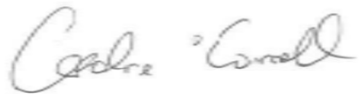
Facility Information Summary	
AER Reporting Year	2019
Licence Register Number	P0566-02
Name of site	Tawnaghmore Generating Station
Site Location	Killala, Co. Mayo.
NACE Code	3511
Class/Classes of Activity	Production and supply of electricity
National Grid Reference (6E, 6 N)	120370E, 327918N

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.

Tawnaghmore Peaking Capacity Plant (PCP) is located in north County Mayo, 3 km to the south of Killala village along the R314 Ballina/Killala road. The surrounding catchment area is the Moy River and the land use is predominantly agricultural land. The plant has been in operation since late 2000 with the purpose of covering the peaks in electricity demand. At Tawnaghmore PCP the process involved is the combustion of gas oil (distillate fuel oil) in a gas turbine (GT) that drives a generator for electricity production. The combustion plant currently installed consists of two TwinPac turbine sets, manufactured by Pratt and Whitney, comprising two combustion turbines each (and therefore two exhaust stacks each 20m high) driving a common generator. The total rated electrical output of the each unit is approximately 52MWe. Unit 1 commenced operation in December 2003. The installation of a second turbine occurred in 2008 and doubled the electrical output capacity bringing the total output to 104 MWe. Gas oil with low sulphur content is used for combustion in the gas turbines.
Fuel consumption will depend on the actual number of run hours during the period of deployment. The operating hours have decreased from 171 in 2018 to 50 in 2019. The MWhours generated onsite in 2018 was 3583 MWhrs and this decreased to 1365 MWhrs in 2019. This has lead to an decrease in emissions from the site from last years reported emissions. With regards to compliance with the sites licence, there was no incidents, exceedance of ELVs or trigger levels onsite in 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.



06/03/2020

Signature

Date

Environmental Co-ordinator

(or nominated, suitably qualified and experienced deputy)

AIR-summary template	Lic No:	P0566-02	Year	2019

Answer all questions and complete all tables where relevant

			Additional information
1	Does your site have licensed air emissions? If yes please complete table A1 and A2 below for the current reporting year and answer further questions. If **you do not have** licenced emissions and **do not complete a solvent management plan** (table A4 and A5) you do not need to complete the tables	Yes	

Periodic/Non-Continuous Monitoring

2	Are there any results in breach of licence requirements? If yes please provide brief details in the comment section of TableA1 below	No	
3	Was all monitoring carried out in accordance with EPA guidance note AG2 and using the basic air monitoring checklist? Basic air monitoring checklist AGN2	Yes	

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

Emission reference no:	Parameter/ Substance	Frequency of Monitoring	ELV in licence or any revision therof	Licence Compliance criteria	Measured value	Unit of measurement	Compliant with licence limit	Method of analysis	Annual mass load (kg)	Comments - reason for change in % mass load from previous year if applicable
A1	Nitrogen oxides (NOx/NO2)	Annually	120	No 30min mean can exceed the ELV	101.1	mg/Nm3	yes	EN 14792:2005	1175	
A2	Nitrogen oxides (NOx/NO2)	Annually	120	No 30min mean can exceed the ELV	109.2	mg/Nm3	yes	EN 14792:2005	1057	
A3	Nitrogen oxides (NOx/NO2)	Annually	120	No 30min mean can exceed the ELV	109.4	mg/Nm3	yes	EN 14792:2005	339	
A4	Nitrogen oxides (NOx/NO2)	Annually	120	No 30min mean can exceed the ELV	99.3	mg/Nm3	yes	EN 14792:2005	416	

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

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Continuous Monitoring

4	Does your site carry out continuous air emissions monitoring?	No	
	If yes please review your continuous monitoring data and report the required fields below in Table A2 and compare it to its relevant Emission Limit Value (ELV)		
5	Did continuous monitoring equipment experience downtime? If yes please record downtime in table A2 below	SELECT	
6	Do you have a proactive service agreement for each piece of continuous monitoring equipment?	SELECT	
7	Did your site experience any abatement system bypasses? If yes please detail them in table A3 below	SELECT	

Table A2: Summary of average emissions -continuous monitoring

Emission reference no:	Parameter/ Substance	ELV in licence or any revision therof	Averaging Period	Compliance Criteria	Units of measurement	Annual Emission	Annual maximum	Monitoring Equipment downtime (hours)	Number of ELV exceedences in current reporting year	Comments
	SELECT			SELECT	SELECT					
	SELECT				SELECT					
	SELECT				SELECT					
	SELECT				SELECT					
	SELECT				SELECT					

note 1: Volumetric flow shall be included as a reportable parameter.

Table A3: Abatement system bypass reporting table

Bypass protocol

Date*	Duration** (hours)	Location	Reason for bypass	Impact magnitude	Corrective action

* this should include all dates that an abatement system bypass occurred

** an accurate record of time bypass beginning and end should be logged on site and maintained for future Agency inspections please refer to bypass protocol link

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Solvent use and management on site

8	Do you have a total Emission Limit Value of direct and fugitive emissions on site? if yes please fill out tables A4 and A5	No

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

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

Reporting year	Total solvent input on site (kg)	Total VOC emissions to Air from entire site (direct and fugitive)	Total VOC emissions as %of solvent input	Total Emission Limit Value (ELV) in licence or any revision therof	Compliance
					SELECT
					SELECT

Table A5: Solvent Mass Balance summary

	(I) Inputs (kg)	(O) Outputs (kg)						
Solvent	(I) Inputs (kg)	Organic solvent emission in waste	Solvents lost in water (kg)	Collected waste solvent (kg)	Fugitive Organic Solvent (kg)	Solvent released in other ways e.g.	Solvents destroyed onsite through	Total emission of Solvent to air (kg)
							Total	

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER) Lic No: P0566-02 Year 2019

			Additional information
1	Does your site have licensed emissions direct to surface water or direct to sewer? If yes please complete table W2 and W3 below for the current reporting year and answer further questions. If **you do not have** licenced emissions you only need to complete table W1 and or W2 for storm water analysis and visual inspections	Yes	
2	Was it a requirement of your licence to carry out visual inspections on any surface water discharges or watercourses on or near your site? If yes please complete table W2 below summarising only any evidence of contamination noted during visual inspections	Yes	

Table W1 Storm water monitoring

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

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

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

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

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

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

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

Emission reference no:	Emission released to	Parameter/ SubstanceNote 1	Type of sample	Frequency of monitoring	Averaging period	ELV or trigger values in licence or any revision thereof[Note 2]	Licence Compliance criteria	Measured value	Unit of measurement	Compliant with licence	Method of analysis	Procedural reference source	Procedural reference standard number	Annual mass load (kg)	Comments
S2	Water	pH	discrete	Monthly	Monthly	9	No pH value shall deviate from	7.2	pH units	yes	pH Meter (Electrode)	APHA / AWWA			Jan
S2	Water	pH	discrete	Monthly	Monthly	9	No pH value shall deviate from	7.7	pH units	yes	pH Meter (Electrode)	APHA / AWWA			Feb
S2	Water	pH	discrete	Monthly	Monthly	9	No pH value shall deviate from	7.9	pH units	yes	pH Meter (Electrode)	APHA / AWWA			Mar
S2	Water	pH	discrete	Monthly	Monthly	9	No pH value shall deviate from	7.7	pH units	yes	pH Meter (Electrode)	APHA / AWWA			Apr
S2	Water	pH	discrete	Monthly	Monthly	9	No pH value shall deviate from	7.3	pH units	yes	pH Meter (Electrode)	APHA / AWWA			May
S2	Water	pH	discrete	Monthly	Monthly	9	No pH value shall deviate from	7.4	pH units	yes	pH Meter (Electrode)	APHA / AWWA			Jun
S2	Water	pH	discrete	Monthly	Monthly	9	No pH value shall deviate from	7.2	pH units	yes	pH Meter (Electrode)	APHA / AWWA			Jul
S2	Water	pH	discrete	Monthly	Monthly	9	No pH value shall deviate from	7.2	pH units	yes	pH Meter (Electrode)	APHA / AWWA			Aug
S2	Water	pH	discrete	Monthly	Monthly	9	No pH value shall deviate from	7.3	pH units	yes	pH Meter (Electrode)	APHA / AWWA			Sep
S2	Water	pH	discrete	Monthly	Monthly	9	No pH value shall deviate from	7.8	pH units	yes	pH Meter (Electrode)	APHA / AWWA			Oct
S2	Water	pH	discrete	Monthly	Monthly	9	No pH value shall deviate from	7.6	pH units	yes	pH Meter (Electrode)	APHA / AWWA			Nov
S2	Water	pH	discrete	Monthly	Monthly	9	No pH value shall deviate from	7.8	pH units	yes	pH Meter (Electrode)	APHA / AWWA			Dec
S2	Water	COD	discrete	Monthly	Monthly	65	All results < 1.2 x ELV	<10	mg/L	yes	Spectrophotometry (Colorimetry)	APHA / AWWA			Jan
S2	Water	COD	discrete	Monthly	Monthly	65	All results < 1.2 x ELV	<10	mg/L	yes	Spectrophotometry (Colorimetry)	APHA / AWWA			Feb
S2	Water	COD	discrete	Monthly	Monthly	65	All results < 1.2 x ELV	15	mg/L	yes	Spectrophotometry (Colorimetry)	APHA / AWWA			Mar
S2	Water	COD	discrete	Monthly	Monthly	65	All results < 1.2 x ELV	27	mg/L	yes	Spectrophotometry (Colorimetry)	APHA / AWWA			Apr

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER)						Lic No:	P0566-02		Year		2019				
S2	Water	COD	discrete	Monthly	Monthly	65	All results < 1.2 x ELV	13	mg/L	yes	Spectrophotometry (Colorimetry)	APHA / AWWA			May
S2	Water	COD	discrete	Monthly	Monthly	65	All results < 1.2 x ELV	12	mg/L	yes	Spectrophotometry (Colorimetry)	APHA / AWWA			Jun
S2	Water	COD	discrete	Monthly	Monthly	65	All results < 1.2 x ELV	<10	mg/L	yes	Spectrophotometry (Colorimetry)	APHA / AWWA			Jul
S2	Water	COD	discrete	Monthly	Monthly	65	All results < 1.2 x ELV	<10	mg/L	yes	Spectrophotometry (Colorimetry)	APHA / AWWA			Aug
S2	Water	COD	discrete	Monthly	Monthly	65	All results < 1.2 x ELV	8	mg/L	yes	Spectrophotometry (Colorimetry)	APHA / AWWA			Sep
S2	Water	COD	discrete	Monthly	Monthly	65	All results < 1.2 x ELV	5	mg/L	yes	Spectrophotometry (Colorimetry)	APHA / AWWA			Oct
S2	Water	COD	discrete	Monthly	Monthly	65	All results < 1.2 x ELV	6	mg/L	yes	Spectrophotometry (Colorimetry)	APHA / AWWA			Nov
S2	Water	COD	discrete	Monthly	Monthly	65	All results < 1.2 x ELV	9	mg/L	yes	Spectrophotometry (Colorimetry)	APHA / AWWA			Dec
S2	Water	Conductivity	discrete	Monthly	Monthly			164.3	us/cm	yes	INSTRUMENTAL METHODS	APHA / AWWA			Jan
S2	Water	Conductivity	discrete	Monthly	Monthly			165	us/cm	yes	INSTRUMENTAL METHODS	APHA / AWWA			Feb
S2	Water	Conductivity	discrete	Monthly	Monthly			149.1	us/cm	yes	INSTRUMENTAL METHODS	APHA / AWWA			Mar
S2	Water	Conductivity	discrete	Monthly	Monthly			168.2	us/cm	yes	INSTRUMENTAL METHODS	APHA / AWWA			Apr
S2	Water	Conductivity	discrete	Monthly	Monthly			178.5	us/cm	yes	INSTRUMENTAL METHODS	APHA / AWWA			May
S2	Water	Conductivity	discrete	Monthly	Monthly			119.55	us/cm	yes	INSTRUMENTAL METHODS	APHA / AWWA			Jun
S2	Water	Conductivity	discrete	Monthly	Monthly			83.2	us/cm	yes	INSTRUMENTAL METHODS	APHA / AWWA			Jul
S2	Water	Conductivity	discrete	Monthly	Monthly			129.7	us/cm	yes	INSTRUMENTAL METHODS	APHA / AWWA			Aug
S2	Water	Conductivity	discrete	Monthly	Monthly			107	us/cm	yes	INSTRUMENTAL METHODS	APHA / AWWA			Sep
S2	Water	Conductivity	discrete	Monthly	Monthly			79	us/cm	yes	INSTRUMENTAL METHODS	APHA / AWWA			Oct
S2	Water	Conductivity	discrete	Monthly	Monthly			135	us/cm	yes	INSTRUMENTAL METHODS	APHA / AWWA			Nov
S2	Water	Conductivity	discrete	Monthly	Monthly			194	us/cm	yes	INSTRUMENTAL METHODS	APHA / AWWA			Dec
S2	Water	Volatile organic	discrete	Monthly	Monthly	1000	All results < 1.2 x ELV	<10	µg/L	yes	GCMS (Gas Chromatography Mass Spectroscopy)	APHA / AWWA			Jan
S2	Water	Volatile organic	discrete	Monthly	Monthly	1000	All results < 1.2 x ELV	<10	µg/L	yes	GCMS (Gas Chromatography Mass Spectroscopy)	APHA / AWWA			Feb
S2	Water	Volatile organic	discrete	Monthly	Monthly	1000	All results < 1.2 x ELV	<10	µg/L	yes	GCMS (Gas Chromatography Mass Spectroscopy)	APHA / AWWA			Mar
S2	Water	Volatile organic	discrete	Monthly	Monthly	1000	All results < 1.2 x ELV	<10	µg/L	yes	GCMS (Gas Chromatography Mass Spectroscopy)	APHA / AWWA			Apr
S2	Water	Volatile organic	discrete	Monthly	Monthly	1000	All results < 1.2 x ELV	<10	µg/L	yes	GCMS (Gas Chromatography Mass Spectroscopy)	APHA / AWWA			May
S2	Water	Volatile organic	discrete	Monthly	Monthly	1000	All results < 1.2 x ELV	<10	µg/L	yes	GCMS (Gas Chromatography Mass Spectroscopy)	APHA / AWWA			Jun
S2	Water	Volatile organic	discrete	Monthly	Monthly	1000	All results < 1.2 x ELV	<10	µg/L	yes	GCMS (Gas Chromatography Mass Spectroscopy)	APHA / AWWA			Jul
S2	Water	Volatile organic	discrete	Monthly	Monthly	1000	All results < 1.2 x ELV	<10	µg/L	yes	GCMS (Gas Chromatography Mass Spectroscopy)	APHA / AWWA			Aug
S2	Water	Volatile organic	discrete	Monthly	Monthly	1000	All results < 1.2 x ELV	64	µg/L	yes	GCMS (Gas Chromatography Mass Spectroscopy)	APHA / AWWA			Sep
S2	Water	Volatile organic	discrete	Monthly	Monthly	1000	All results < 1.2 x ELV	58	µg/L	yes	GCMS (Gas Chromatography Mass Spectroscopy)	APHA / AWWA			Oct
S2	Water	Volatile organic	discrete	Monthly	Monthly	1000	All results < 1.2 x ELV	59	µg/L	yes	GCMS (Gas Chromatography Mass Spectroscopy)	APHA / AWWA			Nov
S2	Water	Volatile organic	discrete	Monthly	Monthly	1000	All results < 1.2 x ELV	<10	µg/L	yes	GCMS (Gas Chromatography Mass Spectroscopy)	APHA / AWWA			Dec
S2	Water	DRO	discrete	Monthly	Monthly	1000	All results < 1.2 x ELV	<10	µg/L	yes	GC (Gas Chromatography)	APHA / AWWA			Jan
S2	Water	DRO	discrete	Monthly	Monthly	1000	All results < 1.2 x ELV	<10	µg/L	yes	GC (Gas Chromatography)	APHA / AWWA			Feb
S2	Water	DRO	discrete	Monthly	Monthly	1000	All results < 1.2 x ELV	<10	µg/L	yes	GC (Gas Chromatography)	APHA / AWWA			Mar
S2	Water	DRO	discrete	Monthly	Monthly	1000	All results < 1.2 x ELV	<10	µg/L	yes	GC (Gas Chromatography)	APHA / AWWA			Apr
S2	Water	DRO	discrete	Monthly	Monthly	1000	All results < 1.2 x ELV	<10	µg/L	yes	GC (Gas Chromatography)	APHA / AWWA			May
S2	Water	DRO	discrete	Monthly	Monthly	1000	All results < 1.2 x ELV	<10	µg/L	yes	GC (Gas Chromatography)	APHA / AWWA			Jun
S2	Water	DRO	discrete	Monthly	Monthly	1000	All results < 1.2 x ELV	<10	µg/L	yes	GC (Gas Chromatography)	APHA / AWWA			Jul
S2	Water	DRO	discrete	Monthly	Monthly	1000	All results < 1.2 x ELV	<10	µg/L	yes	GC (Gas Chromatography)	APHA / AWWA			Aug
S2	Water	DRO	discrete	Monthly	Monthly	1000	All results < 1.2 x ELV	51	µg/L	yes	GC (Gas Chromatography)	APHA / AWWA			Sep
S2	Water	DRO	discrete	Monthly	Monthly	1000	All results < 1.2 x ELV	41	µg/L	yes	GC (Gas Chromatography)	APHA / AWWA			Oct
S2	Water	DRO	discrete	Monthly	Monthly	1000	All results < 1.2 x ELV	42	µg/L	yes	GC (Gas Chromatography)	APHA / AWWA			Nov
S2	Water	DRO	discrete	Monthly	Monthly	1000	All results < 1.2 x ELV	<10	µg/L	yes	GC (Gas Chromatography)	APHA / AWWA			Dec

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER) Lic No: P0566-02 Year 2019

S2	Water	Mineral Oil	discrete	Monthly	Monthly	1000	All results < 1.2 x ELV	<10	µg/L	yes	GC (Gas Chromatography)	APHA / AWWA			Jan
S2	Water	Mineral Oil	discrete	Monthly	Monthly	1000	All results < 1.2 x ELV	<10	µg/L	yes	GC (Gas Chromatography)	APHA / AWWA			Feb
S2	Water	Mineral Oil	discrete	Monthly	Monthly	1000	All results < 1.2 x ELV	<10	µg/L	yes	GC (Gas Chromatography)	APHA / AWWA			Mar
S2	Water	Mineral Oil	discrete	Monthly	Monthly	1000	All results < 1.2 x ELV	<10	µg/L	yes	GC (Gas Chromatography)	APHA / AWWA			Apr
S2	Water	Mineral Oil	discrete	Monthly	Monthly	1000	All results < 1.2 x ELV	<10	µg/L	yes	GC (Gas Chromatography)	APHA / AWWA			May
S2	Water	Mineral Oil	discrete	Monthly	Monthly	1000	All results < 1.2 x ELV	<10	µg/L	yes	GC (Gas Chromatography)	APHA / AWWA			Jun
S2	Water	Mineral Oil	discrete	Monthly	Monthly	1000	All results < 1.2 x ELV	<10	µg/L	yes	GC (Gas Chromatography)	APHA / AWWA			Jul
S2	Water	Mineral Oil	discrete	Monthly	Monthly	1000	All results < 1.2 x ELV	<10	µg/L	yes	GC (Gas Chromatography)	APHA / AWWA			Aug
S2	Water	Mineral Oil	discrete	Monthly	Monthly	1000	All results < 1.2 x ELV	13	µg/L	yes	GC (Gas Chromatography)	APHA / AWWA			Sep
S2	Water	Mineral Oil	discrete	Monthly	Monthly	1000	All results < 1.2 x ELV	18	µg/L	yes	GC (Gas Chromatography)	APHA / AWWA			Oct
S2	Water	Mineral Oil	discrete	Monthly	Monthly	1000	All results < 1.2 x ELV	17	µg/L	yes	GC (Gas Chromatography)	APHA / AWWA			Nov
S2	Water	Mineral Oil	discrete	Monthly	Monthly	1000	All results < 1.2 x ELV	<10	µg/L	yes	GC (Gas Chromatography)	APHA / AWWA			Dec

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

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

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

6	Did continuous monitoring equipment experience downtime? **If yes please record downtime in table W4 below**	No	
7	Do you have a proactive service contract for each piece of continuous monitoring equipment on site?	Yes	
8	Did abatement system bypass occur during the reporting year? **If yes please complete table W5 below**	No	

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
											There was no discharges from S1 during 2019.

note 1: Volumetric flow shall be included as a reportable parameter.

Table W5: Abatement system bypass reporting table

Date	Duration (hours)	Location	Resultant emissions	Reason for bypass	Corrective action*	Was a report submitted to the EPA?	When was this report submitted?
						SELECT	

*Measures taken or proposed to reduce or limit bypass frequency

Bund/Pipeline testing template

Lic No: P0566-02 Year 2019

Bund testing

dropdown menu click to see options

		Additional information
1	Are you required by your licence to undertake integrity testing on bunds and containment structures ? if yes please fill out table B1 below listing all **new bunds and containment structures** on site, in addition to **all bunds which failed** the integrity test-**all bunding structures which failed including mobile bunds must be listed in the table below, please include all bunds outside the licenced testing period** (mobile bunds and chemstore included)	Yes	
2	Please provide integrity testing frequency period	3 years	
3	Does the site maintain a register of bunds, underground pipelines (including stormwater and foul), Tanks, sumps and containers? (containers refers to "Chemstore" type units and mobile bunds)	Yes	
4	How many bunds are on site?	16	
5	How many of these bunds have been tested within the required test schedule?	16	
6	How many mobile bunds are on site?	15	
7	Are the mobile bunds included in the bund test schedule?	Yes	
8	How many of these mobile bunds have been tested within the required test schedule?	15	
9	How many sumps on site are included in the integrity test schedule?	0	
10	How many of these sumps are integrity tested within the test schedule?	0	
	Please list any sump integrity failures in table B1		
11	Do all sumps and chambers have high level liquid alarms?	No	
12	If yes to Q11 are these failsafe systems included in a maintenance and testing programme?	N/A	
13	Is the Fire Water Retention Pond included in your integrity test programme?	N/A	

Table B1: Summary details of bund /containment structure integrity test

Bund/Containment structure ID	Type	Specify Other type	Product containment	Actual capacity	Capacity required*	Type of integrity test	Other test type	Test date	Integrity reports maintained on site?	Results of test	Integrity test failure explanation <50 words	Corrective action taken	Scheduled date for retest	Results of retest(if in current reporting year)
	SELECT					SELECT			SELECT	SELECT		SELECT		

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

		Commentary
15	Has integrity testing been carried out in accordance with licence requirements and are all structures tested in line with BS8007/EPA Guidance? bunding and storage guidelines	
16	Are channels/transfer systems to remote containment systems tested?	
17	Are channels/transfer systems compliant in both integrity and available volume?	

Pipeline/underground structure testing

1	Are you required by your licence to undertake integrity testing* on underground structures e.g. pipelines or sumps etc ? if yes please fill out table 2 below listing all underground structures and pipelines on site **which failed the integrity test and all which have not been tested within the integrity test period as specified**	Yes	
2	Please provide integrity testing frequency period	3 years	

*please note integrity testing means water tightness testing of all underground pipelines (as required under your licence)

Table B2: Summary details of pipeline/underground structures integrity test

Structure ID	Type system	Material of construction:	Does this structure have Secondary containment?	Type of secondary containment	Type integrity testing	Integrity reports maintained on site?	Results of test	Integrity test failure explanation <50 words	Corrective action taken	Scheduled date for retest	Results of retest(if in current reporting year)
	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT				SELECT

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

Groundwater/Soil monitoring template	Lic No:	P0566-02	Year	2019

			Comments	
1	Are you required to carry out groundwater 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 interpretaion as an additional section in this AER
2	Are you required to carry out soil monitoring as part of your licence requirements?	no		
3	Do you extract groundwater for use on site? If yes please specify use in comment section	no		
4	Do monitoring results show that groundwater generic assessment criteria such as GTVs or IGVs are exceeded or is there an upward trend in results for a substance? If yes, please complete the Groundwater Monitoring Guideline Template Report (link in cell G8) and submit separately through ALDER as a licensee return AND answer questions 5-12 below. Groundwater monitoring template	SELECT		
5	Is the contamination related to operations at the facility (either current and/or historic)	SELECT		
6	Have actions been taken to address contamination issues?If yes please summarise remediation strategies proposed/undertaken for the site	SELECT		
7	Please specify the proposed time frame for the remediation strategy	SELECT		
8	Is there a licence condition to carry out/update ELRA for the site?	SELECT		
9	Has any type of risk assesment been carried out for the site?	SELECT		
10	Has a Conceptual Site Model been developed for the site?	SELECT		
11	Have potential receptors been identified on and off site?	SELECT		
12	Is there evidence that contamination is migrating offsite?	SELECT		

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
							SELECT			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	GTV's*	SELECT**	Upward trend in yearly average pollutant concentration over last 5 years of monitoring data
							SELECT			SELECT
							SELECT			SELECT

Groundwater/Soil monitoring template	Lic No:	P0566-02	Year	2019

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

Groundwater monitoring template

More information on the use of soil and groundwater standards/ generic assessment criteria (GAC) and risk assessment tools is available in the EPA published guidance (see the link in G31)

Guidance on the Management of Contaminated Land and Groundwater at EPA Licensed Sites (EPA 2013).

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

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

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:	P0566-02	Year	2019

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

		Commentary
ELRA initial agreement status	Submitted and agreed by EPA	
ELRA review status	Review required and completed	
Amount of Financial Provision cover required as determined by the latest ELRA	€2,160,000	
Financial Provision for ELRA status	Submitted and agreed by EPA	
Financial Provision for ELRA - amount of cover	€2,160,000	
Financial Provision for ELRA - type	Other please specify	Parent Company Guarantee
Financial provision for ELRA expiry date	None	
Closure plan initial agreement status	Closure plan submitted and agreed by EPA	
Closure plan review status	Review required and completed	
Financial Provision for Closure status	Submitted and agreed with EPA	
Financial Provision for Closure - amount of cover	€583,871	
Financial Provision for Closure - type	Other please specify	Parent Company Guarantee
Financial provision for Closure expiry date	None	

Environmental Management Programme/Continuous Improvement Programme template

Lic No: P0566-02 Year 2019

Highlighted cells contain dropdown menu click to view

			Additional Information
1	Do you maintain an Environmental Mangement System (EMS) for the site. If yes, please detail in additional information	Yes	
2	Does the EMS reference the most significant environmental aspects and associated impacts on-site	Yes	
3	Does the EMS maintain an Environmental Management Programme (EMP) as required in accordance with the licence requirements	Yes	
4	Do you maintain an environmental documentation/communication system to inform the public on environmental performance of the facility, as required by the licence	Yes	

Environmental Management Programme (EMP) report

Objective Category	Target	Status (% completed)	How target was progressed	Responsibility	Intermediate outcomes
Additional improvements	Achieve no Major Non Conformances	100	ISO 14001 audit completed in May 2019. No major or minor non-conformances received.	Individual	Improved Environmental Management Practices
Waste reduction/Raw material usage efficiency	Consider reducing the amount of waste going to landfill by 10% by introducing a composting bin onsite.	50	Compost bins have been provided and are in operation onsite during the last quarter fo the year. Waste diversion will be monitored during 2020.	Individual	Improved Environmental Management Practices
Additional improvements	Prepare gap analaysis report and outline an action plan to achieve compliance with BAT Conclusions for Large Combustion Plant (LCPBREF)	70	Gap analysis was in progress at this time of submission of the AER	Individual	Increased compliance with licence conditions
Additional improvements	Achieve no environmental licence breaches	100	No licence breaches recorded.	Individual	Increased compliance with licence conditions
Reduction of emissions to Air	Maintain the water injection abatement malfunctions incidents the same level as 2017/2018. Target: 0 incident at Tawnaghmore.	100	No water injection malfcuntion to date.	Individual	Increased compliance with licence conditions

Noise monitoring summary report	Lic No:	P0566-02	Year	2019

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

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)?
								SELECT	SELECT		SELECT

*Please ensure that a tonal analysis has been carried out as per guidance note NG4. These records must be maintained onsite for future inspection

If noise limits exceeded as a result of noise attributed to site activities, please choose the corrective action from the following options? 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: P0566-02 Year 2019

			Additional information
1	When did the site carry out the most recent energy efficiency audit? Please list the recommendations in table 3 below		
2	Is the site a member of any accredited programmes for reducing energy usage/water conservation such as the SEAI programme linked to the right? If yes please list them in additional information	SEAI - Large Industry Energy Network (LIEN)	No	
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	<1%

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)	3583	1365	-162%	
Total Renewable Energy Generated (MWHrs)				
Electricity Consumption (MWHrs)				
Fossil Fuels Consumption:				
Heavy Fuel Oil (m3)				
Light Fuel Oil (m3)	1176	437	-169%	
Natural gas (m3)				
Coal/Solid fuel (metric tonnes)				
Peat (metric tonnes)				
Renewable Biomass				
Renewable energy generated on site				

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

Table R2 Water usage on site

					Water Emissions	**Water Consumption**	
Water use	Water extracted Previous year m3/yr.	Water extracted Current year m3/yr.	Production +/- % compared to previous reporting year**	Energy Consumption +/- % vs overall site production*	Volume Discharged back to environment(m^3yr):	Volume used i.e not discharged to environment e.g. released as steam m3/yr	Unaccounted for Water:
Groundwater							
Surface water							
Public supply	1294	846	-53%				
Recycled water							
Total	1294	846	-53%				

* 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

Resource Usage/Energy efficiency summary

Lic No: P0566-02 Year 2019

Table R3 Waste Stream Summary

	Total	Landfill	Incineration	Recycled	Other
Hazardous (Tonnes)	11.98			0.10	11.88
Non-Hazardous (Tonnes)	11.47	2.52		0.82	8.13

Table R4: Energy Audit finding recommendations

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

Table R5: Power Generation: Where power is generated onsite (e.g. power generation facilities/food and drink industry)please complete the following information

	Unit 1A	Unit 1B	Unit 3A	Unit 3B	Station Total
Technology	Gas Turbine	Gas Turbine	Gas Turbine	Gas Turbine	
Primary Fuel	LFO	LFO	LFO	LFO	
Thermal Efficiency	35%	35%	35%	35%	
Energy Input (net calorific value in TJ)	4.08	5.71	1.88	3.32	
Unit Date of Commission	2003	2003	2008	2008	
Total Starts for year	30	38	17	33	
Total Running Time	40.7	40.9	10.1	19	
Total Electricity Generated (GWH)					1.365
House Load (GWH)					
KWH per Litre of Process Water					1613
KWH per Litre of Total Water used on Site					1613

Complaints and Incidents summary template Lic No: P0566-02 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	

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	
Total new complaints received during reporting year	
Total complaints closed during reporting year	
Balance of complaints end of reporting year	

Complaints and Incidents summary template Lic No: P0566-02 Year 2019

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	No	

*For information on how to report and what constitutes an incident	What is an incident

Table 2 Incidents summary

Date of occurrence	Incident nature	Location of occurrence	Incident category*please refer to guidance	Receptor	Cause of incident	Other cause(please specify)	Activity in progress at time of incident	Communication	Occurrence	Corrective action<20 words	Preventative action <20 words	Resolution status	Resolution date	Likelihood of reoccurence

Total number of incidents current year	0
Total number of incidents previous year	3
% reduction/ increase	-100%

WASTE SUMMARY	Lic No:	P0566-02	Year	2019
SECTION A-PRTR ON SITE WASTE TREATMENT AND WASTE TRANSFERS TAB- TO BE COMPLETED BY ALL IPPC AND WASTE FACILITIES		PRTR facility logon	dropdown list click to see options	

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

			Additional Information
1	Were any wastes accepted onto your site for recovery or disposal or treatment prior to recovery or disposal within the boundaries of your facility ?; (waste generated within your boundaries is to be captured through PRTR reporting) If yes please enter details in table 1 below	No	
2	Did your site have any rejected consignments of waste in the current reporting year? If yes please give a brief explanation in the additional information	SELECT	
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	SELECT	

Table 1 Details of waste accepted onto your site for recovery, disposal or treatment (do not include wastes generated at your site, as these will have been reported in your PRTR workbook)

Licenced annual tonnage limit for your site (total tonnes/annum)	EWC code European Waste Catalogue EWC codes	Source of waste accepted	Description of waste accepted **Please enter an accurate and detailed description - which applies to relevant EWC code** European Waste Catalogue EWC codes	Quantity of waste accepted in current reporting year (tonnes)	Quantity of waste accepted in previous reporting year (tonnes)	Reduction/ Increase over previous year +/ - %	Reason for reduction/ increase from previous reporting year	Packaging Content (%)- only applies if the waste has a packaging component	Disposal/Recovery or treatment operation carried out at your site and the description of this operation	Quantity of waste remaining on site at the end of reporting year (tonnes)	Comments -

SECTION C-TO BE COMPLETED BY ALL WASTE FACILITIES (waste transfer stations, Composters, Material recovery facilities etc) EXCEPT LANDFILL SITES

4	Is all waste processing infrastructure as required by your licence and approved by the Agency in place? If no please list waste processing infrastructure required onsite	SELECT	
5	Is all waste storage infrastructure as required by your licence and approved by the Agency in place? If no please list waste storage infrastructure required on site	SELECT	
6	Does your facility have relevant nuisance controls in place?	SELECT	
7	Do you have an odour management system in place for your facility? If no why?	SELECT	
8	Do you maintain a sludge register on site?	SELECT	

SECTION D-TO BE COMPLETED BY LANDFILL SITES ONLY

Table 2 Waste type and tonnage-landfill only

Waste types permitted for disposal	Authorised/licenced annual intake for disposal (tpa)	Actual intake for disposal in reporting year (tpa)	Remaining licensed capacity at end of reporting year (m3)	Comments

Table 3 General information-Landfill only

Area ID	Date landfilling commenced	Date landfilling ceased	Currently landfilling	Private or Public Operated	Inert or non-hazardous	Predicted date to cease landfilling	Licence permits asbestos	Is there a separate cell for asbestos?	Accepted asbestos in reporting year	Total disposal area occupied by waste	Lined disposal area occupied by waste	Unlined area	Comments on liner type
										SELECT UNIT	SELECT UNIT	SELECT UNIT	
Cell 8													

WASTE SUMMARY Lic No: P0566-02 Year 2019

Table 4 Environmental monitoring-landfill only

Landfill Manual-Monitoring Standards

Was meterological monitoring in compliance with Landfill Directive (LD) standard in reporting year +	Was leachate monitored in compliance with LD standard in reporting year	Was Landfill Gas monitored in compliance with LD standard in reporting year	Was SW monitored in compliance with LD standard in reporting year	Have GW trigger levels been established	Were emission limit values agreed with the Agency (ELVs)	Was topography of the site surveyed in reporting year	Has the statement under S53(A)(5) of WMA been submitted in reporting year	Comments

.+ please refer to Landfill Manual linked above for relevant Landfill Directive monitoring standards

Table 5 Capping-Landfill only

Area uncapped*	Area with temporary cap	Area with final cap to LD Standard m2 ha, a	Area capped other	Area with waste that should be permanently capped to date under licence	What materials are used in the cap	Comments
SELECT UNIT	SELECT UNIT					

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

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

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
			SELECT	

Waste Summary Continued

Please insert a copy of your Waste Management Record for <u>waste transferred off site</u>

Transferred Waste							
List of Waste (LoW)				Next Destination		Final Destination	
LoW Code	LoW Description	Classification	Quantity of waste Tonnes / year	Organisation	Waste Treatment Operation	Organisation	Waste Treatment Operation
13 05 03*	interceptor sludges	Hazardous	11.88	Enva Ireland Limited (Portlaoise) - W0184	D09 - Physico-chemical treatment not specified elsewhere in this Annex which results in final compounds or mixtures which are discarded by means of any of the operations numbered D 1 to D 12 (e.g. evaporation, drying, calcination, etc.)	-	
19 09 05	saturated or spent ion exchange resins	-	1.22	Walsh Waste Limited	D13 - Blending or mixing prior to submission to any of the operations numbered D 1 to D 12	-	
19 09 01	solid waste from primary filtration and screenings	-	1.3	Walsh Waste Limited	D13 - Blending or mixing prior to submission to any of the operations numbered D 1 to D 12	-	
19 09 06	solutions and sludges from regeneration of ion exchangers	-	8.13	Limerick - D0013	D08 - Biological treatment not specified elsewhere in this Annex which results in final compounds or mixtures which are discarded by means of any of the operations numbered D 1 to D 12	-	
16 02 14 D	Non-household other waste electrical and electronic equipment, non-hazardous	-	0.3	KMK Metals Recycling Limited - W0113	R04 - Recycling/reclamation of metals and metal compounds	-	
16 02 16	components removed from discarded equipment other than those mentioned in 16 02 15	-	0.08	KMK Metals Recycling Limited - W0113	R04 - Recycling/reclamation of metals and metal compounds	-	
20 03 01 B	Municipal mixed residual non-household	-	0.24	McGrath Industrial Waste Ltd - W0143	R13 - Storage of waste pending any of the operations numbered R 1 to R 12 (excluding temporary storage, pending collection, on the site where the waste is produced)	-	
20 01 01	paper and cardboard	-	0.2	McGrath Industrial Waste Ltd - W0143	R13 - Storage of waste pending any of the operations numbered R 1 to R 12 (excluding temporary storage, pending collection, on the site where the waste is produced)	-	
15 01 10*	packaging containing residues of or contaminated by hazardous substances	Hazardous	0.1	Enva Ireland Limited (Portlaoise) - W0184	R13 - Storage of waste pending any of the operations numbered R 1 to R 12 (excluding temporary storage, pending collection, on the site where the waste is produced)	Recyfuel	R05 - Recycling/reclamation of other inorganic materials