Facility Information Summary	
AER Reporting Year	**2015**
Licence Register Number	**W0025-04**
Name of site	**Powerstown Landfill**
Site Location	**Powerstown, County Carlow**
NACE Code	**3821**
Class/Classes of Activity	**A2**
National Grid Reference (6E, 6 N)	E271,000 N168,800

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.

Activities consisted of the landfilling of munical waste (56652 tonnes) and the operation of a civic amenity site (1015 tonnes)
No major infrastructure changes occurred during the reporting year
Environmental performance is summarised as follows:
Air: flare emissions in compliance
Noise: emissions in compliance
Goundwater: elevated downgradient ammonia, no trigger levels exceeded.
Surface water: one SS exceedance Q3
Leachate: no applicable ELV's

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 (or nominated, suitably qualified and experienced deputy)	Date

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Answer all questions and complete all tables where relevant

			Additional information
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	Yes	LFGF1

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 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
LFGF1	Nitrogen oxides (NOx/NO2)	annual	150	No 30min mean can exceed the ELV	55.7	mg/Nm3	SELECT	OTH	153.7	no significant change
LFGF1	Carbon monoxide (CO)	annual		SELECT	3.17	mg/Nm3	SELECT	OTH	8.8	
LFGF1	Sulphur oxides (SOx/SO2)	annual		SELECT	383	mg/Nm3	SELECT	OTH	1059	
LFGF1	Volatile organic compounds (as TOC)	annual			3.7	mg/Nm3		OTH	10.2	
LFGF1	Chlorine and inorganic compounds (as HCl)	annual			2.08	mg/Nm3		OTH	5.7	
LFGF1	Fluorine and inorganic compounds (as HF)	annual			4.64	mg/Nm3		OTH	12.8	
LFGf1	SELECT	annual		SELECT		SELECT	SELECT	SELECT		

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

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Continuous Monitoring				

4	Does your site carry out continuous air emissions monitoring?	SELECT	Continuous Monitoring carried out at Landfill Flare LFGF1, for temperature, flow, CH4, CO2, CO, O2. There are no ELV for these parameters. The results were summarised and incorporated into the landfill gas survey for the site.

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	Yes	
6	Do you have a proactive service agreement for each piece of continuous monitoring equipment?	Yes	
7	Did your site experience any abatement system bypasses? If yes please detail them in table A3 below	SELECT	NA

Table A2: Summary of average emissions -continuous monitoring

Emission reference no:	Parameter/ Substance	ELV in licence or any revision therof	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

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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	

Table A4: Solvent Management Plan Summary
Total VOC Emission limit value

Solvent regulations — Please refer to linked solvent regulations to complete table 5 and 6

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	

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER) Lic No: W0025-04 Year 2015

			Additional information
1	Does your site have licensed emissions direct to surface water or direct to sewer? If yes please complete table W2 and W3 below for the current reporting year and answer further questions. If **you do not have** licenced emissions you only need to complete table W1 and or W2 for storm water analysis and visual inspections	Yes	Licensed Emissions from Surface Water Pond Outlet (SWLO)
2	Was it a requirement of your licence to carry out visual inspections on any surface water discharges or watercourses on or near your site? If yes please complete table W2 below summarising only any evidence of contamination noted during visual inspections	Yes	No evidence of any contamination

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
	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)

					Additional information
3	Was there any result in breach of licence requirements? If yes please provide brief details in the comment section of Table W3 below			No	
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	External /Internal Lab Quality checklist	Assessment of results checklist	Yes	

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
SWLO	Water	volumetric flow	SELECT	continuous	every 2 mins		SELECT		m3/day	SELECT	SELECT	SELECT			
SWLO	Water	Ammonia (as N)	discrete	quarterly		0.065		0.035	mg/L	yes	DISCRETE METHODS	UK Standard method 1981	EPA Method W07		Averaged quarterly results
SWLO	Water	Dissolved Oxygen	discrete	quarterly		-		90.675	% Sat		Dissolved Oxygen Meter (Electrode)	APHA / AWWA "Standard Methods"	APHA Section 4500-0 G		Averaged quarterly results.
SWLO	Water	Conductivity	discrete	quarterly		2500		672.5	µS/cm@25oC	yes	Conductivity Meter (Electrode)	APHA / AWWA "Standard Methods"	APHA Section 2510-B		Averaged quarterly results.
SWLO	Water	COD	discrete	quarterly				20	mg/L		Digestion + Spectrophotometry	ISO 15705:2002	EPA Method W01		Averaged quarterly results.
SWLO	Water	Chlorides (as Cl)	discrete	quarterly		250		20.25	mg/L	yes	DISCRETE METHODS	US EPA	EPA Method W07		Averaged quarterly results.
SWLO	Water	pH	discrete	quarterly		6.5 - 9.5		7.5	pH units	yes	pH Meter (Electrode)	APHA / AWWA "Standard Methods"	APHA Section 4500 H+		Averaged quarterly results.
SWLO	Water	Suspended Solids	discrete	quarterly		35	<35 ELV	34.5	mg/L	see comments	Gravimetric analysis	ISEN 872:2005	EPA Method W03		Averaged quarterly results. Q3 value exceeded ELV (97)
SWLO	Water	Temperature	discrete	quarterly		25		11.5	degrees C	yes	Thermometry				Averaged quarterly results.
SWLO	Water	BOD	discrete	quarterly				<2.0							Averaged quarterly results.
SWLO	Water	Orthophosphate (P)	discrete	annually		0.035		0.01	mg/l		DISCRETE METHODS	US EPA	EPA W07		annual results
SWLO	Water	Sulphate	discrete	annually		250		39	mg/L	yes	Ion Chromatography	APHA / AWWA "Standard Methods"	J01		annual results
SWLO	Water	Alkalinity	discrete	annually				279	mg/L		DISCRETE METHODS	APHA / AWWA "Standard Methods"	APHA Section 2320B		annual results
SWLO	Water	Boron	discrete	annually		1000		0.02	µg/L	yes	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	B.S. (British Standard)	EPA W05		annual results
SWLO	Water	Cadmium and compounds (as Cd)	discrete	annually		5		<0.2	µg/L	yes	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	B.S. (British Standard)	EPA W05		annual results
SWLO	Water	Calcium	discrete	annually				94	mg/L		ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	B.S. (British Standard)	EPA W05		annual results
SWLO	Water	Copper	discrete	annually		2000		1	µg/L	yes	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	B.S. (British Standard)	EPA W05		annual results
SWLO	Water	Iron	discrete	annually		200		10	µg/L	yes	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	B.S. (British Standard)	EPA W05		annual results
SWLO	Water	lead	discrete	annually		10		1	µg/L	yes	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	B.S. (British Standard)	EPA W05		annual results
SWLO	Water	Magnesium	discrete	annually				13	mg/l		ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	B.S. (British Standard)	EPA W05		annual results
SWLO	Water	manganese	discrete	annually		50		5	µg/L	yes	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	B.S. (British Standard)	EPA W05		annual results

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SWLO	Water	Mercury	discrete	annually		1		0.5	µg/L	yes	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	B.S. (British Standard)	EPA W05		annual results
SWLO	Water	Nickel	discrete	annually		20		1	µg/L	yes	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	B.S. (British Standard)	EPA W05		annual results
SWLO	Water	Potassium	discrete	annually				1.7	mg/L		ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	B.S. (British Standard)	EPA W05		annual results
SWLO	Water	Sodium	discrete	annually		200		8.9	mg/L	yes	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	B.S. (British Standard)	EPA W05		annual results
SWLO	Water	Zinc	discrete	annually				13	µg/L		ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	B.S. (British Standard)	EPA W05		annual results

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

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER) Lic No: W0025-04 Year 2015

Continuous monitoring

		Additional Information
Does your site carry out continuous emissions to water/sewer monitoring?	No	Continuous monitoring for TOC is carried out at the inlet to the surface water pond as per licence requirements but not at the emissions point. There is no ELV set in the licence for TOC.

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**	No	
7	Do you have a proactive service contract for each piece of continuous monitoring equipment on site?	Yes	
8	Did abatement system bypass occur during the reporting year? **If yes please complete table W5 below**	N/A	

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/Pipeline testing template

Lic No: W0025-04 Year 2015

Bund testing

dropdown menu click to see options

			Additional information
1	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)	Yes	Condition 3.11 of licence requires tank and drum storage areas to be tested. This condition is relevant only to Leachate Tank and Leachate Lagoon.
2	Please provide integrity testing frequency period	3 years	
3	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)	No	
4	How many bunds are on site?	2	1 bund around leachate tank, 1 storage lagoon
5	How many of these bunds have been tested within the required test schedule?	2	
6	How many mobile bunds are on site?	0	
7	Are the mobile bunds included in the bund test schedule?	N/A	
8	How many of these mobile bunds have been tested within the required test schedule?	N/A	
9	How many sumps on site are included in the integrity test schedule?	0	
10	How many of these sumps are integrity tested within the test schedule?	N/A	
	Please list any sump integrity failures in table B1		
11	Do all sumps and chambers have high level liquid alarms?	No	
12	If yes to Q11 are these failsafe systems included in a maintenance and testing programme?	SELECT	
13	Is the Fire Water Retention Pond included in your integrity test programme?	N/A	

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)
LT Leachate Tank	reinforced concrete	glass lined	Leachate	440	400	Structural assessment		Dec-13	Yes	Pass		SELECT	2016	
LG Leachate Lagoon	other (please specify)	Lined and covered lagoon	Leachate	350		Hydraulic test	BS8007	Dec-13	Yes	Pass			2016	

* Capacity required should comply with 25% or 110% containment rule as detailed in your licence

			Commentary
15	Has integrity testing been carried out in accordance with licence requirements and are all structures tested in line with BS8007/EPA Guidance?	bunding and storage guidelines	Yes	
16	Are channels/transfer systems to remote containment systems tested?		No	
17	Are channels/transfer systems compliant in both integrity and available volume?		SELECT	

Pipeline/underground structure testing

1	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**	No	
2	Please provide integrity testing frequency period	SELECT	

*please note integrity testing means water tightness testing for process and foul 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: W0025-04 Year 2015

			Comments	
1	Are you required to carry out groundwater monitoring as part of your licence requirements?	yes		Please provide an interpretation of groundwater monitoring data in the interpretation box below or if you require additional space please include a groundwater/contaminated land monitoring results interpretaion as an additional section in this AER
2	Are you required to carry out soil monitoring as part of your licence requirements?	no		
3	Do you extract groundwater for use on site? If yes please specify use in comment section	no		
4	Do monitoring results show that groundwater generic assessment criteria such as GTVs or IGVs are exceeded or is there an upward trend in results for a substance? If yes, please complete the Groundwater Monitoring Guideline Template Report (link in cell G8) and submit separately through ALDER as a licensee return AND answer questions 5-12 below. Groundwater monitoring template	yes	A Tier 3 risk assessment for Powerstown Landfill was submitted to the EPA. This report contains the requirement of the groundwater monitoring template and the conceptual site model.	Groundwater quality results were submitted to the EPA during 2015 in the form of quarterly and annual groundwater compliance monitoring reports. Quarterly groundwater monitoring results for Powerstown Landfill were compared to S.I. No 9 of 2010 for the 4 monitoring events. Groundwater results were also compared to groundwater trigger levels (GTLs)for the site. Following the completion of the Tier 3 risk Assessment report, groundwater compliance values were derived for BH1, BH2, BH3 and GW8 which supersede previous groundwater trigger levels. During 2015 ammonia levels at GW1 exceeded the upper threshold value for ammonia set out in S.I. No 9 of 2010. VOC's were not detected at RCA2 and GW8 during the annual monitoring event.
5	Is the contamination related to operations at the facility (either current and/or historic)	yes		
6	Have actions been taken to address contamination issues?If yes please summarise remediation strategies proposed/undertaken for the site	yes	Capping of unlined cells completed. Tier 3 Risk Assessment completed. Recommendations as per section 9 of the Tier 3 Risk assessment are currently being carried out for the Powerstown Stream and groundwater monitoring.	
7	Please specify the proposed time frame for the remediation strategy	SELECT		
8	Is there a licence condition to carry out/update ELRA for the site?	SELECT		
9	Has any type of risk assesment been carried out for the site?	yes	Tier 3 Risk assessment submitted to EPA .	
10	Has a Conceptual Site Model been developed for the site?	yes		
11	Have potential receptors been identified on and off site?	N/A		
12	Is there evidence that contamination is migrating offsite?	yes		

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
2015	RCA2	Ammonia (as N)		quarterly	0.048	0.027	mg/l	0.175	S.I No 9 2010	no
		chloride		quarterly	21	20.3	mg/l	187.5	S.I No 9 2010	no
		Dissolved Oxygen		quarterly	76	72	% saturation			no
		Conductivity		quarterly	839	796	uS/cm	1875	S.I No 9 2010	no
		pH		quarterly	7.3	7.2	pH units			no
		Temp		quarterly	11.3	9.1	oC			no
		TOC		quarterly	1	1	mg/l			no
		boron		annually	nm		ug/l	750	S.I No 9 2010	no
		cadmium		annually	<0.020		ug/l	3.75	S.I No 9 2010	no
		calcium		annually	120		mg/l			no
		total chromium		annually	1.8		ug/l	37.5	S.I No 9 2010	no
		copper		annually	<1.0		ug/l	1500	S.I No 9 2010	no
		iron		annually	170		ug/l			no
		lead		annually	<1.0		ug/l	18.75	S.I No 9 2010	no
		magnesium		annually	16		ug/l			no
		manganese		annually	35		ug/l			no
		nickel		annually	<1.0		ug/l	15	S.I No 9 2010	no
		potassium		annually	1.3		mg/l			no
		sodium		annually	7		mg/l	150	S.I No 9 2010	no
		zinc		annually	18		ug/l			no
		fluoride		annually	<0.020		mg/l			no
		mercury		annually	<0.50		ug/l	0.75	S.I No 9 2010	no
		sulphate		annually	44		mg/l	187.5	S.I No 9 2010	no
		total alkalinity		annually	313		mg/l			no
		Orthophosphate		annually	0.012		mg/l			no
		TON		annually	11		mg/l			no

.+ where average indicates arithmetic mean

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

Groundwater/Soil monitoring template Lic No: W0025-04 Year 2015

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
2015	GW8	Ammonia (as N)		quarterly	0.096	0.053	mg/l	0.175	S.I No 9 2010	no
		chloride		quarterly	26	23.5	mg/l	187.5	S.I No 9 2010	no
		Dissolved Oxygen		quarterly	31	31	% saturation			no
		Conductivity		quarterly	781	734	uS/cm	1875	S.I No 9 2010	no
		pH		quarterly	7.3	7.1	pH units			no
		Temp		quarterly	12.1	11.6	oC			no
		TOC		quarterly	1	1	mg/l			no
		boron		annually	nm	nm	ug/l	750	S.I No 9 2010	no
		cadmium		annually	0.02		ug/l	3.75	S.I No 9 2010	no
		calcium		annually	99		mg/l			no
		total chromium		annually	1.8		ug/l	37.5	S.I No 9 2010	no
		copper		annually	<1		ug/l	1500	S.I No 9 2010	no
		iron		annually	79		ug/l			no
		lead		annually	<1		ug/l	18.75	S.I No 9 2010	no
		magnesium		annually	16		ug/l			no
		manganese		annually	20		ug/l			no
		nickel		annually	<1		ug/l	15	S.I No 9 2010	no
		potassium		annually	2.7		mg/l			no
		sodium		annually	8.8		mg/l	150	S.I No 9 2010	no
		zinc		annually	12		ug/l			no
		fluoride		annually	<0.20		mg/l			no
		mercury		annually	<0.5		ug/l	0.75	S.I No 9 2010	no
		sulphate		annually	43		mg/l	187.5	S.I No 9 2010	no
		total alkalinity		annually	278		mg/l			no
		Orthophosphate		annually	<0.01		mg/l			no
							SELECT			SELECT

*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)

Surface water EQS | Groundwater regulations GTV's | Drinking water (private supply) standards | Drinking water (public supply) standards | Interim Guideline Values (IGV)

Groundwater/Soil monitoring template Lic No: W0025-04 Year 2015

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:	W0025-04	Year	2015

Click here to access EPA guidance on Environmental Liabilities and Financial provision

			Commentary
1	ELRA initial agreement status	Submitted and agreed by EPA	
2	ELRA review status	Review required and completed	
3	Amount of Financial Provision cover required as determined by the latest ELRA	Specify	3,474,000
4	Financial Provision for ELRA status	Required but not submitted	
5	Financial Provision for ELRA - amount of cover	Specify	
6	Financial Provision for ELRA - type	Public Liability Insurance with Environmental Impairment Liability cover,	
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	Review required and completed	
10	Financial Provision for Closure status	Required but not submitted	
11	Financial Provision for Closure - amount of cover	Specify	7,415,000
12	Financial Provision for Closure - type	cash deposit	
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	
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	

Environmental Management Programme (EMP) report

Objective Category	Target	Status (% completed)	How target was progressed	Responsibility	Intermediate outcomes
Reduction of emissions to Air	~~extend gas collection~~ cell 17/18 review odour management plan inspect and seal wellheads Update gas production model Carry out gas utilisation study	90	additional gas wells update plan inspections completed new gas model completed	Individual	Reduced emissions
Groundwater protection	Complete Tier 3 Risk Assessment	90	report submitted to EPA	Individual	Increased compliance with licence conditions
Additional improvements	Review bird control tender Review pest control tender Investigate leachate treatment	90	new tenders in place leachate trials completed	Individual	Increased compliance with licence conditions

Noise monitoring summary report

Lic No: W0025-04 Year 2015

1	Was noise monitoring a licence requirement for the AER period? If yes please fill in table N1 noise summary below	Yes
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)	Yes
3	Does your site have a noise reduction plan	No
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?	No

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)?
10/12/2015	15:14	opposite old entrance	S1	71	60	75	85	No	SELECT	no audible site activities, noise sources are from motorway and regional road	Yes
10/12/2015	15:44	opposite old entrance	S1	71	61	75	81	No		no audible site activities, noise sources are from motorway and regional road	Yes
10/12/2015	16:14	opposite old entrance	S1	72	60	75	80	No		no audible site activities, noise sources are from motorway and regional road	Yes
10/12/2015	11:49	local access road	S2	68	51	62	93	No		no audible site activities, noise sources are from local road and quarry to the south	Yes
10/12/2015	12:19	local access road	S2	67	51	61	92	No		no audible site activities, noise sources are from local road and quarry to the south	Yes
10/12/2015	12:50	local access road	S2	65	49	61	89	No		no audible site activities, noise sources are from local road and quarry to the south	Yes
10/12/2015	13:28	near old entrance	N4	57	51	60	69	No		no audible site activities, noise sources are from motorway and regional road	Yes
10/12/2015	14:08	near old entrance	N4	58	53	61	67	No		no audible site activities, noise sources are from motorway and regional road	Yes
10/12/2015	14:38	near old entrance	N4	58	52	61	68	No		no audible site activities, noise sources are from motorway and regional road	Yes
10/12/2015	08:30	near new entrance	N5	52	48	53	73	No		minor audible site activities, noise sources are from local road and quarry to the south	Yes
10/12/2015	09:30	near new entrance	N5	51	47	51	75	No		minor audible site activities, noise sources are from local road and quarry to the south	Yes
10/12/2015	09:31	near new entrance	N5	52	46	51	78	No		minor audible site activities, noise sources are from local road and quarry to the south	Yes
10/12/2015	10:06	east of railway line	N6	49	42	48	68	Yes		minor audible site activities, noise sources are from local road and quarry to the south	Yes
10/12/2015	10:36	east of railway line	N6	49	44	49	69	No		minor audible site activities, noise sources are from local road and quarry to the south	Yes
10/12/2015	11:07	east of railway line	N6	49	44	49	73	No		minor audible site activities, noise sources are from local road and quarry to the south	Yes

*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)

Resource Usage/Energy efficiency summary

Lic No: W0025-04 Year 2015

		Additional information	
1	When did the site carry out the most recent energy efficiency audit? Please list the recommendations in table 3 below	07/01/2014	
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	Yes	SEAI - Large Industry Energy Network (LIEN); Carlow County Council has signed up to Energy MAP
3	Where Fuel Oil is used in boilers on site is the sulphur content compliant with licence conditions? Please state percentage in additional information	N/A	

Yes	
No	
accredited programme	
energy audit	
other initiative (please specify)	

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)				
Total Energy Generated (MWHrs)				
Total Renewable Energy Generated (MWHrs)				
Electricity Consumption (MWHrs)	85.11	95.34		
Fossil Fuels Consumption:				
Heavy Fuel Oil (m3)				
Light Fuel Oil (m3)	55	61		
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^3yr):	Volume used i.e not discharged to environment e.g. released as	Unaccounted for Water:
Groundwater							
Surface water							
Public supply	72.87	81.46					
Recycled water							
Total							

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

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

Table R3 Waste Stream Summary

	Total	Landfill	Incineration	Recycled	Other
Hazardous (Tonnes)	32.08			32.08	
Non-Hazardous (Tonnes)	57637.29	56652.84		984.45	

Resource Usage/Energy efficiency summary Lic No: W0025-04 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
07/01/2014	Reduce site MIC from 74 to <29	Contact service provider	energy audit	25	2014	Energy Engineer		completed during 2014
07/01/2014	Remove storage heaters and install de-humidifier in storage containers	Remove storage heaters and install de-humidifier in storage containers	energy audit	25	2014	Site Management		Completed February 2014
07/01/2014	Replace convector heater with radiant heater with appropriate controls	Replace convector heater with radiant heater with appropriate controls	energy audit	25	2014	Site Management		use of heaters reviewed within this area
07/01/2014	Improve housekeeping, optimise PC usage and lighting	Ensure lights and pc's and shut down when not in use	energy audit	minimal	2014	all staff	continuously	ongoing
			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: W0025-04 Year 2015

Complaints

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	Yes	Additional information

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
Jan-15	Odour		odour nuisance	additional cover	Complete	30/01/2015	
Jan-15	Odour		odour nuisance	additional cover	Complete	30/01/2015	
Jan-15	Odour		odour nuisance	additional cover	Complete	30/01/2015	
Jan-15	Odour		odour nuisance	additional cover	Complete	30/01/2015	
Jan-15	Odour		odour nuisance	additional cover	Complete	30/01/2015	
Jan-15	Odour		odour nuisance	additional cover	Complete	30/01/2015	
Apr-15		flies	flies near landfill	additional cover	Complete	30/04/2015	
May-15		flies	flies near landfill	additional cover	Complete	31/05/2015	
May-15		flies	flies near landfill	additional cover	Complete	31/05/2015	
Jun-15		flies	flies near landfill	additional cover	Complete	30/06/2015	
Jun-15		flies	flies near landfill	additional cover	Complete	30/06/2015	
Jul-15		flies	flies near landfill	additional cover	Complete	31/07/2015	
Sep-15		flies	flies near landfill	additional cover	Complete	31/07/2015	
	SELECT				SELECT		

Total complaints open at start of reporting year	0
Total new complaints received during reporting year	13
Total complaints closed during reporting year	13
Balance of complaints end of reporting year	0

Incidents

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

*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 reoccurence
25/12/2015	Odour	flare shutdown	2. Limited	Air	Plant or equipment issues		Normal activities	EPA	New	flare restart	flare mtce	Complete	25/12/2015	Low
15/12/2015	leachate level above 1m	cells 15-18	1. Minor	no release	Plant or equipment issues		Normal activities	EPA	New	pump leachate	pump mtce	Complete	31/12/2015	Medium
14/12/2015	leachate level above 1m	cells 15-18	1. Minor	no release	Plant or equipment issues		Normal activities	EPA	New	pump leachate	pump mtce	Complete	31/12/2015	Medium
08/12/2015	breach of ELV CO2	boundary gas well	1. Minor	Air	Other (add details)	gas migration	Normal activities	EPA	Recurring	continue gas extraction	continue gas extraction	Complete	31/12/2015	Medium
26/11/2015	breach of ELV CO2	boundary gas well	1. Minor	Air	Other (add details)	gas migration	Normal activities	EPA	Recurring	continue gas extraction	continue gas extraction	Complete	30/11/2015	Medium
29/10/2015	breach of ELV CO2	boundary gas well	1. Minor	Air	Other (add details)	gas migration	Normal activities	EPA	Recurring	continue gas extraction	continue gas extraction	Complete	30/10/2015	Medium
16/09/2015	breach of ELV CO2	boundary gas well	1. Minor	Air	Other (add details)	gas migration	Normal activities	EPA	Recurring	continue gas extraction	continue gas extraction	Complete	30/09/2015	Medium
06/08/2015	breach of ELV CO2	boundary gas well	1. Minor	Air	Other (add details)	gas migration	Normal activities	EPA	Recurring	continue gas extraction	continue gas extraction	Complete	30/08/2015	Medium
23/07/2015	breach of ELV CO2	boundary gas well	1. Minor	Air	Other (add details)	gas migration	Normal activities	EPA	Recurring	continue gas extraction	continue gas extraction	Complete	31/07/2015	Medium

Complaints and Incidents summary template Lic No: W0025-04 Year 2015

25/06/2015	breach of ELV CO2	boundary gas well	1. Minor	Air	Other (add details)	gas migration	Normal activities	EPA	Recurring	continue gas extraction	continue gas extraction	Complete	30/06/2015	Medium
25/05/2015	breach of ELV CO2	boundary gas well	1. Minor	Air	Other (add details)	gas migration	Normal activities	EPA	Recurring	continue gas extraction	continue gas extraction	Complete	31/05/2015	Medium
24/04/2015	breach of ELV CO2	boundary gas well	1. Minor	Air	Other (add details)	gas migration	Normal activities	EPA	Recurring	continue gas extraction	continue gas extraction	Complete	30/04/2015	Medium
18/03/2015	breach of ELV CO2	boundary gas well	1. Minor	Air	Other (add details)	gas migration	Normal activities	EPA	Recurring	continue gas extraction	continue gas extraction	Complete	31/03/2015	Medium
06/02/2015	breach of ELV CO2	boundary gas well	1. Minor	Air	Other (add details)	gas migration	Normal activities	EPA	Recurring	continue gas extraction	continue gas extraction	Complete	28/02/2015	Medium
16/01/2015	breach of ELV CO2	boundary gas well	1. Minor	Air	Other (add details)	gas migration	Normal activities	EPA	Recurring	continue gas extraction	continue gas extraction	Complete	31/01/2015	Medium
13/10/2015	Breach of ELV	surface emissions VOC	1. Minor	Air	Other (add details)	gas migration	Normal activities	EPA	Recurring	continue gas extraction	continue gas extraction	Complete	30/10/2015	Medium
12/05/2015	Breach of ELV	surface emissions VOC	1. Minor	Air	Other (add details)	gas migration	Normal activities	EPA	Recurring	continue gas extraction	continue gas extraction	complete	31/05/2015	Medium
20/08/2015	Breach of ELV SS	Licenced discharge point (ty	1. Minor	Water	Adverse weather	suspended solids	Normal activities	EPA	New	close emission pt.	continue monitoring	Complete	30/08/2015	Low
	SELECT	SELECT	SELECT	SELECT	SELECT		SELECT	SELECT	SELECT			SELECT		SELECT

Total number of incidents current year	18
Total number of incidents previous year	20
% reduction/ increase	10%

WASTE SUMMARY Lic No: W0025-04 Year 2015

SECTION A-PRTR ON SITE WASTE TREATMENT AND WASTE TRANSFERS TAB- TO BE COMPLETED BY ALL IPPC AND WASTE FACILITIES PRTR facility logon dropdown list click to see options

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

			Additional Information
1	Were any wastes accepted onto your site for recovery or disposal or treatment prior to recovery or disposal within the boundaries of your facility ?; (waste generated within your boundaries is to be captured through PRTR reporting) If yes please enter details in table 1 below	Yes	
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	No	
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	No	

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)

Licenced 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 -
50,000	191212	ray whelan	pre-treated municipal waste	15418					D5- Specially engineered landfill	0	
	200307	clonmel waste	bulky waste	4275					D5- Specially engineered landfill	0	
	200301	clonmel waste	pre-treated municipal waste	1074					D5- Specially engineered landfill	0	
	200301	clonmel waste	pre-treated household waste	823					D5- Specially engineered landfill	0	
	170904	clonmel waste	C&D fines cover material	2452					R5-Recycling/reclamation or other inorganic materials which includes soil celaning resuling in recovery of the soil and recycling of inorganic construction materials		
	200303	clonmel waste	pre-treated street cleaning	1985					D5- Specially engineered landfill	0	
	200307	country clean	bulky waste	7065					D5- Specially engineered landfill	0	
	200301	country clean	pre-treated municipal waste	5220					D5- Specially engineered landfill	0	
	170904	country clean	C&D fines cover material	3846					R5-Recycling/reclamation or other inorganic materials which includes soil celaning resuling in recovery of the	0	
	200307	clean ireland	bulky waste	1381					D5- Specially engineered landfill	0	
	200301	clean ireland	pre-treated municipal waste	781					D5- Specially engineered landfill	0	
	170904	clean ireland	C&D fines cover material	734					R5-Recycling/reclamation or other inorganic materials which includes soil celaning resuling in recovery of the	0	
	200307	killarney waste disposal	bulky waste	4084					D5- Specially engineered landfill	0	
	200301	killarney waste disposal	pre-treated municipal waste	423					D5- Specially engineered landfill	0	
	200303	killarney waste disposal	pre-trweated street cleaning	458					D5- Specially engineered landfill	0	
	200301	killarney waste disposal	pre-treated household waste	194					D5- Specially engineered landfill	0	
	200307	waste recovery services	bulky waste	3130					D5- Specially engineered landfill	0	
	200301	waste recovery services	pre-treated municipal waste	991					D5- Specially engineered landfill	0	
	200307	clare waste	bulky waste	198					D5- Specially engineered landfill	0	
	200301	clare waste	pre-treated municipal waste	1533					D5- Specially engineered landfill	0	
	200307	white skip hire	bulky waste	124					D5- Specially engineered landfill	0	
	200301	white skip hire	pre-treated household waste	19					D5- Specially engineered landfill	0	
	200301	white skip hire	pre-treated municipal waste	1346					D5- Specially engineered landfill	0	
	100101	clonmel waste	bottom ash cover material	3831					R5-Recycling/reclamation or other inorganic materials which includes soil celaning resuling in recovery of the	0	
	190599	clonmel waste	stabilised biowaste cover material	407					R5-Recycling/reclamation or other inorganic materials which includes soil celaning resuling in recovery of the	0	
	200399	clean ireland	international catering waste	426					D5- Specially engineered landfill	0	
	200301	public skips	residual municipal waste	1620					D5- Specially engineered landfill	0	
	190805	carlow county council	wastewater sludges	270					D5- Specially engineered landfill	0	
	190902	kilkenny county council	drinking water sludges	595					D5- Specially engineered landfill	0	
	200301	carlow county council	clean ups	560.86					D5- Specially engineered landfill	0	assumed all waste delivered by carlow county council, not possible to verify from our records due to the ansence of the landfill manager on
	200301	carlow county council	fly tipping	388.08					D5- Specially engineered landfill	0	
	200201	carlow county council	garden park	464.9					D5- Specially engineered landfill	0	
	200303	carlow county council	litter bins	572.28					D5- Specially engineered landfill	0	
	200303	carlow county council	street cleaning	1196.66					D5- Specially engineered landfill	0	
	170504	carlow county council	soil & stones	10001.22					R5-Recycling/reclamation or other inorganic materials which includes soil celaning resuling in recovery of the	10001.22	
	170101	carlow county council	rubble	278.28					R5-Recycling/reclamation or other inorganic materials which includes soil celaning resuling in recovery of the	278.28	

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	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	
6	Does your facility have relevant nuisance controls in place?	Yes	
7	Do you have an odour management system in place for your facility? If no why?	Yes	
8	Do you maintain a sludge register on site?	No	

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
residual household commercial industrial solids	48,500	56,600		
C&D	1,000	0	50,000	
treated sludge	500	0		

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 (SELECT UNIT)	Lined disposal area occupied by waste (SELECT UNIT)	Unlined area (SELECT UNIT)	Comments on liner type
cell 15/16	2006	2012	no	public	non-haz	2016	no	no	no	18,000	18,000	0	bentonite/double HDPE
cell 17	2013	2015	no	public	non-haz	2016	no	no	no	9,000	9,000	0	bentonite/double HDPE
cell 18	2015	present	Yes	public	Non Hazardous	2016	No	No	No	9,000	9,000	0	bentonite/double HDPE

WASTE SUMMARY

Lic No: W0025-04 Year 2015

Table 4 Environmental monitoring-landfill only

Landfill Manual-Monitoring Standards

Was meterological 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	yes	yes	Yes	Yes	Yes	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					
36,000	0	0	temporary cap planned for 2016	18,000		

*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(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
16871	1265	15959	607	12,231	0	0	

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
3,389,166	0	0	Yes	

Environmental Protection Agency

Guidance to completing the PRTR workbook

PRTR Returns Workbook

Version 1.1.19

REFERENCE YEAR	2015

1. FACILITY IDENTIFICATION

Parent Company Name	Carlow County Council
Facility Name	Powerstown Landfill Site
PRTR Identification Number	W0025
Licence Number	W0025-04

Classes of Activity

No.	class_name
-	Refer to PRTR class activities below

Address 1	Kilkenny Rd.
Address 2	
Address 3	
Address 4	
	Carlow
Country	Ireland
Coordinates of Location	-6.15456 53.5062
River Basin District	IESE
NACE Code	3821
Main Economic Activity	Treatment and disposal of non-hazardous waste
AER Returns Contact Name	Pat Connolly
AER Returns Contact Email Address	pconnoll@carlowcoco.ie
AER Returns Contact Position	Landfill Manager
AER Returns Contact Telephone Number	0599172478
AER Returns Contact Mobile Phone Number	0872271109
AER Returns Contact Fax Number	
Production Volume	0.0
Production Volume Units	
Number of Installations	1
Number of Operating Hours in Year	1400
Number of Employees	10
User Feedback/Comments	Air emissions-There is a difference in emissions in the period 2014 to 2015, aswell as previous to that. The reason for this is likely due to the use of different calculation methods. For these calculations, a claibrated landfill gas calibration model was used to provide a best
Web Address	

2. PRTR CLASS ACTIVITIES

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

SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

RELEASES TO AIR					Please enter all quantities in this section in KGs			
POLLUTANT		METHOD				QUANTITY		
			Method Used		flare 1			
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
08	Nitrogen oxides (NOx/NO2)	M	EN 15058:2004		153.7	153.7	0.0	0.0
02	Carbon monoxide (CO)	M	EN 14792:2005		8.8	8.8	0.0	0.0
11	Sulphur oxides (SOx/SO2)	M	OTH	TGN 21, NDIR absorption	1059.0	1059.0	0.0	0.0
01	Methane (CH4)	M	OTH	Total estimated methane generated minus methane flared	0.0	245635.0	0.0	245635.0

* 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					Please enter all quantities in this section in KGs			
POLLUTANT		METHOD				QUANTITY		
			Method Used		flare 1			
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
80	Chlorine and inorganic compounds (as HCl)	M	EN 1911-1 to 3:2003		5.7	5.7	0.0	0.0
84	Fluorine and inorganic compounds (as HF)	M	ISO/DIS 15713:2004		12.8	12.8	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					Please enter all quantities in this section in KGs			
POLLUTANT		METHOD				QUANTITY		
			Method Used					
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
237	**Volatile organic compounds (as TOC)**	M	OTH	EN12619:2013 Flame Ionisation Detection	10.2	10.2	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: Powerstown Landfill Site

Please enter summary data on the quantities of methane flared and / or utilised	T (Total) kg/Year	M/C/E	Method Used: Method Code	Method Used: Designation or Description	Facility Total Capacity m3 per hour	
Total estimated methane generation (as per site model)	944846.0	E	OTH	Landgem	N/A	
Methane flared	699211.0	M	OTH	From 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)	245635.0	C	OTH	Calculated. Landgem model	N/A	

5. ONSITE TREATMENT & OFFSITE TRANSFERS OF WASTE

Please enter all quantities on this sheet in Tonnes 0

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	13 02 05	Yes	6.34	mineral-based non-chlorinated engine, gear and lubricating oils	R13	M	Weighed	Offsite in Ireland	ENVA Ireland,W0181-01	-,-,Portlaoise,Co. Laois,Ireland	ENVA Ireland,W0181-01	-,-,Portlaoise,Co. Laois,Ireland
Within the Country	15 01 02	No	64.78	plastic packaging (bottles & wrapping)	R13	M	Weighed	Offsite in Ireland	Greenstar,WFP -KK-09-0003 01	-,-,-,Kilkenny,Ireland		
Within the Country	15 01 05	No	0.0	composite packaging (tetrapac)	R13	M	Weighed	Offsite in Ireland	Greenstar,WFP -KK-09-0003 01	-,-,-,Kilkenny,Ireland		
Within the Country	15 01 07	No	59.08	glass packaging	R13	M	Weighed	Offsite in Ireland	Rehab Glasco Ltd.,WFP-KE-08-0357-01	-,-,Naas,Co. Kildare,Ireland		
Within the Country	16 01 03	No	0.0	end-of-life tyres	R13	M	Weighed	Offsite in Ireland	Crumb Rubber Ireland Ltd,WFP-LH-10-0005-01	Mooretown,Dromiskin,Dundalk,Co Louth,Ireland		
To Other Countries	16 01 07	Yes	1.02	oil filters	R13	M	Weighed	Abroad	ENVA Ireland,W0181-01	-,-,Portlaoise,Co. Laois,Ireland	R.D. Recycling,51727-1-KD,Houthalen,.,.,.,.,Belgium	Houthalen,.,.,.,.,Belgium
To Other Countries	16 06 01	Yes	5.68	lead batteries	R13	M	Weighed	Abroad	ENVA Ireland,W0181-01	-,-,Portlaoise,Co. Laois,Ireland	Campine Recycling Ltd,MLAV /05,Campine Recycling Ltd,173/GVDA,Beerse,.,.Belgium	Campine Recycling Ltd,173/GVDA,Beerse,.,.Belarus
Within the Country	16 06 04	No	1.82	alkaline batteries (except 16 06 03)	R13	M	Weighed	Offsite in Ireland	The Recycling Village,WFP-LH-10-0010-01	-,-,-,Co. Louth,Ireland		
Within the Country	17 08 02	No	11.82	gypsum-based construction materials other than those mentioned in 17 08 01	R13	M	Weighed	Offsite in Ireland	Greenstar,WFP -KK-09-0003 01	-,-,-,Kilkenny,Ireland		
Within the Country	19 07 03	No	16871.0	landfill leachate other than those mentioned in 19 07 02	D8	M	Weighed	Offsite in Ireland	Mortarstown Waste Water Treatment Plant, D-0028	Carlow,.,.,.,.Ireland		
Within the Country	20 01 01	No	189.34	paper and cardboard	R13	M	Weighed	Offsite in Ireland	Greenstar,WFP -KK-09-0003 01	-,-,-,Kilkenny,Ireland		
Within the Country	20 01 02	No	28.22	flat glass	R13	M	Weighed	Offsite in Ireland	Greenstar,WFP -KK-09-0003 01	-,-,-,Kilkenny,Ireland		
Within the Country	20 01 08	No	36.72	biodegradable kitchen and canteen waste	R13	M	Weighed	Offsite in Ireland	O'Toole Composting,WFP-CW-10-0003-01	Balintrane,Fenagh,Co. Carlow,-,Ireland		
Within the Country	20 01 11	No	8.83	textiles	R13	M	Weighed	Offsite in Ireland	Mrs Quinns Charity Shop,-	-,-,-,-,Ireland		
Within the Country	20 01 21	Yes	0.5	fluorescent tubes and other mercury-containing waste	R13	M	Weighed	Offsite in Ireland	KMK Metals,W0113-01	Cappincur Industrial Estate,Daingean Road,Tullamore,Co. Offaly,Ireland	KMK Metals,W0113-01	-,-,Tullamore,Co. Offaly,Ireland
Within the Country	20 01 23	Yes	21.76	discarded equipment containing chlorofluorocarbons	R13	M	Weighed	Offsite in Ireland	Ratcliffe Recycling Ltd,WCP-DC-08-1130-01	Ballystahan ,St. Margarets ,Dublin,.,Ireland	Ratcliffe Recycling,WCP-DC-08-1130-01,Ballystahan,St. Margarets,Dublin,.,Ireland	.,.,.,.,Ireland
Within the Country	20 01 25	No	0.8	edible oil and fat	R13	M	Weighed	Offsite in Ireland	Pure Oil Ltd,NWCPO-10-02557-01	-,Ballyweather,Barntown,Co. Wexford,Ireland		
To Other Countries	20 01 27	Yes	16.9	paint, inks, adhesives and resins containing dangerous substances	R13	M	Weighed	Abroad	ENVA Ireland,W0181-01	-,-,Portlaoise,Co. Laois,Ireland	Nehlsen,D33300040,Braemen,.,.,.,Germany	Braemen,.,.,.,.Germany
Within the Country	20 01 35	Yes	66.6	discarded electrical and electronic equipmen other than those mentioned in 20 01 21 and and 20 01 23 containing hazardous components	R13	M	Weighed	Offsite in Ireland	Ratcliffe Recycling Ltd,WCP-DC-08-1130-01	Ballystahan ,St. Margarets ,Dublin,.,Ireland	Ratcliffe Recycling,WCP-DC-08-1130-01,Ballystahan,St. Margarets,Dublin,.,Ireland	.,.,.,.,Ireland
Within the Country	20 01 36	No	0.16	discarded electrical and electronic equipmen other than those mentioned in 20 01 21, 20 01 23 and 20 01 35	R13	M	Weighed	Offsite in Ireland	Irish Lamp Recycling ,WFP-KE-08-0348-01	Woodstock Industrial Estate,Kilkenny Road,Athy ,Co. Kildare,Ireland		
Within the Country	20 01 36	No	38.0	discarded electrical and electronic equipmen other than those mentioned in 20 01 21, 20 01 23 and 20 01 35	R13	M	Weighed	Offsite in Ireland	Ratcliffe Recycling Ltd,WCP-DC-08-1130-01	Ballystahan ,St. Margarets ,Dublin,.,Ireland		
Within the Country	20 01 38	No	89.86	wood other than that mentioned in 20 01 37	R13	M	Weighed	Offsite in Ireland	Greenstar,WFP -KK-09-0003 01	-,-,-,Kilkenny,Ireland		
Within the Country	20 01 40	No	90.18	metals	R13	M	Weighed	Offsite in Ireland	Ratcliffe Recycling Ltd,WCP-DC-08-1130-01	Ballystahan ,St. Margarets ,Dublin,.,Ireland		
Within the Country	20 02 01	No	225.36	biodegradable waste	R13	M	Weighed	Offsite in Ireland	Greenstar,WFP -KK-09-0003 01	-,-,-,Kilkenny,Ireland		
Within the Country	15 01 05	No	5.56	composite packaging	R13	M	Weighed	Offsite in Ireland	Greenstar,WFP -KK-09-0003 01	-,-,-,Kilkenny,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