

Facility Information Summary	
AER Reporting Year	2017
Licence Register Number	W0071-02
Name of site	Marlinstown Landfill
Site Location	Marlinstown, Mullingar, County Westmeath
NACE Code	3821
Class/Classes of Activity	A3 (2011)
National Grid Reference (6E, 6 N)	(-) 7.29169 53.5229
<p>A description of the activities/processes at the site for the reporting year. This should include information such as production 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.</p> <p>The final capping of the last section of the landfill (phase 2) was completed in early 2012. In October 2013 the flare ignition system was turned off while a flow pumping trial was started to ascertain at what abstraction levels landfill gas migration off site ceased. In December 2015 gas flaring was restarted. There were 17 incidents in 2016 and 15 in 2017. This was a 11% reduction on the previous year mainly due to changes carried out on the igniter. This reduced the number of times the flare failed to start in adverse weather. Power consumption was down 12% on last year.</p>	

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.

 Signature Group/Facility manager <small>(or nominated, suitably qualified and experienced deputy)</small>	 Date
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AIR-summary template

Lic No:

W0071-02

Year

2017

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	Licence requires monitoring for Nox, SO2 and TOC, HCl and HF.

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

No	
SELECT	

- 3 Was all monitoring carried out in accordance with EPA guidance note AG2 and using the basic air monitoring checklist? Basic air monitoring checklist AGN2

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
Flare stack	Nitrogen oxides (NOx/NO2)	Yearly	150	100 % of values < ELV	44.88	mg/Nm3	yes	EN 14792:2005		
Flare stack	Volatile organic compounds (as TOC)	Yearly	10	100 % of values < ELV	3.98	mgC/Nm3	yes	OTH		
Flare stack	Hydrogen Chloride	Yearly	50	100 % of values < ELV	<0.36	mg/Nm3	yes	EN 1911-1 to 3:2003		
Flare stack	Hydrogen Fluoride	Yearly	5	100 % of values < ELV	<0.43	mg/Nm3	yes	OTH		
Flare stack	Sulphur Dioxide	Yearly	None	100 % of values < ELV	22.41	mg/Nm3	yes	OTH		

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

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Continuous Monitoring		

<p>4 Does your site carry out continuous air emissions monitoring? 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)</p>	No	
<p>5 Did continuous monitoring equipment experience downtime? If yes please record downtime in table A2 below</p>	SELECT	
<p>6 Do you have a proactive service agreement for each piece of continuous monitoring equipment?</p>	SELECT	
<p>7 Did your site experience any abatement system bypasses? If yes please detail them in table A3 below</p>	SELECT	

Table A2: Summary of average emissions -continuous monitoring

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

Solvent use and management on site

8 Do you have a total Emission Limit Value of direct and fugitive emissions on site? if yes please fill out tables A4 and A5

No	
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Table A4: Solvent Management Plan Summary	Please refer to linked solvent regulations to complete table 5 and 6
Total VOC Emission limit value	<u>Solvent regulations</u>

Reporting year	Total solvent input on site (kg)	Total VOC emissions to Air from entire site (direct and fugitive)	Total VOC emissions as %of solvent input	Total Emission Limit Value (ELV) in licence or any revision therof	Compliance
					SELECT
					SELECT

Table A5: Solvent Mass Balance summary								
	(I) Inputs (kg)	(O) Outputs (kg)						
Solvent	(I) Inputs (kg)	Organic solvent emission in waste	Solvents lost in water (kg)	Collected waste solvent (kg)	Fugitive Organic Solvent (kg)	Solvent released in other ways e.g.	Solvents destroyed onsite through	Total emission of Solvent to air (kg)
Total								

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 licenced emissions you only need to complete table W1 and or W2 for storm water analysis and visual inspections

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

Additional information	
No	There are 4 surface water monitoring points - SW1 & SW2 are the US point on the Marlinstown stream. However due to low flows / no flows SW1 was monitored infrequently. SW3 1km DS and SW5 DS at side of landfill. For SW5 only NH4 and SS required.
Yes	Occasional Oily contamination upstream at SW1 unable to find its source.

Table W1 Storm water monitoring

Location reference	Location relative to site activities	PRTR Parameter	Licenced 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
SW2	upstream		Ammonia (as N)	14/06/2017	0.16	All values < ELV	<0.41	mg/L	see enter details in cc	below limit of detection
SW2	upstream		BOD	14/06/2017	5	All values < ELV	<1	mg/L	yes	
SW2	upstream		Chloride as Cl	14/06/2017	250	All values < ELV	31.5	mg/L	yes	
SW3	downstream		Ammonia (as N)	14/06/2017	0.16	All values < ELV	0.51	mg/L	see enter details in cc	possible contamination from landfill or surrounding farms
SW3	downstream		BOD	14/06/2017	5	All values < ELV	2	mg/L	yes	
SW3	downstream	SELECT	Chloride as Cl	14/06/2017	250	All values < ELV	36	mg/L	yes	

*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
SW1	22/03/2017	Oil film and odour	offsite	Investigate source. Could be N4	Nothing found
SW1	14/06/2017	Oil film and odour	offsite	Investigate source. Could be N4	Nothing found
			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

4 Was all monitoring carried out in accordance with EPA guidance and checklists for Quality of Aqueous Monitoring External /Internal Data Reported to the EPA? If no please detail what areas Lab Quality Assessment of require improvement in additional information box checklist results checklist

Additional information	
SELECT	
SELECT	

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

Emission reference no:	Emission released to	Parameter/ Substance ^{Note 1}	Type of sample	Frequency of monitoring	Averaging period	ELV or trigger values in licence or any revision thereof ^{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
	SELECT	SELECT	SELECT		SELECT		SELECT		SELECT	SELECT	SELECT	SELECT			

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

Additional Information

5 Does your site carry out continuous emissions to water/sewer monitoring? No

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

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

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

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

Bund testing

dropdown menu click to see options

Are you required by your licence to undertake integrity testing on bunds and containment structures? If yes please fill out table B1 below listing all **new bunds and containment structures** on site, in addition to **all bunds which failed the integrity test-all bunding structures which failed including mobile bunds must be listed in the table below, please include all bunds outside the licenced testing period** (mobile bunds and chemstore included)

Additional information	
Yes	1 No. leachate lagoon. Observations of levels in tank indicate that there <u>maybe</u> a leak. Dye tests were negative. More leachate / ground
3 years	Dye tests carried out 2015
No	
	0
	0
	0
N/A	
Yes	High level alarm on lagoon
Yes	
N/A	No fire retention pond. Mains water

- Please provide integrity testing frequency period
Does the site maintain a register of bunds, underground pipelines (including stormwater and foul), Tanks, sumps and containers? (containers refers to "Chemstore" type units and mobile bunds)
- How many bunds are on site?
- How many of these bunds have been tested within the required test schedule?
- How many mobile bunds are on site?
- Are the mobile bunds included in the bund test schedule?
- How many of these mobile bunds have been tested within the required test schedule?
- How many sumps on site are included in the integrity test schedule?
- How many of these sumps are integrity tested within the test schedule?
Please list any sump integrity failures in table B1
- Do all sumps and chambers have high level liquid alarms?
- If yes to Q11 are these failsafe systems included in a maintenance and testing programme?
- Is the Fire Water Retention Pond included in your integrity test programme?

Table B1: Summary details of bund /containment structure integrity test														
Bund/Containment structure ID	Type	Specify Other type	Product containment	Actual capacity	Capacity required*	Type of integrity test	Other test type	Test date	Integrity reports maintained on site?	Results of test	Integrity test failure explanation <50 words	Corrective action taken	Scheduled date for retest	Results of retest(if in current reporting year)
	SELECT					SELECT			SELECT	SELECT		SELECT		
	SELECT					SELECT			SELECT	SELECT		SELECT		

* Capacity required should comply with 25% or 110% containment rule as detailed in your licence
Has integrity testing been carried out in accordance with licence requirements and are all structures tested in line with BS8007/EPA Guidance?

Commentary	
SELECT	
SELECT	
SELECT	

- Are channels/transfer systems to remote containment systems tested?
[bunding and storage guidelines](#)
- Are channels/transfer systems compliant in both integrity and available volume?

Pipeline/underground structure testing

Are you required by your licence to undertake integrity testing* on underground structures e.g. pipelines or sumps etc? If yes please fill out table 2 below listing all underground structures and pipelines on site **which failed the integrity test and all which have not been tested within the integrity test period as specified**

No	
SELECT	

- Please provide integrity testing frequency period
*please note integrity testing means water tightness testing of all underground pipelines (as required under your licence)

Table B2: Summary details of pipeline/underground structures integrity test											
Structure ID	Type system	Material of construction:	Does this structure have Secondary containment?	Type of secondary containment	Type integrity testing	Integrity reports maintained on site?	Results of test	Integrity test failure explanation <50 words	Corrective action taken	Scheduled date for retest	Results of retest(if in current reporting year)
	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT				SELECT

Please use commentary for additional details not answered by tables/ questions above

Groundwater/Soil monitoring template

Lic No:

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		Comments	
1	Are you required to carry out groundwater monitoring as part of your licence requirements?	yes	
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. Groundwater monitoring template	yes	
5	Is the contamination related to operations at the facility (either current and/or historic)	possibly	
6	Have actions been taken to address contamination issues? If yes please summarise remediation strategies proposed/undertaken for the site	yes	Extracting more leachate
7	Please specify the proposed time frame for the remediation strategy	yes	Increased leachate extraction will continue to establish if this improves GW quality.
8	Is there a licence condition to carry out/update ELRA for the site?	yes	
9	Has any type of risk assessment been carried out for the site?	yes	Carried out 2016
10	Has a Conceptual Site Model been developed for the site?	yes	
11	Have potential receptors been identified on and off site?	SELECT	
12	Is there evidence that contamination is migrating offsite?	possible	Elevated ammonia levels in groundwater down gradient of site in boggy ground. It has been agreed with the EPA inspector that perimeter ground water / leachate wells will be pumped into the leachate lagoon during the dry weather period when the water table drops.

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
29/11/2017	BH31	Ammoniacal Nitrogen		Quarterly	0.44	<0.41	mg/l			up on last year
29/11/2017	BH31	Chloride		Quarterly	14.2	8.5	mg/l			no
29/11/2017	BH31	Conductivity		Quarterly	522	477	mg/l			no
29/11/2017	BH32	Ammoniacal Nitrogen		Quarterly	0.66	0.54	mg/l			yes
29/11/2017	BH32	Chloride		Quarterly	22	20	mg/l			up on last year
29/11/2017	BH32	Conductivity		Quarterly	748	691	mg/l			up on last year

.+ 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
29/11/2017	BH13	Ammoniacal Nitrogen		Quarterly	4.11	3.62	mg/l			up on last year
29/11/2017	BH13	Chloride		Quarterly	16.9	16.66	mg/l			up on last year
29/11/2017	BH13	Conductivity		Quarterly	216	193.33	mg/l			no
29/11/2017	BH14	Ammoniacal Nitrogen		Quarterly	3.5	3.22	mg/l			up on last year
29/11/2017	BH14	Chloride		Quarterly	14.6	14.13	mg/l			no
29/11/2017	BH14	Conductivity		Quarterly	310	290	mg/l			up on last year
29/11/2017	BH15	Ammoniacal Nitrogen		Quarterly	0.85	0.54	mg/l			up on last year
29/11/2017	BH15	Chloride		Quarterly	23.5	23.4	mg/l			up on last year
29/11/2017	BH15	Conductivity		Quarterly	678	614	mg/l			up on last year
29/11/2017	BH16	Ammoniacal Nitrogen		Quarterly	0.74	0.56	mg/l			up on last year
29/11/2017	BH16	Chloride		Quarterly	24.8	24.1	mg/l			up on last year

Groundwater/Soil monitoring template Lic No: W0071-02 Year 2017

29/11/2017	BH16	Conductivity	Quarterly	607	569 mg/l	up on last year
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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)
Surface water EQS	GTV's			

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

Environmental Liabilities template

Lic No:

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

		Commentary	
1	ELRA initial agreement status	SELECT	Risk assesment carried out in 2005. The landfill has been closed since 2002 & the last remaining section was permantly capped in 2012.
2	ELRA review status	SELECT	
3	Amount of Financial Provision cover required as determined by the latest ELRA	Specify	
4	Financial Provision for ELRA status	SELECT	
5	Financial Provision for ELRA - amount of cover	Specify	
6	Financial Provision for ELRA - type	SELECT	
7	Financial provision for ELRA expiry date	Enter expiry date	
8	Closure plan initial agreement status	Closure plan submitted and agreed by EPA	
9	Closure plan review status	SELECT	
10	Financial Provision for Closure status	SELECT	
11	Financial Provision for Closure - amount of cover	Specify	
12	Financial Provision for Closure - type	SELECT	Westmeath Co. Council will draw from reserved internal capital resources to fund the ongoing aftercare of the landfill
13	Financial provision for Closure expiry date	Enter expiry date	

Environmental Management Programme/Continuous Improvement Programme template

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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	The purpose of the EMS is to ensure the operation of the site is in accordance with regulatory requirements & best landfill practice & to implement a schedule of objectives & targets.
2	Does the EMS reference the most significant environmental aspects and associated impacts on-site	Yes	Since the landfill is closed the emphasis is on the management of the gas collection system, the operation of the flare and the collection of leachate.
3	Does the EMS maintain an Environmental Management Programme (EMP) as required in accordance with the licence requirements	Yes	The main objectives for 2018 are : 1) To keep the existing flare running while ensuring landfill gas does not migrate off site. 2). To increase leachate collection in the lagoon by pumping out of the four perimeter sumps during the summer months.
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	Public given environmental data on request.

Environmental Management Programme (EMP) report

Objective Category	Target	Status (% completed)	How target was progressed	Responsibility	Intermediate outcomes
Reduction of emissions to Air	Maintain operation of existing flare.	50	Existing flare was used all year by regulating the operation time to 7 hours/day and regular gas balancing. Towards the end of the year we were able to increase that time to 8hours / day.	Section Head	Reduced emissions
Groundwater protection	To increase leachate removal from site.	20	Existing ground water / leachate sumps will be turned on in the summer to check increase leachate removal from the site.	Section Head	Reduced emissions
SELECT		SELECT		SELECT	SELECT

- 1 Was noise monitoring a licence requirement for the AER period?
If yes please fill in table N1 noise summary below No

- 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? SELECT
- 3 Does your site have a noise reduction plan SELECT
- 4 When was the noise reduction plan last updated? Enter date
- 5 Have there been changes relevant to site noise emissions (e.g. plant or operational changes) since the last noise survey? SELECT

Noise
Guidance
note NG4

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 site 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?

SELECT

** please explain the reason for not taking action/resolution of noise issues?

Any additional comments? (less than 200 words)

- 1 When did the site carry out the most recent energy efficiency audit? Please list the recommendations in table 3 below
- 2 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
- 3 Where Fuel Oil is used in boilers on site is the sulphur content compliant with licence conditions? Please state percentage in additional information

Additional information

Enter date of audit	
Yes	
SELECT	

Energy Use	Previous year	Current year	Production +/- % compared to previous reporting year**	Energy Consumption +/- % vs overall site production*
Total Energy Used (MWHrs)				
Total Energy Generated (MWHrs)				
Total Renewable Energy Generated (MWHrs)				
Electricity Consumption (MWHrs)	19.08	16.64	12% reduction	
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

Water use	Water extracted		Production +/- % compared to previous reporting year**	Energy Consumption +/- % vs overall site production*	Water Emissions Volume Discharged back to environment(m ³ /yr):	Water Consumption Volume used i.e not discharged to environment e.g. released as steam m3/yr	Unaccounted for Water:
	Previous year m3/yr.	Current year m3/yr.					
Groundwater	no	no					
Surface water	no	no					
Public supply	not metered	not metered					
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

	Total	Landfill	Incineration	Recycled	Other
Hazardous (Tonnes)					
Non-Hazardous (Tonnes)					

Resource Usage/Energy efficiency summary Lic No: W0071-02 Year 2017

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					

Complaints and Incidents summary template Lic No: W0071-02 Year 2017

Complaints		Additional information
Have you received any environmental complaints in the current reporting year? If yes please complete summary details of complaints received on site in table 1 below	SELECT	no

Table 1 Complaints summary							
Date	Category	Other type (please specify)	Brief description of complaint (Free txt <20 words)	Corrective action< 20 words	Resolution status	Resolution date	Further information
	SELECT				SELECT		
	SELECT				SELECT		
	SELECT				SELECT		
	SELECT				SELECT		
	SELECT				SELECT		
Total complaints open at start of reporting year							
Total new complaints received during reporting year							
Total complaints closed during reporting year							
Balance of complaints end of reporting year							

Incidents		Additional information
Have any incidents occurred on site in the current reporting year? Please list all incidents for current reporting year in Table 2 below	Yes	

*For information on how to report and what constitutes an incident [What is an incident](#)

Table 2 Incidents summary														
Date of occurrence	Incident nature	Location of occurrence	Incident category*please refer to guidance	Receptor	Cause of incident	Other cause(please specify)	Activity in progress at time of incident	Communication	Occurrence	Corrective action<20 words	Preventative action <20 words	Resolution status	Resolution date	Likelihood of reoccurrence
22/03/2017	Trigger level reached	Other location (BH13, 14, 15)	1. Minor	Ground	Other (add details)	Ground conditions	Normal activities	EPA	Recurring	Remove more leachate		Ongoing	31/12/2018	High
31/03/2017	Trigger level reached	Perimeter gas wells	1. Minor	Air	Plant or equipment issues		Normal activities	EPA	Recurring	Balancing & increase flaring		Ongoing	31/12/2018	High
10/06/2017	Uncontrolled release	Fugitive emissions	1. Minor	Air	Plant or equipment	Damp ignitor	Normal activities	EPA	New	Dry ignitor & restart flare		Complete	11/06/2017	High
14/06/2017	Trigger level reached	Other location (SW2 & SW3)	1. Minor	Water	Other (add details)	Ground conditions	Normal activities	Inland Fisheries	Recurring	Remove more leachate		Ongoing	31/12/2018	High
14/06/2017	Trigger level reached	Other location (BH13, 14, 15)	1. Minor	Ground	Other (add details)	Ground conditions	Normal activities	EPA	Recurring	Remove more leachate		Ongoing	31/12/2018	High
24/06/2017	Uncontrolled release	Fugitive emissions	1. Minor	Air	Plant or equipment	Ignitor problem	Normal activities	EPA	Recurring	Clean ignitor		Complete	26/06/2017	High
30/06/2017	Uncontrolled release	Fugitive emissions	1. Minor	Air	Plant or equipment	Ignitor problem	Normal activities	EPA	Recurring	Clean ignitor		Complete	03/07/2017	High
14/07/2017	Uncontrolled release	Fugitive emissions	1. Minor	Air	Plant or equipment	Ignitor problem	Normal activities	EPA	Recurring	Clean ignitor		Complete	17/07/2017	High
11/08/2017	Trigger level reached	Perimeter gas wells	1. Minor	Air	Plant or equipment issues		Normal activities	EPA	Recurring	Balancing & increase flaring		Ongoing	31/12/2018	High
13/09/2017	Trigger level reached	Other location (BH13, 14, 15)	1. Minor	Air	Other (add details)	Ground conditions	Normal activities	EPA	New	Remove more leachate		Ongoing	31/12/2018	High
26/11/2017	Trigger level reached	Fugitive emissions	1. Minor	Air	Other (add details)	Power failure	Normal activities	EPA	New	Resart flare		Complete	27/11/2017	Medium
29/11/2017	Trigger level reached	Other location (SW2 & SW3)	1. Minor	Water	Other (add details)	Ground conditions	Normal activities	Inland Fisheries	Recurring	Remove more leachate		Ongoing	31/12/2018	High
29/11/2017	Trigger level reached	Other location (BH13, 14, 15)	1. Minor	Ground	Other (add details)	Ground conditions	Normal activities	EPA	Recurring	Remove more leachate		Ongoing	31/12/2017	High
17/12/2017	Uncontrolled release	Fugitive emissions	1. Minor	Air	Other (add details)	Power failure	Normal activities	EPA	New	Resart flare		Complete	18/12/2017	Medium
26/12/2017	Uncontrolled release	Fugitive emissions	1. Minor	Air	Other (add details)	Power failure	Normal activities	EPA	New	Resart flare		Complete	27/12/2017	Medium
Total number of incidents current year			15											
Total number of incidents previous year			17											
% reduction/increase			12% reduction											

WASTE SUMMARY	Lic No: W0071-02	Year: 2017
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

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

Additional Information

No	Landfill closed
----	-----------------

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

SELECT	
SELECT	

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

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 <small>European Waste Catalogue EWC codes</small>	Source of waste accepted	Description of waste accepted Please enter an accurate and detailed description - which applies to relevant EWC code <small>European Waste Catalogue EWC codes</small>	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 -

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

SELECT	
SELECT	

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

SELECT	
SELECT	
SELECT	

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?

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	Unlined area	Comments on liner type
										SELECT UNIT	SELECT UNIT	SELECT UNIT	
Whole landfill	1963	2002	No	Public	Non Hazardous		No		No	8ha		8ha	

WASTE SUMMARY

Lic No:

W0071-02

Year

2017

Table 4 Environmental monitoring-landfill on 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
No	Yes	Yes	Yes	Yes	Yes	No	No	Landfill closed

.+ 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
SELECT UNIT	SELECT UNIT					
0		0 9ha		9ha	An impermeable geocomposite layer, 800mm subsoil and 200mm top soil for 7 ha. A permeable geocomposite layer for 2 ha.	Capping work completed in April 2012

*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?

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

Yes
No

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
107.76							

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
160,656	0		No	Due to improvements in the quality and quantity of gas, flaring increased from 7hrs to 8hrs each day.



Environmental Protection Agency

Guidance to completing the PRTR workbook

PRTR Returns Workbook

Version 1.1.19

REFERENCE YEAR	2017
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1. FACILITY IDENTIFICATION

Parent Company Name	Westmeath County Council
Facility Name	Marlinstown Landfill
PRTR Identification Number	W0071
Licence Number	W0071-02

Classes of Activity

No.	class name
-	Refer to PRTR class activities below

Address 1	Marlinstown Bog
Address 2	Mullingar
Address 3	
Address 4	
Country	Westmeath
Coordinates of Location	Ireland
River Basin District	-7.29169 53.5229
NACE Code	IEEA
Main Economic Activity	3821
AER Returns Contact Name	Treatment and disposal of non-hazardous waste
AER Returns Contact Email Address	Patrick Tighe
AER Returns Contact Position	ptighe@westmeathcoco.ie
AER Returns Contact Telephone Number	SeniorExecutive Technician
AER Returns Contact Mobile Phone Number	044 9332128
AER Returns Contact Fax Number	087 7958143
Production Volume	
Production Volume Units	0.0
Number of Installations	0
Number of Operating Hours in Year	0
Number of Employees	1
User Feedback/Comments	Flaring of landfill gas resumed in December 2015. The quality and quantity of LFG was improved by maintenance work on the gas and leachate collection systems. There was a 28% increase in methane flared in 2017 compared to that in 2016. Leachate removal was 350% up on the 2016 value. This was due to repairs off the leachate pumps and the compressed air system.
Web Address	

2. PRTR CLASS ACTIVITIES

Activity Number	Activity Name
5(a)	Installations for the recovery or disposal of hazardous waste
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](#)

| PRTR# W0071 | Facility Name Marinstown Landfill | Filename Marinstown PRTR W0071_2017 xlsm | Return Year 2017 |

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SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

POLLUTANT		METHOD			QUANTITY			
No. Annex II	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
01	Methane (CH4)	C	OTH	Calculated using gas sym	0.0	26341.0	0.0	26341.0
03	Carbon dioxide (CO2)	C	OTH	Calculated using gas sym	0.0	381586.0	0.0	381586.0

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

SECTION B : REMAINING PRTR POLLUTANTS

POLLUTANT		METHOD			QUANTITY			
No. Annex II	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
					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)

POLLUTANT		METHOD			QUANTITY			
Pollutant No.	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
					0.0	0.0	0.0	0.0

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

Additional Data Requested from Landfill operators

For the purposes of the National Inventory on Greenhouse Gases, landfill operators are requested to provide summary data on landfill gas (Methane) flared or utilised on their facilities to accompany the figures for total methane generated. Operators should only report their Net methane (CH4) emission to the environment under T(total) KG/yr for Section A: Sector specific PRTR pollutants above. Please complete the table below:

Please enter summary data on the quantities of methane flared and / or utilised	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)	136831.0	C	OTH	Gassim Lite 1.5	N/A
Methane flared	110490.0	C	OTH	calculated using av flow	750.0 (Total Flaring Capacity)
Methane utilised in engine/s	0.0				0.0 (Total Utilising Capacity)
Net methane emission (as reported in Section A above)	26341.0	C	OTH	Total estimated minus metha	N/A

5. ONSITE TREATMENT & OFFSITE TRANSFERS OF WASTE

| PRTR# : W0071 | Facility Name : Marlinstown Landfill | Filename : Marlinstown PRTR W0071_2017.xlsm | Return Year : 2017 |

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Please enter all quantities on this sheet in Tonnes

3

Transfer Destination	European Waste Code	Hazardous	Quantity (Tonnes per Year)	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	Haz Waste : Name and Licence/Permit No of Next Destination Facility Non Haz Waste: 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	19 07 03	No	107.76 in 19 07 02	landfill leachate other than those mentioned	D8	C	Volume Calculation	Offsite in Ireland	Mullingar Waste Water Treatment Plant,D 0008 -01	Clonmore,Mullingar ,Co Westmeath,,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](#)