

Facility Information Summary

AER Reporting Year	2019
Licence Register Number	P00561-05
Name of site	ESB Aghada Generating Station
Site Location	Whitegate, Midelton, Co. Cork
NACE Code	3511
Class/Classes of Activity	The Operation of Combustion Installations with a rated Thermal
National Grid Reference (6E, 6 N)	E1838, N6556

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.**

ESB Aghada Generating station is situated at Long Point near the village of Whitegate on the eastern shorelines of lower Cork Harbour. The Midleton- Whitegate public road (R630) bisects the site, separating the gas turbines and oil storage facility from the conventional steam generating unit (unit 1) & the CCGT (Combined Cycle Gas Turbine). ESB Aghada comprises of three separate plant components, which consist of the following:• A 270 MWe gross capacity boiler/turbine plant fired only on natural gas. This discharges via a 152m stack- closed on the 30/9/18. • Three GE Frame 9B Open Cycle Gas Turbines, each of 85 MWe gross capacities firing either natural gas or gasoil. These discharge via individual 65m stacks. • A 430 MWe Combines Cycle Gas Turbine. The station’s Environmental Management system (EMS) has been ISO 14001 accredited since January 2000. Successful recertification of the Environmental Management System took place in February 2018. A outage on AD2 took place between the 12th of August and 1st of November and from 7th of December to the 23rd of December 2019, at the height id the outage in excess of 400 people were onsite. As a consequence of the AD2 outage, there are significant increases in waste removed from site during 2019, these include sewage, timber, general waste, wood etc. In addition, the continued decommissioning of AD1(A1-1) took place during Q1 & Q2 2019.

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.

Elizabeth Stack	27/03/2020
Signature Group/Facility manager	Date
(or nominated, suitably qualified and experienced deputy)	

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		Additional information
1	Does your site have licensed emissions direct to surface water or direct to sewer? If yes please complete table W2 and W3 below for the current reporting year and answer further questions. If you do not have licensed emissions you <u>only</u> need to complete table W1 and or W2 for storm water analysis and visual inspections	Yes Note that during the AD2 outage, samples were not taken as the no flow or sample was available and the entire system was isolated.
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</u> contamination noted during visual inspections	Yes No evidence of contamination

Table W1 Storm water monitoring

Location reference	Location relative to site activities	PRTR Parameter	Licensed Parameter	Monitoring date	ELV or trigger level in licence or any revision thereof*	Licence Compliance criteria	Measured value	Unit of measurement	Compliant with licence	Comments
	SELECT	SELECT	SELECT			SELECT		SELECT	SELECT	
	SELECT	SELECT	SELECT			SELECT		SELECT	SELECT	

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

Table W2 Visual inspections-Please only enter details where contamination was observed.

Location Reference	Date of inspection	Description of contamination	Source of contamination	Corrective action	Comments
			SELECT		
			SELECT		

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

3	Was there any result in breach of licence requirements? If yes please provide brief details in the comment section of Table W3 below	No	Additional information
4	Was all monitoring carried out in accordance with EPA guidance and checklists for Quality of Aqueous Monitoring Data Reported to the EPA? If no please detail what areas require improvement in additional information box	Yes	Additional information

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 ^{Notes 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
SW10	Water	pH	discrete	Quarterly		6 to 9 pH	No pH value shall deviate from the specified range.	7.9	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			26-Feb-19
						8 to 9 pH	No pH value shall deviate from the specified range.	8.2	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			21-May-19
						6 to 9 pH	No pH value shall deviate from the specified range.	8.3	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			20-Aug-19
						6 to 9 pH	No pH value shall deviate from the specified range.	8	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			26-Nov-19
						3-4mg/l	SW trigger levels	2	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			26-Feb-19
						3-4mg/l	SW trigger levels	4	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			21-May-19
SW12	Water	Ammonia	discrete	Quarterly		0.2-0.3 mg/l	SW trigger levels	0.1	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			26-Feb-19
						0.2-0.3 mg/l	SW trigger levels	0.1	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			21-May-19
						0.2-0.3 mg/l	SW trigger levels	0.1	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			20-Aug-19
						0.2-0.3 mg/l	SW trigger levels	0.1	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			26-Nov-19
						0.14-0.19 mg/l	SW trigger levels	0.01	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			22-Jan-19
						0.14-0.19 mg/l	SW trigger levels	0.01	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			26-Feb-19
SW12	Water	Mineral oils	discrete	Monthly		0.1-0.12 mg/l	SW trigger levels	0.01	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			20-Mar-19
						0.1-0.12 mg/l	SW trigger levels	0.01	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			16-Apr-19
						0.14-0.19 mg/l	SW trigger levels	0.01	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			21-May-19
						0.14-0.19 mg/l	SW trigger levels	0.01	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			25-Jun-19
						0.14-0.19 mg/l	SW trigger levels	0.01	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			24-Jul-19
						0.14-0.19 mg/l	SW trigger levels	0.01	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			20-Aug-19

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AER Monitoring returns summary template-WATER/WASTEWATER(SEWER)					Lic No:	P00561-05	Year	2019					
					0.14-0.19 mg/l	SW trigger levels	0.01	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)		24-Sep-19
					0.14-0.19 mg/l	SW trigger levels	0.01	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)		25/09/2019 - SW12 incident ref: INCB017272
					0.14-0.19 mg/l	SW trigger levels	0.01	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)		22-Oct-19
					0.14-0.19 mg/l	SW trigger levels	0.01	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)		25/10/2019 - SW12 incident ref: INCB017473
					0.14-0.19 mg/l	SW trigger levels	0.01	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)		26-Nov-19
					0.14-0.19 mg/l	SW trigger levels	0.01	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)		17-Dec-19
PE19		Mineral oils	discrete	Monthly	20	All results < 1.2 x ELV	0.03	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)		Not sampled during outage from the 12th August 2019 to mid November 2019 & 7 th to 23rd of December 2019
				Or when	20	All results < 1.2 x ELV	0.01	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)		
				Unit AD2	20	All results < 1.2 x ELV	0.01	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)		
				Running	20	All results < 1.2 x ELV	0.01	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)		
					20	All results < 1.2 x ELV	0.01	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)		
					20	All results < 1.2 x ELV	0.01	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)		
PE23	Wastewater/Sewer	BOD	discrete	Quarterly	20	All results < 1.2 x ELV	24	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)		26-Feb-19
					20	All results < 1.2 x ELV	4	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)		16-Apr-19
					20	All results < 1.2 x ELV	-	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)		AD2 Outage- no sample
					20	All results < 1.2 x ELV	-	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)		17-Dec-19
		Suspended Solids	discrete	Quarterly	30	All results < 1.2 x ELV	13	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)		26-Feb-19
					30	All results < 1.2 x ELV	10	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)		16-Apr-19
					30	All results < 1.2 x ELV	-	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)		AD2 Outage- no sample
					30	All results < 1.2 x ELV	29	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)		17-Dec-19
SE3	Wastewater/Sewer	BOD	discrete	Quarterly	20	All results < 1.2 x ELV	2	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)		26-Feb-19
					20	All results < 1.2 x ELV	2	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)		16-Apr-19
					20	All results < 1.2 x ELV	2	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)		24-Sep-19
					20	All results < 1.2 x ELV	5	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)		17-Dec-19
							Suspended Solids	discrete	Quarterly	30	All results < 1.2 x ELV	2	mg/L
		30	All results < 1.2 x ELV	2	mg/L	yes				STRUMENTAL METHO	I.S. (Irish Standard)		16-Apr-19
		30	All results < 1.2 x ELV	20	mg/L	yes				STRUMENTAL METHO	I.S. (Irish Standard)		24-Sep-19
					30	All results < 1.2 x ELV	18	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)		17-Dec-19
PE24	Wastewater/Sewer	pH	discrete	Per Discharge	6 to 9	No pH value shall deviate from the specified range.	7.2	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)		03-Jan-19
					6 to 9	No pH value shall deviate from the specified range.	7.2	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)		03-Jan-19
					6 to 9	No pH value shall deviate from the specified range.	6.8	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)		04-Jan-19
					6 to 9	No pH value shall deviate from the specified range.	7	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)		10-Jan-19
					6 to 9	No pH value shall deviate from the specified range.	7.11	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)		11-Jan-19
					6 to 9	No pH value shall deviate from the specified range.	6.7	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)		17-Jan-19
					6 to 9	No pH value shall deviate from the specified range.	6.52	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)		18-Jan-19
					6 to 9	No pH value shall deviate from the specified range.	6.59	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)		19-Jan-19
					6 to 9	No pH value shall deviate from the specified range.	6.63	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)		23-Jan-19
					6 to 9	No pH value shall deviate from the specified range.	0	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)		23-Jan-19
					6 to 9	No pH value shall deviate from the specified range.	6.9	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)		30-Jan-19
					6 to 9	No pH value shall deviate from the specified range.	0	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)		30-Jan-19
					6 to 9	No pH value shall deviate from the specified range.	6.8	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)		31-Jan-19
6 to 9	No pH value shall deviate from the specified range.	0	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)		07-Feb-19					

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AER Monitoring returns summary template-WATER/WASTEWATER(SEWER)					Lic No:	P00561-05	Year	2019							
						6 to 9	No pH value shall deviate from the specified range.	6.8	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			25-Jul-19
						6 to 9	No pH value shall deviate from the specified range.	7.2	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			29-Jul-19
						6 to 9	No pH value shall deviate from the specified range.	6.6	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			30-Jul-19
						6 to 9	No pH value shall deviate from the specified range.	6.8	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			08-Aug-19
						6 to 9	No pH value shall deviate from the specified range.	7.5	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			15-Aug-19
						6 to 9	No pH value shall deviate from the specified range.	7.4	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			23-Aug-19
						6 to 9	No pH value shall deviate from the specified range.	6.61	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			10-Oct-19
						6 to 9	No pH value shall deviate from the specified range.	6.1	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			10-Oct-19
						6 to 9	No pH value shall deviate from the specified range.	6	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			10-Oct-19
						6 to 9	No pH value shall deviate from the specified range.	7.5	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			18-Oct-19
						6 to 9	No pH value shall deviate from the specified range.	6.5	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			23-Oct-19
						6 to 9	No pH value shall deviate from the specified range.	6.4	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			28-Oct-19
						6 to 9	No pH value shall deviate from the specified range.	6.1	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			28-Oct-19
						6 to 9	No pH value shall deviate from the specified range.	6.6	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			29-Oct-19
						6 to 9	No pH value shall deviate from the specified range.	6.5	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			01-Nov-19
						6 to 9	No pH value shall deviate from the specified range.	7.2	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			01-Nov-19
						6 to 9	No pH value shall deviate from the specified range.	6.8	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			03-Nov-19
						6 to 9	No pH value shall deviate from the specified range.	7.9	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			03-Nov-19
						6 to 9	No pH value shall deviate from the specified range.	7	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			04-Nov-19
						6 to 9	No pH value shall deviate from the specified range.	6.8	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			06-Nov-19
						6 to 9	No pH value shall deviate from the specified range.	6.8	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			06-Nov-19
						6 to 9	No pH value shall deviate from the specified range.	7.6	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			13-Nov-19
						6 to 9	No pH value shall deviate from the specified range.	7.2	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			13-Nov-19
						6 to 9	No pH value shall deviate from the specified range.	7	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			18-Nov-19
						6 to 9	No pH value shall deviate from the specified range.	6.8	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			21-Nov-19
						6 to 9	No pH value shall deviate from the specified range.	7.3	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			21-Nov-19
						6 to 9	No pH value shall deviate from the specified range.	6.2	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			28-Nov-19
						6 to 9	No pH value shall deviate from the specified range.	6.7	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			28-Nov-19
						6 to 9	No pH value shall deviate from the specified range.	6.2	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			30-Nov-19
						6 to 9	No pH value shall deviate from the specified range.	6.3	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			30-Nov-19
						6 to 9	No pH value shall deviate from the specified range.	6.3	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			12-Dec-19
						6 to 9	No pH value shall deviate from the specified range.	6.42	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			19-Dec-19
						6 to 9	No pH value shall deviate from the specified range.	6.8	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			19-Dec-19
						6 to 9	No pH value shall deviate from the specified range.	6.7	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			23-Dec-19
						6 to 9	No pH value shall deviate from the specified range.	7.2	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			24-Dec-19
						6 to 9	No pH value shall deviate from the specified range.	6.6	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			30-Dec-19
						6 to 9	No pH value shall deviate from the specified range.	6.78	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			30-Dec-19
						6 to 9	No pH value shall deviate from the specified range.		pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			
PE24	Wastewater/Sewer	Suspended Solids	discrete	Per		100	All results < 1.2 x ELV	4.2	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			03-Jan-19
				Discharge		100	All results < 1.2 x ELV	5	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			03-Jan-19
						100	All results < 1.2 x ELV	3.1	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			04-Jan-19
						100	All results < 1.2 x ELV	3.5	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			10-Jan-19
						100	All results < 1.2 x ELV	8.8	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			11-Jan-19
						100	All results < 1.2 x ELV	2.1	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			17-Jan-19
						100	All results < 1.2 x ELV	7.6	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			18-Jan-19
						100	All results < 1.2 x ELV	7.1	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			19-Jan-19
						100	All results < 1.2 x ELV	9.2	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			23-Jan-19
						100	All results < 1.2 x ELV	0	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			23-Jan-19
						100	No pH value shall deviate from the specified range.	3.1	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			30-Jan-19
						100	No pH value shall deviate from the specified range.	0	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			30-Jan-19

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					100	All results < 1.2 x ELV	12.2	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			17-Jul-19
					100	All results < 1.2 x ELV	2.5	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			17-Jul-19
					100	All results < 1.2 x ELV	8	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			25-Jul-19
					100	All results < 1.2 x ELV	1.5	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			25-Jul-19
					100	All results < 1.2 x ELV	2.1	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			29-Jul-19
					100	All results < 1.2 x ELV	8.8	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			30-Jul-19
					100	All results < 1.2 x ELV	2.1	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			08-Aug-19
					100	All results < 1.2 x ELV	1.4	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			15-Aug-19
					100	All results < 1.2 x ELV	2.2	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			23-Aug-19
					100	All results < 1.2 x ELV	8.2	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			10-Oct-19
					100	All results < 1.2 x ELV	4	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			10-Oct-19
					100	All results < 1.2 x ELV	3.2	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			10-Oct-19
					100	All results < 1.2 x ELV	2.4	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			18-Oct-19
					100	All results < 1.2 x ELV	3.5	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			23-Oct-19
					100	All results < 1.2 x ELV	3.4	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			28-Oct-19
					100	All results < 1.2 x ELV	2	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			28-Oct-19
					100	All results < 1.2 x ELV	4.6	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			29-Oct-19
					100	All results < 1.2 x ELV	6	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			01-Nov-19
					100	All results < 1.2 x ELV	2	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			01-Nov-19
					100	All results < 1.2 x ELV	8	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			03-Nov-19
					100	All results < 1.2 x ELV	2	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			03-Nov-19
					100	All results < 1.2 x ELV	3.4	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			04-Nov-19
					100	All results < 1.2 x ELV	6	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			06-Nov-19
					100	All results < 1.2 x ELV	4.6	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			06-Nov-19
					100	All results < 1.2 x ELV	4.6	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			13-Nov-19
					100	All results < 1.2 x ELV	3	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			13-Nov-19
					100	All results < 1.2 x ELV	3.2	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			18-Nov-19
					100	All results < 1.2 x ELV	1.6	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			21-Nov-19
					100	All results < 1.2 x ELV	2.8	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			21-Nov-19
					100	All results < 1.2 x ELV	8	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			26-Nov-19
					100	All results < 1.2 x ELV	2.2	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			28-Nov-19
					100	All results < 1.2 x ELV	4.6	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			30-Nov-19
					100	All results < 1.2 x ELV	1.6	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			30-Nov-19
					100	All results < 1.2 x ELV	1.6	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			12-Dec-19
					100	All results < 1.2 x ELV	4.8	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			19-Dec-19
					100	All results < 1.2 x ELV	1	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			19-Dec-19
					100	All results < 1.2 x ELV	3.2	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			23-Dec-19
					100	All results < 1.2 x ELV	2.6	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			24-Dec-19
					100	All results < 1.2 x ELV	12.2	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			30-Dec-19
					100	All results < 1.2 x ELV	5	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			30-Dec-19
					100	All results < 1.2 x ELV		mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			
PE25	Wastewater/Sewer	Ammonia (as N)	discrete	Monthly	5	All results < 1.2 x ELV	0.08	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			22-Jan-18
					5	All results < 1.2 x ELV	0.09	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			26-Feb-19
					5	All results < 1.2 x ELV	0.12	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			20-Mar-19
					5	All results < 1.2 x ELV	0.08	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			16-Apr-19
					5	All results < 1.2 x ELV	0.12	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			21-May-19
					5	All results < 1.2 x ELV	0.19	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			23-Jul-19
					5	All results < 1.2 x ELV	1.62	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			20-Aug-19
					5	All results < 1.2 x ELV	-	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			24/09/2019 outage
					5	All results < 1.2 x ELV	-	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			22/10/2019 outage
					5	All results < 1.2 x ELV	0.58	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			26-Nov-19

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER)				Lic No:	P00561-05	Year	2019							
					5	All results < 1.2 x ELV	0.37	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			17/12/2019
					5	All results < 1.2 x ELV		mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			
PE25	Wastewater/Sewer	Ortho-phosphate (as PO4)	discrete	monthly	5	All results < 1.2 x ELV	0.09	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			22-Jan-18
					5	All results < 1.2 x ELV	0.12	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			26-Feb-19
					5	All results < 1.2 x ELV	0.13	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			20-Mar-19
					5	All results < 1.2 x ELV	0.08	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			16-Apr-19
					5	All results < 1.2 x ELV	0.32	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			21-May-19
					5	All results < 1.2 x ELV	0.13	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			23-Jul-19
					5	All results < 1.2 x ELV	0.3	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			20-Aug-19
					5	All results < 1.2 x ELV	-	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			24/09/2019 outage
					5	All results < 1.2 x ELV	-	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			22/10/2019 outage
					5	All results < 1.2 x ELV	0.15	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			26-Nov-19
					5	All results < 1.2 x ELV	0.03	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			17/12/2019
					5	All results < 1.2 x ELV		mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			
PE25	Wastewater/Sewer	pH	discrete	Weekly	6to9	No pH value shall deviate from the specified range.	7.1	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			05-Jan-19
					6to9	No pH value shall deviate from the specified range.	7.84	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			10-Jan-19
					6to9	No pH value shall deviate from the specified range.	7.94	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			17-Jan-19
					6to9	No pH value shall deviate from the specified range.	7.83	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			22-Jan-19
					6to9	No pH value shall deviate from the specified range.	7.87	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			30-Jan-19
					6to9	No pH value shall deviate from the specified range.	7.97	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			01-Feb-19
					6to9	No pH value shall deviate from the specified range.	8.12	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			07-Feb-19
					6to9	No pH value shall deviate from the specified range.	8.12	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			08-Feb-19
					6to9	No pH value shall deviate from the specified range.	8.02	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			13-Feb-19
					6to9	No pH value shall deviate from the specified range.	6.23	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			23-Feb-19
					6to9	No pH value shall deviate from the specified range.	8.2	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			27-Feb-19
					6to9	No pH value shall deviate from the specified range.	8.07	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			05-Mar-19
					6to9	No pH value shall deviate from the specified range.	8.12	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			12-Mar-19
					6to9	No pH value shall deviate from the specified range.	8.8	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			19-Mar-19
					6to9	No pH value shall deviate from the specified range.	8.14	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			27-Mar-19
					6to9	No pH value shall deviate from the specified range.	8.4	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			17-Apr-19
					6to9	No pH value shall deviate from the specified range.	8.22	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			30-Apr-19
					6to9	No pH value shall deviate from the specified range.	7.95	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			07-May-19
					6to9	No pH value shall deviate from the specified range.	8.62	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			15-May-19
					6to9	No pH value shall deviate from the specified range.	8.74	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			24-May-19
					6to9	No pH value shall deviate from the specified range.	8.74	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			24-May-19
					6to9	No pH value shall deviate from the specified range.	8.2	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			30-May-19
					6to9	No pH value shall deviate from the specified range.	8.2	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			30-May-19
					6to9	No pH value shall deviate from the specified range.	7.49	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			06-Jun-19
					6to9	No pH value shall deviate from the specified range.	7.49	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			06-Jun-19
					6to9	No pH value shall deviate from the specified range.	7.61	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			13-Jun-19
					6to9	No pH value shall deviate from the specified range.	7.61	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			13-Jun-19
					6to9	No pH value shall deviate from the specified range.	8.25	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			18-Jun-19
					6to9	No pH value shall deviate from the specified range.	8.28	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			18-Jun-19
					6to9	No pH value shall deviate from the specified range.	8.28	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			26-Jun-19
					6to9	No pH value shall deviate from the specified range.	8.25	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			26-Jun-19
					6to9	No pH value shall deviate from the specified range.	7.58	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			02-Jul-19
					6to9	No pH value shall deviate from the specified range.	7.58	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			02-Jul-19
					6to9	No pH value shall deviate from the specified range.	8.03	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			13-Jul-19
					6to9	No pH value shall deviate from the specified range.	8.6	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			17-Jul-19
					6to9	No pH value shall deviate from the specified range.	7.79	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			24-Jul-19

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AER Monitoring returns summary template-WATER/WASTEWATER(SEWER)					Lic No:	P00561-05	Year	2019							
						6to9	No pH value shall deviate from the specified range.	8.02	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			30-Jul-19
						6to9	No pH value shall deviate from the specified range.	8.15	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			09-Aug-19
						6to9	No pH value shall deviate from the specified range.	7.97	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			06-Nov-19
						6to9	No pH value shall deviate from the specified range.	7.93	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			14-Nov-19
						6to9	No pH value shall deviate from the specified range.	8.1	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			21-Nov-19
						6to9	No pH value shall deviate from the specified range.	8.01	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			28-Nov-19
						6to9	No pH value shall deviate from the specified range.		pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			
P15	Wastewater/Sewer	pH	discrete	per discharge		6to9	No pH value shall deviate from the specified range.	6.98	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			03-Dec-19
		Suspended Solids	discrete			6to9	No pH value shall deviate from the specified range.	7.57	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			20-Mar-19
						50mg/l	All values < ELV	4	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			03-Dec-19
								4						20-Mar-19	
		Ammonia (as N)	discrete			10mg/l	All values < ELV	0	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			03-Dec-19
						10mg/l	All values < ELV	0	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			20-Mar-19
SW22	Wastewater/Sewer	pH	discrete	Quarterly		6to9	No pH value shall deviate from the specified range.	7.9	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			26-Feb-19
						6to9	No pH value shall deviate from the specified range.	7.2	pH units	yes	STRUMENTAL METHO	I.S. (Irish Standard)			20-Aug-19
		BOD	discrete	Quarterly		9-12 mg/l	SW trigger levels	5	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			26-Feb-19
						9-12 mg/l	SW trigger levels	11	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			20-Aug-19
		Mineral oils	discrete	Quarterly		0.14-0.19 mg/l	SW trigger levels	0.01	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			26-Feb-19
						0.14-0.19 mg/l	SW trigger levels	0.01	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			20-Aug-19
		Residual Chlorine	discrete	Quarterly		0.1-0.12 mg/l	SW trigger levels	0	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			26-Feb-19
						0.1-0.12 mg/l	SW trigger levels	0	mg/L	yes	STRUMENTAL METHO	I.S. (Irish Standard)			20-Aug-19
SW1	Wastewater/Sewer	various	discrete	Quarterly											AD1 decomissioned - no flow as a result
PE2	Water	various	discrete	Quarterly											AD1 decomissioned - no flow as a result
SW27	Wastewater/Sewer	SELECT	discrete	Monthly											No flow during the year
PE4	Water	various	discrete	Quarterly											AD1 decomissioned - no flow as a result
PE14	Water	various	discrete	Quarterly											AD1 decomissioned - no flow as a result
	SELECT	SELECT	SELECT		SELECT		SELECT		SELECT	SELECT	SELECT	SELECT			

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

Note 2: Where Emission Limit Values (ELV) do not apply to your licence please compare results against EQS for Surface water or relevant receptor quality standards

Continuous monitoring

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

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	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

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Groundwater/Soil monitoring template	Lic No: P00561-05	Year: 2019
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		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 All ground water monitoring were within the interim guideline values with the exception of the conductivity. The boreholes are beside Cork Harbour and the high conductivity recorded is attributed to the esturine environment. There were no significant upward or downward trends in analysis from previous years.
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 Groundwater monitoring template Report (link in cell G8) and submit separately through ALDER as a licensee return AND answer questions 5-12 below.	no	
5	Is the contamination related to operations at the facility (either current and/or historic)	N/A	
6	Have actions been taken to address contamination issues? If yes please summarise remediation strategies proposed/undertaken for the site	N/A	
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?	N/A	
11	Have potential receptors been identified on and off site?	N/A	
12	Is there evidence that contamination is migrating offsite?	N/A	

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
26/02/2019 21/05/2019 20/08/2019 26/11/2019	BH1	BOD	Titrimetric	Quarterly	2	2	mg/l	30 (mg/l)		no
26/02/2019 21/05/2019 20/08/2019 26/11/2019	BH1	TPH	solvent extraction	Quarterly	10	10	ug/l	Total hydro 0.01(mg/l)		no
26/02/2019 21/05/2019 20/08/2019 26/11/2019	BH1	pH	instrument	Quarterly	7.9	7.45	pH Units	6-9 pH		no
26/02/2019 21/05/2019 20/08/2019 26/11/2019	BH1	Conductivity	instrument	Quarterly	44900	33686	us/cm	1000 ms/cm		no
26/02/2019 21/05/2019 20/08/2019 26/11/2019	BH1	odour		Quarterly	Odourless	Odourless	N/A	N/A		no
26/02/2019 21/05/2019 20/08/2019 26/11/2019	BH4A	BOD	Titrimetric	Quarterly	3	2.5	mg/l	30 (mg/l)		no
26/02/2019 21/05/2019 20/08/2019 26/11/2019	BH4A	TPH	solvent extraction	Quarterly	38	17	ug/l	Total hydro 0.01(mg/l)		no

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26/02/2019 21/05/2019 20/08/2019 26/11/2019	BH4A	pH	instrument	Quarterly	7.8	7.625	pH Units	6-9 pH		no
26/02/2019 21/05/2019 20/08/2019 26/11/2019	BH4A	Conductivity	instrument	Quarterly	40500	30925	us/cm	1000 ms/cm		no
26/02/2019 21/05/2019 20/08/2019 26/11/2019	BH4A	odour		Quarterly	Odourless/dry	Odourless	N/A	N/A		no
26/02/2019 21/05/2019 20/08/2019 26/11/2019	BH5A	BOD	Titrimetric	Quarterly	3	2.2.	mg/l	30 (mg/l)		no
26/02/2019 21/05/2019 20/08/2019 26/11/2019	BH5A	TPH	solvent extraction	Quarterly	13	10	ug/l	Total hydro 0.01(mg/l)		no
26/02/2019 21/05/2019 20/08/2019 26/11/2019	BH5A	pH	instrument	Quarterly	7.6	7.575	pH Units	6-9 pH		no
26/02/2019 21/05/2019 20/08/2019 26/11/2019	BH5A	Conductivity	instrument	Quarterly	33800	32450	us/cm	1000 ms/cm		no
26/02/2019 21/05/2019 20/08/2019 26/11/2019	BH5A	odour		Quarterly	Odourless	Odourless	N/A	N/A		no
26/02/2019 21/05/2019 20/08/2019 26/11/2019	RT1	BOD	Titrimetric	Quarterly	9	4.33	mg/l	30 (mg/l)		no
26/02/2019 21/05/2019 20/08/2019 26/11/2019	RT1	TPH	solvent extraction	Quarterly	22	14	ug/l	Total hydro 0.01(mg/l)		no
26/02/2019 21/05/2019 20/08/2019 26/11/2019	RT1	pH	instrument	Quarterly	6.7	6.4	pH Units	6-9 pH		no
26/02/2019 21/05/2019 20/08/2019 26/11/2019	RT1	Conductivity	instrument	Quarterly	237	226	us/cm	1000 ms/cm		no
26/02/2019 21/05/2019 20/08/2019 26/11/2019	RT1	odour		Quarterly	Odourless	Odourless	N/A	N/A		no
26/02/2019 21/05/2019 20/08/2019 26/11/2019	RT5	BOD	Titrimetric	Quarterly	2	2	mg/l	30 (mg/l)		no
26/02/2019 21/05/2019 20/08/2019 26/11/2019	RT5	TPH	solvent extraction	Quarterly	36	12.5	ug/l	Total hydro 0.01(mg/l)		no
26/02/2019 21/05/2019 20/08/2019 26/11/2019	RT5	pH	instrument	Quarterly	7.2	7.125	pH Units	6-9 pH		no
26/02/2019 21/05/2019 20/08/2019 26/11/2019	RT5	Conductivity	instrument	Quarterly	336	328.75	us/cm	1000 ms/cm		no
26/02/2019 21/05/2019 20/08/2019 26/11/2019	RT5	odour		Quarterly	Odourless	Odourless	N/A	N/A		no
26/02/2019 21/05/2019 20/08/2019 26/11/2019	RT6	BOD	Titrimetric	Quarterly	2	2	mg/l	30 (mg/l)		no
26/02/2019 21/05/2019 20/08/2019 26/11/2019	RT6	TPH	solvent extraction	Quarterly	17	11.75	ug/l	Total hydro 0.01(mg/l)		no
26/02/2019 21/05/2019 20/08/2019 26/11/2019	RT6	pH	instrument	Quarterly	6.5	6.325	pH Units	6-9 pH		no
26/02/2019 21/05/2019 20/08/2019 26/11/2019	RT6	Conductivity	instrument	Quarterly	322	313.75	us/cm	1000 ms/cm		no

Groundwater/Soil monitoring template				Lic No:	P00561-05	Year	2019			
26/02/2019 21/05/2019 20/08/2019 26/11/2019		odour		Quarterly	Odourless	Odourless	N/A	N/A		no
26/02/2019 21/05/2019 20/08/2019 26/11/2019		BOD	Titrimetric	Quarterly	3	2.25	mg/l	30 (mg/l)		no
26/02/2019 21/05/2019 20/08/2019 26/11/2019	RT7.	TPH	solvent extraction	Quarterly	10	10	ug/l	Total hydro 0.01(mg/l)		no
26/02/2019 21/05/2019 20/08/2019 26/11/2019	RT7.	pH	instrument	Quarterly	6.3	6.1	pH Units	6-9 pH		no
26/02/2019 21/05/2019 20/08/2019 26/11/2019	RT7.	Conductivity	instrument	Quarterly	303	293	us/cm	1000 ms/cm		no
26/02/2019 21/05/2019 20/08/2019 26/11/2019	RT7.	odour		Quarterly	Odourless	Odourless	N/A	N/A		no
26/02/2019 21/05/2019 20/08/2019 26/11/2019	RT14.	BOD	Titrimetric	Quarterly	2	2	mg/l	30 (mg/l)		no
26/02/2019 21/05/2019 20/08/2019 26/11/2019	RT14.	TPH	solvent extraction	Quarterly	10	7.5	ug/l	Total hydro 0.01(mg/l)		no
26/02/2019 21/05/2019 20/08/2019 26/11/2019	RT14.	pH	instrument	Quarterly	6.6	6.475	pH Units	6-9 pH		no
26/02/2019 21/05/2019 20/08/2019 26/11/2019	RT14.	Conductivity	instrument	Quarterly	490	450.75	us/cm	1000 ms/cm		no
26/02/2019 21/05/2019 20/08/2019 26/11/2019	RT14.	odour		Quarterly	Odourless	Odourless	N/A	N/A		no
							SELECT	8		SELECT
							SELECT			SELECT

.+ where average indicates arithmetic mean

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

Table 2: Downgradient Groundwater monitoring results

Date of sampling	Sample location reference	Parameter/ Substance	Methodology	Monitoring frequency	Maximum Concentration	Average Concentration	unit	29	SELECT**	Upward trend in yearly average pollutant concentration over last 5 years of monitoring data
							SELECT			SELECT
							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)

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

Groundwater/Soil monitoring template	Lic No:	P00561-05	Year	2019
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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

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Environmental Liabilities template	Lic No:	P00561-05	Year	2019
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[Click here to access EPA guidance on Environmental Liabilities and Financial provision](#)

		Commentary	
1	ELRA initial agreement status	Submitted and agreed by EPA	Agreed with the EPA mid 2017
2	ELRA review status	Review required and completed	reviewed November 2018
3	Amount of Financial Provision cover required as determined by the latest ELRA	Specify	
4	Financial Provision for ELRA status	Submitted and agreed by EPA	Approved 20/2/18
5	Financial Provision for ELRA - amount of cover		2,547,240
6	Financial Provision for ELRA - type	Other please specify	Company Guarantee
7	Financial provision for ELRA expiry date	None	
8	Closure plan initial agreement status	Closure plan submitted and agreed by EPA	Agreed with the EPA mid 2017
9	Closure plan review status	Review required and completed	
10	Financial Provision for Closure status	Submitted and agreed by EPA	Approved 20/2/18
11	Financial Provision for Closure - amount of cover	Specify	1,909,354
12	Financial Provision for Closure - type	Other please specify	Company Guarantee
13	Financial provision for Closure expiry date	None	

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Environmental Management Programme/Continuous Improvement Programme template Lic No: P00561-05 Year 2019

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	Certified to ISO14001.
2	Does the EMS reference the most significant environmental aspects and associated impacts on-site	Yes	This is covered in the aspects and impacts section of the EMS.
3	Does the EMS maintain an Environmental Management Programme (EMP) as required in accordance with the licence requirements	Yes	Yes, there is a EMP in place.
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	Yes, this is in place.

Environmental Management Programme (EMP) report

Objective Category	Target	Status (% completed)	How target was progressed	Responsibility	Intermediate outcomes
Leadership	Accountability Behaviours Continuous Improvement			Station Manager	
	Management visibility – Environmental leadership will be part of performance management, raise general level of Environmental awareness & involvement through active communication between management and staff.	Ongoing throughout year	Environmental Performance included in monthly management meetings. Monthly KPIs reported. Quarterly reports HO GWM on Environmental performance. Quarterly staff communication bulletins	Management Team	Maintain active communication on Environmental issues in Aghada.
	Aghada will utilise the SHIELD system when appropriate for managing Environmental Incidents. The ISO14001 internal audit schedule is also be managed through Shield. Ensure all incidents and licence non-compliances reported to the EPA asap. Continue reviewing all environmental incidents, complaints etc , establish root causes and implement actions to prevent a reoccurrence.	100%	3 year audit schedule 2019-2021 uploaded on SHIELD.	Management Team	Enables tracking of all environmental issues in one location which is available for all staff to review.
		Ongoing throughout year	Environmental incidents recorded on EDEN/shield when appropriate	Management Team	Maintain good communications with the EPA and reporting of incidents in a timely manner. Ensure continual improvement in reviewing incident/complaint root causes.
Compliance Obligations	Emissions to Air Compliance			As below	
	CEMS/ PEMS review	100%	review procedures, alarms,	Maintenance manager/Environmental manager	Improved Environmental Management Practices
	Noise Emissions Monitoring				
	Boundary noise measurements to be carried out year as per IEL	100%	Allegro acoustics completed in 2019 and submitted to the Agency.	Internal resource: Environmental Coordinator to plan. Environmental budget in place for monitoring.	Ensure no changes to noise emissions from operations.
	Reduce the potential for discharge of pollutants to surface and ground water.			As below	
	Carry out 3 yearly retention tests as per bund test schedule and carry out repairs to defective bunds as required. Portable bunds included	100%	Testing schedule tracked through spreadsheet on IDM.	Internal Resources: Operations Manager (Shift Manager to carry out tests) Civil Engineer Environmental Coordinator ESB Networks Plant Specialist Environmental and Civil budgets in place.	To ensure integrity of containment structures and to eliminate risk of leaks reaching surface water.
	Drainage repair and hydrostatic testing schedule. •Sumps to be inspected and tested.	100% AD2 and completed as planned	Tender to be sent out. CCTV Survey to be completed & pressure testing where possible	Civil Engineer Maintenance Manager Operations Manager Env. Coordinator Resources: Contract awarded - budget in place. Additional ESBI resources now appointed to manage drainage works to	To reduce risk of leaks reaching surface water
CMMS +	100%	review Job cards monthly and clear asap in relation to IEL compliance	Environmental Coordinator/General services and Maintenance Manager	No environmental jobcard back log	
Emergency Procedures	Emergency Preparedness			As below	
Resource Use Energy Conservation Waste Management	Drills to be completed	100%	review with consultant prior to proceeding	Operations Mgr. & Environmental Coordinator	Reduced emissions
	Sustainability - Waste water and energy are KPIs and reported monthly.			As below	
	Wasterecover/reuse target % This is for non-hazardous contract waste (General, timber, glass, compost and WEEE waste) Does not include project waste.	Ongoing throughout year	Waste included in business plan, reported as monthly KPI. Review and track waste monthly.	Internal resource: Environmental Coordinator FWA in place for waste management. Environmental budget in place for waste disposal.	Ensure good waste management and segregation is being carried out by all staff and contractors on site.
	Water usage Treated water use in the CCGT to be monitored by underfeed meter	Ongoing throughout year	Water usage in business plan, reported as monthly KPI. Review and track water usage daily, report monthly.	Shift Manager Environmental Coordinator	Optimisation of water usage. Ongoing water monitoring and investigations to be carried out to ensure leaks and use are minimised.
Environmental Awareness and Communication	Energy Efficiency target CTS, AD1 & AD2%	Ongoing throughout year	Efficiency included in business plan. Plant Efficiency reported as a monthly KPI. review at FMG	Internal Resource: Operations manager and Cnvironmental Coordinator.	Optimisation of energy and fuel use.
	Training to be carried out as per training schedule. The following training to be carried out in 2020 • General awareness for Ops team as required. • Waste training • Spill training- exercise Env. Coordinator to attend webinars as scheduled for the EPA Surveillance visit ISO14001:2015	100%	Env. Coordinator to carry out training.	Internal Resource: Environmental Coordinator and training coordinator.	To ensure all staff are aware of our IE licence environmental aspects associated with their work on-site.
ISO14001	Surveillance visit ISO14001:2015	100%	April & November 2019 Surveillance visits	Internal resources : Environmental Coordinator.External resource: Emma Delaney ESBI Budget in place for auditing	Improved Environmental Management Practices
	Community	ongoing	Various CSR projects with community	Environmental Coordinator/Station Mgr.	Stakeholder management
	Internal Audits	100%	Quarterly review	Internal resources : Environmental Coordinator. ESBI in Q4 2018	Improved Environmental Management Practices.
	Complete all IEL reports			As below	
	AER	100%	Sections completed by chemical and operations team	Internal resources: Environmental Coordinator//GWM Env Mgr.	Increased compliance with licence conditions
	Noise Emissions Monitoring	100%	Annual survey complying with environmental compliance obligations.	Internal resources: Env Coordinator.	Increased compliance with licence conditions

Environmental Management Programme/Continuous Improvement Programme template				Lic No:	P00561-05	Year	2019
IE Licence/ GHG permits	GHG AEM	100%	Preverification/internal audit/ESBI audit & review	Internal resources: Environmental Coordinator/ Technical services Engineer/GWM Env Mgr. CICs consultants engaged to advise and carry out preliminary and final verification and reports for EPA.	Increased compliance with licence conditions		
	AST/QAL2 reports, AST reports CT11, CT12 & CT14 as appropriate.	100%	ASTs completed in 2019	Environmental Coordinator//GWM Env Mgr. Thermal performance Manager	Increased compliance with licence conditions		

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- 1 Was noise monitoring a licence requirement for the AER period?
If yes please fill in table N1 noise summary below
- 2 Was noise monitoring carried out using the EPA Guidance note, including completion of the "Checklist for noise measurement report" included in the guidance note as table 6?
- 3 Does your site have a noise reduction plan
- 4 When was the noise reduction plan last updated?
- 5 Have there been changes relevant to site noise emissions (e.g. plant or operational changes) since the last noise survey?

Yes
Yes
No
NA
No

[Noise Guidance note NG4](#)

Table N1: Noise monitoring summary

Date of monitoring	Time period	Noise location (on site)	Noise sensitive location -NSL (if applicable)	LA _{eq}	LA ₉₀	LA ₁₀	LA _{max}	Tonal or impulsive noise* (Y/N)	If tonal /impulsive noise was identified was 5dB penalty applied?	Comments (ex. main noise sources on site, & extraneous noise ex. road traffic)	Is site compliant with noise limits (day/evening/night)?
20/03/2019	Day	-	NSL1	72.9	44.5	78.1	89.3	No		The dominant noise source during this measurement was road traffic along the R630 regional road. Additional noise sources included birdsong and pedestrians. The Power Station was not audible at this location during this measurement.	Yes
20/03/2019	Eve	-	NSL1	71.9	41.2	76.1	91.3	No		The dominant noise source during this measurement was road traffic along the R630 regional road. Additional noise sources included birdsong and pedestrians. The Power Station was not audible at this location during this measurement.	Yes
20/03/2019	Night	-	NSL1	63.9	36.4	52.6	91.1	No		The dominant noise source during this measurement was occasional road traffic along the R630 regional road. The Power Station was audible at this location during this measurement as a low-level, broadband hum.	Yes
20/03/2019	Day	-	NSL2	69.8	42.3	74.7	87.6	No		The dominant noise source during this measurement was road traffic along the R630 regional road. Additional noise sources included birdsong, pedestrians, and a broadband hum from the Whitegate Oil Refinery. The Power Station was not audible at this location during this measurement.	Yes
20/03/2019	Eve	-	NSL2	67.4	43.2	69.4	88.1	No		The dominant noise source during this measurement was road traffic along the R630 regional road. Additional noise sources included birdsong, pedestrians, a siren from the Whitegate Oil Refinery, and a broadband hum from the Whitegate Oil Refinery. The Power Station was not audible at this location during this measurement.	Yes
20/03/2019	Night	-	NSL2	58.3	41.2	45.5	84.9	No		The dominant noise source during this measurement was road traffic along the R630 regional road. Additional noise sources included a broadband hum from the Whitegate Oil Refinery. The Power Station was audible at this location during this measurement as a low-level, broadband hum.	Yes

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*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)

		Additional information	
		2019	overall efficiency of units monitored
1	When did the site carry out the most recent energy efficiency audit? Please list the recommendations in table 3 below		
2	Is the site a member of any accredited programmes for reducing energy usage/water conservation such as the SEAI programme linked to the right? If yes please list them in additional information SEAI - Large Industry Energy Network (LIEN)	Yes	
3	Where Fuel Oil is used in boilers on site is the sulphur content compliant with licence conditions? Please state percentage in additional information	Yes	

Energy Use	Previous year 2018	Current year 2019	Production +/- % compared to previous reporting year**	Energy Consumption +/- % vs overall site production*
Total Energy Used (MWHrs)	39,547	25,870	-34.58%	
Total Energy Generated (MWHrs)	1,990,698	1,385,036	-30.42%	
Total Renewable Energy Generated (MW)	n/a			
Electricity Consumption (MWHrs)	As above	As above		
Fossil Fuels Consumption:	n/a	n/a		
Heavy Fuel Oil (m3)	n/a	n/a		
Light Fuel Oil (m3)	495.68	615.515	24.17%	
Natural gas (m3)	353114240	256439624.4	-27.38%	
Coal/Solid fuel (metric tonnes)	n/a	n/a		
Peat (metric tonnes)	n/a	n/a		
Renewable Biomass	n/a	n/a		
Renewable energy generated on site	n/a	n/a		

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

Water use	Water extracted		Production +/- % compared to previous reporting year**	Energy Consumption +/- % vs overall site production*	Water Emissions Volume Discharged back to environment(m ³ /yr)	Water Consumption Volume used i.e not discharged to environment e.g. released as steam m3/yr	Unaccounted for Water:
	Previous year m3/yr.	Current year m3/yr.					
Groundwater							
Surface water							
Public supply	14928	25432					
Recycled water							
Total	14928	25432					

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

	Total	Landfill	Incineration	Recycled/Recovery	Other
Hazardous (Tonnes)	153.69			153.69	
Non-Hazardous (Tonnes)	2029.45			2029.45	

Date of audit	Recommendations	Description of Measures proposed	Origin of measures	Predicted energy savings %	Implementation date	Responsibility	Completion date	Status and comments
			SELECT					
			SELECT					
			SELECT					

Technology	AD2 (A2-1)		AT1 (A1-2)		AT2 (A1-3)		AT4 (A1-4)		Station Total
	CCGT	Gas	CCGT	Gas	CCGT	Gas	CCGT	Gas	
Primary Fuel	Gas		Gas		Gas		Gas		
Thermal Efficiency	58%		31%		31%		31%		
	2010		1980		1980		1980		
	63		60		14		40		177
Total Running Time	4836.76		422		61		363		5682.76
Total Electricity Generated (GWH)	1364.178		10.696		1.991		8.171		1385.036
House Load (GWH)	23.905		0.312		0.149		0.264		24.63
KWH per Litre of Process Water	1,217.90		n/a		n/a		n/a		
KWH per Litre of Total Water used on Site									

Complaints and Incidents summary template Lic No: P00561-05 Year: 2019

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

No N/A

Table 1 Complaints summary							
Date	Category	Other type (please specify)	Brief description of complaint (Free txt <20 words)	Corrective action< 20 words	Resolution status	Resolution date	Further information
	SELECT				SELECT		
	SELECT				SELECT		
	SELECT				SELECT		
	SELECT				SELECT		
	SELECT				SELECT		
Total complaints open at start of reporting year		0					
Total new complaints received during reporting year		0					
Total complaints closed during reporting year	NA						
Balance of complaints end of reporting year		0					

Incidents Additional information

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

Yes Minor indication of oil seen at SW12 on the 25/9/19 & 25/10/19, samples taken at the time & SW triggers levels were not breached on either occasion.

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

Table 2 Incidents summary															
Date of occurrence	Incident nature	Location of occurrence	Incident category* please refer to guidance	Receptor	Cause of incident	Other cause (please specify)	Activity in progress at time of incident	Communication	Occurrence	Corrective action<20 words	Preventative action <20 words	Resolution status	Resolution date	Likelihood of reoccurrence	
25/09/2019	Uncontrolled release	SW12	1. Minor	Water	Adverse weather	heavy rains dsiturbed drains	Normal activities	EPA	New	*calculated from Sulphur content in distillate usage,449 operating hours as per condition 5.7 of IPPCL, PEMS, AST & Biannual SO2 report available on site		Complete	7/10/19- Sample taken at SW12, mineral oil content below SW trigger level	Low	
25/10/2019	Uncontrolled release	SW12	1. Minor	Water	Adverse weather	heavy rains dsiturbed drains	Normal activities	EPA	Recurring	CT bunds & interceptrs skimmed		Complete	8/11/19- Sample taken at SW12, mineral oil content below SW trigger level	Low	
	SELECT	SELECT	SELECT	SELECT	SELECT		SELECT	SELECT	SELECT			SELECT		SELECT	
Total number of incidents current year															2
Total number of incidents previous year															3
% reduction/ increase	33% decrease														

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Waste Summary Continued

Please insert a copy of your Waste Management Record for waste transferred off site

LoW Code	LoW Description	Classification	Quantity of waste	Organisation	Waste Treatment Operation	Organisation	Waste Treatment Operation
06 01 01*	sulphuric acid and sulphuric acid	Hazardous	34.44	Enva Ireland Limited (Shannon) - W0041	D09 - Physico-chemical treatment		
06 01 02*	hydrochloric acid	Hazardous	2.66	Enva Ireland Limited (Shannon) - W0041	D09 - Physico-chemical treatment		
06 02 03*	ammonium hydroxide	Hazardous	4.41	Enva Ireland Limited (Shannon) - W0041	R01 - Use principally as a fuel or other means to generate energy		
06 02 04*	sodium and potassium hydroxide	Hazardous	10.23	Enva Ireland Limited (Shannon) - W0041	D09 - Physico-chemical treatment		
06 02 05*	other bases	Hazardous	0.07	Enva Ireland Limited (Shannon) - W0041	R01 - Use principally as a fuel or other means to generate energy		
08 03 18	waste printing toner		0.12	ENVA	R13 - Storage of waste pending further treatment		
11 01 11*	aqueous rinsing liquids	Hazardous	0.74	Enva Ireland Limited (Shannon) - W0041	R01 - Use principally as a fuel or other means to generate energy		
12 01 16*	waste blasting material	Hazardous	4.03	ENVA	R13 - Storage of waste pending further treatment		RU1 - Use principally as a fuel or other means to generate energy
13 02 06*	synthetic engine, gear and axle oils	Hazardous	25.68	ENVA	R09 - Oil re-refining or other re-treatment		
13 05 02*	sludges from oil/water	Hazardous	0.24	ENVA	R13 - Storage of waste pending further treatment		RU1 - Use principally as a fuel or other means to generate energy
13 07 01*	fuel oil and diesel	Hazardous	15.88	ENVA	R09 - Oil re-refining or other re-treatment		
15 02 02*	absorbents, filter material	Hazardous	0.61	ENVA	R13 - Storage of waste pending further treatment		RU1 - Use principally as a fuel or other means to generate energy
15 02 02*	absorbents, filter material	Hazardous	0.01	Enva Ireland Limited (Shannon) - W0041	R01 - Use principally as a fuel or other means to generate energy		
16 05 06*	laboratory chemicals, oils	Hazardous	0.65	Enva Ireland Limited (Shannon) - W0041	R01 - Use principally as a fuel or other means to generate energy		
16 05 07*	discarded inorganic chemicals	Hazardous	0.4	Enva Ireland Limited (Shannon) - W0041	R01 - Use principally as a fuel or other means to generate energy		
16 05 08*	discarded organic chemicals	Hazardous	2.3	Enva Ireland Limited (Shannon) - W0041	R01 - Use principally as a fuel or other means to generate energy		
16 06 01*	lead batteries	Hazardous	0.89	Enva Ireland Limited (Shannon) - W0041	R13 - Storage of waste pending further treatment	Campine Recycling	RU6 - Regeneration of acids or bases
17 01 01	Concrete		518.36	Chrystal Hill Ins Ltd,	R05 - Recycling/reclamation of waste		
17 05 04	soil and stones other than		82.38	Chrystal Hill Ins Ltd,	R05 - Recycling/reclamation of waste		
20 03 06	waste from sewage cleaning		856.38	H&L Environmental	R03 - Recycling/reclamation of waste		
19 08 05	sludges from treatment		0.48	Enva Ireland Limited (Naas Road) - W0196	R03 - Recycling/reclamation of waste		
20 03 06	waste from sewage cleaning		35.6	Cremins Farm Compost	R03 - Recycling/reclamation of waste		
20 03 06	waste from sewage cleaning		232.7	BunLickey WWTP	R03 - Recycling/reclamation of waste		
20 03 06	waste from sewage cleaning		151.34	Portlaoise WWTP	R03 - Recycling/reclamation of waste		
20 01 25	edible oil and fat		1.24	H&L Environmental	R03 - Recycling/reclamation of waste		
20 01 08 A	Household biodegradable waste		0.06	Greenstar	R03 - Recycling/reclamation of waste		
17 09 04	mixed construction and demolition waste		4.34	Greenstar	R01 - Use principally as a fuel or other means to generate energy		
15 01 01	paper and cardboard		8.52	Greenstar	R12 - Exchange of waste for reuse or recycling		
17 02 03	Plastic		1.12	Greenstar	R05 - Recycling/reclamation of waste		
15 01 01	paper and cardboard		4.85	Greenstar	R12 - Exchange of waste for reuse or recycling		
15 01 03	wooden packaging		40.86	Greenstar	R12 - Exchange of waste for reuse or recycling		
19 09 06	solutions and sludges from cleaning		30.48	ENVA	D09 - Physico-chemical treatment		
20 02 01	biodegradable waste		16.1	Greenstar	R03 - Recycling/reclamation of waste		
20 01 10	Clothes		0.69	REHAB recycle	R05 - Recycling/reclamation of waste		
20 03 01 B	Municipal mixed residual waste		41.21	Greenstar	R01 - Use principally as a fuel or other means to generate energy		
20 01 21*	Household waste fluorescent tubes	Hazardous	0.72	Irish Lamp Recycling	R04 - Recycling/reclamation of waste		
13 05 07*	oily water from oil/water	Hazardous	24.9	ENVA	R09 - Oil re-refining or other re-treatment		
13 02 08*	other engine, gear and axle oils	Hazardous	3.22	ENVA	R09 - Oil re-refining or other re-treatment		
15 02 02*	absorbents, filter material	Hazardous	4.97	ENVA	R13 - Storage of waste pending further treatment		RU1 - Use principally as a fuel or other means to generate energy
20 01 01	paper and cardboard		2.62	Greenstar	R03 - Recycling/reclamation of waste		
08 01 11*	waste paint and varnish	Hazardous	1.02	ENVA	R03 - Recycling/reclamation of Recyfuel		RU3 - Recycling/reclamation of organic substances which are not hazardous
13 08 02*	other emulsions	Hazardous	13.22	ENVA	R09 - Oil re-refining or other re-treatment		
15 01 10*	packaging containing residual waste	Hazardous	1.56	Enva Ireland Limited (Shannon) - W0041	R01 - Use principally as a fuel or other means to generate energy		RU1 - Use principally as a fuel or other means to generate energy
15 01 10*	packaging containing residual waste	Hazardous	0.2	ENVA	R13 - Storage of waste pending further treatment		RU3 - Recycling/reclamation of organic substances which are not hazardous
08 01 13*	sludges from paint or varnish	Hazardous	0.64	ENVA	R03 - Recycling/reclamation of Recyfuel		
Total Waste Tonnes			2183.14				
			2029.45				
			153.69				

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