

Facility Information Summary	
AER Reporting Year	2015
Licence Register Number	W0073
Name of site	Roscommon Landfill Facility
Site Location	Killarney Townland, Roscommon
NACE Code	3821
Class/Classes of Activity	3.11,3.12, 3.13, 3.4,3.6, 3.7, 4.13, 4.2, 4.3, 4.4, 4.
National Grid Reference (6E, 6 N)	
A description of the activities/processes at the site for the reporting year. This should include information such as production	<p>Landfilling at the facility ceased on December 31st 2001. A Recycling Centre is in operation at the site which accepts recyclables such as paper, glass and cardboard. Domestic waste is also accepted for disposal. 5905.256 tonnes of mixed municipal waste was collected at the facility in 2015. Barna Waste service the site and remove the domestic mixed municipal waste compactor for pre-treatment prior to disposal. One petrol interceptor was installed on site in 2013. Three boreholes (RC02-RC03) ~15m deep were installed in the fields adjacent to the site in 2015. The site was marked out in thermoplastic lines during August 2015, providing a one way in and out system for customers and separation from collections. Additional storage for hazardous waste was procured by way of two converted shipping containers – one 40', one 20' both with full height roller doors along the 'long side'. A new pump and pipeline were installed in November 2015 for leachate discharge direct to sewer. This is programmed to discharge at 2 l/s overnight to avoid shock loading of the sewerage works and also to provide 'night load' to the plant. The lagoon recharges during the day. There were no incidents or complaints reported for the year 2015</p>

increases or decreases on site, any infrastructural changes, environmental performance which was measured during the reporting year **and an overview of compliance with your licence listing all exceedances of licence limits (where applicable) and what they relate to e.g. air, water, noise.**

for the year 2015:

Surface water: The surface water parameters were within limits with exception of BOD, COD and DO, which is consistent with previous results. Elevated levels of BOD recorded upstream of the raised area of filling indicate a local source of BOD. The higher levels of COD and DO at SW3 may indicate possible influence from the adjacent raised area of filling. However, previous trends of DO recorded upstream of the site indicate probable seasonal variation due to water movement and temperature changes. **Groundwater:** Groundwater parameters were within limits with exception of Ammonia which is consistent with previous results. The ammonia levels exceeded the limits both up- and downgradient of the site; with increased levels recorded in the wells downgradient, which is consistent with previous trends.

Leachate: The leachate mean levels of ammonia and BOD decreased during H2 2015 compared to the previous monitoring periods of H1 2015 and H2 2014. The COD, Chloride, pH and conductivity mean levels increased compared to the previous monitoring periods of H1 2015 and H2 2014. The quantity of leachate that was tankered from the site to WWTP in 2015 was 226.22 cu m. Leachate discharge via pipeline to sewer was from Dec 4 – 31 only.

Landfill Gas Monitoring: There were no significantly large increases or decreases as regards the gas parameter concentrations in comparison to the previous monitoring periods. In the first half of 2015, CH₄ and CO₂ gas concentrations decreased from the level recorded in 2014. Methane continued to decrease in concentration in the second half of 2015 along with O₂ levels.

Declaration:

All the data and information presented in this report has been checked and certified as being accurate. The quality of the information is assured to meet licence requirements.

<p><i>Kieran Madden</i> Signature Group/Facility manager (or nominated, suitably qualified and experienced deputy)</p>	<p>30/03/2016 Date</p>
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AIR-summary template	Lic No: W0073	Year: 2015
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Answer all questions and complete all tables where relevant

- 1 Does your site have licensed air emissions? If yes please complete table A1 and A2 below for the current reporting year and answer further questions. If **you do not have** licenced emissions and **do not complete a solvent management plan** (table A4 and A5) you do not need to complete the tables

Additional information	
Yes	Undertake landfill gas monitoring on a biannual basis at 10 no. gas extraction boreholes.

Periodic/Non-Continuous Monitoring

- 2 Are there any results in breach of licence requirements? If yes please provide brief details in the comment section of TableA1 below
- 3 Was all monitoring carried out in accordance with EPA guidance [Basic air monitoring checklist](#) note AG2 and using the basic air monitoring checklist? [AGN2](#)

No	
Yes	

Table A1: Licensed Mass Emissions/Ambient data-periodic monitoring (non-continuous)

Emission reference no:	Parameter/ Substance	Frequency of Monitoring	ELV in licence or any revision thereof	Licence Compliance criteria	Measured value	Unit of measurement	Compliant with licence limit	Method of analysis	Annual mass load (kg)	Comments -reason for change in % mass load from previous year if applicable
Site Office	Methane (CH4)	Once every 3 months	1.0%v/v	100 % of values < ELV	0.00	SELECT	yes	Gas Analyser		
Site Office	Carbon dioxide (CO2)	Once every 3 months	1.5%v/v	100 % of values < ELV	0.00	SELECT	yes	Gas Analyser		
Flare Outlet	volumetric flow	Biannual	3000m3/hr	SELECT		SELECT	SELECT	SELECT		Measure value is averaged form average from available data.
	SELECT			SELECT		SELECT	SELECT	SELECT		

Note 1: Volumetric flow shall be included as a reportable parameter

AIR-summary template	Lic No: W0073	Year: 2015
Continuous Monitoring		

4 Does your site carry out continuous air emissions monitoring? No

If yes please review your continuous monitoring data and report the required fields below in Table A2 and compare it to its relevant Emission Limit Value (ELV)

5 Did continuous monitoring equipment experience downtime? If yes please record downtime in table A2 below SELECT

6 Do you have a proactive service agreement for each piece of continuous monitoring equipment? SELECT

7 Did your site experience any abatement system bypasses? If yes please detail them in table A3 below SELECT

Table A2: Summary of average emissions -continuous monitoring

Emission reference no:	Parameter/ Substance	Averaging Period	Compliance Criteria	Units of measurement	Annual Emission	Annual maximum	Monitoring Equipment downtime (hours)	Number of ELV exceedences in current reporting year	Comments
	ELV in licence or any revision therof								
	SELECT		SELECT	SELECT					
	SELECT			SELECT					
	SELECT			SELECT					
	SELECT			SELECT					
	SELECT			SELECT					

note 1: Volumetric flow shall be included as a reportable parameter.

Table A3: Abatement system bypass reporting table [Bypass protocol](#)

Date*	Duration** (hours)	Location	Reason for bypass	Impact magnitude	Corrective action

* this should include all dates that an abatement system bypass occurred

** an accurate record of time bypass beginning and end should be logged on site and maintained for future Agency inspections please refer to bypass protocol link

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER)

Lic No: W0073 Year 2015

		Additional information	
1	Does your site have licensed emissions direct to surface water or direct to sewer? If yes please complete table W2 and W3 below for the current reporting year and answer further questions. If you do not have licensed emissions you only need to complete table W1 and or W2 for storm water analysis and visual inspections	No	Surface water fom landfill discharged to surrounding stream network. Leachate - A new pipeline was installed in November 2015, the leachate was pumped via the new pipeline direct to the sewer from December 4th - 31st only.
2	Was it a requirement of your licence to carry out visual inspections on any surface water discharges or watercourses on or near your site? If yes please complete table W2 below summarising only any evidence of contamination noted during visual inspections	Yes	Complete visual inspection of 3 no. sampling locations on a biannual frequency. No evidence of contamination observed

Table W1 Storm water monitoring

Location reference	Location relative to site activities	PRTR Parameter	Licensed Parameter	Monitoring date	ELV or trigger level in licence or any revision thereof*	Licence Compliance criteria	Measured value	Unit of measurement	Compliant with licence	Comments
	SELECT	SELECT	SELECT			SELECT		SELECT	SELECT	
	SELECT	SELECT	SELECT			SELECT		SELECT	SELECT	

*trigger values may be agreed by the Agency outside of licence conditions

Table W2 Visual inspections-Please only enter details where contamination was observed.

Location Reference	Date of inspection	Description of contamination	Source of contamination	Corrective action	Comments
			SELECT		
			SELECT		

Licensed Emissions to water and /or wastewater(sewer)-periodic monitoring (non-continuous)

3	Was there any result in breach of licence requirements? If yes please provide brief details in the comment section of Table W3 below	Yes	Additional information
4	Was all monitoring carried out in accordance with EPA guidance and checklists for Quality of Aqueous Monitoring Data Reported to the EPA? If no please detail what areas require improvement in additional information box	Yes	External/Internal Lab Quality checklist Assessment of results checklist

Table W3: Licensed Emissions to water and /or wastewater (sewer)-periodic monitoring (non-continuous)

Emission reference no:	Emission released to	Parameter/ SubstanceNote 1	Type of sample	Frequency of monitoring	Averaging period	ELV or trigger values in licence or any revision therof ^{Note 2}	Licence Compliance criteria	Measured value	Unit of measurement	Compliant with licence	Method of analysis	Procedural reference source	Procedural reference standard number	Annual mass load (kg)	Comments
SW3	Water	pH	SELECT	biannual	SELECT	6.0<pH<9.0	All values < ELV	7.44*	pH units	yes	Other: Roscommon County Council Laboratory	SELECT			*Averaged value
SW3	Water	BOD		biannual		<= 2.6 (95%ile)	All values < ELV	2.65*	mg/L	no (if no please enter details in comments box)					*Averaged value. The BOD does not appear to indicate pollution from the landfill, as BOD levels are elevated at SW1 which is located upstream of the raised area of filling.

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER)														
		Lic No:		W0073		Year		2015						
SW3	Water	COD		biannual		40	All values < ELV	74*	mg/L	no (if no please enter details in comments box)				*averaged value. This monitoring point, has been non-compliant since H1 2011, with the exception of H1 2013 and H2 2014.
SW3	Water	Ammonia (as N)		biannual		0.140 (95%ile)	All values < ELV	0.09*	mg/L	yes				*averaged value
SW3	Water	Suspended Solids		biannual		25	All values < ELV	17.5*	mg/L	yes				*averaged value
SW3	Water	Dissolved Oxygen		biannual		5	All values < ELV	5.05*	mg/L	no (if no please enter details in comments box)				*averaged value. It cannot be deduced whether DO levels at SW3 are influenced by the adjacent raised area of filling, because results from the previous monitoring period show that the levels at SW1 and SW7 were previously above the limit and levels at SW3 were below the limit. The
SW3	Water	Chlorides (as Cl)		biannual		250	All values < ELV	19.3*	mg/L	yes				*averaged value
SW3	Water	Temperature		biannual		25	All values < ELV	12.15*	degrees C	yes				*averaged value
SW3	Water	Conductivity		biannual		2500	All values < ELV	551*	µS/cm @20oC	yes				*averaged value

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER)														
Lic No: W0073 Year 2015														
SW3	Water	Cadmium		annual		0.15	All values < ELV	<0.1	µg/L	yes				
SW3	Water	Chromium and compounds (as Cr)		annual		Cr VI 3.4	All values < ELV	<1	µg/L	yes				
SW3	Water	Copper and compounds (as Cu)		annual		30	All values < ELV	0.005	mg/L	yes				
SW3	Water	Iron		annual		200	All values < ELV	470	µg/L	no (if no please enter details in comments box)				The iron concentrations can naturally fluctuate greatly in the study area and can be naturally higher than the maximum admissible concentration (MAC).
SW3	Water	Lead and compounds (as Pb)		annual		7.2	All values < ELV	<0.3	µg/L	yes				
SW3	Water	Magnesium		annual		None		8.4	mg/L	N/A				
SW3	Water	Manganese (as Mn)		annual		50	All values < ELV	320	µg/L	no (if no please enter details in comments box)				The manganese concentrations can naturally fluctuate greatly in the study area and can be naturally higher than the maximum admissible concentration (MAC).

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER)													
						Lic No:	W0073			Year	2015		
SW3	Water	Mercury and compounds (as Hg)		annual		0.05	All values < ELV	<0.02	µg/L	yes			
SW3	Water	Nickel and compounds (as Ni)		annual		20	All values < ELV	5	µg/L	yes			
SW3	Water	Phenols		annual		8	All values < ELV	<0.15	mg/L	yes			
SW3	Water	Potassium		annual		None		1.31	mg/L	yes			
SW3	Water	Sodium		annual		200	All values < ELV	13.7	mg/L	yes			
SW3	Water	Sulphate		annual		250	All values < ELV	<1.79	mg/L	yes			
		Total Phosphorus		annual		None		0.4	mg/L	N/A			

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER)															
						Lic No:	W0073							Year	2015
SW3	Water	Zinc		annual		100	All values < ELV	92.6	µg/L	yes					

Note 1: Volumetric flow shall be included as a reportable parameter

Note 2: Where Emission Limit Values (ELV) do not apply to your licence please compare results against EQS for Surface water or relevant receptor quality standards

Continuous monitoring
 5 Does your site carry out continuous emissions to water/sewer monitoring? Additional Information

No	
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If yes please summarise your continuous monitoring data below in Table W4 and compare it to its relevant Emission Limit Value (ELV)

6 Did continuous monitoring equipment experience downtime? If yes please record downtime in table W4 below

SELECT	
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7 Do you have a proactive service contract for each piece of continuous monitoring equipment on site?

SELECT	
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8 Did abatement system bypass occur during the reporting year? If yes please complete table W5 below

SELECT	
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Table W4: Summary of average emissions -continuous monitoring

Emission reference no:	Emission released to	Parameter/ Substance	ELV or trigger values in licence or any revision thereof	Averaging Period	Compliance Criteria	Units of measurement	Annual Emission for current reporting year (kg)	% change +/- from previous reporting year	Monitoring Equipment downtime (hours)	Number of ELV exceedences in reporting year	Comments
	SELECT	SELECT		SELECT	SELECT	SELECT					
	SELECT	SELECT		SELECT	SELECT	SELECT					

note 1: Volumetric flow shall be included as a reportable parameter.

Table W5: Abatement system bypass reporting table

Date	Duration (hours)	Location	Resultant emissions	Reason for bypass	Corrective action*	Was a report submitted to the EPA?	When was this report submitted?
						SELECT	

*Measures taken or proposed to reduce or limit bypass frequency

Groundwater/Soil monitoring template	Lic No: W0073	Year 2015
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		Comments		
1	Are you required to carry out groundwater monitoring as part of your licence requirements?	yes	Please provide an interpretation of groundwater monitoring data in the interpretation box below or if you require additional space please include a groundwater/contaminated land monitoring results interpretaion as an additional section in this AER	
2	Are you required to carry out soil monitoring as part of your licence requirements?	no		
3	Do you extract groundwater for use on site? If yes please specify use in comment section	no		
4	Do monitoring results show that groundwater generic assessment criteria such as GTVs or IGVs are exceeded or is there an upward trend in results for a substance? If yes, please complete the Groundwater Monitoring Guideline Template Report (link in cell G8) and submit separately through ALDER as a licensee return AND answer questions 5-12 below.	yes		
5	Is the contamination related to operations at the facility (either current and/or historic)	yes		Levels of pH, DO, temperature, conductivity, cadmium, chromium, copper, lead, magnesium, mercury, sulphate, sodium, total phosphorus, phenols and zinc remained within guidelines set out for groundwater. Levels of ammonia were above the standard limit at all monitoring points. GW6 and GW4, both downgradient of the site, have consistently exceeded limits for ammonia since 2008 and 2010 respectively. The lowest ammonia levels were recorded at wells GW2 and RC03 upgradient of the site, but their elevated concentrations over guideline limits in H2 2015 indicate a local source of ammonia contributing to groundwater in the area. The highest iron concentration was recorded at GW2 which is upgradient of the landfill, whereas the iron level at the groundwater monitoring point downgradient of the landfill (GW6) was compliant. This indicates that there may be a local source of iron contributing to the groundwater, as opposed to the iron levels being related to the landfill.
6	Have actions been taken to address contamination issues? If yes please summarise remediation strategies proposed/undertaken for the site	yes		
7	Please specify the proposed time frame for the remediation strategy	N/A		
8	Is there a licence condition to carry out/update ELRA for the site?	no		
9	Has any type of risk assesment been carried out for the site?	yes		
10	Has a Conceptual Site Model been developed for the site?	yes		
11	Have potential receptors been identified on and off site?	yes		
12	Is there evidence that contamination is migrating offsite?	yes		
		landfill appears to be contributing to ammonia		
		Installation of active pumping system will not		
		Groundwater Risk Assessment		

Table 1: Upgradient Groundwater monitoring results

Date of sampling	Sample location reference	Parameter/ Substance	Methodology	Monitoring frequency	Maximum Concentration++	Average Concentration+	unit	GTV's*	SELECT**	Upward trend in pollutant concentration over last 5 years of monitoring data
11/06/15 & 03/11/15	GW2	Ammonia	Competent lab	Biannually	0.37	0.23	mg/l	0.065-0.175		no
11/06/15 & 03/11/15	GW2	DO	Competent lab	Biannually	4.4	3.42	mg/l		IGV	no
11/06/15 & 03/11/15	GW2	PH	Competent lab	Biannually	7.41	7.21			IGV	no
11/06/15 & 03/11/15	GW2	Conductivity	Competent lab	Biannually	794	786	at 20°	800-1875	IGV	no
11/06/15 & 03/11/15	GW2	Temperature	Competent lab	Biannually	16.5	14.05	C°		IGV	no
11/06/2015	GW2	Cadmium	Competent lab	Annually	<0.1	<0.1	µg/l	3.75	IGV	no
11/06/2015	GW2	Chromium	Competent lab	Annually	<1	<1	µg/l	37.5	IGV	no
11/06/2015	GW2	Copper	Competent lab	Annually	<0.003	<0.003	µg/l	1500	IGV	no
11/06/2015	GW2	Iron	Competent lab	Annually	2200	2200	µg/l		IGV	no

Groundwater/Soil monitoring template					Lic No: W0073		Year 2015			
11/06/2015	GW2	Lead	Competent lab	Annually	0.6	0.9	µg/l	18.8	IGV	no
11/06/2015	GW2	Magnesium	Competent lab	Annually	17.7	17.7	µg/l		IGV	no
11/06/2015	GW2	Manganese	Competent lab	Annually	81	81	µg/l		IGV	no
11/06/2015	GW2	Mercury	Competent lab	Annually	<0.02	<0.02	µg/l	0.75	IGV	no
11/06/2015	GW2	Potassium	Competent lab	Annually	3.95	3.95	mg/l		IGV	no
11/06/2015	GW2	Sulphate	Competent lab	Annually	27.7	27.7	mg/l	187.5	IGV	no
11/06/2015	GW2	Sodium	Competent lab	Annually	16.7	16.7	mg/l	150	IGV	no
11/06/2015	GW2	Total Phosphorus	Competent lab	Annually	0.07	0.07	mg/l	35		no
11/06/2015	GW2	Nickel	Competent lab	Annually	1.2	1.2	µg/l	15		no
11/06/2015	GW2	Phenols	Competent lab	Annually	<0.015	<0.015	µg/l		IGV	no
11/06/2015	GW2	Zinc	Competent lab	Annually	6.4	6.4	µg/l		IGV	no

.+ where average indicates arithmetic mean

++. maximum concentration indicates the maximum measured concentration from all monitoring results produced during the reporting year

Table 2: Downgradient Groundwater monitoring results

Date of sampling	Sample location reference	Parameter/ Substance	Methodology	Monitoring frequency	Maximum Concentration	Average Concentration	unit	GTV's*	SELECT**	Upward trend in yearly average pollutant concentration over last 5 years of monitoring data
11/06/15 & 03/11/15	GW6	Ammonia	Competent lab	Biannually	3.53	3.315	mg/l	0.065-0.175	IGV	no
11/06/15 & 03/11/15	GW6	DO	Competent lab	Biannually	4.18	3.79	mg/l and mg/l %SAT		IGV	no
11/06/15 & 03/11/15	GW6	PH	Competent lab	Biannually	7.04	7.01			IGV	no
11/06/15 & 03/11/15	GW6	Conductivity	Competent lab	Biannually	855	846	at 20°	800-1875	IGV	no
11/06/15 & 03/11/15	GW6	Temperature	Competent lab	Biannually	15.6	13.25	C°		IGV	no
11/06/2015	GW6	Cadmium	Competent lab	Annually	<0.1	<0.1	µg/l	3.75	IGV	no
11/06/2015	GW6	Chromium	Competent lab	Annually	<1	<1	µg/l	37.5	IGV	no
11/06/2015	GW6	Copper	Competent lab	Annually	<0.003	<0.003	µg/l	1500	IGV	no
11/06/2015	GW6	Iron	Competent lab	Annually	<20	<20	µg/l		IGV	no
11/06/2015	GW6	Lead	Competent lab	Annually	<0.3	<0.3	µg/l	18.8	IGV	no
11/06/2015	GW6	Magnesium	Competent lab	Annually	17.5	17.5	mg/l		IGV	no
11/06/2015	GW6	Manganese	Competent lab	Annually	7.2	7.2	µg/l		IGV	no
11/06/2015	GW6	Mercury	Competent lab	Annually	<0.02	<0.02	µg/l	0.75	IGV	no
11/06/2015	GW6	Potassium	Competent lab	Annually	12.5	12.5	mg/l		IGV	no
11/06/2015	GW6	Sulphate	Competent lab	Annually	12.2	12.2	mg/l	187.5	IGV	no
11/06/2015	GW6	Sodium	Competent lab	Annually	18.3	18.3	mg/l	150	IGV	no
11/06/2015	GW6	Total Phosphorus	Competent lab	Annually	0.15	0.15	mg/l	35		no
11/06/2015	GW6	Nickel	Competent lab	Annually	5.4	5.4	µg/l	15	IGV	no
11/06/2015	GW6	Phenols	Competent lab	Annually	<0.015	<0.015	mg/l		IGV	no
11/06/2015	GW6	Zinc	Competent lab	Annually	34.2	34.2	ug/l		IGV	no

Groundwater/Soil monitoring template	Lic No: W0073	Year: 2015
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*please note exceedance of generic assessment criteria (GAC) such as a Groundwater Threshold Value (GTV) or an Interim Guideline Value (IGV) or an upward trend in results for a substance indicates that further interpretation of monitoring results is required. In addition to completing the above table, please complete the Groundwater Monitoring Guideline Template Report at the link provided and submit separately through ALDER as a licensee return or as otherwise instructed by the EPA.

[Groundwater monitoring template](#)

More information on the use of soil and groundwater standards/ generic assessment criteria (GAC) and risk assessment tools is available in the EPA published guidance (see the link in G31)

[Guidance on the Management of Contaminated Land and Groundwater at EPA Licensed Sites \(EPA 2013\).](#)

**Depending on location of the site and proximity to other sensitive receptors alternative Receptor based Water Quality standards should be used in addition to the GTV e.g. if the site is close to surface water compare to Surface Water Environmental Quality Standards (SWEQS), If the site is close to a drinking water supply compare results to the Drinking Water Standards (DWS)

[Groundwater regulations](#)
[Drinking water \(private supply\) standards](#)
[Drinking water \(public supply\) standards](#)
[Interim Guideline Values \(IGV\)](#)

Table 3: Soil results

Date of sampling	Sample location reference	Parameter/ Substance	Methodology	Monitoring frequency	Maximum Concentration	Average Concentration	unit
							SELECT
							SELECT

Where additional detail is required please enter it here in 200 words or less

[Click here to access EPA guidance on Environmental Liabilities and Financial provision](#)

			Commentary
1	ELRA initial agreement status	Not Required	The licensee has established and maintains a fund/written guarantee that is adequate to assure the Agency that the licensee is at all times capable of implementing the Restoration and Aftercare Plan required by Condition 8.1
2	ELRA review status	N/A	
3	Amount of Financial Provision cover required as determined by the latest ELRA	N/A	
4	Financial Provision for ELRA status	N/A	
5	Financial Provision for ELRA - amount of cover	N/A	
6	Financial Provision for ELRA - type	N/A	
7	Financial provision for ELRA expiry date	N/A	
8	Closure plan initial agreement status	N/A	
9	Closure plan review status	N/A	
10	Financial Provision for Closure status	N/A	
11	Financial Provision for Closure - amount of cover	N/A	
12	Financial Provision for Closure - type	N/A	
13	Financial provision for Closure expiry date	N/A	

Environmental Management Programme/Continuous Improvement Programme template		Lic No:	W0073	Year	2015
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Highlighted cells contain dropdown menu click to view		Additional Information
1	Do you maintain an Environmental Mangement System (EMS) for the site. If yes, please detail in additional information	Yes A revised Environmental Management Plan (EMP) for the facility was issued in December 2004.
2	Does the EMS reference the most significant environmental aspects and associated impacts on-site	Yes
3	Does the EMS maintain an Environmental Management Programme (EMP) as required in accordance with the licence requirements	Yes
4	Do you maintain an environmental documentation/communication system to inform the public on environmental performance of the facility, as required by the licence	Yes Refer to Roscommon County Council website: http://www.roscommoncoco.ie/en/Services/Environment/Waste_Management,_Disposal_and_Recycling/

Environmental Management Programme (EMP) report

Objective Category	Target	Status (% completed)	How target was progressed	Responsibility	Intermediate outcomes
SELECT		SELECT		SELECT	SELECT
SELECT		SELECT		SELECT	SELECT
SELECT		SELECT		SELECT	SELECT

Noise monitoring summary report	Lic No: W0073	Year	2015
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1 Was noise monitoring a licence requirement for the AER period?

If yes please fill in table N1 noise summary below

2 Was noise monitoring carried out using the EPA Guidance note, including completion of the "Checklist for noise measurement report" included in the guidance note as table 6?

[Noise Guidance note NG4](#)

3 Does your site have a noise reduction plan

4 When was the noise reduction plan last updated?

5 Have there been changes relevant to site noise emissions (e.g. plant or operational changes) since the last noise survey?

Table N1: Noise monitoring summary

Date of monitoring	Time period	Noise location (on site)	Noise sensitive location -NSL (if applicable)	LA _{eq}	LA ₉₀	LA ₁₀	LA _{max}	Tonal or Impulsive noise* (Y/N)	If tonal /impulsive noise was identified was 5dB penalty applied?	Comments (ex. main noise sources on site, & extraneous noise ex. road traffic)	Is <u>site</u> compliant with noise limits (day/evening/night)?
								SELECT	SELECT		SELECT

*Please ensure that a tonal analysis has been carried out as per guidance note NG4. These records must be maintained onsite for future inspection

If noise limits exceeded as a result of noise attributed to site activities, please choose the corrective action from the following options?

** please explain the reason for not taking action/resolution of noise issues?
Any additional comments? (less than 200 words)

Resource Usage/Energy efficiency summary

Lic No:

W0073

Year

2015

Additional information

- 1 When did the site carry out the most recent energy efficiency audit? Please list the recommendations in table 3 below
- Is the site a member of any accredited programmes for reducing energy usage/water conservation such as the SEAI programme linked to the right? If yes please list them in additional information
- 2 Where Fuel Oil is used in boilers on site is the sulphur content compliant with licence conditions? Please state percentage in additional information
- 3

N/A	
SELECT	
SELECT	

Table R1 Energy usage on site				
Energy Use	Previous year	Current year	Production +/- % compared to previous reporting year**	Energy Consumption +/- % vs overall site production*
Total Energy Used (MWHrs)	12747	6850		
Total Energy Generated (MWHrs)				
Total Renewable Energy Generated (MWHrs)				
Electricity Consumption (MWHrs)	12747	6850	N/A	N/A
Fossil Fuels Consumption:				
Heavy Fuel Oil (m3)				
Light Fuel Oil (m3)				
Natural gas (m3)				
Coal/Solid fuel (metric tonnes)				
Peat (metric tonnes)				
Renewable Biomass				
Renewable energy generated on site				

* where consumption of energy can be compared to overall site production please enter this information as percentage increase or decrease compared to the previous reporting year.

** where site production information is available please enter percentage increase or decrease compared to previous year

Table R2 Water usage on site					Water Emissions	Water Consumption	
Water use	Water extracted Previous year m3/yr.	Water extracted Current year m3/yr.	Production +/- % compared to previous reporting year**	Energy Consumption +/- % vs overall site production*	Volume Discharged back to environment(m ³ /yr):	Volume used i.e not discharged to environment e.g. released as steam m3/yr	Unaccounted for Water:
Groundwater							
Surface water							
Public supply							
Recycled water							
Total							

* where consumption of water can be compared to overall site production please enter this information as percentage increase or decrease compared to the previous reporting year.

** where site production information is available please enter percentage increase or decrease compared to previous year

Table R3 Waste Stream Summary					
	Total	Landfill	Incineration	Recycled	Other
Hazardous (Tonnes)					
Non-Hazardous (Tonnes)					

Resource Usage/Energy efficiency summary Lic No: W0073 Year 2015

Table R4: Energy Audit finding recommendations								
Date of audit	Recommendations	Description of Measures proposed	Origin of measures	Predicted energy savings %	Implementation date	Responsibility	Completion date	Status and comments
			SELECT					
			SELECT					
			SELECT					

Table R5: Power Generation: Where power is generated onsite (e.g. power generation facilities/food and drink industry) please complete the following information

	Unit ID	Unit ID	Unit ID	Unit ID	Station Total
Technology					
Primary Fuel					
Thermal Efficiency					
Unit Date of Commission					
Total Starts for year					
Total Running Time					
Total Electricity Generated (GWH)					
House Load (GWH)					
KWH per Litre of Process Water					
KWH per Litre of Total Water used on Site					

WASTE SUMMARY	Lic No: W0073	Year: 2015
SECTION A-PRTR ON SITE WASTE TREATMENT AND WASTE TRANSFERS TAB- TO BE COMPLETED BY ALL IPPC AND WASTE FACILITIES	PRTR facility logon	dropdown list click to see options

SECTION B- WASTE ACCEPTED ONTO SITE-TO BE COMPLETED BY ALL IPPC AND WASTE FACILITIES

- 1 Were any wastes accepted onto your site for recovery or disposal or treatment prior to recovery or disposal within the boundaries of your facility?; (waste generated within your boundaries is to be captured through PRTR reporting)
If yes please enter details in table 1 below
- 2 Did your site have any rejected consignments of waste in the current reporting year? If yes please give a brief explanation in the additional information
- 3 Was waste accepted onto your site that was generated outside the Republic of Ireland? If yes please state the quantity in tonnes in additional information

Additional Information	
No	Landfill closed in 2001
No	Landfill closed in 2001
No	Landfill closed in 2001

Table 1 Details of waste accepted onto your site for recovery, disposal or treatment (do not include wastes generated at your site, as these will have been reported in your PRTR workbook)

Licensed annual tonnage limit for your site (total tonnes/annum)	EWC code	Source of waste accepted	Description of waste accepted Please enter an accurate and detailed description - which applies to relevant EWC code European Waste Catalogue EWC codes	Quantity of waste accepted in current reporting year (tonnes)	Quantity of waste accepted in previous reporting year (tonnes)	Reduction/ Increase over previous year +/- %	Reason for reduction/ increase from previous reporting year	Packaging Content (%) - only applies if the waste has a packaging component	Disposal/Recovery or treatment operation carried out at your site and the description of this operation	Quantity of waste remaining on site at the end of reporting year (tonnes)	Comments -
<i>Refer to PRTR for Recycling Centre waste data</i>											

SECTION C-TO BE COMPLETED BY ALL WASTE FACILITIES (waste transfer stations, Composters, Material recovery facilities etc) EXCEPT LANDFILL SITES

- 4 Is all waste processing infrastructure as required by your licence and approved by the Agency in place? If no please list waste processing infrastructure required onsite
- 5 Is all waste storage infrastructure as required by your licence and approved by the Agency in place? If no please list waste storage infrastructure required on site
- 6 Does your facility have relevant nuisance controls in place?
- 7 Do you have an odour management system in place for your facility? If no why?
- 8 Do you maintain a sludge register on site?

N/A	No waste processing on site.
Yes	
Yes	
No	Landfill closed in 2001
N/A	

SECTION D-TO BE COMPLETED BY LANDFILL SITES ONLY

Table 2 Waste type and tonnage-landfill only

Waste types permitted for disposal	Authorised/licenced annual intake for disposal (tpa)	Actual intake for disposal in reporting year (tpa)	Remaining licensed capacity at end of reporting year (m3)	Comments

Table 3 General information-Landfill only

Area ID	Date landfilling commenced	Date landfilling ceased	Currently landfilling	Private or Public Operated	Inert or non-hazardous	Predicted date to cease landfilling	Licence permits asbestos	Is there a separate cell for asbestos?	Accepted asbestos in reporting year	Total disposal area occupied by waste	Lined disposal area occupied by waste
										ha	SELECT UNIT
Landfill	Pre 1980	Dec-01	No	Public	Non Hazardous	N/A	No	No	No	6.1	0

WASTE SUMMARY	Lic No: W0073	Year: 2015
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Table 4 Environmental monitoring-landfill only [Landfill Manual-Monitoring Standards](#)

Was meteorological monitoring in compliance with Landfill Directive (LD) standard in reporting year +	Was leachate monitored in compliance with LD standard in reporting year	Was Landfill Gas monitored in compliance with LD standard in reporting year	Was SW monitored in compliance with LD standard in reporting year	Have GW trigger levels been established	Were emission limit values agreed with the Agency (ELVs)	Was topography of the site surveyed in reporting year	Has the statement under S53(A)(5) of WMA been submitted in reporting year	Comments
Yes	Yes, biannual in agreement with EPA	yes, every 3 months in agreement	Yes, biannual in agreement	No	Yes	No	No	

+ please refer to Landfill Manual linked above for relevant Landfill Directive monitoring standards

Table 5 Capping-Landfill only

Area uncapped*	Area with temporary cap	Area with final cap to LD Standard m2 ha, a	Area capped other	Area with waste that should be permanently capped to date under licence	What materials are used in the cap	Comments
0		Entire Landfill			GCL and 1m of topsoil and subsoil	

*please note this includes daily cover area

Table 6 Leachate-Landfill only

9 Is leachate from your site treated in a Waste Water Treatment Plant?

Yes
No

10 Is leachate released to surface water? If yes please complete leachate mass load information below

Volume of leachate in reporting year(m3)	Leachate (BOD) mass load (kg/annum)	Leachate (COD) mass load (kg/annum)	Leachate (NH4) mass load (kg/annum)	Leachate (Chloride) mass load kg/annum	Leachate treatment on-site	Specify type of leachate treatment	Comments
3515	21.4	3.5	8.2	98.4	None		leachate tankered (226.22 cu.m). Total leachate = 3741.22 cu m

Please ensure that all information reported in the landfill gas section is consistent with the Landfill Gas Survey submitted in conjunction with PRTR returns

Table 7 Landfill Gas-Landfill only

Gas Captured&Treated by LFG System m3	Power generated (MW / KWh)	Used on-site or to national grid	Was surface emissions monitoring performed during the reporting year?	Comments
46053 of methane flared	0	N/A	No	

Unlined area	Comments on liner type
ha	
6.1	



[Guidance to completing the PRTR workbook](#)

PRTR Returns Workbook

Version 1.1.19

REFERENCE YEAR	2015
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1. FACILITY IDENTIFICATION

Parent Company Name	Roscommon County Council
Facility Name	Roscommon Landfill Facility
PRTR Identification Number	W0073
Licence Number	W0073-01

Classes of Activity	
No.	class_name
-	Refer to PRTR class activities below

Address 1	Killarney Townland
Address 2	
Address 3	
Address 4	
Country	Roscommon
Coordinates of Location	Ireland
River Basin District	-8.15598 53.6378
NACE Code	IEGBNISH
Main Economic Activity	3821
AER Returns Contact Name	Treatment and disposal of non-hazardous waste
AER Returns Contact Email Address	Kieran Madden
AER Returns Contact Position	kmadden@roscommoncoco.ie
AER Returns Contact Telephone Number	Environment Department
AER Returns Contact Mobile Phone Number	0906637185
AER Returns Contact Fax Number	0872486721
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
5(d)	Landfills
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?	
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) ?	
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This question is only applicable if you are an IPPC or Quarry site

4.1 RELEASES TO AIR

[Link to previous years emissions data](#)

SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

POLLUTANT		METHOD			Please enter all quantities in this section in KGs			
No. Annex II	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
01	Methane (CH4)	C	OTH	Landfill Gas Survey and Gas Sim	8480.0	8480.0	0.0	0.0
03	Carbon dioxide (CO2)	C	OTH	Landfill Gas Survey and Gas Sim	16682.0	16682.0	0.0	0.0

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

SECTION B : REMAINING PRTR POLLUTANTS

POLLUTANT		METHOD			Please enter all quantities in this section in KGs			
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

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

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

POLLUTANT		METHOD			Please enter all quantities in this section in KGs			
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	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: Please enter summary data on the quantities of methane flared and / or utilised	Roscommon Landfill Facility				
	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)	39590.0	C	OTH	Gassim 2.5	N/A
Methane flared	31110.0	C	OTH	Landfill Gas Survey	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)	8480.0	C	OTH	Landfill Gas Survey & GasS	N/A

4.3 RELEASES TO WASTEWATER OR SEWER

[Link to previous years emissions data](#)

| PRTR# : W0073 | Facility Name : Roscommon Landfill Facility | Filename : ME0016RP0057_PRTR

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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			
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

* 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			
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	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#: W0073 | Facility Name : Roscommon Landfill Facility | Filename : ME0016RP0057_PRTR_2015-F01 (2).xls | Return Year : 2015]

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Please enter all quantities on this sheet in Tonnes

7

Transfer Destination	European Waste Code	Hazardous	Quantity (Tonnes per Year)	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	Haz Waste : Name and Licence/Permit No of Next Destination Facility	Non	Haz Waste : Address of Next Destination Facility	Name and License / Permit No. and Address of Final Recoverer / Disposer (HAZARDOUS WASTE ONLY)	Actual Address of Final Destination i.e. Final Recovery / Disposal Site (HAZARDOUS WASTE ONLY)
						M/C/E	Method Used		Haz Waste : Name and Licence/Permit No of Recover/Disposer	Non Haz Waste: Address of Recover/Disposer			
Within the Country	15 01 02	No	1.395	aeroboard	R5	M	Weighed	Offsite in Ireland	Barna Waste,W0106-02		Carrowbrowne,Headford Road,Galway,..Ireland		
Within the Country	15 01 06	No	107.0	mixed packaging landfill leachate other than those mentioned in 19 07 02	R4	M	Weighed	Offsite in Ireland	Barna Waste,W0106-02 Roscommon Wastewater Treatment Plant,."		Carrowbrowne,Headford Road,Galway,..Ireland		
Within the Country	19 07 03	No	3741.22	cardboard, newspaper, glossy magazines,	D8	M	Weighed	Offsite in Ireland	" , , , ,Roscommon, , , ,Ireland		Carrowbrowne,Headford Road,Galway,..Ireland		
Within the Country	20 01 01	No	179.0	milk cartons	R3	M	Weighed	Offsite in Ireland	Barna Waste,W0106-02		Carrowbrowne,Headford Road,Galway,..Ireland 52 Creagh Road,Toomebridge,Co. Antrim,BT41 3SE,United Kingdom		
To Other Countries	20 01 02	No	45.7	glass	R5	M	Weighed	Abroad	Glassdon Recycling,.		Glen Abbey Complex / Carrowbrowne,Belgard Road Tallaght / Headford Road,Dublin 24 / Galway,..Ireland		
Within the Country	20 01 11	No	3.78	textiles	R3	M	Weighed	Offsite in Ireland	Textile Recycling Ltd./Barna Waste,W0106-02		Carrowbrowne,Dublin 1 / Headford Road,Dublin / Galway,..Ireland		
To Other Countries	20 01 27	Yes	7.356	household hazardous batteries and accumulators included in 16 06 01, 16 06 02 or 16 06 03 and unsorted batteries and accumulators containing these batteries	R2	M	Weighed	Abroad	Indaver / Barna Waste,W0036-02 / W0106-02		Carrowbrowne,Dublin 1 / Headford Road,Dublin / Galway,..Ireland	Indaver,W0036-02,Dublin Port,Dublin 1,Dublin,..Ireland	Dublin Port,Dublin 1,Dublin,..Ireland
Within the Country	20 01 33	Yes	0.54	discarded electrical and electronic equipment other than those mentioned in 20 01 21 and and 20 01 23 containing	R4	M	Weighed	Offsite in Ireland	Enva W0184-01 / WEEE Ireland,.		Portlaoise / Suite 18, / The Mall Beacon court,Co. Laois / Dublin 18,..Ireland	Enva Ireland,W0184-01,Portlaoise,," ,Co. Laois,," ,Ireland	Portlaoise,," ,Co. Laois,," ,Ireland
Within the Country	20 01 35	Yes	1523.225	hazardous components	R4	M	Weighed	Offsite in Ireland	KMK Metal Recycling Ltd.,W01130-03		Offaly,Ireland	Abroad (commercially sensitive information),,,,,,,,,,,,,,,,,,,,,,	
Within the Country	20 01 38	No	35.3	wood other than that mentioned in 20 01 37	R3	M	Weighed	Offsite in Ireland	Barna Waste,W0106-02		Carrowbrowne,Headford Road,Galway,..Ireland		
Within the Country	20 01 40	No	27.44	metals	R4	M	Weighed	Offsite in Ireland	Barna Waste,W0106-02		Carrowbrowne,Headford Road,Galway,..Ireland		
Within the Country	20 03 99	No	233.3	municipal wastes not otherwise specified	R3	M	Weighed	Offsite in Ireland	Barna Waste,W0106-02		Carrowbrowne,Headford Road,Galway,..Ireland		

* 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](#)
- [Link to Waste Guidance](#)