

**Facility Information Summary**

AER Reporting Year	2015
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

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.**

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 the flow through the blower was increased incrementally to an average of 492m<sup>3</sup>/hr. This was to ascertain at what abstraction levels landfill gas migration off site ceased. The trial also established that when the blower was turned off, it took 10 days for methane levels in two of the perimeter wells to exceed the 1% licence limit. In October 2015 methane levels had crept upto 15% and at the time of our EPA site inspection in December it was at 32%. On instruction from EPA, gas flaring was restarted on the 16th December. There were 33 incidents this year, one more than the previous year. Power consumption was down 7% on last year. This was due to repairing a leak on the compressed air line.

**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.

	<i>13 Nov 2015</i>
Signature Group/Facility manager <small>(or nominated, suitably qualified and experienced deputy)</small>	Date

**AIR-summary template** Lic No: W0071-02 Year 2015

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

SELECT	No monitoring of emissions from the flare had been carried out as the flare was turned off for the whole year. The flare was only restarted on the 16th December 2015.
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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

No	No monitoring of the flare was carried out as there was no burning of the gas for a substantial part of the year.
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**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 therof	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
	SELECT			SELECT		SELECT	SELECT	SELECT		
	SELECT			SELECT		SELECT	SELECT	SELECT		
	SELECT			SELECT		SELECT	SELECT	SELECT		
	SELECT			SELECT		SELECT	SELECT	SELECT		

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

<b>AIR-summary template</b>	Lic No: W0071-02	Year: 2015
<b>Continuous Monitoring</b>		

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)	No	
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	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

<b>Table A4: Solvent Management Plan Summary</b>		<u>Solvent regulations</u>		Please refer to linked solvent regulations to complete table 5 and 6	
<b>Total VOC Emission limit value</b>					
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 thereof	Compliance
					SELECT
					SELECT

<b>Table A5: Solvent Mass Balance summary</b>								
	(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. by-	Solvents destroyed onsite through	Total emission of Solvent to air (kg)
							Total	

<p>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 <u>only</u> need to complete table W1 and or W2 for storm water analysis and visual inspections</p> <p>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 <u>only any evidence of contamination noted during visual inspections</u></p>	<p>Additional information</p> <p>No There are 4 surface water monitoring points - SW1 &amp; 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.</p> <p>Yes</p>
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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
SW1	Upstream		Chloride	Half yearly			52.6	mg/L		Not sampled last year
SW1	Upstream		Ammonia (as N)	Half yearly			<0.27	mg/L		Not sampled last year
SW1	Upstream		BOD	Half yearly			2	mg/L		Not sampled last year
SW2	Upstream		Chloride	Half yearly			34.5	mg/L		This is a 14% reduction on last year
SW2	Upstream		Ammonia (as N)	Half yearly			<0.27	mg/L		This is a 46% reduction on last year
SW2	Upstream		BOD	Half yearly			<1	mg/L		This is a 54% reduction on last year
SW3	Dnstream		Chloride	Half yearly			37.3	mg/L		This is a 25% reduction on last year
SW3	downstream	SELECT	Ammonia (as N)	Half yearly		SELECT	1.01	mg/L	SELECT	This is a 56% reduction on last year
SW3	downstream	SELECT	BOD	Half yearly		SELECT	1	mg/L	SELECT	This is a 87% reduction on last year

\*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)

<p>3 Was there any result in breach of licence requirements? If yes please provide brief details in the comment section of Table W3 below</p> <p>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</p>	<p>Additional information</p> <p>SELECT</p> <p>External /Internal Lab Quality Assessment of results checklist</p> <p>SELECT</p>
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Table W3: Licensed Emissions to water and /or wastewater (sewer)-periodic monitoring (non-continuous)

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER)															
						Lic No:	W0071-02			Year	2015				
Emission reference no:	Emission released to	Parameter/ Substance <small>Note 1</small>	Type of sample	Frequency of monitoring	Averaging period	ELV or trigger values in licence or any revision thereof <small>Note 2</small>	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**

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

**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 licensed testing period (mobile bunds and chemstore included)

- 1
- 2 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)
- 3
- 4 How many bunds are on site?
- 5 How many of these bunds have been tested within the required test schedule?
- 6 How many mobile bunds are on site?
- 7 Are the mobile bunds included in the bund test schedule?
- 8 How many of these mobile bunds have been tested within the required test schedule?
- 9 How many sumps on site are included in the integrity test schedule?
- 10 How many of these sumps are integrity tested within the test schedule?  
Please list any sump integrity failures in table B1
- 11 Do all sumps and chambers have high level liquid alarms?
- 12 If yes to Q11 are these failsafe systems included in a maintenance and testing programme?
- 13 Is the Fire Water Retention Pond included in your integrity test programme?

Additional information	
Yes	1 No. leachate lagoon Observations of levels in tank indicate that there maybe a leak. Dye tests were negative. Removal of cover,
3 years	
No	
0	
0	
0	
N/A	
Yes	High level alarm on lagoon
Yes	
N/A	No fire retention pond

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?

- 15
- 16 Are channels/transfer systems to remote containment systems tested?
- 17 Are channels/transfer systems compliant in both integrity and available volume?

Commentary	
SELECT	
SELECT	
SELECT	

**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

- 2 Please provide integrity testing frequency period  
\*please note integrity testing means water tightness testing for process and foul pipelines (as required under your licence)

No	
SELECT	

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



<b>Groundwater/Soil monitoring template</b>	Lic No:	W0071-02	Year	2015
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		Comments	
1	Are you required to carry out groundwater monitoring as part of your licence requirements?	yes	6 No. monitoring boreholes around site.
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 <a href="#">Groundwater monitoring template</a> 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)	inconclusive	
6	Have actions been taken to address contamination issues? If yes please summarise remediation strategies proposed/undertaken for the site	yes	Possible leak in lagoon. Tender ready for
7	Please specify the proposed time frame for the remediation strategy	SELECT	End of 2016
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	Submitted 2016.
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?	possible	Elevated ammonia levels in groundwater down gradient of site in boggy ground.

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 interpretation as an additional section in this AER

SW3 is situated approximately 500m downstream of the landfill. It is located in agricultural land. It is possible that the elevated ammonia levels at this location could be as a result of agricultural practices in the area. However as we now suspect a leak from the lagoon, the increased levels may be as a result of this leak.

**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
Half yearly	BH31	Ammonia		Half yearly	<0.41	<0.34	mg/l			yes
Half yearly	BH31	Chloride		Half yearly	13.8	13.7	mg/l			yes
Half yearly	BH31	Conductivity		Half yearly	514	490	mScm-1			data not available in previous years.
Half yearly	BH32	Ammonia		Half yearly	<0.41	<0.34	mg/l			yes
Half yearly	BH32	Chloride		Half yearly	18.7	17.8	mg/l			no

**Groundwater/Soil monitoring template** Lic No: W0071-02 Year 2015

Half yearly	BH32	Conductivity		Half yearly	729	685	mScm-1			data not available in previous years.
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.+ 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
Half yearly	BH13	Ammonia		Half yearly	3.19	3.07	mg/l			Fall on last year
Half yearly	BH13	Chloride		Half yearly	16.4	15.7	mg/l			Increase on last year
Half yearly	BH13	Conductivity		Half yearly	263	243	mScm-1			Fall on last year
Half yearly	BH14	Ammonia		Half yearly	3.12	2.74	mg/l			Fall on last year
Half yearly	BH14	Chloride		Half yearly	30.5	20.6	mg/l			Increase on last year
Half yearly	BH14	Conductivity		Half yearly	387	345	mScm-1			Fall on last year
Half yearly	BH15	Ammonia		Half yearly	<0.41	0.4	mg/l			no data for last year
Half yearly	BH15	Chloride		Half yearly	22.4	22	mg/l			no data for last year
Half yearly	BH15	Conductivity		Half yearly	659	591	mScm-1			no data for last year
Half yearly	BH16	Ammonia		Half yearly	<0.41	0.34	mg/l			no data for last year
Half yearly	BH16	Chloride		Half yearly	27.5	27.35	mg/l			no data for last year
Half yearly	BH16	Conductivity		Half yearly	557	501	mScm-1			no data for last year

\*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 [Guidance on the Management of Contaminated Land and Groundwater at EPA Licensed Sites \(EPA 2013\)](#). (see the link in G31)

\*\*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)

	<u>Groundwater</u>	<u>Drinking water</u>		
<u>Surface</u>	<u>regulations</u>	<u>(private supply)</u>	<u>Drinking water (public</u>	<u>Interim Guideline</u>
<u>water EQS</u>	<u>GTV's</u>	<u>standards</u>	<u>supply) standards</u>	<u>Values (IGV)</u>

**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	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	Other please specify	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**

Lic No:

W0071-02

Year

2015

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 2016 are : 1) To trial a low calorific flare while ensuring landfill gas does not migrate off site. 2). Consultants to look at alternative treatment methods for landfill gas. 3) Investigate & repair possible leak to leachate lagoon to allow leachate removal as required.
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	Establish whether low calorific flare will burn the low quality and quantity gas produced.	30	Discussions with flare manufacturer on-going. Pump test to size LC flare	Section Head	As gas was not flared on site for two years, the existing flare is able to burn gas for a fixed period each day.
Groundwater protection	Repair possible leak to leachate lagoon.	40	Tender documents being prepared.	Section Head	At present no leachate is being removed off site.
SELECT		SELECT		SELECT	SELECT

<b>Noise monitoring summary report</b>	Lic No: W0071-02	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 <sub>eq</sub>	LA <sub>90</sub>	LA <sub>10</sub>	LA <sub>max</sub>	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?

** 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	
SEAI - Large Industry Energy Network (LIEN)	
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)	16.973	15.833		
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 Previous year m3/yr.	Water extracted Current year m3/yr.	Production +/- % compared to previous reporting year**	Energy Consumption +/- % vs overall site production*	Water Emissions	Water Consumption	Unaccounted for Water:
					Volume Discharged back to environment(m <sup>3</sup> /yr):	Volume used i.e not discharged to environment e.g. released as steam 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 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					





<b>WASTE SUMMARY</b>		Lic No:	W0071-02	Year	2015
<b>SECTION A-PRTR ON SITE WASTE TREATMENT AND WASTE TRANSFERS TAB- TO BE COMPLETED BY ALL IPPC AND WASTE FACILITIES</b>			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  <u>European Waste Catalogue EWC codes</u>	Source of waste accepted	Description of waste accepted Please enter an accurate and detailed description - which applies to relevant EWC code <u>European Waste Catalogue EWC codes</u>	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	
--------	--

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	
--------	--

6 Does your facility have relevant nuisance controls in place?

SELECT	
--------	--

7 Do you have an odour management system in place for your facility? If no why?

SELECT	
--------	--

8 Do you maintain a sludge register on site?

SELECT	
--------	--

**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
										ha	ha	ha	
Whole landfill	1963	2002	No	Public	Non Hazardous		No		No	8	0	8	

<b>WASTE SUMMARY</b>	Lic No:	W0071-02	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 553(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 m <sup>2</sup> 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	9			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?

Yes

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

No

Volume of leachate in reporting year(m <sup>3</sup> )	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

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 m <sup>3</sup>	Power generated (MW / KWh)	Used on-site or to national grid	Was surface emissions monitoring performed during the reporting year?	Comments
6126	0	0	No	Due to trial to prove gas was migrating off site no gas flared until 16-12-15.



Environmental Protection Agency

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Guidance to completing the PRTR workbook

# PRTR Returns Workbook

Version 1.1.19

<b>REFERENCE YEAR</b>	2015
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## 1. FACILITY IDENTIFICATION

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

### Classes of Activity

No.	class name
-	Refer to PRTR class activities below

<b>Address 1</b>	Marlinstown Bog
<b>Address 2</b>	Mullingar
<b>Address 3</b>	
<b>Address 4</b>	
<b>Country</b>	Westmeath
<b>Country</b>	Ireland
<b>Coordinates of Location</b>	-7.29169 53.5229
<b>River Basin District</b>	IEEA
<b>NACE Code</b>	3821
<b>Main Economic Activity</b>	Treatment and disposal of non-hazardous waste
<b>AER Returns Contact Name</b>	Patrick Tighe
<b>AER Returns Contact Email Address</b>	ptighe@westmeathcoco.ie
<b>AER Returns Contact Position</b>	Senior Executive Technician
<b>AER Returns Contact Telephone Number</b>	044 9332128
<b>AER Returns Contact Mobile Phone Number</b>	087 7958143
<b>AER Returns Contact Fax Number</b>	
<b>Production Volume</b>	0.0
<b>Production Volume Units</b>	
<b>Number of Installations</b>	0
<b>Number of Operating Hours in Year</b>	0
<b>Number of Employees</b>	1
<b>User Feedback/Comments</b>	No gas was flared at the landfill for the majority of the year due to poor gas quality. Following an EPA inspection in early December the flare was serviced and the flare was ignited on the 16/12/15. Leachate was only removed from the site in January & February. The leachate pumps, delivery system and compressed air systems were serviced and repaired. However no improvement in leachate into the lagoon. Dye tests were carried out on the lagoon, nothing appeared. We still believe that the lagoon liner is leaking and are preparing contract documents for its repair.
<b>Web Address</b>	

## 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)

<b>Is it applicable?</b>	
<b>Have you been granted an exemption ?</b>	
<b>If applicable which activity class applies (as per Schedule 2 of the regulations) ?</b>	

Is the reduction scheme compliance route being used ?	
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**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) ?	
--	--

4.1 RELEASES TO AIR

[Link to previous years emissions data](#)

| PRTR# W0071 | Facility Name Marlinstown Landfill | Filename W0071\_2015PRTR.xlsm | Return Year 2015 |

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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	157360.0	0.0	157360.0
03	Carbon dioxide (CO2)	C	OTH	Calculated using gas sym	0.0	444845.0	0.0	444845.0

\* 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:

Landfill: Please enter summary data on the quantities of methane flared and / or utilised	Marlinstown Landfill				
	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)	161710.0	C	OTH	Gassim Lite 1.5	N/A
Methane flared	4350.0	C	OTH	Calculated using av flow	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)	157360.0	C	OTH	Total minus flared	N/A

5. ONSITE TREATMENT & OFFSITE TRANSFERS OF WASTE

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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	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		Non	Non Haz Waste: Address of Recover/Disposer		
Within the Country	19 07 03	No	31.0 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