

Facility Information Summary

AER Reporting Year	2017
Licence Register Number	WO 165-02
Name of site	Ballynagran Residual Landfill
Site Location	Ballynagran, Coolbeg and Kilcandra, County Wicklow
NACE Code	3821
Class/Classes of Activity	11.1, 11.5
National Grid Reference (6E, 6 N)	327024E, 191229N

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.**

Ballynagran is a currently operational landfill in Co. Wicklow. It covers an area of 128 hectares approximately. It accepts residual non-hazardous, commercial and industrial waste. The facility was granted a waste License (W0165-01) by the Agency on 5th September 2003 which was reviewed with a revised license (W0165-02) issued on 23rd March 2010. Air Stack emissions, surface water emissions and noise emissions were compliant with the license limit.

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.

<u>Tonis Kimpston</u>	<u>28th March 2018</u>
Signature Group/Facility manager (or nominated, suitably qualified and experienced deputy)	Date

AIR-summary template	Lic No: WO165-02	Year	2017
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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 licensed emissions and do not complete a solvent management plan (Table A4 and A5) you do not need to complete the tables

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

No	
Yes	

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

Emission reference no:	Parameter/ Substance	Frequency of Monitoring	ELV in licence or any revision thereof	Licence Compliance criteria	Measured value	Unit of measurement	Compliant with licence limit	Method of analysis	Annual mass load (kg)	Comments-reason for change in % mass load from previous year if applicable
Flare 1	Carbon monoxide (CO)	Annual	50	No 30min mean can exceed the ELV	<1.7	mg/m3	yes	EN 15058:2006	<2.96	
Flare 1	Nitrous oxide (N2O)	Annual	150	No 30min mean can exceed the ELV	105.2	mg/m3	yes	EN 14792:2006	183	
Flare 1	Volatile organic compounds (as TOC)	Annual	10	No 30min mean can exceed the ELV	5.25	mg/m3	yes	EN12619:2013	9.13	
Flare 1	Hydrogen Chloride	Annual	50	No 30min mean can exceed the ELV	2.64	mg/m3	yes	EN1911:2010	4.59	
Flare 1	Hydrogen Fluoride	Annual	5	No 30min mean can exceed the ELV	4.95	mg/m3	yes	EN15713:2006	8.61	
Flare 1	Sulphur Dioxide	Annual	-	No 30min mean can exceed the ELV	4.789	mg/m3	yes	TGN 21	8.333	
Engine 1	Total Particulate Matter	Annual	130	No 30min mean can exceed the ELV	<0.81	mg/m3	yes	EN13284-1:2002	<3.13	
Engine 1	Carbon monoxide (CO)	Annual	1400	No 30min mean can exceed the ELV	881.45	mg/m3	yes	EN 15058:2006	3,411	
Engine 1	Nitrous oxide (N2O)	Annual	500	No 30min mean can exceed the ELV	368.2	mg/m3	yes	EN 14792:2006	1,425	
Engine 1	Hydrogen Chloride	Annual	50	No 30min mean can exceed the ELV	3.93	mg/m3	yes	EN1911:2010	15.21	
Engine 1	Hydrogen Fluoride	Annual	5	No 30min mean can exceed the ELV	4.43	mg/m3	yes	EN15713:2006	17.14	
Engine 1	TA luft organics	Annual	20	No 30min mean can exceed the ELV	0.61	mg/m3	yes	EN13649:2002	2.36	
Engine 1	Sulphur Dioxide	Annual	-	No 30min mean can exceed the ELV	4,718	mg/m3	yes	TGN 21	18,256	
Engine 1	Volumetric Flow Rate	Annual	3000	No 30min mean can exceed the ELV	1,386	mg/m3	yes	EN16911:2013	3,869,440	
Engine 2	Total Particulate Matter	Annual	130	No 30min mean can exceed the ELV	<0.74	mg/m3	yes	EN13284-1:2002	<4.04	
Engine 2	Carbon monoxide (CO)	Annual	1400	No 30min mean can exceed the ELV	892	mg/m3	yes	EN 15058:2006	4,874	
Engine 2	Nitrous oxide (N2O)	Annual	500	No 30min mean can exceed the ELV	378	mg/m3	yes	EN 14792:2006	2,065	
Engine 2	Hydrogen Chloride	Annual	50	No 30min mean can exceed the ELV	2.42	mg/m3	yes	EN1911:2010	13.22	
Engine 2	Hydrogen Fluoride	Annual	5	No 30min mean can exceed the ELV	2.96	mg/m3	yes	EN15713:2006	16.17	
Engine 2	TA luft organics	Annual	20	No 30min mean can exceed the ELV	<0.09	mg/m3	yes	EN13649:2002	<4.92	
Engine 2	Sulphur Dioxide	Annual	-	No 30min mean can exceed the ELV	4,824	mg/m3	yes	TGN 21	26,359	
Engine 2	Volumetric Flow Rate	Annual	3000	No 30min mean can exceed the ELV	2,887	mg/m3	yes	EN16911:2013	5,464,160	
Engine 3	Total Particulate Matter	Annual	130	No 30min mean can exceed the ELV	<0.78	mg/m3	yes	EN13284-1:2002	<6.14	
Engine 3	Carbon monoxide (CO)	Annual	1400	No 30min mean can exceed the ELV	911	mg/m3	yes	EN 15058:2006	7,424	
Engine 3	Nitrous oxide (N2O)	Annual	500	No 30min mean can exceed the ELV	383	mg/m3	yes	EN 14792:2006	3,141	
Engine 3	Hydrogen Chloride	Annual	50	No 30min mean can exceed the ELV	1.76	mg/m3	yes	EN1911:2010	20.55	
Engine 3	Hydrogen Fluoride	Annual	5	No 30min mean can exceed the ELV	3.22	mg/m3	yes	EN15713:2006	15.51	
Engine 3	TA luft organics	Annual	20	No 30min mean can exceed the ELV	<0.07	mg/m3	yes	EN13649:2002	<0.55	
Engine 3	Sulphur Dioxide	Annual	-	No 30min mean can exceed the ELV	4,868	mg/m3	yes	TGN 21	39,397	
Engine 3	Volumetric Flow Rate	Annual	3000	No 30min mean can exceed the ELV	2,780	mg/m3	yes	EN16911:2013	7,873,060	
Engine 4	Total Particulate Matter	Annual	130	No 30min mean can exceed the ELV	1.5	mg/m3	yes	EN13284-1:2002	6.92	
Engine 4	Carbon monoxide (CO)	Annual	1400	No 30min mean can exceed the ELV	943	mg/m3	yes	EN 15058:2006	4,350	
Engine 4	Nitrous oxide (N2O)	Annual	500	No 30min mean can exceed the ELV	399	mg/m3	yes	EN 14792:2006	1,841	
Engine 4	Hydrogen Chloride	Annual	50	No 30min mean can exceed the ELV	2.61	mg/m3	yes	EN1911:2010	12.04	
Engine 4	Hydrogen Fluoride	Annual	5	No 30min mean can exceed the ELV	1.97	mg/m3	yes	EN15713:2006	9.09	
Engine 4	TA luft organics	Annual	20	No 30min mean can exceed the ELV	<0.08	mg/m3	yes	EN13649:2002	<0.37	
Engine 4	Sulphur Dioxide	Annual	-	No 30min mean can exceed the ELV	5,004	mg/m3	yes	TGN 21	23,083	
Engine 4	Volumetric Flow Rate	Annual	3000	No 30min mean can exceed the ELV	1,977	mg/m3	yes	EN16911:2013	4,612,870	

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

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER)					Lic No:	WO 165-02	Year	2017		
					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 <u>only</u> need to complete table W1 and or W2 for storm water analysis and visual inspections				No					
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					
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
SW-10	onsite	SELECT	pH	15/02/2017	n/a	N/A	7.92	pH units	n/a	
SW-10	onsite	SELECT	pH	09/05/2017	n/a	N/A	7.18	pH units	n/a	
SW-10	onsite	SELECT	pH	22/08/2017	n/a	N/A	7.06	pH units	n/a	
SW-10	onsite	SELECT	pH	30/11/2017	n/a	N/A	6.72	pH units	n/a	
SW-10	onsite	SELECT	Conductivity	15/02/2017	n/a	N/A	475	µS/cm @25oC	n/a	
SW-10	onsite	SELECT	Conductivity	09/05/2017	n/a	N/A	221	µS/cm @25oC	n/a	
SW-10	onsite	SELECT	Conductivity	22/08/2017	n/a	N/A	268	µS/cm @25oC	n/a	
SW-10	onsite	SELECT	Conductivity	30/11/2017	n/a	N/A	346	µS/cm @25oC	n/a	
SW-10	onsite	SELECT	Chlorides (as Cl)	15/02/2017	n/a	N/A	23.8	mg/L	n/a	
SW-10	onsite	SELECT	Chlorides (as Cl)	09/05/2017	n/a	N/A	14.8	mg/L	n/a	
SW-10	onsite	SELECT	Chlorides (as Cl)	22/08/2017	n/a	N/A	12	mg/L	n/a	
SW-10	onsite	SELECT	Chlorides (as Cl)	30/11/2017	n/a	N/A	18.7	mg/L	n/a	
SW-10	onsite	SELECT	Ammoniacal Nitrogen	15/02/2017	n/a	N/A	0.15	mg/L	n/a	
SW-10	onsite	SELECT	Ammoniacal Nitrogen	09/05/2017	n/a	N/A	0.02	mg/L	n/a	
SW-10	onsite	SELECT	Ammoniacal Nitrogen	22/08/2017	n/a	N/A	0.09	mg/L	n/a	
SW-10	onsite	SELECT	Ammoniacal Nitrogen	30/11/2017	n/a	N/A	0.56	mg/L	n/a	
SW-10	onsite	SELECT	Total Suspended Solids	15/02/2017	35	All values < ELV	22	mg/L	yes	
SW-10	onsite	SELECT	Total Suspended Solids	09/05/2017	35	All values < ELV	<10	mg/L	yes	
SW-10	onsite	SELECT	Total Suspended Solids	22/08/2017	35	All values < ELV	<10	mg/L	yes	
SW-10	onsite	SELECT	Total Suspended Solids	30/11/2017	35	All values < ELV	<10	mg/L	Yes	
SW-10	onsite	SELECT	Dissolved Oxygen	15/02/2017	n/a	N/A	10	mg/L	n/a	
SW-10	onsite	SELECT	Dissolved Oxygen	09/05/2017	n/a	N/A	9	mg/L	n/a	
SW-10	onsite	SELECT	Dissolved Oxygen	22/08/2017	n/a	N/A	6	mg/L	n/a	
SW-10	onsite	SELECT	Dissolved Oxygen	30/11/2017	n/a	N/A	10	mg/L	n/a	
SW-10	onsite	SELECT	BOD	15/02/2017	n/a	N/A	1	mg/L	n/a	
SW-10	onsite	SELECT	BOD	09/05/2017	n/a	N/A	<1	mg/L	n/a	
SW-10	onsite	SELECT	BOD	22/08/2017	n/a	N/A	<1	mg/L	n/a	
SW-10	onsite	SELECT	BOD	30/11/2017	n/a	N/A	1	mg/L	n/a	
SW-10	onsite	SELECT	COD	15/02/2017	n/a	N/A	18	mg/L	n/a	
SW-10	onsite	SELECT	COD	09/05/2017	n/a	N/A	12	mg/L	n/a	
SW-10	onsite	SELECT	COD	22/08/2017	n/a	N/A	12	mg/L	n/a	
SW-10	onsite	SELECT	COD	30/11/2017	n/a	N/A	22	mg/L	n/a	
SW-10	onsite	SELECT	Chromium and compounds (as Cr)	30/11/2017	n/a	N/A	<1.5	µg/L	n/a	
SW-10	onsite	SELECT	Boron	30/11/2017	n/a	N/A	16	µg/L	n/a	
SW-10	onsite	SELECT	Cadmium and compounds (as Cd)	30/11/2017	n/a	N/A	<0.5	µg/L	n/a	
SW-10	onsite	SELECT	Calcium	30/11/2017	n/a	N/A	58.8	mg/L	n/a	
SW-10	onsite	SELECT	Copper and compounds (as Cu)	30/11/2017	n/a	N/A	<7	µg/L	n/a	
SW-10	onsite	SELECT	Iron	30/11/2017	n/a	N/A	<20	µg/L	n/a	
SW-10	onsite	SELECT	Lead and compounds (as Pb)	30/11/2017	n/a	N/A	<5	µg/L	n/a	
SW-10	onsite	SELECT	Magnesium	30/11/2017	n/a	N/A	8.4	mg/L	n/a	
SW-10	onsite	SELECT	Manganese (as Mn)	30/11/2017	n/a	N/A	<2	µg/L	n/a	
SW-10	onsite	SELECT	Mercury and compounds (as Hg)	30/11/2017	n/a	N/A	<1	µg/L	n/a	
SW-10	onsite	SELECT	Nickel and compounds (as Ni)	30/11/2017	n/a	N/A	<2	µg/L	n/a	
SW-10	onsite	SELECT	Potassium	30/11/2017	n/a	N/A	3.3	mg/l	n/a	
SW-10	onsite	SELECT	Sodium	30/11/2017	n/a	N/A	12.8	mg/l	n/a	
SW-10	onsite	SELECT	Zinc and compounds (as Zn)	30/11/2017	n/a	N/A	<3	µg/L	n/a	
SW-10	onsite	SELECT	Sulphate	30/11/2017	n/a	N/A	55.4	mg/L	n/a	
SW-10	onsite	SELECT	Ortho-phosphate (as PO4)	30/11/2017	n/a	N/A	<0.06	mg/L	n/a	
SW-10	onsite	SELECT	Total Oxidised Nitrogen (TON)	30/11/2017	n/a	N/A	1.7	mg/L	n/a	
SW-10	onsite	SELECT	Total Alkalinity	30/11/2017	n/a	N/A	106	mg/L	n/a	

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

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER)			Lic No:	WO 165-02	Year	2017
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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
	Weekly	No contamination observed throughout 2017	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

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

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

Emission reference no:	Emission released to	Parameter/ Substance ^{Note 1}	Type of sample	Frequency of monitoring	Averaging period	ELV or trigger values in licence or any revision thereof ^{Note 2}	Licence Compliance criteria	Measured value	Unit of measurement	Compliant with licence

Note 1: Volumetric flow shall be included as a reportable parameter
 Note 2: Where Emission Limit Values (ELV) do not apply to your licence please compare results against EQS for Surface water or relevant receptor quality standards

Continuous monitoring

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

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

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

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

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
	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?
- Please list any sump integrity failures in table B1**
- 11 Do all sumps and chambers have high level liquid alarms?
 - 12 If yes to Q11 are these failsafe systems included in a maintenance and testing programme?
 - 13 Is the Fire Water Retention Pond included in your integrity test programme?

Yes	
3 years	
Yes	
1	
1	
7	
Yes	
all	
n/a	
n/a	
N/A	
SELECT	
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)
6000L Diesel	reinforced concrete		Diesel	6600L	6000L	Hydraulic test		20/03/2015	Yes	Pass		SELECT		
mobile bund 1	prefabricated		oil	275L	250L	Hydraulic test		20/03/2015	Yes	Pass				
mobile bund 2	prefabricated		oil	275L	250L	Hydraulic test		20/03/2015	Yes	Pass				
mobile bund 3	prefabricated		oil	275L	250L	Hydraulic test		20/03/2015	Yes	Pass				
mobile bund 4	prefabricated		oil	275L	250L	Hydraulic test		13/10/2017	Yes	Pass				
mobile bund 5	prefabricated		Waste oil bund	1100L	1000L	Hydraulic test		13/10/2017	Yes	Pass				
Gas Com storage	prefabricated		Oils and Coolant	4800L	4400L			from new due Y18						
Mobile 6	prefabricated		Ad blue	1100L	1000L			From new due y20						
	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? [bunding and storage guidelines](#)
- 15 Are channels/transfer systems to remote containment systems tested?
 - 16 Are channels/transfer systems compliant in both integrity and available volume?

Commentary

SELECT	
SELECT	
SELECT	

Pipeline/underground structure testing

- Are you required by your licence to undertake integrity testing* on underground structures e.g. pipelines or sumps etc? If yes please fill out table 2 below listing all underground structures and pipelines on site **which failed the integrity test and all which have not been tested within the integrity test period as specified**
- 2 Please provide integrity testing frequency period
- *please note integrity testing means water tightness testing for process and foul pipelines (as required under your licence)

No	
Other (please specify)	Annual

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)
	Process	concrete	No	Other (please specify)	SELECT	SELECT	Pass				SELECT

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

Groundwater/Soil monitoring template

Lic No:

WO 165-02

Year

2017

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	Please provide an interpretation of groundwater monitoring data in the interpretation box below or if you require additional space please include a groundwater/contaminated land monitoring results interpretation as an additional section in this AER
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.	no	Groundwater monitoring at Ballynagran is compared to Groundwater Trigger Levels approved by the Agency in December 2011. None of the results exceed the IGV / GTVs and there are no upward trends.
5 Is the contamination related to operations at the facility (either current and/or historic)	no	
6 Have actions been taken to address contamination issues? If yes please summarise remediation strategies proposed/undertaken for the site	no	
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?	yes	
9 Has any type of risk assessment been carried out for the site?	yes	
10 Has a Conceptual Site Model been developed for the site?	no	
11 Have potential receptors been identified on and off site?	no	
12 Is there evidence that contamination is migrating offsite?	no	

Upgradient Groundwater monitoring results										
Date of sampling	Sample location reference	Parameter/Substance	Methodology	Monitoring frequency	Maximum Concentration ⁺⁺	Average Concentration ⁺	unit	GTVs*	SELECT**	Upward trend in pollutant concentration over last 5 years of monitoring data
2017	MW-1D	pH	Field Probe	Quarterly	7.55	7.20	pH units	<6.5 & >9.5	IGV	No
2017	MW-1D	Electrical Conductivity	Field Probe	Quarterly	290	259	uS/cm	800 - 1,875	GTV	No
2017	MW-1D	Chloride	Soluble Ion Analysis Thermo Aquakem Photometric Automatic Analyser	Quarterly	21.1	20.43	mg/l	24 - 187.5	GTV	No
2017	MW-1D	Ammonia	Soluble Ion Analysis Thermo Aquakem Photometric Automatic Analyser	Quarterly	0.12	0.05	mg/l	0.065 - 0.175	GTV	No
2017	MW-1D	Potassium	Inductively Coupled Plasma - Optical Emission Spectrometry	Quarterly	0.8	0.65	mg/l	5	IGV	No
2017	MW-1D	Dissolved Oxygen	Hach HQ30D Oxygen Meter	Quarterly	10	8.75	mg/l	NAC	IGV	No
2017	MW-1D	TOC	TOC analyser	Quarterly	<2	<2	mg/l	37.5	GTV	No
2017	MW-1D	Total Chromium	Inductively Coupled Plasma - Optical Emission Spectrometry	Annually	<1.5	<1.5	ug/l	NAC	IGV	No
2017	MW-1D	Boron	Inductively Coupled Plasma - Optical Emission Spectrometry	Annually	16	16	ug/l	1,000	IGV	No
2017	MW-1D	Cadmium	Inductively Coupled Plasma - Optical Emission Spectrometry	Annually	<0.5	<0.5	ug/l	3.75	GTV	No
2017	MW-1D	Calcium	Inductively Coupled Plasma - Optical Emission Spectrometry	Annually	26.2	26.2	mg/l	200	IGV	No
2017	MW-1D	Copper	Inductively Coupled Plasma - Optical Emission Spectrometry	Annually	<7	<7	ug/l	1,500	GTV	No
2017	MW-1D	Iron	Inductively Coupled Plasma - Optical Emission Spectrometry	Annually	<20	<20	ug/l	200	IGV	No
2017	MW-1D	Lead	Inductively Coupled Plasma - Optical Emission Spectrometry	Annually	<5	<5	ug/l	18.75	GTV	No
2017	MW-1D	Magnesium	Inductively Coupled Plasma - Optical Emission Spectrometry	Annually	6.3	6.3	mg/l	50	IGV	No
2017	MW-1D	Manganese	Inductively Coupled Plasma - Optical Emission Spectrometry	Annually	50	50	ug/l	50	IGV	No
2017	MW-1D	Mercury	Inductively Coupled Plasma - Optical Emission Spectrometry	Annually	<1	<1	ug/l	0.75	GTV	No
2017	MW-1D	Nickel	Inductively Coupled Plasma - Optical Emission Spectrometry	Annually	<2	<2	ug/l	15	GTV	No
2017	MW-1D	Sodium	Inductively Coupled Plasma - Optical Emission Spectrometry	Annually	17	17	mg/l	150	GTV	No
2017	MW-1D	Zinc	Inductively Coupled Plasma - Optical Emission Spectrometry	Annually	<3	<3	ug/l	100	IGV	No
2017	MW-1D	Fluoride	Dionex (Ion-Chromatography).	Annually	<0.3	<0.3	mg/l	1	IGV	No
2017	MW-1D	Sulphate	Soluble Ion Analysis Thermo Aquakem Photometric Automatic Analyser	Annually	7.9	7.9	mg/l	187.5	GTV	No
2017	MW-1D	Ortho Phosphate	Soluble Ion Analysis Thermo Aquakem Photometric Automatic Analyser	Annually	0.23	0.23	mg/l	0.035	GTV	No
2017	MW-1D	TON	Soluble Ion Analysis Thermo Aquakem Photometric Automatic Analyser	Annually	5.1	5.1	mg/l	NAC	IGV	No
2017	MW-1D	Total Cyanide	Flow Injection Analyser	Annually	<0.01	<0.01	mg/l	0.0375	GTV	No
2017	MW-1D	Alkalinity	Metrohm automated titration analyser	Annually	70	70	mg/l	NAC	IGV	No
2017	MW-1D	Total Solids	Gravimetric determination of Total Dissolved Solids/Total Solids	Annually	320	320	mg/l	-	GTV	No
2017	MW-1D	VOCs	Headspace GC-MS	Annually	ND	ND	ug/l	-	GTV	No
2017	MW-1D	sVOCs	GC-MS	Annually	ND	ND	ug/l	-	GTV	No
2017	MW-1D	Pesticides	Large Volume Injection on GC Triple Quad MS	Annually	ND	ND	ug/l	0.375	GTV	No
2017	MW-1D	Total Coliforms	Membrane Filtration	Annually	>100	>100	cfu/100ml	0	IGV	No
2017	MW-1D	Faecal Coliforms	Colliert System	Annually	0	0	cfu/100ml	0	IGV	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: WO 165-02 Year: 2017

Downgradient Groundwater monitoring results										
Date of sampling	Sample location reference	Parameter/ Substance	Methodology	Monitoring frequency	Maximum Concentration	Average Concentration	unit	GTVs*	SELECT**	Upward trend in yearly average pollutant concentration over last 5 years of monitoring data
2017	MW-5D	pH	Field Probe	Quarterly	7.92	7.58	pH units	<6.5 & >9.5	IGV	No
2017	MW-5D	Electrical Conductivity	Field Probe	Quarterly	292	256	uS/cm	800 - 1,875	GTV	No
2017	MW-5D	Chloride	Soluble Ion Analysis Thermo Aquakem Photometric Automatic Analyser	Quarterly	20.4	19.35	mg/l	24 - 187.5	GTV	No
2017	MW-5D	Ammonia	Soluble Ion Analysis Thermo Aquakem Photometric Automatic Analyser	Quarterly	0.03	0.02	mg/l	0.065 - 0.175	GTV	No
2017	MW-5D	Potassium	Inductively Coupled Plasma - Optical Emission Spectrometry	Quarterly	0.9	0.88	mg/l	5	IGV	No
2017	MW-5D	Dissolved Oxygen	Hach HQ30D Oxygen Meter	Quarterly	8	7.75	mg/l	NAC	IGV	No
2017	MW-5D	TOC	TOC analyser	Quarterly	<2	<2	mg/l	37.5	GTV	No
2017	MW-5D	Total Chromium	Inductively Coupled Plasma - Optical Emission Spectrometry	Annually	<1.5	<1.5	ug/l	NAC	IGV	No
2017	MW-5D	Boron	Inductively Coupled Plasma - Optical Emission Spectrometry	Annually	22	22	ug/l	1,000	IGV	No
2017	MW-5D	Cadmium	Inductively Coupled Plasma - Optical Emission Spectrometry	Annually	<0.5	<0.5	ug/l	3.75	GTV	No
2017	MW-5D	Calcium	Inductively Coupled Plasma - Optical Emission Spectrometry	Annually	29	29	mg/l	200	IGV	No
2017	MW-5D	Copper	Inductively Coupled Plasma - Optical Emission Spectrometry	Annually	<7	<7	ug/l	1,500	GTV	No
2017	MW-5D	Iron	Inductively Coupled Plasma - Optical Emission Spectrometry	Annually	<20	<20	ug/l	200	IGV	No
2017	MW-5D	Lead	Inductively Coupled Plasma - Optical Emission Spectrometry	Annually	<5	<5	ug/l	18.75	GTV	No
2017	MW-5D	Magnesium	Inductively Coupled Plasma - Optical Emission Spectrometry	Annually	7	7	mg/l	50	IGV	No
2017	MW-5D	Manganese	Inductively Coupled Plasma - Optical Emission Spectrometry	Annually	<2	<2	ug/l	50	IGV	No
2017	MW-5D	Mercury	Inductively Coupled Plasma - Optical Emission Spectrometry	Annually	<1	<1	ug/l	0.75	GTV	No
2017	MW-5D	Nickel	Inductively Coupled Plasma - Optical Emission Spectrometry	Annually	<2	<2	ug/l	15	GTV	No
2017	MW-5D	Sodium	Inductively Coupled Plasma - Optical Emission Spectrometry	Annually	15.2	15.2	mg/l	150	GTV	No
2017	MW-5D	Zinc	Inductively Coupled Plasma - Optical Emission Spectrometry	Annually	<3	<3	ug/l	100	IGV	No
2017	MW-5D	Fluoride	Dionex (Ion-Chromatography)	Annually	<0.3	<0.3	mg/l	1	IGV	No
2017	MW-5D	Sulphate	Soluble Ion Analysis Thermo Aquakem Photometric Automatic Analyser	Annually	7.2	7.2	mg/l	187.5	GTV	No
2017	MW-5D	Ortho Phosphate	Soluble Ion Analysis Thermo Aquakem Photometric Automatic Analyser	Annually	0.26	0.26	mg/l	0.035	GTV	No
2017	MW-5D	TON	Soluble Ion Analysis Thermo Aquakem Photometric Automatic Analyser	Annually	0.3	0.3	mg/l	NAC	IGV	No
2017	MW-5D	Total Cyanide	Flow Injection Analyser	Annually	<0.01	<0.01	mg/l	0.0375	GTV	No
2017	MW-5D	Alkalinity	Metrohm automated titration analyser	Annually	114	114	mg/l	NAC	IGV	No
2017	MW-5D	Total Solids	Gravimetric determination of Total Dissolved Solids/Total Solids	Annually	723	723	mg/l	-	GTV	No
2017	MW-5D	VOCs	Headspace GC-MS	Annually	ND	ND	ug/l	-	GTV	No
2017	MW-5D	sVOCs	GC-MS	Annually	ND	ND	ug/l	-	GTV	No
2017	MW-5D	Pesticides	Large Volume Injection on GC Triple Quad MS	Annually	ND	ND	ug/l	0.375	GTV	No
2017	MW-5D	Total Coliforms	Membrane Filtration	Annually	0	0	cfu/100ml	0	IGV	No
2017	MW-5D	Faecal Coliforms	Colilert System	Annually	0	0	cfu/100ml	0	IGV	No

*please note exceedance of generic assessment criteria (GAC) such as a Groundwater Threshold Value (GTV) or an Interim Guideline Value (IGV) or an upward trend in results for a substance indicates that further interpretation of monitoring results is required. In addition to completing the above table, please complete the Groundwater Monitoring Guideline Template Report at the link provided and submit separately through ALDER as a licensee return or as otherwise instructed by the EPA.

[Groundwater monitoring template](#)

More information on the use of soil and groundwater standards/ generic assessment criteria (GAC) and risk assessment tools is available in the EPA published guidance [Guidance on the Management of Contaminated Land and Groundwater at EPA Licensed Sites \(EPA 2013\)](#). (see the link in G31)

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

[Surface water EQS](#) [Groundwater regulations GTV's](#) [Drinking water \(private supply\) standards](#) [Drinking water \(public supply\) standards](#) [Interim Guideline Values \(IGV\)](#)

Table 3: Soil results

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

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

Environmental Liabilities template

Lic No:W0165-02

2017

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

			Commentary
1	ELRA initial agreement status	Agreed	
2	ELRA review status		
3	Amount of Financial Provision cover required as determined by the latest ELRA		As part of Condition 12.2.2, the Licensee completed a fully costed Environmental Liabilities Risk Assessment for the site. This document outlines the potential unknown environmental liabilities associated with the landfill and estimates the possible cost of these liabilities. An environmental liability insurance policy has been taken out for €10M.
4	Financial Provision for ELRA status		
5	Financial Provision for ELRA - amount of cover		
6	Financial Provision for ELRA - type	Public Liability Insurance with Environmental Impairment Liability cover,	
7	Financial provision for ELRA expiry date		
8	Closure plan initial agreement status	Closure plan submitted and agreed by EPA	Under condition 12.2.3 of the licence Ballynagran Landfill Ltd is required to maintain a financial provision that is sufficient to cover all liabilities incurred whilst carrying on the activities to which this licence relates. As part of the licence transfer in 2014 the CRAMP liability was recalculated and agreed with the Office for Environmental Enforcement and a financial provision mechanism, to the satisfaction of the Board of the EPA, was put in place.
9	Closure plan review status	Review required and completed	
10	Financial Provision for Closure status	Submitted and agreed by EPA	
11	Financial Provision for Closure - amount of cover		
12	Financial Provision for Closure - type		
13	Financial provision for Closure expiry date		

Environmental Management Programme/Continuous Improvement Programme template			Lic No:	WO 165-02
Highlighted cells contain dropdown menu click to view			Additional Information	
1	Do you maintain an Environmental Management System (EMS) for the site. If yes, please detail in additional information	Yes	ISO 14001 Audit compliant	
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	ISO 14001 Audit compliant	
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	Hold Gas Management meetings every 6 months to review existing infrastructure and discuss maintenance and upgrading as required.	100	meetings held actions arising completed	Section Head	Improved Environmental Management Practices
Reduction of emissions to Air	In accordance with condition 7.8.5 of the IED licence W0165-02, the site will aim to reduce the number of fugitive VOC emissions from the landfill at each survey.	achieved	management and operation of facility to high standard	Section Head	Reduced emissions
Reduction of emissions to Air	Maintain FID surveys on quarterly.	achieved	4 surveys completed	Section Head	Reduced emissions
Reduction of emissions to Air	Ensure delivery of high gas quality above 39% methane suitable for use engine.	achieved		Section Head	Reduced emissions
Reduction of emissions to Air	Target 95% Gas utilisation of all landfill gas generated by the facility, 5% flaring.	achieved		Section Head	Improved Environmental Management Practices
Reduction of emissions to Air	Install additional drilled wells when final heights are achieved in filled cell locations.	achieved	horizontal and vertical wells installed	Section Head	Reduced emissions
Reduction of emissions to Wastewater	Continue to monitor and control leachate through quarterly leachate quality monitoring and weekly leachate level checks.	achieved		Section Head	Reduced emissions
Reduction of emissions to Wastewater	Continually assess and upgrade infrastructure as necessary. Cells are filled on an individual basis, which decreases leachate volume.	ongoing	20,000m2 Geohess installed	Section Head	Improved Environmental Management Practices
Groundwater protection	Leachate infrastructure inspection annually. The system was found to be in good condition.	achieved	Annual inspection completed	Section Head	Increased compliance with licence conditions
Reduction of emissions to Air	Install permanent capping to all finished areas of landfill and extra clay capping on intermediate areas.	achieved	in permanent cap topsoil placement and grassed circa 20,000m2	Section Head	Improved Environmental Management Practices
Materials Handling/Storage/Bunding	Maintain the buffer capacity within the leachate lagoon level, aim for below 2.3m level.	75	Leachate removed from site continually throughout the year	Section Head	Improved Environmental Management Practices

Environmental Management Programme/Continuous Improvement Programme template				Lic No:	WO 165-02
Additional improvements	Maintain and continue to improve all on site landscaping and the wetland area.	90	Landscape maintenance service in operation	Section Head	Improved Environmental Management Practices
Additional improvements	Employ a landscape contractor to assess plantations, replace failed trees/plants and improve the overall general appearance of the landfill site.	ongoing	topsoil placement of final cap area	Section Head	Improved Environmental Management Practices
Additional improvements	Review relationships with neighbours and interested parties on a continual basis and review communications programme annually.	90	Community liaison meetings, and communication programme reviewed	Section Head	Improved Environmental Management Practices
Additional improvements	Review the number and composition of complaints to determine any trends.	ongoing	Downward trend in complaints in 2018	Section Head	Less complaints
Additional improvements	Install new litter fences across capped areas to reduce open area for wind blow. Repair existing netting on sides of cells.	completed	Installed additional litter netting on new cells 11 and 12 and across site	Section Head	Increased compliance with licence conditions
Additional improvements	Continue to hold regular meetings with local residents.	ongoing	Community liaison meetings, and communication programme reviewed and direct visit to complainants	Section Head	Improved Environmental Management Practices
Noise reduction	Continually review and assess all nuisance control procedures to ensure minimal impact on surrounding areas.	ongoing	Extensive noise monitoring completed in 2018 no adverse impact noted. In addition changes to gas engine cladding and engine replacements undertaken.	Section Head	Improved Environmental Management Practices
Additional improvements	Continue with litter patrols and litter picking	Standard operation	Daily site inspections	Section Head	Improved Environmental Management Practices
Additional improvements	Ensure noise, dust, odour from vehicle movements are minimised by correct implementation of relevant operational protocols.	ongoing	Completed signage review and modification, Daily site inspection reports and actions undertaken	Section Head	Less complaints
Additional improvements	Aim to visit all complainants after complaint lodgement and respond to queries as quickly as reasonably practicable, ensuring that any complaints are followed up in writing ASAP after receipt of complaint within 5 working days.	ongoing	Visited complainants where possible all complaints responded to and updated on Alder	Section Head	Less complaints

Environmental Management Programme/Continuous Improvement Programme template				Lic No:	WO 165-02
Additional improvements	Review relationships with neighbours and interested parties on a continual basis, review communications programme annually and reduce environmental complaints.	achieved	Review of EMS system	Section Head	Less complaints
Additional improvements	Achieve a reduced level in the number and source of complaints from previous year.	achieved	Reduction in level of complaints received	Section Head	Less complaints
Additional improvements	Keep Public Information Room updated and current	Ongoing		Section Head	Improved Environmental Management Practices
Energy Efficiency/Utility conservation	Continual monitoring of annual usage, reported in AER Cap in progressive, small sections to reduce of potential fugitive emissions. Coordinate with the contractor on this and include nuisance issues in regular construction meetings.	achieved	completed	Section Head	Improved Environmental Management Practices
Reduction of emissions to Air		Ongoing,	Implemented during geohess placement	Section Head	Improved Environmental Management Practices
Additional improvements	Ensure monitoring results comply with licence limits and investigate any exceedances of emission limit values.	Ongoing,	All exceedances investigated, incident reports lodged as required	Section Head	Improved Environmental Management Practices
Materials Handling/Storage/Bunding	Ensure all chemicals are banded at all times. Spillage and emergency response training given. SDS register to be updated annually.	ongoing	EPA NC issued for drum temporarily outside banded area	Section Head	Improved Environmental Management Practices
Legal compliance	Development of a new 'evaluation of legal compliance' tool. Implementation of Pegasus (Register of Legislation).	ongoing	Pegasus online implemented and in use	Section Head	Improved Environmental Management Practices
Legal compliance	Maintain, evaluate compliance with Pegasus legal register.	ongoing	Pegasus online implemented and in use	Section Head	Improved Environmental Management Practices
Training	Develop and implement environmental training for all staff	Ongoing	EMS reviewed, training provided, courses attended	Section Head	Improved Environmental Management Practices

Noise monitoring summary report

Lic No: WO 165-02 Year

2017

1 Was noise monitoring a licence requirement for the AER period?

Yes

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

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 _{req}	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)?
08/02/2017	1647 - 1702	NL1		47	44	50		No	SELECT	Facility: Several excavators and compactor operating on mound continuously clearly audible. No other sources audible apart from plant reversing alarms. Extraneous: All sources other than bird song/calls and aircraft masked by site emissions.	
08/02/2017	1614 - 1629	NL2		51	42	48		No		Facility: Tipper truck movements x2 on adjacent haul road dominant at start of interval. Intermittent truck activity at weighbridge area audible at low level. Excavator operating at 200 m continuously audible at low level. Leachate tanker whine faintly audible. Extraneous: M11 traffic continuously audible at low level. Bird song/calls.	
08/02/2017	1711 - 1726	NL3		51	50	52		No		Facility: Mobile plant operating across mound continuously clearly audible, screened by intervening temporary earth bank. Gas engines continuously quite audible, with audible hum at 80 Hz. Extraneous: None audible apart from local bird song/calls.	
08/02/2017	1529 - 1544	NL4		44	41	46		No		Facility: Mobile plant almost continuously audible, with audibility varying from slight to low. Ejector trailer donkey engine slightly audible from 1544. Extraneous: Water flow in nearby drain continuously audible at low level. Bird song/calls, aircraft, and faintly audible distant traffic. Several vehicle movements on road to S more clearly audible. Tractor operating at 2-300 m clearly audible from 1542.	
08/02/2017	1509 - 1524		NSL1	54	43	49		No		Facility: No emissions audible. Extraneous: Water flow in nearby stream continuously clearly audible, masking distant sources except loudest M11 vehicles. Bird song/calls, and sporadic passing traffic. Dog barking at adjacent dwelling significant from 1516.	Yes
08/02/2017	1451 - 1506		NSL2	63	41	60		No		Facility: Sporadic truck movements on access road clearly audible. Excavator operating near maintenance garage audible intermittently at low level (engine and bucket). Extraneous: Intermittent passing road traffic intrusive when present, and audible on approaches. Distant traffic continuously slightly audible. Bird song/calls and aircraft. Local car intrusion during final minute.	Yes
08/02/2017	1554 - 1609		NSL3	59	48	65		No		Facility: No emissions audible. Extraneous: Intermittent passing traffic and continuous M11 traffic dominant. No other noise audible apart from birdsong.	Yes
04/04/2017	1524 - 1539	NL1		38	33	41		No		Facility: Mobile plant slightly audible continuously, with vibro-roller energy at 31.5 Hz band discernible. Reversing alarms also slightly audible. Extraneous: Distant M11 traffic faintly audible. Bird song/calls and aircraft.	
04/04/2017	1616 - 1631	NL2		54	43	52		No		Facility: Dozer operating on W side of site continuously audible at low level, masking all other plant noise except reversing alarms in active cell area, faintly discernible vibro-roller energy, and several truck movements on adjacent haul road. Extraneous: No emissions audible other than local birdsong.	
04/04/2017	1550 - 1605	NL3		46	44	48		No		Facility: Plant operating on mound continuously quite audible, particularly compactor. Vibro-roller energy faintly discernible. Extraneous: Bird song/calls and aircraft. Traffic masked by site emissions.	
04/04/2017	1418 - 1433	NL4		56	36	46		No		Facility: Plant on mound audible on occasion with breeze, with audibility varying from faint to low. Extraneous: Bird song/calls, aircraft, lightly rustling trees, and cattle lowing nearby. M11 traffic faintly audible.	
04/04/2017	1354 - 1409		NSL1	55	47	56		No		Facility: Dozer operating near SW corner continuously quite audible. No other sources audible, apart from intermittently discernible vibro-roller energy at 31.5 Hz. Extraneous: Local vehicle 1357 dominant when present. Local birdsong significant. Aircraft. M11 traffic masked by dozer.	Yes
04/04/2017	1333 - 1348		NSL2	62	42	59		No		Facility: Truck movements through weighbridge area clearly audible. Trucks on haul road occasionally audible at low level. Plant within cell area and reversing alarms audible at low level occasionally on breeze. Extraneous: Intermittent local traffic dominant when present. M11 traffic continuously audible at low level. Bird song/calls and aircraft.	Yes
04/04/2017	1314 - 1329		NSL3	56	46	61		No		Facility: No emissions audible. Extraneous: Regular local traffic and continuous M11 traffic dominant. No other noise audible apart from local birdsong.	Yes

09/08/2017	1454 - 1509	NL1		46	42	49	No	Facility: Inaudible. Extraneous: Distant M11 traffic and breeze through nearby trees continuously quite audible, masking all sources other than local bird song/calls.	
09/08/2017	1357 - 1412	NL2		46	41	47	No	Facility: Sporadic crew vehicle movements on adjacent haul road dominant when present. Several truck movements on haul road to NE quite audible. No noise audible from within cell area apart from clearly discernible vibro-roller hum. Extraneous: Distant M11 traffic audible at low level throughout. Bird song/calls, aircraft, and lightly rustling vegetation.	
09/08/2017	1428 - 1443	NL3		48	45	49	No	Facility: Gas engines slightly audible continuously. Plant on mound intermittently audible, chiefly compactor reversing alarm, but also excavators (tracks and engine), with audibility varying from slight to clear. Extraneous: Distant M11 traffic to E quite audible continuously. Bird song/calls and aircraft. Lightly rustling vegetation continuously audible at low level.	
09/08/2017	1631 - 1646	NL4		52	47	54	No	Facility: Dozer and 6x6 dump truck activity continuously quite audible. Extraneous: Bird song/calls, aircraft and continuously lightly rustling trees.	
09/08/2017	1606 - 1621	NSL1		52	43	51	No	Facility: Dozer continuously quite audible. Recurring 6x6 dump truck movements clearly audible. Extraneous: Sporadic passing traffic dominant when present. Bird song/calls, aircraft and continuously lightly rustling vegetation.	Yes
09/08/2017	1545 - 1600	NSL2		64	44	63	No	Facility: Various mobile plant almost continuously audible at low level on breeze. Sporadic truck movements through weighbridge area and on nearest haul road quite audible when present. Extraneous: Intermittent passing traffic intrusive. Bird song/calls, aircraft and lightly rustling vegetation. M11 traffic slightly audible continuously.	Yes
09/08/2017	1701 - 1716	NSL3		59	47	63	No	Facility: No emissions audible. Extraneous: Regular passing traffic dominant. M11 traffic also quite audible continuously. Birdsong.	Yes
26/10/2017	1344 - 1359	NL1		45	40	47	No	Facility: Excavator operating at N end of works area almost continuously audible at low level, with 6x6 engines also audible at low level. Extraneous: M11 traffic to E continuously audible at low level. Bird song/calls and aircraft.	
26/10/2017	1438 - 1453	NL2		41	38	42	No	Facility: Dozer and 6x6 movements audible at low level almost continuously. No local haul road traffic. Extraneous: M11 traffic continuously slightly audible. Occasional traffic movements audible on roads to S. Bird song/calls and aircraft.	
26/10/2017	1406 - 1421	NL3		51	46	55	No	Facility: Dozer and 6x6 movements audible at low level almost continuously. No local haul road traffic. Extraneous: M11 traffic continuously audible at low level. Cattle lowing nearby occasionally quite audible. Bird song/calls and aircraft.	
26/10/2017	1244 - 1259	NL4		43	37	46	No	Facility: Dozer continuously audible at low level, with LAF approaching 43 dB at loudest. Extraneous: Bird song/calls and aircraft. Distant road traffic slightly audible almost continuously. Lightly rustling tree nearby slightly audible.	
26/10/2017	1222 - 1237	NSL1		53	36	47	No	Facility: Mobile plant almost continuously audible at low level, chiefly dozer, with LAF rising to 47 dB at loudest. Extraneous: Passing car movement x3. Bird song/calls and aircraft. Distant traffic to S intermittently audible at low level.	Yes
26/10/2017	1509 - 1524	NSL2		66	44	67	No	Facility: Plant and/or gas engines slightly audible continuously. Extraneous: Intermittent passing traffic intrusive. M11 traffic to NE continuously quite audible. Bird song/calls and aircraft.	Yes
26/10/2017	1529 - 1544	NSL3		61	47	65	No	Facility: No emissions audible. Extraneous: Intermittent passing traffic dominant. M11 traffic continuously clearly audible. Bird song/calls.	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:

WO 165-02

Year

2017

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

Additional information

Enter date of audit	9th March 2010
No	
No	

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)	21,105.00	20,927.00	1%	
Electricity Consumption (MWHrs)	4.14	5.57	26%	
Fossil Fuels Consumption:				
Heavy Fuel Oil (m3)				
Light Fuel Oil (m3)	412,143	321,583	47%	
Natural gas (m3)				
Coal/Solid fuel (metric tonnes)				
Peat (metric tonnes)				
Renewable Biomass				
Renewable energy generated on site				

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

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

Table R2 Water usage on site					Water Emissions	Water Consumption	
Water use	Water extracted Previous year m3/yr.	Water extracted Current year m3/yr.	Production +/- % compared to previous reporting year**	Energy Consumption +/- % vs overall site production*	Volume Discharged back to environment(m ³ /yr):	Volume used i.e not discharged to environment e.g. released as steam m3/yr	Unaccounted for Water:
Groundwater							
Surface water	600m3 estimate	600m3 estimate	0		600m3 estimate		
Public supply			0				
On site well	52m3 estimate	52m3 estimate	0		25m2 estimate	25m2 estimate	
Recycled water							
Total							

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

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

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

Resource Usage/Energy efficiency summary	Lic No:	WO 165-02	Year	2017
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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
23rd February 2009	Prepare Energy Policy Statement		energy audit					
	Appoint responsible person		energy audit					
	Provide appropriate training		energy audit					
	Prepare targets and objectives		energy audit					
	Annual summary on performance in AER		energy audit					
	Assessment of energy efficiency of future plant and equipment		energy audit					
	Communicate policy objectives to staff		energy audit					
	Provide sub meters for gas utilisation plants		energy audit					
	Bi-Monthly data analyses and identification of efficiency opportunities		energy audit					
	Annual summary report in AER		energy audit					
	Provide awareness training to staff		energy audit					
	Provide feed back to staff		energy audit					
	Provide time sensors for office		energy audit					
	Consider introducing bio-diesel		energy audit					
	Benchmark gas utilisation plant against KTK and IPS systems		energy audit					

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:	WO 165-02	Year	2017
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	Complaints
	Additional information
Have you received any environmental complaints in the current reporting year? If yes please complete summary details of complaints received on site in table 1 below	Yes All complaints were investigated and findings and correspondence forwarded to the agency

Date	Category	Other type (please specify)	Brief description of complaint (Free txt <20 words)	Corrective action< 20 words	Resolution status	Resolution date	Further information
01.02.2017	Noise	-	Noise		Complete		Com005759
02.09.2017	Noise	-	Noise		Complete		COM006641
04.01.2017	Odour	-	Landfill Gas Odour		Complete		Com005673
05.05.2017	Odour	-	Waste Odour		Complete		COM006147
06.07.2017	Odour	-	Landfill Gas Odour		Complete		COM006424
07.01.2017	Odour	-	Landfill Gas Odour		Complete		Com005690
07.01.2017	Odour	-	Landfill Gas/Waste Odour		Complete		Com005688
07-09.08.2017	Odour	-	Landfill Gas/Waste Odour		Complete		COM006566
08.02.2017	Odour	-	Landfill Gas Odour		Complete		Com005793
08.07.2017	Noise	-	Noise		Complete		COM006432
08/09.08.2017	Odour	-	Odour		Complete		None
09.05.2017	Noise	-	Noise		Complete		Com006211
10.05.2017	Odour	-	Landfill Gas Odour		Complete		com006178
11.12.2017	Other	-	Vermin		Complete		Com006973
12.04.2017	Noise	-	Noise		Complete		COM006015
12-21.06.2017	Noise	-	Noise		Complete		COM006397
12-21.06.2017	Odour	-	Odour		Complete		COM006396
13.03.2017	Odour	-	Waste Odour		Complete		Com 005900
16.01.2017	Odour	-	Landfill Gas Odour		Complete		Com005701
18.04.2017	Noise	-	Noise		Complete		COM006027
18.04.2017	Odour	-	Waste Odour		Complete		COM006028
18.10.17	Odour	-	Landfill Gas Odour		Complete		None
18.10.17	Odour	-	Landfill Gas Odour		Complete		None
19.05.2017	Odour	-	Landfill Gas Odour		Complete		com006217
2.09.2017	Odour	-	Landfill Gas Odour		Complete		None
20.10.2017	Odour	-	Landfill Gas Odour		Complete		COM006820
20.10.2017	Odour	-	Landfill Gas Odour		Complete		None
21.02.2017	Noise	-	Noise		Complete		COM005849
21.06.2017	Odour	-	Odour		Complete		COM006338
22.03.2017	Odour	-	Waste Odour		Complete		COM005935
22.05.2017	Odour	-	Waste Odour		Complete		COM006228
24.03.2017	Odour	-	Waste Odour		Complete		COM005940
24.04.2017	Odour	-	Landfill Gas/Waste Odour		Complete		COM006075
24.05.2017	Odour	-	Waste Odour		Complete		COM006230
25.05.2017	Odour	-	Waste Odour		Complete		COM006247
26.03.2017	Noise	-	Noise		Complete		COM005958
26.06.2017	Noise	-	Noise		Complete		COM006399
26.06.2017	Odour	-	Waste Odour		Complete		COM006384
27.03.2017	Odour	-	Landfill Gas Odour		Complete		COM005950
27.04.2017	Other	-	Dirty Road		Complete		None
27.06.2017	Odour	-	Waste Odour		Complete		COM006398
28.03.2017	Odour	-	Waste Odour		Complete		COM005957
29.06.2017	Odour	-	Landfill Gas Odour		Complete		COM006405
30.08.2017	Odour	-	Waste Odour		Complete		None
30.4.+15/16/17.05.2017	Odour	-	Waste Odour		Complete		Com006210
31.08 & 4.09.2018	Odour	-	Landfill Gas/Waste Odour		Complete		COM006640
31.08.2017	Water	-	Water Quality		Complete		COM006630
4.04.2017	Noise	-	Noise		Complete		COM005977
5.04.2017	Noise	-	Noise		Complete		COM005989
Total complaints open at start of reporting year		0					
Total new complaints received during reporting year		49					
Total complaints closed during reporting year		49					
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

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

Additional information
All incidents were lodged with the Agency

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)	Activity in progress at	Communication	Occurrence	Corrective action<20 words	Preventative action <20 words	Resolution status	Resolution date	Likelihood of reoccurrence
07/02/17	Abatement equipment	Other location (Gas)	1. Minor	No Uncontrolled release	Plant or equipment issues		Normal activities	EPA	New	As per incident lodged with agency INCI011602	As per incident lodged with agency INCI011602	Resolved	06/02/17	Possible
20/01/17	Gas Methane and Carbon dioxide	Other location (perit)	1. Minor	No Uncontrolled release	Other (add details)	Report lodged with Agency Jan/Feb 2016	Normal activities	EPA	New	As per incident lodged with agency INCI011634	As per incident lodged with agency INCI011634	Resolved	01/12/17	Possible
24/04/17	Dust exceedance	Other location (AD)	1. Minor	No Uncontrolled release	Other (add details)	that vegetation and organic growth in the dust jar were the reasons for the exceedance of the dust deposition limit.	Normal activities	EPA	New	As per incident lodged with agency INCI012006	As per incident lodged with agency INCI012006	Resolved	13/04/16	Unlikely
25/07/17	Leachate transducer	Other location (cell)	1. Minor	No Uncontrolled release	Plant or equipment issues	Transducer Failure	Normal activities	EPA	New	As per incident lodged with agency INCI012570	As per incident lodged with agency INCI012570	Resolved	15/07/17	Possible
18/08/17	Breach of ELV	Other location (On)	1. Minor	Air	Operational controls	VOC survey	Normal activities	EPA	New	As per incident lodged with agency INCI012709	As per incident lodged with agency INCI012709	Resolved	16/06/17	Possible
25/08/17	leachate transducer	Other location (cell)	1. Minor	No Uncontrolled release	Other (add details)	Transducer and pump failure	Normal activities	EPA	New	As per incident lodged with agency INCI012745	As per incident lodged with agency INCI012745	Resolved	11/08/17	Possible
20/11/17	Breach of ELV	Other location (On)	1. Minor	Air	Operational controls	VOC survey	Normal activities	EPA	New	As per incident lodged with agency INCI013372	As per incident lodged with agency INCI013372	Resolved	06/09/17	Low
08/12/17	Breach of ELV	Other location (On)	1. Minor	Air	Operational controls	VOC survey	Normal activities	EPA	New	As per incident lodged with agency INCI013523	As per incident lodged with agency INCI013523	Resolved	04/12/17	Low
	SELECT	Other location (please)	1. Minor	SELECT	Other (add details)		SELECT	SELECT	SELECT			SELECT		SELECT
Total number of incidents current year		10												
Total number of incidents previous year		20												
% reduction/increase		50%												

WASTE SUMMARY	Lic No:	WO 165-02	Year	2017
SECTION A-PRTR ON SITE WASTE TREATMENT AND WASTE TRANSFERS TAB- TO BE COMPLETED BY ALL IPPC AND WASTE FACILITIES	PRTR facility logon		dropdown list click to see options	

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

Additional Information

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)

Yes	
-----	--

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

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)

Licensed annual tonnage limit for your site (total tonnes/annum)	EWC code	Source of waste accepted	Description of waste accepted Please enter an accurate and detailed description - which applies to relevant EWC code European Waste Catalogue EWC codes	Quantity of waste accepted in current reporting year (tonnes)	Quantity of waste accepted in previous reporting year (tonnes)	Reduction/ Increase over previous year +/- %	Reason for reduction/ increase from previous reporting year	Packaging Content (%) - only applies if the waste has a packaging component	Disposal/Recovery or treatment operation carried out at your site and the description of this operation	Quantity of waste remaining on site at the end of reporting year (tonnes)	Comments -
	200307	20- MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS	Bulky waste	578.32	5,392.70	-89%			D5- Specially engineered landfill		
	200303	20- MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS	Treated Street cleanings	3847.46	11,243.82	-66%			D5- Specially engineered landfill		
	200301	20- MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS	MSW Mixed	104802.99	120235.41	-13%			D5- Specially engineered landfill		
	191212	19- WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION AND WATER FOR INDUSTRIAL USE	MSW Mixed	1173.24	225.58	420%			D5- Specially engineered landfill		
	191212	19- WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION AND WATER FOR INDUSTRIAL USE	C&D Mixed	334	1,102.26	-70%			D5- Specially engineered landfill		
	191212	19- WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION AND WATER FOR INDUSTRIAL USE	C&I Mixed	11440.22	19,514.54	-41%			D5- Specially engineered landfill		
	191204	19- WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION AND WATER FOR INDUSTRIAL USE	PVC		133.20	-100%			D5- Specially engineered landfill		
	190802	19- WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION AND WATER FOR INDUSTRIAL USE	Grit (WWTP)	227.62	404.24	-44%			D5- Specially engineered landfill		
	190801	19- WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION AND WATER FOR INDUSTRIAL USE	SCREENINGS (WWTP)	1358.32	1,454.20	-7%			D5- Specially engineered landfill		
	190501	19- WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION AND WATER FOR INDUSTRIAL USE	Biostabilised Waste D	2888.5	1,898.28	52%			D5- Specially engineered landfill		
	020203	02-WASTES FROM AGRICULTURE, HORTICULTURE, AQUACULTURE, FORESTRY, HUNTING AND FISHING, FOOD PREPARATION AND PROCESSING	Knotweed		36.20	-100%			D5- Specially engineered landfill		

WASTE SUMMARY			Lic No: WO 165-02			Year 2017		
191212	19- WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION AND WATER FOR INDUSTRIAL USE	Fines (C&D, C&I)	42632.04	41,598.02	2%	R5-Recycling/reclamation or other inorganic materials which includes soil celaning resulting in recovery of the soil and recycling of inorganic construction materials		
191209	19- WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION AND WATER FOR INDUSTRIAL USE	Stone	8877.04	6,294.38	41%	R5-Recycling/reclamation or other inorganic materials which includes soil celaning resulting in recovery of the soil and recycling of inorganic construction materials		
191209	19- WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION AND WATER FOR INDUSTRIAL USE	Soil and stones	79.66	3,582.26	-98%	R5-Recycling/reclamation or other inorganic materials which includes soil celaning resulting in recovery of the soil and recycling of inorganic construction materials		
191207	19- WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION AND WATER FOR INDUSTRIAL USE	Woodchip	988.78	2,720.66	-64%	R3-Recycling/reclamation or organic substances which are not used as solvents(including composting asanother biological transformation processes)which includes gasification and pyrolysis		
190599	19- WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION AND WATER FOR INDUSTRIAL USE	Biostablised Waste R	8583.84		100%	R3-Recycling/reclamation or organic substances which are not used as solvents(including composting asanother biological transformation processes)which includes gasification and pyrolysis		
190503	19- WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION AND WATER FOR INDUSTRIAL USE	Biostablised Waste R	13099.42	9,095.22	44%	R3-Recycling/reclamation or organic substances which are not used as solvents(including composting asanother biological transformation processes)which includes gasification and pyrolysis		
190112	19- WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION AND WATER FOR INDUSTRIAL USE	Incinerator ash		423.18	-100%	R5-Recycling/reclamation or other inorganic materials which includes soil celaning resulting in recovery of the soil and recycling of inorganic construction materials		
170504	17- CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)	Soil and stones	163.04	1,864.60	-91%	R5-Recycling/reclamation or other inorganic materials which includes soil celaning resulting in recovery of the soil and recycling of inorganic construction materials		
170904	17- CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)	Soil and stones	7189.32		100%	R5-Recycling/reclamation or other inorganic materials which includes soil celaning resulting in recovery of the soil and recycling of inorganic construction materials		
		Total	208,263.81	227,218.75	-8%			

WASTE SUMMARY	Lic No:	WO 165-02	Year	2017
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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	
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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?

No	
----	--

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
Household	62500 tonnes	208,264		
Commercial	67500 tonnes			
Industrial	45000 tonnes			
Recovery	28000 tonnes			In addition to the waste recovered, 125,880.48 tonnes of green field soils and rock were received for construction and restoration works.

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
										SELECT UNIT	SELECT UNIT
Cell 1-5		2013	No	Private	Non Hazardous		No	No	No		
Cell 6 & 7	2009 & 2010	2015	No	Private	Non Hazardous		No	No	No		
Cell 9 & 10	2012		Yes	Private	Non Hazardous		No	No	No		
Cell 9 & 10 backwall	2016		Yes	Private	Non Hazardous		No	No	No		
cell 12	Jan-17		Yes	Private	Non Hazardous		No	No	No		

WASTE SUMMARY	Lic No:	WO 165-02	Year	2017
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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	Yes	Yes	Yes	Yes	Yes	Yes	

+ 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
m2	SELECT UNIT					
22,000	22,000	63,500		none	As per SEW and EPA design manual	

*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 off site

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
20,846.90						WWTP off site	

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
23,619,480	20,927,000 kWh	National Grid mainly with some on site use	Yes	



Environmental Protection Agency

[Guidance to completing the PRTR workbook](#)

PRTR Returns Workbook

Version 1.1.19

REFERENCE YEAR	2017
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1. FACILITY IDENTIFICATION

Parent Company Name	Ballynagran Landfill Limited
Facility Name	Ballynagran Residual Landfill
PRTR Identification Number	W0165
Licence Number	W0165-02

Classes of Activity

No.	class name
-	Refer to PRTR class activities below

Address 1	Ballynagran
Address 2	Coolbeg and Kilcandra
Address 3	
Address 4	
	Wicklow
Country	Ireland
Coordinates of Location	-8.41098 51.914
River Basin District	IEEA
NACE Code	3821
Main Economic Activity	Treatment and disposal of non-hazardous waste
AER Returns Contact Name	Tomas Fingleton
AER Returns Contact Email Address	tomas.fingleton@landfills.ie
AER Returns Contact Position	Landfill Manager
AER Returns Contact Telephone Number	086 7741813
AER Returns Contact Mobile Phone Number	086 7741813
AER Returns Contact Fax Number	045 482629
Production Volume	0.0
Production Volume Units	
Number of Installations	0
Number of Operating Hours in Year	0
Number of Employees	10
User Feedback/Comments	Waste Lubricating Oils from Gas Engines sent to Rilta Environmental Ltd for treatment/recovery - This is omitted from the submitted 2016 PRTR in error but has been amended in March 2018. The volume of waste oils transferred offsite decreased by 6% in 2017 compared to 2016.
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) ?	Yes
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This question is only applicable if you are an IPPC or Quarry site

4.1 RELEASES TO AIR

[Link to previous years emissions data](#)

| PRTR# : W0165 | Facility Name : Ballynagran Residual Landfill | Filename : W0165_2017-PRTR.xls | Return Year : 2017 |

29/03/2018 10:41

SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

RELEASERS TO AIR		Please enter all quantities in this section in KGs												
No. Annex II	POLLUTANT Name	M/C/E	METHOD		Emission Points						QUANTITY			
			Method Code	Designation or Description	Flare 1	Flare 2	Engine 1	Engine 2	Engine 3	Engine 4	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year	
02	Carbon monoxide (CO)	M	EN 15058:2004	NCIR By Horiba PG-250	Emission Point 1	Emission Point 2	Emission Point 3	Emission Point 4	Emission Point 5	Emission Point 6				
05	Nitrous oxide (N2O)	M	EN 14792:2005	Chemiluminescence	2.96	0.0	3411.0	4874.0	7424.0	4350.0	2061.96	0.0	0.0	
11	Sulphur oxides (SOx/SO2)	M	OTH	NDIR Absorption	183.0	0.0	1425.0	2065.0	3141.0	1841.0	8655.0	0.0	0.0	
01	Methane (CH4)	C	OTH	Gassim Model	8333.0	0.0	18256.0	26359.0	39397.0	23083.0	115428.0	0.0	0.0	
07	Non-methane volatile organic compounds (NMVOC)	M	ALT	FID	0.0	0.0	0.0	0.0	0.0	0.0	85194.0	0.0	85194.0	
					9.13	0.0	0.0	0.0	0.0	0.0	9.13	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

RELEASERS TO AIR		Please enter all quantities in this section in KGs											
No. Annex II	POLLUTANT Name	M/C/E	METHOD		Emission Points						QUANTITY		
			Method Code	Designation or Description	Flare 1	Engine 1	Engine 2	Engine 3	Engine 4	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year	
80	Chlorine and inorganic compounds (as HCl)	M	ALT	Ion Chromatography	Emission Point 1	Emission Point 2	Emission Point 3	Emission Point 4	Emission Point 5				
84	Fluorine and inorganic compounds (as HF)	M	ALT	Ion Chromatography	4.59	15.21	13.22	20.55	12.04	65.61	0.0	0.0	
					8.61	17.14	16.17	15.51	9.09	66.52	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)

RELEASERS TO AIR		Please enter all quantities in this section in KGs										
Pollutant No.	POLLUTANT Name	M/C/E	METHOD		Emission Points						QUANTITY	
			Method Code	Designation or Description	Engine 1	Engine 2	Engine 3	Engine 4	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year	
224	TA Luft carcinogenic substances Class 1	M	ALT	Thermal Desorption	Emission Point 1	Emission Point 2	Emission Point 3	Emission Point 4				
244	Total Particulates	M	ALT	Gravimetric	2.36	4.92	0.55	0.37	8.2	0.0	0.0	
					3.13	4.04	6.14	6.92	20.23	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:	Ballynagran Residual Landfill				
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	
	Total estimated methane generation (as per site model)	5742520.0	C OTH	Gassim 2.5	N/A
	Methane flared	425108.0	M OTH	On-Site Monitoring	5000.0 (Total Flaring Capacity)
	Methane utilised in engine/s	5232218.0	M OTH	On-Site Monitoring	3520.0 (Total Utilising Capacity)
	Net methane emission (as reported in Section A above)	85194.0	C OTH	Model and Monitoring data	N/A

4.2 RELEASES TO WATERS

[Link to previous years emissions data](#)

| PRTR# : W0165 | Facility Name : Ballynagran Residual Landfill | Filename : W0165_2017 PRTR.xls | Return Year : 2017 |

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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		RELEASURES TO WATERS			Please enter all quantities in this section in KGs			
No. Annex II	Name	M/C/E	Method Used		Emission Point 1	QUANTITY		
			Method Code	Designation or Description		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 B : REMAINING PRTR POLLUTANTS

POLLUTANT		RELEASURES TO WATERS			Please enter all quantities in this section in KGs			
No. Annex II	Name	M/C/E	Method Used		Emission Point 1	QUANTITY		
			Method Code	Designation or Description		T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
					0.0	0.0	0.0	0.0

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

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

POLLUTANT		RELEASURES TO WATERS			Please enter all quantities in this section in KGs			
Pollutant No.	Name	M/C/E	Method Used		Emission Point 1	QUANTITY		
			Method Code	Designation or Description		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

4.3 RELEASES TO WASTEWATER OR SEWER

[Link to previous years emissions data](#)

| PRTR# : W0165 | Facility Name : Ballynagran Residual Landfill | Filename : W0165_2017 PRTR.xl

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SECTION A : PRTR POLLUTANTS

OFFSITE TRANSFER OF POLLUTANTS DESTINED FOR WASTE-WATER TREATMENT OR SEWER					Please enter all quantities in this section in KGs			
POLLUTANT		METHOD			QUANTITY			
No. Annex II	Name	M/C/E	Method Used		Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
			Method Code	Designation or Description				
					0.0	0.0	0.0	0.0

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

SECTION B : REMAINING POLLUTANT EMISSIONS (as required in your Licence)

OFFSITE TRANSFER OF POLLUTANTS DESTINED FOR WASTE-WATER TREATMENT OR SEWER					Please enter all quantities in this section in KGs			
POLLUTANT		METHOD			QUANTITY			
Pollutant No.	Name	M/C/E	Method Used		Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
			Method Code	Designation or Description				
					0.0	0.0	0.0	0.0

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

4.4 RELEASES TO LAND

[Link to previous years emissions data](#)

| PRTR# : W0165 | Facility Name : Ballynagran Residual Landfill | Filename : W0165_2017 PRTR.xls | Return Year : 2017 |

29/03/2018 10:41

SECTION A : PRTR POLLUTANTS

POLLUTANT		RELEASES TO LAND			Please enter all quantities in this section in KGs		
No. Annex II	Name	M/C/E	METHOD		QUANTITY		
			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		RELEASES TO LAND			Please enter all quantities in this section in KGs		
Pollutant No.	Name	M/C/E	METHOD		QUANTITY		
			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#: W0165 | Facility Name : Ballynagran Residual Landfill | Filename : W0165_2017 PRTR.xls | Return Year : 2017 |

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Please enter all quantities on this sheet in Tonnes

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Transfer Destination	European Waste Code	Hazardous	Quantity (Tonnes per Year)	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	Haz Waste : Name and Licence/Permit No of Next Destination Facility	Haz Waste : Address of Next Destination Facility	Name and License / Permit No. and Address of Final Recoverer / Disposer (HAZARDOUS WASTE ONLY)	Actual Address of Final Destination i.e. Final Recovery / Disposal Site (HAZARDOUS WASTE ONLY)
						M/C/E	Method Used		Haz Waste : Name and Licence/Permit No of Recover/Disposer	Non Haz Waste: Address of Recover/Disposer		
Within the Country	13 02 05	Yes	98.911	mineral-based non-chlorinated engine, gear and lubricating oils	D9	C	Volume Calculation	Offsite in Ireland	Rilta Environmental Ltd,W0192-01	Block 402 ,Grant?s Drive ,Greenogue Business Park, Rathcoole ,Dublin,Ireland	Rilta Environmental Ltd,W0195-01,Block 402,Grants Drive,Greenogue Business park,Rathcoole Dublin ,Ireland,Ireland
Within the Country	19 07 03	No	20846.9	landfill leachate other than those mentioned in 19 07 02	D8	M	Weighed	Offsite in Ireland	Ringsend WWTP,D00-34-01	Ringsend ,Dublin,-,-,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](#)