



Annual Environmental Report 2019
Bord na Mona Energy Ltd
(Derrygreenagh Group of Bogs)
IPC Licence P0501-01

Facility Information Summary

AER Reporting Year	2019
Licence Register Number	P0501-01
Name of site	Bord na Mona Derrygreenagh
Site Location	Derrygreenagh, Rochfortbridge, Co Westmeath
NACE Code	0892
Class/Classes of Activity	1.4
National Grid Reference (6E, 6 N)	249450, 238140

A description of the activities/processes at the site for the reporting year. This should include information such as production increases or decreases on site, any infrastructural changes, environmental performance which was measured during the reporting year and an overview of compliance with your licence listing all exceedances of licence limits (where applicable) and what they relate to e.g. air, water, noise.

Activities on site can be divided into two components, firstly the milling, harrowing, ridging and harvesting of peat into stockpiles and secondly the transportation of that peat via an internal rail network to the Power Station and lorry outloading facilities. Production achieved was approximately 140,237 tonnes which is a 52% reduction on the 2018 figure. Quarterly grab sampling was 100% compliant with regard to the ELV, with the continuous composite sampling returning no non-compliances for suspended solids, with 29% downtime due to battery and maintenance issues but 52 weekly samples were achieved. The number of exceedances in trigger levels noted and reported to the Agency was 11 which was a 50% reduction on 2018, with the majority being exceedances in COD or Ammonia Trigger levels, with one spillage incident where a stolen tractor was driven into a drain with a resultant fuel spillage that required remediation. There was one environmental complaint received during the reporting period, this was dust related and was resolved to the satisfaction of the complainant and reported to the Agency. In relation to silt pond cleaning, 100% of all 58 silt ponds received the required two cleanings, with inspections dictating the cleaning schedules. During the reporting period, there were a number of notifications to the Agency including notification of an interim cessation of peat extraction at Derrygreenagh, pending regularisation. Decommissioning and Rehabilitation works are described in an attachment.

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.

	31/05/2020
Signature Group/Facility manager (or nominated, suitably qualified and experienced deputy)	Date

AIR-summary template

Lic No:

P0501-01

Year

2019

Answer all questions and complete all tables where relevant

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

Additional information	
No	Fugitive emissions only

Periodic/Non-Continuous Monitoring

- 2 Are there any results in breach of licence requirements? If yes please provide brief details in the comment section of TableA1 below
- 3 Was all monitoring carried out in accordance with EPA guidance [Basic air monitoring checklist](#) note AG2 and using the basic air monitoring checklist? [AGN2](#)

No	
Yes	

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

Emission reference no:	Parameter/ Substance	Frequency of Monitoring	ELV in licence or any revision thereof	Licence Compliance criteria	Measured value	Unit of measurement	Compliant with licence limit	Method of analysis	Annual mass load (kg)	Comments -reason for change in % mass load from previous year if applicable
	SELECT			SELECT		SELECT	SELECT	SELECT		
	SELECT			SELECT		SELECT	SELECT	SELECT		
	SELECT			SELECT		SELECT	SELECT	SELECT		
	SELECT			SELECT		SELECT	SELECT	SELECT		

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

AIR-summary template	Lic No:	P0501-01	Year	2019
Continuous Monitoring				

- 4 Does your site carry out continuous air emissions monitoring?
- If yes please review your continuous monitoring data and report the required fields below in Table A2 and compare it to its relevant Emission Limit Value (ELV)

No	
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- 5 Did continuous monitoring equipment experience downtime? If yes please record downtime in table A2 below

No	
----	--

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

No	
----	--

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

No	
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Table A2: Summary of average emissions -continuous monitoring

Emission reference no:	Parameter/ Substance	ELV in licence or any revision thereof	Averaging Period	Compliance Criteria	Units of measurement	Annual Emission	Annual maximum	Monitoring Equipment downtime (hours)	Number of ELV exceedences in current reporting year	Comments
DM-01	Total Particulates	350	140 DAYS	Daily average < ELV	mg/m2/day	4536	83	0	0	Dust monitoring took place on 4 occasions for 28 days each time between April and August
DM-02	Total Particulates	350	140 DAYS	Daily average < ELV	mg/m2/day	8512	178	0	0	
DM-03	Total Particulates	350	140 DAYS	Daily average < ELV	mg/m2/day	10808	166	0	0	
DM-04	Total Particulates	350	140 DAYS	Daily average < ELV	mg/m2/day	12740	261	0	0	
	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

AIR-summary template		Lic No: P0501-01	Year 2019					
Solvent use and management on site								
8 Do you have a total Emission Limit Value of direct and fugitive emissions on site? if yes please fill out tables A4 and A5		SELECT						
Table A4: Solvent Management Plan Summary 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 thereof					
			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	Total emission of Solvent to air (kg)
Total								

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER)

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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** licenced emissions you only need to complete table W1 and or W2 for storm water analysis and visual inspections

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	
Yes	Monthly COD of yard run-off is attached.

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

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](#)

No	
Yes	Surface water monitoring was carried out on a quarterly basis. The results of which are attached.

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

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

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

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER)

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Continuous monitoring

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

Additional Information	
Yes	Flow proportionate composite sampling

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

Yes	Total of 108 days over 365 days
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7 Do you have a proactive service contract for each piece of continuous monitoring equipment on site?

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

No	
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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
SW43	Water	Suspended Solids	35	24 hour	All results < 1.5 times ELV, plus 8 from ten results must be < ELV	mg/L			2592	0	Down time due to battery failure, and sampler repairs. Agency informed of repairs. Its not possible to report average continuous emissions as this sampler is located on one of 58 silt ponds and samplers are moved around periodically to allow for analysis of other silt pond performance.
SW43	Water	Ammonia (as N)	2.78	Weekly	NA	mg/L					
SW43	Water	Total phosphorus	NA	Weekly	NA	mg/L					
SW43	Water	COD	100	Weekly	NA	mg/L					
SW43	Water	volumetric flow	NA	24 hour	NA	m3/day					
SW43	Water	Total Dissolved Solids	NA	Weekly	NA	mg/L					

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:	P0501-01	Year	2019
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Bund testing

dropdown menu click to see options

Additional information

Are you required by your licence to undertake integrity testing on bunds and containment structures ? If yes please fill out table B1 below listing all **new bunds and containment structures** on site, in addition to **all bunds which failed the integrity test-all bunding structures which failed including mobile bunds must be listed in the table below, please include all bunds outside the licenced testing period** (mobile bunds and chemstore included)

- 1
2 Please provide integrity testing frequency period
Does the site maintain a register of bunds, underground pipelines (including stormwater and foul), Tanks, sumps and containers? (containers refers to
3 "Chemstore" type units and mobile bunds)
4 How many bunds are on site?

Yes	
Other (2 Yearly)	
Yes	
2	
2	
0	
No	
0	
0	
0	
N/A	
N/A	
N/A	

- 5 How many of these bunds have been tested within the required test schedule?
6 How many mobile bunds are on site?
7 Are the mobile bunds included in the bund test schedule?
8 How many of these mobile bunds have been tested within the required test schedule?
9 How many sumps on site are included in the integrity test schedule?
10 How many of these sumps are integrity tested within the test schedule?
Please list any sump integrity failures in table B1
11 Do all sumps and chambers have high level liquid alarms?
12 If yes to Q11 are these failsafe systems included in a maintenance and testing programme?
13 Is the Fire Water Retention Pond included in your integrity test programme?

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)
Derrygreenagh Bund NO-501-37-01	reinforced concrete		Gas Oil	110,592	45000	Hydraulic test		22/07/2019	Yes	Pass	N/A	N/A	N/A	N/A
						Hydraulic test								

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

Has integrity testing been carried out in accordance with licence requirements and are all structures tested in line with BS8007/EPA Guidance?

- 15 Are channels/transfer systems to remote containment systems tested?
16 Are channels/transfer systems compliant in both integrity and available volume?

[bunding and storage guidelines](#)

SELECT	
SELECT	
SELECT	

Pipeline/underground structure testing

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

- 2 Please provide integrity testing frequency period
*please note integrity testing means water tightness testing for process and foul pipelines (as required under your licence)

Yes	No underground tanks or pipelines on site
SELECT	

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

Structure ID	Type system	Material of construction:	Does this structure have Secondary containment?	Type 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:	P0501-01	Year	2019
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		Comments	
1	Are you required to carry out groundwater monitoring as part of your licence requirements?	no	
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	yes	Drinking water well
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 Groundwater monitoring template	no	
5	Is the contamination related to operations at the facility (either current and/or historic)	no	
6	Have actions been taken to address contamination issues? If yes please summarise remediation strategies proposed/undertaken for the site	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?	N/A	
9	Has any type of risk assessment been carried out for the site?	N/A	
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	

Please provide an interpretation of groundwater monitoring data in the interpretation box below or if you require additional space please include a groundwater/contaminated land monitoring results interpretation as an additional section in this AER

Please enter interpretation of data here

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**	
							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**	
							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 water EQS](#) [regulations](#) [\(private supply\)](#) [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:	P0501-01	Year 2017	2019
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[Click here to access EPA guidance on Environmental Liabilities and Financial provision](#)

		Commentary	
1	ELRA initial agreement status	Not a licence requirement	
2	ELRA review status	NA	
3	Amount of Financial Provision cover required as determined by the latest ELRA	NA	
4	Financial Provision for ELRA status	NA	
5	Financial Provision for ELRA - amount of cover	NA	
6	Financial Provision for ELRA - type	NA	
7	Financial provision for ELRA expiry date	NA	
8	Closure plan initial agreement status	NA	
9	Closure plan review status	NA	
10	Financial Provision for Closure status	NA	
11	Financial Provision for Closure - amount of cover	NA	
12	Financial Provision for Closure - type	NA	
13	Financial provision for Closure expiry date	NA	

Environmental Management Programme/Continuous Improvement Programme template		Lic No:	P0501-01	Year	2019
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Highlighted cells contain dropdown menu click to view		Additional Information	
1	Do you maintain an Environmental Mangement System (EMS) for the site. If yes, please detail in additional information	Yes	Internal unaccredited EMS.
2	Does the EMS reference the most significant environmental aspects and associated impacts on-site	Yes	
3	Does the EMS maintain an Environmental Management Programme (EMP) as required in accordance with the licence requirements	Yes	
4	Do you maintain an environmental documentation/communication system to inform the public on environmental performance of the facility, as required by the licence	Yes	

Environmental Management Programme (EMP) report

Objective Category	Target	Status (% completed)	How target was progressed	Responsibility	Intermediate outcomes
Reduction of emissions to Air	Continue to train all employees in environmental matters. Training will be by means of a new four module training programme delivered by dedicated Bord na Mona training specialists. This new training programme includes environmental compliance-IPPC, Biodiversity, Archaeology and Energy management. Hydraulic harrows will be deployed at dust sensitive locations. Continue with the collection of headland peat.	50	In total 0 Personnel received training in 2019. Training takes place every two years, so no training due in the period. Hydraulic harrows were depolyed at 4 locations. Headland peat was collected at all locations and returned with production figures.	Individual	Reduced emissions

Environmental Management Programme/Continuous Improvement Programme template				Lic No:	P0501-01	Year	2019
Waste reduction/Raw material usage efficiency	Waste streamlining is a project we are particularly interested in continuing and hope to reduce wastes further in the future and be more efficient in dealing with all aspects of waste management	80	Installed a waste management system. Monthly waste reports are returned for records/filing and waste streams are segregated on site to maximise recycling potential.	Section Head	Improved Environmental Management Practices		
Waste reduction/Raw material usage efficiency	Continue with the recycling of polyethylene. The sourcing of more recycling contractors will be ongoing.	100	In total 89.85 tonnes of polyethylene were sent off site for recycling. Procurement also exploring the possibility of securing further recyclers.	Individual	Improved Environmental Management Practices		
Energy Management	As part of an Energy Awareness campaign all aspects of energy consumption will be communicated to personnel with the intention of reducing consumption through awareness	80	The monthly consumption of energy is regularly communicated to the relevant personnel. This included the KPI's for peat production, maintenance and transportation as well as bog pumping and workshop electrical consumption.	Section Head	Reduce overall energy output while maintaining productivity.		
Reduction of emissions to Water	Continue to train all employees in environmental matters. Training will be by means of a new four module training programme delivered by dedicated Bord na Mona training specialists. This new training programme includes environmental compliance-IPPC, Biodiversity, Archaeology and Energy management. Continue with the collection of headland peat.	50	Personnel are trained every two years in Environmental matters. Headland peat was collected at all locations and included as part of overall peat returns.	Individual	Improved Environmental Management Practices		

Noise monitoring summary report

Lic No: P0501-01

Year

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

No

If yes please fill in table N1 noise summary below

2 Was noise monitoring carried out using the EPA Guidance note, including completion of the "Checklist for noise measurement report" included in the guidance note as table 6?

[Noise Guidance note NG4](#)

NA

3 Does your site have a noise reduction plan

NA

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?

NA

Table N1: Noise monitoring summary

Date of monitoring	Time period	Noise location (on site)	Noise sensitive location -NSL (if applicable)	LA _{eq}	LA ₉₀	LA ₁₀	LA _{max}	Tonal or Impulsive noise* (Y/N)	If tonal /impulsive noise was identified was 5dB penalty applied?	Comments (ex. main noise sources on site, & extraneous noise ex. road traffic)	Is <u>site</u> compliant with noise limits (day/evening/night)?
								SELECT	SELECT		SELECT

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

If noise limits exceeded as a result of noise attributed to site activities, please choose the corrective action from the following options?

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:

P0501-01

Year

2019

- 1 When did the site carry out the most recent energy efficiency audit? Please list the recommendations in table 3 below

- 2 Is the site a member of any accredited programmes for reducing energy usage/water conservation such as the SEAI programme linked to the right? If yes please list them in additional information

- 3 Where Fuel Oil is used in boilers on site is the sulphur content compliant with licence conditions? Please state percentage in additional information

Additional information

	Aug-19	Report on file
Yes		
NA		Not a Licence requirement

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)	5858	4191.88	-52	-28
Total Energy Generated (MWHrs)				
Total Renewable Energy Generated (MWHrs)				
Electricity Consumption (MWHrs)	226	191.88	-52.00%	-15
Fossil Fuels Consumption:				
Heavy Fuel Oil (m3)				
Light Fuel Oil (m3)	1692	400	-52.00%	-76.00%
Natural gas (m3)				
Coal/Solid fuel (metric tonnes)				
Peat (metric tonnes)				
Renewable Biomass				
Renewable energy generated on site				

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

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

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

* 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:	P0501-01	Year	2019
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Table R3 Waste Stream Summary					
	Total	Landfill	Incineration	Recycled	Other
Hazardous (Tonnes)	13.38			13.38	
Non-Hazardous (Tonnes)	331.59	45.88	0	122.35	163.36

Resource Usage/Energy efficiency summary			Lic No:	P0501-01	Year	2019
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Table R4: Energy Audit finding recommendations								
Date of audit	Recommendations	Description of Measures proposed	Origin of measures	Predicted energy savings %	Implementation date	Responsibility	Completion date	Status and comments
			SELECT					
			SELECT					
			SELECT					

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

	Unit ID	Unit ID	Unit ID	Unit ID	Station Total
Technology					
Primary Fuel					
Thermal Efficiency					
Unit Date of Commission					
Total Starts for year					
Total Running Time					
Total Electricity Generated (GWH)					
House Load (GWH)					
KWH per Litre of Process Water					
KWH per Litre of Total Water used on Site					

**Complaints
and Incidents
summary
template**

Lic No: P0501-01

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Complaints

Additional information

Yes

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

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
22/06/2019	Dust		Complaint about dust blowing onto house and property	Complainants property visited and damage assessed. Production suspended and amended. Employees reminded of their environmental training.	Complete	22/06/2019	Reported to Agency Ref:LR042924
Total complaints open at start of reporting year		0					
Total new complaints received during reporting year		1					
Total complaints closed during reporting year		1					
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

All reported to the Agency

*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
30/04/2019	Trigger level reached	Rossan Bog SW-43	1. Minor	Water	Not related to site activities	Unknown	Normal activities	EPA INCI016437	New	No corrective action available, naturally occurring	None available	Complete	08/05/2019	Medium
25/06/2019	Trigger level reached	Rossan Bog SW-43	1. Minor	Water	Not related to site activities	Unknown	Normal activities	EPA INCI016838	New	No corrective action available, naturally occurring	None available	Complete	18/07/2019	Medium
23/07/2019	Trigger level reached	Rossan Bog SW-43	1. Minor	Water	Not related to site activities	Unknown	Normal activities	EPA INCI016886	Recurring	No corrective action available, naturally occurring	None available	Complete	26/07/2019	Medium

[illegible]

Waste Summary Continued

Lic No:

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European Waste Code (EWC)	Description of Waste (in line with applicable EWC code)	Hazardous - Yes/No	Quantity (Tonnes)	Name & Permit No. of Agent/Carrier	Treatment Type – Recovered / Disposed / Recycled	Name, Address & Licence/Permit No. of FINAL Destination	Location of Treatment - Country
02 01 04	waste plastics (except packaging)	No	89.85	ADN Materials Ltd.WFP-MN-12-0001-04	R05 - Recycling/reclamation of other inorganic materials	ADN Materials Ltd., Lossetts, Carrickmacross, Co. Monaghan - WFP-MN-12-0001-04	Ireland
08 01 11*	waste paint and varnish containing organic solvents or other hazardous substances	Yes	0	Enva Ireland Limited (Portlaoise) - W0184	R02 - Solvent reclamation/regeneration	Recyfuel Ltd., Enghis - BE0459.735.458	Belgium
11 01 13*	degreasing wastes containing hazardous substances	Yes	0.06	Safety Kleen Ireland Ltd - W0099	R11 - Use of waste obtained from any of the operations numbered R 1 to R 10	Solvent Recovery Management, PP33345F, Wheeland Rd., Knottingly, West Yorks	UK
13 02 05*	mineral-based non-chlorinated engine, gear and lubricating oils	Yes	5.77	Enva Ireland Limited (Portlaoise) - W0184	R01 - Use principally as a fuel or other means to generate energy	Enva Ireland Limited, Clonminam Industrial Estate, Portlaoise - W0184	Ireland
13 05 03*	interceptor sludges	Yes	3.58	Enva Ireland Limited (Portlaoise) - W0184	R01 - Use principally as a fuel or other means to generate energy	Enva Ireland Limited, Clonminam Industrial Estate, Portlaoise - W0184	Ireland
15 01 03	wooden packaging	No	1.16	AES Ltd WP-OY-08-601-01	R01 - Use principally as a fuel or other means to generate energy	AES LTD, Cappincur, Tullamore, Co. Offaly - WP-OY-08-601-01	Ireland
15 02 02*	absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by hazardous substances	Yes	0.21	Enva Ireland Limited (Portlaoise) - W0184	R01 - Use principally as a fuel or other means to generate energy	Lindenschmidt, Kreutzal - Reg No: E97095037	Germany
16 01 07*	oil filters	Yes	0.6	Enva Ireland Limited (Portlaoise) - W0184	R04 - Recycling/reclamation of metals and metal compounds	R.D. Recycling, Houthalen, Reg No: 51727/1KD	Belgium
16 06 01*	lead batteries	Yes	2.83	Enva Ireland Limited (Portlaoise) - W0184	R04 - Recycling/reclamation of metals and metal compounds	Campine Recycling, Beerse - MLAV/05173/GVDA	Belgium
17 04 07	mixed metals	No	31.34	AES Ltd WP-OY-08-601-01	R04 - Recycling/reclamation of metals and metal compounds	AES LTD, Cappincur, Tullamore, Co. Offaly - WP-OY-08-601-01	Ireland
20 03 01 A	Municipal mixed residual household	No	3.88	AES Ltd WP-OY-08-601-01	D05 - Specially engineered landfill (e.g. placement into lined discrete cells which are capped and isolated from one another and the environment, etc.)	AES LTD, Cappincur, Tullamore, Co. Offaly - WP-OY-08-601-01	Ireland
20 03 01 B	Municipal mixed residual non-household	No	42	AES Ltd WP-OY-08-601-01	D05 - Specially engineered landfill (e.g. placement into lined discrete cells which are capped and isolated from one another and the environment, etc.)	AES LTD, Cappincur, Tullamore, Co. Offaly - WP-OY-08-601-01	Ireland
17 05 03*	soil and stones containing hazardous substances	Yes	0	Enva Ireland Limited (Portlaoise) - W0184	D10 - Incineration on land	Enva Ireland Limited, Clonminam Industrial Estate, Portlaoise - W0184	Ireland

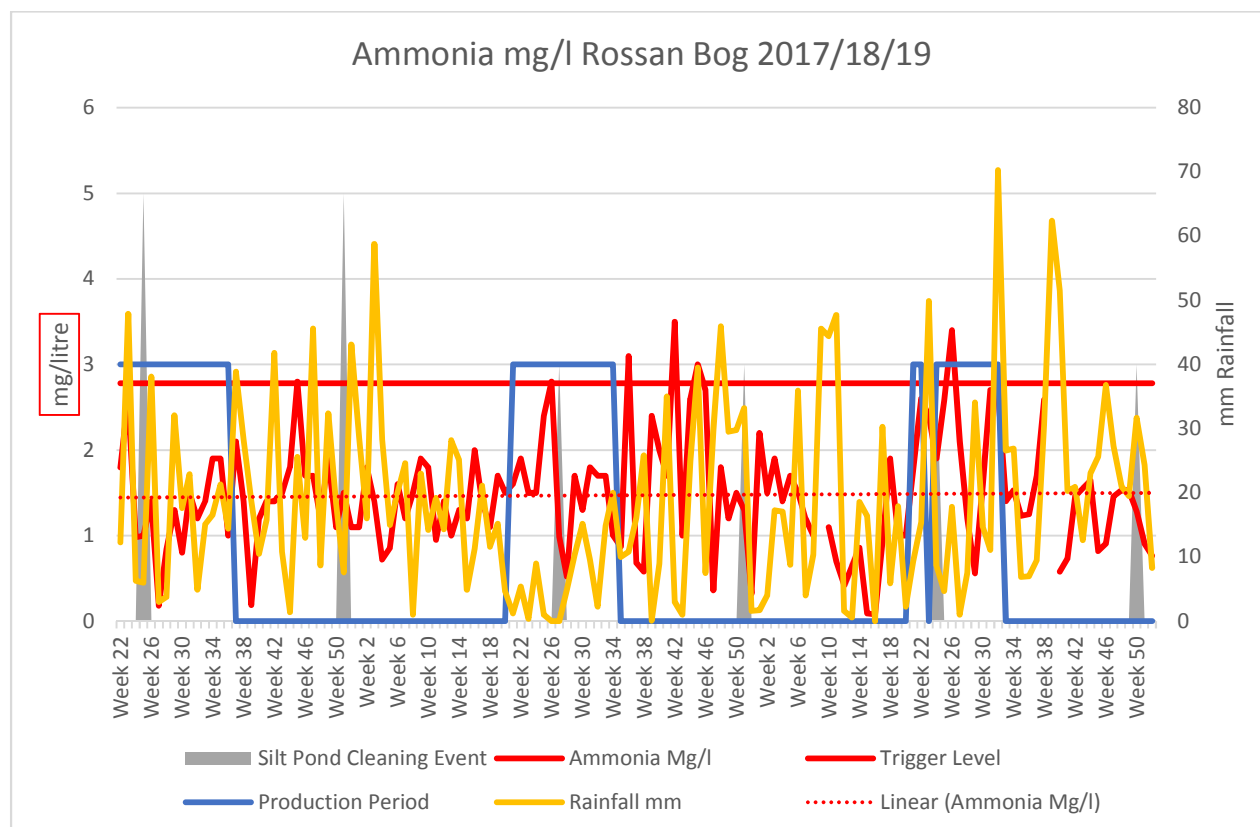
Derrygreenagh IPC Licence

Decommissioning and Rehabilitation

Bog Rehabilitation Progress Report 2019.

- No active peatland rehabilitation in Derrygreenagh licence area in 2019.
- There was ongoing monitoring of peatland rehabilitation carried out in previous years at Derryarkin, Drumman and Daingean-Rathdrum bogs.
- Fertiliser spread in Derryarkin in 2018 as part of the rehabilitation has had a positive impact and has increased vegetation cover
- Bog restoration in Daingean-Rathdrum carried out in 2019 has been successful in re-wetting this portion of bog.
- The majority of the Bord na Móna property in this bog group has been organically certified with the aim of using some areas for the cultivation of plants for use in herbal medicine into the future. This project is ongoing. Bord na Mona have committed not to use herbicides in organically certified areas to maintain industrial railways and other infrastructure.
- Draft rehabilitation plans for the Derrygreenagh bogs licensed area, including more detailed draft plans for each component bog unit were submitted to the EPA in 2013 and these were reviewed and updated in 2015 and 2017, and again submitted to the EPA May 2018.
- The new Biodiversity Action Plan (2016-2021) was launched in 2016 with the annual Biodiversity Action Plan review day being held in May 2018. This included an update on the progress of this plan, bog restoration and cutaway rehabilitation for a wide range on statutory and non-statutory consultees including members of the EPA, NPWS, BWI, Bord na Mona, Coillte, Inland Fisheries Ireland, An Taisce, IPCC, Irish Red Grouse Association, Irish Wildlife Trust, NARGC, local game councils, Midland Regional Planning Authority as well as a range of local community groups and Heritage Officers from counties Laois, Offaly, Kildare, Roscommon, Longford, Meath, Galway, Westmeath and Dublin.
- A copy of our Biodiversity Action Plan is available to view and download at <http://www.bordnamona.ie/our-company/biodiversity/>

		Bord na Mona Derrygreenagh			Siltpond Monitoring Frequency & Results							
			IPPC Licence P0501-01									
X	Y	Bog	SW	Monitoring	Sampled	pH	SS	TS	Ammonia	TP	COD	Colour
255381.2	243606.1	Derryhinch	SW-1	Q1 19	19/02/2019	7.4	5	222	1.3	0.05	73	139
254528.8	242354.3	Derryhinch	SW-2	Q1 19	19/02/2019	7.4	5	200	1.8	0.05	63	186
253369.2	242417.9	Derryhinch	SW-3	Q1 19	22/02/2019	7.4	5	276	1.9	0.05	50	125
252602.8	242540.2	Derryhinch	SW-4	Q1 19	22/02/2019	7.6	5	272	1	0.05	10	167
252623.6	241470.2	Carrick	SW-4A	Q1 19	19/02/2019	7.7	5	298	1.8	0.05	61	178
252468.7	240919.3	Carrick	SW-5	Q1 19	19/02/2019	7.7	5	258	0.2	0.05	41	55
252409.7	241163.3	Carrick	SW-6	Q1 19	19/02/2019	7.7	5	224	0.16	0.05	30	50
252473.2	241162	Carrick	SW-7	Q1 19	19/02/2019	7.8	5	254	0.13	0.05	36	47
252275.6	239871.6	Drumman	SW-8	Q1 19	22/02/2019	7.7	5	240	1.2	0.05	10	127
252950.4	238421.7	Drumman	SW-9	Q1 19	19/02/2019	7.7	5	228	0.15	0.05	54	118
251559.9	235341.7	Ballybeg	SW-11	Q 2 19	27/05/2019	7.4	5	554	0.11	0.05	52	112
252206.1	235207	Ballybeg	SW-12	Q 2 19	27/05/2019	7.8	5	574	0.6	0.05	69	133
251880.6	234593.1	Ballybeg	SW-13	Q 2 19	27/05/2019	7.9	5	584	1.5	0.05	19	49
252250.5	235061.5	Ballybeg	SW-13A	Q 2 19	27/05/2019	7.8	5	556	1.1	0.05	40	51
240485.2	235706.3	Torr	SW-14	Q 2 19	27/05/2019	7.8	7	552	2.8	0.05	34	50
244391.8	235128.9	Torr	SW-15	Q 2 19	27/05/2019	8	5	482	0.45	0.05	28	51
244435.6	235093.4	Torr	SW-16	Q 2 19	27/05/2019	7.6	5	530	0.39	0.05	29	49
240425.7	234997.3	Torr	SW-17	Q 2 19	27/05/2019	7.9	5	508	0.06	0.05	33	44
259415.3	256855.8	Bracklin	SW-29	Q 2 19	27/05/2019	7.4	5	305	1.4	0.05	60	166
259519.5	257618.4	Bracklin	SW-30	Q 2 19	27/05/2019	7.5	6	328	1.6	0.05	60	177
262437	258824.8	Lisclogher	SW-19	Q3 19	10/09/2019	7.8	2	369	0.176	0.07	66	380
262935.7	258722.5	Lisclogher	SW-20	Q3 19	10/09/2019	7.6	15	366	0.223	0.09	88	493
262969.1	258691.3	Lisclogher	SW-21	Q3 19	10/09/2019	8	7	385	0.174	0.05	65	325
263432.9	258465.2	Lisclogher	SW-22	Q3 19	10/09/2019	8.1	16	379	0.158	0.06	66	301
263467.2	258446.6	Lisclogher	SW-23	Q3 19	10/09/2019	8	15	352	0.166	0.06	68	337
263740.8	258368	Lisclogher	SW-24	Q3 19	10/09/2019	8.1	10	367	0.172	0.05	63	
266022.6	259613.6	Lisclogher	SW-25	Q3 19	10/09/2019	7.5	5	357	3.49	0.09	74	489
260584	256514.3	Bracklin	SW-26	Q3 19	10/09/2019	6.6	2	211	1.38	0.05	82	307
260609.4	256526.3	Bracklin	SW-27	Q3 19	10/09/2019	7.4	2	306	1.9	0.05	76	247
263649.6	255035.4	Carranstown	SW-31	Q3 19	10/09/2019	6.8	3	213	0.149	0.05	106	620
265554	255989.1	Carranstown	SW-32	Q4 19	05/12/2019	8	2	371	0.249	0.05	49	163
265632.8	254865	Carranstown	SW-33	Q4 19	05/12/2019	8	2	438	0.129	0.05	52	169
265887	254984.2	Carranstown	SW-34	Q4 19	05/12/2019	7.7	2	195	0.086	0.05	47	140
265140.1	254114.5	Ballivor	SW-35	Q4 19	05/12/2019	8.1	2	337	0.301	0.05	42	107
265879	253506.6	Ballivor	SW-38	Q4 19	05/12/2019	8	2	434	0.046	0.06	33	103
265889	253456.6	Ballivor	SW-39	Q4 19	05/12/2019	7.6	2	378	2.12	0.05	27	82.5
266366.9	251598.6	Ballivor	SW-40	Q4 19	Site backed up							
266386.5	251579.2	Ballivor	SW-41	Q4 19	Site backed up							



Rossan bog is an active horticultural production bog with the composite sampler located here from May 2017 to date. The composite sampler takes a flow proportional composite sample over a 24 hour period. The sampler had 29% downtime during this reporting period but returned 50 weekly ammonia results during the period. The ammonia trigger level of 2.78mg/l, as agreed with the Agency, was exceeded once during the reporting period, as reported to the Agency. Over the sampling period of 82 weeks up to 2018 the trending showed a slightly increasing trend in ammonia, however including the period of 2019, the ammonia seems to have levelled off. The rainfall levels were higher in 2019, but the average ammonia was slight reduced over 2018, so the ammonia concentration in this bog, may be heading in-line with the downwards trends in some bogs as production progresses, as submitted to the EPA in 2013 under condition 6.14.

There is no obvious link between the summer production, winter maintenance, or silt pond maintenance events on the concentration of Ammonia discharging from this peatland. The only link expected would be that related to rainfall events and seasonal weather patterns and the subsequent surfacewater runoff and associated ammonia concentrations.

The sampler at this location may be relocated to fill any information gaps on other peatland catchments and to reflect the need to support the information gathering required for the Water Framework Directive's River Basin Management Plan. There is also an EPA lead research project commencing in 2019, called the SWAMP project, whose aims are to appraise and understand the nutrient impact from peatlands, to evaluate treatment technologies and to propose predictive tools for watershed management.

Extractive Waste Management Plan Implementation AER Update 2019.

March 2020.

IPC Licence P0501-01.

1.0 Extractive Wastes.

Waste classified as extractive waste from peat extraction operations arise from two operations associated with this activity.

- Silt Pond excavations and maintenance
- Bog Timbers

There has been no change to the type and nature of these two waste streams and no new waste streams added to this list. These wastes streams continue to be stored and maintained at between 1 and 3 metres in height.

2.0 Condition 7.5 Extractive Waste Management

- An extractive waste management plan (EWMP) was submitted to the Agency in September 2012 and was approved.
- The EWMP was reviewed in September 2017. There were no substantial changes to the operation of the plan, associated waste facilities or to the waste deposited. The EWMP will be reviewed again in September 2022. At this stage, it is envisaged that many bogs will be entering a decommissioning and rehabilitation phase, which will see a significant reduction in the generation of bog timbers. In addition, and depending on the progress with bog stabilisation and rehabilitation, silt generation will significantly reduce which will lead to reduced volumes to be removed from the silt ponds.

3.0 Minimisation

- The IPC Licence has various conditions that require the installation, inspections and maintenance of silt ponds for operational areas and as such these requirements dictate the need for silt ponds and associated excavation materials and cleanings.
- Bog timbers arise from the active production footprint and are naturally occurring. The active footprint is dictated by the peat production targets and customer supply contract and service level agreements.

4.0 Treatment

- Silt pond excavation and maintenance materials do not require any treatment and are stored as per the EWMP, adjacent to the associated silt pond.
- There is no treatment of bog timbers arising and these are stockpiled at various locations in associated bogs.

5.0 Recovery

- As per the EWMP, there is still no opportunity to recover these silt pond associated materials
- Bog timbers stored on the bog are natural to the peat bog and while there have been trails to recover this waste material, these have not proved viable.

6.0 Disposal

- Silt pond cleanings continue to be disposed of adjacent to the associated silt pond and will be incorporated back into the rehabilitation plans for these bogs, post production and decommissioning.
- Bog timbers will continue to be stockpiled at suitable locations to be either incorporated back into the bog, as a supply of bog timbers for the crafting industry or will continue to decay naturally.