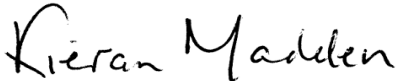


Facility Information Summary	
AER Reporting Year	2016
Licence Register Number	W0073
Name of site	Roscommon Landfill Facility
Site Location	Killarney Townland, Roscommon
NACE Code	3821
Class/Classes of Activity	3.11,3.12, 3.13, 3.4,3.6, 3.7, 4.13, 4.2, 4.3, 4.4, 4.
National Grid Reference (6E, 6 N)	
A description of the activities/processes at the site for the reporting year. This should include information such as production 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>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. 252.8 tonnes of mixed municipal waste was collected at the facility in 2016. Barna Waste service the site and remove the domestic mixed municipal waste for pre-treatment prior to disposal. No development works took place in 2016. There were no incidents or complaints reported for the year 2016.</p> <p>Surface water: The surface water parameters were within limits with exception of COD and DO, which is consistent with previous results. The higher levels of COD at SW3 and DO at SW1, SW3 and SW7, may indicate possible influence from the adjacent raised area of filling. However, all three locations are above DO recommended levels which may indicate that other factors other than the raised area of filling are responsible.</p> <p>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. However, it should be noted that the overall mean ammonia value was within the guideline limits.</p> <p>Leachate: There was a significant increase in the mean levels of ammonia, COD and Chloride in comparison to previous monitoring levels in H1 and H2 2015. The leachate mean levels for temperature, BOD and conductivity has also increased, with pH the only parameter decreasing in the monitoring period. All leachate is now pumped directly to the public sewer in Roscommon. The total quantity that was pumped in 2016 was 10,968 cubic metres.</p> <p>Landfill Gas Monitoring: There were no significantly large increases or decreases as regards the gas parameter concentrations in comparison to the previous monitoring periods. The mean methane and carbon dioxide concentrations have slightly decreased in H2 2016 from the levels recorded H1 2016. The mean oxygen concentration has increased in H2 2016 from the level recorded in the previous monitoring period, H1 2016.</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.

	30/03/2017
Signature	Date
Group/Facility manager	
(or nominated, suitably qualified and experienced deputy)	

AIR-summary template Lic No: W0073 Year 2016

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	

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	
----	--

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](#)

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
Flare Outlet	Volumetric Flow	Biannual	3000m3/hr	100 % of values < ELV	50	m3/hr				
Flare Outlet	CO	Biannual	650 mg/m3	100 % of values < ELV	2.96	mg/m3				

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

AIR-summary template	Lic No:	W0073	Year	2016
Continuous Monitoring				

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)

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

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

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

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
	<input type="text" value="SELECT"/>			<input type="text" value="SELECT"/>	<input type="text" value="SELECT"/>					
	<input type="text" value="SELECT"/>				<input type="text" value="SELECT"/>					
	<input type="text" value="SELECT"/>				<input type="text" value="SELECT"/>					
	<input type="text" value="SELECT"/>				<input type="text" value="SELECT"/>					
	<input type="text" value="SELECT"/>				<input type="text" value="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

SELECT

Table A4: Solvent Management Plan Summary	Solvent regulations	Please refer to linked solvent regulations to complete table 5 and 6
Total VOC Emission limit value		

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

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

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER)		Lic No:	W0073	Year	2016
-----------------------------------------------------------------	--	---------	-------	------	------

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 <u>only</u> need to complete table W1 and or W2 for storm water analysis and visual inspections	No All leachate is pumped directly to the public sewer in Roscommon.
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>	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	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 The surface water sampling points were within limits set with the exception of COD at SW3 and DO at SW1, SW3 and SW7. The higher levels of COD at SW3 may indicate influence from the adjacent raised area of filling. However, all three locations are above DO recommended levels which may indicate that other factors other than the raised area of filling are responsible. Manganese and Iron are non-compliant, with measured values above the recommended limit.
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 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 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
SW3	Water	Ammonia (as N)	discrete	Biannual	SELECT	0.140 (95%ile)	All values < ELV	0.091	mg/L	yes		SELECT			
SW3	Water	BOD		Biannual		<= 2.6 (95%ile)	All values < ELV	2.4	mg/L	yes					
SW3	Water	COD		Biannual		40	All values < ELV	65	mg/L	no (if no please enter details in comments box)					
SW3	Water	Chlorides (as Cl)		Biannual		250	All values < ELV	17.16	mg/L	yes					
SW3	Water	Conductivity		Biannual		2500	All values < ELV	649	µS/cm @20oC	yes					
SW3	Water	Dissolved Oxygen		Biannual		5	All values < ELV	10.17	mg/L	no (if no please enter details in comments box)					
SW3	Water	pH		Biannual		6.0<pH<9.0	All values < ELV	7.58	pH units	yes					
SW3	Water	Suspended Solids		Biannual		25	All values < ELV	14.5	mg/L	yes					
SW3	Water	Temperature		Biannual		25	All values < ELV	16	degrees C	yes					
SW3	Water	Cadmium and compounds (as Cd)		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					

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER)												
		Lic No:		W0073		Year		2016				
SW3	Water	Copper and compounds (as Cu)		Annual		30	All values < ELV	<0.003	µg/L	yes		
SW3	Water	Iron		Annual		200	All values < ELV	520	µg/L	no (if no please enter details in comments box)		
SW3	Water	Lead and compounds (as Pb)		Annual		7.2	All values < ELV	<0.3	µg/L	yes		
SW3	Water	Magnesium		Annual		None	All values < ELV	10.1	mg/L	N/A		
SW3	Water	Manganese		Annual		50	All values < ELV	110	µg/L	no (if no please enter details in comments box)		
SW3	Water	Mercury		Annual		0.05	All values < ELV	<0.02	µg/L	yes		
SW3	Water	Nickel		Annual		20	All values < ELV	4.8	µg/L	yes		
SW3	Water	Ortho-Phosphate PO4-P		Annual		n/a	All values < ELV	17.6	mg/L	n/a		
SW3	Water	Potassium		Annual		None	All values < ELV	3.02	mg/L	N/A		
SW3	Water	Sodium		Annual		200	All values < ELV	9.19	mg/L	yes		
SW4	Water	Sulphate		Annual		200	All values < ELV	<1.8	mg/L	yes		
SW5	Water	Total Phosphorus		Annual		None	All values < ELV	0.05	mg/L	N/A		
SW6	Water	Zinc		Annual		100	All values < ELV	1.9	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

5 Continuous monitoring

Does your site carry out continuous emissions to water/sewer monitoring?

SELECT	Additional Information
--------	------------------------

6 If yes please summarise your continuous monitoring data below in Table W4 and compare it to its relevant Emission Limit Value (ELV)

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

SELECT	
--------	--

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

SELECT	
--------	--

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

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

Additional information

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)

- 1 Please provide integrity testing frequency period
- 2 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 How many bunds are on site?
- 4 How many of these bunds have been tested within the required test schedule?
- 5 How many mobile bunds are on site?
- 6 Are the mobile bunds included in the bund test schedule?
- 7 How many of these mobile bunds have been tested within the required test schedule?
- 8 How many sumps on site are included in the integrity test schedule?
- 9 How many of these sumps are integrity tested within the test schedule?

Yes	Leachate lagoon only containment structure on site.
3 years	
No	Leachate lagoon only containment structure on site.
1	
N/A	
0	
SELECT	
SELECT	
SELECT	
SELECT	

- Please list any sump integrity failures in table B1**
- 10 Do all sumps and chambers have high level liquid alarms?
 - 11 If yes to Q11 are these failsafe systems included in a maintenance and testing programme?
 - 12 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? [bundings and storage guidelines](#)

- 15 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 withing the integrity test period as specified**

1 Please provide integrity testing frequency period

*please note integrity testing means water tightness testing for process and foul pipelines (as required under your licence)

SELECT
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 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: W0073	Year: 2016
---------------------------------------------	---------------	------------

		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.	yes	Groundwater monitoring template
5	Is the contamination related to operations at the facility (either current and/or historic)	yes	Leachate from closed landfill appears to be contributing to ammonia levels in groundwater.
6	Have actions been taken to address contamination issues? If yes please summarise remediation strategies proposed/undertaken for the site	yes	Installation of active pumping system will not allow leachate to build up and stagnate.
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 assessment been carried out for the site?	yes	Groundwater Risk Assessment
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 elevated ammonia in groundwater downgradient of the landfill.

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

The levels of pH, conductivity, cadium, chromium, copper, lead, mercury, nickel, sodium, sulphate and total phosphorus are all within the guidelines set out for groundwater.

Ammonia was the only groundwater parameter with levels exceeding the guideline limits at the following sampling locations; GW2, GW4, GW6 and RC01. However, the overall mean ammonia value was within the guideline limits. 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. The wells up gradient of the site with elevated ammonia concentrations indicate that a local source of ammonia is contributing to groundwater in the area.

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
07/12/2016	GW2	Ammonia	Competent Lab	Biannually	0.151	0.151	mg/l	0.065-0.175	IGV	no
08/12/2016	GW2	Conductivity	Competent Lab	Biannually	816	816	µS/cm	800-1875	IGV	no
07/12/2016	GW2	Dissolved Oxygen	Competent Lab	Biannually	10.12	10.12	mg/l		IGV	no
07/12/2016	GW2	pH	Competent Lab	Biannually	7.16	7.16	pH Units		IGV	no
09/12/2016	GW2	Cadmium	Competent Lab	Annually	<0.1	<0.1	ug/l	3.75	IGV	no
09/12/2016	GW2	Chromium	Competent Lab	Annually	<1	<1	ug/l	37.5	IGV	no
09/12/2016	GW2	Copper	Competent Lab	Annually	<0.003	<0.003	mg/l	1500	IGV	no
09/12/2016	GW2	Iron	Competent Lab	Annually	<20	<20	ug/l		IGV	no
09/12/2016	GW2	Lead	Competent Lab	Annually	<0.3	<0.3	ug/l	18.8	IGV	no
09/12/2016	GW2	Magnesium	Competent Lab	Annually	15.9	15.9	mg/l		IGV	no
09/12/2016	GW2	Manganese	Competent Lab	Annually	62	62	ug/l		IGV	no
09/12/2016	GW2	Mercury	Competent Lab	Annually	<0.02	<0.02	ug/l	0.75	IGV	no
09/12/2016	GW2	Nickel	Competent Lab	Annually	7	7	ug/l	15	IGV	no

Groundwater/Soil monitoring template					Lic No:	W0073		Year	2016	
12/12/2016	GW2	Potassium	Competent Lab	Annually	6.28	6.28	mg/l		IGV	no
07/12/2016	GW2	Sodium	Competent Lab	Annually	19.96	19.96	mg/l	150	IGV	no
07/12/2016	GW2	Sulphate	Competent Lab	Annually	26.95	26.95	mg/l	187.5	IGV	no
07/12/2016	GW2	Temperature	Competent Lab	Biannually	16	16	Degrees C		IGV	no
		Total			<0.01	<0.01				
09/12/2016	GW2	Phosphorus	Competent Lab	Annually			mg/l	35	IGV	no
09/12/2016	GW2	Zinc	Competent Lab	Annually	8.2	8.2	ug/l		IGV	no

.+ where average indicates arithmetic mean

[supply standards](#) [Values \(IGV\)](#)

Groundwater/Soil monitoring template	Lic No:	W0073	Year	2016
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[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	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	SELECT	
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	
13	Financial provision for Closure expiry date	Enter expiry date	

Environmental Management Programme/Continuous Improvement Programme template	Lic No:	W0073	Year	2016
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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: 2016

- 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

2016

Additional information

- 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

[SEAI - Large Industry Energy Network \(LIEN\)](#)

Enter date of audit	
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)	6.85MWHrs	10.68 MWHrs		
Total Energy Generated (MWHrs)				
Total Renewable Energy Generated (MWHrs)				
Electricity Consumption (MWHrs)	6.85MWHrs	10.68 MWHrs	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
Groundwater						
Surface water						
Public supply						
Recycled water						
Total						Unaccounted for Water:

* 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 2016

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	2016
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 **1 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
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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 European Waste Catalogue EWC codes	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

N/A	No waste processing on site
Yes	

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

Yes	
No	Landfill closed in 2001
N/A	

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
										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	2016
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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 with EPA	Yes, biannual in agreement with EPA	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
SELECT UNIT	SELECT UNIT					
0		Entire Lanfill			GCL, 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
10968	69.756	588.542	438.61032	985.475	None	N/A	

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
38,953	No	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	2016
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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	
	Roscommon
Country	Ireland
Coordinates of Location	-8.15598 53.6378
River Basin District	IEGBNISH
NACE Code	3821
Main Economic Activity	Treatment and disposal of non-hazardous waste
AER Returns Contact Name	Kieran Madden
AER Returns Contact Email Address	kmadden@roscommoncoco.ie
AER Returns Contact Position	Environment Department
AER Returns Contact Telephone Number	090 6637185

AER Returns Contact Mobile Phone Number	087 2486721
AER Returns Contact Fax Number	
Production Volume	0.0
Production Volume Units	
Number of Installations	0
Number of Operating Hours in Year	0
Number of Employees	0
User Feedback/Comments	
Web Address	

2. PRTR CLASS ACTIVITIES

Activity Number	Activity Name
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) ?	
------------------------------------------------------------------------------------------------------------	--

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# : W0073 | Facility Name : Roscommon Landfill Facility | Filename : MGE0016RP0069_PRTR.xls | Return Year : 2016 |

03/04/2017 12:07

SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

RELEASES TO AIR		METHOD			Please enter all quantities in this section in KGs			
POLLUTANT		Method Used			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
01	Methane (CH4)	C	OTH	Landfill Gas Survey and GasSim	6340.0	6340.0	0.0	0.0
03	Carbon dioxide (CO2)	C	OTH	Landfill Gas Survey and GasSim	14732.0	14732.0	0.0	0.0

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

SECTION B : REMAINING PRTR POLLUTANTS

RELEASES TO AIR		METHOD			Please enter all quantities in this section in KGs			
POLLUTANT		Method Used			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)

RELEASES TO AIR		METHOD			Please enter all quantities in this section in KGs			
POLLUTANT		Method Used			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:	Roscommon Landfill Facility					
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)	32551.0	C	OTH	Gassim 2.5	N/A
	Methane flared	26211.0	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)	6340.0	C	OTH	Gassim and Landfill Gas Sur	N/A	

4.2 RELEASES TO WATERS

[Link to previous years emissions data](#)

| PRTR#: W0073 | Facility Name : Roscommon Landfill Facility | Filename : MGE0016RP0060_PRTR.xls | Return Year : 2016 |

03/04/2017 12:07

SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

Data on ambient monitoring of storm/surface water or groundwater, conducted as part of your licence requirements, should NOT be submitted under AER / PRTR Reporting as this only concerns Releases from your facility

POLLUTANT		RELEASERS TO WATERS			Please enter all quantities in this section in KGs			
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 PRTR POLLUTANTS

POLLUTANT		RELEASERS TO WATERS			Please enter all quantities in this section in KGs			
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 C : REMAINING POLLUTANT EMISSIONS (as required in your Licence)

POLLUTANT		RELEASERS TO WATERS			Please enter all quantities in this section in KGs			
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

4.3 RELEASES TO WASTEWATER OR SEWER

[Link to previous years emissions data](#)

| PRTR# : W0073 | Facility Name : Roscommon Landfill Facility | Filename : MGE0016RP0060_PRT

03/04/2017 12:07

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
						0.0	0.0	0.0	0.0
						0.0	0.0	0.0	0.0
						0.0	0.0	0.0	0.0
						0.0	0.0	0.0	0.0
						0.0	0.0	0.0	0.0
						0.0	0.0	0.0	0.0
						0.0	0.0	0.0	0.0
						0.0	0.0	0.0	0.0
						0.0	0.0	0.0	0.0
						0.0	0.0	0.0	0.0
						0.0	0.0	0.0	0.0
						0.0	0.0	0.0	0.0
						0.0	0.0	0.0	0.0
						0.0	0.0	0.0	0.0
						0.0	0.0	0.0	0.0
						0.0	0.0	0.0	0.0
						0.0	0.0	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

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
						0.0	0.0	0.0	0.0
						0.0	0.0	0.0	0.0
						0.0	0.0	0.0	0.0
						0.0	0.0	0.0	0.0
						0.0	0.0	0.0	0.0
						0.0	0.0	0.0	0.0
						0.0	0.0	0.0	0.0
						0.0	0.0	0.0	0.0
						0.0	0.0	0.0	0.0
						0.0	0.0	0.0	0.0
						0.0	0.0	0.0	0.0
						0.0	0.0	0.0	0.0
						0.0	0.0	0.0	0.0
						0.0	0.0	0.0	0.0
						0.0	0.0	0.0	0.0
						0.0	0.0	0.0	0.0
						0.0	0.0	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

4.4 RELEASES TO LAND

[Link to previous years emissions data](#)

| PRTR# : W0073 | Facility Name : Roscommon Landfill Facility | Filename : MGE0016RP0060_PRTR.xls | Return Year : 2016 |

03/04/2017 12:07

SECTION A : PRTR POLLUTANTS

POLLUTANT		RELEASERS TO LAND			Please enter all quantities in this section in KGs		
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
					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)

POLLUTANT		RELEASERS TO LAND			Please enter all quantities in this section in KGs		
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
					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 : MGE0016RP0060_PRTR.xls | Return Year : 2016 |

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Please enter all quantities on this sheet in Tonnes

10

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 : Name and Licence/Permit No of Recoverer/Disposer	Haz Waste : Address of Next Destination Facility Non Haz Waste: Address of Recoverer/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	15 01 02	No	0.41	aeroboard	R5	M	Weighed	Offsite in Ireland	Barna Waste,W0106-02	Carrowbrowne,Headford Road,Galway,,Ireland		
Within the Country	15 01 06	No	49.443	mixed packaging landfill leachate other than those mentioned	R4	M	Weighed	Offsite in Ireland	Barna Waste,W0106-02	Carrowbrowne,Headford Road,Galway,,Ireland		
Within the Country	19 07 03	No	3873.0	cardboard, newspaper, glossy magazines, in 19 07 02	D8	M	Weighed	Offsite in Ireland	Roscommon Wastewater Treatment Plant,,"	,",","Roscommon,,","Ireland		
Within the Country	20 01 01	No	200.441	milk cartons	R3	M	Weighed	Offsite in Ireland	Barna Waste,W0106-02	Carrowbrowne,Headford Road,Galway,,Ireland		
To Other Countries	20 01 02	No	33.825	glass	R5	M	Weighed	Abroad	Glassdon Recycling,.	Antrim,BT41 3SE,United Kingdom		
Within the Country	20 01 11	No	7.12	textiles	R3	M	Weighed	Offsite in Ireland	Textile Recycling Ltd./Barna Waste,W0106-02	Galway,,Ireland		
To Other Countries	20 01 27	Yes	5.961	household hazardous batteries and accumulators included in 16 06 01, 16 06 02 or 16 06 03 and unsorted batteries and accumulators containing these	R2	M	Weighed	Abroad	Indaver / Barna Waste,W0036-02 / W0106-02	Dublin Port / Carrowbrowne,Dublin 1/ Headford Road,Dublin / Galway,,Ireland	ATM (Afvalstoffen Terminal Moerdijk B.V.),09U001775,Viasweg 12,Moerdijk,4780 AA Moerdijk,PO Box 30,Netherlands	Viasweg 12,Moerdijk,4780 AA Moerdijk,PO Box 30,Netherlands
Within the Country	20 01 33	Yes	1.549	batteries 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	85.755	hazardous components	R4	M	Weighed	Offsite in Ireland	KMK Metal Recycling Ltd.,W01130-03	Road,Tullamore,Co. Offaly,Ireland	Abroad (commercially sensitive information),,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
Within the Country	20 01 38	No	34.08	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	27.02	metals	R4	M	Weighed	Offsite in Ireland	Barna Waste,W0106-02	Carrowbrowne,Headford Road,Galway,,Ireland		
Within the Country	20 03 99	No	252.8	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](#)