544	476544	0.0	0.0	0.0	0.0
03	Carbon dioxide (CO2)	C	1965744	1965744	0.0	0.0	0.0	0.0
<input type="button" value="ADD NEW ROW"/> <input type="button" value="DELETE ROW *"/>		* 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					ADD EMISSION POINT			
POLLUTANT		METHOD			QUANTITY			
No. Annex II	Name	M/C/E	Method Used		Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
			Method Code	Designation or Description				
					0.0	0.0	0.0	0.0
<input type="button" value="ADD NEW ROW"/> <input type="button" value="DELETE ROW *"/>		* 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					ADD EMISSION POINT			
POLLUTANT		METHOD			QUANTITY			

Pollutant No.	Name	M/C/E	Method Used		Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
			Method Code	Designation or Description				
						0.0	0.0	0.0
<input type="button" value="ADD NEW ROW"/> <input type="button" value="DELETE ROW *"/>		* 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:**  
Please enter summary data on the quantities of methane flared and / or utilised

		Longpavement				
		M/C/E	Method Used		Facility Total Capacity m3 per hour	
T (Total) kg/Year			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

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									
POLLUTANT						ADD EMISSION POINT	QUANTITY		
No. Annex II	Name	M/C/E	Method Used		Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F KG/Year	
			Method Code	Designation or Description					
						0.0	0.0	0.0	
ADD NEW ROW		DELETE ROW *		* 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									
POLLUTANT						ADD EMISSION POINT	QUANTITY		
No. Annex II	Name	M/C/E	Method Used		Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F KG/Year	
			Method Code	Designation or Description					
						0.0	0.0	0.0	
ADD NEW ROW		DELETE ROW *		* 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									
POLLUTANT						ADD EMISSION POINT	QUANTITY		
Pollutant No.	Name	M/C/E	Method Used		Emission Point 1	T (Total)	A	F	
			Method Code	Designation or Description					

			<a href="#">Code</a>			KG/Year	(Accidental) KG/Year	KG/Year
						0.0	0.0	0.0

ADD NEW ROW

DELETE ROW \*

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

