



APPENDIX 4-3

**ANNUAL ENVIRONMENTAL
REPORTS 2000-2025**



Annual Environmental Report (AER) 2025

Company Name: Bord na Mona

Licence Number: P0503-01

Address: Bord na Mona, C/O Derrygreenagh Works,
Rochfortbridge, Co. Westmeath

Class of Activity¹:1.4

¹ See Appendix I

Purpose of this Report

One of the functions of the Environmental Protection Agency (EPA) is to licence and regulate the activities² of large scale industrial (e.g. chemical, food processors, power plants) and waste facilities. Submitting an Annual Environmental Report (AER) is a requirement of all EPA licences.

An AER is a public document. To this end, this format has been developed for industrial and waste licence holders (other than the intensive agriculture sector) to use as a template. This is to assist any member of the public to interpret and understand the environmental performance of the licensed facility.

The AER is a **summary** of environmental information for a given year. It includes:

- Details of the licence holder's environmental goals achieved, goals to maintain compliance and/or improve their environmental performance;
- Answers to questions regarding their facility's activities;
- Tables of results from monitoring emissions such as air, water, noise, and odour; and
- Details of waste generated, accepted and treated.

An AER does **not** provide detailed technical data. Such information is available in three ways:

- 1) Contacting the licence holder directly. The Contact Us section of this template enables the licence holder to provide details of where a member of the public can obtain further information on topics reported in this document.

² See Appendix I

- 2) Some documents³ are available on the EPA website via the licence details page for each individual licence. This can be found by browsing either the <http://www.epa.ie/licensing/> or <http://www.epa.ie/enforcement/> pages of the EPA website.
- 3) All formal enforcement correspondence exchanged between the EPA and a licence holder during the regulatory process is available for public viewing by appointment at any EPA Office.

If you have a question or query about an AER or an individual EPA licensed facility see the EPA's website or contact the relevant EPA office. See <http://www.epa.ie/about/contactus/> for contact details.

³ This includes EPA site inspection and compliance monitoring reports, licence holders' self-monitoring reports, AERs and special reports

Contents

Glossary	5
Declaration	8
1) Introduction	9
Contact Us	10
2) How we Manage our Facility	11
Environmental Management System	11
Beyond Compliance	13
3) Energy & Water	14
Energy	14
Water	16
4) Environmental Complaints	17
5) Environmental Incidents	19
6) Our Environmental Emissions	22
Storm Water	23
Waste Water	25
Air	27
Fugitive Solvent Emissions	29
Groundwater	30
Noise	32
7) Waste	33
Waste Generated	33
Waste Accepted	34
8) Financial Provision	35

Glossary

Abatement Equipment	Technology used to reduce pollution
AER	Annual Environmental Report.
Beyond Compliance	Beyond compliance is concept to help deliver greater organisational performance and long-term value for the environment, society and the economy.
CRAMP	Closure, Restoration and Aftercare Management Plan.
ELRA	Environmental Liability Risk Assessment.
Emission Limit Value	Limits set for specified emissions, typically outlined in Schedule B of an EPA licence.
EMS	Environmental Management System.
Environmental Goal	An objective or target set by a licensee as part of an environmental management system (EMS).
Environmental Pollutant	Substance or material that due to its quantity and/or nature has a negative impact on the environment.
Facility	Any site or premises that holds an EPA industrial or waste licence.
FP	Financial Provision.
GJ	Giga joules, an international unit of energy measurement.

Groundwater	All water which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil.
Incident	As defined by an EPA industrial or waste licence.
Inert Waste	Is waste that will not undergo physical, chemical or biological change thereby, is unlikely to cause environmental pollution or harm human health.
List of Wastes (LoW)	A list of wastes drawn up by the European Commission and published as Commission Decision 2014/955/EU.
Noise Sensitive Location	Any dwelling house, hotel or hostel, health building, educational establishment, place of worship or entertainment, or any other installation or area of high amenity which for its proper enjoyment requires the absence of noise at nuisance levels.
Non-Renewable Resource	A resource of economic value that cannot be replaced at the same rate it is being consumed e.g. coal, peat, oil and natural gas.
Oil Separator	Separator system for light liquids (e.g. oil and petrol).
PRTR	Pollutant Release and Transfer Register.
Renewable Resource	Wind, solar, aerothermal, geothermal, hydrothermal and ocean energy, hydropower, biomass, landfill gas, sewage treatment plant gas and biogases.
Sanitary Waste	Waste water from toilet, washroom and canteen facilities.

Storm Water	Rain water run-off from roof and non-process areas.
Surface Water	Lakes, rivers, streams, estuaries and coastal waters.
Trigger Level	A value set for a specific parameter, the achievement or exceedance of which requires certain actions to be taken by the licence holder.
Volatile Organic Compounds	Gases produced from solids or liquids that evaporate readily in ambient conditions.
Waste	Any substance or object which the holder discards or intends or is required to discard.

Disclaimer

These are **not** legal definitions. Legal definitions can be found in the corresponding legislation.

Declaration

I, ~~Ray~~*Lenahan* PCAS Operations Manager, confirm that by ticking the box below, all information in this report is truthful and accurate to the best of my knowledge and belief.

In addition, I confirm that all monitoring and performance reporting required by our EPA licence and summarised herein is available for inspection by the EPA.

Tick here



1) Introduction

See below a brief description of our facility and a summary of our environmental performance this year.

- During the reporting period the main activity was decommissioning and rehabilitation of several bogs and workshops in this IPC Licence.
- During the reporting period, 435 hectares of peatlands at Esker, Timahoe Sth & Daingean Derries bogs were rehabilitated, with any balance of the rehabilitation extending into the 2026 period.
- Similarly, 310 Ha's of peatlands were subject of ongoing decommissioning, with 17 kms of rail line lifted and various waste materials removed.
- During the period, there was no complaints received of an environmental nature.
- During the reporting period, there was a decrease in waste generated for recycling or disposal. One of the main activities during 2025 was the decommissioning of the rail line infrastructure as required under Condition 10.1.
- In the period, there 1% of sampling reported exceedances in the COD trigger levels related to emissions from peatlands. This was of minor significance and was closed out during the period as they are not linked to any ongoing activity.
- During the period, there were various submissions to the Agency including the 2024 AER, Annual Monitoring Returns, trigger level exceedances, Rehabilitation Plan Reviews, a revised management structure, Silt pond maintenance schedule change, PCAS progress report, Illegal trespass notification, Trail Development information, requests for boundary amendments and various updates on relevant activities.
- Cavemount, Clonad, Esker and Mountlucas Bogs were rehabilitated in year 1 of the PCAS scheme (2021/2022), with a 2 year review of these plans submitted to the Agency in 2024. Due to the completion of the rehabilitation, there has been no requirement to undertake another review of the rehabilitation plan, as there were no amendments

required to the previous plan and subsequent 2 yr review undertaken in 2024.

- Bord na Mona continued to retain certification to ISO9001 for the decommissioning and rehabilitation of peatlands to support the climate action scheme (PCAS).

Contact Us

If you have any questions or would like further information on any aspect of our licensed activity, please contact us directly.

See below details:

Enda McDonagh,
Bord na Mona Energy Ltd.,
Leabeg,
Tullamore,
Co. Offaly.

2) How we Manage our Facility

Environmental Management System

Explanation

To ensure our facility's activities do not cause environmental pollution we are required to have detailed documentation systems in place to help us manage and track our environmental performance. These systems are referred to as Environmental Management Systems (EMS). We review our EMS every year and set up-to-date **environmental goals** to continually improve our environmental performance.

The information below sets out the environmental goals for our facility to help us prevent environmental pollution and reduce our impact on the environment. Target dates for completing each goal and progress towards achieving the goal are outlined in Table 1.

Table 1 Environmental Goals

Environmental Goal	Target Date	Progress
Training/awareness for all area leaders and operatives where required, in advance of decommissioning and rehabilitation of the 2026 bogs	Jan 2026	Underway
Waste Management – Removal of all waste that are deemed a risk the environment in bogs and workshops as required under condition 10.1	Dec 2026	Underway
Communication of Decommissioning and Rehabilitation plans to all neighbours within 1km of any proposed rehabilitation activity for 2026.	June 2026	Not started
Maintain surface water quality compliance with emission limit values for Suspended Solids during the proposed decommissioning and rehabilitation programme.	Dec 2026	Underway
Decommissioning and Rehabilitation of scheduled bogs in accordance with	December 2026	Underway

Condition 10 of the IPC Licence and in accordance with Peatlands Climate Action Scheme https://www.gov.ie/en/publication/136a7-bord-na-mona-bog-rehabilitation-scheme/		
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Add rows as necessary

Comment

As peat extraction on all bogs in this licence ceased in 2020, all environmental goals for 2026 are linked to the remaining bog activity which is the decommissioning and rehabilitation of any bogs scheduled for 2026.

Beyond Compliance

Explanation

We are legally required to comply with our environmental licence. However, the EPA realise that some sites go further than just complying with their environmental licence requirements. Some projects carried out at facilities can have long term positive impacts on the environment and local communities.

The EPA's beyond compliance initiative is encouraging us to identify and report on these environmental and sustainability projects. For example, the project could involve renewable energy, biodiversity, water conservation or exemplar community engagement.

Did any project completed on your site in the reporting year go beyond your licence requirements?

Yes ☒

No ☐

If yes, provide details of one case study in Appendix III that demonstrates how the project went beyond compliance of your licence.

3) Energy & Water

Energy

Explanation

Fossil fuels such as coal, gas and oil are non-renewable resources. As a result, our EPA licence requires that we measure our energy use and set targets to improve the energy efficiency of our activities and reduce our overall use, where possible. Where we have the means and technology on-site to generate energy, this is also captured in this report.

The information below summarises the energy used this year compared to the previous year and includes renewable and non-renewable energy types.

Table 3 Energy Used

Energy Used	Quantity (GJ)	% Increase/ decrease on previous year
Electricity	215.18	150.61% Increase
Heavy Fuel Oil		
Light Fuel Oil	4,446.00	37.74% Decrease
Natural Gas		
Coal / Solid Fuel		
Peat		
Renewable Biomass		
Renewable Energy Generated On-site		
Total Energy Used	4661.18	35.50% Decrease

Comment

Fuel usage decreased in 2025 due to less activity. Electricity increased from a low level in 2024 due to decommissioning activity at workshops. Overall, energy usage decreased by over one third from 2024.

The information below summarises the energy we generated on our site this year with specific focus on renewable energy generation.

Table 4 Energy Generated

Energy Generated	Quantity (GJ)	% Increase/ decrease on previous year
Renewable Energy		
Total Energy Generated	n/a	

Comment

N/A

Water

Explanation

Water is a natural resource and we are required by our EPA licence to identify ways to reduce our use where possible. Water used in industry can be extracted from groundwater, rivers and lakes (surface water), taken from public water supplies (Irish Water), recycled from the facility's processes or harvested from rainwater.

The information below summarises and compares the quantity of water used this year compared to the previous year.

Table 5 Water Used

Source of Water Used	Quantity (m³/year)	% Increase/decrease on previous year
Groundwater	0	
Surface Water	0	
Public Supply	0	
Recycled Water	0	
Rainwater	0	
Total Water Used	0	

Comment

Water is not used in any of the peatland rehabilitation or current activities. The only water used is that required to provide associated office and workshop and welfare facilities.

4) Environmental Complaints

Explanation

Our EPA licence requires that activities do not cause environmental nuisance such as odour, dust or noise. Our licence also requires that we have procedures in place to record, investigate and respond to environmental complaints if or when they arise.

We have an environmental complaints procedure in place where you can contact us⁴ directly. You can also contact the EPA⁵ if you wish to make an environmental complaint, confidentially or not.

See the information below for a summary of **all** the environmental complaints relating to our activities made directly to us and to the EPA this year.

Table 6 Summary of All Environmental Complaints Received in

Type of Complaint	Number of Complaints	Number Closed
Odour / Smells	0	
Noise	0	
Dust	0	
Water Quality	0	
Air Quality	0	
Waste	0	
Litter	0	
Vermin/Flies/Birds	0	
Soil Contamination	0	
Vibration	0	
Other	0	

⁴ See Section 1, Introduction – Contact Us

⁵ If you wish to contact the EPA to make an environmental complaint about an EPA licenced facility, please go to <https://lema.epa.ie/complaints>

Comment

There were no complaints of an environmental nature received in 2025.

5) Environmental Incidents

Explanation

It is our responsibility as an EPA licensed facility to ensure we have systems in place to prevent incidents that have the potential to cause environmental pollution. If an incident occurs, we are required to report it to the EPA, investigate the cause and fix the problem.

The EPA classify environmental incidents into 5 categories based on the potential impact on the environment:

- Minor
- Limited
- Serious
- Very Serious
- Catastrophic

See Table 7 for the number of the environmental incidents we reported to the EPA this year.

Table 7 Number of Environmental Incidents

Incident Category	Minor	Limited	Serious	Very Serious	Catastrophic
Abatement Equipment Offline	N/A				
Breach of Ambient ELV	N/A				
Breach of Emission Limit	N/A				
Explosion	N/A				
Fire	N/A				
Monitoring Equipment Failure	N/A				
Odour	N/A				
Spillage	N/A				
Breach of trigger Level	N/A				
Uncontrolled Release	N/A				

Incident Category	Minor	Limited	Serious	Very Serious	Catastrophic
Other	N/A				

Comment

There were no incidents in 2025

6) Our Environmental Emissions

Explanation

We are required to ensure the emissions from our activities do not cause environmental pollution.

We are required to monitor any of the following emissions that we make:

- Storm water
- Waste water
- Air
- Groundwater
- Noise

We regularly test any such emissions for specific pollutants and materials to ensure they do not contain levels of pollution that exceed emission limit values (ELVs) or cause environmental pollution. If monitoring of an emission indicates an ELV is exceeded, we are required to report this to the EPA⁶.

The next sub-sections of this report summarise our compliance with any ELVs set in our EPA licence. Some emissions monitored do not have specific ELVs, but we still carry out monitoring and report all incidents that may give rise to environmental pollution.

⁶ See section 5, Incidents

Storm Water

Explanation

Storm water is rain water run-off from roof and non-process areas of a facility, e.g. car parks, and generally shall not contain any pollution. Storm water is usually released into a local water body after a basic form of treatment. Our EPA licence requires that we manage storm water to ensure no polluting substances or materials are released into the environment.

The information below summarises how the storm water from our facility is treated, where it is released and the results of monitoring this year.

1. Storm water from our facility is managed prior to release by;

Either direct to drain where it is roof water only, or via the petrol/oil interceptor

2. Storm water from our facility is released into the following water bodies:

The Figile, Cushina and Philipstown Rivers

Table 8 Summary of Storm Water Monitoring

Parameter measured	No. of Samples	% Compliant⁷	Comment
COD	24	100%	Sampling took place at two locations monthly as required by licence.

Add rows as necessary

Comment

As required by the licence, stormwater is required to be separated where possible from process/non-process areas. Where it is possible, stormwater is managed via oil-interceptors which are inspected on a weekly basis and sampled for associated discharges each month. Other than visual observations, the other main criteria to define adequate treatment is COD mg/l so this and visual inspections dictate when the interceptor is cleaned by an approved hazardous waste contractor.

⁷ % compliant = [(number of samples compliant) / (number of samples taken)] x 100. Compliance could refer to emission limit values or trigger levels. The EPA commonly use trigger levels on stormwater discharges.

Waste Water

Explanation

There are two types of waste water that can be produced:

- Process waste water produced from the activities and;
- Sanitary waste water from toilets, washrooms and canteens.

Our EPA licence requires us to manage our waste water on or off-site and ensure that it does not cause environmental pollution when discharged into the environment.

The information below summarises how we treat the waste water produced from our activities, where it is released and the results of monitoring this year.

1. Waste water produced by our activities is treated as follows before discharge to a receiving waterbody;

All bog area runoff is treated via an associated silt pond designed, inspected, and maintained in accordance with condition 6 of the IPC Licence.

2. Treated waste water from our facility is released into the following water bodies:

Yellow River, Silver River, Grand Canal, Philipstown River, Tullamore River, Cushina River, Esker Stream, Figile River, Cotteners Brook, Cushling River, Abbeylough River, Slate River, and the Crabtree River.

Table 9 Summary of Waste Water Monitoring

Parameter measured	No. of Samples	% Compliant	Comment
Suspended Solids	428	100%	
Total Solids	428	100%	
Ammonia	124	100%	
Total Phosphorous	124	100%	
pH	124	100%	
Colour	124	100%	
COD	124	100%	

Add rows as necessary

Comment

Licence requirements are quarterly grab samples on a selected number of silt pond outlets as per condition 6.2 and one 24hr flow proportional composite sampler at Mountlucas Bog.

The emission limit values are 35mg/l suspended solids. Trigger levels are set at 3mg/l total ammonia and 100mg/l COD, with any exceedances in trigger levels for ammonia required to be submitted to the Agency each quarter.

Air

Explanation

Generally, three types of air emissions are monitored from industry in Ireland: gases, dust (particulates) and odour. Our EPA licence requires us to ensure that any air emissions from our activities do not cause air pollution or create an odour nuisance.

The information below details the number of air emission points we monitor, the results from testing the air emissions and any odour assessments carried out by us and the EPA this year.

1. We monitor air emissions from the following number of emission points at our facility.

As peat production has ceased, no dust monitoring took place during 2025

Table 10 Summary of Air Emissions Monitoring

Parameter measured	No. of Samples	% Compliant	Comment
N/A			

Add rows as necessary

Comment

Due to the permanent cessation of peat production, it is no longer necessary to monitor for dust.

Table 11 Summary of Odour Assessments Carried Out

Assessment Conducted By	No. of Odour Assessments	% Compliant⁸	Comment
Licence Holder	N/A		
EPA	N/A		

Add rows where necessary

Comment

There are no odour emissions of note from our activities and no requirements to monitor with no associated complaints.

⁸ A compliant odour assessment is based on EPA Odour Impact Assessment Guidance available at [Air Enforcement | Environmental Protection Agency \(epa.ie\)](#)

Fugitive Solvent Emissions

Are you required to monitor fugitive solvent air emissions from your facility?

Yes ☐

No ☒

Explanation

The use of solvents is regulated under Irish and European Union (EU) Regulations⁹. Solvents are chemicals that, by their nature, are volatile (evaporate readily under ambient conditions). Solvents can be found in many inks, glues and cleaning agents. Due to the volatility of solvents some emissions may be released into the atmosphere during our activities before being captured in our air treatment system. This type of emission is called a **fugitive solvent emission**.

The information below summarises the quantity of solvents used this year, the percentage of fugitive solvent emissions (% of total quantity used) and whether the percentage complied with the targets set in the EU Regulations.

Table 12 Summary of Fugitive Solvent Emissions

Quantity of Solvents Used (Kg)	% Fugitive Solvent Emissions	Compliant
N/A		

Comment

N/A

⁹ See Annex VII of the Industrial Emissions Directive

<https://ec.europa.eu/environment/industry/stationary/ied/legislation.htm>

Groundwater

Explanation

Groundwater is an important and sensitive resource in Ireland. Our EPA licence requires that we monitor groundwater to ensure our activities do not cause groundwater pollution.

Understanding how groundwater flows through soil and rock layers and eventually into surface and coastal waters is a complex science. Sometimes groundwater pollution that occurred in the past can take years and even decades to disappear. Therefore, it is important that experts help us monitor and interpret results from groundwater monitoring and testing.

The information below is a basic summary of the condition of the groundwater this year.

1. Do you have a groundwater monitoring programme in place?

Yes ☐

No ☒

2. Have the groundwater monitoring results over the last 5 years indicated the presence of groundwater pollution?

Yes ☐

No ☒

Table 13 List of Groundwater Pollutants Identified

Pollutants
N/A

Add rows as necessary

3. Give details of the investigations and subsequent actions taken, where applicable, to manage the groundwater pollution.

N/A

Comment

Groundwater monitoring is not a requirement of the licence

Noise

Explanation

Our EPA licence requires that we monitor noise emissions from our facility. Noise monitoring can be conducted at the boundary of our facility and/or at locations beyond the boundary referred to as “noise sensitive locations”. Noise monitoring requires the use of special noise monitoring equipment. Our EPA licence requires that noise produced by our facility shall not exceed the noise limit values and/or give rise to nuisance.

The information below gives a summary of when and where we conducted noise monitoring this year and if results complied with our EPA licence limits.

1. We conducted noise monitoring on the following dates this year:

N/A

2. Where was the noise monitoring carried out?

- i. the boundary of our facility;
- ii. noise sensitive locations off-site; or
- iii. both.

N/A

3. Were measured noise levels compliant with your EPA licence limits?

Yes ☐

No ☒

If No, we took the following actions to address the noise level exceedances?

N/A

Comment

N/A

7) Waste

Waste Generated

Explanation

Our EPA licence requires us to manage the waste we generate in a manner that does not cause environmental pollution.

We manage, store and record hazardous, non-hazardous and inert waste we generate in accordance with our licence. We ensure that this waste is subsequently treated or disposed of in accordance with the relevant waste Regulations.

The information in Table 14 is a summary of waste we generated this year and the percentage increase or decrease on the previous year. The percentage recovery is the amount of total waste generated that was reused, recycled or recovered.

Table 14 Waste Generated

Type	Quantity (Tonnes)	% Increase/ decrease on previous year	% Recovery
Hazardous	4.18	59.13% Decrease	100%
Non-Hazardous	1953.23	30.52% Decrease	97.69%
Inert			
Total Tonnes	1957.41	30.63% Decrease	97.69%

Comment

There was a decrease in hazardous waste from the 2024 period, due to the fact less workshops were decommissioned in the period. General waste is also down on last year's figure. This waste was mainly generated from decommissioning of the rail line infrastructure.

Waste Accepted

Did you accept waste onto your facility for storage, treatment, recovery or disposal this year?

Yes ☐

No ☒

Explanation

Our EPA licence requires us to manage the waste we accept in a manner that does not cause environmental pollution.

We manage, store and record all incoming and outgoing hazardous, non-hazardous and inert waste. The waste we accept may be treated, recovered, disposed or stored at our facility depending on our licence requirements.

The information in Table 15 provides a summary of waste we accepted this year and the percentage increase or decrease on the previous year. The percentage recovery is the amount of total waste accepted that was reused, recycled or recovered.

Table 15 Waste Accepted

Type	Quantity (Tonnes)	% Increase/ decrease on previous year	% Recovery
Hazardous	N/A		
Non-Hazardous	N/A		
Inert	N/A		
Total Tonnes	N/A		

Comment

No wastes accepted

8) Financial Provision

Explanation

Our EPA licence requires us to assess the risk our activities pose to the environment if we cease our activities or if an incident occurred. If we are identified as a high risk facility¹⁰ by the EPA, we are required to put provision in place such as a financial bond or insurance to cover the cost of restoring our site to a satisfactory condition. This financial provision can then be used to cover the cost of managing the restoration or clean up should such an event occur.

1. Are you required to have an agreed financial provision in place?

Yes ☐

No ☒

2. What year was your Closure, Restoration and Aftercare Management Plan (CRAMP) last agreed by the Agency?

N/A

3. What year was your Environmental Liability Assessment Report (ELRA) agreed by the Agency?

4. Has there been any significant changes on your site since the last agreements?

Yes ☐

No ☐

If yes, have you submitted details to the EPA?

Yes ☐

No ☐

N/A ☒

¹⁰ See Appendix II

Appendix I

Class of Activity

Industrial and waste facilities are classed into different sectors depending on the nature of their activity and its potential impact on the environment. The EPA Act 1992 as amended, outlines these as follows:

Class 1	Minerals and other materials
Class 2	Energy
Class 3	Metals
Class 4	Mineral fibres and glass
Class 5	Chemicals
Class 6	Intensive Agriculture ¹¹
Class 7	Food and drink
Class 8	Wood, paper, textiles and leather
Class 9	Fossil fuels
Class 10	Cement, lime and magnesium oxide
Class 11	Waste
Class 12	Surface Coatings
Class 13	Other Activities

¹¹ This reporting template is not applicable to the **intensive agriculture sector**. Their annual environmental reporting structure is different and can be found at [Compliance & Enforcement: Licensees: Reporting Publications | Environmental Protection Agency \(epa.ie\)](#)

Appendix II

High Environmental Risk Categories

If an industrial or waste licence falls into one of these categories it is deemed, by the EPA, as a high environmental risk. As a result, the licence holder is required to have financial provision in place. See section 8, Financial Provision.

1. Landfills
2. Non-Hazardous Waste Transfer Station
3. Incineration and Co-Incineration Waste Facilities
4. Category A – Extractive Waste Facilities
5. Upper and Lower Tier Seveso Facilities
6. Hazardous Waste Transfer Stations
7. High Risk Contaminated Land
8. Exceptional Circumstances

NOTE:

This list is subject to change.

See the link below for further information.

[Compliance & Enforcement: Financial Provisions Publications | Environmental Protection Agency \(epa.ie\)](#)

Appendix III

Beyond Compliance

The case study below shows how we went beyond the requirements of our licence in the reporting year.

The Government implemented a scheme called the 'Peatlands Climate Action Scheme' (PCAS), also known as the Peatlands Enhanced Decommissioning, Rehabilitation and Restoration Scheme (EDRRS). The Scheme commenced in 2021 and was devised so that Bord na Móna could carry out enhanced rehabilitation of its industrial peatlands, having ceased peat extraction in 2020. The scheme is supported by Government through the Climate Action Fund, and Ireland's National Recovery and Resilience Plan administered by the Department of Environment, Climate and Communications (DECC), while the National Parks and Wildlife Service (NPWS) act as the Scheme regulator and the Environmental Protection Agency regulate rehabilitation plan under Condition 10 of this IPC Licence. This Scheme will significantly go beyond what is required to meet rehabilitation and decommissioning obligations under the existing EPA IPC licence conditions. Improvements supported by the Scheme will ensure that environmental stabilisation is achieved (meaning IPC obligations are met), and importantly, significant additional benefits, particularly relating to climate action and other ecosystem services, will also be delivered.

To measure and verify the rehabilitation outcomes, the scheme has increased the water monitoring requirements of the licence, the range of parameters to be included and the frequency of monitoring.

These co-benefits include supporting the objectives of the Irelands Climate Action Plan, the preservation of wetland archaeology, the reduction of peak flows to receiving water, supporting Irelands Biodiversity objectives, reduction in carbon emissions, improvements in water quality and reduction in water abstraction pressures associated with drainage. For further details see www.bnmpcas.ie.

In this IPC licensed area, nine peatlands have been rehabilitated todate at Clonad, Esker, Cavemount, Daingean Derries, Daingean Rathdrum, Mountlucas, Cloncreen, Lodge & Timahoe Sth Bogs.



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2024

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Licence Number: P0503-01

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Contents

Glossary	5
Declaration	8
1) Introduction	9
Contact Us	10
2) How we Manage our Facility	11
Environmental Management System	11
Beyond Compliance	13
3) Energy & Water	14
Energy	14
Water	16
4) Environmental Complaints	17
5) Environmental Incidents	19
6) Our Environmental Emissions	22
Storm Water	23
Waste Water	25
Air	27
Fugitive Solvent Emissions	29
Groundwater	30
Noise	32
7) Waste	33
Waste Generated	33
Waste Accepted	34
8) Financial Provision	35

Glossary

Abatement Equipment	Technology used to reduce pollution
AER	Annual Environmental Report.
Beyond Compliance	Beyond compliance is concept to help deliver greater organisational performance and long-term value for the environment, society and the economy.
CRAMP	Closure, Restoration and Aftercare Management Plan.
ELRA	Environmental Liability Risk Assessment.
Emission Limit Value	Limits set for specified emissions, typically outlined in Schedule B of an EPA licence.
EMS	Environmental Management System.
Environmental Goal	An objective or target set by a licensee as part of an environmental management system (EMS).
Environmental Pollutant	Substance or material that due to its quantity and/or nature has a negative impact on the environment.
Facility	Any site or premises that holds an EPA industrial or waste licence.
FP	Financial Provision.
GJ	Giga joules, an international unit of energy measurement.

Groundwater	All water which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil.
Incident	As defined by an EPA industrial or waste licence.
Inert Waste	Is waste that will not undergo physical, chemical or biological change thereby, is unlikely to cause environmental pollution or harm human health.
List of Wastes (LoW)	A list of wastes drawn up by the European Commission and published as Commission Decision 2014/955/EU.
Noise Sensitive Location	Any dwelling house, hotel or hostel, health building, educational establishment, place of worship or entertainment, or any other installation or area of high amenity which for its proper enjoyment requires the absence of noise at nuisance levels.
Non-Renewable Resource	A resource of economic value that cannot be replaced at the same rate it is being consumed e.g. coal, peat, oil and natural gas.
Oil Separator	Separator system for light liquids (e.g. oil and petrol).
PRTR	Pollutant Release and Transfer Register.
Renewable Resource	Wind, solar, aerothermal, geothermal, hydrothermal and ocean energy, hydropower, biomass, landfill gas, sewage treatment plant gas and biogases.
Sanitary Waste	Waste water from toilet, washroom and canteen facilities.

Storm Water	Rain water run-off from roof and non-process areas.
Surface Water	Lakes, rivers, streams, estuaries and coastal waters.
Trigger Level	A value set for a specific parameter, the achievement or exceedance of which requires certain actions to be taken by the licence holder.
Volatile Organic Compounds	Gases produced from solids or liquids that evaporate readily in ambient conditions.
Waste	Any substance or object which the holder discards or intends or is required to discard.

Disclaimer

These are **not** legal definitions. Legal definitions can be found in the corresponding legislation.

Declaration

I, ~~Ray~~*Lenahan* PCAS Operations Manager, confirm that by ticking the box below, all information in this report is truthful and accurate to the best of my knowledge and belief.

In addition, I confirm that all monitoring and performance reporting required by our EPA licence and summarised herein is available for inspection by the EPA.

Tick here



1) Introduction

See below a brief description of our facility and a summary of our environmental performance this year.

- During the reporting period the main activity was decommissioning and rehabilitation of several bogs and workshops in this IPC Licence.
- During the reporting period, 291 hectares of peatlands at Daingean and Timahoe Sth bogs were rehabilitated, with any balance of the rehabilitation extending into the 2025 period.
- Similarly, 310 Ha's of peatlands were subject of ongoing decommissioning, with waste materials removed.
- During the period, there was no complaints received of an environmental nature.
- During the reporting period, there was a decrease in waste generated for recycling or disposal. One of the main activities during 2024 was the decommissioning of the rail line infrastructure as required under Condition 10.1.
- In the period, there 1% of sampling reported exceedances in the COD trigger levels related to emissions from peatlands. This was of minor significance and was closed out during the period as they are not linked to any ongoing activity.
- During the period, there were various submissions to the Agency including the 2023 AER, the Annual Monitoring Returns, trigger level exceedances, Rehabilitation Plan Reviews, a revised management structure, requests for boundary amendments and various updates on relevant activities.
- Bord na Mona continued to retain certification to ISO9001 for the decommissioning and rehabilitation of peatlands to support the climate action scheme (PCAS).

Contact Us

If you have any questions or would like further information on any aspect of our licensed activity, please contact us directly.

See below details:

Enda McDonagh,
Bord na Mona Energy Ltd.,
Leabeg,
Tullamore,
Co. Offaly.

2) How we Manage our Facility

Environmental Management System

Explanation

To ensure our facility's activities do not cause environmental pollution we are required to have detailed documentation systems in place to help us manage and track our environmental performance. These systems are referred to as Environmental Management Systems (EMS). We review our EMS every year and set up-to-date **environmental goals** to continually improve our environmental performance.

The information below sets out the environmental goals for our facility to help us prevent environmental pollution and reduce our impact on the environment. Target dates for completing each goal and progress towards achieving the goal are outlined in Table 1.

Table 1 Environmental Goals

Environmental Goal	Target Date	Progress
Training/awareness for all area leaders and operatives in advance of decommissioning and rehabilitation of the 2025 bogs	May 2025	Underway
Waste Management – Removal of all waste that are deemed a risk the environment in bogs scheduled to be decommissioned in 2025	Dec 2025	Underway
Communication of Decommissioning and Rehabilitation plans to all neighbours within 1km of and proposed activity for 2025	June 2025	Not started
Completion of internal audits/inspections of applicable bogs scheduled for decommissioning and rehabilitation as required by condition 10 and the Peatlands Climate Action Scheme	Sept 2025	Underway
Maintain surface water quality compliance with emission limit values for Suspended Solids during the proposed	Dec 2025	Underway

decommissioning and rehabilitation programme		
Decommissioning and Rehabilitation of scheduled bogs in accordance with Condition 10 of the IPC Licence and in accordance with Peatlands Climate Action Scheme https://www.gov.ie/en/publication/136a7-bord-na-mona-bog-rehabilitation-scheme/	December 2025	

Add rows as necessary

Comment

As peat extraction on all bogs in this licence ceased in 2020, all environmental goals for 2025 are linked to the remaining bog activity which is the decommissioning and rehabilitation of any bogs scheduled for 2025.

Beyond Compliance

Explanation

We are legally required to comply with our environmental licence. However, the EPA realise that some sites go further than just complying with their environmental licence requirements. Some projects carried out at facilities can have long term positive impacts on the environment and local communities.

The EPA's beyond compliance initiative is encouraging us to identify and report on these environmental and sustainability projects. For example, the project could involve renewable energy, biodiversity, water conservation or exemplar community engagement.

Did any project completed on your site in the reporting year go beyond your licence requirements?

Yes ☒

No ☐

If yes, provide details of one case study in Appendix III that demonstrates how the project went beyond compliance of your licence.

3) Energy & Water

Energy

Explanation

Fossil fuels such as coal, gas and oil are non-renewable resources. As a result, our EPA licence requires that we measure our energy use and set targets to improve the energy efficiency of our activities and reduce our overall use, where possible. Where we have the means and technology on-site to generate energy, this is also captured in this report.

The information below summarises the energy used this year compared to the previous year and includes renewable and non-renewable energy types.

Table 3 Energy Used

Energy Used	Quantity (GJ)	% Increase/ decrease on previous year
Electricity	85.86	59.73% Decrease
Heavy Fuel Oil		
Light Fuel Oil	7141.38	27.74% Decrease
Natural Gas		
Coal / Solid Fuel		
Peat		
Renewable Biomass		
Renewable Energy Generated On-site		
Total Energy Used	7227.24	28.42% Decrease

Comment

Both electricity and fuel usage decreased in 2024, primarily due to reduced workshop activities and bog pumps being decommissioned.

The information below summarises the energy we generated on our site this year with specific focus on renewable energy generation.

Table 4 Energy Generated

Energy Generated	Quantity (GJ)	% Increase/ decrease on previous year
Renewable Energy		
Total Energy Generated	n/a	

Comment

N/A

Water

Explanation

Water is a natural resource and we are required by our EPA licence to identify ways to reduce our use where possible. Water used in industry can be extracted from groundwater, rivers and lakes (surface water), taken from public water supplies (Irish Water), recycled from the facility's processes or harvested from rainwater.

The information below summarises and compares the quantity of water used this year compared to the previous year.

Table 5 Water Used

Source of Water Used	Quantity (m³/year)	% Increase/decrease on previous year
Groundwater	0	
Surface Water	0	
Public Supply	0	
Recycled Water	0	
Rainwater	0	
Total Water Used	0	

Comment

Water is not used in any of the peatland rehabilitation or current activities. The only water used is that required to provide associated office and workshop and welfare facilities.

4) Environmental Complaints

Explanation

Our EPA licence requires that activities do not cause environmental nuisance such as odour, dust or noise. Our licence also requires that we have procedures in place to record, investigate and respond to environmental complaints if or when they arise.

We have an environmental complaints procedure in place where you can contact us⁴ directly. You can also contact the EPA⁵ if you wish to make an environmental complaint, confidentially or not.

See the information below for a summary of **all** the environmental complaints relating to our activities made directly to us and to the EPA this year.

Table 6 Summary of All Environmental Complaints Received in

Type of Complaint	Number of Complaints	Number Closed
Odour / Smells	0	
Noise	0	
Dust	0	
Water Quality	0	
Air Quality	0	
Waste	0	
Litter	0	
Vermin/Flies/Birds	0	
Soil Contamination	0	
Vibration	0	
Other	0	

⁴ See Section 1, Introduction – Contact Us

⁵ If you wish to contact the EPA to make an environmental complaint about an EPA licenced facility, please go to <https://lema.epa.ie/complaints>

Comment

There were no complaints of an environmental nature received in 2024.

5) Environmental Incidents

Explanation

It is our responsibility as an EPA licensed facility to ensure we have systems in place to prevent incidents that have the potential to cause environmental pollution. If an incident occurs, we are required to report it to the EPA, investigate the cause and fix the problem.

The EPA classify environmental incidents into 5 categories based on the potential impact on the environment:

- Minor
- Limited
- Serious
- Very Serious
- Catastrophic

See Table 7 for the number of the environmental incidents we reported to the EPA this year.

Table 7 Number of Environmental Incidents

Incident Category	Minor	Limited	Serious	Very Serious	Catastrophic
Abatement Equipment Offline	N/A				
Breach of Ambient ELV	N/A				
Breach of Emission Limit	N/A				
Explosion	N/A				
Fire	N/A				
Monitoring Equipment Failure	N/A				
Odour	N/A				
Spillage	N/A				
Breach of trigger Level	2				
Uncontrolled Release	N/A				

Incident Category	Minor	Limited	Serious	Very Serious	Catastrophic
Other	N/A				

Comment

There were two incidents in 2024. Both incidents were elevated COD readings. Both were of a minor nature.

6) Our Environmental Emissions

Explanation

We are required to ensure the emissions from our activities do not cause environmental pollution.

We are required to monitor any of the following emissions that we make:

- Storm water
- Waste water
- Air
- Groundwater
- Noise

We regularly test any such emissions for specific pollutants and materials to ensure they do not contain levels of pollution that exceed emission limit values (ELVs) or cause environmental pollution. If monitoring of an emission indicates an ELV is exceeded, we are required to report this to the EPA⁶.

The next sub-sections of this report summarise our compliance with any ELVs set in our EPA licence. Some emissions monitored do not have specific ELVs, but we still carry out monitoring and report all incidents that may give rise to environmental pollution.

⁶ See section 5, Incidents

Storm Water

Explanation

Storm water is rain water run-off from roof and non-process areas of a facility, e.g. car parks, and generally shall not contain any pollution. Storm water is usually released into a local water body after a basic form of treatment. Our EPA licence requires that we manage storm water to ensure no polluting substances or materials are released into the environment.

The information below summarises how the storm water from our facility is treated, where it is released and the results of monitoring this year.

1. Storm water from our facility is managed prior to release by;

Either direct to drain where it is roof water only, or via the petrol/oil interceptor

2. Storm water from our facility is released into the following water bodies:

The Figile, Cushina and Philipstown Rivers

Table 8 Summary of Storm Water Monitoring

Parameter measured	No. of Samples	% Compliant ⁷	Comment
COD	21	100%	Sampling took place at two locations monthly as required by licence. Due to the dry weather, no samples were available on some occasions.

Add rows as necessary

Comment

As required by the licence, stormwater is required to be separated where possible from process/non-process areas. Where it is possible, stormwater is managed via oil-interceptors which are inspected on a weekly basis and sampled for associated discharges each month. Other than visual observations, the other main criteria to define adequate treatment is COD mg/l so this and visual inspections dictate when the interceptor is cleaned by an approved hazardous waste contractor.

⁷ % compliant = [(number of samples compliant) / (number of samples taken)] x 100. Compliance could refer to emission limit values or trigger levels. The EPA commonly use trigger levels on stormwater discharges.

Waste Water

Explanation

There are two types of waste water that can be produced:

- Process waste water produced from the activities and;
- Sanitary waste water from toilets, washrooms and canteens.

Our EPA licence requires us to manage our waste water on or off-site and ensure that it does not cause environmental pollution when discharged into the environment.

The information below summarises how we treat the waste water produced from our activities, where it is released and the results of monitoring this year.

1. Waste water produced by our activities is treated as follows before discharge to a receiving waterbody;

All bog area runoff is treated via an associated silt pond designed, inspected, and maintained in accordance with condition 6 of the IPC Licence.

2. Treated waste water from our facility is released into the following water bodies:

Yellow River, Silver River, Grand Canal, Philipstown River, Tullamore River, Cushina River, Esker Stream, Figile River, Cotteners Brook, Cushling River, Abbeylough River, Slate River, and the Crabtree River.

Table 9 Summary of Waste Water Monitoring

Parameter measured	No. of Samples	% Compliant	Comment
Suspended Solids	409	100%	
Total Solids	409	100%	
Ammonia	97	100%	
Total Phosphorous	97	100%	
pH	97	100%	
Colour	97	100%	
COD	97	100%	

Add rows as necessary

Comment

Licence requirements are quarterly grab samples on a selected number of silt pond outlets as per condition 6.2 and one 24hr flow proportional composite sampler at Mountlucas Bog.

The emission limit values are 35mg/l suspended solids. Trigger levels are set at 3mg/l total ammonia and 100mg/l COD.

Air

Explanation

Generally, three types of air emissions are monitored from industry in Ireland: gases, dust (particulates) and odour. Our EPA licence requires us to ensure that any air emissions from our activities do not cause air pollution or create an odour nuisance.

The information below details the number of air emission points we monitor, the results from testing the air emissions and any odour assessments carried out by us and the EPA this year.

1. We monitor air emissions from the following number of emission points at our facility.

As peat production has ceased. No dust monitoring took place during 2023

Table 10 Summary of Air Emissions Monitoring

Parameter measured	No. of Samples	% Compliant	Comment
N/A			

Add rows as necessary

Comment

Due to the permanent cessation of peat production, it is no longer necessary to monitor for dust.

Table 11 Summary of Odour Assessments Carried Out

Assessment Conducted By	No. of Odour Assessments	% Compliant⁸	Comment
Licence Holder	N/A		
EPA	N/A		

Add rows where necessary

Comment

There are no odour emissions of note from our activities and no requirements to monitor with no associated complaints.

⁸ A compliant odour assessment is based on EPA Odour Impact Assessment Guidance available at [Air Enforcement | Environmental Protection Agency \(epa.ie\)](#)

Fugitive Solvent Emissions

Are you required to monitor fugitive solvent air emissions from your facility?

Yes ☐

No ☒

Explanation

The use of solvents is regulated under Irish and European Union (EU) Regulations⁹. Solvents are chemicals that, by their nature, are volatile (evaporate readily under ambient conditions). Solvents can be found in many inks, glues and cleaning agents. Due to the volatility of solvents some emissions may be released into the atmosphere during our activities before being captured in our air treatment system. This type of emission is called a **fugitive solvent emission**.

The information below summarises the quantity of solvents used this year, the percentage of fugitive solvent emissions (% of total quantity used) and whether the percentage complied with the targets set in the EU Regulations.

Table 12 Summary of Fugitive Solvent Emissions

Quantity of Solvents Used (Kg)	% Fugitive Solvent Emissions	Compliant
N/A		

Comment

N/A

⁹ See Annex VII of the Industrial Emissions Directive

<https://ec.europa.eu/environment/industry/stationary/ied/legislation.htm>

Groundwater

Explanation

Groundwater is an important and sensitive resource in Ireland. Our EPA licence requires that we monitor groundwater to ensure our activities do not cause groundwater pollution.

Understanding how groundwater flows through soil and rock layers and eventually into surface and coastal waters is a complex science. Sometimes groundwater pollution that occurred in the past can take years and even decades to disappear. Therefore, it is important that experts help us monitor and interpret results from groundwater monitoring and testing.

The information below is a basic summary of the condition of the groundwater this year.

1. Do you have a groundwater monitoring programme in place?

Yes ☐

No ☒

2. Have the groundwater monitoring results over the last 5 years indicated the presence of groundwater pollution?

Yes ☐

No ☒

Table 13 List of Groundwater Pollutants Identified

Pollutants
N/A

Add rows as necessary

3. Give details of the investigations and subsequent actions taken, where applicable, to manage the groundwater pollution.

N/A

Comment

Groundwater monitoring is not a requirement of the licence

Noise

Explanation

Our EPA licence requires that we monitor noise emissions from our facility. Noise monitoring can be conducted at the boundary of our facility and/or at locations beyond the boundary referred to as “noise sensitive locations”. Noise monitoring requires the use of special noise monitoring equipment. Our EPA licence requires that noise produced by our facility shall not exceed the noise limit values and/or give rise to nuisance.

The information below gives a summary of when and where we conducted noise monitoring this year and if results complied with our EPA licence limits.

1. We conducted noise monitoring on the following dates this year:

N/A

2. Where was the noise monitoring carried out?

- i. the boundary of our facility;
- ii. noise sensitive locations off-site; or
- iii. both.

N/A

3. Were measured noise levels compliant with your EPA licence limits?

Yes ☐

No ☒

If No, we took the following actions to address the noise level exceedances?

N/A

Comment

N/A

7) Waste

Waste Generated

Explanation

Our EPA licence requires us to manage the waste we generate in a manner that does not cause environmental pollution.

We manage, store and record hazardous, non-hazardous and inert waste we generate in accordance with our licence. We ensure that this waste is subsequently treated or disposed of in accordance with the relevant waste Regulations.

The information in Table 14 is a summary of waste we generated this year and the percentage increase or decrease on the previous year. The percentage recovery is the amount of total waste generated that was reused, recycled or recovered.

Table 14 Waste Generated

Type	Quantity (Tonnes)	% Increase/ decrease on previous year	% Recovery
Hazardous	10.23	96.08% Decrease	100%
Non-Hazardous	2811.49	7.72% Decrease	98.81%
Inert			
Total Tonnes	2821.72	13.66% Decrease	98.80%

Comment

There was a large decrease in hazardous waste from the 2023 period, due to the fact less workshops were decommissioned in the period. General waste is also slightly down on last year's figure. This waste was mainly generated from decommissioning of the rail line infrastructure.

Waste Accepted

Did you accept waste onto your facility for storage, treatment, recovery or disposal this year?

Yes ☐

No ☒

Explanation

Our EPA licence requires us to manage the waste we accept in a manner that does not cause environmental pollution.

We manage, store and record all incoming and outgoing hazardous, non-hazardous and inert waste. The waste we accept may be treated, recovered, disposed or stored at our facility depending on our licence requirements.

The information in Table 15 provides a summary of waste we accepted this year and the percentage increase or decrease on the previous year. The percentage recovery is the amount of total waste accepted that was reused, recycled or recovered.

Table 15 Waste Accepted

Type	Quantity (Tonnes)	% Increase/decrease on previous year	% Recovery
Hazardous	N/A		
Non-Hazardous	N/A		
Inert	N/A		
Total Tonnes	N/A		

Comment

No wastes accepted

8) Financial Provision

Explanation

Our EPA licence requires us to assess the risk our activities pose to the environment if we cease our activities or if an incident occurred. If we are identified as a high risk facility¹⁰ by the EPA, we are required to put provision in place such as a financial bond or insurance to cover the cost of restoring our site to a satisfactory condition. This financial provision can then be used to cover the cost of managing the restoration or clean up should such an event occur.

1. Are you required to have an agreed financial provision in place?

Yes ☐

No ☒

2. What year was your Closure, Restoration and Aftercare Management Plan (CRAMP) last agreed by the Agency?

N/A

3. What year was your Environmental Liability Assessment Report (ELRA) agreed by the Agency?

4. Has there been any significant changes on your site since the last agreements?

Yes ☐

No ☐

If yes, have you submitted details to the EPA?

Yes ☐

No ☐

N/A ☒

¹⁰ See Appendix II

Appendix I

Class of Activity

Industrial and waste facilities are classed into different sectors depending on the nature of their activity and its potential impact on the environment. The EPA Act 1992 as amended, outlines these as follows:

Class 1	Minerals and other materials
Class 2	Energy
Class 3	Metals
Class 4	Mineral fibres and glass
Class 5	Chemicals
Class 6	Intensive Agriculture ¹¹
Class 7	Food and drink
Class 8	Wood, paper, textiles and leather
Class 9	Fossil fuels
Class 10	Cement, lime and magnesium oxide
Class 11	Waste
Class 12	Surface Coatings
Class 13	Other Activities

¹¹ This reporting template is not applicable to the **intensive agriculture sector**. Their annual environmental reporting structure is different and can be found at [Compliance & Enforcement: Licensees: Reporting Publications | Environmental Protection Agency \(epa.ie\)](#)

Appendix II

High Environmental Risk Categories

If an industrial or waste licence falls into one of these categories it is deemed, by the EPA, as a high environmental risk. As a result, the licence holder is required to have financial provision in place. See section 8, Financial Provision.

1. Landfills
2. Non-Hazardous Waste Transfer Station
3. Incineration and Co-Incineration Waste Facilities
4. Category A – Extractive Waste Facilities
5. Upper and Lower Tier Seveso Facilities
6. Hazardous Waste Transfer Stations
7. High Risk Contaminated Land
8. Exceptional Circumstances

NOTE:

This list is subject to change.

See the link below for further information.

[Compliance & Enforcement: Financial Provisions Publications | Environmental Protection Agency \(epa.ie\)](#)

Appendix III

Beyond Compliance

The case study below shows how we went beyond the requirements of our licence in the reporting year.

The Government implemented a scheme called the 'Peatlands Climate Action Scheme' (PCAS), also known as the Peatlands Enhanced Decommissioning, Rehabilitation and Restoration Scheme (EDRRS). The Scheme commenced in 2021 and was devised so that Bord na Móna could carry out enhanced rehabilitation of its industrial peatlands, having ceased peat extraction in 2020. The scheme is supported by Government through the Climate Action Fund, and Ireland's National Recovery and Resilience Plan administered by the Department of Environment, Climate and Communications (DECC), while the National Parks and Wildlife Service (NPWS) act as the Scheme regulator and the Environmental Protection Agency regulate rehabilitation plan under Condition 10 of this IPC Licence. This Scheme will significantly go beyond what is required to meet rehabilitation and decommissioning obligations under the existing EPA IPC licence conditions. Improvements supported by the Scheme will ensure that environmental stabilisation is achieved (meaning IPC obligations are met), and importantly, significant additional benefits, particularly relating to climate action and other ecosystem services, will also be delivered.

To measure and verify the rehabilitation outcomes, the scheme has increased the water monitoring requirements of the licence, the range of parameters to be included and the frequency of monitoring.

These co-benefits include supporting the objectives of the Irelands Climate Action Plan, the preservation of wetland archaeology, the reduction of peak flows to receiving water, supporting Irelands Biodiversity objectives, reduction in carbon emissions, improvements in water quality and reduction in water abstraction pressures associated with drainage. For further details see www.bnmpcas.ie

Annual Environmental Report (AER) 2023

Company Name: Bord na Mona

Licence Number: P0503-01

Address: Bord na Mona, C/O Derrygreenagh Works,
Rochfortbridge, Co. Westmeath

Class of Activity¹:1.4

¹ See Appendix I

Purpose of this Report

One of the functions of the Environmental Protection Agency (EPA) is to licence and regulate the activities² of large scale industrial (e.g. chemical, food processors, power plants) and waste facilities. Submitting an Annual Environmental Report (AER) is a requirement of all EPA licences.

An AER is a public document. To this end, this format has been developed for industrial and waste licence holders (other than the intensive agriculture sector) to use as a template. This is to assist any member of the public to interpret and understand the environmental performance of the licensed facility.

The AER is a **summary** of environmental information for a given year. It includes:

- Details of the licence holder's environmental goals achieved, goals to maintain compliance and/or improve their environmental performance;
- Answers to questions regarding their facility's activities;
- Tables of results from monitoring emissions such as air, water, noise, and odour; and
- Details of waste generated, accepted and treated.

An AER does **not** provide detailed technical data. Such information is available in three ways:

- 1) Contacting the licence holder directly. The Contact Us section of this template enables the licence holder to provide details of where a member of the public can obtain further information on topics reported in this document.

² See Appendix I

- 2) Some documents³ are available on the EPA website via the licence details page for each individual licence. This can be found by browsing either the <http://www.epa.ie/licensing/> or <http://www.epa.ie/enforcement/> pages of the EPA website.
- 3) All formal enforcement correspondence exchanged between the EPA and a licence holder during the regulatory process is available for public viewing by appointment at any EPA Office.

If you have a question or query about an AER or an individual EPA licensed facility see the EPA's website or contact the relevant EPA office. See <http://www.epa.ie/about/contactus/> for contact details.

³ This includes EPA site inspection and compliance monitoring reports, licence holders' self-monitoring reports, AERs and special reports

Contents

Glossary	5
Declaration	8
1) Introduction	9
Contact Us	10
2) How we Manage our Facility	11
Environmental Management System	11
Beyond Compliance	13
3) Energy & Water	14
Energy	14
Water	16
4) Environmental Complaints	17
5) Environmental Incidents	19
6) Our Environmental Emissions	22
Storm Water	23
Waste Water	25
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Waste	Any substance or object which the holder discards or intends or is required to discard.

Disclaimer

These are **not** legal definitions. Legal definitions can be found in the corresponding legislation.

Declaration

I, *Cathal Brennan*, confirm that by ticking the box below, all information in this report is truthful and accurate to the best of my knowledge and belief.

In addition, I confirm that all monitoring and performance reporting required by our EPA licence and summarised herein is available for inspection by the EPA.

Tick here



1) Introduction

See below a brief description of our facility and a summary of our environmental performance this year.

- During the reporting period the main activity was decommissioning and rehabilitation of several bogs in this IPC Licence.
- During the reporting period 1090 hectares of peatlands at Clonad, Mountlucas, Cavemount, Esker, Lodge, Cloncreen, Timahoe South and Ballycon Bogs were rehabilitated, with any balance of the rehabilitation extending into the 2024 period.
- Similarly, 1,483 Hectares of peatlands were decommissioned, with plant, equipment and waste materials removed at Clonad, Mountlucas, Cavemount, Esker, Lodge, Cloncreen, Timahoe South and Ballycon bogs.
- During the period, there was no complaints received of an environmental nature.
- During the reporting period, there were significant increases in waste generated for recycling or disposal. One of the main activities during 2023 was the decommissioning of bog and workshop activities as required under Condition 10.1.
- In the period, there was 10% of sampling reported exceedances in the COD trigger levels related to emissions from peatlands. This was of minor significance and was closed out during the period as they are not linked to any ongoing activity.
- During the period, there were various submissions to the Agency including the 2022 AER, mapping clarifications, review of silt pond maintenance, the annual monitoring returns, and various updates on relevant activities.
- In 2023, rehabilitation plans, maps and associated assessments were submitted to the Agency for Daingean Derries/Rathdrum Bog and these are available to view at <https://www.bnmecas.ie/bogs-peatlands-climate-action-scheme/>

- Bord na Mona continued to retain certification to ISO9001 for the decommissioning and rehabilitation of peatlands to support the climate action scheme (PCAS).

Contact Us

If you have any questions or would like further information on any aspect of our licensed activity, please contact us directly.

See below details:

Enda McDonagh,
Bord na Mona Energy Ltd.,
Leabeg,
Tullamore,
Co. Offaly.

2) How we Manage our Facility

Environmental Management System

Explanation

To ensure our facility's activities do not cause environmental pollution we are required to have detailed documentation systems in place to help us manage and track our environmental performance. These systems are referred to as Environmental Management Systems (EMS). We review our EMS every year and set up-to-date **environmental goals** to continually improve our environmental performance.

The information below sets out the environmental goals for our facility to help us prevent environmental pollution and reduce our impact on the environment. Target dates for completing each goal and progress towards achieving the goal are outlined in Table 1.

Table 1 Environmental Goals

Environmental Goal	Target Date	Progress
Training/awareness for all area leaders and operatives in advance of decommissioning and rehabilitation of the 2024 bogs	May 2024	Underway
Waste Management – Removal of all waste that are deemed a risk the environment in bogs scheduled to be decommissioned in 2024	Dec 2024	Underway
Communication of Decommissioning and Rehabilitation plans to all neighbours within 1km of and proposed activity for 2024	June 2024	Not started
Completion of internal audits/inspections of applicable bogs scheduled for decommissioning and rehabilitation as required by condition 10 and the Peatlands Climate Action Scheme	Sept 2024	Underway
Maintain surface water quality compliance with emission limit values for Suspended Solids during the proposed	Dec 2024	Underway

decommissioning and rehabilitation programme		
Decommissioning and Rehabilitation of scheduled bogs in accordance with Condition 10 of the IPC Licence and in accordance with Peatlands Climate Action Scheme https://www.gov.ie/en/publication/136a7-bord-na-mona-bog-rehabilitation-scheme/	December 2024	

Add rows as necessary

Comment

As peat extraction on all bogs in this licence ceased in 2020, all environmental goals for 2024 are linked to the remaining bog activity which is the decommissioning and rehabilitation of any bogs scheduled for 2024.

Beyond Compliance

Explanation

We are legally required to comply with our environmental licence. However, the EPA realise that some sites go further than just complying with their environmental licence requirements. Some projects carried out at facilities can have long term positive impacts on the environment and local communities.

The EPA's beyond compliance initiative is encouraging us to identify and report on these environmental and sustainability projects. For example, the project could involve renewable energy, biodiversity, water conservation or exemplar community engagement.

Did any project completed on your site in the reporting year go beyond your licence requirements?

Yes ☒

No ☐

If yes, provide details of one case study in Appendix III that demonstrates how the project went beyond compliance of your licence.

3) Energy & Water

Energy

Explanation

Fossil fuels such as coal, gas and oil are non-renewable resources. As a result, our EPA licence requires that we measure our energy use and set targets to improve the energy efficiency of our activities and reduce our overall use, where possible. Where we have the means and technology on-site to generate energy, this is also captured in this report.

The information below summarises the energy used this year compared to the previous year and includes renewable and non-renewable energy types.

Table 3 Energy Used

Energy Used	Quantity (GJ)	% Increase/ decrease on previous year
Electricity	213.23	64.17% Decrease
Heavy Fuel Oil	0	
Light Fuel Oil	9883.89	23.22% Decrease
Natural Gas	0	
Coal / Solid Fuel	0	
Peat	0	
Renewable Biomass	0	
Renewable Energy Generated On-site	0	
Total Energy Used	10097.12	25.03% Decrease

Comment

Both electricity and fuel usage decreased in 2023, primarily to reduced workshop activities and bog pumps being decommissioned.

The information below summarises the energy we generated on our site this year with specific focus on renewable energy generation.

Table 4 Energy Generated

Energy Generated	Quantity (GJ)	% Increase/ decrease on previous year
Renewable Energy		
Total Energy Generated	n/a	

Comment

N/A

Water

Explanation

Water is a natural resource and we are required by our EPA licence to identify ways to reduce our use where possible. Water used in industry can be extracted from groundwater, rivers and lakes (surface water), taken from public water supplies (Irish Water), recycled from the facility's processes or harvested from rainwater.

The information below summarises and compares the quantity of water used this year compared to the previous year.

Table 5 Water Used

Source of Water Used	Quantity (m³/year)	% Increase/decrease on previous year
Groundwater	0	
Surface Water	0	
Public Supply	0	
Recycled Water	0	
Rainwater	0	
Total Water Used	0	

Comment

Water is not used in any of the peatland rehabilitation or peat Transport processes. The only water used is that required to provide associated office and workshop and welfare facilities.

4) Environmental Complaints

Explanation

Our EPA licence requires that activities do not cause environmental nuisance such as odour, dust or noise. Our licence also requires that we have procedures in place to record, investigate and respond to environmental complaints if or when they arise.

We have an environmental complaints procedure in place where you can contact us⁴ directly. You can also contact the EPA⁵ if you wish to make an environmental complaint, confidentially or not.

See the information below for a summary of **all** the environmental complaints relating to our activities made directly to us and to the EPA this year.

Table 6 Summary of All Environmental Complaints Received in

Type of Complaint	Number of Complaints	Number Closed
Odour / Smells	0	
Noise	0	
Dust	0	
Water Quality	0	
Air Quality	0	
Waste	0	
Litter	0	
Vermin/Flies/Birds	0	
Soil Contamination	0	
Vibration	0	
Other	0	

⁴ See Section 1, Introduction – Contact Us

⁵ If you wish to contact the EPA to make an environmental complaint about an EPA licenced facility, please go to <https://lema.epa.ie/complaints>

Comment

There were no complaints of an environmental nature received in 2023.

5) Environmental Incidents

Explanation

It is our responsibility as an EPA licensed facility to ensure we have systems in place to prevent incidents that have the potential to cause environmental pollution. If an incident occurs, we are required to report it to the EPA, investigate the cause and fix the problem.

The EPA classify environmental incidents into 5 categories based on the potential impact on the environment:

- Minor
- Limited
- Serious
- Very Serious
- Catastrophic

See Table 7 for the number of the environmental incidents we reported to the EPA this year.

Table 7 Number of Environmental Incidents

Incident Category	Minor	Limited	Serious	Very Serious	Catastrophic
Abatement Equipment Offline	N/A				
Breach of Ambient ELV	N/A				
Breach of Emission Limit	N/A				
Explosion	N/A				
Fire	N/A				
Monitoring Equipment Failure	N/A				
Odour	N/A				
Spillage	N/A				
Breach of trigger Level	3				
Uncontrolled Release	N/A				

Incident Category	Minor	Limited	Serious	Very Serious	Catastrophic
Other	N/A				

Comment

There were three incidents in the reporting period, all were elevated COD results, all were in the minor category, were investigated and closed off with the Agency.

6) Our Environmental Emissions

Explanation

We are required to ensure the emissions from our activities do not cause environmental pollution.

We are required to monitor any of the following emissions that we make:

- Storm water
- Waste water
- Air
- Groundwater
- Noise

We regularly test any such emissions for specific pollutants and materials to ensure they do not contain levels of pollution that exceed emission limit values (ELVs) or cause environmental pollution. If monitoring of an emission indicates an ELV is exceeded, we are required to report this to the EPA⁶.

The next sub-sections of this report summarise our compliance with any ELVs set in our EPA licence. Some emissions monitored do not have specific ELVs, but we still carry out monitoring and report all incidents that may give rise to environmental pollution.

⁶ See section 5, Incidents

Storm Water

Explanation

Storm water is rain water run-off from roof and non-process areas of a facility, e.g. car parks, and generally shall not contain any pollution. Storm water is usually released into a local water body after a basic form of treatment. Our EPA licence requires that we manage storm water to ensure no polluting substances or materials are released into the environment.

The information below summarises how the storm water from our facility is treated, where it is released and the results of monitoring this year.

1. Storm water from our facility is managed prior to release by;

Either direct to drain where it is roof water only, or via the petrol/oil interceptor

2. Storm water from our facility is released into the following water bodies:

The Figile, Cushina and Philipstown Rivers

Table 8 Summary of Storm Water Monitoring

Parameter measured	No. of Samples	% Compliant ⁷	Comment
COD	33	100%	Sampling took place at three locations monthly as required by licence. Due to the dry weather, no samples were available.

Add rows as necessary

Comment

As required by the licence, stormwater is required to be separated where possible from process/non-process areas. Where it is possible, stormwater is managed via oil-interceptors which are inspected on a weekly basis and sampled for associated discharges each month. Other than visual observations, the other main criteria to define adequate treatment is COD mg/l so this and visual inspections dictate when the interceptor is cleaned by an approved hazardous waste contractor. The oil interceptor was cleaned at the Edenderry Power Fuel intake workshop during 2023.

⁷ % compliant = [(number of samples compliant) / (number of samples taken)] x 100. Compliance could refer to emission limit values or trigger levels. The EPA commonly use trigger levels on stormwater discharges.

Waste Water

Explanation

There are two types of waste water that can be produced:

- Process waste water produced from the activities and;
- Sanitary waste water from toilets, washrooms and canteens.

Our EPA licence requires us to manage our waste water on or off-site and ensure that it does not cause environmental pollution when discharged into the environment.

The information below summarises how we treat the waste water produced from our activities, where it is released and the results of monitoring this year.

1. Waste water produced by our activities is treated as follows before discharge to a receiving waterbody;

All bog area runoff is treated via an associated silt pond designed, inspected, and maintained in accordance with condition 6 of the IPC Licence.

2. Treated waste water from our facility is released into the following water bodies:

Yellow River, Silver River, Grand Canal, Philipstown River, Tullamore River, Cushina River, Esker Stream, Figile River, Cotteners Brook, Cushling River, Abbeylough River, Slate River, and the Crabtree River.

Table 9 Summary of Waste Water Monitoring

Parameter measured	No. of Samples	% Compliant	Comment
Suspended Solids	400	100%	
Total Solids	400	100%	
Ammonia	101	100%	
Total Phosphorous	101	100%	
pH	101	100%	
Colour	101	100%	
COD	101	89%	11 samples were over the trigger level of 100mg/l for COD during the reporting period. No evidence of any contamination was found at any of these events.

Add rows as necessary

Comment

Licence requirements are quarterly grab samples on a selected number of silt pond outlets as per condition 6.2 and one 24hr flow proportional composite sampler at Mountlucas Bog.

The emission limit values are 35mg/l suspended solids. 3mg/l total ammonia and 100mg/l COD.

Air

Explanation

Generally, three types of air emissions are monitored from industry in Ireland: gases, dust (particulates) and odour. Our EPA licence requires us to ensure that any air emissions from our activities do not cause air pollution or create an odour nuisance.

The information below details the number of air emission points we monitor, the results from testing the air emissions and any odour assessments carried out by us and the EPA this year.

1. We monitor air emissions from the following number of emission points at our facility.

As peat production has ceased. No dust monitoring took place during 2023

Table 10 Summary of Air Emissions Monitoring

Parameter measured	No. of Samples	% Compliant	Comment
N/A			

Add rows as necessary

Comment

Due to the permanent cessation of peat production, it is no longer necessary to monitor for dust.

Table 11 Summary of Odour Assessments Carried Out

Assessment Conducted By	No. of Odour Assessments	% Compliant⁸	Comment
Licence Holder	N/A		
EPA	N/A		

Add rows where necessary

Comment

There are no odour emissions of note from our activities and no requirements to monitor with no associated complaints.

⁸ A compliant odour assessment is based on EPA Odour Impact Assessment Guidance available at [Air Enforcement | Environmental Protection Agency \(epa.ie\)](#)

Fugitive Solvent Emissions

Are you required to monitor fugitive solvent air emissions from your facility?

Yes ☐

No ☒

Explanation

The use of solvents is regulated under Irish and European Union (EU) Regulations⁹. Solvents are chemicals that, by their nature, are volatile (evaporate readily under ambient conditions). Solvents can be found in many inks, glues and cleaning agents. Due to the volatility of solvents some emissions may be released into the atmosphere during our activities before being captured in our air treatment system. This type of emission is called a **fugitive solvent emission**.

The information below summarises the quantity of solvents used this year, the percentage of fugitive solvent emissions (% of total quantity used) and whether the percentage complied with the targets set in the EU Regulations.

Table 12 Summary of Fugitive Solvent Emissions

Quantity of Solvents Used (Kg)	% Fugitive Solvent Emissions	Compliant
N/A		

Comment

N/A

⁹ See Annex VII of the Industrial Emissions Directive

<https://ec.europa.eu/environment/industry/stationary/ied/legislation.htm>

Groundwater

Explanation

Groundwater is an important and sensitive resource in Ireland. Our EPA licence requires that we monitor groundwater to ensure our activities do not cause groundwater pollution.

Understanding how groundwater flows through soil and rock layers and eventually into surface and coastal waters is a complex science. Sometimes groundwater pollution that occurred in the past can take years and even decades to disappear. Therefore, it is important that experts help us monitor and interpret results from groundwater monitoring and testing.

The information below is a basic summary of the condition of the groundwater this year.

1. Do you have a groundwater monitoring programme in place?

Yes ☐

No ☒

2. Have the groundwater monitoring results over the last 5 years indicated the presence of groundwater pollution?

Yes ☐

No ☒

Table 13 List of Groundwater Pollutants Identified

Pollutants
N/A

Add rows as necessary

3. Give details of the investigations and subsequent actions taken, where applicable, to manage the groundwater pollution.

N/A

Comment

N/A

Noise

Explanation

Our EPA licence requires that we monitor noise emissions from our facility. Noise monitoring can be conducted at the boundary of our facility and/or at locations beyond the boundary referred to as “noise sensitive locations”. Noise monitoring requires the use of special noise monitoring equipment. Our EPA licence requires that noise produced by our facility shall not exceed the noise limit values and/or give rise to nuisance.

The information below gives a summary of when and where we conducted noise monitoring this year and if results complied with our EPA licence limits.

1. We conducted noise monitoring on the following dates this year:

N/A

2. Where was the noise monitoring carried out?

- i. the boundary of our facility;
- ii. noise sensitive locations off-site; or
- iii. both.

N/A

3. Were measured noise levels compliant with your EPA licence limits?

Yes ☐

No ☐

If No, we took the following actions to address the noise level exceedances?

N/A

Comment

Noise monitoring not required.

7) Waste

Waste Generated

Explanation

Our EPA licence requires us to manage the waste we generate in a manner that does not cause environmental pollution.

We manage, store and record hazardous, non-hazardous and inert waste we generate in accordance with our licence. We ensure that this waste is subsequently treated or disposed of in accordance with the relevant waste Regulations.

The information in Table 14 is a summary of waste we generated this year and the percentage increase or decrease on the previous year. The percentage recovery is the amount of total waste generated that was reused, recycled or recovered.

Table 14 Waste Generated

Type	Quantity (Tonnes)	% Increase/ decrease on previous year	% Recovery
Hazardous	261.23	638.77% Increase	
Non-Hazardous	3046.86	11.91% Increase	
Inert			
Total Tonnes	3268.09	18.50% Increase	

Comment

There was a big increase in hazardous waste from 2022 due mainly to the waste generated from decommissioning of oil tanks and oil interceptor cleanings. General waste is also up on last year's figure. This waste was mainly generated from decommissioning of the rail line infrastructure.

Waste Accepted

Did you accept waste onto your facility for storage, treatment, recovery or disposal this year?

Yes ☐

No ☒

Explanation

Our EPA licence requires us to manage the waste we accept in a manner that does not cause environmental pollution.

We manage, store and record all incoming and outgoing hazardous, non-hazardous and inert waste. The waste we accept may be treated, recovered, disposed or stored at our facility depending on our licence requirements.

The information in Table 15 provides a summary of waste we accepted this year and the percentage increase or decrease on the previous year. The percentage recovery is the amount of total waste accepted that was reused, recycled or recovered.

Table 15 Waste Accepted

Type	Quantity (Tonnes)	% Increase/ decrease on previous year	% Recovery
Hazardous	N/A		
Non-Hazardous	N/A		
Inert	N/A		
Total Tonnes	N/A		

Comment

No wastes accepted

8) Financial Provision

Explanation

Our EPA licence requires us to assess the risk our activities pose to the environment if we cease our activities or if an incident occurred. If we are identified as a high risk facility¹⁰ by the EPA, we are required to put provision in place such as a financial bond or insurance to cover the cost of restoring our site to a satisfactory condition. This financial provision can then be used to cover the cost of managing the restoration or clean up should such an event occur.

1. Are you required to have an agreed financial provision in place?

Yes ☐

No ☒

2. What year was your Closure, Restoration and Aftercare Management Plan (CRAMP) last agreed by the Agency?

N/A

3. What year was your Environmental Liability Assessment Report (ELRA) agreed by the Agency?

4. Has there been any significant changes on your site since the last agreements?

Yes ☐

No ☐

If yes, have you submitted details to the EPA?

Yes ☐

No ☐

N/A ☒

¹⁰ See Appendix II

Appendix I

Class of Activity

Industrial and waste facilities are classed into different sectors depending on the nature of their activity and its potential impact on the environment. The EPA Act 1992 as amended, outlines these as follows:

Class 1	Minerals and other materials
Class 2	Energy
Class 3	Metals
Class 4	Mineral fibres and glass
Class 5	Chemicals
Class 6	Intensive Agriculture ¹¹
Class 7	Food and drink
Class 8	Wood, paper, textiles and leather
Class 9	Fossil fuels
Class 10	Cement, lime and magnesium oxide
Class 11	Waste
Class 12	Surface Coatings
Class 13	Other Activities

¹¹ This reporting template is not applicable to the **intensive agriculture sector**. Their annual environmental reporting structure is different and can be found at [Compliance & Enforcement: Licensees: Reporting Publications | Environmental Protection Agency \(epa.ie\)](#)

Appendix II

High Environmental Risk Categories

If an industrial or waste licence falls into one of these categories it is deemed, by the EPA, as a high environmental risk. As a result, the licence holder is required to have financial provision in place. See section 8, Financial Provision.

1. Landfills
2. Non-Hazardous Waste Transfer Station
3. Incineration and Co-Incineration Waste Facilities
4. Category A – Extractive Waste Facilities
5. Upper and Lower Tier Seveso Facilities
6. Hazardous Waste Transfer Stations
7. High Risk Contaminated Land
8. Exceptional Circumstances

NOTE:

This list is subject to change.

See the link below for further information.

[Compliance & Enforcement: Financial Provisions Publications | Environmental Protection Agency \(epa.ie\)](#)

Appendix III

Beyond Compliance

The case study below shows how we went beyond the requirements of our licence in the reporting year.

The Government implemented a scheme called the 'Peatlands Climate Action Scheme' (PCAS), also known as the Peatlands Enhanced Decommissioning, Rehabilitation and Restoration Scheme (EDRRS). The Scheme commenced in 2021 and was devised so that Bord na Móna could carry out enhanced rehabilitation of its industrial peatlands, having ceased peat extraction in 2020. The scheme is supported by Government through the Climate Action Fund, and Ireland's National Recovery and Resilience Plan administered by the Department of Environment, Climate and Communications (DECC), while the National Parks and Wildlife Service (NPWS) act as the Scheme regulator and the Environmental Protection Agency regulate rehabilitation plan under Condition 10 of this IPC Licence. This Scheme will significantly go beyond what is required to meet rehabilitation and decommissioning obligations under the existing EPA IPC licence conditions. Improvements supported by the Scheme will ensure that environmental stabilisation is achieved (meaning IPC obligations are met), and importantly, significant additional benefits, particularly relating to climate action and other ecosystem services, will also be delivered.

To measure and verify the rehabilitation outcomes, the scheme has increased the water monitoring requirements of the licence, the range of parameters to be included and the frequency of monitoring.

These co-benefits include supporting the objectives of the Irelands Climate Action Plan, the preservation of wetland archaeology, the reduction of peak flows to receiving water, supporting Irelands Biodiversity objectives, reduction in carbon emissions, improvements in water quality and reduction in water abstraction pressures associated with drainage. For further details see www.bnmpcas.ie



Annual Environmental Report (AER)

2022

Company Name: Bord na Mona Biomass Ltd (Allen Group)

Licence Number: PO503-01

Address: Bord na Mona, C/O Derrygreenagh Works,
Rochfortbridge, Co. Westmeath

Class of Activity¹: 1.4

¹ See Appendix I

Purpose of this Report

One of the functions of the Environmental Protection Agency (EPA) is to licence and regulate the activities² of large scale industrial (e.g. chemical, food processors, power plants) and waste facilities. Submitting an Annual Environmental Report (AER) is a requirement of all EPA licences.

An AER is a public document. To this end, this format has been developed for industrial and waste licence holders (other than the intensive agriculture sector) to use as a template. This is to assist any member of the public to interpret and understand the environmental performance of the licensed facility.

The AER is a **summary** of environmental information for a given year. It includes:

- Details of the licence holder's environmental goals achieved, goals to maintain compliance and/or improve their environmental performance;
- Answers to questions regarding their facility's activities;
- Tables of results from monitoring emissions such as air, water, noise, and odour; and
- Details of waste generated, accepted and treated.

An AER does **not** provide detailed technical data. Such information is available in three ways:

- 1) Contacting the licence holder directly. The Contact Us section of this template enables the licence holder to provide details of where a member of the public can obtain further information on topics reported in this document.

² See Appendix I

- 2) Some documents³ are available on the EPA website via the licence details page for each individual licence. This can be found by browsing either the <http://www.epa.ie/licensing/> or <http://www.epa.ie/enforcement/> pages of the EPA website.
- 3) All formal enforcement correspondence exchanged between the EPA and a licence holder during the regulatory process is available for public viewing by appointment at any EPA Office.

If you have a question or query about an AER or an individual EPA licensed facility see the EPA's website or contact the relevant EPA office. See <http://www.epa.ie/about/contactus/> for contact details.

³ This includes EPA site inspection and compliance monitoring reports, licence holders' self-monitoring reports, AERs and special reports

Contents

Glossary	5
Declaration	8
1) Introduction	9
Contact Us	10
2) How we Manage our Facility.....	11
3) Energy & Water.....	13
Energy.....	13
Water.....	15
4) Environmental Complaints.....	16
5) Environmental Incidents	18
6) Our Environmental Emissions	21
Storm Water	22
Waste Water	24
Air	26
Fugitive Solvent Emissions.....	28
Groundwater	29
Noise.....	30
7) Waste	31
Waste Generated	31
Waste Accepted	32
8) Financial Provision	33

Glossary

Abatement Equipment	Technology used to reduce pollution
AER	Annual Environmental Report.
CRAMP	Closure, Restoration and Aftercare Management Plan.
ELRA	Environmental Liability Risk Assessment.
Emission Limit Value	Limits set for specified emissions, typically outlined in Schedule B of an EPA licence.
EMS	Environmental Management System.
Environmental Goal	An objective or target set by a licensee as part of an environmental management system (EMS).
Environmental Pollutant	Substance or material that due to its quantity and/or nature has a negative impact on the environment.
Facility	Any site or premises that holds an EPA industrial or waste licence.
FP	Financial Provision.
GJ	Giga joules, an international unit of energy measurement.
Groundwater	All water which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil.
Incident	As defined by an EPA industrial or waste licence.

Inert Waste	Is waste that will not undergo physical, chemical or biological change thereby, is unlikely to cause environmental pollution or harm human health.
List of Wastes (LoW)	A list of wastes drawn up by the European Commission and published as Commission Decision 2014/955/EU.
Noise Sensitive Location	Any dwelling house, hotel or hostel, health building, educational establishment, place of worship or entertainment, or any other installation or area of high amenity which for its proper enjoyment requires the absence of noise at nuisance levels.
Non-Renewable Resource	A resource of economic value that cannot be replaced at the same rate it is being consumed e.g. coal, peat, oil and natural gas.
Oil Separator	Separator system for light liquids (e.g. oil and petrol).
PRTR	Pollutant Release and Transfer Register.
Renewable Resource	Wind, solar, aerothermal, geothermal, hydrothermal and ocean energy, hydropower, biomass, landfill gas, sewage treatment plant gas and biogases.
Sanitary Waste	Waste water from toilet, washroom and canteen facilities.
Storm Water	Rain water run-off from roof and non-process areas.

Surface Water	Lakes, rivers, streams, estuaries and coastal waters.
Trigger Level	A value set for a specific parameter, the achievement or exceedance of which requires certain actions to be taken by the licence holder.
Volatile Organic Compounds	Gases produced from solids or liquids that evaporate readily in ambient conditions.
Waste	Any substance or object which the holder discards or intends or is required to discard.

Disclaimer

These are **not** legal definitions. Legal definitions can be found in the corresponding legislation.

Declaration

I, Cathal Brennan, Operations Manager, confirm that by ticking the box below, all information in this report is truthful and accurate to the best of my knowledge and belief.

In addition, I confirm that all monitoring and performance reporting required by our EPA licence and summarised herein is available for inspection by the EPA.

Tick here



1) Introduction

See below a brief description of our facility and a summary of our environmental performance this year.

- During the reporting period the primary activities were peat sales of existing stock and decommissioning and rehabilitation of several bogs in this IPC Licence.
- During the reporting period 1164 Ha's or 35% of peatlands at Clonad, Mountlucas, Cavemount, Esker, Lodge, Cloncreen, Timahoe South and Ballycon Bogs were rehabilitated, with the balance of the rehabilitation extending into the 2023 period.
- Similarly, 2195 Ha's of peatlands were decommissioned, with plant, equipment and waste materials removed at Clonad, Mountlucas, Cavemount, Esker, Lodge, Cloncreen, Timahoe South and Ballycon bogs.
- In the period, there was no complaints of an environmental nature, down from 1 complaint received in 2021.
- During the period, there was a 13.71% increase in waste generated, mostly related to an increase in decommissioning.
- In the period, there was 1 reported incident of an environmental nature relating to an exceedance in COD trigger levels. This was of minor significance and was closed out during the period.
- During the period, there were notifications submitted regarding unauthorised dumping on Bord na Mona lands, commencement of the Timahoe North Solar Farm/Substation, the Mountlucas Hydrogen Project, water quality sample results and the 2021 Annual Environmental Report.
- During 2022, Rehabilitation plans, maps and associated assessments were submitted to the Agency for the following bogs: Lodge, Cloncreen, Ballycon and Timahoe South and these are available to view at <https://www.bnmecas.ie/bogs-peatlands-climate-action-scheme/>
- During the period Bord na Mona retained certification to ISO9001 for the decommissioning and rehabilitation of peatlands to support the climate action scheme.

Contact Us

If you have any questions or would like further information on any aspect of this report, please contact us directly.

See below details:

Enda McDonagh, Bord na Mona Energy Ltd., Leabeg, Tullamore, Co. Offaly.

2) How we Manage our Facility

Explanation

To ensure our facility's activities do not cause environmental pollution we are required to have detailed documentation systems in place to help us manage and track our environmental performance. These systems are referred to as Environmental Management Systems (EMS). We review our EMS every year and set up-to-date **environmental goals** to continually improve our environmental performance.

The information below sets out the environmental goals for our facility to help us prevent environmental pollution and reduce our impact on the environment. Target dates for completing each goal and progress towards achieving the goal are outlined in Table 1.

Table 1 Environmental Goals

Environmental Goal	Target Date	Progress
Training/awareness for all area leaders and operatives in advance of decommissioning and rehabilitation of the 2023 bogs	May 2023	Underway
Waste Management – Removal of all waste that are deemed a risk the environment in bogs scheduled to be decommissioned in 2023	Dec 2023	Underway
Communication of Decommissioning and Rehabilitation plans to all neighbours within 1km of the proposed activity for 2023	June 2023	Daingean Derries and Rathdrum Bogs have had letters and associated details delivered.
Completion of internal audits/inspections of applicable bogs scheduled for decommissioning and rehabilitation as required by condition 10 and the Peatlands Climate Action Scheme	Sept. 2023	Audits completed at Timahoe South, Lodge, Ballydermot and Esker Bogs.

Maintain surface water quality compliance with emission limit values for Suspended Solids during the proposed decommissioning and rehabilitation programme	Dec 2023	Underway
Decommissioning and Rehabilitation of two bogs in accordance with Condition 10 of the IPC Licence and in accordance with Peatlands Climate Action Scheme https://www.gov.ie/en/publication/136a7-bord-na-mona-bog-rehabilitation-scheme/	January 2023 to March 2024	To commence in 2023.

Add rows as necessary

Comment

As peat extraction on all bogs in this licence ceased in 2020, all environmental goals for 2023 are linked to the remaining bog activity which is the decommissioning and rehabilitation of the two bogs planned for 2023.

3) Energy & Water

Energy

Explanation

Fossil fuels such as coal, gas and oil are non-renewable resources. As a result, our EPA licence requires that we measure our energy use and set targets to improve the energy efficiency of our activities and reduce our overall use, where possible. Where we have the means and technology on-site to generate energy, this is also captured in this report.

The information below summarises the energy used this year compared to the previous year and includes renewable and non-renewable energy types.

Table 2 Energy Used

Energy Used (GJ)	Quantity	% Increase/ decrease on previous year
Electricity	595	35.29% Decrease
Heavy Fuel Oil	0	
Light Fuel Oil	12872.70	24.10% Decrease
Natural Gas	0	
Coal / Solid Fuel	0	
Peat	0	
Renewable Biomass	0	
Renewable Energy Generated On-site	0	
Total Energy Used	13467.7	24.68% Decrease

Comment

Both electricity and fuel usage decreased in 2022.

The information below summarises the energy we generated on our site this year with specific focus on renewable energy generation.

Table 3 Energy Generated

Energy Generated (GJ)	Quantity	% Increase/ decrease on previous year
Renewable Energy	n/a	
Total Energy Generated		

Comment

N/A

Water

Explanation

Water is a natural resource and we are required by our EPA licence to identify ways to reduce our use where possible. Water used in industry can be extracted from groundwater, rivers and lakes (surface water), taken from public water supplies (Irish Water), recycled from the facility's processes or harvested from rainwater.

The information below summarises and compares the quantity of water used this year compared to the previous year.

Table 4 Water Used

Source of Water Used	Quantity (m³/year)	% Increase/decrease on previous year
Groundwater	0	
Surface Water	0	
Public Supply	0	
Recycled Water	0	
Rainwater	0	
Total Water Used	0	

Comment

Water is not used in any of the PCAS, Rehabilitation or Peat Transport processes. The only water used is that required to provide associated offices and workshop facilities(canteen/toilets)

4) Environmental Complaints

Explanation

Our EPA licence requires that activities do not cause environmental nuisance such as odour, dust or noise. Our licence also requires that we have procedures in place to record, investigate and respond to environmental complaints if or when they arise.

We have an environmental complaints procedure in place where you can contact us⁴ directly. You can also contact the EPA⁵ if you wish to make an environmental complaint, confidentially or not.

See the information below for a summary of **all** the environmental complaints relating to our activities made directly to us and to the EPA this year.

Table 5 Summary of All Environmental Complaints Received in

Type of Complaint	Number of Complaints Received	Number Closed
Odour / Smells	0	
Noise	0	
Dust	0	
Water Quality	0	
Air Quality	0	
Waste	0	
Litter	0	
Vermin/Flies/Birds	0	
Soil Contamination	0	
Vibration	0	
Other	0	

⁴ See Section 1, Introduction – Contact Us

⁵ If you wish to contact the EPA to make an environmental complaint about an EPA licenced facility, please go to <https://lema.epa.ie/complaints>

Comment

There were no complaints received in the reporting period.

5) Environmental Incidents

Explanation

It is our responsibility as an EPA licensed facility to ensure we have systems in place to prevent incidents that have the potential to cause environmental pollution. If an incident occurs, we are required to report it to the EPA, investigate the cause and fix the problem.

The EPA classify environmental incidents into 5 categories based on the potential impact on the environment:

- Minor
- Limited
- Serious
- Very Serious
- Catastrophic

See Table 6 for the number of the environmental incidents we reported to the EPA this year.

Table 6 Number of Environmental Incidents

Incident Category	Minor	Limited	Serious	Very Serious	Catastrophic
Abatement Equipment Offline					
Breach of Ambient ELV					
Breach of Emission Limit					
Explosion					
Fire					
Monitoring Equipment Failure					
Odour					
Spillage					
Breach of trigger Level	1				
Uncontrolled Release					

Incident Category	Minor	Limited	Serious	Very Serious	Catastrophic
Other					

Comment

There was one environmental incident in the licence area in 2022. This was for a trigger level breach relating to COD and was a minor incident related to natural processes in the bog catchment.

6) Our Environmental Emissions

Explanation

We are required to ensure the emissions from our activities do not cause environmental pollution.

We are required to monitor any of the following emissions that we make:

- Storm water
- Waste water
- Air
- Groundwater
- Noise

We regularly test any such emissions for specific pollutants and materials to ensure they do not contain levels of pollution that exceed emission limit values (ELVs) or cause environmental pollution. If monitoring of an emission indicates an ELV is exceeded, we are required to report this to the EPA⁶.

The next sub-sections of this report summarise our compliance with any ELVs set in our EPA licence. Some emissions monitored do not have specific ELVs, but we still carry out monitoring and report all incidents that may give rise to environmental pollution.

⁶ See section 5, Incidents

Storm Water

Explanation

Storm water is rain water run-off from roof and non-process areas of a facility, e.g. car parks, and generally shall not contain any pollution. Storm water is usually released into a local water body after a basic form of treatment. Our EPA licence requires that we manage storm water to ensure no polluting substances or materials are released into the environment.

The information below summarises how the storm water from our facility is treated, where it is released and the results of monitoring this year.

1. Storm water from our facility is managed prior to release by;

Either direct to drain where it is roof water only, or via the petrol/oil interceptor

2. Storm water from our facility is released into the following water bodies:

The Figile, Cushina and Philipstown Rivers

Table 7 Summary of Storm Water Monitoring

Parameter measured	No. of Samples	% Compliant ⁷	Comment
COD	32	100%	Sampling took place at four locations monthly as required by licence. Due to the exceptionally dry weather, no samples were available on some occasions.

Add rows as necessary

Comment

As required by the licence, stormwater is required to be separated where possible from process/non-process areas. Where it is possible, stormwater is managed via oil-interceptors which are inspected on a weekly basis and sampled for associated discharges each month. Other than visual observations, the other main criteria to define adequate treatment is COD mg/l so this and visual inspections dictate when the interceptor is cleaned by an approved hazardous waste contractor. The oil interceptor was cleaned at the Edenderry Power Peat intake workshop during 2022.

⁷ % compliant = [(number of samples compliant) / (number of samples taken)] x 100. Compliance could refer to emission limit values or trigger levels. The EPA commonly use trigger levels on stormwater discharges.

Waste Water

Explanation

There are two types of waste water that can be produced:

- Process waste water produced from the activities and;
- Sanitary waste water from toilets, washrooms and canteens.

Our EPA licence requires us to manage our waste water on or off-site and ensure that it does not cause environmental pollution when discharged into the environment.

The information below summarises how we treat the waste water produced from our activities, where it is released and the results of monitoring this year.

1. Wastewater produced by our activities is treated as follows before discharge to a receiving waterbody;

All bog area runoff is treated via an associated silt pond designed, inspected, and maintained in accordance with condition 6 of the IPC Licence.

2. Treated wastewater from our facility is released into the following water bodies:

Yellow River, Silver River, Grand Canal, Philipstown River, Tullamore River, Cushina River, Esker Stream, Figile River, Cotteners Brook, Cushling River, Abbeylough River, Slate River, and the Crabtree River.

Table 8 Summary of Waste Water Monitoring

Parameter measured	No. of Samples	% Compliant	Comment
Suspended Solids	334	100	
Ammonia	100	100%	
Total Solids	100	100%	
Total Phosphorus	100	100%	
pH	100	100%	
Colour	100	100%	
COD	100	98%	2 samples were over the trigger level of 100mg/l for COD during the reporting period. No evidence of any contamination was found at either of these events.

Add rows as necessary

Comment

Licence requirements are quarterly grab samples on a selected number of silt pond outlets as per condition 6.2 and one 24hr flow proportional composite sampler at Mountlucas Bog.

The emission limit values are 35mg/l suspended solids. 3mg/l total ammonia and 100mg/l COD.

Air

Explanation

Generally, three types of air emissions are monitored from industry in Ireland: gases, dust (particulates) and odour. Our EPA licence requires us to ensure that any air emissions from our activities do not cause air pollution or create an odour nuisance.

The information below details the number of air emission points we monitor, the results from testing the air emissions and any odour assessments carried out by us and the EPA this year.

1. We monitor air emissions from the following number of emission points at our facility.

As peat production has ceased. No dust monitoring took place during 2022

Table 9 Summary of Air Emissions Monitoring

Parameter measured	No. of Samples	% Compliant	Comment
N/A			

Add rows as necessary

Comment

Due to the permanent cessation of peat production, it is no longer necessary to monitor for dust.

Table 10 Summary of Odour Assessments Carried Out

Assessment Conducted By	No. of Odour Assessments	% Compliant⁸	Comment
Licence Holder	N/A		Not required
EPA	N/A		Not required

Add rows where necessary

Comment

There are no odour emissions of note from our activities, no requirements to monitor and no associated complaints.

⁸ A compliant odour assessment is based on EPA Odour Impact Assessment Guidance available at <http://www.epa.ie/pubs/advice/air/emissions/ag5-odourassessment.html>

Fugitive Solvent Emissions

Are you are required to monitor fugitive solvent air emissions from your facility?

Yes ☐

No ☒

Explanation

The use of solvents is regulated under Irish and European Union (EU) Regulations⁹. Solvents are chemicals that, by their nature, are volatile (evaporate readily under ambient conditions). Solvents can be found in many inks, glues and cleaning agents. Due to the volatility of solvents some emissions may be released into the atmosphere during our activities before being captured in our air treatment system. This type of emission is called a **fugitive solvent emission**.

The information below summarises the quantity of solvents used this year, the percentage of fugitive solvent emissions (% of total quantity used) and whether the percentage complied with the targets set in the EU Regulations.

Table 11 Summary of Fugitive Solvent Emissions

Quantity of Solvents Used (Kg)	% Fugitive Solvent Emissions	Compliant
N/A		

Comment

N/A

⁹ See Annex VII of the Industrial Emissions Directive

<https://ec.europa.eu/environment/industry/stationary/ied/legislation.htm>

Groundwater

Explanation

Groundwater is an important and sensitive resource in Ireland. Our EPA licence requires that we monitor groundwater to ensure our activities do not cause groundwater pollution.

Understanding how groundwater flows through soil and rock layers and eventually into surface and coastal waters is a complex science. Sometimes groundwater pollution that occurred in the past can take years and even decades to disappear. Therefore, it is important that experts help us monitor and interpret results from groundwater monitoring and testing.

The information below is a basic summary of the condition of the groundwater this year.

1. Do you have a groundwater monitoring programme in place?

Yes ☐

No ☒

2. Have the groundwater monitoring results over the last 5 years indicated the presence of groundwater pollution?

Yes ☐

No ☒

Table 12 List of Groundwater Pollutants Identified

Pollutants
N/A

Add rows as necessary

3. Give details of the investigations and subsequent actions taken, where applicable, to manage the groundwater pollution.

N/A

Comment

N/A

Noise

Explanation

Our EPA licence requires that we monitor noise emissions from our facility. Noise monitoring can be conducted at the boundary of our facility and/or at locations beyond the boundary referred to as “noise sensitive locations”. Noise monitoring requires the use of special noise monitoring equipment. Our EPA licence requires that noise produced by our facility shall not exceed the noise limit values and/or give rise to nuisance.

The information below gives a summary of when and where we conducted noise monitoring this year and if results complied with our EPA licence limits.

1. We conducted noise monitoring on the following dates this year:

N/A

2. Was the noise monitoring carried out at:

- i. the boundary of our facility,
- ii. noise sensitive locations off-site, or
- iii. both?

N/A

3. Were measured noise levels compliant with your EPA licence limits?

Yes ☐

No ☒

If No, we took the following actions to address the noise level exceedances?

N/A

Comment

N/A

7) Waste

Waste Generated

Explanation

Our EPA licence requires us to manage the waste we generate in a manner that does not cause environmental pollution.

We manage, store and record hazardous, non-hazardous and inert waste we generate in accordance with our licence. We ensure that this waste is subsequently treated or disposed of in accordance with the relevant waste Regulations.

The information in table 13 is a summary of waste we generated this year and the percentage increase or decrease on the previous year. The percentage recovery is the amount of total waste generated that was reused, recycled or recovered.

Table 13 Waste Generated

Type	Quantity (Tonnes)	% Increase/ decrease on previous year	% Recovery
Hazardous	35.36	277.51% Increase	
Non-Hazardous	2722.55	12.69% Increase	
Inert	N/A	N/A	
Total Tonnes	2757.81	13.71% Increase	

Comment

The main wastes generated from activities are Waste Oil, Interceptor Waste, Oil Bund sludge, Oil Filters, Parts Wash, Polythene, Scrap Metal, Silt Pond Waste and Peat Screenings all of which are recycled. The waste generated for landfill was from Scrap polythene, General Waste skips and Wheelie Bins.

Waste Accepted

Did you accept waste onto your facility for storage, treatment, recovery or disposal this year?

Yes ☐

No ☒

Explanation

Our EPA licence requires us to manage the waste we accept in a manner that does not cause environmental pollution.

We manage, store and record all incoming and outgoing hazardous, non-hazardous and inert waste. The waste we accept may be treated, recovered, disposed or stored at our facility depending on our licence requirements.

The information in Table 14 provides a summary of waste we accepted this year and the percentage increase or decrease on the previous year. The percentage recovery is the amount of total waste accepted that was reused, recycled or recovered.

Table 14 Waste Accepted

Type	Quantity (Tonnes)	% Increase/ decrease on previous year	% Recovery
Hazardous	N/A		
Non-Hazardous	N/A		
Inert	N/A		
Total Tonnes	N/A		

Comment

No wastes accepted

8) Financial Provision

Explanation

Our EPA licence requires us to assess the risk our activities pose to the environment if we cease our activities or if an incident occurred. If we are identified as a high risk facility¹⁰ by the EPA, we are required to put provision in place such as a financial bond or insurance to cover the cost of restoring our site to a satisfactory condition. This financial provision can then be used to cover the cost of managing the restoration or clean up should such an event occur.

1. Are you required to have an agreed financial provision in place?

Yes ☐

No ☒

2. What year was your Closure, Restoration and Aftercare Management Plan (CRAMP) last agreed by the Agency?

Not required under the licence. However, the equivalent Bog Rehabilitation Plans, which include closure, restoration and aftercare are being submitted to the Agency in advance of any decommissioning and rehabilitation.

3. What year was your Environmental Liability Assessment Report (ELRA) agreed by the Agency?

Not required under the licence.

4. Has there been any significant changes on your site since the last agreements?

Yes ☐

No ☒

¹⁰ See Appendix II

If yes, have you submitted details to the EPA?

Yes ☐

No ☐

N/A ☒

Appendix I

Class of Activity

Industrial and waste facilities are classed into different sectors depending on the nature of their activity and its potential impact on the environment. The EPA Act 1992 as amended, outlines these as follows:

Class 1	Minerals and other materials
Class 2	Energy
Class 3	Metals
Class 4	Mineral fibres and glass
Class 5	Chemicals
Class 6	Intensive Agriculture ¹¹
Class 7	Food and drink
Class 8	Wood, paper, textiles and leather
Class 9	Fossil fuels
Class 10	Cement, lime and magnesium oxide
Class 11	Waste
Class 12	Surface Coatings
Class 13	Other Activities

¹¹ This reporting template is not applicable to the **intensive agriculture sector**. Their annual environmental reporting structure is different and can be found at <http://www.epa.ie/pubs/advice/aerprtr/aerguid/>

Appendix II

High Environmental Risk Categories

If an industrial or waste licence falls into one of these categories it is deemed, by the EPA, as a high environmental risk. As a result, the licence holder is required to have financial provision in place. See section 8, Financial Provision.

1. Landfills
2. Non-Hazardous Waste Transfer Station
3. Incineration and Co-Incineration Waste Facilities
4. Category A – Extractive Waste Facilities
5. Upper and Lower Tier Seveso Facilities
6. Hazardous Waste Transfer Stations
7. High Risk Contaminated Land
8. Exceptional Circumstances

NOTE:

This list is subject to change.

See the link below for further information.

<http://www.epa.ie/pubs/advice/licensee/fp/epaapproachtoenvironmentalliabilitiesandfinancialprovision.html>

Annual Environmental Report (AER) 2021

Company Name: Bord na Mona Biomass Ltd (Allen Group)

Licence Number: PO503-01

Address: Bord na Mona, C/O Derrygreenagh Works,
Rochfortbridge, Co. Westmeath

Class of Activity¹: 1.4

¹ See Appendix I

Purpose of this Report

One of the functions of the Environmental Protection Agency (EPA) is to licence and regulate the activities² of large scale industrial (e.g. chemical, food processors, power plants) and waste facilities. Submitting an Annual Environmental Report (AER) is a requirement of all EPA licences.

An AER is a public document. To this end, this format has been developed for industrial and waste licence holders (other than the intensive agriculture sector) to use as a template. This is to assist any member of the public to interpret and understand the environmental performance of the licensed facility.

The AER is a **summary** of environmental information for a given year. It includes:

- Details of the licence holder's environmental goals achieved, goals to maintain compliance and/or improve their environmental performance;
- Answers to questions regarding their facility's activities;
- Tables of results from monitoring emissions such as air, water, noise, and odour; and
- Details of waste generated, accepted and treated.

An AER does **not** provide detailed technical data. Such information is available in three ways:

- 1) Contacting the licence holder directly. The Contact Us section of this template enables the licence holder to provide details of where a member of the public can obtain further information on topics reported in this document.

² See Appendix I

- 2) Some documents³ are available on the EPA website via the licence details page for each individual licence. This can be found by browsing either the <http://www.epa.ie/licensing/> or <http://www.epa.ie/enforcement/> pages of the EPA website.
- 3) All formal enforcement correspondence exchanged between the EPA and a licence holder during the regulatory process is available for public viewing by appointment at any EPA Office.

If you have a question or query about an AER or an individual EPA licensed facility see the EPA's website or contact the relevant EPA office. See <http://www.epa.ie/about/contactus/> for contact details.

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³ This includes EPA site inspection and compliance monitoring reports, licence holders' self-monitoring reports, AERs and special reports

Contents

Glossary	5
Declaration	8
1) Introduction	9
Contact Us	10
2) How we Manage our Facility	11
3) Energy & Water	13
Energy.....	13
Water.....	15
4) Environmental Complaints.....	16
5) Environmental Incidents	18
6) Our Environmental Emissions.....	21
Storm Water	22
Waste Water	24
Air	27
Fugitive Solvent Emissions.....	29
Groundwater	30
Noise.....	32
7) Waste	33
Waste Generated	33
Waste Accepted	34
8) Financial Provision	35

Glossary

Abatement Equipment	Technology used to reduce pollution
AER	Annual Environmental Report.
CRAMP	Closure, Restoration and Aftercare Management Plan.
ELRA	Environmental Liability Risk Assessment.
Emission Limit Value	Limits set for specified emissions, typically outlined in Schedule B of an EPA licence.
EMS	Environmental Management System.
Environmental Goal	An objective or target set by a licensee as part of an environmental management system (EMS).
Environmental Pollutant	Substance or material that due to its quantity and/or nature has a negative impact on the environment.
Facility	Any site or premises that holds an EPA industrial or waste licence.
FP	Financial Provision.
GJ	Giga joules, an international unit of energy measurement.
Groundwater	All water which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil.
Incident	As defined by an EPA industrial or waste licence.

Inert Waste	Is waste that will not undergo physical, chemical or biological change thereby, is unlikely to cause environmental pollution or harm human health.
List of Wastes (LoW)	A list of wastes drawn up by the European Commission and published as Commission Decision 2014/955/EU.
Noise Sensitive Location	Any dwelling house, hotel or hostel, health building, educational establishment, place of worship or entertainment, or any other installation or area of high amenity which for its proper enjoyment requires the absence of noise at nuisance levels.
Non-Renewable Resource	A resource of economic value that cannot be replaced at the same rate it is being consumed e.g. coal, peat, oil and natural gas.
Oil Separator	Separator system for light liquids (e.g. oil and petrol).
PRTR	Pollutant Release and Transfer Register.
Renewable Resource	Wind, solar, aerothermal, geothermal, hydrothermal and ocean energy, hydropower, biomass, landfill gas, sewage treatment plant gas and biogases.
Sanitary Waste	Waste water from toilet, washroom and canteen facilities.
Storm Water	Rain water run-off from roof and non-process areas.

Surface Water	Lakes, rivers, streams, estuaries and coastal waters.
Trigger Level	A value set for a specific parameter, the achievement or exceedance of which requires certain actions to be taken by the licence holder.
Volatile Organic Compounds	Gases produced from solids or liquids that evaporate readily in ambient conditions.
Waste	Any substance or object which the holder discards or intends or is required to discard.

Disclaimer

These are **not** legal definitions. Legal definitions can be found in the corresponding legislation.

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Declaration

I, Cathal Brennan, Operations Manager, confirm that by ticking the box below, all information in this report is truthful and accurate to the best of my knowledge and belief.

In addition, I confirm that all monitoring and performance reporting required by our EPA licence and summarised herein is available for inspection by the EPA.

Tick here



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1) Introduction

See below a brief description of our facility and a summary of our environmental performance this year.

- During the reporting period, Bord na Móna notified the Agency, that in line with its Brown to Green strategy, it had decided to end all peat harvesting on Bord na Móna lands. It is now progressing with its requirements under Condition 10 of the relevant IPC Licences to decommission and rehabilitate available bogs under the Peatlands Climate Action Scheme PCAS (February 2021).
- During the reporting period the primary activities were peat sales of existing stock and decommissioning and rehabilitation of several bogs in this IPC Licence.
- During the reporting period 1692 Ha's or 76% of peatlands at Clonad, Mountlucas, Cavemount and Esker Bogs, were rehabilitated with the balance extending into the 2022 period.
- Similarly, 2195 Ha's of peatlands were decommissioned, with plant, equipment and waste materials removed at Clonad, Mountlucas, Cavemount and Esker Bogs.
- In the period, there was 1 complaint of an environmental nature, down from 3 complaints received in 2020.
- During the period, there was a 17.12% decrease in waste generated, mostly related to a decrease in activity but an increase in decommissioning.
- In the period, there 6 reported incidents of an environmental nature, 5 relating to exceedances in COD trigger levels and 1 for suspended solids. All were of minor significance and were closed out during the period.
- During the period, there were notifications submitted regarding the composite sampler, and sample results.
- During 2021, Rehabilitation plans, maps and associated assessments were submitted to the Agency for the following bogs: Clonad,

Mountlucas, Cavemount and Esker Bogs and these are available to view at <https://www.bnmecas.ie/bogs-peatlands-climate-action-scheme/>

- Monthly water quality sampling data was submitted for sampling undertaken during the period, which included peatlands prior to the rehabilitation undertaken in 2021 and to provide baseline data for peatlands to be rehabilitated in subsequent years.
- During the period, certification to ISO9001 was retained.

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Contact Us

If you have any questions or would like further information on any aspect of this report, please contact us directly.

See below details:

Enda McDonagh,
Bord na Mona Energy Ltd.,
Leabeg,
Tullamore,
Co. Offaly.

2) How we Manage our Facility

Explanation

To ensure our facility's activities do not cause environmental pollution we are required to have detailed documentation systems in place to help us manage and track our environmental performance. These systems are referred to as Environmental Management Systems (EMS). We review our EMS every year and set up-to-date **environmental goals** to continually improve our environmental performance.

The information below sets out the environmental goals for our facility to help us prevent environmental pollution and reduce our impact on the environment. Target dates for completing each goal and progress towards achieving the goal are outlined in Table 1.

Table 1 Environmental Goals

Environmental Goal	Target Date	Progress
Training/awareness for all area leaders and operatives in advance of decommissioning and rehabilitation of the 2022 bogs	May 2022	Underway
Waste Management – Removal of all waste that are deemed a risk the environment in bogs scheduled to be decommissioned in 2022	Dec 2022	Underway
Communication of Decommissioning and Rehabilitation plans to all neighbours within 1km of the proposed activity for 2022	June 2022	3 Bogs have had letters and associated details delivered
Completion of internal audits/inspections of applicable bogs scheduled for decommissioning and rehabilitation as required by condition 10 and the Peatlands Climate Action Scheme	Sept. 2022	Not commenced yet
Maintain surface water quality compliance with emission limit values for Suspended Solids	Dec 2022	Underway

during the proposed decommissioning and rehabilitation programme		
Decommissioning and Rehabilitation of 4 bogs in accordance with Condition 10 of the IPC Licence and in accordance with Peatlands Climate Action Scheme https://www.gov.ie/en/publication/136a7-bord-na-mona-bog-rehabilitation-scheme/	December 2022 to March 2023	To commence on the 1 st April 2022.

Add rows as necessary

Comment

As peat extraction on all bogs in this licence ceased in 2020, all environmental goals for 2022 are linked to the remaining bog activity which is the decommissioning and rehabilitation of the 4 bogs planned for 2022.

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3) Energy & Water

Energy

Explanation

Fossil fuels such as coal, gas and oil are non-renewable resources. As a result, our EPA licence requires that we measure our energy use and set targets to improve the energy efficiency of our activities and reduce our overall use, where possible. Where we have the means and technology on-site to generate energy, this is also captured in this report.

The information below summarises the energy used this year compared to the previous year and includes renewable and non-renewable energy types.

Table 2 Energy Used

Energy Used (GJ)	Quantity	% Increase/ decrease on previous year
Electricity	919.54	10.35% decrease
Heavy Fuel Oil	0	
Light Fuel Oil	16961.11	42.89% Increase
Natural Gas	0	
Coal / Solid Fuel	0	
Peat	0	
Renewable Biomass	0	
Renewable Energy Generated On-site	0	
Total Energy Used	17880.65	40.1% Increase

Comment

Although electricity usage decreased, fuel usage increased in 2021. This was mainly due to PCAS bog rehabilitation and decommissioning work.

The information below summarises the energy we generated on our site this year with specific focus on renewable energy generation.

Table 3 Energy Generated

Energy Generated (GJ)	Quantity	% Increase/ decrease on previous year
Renewable Energy	n/a	
Total Energy Generated		

Comment

N/A

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Water

Explanation

Water is a natural resource and we are required by our EPA licence to identify ways to reduce our use where possible. Water used in industry can be extracted from groundwater, rivers and lakes (surface water), taken from public water supplies (Irish Water), recycled from the facility's processes or harvested from rainwater.

The information below summarises and compares the quantity of water used this year compared to the previous year.

Table 4 Water Used

Source of Water Used	Quantity (m ³ /year)	% Increase/decrease on previous year
Groundwater	0	
Surface Water	0	
Public Supply	0	
Recycled Water	0	
Rainwater	0	
Total Water Used	0	

Comment

Water is not used in any of the PCAS, Rehabilitation or Peat Transport processes. The only water used is that required to provide associated offices and workshop facilities(canteen/toilets)

4) Environmental Complaints

Explanation

Our EPA licence requires that activities do not cause environmental nuisance such as odour, dust or noise. Our licence also requires that we have procedures in place to record, investigate and respond to environmental complaints if or when they arise.

We have an environmental complaints procedure in place where you can contact us⁴ directly. You can also contact the EPA⁵ if you wish to make an environmental complaint, confidentially or not.

See the information below for a summary of **all** the environmental complaints relating to our activities made directly to us and to the EPA this year.

Table 5 Summary of All Environmental Complaints Received in

Type of Complaint	Number of Complaints Received	Number Closed
Odour / Smells	0	
Noise	0	
Dust	0	
Water Quality	1	0
Air Quality	0	
Waste	0	
Litter	0	
Vermin/Flies/Birds	0	
Soil Contamination	0	
Vibration	0	
Other	0	

⁴ See Section 1, Introduction – Contact Us

⁵ If you wish to contact the EPA to make an environmental complaint about an EPA licenced facility, please go to <https://lema.epa.ie/complaints>

Comment

There was one complaint in the reporting period. This related to the level of water in a private lake. Bord na Mona employed Hydro Environmental to install water monitoring loggers both the lake land and Bord na Mona land. The final report is due in May 2022. Hydro environmental preliminary opinion is that the water levels on both pieces of lands are controlled by ground water levels and fluctuate throughout the year.

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5) Environmental Incidents

Explanation

It is our responsibility as an EPA licensed facility to ensure we have systems in place to prevent incidents that have the potential to cause environmental pollution. If an incident occurs, we are required to report it to the EPA, investigate the cause and fix the problem.

The EPA classify environmental incidents into 5 categories based on the potential impact on the environment:

- Minor
- Limited
- Serious
- Very Serious
- Catastrophic

See Table 6 for the number of the environmental incidents we reported to the EPA this year.

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Table 6 Number of Environmental Incidents

Incident Category	Minor	Limited	Serious	Very Serious	Catastrophic
Abatement Equipment Offline					
Breach of Ambient ELV					
Breach of Emission Limit	1				
Explosion					
Fire					
Monitoring Equipment Failure					
Odour					
Spillage					
Breach of trigger Level	5				
Uncontrolled Release					

Incident Category	Minor	Limited	Serious	Very Serious	Catastrophic
Other					

Comment

There were six environmental incidents in the licence area in 2021. Five of these were trigger level breaches relating to COD. One was an elevated licence value for suspended solids. All were minor incidents.

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6) Our Environmental Emissions

Explanation

We are required to ensure the emissions from our activities do not cause environmental pollution.

We are required to monitor any of the following emissions that we make:

- Storm water
- Waste water
- Air
- Groundwater
- Noise

We regularly test any such emissions for specific pollutants and materials to ensure they do not contain levels of pollution that exceed emission limit values (ELVs) or cause environmental pollution. If monitoring of an emission indicates an ELV is exceeded, we are required to report this to the EPA⁶.

The next sub-sections of this report summarise our compliance with any ELVs set in our EPA licence. Some emissions monitored do not have specific ELVs, but we still carry out monitoring and report all incidents that may give rise to environmental pollution.

⁶ See section 5, Incidents

Storm Water

Explanation

Storm water is rain water run-off from roof and non-process areas of a facility, e.g. car parks, and generally shall not contain any pollution. Storm water is usually released into a local water body after a basic form of treatment. Our EPA licence requires that we manage storm water to ensure no polluting substances or materials are released into the environment.

The information below summarises how the storm water from our facility is treated, where it is released and the results of monitoring this year.

1. Storm water from our facility is managed prior to release by;

Either direct to drain where it is roof water only, or via the petrol/oil interceptor

2. Storm water from our facility is released into the following water bodies:

The Figile, Cushina and Philipstown Rivers

Table 7 Summary of Storm Water Monitoring

Parameter measured	No. of Samples	% Compliant ⁷	Comment
COD	42	100%	Sampling took place at four locations monthly as required by licence. Due to the exceptionally dry weather, no samples were available on some occasions.

Add rows as necessary

Comment

As required by the licence, stormwater is required to be separated where possible from process/non-process areas. Where it is possible, stormwater is managed via oil-interceptors which are inspected on a weekly basis and sampled for associated discharges each month. Other than visual observations, the other main criteria to define adequate treatment is COD mg/l so this and visual inspections dictate when the interceptor is cleaned by an approved hazardous waste contractor.

⁷ % compliant = [(number of samples compliant) / (number of samples taken)] x 100. Compliance could refer to emission limit values or trigger levels. The EPA commonly use trigger levels on stormwater discharges.

Waste Water

Explanation

There are two types of waste water that can be produced:

- Process waste water produced from the activities and;
- Sanitary waste water from toilets, washrooms and canteens.

Our EPA licence requires us to manage our waste water on or off-site and ensure that it does not cause environmental pollution when discharged into the environment.

The information below summarises how we treat the waste water produced from our activities, where it is released and the results of monitoring this year.

1. Waste water produced by our activities is treated as follows before discharge to a receiving waterbody:

All bog area runoff is treated via an associated silt pond designed, inspected and maintained in accordance with condition 6 of the IPC Licence.

2. Treated waste water from our facility is released into the following water bodies:

Yellow River, Silver River, Grand Canal, Philipstown River, Tullamore River, Cushina River, Esker Stream, Figile River, Cotteners Brook, Cushling River, Abbeylough River, Slate River, and the Crabtree River.

Table 8 Summary of Waste Water Monitoring

Parameter measured	No. of Samples	% Compliant	Comment
Suspended Solids	296	99.66%	1 sample was over the limit at SW-20 Cavemount Bog
Ammonia	99	100%	
Total Solids	99	100%	
Total Phosphorus	99	100%	
pH	99	100%	
Colour	99	100%	
COD	99	92%	5 samples were over the trigger level of 100mg/l for COD during the reporting period. No evidence of any contamination was found on any of these events.

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Add rows as necessary

Comment

Licence requirements are quarterly grab samples on a selected number of silt pond outlets as per condition 6.2 and one 24hr flow proportional composite sampler at Blackriver Bog.

The emission limit values are 35mg/l suspended solids. 3mg/l total ammonia and 100mg/l COD.

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Air

Explanation

Generally, three types of air emissions are monitored from industry in Ireland: gases, dust (particulates) and odour. Our EPA licence requires us to ensure that any air emissions from our activities do not cause air pollution or create an odour nuisance.

The information below details the number of air emission points we monitor, the results from testing the air emissions and any odour assessments carried out by us and the EPA this year.

1. We monitor air emissions from the following number of emission points at our facility.

As peat production has ceased. No dust monitoring took place during 2021

Table 9 Summary of Air Emissions Monitoring

Parameter measured	No. of Samples	% Compliant	Comment
N/A			

Add rows as necessary

Comment

Due to the permanent cessation of peat production, it is no longer necessary to monitor for dust.

Table 10 Summary of Odour Assessments Carried Out

Assessment Conducted By	No. of Odour Assessments	% Compliant ⁸	Comment
Licence Holder	N/A		Not required
EPA	N/A		Not required

Add rows where necessary

Comment

There are no odour emissions of note from our activities, no requirements to monitor and no associated complaints.

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⁸ A compliant odour assessment is based on EPA Odour Impact Assessment Guidance available at <http://www.epa.ie/pubs/advice/air/emissions/ag5-odourassessment.html>

Fugitive Solvent Emissions

Are you are required to monitor fugitive solvent air emissions from your facility?

Yes ☐

No ☒

Explanation

The use of solvents is regulated under Irish and European Union (EU) Regulations⁹. Solvents are chemicals that, by their nature, are volatile (evaporate readily under ambient conditions). Solvents can be found in many inks, glues and cleaning agents. Due to the volatility of solvents some emissions may be released into the atmosphere during our activities before being captured in our air treatment system. This type of emission is called a **fugitive solvent emission**.

The information below summarises the quantity of solvents used this year, the percentage of fugitive solvent emissions (% of total quantity used) and whether the percentage complied with the targets set in the EU Regulations.

Table 11 Summary of Fugitive Solvent Emissions

Quantity of Solvents Used (Kg)	% Fugitive Solvent Emissions	Compliant
N/A		

Comment

N/A

⁹ See Annex VII of the Industrial Emissions Directive

<https://ec.europa.eu/environment/industry/stationary/ied/legislation.htm>

Groundwater

Explanation

Groundwater is an important and sensitive resource in Ireland. Our EPA licence requires that we monitor groundwater to ensure our activities do not cause groundwater pollution.

Understanding how groundwater flows through soil and rock layers and eventually into surface and coastal waters is a complex science. Sometimes groundwater pollution that occurred in the past can take years and even decades to disappear. Therefore, it is important that experts help us monitor and interpret results from groundwater monitoring and testing.

The information below is a basic summary of the condition of the groundwater this year.

1. Do you have a groundwater monitoring programme in place?

Yes ☐

No ☒

2. Have the groundwater monitoring results over the last 5 years indicated the presence of groundwater pollution?

Yes ☐

No ☒

Table 12 List of Groundwater Pollutants Identified

Pollutants
N/A

Add rows as necessary

3. Give details of the investigations and subsequent actions taken, where applicable, to manage the groundwater pollution.

N/A

Comment

N/A

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Noise

Explanation

Our EPA licence requires that we monitor noise emissions from our facility. Noise monitoring can be conducted at the boundary of our facility and/or at locations beyond the boundary referred to as “noise sensitive locations”. Noise monitoring requires the use of special noise monitoring equipment. Our EPA licence requires that noise produced by our facility shall not exceed the noise limit values and/or give rise to nuisance.

The information below gives a summary of when and where we conducted noise monitoring this year and if results complied with our EPA licence limits.

1. We conducted noise monitoring on the following dates this year:

N/A

2. Was the noise monitoring carried out at:

- i. the boundary of our facility,
- ii. noise sensitive locations off-site, or
- iii. both?

N/A

3. Were measured noise levels compliant with your EPA licence limits?

Yes ☐

No ☒

If No, we took the following actions to address the noise level exceedances?

N/A

Comment

N/A

7) Waste

Waste Generated

Explanation

Our EPA licence requires us to manage the waste we generate in a manner that does not cause environmental pollution.

We manage, store and record hazardous, non-hazardous and inert waste we generate in accordance with our licence. We ensure that this waste is subsequently treated or disposed of in accordance with the relevant waste Regulations.

The information in table 13 is a summary of waste we generated this year and the percentage increase or decrease on the previous year. The percentage recovery is the amount of total waste generated that was reused, recycled or recovered.

Table 13 Waste Generated

Type	Quantity (Tonnes)	% Increase/decrease on previous year	% Recovery
Hazardous	9.34	68.32% decrease	
Non-Hazardous	2415.85	15.23% decrease	
Inert	N/A	N/A	
Total Tonnes	2425.19	17.12% decrease	

Comment

The main wastes generated from activities are Waste Oil, Interceptor Waste, Oil Filters, Parts Wash, Polythene, Scrap Metal, Silt Pond Waste and Peat Screenings all of which are recycled. The waste generated for landfill was from General Waste skips and Wheelie Bins.

Waste Accepted

Did you accept waste onto your facility for storage, treatment, recovery or disposal this year?

Yes ☐

No ☒

Explanation

Our EPA licence requires us to manage the waste we accept in a manner that does not cause environmental pollution.

We manage, store and record all incoming and outgoing hazardous, non-hazardous and inert waste. The waste we accept may be treated, recovered, disposed or stored at our facility depending on our licence requirements.

The information in Table 14 provides a summary of waste we accepted this year and the percentage increase or decrease on the previous year. The percentage recovery is the amount of total waste accepted that was reused, recycled or recovered.

Table 14 Waste Accepted

Type	Quantity (Tonnes)	% Increase/ decrease on previous year	% Recovery
Hazardous	N/A		
Non-Hazardous	N/A		
Inert	N/A		
Total Tonnes	N/A		

Comment

No wastes accepted

8) Financial Provision

Explanation

Our EPA licence requires us to assess the risk our activities pose to the environment if we cease our activities or if an incident occurred. If we are identified as a high risk facility¹⁰ by the EPA, we are required to put provision in place such as a financial bond or insurance to cover the cost of restoring our site to a satisfactory condition. This financial provision can then be used to cover the cost of managing the restoration or clean up should such an event occur.

1. Are you required to have an agreed financial provision in place?

Yes ☐

No ☒

2. What year was your Closure, Restoration and Aftercare Management Plan (CRAMP) last agreed by the Agency?

Not required under the licence. However the equivalent Bog Rehabilitation Plans, which include closure, restoration and aftercare are being submitted to the Agency in advance of any decommissioning and rehabilitation.

3. What year was your Environmental Liability Assessment Report (ELRA) agreed by the Agency?

Not required under the licence.

4. Has there been any significant changes on your site since the last agreements?

Yes ☐

No ☒

¹⁰ See Appendix II

If yes, have you submitted details to the EPA?

Yes ☐

No ☐

N/A ☒

Appendix I

Class of Activity

Industrial and waste facilities are classed into different sectors depending on the nature of their activity and its potential impact on the environment. The EPA Act 1992 as amended, outlines these as follows:

Class 1	Minerals and other materials
Class 2	Energy
Class 3	Metals
Class 4	Mineral fibres and glass
Class 5	Chemicals
Class 6	Intensive Agriculture ¹¹
Class 7	Food and drink
Class 8	Wood, paper, textiles and leather
Class 9	Fossil fuels
Class 10	Cement, lime and magnesium oxide
Class 11	Waste
Class 12	Surface Coatings
Class 13	Other Activities

¹¹ This reporting template is not applicable to the **intensive agriculture sector**. Their annual environmental reporting structure is different and can be found at <http://www.epa.ie/pubs/advice/aerprtr/aerguid/>

Appendix II

High Environmental Risk Categories

If an industrial or waste licence falls into one of these categories it is deemed, by the EPA, as a high environmental risk. As a result, the licence holder is required to have financial provision in place. See section 8, Financial Provision.

1. Landfills
2. Non-Hazardous Waste Transfer Station
3. Incineration and Co-Incineration Waste Facilities
4. Category A – Extractive Waste Facilities
5. Upper and Lower Tier Seveso Facilities
6. Hazardous Waste Transfer Stations
7. High Risk Contaminated Land
8. Exceptional Circumstances

NOTE:

This list is subject to change.

See the link below for further information.

<http://www.epa.ie/pubs/advice/licensee/fp/epaapproachtoenvironmentalliabilitiesandfinancialprovision.html>



Annual Environmental Report (AER) 2020

Company Name: Bord na Mona Biomass Ltd (Allen Group)

Licence Number: P0503-01

Address: Bord na Mona, C/O Derrygreenagh Works,
Rochfortbridge, Co Westmeath.

Class of Activity¹: 1.4

¹ See Appendix I

Purpose of this Report

One of the functions of the Environmental Protection Agency (EPA) is to licence and regulate the activities² of large scale industrial (e.g. chemical, food processors, power plants) and waste facilities. Submitting an Annual Environmental Report (AER) is a requirement of all EPA licences.

An AER is a public document. To this end, this format has been developed for industrial and waste licence holders (other than the intensive agriculture sector) to use as a template. This is to assist any member of the public to interpret and understand the environmental performance of the licensed facility.

The AER is a **summary** of environmental information for a given year. It includes:

- Details of the licence holder's environmental goals achieved, goals to maintain compliance and/or improve their environmental performance;
- Answers to questions regarding their facility's activities;
- Tables of results from monitoring emissions such as air, water, noise, and odour; and
- Details of waste generated, accepted and treated.

An AER does **not** provide detailed technical data. Such information is available in three ways:

- 1) Contacting the licence holder directly. The Contact Us section of this template enables the licence holder to provide details of where a member of the public can obtain further information on topics reported in this document.

² See Appendix I

- 2) Some documents³ are available on the EPA website via the licence details page for each individual licence. This can be found by browsing either the <http://www.epa.ie/licensing/> or <http://www.epa.ie/enforcement/> pages of the EPA website.
- 3) All formal enforcement correspondence exchanged between the EPA and a licence holder during the regulatory process is available for public viewing by appointment at any EPA Office.

If you have a question or query about an AER or an individual EPA licensed facility see the EPA's website or contact the relevant EPA office. See <http://www.epa.ie/about/contactus/> for contact details.

³ This includes EPA site inspection and compliance monitoring reports, licence holders' self-monitoring reports, AERs and special reports

Contents

Glossary	5
Declaration	8
1) Introduction	9
Contact Us	10
2) How we Manage our Facility	11
3) Energy & Water	13
Energy.....	13
Water.....	16
4) Environmental Complaints.....	17
5) Environmental Incidents	19
6) Our Environmental Emissions.....	22
Storm Water	23
Waste Water	25
Air	27
Fugitive Solvent Emissions.....	30
Groundwater	31
Noise.....	33
7) Waste	34
Waste Generated	34
Waste Accepted	35
8) Financial Provision	36

Glossary

Abatement Equipment	Technology used to reduce pollution
AER	Annual Environmental Report.
CRAMP	Closure, Restoration and Aftercare Management Plan.
ELRA	Environmental Liability Risk Assessment.
Emission Limit Value	Limits set for specified emissions, typically outlined in Schedule B of an EPA licence.
EMS	Environmental Management System.
Environmental Goal	An objective or target set by a licensee as part of an environmental management system (EMS).
Environmental Pollutant	Substance or material that due to its quantity and/or nature has a negative impact on the environment.
Facility	Any site or premises that holds an EPA industrial or waste licence.
FP	Financial Provision.
GJ	Giga joules, an international unit of energy measurement.
Groundwater	All water which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil.
Incident	As defined by an EPA industrial or waste licence.

Inert Waste	Is waste that will not undergo physical, chemical or biological change thereby, is unlikely to cause environmental pollution or harm human health.
List of Wastes (LoW)	A list of wastes drawn up by the European Commission and published as Commission Decision 2014/955/EU.
Noise Sensitive Location	Any dwelling house, hotel or hostel, health building, educational establishment, place of worship or entertainment, or any other installation or area of high amenity which for its proper enjoyment requires the absence of noise at nuisance levels.
Non-Renewable Resource	A resource of economic value that cannot be replaced at the same rate it is being consumed e.g. coal, peat, oil and natural gas.
Oil Separator	Separator system for light liquids (e.g. oil and petrol).
PRTR	Pollutant Release and Transfer Register.
Renewable Resource	Wind, solar, aerothermal, geothermal, hydrothermal and ocean energy, hydropower, biomass, landfill gas, sewage treatment plant gas and biogases.
Sanitary Waste	Waste water from toilet, washroom and canteen facilities.
Storm Water	Rain water run-off from roof and non-process areas.

Surface Water	Lakes, rivers, streams, estuaries and coastal waters.
Trigger Level	A value set for a specific parameter, the achievement or exceedance of which requires certain actions to be taken by the licence holder.
Volatile Organic Compounds	Gases produced from solids or liquids that evaporate readily in ambient conditions.
Waste	Any substance or object which the holder discards or intends or is required to discard.

Disclaimer

These are **not** legal definitions. Legal definitions can be found in the corresponding legislation.

Declaration

I, Cathal Brennan, confirm that by ticking the box below, all information in this report is truthful and accurate to the best of my knowledge and belief.

In addition, I confirm that all monitoring and performance reporting required by our EPA licence and summarised herein is available for inspection by the EPA.

Tick here

☒

1) Introduction

See below a brief description of our facility and a summary of our environmental performance this year.

- The primary activity during the reporting period was peat sales and transport. Bord na Mona had a delayed start to peat production operations in 2020, commencing on the 11th June. However, activities ceased again at the end of June.
- In the period there were three complaints of an environmental nature, up from the two complaints received in 2019
- In the period, there seven reported incidents of an environmental nature relating to dust, fires and exceedances in COD trigger levels. All were of minor to limited significance and were closed out during the period.
- During the period, there were approvals sought for cultivation trials of medicinal herbs, the removal of an ESB substation from the licensed footprint and notifications regarding late commencement of production and early cessation of activities.
- During the season 71,859 tonnes of peat were produced, down 72.5 % on 2019.
- During the period, certification to ISO9001 and ISO50001 were retained.
- During the period, there was a 57.96% increase in waste generated and this was primarily related to lifting and recycling rail line.
- In January 2021, Bord na Mona announced it was permanently ending all peat harvesting activities on its lands. Since then Bord na Mona have been engaged in the Governments Peatlands Climate Action Scheme (<https://www.gov.ie/en/publication/136a7-bord-na-mona-bog-rehabilitation-scheme/>), with a view to commencing applicable decommissioning & rehabilitation activities on a number of bogs under the Condition 10 obligations of this licence. In addition, Bord na Mona are continuing to sell and transport existing peat stock harvested in previous years.

Contact Us

If you have any questions or would like further information on any aspect of this report, please contact us directly.

See below details:

Enda McDonagh,
Bord na Mona Energy Ltd
Leabeg
Tullamore
Co Offaly
Enda.mcdonagh@bnm.ie
0579329701
www.bnm.ie

2) How we Manage our Facility

Bord na Mona have an Environmental Compliance Department with a team of five who manage the day to day IPC Licence requirements. This licence governs the extraction of peat and associated activities and manages emission to air, water and land.

The information below sets out the environmental goals for our facility to help us prevent environmental pollution and reduce our impact on the environment. Target dates for completing each goal and progress towards achieving the goal are outlined in Table 1.

Table 1 Environmental Goals

Environmental Goal	Target Date	Progress
2020 Training	Dec 2020	None trained in 2020 due to Covid 19 restrictions.
2020 Waste Management.	Dec 2020	Increase of 57.96% from 2019 mainly due to recycling of railway line.
2020 Energy Efficiency (any reduction in electricity/energy use)	Dec 2020	Decrease of 45.46% due to reduction in peat production.
2021 Reduction of Complaints	Dec 2021	Commenced
2021 Reduction of Incidents	Dec 2021	Commenced
2021 Communication regarding decommissioning and rehabilitation	Ongoing for applicable Bogs	Commenced

2021 Review of environmental monitoring programme	Ongoing in line with PCAS & LAWPRO	Commenced
2021 Training & Awareness	May 2021	On Track
2021 Completion of Internal Audits	June 2021	On Track
2021 Decommissioning and Rehabilitation of 4 bogs in accordance with Condition 10 of the IPC Licence and in accordance with Peatlands Climate Action Scheme https://www.gov.ie/en/publication/136a7-bord-na-mona-bog-rehabilitation-scheme/	December 2021	Not Commenced

Add rows as necessary

Comment

Bord na Mona had a delayed start to peat production operations in 2020, commencing on the 11th June. However, activities ceased again at the end of June.

In January 2021, Bord na Mona announced it was permanently ending all peat harvesting activities on its lands. Since then Bord na Mona have been engaged in the Governments Peatlands Climate Action Scheme (<https://www.gov.ie/en/publication/136a7-bord-na-mona-bog-rehabilitation-scheme/>), with a view to commencing applicable decommissioning & rehabilitation activities on a number of bogs under the Condition 10 obligations of this licence. In addition, Bord na Mona are continuing to sell and transport existing peat stock harvested in previous years.

3) Energy & Water

Energy

Explanation

Fossil fuels such as coal, gas and oil are non-renewable resources. As a result, our EPA licence requires that we measure our energy use and set targets to improve the energy efficiency of our activities and reduce our overall use, where possible. Where we have the means and technology on-site to generate energy, this is also captured in this report.

The information below summarises the energy used this year compared to the previous year and includes renewable and non-renewable energy types.

Table 2 Energy Used

Energy Used (GJ)	Quantity	% Increase/ decrease on previous year
Electricity	1025.75	10.17% Decrease
Heavy Fuel Oil	-	
Light Fuel Oil	9686.54	57% Decrease
Natural Gas	-	
Coal / Solid Fuel	-	
Peat	-	
Renewable Biomass	-	
Renewable Energy Generated On-site	-	
Total Energy Used	10712.29	45.46% Decrease

Comment

Bord na Mona had a delayed start to peat production operations in 2020, commencing on the 11th June. However, activities ceased again at the end of June.

Bord na Mona Energy were certified to the energy management standard ISO50001 during the 2020 season.

The information below summarises the energy we generated on our site this year with specific focus on renewable energy generation.

Table 3 Energy Generated

Energy Generated (GJ)	Quantity	% Increase/ decrease on previous year
Renewable Energy	NA	
Total Energy Generated		

Comment

There are no renewable energy assets on this site.

Water

Explanation

Water is a natural resource and we are required by our EPA licence to identify ways to reduce our use where possible. Water used in industry can be extracted from groundwater, rivers and lakes (surface water), taken from public water supplies (Irish Water), recycled from the facility's processes or harvested from rainwater.

The information below summarises and compares the quantity of water used this year compared to the previous year.

Table 4 Water Used

Source of Water Used	Quantity (m³/year)	% Increase/decrease on previous year
Groundwater	0	
Surface Water	0	
Public Supply	0	
Recycled Water	0	
Rainwater	0	
Total Water Used	0	

Comment

Water is not used in any of the peat harvesting or transport processes. The only water used is that required to provide associated offices and workshop welfare facilities (canteen/toilets)

4) Environmental Complaints

Explanation

Our EPA licence requires that activities do not cause environmental nuisance such as odour, dust or noise. Our licence also requires that we have procedures in place to record, investigate and respond to environmental complaints if or when they arise.

We have an environmental complaints procedure in place where you can contact us⁴ directly. You can also contact the EPA⁵ if you wish to make an environmental complaint, confidentially or not.

See the information below for a summary of **all** the environmental complaints relating to our activities made directly to us and to the EPA this year.

Table 5 Summary of All Environmental Complaints Received in

Type of Complaint	Number of Complaints Received	Number Closed
Odour / Smells	N/A	
Noise	N/A	
Dust	1	1
Water Quality	1	1
Air Quality	1	1
Waste	N/A	
Litter	N/A	
Vermin/Flies/Birds	N/A	
Soil Contamination	N/A	
Vibration	N/A	
Other	N/A	

⁴ See Section 1, Introduction – Contact Us

⁵ If you wish to contact the EPA to make an environmental complaint about an EPA licenced facility, please go to <https://lema.epa.ie/complaints>

Comment

As required environmental complaints are reportable to the EPA and as such must be investigated. In the 2020 reporting period, this licence had 3 complaints received and there were 0 carried over into 2021. The complaints were in relation to Dust, Smoke and Water Quality. At present, there are 0 complaints from 2020 still open.

5) Environmental Incidents

Explanation

It is our responsibility as an EPA licensed facility to ensure we have systems in place to prevent incidents that have the potential to cause environmental pollution. If an incident occurs, we are required to report it to the EPA, investigate the cause and fix the problem.

The EPA classify environmental incidents into 5 categories based on the potential impact on the environment:

- Minor
- Limited
- Serious
- Very Serious
- Catastrophic

See Table 6 for the number of the environmental incidents we reported to the EPA this year.

Table 6 Number of Environmental Incidents

Incident Category	Minor	Limited	Serious	Very Serious	Catastrophic
Abatement Equipment Offline					
Breach of Ambient ELV					
Breach of Emission Limit	3				
Explosion					
Fire	1	1			
Monitoring Equipment Failure					
Odour					
Spillage					
Breach of trigger Level	2				
Uncontrolled Release					

Incident Category	Minor	Limited	Serious	Very Serious	Catastrophic
Other					

Comment

As required, incidents of an environmental nature are reportable to the EPA and as such must be investigated. In the 2020 reporting period, this licence recorded and reported 7 incidents. These incidents were primarily related to dust, bog fires and trigger levels.

6) Our Environmental Emissions

Explanation

We are required to ensure the emissions from our activities do not cause environmental pollution.

We are required to monitor any of the following emissions that we make:

- Storm water
- Waste water
- Air
- Groundwater
- Noise

We regularly test any such emissions for specific pollutants and materials to ensure they do not contain levels of pollution that exceed emission limit values (ELVs) or cause environmental pollution. If monitoring of an emission indicates an ELV is exceeded, we are required to report this to the EPA⁶.

The next sub-sections of this report summarise our compliance with any ELVs set in our EPA licence. Some emissions monitored do not have specific ELVs, but we still carry out monitoring and report all incidents that may give rise to environmental pollution.

⁶ See section 5, Incidents

Storm Water

Explanation

Storm water is rain water run-off from roof and non-process areas of a facility, e.g. car parks, and generally shall not contain any pollution. Storm water is usually released into a local water body after a basic form of treatment. Our EPA licence requires that we manage storm water to ensure no polluting substances or materials are released into the environment.

The information below summarises how the storm water from our facility is treated, where it is released and the results of monitoring this year.

1. Storm water from our facility is managed prior to release by;

Either direct to drain where it is roof water only, or via petrol/oil interceptor.

2. Storm water from our facility is released into the following water bodies:

The Figile and Philipstown rivers.

Table 7 Summary of Storm Water Monitoring

Parameter measured	No. of Samples	% Compliant⁷	Comment
COD	60	100%	One Oil Interceptor was cleaned in 2020 at Edenderry Power Station Workshop.

Add rows as necessary

Comment

As required by the licence, stormwater is required to be separated where possible from process/non-process areas. Where this is not possible, stormwater is managed via oil-interceptors which are inspected on a weekly basis and sampled for associated discharges each month. Other than visual observations, the other main criteria to define adequate treatment is COD mg/l so this and visual inspections dictate when the interceptor is cleaned by an approved hazardous waste contractor.

⁷ % compliant = [(number of samples compliant) / (number of samples taken)] x 100. Compliance could refer to emission limit values or trigger levels. The EPA commonly use trigger levels on stormwater discharges.

Waste Water

Explanation

There are two types of waste water that can be produced:

- Process waste water produced from the activities and;
- Sanitary waste water from toilets, washrooms and canteens.

Our EPA licence requires us to manage our waste water on or off-site and ensure that it does not cause environmental pollution when discharged into the environment.

The information below summarises how we treat the waste water produced from our activities, where it is released and the results of monitoring this year.

1. Waste water produced by our activities is treated as follows before discharge to a receiving waterbody;

All production area runoff is treated via an associated silt pond designed, inspected and maintained in accordance with condition 6 of the IPC Licence

2. Treated waste water from our facility is released into the following water bodies:

Yellow River, Silver River, Grand Canal, Philipstown river, Tullamore River, Cushina River, Esker Stream, Figile River, Cotteners Brook, Cushling river, Abbeylough River, Slate river and the Crabtree river.

Table 8 Summary of Waste Water Monitoring

Parameter measured	No. of Samples	% Compliant	Comment
Suspended Solids	404	100%	
Ammonia	101	100%	
Total Solids	404	NA	
Total Phosphorus	101	NA	
pH	101	NA	
Colour	101	NA	
COD	101	99%	Trigger level reached on two occasions in 2020

Add rows as necessary

Comment

Licence requirements are quarterly grab samples on a selected number of silt pond outlets as per condition 6.2 and one 24hr flow proportional composite sampler at Blackriver bog.

The emission limit values are 35mg/l suspended solids, 3 mg/l total ammonia and 100mg/l COD. The trigger level for COD was reached on two occasions in 2020 which is similar to 2019. There was no obvious cause to the exceedances.

Air

Explanation

Generally, three types of air emissions are monitored from industry in Ireland: gases, dust (particulates) and odour. Our EPA licence requires us to ensure that any air emissions from our activities do not cause air pollution or create an odour nuisance.

The information below details the number of air emission points we monitor, the results from testing the air emissions and any odour assessments carried out by us and the EPA this year.

1. We monitor air emissions from the following number of emission points at our facility.

DM-02 Derrybrennan Bog, DM-03 Ballykeane Bog and DM-05 Blackriver Bog

Table 9 Summary of Air Emissions Monitoring

Parameter measured	No. of Samples	% Compliant	Comment
Fugitive Dust	9	66%	There were three exceedances in 2020. Two of these were caused by a storm and on one occasion it is suspected the gauge was tampered with.

Add rows as necessary

Comment

Due to peat extraction being suspended on two occasions in the reporting period, the Bergerhoff dust gauges were deployed three times in 2020.

Table 10 Summary of Odour Assessments Carried Out

Assessment Conducted By	No. of Odour Assessments	% Compliant⁸	Comment
Licence Holder	NA		Not required
EPA	NA		Not required

Add rows where necessary

Comment

There are no odour emissions of note from the activity, no requirements to monitor and no associated complaints.

⁸ A compliant odour assessment is based on EPA Odour Impact Assessment Guidance available at <http://www.epa.ie/pubs/advice/air/emissions/ag5-odourassessment.html>

Fugitive Solvent Emissions

Are you are required to monitor fugitive solvent air emissions from your facility?

Yes ☐

No ☒

Explanation

The use of solvents is regulated under Irish and European Union (EU) Regulations⁹. Solvents are chemicals that, by their nature, are volatile (evaporate readily under ambient conditions). Solvents can be found in many inks, glues and cleaning agents. Due to the volatility of solvents some emissions may be released into the atmosphere during our activities before being captured in our air treatment system. This type of emission is called a **fugitive solvent emission**.

The information below summarises the quantity of solvents used this year, the percentage of fugitive solvent emissions (% of total quantity used) and whether the percentage complied with the targets set in the EU Regulations.

Table 11 Summary of Fugitive Solvent Emissions

Quantity of Solvents Used (Kg)	% Fugitive Solvent Emissions	Compliant

Comment

100 word limit

⁹ See Annex VII of the Industrial Emissions Directive

<https://ec.europa.eu/environment/industry/stationary/ied/legislation.htm>

Groundwater

Explanation

Groundwater is an important and sensitive resource in Ireland. Our EPA licence requires that we monitor groundwater to ensure our activities do not cause groundwater pollution.

Understanding how groundwater flows through soil and rock layers and eventually into surface and coastal waters is a complex science. Sometimes groundwater pollution that occurred in the past can take years and even decades to disappear. Therefore, it is important that experts help us monitor and interpret results from groundwater monitoring and testing.

The information below is a basic summary of the condition of the groundwater this year.

1. Do you have a groundwater monitoring programme in place?

Yes ☐

No ☒

2. Have the groundwater monitoring results over the last 5 years indicated the presence of groundwater pollution?

Yes ☐

No ☒

Table 12 List of Groundwater Pollutants Identified

Pollutants

Add rows as necessary

3. Give details of the investigations and subsequent actions taken, where applicable, to manage the groundwater pollution.

150 word limit

Comment

There are no licence requirements to monitor groundwater from the activity.

Noise

Explanation

Our EPA licence requires that we monitor noise emissions from our facility. Noise monitoring can be conducted at the boundary of our facility and/or at locations beyond the boundary referred to as “noise sensitive locations”. Noise monitoring requires the use of special noise monitoring equipment. Our EPA licence requires that noise produced by our facility shall not exceed the noise limit values and/or give rise to nuisance.

The information below gives a summary of when and where we conducted noise monitoring this year and if results complied with our EPA licence limits.

1. We conducted noise monitoring on the following dates this year:

NA

2. Was the noise monitoring carried out at:

- i. the boundary of our facility,
- ii. noise sensitive locations off-site, or
- iii. both?

NA

3. Were measured noise levels compliant with your EPA licence limits?

Yes ☐

No ☐

If No, we took the following actions to address the noise level exceedances?

NA

Comment

There are no licence requirements to monitor noise from the activity, or any complaints regarding noise impact.

7) Waste

Waste Generated

Explanation

Our EPA licence requires us to manage the waste we generate in a manner that does not cause environmental pollution.

We manage, store and record hazardous, non-hazardous and inert waste we generate in accordance with our licence. We ensure that this waste is subsequently treated or disposed of in accordance with the relevant waste Regulations.

The information in table 13 is a summary of waste we generated this year and the percentage increase or decrease on the previous year. The percentage recovery is the amount of total waste generated that was reused, recycled or recovered.

Table 13 Waste Generated

Type	Quantity (Tonnes)	% Increase/ decrease on previous year	% Recovery
Hazardous	29.49	6% increase	100%
Non-Hazardous	2849.98	42% increase	98.5%
Inert	N/A		
Total Tonnes	2879.47	57.96% Increase	99.25%

Comment

The main wastes generated from this activity are Waste Oil, Interceptor Waste, Oil Filters, Parts Wash Polythene, scrap metal, Silt Pond Waste and Peat Screenings all of which are recycled. The waste generated for landfill was from General Waste skips and Wheelie Bins.

Waste Accepted

Did you accept waste onto your facility for storage, treatment, recovery or disposal this year?

Yes ☐

No ☒

Explanation

Our EPA licence requires us to manage the waste we accept in a manner that does not cause environmental pollution.

We manage, store and record all incoming and outgoing hazardous, non-hazardous and inert waste. The waste we accept may be treated, recovered, disposed or stored at our facility depending on our licence requirements.

The information in Table 14 provides a summary of waste we accepted this year and the percentage increase or decrease on the previous year. The percentage recovery is the amount of total waste accepted that was reused, recycled or recovered.

Table 14 Waste Accepted

Type	Quantity (Tonnes)	% Increase/ decrease on previous year	% Recovery
Hazardous			
Non- Hazardous			
Inert			
Total Tonnes			

Comment

No waste accepted.

8) Financial Provision

Explanation

Our EPA licence requires us to assess the risk our activities pose to the environment if we cease our activities or if an incident occurred. If we are identified as a high risk facility¹⁰ by the EPA, we are required to put provision in place such as a financial bond or insurance to cover the cost of restoring our site to a satisfactory condition. This financial provision can then be used to cover the cost of managing the restoration or clean up should such an event occur.

1. Are you required to have an agreed financial provision in place?

Yes ☐

No ☒

2. What year was your Closure, Restoration and Aftercare Management Plan (CRAMP) last agreed by the Agency?

Not required under the Licence. However Bog Rehabilitation Plans are required to be submitted to the EPA. These were submitted to the Agency in May 2018. Since then, the EPA issued new Guidance on the process of preparing and implementing a bog rehabilitation plan and under the Peatlands Climate Action Plan www.bnmecas.ie & <https://www.gov.ie/en/publication/136a7-bord-na-mona-bog-rehabilitation-scheme/>, Bord na Mona are preparing new rehabilitation plans to be submitted by March/April 2021.

3. What year was your Environmental Liability Assessment Report (ELRA) agreed by the Agency?

Not required under the Licence.

¹⁰ See Appendix II

4. Has there been any significant changes on your site since the last agreements?

Yes ☐

No ☒

If yes, have you submitted details to the EPA?

Yes ☒

No ☐

N/A ☐

Appendix I

Class of Activity

Industrial and waste facilities are classed into different sectors depending on the nature of their activity and its potential impact on the environment. The EPA Act 1992 as amended, outlines these as follows:

Class 1	Minerals and other materials
Class 2	Energy
Class 3	Metals
Class 4	Mineral fibres and glass
Class 5	Chemicals
Class 6	Intensive Agriculture ¹¹
Class 7	Food and drink
Class 8	Wood, paper, textiles and leather
Class 9	Fossil fuels
Class 10	Cement, lime and magnesium oxide
Class 11	Waste

¹¹ This reporting template is not applicable to the **intensive agriculture sector**. Their annual environmental reporting structure is different and can be found at <http://www.epa.ie/pubs/advice/aerprtr/aerguid/>

Class 12 Surface Coatings

Class 13 Other Activities

Appendix II

High Environmental Risk Categories

If an industrial or waste licence falls into one of these categories it is deemed, by the EPA, as a high environmental risk. As a result, the licence holder is required to have financial provision in place. See section 8, Financial Provision.

1. Landfills
2. Non-Hazardous Waste Transfer Station
3. Incineration and Co-Incineration Waste Facilities
4. Category A – Extractive Waste Facilities
5. Upper and Lower Tier Seveso Facilities
6. Hazardous Waste Transfer Stations
7. High Risk Contaminated Land
8. Exceptional Circumstances

NOTE:

This list is subject to change.

See the link below for further information.

<http://www.epa.ie/pubs/advice/licensee/fp/epaapproachtoenvironmentalliabilitiesandfinancialprovision.html>



Annual Environmental Report 2019
Bord na Mona Biomass Ltd
(Allen Group of Bogs)
IPC Licence P0503-01

Facility Information Summary

AER Reporting Year
 Licence Register Number
 Name of site
 Site Location
 NACE Code
 Class/Classes of Activity
 National Grid Reference (6E, 6 N)

2019

P0503-01

Bord na Mona Allen

Derrygreenagh, Rochfortbridge, Co Westmeath

0892

1.4

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 260,455 tones which was 61% down on the 2018 figure. The quarterly grab sampling was 100% compliant with regard to the ELV's, as was the continuous composite sampling. The number of incidents reported reduced by 50% in 2019 compared to 2018. These were mainly trigger level exceedances for ammonia and COD due to the exceptionally dry summer experienced. There were 2 environmental complaints received during the reporting period. One related to smoke from a malicious fire started at a disused building at Timhove workshop, that was resolved, and the other related to dust from Ballykean bog and which was also resolved to the satisfaction of the complainant. In relation to silt pond cleaning, 100% of ponds received the required two cleanings, with fortnightly inspections dictating the cleaning schedules. Decommissioning and Rehabilitation works are described in an attachment. During the period of reporting, consent was sought and approved for Wildcrafting and Herb trials at Ballykean Bog. The Agency was also notified of the interim cessation of peat extraction, pending regularisation, the notification of a proposed planning application at Timhove Bog for a Solarfarm and a change of use for the Clonsast workshop.

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.

Cathal Bannon

Signature
 Group/Facility manager
 (or nominated, suitably qualified and experienced deputy)

31/03/2020

Date

AIR-summary template

Lic No:

P0503-01

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 <u>do not</u> need to complete the tables	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	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 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:		P0503-01	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

- 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

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-2	Total Particulates	350	140 DAYS	Daily average < ELV	mg/m2/day	14420	303	0	0	Dust monitoring took place on 4 occasions for 28 days each time between April and August
DM-03	Total Particulates	350	140 DAYS	Daily average < ELV	mg/m2/day	12264	231	0	0	
DM-05	Total Particulates	350	140 DAYS	Daily average < ELV	mg/m2/day	14616	195	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: P0503-01		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								
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	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	Total emission of Solvent to air (kg)
Total								

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER)	Lic No:	P0503-01	Year	2019
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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 only need to complete table W1 and or W2 for storm water analysis and visual inspections

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 evidence of contamination noted during visual inspections

Additional information
Yes
Monthly COD and Yard Run Off

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)

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	Additional information
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
	SELECT	SELECT	SELECT		SELECT		SELECT		SELECT	SELECT	SELECT	SELECT			

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

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

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

Lic No:

P0503-01

Year

2019

Continuous monitoring

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

Additional Information	
Yes	See note above

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 13 days over 365 days
-----	--------------------------------

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

Yes	Annual calibration schedule and trouble shooting service.
-----	---

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
SW-65A	Water	Suspended Solids	35	24 hour	Not Listed	mg/L			312	0	Down time primarily due to battery failure.Its not possible to report average continuous emissions as this sampler is located on one of 99 silt ponds and samplers are moved around periodically to allow for analysis of other silt pond performance.
SW-65A	Water	Ammonia (as N)	3	Weekly	NA	mg/L					
SW-65A	Water	Total phosphorus	NA	Weekly	NA	mg/L					
SW-65A	Water	COD	100	Weekly	NA	mg/L					
SW-65A	Water	Volumetric flow	NA	24 hour	NA	m3/day					
SW-65A	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? SELECT	When was this report submitted?

*Measures taken or proposed to reduce or limit bypass frequency

Bund/Pipeline testing template	Lic No:	P0503-01	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?

- 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?

Yes	
Other (2 Yearly)	
Yes	
3	
3	One bund was tested and passed in 2019. Two bunds were tested and passed in 2018.
90	
No	Visually inspected
0	
0	
0	
SELECT	
SELECT	
SELECT	

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)
EPL Main Bund 503-37-05	reinforced concrete		Gas Oil	132440 litres	44000 litres	Hydraulic test			Yes	Pass 2018		NA	NA	NA
Clonsast Heating Bund 503-37-07	reinforced concrete		Gas Oil	9288 litres	5500 litres	Hydraulic test			Yes	Pass 2018		NA	NA	NA
Ballycon Main Bund 503-37-09	reinforced concrete		Gas Oil	346500 litres	315000 litres	Hydraulic test			Yes	Pass 2019		NA	NA	NA

* 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?

[bundings and storage guidelines](#)

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

Commentary	
Yes	
No	
No	

Pipeline/underground structure testing

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

2 Please provide integrity testing frequency period

*please note integrity testing means water tightness testing for process and foul pipelines (as required under your licence)

No underground pipe lines that require testing	
Yes	
Other (Every 3 Years)	

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:	P0503-01	Year	2019
**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)			

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:	P0503-01	Year	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:	P0503-01	Year	2019
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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	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.	90	In total 0 Personnel received training in 2019. Training taking place every three years. There were 12 hydraulic harrows deployed across the licence area. Headland peat was collected at all locations and returned as part of overall production figures.	Individual	Improved Environmental Management Practices

Environmental Management Programme/Continuous Improvement Programme template				Lic No:	P0503-01	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	90	Installed a waste management system. Monthly waste reports are returned for records/filing and waste streams are segregated on site to maximise recycling potential. In an attempt to curtail illegal dumping on Bord na Mona remain in contact with Laois, Offaly and Kildare Co Councils.				
				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 223.22 tonnes 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	90	The monthly consumption of energy was 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.	

Environmental Management Programme/Continuous Improvement Programme template				Lic No:	P0503-01	Year	2019
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.	100	All personnel trained in Environmental Awareness every three years. There were 12 hydraulic harrows deployed across the licence area and headland peat was collected and returned as part of overall production figures.	Individual	Improved Environmental Management Practices		

Noise monitoring summary report

Lic No: P0503-01

Year

2019

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:	P0503-01	Year	2019
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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

[SEAI - Large
Industry Energy
Network \(LIEN\)](#)

Additional information

NA	
Yes	
NA	

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)	12512	5973	-61.00%	-52.00%
Total Energy Generated (MWHrs)				
Total Renewable Energy Generated (MWHrs)				
Electricity Consumption (MWHrs)	838	143	-61	-82.00%
Fossil Fuels Consumption:				
Heavy Fuel Oil (m3)				
Light Fuel Oil (m3)	1148	582.03	-61.00%	-49.00%
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	Unaccounted for Water:
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

Table R3 Waste Stream Summary

Resource Usage/Energy efficiency summary				Lic No:	P0503-01	Year	2019
	Total	Landfill	Incineration	Recycled	Other		
Hazardous (Tonnes)	27.76	0	0	27.76	0		
Non-Hazardous (Tonnes)	1641.14	65.12	0	1576.01	0		

Resource Usage/Energy efficiency summary				Lic No: P0503-01		Year 2019			
	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					

Table 1 Complaints summary

Incidents	
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100	100

Table 2 Incidents summary[illegible]

Waste Summary Continued

Lic No:

P0503-01

Year

2019

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	Country
02 01 04	waste plastics (except packaging)	No	223.22	Walker Recycling Services Ltd., Clonkeen, Portlaoise, Co.Laois	R03 - Recycling/reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes)	ADN Materials Ltd., Lossets, Carrickmacross, Co.Monaghan. WFP-MN-12-0001-05	Ireland
11 01 13*	degreasing wastes containing hazardous substances	Yes	0.6	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	6.86	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 02 02*	absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by hazardous substances	Yes	0	Enva Ireland Limited (Portlaoise) - W0184	R01 - Use principally as a fuel or other means to generate energy	Lindenschmidt, Kreutzal - Reg No: E97095037	Germany
16 06 01	Lead Acid Batteries	Yes	0.24	Enva Ireland Limited (Portlaoise) - W0184	R04 - Recycling/reclamation of metals and metal compounds	R.D. Recycling, Houthalen, Reg No: 51727/1KD	Belgium
16 01 07*	oil filters	Yes	0.24	Enva Ireland Limited (Portlaoise) - W0184	R04 - Recycling/reclamation of metals and metal compounds	R.D. Recycling, Houthalen, Reg No: 51727/1KD	Belgium
13 05 07*	oily water from oil/water separators	Yes	19.82	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
17 04 07	mixed metals	No	124.25	AES Ltd WP-OY-08-601-01	R04 - Recycling/reclamation of metals and metal compounds	Enva Ireland Limited, Clonminam Industrial Estate, Portlaoise - W0184	Ireland
20 03 01 A	Municipal mixed residual household	No	5.48	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 C	Municipal mixed dry recyclables	No	1.045	AES Ltd WP-OY-08-601-01	R03 - Recycling/reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes)	AES LTD, Cappincur, Tullamore, Co. Offaly - WP-OY-08-601-01	Ireland
20 03 01 B	Municipal mixed residual non-household	No	59.65	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
15 01 10*	packaging containing residues of or contaminated by hazardous substances	Yes	0	Enva Ireland Limited (Portlaoise) - W0184	R02 - Solvent reclamation/regeneration	Enva Ireland Limited, Clonminam Industrial Estate, Portlaoise - W0184	Ireland

Allen IPC Licence

Decommissioning and Rehabilitation

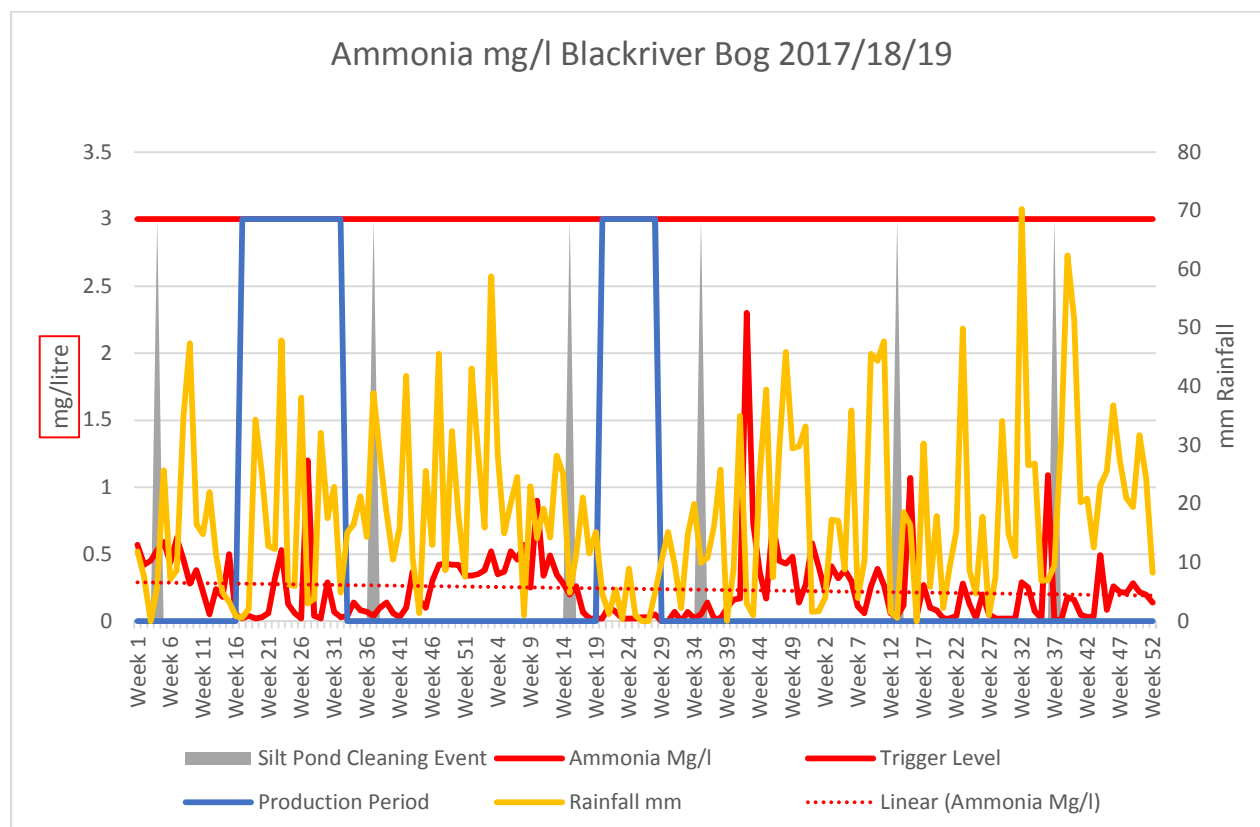
Bog Rehabilitation Progress Report 2019.

- There was ongoing monitoring of peatland rehabilitation carried out in previous years at Derrylea, Clonsast, Clonsast North, Ballycon, Lullymore and Glashabaun Bogs.
- Some rehabilitation maintenance work was carried at Lullymore Bog in 2019. This was to re-block a leak from a wetland and raise water-levels.
- A small re-wetting trial was set up at Lodge Bog (34 ha), in association with the Irish Peatland Conservation Council (IPCC) in 2017. There is ongoing consultation with the IPCC regarding this trial and annual monitoring. Kildare Birdwatch Ireland are also monitoring the response of birds to re-wetting at this site. Re-wetting has been successful at this site and pioneer wet cutaway vegetation is continuing to develop.
- Lodge Bog was also used for a *Sphagnum* inoculation trial using a product called BeadaMoss. BeadaMoss is a product that acts as a small *Sphagnum* moss 'seed' and is used in peatland rehabilitation in the UK. A small area (0.5 ha) of re-wetted cutaway was spread with BeadaMoss to investigate if this product had potential to help establish *Sphagnum* moss on the cutaway. This trial is in the early stages and no definitive results are expected for several years. The progress of the *Sphagnum* inoculation trial was slow. There was ongoing monitoring of this trial in 2019.
- Active rehabilitation work in Cavemount bog is ongoing. Drain-blocking started on the western side in 2018 and continued in 2019. Some ground works were also carried out with a bulldozer to help stabilise a small section of the headland and to block field drains. This is a phased rehabilitation programme and will be completed over several years. Cavemount is developing as a cutaway wetland and is attracting nationally important wintering and breeding bird species. This cutaway wetland will continue to be managed to enhance its biodiversity value.
- Cavemount has also been selected as a demonstration site for the CAREPEAT INTERREG project. Some rehab trials as part of this research project have been carried out to level selected areas before re-wetting.
- A Greenhouse Gas (GHG) flux tower has been constructed in Lullymore in association with several academic institutions (UCC, WIT, TCD, UCD). Bord na Mona are funding a PHD student (UCC) to carry out GHG research at this site. 2020 is the first year of a 3 year project. This research will establish if cutaway at Lullymore (Birch woodland mosaic) has potential to develop as a Carbon sink or source, and will help inform peatland rehabilitation management to re-create GHG sinks in the cutaway.

- 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 Allen 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 Allen Siltpond Monitoring Frequency & Results										
		IPPC Licence P0503-01										
X	Y	Bog	SW	Monitoring	Sample Date	pH	SS	TS	Ammonia	TP	COD	Colour
269197.57	228032.68	Glashabaun South	SW-47	Q 1 19	20/02/2019	7.4	5	180	0.7	0.05	56	219
268823.95	228190.35	Glashabaun South	SW-48	Q 1 19	20/02/2019	7.4	5	224	0.23	0.05	61	149
269054.43	228057.26	Glashabaun South	SW-49	Q 1 19	20/02/2019	7.3	92	280	0.63	0.05	65	161
269278.18	227938.86	Glashabaun South	SW-50	Q 1 19	20/02/2019	7.3	5	258	0.2	0.05	61	146
266471.63	226777.93	Glashabaun South	SW-51	Q 1 19	20/02/2019	7.4	5	336	0.19	0.05	96	267
266530.75	226503.86	Glashabaun South	SW-52	Q 1 19	20/02/2019	7.7	5	356	0.14	0.05	57	145
266677.4	226324.12	Glashabaun South	SW-53	Q 1 19	20/02/2019	7.5	5	268	0.22	0.05	70	209
268454.98	225617.94	Lullybeg	SW-56	Q 1 19	18/02/2019	7.6	5	121	3.9	0.05	59	138
273261.1	224710.84	Lodge	SW-60	Q 1 19	20/02/2019	8	5	264	0.02	0.05	43	91
273158.15	224383.3	Lodge	SW-61	Q 1 19	20/02/2019	7.8	5	314	0.94	0.05	52	195
268001.63	223625.99	Barnaran	SW-62	Q 1 19	20/02/2019	7.6	5	339	0.48	0.05	65	156
265940.18	224925.96	Blackriver	SW-65	Q 1 19	18/02/2019	7.9	5	108	0.28	0.05	65	144
264507.34	223259.15	Ballydermot	SW-67A	Q 1 19	18/02/2019	8	12	136	0.62	0.05	77	226
263592.36	226625.93	Codd South	SW-45	Q 2 19	25/05/2019	8	5	306	0.05	0.05	64	123
265523.7	225264.93	Blackriver	SW-65A	Q 2 19	25/05/2019	8	5	440	0.03	0.05	67	135
264457.64	225650.79	Codd South	SW-67	Q 2 19	25/05/2019	8.2	5	305	0.06	0.05	55	79
266794.47	229663.32	Ticknevin	SW-68	Q 2 19	25/05/2019	7.5	5	292	1.1	0.05	61	123
266266.45	229593.59	Ticknevin	SW-69	Q 2 19	25/05/2019	8	5	348	0.05	0.05	80	165
265768.96	229932.59	Ticknevin	SW-70	Q 2 19	25/05/2019	7.8	5	394	0.04	0.05	83	175
265060.79	228192.45	Glashabaun North	SW-71	Q 2 19	25/05/2019	7.9	5	366	0.24	0.05	52	86
264299.21	227722	Codd North	SW-72	Q 2 19	25/05/2019	8	5	432	0.04	0.05	58	79
263602.31	227263.88	Sheridans	SW-73	Q 2 19	25/05/2019	7.6	5	260	0.07	0.05	92	335
263712.36	226714.35	Codd North	SW-74	Q 2 19	25/05/2019	7.9	5	222	0.16	0.05	51	119
263831.27	226569.76	Codd North	SW-75	Q 2 19	25/05/2019	8	5	396	2.7	0.05	42	91
264471.44	226292.96	Codd North	SW-76	Q 2 19	25/05/2019	7.9	5	418	1.5	0.05	48	76
261589.1	228825.1	Ballykillen	SW-35A	Q2 19	29/05/2019	6.7	5	204	0.62	0.05	107	473
248527.2	224119.1	Mountlucas	SW-11A	Q3 19	29/07/2019	7.9	5	456	0.41	0.07	31	45
247623.23	225441.21	Clonad	SW-12	Q3 19	29/07/2019	7.8	5	382	0.88	0.07	51	87
245572.38	225495.02	Clonad	SW-12A	Q3 19	29/07/2019	8.1	5	322	0.05	0.05	41	83
245814.66	223083.89	Clonad	SW-13	Q3 19	29/07/2019	7.7	5	274	0.6	0.07	49	114
250869.07	219763.05	Ballykeane	SW-14	Q3 19	29/07/2019	8.1	5	412	0.13	0.08	56	105
250117.79	219970.86	Ballykeane	SW-15	Q3 19	29/07/2019	7.6	5	398	0.56	0.06	44	97

249524.55	220230.29	Ballykeane	SW-16	Q3 19	29/07/2019	7.7	5	458	0.04	0.13	33	78
251030.51	221700	Ballykeane	SW-17	Q3 19	29/07/2019	8.2	5	262	0.03	0.05	61	103
250247.9	219855.73	Ballykeane	SW-18	Q3 19	29/07/2019	7.7	5	240	1.1	0.07	68	162
253272.1	225558.7	Mountlucas	SW-19	Q3 19	30/07/2019	7.6	5	420	0.02	0.08	57	48
259705.78	214693.84	Derrylea	SW-43	Q3 19	30/07/2019	8	5	404	0.04	0.07	65	121
255326.91	214636.24	Derrylea	SW-43A	Q3 19	30/07/2019	7.8	20	512	0.05	0.19	78	71
240694.98	230298.04	Daingean Derries	SW-1	Q4 19	14/11/2019	7.7	3	268	0.064	0.07	52	252
239594.68	230408.21	Daingean Derries	SW-2	Q4 19	14/11/2019	6.3	6	81	0.254	0.05	46	274
238801.4	230901.25	Daingean Derries	SW-3	Q4 19	14/11/2019	4.7	2	77	0.07	0.05	65	294
238933.48	231178.52	Daingean Derries	SW-4	Q4 19	14/11/2019	6.1	2	105	0.113	0.05	71	339
239107.6	231601.27	Daingean Derries	SW-5	Q4 19	14/11/2019	4.8	2	61	0.116	0.05	43	202
239491.98	231872.83	Daingean Derries	SW-6	Q4 19	14/11/2019	6.8	2	46	0.151	0.05	34	179
240411.24	231853.09	Daingean Derries	SW-7	Q4 19	14/11/2019	5.8	2	31	0.119	0.05	41	232
240239.99	231828.83	Daingean Derries	SW-7A	Q4 19	14/11/2019	6.7	2	39	0.109	0.05	35	186
243969.34	228585.84	Rathdrum	SW-8	Q4 19	14/11/2019	7.5	2	358	0.303	0.11	45	200
241227.37	229904.04	Rathdrum	SW-9	Q4 19	14/11/2019	7.6	2	284	0.081	0.09	54	196
241835.4	230389.25	Rathdrum	SW-9A	Q4 19	14/11/2019	7.6	3	131	0.193	0.13	53	164
243801.34	228449.41	Rathdrum	SW-10	Q4 19	14/11/2019	7.2	2	114	0.289	0.07	65	370



Blackriver bog is an active fuel peat production bog with the composite sampler located here during 17/18/19, but there wasn't any peat production in this bog during the 2019 season. The composite sampler takes a flow proportional composite sample over a 24 hour period. The sampler had 3.5% downtime during the period and returned 52 weekly ammonia results. The ammonia trigger level of 3.0mg/l, as agreed with the Agency, was not exceeded during the period. The results above, over the three years have started to show a downward trend in concentrations, either due to lack of production during the reporting period or a general reducing ammonia concentration regardless of activities, as has been demonstrated at other bogs, and the flat or downwards trends submitted to the EPA in 2013, as required by condition 6.14. The sampler is 3 years at this location covering two production seasons so the trending to include the outcome for 2020 will better inform this current trend from 2019.

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, seasonal weather patterns and the subsequent surface water 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, the bog rehabilitation programme and the EPA funded 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 2019.

IPC Licence P0503-01.

1.0 Extractive Wastes.

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

- Silt Pond excavations and maintenance
- Power Station Screenings
- Bog Timbers

There has been no change to the type and nature of these three 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.
- Peat screenings are a factor of the screening process with Edenderry Power Ltd as these oversized bog timbers, stones and peat cannot be utilised in the power station.
- 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.
- The factory screenings are permitted to be returned to the bog as they were naturally occurring materials from the bog, and as such do not require any treatment to serve this purpose.

- 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.
- Given the nature of these screenings as outlined in the EWMP, there is no further use identified, other than the permitted reuse of these natural materials in areas that required improvement for trafficking purposes.
- 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.
- Schedule 3 (ii) of this IPC Licence permits the disposal of peat screenings to the bog at designated locations agreed under Condition 7.4 and this continues to be the case.
- 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.



Annual Environmental Report 2018

Bord na Mona Biomass Ltd
(Allen Group of Bogs)
IPC Licence P0503-01

Facility Information Summary

AER Reporting Year	2018
Licence Register Number	P0503-01
Name of site	Bord na Mona Allen
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 676,548 tonnes which was down on the 2017 figure. Infrastructurally, there was no bog development. The quarterly grab sampling was 100% compliant, as was the continuous composite sampling. The number of incidents reported rose in 2018. These were mainly trigger level exceedences for ammonia and COD due to the exceptionally dry summer we experienced. There were two environmental complaints received during the reporting period, one related to littering that was that was resolved in conjunction with Offaly Co Co, the other related to dust and were resolved to the satisfaction of the complainant. We engaged with both Offaly and Kildare Co Councils to conduct a number of litter clean-ups on by-roads near our bogs. In relation to silt pond cleaning, 100% of ponds received two cleanings, inspections dictating cleaning schedules. Decommissioning and Rehabilitation works are described in an attachment. During the period of reporting, a draft Rehabilitation plan was submitted along with consent sought and approved for two new trail projects, namely the trial cultivation of herbs and wildcrafting for indigenous herbs and plant water

Declaration:

All the data and information presented in this report has been checked and certified as being accurate. The quality of the information is assured to meet licence requirements.

<u>E. Mullan</u>	<u>15-3-19</u>
Signature	Date
Group/Facility manager	
(or nominated, suitably qualified and experienced deputy)	

AIR-summary template	Lic No:	P0503-01	Year	2018
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Answer all questions and complete all tables where relevant

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 <u>do not</u> 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	Yes	
3	Was all monitoring carried out in accordance with EPA Basic air monitoring guidance note AG2 and using the 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
	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

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	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	

AIR-summary template	Lic No:	P0503-01	Year	2018
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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
DM-2	Total Particulates	350	140 DAYS	Daily average < ELV	mg/m2/day	15764	191	0	0	Dust monitoring took place on 5 occasions for 28 days each time between April and September
DM-03	Total Particulates	350	140 DAYS	Daily average < ELV	mg/m2/day	38360	451	0	1	Reported to Agency on 31/08/2018. INCI015083
DM-05	Total Particulates	350	140 DAYS	Daily average < ELV	mg/m2/day	33600	357	0	1	Reported to Agency on 07/06/2018. INCI014530
	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

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									
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	Solvents destroyed onsite	Total emission of Solvent to air (kg)	
							Total		

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER)	Lic No: P0503-01	Year 2018
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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

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

Additional information
Yes
Monthly COD and Yard Run Off

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)

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 Quality checklist](#) [Assessment of results checklist](#)

Additional information
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/ Substance ^{Note 1}	Type of sample	Frequency of monitoring	Averaging period	ELV or trigger values in licence or any revision thereof ^{Note 2}	Licence Compliance criteria	Measured value	Unit of measurement	Compliant with licence	Method of analysis	Procedural reference source	Procedural reference standard number	Annual mass load (kg)	Comments
	SELECT	SELECT	SELECT		SELECT		SELECT		SELECT	SELECT	SELECT	SELECT			

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?

Yes

Additional Information

See note above

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 134 days over 365 days

7

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

Yes

Annual calibration schedule and trouble shooting service.

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
SW-65A	Water	Suspended Solids	35	24 hour	Not Listed	mg/L			3216	0	Down time primariially due to dry weather, battery failure and sampler repairs. The Agency being informed of same.
SW-65A	Water	Ammonia (as N)	NA	Weekly	NA	mg/L					
SW-65A	Water	Total phosphorus	NA	Weekly	NA	mg/L					
SW-65A	Water	COD	NA	Weekly	NA	mg/L					
SW-65A	Water	Volumetric flow	NA	24 hour	NA	m3/day					
SW-65A	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:	P0503-01	Year	2018	
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Bund testing dropdown menu click to see options

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
- 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)
- 4 How many bunds are on site?

- 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?

Additional information	
Yes	
Other (2 Yearly)	
Yes	
3	
3	Two bunds tested and passed in 2018. One bund tested and passed in 2017.
No	Visually inspected
0	
0	
0	
SELECT	
SELECT	
SELECT	

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)
EPL Main Bund 503-37-05	reinforced concrete		Gas Oil	132440 litres	44000 litres	Hydraulic test			Yes	Pass 2018		NA	NA	NA
Clonsast Heating Bund 503-37-07	reinforced concrete		Gas Oil	9288 litres	5500 litres	Hydraulic test			Yes	Pass 2018		NA	NA	NA
Ballycon Main Bund 503-37-09	reinforced concrete		Gas Oil	346500 litres litres	315000 litres	Hydraulic test			Yes	Pass 2017		NA	NA	NA

- * 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? [bundling 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?

Commentary	
Yes	
No	
No	

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 pipe lines that require testing
Other (Every 3 Years)	

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:	P0503-01	Year	2018
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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

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

P0503-01

Year

2018

[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	Internal budget provision
9	Closure plan review status	Internal budget provision
10	Financial Provision for Closure status	Internal budget provision
11	Financial Provision for Closure - amount of cover	Internal budget provision
12	Financial Provision for Closure - type	Internal budget provision
13	Financial provision for Closure expiry date	NA

Environmental Management Programme/Continuous Improvement Programme template			Lic No:	P0503-01	Year	2018
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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	90	In total 34 Personnel received training in 2018. There were 12 haydraulic harrows deployed across the licence area. Headland peat was collected at all locations and returned as part of overall production figures.	Individual	Improved Environmental Management Practices
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	90	Installed a waste management system. Monthly waste reports are returned for records/filing and waste streams are segregated on site to maximise recycling potential. In an attempt to curtail illegal dumping on Bord na Mona remain in contact with Laois, Offaly and Kildare Co Councils.	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	100	In total 431.01 tonnes were sent off site for recycling. Procurement also exploring the possibility of securing	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	90	The monthly consumption of energy was regurally 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.	90	In total 34 Personnel received training in 2018. There were 12 hydraulic harrows deployed across the licence area and headland peat was collected and returned as part of overall production figures.	Individual	Improved Environmental Management Practices

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 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:

P0503-01

Year

2018

- 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

Sep-18	Report on file
Yes	ISO50001 accreditation attained from Certification Europe
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)	15953.23	12512.02		
Total Energy Generated (MWHrs)				
Total Renewable Energy Generated (MWHrs)				
Electricity Consumption (MWHrs)	1909.3	838.69		
Fossil Fuels Consumption:				
Heavy Fuel Oil (m3)				
Light Fuel Oil (m3)	1382.141	1148.837		
Natural gas (m3)				
Coal/Solid fuel (metric tonnes)				
Peat (metric tonnes)	0			
Renewable Biomass				
Renewable energy generated on site				

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

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

Table R2 Water usage on site					Water Emissions	Water Consumption	
Water use	Water extracted Previous year m3/yr.	Water extracted Current year m3/yr.	Production +/- % compared to previous reporting year**	Energy Consumption +/- % vs overall site production*	Volume Discharged back to environment(m ³ /yr)	Volume used i.e not discharged to environment e.g. released as steam m3/yr	Unaccounted for Water:
Groundwater							
Surface water							
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:	P0503-01	Year	2018
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Table R3 Waste Stream Summary					
	Total	Landfill	Incineration	Recycled	Other
Hazardous (Tonnes)	26.53				
Non-Hazardous (Tonnes)	2382.17				

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: P0503-01

Year

2018

Complaints

Additional information

Have you received any environmental complaints in the current reporting year? If yes please complete summary details of complaints received on site in table 1 below

Yes

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
05/04/2018	Waste		Complaint about litter dumped on Bord na Mona property.	Cameras and signage installed. Litter cleaned up in conjunction with Offaly Co.Council	Complete	08/05/2018	Reported to Agency Ref:LR034727
18/09/2018	Dust		Complaint about dust blowing into the property from Ballykeane Bog	Personnel working in the area informed and made aware of their environmental training.	Complete	03/10/2018	Reported to Agency Ref:LR037003
	SELECT				SELECT		
Total complaints open at start of reporting year		0					
Total new complaints received during reporting year		2					
Total complaints closed during reporting year		2					
Balance of complaints end of reporting year		0					

Lic No:	P0503-01	Year	2018
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Additional information

Yes	
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What is an incident

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[illegible]

WASTE SUMMARY	Lic No:	P0503-01	Year	2018
SECTION A-PRTR ON SITE WASTE TREATMENT AND WASTE TRANSFERS TAB- TO BE COMPLETED BY ALL IPPC AND WASTE FACILITIES		PRTR facility login	dropdown list click to see options	

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

Were any wastes accepted onto your site for recovery or disposal 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

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

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

Additional Information

SELECT	
SELECT	
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)	EWG code	Source of waste accepted	Description of waste accepted Please enter an accurate and detailed description - which applies to relevant EWG code European Waste Catalogue EWG 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 -
	European Waste Catalogue EWG codes										

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

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

6 Does your facility have relevant nuisance controls in place?

7 Do you have an odour management system in place for your facility? If no why?

8 Do you maintain a sludge register on site?

SELECT	
SELECT	
SELECT	
SELECT	
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

WASTE SUMMARY				Lic No:	P0503-01	Year	2018
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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													

Table 4 Environmental monitoring-landfill only [Landfill Manual-Monitoring Standards](#)

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

+. 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
SELECT

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

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	Lic No:	P0503-01	Year	2018
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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	Country
02 01 04	waste plastics (except packaging)	No	431	Envva Ireland Limited (Portlaoise) - W0184	R03 - Recycling/reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes)	Envva Ireland Limited, Clonminam Industrial Estate, Portlaoise - W0184	Ireland
11 01 13*	degreasing wastes containing hazardous substances	Yes	1.47	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	11.84	Envva Ireland Limited (Portlaoise) - W0184	R01 - Use principally as a fuel or other means to generate energy	Envva Ireland Limited, Clonminam Industrial Estate, Portlaoise - W0184	Ireland
15 02 02*	absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by hazardous substances	Yes	1.7	Envva 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	4.78	Envva Ireland Limited (Portlaoise) - W0184	R04 - Recycling/reclamation of metals and metal compounds	R.D. Recycling, Houthalen, Reg No: 51727/1KD	Belgium
13 05 07*	oily water from oil/water separators	Yes	5.84	Envva Ireland Limited (Portlaoise) - W0184	R01 - Use principally as a fuel or other means to generate energy	Envva Ireland Limited, Clonminam Industrial Estate, Portlaoise - W0184	Ireland
17 04 07	mixed metals	No	565.48	Envva Ireland Limited (Portlaoise) - W0184	R04 - Recycling/reclamation of metals and metal compounds	Envva Ireland Limited, Clonminam Industrial Estate, Portlaoise - W0184	Ireland
20 03 01 A	Municipal mixed residual household	No	4.43	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 C	Municipal mixed dry recyclables	No	0.87	AES Ltd WP-OY-08-601-01	R03 - Recycling/reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes)	AES LTD, Cappincur, Tullamore, Co. Offaly - WP-OY-08-601-01	Ireland
20 03 01 B	Municipal mixed residual non-household	No	61.5	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
15 01 10*	packaging containing residues of or contaminated by hazardous substances	Yes	0.9	Envva Ireland Limited (Portlaoise) - W0184	R02 - Solvent reclamation/regeneration	Envva Ireland Limited, Clonminam Industrial Estate, Portlaoise - W0184	Ireland

Allen
Decommissioning and Rehabilitation
Bog Rehabilitation Progress Report 2018.

Within the Allen licensed area (P0503-01), Cloncreen became available for rehabilitation in 2018. Rehabilitation is expected to start at this bog in 2019. Bord na Móna have obtained consent for the construction of a windfarm on this bog in 2017, although construction is not likely to take place for several years. It is expected that part of the rehabilitation of the site will take place in association with the construction of the windfarm. Ongoing monitoring of cutaway sites within the Allen Bog Group was undertaken with Lisclogher East re-surveyed in 2018. The surveys comprised of baseline walkover surveys to identify and map pioneer and established habitats on the cutaway and to assess the condition of raised bog remnants along bog margins.

A small re-wetting trial was set up at Lodge Bog (34 ha), in association with the Irish Peatland Conservation Council (IPCC). The IPCC own an area of remnant raised bog called Lodge Bog. BnM decided to re-wet an area of cutaway adjacent to this high bog remnant to support the conservation objectives of the IPCC for the high bog area. These include raised bog restoration (of the high bog area) and conservation of breeding Curlew, which use this area. This re-wetting has been very successful in creating new pioneer cutaway wetland habitat and in helping natural colonisation in this area. There is ongoing consultation with the IPCC regarding this trial. Kildare Birdwatch Ireland are also monitoring this site. Some water level maintenance was carried out in 2018.

Lodge Bog was also used for a *Sphagnum* inoculation trial using a product called BeadaMoss. BeadaMoss is a product that acts as a small *Sphagnum* moss 'seed' and is used in peatland rehabilitation in the UK. A small area (0.5 ha) of re-wetted cutaway was spread with BeadaMoss to investigate if this product had potential to help establish *Sphagnum* moss on the cutaway. This trial is in the early stages and no definitive results are expected for several years. There was ongoing monitoring of this trial in 2018.

Active rehabilitation work in Cavemount bog is ongoing. Drain-blocking started on the western side in 2018. An overflow pipe was constructed in 2017 to manage the maximum winter water levels on the eastern side. Some ground works were also carried out with a bulldozer to help stabilise a small section of the headland and to block field drains. This is a phased rehabilitation programme and will be completed over several years. Cavemount is developing as a cutaway wetland and is attracting nationally important wintering and breeding bird species. This cutaway wetland will continue to be managed to enhance its biodiversity value. Cavemount has been selected as a demonstration site for the CAREPEAT INTERREG project. Some rehabilitation was carried out in Clonsast North, Clonsast and Derrylea in 2018. Targeted drain blocking was carried out in Clonsast North and Clonsast to help re-wet cutaway. Bog restoration was carried out on remnant drained high bog along the southern margin of Derrylea.

Bog restoration was carried out on a bog remnant (16 ha) on Glashabaun North in Dec 2018. This area is adjacent to Long Derries SAC.

A Greenhouse Gas (GHG) flux tower has been constructed in Lullymore in association with several academic institutions (UCC, WIT, TCD, UCD), and is now operational. This flux tower is used to measure and model gas fluxes (Carbon Dioxide and Methane) from the surrounding cutaway peatland habitats (wetland and Birch Woodland). Flux Towers are a key tool in Climate Change research and are used to measure and model GHG emission factors from different habitats. This research will establish if cutaway at Lullymore (Birch woodland mosaic) has potential to develop as a Carbon sink or source, and will help inform peatland rehabilitation management to re-create GHG sinks in the cutaway. This is a long-term academic research project.

Draft rehabilitation plans for the Allen 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.

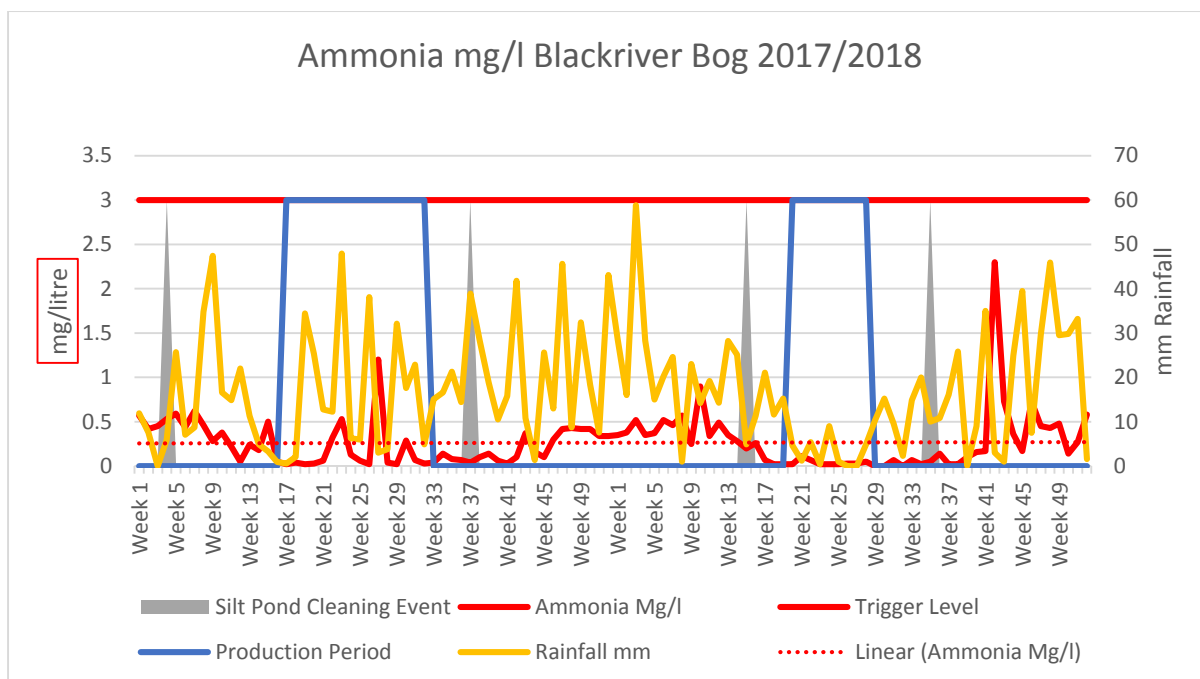
The new Biodiversity Action Plan (2016-2021) was launched in 2016 with the annual Biodiversity Action Plan review day being held in May 2018. This included an update on the progress of this plan, bog restoration and cutaway rehabilitation for a wide range on statutory and non-statutory consultees including 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/>

As required by condition 10.2 *Cutaway Bog Rehabilitation Plans*, draft peatland rehabilitation plans for all the individual bog units were submitted to the agency in 2013, reviewed and amended in 2015 and re-submitted to the agency in 2015. All draft rehabilitation plans have been reviewed in 2017. These reviewed and amended plans will be re-submitted to the agency in due course.

Organic certification was sought for the majority of the Bord na Móna property with the aim of using some areas for the cultivation of plants for use in herbal medicine, this project is ongoing.

Bord na Mona Allen PO503-01												
Quarterly Grab 2018												
X	Y	Bog	SW	Monitoring	Sample Date	pH	SS	TS	Ammonia	TP	COD	Colour
248527.2	224119.1	Mountlucas	SW-11A	Q1 18	21/03/2018	7.9	5	370	1.1	0.05	35	70
247623.23	225441.21	Clonad	SW-12	Q1 18	21/03/2018	7.4	5	230	0.54	0.08	69	163
245572.38	225495.02	Clonad	SW-12A	Q1 18	21/03/2018	7.8	5	330	0.85	0.05	37	66
245814.66	223083.89	Clonad	SW-13	Q1 18	21/03/2018	7.3	5	174	1	0.05	40	88
250869.07	219763.05	Ballykeane	SW-14	Q1 18	22/02/2018	7.7	5	416	0.46	0.05	78	140
250117.79	219970.86	Ballykeane	SW-15	Q1 18	22/02/2018	7.5	5	278	1.8	0.05	63	121
249524.55	220230.29	Ballykeane	SW-16	Q1 18	22/02/2018	7.6	5	432	0.33	0.05	57	72
251030.51	221700	Ballykeane	SW-17	Q1 18	21/03/2018	7.9	5	122	0.39	0.05	68	183
250247.9	219855.73	Ballykeane	SW-18	Q1 18	22/02/2018	7.5	5	248	2.4	0.05	70	151
253272.1	225558.7	Mountlucas	SW-19	Q1 18	21/03/2018	7.8	5	304	0.68	0.05	61	122
259705.78	214693.84	Derrylea	SW-43	Q1 18	22/02/2018	7.6	5	246	1.3	0.05	89	260
255326.91	214636.24	Derrylea	SW-43A	Q1 18	22/02/2018	7.3	5	456	0.82	0.05	100	176
240694.98	230298.04	Daingean Derries	SW-1	Q2 18	30/05/2018	7.8	13	328	0.02	0.13	82	103
239594.68	230408.21	Daingean Derries	SW-2	Q2 18	30/05/2018	7.5	5	378	1.7	0.05	52	322
238801.4	230901.25	Daingean Derries	SW-3	Q2 18	30/05/2018	5.9	14	156	0.02	0.33	116	482
238933.48	231178.52	Daingean Derries	SW-4	Q2 18	30/05/2018	6.4	5	138	0.28	0.12	101	362
239107.6	231601.27	Daingean Derries	SW-5	Q2 18	30/05/2018	7.1	5	172	0.1	0.08	110	295
239491.98	231872.83	Daingean Derries	SW-6	Q2 18	30/05/2018	7.2	9	456	0.15	0.05	27	39
240411.24	231853.09	Daingean Derries	SW-7	Q2 18	30/05/2018	7.4	5	348	0.75	0.05	89	257
240239.99	231828.83	Daingean Derries	SW-7A	Q2 18	30/05/2018	7.4	6	502	0.86	0.05	42	103
243969.34	228585.84	Rathdrum	SW-8	Q2 18	30/05/2018	7.6	7	538	0.15	0.1	34	52
241227.37	229904.04	Rathdrum	SW-9	Q2 18	30/05/2018	7.9	5	454	0.17	0.05	55	92
241835.4	230389.25	Rathdrum	SW-9A	Q2 18	30/05/2018	7.7	5	493	0.02	0.05	15	49
243801.34	228449.41	Rathdrum	SW-10	Q2 18	30/05/2018	7.8	8	324	0.02	0.05	68	166
243109.6	227634.77	Rathdrum	SW-10A	Q3 18	12/09/2018	7.1	6	264	0.02	0.06	85	174
254333.53	229715.7	Esker	SW-24	Q3 18	12/09/2018	7.6	52	276	0.02	0.05	49	86
254066.03	229231.46	Esker	SW-25	Q3 18	12/09/2018	7.1	5	222	0.83	0.11	87	164
255848.09	228220.5	Esker	SW-26	Q3 18	12/09/2018	7.3	5	166	4.6	0.06	86	351
255811.14	228181.42	Esker	SW-27	Q3 18	12/09/2018	7.5	6	296	0.53	0.06	37	76
256098.51	227480.46	Esker	SW-28	Q3 18	12/09/2018	7.6	5	316	0.1	0.05	39	100
253610.03	227876.29	Esker	SW-29	Q3 18	12/09/2018	6.2	5	231	5.6	0.05	159	446
254079.86	227734.11	Esker	SW29-A	Q3 18	12/09/2018	7.6	5	242	5	0.1	116	355
245107	211862.12	Garrymore	SW-39	Q3 18	12/09/2018	7.7	5	266	3.9	0.08	92	217
243424.84	211640.12	Garrymore	SW-39A	Q3 18	12/09/2018	7.8	5	304	0.02	0.05	76	128
244906.14	212161.63	Garrymore	SW-40	Q3 18	12/09/2018	7.5	5	210	2	0.05	140	388
244754.45	212504.25	Garrymore	SW-41	Q3 18	27/09/2018	7.1	39	272	2.4	0.1	135	194
255866.18	225413.14	Ballycon	SW-30	Q4 18	08/10/2018	7.8	5	374	0.31	0.05	54	40
258120.18	224725.27	Cloncreen	SW-32	Q4 18	08/10/2018	7.8	5	234	0.06	0.05	72	80
257161.38	225368.56	Cloncreen	SW-33	Q4 18	08/10/2018	7.7	5	422	0.05	0.05	33	124
256186.23	227016.03	Cloncreen	SW-34	Q4 18	08/10/2018	7.7	5	394	0.13	0.05	35	107
260552.28	227277.74	Cloncreen	SW-35	Q4 18	08/10/2018	7.6	5	438	0.4	0.05	61	60
260597	226777.19	Cloncreen	SW-37	Q4 18	08/10/2018	7.9	5	440	0.06	0.05	31	81
260756.49	225793.84	Cloncreen	SW-37A	Q4 18	08/10/2018	7.7	5	380	0.25	0.05	21	26
To be confirmed	To be confirmed	Ballykilleen	SW-35A	Q4 18	08/10/2018	7.6	5	178	1	0.05	146	260
To be confirmed	To be confirmed	Codd Sth	SW-45A	Q4 18	09/10/2018	7.7	5	248	0.28	0.05	56	145
251754.7	229410.12	Cavemount	SW-20	Q4 18	09/10/2018	7.8	5	298	0.02	0.05	85	325
251340.44	229884.3	Cavemount	SW-22	Q4 18	09/10/2018	7.4	5	252	0.08	0.05	73	270
251274.17	230209.75	Cavemount	SW-22A	Q4 18	09/10/2018	7.6	5	272	0.16	0.05	75	89

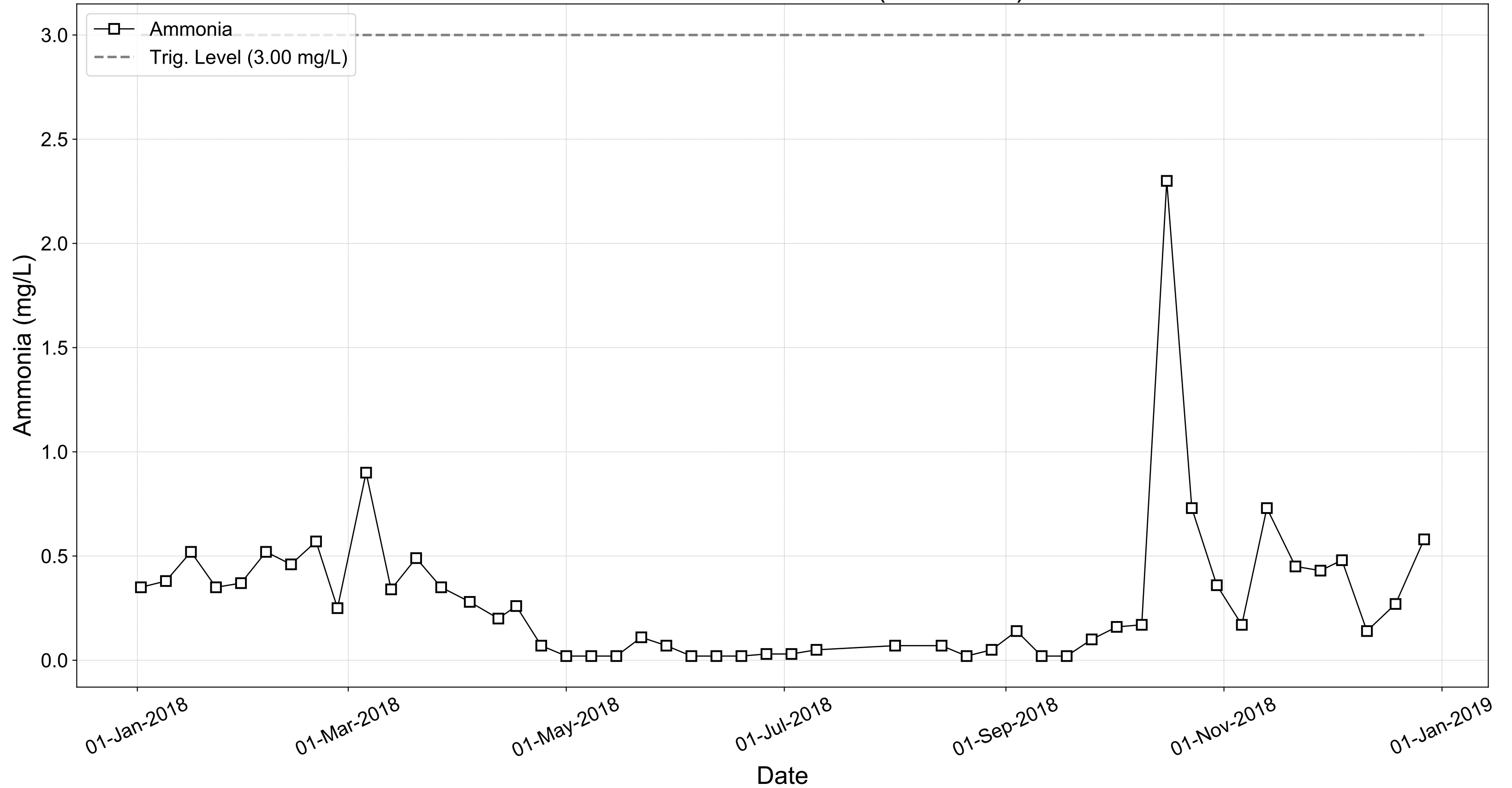


Blackriver bog is an active fuel peat production bog with the composite sampler located here during 2017 and 2018. The composite sampler takes a flow proportional composite sample over a 24 hour period. The sampler had 5.0% downtime during the period and returned 49 weekly ammonia results during the period of this 2018 AER. The ammonia trigger level of 3.0mg/l, as agreed with the Agency, was not exceeded during the period. The results above, over the two years show concentrations trending flat as peat extraction continues and this is in-line with the flat or downwards trends submitted to the EPA in 2013 as required by condition 6.14. The sampler is 2 years at this location covering two seasonal production seasons so the trending from 2019 will better inform this current trend from 2018.

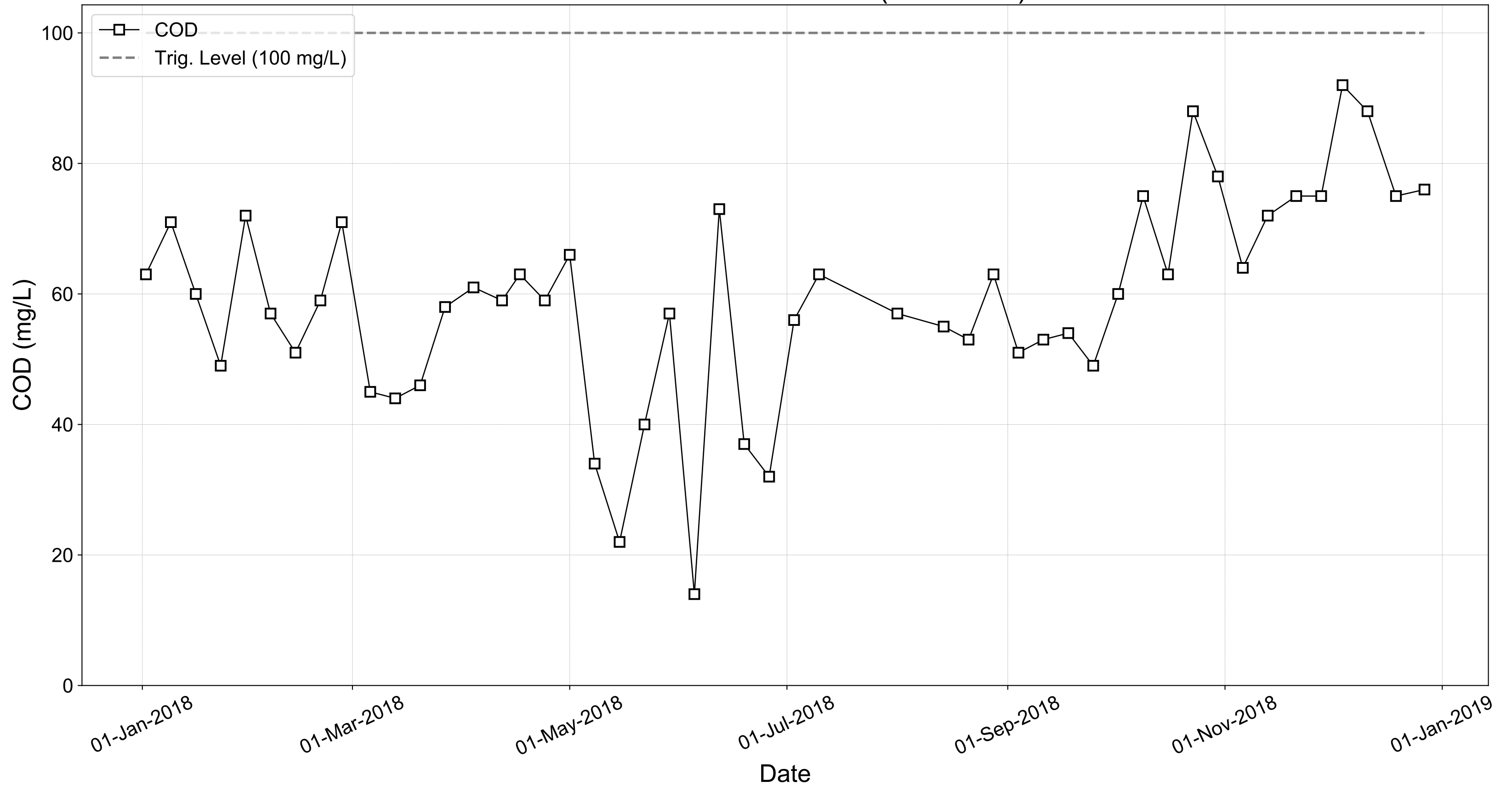
There is no obvious link between the summer production, winter maintenance, or silt pond maintenance events on the concentration of Ammonia discharging from this peatland. The only link expected would be that related to rainfall events, seasonal weather patterns and the subsequent surface water runoff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

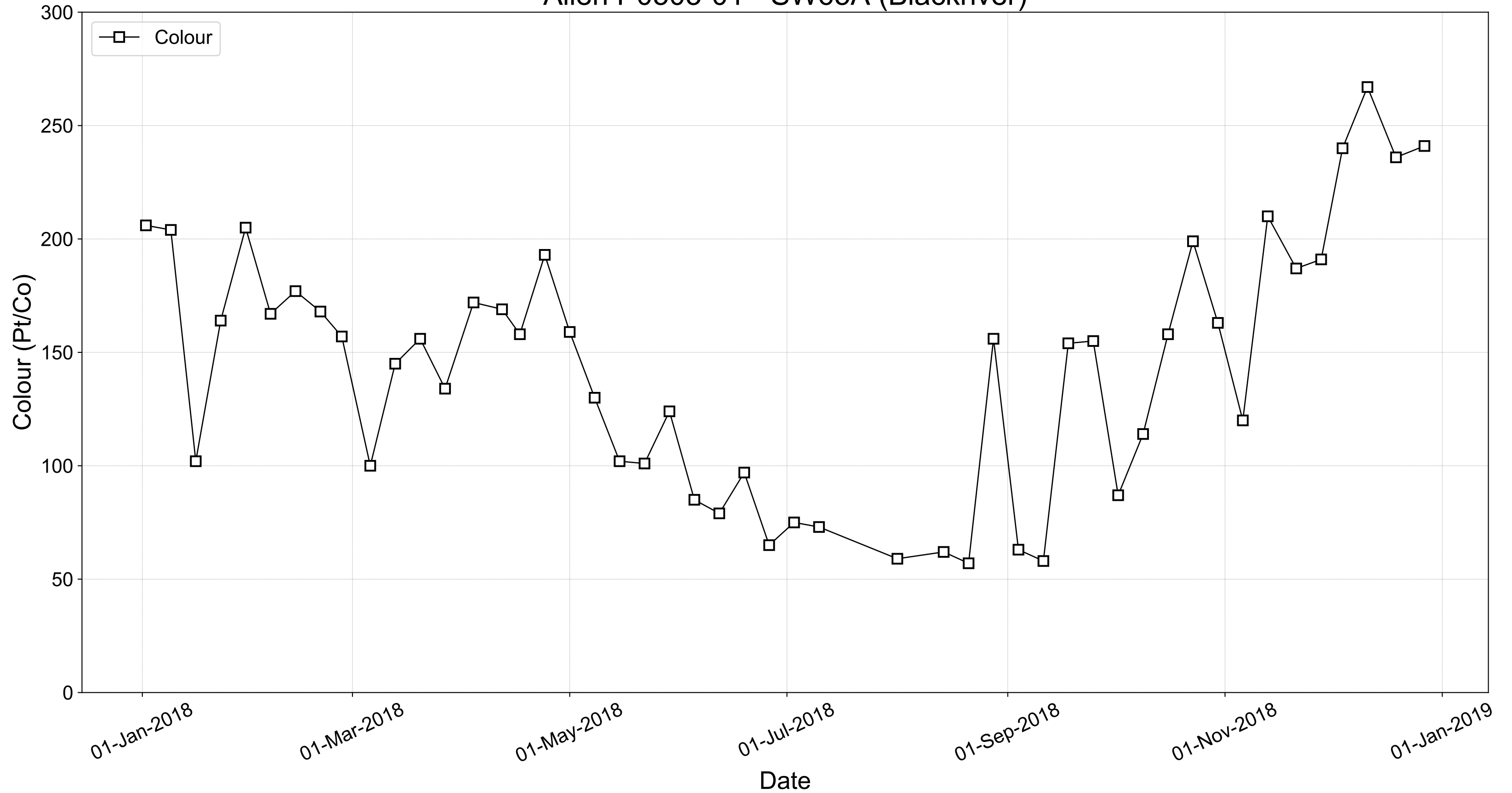
Allen P0503-01 - SW65A (Blackriver)



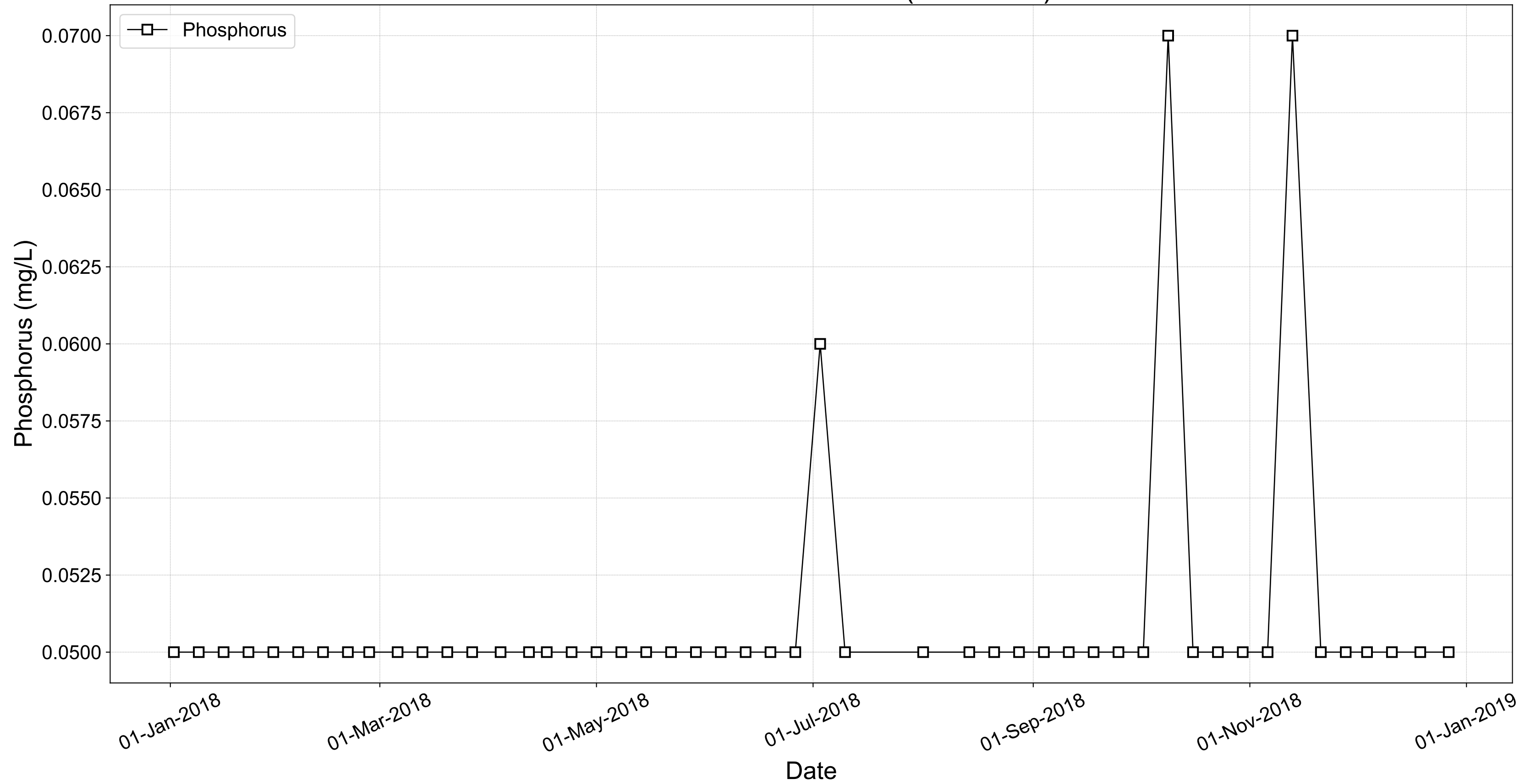
Allen P0503-01 - SW65A (Blackriver)



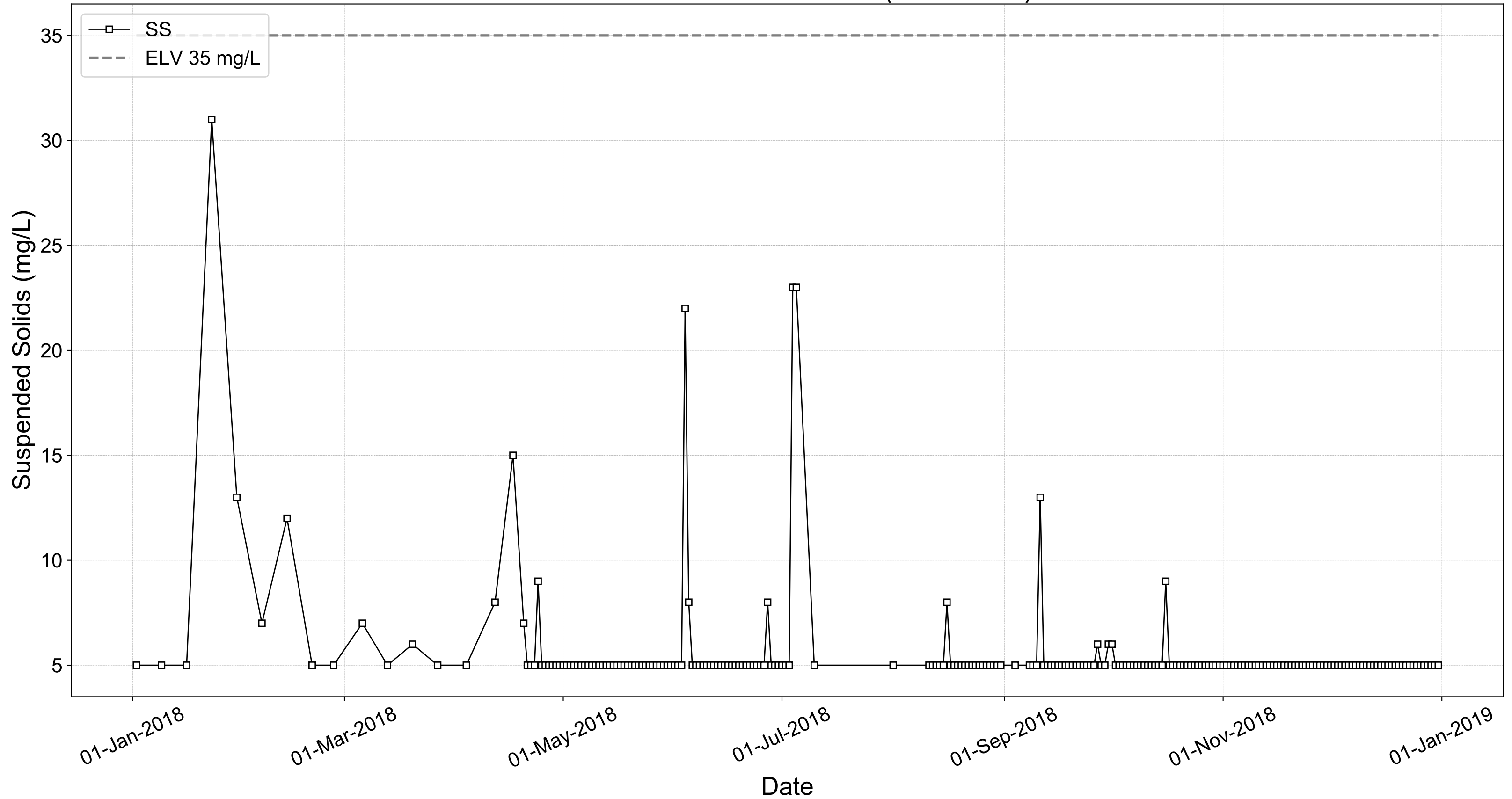
Allen P0503-01 - SW65A (Blackriver)



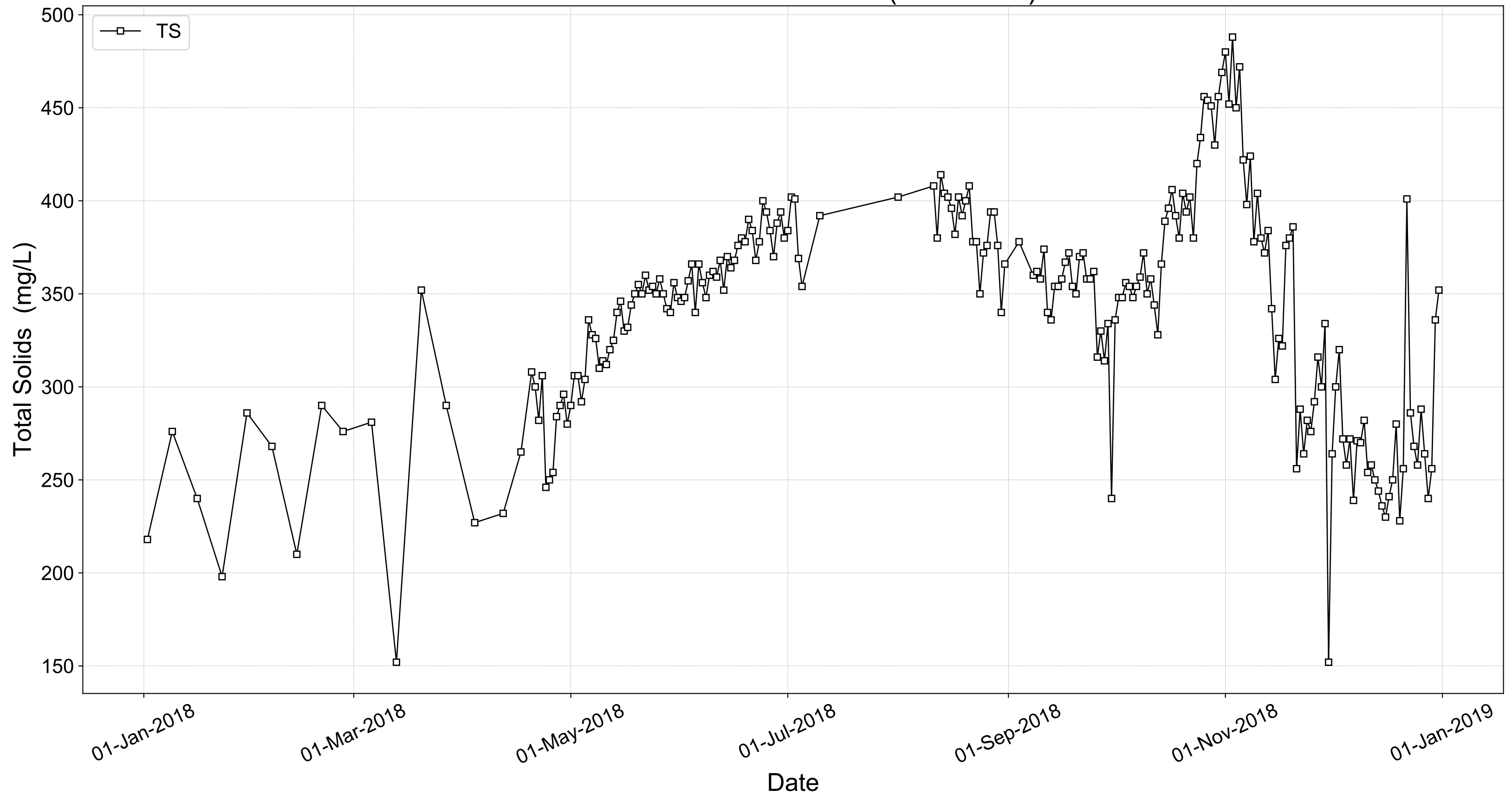
Allen P0503-01 - SW65A (Blackriver)



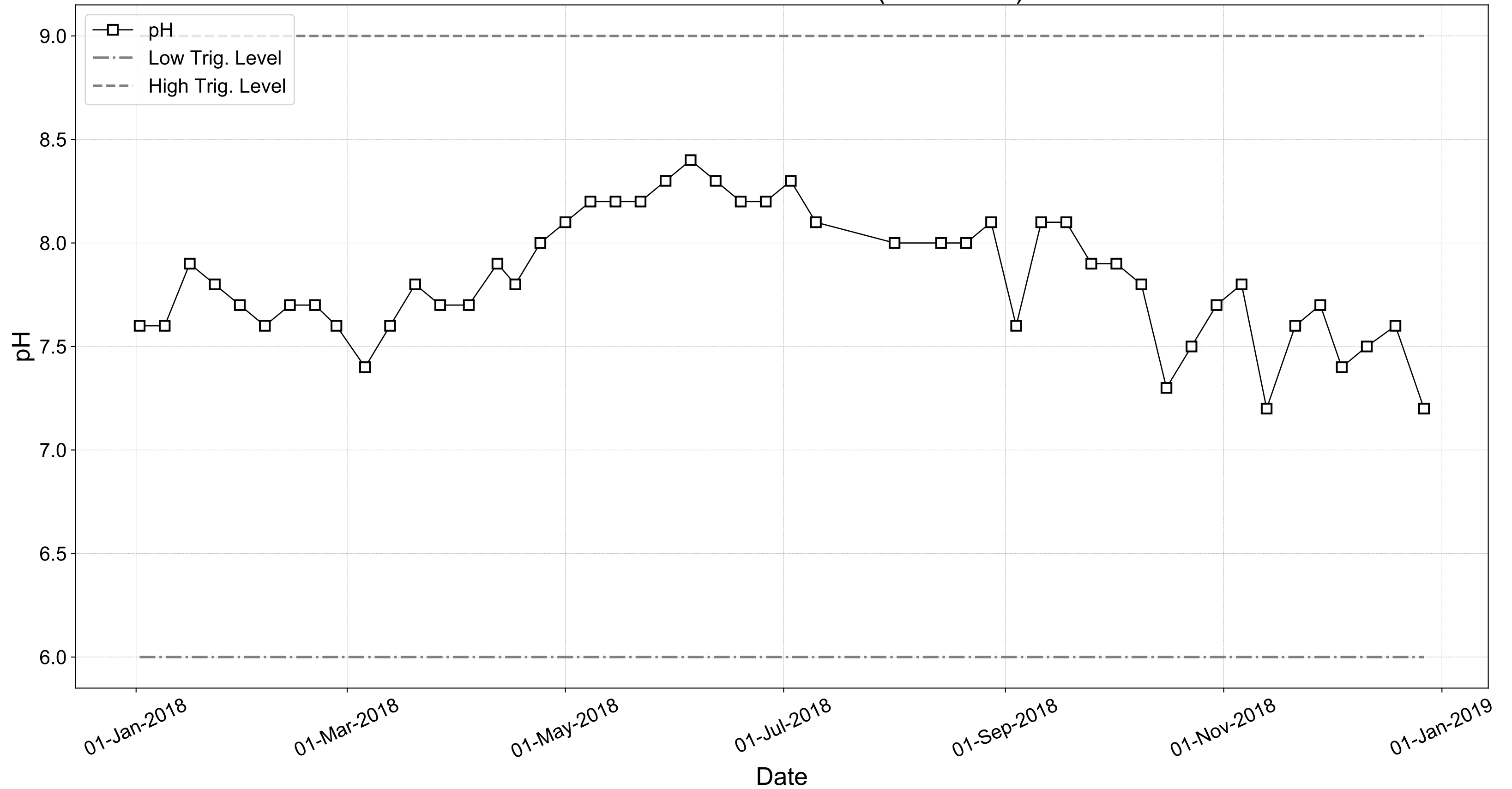
Allen P0503-01 - SW65A (Blackriver)



Allen P0503-01 - SW65A (Blackriver)



Allen P0503-01 - SW65A (Blackriver)



Yard Discharge Results 2018**Licence: P0503-01****Works: Allen**

Month	B/Dermot SWE 1 COD	B/Dermot SWE 2 COD	Clonsast SWE 1 COD	Ballycon SWE1 COD	Power Station SWE1 COD	Trigger Level
Jan	81	74	37	14	83	100
Feb	108	68	98	21	69	100
Mar	73	65	35	19	51	100
Apr	72	62	53	18	60	100
May	40	36	15	10	14	100
June	0	0	0	0	0	100
July	0	0	0	0	0	100
Aug	0	0	0	0	0	100
Sep	0	81	27	36	48	100
Oct	77	72	37	21	91	100
Nov	68	62	53	46	71	100
Dec	44	29	34	30	71	100

0: No Flow On Day Of Sampling

Extractive Waste Management Plan Implementation AER Update.

March 2019.

IPC Licence P0503-01.

1.0 Extractive Wastes.

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

- Silt Pond excavations and maintenance
- Power Station Screenings
- Bog Timbers

There has been no change to the type and nature of these three 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.

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.
- Peat screenings are a factor of the screening process with Edenderry Power Ltd as these oversized bog timbers, stones and peat cannot be utilised in the power station.
- 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.
- The factory screenings are permitted to be returned to the bog as they were naturally occurring materials from the bog, and as such do not require any treatment to serve this purpose.
- 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.

- Given the nature of these screenings as outlined in the EWMP, there is no further use identified, other than the permitted reuse of these natural materials in areas that required improvement for trafficking purposes.
- 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.
- Schedule 3 (ii) of this IPC Licence permits the disposal of peat screenings to the bog at designated locations agreed under Condition 7.4 and this continues to be the case.
- 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.

Facility Information Summary

AER Reporting Year
Licence Register Number
Name of site
Site Location
NACE Code
Class/Classes of Activity
National Grid Reference (6E, 6 N)

2018
P0503-01
Bord na Mona Allen
Derrygreenagh, Rochfortbridge, Co Westmeath
0892
1.4
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 676,548 tonnes which was down on the 2017 figure. Infrastructurally, there was no bog development. The quarterly grab sampling was 100% compliant, as was the continuous composite sampling. The number of incidents reported rose in 2018. These were mainly trigger level exceedences for ammonia and COD due to the exceptionally dry summer we experienced. There were two environmental complaints received during the reporting period, one related to littering that was that was resolved in conjunction with Offaly Co Co, the other related to dust and were resolved to the satisfaction of the complainant. We engaged with both Offaly and Kildare Co Councils to conduct a number of litter clean-ups on by-roads near our bogs. In relation to silt pond cleaning, 100% of ponds received two cleanings, inspections dictating cleaning schedules. Decommissioning and Rehabilitation works are described in an attachment. During the period of reporting, a draft Rehabilitation plan was submitted along with consent sought and approved for two new trail projects, namely the trial cultivation of herbs and wildcrafting for indigenous herbs and plant water

Declaration:

All the data and information presented in this report has been checked and certified as being accurate. The quality of the information is assured to meet licence requirements.

<u>E. McElrath</u>	<u>15-3-19</u>
Signature Group/Facility manager (or nominated, suitably qualified and experienced deputy)	Date

AIR-summary template	Lic No:	P0503-01	Year	2018
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Answer all questions and complete all tables where relevant

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 <u>do not</u> 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	Yes	
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
	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

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	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	

AIR-summary template	Lic No:	P0503-01	Year	2018
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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
DM-2	Total Particulates	350	140 DAYS	Daily average < ELV	mg/m2/day	15764	191	0	0	Dust monitoring took place on 5 occasions for 28 days each time between April and September
DM-03	Total Particulates	350	140 DAYS	Daily average < ELV	mg/m2/day	38360	451	0	1	Reported to Agency on 31/08/2018. INCI015083
DM-05	Total Particulates	350	140 DAYS	Daily average < ELV	mg/m2/day	33600	357	0	1	Reported to Agency on 07/06/2018. INCI014530
	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

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									
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	Solvents destroyed onsite	Total emission of Solvent to air (kg)	
							Total		

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AER Monitoring returns summary template-WATER/WASTEWATER(SEWER)	Lic No: P0503-01	Year 2018
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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		Additional information
Yes		
Was it a requirement of your licence to carry out visual inspections on any surface water discharges or watercourses on or near your site? If yes please complete table W2 below summarising <u>only any evidence of contamination noted during visual inspections</u>		Monthly COD and Yard Run Off
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	Additional information
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	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/ Substance ^{Note 1}	Type of sample	Frequency of monitoring	Averaging period	ELV or trigger values in licence or any revision thereof ^{Note 2}	Licence Compliance criteria	Measured value	Unit of measurement	Compliant with licence	Method of analysis	Procedural reference source	Procedural reference standard number	Annual mass load (kg)	Comments
	SELECT	SELECT	SELECT		SELECT		SELECT		SELECT	SELECT	SELECT	SELECT			

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?

Yes	Additional Information
Yes	See note above

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 134 days over 365 days
Yes	Total of 134 days over 365 days

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

Yes	Annual calibration schedule and trouble shooting service.
Yes	Annual calibration schedule and trouble shooting service.

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

No
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
SW-65A	Water	Suspended Solids	35	24 hour	Not Listed	mg/L			3216	0	Down time primarily due to dry weather, battery failure and sampler repairs. The Agency being informed of same.
SW-65A	Water	Ammonia (as N)	NA	Weekly	NA	mg/L					
SW-65A	Water	Total phosphorus	NA	Weekly	NA	mg/L					
SW-65A	Water	COD	NA	Weekly	NA	mg/L					
SW-65A	Water	Volumetric flow	NA	24 hour	NA	m3/day					
SW-65A	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

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Bund/Pipeline testing template	Lic No:	P0503-01	Year	2018
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Bund testing

dropdown menu click to see options

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?

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?

Additional information

Yes	
Other (2 Yearly)	
Yes	
3	
3	Two bunds tested and passed in 2018. One bund tested and passed in 2017.
No	Visually inspected
0	
0	
0	
SELECT	
SELECT	
SELECT	

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)
EPL Main Bund 503-37-05	reinforced concrete		Gas Oil	132440 litres	44000 litres	Hydraulic test			Yes	Pass 2018		NA	NA	NA
Clonsast Heating Bund 503-37-07	reinforced concrete		Gas Oil	9288 litres	5500 litres	Hydraulic test			Yes	Pass 2018		NA	NA	NA
Ballycon Main Bund 503-37-09	reinforced concrete		Gas Oil	346500 litres	315000 litres	Hydraulic test			Yes	Pass 2017		NA	NA	NA

* 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

15 tested in line with BS8007/EPA Guidance?

[bundling 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?

Commentary

Yes	
No	
No	

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 pipe lines that require testing
Other (Every 3 Years)	

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:

P0503-01

Year

2018

		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 interpretaon 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		Domestic Use Only
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.	NA		
5	Is the contamination related to operations at the facility (either current and/or historic)	NA		
6	Have actions been taken to address contamination issues? If yes please summarise remediation strategies proposed/undertaken for the site	NA		
7	Please specify the proposed time frame for the remediation strategy	NA		
8	Is there a licence condition to carry out/update ELRA for the site?	NA		
9	Has any type of risk assesment been carried out for the site?	NA		
10	Has a Conceptual Site Model been developed for the site?	NA		
11	Have potential receptors been identified on and off site?	NA		
12	Is there evidence that contamination is migrating offsite?	NA	Please enter interpretation of data here	

Groundwater/Soil monitoring template	Lic No:	P0503-01	Year	2018
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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

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

P0503-01

Year

2018

[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	Internal budget provision
9	Closure plan review status	NA	Internal budget provision
10	Financial Provision for Closure status	NA	Internal budget provision
11	Financial Provision for Closure - amount of cover	NA	Internal budget provision
12	Financial Provision for Closure - type	NA	Internal budget provision
13	Financial provision for Closure expiry date	NA	

Environmental Management Programme/Continuous Improvement Programme template		Lic No:	P0503-01	Year	2018
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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	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	90	In total 34 Personnel received training in 2018. There were 12 hydraulic harrows deployed across the licence area. Headland peat was collected at all locations and returned as part of overall production figures.	Individual	Improved Environmental Management Practices
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	90	Installed a waste management system. Monthly waste reports are returned for records/filing and waste streams are segregated on site to maximise recycling potential. In an attempt to curtail illegal dumping on Bord na Mona remain in contact with Laois, Offaly and Kildare Co Councils.	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	100	In total 431.01 tonnes were sent off site for recycling. Procurement also exploring the possibility of securing	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	90	The monthly consumption of energy was 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.	90	In total 34 Personnel received training in 2018. There were 12 hydraulic harrows deployed across the licence area and headland peat was collected and returned as part of overall production figures.	Individual	Improved Environmental Management Practices

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Noise monitoring summary report	Lic No: P0503-01	Year 2018
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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 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:

P0503-01

Year

2018

- 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

Sep-18	Report on file
Yes	ISO50001 accreditation attained from Certification Europe
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)	15953.23	12512.02		
Total Energy Generated (MWHrs)				
Total Renewable Energy Generated (MWHrs)				
Electricity Consumption (MWHrs)	1909.3	838.69		
Fossil Fuels Consumption:				
Heavy Fuel Oil (m3)				
Light Fuel Oil (m3)	1382.141	1148.837		
Natural gas (m3)				
Coal/Solid fuel (metric tonnes)				
Peat (metric tonnes)	0			
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						Unaccounted for Water:
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:	P0503-01	Year	2018
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Table R3 Waste Stream Summary					
	Total	Landfill	Incineration	Recycled	Other
Hazardous (Tonnes)	26.53				
Non-Hazardous (Tonnes)	2382.17				

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					

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Complaints and Incidents summary template		Lic No:	P0503-01	Year	2018
Complaints			Additional information		
Have you received any environmental complaints in the current reporting year? If yes please complete summary details of complaints received on site in table 1 below			Yes		

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
05/04/2018	Waste		Residence group complained about litter dumped on Bord na Mona property	Cameras and signage installed. Litter cleaned up in conjunction with Offaly Co Council	Complete	08/05/2018	Reported to Agency Ref:LR034727
18/09/2018	Dust		Complaint about dust blowing into the property from Ballykeane Bog	Personnel working in the area informed and made aware of their environmental training.	Complete	03/10/2018	Reported to Agency Ref:LR037003
	SELECT				SELECT		
Total complaints open at start of reporting year		0					
Total new complaints received during reporting year		2					
Total complaints closed during reporting year		2					
Balance of complaints end of reporting year		0					

Complaints and Incidents summary template	Lic No:	P0503-01	Year	2018
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Incidents	Additional information
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Have any incidents occurred on site in the current reporting year? Please list all incidents for current reporting year in Table 2 below

Yes

*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
12/02/2018	Trigger level reached	Ballydermot SWE-1	1. Minor	Water	Unknown	Unknown	Normal activities	EPA INCI014019	New	Investigate	Investigate	Complete	07/03/2018	Low
07/06/2018	Breach of ELV	DM-05 Blackriver Bog	1. Minor	Air	Other (add details)	Headland peat collection. Dust gauge located close to headland.	Normal activities	EPA INCI014530	New	Personnel working in the area informed of non compliance and reminded of their environmental training.	Ensure weather conditions and wind direction are suitable for headland peat collection.	Complete	07/06/2018	Medium
29/06/2018	Fire	Timahoe North Bog	1. Minor	Air	Unknown	Fire started on private property and spread into Timahoe North Bog is cutaway.	No activity as Timahoe North Bog is cutaway.	EPA INCI014707	New	Bord na Mona personnel deployed and fire extinguished.	Area monitored during dry weather conditions.	Complete	02/07/2018	Medium
30/05/2018	Trigger level reached	SW-3 Daingean Bog	1. Minor	Water	Unknown	Unknown	Normal activities	EPA INCI014759	New	Outfall checked.	None possible	Complete	02/07/2018	Medium
30/05/2018	Trigger level reached	SW-4 Daingean Bog	1. Minor	Water	Unknown	Unknown	Normal activities	EPA INCI014760	New	Outfall checked.	None possible	Complete	02/07/2018	Medium
30/05/2018	Trigger level reached	SW-5 Daingean Bog	1. Minor	Water	Unknown	Unknown	Normal activities	EPA INCI014761	New	Outfall checked.	None possible	Complete	02/07/2018	Medium
31/05/2018	Breach of ELV		1. Minor	Air	Other (add details)	Headland peat collection. Dust gauge located close to headland.	Normal activities	EPA INCI015083	New	Personnel working in the area informed of non compliance and reminded of their environmental training.	Ensure weather conditions and wind direction are suitable for headland peat collection.	Complete	18/08/2018	Medium
27/09/2018	Trigger level reached	SW-41 Garrymore Bog	1. Minor	Water	Unknown	Unknown	Normal activities	EPA INCI015374	New	Outfall checked.	None possible	Complete	18/10/2018	Medium
08/10/2018	Trigger level reached	SW-35A Ballykilleen Bog	1. Minor	Water	Unknown	Unknown	Normal activities	EPA INCI015375	New	Outfall checked.	None possible	Complete	18/10/2018	Medium
12/09/2018	Trigger level reached	SW-26 Esker Bog	1. Minor	Water	Unknown	Unknown	Normal activities	EPA INCI015676	New	Outfall checked.	Outfall checked.	Outfall checked.	12/12/2018	12/12/2018
12/09/2018	Trigger level reached	SW-29 Esker Bog	1. Minor	Water	Unknown	Unknown	Normal activities	EPA INCI015677	12/12/2018	Outfall checked.	Outfall checked.	Outfall checked.	12/12/2018	12/12/2018
12/09/2018	Trigger level reached	SW-29A Esker Bog	1. Minor	Water	Unknown	Unknown	Normal activities	EPA INCI015678	12/12/2018	Outfall checked.	Outfall checked.	Outfall checked.	12/12/2018	12/12/2018
12/09/2018	Trigger level reached	SW-39 Garrymore Bog	1. Minor	Water	Unknown	Unknown	Normal activities	EPA INCI015679	12/12/2018	Outfall checked.	Outfall checked.	Outfall checked.	12/12/2018	12/12/2018
12/09/2018	Trigger level reached	SW-40 Garrymore Bog	1. Minor	Water	Unknown	Unknown	Normal activities	EPA INCI015681	12/12/2018	Outfall checked.	Outfall checked.	Outfall checked.	12/12/2018	12/12/2018
Total number of incidents current year		14												
Total number of incidents previous year		10												
% reduction/increase		40.00%												

WASTE SUMMARY	Lic No:	P0503-01	Year	2018
SECTION A-PRTR ON SITE WASTE TREATMENT AND WASTE TRANSFERS TAB- TO BE COMPLETED BY ALL IPPC AND WASTE FACILITIES		PRTR facility login	dropdown list click to see options	

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

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
 1 your boundaries is to be captured through PRTR reporting)

If yes please enter details in table 1 below

2 Did your site have any rejected consignments of waste in the current reporting year? If yes please give a brief explanation in the additional information

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

Additional Information

SELECT	
--------	--

SELECT	
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)

Licensed annual tonnage limit for your site (total tonnes/annum)	EWG code European Waste Catalogue EWG codes	Source of waste accepted	Description of waste accepted Please enter an accurate and detailed description - which applies to relevant EWG code European Waste Catalogue EWG 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?

7 Do you have an odour management system in place for your facility? If no why?

8 Do you maintain a sludge register on site?

SELECT	
SELECT	
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

WASTE SUMMARY				Lic No:	P0503-01	Year	2018
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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													

Table 4 Environmental monitoring-landfill only [Landfill Manual-Monitoring Standards](#)

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

+. 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?

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

SELECT

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	Lic No:	P0503-01	Year	2018
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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	Country
02 01 04	waste plastics (except packaging)	-	431	ADN Materials Ltd.WFP-MN-12-0001-04	R03 - Recycling/reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes)	-	
11 01 13*	degreasing wastes containing hazardous substances	Hazardous	1.47	Safety Kleen Ireland Ltd - W0099	R11 - Use of waste obtained from any of the operations numbered R 1 to R 10	Solvent Recovery Management	UK
13 02 05*	mineral-based non-chlorinated engine, gear and lubricating oils	Hazardous	11.84	Envia Ireland Limited (Portlaoise) - W0184	R01 - Use principally as a fuel or other means to generate energy	-	
15 02 02*	absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by hazardous substances	Hazardous	1.7	Envia Ireland Limited (Portlaoise) - W0184	R01 - Use principally as a fuel or other means to generate energy	Lindenschmidt Kreutzal	Germany
16 01 07*	oil filters	Hazardous	4.78	Envia Ireland Limited (Portlaoise) - W0184	R04 - Recycling/reclamation of metals and metal compounds	Re: Recycling	Belgium
13 05 07*	oily water from oil/water separators	Hazardous	5.84	Envia Ireland Limited (Portlaoise) - W0184	R01 - Use principally as a fuel or other means to generate energy	-	
17 04 07	mixed metals	-	565.48	Envia Ireland Limited (Portlaoise) - W0184	R04 - Recycling/reclamation of metals and metal compounds	-	
20 03 01 A	Municipal mixed residual household	-	4.43	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.)	-	
20 03 01 C	Municipal mixed dry recyclables	-	0.87	AES Ltd WP-OY-08-601-01	R03 - Recycling/reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes)	-	
20 03 01 B	Municipal mixed residual non-household	-	61.5	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.)	-	
15 01 10*	packaging containing residues of or contaminated by hazardous substances	Hazardous	0.9	Envia Ireland Limited (Portlaoise) - W0184	R02 - Solvent reclamation/regeneration	-	

Allen Decommissioning and Rehabilitation Bog Rehabilitation Progress Report 2018.

Within the Allen licensed area (P0503-01), Cloncreen became available for rehabilitation in 2018. Rehabilitation is expected to start at this bog in 2019. Bord na Móna have obtained consent for the construction of a windfarm on this bog in 2017, although construction is not likely to take place for several years. It is expected that part of the rehabilitation of the site will take place in association with the construction of the windfarm. Ongoing monitoring of cutaway sites within the Allen Bog Group was undertaken with Lisclogher East re-surveyed in 2018. The surveys comprised of baseline walkover surveys to identify and map pioneer and established habitats on the cutaway and to assess the condition of raised bog remnants along bog margins.

A small re-wetting trial was set up at Lodge Bog (34 ha), in association with the Irish Peatland Conservation Council (IPCC). The IPCC own an area of remnant raised bog called Lodge Bog. BnM decided to re-wet an area of cutaway adjacent to this high bog remnant to support the conservation objectives of the IPCC for the high bog area. These include raised bog restoration (of the high bog area) and conservation of breeding Curlew, which use this area. This re-wetting has been very successful in creating new pioneer cutaway wetland habitat and in helping natural colonisation in this area. There is ongoing consultation with the IPCC regarding this trial. Kildare Birdwatch Ireland are also monitoring this site. Some water level maintenance was carried out in 2018.

Lodge Bog was also used for a *Sphagnum* inoculation trial using a product called BeadaMoss. BeadaMoss is a product that acts as a small *Sphagnum* moss 'seed' and is used in peatland rehabilitation in the UK. A small area (0.5 ha) of re-wetted cutaway was spread with BeadaMoss to investigate if this product had potential to help establish *Sphagnum* moss on the cutaway. This trial is in the early stages and no definitive results are expected for several years. There was ongoing monitoring of this trial in 2018.

Active rehabilitation work in Cavemount bog is ongoing. Drain-blocking started on the western side in 2018. An overflow pipe was constructed in 2017 to manage the maximum winter water levels on the eastern side. Some ground works were also carried out with a bulldozer to help stabilise a small section of the headland and to block field drains. This is a phased rehabilitation programme and will be completed over several years. Cavemount is developing as a cutaway wetland and is attracting nationally important wintering and breeding bird species. This cutaway wetland will continue to be managed to enhance its biodiversity value. Cavemount has been selected as a demonstration site for the CAREPEAT INTERREG project. Some rehabilitation was carried out in Clonsast North, Clonsast and Derrylea in 2018. Targeted drain blocking was carried out in Clonsast North and Clonsast to help re-wet cutaway. Bog restoration was carried out on remnant drained high bog along the southern margin of Derrylea.

Bog restoration was carried out on a bog remnant (16 ha) on Glashabaun North in Dec 2018. This area is adjacent to Long Derries SAC.

A Greenhouse Gas (GHG) flux tower has been constructed in Lullymore in association with several academic institutions (UCC, WIT, TCD, UCD), and is now operational. This flux tower is used to measure and model gas fluxes (Carbon Dioxide and Methane) from the surrounding cutaway peatland habitats (wetland and Birch Woodland). Flux Towers are a key tool in Climate Change research and are used to measure and model GHG emission factors from different habitats. This research will establish if cutaway at Lullymore (Birch woodland mosaic) has potential to develop as a Carbon sink or source, and will help inform peatland rehabilitation management to re-create GHG sinks in the cutaway. This is a long-term academic research project.

Draft rehabilitation plans for the Allen 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.

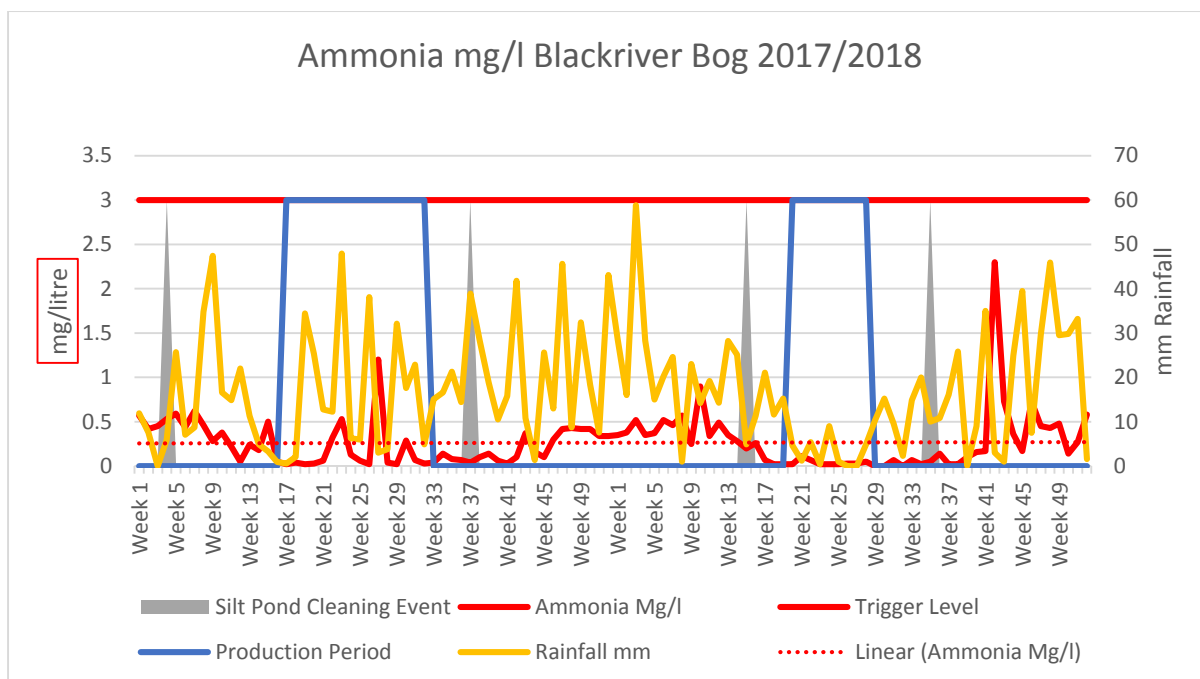
The new Biodiversity Action Plan (2016-2021) was launched in 2016 with the annual Biodiversity Action Plan review day being held in May 2018. This included an update on the progress of this plan, bog restoration and cutaway rehabilitation for a wide range on statutory and non-statutory consultees including 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/>

As required by condition 10.2 *Cutaway Bog Rehabilitation Plans*, draft peatland rehabilitation plans for all the individual bog units were submitted to the agency in 2013, reviewed and amended in 2015 and re-submitted to the agency in 2015. All draft rehabilitation plans have been reviewed in 2017. These reviewed and amended plans will be re-submitted to the agency in due course.

Organic certification was sought for the majority of the Bord na Móna property with the aim of using some areas for the cultivation of plants for use in herbal medicine, this project is ongoing.

Bord na Mona Allen PO503-01												
Quarterly Grab 2018												
X	Y	Bog	SW	Monitoring	Sample Date	pH	SS	TS	Ammonia	TP	COD	Colour
248527.2	224119.1	Mountlucas	SW-11A	Q1 18	21/03/2018	7.9	5	370	1.1	0.05	35	70
247623.23	225441.21	Clonad	SW-12	Q1 18	21/03/2018	7.4	5	230	0.54	0.08	69	163
245572.38	225495.02	Clonad	SW-12A	Q1 18	21/03/2018	7.8	5	330	0.85	0.05	37	66
245814.66	223083.89	Clonad	SW-13	Q1 18	21/03/2018	7.3	5	174	1	0.05	40	88
250869.07	219763.05	Ballykeane	SW-14	Q1 18	22/02/2018	7.7	5	416	0.46	0.05	78	140
250117.79	219970.86	Ballykeane	SW-15	Q1 18	22/02/2018	7.5	5	278	1.8	0.05	63	121
249524.55	220230.29	Ballykeane	SW-16	Q1 18	22/02/2018	7.6	5	432	0.33	0.05	57	72
251030.51	221700	Ballykeane	SW-17	Q1 18	21/03/2018	7.9	5	122	0.39	0.05	68	183
250247.9	219855.73	Ballykeane	SW-18	Q1 18	22/02/2018	7.5	5	248	2.4	0.05	70	151
253272.1	225558.7	Mountlucas	SW-19	Q1 18	21/03/2018	7.8	5	304	0.68	0.05	61	122
259705.78	214693.84	Derrylea	SW-43	Q1 18	22/02/2018	7.6	5	246	1.3	0.05	89	260
255326.91	214636.24	Derrylea	SW-43A	Q1 18	22/02/2018	7.3	5	456	0.82	0.05	100	176
240694.98	230298.04	Daingean Derries	SW-1	Q2 18	30/05/2018	7.8	13	328	0.02	0.13	82	103
239594.68	230408.21	Daingean Derries	SW-2	Q2 18	30/05/2018	7.5	5	378	1.7	0.05	52	322
238801.4	230901.25	Daingean Derries	SW-3	Q2 18	30/05/2018	5.9	14	156	0.02	0.33	116	482
238933.48	231178.52	Daingean Derries	SW-4	Q2 18	30/05/2018	6.4	5	138	0.28	0.12	101	362
239107.6	231601.27	Daingean Derries	SW-5	Q2 18	30/05/2018	7.1	5	172	0.1	0.08	110	295
239491.98	231872.83	Daingean Derries	SW-6	Q2 18	30/05/2018	7.2	9	456	0.15	0.05	27	39
240411.24	231853.09	Daingean Derries	SW-7	Q2 18	30/05/2018	7.4	5	348	0.75	0.05	89	257
240239.99	231828.83	Daingean Derries	SW-7A	Q2 18	30/05/2018	7.4	6	502	0.86	0.05	42	103
243969.34	228585.84	Rathdrum	SW-8	Q2 18	30/05/2018	7.6	7	538	0.15	0.1	34	52
241227.37	229904.04	Rathdrum	SW-9	Q2 18	30/05/2018	7.9	5	454	0.17	0.05	55	92
241835.4	230389.25	Rathdrum	SW-9A	Q2 18	30/05/2018	7.7	5	493	0.02	0.05	15	49
243801.34	228449.41	Rathdrum	SW-10	Q2 18	30/05/2018	7.8	8	324	0.02	0.05	68	166
243109.6	227634.77	Rathdrum	SW-10A	Q3 18	12/09/2018	7.1	6	264	0.02	0.06	85	174
254333.53	229715.7	Esker	SW-24	Q3 18	12/09/2018	7.6	52	276	0.02	0.05	49	86
254066.03	229231.46	Esker	SW-25	Q3 18	12/09/2018	7.1	52	222	0.83	0.11	87	164
255848.09	228220.5	Esker	SW-26	Q3 18	12/09/2018	7.3	5	166	4.6	0.06	86	351
255811.14	228181.42	Esker	SW-27	Q3 18	12/09/2018	7.5	6	296	0.53	0.06	37	76
256098.51	227480.46	Esker	SW-28	Q3 18	12/09/2018	7.6	5	316	0.1	0.05	39	100
253610.03	227876.29	Esker	SW-29	Q3 18	12/09/2018	8.2	5	231	5.6	0.05	159	446
254079.86	227734.11	Esker	SW29-A	Q3 18	12/09/2018	7.6	5	242	5	0.1	116	355
245107	211862.12	Garrymore	SW-39	Q3 18	12/09/2018	7.7	5	266	3.9	0.08	92	217
243424.84	211640.12	Garrymore	SW-39A	Q3 18	12/09/2018	7.8	5	304	0.02	0.05	76	128
244906.14	212161.63	Garrymore	SW-40	Q3 18	12/09/2018	7.5	5	210	2	0.05	140	388
244754.45	212504.25	Garrymore	SW-41	Q3 18	12/09/2018	7.1	39	272	2.4	0.1	135	194
255866.18	225413.14	Ballycon	SW-30	Q4 18	08/10/2018	7.8	5	374	0.31	0.05	54	40
258120.18	224725.27	Cloncreen	SW-32	Q4 18	08/10/2018	7.8	5	234	0.06	0.05	72	80
257161.38	225368.56	Cloncreen	SW-33	Q4 18	08/10/2018	7.7	5	422	0.05	0.05	33	124
256186.23	227016.03	Cloncreen	SW-34	Q4 18	08/10/2018	7.7	5	394	0.13	0.05	35	107
260552.28	227277.74	Cloncreen	SW-35	Q4 18	08/10/2018	7.6	5	438	0.4	0.05	61	60
260597	226777.19	Cloncreen	SW-37	Q4 18	08/10/2018	7.9	5	440	0.06	0.05	31	81
260756.49	225793.84	Cloncreen	SW-37A	Q4 18	08/10/2018	7.7	5	380	0.25	0.05	21	26
To be confirmed	To be confirmed	Ballykilleen	SW-35A	Q4 18	08/10/2018	7.6	5	178	1	0.05	146	260
To be confirmed	To be confirmed	Codd Sth	SW-45A	Q4 18	09/10/2018	7.7	5	248	0.28	0.05	56	145
251754.7	229410.12	Cavemount	SW-20	Q4 18	09/10/2018	7.8	5	298	0.02	0.05	85	325
251340.44	229884.3	Cavemount	SW-22	Q4 18	09/10/2018	7.4	5	252	0.08	0.05	73	270
251274.17	230209.75	Cavemount	SW-22A	Q4 18	09/10/2018	7.6	5	272	0.16	0.05	75	89

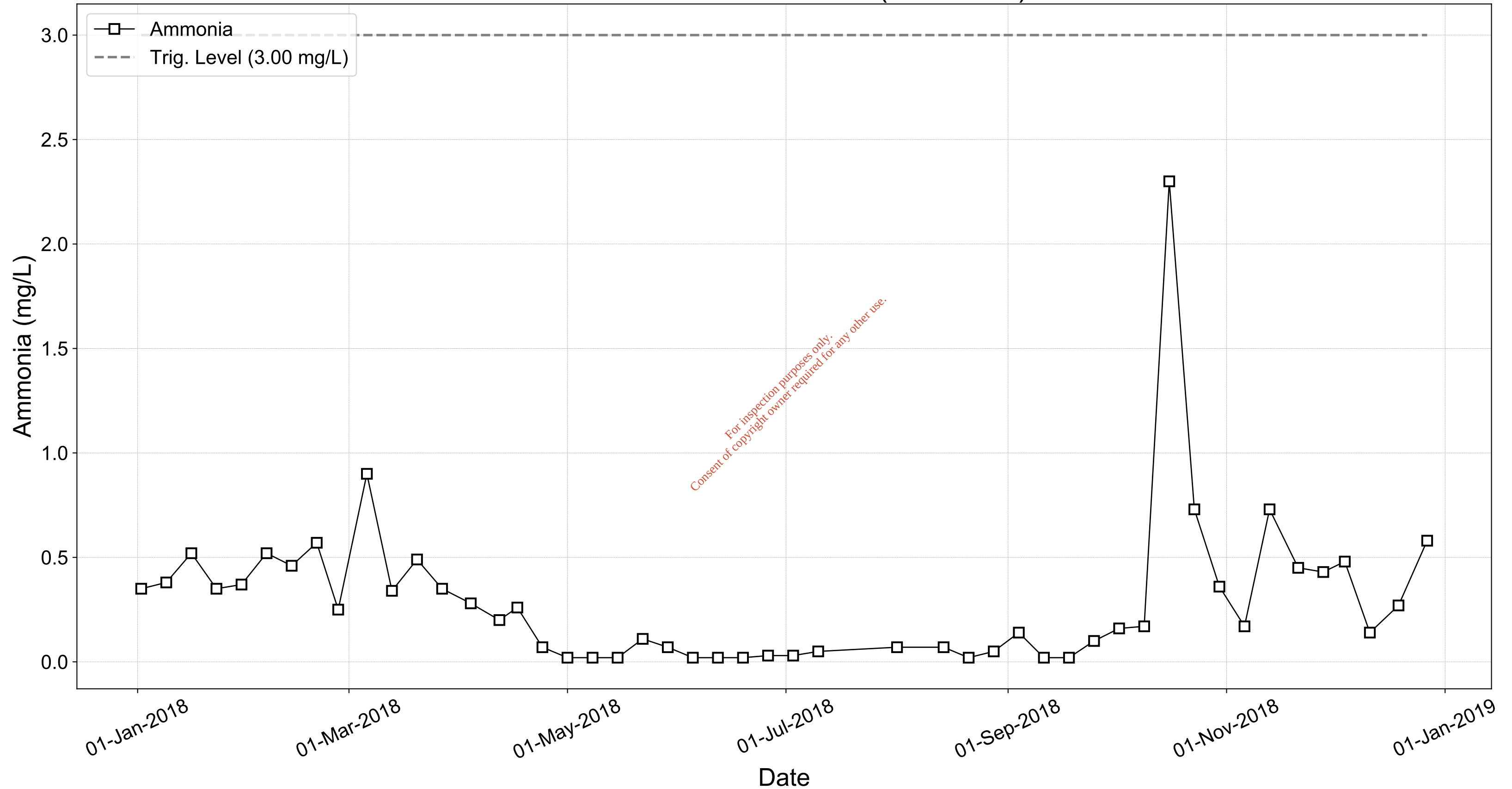


Blackriver bog is an active fuel peat production bog with the composite sampler located here during 2017 and 2018. The composite sampler takes a flow proportional composite sample over a 24 hour period. The sampler had 5.0% downtime during the period and returned 49 weekly ammonia results during the period of this 2018 AER. The ammonia trigger level of 3.0mg/l, as agreed with the Agency, was not exceeded during the period. The results above, over the two years show concentrations trending flat as peat extraction continues and this is in-line with the flat or downwards trends submitted to the EPA in 2013 as required by condition 6.14. The sampler is 2 years at this location covering two seasonal production seasons so the trending from 2019 will better inform this current trend from 2018.

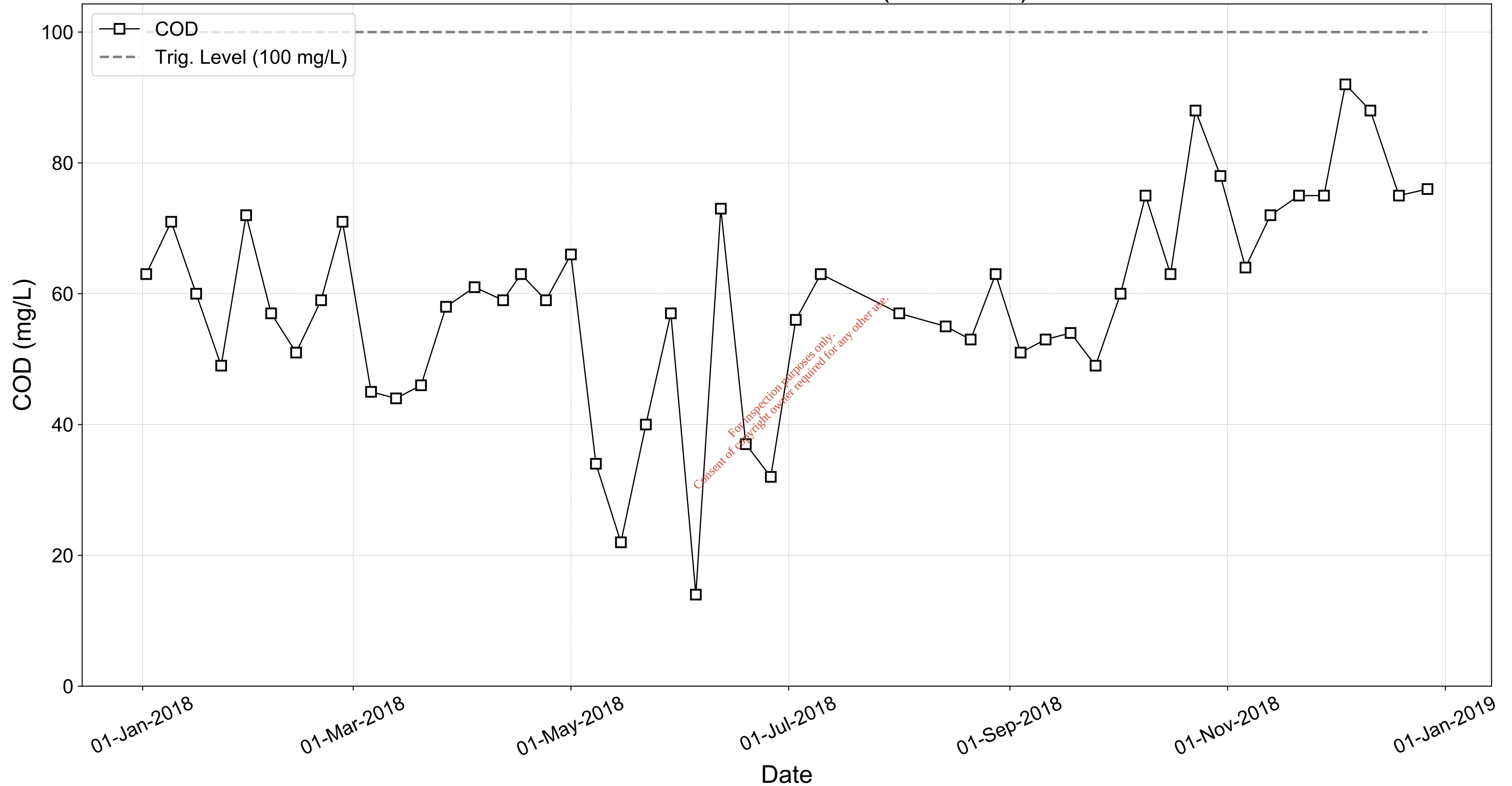
There is no obvious link between the summer production, winter maintenance, or silt pond maintenance events on the concentration of Ammonia discharging from this peatland. The only link expected would be that related to rainfall events, seasonal weather patterns and the subsequent surface water runoff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

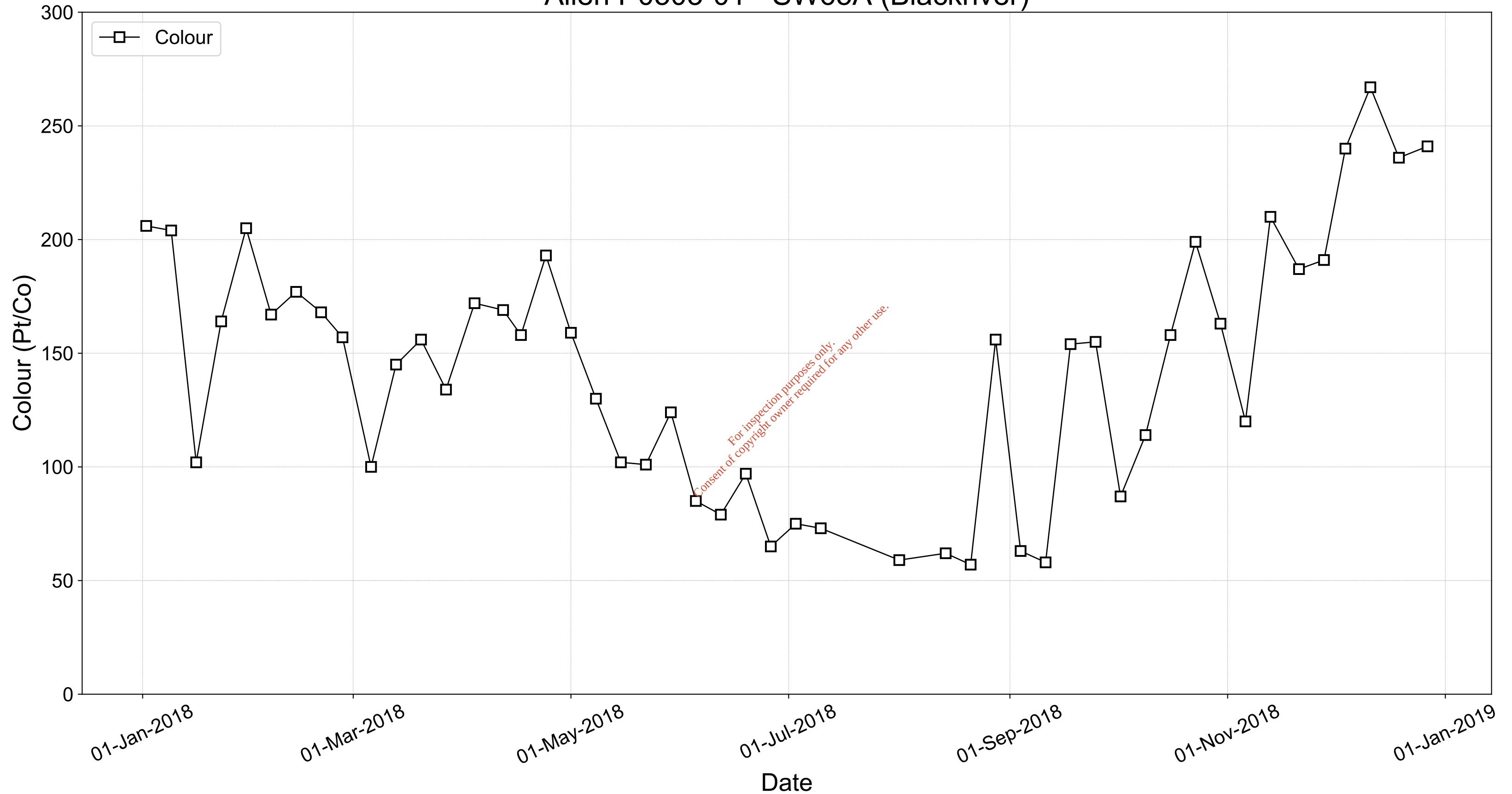
Allen P0503-01 - SW65A (Blackriver)



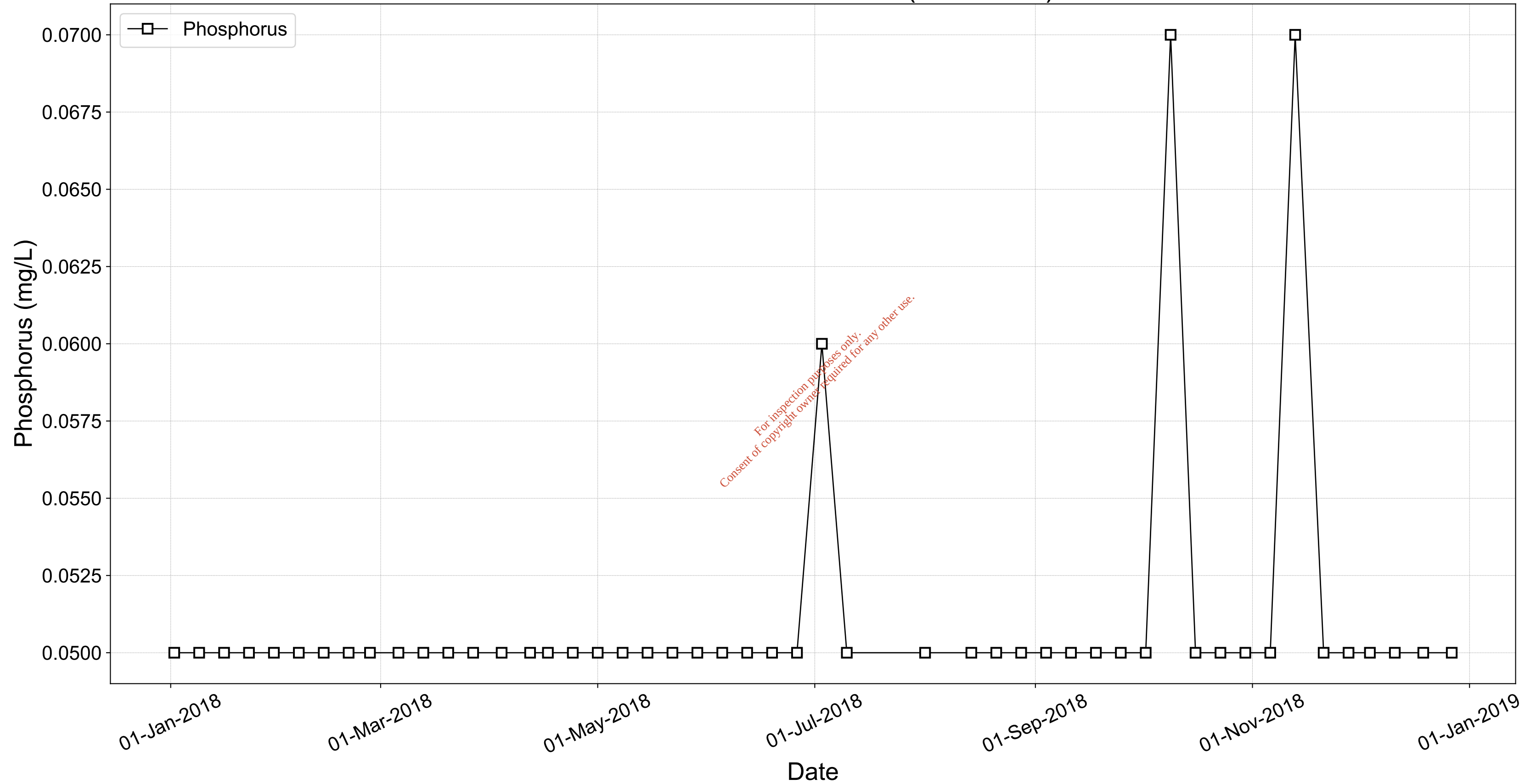
Allen P0503-01 - SW65A (Blackriver)



Allen P0503-01 - SW65A (Blackriver)

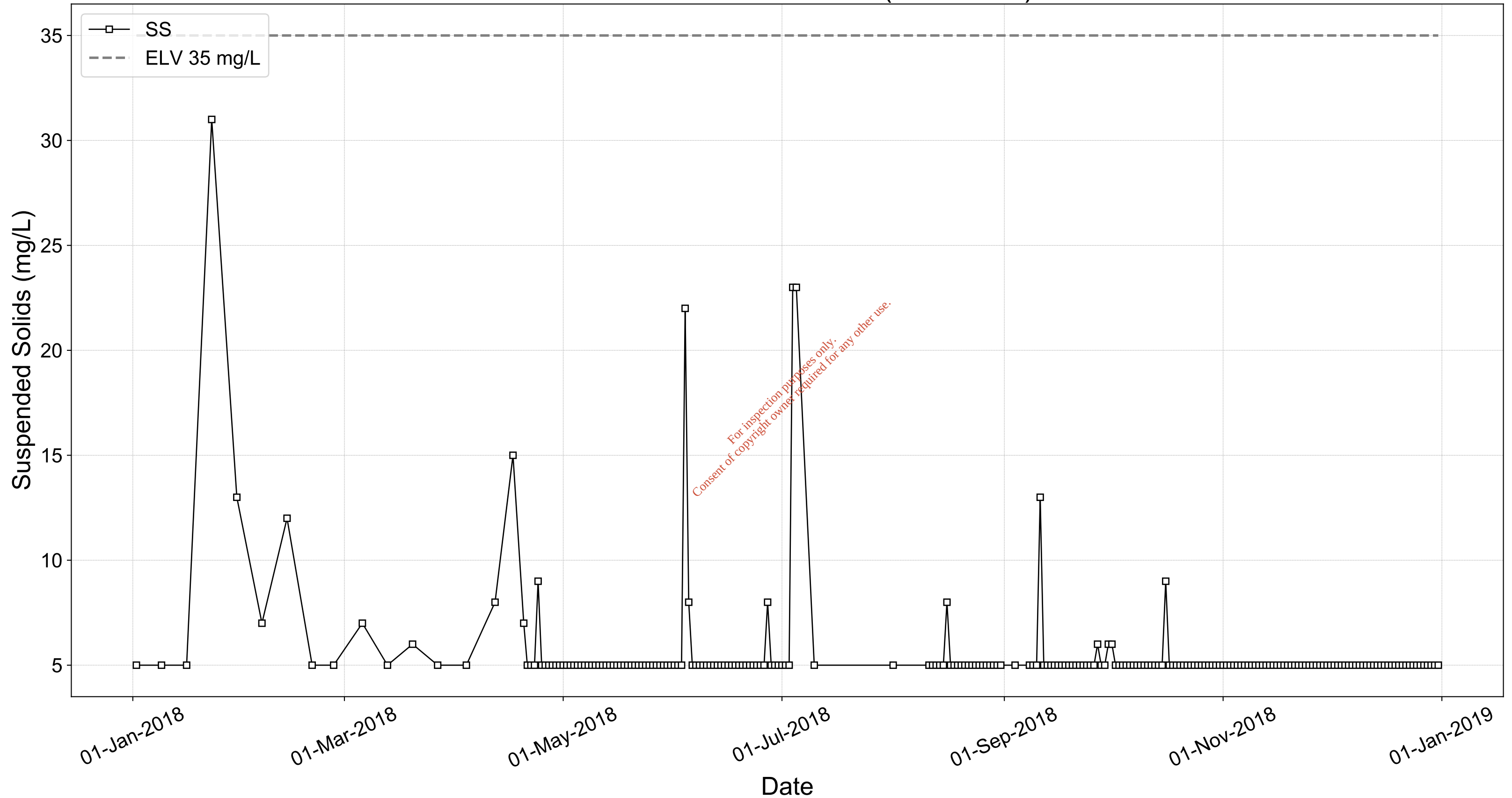


Allen P0503-01 - SW65A (Blackriver)

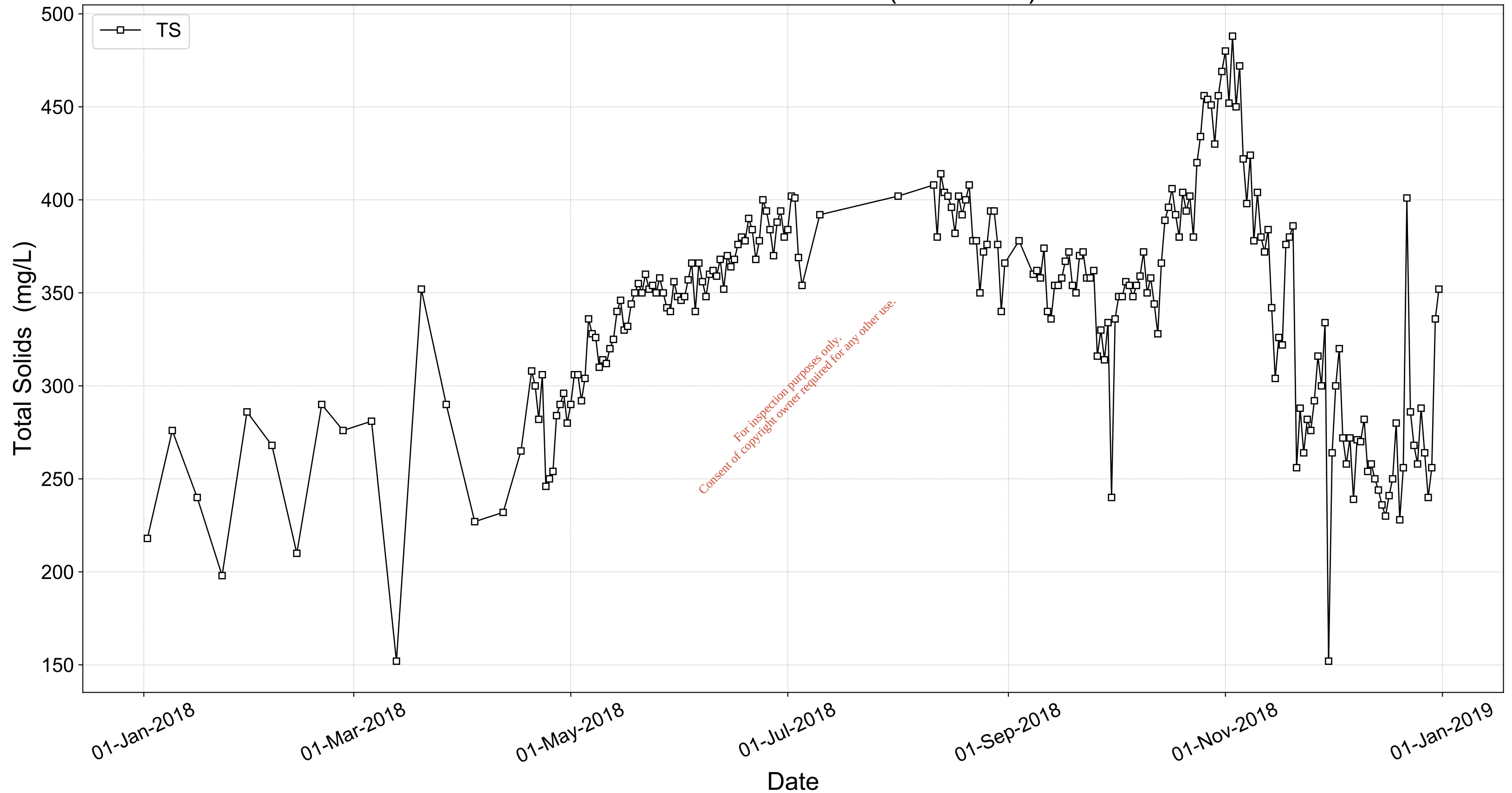


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Allen P0503-01 - SW65A (Blackriver)

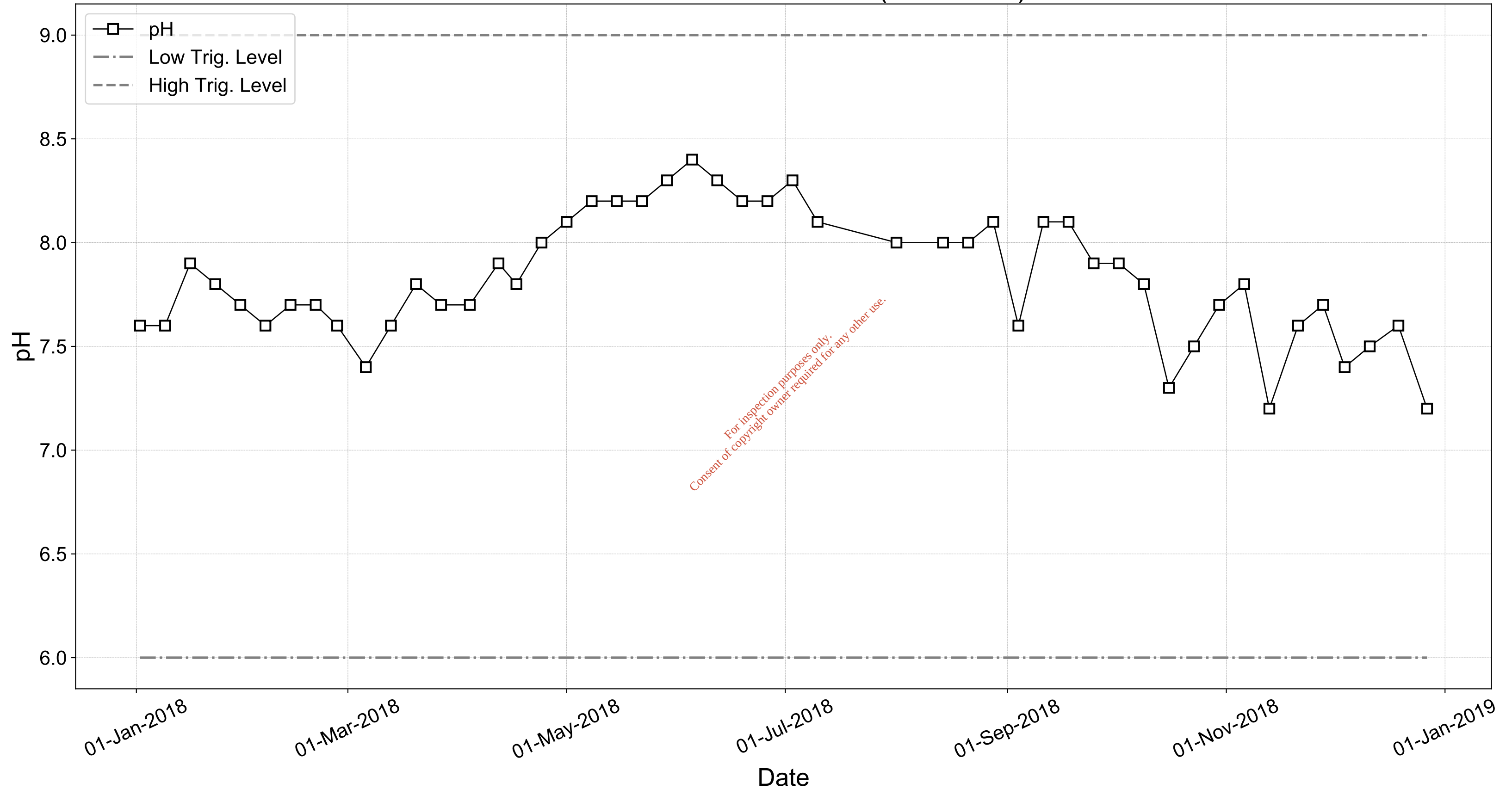


Allen P0503-01 - SW65A (Blackriver)



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Allen P0503-01 - SW65A (Blackriver)



Yard Discharge Results 2018**Licence: P0503-01****Works: Allen**

Month	B/Dermot SWE 1 COD	B/Dermot SWE 2 COD	Clonsast SWE 1 COD	Ballycon SWE1 COD	Power Station SWE1 COD	Trigger Level
Jan	81	74	37	14	83	100
Feb	108	68	98	21	69	100
Mar	73	65	35	19	51	100
Apr	72	62	53	18	60	100
May	40	36	15	10	14	100
June	0	0	0	0	0	100
July	0	0	0	0	0	100
Aug	0	0	0	0	0	100
Sep	0	81	27	36	48	100
Oct	77	72	37	21	91	100
Nov	68	62	53	46	71	100
Dec	44	29	34	30	71	100

0: No Flow On Day Of Sampling

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Extractive Waste Management Plan Implementation AER Update.

March 2019.

IPC Licence P0503-01.

1.0 Extractive Wastes.

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

- Silt Pond excavations and maintenance
- Power Station Screenings
- Bog Timbers

There has been no change to the type and nature of these three waste streams and no new waste streams added to this list. These waste 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.

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.
- Peat screenings are a factor of the screening process with Edenderry Power Ltd as these oversized bog timbers, stones and peat cannot be utilised in the power station.
- 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.
- The factory screenings are permitted to be returned to the bog as they were naturally occurring materials from the bog, and as such do not require any treatment to serve this purpose.
- 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.

- Given the nature of these screenings as outlined in the EWMP, there is no further use identified, other than the permitted reuse of these natural materials in areas that required improvement for trafficking purposes.
- 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.
- Schedule 3 (ii) of this IPC Licence permits the disposal of peat screenings to the bog at designated locations agreed under Condition 7.4 and this continues to be the case.
- 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.

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Consent of copyright owner required for any other use.

Facility Information Summary

AER Reporting Year
 Licence Register Number
 Name of site
 Site Location
 NACE Code
 Class/Classes of Activity
 National Grid Reference (6E, 6 N)

2017
P0503-01
Bord na Mona Allen
Derrygreenagh, Rochfortbridge, Co Westmeath
0892
1.4
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 825,839 tonnes which was up on the 2016 figure. Infrastructurally, there was no bog development. The quarterly grab sampling was 100% compliant, as was the continuous composite sampling. There were two environmental complaints received during the reporting period, both related to dust and were resolved. In relation to silt pond cleaning, 100% of ponds received two cleanings, inspections dictating cleaning schedules. Bord na Mona liaised with Offaly and Kildare Co. Councils to conduct a litter pick and put in measures to reduce littering in litter hot spots across the licence. Decommissioning and Rehabilitation works are described in an attachment. The composite sampler experienced some technical difficulties which impacted on the collection of flow data. A decision was therefore made to send the sampler away to the manufacturer for overhaul.

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.

<i>E. Mulholland</i>	<i>8-3-18</i>
Signature Group/Facility manager (or nominated, suitably qualified and experienced deputy)	Date

AIR-summary template		Lic No:	P0503-01	Year	2017
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Answer all questions and complete all tables where relevant

Additional information	
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	
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	Reported to the Agency ref INCI012523.
	Yes	
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
	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

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER)				Lic No:	P0503-01	Year	2017
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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 only need to complete table W1 and or W2 for storm water analysis and visual inspections

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.

Additional information	
Yes	The continuous monitoring sampler was relocated at the beginning of the reporting period. The sampler experienced technical difficulties which inhibited the collection of flow data and subsequent annual loading calculations. It was therefore decided to present the sampling results in graphical form as an attachment.
Yes	Monthly COD and Yard Run Off

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)

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

No	Additional information
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/ Substance ^{Note 1}	Type of sample	Frequency of monitoring	Averaging period	ELV or trigger values in licence or any revision thereof ^{Note 2}	Licence Compliance criteria	Measured value	Unit of measurement	Compliant with licence	Method of analysis	Procedural reference source	Procedural reference standard number	Annual mass load (kg)	Comments
	SELECT	SELECT	SELECT		SELECT		SELECT		SELECT	SELECT	SELECT	SELECT			

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?

Yes

Additional Information
See note above

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 118 days over 365 days

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

Yes

Annual calibration schedule and trouble shooting service.

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
										0	

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:	P0503-01	Year	2017
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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 "Chemstore"
- 3 type units and mobile bunds
- 4 How many bunds are on site?

Yes	One bund requiring an integrity test in 2017 passed. One bund was decommissioned following a 2016 retest failure.
Other (2 Yearly)	
Yes	
4	Two bunds due for testing in 2018.
4	
13	
No	
0	
0	
0	
SELECT	
SELECT	
SELECT	

- 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)
EPL Main Bund 503-37-05	reinforced concrete		Gas Oil	132440 litres	44000 litres	Hydraulic test			Yes	Pass		NA	NA	NA
Clonsast Heating Bund 503-37-07	reinforced concrete		Gas Oil	9288 litres	5500 litres	Hydraulic test			Yes	Pass		NA	NA	NA
Ballycon Main Bund 503-37-09	reinforced concrete		Gas Oil	346500 litres	315000 litres	Hydraulic test			Yes	Pass		NA	NA	NA
Ballydermot Main Bund 503-37-10	reinforced concrete		Gas Oil	143208 litres	49500 litres	Hydraulic test			Yes	Fail	The outer concrete wall was cracked. A contractor was appointed to repair this and is in the process of doing so.	Repair the bund wall	14/06/2017	Other (please describe) Contractor repaired the wall and a retest was done. The bund failed again. It was decided to decommission the bund.

* 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

- 15 line with BS8007/EPA Guidance?

- 16 Are channels/transfer systems to remote containment systems tested?

- 17 Are channels/transfer systems compliant in both integrity and available volume?

[bundings and storage guidelines](#)

Yes	
No	
No	

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

- 1 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 pipe lines that require testing
Other (Every 3 Years)	

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: P0503-01	Year 2017
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		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 Domestic Use Only	
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.	NA	Please enter interpretation of data here
5	Is the contamination related to operations at the facility (either current and/or historic)	NA	
6	Have actions been taken to address contamination issues?If yes please summarise remediation strategies proposed/undertaken for the site	NA	
7	Please specify the proposed time frame for the remediation strategy	NA	
8	Is there a licence condition to carry out/update ELRA for the site?	NA	
9	Has any type of risk assesment been carried out for the site?	NA	
10	Has a Conceptual Site Model been developed for the site?	NA	
11	Have potential receptors been identified on and off site?	NA	
12	Is there evidence that contamination is migrating offsite?	NA	

Groundwater/Soil monitoring template

Lic No:

P0503-01

Year

2017

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

*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 \(IGV\)](#)

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:

P0503-01

Year

2017

[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	Internal budget provision
9	Closure plan review status	NA	Internal budget provision
10	Financial Provision for Closure status	NA	Internal budget provision
11	Financial Provision for Closure - amount of cover	NA	Internal budget provision
12	Financial Provision for Closure - type	NA	Internal budget provision
13	Financial provision for Closure expiry date	NA	

Environmental Management Programme/Continuous Improvement Programme template			Lic No:	P0503-01	Year	2017
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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	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.	90	In total 73 Personnel received training in 2017. There were 12 hydraulic harrows deployed across the licence area. Headland peat was collected at all locations and returned as part of overall production figures.	Individual	Improved Environmental Management Practices
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	90	Monthly waste reports are returned for records/filing and waste streams are segregated on site to maximise recycling potential. In an attempt to curtail illegal dumping on Bord na Mona remain in contact with Laois, Offaly and Kildare Co Councils.	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 446.54 tonnes 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	90	The monthly consumption of energy was 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.	90	In total 73 Personnel received training in 2017. There were 12 hydraulic harrows deployed across the licence area and headland peat was collected and returned as part of overall production figures.	Individual	Improved Environmental Management Practices

Noise monitoring summary report	Lic No: P0503-01	Year 2017
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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

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](#)
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:	P0503-01	Year	2017
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		Additional information	
1	When did the site carry out the most recent energy efficiency audit? Please list the recommendations in table 3 below	Oct-17	
2	Is the site a member of any accredited programmes for reducing energy usage/water conservation such as the SEAI programme linked to the right? If yes please list them in additional information	Yes	The site attained accreditation to the energy standard 50001
3	Where Fuel Oil is used in boilers on site is the sulphur content compliant with licence conditions? Please state percentage in additional information	NA	

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)	13923.203	13121.695		
Total Energy Generated (MWHrs)				
Total Renewable Energy Generated (MWHrs)				
Electricity Consumption (MWHrs)	1315	900.39	NA	NA
Fossil Fuels Consumption:				
Heavy Fuel Oil (m3)				
Light Fuel Oil (m3)	1199.243	1202.766		
Natural gas (m3)				
Coal/Solid fuel (metric tonnes)				
Peat (metric tonnes)	0			NA
Renewable Biomass				
Renewable energy generated on site				

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

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

Table R2 Water usage on site					Water Emissions	Water Consumption	
Water use	Water extracted Previous year m3/yr.	Water extracted Current year m3/yr.	Production +/- % compared to previous reporting year**	Energy Consumption +/- % vs overall site production*	Volume Discharged back to environment(m ³ /yr):	Volume used i.e not discharged to environment e.g. released as steam m3/yr	Unaccounted for Water:
Groundwater							
Surface water							
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:	P0503-01	Year	2017
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Table R3 Waste Stream Summary					
	Total	Landfill	Incineration	Recycled	Other
Hazardous (Tonnes)	35.91	0	2.79	33.12	0
Non-Hazardous (Tonnes)	2439.93	54.29	0	850.72	1534.92

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:	P0503-01	Year	2017
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Complaints		Additional information
Have you received any environmental complaints in the current reporting year? If yes please complete summary details of complaints received on site in table 1 below	Yes	Two complaints received in relation to dust. The Agency were informed on both occasions

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
11/05/2017	Air	Dust nuisance	Complaint about dust nuisance from Cloncreen Bog	Personnel reminded of responsibilities and production stopped during windy weather	Complete	08/06/2017	Reported to the Agency ref LR029211 on 08/06/2017
04/09/2017	Air	Dust nuisance	Complaint about dust nuisance from Ballykeane Bog	Personnel reminded of responsibilities.	Complete	04/10/2017	Reported to the Agency ref LR031234 on 04/10/2017
	SELECT				SELECT		
Total complaints open at start of reporting year		0					
Total new complaints received during reporting year		2					
Total complaints closed during reporting year		2					
Balance of complaints end of reporting year		0					

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
25/04/2017	Fire	Timahoe South Bog	1. Minor	Air	Other (add details)	Spark from trespassing Motorbike	Normal activities	EPA INCI012024	New	Machinery deployed and fire extinguished	Area patrolled and boundary reinforced to prevent trespass.	Complete	26/04/2017	Medium
05/05/2017	Fire	Garryhinch Bog	1. Minor	Air	Other (add details)	Trespass	Normal activities	EPA INCI012064	New	Machinery deployed and fire extinguished	Area patrolled and boundary reinforced to prevent trespass.	Complete	06/05/2017	Medium
15/05/2017	Trigger level reached	Ballydermot SWE-1	1. Minor	Water	Other (add details)	Unknown, but sample taken after prolonged dry spell	Normal activities	EPA INCI012128	New	The outfall was checked	Outfall monitored	Complete	19/05/2017	Low
25/05/2017	Fire	Garryhinch Bog	1. Minor	Air	Other (add details)	Trespass	Normal activities	EPA INCI012160	New	Machinery deployed and fire extinguished	Area patrolled and boundary reinforced to prevent trespass.	Complete	26/05/2017	Medium
11/05/2017	Breach of ELV	Ballykeane Bog DM-03	1. Minor	Air	Other (add details)	Collection of headland peat.	Normal activities	EPA INCI012523	New	Employees reminded of environmental responsibilities	Collect headland peat in more favourable weather conditions.	Complete	09/06/2017	Medium
28/06/2017	Trigger level reached	Esker Bog SW-29	1. Minor	Water	Other (add details)	Unknown.	Normal activities	EPA INCI012524	New	The outfall was checked	Outfall monitored	Complete	20/07/2017	Medium
28/06/2017	Trigger level reached	Esker Bog SW-26	1. Minor	Water	Other (add details)	Unknown.	Normal activities	EPA INCI012529	New	The outfall was checked	Outfall monitored	Complete	20/07/2017	Medium
28/06/2017	Trigger level reached	Esker Bog SW-29A	1. Minor	Water	Other (add details)	Unknown.	Normal activities	EPA INCI012530	New	The outfall was checked	Outfall monitored	Complete	20/07/2017	Medium
27/10/2017	Trigger level reached	Power Station SWE-1	1. Minor	Water	Other (add details)	Unknown.	Normal activities	EPA INCI013386	New	The outfall was checked	Outfall monitored	Complete	21/11/2017	Low
15/11/2017	Trigger level reached	Ticknevin Bog SW-68	1. Minor	Water	Other (add details)	Unknown.	Normal activities	EPA INCI013444	New	The outfall was checked	Outfall monitored	Complete	29/11/2017	Low
Total number of incidents current year	10													
Total number of incidents previous year	4													
% reduction/ increase	150.00%													

WASTE SUMMARY	Lic No:	P0503-01	Year	2017
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Table 4 Environmental monitoring-landfill only [Landfill Manual-Monitoring Standards](#)

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

→ 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	

Allen Decommissioning and Rehabilitation AER Overview 2017.

Within the Allen licensed area (P0503-01), there were no entire bog units available for rehabilitation in 2017.

Active rehabilitation work was carried out in one area with further hydrological management maintenance work carried out in Lullymore as part of the long term rehabilitation of this site.

A small re-wetting trial was set up at Lodge Bog (34 ha), in association with the Irish Peatland Conservation Council (IPCC). The IPCC own an area of remnant raised bog called Lodge Bog. BnM decided to re-wet an area of cutaway adjacent to this high bog remnant to support the conservation objectives of the IPCC for the high bog area. These include raised bog restoration (of the high bog area) and conservation of breeding Curlew, which use this area. This re-wetting has been very successful in creating new pioneer cutaway wetland habitat and in helping natural colonisation in this area. There is ongoing consultation with the IPCC regarding this trial.

Lodge Bog was also used for a *Sphagnum* inoculation trial using a product called BeadaMoss. BeadaMoss is a product that acts as a small *Sphagnum* moss 'seed' and is used in peatland rehabilitation in the UK. A small area (0.5 ha) of re-wetted cutaway was spread with BeadaMoss to investigate if this product had potential to help establish *Sphagnum* moss on the cutaway. This trial is in the early stages and no definitive results are expected for several years.

A Greenhouse Gas (GHG) flux tower has been constructed in Lullymore in association with several academic institutions (UCC, WIT, TCD, UCD), and is now operational. This flux tower is used to measure and model gas fluxes (Carbon Dioxide and Methane) from the surrounding cutaway peatland habitats (wetland and Birch Woodland). Flux Towers are a key tool in Climate Change research and are used to measure and model GHG emission factors from different habitats. This research will establish if cutaway at Lullymore (Birch woodland mosaic) has potential to develop as a Carbon sink or source, and will help inform peatland rehabilitation management to re-create GHG sinks in the cutaway. This is a long-term academic research project.

Draft rehabilitation plans for the Allen 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.

The new Biodiversity Action Plan (2016-2021) was launched in 2016 with the annual Biodiversity Action Plan review day being held in February 2017. 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.

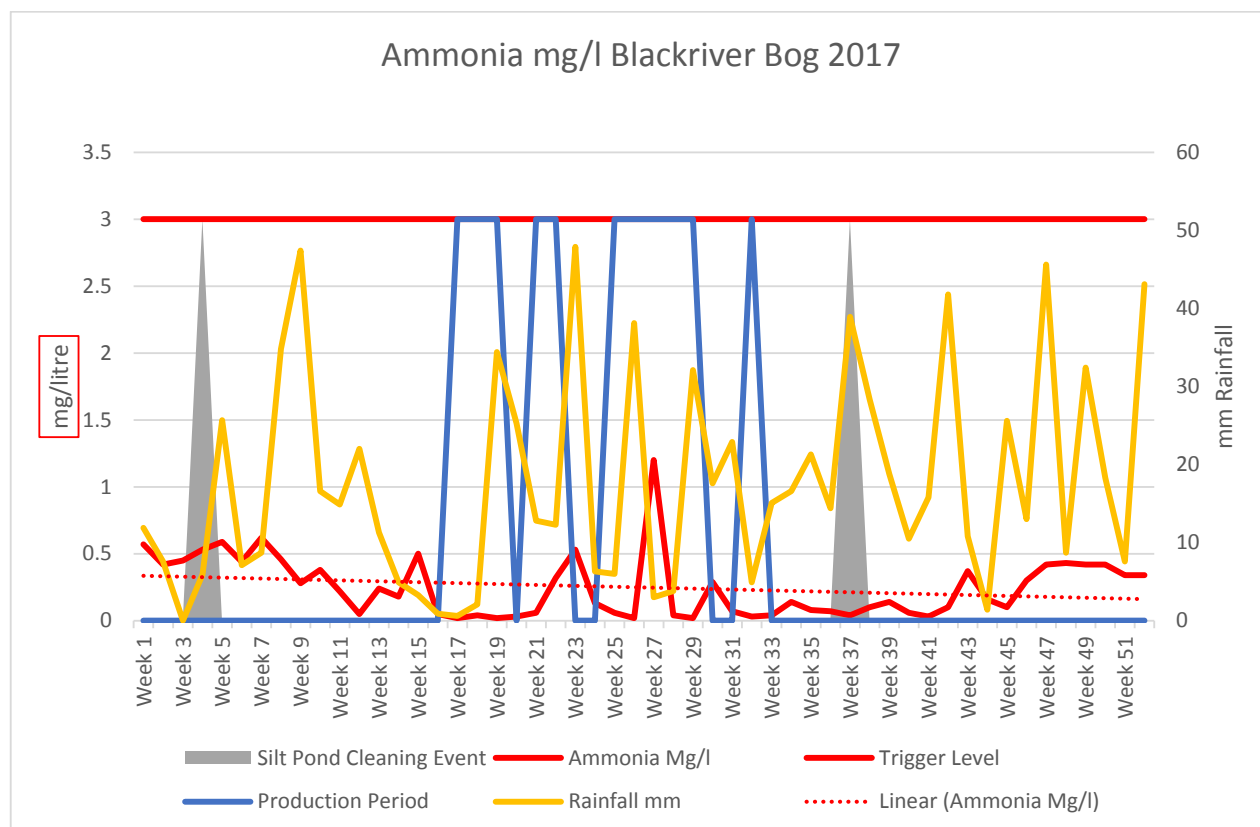
A copy of our Biodiversity Action Plan is available to view and download at <http://www.bordnamona.ie/our-company/biodiversity/>

As required by condition 10.2 *Cutaway Bog Rehabilitation Plans*, draft peatland rehabilitation plans for all the individual bog units were submitted to the agency in 2013, reviewed and amended in 2015 and re-submitted to the agency in 2015. All

draft rehabilitation plans have been reviewed in 2017. These reviewed and amended plans will be re-submitted to the agency in due course.

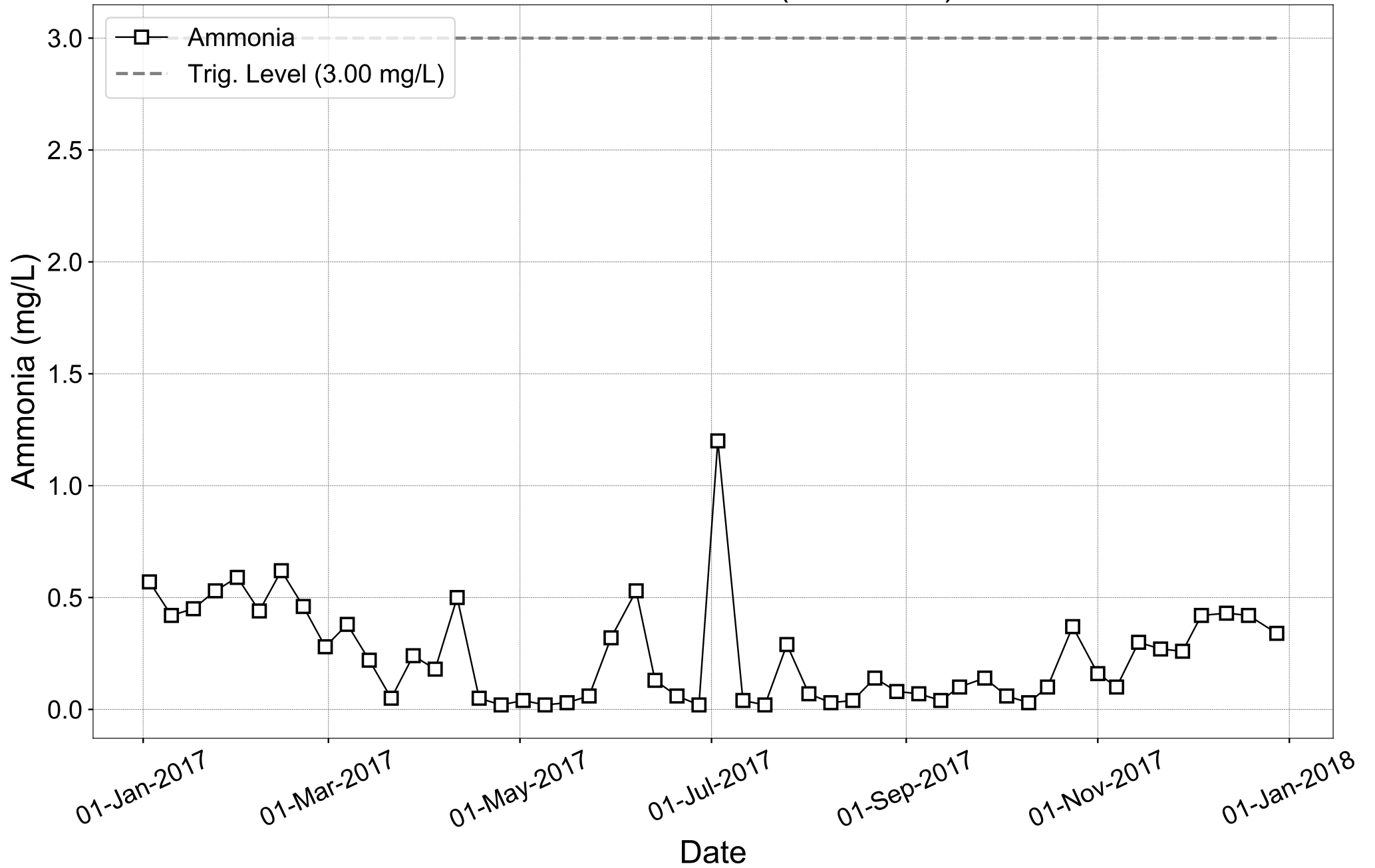
Bord na Mona Allen P0503-01

Quarterly Grab 2017																		
X	Y	Bog	SW	Monitoring	Status	Drainage	Upgrade Status	RBD	Receiving Water Quality	Sampled Date	pH	SS	TS	Ammonia	TP	COD	Colour	
250869.07	219763.05	Ballykeane	SW-14	Q1 17	Operational	Gravity	Complete	SERBD	Moderate	02/03/2017	7.8	8	255	1	0.05	62	147	
249524.55	220230.29	Ballykeane	SW-16	Q1 17	Operational	Gravity	Complete	SERBD	Moderate	02/03/2017	7.6	11	330	0.99	0.05	54	119	
251030.51	221700	Ballykeane	SW-17	Q1 17	Operational	Gravity	Complete	SERBD	Moderate	02/03/2017	7.9	5	176	0.13	0.05	68	169	
251754.7	229410.12	Cavemount	SW-20	Q1 17	Cutaway	Gravity	Complete	SERBD	Moderate	02/03/2017	8.1	5	260	0.07	0.08	56	132	
254333.53	229715.7	Esker	SW-24	Q1 17	Operational	Gravity	Complete	SERBD	Moderate	02/03/2017	7.4	6	130	0.47	0.05	79	242	
254066.03	229231.46	Esker	SW-25	Q1 17	Operational	Gravity	Complete	SERBD	Moderate	02/03/2017	6.6	8	84	0.49	0.05	81	244	
255848.09	228220.5	Esker	SW-26	Q2 17	Operational	Gravity	Complete	SERBD	Moderate	28/06/2017	7.2	5	172	4.3	0.05	112	325	
255811.14	228181.42	Esker	SW-27	Q2 17	Operational	Gravity	Complete	SERBD	Moderate	28/06/2017	7.6	5	298	0.9	0.05	59	131	
256098.51	227480.46	Esker	SW-28	Q2 17	Operational	Gravity	Complete	SERBD	Moderate	28/06/2017	7.5	5	306	1.6	0.05	81	160	
253610.03	227876.29	Esker	SW-29	Q2 17	Operational	Gravity	Complete	SERBD	Moderate	28/06/2017	7.2	15	230	2.3	0.05	126	338	
254079.86	227734.11	Esker	SW29-A	Q2 17	Operational	Gravity	Complete	SERBD	Moderate	28/06/2017	7.1	10	135	3.1	0.05	113	367	
255866.18	225413.14	Ballycon	SW-30	Q2 17	Cutaway	Gravity	Complete	SERBD	Moderate	28/06/2017	7.7	25	304	0.36	0.05	70	89	
269197.57	228032.68	Glashabaun South	SW-47	Q3 17	Operational	Gravity	Complete	SERBD	Poor	31/08/2017	7.7	9	328	0.14	0.05	43	89	
268823.95	228190.35	Glashabaun South	SW-48	Q3 17	Operational	Gravity	Complete	SERBD	Poor	31/08/2017	7.9	5	244	0.32	0.05	64	144	
269054.43	228057.26	Glashabaun South	SW-49	Q3 17	Operational	Gravity	Complete	SERBD	Poor	31/08/2017	8	5	260	0.17	0.05	64	142	
269278.18	227938.86	Glashabaun South	SW-50	Q3 17	Operational	Gravity	Complete	SERBD	Not Monitored	31/08/2017	7.8	10	334	0.13	0.05	58	133	
266471.63	226777.93	Glashabaun South	SW-51	Q3 17	Operational	Gravity	Complete	SERBD	Not Monitored	31/08/2017	7.9	5	308	0.06	0.05	57	125	
266530.75	226503.86	Glashabaun South	SW-52	Q3 17	Operational	Gravity	Complete	SERBD	Not Monitored	31/08/2017	7.9	5	318	0.09	0.05	54	112	
266677.4	226324.12	Glashabaun South	SW-53	Q3 17	Operational	Gravity	Complete	SERBD	Not Monitored	31/08/2017	7.9	5	318	0.09	0.05	59	125	
268454.98	225617.94	Lullybeg	SW-56	Q3 17	Cutaway	Gravity	Complete	SERBD	Poor	31/08/2017	7.6	7	214	0.58	0.05	70	162	
273261.1	224710.84	Lodge	SW-60	Q3 17	Cutaway	Gravity	Complete	SERBD	Poor	31/08/2017	8.1	8	270	0.19	0.05	58	168	
273158.15	224383.3	Lodge	SW-61	Q3 17	Cutaway	Gravity	Complete	SERBD	Poor	31/08/2017	8.1	6	238	0.2	0.05	63	202	
268001.63	223625.99	Barnaran	SW-62	Q3 17	Operational	Gravity	Complete	SERBD	Poor	31/08/2017	7.9	6	319	0.15	0.05	57	128	
265940.18	224925.96	Blackriver	SW-65	Q3 17	Operational	Gravity	Complete	SERBD	Poor	31/08/2017	8	5	330	0.18	0.05	57	111	
264507.34	223259.15	Ballydermot	SW-67A	Q3 17	Operational	Gravity	Complete	SERBD	Moderate	31/08/2017	7.9	5	294	0.42	0.05	54	99	
263592.36	226625.93	Codd South	SW-45	Q4 17	Operational	Gravity	Complete	SERBD	Moderate	15/11/2017	7.7	6	240	1.3	0.05	33	139	
265523.7	225264.93	Blackriver	SW-65A	Q4 17	Operational	Gravity	Complete	SERBD	Not Monitored	15/11/2017	7.7	7	292	0.31	0.05	78	205	
264457.64	225650.79	Codd South	SW-67	Q4 17	Operational	Pumped	Complete	SERBD	Moderate	15/11/2017	7.7	5	244	0.4	0.05	70	179	
266794.47	229663.32	Ticknevin	SW-68	Q4 17	Operational	Pumped	Complete	SERBD	Moderate	15/11/2017	7.3	11	186	2.9	0.05	108	242	
266266.45	229593.59	Ticknevin	SW-69	Q4 17	Operational	Gravity	Complete	SERBD	Moderate	15/11/2017	7.5	5	200	1.4	0.05	84	207	
265768.96	229932.59	Ticknevin	SW-70	Q4 17	Operational	Gravity	Complete	SERBD	Poor	15/11/2017	7.3	5	199	0.91	0.05	81	204	
265060.79	228192.45	Glashabaun North	SW-71	Q4 17	Operational	Pumped	Complete	SERBD	Poor	15/11/2017	7.6	5	240	0.99	0.05	77	201	
264299.21	227722	Codd North	SW-72	Q4 17	Operational	Gravity	Complete	SERBD	Poor	15/11/2017	7.6	5	256	0.66	0.05	70	205	
263602.31	227263.88	Sheridans	SW-73	Q4 17	Operational	Gravity	Complete	SERBD	Moderate	15/11/2017	6.6	5	150	1.4	0.05	87	312	
263712.36	226714.35	Codd North	SW-74	Q4 17	Operational	Gravity	Complete	SERBD	Moderate	15/11/2017	7.5	5	208	2.2	0.05	57	160	
263831.27	226569.76	Codd North	SW-75	Q4 17	Operational	Gravity	Complete	SERBD	Moderate	15/11/2017	7.5	5	252	3	0.05	68	139	
264471.44	226292.96	Codd North	SW-76	Q4 17	Operational	Gravity	Complete	SERBD	Moderate	15/11/2017	7.5	5	218	2.1	0.05	56	142	

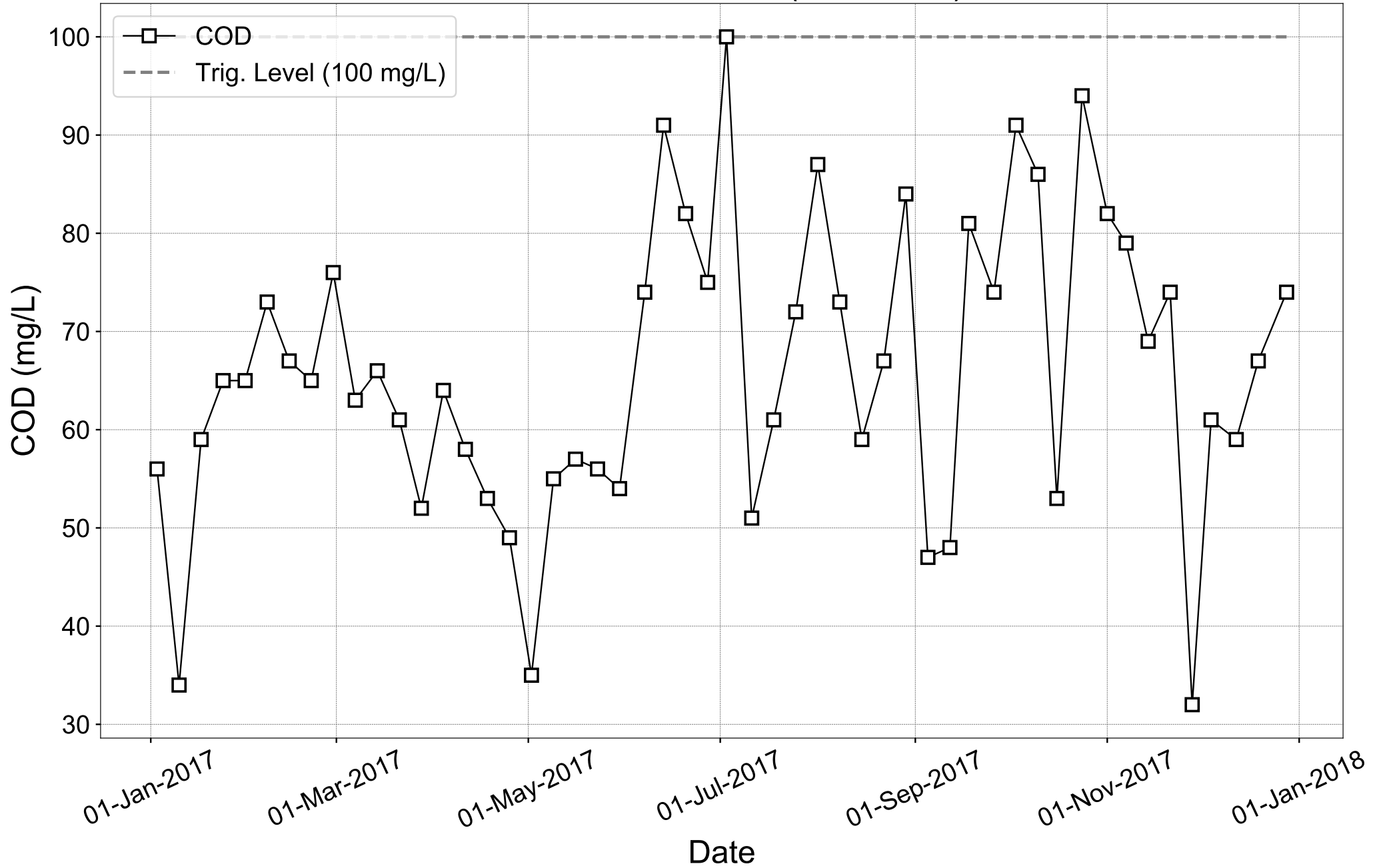


Blackriver bog is an active fuel peat production bog with the composite sampler located here in January 2017. The composite sampler takes a flow proportional composite sample over a 24 hour period. The sampler had 0% downtime during the period and returned 52 weekly ammonia results during the period of this 2017 AER. The ammonia trigger level of 3.0mg/l, as agreed with the Agency, was not exceeded during the period. The results above show concentrations trending downwards as peat extraction continues and this is in-line with the downwards trends submitted to the EPA in 2013 as required by condition 6.14. However the sampler is only 1 year at this location covering once seasonal production season so the trending from 2018 will better inform this current trend from 2017. 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 surface water runoff and associated ammonia concentrations.

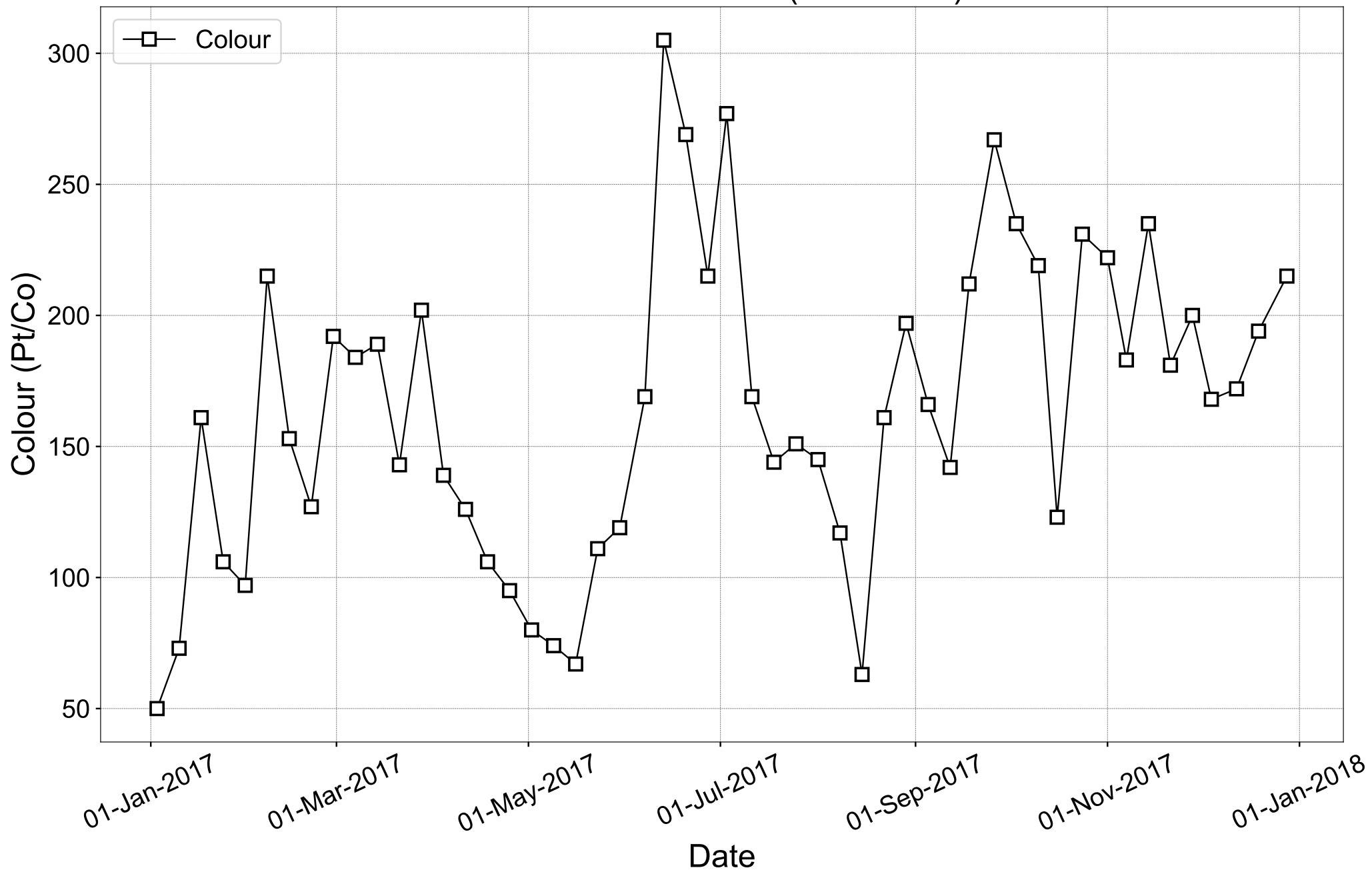
Allen 503 - SW65A (Blackriver)



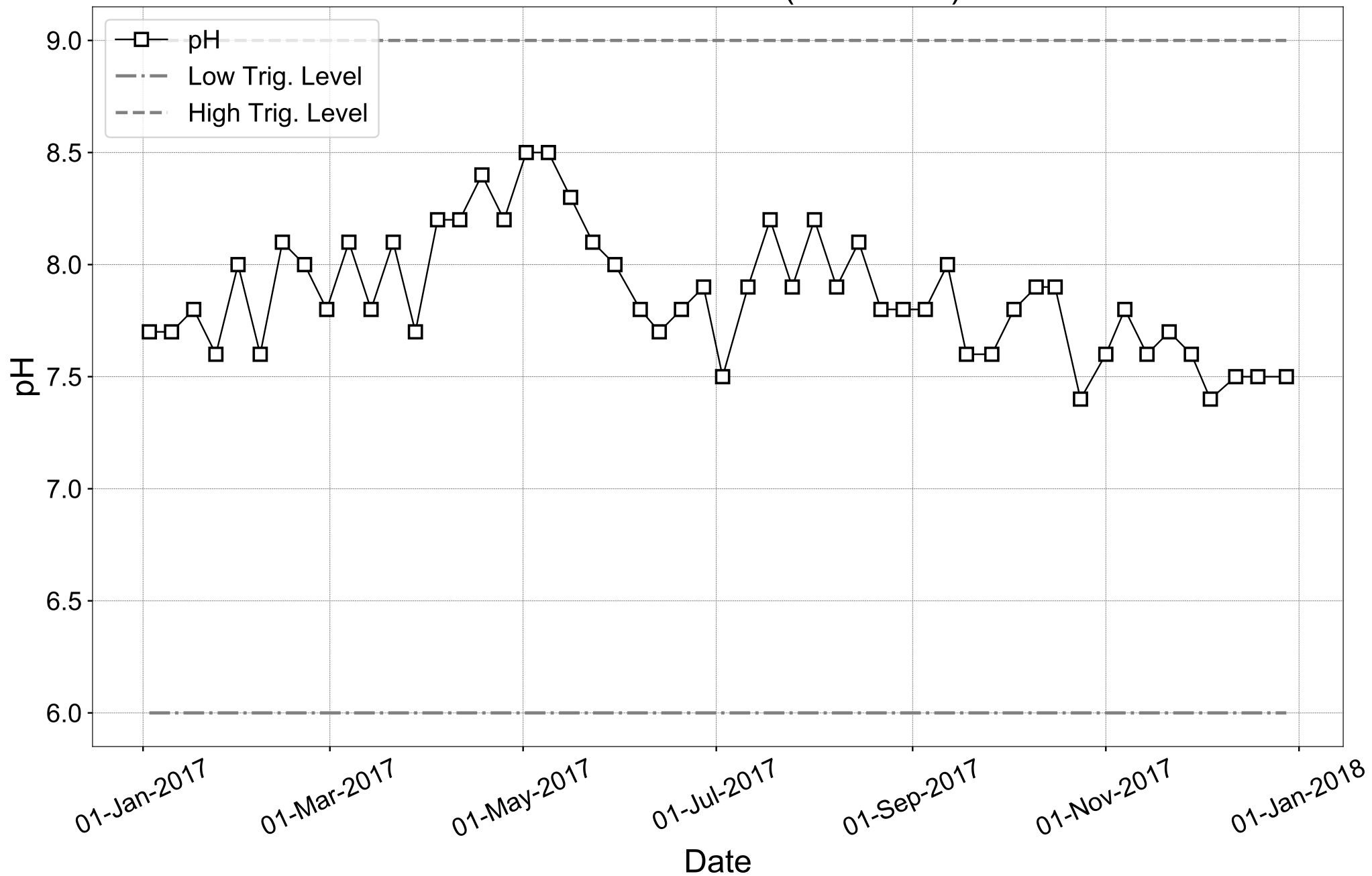
Allen 503 - SW65A (Blackriver)



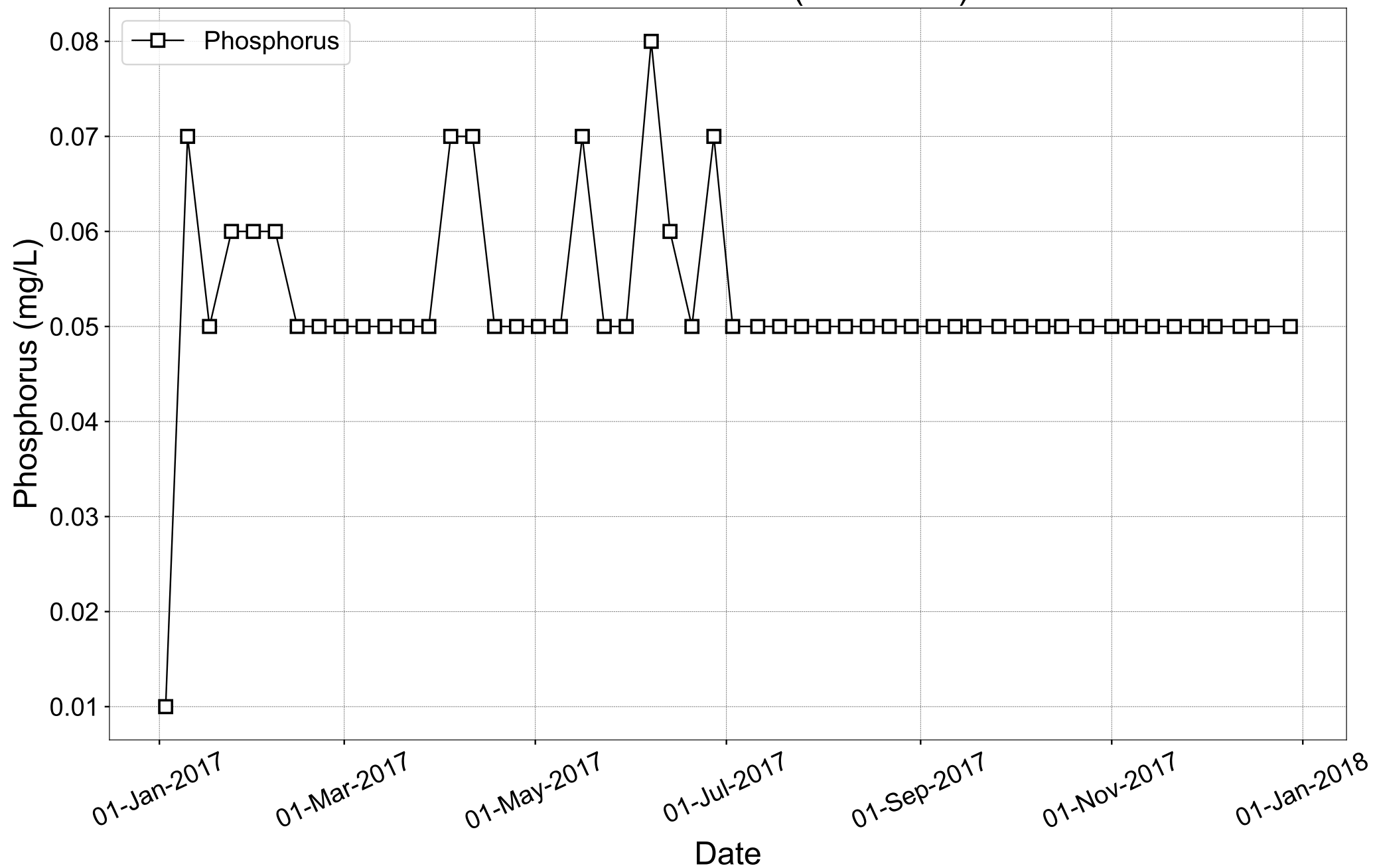
Allen 503 - SW65A (Blackriver)



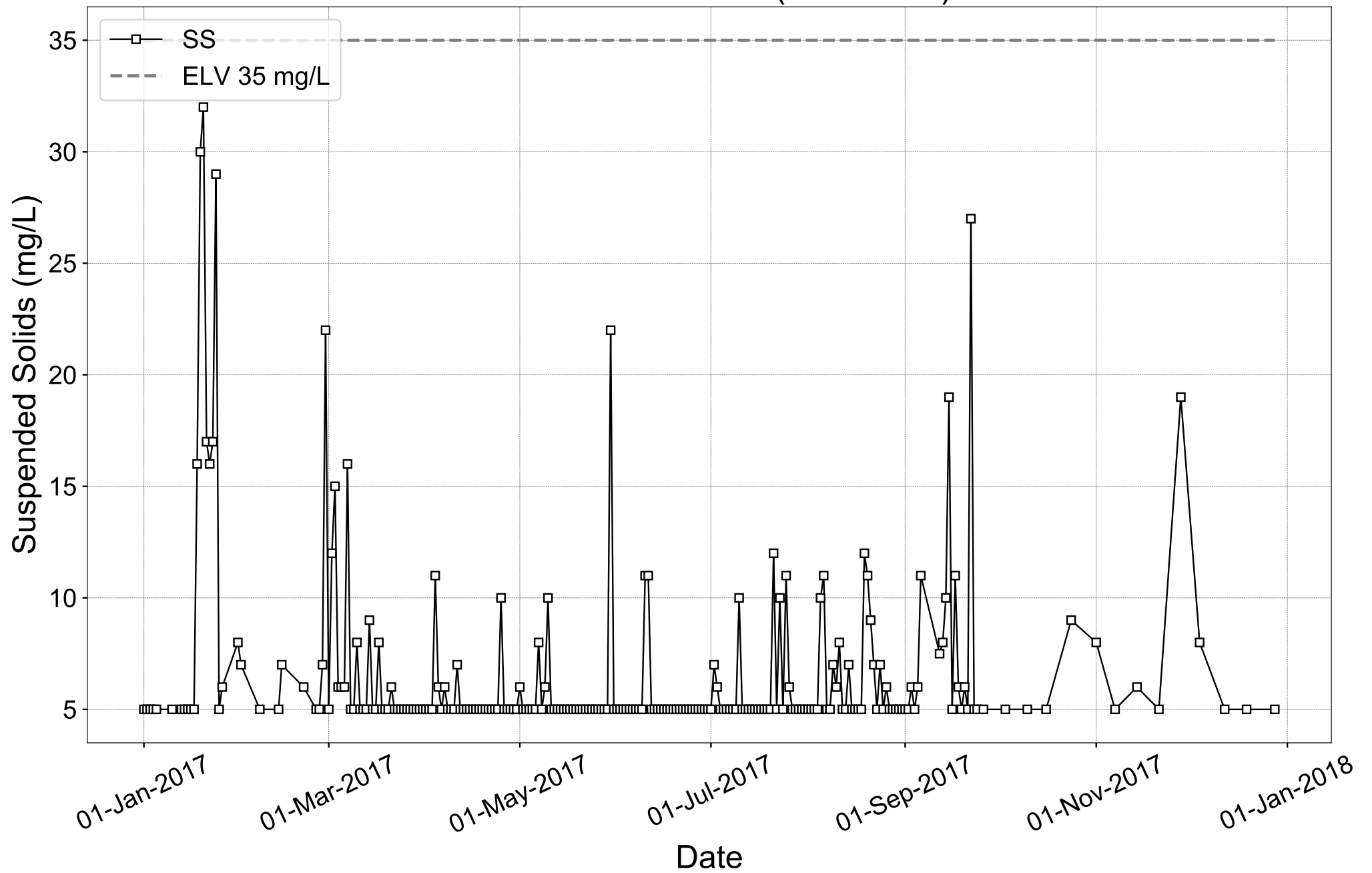
Allen 503 - SW65A (Blackriver)



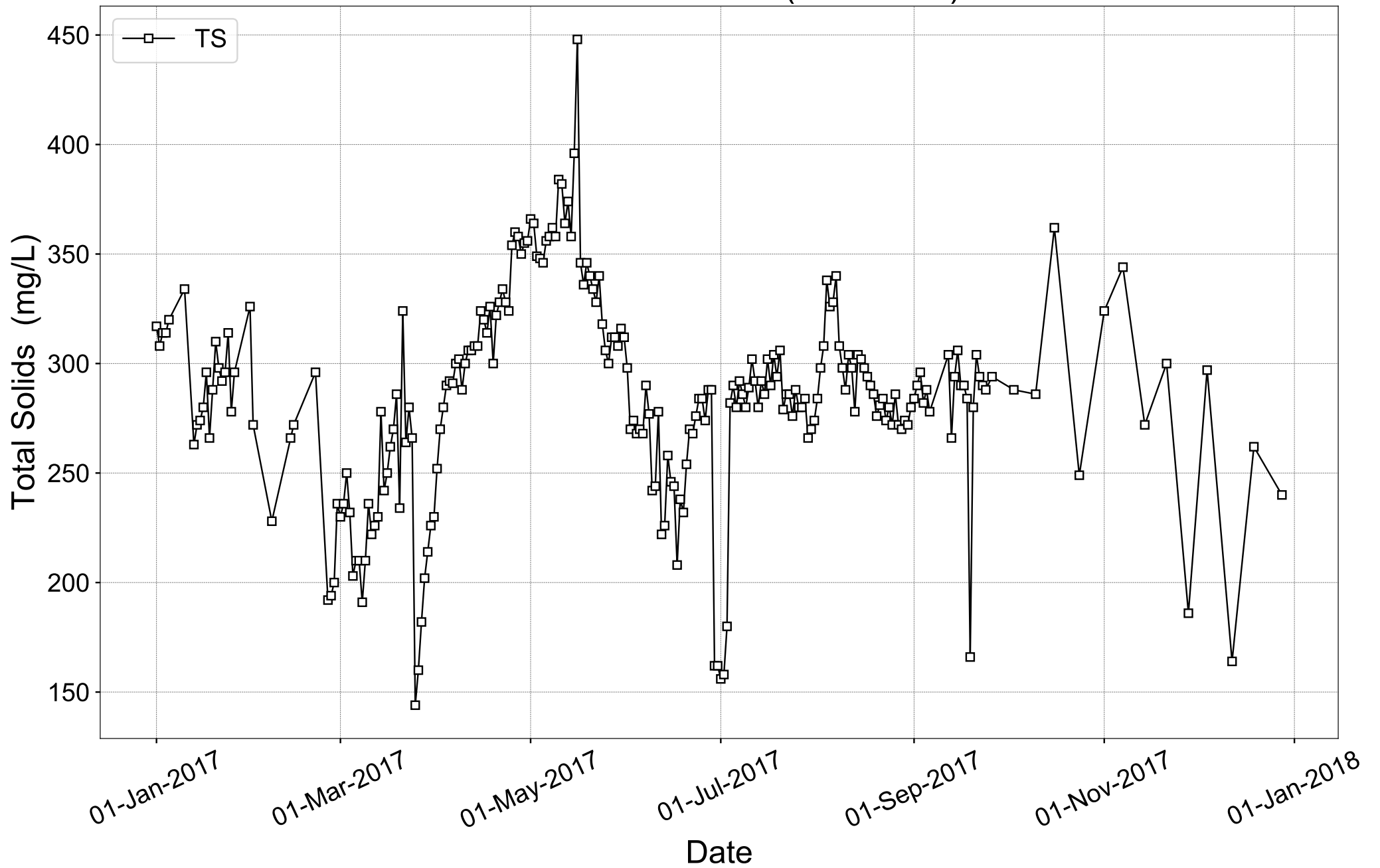
Allen 503 - SW65A (Blackriver)



Allen 503 - SW65A (Blackriver)



Allen 503 - SW65A (Blackriver)



Yard Discharge Results 2017
Licence: P0503-01
Works: Allen

Month	B/Dermot SWE 1 COD	B/Dermot SWE 2 COD	Clonsast SWE 1 COD	Ballycon SWE1 COD	Power Station SWE1 COD	Trigger Level
Jan	83	41	46	28	61	100
Feb	43	53	62	16	60	100
Mar	52	60	41	13	79	100
Apr	89	62	13	40	47	100
May	108	55	51	20	59	100
June	70	40	37	15	83	100
July	70	43	10	16	35	100
Aug	42	33	84	38	60	100
Sep	64	29	25	10	57	100
Oct	85	18	60	21	114	100
Nov	51	46	38	10	10	100
Dec	65	51	34	10	69	100



| PRTR# : P0503 | Facility Name : Bord na Mona Allen Peat Limited | Filename : P0503_2017.xls | Return Year : 2017 |

08/03/2018 10:25

[Guidance to completing the PRTR workbook](#)

PRTR Returns Workbook

Version 1.1.19

REFERENCE YEAR	2017
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1. FACILITY IDENTIFICATION

Parent Company Name	Bord na Mona Allen Peat Limited
Facility Name	Bord na Mona Allen Peat Limited
PRTR Identification Number	P0503
Licence Number	P0503-01

Classes of Activity

No.	class_name
-	Refer to PRTR class activities below

Address 1	Allen Group
Address 2	c/o Derrygreenagh Works
Address 3	Rochfordbridge
Address 4	
	Westmeath
Country	Ireland
Coordinates of Location	-7.25677 53.3910
River Basin District	IEEA
NACE Code	0892
Main Economic Activity	Extraction of peat
AER Returns Contact Name	Enda McDonagh
AER Returns Contact Email Address	enda.mcdonagh@bnm.ie
AER Returns Contact Position	Head of Environment
AER Returns Contact Telephone Number	057 9345911
AER Returns Contact Mobile Phone Number	086 2370816
AER Returns Contact Fax Number	057 9345160
Production Volume	825839.0
Production Volume Units	Tonnes
Number of Installations	15
Number of Operating Hours in Year	2232
Number of Employees	140
User Feedback/Comments	In accordance with licence condition 6.2 of Technical Amendment A, quarterly sampling is now rotated every quarter and therefore suspended solids results are not factored into loading. Due to technical difficulties experienced with the composite sampler annual loading was not possible to calculate. All composite sampler results are attached for review in the AER document.
Web Address	www.bnm.ie

2. PRTR CLASS ACTIVITIES

Activity Number	Activity Name
50.1	General

3. SOLVENTS REGULATIONS (S.I. No. 543 of 2002)

Is it applicable?	No
Have you been granted an exemption?	
If applicable which activity class applies (as per Schedule 2 of the regulations)?	
Is the reduction scheme compliance route being used?	

4. WASTE IMPORTED/ACCEPTED ONTO SITE [Guidance on waste imported/accepted onto site](#)

Do you import/accept waste onto your site for on-site treatment (either recovery or disposal activities)?	No
---	----

This question is only applicable if you are an IPPC or Quarry site

4.1 RELEASES TO AIR [Link to previous years emissions data](#)

| PRTR# : P0503 | Facility Name : Bord na Mona Allen Peat Limited | Filename : P0503_2017.xls | Return Year : 2017 |

08/03/2018 10:26

24

SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

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

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

SECTION B : REMAINING PRTR POLLUTANTS

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

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

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

RELEASES TO AIR		METHOD		Please enter all quantities in this section in KGs							
POLLUTANT		Method Used		QUANTITY							
Pollutant No.	Name	M/C/E	Method Code	Designation or Description	DM02	DM03	DM05	DM06	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
210	Dust	E	OTH	VDI 2119 Blatt 2/Part 2	Emission Point 1	Emission Point 2	Emission Point 3	Emission Point 4			
					0.0	0.0	0.0	0.0	0.10374	0.0	0.10374

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

Additional Data Requested from Landfill operators

For the purposes of the National Inventory on Greenhouse Gases, landfill operators are requested to provide summary data on landfill gas (Methane) flared or utilised on their facilities to accompany the figures for total methane generated. Operators should only report their Net methane (CH4) emission to the environment under T(total) KG/yr for Section A: Sector specific PRTR pollutants above. Please complete the table below:

Landfill:		Bord na Mona Allen Peat Limited			
Please enter summary data on the quantities of methane flared and / or utilised		T (Total) kg/Year		Method Used	
		M/C/E	Method Code	Designation or Description	Facility Total Capacity m3 per hour
Total estimated methane generation (as per site model)		0.0			N/A
Methane flared		0.0			0.0 (Total Flaring Capacity)
Methane utilised in engine/s		0.0			0.0 (Total Utilising Capacity)
Net methane emission (as reported in Section A above)		0.0			N/A

4.2 RELEASES TO WATERS [Link to previous years emissions data](#)

| PRTR# : P0503 | Facility Name : Bord na Mona Allen Peat Limited | Filename : P0503_2017.xls | Return Year : 2017 |

08/03/2018 10:32

SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS Data on ambient monitoring of storm/surface water or groundwater, conducted as part of your licence requirements, should NOT be submitted under AER / PRTR Reporting as this only concerns Releases from your facility

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

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

SECTION B : REMAINING PRTR POLLUTANTS

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

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

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

RELEASES TO WATERS					Please enter all quantities in this section in KGS				
POLLUTANT					QUANTITY				
Pollutant No.	Name	M/C/E	Method Code	Method Used	SW65A	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year	
				Designation or Description	Emission Point 1				
240	Suspended Solids	E	OTH	G/19 Based on ALPHA,1998,20th Edition, Method 2540D		0.0	0.0	0.0	

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

SECTION A : PRTR POLLUTANTS

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

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

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

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

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

08/03/2018 10:34

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

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

5. ONSITE TREATMENT & OFFSITE TRANSFERS OF WASTE

| PRTR# : P0503 | Facility Name : Bord na Mona Allen Peat Limited | Filename : P0503_2017.xls | Return Year : 2017 |

08/03/2018 10:35

Please enter all quantities on this sheet in Tonnes

3

Transfer Destination	European Waste Code	Hazardous	Quantity (Tonnes per Year)	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	Haz Waste : Name and Licence/Permit No of Next Destination Facility Haz Waste : Name and Licence/Permit No of Recover/Disposer	Haz Waste : Address of Next Destination Facility Non Haz Waste : Address of Recover/Disposer	Name and License / Permit No. and Address of Final Recoverer / Disposer (HAZARDOUS WASTE ONLY)	Actual Address of Final Destination i.e. Final Recovery / Disposal Site (HAZARDOUS WASTE ONLY)
						M/C/E	Method Used					
Within the Country	01 01 02	No	413.02	wastes from mineral non-metalliferous excavation	D1	E	Volume Calculation	Onsite of generati	Bord na Mona Allen P0503-01,P0503-01 Derrygreenagh Rochfortbridge Mullingar Co Westmeath	Derrygreenagh,Rochfortbridge,Mullingar,Co Westmeath,Ireland		
Within the Country	01 01 02	No	1115.0	wastes from mineral non-metalliferous excavation	D1	M	Weighed	Onsite of generati	Bord na Mona Allen P0503-01,P0503-01 Derrygreenagh Rochfortbridge Mullingar Co Westmeath	Derrygreenagh,Rochfortbridge,Mullingar,Co Westmeath,Ireland		
Within the Country	02 01 04	No	446.54	waste plastics (except packaging)	R3	M	Weighed	Offsite in Ireland	Walker Recycling,NWCPO-14-11464-01	Clonkeen,Portlaoise,Co Laois,,Ireland		
To Other Countries	11 01 13	Yes	2.71	degreasing wastes containing dangerous substances	R11	C	Volume Calculation	Abroad	Safety Kleen Ltd ,W0099-01	Tallaght,Dublin,,,,Ireland	Solvent Recovery Management,PP33345F,Wheeland Road,Knottingly,West Yorks ,WF11 8DZ,United Kingdom	Wheeland Road,Knottingly,West Yorks ,WF11 8DZ,United Kingdom
Within the Country	13 02 05	Yes	16.85	mineral-based non-chlorinated engine, gear and lubricating oils	R1	C	Volume Calculation	Offsite in Ireland	Enva Ireland Ltd 184.1,Clonminam Ind Estate Portlaoise Co Laois	Clonminam Ind Estate,Portlaoise,Co Laois,,Ireland	Enva Ireland Ltd,184-1,Clonminam Industrial Estate,Portlaoise,Laois,,Ireland	Clonminam Industrial Estate,Portlaoise,Laois,,Ireland
Within the Country	13 05 03	Yes	11.18	interceptor sludges	R1	C	Volume Calculation	Offsite in Ireland	Enva Ireland Ltd 184.1,Clonminam Ind Estate Portlaoise Co Laois	Clonminam Ind Estate,Portlaoise,Co Laois,,Ireland	Enva Ireland Ltd,184-1,Clonminam Industrial Estate,Portlaoise,Laois,,Ireland	Clonminam Industrial Estate,Portlaoise,Laois,,Ireland
To Other Countries	13 08 99	Yes	1.7	wastes not otherwise specified	R1	E	Volume Calculation	Abroad	Enva Ireland Ltd 184.1,Clonminam Ind Estate Portlaoise Co Laois	Clonminam Ind Estate,Portlaoise,Co Laois,,Ireland	Lindenschmidt Kreuztal Germany,E97095037,Linden schmidt ,Kreuztal,,,,Germany	Lindenschmidt ,Kreuztal,,,,Germany
Within the Country	15 01 03	No	0.0	wooden packaging absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by dangerous substances	R1	M	Weighed	Offsite in Ireland	AES Ltd Cappincur Tullamore,WCP-OY-08-601-01	Cappincur,Tullamore,Co Offaly,,Ireland		
To Other Countries	15 02 02	Yes	1.09	dangerous substances	R1	C	Volume Calculation	Abroad	Enva Ireland Ltd 184.1,Clonminam Ind Estate Portlaoise Co Laois	Clonminam Ind Estate,Portlaoise,Co Laois,,Ireland	Lindenschmidt Kreuztal Germany,E97095037,Linden schmidt ,Kreuztal,,,,Germany	Lindenschmidt ,Kreuztal,,,,Germany
To Other Countries	16 01 07	Yes	1.26	oil filters	R4	M	Weighed	Abroad	Enva Ireland Ltd 184.1,Clonminam Ind Estate Portlaoise Co Laois	Clonminam Ind Estate,Portlaoise,Co Laois,,Ireland	R.D. Recycling,Reg No 51727/1/KD,Houthalen,,,,Belgium	Houthalen,,,,Belgium
To Other Countries	16 06 01	Yes	0.0	lead batteries	R6	M	Weighed	Abroad	Enva Ireland Ltd 184.1,Clonminam Ind Estate Portlaoise Co Laois	Clonminam Ind Estate,Portlaoise,Co Laois,,Ireland	Campine Recycling,MLAV/05-173/GVDA,Beerse,,,,Belgium	Beerse,,,,Belgium
Within the Country	17 04 07	No	399.19	mixed metals	R4	M	Weighed	Offsite in Ireland	AES Ltd Cappincur Tullamore,WCP-OY-08-601-01	Cappincur,Tullamore,Co Offaly,,Ireland		
Within the Country	20 03 01	No	48.34	mixed municipal waste	D5	M	Weighed	Offsite in Ireland	AES Ltd Cappincur Tullamore,WCP-OY-08-601-01	Cappincur,Tullamore,Co Offaly,,Ireland		
Within the Country	20 03 01	No	5.94	mixed municipal waste	D5	M	Volume Calculation	Offsite in Ireland	AES Ltd Cappincur Tullamore,WCP-OY-08-601-01	Cappincur,Tullamore,Co Offaly,,Ireland		
Within the Country	17 09 04	No	2.48	mixed construction and demolition wastes other than those mentioned in 17 09 01, 17 09 02 and 17 09 03	R5	M	Weighed	Offsite in Ireland	AES Ltd Cappincur Tullamore,WCP-OY-08-601-01	Cappincur,Tullamore,Co Offaly,,Ireland		

Transfer Destination	European Waste Code	Hazardous	Quantity (Tonnes per Year)	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	Haz Waste: Name and Licence/Permit No of Next Destination Facility Haz Waste: Name and Licence/Permit No of Recover/Disposer Non	Haz Waste: Address of Next Destination Facility Non Haz Waste: Address of Recover/Disposer	Name and License / Permit No. and Address of Final Recoverer / Disposer (HAZARDOUS WASTE ONLY)	Actual Address of Final Destination i.e. Final Recovery / Disposal Site (HAZARDOUS WASTE ONLY)
						M/C/E	Method Used					
Within the Country	15 01 10	Yes	1.12	packaging containing residues of or contaminated by dangerous substances	R4	M	Weighed	Offsite in Ireland	Enva Ireland Ltd 184.1, Clonminam Ind Estate Portlaoise Co Laois	Clonminam Ind Estate, Portlaoise, Co Laois, Ireland		
Within the Country	20 03 04	No	6.9	septic tank sludge	D2	M	Weighed	Offsite in Ireland	FMcG 24 Hour Management Services Ltd, NWCPO-12-11077-02	Shean, Edenderry, Co Offaly, Ireland		

* Select a row by double-clicking the Description of Waste then click the delete button

[Link to previous years waste data](#)

[Link to previous years waste summary data & percentage change](#)

[Link to Waste Guidance](#)

Facility Information Summary

AER Reporting Year	2016
Licence Register Number	P0503-01
Name of site	Bord na Mona Allen
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 711,226 tonnes which was down on the 2015 figure. Infrastructurally, there was no bog development. From an environmental perspective silt pond capacity was increased by 1667m³. The quarterly grab sampling was 100% compliant, as was the continuous composite sampling. There were three environmental complaints received during the reporting period, one related to siltation that was proven to be from a non Bord na Mona source the other two related to dust and were resolved. In relation to silt pond cleaning, 100% of ponds received two cleanings, inspections dictating cleaning schedules. 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.

<u>E. Mulhall</u>	<u>9-2-17</u>
Signature Group/Facility manager (or nominated, suitably qualified and experienced deputy)	Date

AIR-summary template	Lic No: P0503-01	Year 2016
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Answer all questions and complete all tables where relevant

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

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

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: Licenced 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:	P0503-01	Year	2016
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)

5 Did continuous monitoring equipment experience downtime? If yes please record downtime in table A2 below

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

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

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-2	Total Particulates	350	140 DAYS	Daily average < ELV	mg/m2/day	12936	210	0	0	Dust monitoring took place on 5 occasions for 28 days each time between April and September
DM-03	Total Particulates	350	140 DAYS	Daily average < ELV	mg/m2/day	20272	246	0	0	
DM-05	Total Particulates	350	140 DAYS	Daily average < ELV	mg/m2/day	22680	350	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: P0503-01	Year 2016	
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				
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 through
				Total emission of Solvent to air (kg)
				Total

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER)					Lic No:	P0503-01	Year	2016
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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 only need to complete table W1 and or W2 for storm water analysis and visual inspections		Additional information	
1	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.	Monthly COD and Yard Run Off	

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	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
	SELECT	SELECT	SELECT		SELECT		SELECT		SELECT	SELECT	SELECT	SELECT			

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?

Yes

See note above

6

Did continuous monitoring equipment experience downtime? If yes please record downtime in table W4 below

Yes

Total of 36 days over 365 days

7

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

Yes

Annual calibration schedule and trouble shooting service.

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
SW-33	Water	Suspended Solids	35	24 hour	Not Listed	mg/L	5250.45		864	0	Down time primarilyly due to battery failure and sampler repairs. The Agency being informed of same.
SW-33	Water	Ammonia (as N)	NA	Weekly	NA	mg/L	60.81				Annual loading not representative as parameter only carried out weekly
SW-33	Water	Total phosphorus	NA	Weekly	NA	mg/L	7.15				Annual loading not representative as parameter only carried out weekly
SW-33	Water	COD	NA	Weekly	NA	mg/L	4806.82				Annual loading not representative as parameter only carried out weekly
SW-33	Water	Volumetric flow	NA	24 hour	NA	m3/day	3059.88				Total flow divided by 365
SW-33	Water	Total Dissolved Solids	NA	Weekly	NA	mg/L	276756.13				

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:	P0503-01	Year	2016
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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 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 "Chemstore"

3 type units and mobile bunds)

4 How many bunds are on site?

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?

Yes	
Other (2 Yearly)	
Yes	
4	
4	One bund due for testing in 2017. Two Bunds tested and passed in 2016. One tested and failed in 2016, this is to be repaired.
13	
No	
0	
0	
0	
SELECT	
SELECT	
SELECT	

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)
EPL Main Bund 503-37-05	reinforced concrete		Gas Oil	132440 litres	44000 litres	Hydraulic test			Yes	Pass		NA	NA	NA
Clonsast Heating Bund 503-37-07	reinforced concrete		Gas Oil	9288 litres	5500 litres	Hydraulic test			Yes	Pass		NA	NA	NA
Ballydermot Main Bund 503-37-10	reinforced concrete		Gas Oil	143208 litres	49500 litres	Hydraulic test			Yes	Fail	The outer concrete wall was cracked. A contractor was appointed to repair this and is in the process of doing so.	Contractor to repair wall	May-17	NA

* 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

15 line with BS8007/EPA Guidance?

[bundling 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?

Commentary	
Yes	
No	
No	

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

1 underground structures and pipelines on site **which failed the integrity test and all which have not been tested within the integrity test period as specified**

2 Please provide integrity testing frequency period

*please note integrity testing means water tightness testing for process and foul pipelines (as required under your licence)

No underground pipe lines that require testing	
Yes	
Other (Every 3 Years)	

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: P0503-01	Year 2016
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		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 Groundwater monitoring template Report (link in cell G8) and submit separately through ALDER as a licensee return AND answer questions 5-12 below.	NA	Please enter interpretation of data here
5	Is the contamination related to operations at the facility (either current and/or historic)	NA	
6	Have actions been taken to address contamination issues?If yes please summarise remediation strategies proposed/undertaken for the site	NA	
7	Please specify the proposed time frame for the remediation strategy	NA	
8	Is there a licence condition to carry out/update ELRA for the site?	NA	
9	Has any type of risk assesment been carried out for the site?	NA	
10	Has a Conceptual Site Model been developed for the site?	NA	
11	Have potential receptors been identified on and off site?	NA	
12	Is there evidence that contamination is migrating offsite?	NA	

Groundwater/Soil monitoring template

Lic No:

P0503-01

Year

2016

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

*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 regulations](#)
[Drinking water \(private supply\)](#)
[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:

P0503-01

Year

2016

[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	Internal budget provision
9	Closure plan review status	NA	Internal budget provision
10	Financial Provision for Closure status	NA	Internal budget provision
11	Financial Provision for Closure - amount of cover	NA	Internal budget provision
12	Financial Provision for Closure - type	NA	Internal budget provision
13	Financial provision for Closure expiry date	NA	

Environmental Management Programme/Continuous Improvement Programme template			Lic No:	P0503-01	Year	2016
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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	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.	90	In total 147 Personnel received training in 2016. There were 12 hydraulic harrows deployed across the licence area. Headland peat was collected at all locations and returned as part of overall production figures.	Individual	Improved Environmental Management Practices
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	90	Installed a waste management system. Monthly waste reports are returned for records/filing and waste streams are segregated on site to maximise recycling potential. In an attempt to curtail illegal dumping on Bord na Mona remain in contact with Laois, Offaly and Kildare Co Councils.	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 434.28 tonnes 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	90	The monthly consumption of energy was 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. It is planned that the site achieve ISO50001 status in 2017.	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.	90	In total 147 Personnel received training in 2016. There were 12 hydraulic harrows deployed across the licence area and headland peat was collected and returned as part of overall production figures.	Individual	Improved Environmental Management Practices

Noise monitoring summary report	Lic No:	P0503-01	Year	2016
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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?

No

NA

NA

Enter date

NA

[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 <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:

P0503-01

Year

2016

Additional information

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

NA	
Yes	
NA	

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)	15953.23	13923.203		
Total Energy Generated (MWHrs)				
Total Renewable Energy Generated (MWHrs)				
Electricity Consumption (MWHrs)	1909.3	1315		
Fossil Fuels Consumption:				
Heavy Fuel Oil (m3)				
Light Fuel Oil (m3)	1382.141	1199.243		
Natural gas (m3)				
Coal/Solid fuel (metric tonnes)				
Peat (metric tonnes)				NA
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:	P0503-01	Year	2016
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Table R3 Waste Stream Summary					
	Total	Landfill	Incineration	Recycled	Other
Hazardous (Tonnes)	106.95	0	0.08	106.87	0
Non-Hazardous (Tonnes)	2363.95	52.2	0	631.96	1678.37

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					

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

[illegible]

WASTE SUMMARY	Lic No:	P0503-01	Year	2016
SECTION A-PRTR ON SITE WASTE TREATMENT AND WASTE TRANSFERS TAB- TO BE COMPLETED BY ALL IPPC AND WASTE FACILITIES		PRTR facility login	dropdown list click to see options	

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

Additional Information

Were any wastes accepted onto your site for recovery or disposal or treatment prior to recovery or disposal within the boundaries of your facility ?; (waste generated within your boundaries is **1 to be captured through PRTR reporting**)

1

If yes please enter details in table 1 below

2 Did your site have any rejected consignments of waste in the current reporting year? If yes please give a brief explanation in the additional information

2

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

3

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

Licensed annual tonnage limit for your site (total tonnes/annum)	EWIC code	Source of waste accepted	Description of waste accepted Please enter an accurate and detailed description - which applies to relevant EWIC code	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 -
	European Waste Catalogue EWIC codes		European Waste Catalogue EWIC codes								

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

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

WASTE SUMMARY				Lic No:	P0503-01	Year	2016
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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													

Table 4 Environmental monitoring-landfill only [Landfill Manual-Monitoring Standards](#)

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

+ 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
SELECT

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

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	

Allen
Decommissioning and Rehabilitation
AER Overview 2016.

Within the Allen licensed area (P0503-01), there were no entire bog units available for rehabilitation in 2016. Ongoing monitoring of cutaway areas was carried out within the Allen licensing and a number of bog areas re-surveyed including Timahoe North and Timahoe South.

Active rehabilitation work was carried out in one area with further hydrological management work carried out in Lullymore as part of the long term rehabilitation of this site.

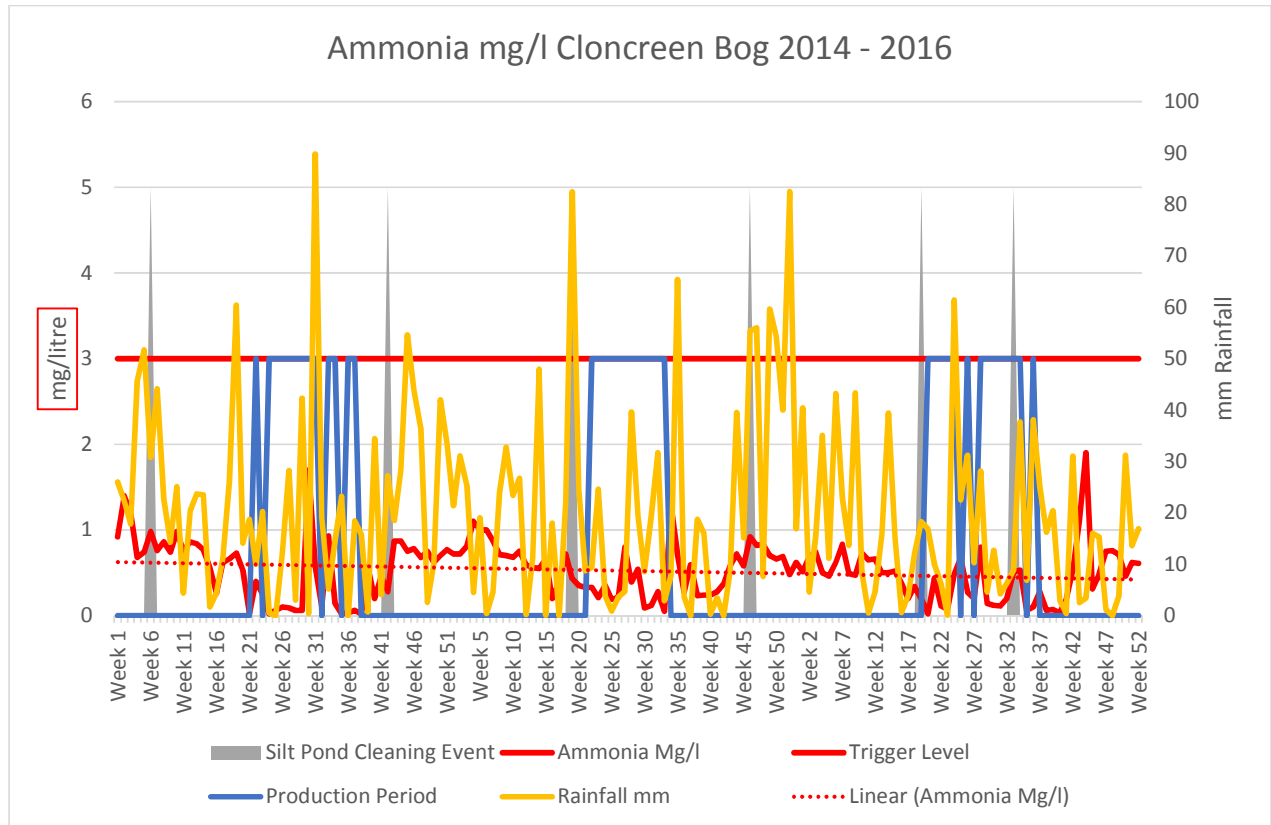
Draft rehabilitation plans for the Allen bogs licensed area, including more detailed draft plans for each component bog unit were submitted to the EPA in 2013 and these were reviewed and updated in 2015.

The new Biodiversity Action Plan (2016-2021) was launched in 2016 with the annual Biodiversity Action Plan review day being held in February 2017. 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/>

As required by condition 10.2 *Cutaway Bog Rehabilitation Plans*, draft peatland rehabilitation plans for all the individual bog units were submitted to the agency in 2013, reviewed and amended in 2015 and re-submitted to the agency in 2015. All draft rehabilitation plans are currently in the process of being reviewed (2017). These reviewed and amended plans will be re-submitted to the agency in due course.

Bord na Mona Allen												
IPPC Licence P0503-01												
X	Y	Bog	SW	Monitoring	Sampling Date	pH	SS	TS	Ammonia	TP	COD	Colour
244754.5	212504.25	Garrymore	SW-41	Q1 16	21/03/2016	7.1	5	126	2	0.05	50	154
269278.2	227938.86	Glashabaun South	SW-50	Q1 16	21/03/2016	7.6	5	415	0.84	0.05	43	76
266471.6	226777.93	Glashabaun South	SW-51	Q1 16	21/03/2016	7.9	5	426	0.13	0.05	55	5
266530.8	226503.86	Glashabaun South	SW-52	Q1 16	21/03/2016	7.8	5	396	0.15	0.11	55	108
266677.4	226324.12	Glashabaun South	SW-53	Q1 16	21/03/2016	7.8	5	398	0.11	0.05	61	107
265523.7	225264.93	Blackriver	SW-65A	Q1 16	21/03/2016	7.9	5	334	0.21	0.05	49	108
245814.7	223083.89	Clonad	SW-13	Q2 16	12/05/2016	7.9	5	248	1.3	0.05	43	114
245572.4	225495.02	Clonad	SW-12A	Q2 16	12/05/2016	7.9	20	324	0.7	0.05	44	66
269197.6	228032.68	Glashabaun South	SW-47	Q2 16	12/05/2016	7.8	11	286	1.3	0.05	56	150
268824	228190.35	Glashabaun South	SW-48	Q2 16	12/05/2016	7.8	5	267	0.78	0.05	57	136
269054.4	228057.26	Glashabaun South	SW-49	Q2 16	12/05/2016	7.6	5	328	0.38	0.05	71	186
268455	225617.94	Lullybeg	SW-56	Q2 16	12/05/2016	7.6	7	246	3.2	0.11	65	150
273261.1	224710.84	Lodge	SW-60	Q3 16	12/08/2016	8.1	8	364	0.66	0.05	71	49
273158.2	224383.3	Lodge	SW-61	Q3 16	12/08/2016	8.2	5	368	0.65	0.05	64	18
268001.6	223625.99	Barnaran	SW-62	Q3 16	12/08/2016	7.9	5	418	0.11	0.05	70	32
265940.2	224925.96	Blackriver	SW-65	Q3 16	12/08/2016	8.2	5	366	0.06	0.05	65	37
265769	229932.59	Ticknevin	SW-70	Q3 16	12/08/2016	8.1	5	276	0.04	0.05	76	40
265060.8	228192.45	Glashabaun North	SW-71	Q3 16	12/08/2016	8	5	366	1.1	0.05	53	34
264299.2	227722	Codd North	SW-72	Q4 16	13/10/2016	7.7	6	370	0.02	0.05	79	43
247623.2	225441.21	Clonad	SW-12	Q4 16	13/10/2016	8	6	348	0.29	0.05	57	37
250117.8	219970.86	Ballykeane	SW-15	Q4 16	13/10/2016	7.5	6	374	1.4	0.05	48	53
250247.9	219855.73	Ballykeane	SW-18	Q4 16	13/10/2016	7.6	6	380	1.2	0.05	81	119
255326.9	214636.24	Derrylea	SW-43A	Q4 16	13/10/2016	7.7	5	444	0.46	0.05	88	55
248527.2	224119.1	Mountlucas	SW-11A	Q4 16	13/10/2016	8	5	402	1.1	0.05	10	35



Cloncreen bog is an active production bog with the composite sampler located here during 2014 to 2016. The composite sampler takes a flow proportional composite sample over a 24 hour period. The sampler had 0% downtime during the period and returned 52 weekly ammonia results during the period of this 2016 AER. The ammonia trigger level of 3.0mg/l, as agreed with the Agency, was not exceeded during the period. Combining the 2014 to 2016 results above show concentrations are trending downwards as peat extraction continues and this is in-line with the downwards trends submitted to the EPA in 2013 as required by 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.

Yard Discharge Results 2016**Licence: P0503-01****Works: Allen**

Month	B/Dermot SWE 1 COD	B/Dermot SWE 2 COD	Clonsast SWE 1 COD	Ballycon SWE1 COD	Power Station SWE1 COD	Trigger Level
Jan	66	67	38	35	66	100
Feb	18	63	32	48	59	100
Mar	70	46	40	29	61	100
Apr	45	37	27	10	72	100
May	42	40	37	28	43	100
June	32	44	35	42	36	100
July	44	43	40	16	82	100
Aug	22	67	26	12	46	100
Sep	16	64	44	10	60	100
Oct	44	98	47	33	94	100
Nov	46	88	103	20	82	100
Dec	92	72	78	36	56	100

0: No Flow On Day Of Sampling



| PRTR#: P0503 | Facility Name : Bord na Mona Allen Peat Limited | Filename : P0503_2016.xls | Return Year : 2016 |

13/02/2017 12:12

[Guidance to completing the PRTR workbook](#)

PRTR Returns Workbook

Version 1.1.19

REFERENCE YEAR	2016
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1. FACILITY IDENTIFICATION

Parent Company Name	Bord na Mona Allen Peat Limited
Facility Name	Bord na Mona Allen Peat Limited
PRTR Identification Number	P0503
Licence Number	P0503-01

Classes of Activity

No.	class_name
-	Refer to PRTR class activities below

Address 1	Allen Group
Address 2	c/o Derrygreenagh Works
Address 3	Rochfordbridge
Address 4	
	Westmeath
Country	Ireland
Coordinates of Location	-7.25677 53.3910
River Basin District	IEEA
NACE Code	0892
Main Economic Activity	Extraction of peat
AER Returns Contact Name	Enda McDonagh
AER Returns Contact Email Address	enda.mcdonagh@bnm.ie
AER Returns Contact Position	Head of Environment
AER Returns Contact Telephone Number	057 9345911
AER Returns Contact Mobile Phone Number	086 2370816
AER Returns Contact Fax Number	057 9345160
Production Volume	711226.0
Production Volume Units	Tonnes
Number of Installations	15
Number of Operating Hours in Year	2232
Number of Employees	140
User Feedback/Comments	In accordance with licence condition 6.2 of Technical Amendment A, quarterly sampling is now rotated every quarter and therefore suspended solids results are not factored into loading.
Web Address	www.bnm.ie

2. PRTR CLASS ACTIVITIES

Activity Number	Activity Name
50.1	General

3. SOLVENTS REGULATIONS (S.I. No. 543 of 2002)

Is it applicable?	No
Have you been granted an exemption ?	
If applicable which activity class applies (as per Schedule 2 of the regulations) ?	
Is the reduction scheme compliance route being used ?	

4. WASTE IMPORTED/ACCEPTED ONTO SITE

[Guidance on waste imported/accepted onto site](#)

Do you import/accept waste onto your site for on-site treatment (either recovery or disposal activities) ?	
--	--

This question is only applicable if you are an IPPC or Quarry site

4.1 RELEASES TO AIR

[Link to previous years emissions data](#)

| PRTR# : P0503 | Facility Name : Bord na Mona Allen Peat Limited | Filename : P0503_2016.xls | Return Year : 2016 |

13/02/2017 12:14

SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

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

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

SECTION B : REMAINING PRTR POLLUTANTS

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

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

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

RELEASES TO AIR		METHOD		Please enter all quantities in this section in KGs					
POLLUTANT		Method Used		QUANTITY					
Pollutant No.	Name	M/C/E	Designation or Description	DM02	DM03	DM05	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
210	Dust	E	VDI 2119 Blatt 2/Part 2	0.0	0.0	0.0	0.055888	0.0	0.055888

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

Additional Data Requested from Landfill operators

For the purposes of the National Inventory on Greenhouse Gases, landfill operators are requested to provide summary data on landfill gas (Methane) flared or utilised on their facilities to accompany the figures for total methane generated. Operators should only report their Net methane (CH4) emission to the environment under T(total) KG/yr for Section A: Sector specific PRTR pollutants above. Please complete the table below:

Landfill:		Bord na Mona Allen Peat Limited			
Please enter summary data on the quantities of methane flared and / or utilised		Method Used		Facility Total Capacity	
T (Total) kg/Year		M/C/E	Designation or Description	m3 per hour	
Total estimated methane generation (as per site model)	0.0			N/A	
Methane flared	0.0			0.0	
Methane utilised in engines	0.0			0.0	
Net methane emission (as reported in Section A above)	0.0			N/A	

SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

Data on ambient monitoring of storm/surface water or groundwater, conducted as part of your licence requirements, should NOT be submitted under AER / PRTR Reporting as this only concerns Releases from your facility

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

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

SECTION B : REMAINING PRTR POLLUTANTS

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

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

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

RELEASES TO WATERS		Please enter all quantities in this section in KGs			
POLLUTANT		Method Used			QUANTITY
Pollutant No.	Name	M/C/E	Method Code	Designation or Description	Emission Point 1
					T (Total) KG/Year
					A (Accidental) KG/Year
					F (Fugitive) KG/Year
240	Suspended Solids	E	OTH	ALPHA.1998.20th Edition, Method 2540D	5252.45
					5252.45
					0.0
					0.0

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

SECTION A : PRTR POLLUTANTS

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

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

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

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

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

13/02/2017 12:19

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

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

5. ONSITE TREATMENT & OFFSITE TRANSFERS OF WASTE

| PRTR# : P0503 | Facility Name : Bord na Mona Allen Peat Limited | Filename : P0503_2016.xls | Return Year : 2016 |

13/02/2017 12:20

Please enter all quantities on this sheet in Tonnes

10

Transfer Destination	European Waste Code	Hazardous	Quantity (Tonnes per Year)	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	Haz Waste : Name and Licence/Permit No of Next Destination Facility Non Haz Waste: Name and Licence/Permit No of Recover/Disposer	Haz Waste : Address of Next Destination Facility Non Haz Waste: Address of Recover/Disposer	Name and License / Permit No. and Address of Final Recoverer / Disposer (HAZARDOUS WASTE ONLY)	Actual Address of Final Destination i.e. Final Recovery / Disposal Site (HAZARDOUS WASTE ONLY)
						M/C/E	Method Used					
Within the Country	01 01 02	No	546.37	wastes from mineral non-metalliferous excavation	D1	E	Volume Calculation	Onsite of generati	Bord na Mona Allen P0503-01,P0503-01 Derrygreenagh Rochfortbridge Mullingar Co Westmeath	Derrygreenagh,Rochfortbridge,Mullingar,Co Westmeath,Ireland		
Within the Country	01 01 02	No	1132.0	wastes from mineral non-metalliferous excavation	D1	M	Weighed	Onsite of generati	Bord na Mona Allen P0503-01,P0503-01 Derrygreenagh Rochfortbridge Mullingar Co Westmeath	Derrygreenagh,Rochfortbridge,Mullingar,Co Westmeath,Ireland		
Within the Country	02 01 04	No	434.28	waste plastics (except packaging)	R3	M	Weighed	Offsite in Ireland	Walker Recycling,NWCPO-14-11464-01	Clonkeen,Portlaoise,Co Laois,,Ireland		
To Other Countries	11 01 13	Yes	2.27	degreasing wastes containing dangerous substances	R11	C	Volume Calculation	Abroad	Safety Kleen Ltd ,W0099-01	Tallaght,Dublin,,Ireland	Solvent Recovery Management,PP33345F,Wheeland Road,Knottingly,West Yorks ,WF11 8DZ,United Kingdom	Wheeland Road,Knottingly,West Yorks ,WF11 8DZ,United Kingdom
Within the Country	13 02 05	Yes	5.11	mineral-based non-chlorinated engine, gear and lubricating oils	R1	C	Volume Calculation	Offsite in Ireland	Envia Ireland Ltd 184.1,Clonminam Ind Estate Portlaoise Co Laois	Clonminam Ind Estate,Portlaoise,Co Laois,,Ireland	Envia Ireland Ltd,184-1,Clonminam Industrial Estate,Portlaoise,Laois,,Ireland	Clonminam Industrial Estate,Portlaoise,Laois,,Ireland
To Other Countries	13 08 99	Yes	0.0	wastes not otherwise specified	R1	E	Volume Calculation	Abroad	Envia Ireland Ltd 184.1,Clonminam Ind Estate Portlaoise Co Laois AES Ltd Cappincur Tullamore,WCP-OY-08-601-01	Clonminam Ind Estate,Portlaoise,Co Laois,,Ireland	Germany,E97095037,Lindenschmidt ,Kreuztal,,Germany	Lindenschmidt ,Kreuztal,,Germany
Within the Country	15 01 03	No	0.0	wooden packaging absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by dangerous substances	R1	M	Weighed	Offsite in Ireland	Envia Ireland Ltd 184.1,Clonminam Ind Estate Portlaoise Co Laois	Clonminam Ind Estate,Portlaoise,Co Laois,,Ireland	Lindenschmidt ,Kreuztal,,Germany	Lindenschmidt ,Kreuztal,,Germany
To Other Countries	15 02 02	Yes	0.08		R1	C	Volume Calculation	Abroad	Envia Ireland Ltd 184.1,Clonminam Ind Estate Portlaoise Co Laois	Clonminam Ind Estate,Portlaoise,Co Laois,,Ireland	Lindenschmidt ,Kreuztal,,Germany	Lindenschmidt ,Kreuztal,,Germany
To Other Countries	16 01 07	Yes	0.96	oil filters	R4	M	Weighed	Abroad	Envia Ireland Ltd 184.1,Clonminam Ind Estate Portlaoise Co Laois	Clonminam Ind Estate,Portlaoise,Co Laois,,Ireland	R.D. Recycling,Reg No 51727/1/KD,Houthalen,,Belgium	Houthalen,,Belgium
To Other Countries	16 06 01	Yes	0.0	lead batteries	R6	M	Weighed	Abroad	Envia Ireland Ltd 184.1,Clonminam Ind Estate Portlaoise Co Laois AES Ltd Cappincur Tullamore,WCP-OY-08-601-01	Clonminam Ind Estate,Portlaoise,Co Laois,,Ireland	Recycling,MLAV/05-173/GVDA,Beerse,,Belgium	Beerse,,Belgium
Within the Country	17 04 07	No	196.27	mixed metals	R4	M	Weighed	Offsite in Ireland	AES Ltd Cappincur Tullamore,WCP-OY-08-601-01	Cappincur,Tullamore,Co Offaly,,Ireland		
Within the Country	20 03 01	No	464.48	mixed municipal waste	D1	M	Weighed	Offsite in Ireland	AES Ltd Cappincur Tullamore,WCP-OY-08-601-01	Cappincur,Tullamore,Co Offaly,,Ireland		
Within the Country	20 03 01	No	7.14	mixed municipal waste	D1	M	Volume Calculation	Offsite in Ireland	AES Ltd Cappincur Tullamore,WCP-OY-08-601-01	Cappincur,Tullamore,Co Offaly,,Ireland		
Within the Country	13 05 03	Yes	98.46	interceptor sludges	R1	C	Volume Calculation	Offsite in Ireland	Envia Ireland Ltd 184.1,Clonminam Ind Estate Portlaoise Co Laois	Clonminam Ind Estate,Portlaoise,Co Laois,,Ireland	Envia Ireland Ltd,184-1,Clonminam Industrial Estate,Portlaoise,Laois,,Ireland	Clonminam Industrial Estate,Portlaoise,Laois,,Ireland

* Select a row by double-clicking the Description of Waste then click the delete button

Transfer Destination	European Waste Code	Hazardous	Quantity (Tonnes per Year)	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	Haz Waste : Name and Licence/Permit No of Next Destination Facility Non Haz Waste: Name and Licence/Permit No of Recover/Disposer	Haz Waste : Address of Next Destination Facility Non Haz Waste: Address of Recover/Disposer	Name and License / Permit No. and Address of Final Recoverer / Disposer (HAZARDOUS WASTE ONLY)	Actual Address of Final Destination i.e. Final Recovery / Disposal Site (HAZARDOUS WASTE ONLY)
						M/C/E	Method Used					

[Link to previous years waste data](#)

[Link to previous years waste summary data & percentage change](#)

[Link to Waste Guidance](#)

Facility Information Summary

AER Reporting Year	2015
Licence Register Number	P0503-01
Name of site	Bord na Mona Allen
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 784,055 tonnes which was down on the 2014 figure. Infrastructurally, there was no bog development. From an environmental perspective silt pond capacity was increased by 780m³. The quarterly grab sampling was 100% compliant, as was the continuous composite sampling. There were 4 environmental complaints received during the reporting period. In relation to silt pond cleaning, 95.29% of ponds received two cleanings, inspections dictating cleaning schedules. 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.

<i>E. Meehall</i>	15 - 3 - 16
Signature Group/Facility manager (or nominated, suitably qualified and experienced deputy)	Date

AIR-summary template	Lic No:	#REF!	Year	#REF!
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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	

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	
Yes	

- 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](#)

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			
Continuous Monitoring		Lic No:	#REF!
		Year	#REF!

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	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	

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-02	Total Particulates	350	84 DAYS	Daily average < ELV	mg/m2/day	7392	105	0	0	
DM-03	Total Particulates	350	84 DAYS	Daily average < ELV	mg/m2/day	29960	589	0	1	INCI008394
DM-05	Total Particulates	350	84 DAYS	Daily average < ELV	mg/m2/day	10192	150	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:	#REF!	Year	#REF!
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 thereof	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:

#REF!

Year

#REF!

Additional information

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

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

Monthly COD and Yard Run Off

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)

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

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](#)
[Assessment of](#)
[checklist](#)
[results checklist](#)

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**+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
	SELECT	SELECT	SELECT		SELECT		SELECT		SELECT	SELECT	SELECT	SELECT			

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

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

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER) Lic No: #REF! Year #REF!

Continuous monitoring

5

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

Yes

Additional Information

See note above

6

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

7

Did continuous monitoring equipment experience downtime? If yes please record downtime in table W4 below

Yes

Total of 22 day over 365 days

8

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

Yes

Annual calibration schedule and trouble shooting service.

9

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
SW-33	Water	Suspended Solids	35	24 hour	Not Listed	mg/L	4338.45	10.35%	528	0	Down time was primarily due to battery changes and periods of no flow.
SW-33	Water	Ammonia (as N)	NA	Weekly	NA	mg/L	85.93	-17.75%			
SW-33	Water	Total phosphorus	NA	Weekly	NA	mg/L	11.69	76.53%			
SW-33	Water	COO	NA	Weekly	NA	mg/L	3792.5	-36.14%			
SW-33	Water	Volumetric flow	NA	24 hour	NA	m3/day	872237159.2	2.04%	528		Down time was primarily due to battery changes and periods of no flow.
SW-33	Water	Total Dissolved Solids	NA	Weekly	NA	mg/L	265632.87	38.98%			

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:	#REF!	Year	#REF!
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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 Please provide integrity testing frequency period

2 Does the site maintain a register of bunds, underground pipelines (including stormwater and foul), Tanks, sumps and containers? (containers refers to

3 "Chemstore" type units and mobile bunds)

4 How many bunds are on site?

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?

Yes	
Other (2 Yearly)	
Yes	
4	
	3 bunds due for testing in 2016.1
	4 Bund repaired and passed in 2015
11	
No	
0	
0	
0	
SELECT	
SELECT	
SELECT	

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)
Ballycon 503-37-09	reinforced concrete		Gas Oil	387324	346500	Hydraulic test		20/07/2015	Yes	Pass		NA		
	SELECT					SELECT			SELECT	SELECT		SELECT		

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

Has integrity testing been carried out in accordance with licence requirements and are all structures tested

15 in line with BS8007/EPA Guidance?

[bundings 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?

Yes	
No	
No	

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

1 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 pipe lines that require testing
Other (Every 3 Years)	

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:	#REF!	Year	#REF!
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		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 Groundwater monitoring template Report (link in cell G8) and submit separately through ALDER as a licensee return AND answer questions 5-12 below.	NA	Please enter interpretation of data here
5	Is the contamination related to operations at the facility (either current and/or historic)	NA	
6	Have actions been taken to address contamination issues?If yes please summarise remediation strategies proposed/undertaken for the site	NA	
7	Please specify the proposed time frame for the remediation strategy	NA	
8	Is there a licence condition to carry out/update ELRA for the site?	NA	
9	Has any type of risk assesment been carried out for the site?	NA	
10	Has a Conceptual Site Model been developed for the site?	NA	
11	Have potential receptors been identified on and off site?	NA	
12	Is there evidence that contamination is migrating offsite?	NA	

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:	#REF!	Year	#REF!																
*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)		<table><tr><td>Groundwater</td><td>Drinking water</td></tr><tr><td>Surface</td><td>regulations</td></tr><tr><td>water EQS</td><td>(private supply)</td></tr><tr><td>GTV's</td><td>standards</td></tr><tr><td></td><td>Drinking water (public</td></tr><tr><td></td><td>supply) standards</td></tr><tr><td></td><td>Interim Guideline</td></tr><tr><td></td><td>Values (IGV)</td></tr></table>				Groundwater	Drinking water	Surface	regulations	water EQS	(private supply)	GTV's	standards		Drinking water (public		supply) standards		Interim Guideline		Values (IGV)
Groundwater	Drinking water																				
Surface	regulations																				
water EQS	(private supply)																				
GTV's	standards																				
	Drinking water (public																				
	supply) standards																				
	Interim Guideline																				
	Values (IGV)																				

Groundwater/Soil monitoring template	Lic No:	#REF!	Year	#REF!
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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

Environmental Liabilities template		Lic No:	#REF!	Year	#REF!
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	Internal budget provision		
9	Closure plan review status	NA	Internal budget provision		
10	Financial Provision for Closure status	NA	Internal budget provision		
11	Financial Provision for Closure - amount of cover	NA	Internal budget provision		
12	Financial Provision for Closure - type	NA	Internal budget provision		
13	Financial provision for Closure expiry date	NA			

Environmental Management Programme/Continuous Improvement Programme template		Lic No:	#REF!	Year	#REF!
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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	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.	90	In total 21 Personnel received training in 2015. There were 12 haydraulic harrows deployed across the licence area. Headland peat was collected at all locations and returned as part of overall production figures.	Individual	Improved Environmental Management Practices

Environmental Management Programme/Continuous Improvement Programme template				Lic No:	#REF!	Year	#REF!
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	70	Installed a waste management system. Quarterly waste reports are returned for records/filing and waste streams are segregated on site to maximise recycling potential. In an attempt to curtail illegal dumping on Bord na Mona property, signs were secured from Kildare Co Council.	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 296.82 tonnes 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	90	Electrical and Gas oil consumption is in the future to be included in production area budgets with KPI's set for the ongoing monitoring of same.	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.	90	In total 21 Personnel received training in 2015. There were 12 hydraulic harrows deployed across the licence area and headland peat was collected and returned as part of overall production figures.	Individual	Improved Environmental Management Practices		

Noise monitoring summary report	Lic No:	#REF!	Year	#REF!
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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

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
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:	#REF!	Year	#REF!
--	---------	-------	------	-------

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

[SEAI - Large Industry Energy Network \(LIEN\)](#)

Additional information

NA	
Yes	
NA	

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)	18990.56	15953.23		
Total Energy Generated (MWHrs)				
Total Renewable Energy Generated (MWHrs)				
Electricity Consumption (MWHrs)	1473	1909.3	NA	NA
Fossil Fuels Consumption:				
Heavy Fuel Oil (m3)				
Light Fuel Oil (m3)	1724	1382.141	-20.90%	-19.80%
Natural gas (m3)				
Coal/Solid fuel (metric tonnes)				
Peat (metric tonnes)	20	0		NA
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

Table R3 Waste Stream Summary					
	Total	Landfill	Incineration	Recycled	Other
Hazardous (Tonnes)	7.644	0	0.374	7.27	0
Non-Hazardous (Tonnes)	2451.98	106.59	0	526.49	1818.9

Resource Usage/Energy efficiency summary	Lic No:	#REF!	Year	#REF!
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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:	#REF1	Year	#REF1
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Complaints	Additional information
Have you received any environmental complaints in the current reporting year? If yes please complete summary details of complaints received on site in table 1 below	

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
26/06/2015	Dust	Dust nuisance	Householder complained of dust nuisance from Blackriver bog	Employees reminded of Environmental Duties. No peat production during windy weather.	Complete	28/06/2015	Reported to the Agency ref LR017166 on 08/07/2015
06/07/2015	Dust	Dust nuisance	Householder complained of dust nuisance from Derrybrennan bog	Employees reminded of Environmental Duties. No peat production during windy weather.	Complete	08/07/2015	Reported to the Agency ref LR017880 on 05/08/2015
14/07/2015	Dust	Dust nuisance	Householder complained of dust nuisance from Blackriver bog	Employees reminded of Environmental Duties. No peat production during windy weather.	Complete	14/07/2015	Reported to the Agency ref LR017880 on 05/08/2015
18/08/2015	Dust	Dust nuisance	Householder complained of dust nuisance from Lodge bog	Employees reminded of Environmental Duties. No peat production during windy weather. Private producers were storing and loading turf beside complainants house.	Complete	19/08/2015	Reported to the Agency ref LR018244 on 01/09/2015
	SELECT				SELECT		
Total complaints open at start of reporting year		0					
Total new complaints received during reporting year		4					
Total complaints closed during reporting year		4					
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	
*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
11/02/2015	COD Trigger level reached	SW 3 Daingean Bog	1. Minor	Water	Other (add details)	Naturally Occurring	Normal activities	EPA INCI007307	New	NA	NA	Complete	27/03/2015	Low
11/02/2015	Ammonia Trigger level reached	SW 74 Codd Nth	1. Minor	Water	Other (add details)	Naturally Occurring	Normal activities	EPA INCI007309	New	NA	NA	Complete	27/03/2015	Low
11/02/2015	Ammonia Trigger level reached	SW 75 Codd Nth	1. Minor	Water	Other (add details)	Naturally Occurring	Normal activities	EPA INCI007310	New	NA	NA	Complete	27/03/2015	Low
11/02/2015	Ammonia Trigger level reached	SW 76 Codd Nth	1. Minor	Water	Other (add details)	Naturally Occurring	Normal activities	EPA INCI007312	New	NA	NA	Complete	27/03/2015	Low
05/06/2015	Fire	Clonsast Bog	1. Minor	Air	Unknown		Normal activities	EPA INCI007860	New	Extinguish fire	Include location in fire watch exercise	Complete	08/06/2015	Low

[illegible]

Additional Information

SELECT	
--------	--

SELECT	

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)

[illegible]

SELECT	

SELECT	
--------	--

SELECT	
SELECT	
SELECT	

SELECT	
--------	--

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

[illegible]

WASTE SUMMARY		Lic No:	#REF!	Year	#REF!
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Table 4 Environmental monitoring-landfill only [Landfill Manual-Monitoring Standards](#)

Was meteorological monitoring in compliance with Landfill Directive (LD) standard in reporting year +	Was leachate monitored in compliance with LD standard in reporting year	Was Landfill Gas monitored in compliance with LD standard in reporting year	Was SW monitored in compliance with LD standard in reporting year	Have GW trigger levels been established	Were emission limit values agreed with the Agency (ELVs)	Was topography of the site surveyed in reporting year	Has the statement under SS3(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	

Allen
Decommissioning and Rehabilitation
AER Overview 2015.

Within the Allen licensed area (P0503-01), there were no entire bog units available for rehabilitation in 2015. Ongoing monitoring of cutaway areas was carried out within the Allen licensing and a number of bog areas re-surveyed including Barnaran, Ballycon, Derrycricket, Clonsast North, Derrycastle, Killinagh, Cloncreen and Lullymore.

Active rehabilitation work was carried out in two areas: a sphagnum inoculation trial was established on Clonroosk Bog and further hydrological management work was carried out in Lullymore as part of the long term rehabilitation of this site.

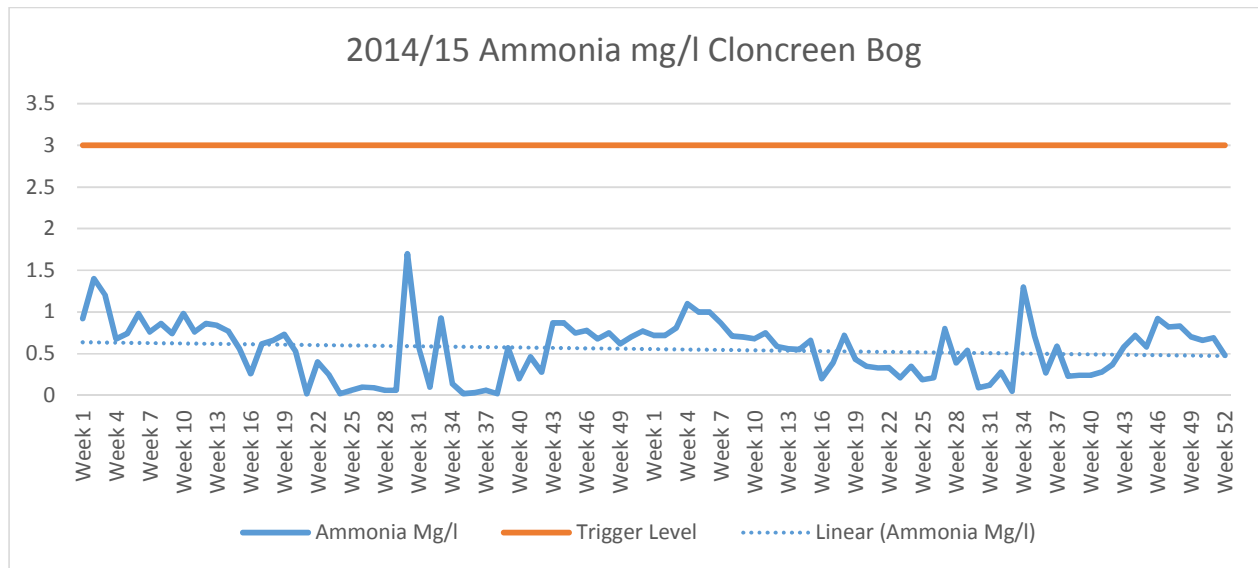
Draft rehabilitation plans for the Allen bogs licensed area, including more detailed draft plans for each component bog unit were submitted to the EPA in 2013 and these were reviewed and updated in 2015.

The annual Biodiversity Action Plan review day was held in November 2015 and this included an update on 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. At this meeting the draft of the new Biodiversity Action Plan was discussed, with a further extensive engagement with consultees held online.

The new Biodiversity Action Plan will be available from April 2016.

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
To Be Confirmed	To Be Confirmed	Rossan	SW-49	Q1 15	04/02/2015	6.7	5	152	2.3	0.05	60	210
To Be Confirmed	To Be Confirmed	Derryarkin	SW-10	Q1 15	04/02/2015	7.3	5	272	0.11	0.05	52	168
251559.92	235341.71	Ballybeg	SW-11	Q1 15	04/02/2015	7.2	5	312	0.68	0.05	59	208
240485.16	235706.33	Torr	SW-14	Q1 15	04/02/2015	7.2	5	298	1.9	0.05	46	150
244391.76	235128.93	Torr	SW-15	Q1 15	04/02/2015	7.4	5	382	0.77	0.05	38	80
244435.64	235093.42	Torr	SW-16	Q1 15	04/02/2015	7.3	5	368	0.65	0.05	32	83
240425.65	234997.32	Torr	SW-17	Q2 15	17/04/2015	7.5	5	458	1.1	0.05	49	164
262436.96	258824.82	Lisclogher	SW-19	Q2 15	17/04/2015	7.5	5	202	0.66	0.05	81	481
262935.72	258722.50	Lisclogher	SW-20	Q2 15	17/04/2015	7.1	5	196	1.2	0.05	82	499
262969.12	258691.34	Lisclogher	SW-21	Q2 15	17/04/2015	4.6	5	84	0.11	0.05	81	315
263432.94	258465.16	Lisclogher	SW-22	Q2 15	17/04/2015	7.4	24	378	3.4	0.14	62	140
263467.21	258446.56	Lisclogher	SW-23	Q3 15	22/07/2015	7.8	5	450	0.21	0.05	24	72
263740.80	258367.96	Lisclogher	SW-24	Q3 15	22/07/2015	4.6	5	141	0.11	0.05	146	350
263649.63	255035.41	Carranstown	SW-31	Q3 15	22/07/2015	6.9	5	168	0.16	0.05	60	146
265553.99	255989.11	Carranstown	SW-32	Q3 15	22/07/2015	7.4	5	350	0.35	0.05	89	224
254528.83	242354.28	Derryhinch	SW-2	Q4 15	30/10/2015	7.2	5	166	1.5	0.05	83	225
253369.19	242417.94	Derryhinch	SW-3	Q4 15	30/10/2015	7.4	5	204	2.4	0.05	22	129
252468.68	240919.32	Carrick	SW-5	Q4 15	30/10/2015	7.6	5	280	0.73	0.05	58	143
252409.71	241163.33	Carrick	SW-6	Q4 15	30/10/2015	7.8	5	426	0.29	0.06	10	105
252473.21	241162.01	Carrick	SW-7	Q4 15	30/10/2015	7.8	5	422	0.27	0.05	53	109



Cloncreen bog is an active production bog with the composite sampler located here during 2015. The composite sampler takes a flow proportional composite sample over a 24 hour period. The sampler had 0% downtime during the period and returned 52 weekly ammonia results. The ammonia trigger level of 3.0mg/l, as agreed with the Agency, was not exceeded during the period. Overall the results are trending downwards as peat extraction continues and this is in-line with the downwards trends submitted to the EPA in 2013 as required by condition 6.14 below. Due to the new licence condition 6.2, where all monitoring locations are required to be sampled at least once in a 5 yr period, it is not possible to trend these ammonia results for each individual location due to the new licence requirement. However the ammonia trends on the 24/7 composite sampler provided for 2014 and 2015, gives a good representation of the ammonia trends in the Allen bogs which are downwards.

Yard Discharge Results 2015
Licence: P0503-01
Works: Allen

Month	B/Dermot SWE 1 COD	B/Dermot SWE 2 COD	Timahoe SWE 1 COD	Clonsast SWE 1 COD	Ballycon SWE1 COD	Power Station SWE1 COD
Jan	51	55	30	54	23	73
Feb	55	43	28	70	10	58
Mar	54	37	16	26	11	42
Apr	34	45	29	40	10	52
May	52	44	56	63	10	27
June	10	40	37	87	10	40
July	10	74	55	112	13	61
Aug	10	42	52	35	10	32
Sep	15	37	47	27	10	46
Oct	34	14	44	16	10	12
Nov	21	60	36	40	15	52
Dec	31	56	46	35	27	94

0: No Flow On Day Of Sampling



| PRTR# : P0503 | Facility Name : Bord na Mona Allen Peat Limited | Filename : P0503_2015.xls | Return Year : 2015 |

16/03/2016 16:19

[Guidance to completing the PRTR workbook](#)

PRTR Returns Workbook

Version 1.1.19

REFERENCE YEAR	2015
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1. FACILITY IDENTIFICATION

Parent Company Name	Bord na Mona Allen Peat Limited
Facility Name	Bord na Mona Allen Peat Limited
PRTR Identification Number	P0503
Licence Number	P0503-01

Classes of Activity

No.	class_name
-	Refer to PRTR class activities below

Address 1	Allen Group
Address 2	c/o Derrygreenagh Works
Address 3	Rochfordbridge
Address 4	
	Westmeath
Country	Ireland
Coordinates of Location	-7.25677 53.3910
River Basin District	IEEA
NACE Code	0892
Main Economic Activity	Extraction of peat
AER Returns Contact Name	Enda McDonagh
AER Returns Contact Email Address	enda.mcdonagh@bnm.ie
AER Returns Contact Position	Head of Environment
AER Returns Contact Telephone Number	057 9345911
AER Returns Contact Mobile Phone Number	086 2370816
AER Returns Contact Fax Number	057 9345160
Production Volume	784055.0
Production Volume Units	Tonnes
Number of Installations	15
Number of Operating Hours in Year	2232
Number of Employees	140
User Feedback/Comments	In accordance with licence condition 6.2 of Technical Amendment A, quarterly sampling is now rotated every quarter and therefore suspended solids results are not factored into loading.
Web Address	

2. PRTR CLASS ACTIVITIES

Activity Number	Activity Name
50.1	General

3. SOLVENTS REGULATIONS (S.I. No. 543 of 2002)

Is it applicable?	No
Have you been granted an exemption ?	
If applicable which activity class applies (as per Schedule 2 of the regulations) ?	
Is the reduction scheme compliance route being used ?	

4. WASTE IMPORTED/ACCEPTED ONTO SITE

[Guidance on waste imported/accepted onto site](#)

Do you import/accept waste onto your site for on-site treatment (either recovery or disposal activities) ?	No
--	----

This question is only applicable if you are an IPPC or Quarry site

4.1 RELEASES TO AIR

[Link to previous years emissions data](#)

| PRTR# : P0503 | Facility Name : Bord na Mona Allen Peat Limited | Filename : P0503_2015.xls | Return Year : 2015 |

16/03/2016 16:20

SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

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

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

SECTION B : REMAINING PRTR POLLUTANTS

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

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

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

RELEASES TO AIR		METHOD			Please enter all quantities in this section in KGs					
POLLUTANT		Method Used			QUANTITY					
Pollutant No.	Name	M/C/E	Method Code	Designation or Description	DM-02	DM-03	DM-05	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
					Emission Point 1	Emission Point 2	Emission Point 3			
210	Dust	E	OTH	VDI 2119 Blatt 2/Part 2	0.0	0.0	0.0	0.052294	0.0	0.052294

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

Additional Data Requested from Landfill operators

For the purposes of the National Inventory on Greenhouse Gases, landfill operators are requested to provide summary data on landfill gas (Methane) flared or utilised on their facilities to accompany the figures for total methane generated. Operators should only report their Net methane (CH4) emission to the environment under T(total) KG/yr for Section A: Sector specific PRTR pollutants above. Please complete the table below:

Landfill: Bord na Mona Allen Peat Limited

Please enter summary data on the quantities of methane flared and / or utilised

T (Total) kg/Year	M/C/E	Method Used		Facility Total Capacity m3 per hour
		Method Code	Designation or Description	
Total estimated methane generation (as per site model)	0.0			N/A
Methane flared	0.0			0.0 (Total Flaring Capacity)
Methane utilised in engine/s	0.0			0.0 (Total Utilising Capacity)
Net methane emission (as reported in Section A above)	0.0			N/A

4.2 RELEASES TO WATERS

[Link to previous years emissions data](#)

[PRTR# : P0503 | Facility Name : Bord na Mona Allen Peat Limited | Filename : P0503_2015.xls | Return Year : 2015]

16/03/2016 16:21

SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

Data on ambient monitoring of storm/surface water or groundwater, conducted as part of your licence requirements, should NOT be submitted under AER / PRTR Reporting as this

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

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

SECTION B : REMAINING PRTR POLLUTANTS

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

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

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

RELEASES TO WATERS					Please enter all quantities in this section in KGs			
POLLUTANT					QUANTITY			
Pollutant No.	Name	M/C/E	Method Code	Method Used	SW33			
				Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
240	Suspended Solids	E	OTH	G/19 Based on ALPHA,1998,20th Edition, Method 2540D	4338.45	4338.45	0.0	0.0

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

SECTION A : PRTR POLLUTANTS

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

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

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

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

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

4.4 RELEASES TO LAND

[Link to previous years emissions data](#)

| PRTR# : P0503 | Facility Name : Bord na Mona Allen Peat Limited | Filename : P0503_2015.xls | Return Year : 2015 |

16/03/2016 16:22

SECTION A : PRTR POLLUTANTS

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

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

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

RELEASES TO LAND					Please enter all quantities in this section in KGs		
POLLUTANT		METHOD			QUANTITY		
Pollutant No.	Name	M/C/E	Method Used		Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year
			Method Code	Designation or Description			
					0.0	0.0	0.0

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

5. ONSITE TREATMENT & OFFSITE TRANSFERS OF WASTE

| PRTR# : P0503 | Facility Name : Bord na Mona Allen Peat Limited | Filename : P0503_2015.xls | Return Year : 2015 |

16/03/2016 16:23

Please enter all quantities on this sheet in Tonnes

3

Transfer Destination	European Waste Code	Hazardous	Quantity (Tonnes per Year)	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	Haz Waste : Name and Licence/Permit No of Next Destination Facility Haz Waste : Name and Licence/Permit No of Recover/Disposer	Haz Waste : Address of Next Destination Facility Non Haz Waste: Address of Recover/Disposer	Name and License / Permit No. and Address of Final Recoverer / Disposer (HAZARDOUS WASTE ONLY)	Actual Address of Final Destination i.e. Final Recovery / Disposal Site (HAZARDOUS WASTE ONLY)
						M/C/E	Method Used					
Within the Country	01 01 02	No	455.9	wastes from mineral non-metalliferous excavation	D1	E	Volume Calculation	Onsite of generati	Bord na Mona Allen P0503-01,P0503-01 Derrygreenagh Rochfortbridge Mullingar Co e,Mullingar,Co Westmeath	Derrygreenagh,Rochfortbridg e,Mullingar,Co Westmeath,Ireland		
Within the Country	01 01 02	No	1363.0	wastes from mineral non-metalliferous excavation	D1	M	Weighed	Onsite of generati	Bord na Mona Allen P0503-01,P0503-01 Derrygreenagh Rochfortbridge Mullingar Co e,Mullingar,Co Westmeath	Derrygreenagh,Rochfortbridg e,Mullingar,Co Westmeath,Ireland		
Within the Country	02 01 04	No	296.82	waste plastics (except packaging)	R3	M	Weighed	Offsite in Ireland	Leinster Environmentals Haggardstown Dundalk,WP 2008/06 Haggardstown Dundalk	Haggardstown,Dundalk,Co Louth,,Ireland		
To Other Countries	11 01 13	Yes	0.92	degreasing wastes containing dangerous substances	R11	C	Volume Calculation	Abroad	Safety Kleen Ltd ,W0099-01	Tallaght,Dublin,,,,Ireland	Solvent Recovery Management,PP33345F,Wheeland Road,Knottingly,West Yorks ,WF11 8DZ,United Kingdom	Wheeland Road,Knottingly,West Yorks ,WF11 8DZ,United Kingdom
Within the Country	13 02 05	Yes	5.9	mineral-based non-chlorinated engine, gear and lubricating oils	R1	C	Volume Calculation	Offsite in Ireland	Enva Ireland Ltd 184.1,Clonminam Ind Estate Portlaoise Co Laois AES Ltd Cappincur Tullamore,WCP-OY-08-601-01	Clonminam Ind Estate,Portlaoise,Co Laois,,Ireland	Enva Ireland Ltd,184-1,Clonminam Industrial Estate,Portlaoise,Laois,,Ireland	Clonminam Industrial Estate,Portlaoise,Laois,,Ireland
Within the Country	15 01 03	No	3.48	wooden packaging absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by	R1	M	Weighed	Offsite in Ireland	Enva Ireland Ltd 184.1,Clonminam Ind Estate Portlaoise Co Laois	Clonminam Ind Estate,Portlaoise,Co Laois,,Ireland	Lindenschmidt Kreuztal Germany,E97095037,Linden schmidt ,Kreuztal,,,,Germany	Lindenschmidt ,Kreuztal,,,,Germany
To Other Countries	15 02 02	Yes	0.15	dangerous substances	R1	C	Volume Calculation	Abroad	Enva Ireland Ltd 184.1,Clonminam Ind Estate Portlaoise Co Laois	Clonminam Ind Estate,Portlaoise,Co Laois,,Ireland	R.D. Recycling,Reg No 51727/1/KD,Houthalen,,,,,Belgium	Houthalen,,,,,Belgium
To Other Countries	16 01 07	Yes	0.45	oil filters	R4	M	Weighed	Abroad	Enva Ireland Ltd 184.1,Clonminam Ind Estate Portlaoise Co Laois	Clonminam Ind Estate,Portlaoise,Co Laois,,Ireland	Campine Recycling,MLAV/05-173/GVDA,Beerse,,,,,Belgium	Beerse,,,,,Belgium
Within the Country	17 04 07	No	224.09	mixed metals	R4	M	Weighed	Offsite in Ireland	AES Ltd Cappincur Tullamore,WCP-OY-08-601-01	Cappincur,Tullamore,Co Offaly,,Ireland		
Within the Country	20 03 01	No	87.42	mixed municipal waste	D1	M	Weighed	Offsite in Ireland	AES Ltd Cappincur Tullamore,WCP-OY-08-601-01	Cappincur,Tullamore,Co Offaly,,Ireland		
Within the Country	20 03 01	No	19.17	mixed municipal waste	D1	M	Volume Calculation	Offsite in Ireland	AES Ltd Cappincur Tullamore,WCP-OY-08-601-01	Cappincur,Tullamore,Co Offaly,,Ireland		
To Other Countries	13 08 99	Yes	0.22	wastes not otherwise specified	R1	E	Volume Calculation	Abroad	Enva Ireland Ltd 184.1,Clonminam Ind Estate Portlaoise Co Laois	Clonminam Ind Estate,Portlaoise,Co Laois,,Ireland	Lindenschmidt Kreuztal Germany,E97095037,Linden schmidt ,Kreuztal,,,,Germany	Lindenschmidt ,Kreuztal,,,,Germany

* Select a row by double-clicking the Description of Waste then click the delete button

Facility Information Summary

AER Reporting Year
 Licence Register Number
 Name of site
 Site Location
 NACE Code
 Class/Classes of Activity
 National Grid Reference (6E, 6 N)

2014

P0503-01

Bord na Mona Allen

Derrygreenagh, Rochfortbridge, Co Westmeath

0892

1.4

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 991,930 tonnes which was down on the 2013 figure. Infrastructurally, there was no bog development. From an environmental perspective silt pond capacity was increased by 4808m³ and there was 450 metres of shelter belt planted on a machine run leading to Ballydermot Bogs. The quarterly grab sampling was 100% compliant, as was the continuous composite sampling. There was 1 environmental complaint received during the reporting period. In relation to silt pond cleaning, 96.8% of ponds received two cleanings, inspections dictating cleaning schedules. 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.

E. Mullally

Signature

Group/Facility manager

(or nominated, suitably qualified and experienced deputy)

Date

24-3-15

AIR-summary template

Lic No:

#REF!

Year

#REF!

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

No

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 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:	#REF!	Year	#REF!
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	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	

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-02	Total Particulates	350	140 DAYS	Daily average < ELV	mg/m2/day	473	128	0	0	
		350	140 DAYS			605	155	0	0	The 605 result proved to be contamination and not dust.
DM-03	Total Particulates			Daily average < ELV	mg/m2/day					
DM-04	Total Particulates	350	140 DAYS	Daily average < ELV	mg/m2/day	743	631	0	0	
DM-05	Total Particulates	350	140 DAYS	Daily average < ELV	mg/m2/day	445	103	0	0	
	SELECT				SELECT					

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

128

155

631

103

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:	#REF!	Year	#REF!			
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 thereof	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:	#REF!	Year	#REF!
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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 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

	Additional information
Yes	
Yes	Monthly COD and Yard Run Off

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

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

[External /Internal](#)

[Lab Quality](#)

[Assessment of](#)

[checklist](#)

[results checklist](#)

4 require improvement in additional information box

No	Additional information
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
	SELECT	SELECT	SELECT		SELECT		SELECT		SELECT	SELECT	SELECT	SELECT			

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

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

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

Lic No:

#REF!

Year

#REF!

Continuous monitoring

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

Additional Information	
Yes	See note above

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 82 day over 365 days
-----	-------------------------------

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

Yes	Annual calibration schedule and trouble shooting service.
-----	---

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
SW-33	Water	Suspended Solids	35	24 hour	Not Listed	mg/L	3931.49	3.36%	1968	0	Down time was primarily due to battery changes and periods of no flow.
SW-33	Water	Ammonia (as N)	NA	Weekly	NA	mg/L	104.49	4.48%			
SW-33	Water	Total phosphorus	NA	Weekly	NA	mg/L	6.54	14.66%			
SW-33	Water	COD	NA	Weekly	NA	mg/L	5938	14.57%			
SW-33	Water	Volumetric flow	NA	24 hour	NA	m3/day	854763	11.39%	1968		Down time was primarily due to battery changes and periods of no flow.
SW-33	Water	Total Dissolved Solids	NA	Weekly	NA	mg/L	191116	-4.44%			

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:	#REF!	Year	#REF!
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Bund testing

dropdown menu click to see options

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 "Chemstore" type units and mobile bunds)
4 How many bunds are on site?
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?

Additional information	
One bund failed, the details of which are included in table B1 below.	
Yes	
Other (2 Yearly)	
Yes	
4	
4	
11	
No	
0	
0	
0	
SELECT	
SELECT	
SELECT	

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)
Ballycon 503-37-09	reinforced concrete		Gas Oil	387324	346500	Hydraulic test		17-24-11-2014	Yes	Fail	Initial investigations suggest a localised failure of the interface between floor and wall.	Other (Decision whether to repair or replace with double skinned tank pending)	Not Known at time of submission	
	SELECT					SELECT			SELECT	SELECT		SELECT		

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

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

[bundings 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?

Commentary	
Yes	
No	
No	

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

- 1 underground structures and pipelines on site **which failed the integrity test and all which have not been tested within the integrity test period as specified**
2 Please provide integrity testing frequency period
*please note integrity testing means water tightness testing for process and foul pipelines (as required under your licence)

No underground pipe lines that require testing	
Yes	
Other (Every 3 Years)	

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:	#REF!	Year	#REF!
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		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	NA	Please enter interpretation of data here
5	Is the contamination related to operations at the facility (either current and/or historic)	NA	
6	Have actions been taken to address contamination issues?If yes please summarise remediation strategies proposed/undertaken for the site	NA	
7	Please specify the proposed time frame for the remediation strategy	NA	
8	Is there a licence condition to carry out/update ELRA for the site?	NA	
9	Has any type of risk assesment been carried out for the site?	NA	
10	Has a Conceptual Site Model been developed for the site?	NA	
11	Have potential receptors been identified on and off site?	NA	
12	Is there evidence that contamination is migrating offsite?	NA	

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:	#REF!	Year	#REF!															
*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)		<table> <tr> <td>Groundwater</td> <td>Drinking water</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Surface water EQS</td> <td>regulations</td> <td>(private supply)</td> <td>Drinking water (public supply) standards</td> <td>Interim Guideline Values (IGV)</td> </tr> <tr> <td></td> <td>GTV's</td> <td>standards</td> <td></td> <td></td> </tr> </table>				Groundwater	Drinking water				Surface water EQS	regulations	(private supply)	Drinking water (public supply) standards	Interim Guideline Values (IGV)		GTV's	standards		
Groundwater	Drinking water																			
Surface water EQS	regulations	(private supply)	Drinking water (public supply) standards	Interim Guideline Values (IGV)																
	GTV's	standards																		

Groundwater/Soil monitoring template	Lic No:	#REF!	Year	#REF!
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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

Environmental Liabilities template		Lic No:	#REF!	Year	#REF!
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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	Internal budget provision
9	Closure plan review status	NA	Internal budget provision
10	Financial Provision for Closure status	NA	Internal budget provision
11	Financial Provision for Closure - amount of cover	NA	Internal budget provision
12	Financial Provision for Closure - type	NA	Internal budget provision
13	Financial provision for Closure expiry date	NA	

Environmental Management Programme/Continuous Improvement Programme template		Lic No:	#REF!	Year	#REF!
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	SELECT			
2	Does the EMS reference the most significant environmental aspects and associated impacts on-site	SELECT			
3	Does the EMS maintain an Environmental Management Programme (EMP) as required in accordance with the licence requirements	SELECT			
4	Do you maintain an environmental documentation/communication system to inform the public on environmental performance of the facility, as required by the licence	SELECT			

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.	90	In total 115 Personnel received training in 2014. There were 12 haydraulic harrows deployed across the licence area. There was 450 metres of shelter belt planted adjacent to the machine run out to ballydermot from the Power Station. Headland peat was collected at all locations and returned as part of overall production figures.	Individual	Improved Environmental Management Practices

Environmental Management Programme/Continuous Improvement Programme template				Lic No:	#REF!	Year	#REF!
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	70	Installed a waste management system. Quarterly waste reports are returned for records/filing and waste streams are segregated on site to maximise recycling potential. In an attempt to curtail illegal dumping on Bord na Mona property, signs were secured from Kildare and Offaly Co Councils. There was also a successful prosecution of an illegal dumper in Garryhinch Bog.	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 468.29 tonnes 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	90	A launch event took place where the various energy aspects of the process was communicated, with a breakdown of individuals consumption across all areas of operation.	Section Head	Reduce overall energy output while maintaining productivity.		

Environmental Management Programme/Continuous Improvement Programme template				Lic No:	#REF!	Year	#REF!
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.	90	In total 115 Personnel received training in 2014. There were 12 hydraulic harrows deployed across the licence area and headland peat was collected and returned as part of overall production figures.	Individual	Improved Environmental Management Practices		

Noise monitoring summary report

Lic No:

#REF!

Year

#REF!

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:	#REF!	Year	#REF!
--	---------	-------	------	-------

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

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)	15625.59	18990.56	-27.24%	21.53%
Total Energy Generated (MWHrs)				
Total Renewable Energy Generated (MWHrs)				
Electricity Consumption (MWHrs)	1228	1473		20.00%
Fossil Fuels Consumption:				
Heavy Fuel Oil (m3)				
Light Fuel Oil (m3)	1416	1724		21.75%
Natural gas (m3)				
Coal/Solid fuel (metric tonnes)				
Peat (metric tonnes)	20	0		-100%
Renewable Biomass				
Renewable energy generated on site				

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

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

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

Table R3 Waste Stream Summary					
	Total	Landfill	Incineration	Recycled	Other
Hazardous (Tonnes)	68.25			68.25	
Non-Hazardous (Tonnes)	2736.42	51.54		969.39	1715.49

Resource Usage/Energy efficiency summary	Lic No:	#REF!	Year	#REF!
--	---------	-------	------	-------

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:	#REF!	Year	#REF!
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Complaints		Additional information	
Have you received any environmental complaints in the current reporting year? If yes please complete summary details of complaints received on site in table 1 below		Yes	

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
17/04/2014	Water	Unauthorised Drainage	A section of peatland was drained in error.	A program of remediation was put in place where by all excavated drains were closed in.	Ongoing	To be communicated	Reported to the Agency ref COM 001722 on 17/04/2014
	SELECT				SELECT		
	SELECT				SELECT		
	SELECT				SELECT		
	SELECT				SELECT		
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	
*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
15/01/2014	Trigger level reached	EPL SWE 1	1. Minor	Water	Plant or equipment issues		Normal activities	EPA	New	Filters washed down	Scheduled washing of filters	Complete	20/01/2014	Medium
07/05/2014	Trigger level reached	EPL SWE 1	1. Minor	Water	Plant or equipment issues		Normal activities	EPA	Recurring	Filters washed down	More care when washing filters	Complete	04/06/2014	Medium
27/05/2014	Trigger level reached	SW33 Cloncreen	1. Minor	Water	Naturally Occurring		Normal activities	EPA	New	NA	NA	Complete	04/06/2014	Low
17/06/2014	Fire	Clonsast Bog	1. Minor	Air	Spark from machinery		Normal activities	EPA	New	Extinguish fire	Include location in fire watch exercise	Complete	20/06/2014	Medium
17/07/2014	Fire	Clonsast Bog	1. Minor	Air	Unknown		Normal activities	EPA	New	Extinguish fire	Include location in fire watch exercise	Complete	18/07/2014	Medium
21/07/2014	Trigger level reached	SW35 Cloncreen Bog	1. Minor	Water	Naturally Occurring		Normal activities	EPA	New	NA	NA	Complete	18/08/2014	Medium
12/12/2014	Spillage	Daingean Bog	1. Minor	Water	Other (add details)	Entry into Bord na Mona site following spillage elsewhere	Normal activities	EPA, Local Authority, An Garda	New	Booms deployed at interval along outfall.	NA	Complete	16/12/2014	Low

Complaints and Incidents summary template		Lic No:	#REF!	Year	#REF!
Total number of incidents current year					7
Total number of incidents previous year					8
% reduction/increase					-12.3%

WASTE SUMMARY	Lic No:	#REF!	Year	#REF!
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Table 4 Environmental monitoring-landfill only [Landfill Manual-Monitoring Standards](#)

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

.-+ 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	

Comments on liner type

**Allen
Decommissioning and Rehabilitation
AER Overview 2014.**

Within the Allen licensed area (P0503-01), there were no entire bog units available for rehabilitation in 2014. Ongoing monitoring of cutaway areas was carried out within the Allen licensing. An area of bog (~40ha) that had been drained in error (Clonroosk Bog, part of Ballydermot Bog) was rewetted between April 2014 and August 2014. Also, an area of bare peat in Lullymore Bog (~5ha) was fertilised to enhance revegetation. Draft rehabilitation plans for the Allen bogs licensed area, including more detailed draft plans for each component bog unit were submitted to the EPA in 2013. The BNM Ecology Team (who plan and manage rehabilitation) met with the EPA inspectorate in 2013 to outline the general content of the rehab plans and a review process was agreed. This will involve a biannual review and update of plans as well as more detail and finalisation of plans for sites that have been taken out of production. The plans are currently under review (March-April 2015).

The annual Biodiversity Action Plan review day was held in February 2015 and this included an update on progress of this plan, bog restoration and cutaway rehabilitation for a wide range of 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 Allen			Siltpond Monitoring Frequency & Results									
IPPC Licence P0503-01												
X	Y	Bog	SW	Monitoring	Sampled Date	pH	SS	TS	Ammonia	TP	COD	Colour
250869.07	219763.05	Ballykeane	SW-14	Q1 14	26/03/2014	7.9	5	366	0.94	0.05	53	133
249524.55	220230.29	Ballykeane	SW-16	Q1 14	26/03/2014	7.5	9	408	0.4	0.05	42	70
251030.51	221700.00	Ballykeane	SW-17	Q1 14	26/03/2014	7.8	5	200	0.21	0.05	67	177
251754.70	229410.12	Cavemount	SW-20	Q1 14	26/03/2014	7.6	5	250	2.3	0.06	75	193
254333.53	229715.70	Esker	SW-24	Q1 14	26/03/2014	7.6	10	141	1.6	0.06	75	250
254066.03	229231.46	Esker	SW-25	Q1 14	26/03/2014	7.2	5	168	2.4	0.05	68	236
255848.09	228220.50	Esker	SW-26	Q2 14	19/06/2014	7.8	5	428	0.28	0.18	19	44
255811.14	228181.42	Esker	SW-27	Q2 14	19/06/2014	7.7	11	334	2.3	0.11	51	186
256098.51	227480.46	Esker	SW-28	Q2 14	19/06/2014	7.7	5	366	0.02	0.06	54	133
253610.03	227876.29	Esker	SW-29	Q2 14	19/06/2014	7.6	5	454	0.02	0.05	18	35
254079.86	227734.11	Esker	SW29-A	Q2 14	19/06/2014	7.6	7	244	1.7	0.07	85	250
255866.18	225413.14	Ballycon	SW-30	Q2 14	19/06/2014	7.6	5	410	0.02	0.05	51	90
258120.18	224725.27	Cloncreen	SW-32	Q3 14	21/07/2014	8	5	284	0.02	0.05	41	86
257161.38	225368.56	Cloncreen	SW-33	Q3 14	21/07/2014	7.8	5	400	0.1	0.05	17	34
256186.23	227016.03	Cloncreen	SW-34	Q3 14	21/07/2014	7.8	5	426	0.41	0.05	27	64
260552.28	227277.74	Cloncreen	SW-35	Q3 14	21/07/2014	8	10	796	0.05	0.05	103	124
260597.00	226777.19	Cloncreen	SW-37	Q3 14	21/07/2014	7.9	5	424	0.09	0.05	18	46
260756.49	225793.84	Cloncreen	SW-37A	Q3 14	21/07/2014	7.7	5	344	1.4	0.05	10	17
244906.14	212161.63	Garrymore	SW-40	Q4 14	22/10/2014	7.6	5	116	1.8	0.06	10	257
259705.78	214693.84	Derrylea	SW-43	Q4 14	22/10/2014	7.8	5	224	1.1	0.05	64	323
263592.36	226625.93	Codd South	SW-45	Q4 14	22/10/2014	7.7	8	198	0.76	0.05	86	225
264507.34	223259.15	Ballydermot	SW-67A	Q4 14	22/10/2014	8	5	278	0.63	0.05	63	170
264457.64	225650.79	Codd South	SW-67	Q4 14	22/10/2014	7.7	5	278	0.42	0.05	97	213
266794.47	229663.32	Ticknevin	SW-68	Q4 14	22/10/2014	7.1	5	186	2.9	0.05	86	260

Yard Discharge Results 2014						
Licence: P0503-01						
Works: Allen						
Month	B/Dermot SWE 1 COD	B/Dermot SWE 2 COD	Timahoe SWE 1 COD	Clonsast SWE 1 COD	Ballycon SWE1 COD	Power Station SWE1 COD
Jan	78	29	32	51	31	128
Feb	45	63	44	20	14	60
Mar	64	60	30	44	40	70
Apr	53	68	15	35	43	76
May	56	48	77	36	46	175
June	23	21	24	29	19	39
July	51	57	58	75	26	55
Aug	47	50	61	45	50	45
Sep	14	20	75	29	0	23
Oct	34	37	67	39	14	59
Nov	63	40	46	44	18	15
Dec	90	62	49	54	20	61



| PRTR# : P0503 | Facility Name : Bord na Mona Allen Peat Limited | Filename : P0503_2014.xls | Return Year : 2014 |

23/03/2015 13:44

[Guidance to completing the PRTR workbook](#)

AER Returns Workbook

Version 1.1.18

REFERENCE YEAR	2014
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1. FACILITY IDENTIFICATION

Parent Company Name	Bord na Mona Allen Peat Limited
Facility Name	Bord na Mona Allen Peat Limited
PRTR Identification Number	P0503
Licence Number	P0503-01

Classes of Activity

No.	class_name
-	Refer to PRTR class activities below

Address 1	Allen Group
Address 2	c/o Derrygreenagh Works
Address 3	Rochfordbridge
Address 4	
	Westmeath
Country	Ireland
Coordinates of Location	-7.25677 53.3910
River Basin District	IEEA
NACE Code	0892
Main Economic Activity	Extraction of peat
AER Returns Contact Name	Enda McDonagh
AER Returns Contact Email Address	enda.mcdonagh@bnm.ie
AER Returns Contact Position	Head of Environment
AER Returns Contact Telephone Number	057 9345911
AER Returns Contact Mobile Phone Number	086 2370816
AER Returns Contact Fax Number	057 9345160
Production Volume	991930.0
Production Volume Units	Tonnes
Number of Installations	15
Number of Operating Hours in Year	2232
Number of Employees	140
User Feedback/Comments	In accordance with licence condition 6.2 of Technical Amendment A, quarterly sampling is now rotated every quarter and therefore suspended solids results are not factored into loading.
Web Address	www.bnm.ie

2. PRTR CLASS ACTIVITIES

Activity Number	Activity Name
50.1	General

3. SOLVENTS REGULATIONS (S.I. No. 543 of 2002)

Is it applicable?	No
Have you been granted an exemption ?	
If applicable which activity class applies (as per Schedule 2 of the regulations) ?	
Is the reduction scheme compliance route being used ?	

4. WASTE IMPORTED/ACCEPTED ONTO SITE

[Guidance on waste imported/accepted onto site](#)

Do you import/accept waste onto your site for on-site treatment (either recovery or disposal activities) ?	No
--	----

This question is only applicable if you are an IPPC or Quarry site

4.2 RELEASES TO WATERS [Link to previous years emissions data](#)

| PRTR# : P0503 | Facility Name : Bord na Mona Allen Peat Limited | Filename : P0503_2014.xls | Return Year : 2014 |

23/03/2015 13:46

SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

Data on ambient monitoring of storm/surface water or groundwater, conducted as part of your licence requirements, should NOT be submitted under AER / PRTR Reporting as this only co

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

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

SECTION B : REMAINING PRTR POLLUTANTS

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

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

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

RELEASES TO WATERS					Please enter all quantities in this section in KGs			
POLLUTANT		Method Used			QUANTITY			
Pollutant No.	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
240	Suspended Solids	E	OTH	G/19 Based on ALPHA,1998,20th Edition, Method 2540D	SW33 3931.0	3931.0	0.0	0.0

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

SECTION A : PRTR POLLUTANTS

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

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

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

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

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

4.4 RELEASES TO LAND[Link to previous years emissions data](#)

| PRTR# : P0503 | Facility Name : Bord na Mona Allen Peat Limited | Filename : P0503_2014.xls | Return Year : 2014 |

23/03/2015 13:47

SECTION A : PRTR POLLUTANTS

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

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

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

RELEASES TO LAND			Please enter all quantities in this section in KGs		
POLLUTANT		METHOD		QUANTITY	
Pollutant No.	Name	M/C/E	Method Used Method Code Designation or Description	Emission Point 1	T (Total) KG/Year A (Accidental) KG/Year
				0.0	0.0

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

5. ONSITE TREATMENT & OFFSITE TRANSFERS OF WASTE

| PRTR# : P0503 | Facility Name : Bord na Mona Allen Peat Limited | Filename : P0503_2014.xls | Return Year : 2014 |

23/03/2015 13:48

Please enter all quantities on this sheet in Tonnes

3

Transfer Destination	European Waste Code	Hazardous	Quantity (Tonnes per Year)	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	Haz Waste : Name and Licence/Permit No of Next Destination Facility Non Haz Waste: Name and Licence/Permit No of Recover/Disposer	Haz Waste : Address of Next Destination Facility Non Haz Waste: Address of Recover/Disposer	Name and License / Permit No. and Address of Final Recoverer / Disposer (HAZARDOUS WASTE ONLY)	Actual Address of Final Destination i.e. Final Recovery / Disposal Site (HAZARDOUS WASTE ONLY)
						M/C/E	Method Used					
Within the Country	01 01 02	No	545.49	wastes from mineral non-metalliferous excavation	D1	E	Volume Calculation	Onsite of generati	Bord na Mona Allen P0503-01,P0503-01 Derrygreenagh Rochfortbridge Mullingar Co e, Mullingar, Co Westmeath, Ireland	Derrygreenagh,Rochfortbridge Mullingar, Co Westmeath,Ireland		
Within the Country	01 01 02	No	1170.0	wastes from mineral non-metalliferous excavation	D1	M	Weighed	Onsite of generati	Bord na Mona Allen P0503-01,P0503-01 Derrygreenagh Rochfortbridge Mullingar Co e, Mullingar, Co Westmeath, Ireland	Derrygreenagh,Rochfortbridge Mullingar, Co Westmeath,Ireland		
Within the Country	02 01 04	No	468.29	waste plastics (except packaging)	R3	M	Weighed	Offsite in Ireland	Leinster Environmental Haggardstown Dundalk,WP 2008/06 Haggardstown Dundalk	Haggardstown,Dundalk,Co Louth,,Ireland		
To Other Countries	11 01 13	Yes	0.75	degreasing wastes containing dangerous substances	R11	C	Volume Calculation	Abroad	Safety Kleen Ltd ,W0099-01	Tallaght,Dublin,,Ireland	Solvent Recovery Management,PP33345F,Wheeland Road,Knottingly,West Yorks ,WF11 8DZ,United Kingdom	Wheeland Road,Knottingly,West Yorks ,WF11 8DZ,United Kingdom
Within the Country	13 02 05	Yes	55.09	mineral-based non-chlorinated engine, gear and lubricating oils	R1	C	Volume Calculation	Offsite in Ireland	Enva Ireland Ltd 184.1,Clonminam Ind Estate Portlaoise Co Laois AES Ltd Cappincur Tullamore,WCP-OY-08-601-01	Clonminam Ind Estate,Portlaoise,Co Laois,,Ireland	Enva Ireland Ltd,184-1,Clonminam Industrial Estate,Portlaoise,Laois,,Ireland	Clonminam Industrial Estate,Portlaoise,Laois,,Ireland
Within the Country	15 01 03	No	5.36	wooden packaging absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by	R1	M	Weighed	Offsite in Ireland	Enva Ireland Ltd 184.1,Clonminam Ind Estate Portlaoise Co Laois AES Ltd Cappincur Tullamore,WCP-OY-08-601-01	Clonminam Ind Estate,Portlaoise,Co Laois,,Ireland	Lindenschmidt Kreuztal Germany,E97095037,Linden schmidt ,Kreuztal,,Germany	Lindenschmidt ,Kreuztal,,Germany
To Other Countries	15 02 02	Yes	9.64	dangerous substances	R1	C	Volume Calculation	Abroad	Enva Ireland Ltd 184.1,Clonminam Ind Estate Portlaoise Co Laois AES Ltd Cappincur Tullamore,WCP-OY-08-601-01	Clonminam Ind Estate,Portlaoise,Co Laois,,Ireland	Lindenschmidt Kreuztal Germany,E97095037,Linden schmidt ,Kreuztal,,Germany	Lindenschmidt ,Kreuztal,,Germany
Within the Country	17 04 07	No	495.74	mixed metals	R4	M	Weighed	Offsite in Ireland	Enva Ireland Ltd 184.1,Clonminam Ind Estate Portlaoise Co Laois AES Ltd Cappincur Tullamore,WCP-OY-08-601-01	Clonminam Ind Estate,Portlaoise,Co Laois,,Ireland		
Within the Country	20 03 01	No	38.92	mixed municipal waste	D1	M	Weighed	Offsite in Ireland	Enva Ireland Ltd 184.1,Clonminam Ind Estate Portlaoise Co Laois AES Ltd Cappincur Tullamore,WCP-OY-08-601-01	Clonminam Ind Estate,Portlaoise,Co Laois,,Ireland		
Within the Country	20 03 01	No	12.62	mixed municipal waste	D1	M	Volume Calculation	Offsite in Ireland	Enva Ireland Ltd 184.1,Clonminam Ind Estate Portlaoise Co Laois AES Ltd Cappincur Tullamore,WCP-OY-08-601-01	Clonminam Ind Estate,Portlaoise,Co Laois,,Ireland		
To Other Countries	16 01 07	Yes	1.97	oil filters	R4	M	Weighed	Abroad	Enva Ireland Ltd 184.1,Clonminam Ind Estate Portlaoise Co Laois	Clonminam Ind Estate,Portlaoise,Co Laois,,Ireland	R.D. Recycling,Reg No 51727/1/KD,Houthalen,,B elgium	Houthalen,,B elgium
To Other Countries	16 06 01	Yes	0.8	lead batteries	R6	M	Weighed	Abroad	Enva Ireland Ltd 184.1,Clonminam Ind Estate Portlaoise Co Laois	Clonminam Ind Estate,Portlaoise,Co Laois,,Ireland	Campine Recycling,MLAV/05-173/GVDA,Beerse,,Belgiu m	Beerse,,Belgium

* Select a row by double-clicking the Description of Waste then click the delete button

Facility Information Summary

AER Reporting Year
 Licence Register Number
 Name of site
 Site Location
 NACE Code
 Class/Classes of Activity
 National Grid Reference (6E, 6 N)

2013
P0503-01
Bord na Mona Allen
Derrygreenagh, Rochfortbridge, Co Westmeath
0892
1.4
249450, 238140

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. Due to the exceptionally good weather experienced during the 2013 production season, production increased to approximately 1370066 tonnes which was a 4 fold increase of the 2012 production achieved. Infrastructurally, there was no bog development. From an environmental perspective silt pond capacity was increased by 8361m³. The quarterly grab sampling was 100% compliant. There were 3 environmental complaints received during the reporting period. In relation to silt pond cleaning, 100% of ponds received two cleanings, inspections dictating cleaning schedules. Decommissioning and Rehabilitation works are described in an attachment.

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.**

Declaration:

All the data and information presented in this report has been checked and certified as being accurate. The quality

<i>E. McKeel</i>	25-3-'14
Signature	Date
Group/Facility manager (or nominated, suitably qualified and	

AIR-summary template

Lic No:

P0503-01

Year

2013

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 note AG2 and using the basic air monitoring checklist? [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:	P0503-01	Year	2013
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	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	

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-02	Total Particulates	350	140 DAYS	Daily average < ELV	mg/m2/day	13748	149	0	0	Dust monitoring took place on 5 occasions for 28 days each time between April and September
DM-03	Total Particulates	350	140 DAYS	Daily average < ELV	mg/m2/day	34328	602	0	1	
DM-04	Total Particulates	350	140 DAYS	Daily average < ELV	mg/m2/day	9828	128	0	0	
DM-05	Total Particulates	350	140 DAYS	Daily average < ELV	mg/m2/day	19768	287	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: P0503-01		Year: 2013				
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 thereof	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. by- onsite through	Solvents destroyed onsite through	Total emission of Solvent to air (kg)
Total								

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER)	Lic No:	P0503-01	Year	2013
--	---------	----------	------	------

- 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 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

Additional information	
Yes	
Yes	Monthly COD of yard runoff 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

- 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

No	Additional information
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/ Substance ^{Note 1}	Type of sample	Frequency of monitoring	Averaging period	ELV or trigger values in licence or any revision thereof ^{Note 2}	Licence Compliance criteria	Measured value	Unit of measurement	Compliant with licence	Method of analysis	Procedural reference source	Procedural reference standard number	Annual mass load (kg)	Comments
	SELECT	SELECT	SELECT		SELECT		SELECT		SELECT	SELECT	SELECT	SELECT			

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

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

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

Lic No:

P0503-01

Year

2013

Continuous monitoring

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

Yes

Additional Information

See note above

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 24 day over 365 days

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

Yes

Annual calibration schedule and trouble shooting service.

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

SELECT

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
SW-33	Water	Suspended Solids	35	24 hour	Not Listed	mg/L	3803.47	-16.1	576	0	Down time was primarily due to battery changes and periods of no flow.
SW-33	Water	Ammonia (as N)	NA	Weekly	NA	mg/L	100	13.59	0	NA	
SW-33	Water	Total phosphorus	NA	Weekly	NA	mg/L	5.71	-9.58	0	NA	
SW-33	Water	COD	NA	Weekly	NA	mg/L	5183.31	22.52	0	NA	
SW-33	Water	Volumetric flow	NA	24 hour	NA	m3/day	2230.56	-5.37	504	NA	Down time was primarily due to battery changes and periods of no flow.
SW-33	Water	Total Dissolved Solids	NA	Weekly	NA	mg/L	199999.53	-7.46	0	NA	

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:	P0503-01	Year	2013
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Bund testing

dropdown menu click to see options

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 "Chemstore" type units and mobile bunds)
3
4 How many bunds are on site?
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?

Additional information	No Bund integrity testing was required during 2013.
Yes	
Two Yearly	
Yes	
4	
4	
11	
No	
0	
0	
0	
NA	
NA	
NA	

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		
	SELECT					SELECT			SELECT	SELECT		SELECT		

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

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

16 Are channels/transfer systems to remote containment systems tested?

17 Are channels/transfer systems compliant in both integrity and available volume?

[bundings and storage guidelines](#)

Commentary	
NA	
NA	
NA	

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 1 underground structures and pipelines on site **which failed the integrity test and all which have not been tested withing the integrity test period as specified**

2 Please provide integrity testing frequency period

*please note integrity testing means water tightness testing for process and foul pipelines (as required under your licence)

No underground pipe lines that require testing
Yes
3 years

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:	P0503-01	Year	2013
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		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	Domestic use only	
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.	NA		Please enter interpretation of data here
5 Is the contamination related to operations at the facility (either current and/or historic)	NA		
6 Have actions been taken to address contamination issues?If yes please summarise remediation strategies proposed/undertaken for the site	NA		
7 Please specify the proposed time frame for the remediation strategy	NA		
8 Is there a licence condition to carry out/update ELRA for the site?	NA		
9 Has any type of risk assesment been carried out for the site?	NA		
10 Has a Conceptual Site Model been developed for the site?	NA		
11 Have potential receptors been identified on and off site?	NA		
12 Is there evidence that contamination is migrating offsite?	NA		

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:	P0503-01	Year	2013
*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 Surface water EQS	Drinking water 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:	P0503-01	Year	2013
	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	Internal budget provision
9	Closure plan review status	NA	Internal budget provision
10	Financial Provision for Closure status	NA	Internal budget provision
11	Financial Provision for Closure - amount of cover	NA	Internal budget provision
12	Financial Provision for Closure - type	NA	Internal budget provision
13	Financial provision for Closure expiry date	NA	

Environmental Management Programme/Continuous Improvement Programme template			Lic No:	P0503-01	Year	2013
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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.	90	In total 59 Personnel received training in 2013. There were 12 haydraulic harrows deployed across the licence area.	Individual	Reduced emissions
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	100	Installed a waste management system. Quarterly waste reports are returned for records/filing and waste streams are segregated on site to maximise recycling potential.	Section Head	Improved Environmental Management Practices

Environmental Management Programme/Continuous Improvement Programme template				Lic No:	P0503-01	Year	2013
Waste reduction/Raw material usage efficiency	Continue with the recycling of polyethylene. The sourcing of more recycling contractors will be ongoing.	100	In total 372.06 tonnes 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 management process, workshop energy audits were carried out with the assistance of SEAL.	70	Workshop audit findings in relation to the utilisation of natural light were implemented reducing the dependence on artificial lighting.	Section Head	Improved Environmental Management Practices		
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.	90	In total 59 Personnell received training in 2012. There were 12 hydraulic harrows deployed across the licence area and headland peat was collected and returned as part of overall production figures.	Individual	Improved Environmental Management Practices		

Noise monitoring summary report

Lic No: P0503-01

Year2013

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](#)

NA

3 Does your site have a noise reduction plan

NA

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?

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:

P0503-01

Year

2013

Additional information

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

NA	
Yes	
NA	

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)	12596.92	15625.59	324	24
Total Energy Generated (MWHrs)				
Total Renewable Energy Generated (MWHrs)				
Electricity Consumption (MWHrs)	1149	1228	324	7
Fossil Fuels Consumption:				
Heavy Fuel Oil (m3)				
Light Fuel Oil (m3)	1126.644	1416	324	25
Natural gas (m3)				
Coal/Solid fuel (metric tonnes)				
Peat (metric tonnes)	20	20	324	0
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

Table R3 Waste Stream Summary					
	Total	Landfill	Incineration	Recycled	Other
Hazardous (Tonnes)	91.92	0	2.08	89.84	0
Non-Hazardous (Tonnes)	2272.81	48.64	0	547.14	1677.03

Resource Usage/Energy efficiency summary	Lic No:	P0503-01	Year	2013
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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					

Lic No:

Year

Complaints

Additional information

Have you received any environmental complaints in the current reporting year? If yes please complete summary details of complaints received on site in table 1 below

Yes

Table 1 Complaints summary

Table 1 Complaints summary			Brief description of complaint (Free txt <20 words)	Corrective action< 20 words	Resolution status	Resolution date	Further information
Date	Category	Other type (please specify)					
03/05/2013	Air		Dust Complaint	Stopped production during	Complete	06/05/2013	Reported on ALDER
03/05/2013	Air		Dust Complaint	Stopped production during	Complete	06/05/2013	Reported on ALDER
20/07/2013	Air		Dust Complaint	Stopped production during	Complete	13/08/2013	Reported on ALDER
	SELECT				SELECT		
	SELECT				SELECT		
Total complaints open at start of reporting year		0					
Total new complaints received during reporting year		3					
Total complaints closed during reporting year		3					
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

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

What is an incident

Table 2 Incidents summary

[illegible]

WASTE SUMMARY	Lic No:	P0503-01	Year	2013
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Table 4 Environmental monitoring-landfill only [Landfill Manual-Monitoring Standards](#)

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

.-+ 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	

Comments on liner type

Allen
Decommissioning and Rehabilitation
AER Overview 2013.

Within the Allen licensed area (P0503-01) there were no bogs available for rehabilitation in 2013. Ongoing monitoring of cutaway within the Allen licensing area included the development of the Mountlucas Windfarm and the re-survey of cutaway at Cavemount bog units. .

Draft rehabilitation plans for the Allen bogs licensed area, including more detailed draft plans for each component bog unit were submitted to the EPA in 2013. The plans will be reviewed in Winter 2014/2015 and updated accordingly. The BNM Ecology Team (who plan and manage rehabilitation) met with the EPA inspectorate in 2013 to outline the general content and a review process was agreed. This will involve a biannual review and update of plans as well as more detail and finalisation of plans for sites that have been taken out of production.

The annual Biodiversity Action Plan review day was held in December 2013 and this included an update on progress of this plan, bog restoration and cutaway rehabilitation for a wide range on statutory and non-statutory consultees including members of the 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.

The Restoration and Aftercare Plans for the Allen Group of Bogs was submitted to the Agency in April 2013.

A copy of our Biodiversity Action Plan is available to view and download at <http://www.bordnamona.ie/our-company/biodiversity/>

Bord na Mona Allen			Siltpond Monitoring Frequency & Results									
IPPC Licence P0503-01												
X	Y	Bog	SW	Monitoring	Sampled Date	pH	SS	TS	Ammonia	TP	COD	Colour
241227.37	229904.04	Rathdrum	SW-9	Q1 13	26/03/2013	6.6	5	70	0.43	0.05	49	137
250869.07	219763.05	Ballykeane	SW-14	Q1 13	26/03/2013	7.8	5	408	0.61	0.05	62	122
258120.18	224725.27	Cloncreen	SW-32	Q1 13	26/03/2013	8.2	5	228	1.1	0.05	36	81
260756.49	225793.84	Cloncreen	SW-37A	Q1 13	26/03/2013	8	12	334	1.6	0.05	28	38
264507.34	223259.15	Ballydermot	SW-67A	Q1 13	26/03/2013	7.7	5	236	1.2	0.05	56	154
265768.96	229932.59	Ticknevin	SW-70	Q1 13	26/03/2013	7.6	5	210	1.4	0.1	65	176
245814.66	223083.89	Clonad	SW-13	Q2 13	10/06/2013	7.2	7	348	2.4	0.05	61	82
245572.38	225495.02	Clonad	SW-12A	Q2 13	10/06/2013	8.1	17	380	0.13	0.05	59	76
269197.57	228032.68	Glashabaun South	SW-47	Q2 13	10/06/2013	8	7	414	0.28	0.05	79	100
268823.95	228190.35	Glashabaun South	SW-48	Q2 13	10/06/2013	7.9	9	400	0.34	0.05	69	90
269054.43	228057.26	Glashabaun South	SW-49	Q2 13	10/06/2013	7.8	5	436	0.16	0.05	71	89
268454.98	225617.94	Lullybeg	SW-56	Q2 13	10/06/2013	8	5	434	0.02	0.06	61	87
273261.10	224710.84	Lodge	SW-60	Q3 13	28/08/2013	7.9	5	318	0.43	0.05	57	123
273158.15	224383.30	Lodge	SW-61	Q3 13	28/08/2013	8	5	316	0.64	0.05	68	128
268001.63	223625.99	Barnaran	SW-62	Q3 13	28/08/2013	7.8	5	358	0.05	0.05	69	111
265940.18	224925.96	Blackriver	SW-65	Q3 13	28/08/2013	7.9	5	356	0.44	0.05	77	152
265768.96	229932.59	Ticknevin	SW-70	Q3 13	28/08/2013	7.5	5	244	0.1	0.05	76	176
265060.79	228192.45	Glashabaun North	SW-71	Q3 13	28/08/2013	7.9	5	318	0.5	0.05	52	97
264299.21	227722.00	Codd North	SW-72	Q4 13	15/11/2013	7.6	5	216	1.2	0.06	70	187
247623.23	225441.21	Clonad	SW-12	Q4 13	15/11/2013	7.2	5	262	0.68	0.05	77	183
250117.79	219970.86	Ballykeane	SW-15	Q4 13	15/11/2013	7.4	11	262	2.1	0.05	54	92
250247.90	219855.73	Ballykeane	SW-18	Q4 13	15/11/2013	7.4	8	222	2.8	0.05	72	172
255326.91	214636.24	Derrylea	SW-43A	Q4 13	15/11/2013	7.2	5	400	0.78	0.05	85	195
248527.20	224119.10	Mountlucas	SW-11A	Q4 13	15/11/2013	7.7	7	386	1.8	0.05	52	97

Yard Discharge Results 2013						
Licence: P0503-01						
Works: Allen						
Month	B/Dermot SWE 1 COD	B/Dermot SWE 2 COD	Timahoe SWE 1 COD	Clonsast SWE 1 COD	Ballycon SWE1 COD	Power Station SWE1 COD
Jan	87	72	80	51	33	35
Feb	86	58	0	0	29	0
Mar	74	88	85	64	40	87
Apr	108	89	33	58	41	48
May	62	70	72	57	10	59
June	51	56	27	16	27	103
July	0	0	0	0	0	0
Aug	0	0	0	0	0	0
Sep	0	0	0	0	0	0
Oct	29	74	72	109	22	86
Nov	69	66	43	46	22	71
Dec	43	60	51	57	61	105
0: No Flow On Day Of Sampling						



| PRTR# : P0503 | Facility Name : Bord na Mona Allen Peat Limited | Filename : P0503_2013(1).xls | Return Year : 2013 |

31/03/2014 11:14

[Guidance to completing the PRTR workbook](#)

AER Returns Workbook

Version 1.1.18

REFERENCE YEAR	2013
-----------------------	------

1. FACILITY IDENTIFICATION

Parent Company Name	Bord na Mona Allen Peat Limited
Facility Name	Bord na Mona Allen Peat Limited
PRTR Identification Number	P0503
Licence Number	P0503-01

Waste or IPPC Classes of Activity

No.	class_name
1.4	The extraction of peat in the course of business which involves an area exceeding 50 hectares.

Address 1	Bord na Mona
Address 2	Derrygreenagh
Address 3	Rochfortbridge, Mullingar
Address 4	County Westmeath
	Westmeath
Country	Ireland
Coordinates of Location	-7.25677 53.3910
River Basin District	IEEA
NACE Code	0892
Main Economic Activity	Extraction of peat
AER Returns Contact Name	Enda McDonagh
AER Returns Contact Email Address	enda.mcdonagh@bnm.ie
AER Returns Contact Position	Head of Environment
AER Returns Contact Telephone Number	057 9345911
AER Returns Contact Mobile Phone Number	086 2370816
AER Returns Contact Fax Number	057 9345160
Production Volume	1363366.0
Production Volume Units	Tonnes
Number of Installations	15
Number of Operating Hours in Year	2232
Number of Employees	140
User Feedback/Comments	In accordance with licence condition 6.2 of Technical Amendment A, quarterly sampling is now rotated every quarter and therefore suspended solids results are not factored into loading.
Web Address	www.bnm.ie

2. PRTR CLASS ACTIVITIES

Activity Number	Activity Name
50.1	General

3. SOLVENTS REGULATIONS (S.I. No. 543 of 2002)

Is it applicable?	No
Have you been granted an exemption ?	
If applicable which activity class applies (as per Schedule 2 of the regulations) ?	
Is the reduction scheme compliance route being used ?	

4. WASTE IMPORTED/ACCEPTED ONTO SITE

[Guidance on waste imported/accepted onto site](#)

Do you import/accept waste onto your site for on-site treatment (either recovery or disposal activities) ?	No
--	----

This question is only applicable if you are an IPPC or Quarry site

4.2 RELEASES TO WATERS [Link to previous years emissions data](#)

| PRTR# : P0503 | Facility Name : Bord na Mona Allen Peat Limited | Filename : P0503_2013(1).xls | Return Year : 2013 |

31/03/2014 11:16

SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

Data on ambient monitoring of storm/surface water or groundwater, conducted as part of your licence requirements, should NOT be submitted under AER / PRTR Reporting as this only co

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

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

SECTION B : REMAINING PRTR POLLUTANTS

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

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

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

RELEASES TO WATERS					Please enter all quantities in this section in KGs			
POLLUTANT		Method Used			QUANTITY			
Pollutant No.	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
240	Suspended Solids	E	OTH	G/19 Based on ALPHA,1998,20th Edition, Method 2540D	SW 33	3802.47	3802.47	0.0
							0.0	0.0

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

SECTION A : PRTR POLLUTANTS

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

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

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

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

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

4.4 RELEASES TO LAND[Link to previous years emissions data](#)

| PRTR# : P0503 | Facility Name : Bord na Mona Allen Peat Limited | Filename : P0503_2013(1).xls | Return Year : 2013 |

31/03/2014 11:17

SECTION A : PRTR POLLUTANTS

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

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

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

RELEASES TO LAND			Please enter all quantities in this section in KGs		
POLLUTANT		METHOD		QUANTITY	
Pollutant No.	Name	M/C/E	Method Used Method Code Designation or Description	Emission Point 1	T (Total) KG/Year A (Accidental) KG/Year
				0.0	0.0

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

5. ONSITE TREATMENT & OFFSITE TRANSFERS OF WASTE

[PRTR# : P0503 | Facility Name : Bord na Mona Allen Peat Limited | Filename : P0503_2013(1).xls | Return Year : 2013]

31/03/2014 11:17

Please enter all quantities on this sheet in Tonnes

22

Transfer Destination	European Waste Code	Hazardous	Quantity (Tonnes per Year)	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	Haz Waste : Name and Licence/Permit No of Next Destination Facility Haz Waste : Name and Licence/Permit No of Recover/Disposer	Non Haz Waste : Address of Next Destination Facility Non Haz Waste : Address of Recover/Disposer	Name and License / Permit No. and Address of Final Recoverer / Disposer (HAZARDOUS WASTE ONLY)	Actual Address of Final Destination i.e. Final Recovery / Disposal Site (HAZARDOUS WASTE ONLY)
						M/C/E	Method Used					
Within the Country	01 01 02	No	491.03	wastes from mineral non-metalliferous excavation	D1	E	Volume Calculation	Onsite of generati	Bord na Mona Allen P0503-01,P0503-01 Derrygreenagh Rochfortbridge Mullingar Co Westmeath	Derrygreenagh,Rochfortbridge Mullingar Co Westmeath,Ireland		
Within the Country	01 01 02	No	1186.0	wastes from mineral non-metalliferous excavation	D1	M	Weighed	Onsite of generati	Bord na Mona Allen P0503-01,P0503-01 Derrygreenagh Rochfortbridge Mullingar Co Westmeath	Derrygreenagh,Rochfortbridge Mullingar Co Westmeath,Ireland		
Within the Country	02 01 04	No	372.08	waste plastics (except packaging)	R3	M	Weighed	Offsite in Ireland	Leinster Environmental's Haggardstown Dundalk,WP 2008/06 Haggardstown Dundalk	Haggardstown,Dundalk,Co Louth,,Ireland		
To Other Countries	11 01 13	Yes	0.24	degreasing wastes containing dangerous substances	R11	C	Volume Calculation	Abroad	Safety Kleen Ltd ,W0099-01	Tallaght,Dublin,,Ireland	Solvent Recovery Management,PP33345F,Wheeland Road,Knottingly,West Yorks ,WF11 8DZ,United Kingdom	Wheeland Road,Knottingly,West Yorks ,WF11 8DZ,United Kingdom
Within the Country	13 02 05	Yes	89.6	mineral-based non-chlorinated engine, gear and lubricating oils	R1	C	Volume Calculation	Offsite in Ireland	Enva Ireland Ltd 184.1,Clonminam Ind Estate Portlaoise Co Laois AES Ltd Cappincur Tullamore,WCP-OY-08-601-01	Clonminam Ind Estate,Portlaoise,Co Laois,,Ireland	Enva Ireland Ltd,184-1,Clonminam Industrial Estate,Portlaoise,Laois,,Ireland	Clonminam Industrial Estate,Portlaoise,Laois,,Ireland
Within the Country	15 01 03	No	1.18	wooden packaging absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by	R1	M	Weighed	Offsite in Ireland	Enva Ireland Ltd 184.1,Clonminam Ind Estate Portlaoise Co Laois AES Ltd Cappincur Tullamore,WCP-OY-08-601-01	Clonminam Ind Estate,Portlaoise,Co Laois,,Ireland	Lindenschmidt Kreuztal Germany,E97095037,Linden schmidt ,Kreuztal,,Germany	Lindenschmidt ,Kreuztal,,Germany
To Other Countries	15 02 02	Yes	2.08	dangerous substances	R1	C	Volume Calculation	Abroad	Enva Ireland Ltd 184.1,Clonminam Ind Estate Portlaoise Co Laois AES Ltd Cappincur Tullamore,WCP-OY-08-601-01	Clonminam Ind Estate,Portlaoise,Co Laois,,Ireland	Lindenschmidt Kreuztal Germany,E97095037,Linden schmidt ,Kreuztal,,Germany	Lindenschmidt ,Kreuztal,,Germany
Within the Country	17 04 07	No	173.88	mixed metals	R4	M	Weighed	Offsite in Ireland	AES Ltd Cappincur Tullamore,WCP-OY-08-601-01	Cappincur,Tullamore,Co Offaly,,Ireland		
Within the Country	20 03 01	No	38.21	mixed municipal waste	D1	M	Weighed	Offsite in Ireland	AES Ltd Cappincur Tullamore,WCP-OY-08-601-01	Cappincur,Tullamore,Co Offaly,,Ireland		
Within the Country	20 03 01	No	10.43	mixed municipal waste	D1	M	Volume Calculation	Offsite in Ireland	AES Ltd Cappincur Tullamore,WCP-OY-08-601-01	Cappincur,Tullamore,Co Offaly,,Ireland		

* Select a row by double-clicking the Description of Waste then click the delete button

[Link to previous years waste data](#)[Link to previous years waste summary data & percentage change](#)[Link to Waste Guidance](#)

Facility Information Summary

AER Reporting Year
 Licence Register Number
 Name of site
 Site Location
 NACE Code
 Class/Classes of Activity
 National Grid Reference (6E, 6 N)

2012	
P0503-01	Bord na Mona Allen
	Derrygreenagh, Rochfortbridge, Co Westmeath
	0892
	1.4
	249450, 238140

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. Due to the unprecedented inclement weather experienced during the 2012 production season, 38.2% of production target was achieved. This equates to approximately 298006 tonnes which is a reduction of 64% of the 2011 production achieved. Infrastructurally, there was no bog development. There were four non-compliances, one related to an Agency audit and three were exceedences of the ELV as a result of dust monitoring at DM04 and DM05. There were no environmental complaints received during the reporting period. In relation to silt pond cleaning, 76.2% of ponds received two cleanings, inspections dictating if a pond required cleaning or not. Decommissioning and Rehabilitation works are described in an attachment.

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 exceedences of licence limits (where applicable) and what they relate to e.g. air, water, noise.**

Declaration:

All the data and information presented in this report has been checked and certified as being accurate. The quality of the information is assured to meet licence requirements.

Signature <i>Seela McElroy</i> Group/Facility manager (or nominated, suitably qualified and experienced deputy)	Date <i>26/3/13</i>
--	------------------------

AIR-summary template

Lic No:

P0503-01

Year

2012

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

No

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 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		

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

AIR-summary template	Lic No:	P0503-01	Year	2012
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 3 and compare it to its relevant Emission Limit Value (ELV)		
5	Did continuous monitoring equipment experience downtime? If yes please record downtime in table 3 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 4 below	No	

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-02	Total Particulates	350	140 DAYS	Daily average < ELV	mg/m2/day	12768	233	0	0	Dust monitoring took place on 5 occasions for 28 days each time between April and September
DM-03	Total Particulates	350	140 DAYS	Daily average < ELV	mg/m2/day	10724	150	0	0	Dust monitoring took place on 5 occasions for 28 days each time between April and September
DM-04	Total Particulates	350	140 DAYS	Daily average < ELV	mg/m2/day	44100	1344	0	1	Dust monitoring took place on 5 occasions for 28 days each time between April and September
DM-05	Total Particulates	350	140 DAYS	Daily average < ELV	mg/m2/day	62924	1421	0	2	Dust monitoring took place on 5 occasions for 28 days each time between April and September
	SELECT				SELECT					

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

AIR-summary template

Lic No:

P0503-01

Year

2012

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: P0503-01	Year: 2012					
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	Total VOC emissions as %of solvent					
			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	Solvents lost in water (kg)	Collected waste solvent (kg)	Fugitive Organic Solvent (kg)	Solvent released in other ways e.g. by-	Solvents destroyed onsite through	Total emission of Solvent to air (kg)
							Total	

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

Lic No:

P0503-01

Year

2012

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 only need to complete table W1 and or W2 for surface 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

Additional information	
Yes	
Yes	Monthly COD monitoring is attached

Table W1 Surface 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	Additional information
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
	SELECT	SELECT	SELECT		SELECT		SELECT		SELECT	SELECT	SELECT	SELECT			

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

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

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

Lic No:

P0503-01

Year

2012

Continuous monitoring

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

Additional Information	
Yes	See Note Above

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	
-----	--

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

Yes	Annual calibration schedule and trouble shooting service
-----	--

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
SW-33	Water	Suspended Solids	35	24 hour	Not Listed	mg/L	4416	63.00%	1032	0	Down time was primarily due to battery changes and periods of no flow.
SW-33	Water	Ammonia (as N)	NA	Weekly	NA	mg/L	86.4	-11.00%	0	NA	Down time was primarily due to battery changes and periods of no flow.
SW-33	Water	Total phosphorus	NA	Weekly	NA	mg/L	6.2	76.00%	0	NA	Down time was primarily due to battery changes and periods of no flow.
SW-33	Water	COD	NA	Weekly	NA	mg/L	4015	35.00%	0	NA	Down time was primarily due to battery changes and periods of no flow.
SW-33	Water	Volumetric flow	NA	24 hour	NA	m3/day	808568545	54.00%	0	NA	Down time was primarily due to battery changes and periods of no flow.
SW-33	Water	Total Dissolved Solids	NA	Weekly	NA	mg/L	214928	56.00%	0	NA	Down time was primarily due to battery changes and periods of no flow.

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:	P0503-01	Year	2012	
---------------------------------------	---------	----------	------	------	--

Bund testing

dropdown menu click to see options

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**

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 "Chemstore"

3 type units and mobile bunds)

4 How many bunds are on site?

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?

Additional information	
Yes	Included are details of bund test results, however going forward only new and failed bunds will be included.
Two Yearly	
Yes	
4	
4	
11	
No	
0	
0	
0	
NA	
NA	

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)
503-37-05	reinforced concrete		Gas Oil	132440	44000	Hydraulic test		Oct-12	Yes	Pass		NA	Oct-14	
503-37-07	reinforced concrete		Gas Oil	9288	5500	Hydraulic test		Oct-12	Yes	Pass		NA	Oct-14	
503-37-09	reinforced concrete		Gas Oil	387324	346500	Hydraulic test		Oct-12	Yes	Pass		NA	Oct-14	
503-37-10	reinforced concrete		Gas Oil	143208	49500	Hydraulic test		Oct-12	Yes	Pass		NA	Oct-14	

* 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

14 line with BS8007/EPA Guidance?

[bundling and storage guidelines](#)

15 Are channels/transfer systems to remote containment systems tested?

16 Are channels/transfer systems compliant in both integrity and available volume?

Commentary	
Yes	
NA	
NA	

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

 1 underground structures and pipelines on site **which failed the integrity test**

2 Please provide integrity testing frequency period

No	
NA	

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:

P0503-01

Year

2012

	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	no Domestic use only
4 Is there contaminated land and /or groundwater on site? If yes please answer q's 5-12	no
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 assessment 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**	% change in average concentration previous year +/-	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**	% change in average concentration previous year +/-	Upward trend in yearly average pollutant concentration over last 5 years of monitoring data
							SELECT				SELECT
							SELECT				SELECT

* please note exceedance of a relevant Groundwater threshold value (GTV) at a representative monitoring point does not indicate non compliance, an exceedance triggers further investigation to confirm whether the criteria for poor groundwater chemical status are being met.

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

[Surface water EQS](#)

[Groundwater regulations GTV's](#)

[Drinking water \(private supply\) standards](#)

[Drinking water \(public supply\) standards](#)

[Interim Guideline Values \(IGV\)](#)

Groundwater/Soil monitoring template

Lic No:

P0503-01

Year

2012

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:

P0503-01

Year

2012

[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	Required but not submitted	
9	Closure plan review status	Review required and completed	
10	Financial Provision for Closure status	Required but not submitted	
11	Financial Provision for Closure - amount of cover	NA	Internal Budget Provision
12	Financial Provision for Closure - type	Other please specify	Budgeted Financial Provision
13	Financial provision for Closure expiry date	2030	

Environmental Management Programme/Continuous Improvement Programme template			Lic No:	P0503-01	Year	2012
--	--	--	---------	----------	------	------

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	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	100	In total 30 Personnel received training in 2012. There were hydraulic harrows deployed at	Individual	Reduced emissions
Waste reduction/Raw material usage efficiency	Waste streamlining is a project we are particularly interested in pursuing and hope to reduce wastes in the future and be more efficient in dealing with all aspects of waste management	100	Installed a waste management system. Quarterly waste reports are returned for records and waste streams are segregated on site to maximise recycling potential.	Section Head	Improved Environmental Management Practices
Materials Handling/Storage/Bunding	Increased bund provisions will be provided where required during 2012	NA	There was no additional bund requirements during the reporting period.	Individual	Reduced emissions
Waste reduction/Raw material usage efficiency	Continue with the recycling of polyethylene. The sourcing of more recycling contractors will be ongoing.	100	In total 367.74 tonnes 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 management process, a review of energy aspects will take place identifying the significant energy users of the licensee.	60	As expected gas oil used in the production and transportation of peat is the most significant energy user followed by electrical consumption at workshops and bog pumps.	Section Head	Improved Environmental Management Practices

Environmental Management Programme/Continuous Improvement Programme template				Lic No:	P0503-01	Year	2012
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.	100	In total 30 Personnell received training in 2012.	Individual	Improved Environmental Management Practices		

Noise monitoring summary report

Lic No: P0503-01

Year

2012

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?

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 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:

P0503-01

Year

2012

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

[SEAI - Large Industry Energy Network \(LIEN\)](#)

yes	
NA	

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)	13992	11383	-64%	-18%
Total Energy Generated (MWHrs)				
Total Renewable Energy Generated (MWHrs)				
Electricity Consumption (MWHrs)	1173	1149	-64%	-2%
Fossil Fuels Consumption:				
Heavy Fuel Oil (m3)				
Light Fuel Oil (m3)	1251	997	-64%	-20%
Natural gas (CMN)				
Coal/Solid fuel (metric tonnes)	20	20	0%	0%
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

Table R3 Waste Stream Summary

	Total	Landfill	Incineration	Recycled	Other
Hazardous (Tonnes)	12.3			12.3	
Non-Hazardous (Tonnes)	2387.81	61.98		643.08	1682.75

Resource Usage/Energy efficiency summary	Lic No:	P0503-01	Year	2012
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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:

P0503-01

Year

2012

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		0					
Total new complaints received during reporting year		0					
Total complaints closed during reporting year		0					
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

*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
02/07/2012	Breach of ELV	Other location (DM-05)	1. Minor	Air	Other (add details)	Debris from trees and shrubs in the vicinity of dust gauge	Normal activities	EPA	Recurring	Try an ensure that debris does not enter the dust gauge	Explore the possibilities of moving the gauge away from the external source of contamination.	Complete	Jul-12	Medium
23/08/2012	Breach of ELV	Other location (DM-04)	1. Minor	Air	Other (add details)	The housholder received a delivery of turf into his yard which created dust when being tipped.	Normal activities	EPA	Recurring	Try an ensure that debris does not enter the dust gauge	Explore the possibilities of moving the gauge away from the external source of contamination.	Complete	Aug-12	Medium

WASTE SUMMARY	Lic No:	P0503-01	Year	2012
---------------	---------	----------	------	------

Table 4 Environmental monitoring-landfill only [Landfill Manual-Monitoring Standards](#)

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

.-+ 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

SELECT

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

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	

Allen
Decommissioning and Rehabilitation
AER Overview 2012.

Bog decommissioning took place at Cavemount and Timahoe Bogs work extended to the removal and recycle of obsolete machinery and bog rail line. In relation to rehabilitation, draft rehabilitation plans have been drawn up for all licensed areas and are available on file with the local environmental co-ordinators. The plans will be submitted to the EPA for review in April 2013. Consultation with statutory and non-statutory consultees is ongoing as part of Bord na Mona rehabilitation planning under its Biodiversity Objective. A review day of the Bord na Mona Biodiversity Action Plan 2010-2015 for the period 2012 was held in January 2013 and attended by up to 90 interest groups including members of the NPWS, BWI, EPA, Bord na Mona, Coillte, ESBi, IPCC, Golden Eagle Trust, Butterfly Conservation Ireland, 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.

BNM Group:	Allen			
IPC Licence No.	503			
Year	2012			
pH (units)				
	Jan - Mar	Apr - June	July - Sept	Oct - Dec
SW11	7.7	7.9	7.8	7.7
SW68	7.2	7.7	7.4	6.8
SW45	7.7	7.7	7.7	7.5
SW24	7.4	7.6	7.5	6.3
SW43A	7.2	7.5	7.1	7
SW15	7.4	7.3	7.4	7.3
SW34	7.6	7.7	7.8	7.4
COD (mg/l)				
	Jan - Mar	Apr - June	July - Sept	Oct - Dec
SW11	26	47	34	42
SW68	116	63	64	209
SW45	52	62	60	138
SW24	61	48	78	106
SW43A	76	72	94	99
SW15	77	49	40	64
SW34	32	46	32	45
Ammonia as N (mg/l)				
	Jan - Mar	Apr - June	July - Sept	Oct - Dec
SW11	1	0.36	0.14	0.7
SW68	2.68	2.39	2.1	0.94
SW45	1.18	0.91	0.37	1
SW24	0.34	0.09	0.65	0.92
SW43A	0.79	0.56	0.94	0.61
SW15	2.02	1.79	1.1	0.92
SW34	0.88	1.24	0.69	0.56
Total Phosphorus (mg/l)				
	Jan - Mar	Apr - June	July - Sept	Oct - Dec
SW11	0.05	0.05	0.05	0.05
SW68	0.13	0.06	0.13	0.17
SW45	0.07	0.06	0.05	0.13
SW24	0.06	0.05	0.05	0.05
SW43A	0.05	0.05	0.05	0.05
SW15	0.05	0.05	0.05	0.05
SW34	0.05	0.05	0.05	0.05
Suspended Solids (mg/l)				
	Jan - Mar	Apr - June	July - Sept	Oct - Dec
SW11	5	5	5	5
SW68	29	7	5	67
SW45	5	15	7	66
SW24	5	5	5	17
SW43A	8	7	6	5
SW15	5	5	5	18
SW34	5	5	5	5
Total Solids (mg/l)				
	Jan - Mar	Apr - June	July - Sept	Oct - Dec
SW11	364	364	362	312
SW68	260	346	344	282
SW45	209	262	266	190

SW24	210	467	176	139
SW43A	396	430	432	262
SW15	240	314	330	192

SW34	414	404	394	316
Colour (pt Co Units)				
	Jan - Mar	Apr - June	July - Sept	Oct - Dec
SW11	83	94	106	101
SW68	258	164	244	229
SW45	155	181	159	162
SW24	218	108	371	342
SW43A	270	188	312	377
SW15	125	80	94	162
SW34	88	80	89	124
Flow (l/s)				
	Jan - Mar	Apr - June	July - Sept	Oct - Dec
SW11	4	12	9	12
SW68	14	14	6	10
SW45	6	5	2	25
SW24	7	3	2	4
SW43A	9	6	6	10
SW15	12	22	13	23
SW34	9	18	11	26

Yard Discharge Results 2012						
Licence: P0503-01						
Works: Allen						
Month	B/Dermot SWE 1 COD	B/Dermot SWE 2 COD	Timahoe SWE 1 COD	Clonsast SWE 1 COD	Ballycon SWE1 COD	Power Station SWE1 COD
Jan	65	38	56	50	13	50
Feb	55	51	117	35	21	77
Mar	NF	NF	NF	NF	31	NF
Apr	36	75	134	34	15	0
May	43	40	56	43	31	76
June	35	32	73	11	62	20
July	55	49	72	16	18	112
Aug	54	66	66	63	89	92
Sep	29	58	38	30	22	71
Oct	73	67	36	58	28	24
Nov	45	48	74	21	21	121
Dec	38	62	52	101	24	66

Note: NF denotes no flow on day of sampling



| PRTR# : P0503 | Facility Name : Bord na Mona Allen Peat Limited | Filename : P0503_2012(1).xls | Return Year : 2012 |

[Guidance to completing the PRTR workbook](#)

AER Returns Workbook

Version 1.1.15

REFERENCE YEAR	2012
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1. FACILITY IDENTIFICATION

Parent Company Name	Bord na Mona Allen Peat Limited
Facility Name	Bord na Mona Allen Peat Limited
PRTR Identification Number	P0503
Licence Number	P0503-01

Waste or IPPC Classes of Activity

No.	class_name
1.4	The extraction of peat in the course of business which involves an area exceeding 50 hectares.

Address 1	Bord na Mona
Address 2	Derrygreenagh
Address 3	Rochfortbridge, Mullingar
Address 4	County Westmeath
	Westmeath
Country	Ireland
Coordinates of Location	-7.25677 53.3910
River Basin District	IEEA
NACE Code	0892
Main Economic Activity	Extraction of peat
AER Returns Contact Name	Enda McDonagh
AER Returns Contact Email Address	enda.mcdonagh@bnm.ie
AER Returns Contact Position	Head of Environment
AER Returns Contact Telephone Number	057 9345911
AER Returns Contact Mobile Phone Number	086 2370816
AER Returns Contact Fax Number	057 9345160
Production Volume	322790.0
Production Volume Units	Tonnes
Number of Installations	15
Number of Operating Hours in Year	2232
Number of Employees	140
User Feedback/Comments	
Web Address	www.bnm.ie

2. PRTR CLASS ACTIVITIES

Activity Number	Activity Name
50.1	General

3. SOLVENTS REGULATIONS (S.I. No. 543 of 2002)

Is it applicable?	No
Have you been granted an exemption ?	
If applicable which activity class applies (as per Schedule 2 of the regulations) ?	
Is the reduction scheme compliance route being used ?	

4. WASTE IMPORTED/ACCEPTED ONTO SITE

[Guidance on waste imported/accepted onto site](#)

Do you import/accept waste onto your site for on-site treatment (either recovery or disposal activities) ?	No
--	----

4.1 RELEASES TO AIR [Link to previous years emissions data](#)

[PRTR# : P0503 | Facility Name : Bord na Mona Allen Peat Limited | Filename : P0503_2012(1).xls | Return Year : 2012 |

26/03/2013 16:29

SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

RELEASES TO AIR		Please enter all quantities in this section in KGs			
POLLUTANT		METHOD		QUANTITY	
No. Annex II	Name	M/C/E	Method Used	Emission Point 1	T (Total) KG/Year
			Designation or Description		
				0.0	0.0
					0.0
					0.0

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

SECTION B : REMAINING PRTR POLLUTANTS

RELEASES TO AIR		Please enter all quantities in this section in KGs			
POLLUTANT		METHOD		QUANTITY	
No. Annex II	Name	M/C/E	Method Used	Emission Point 1	T (Total) KG/Year
			Designation or Description		
				0.0	0.0
					0.0
					0.0

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

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

RELEASES TO AIR		Please enter all quantities in this section in KGs							
POLLUTANT		METHOD		QUANTITY					
Pollutant No.	Name	M/C/E	Method Used	DM-02	DM-03	DM-04	DM-05	T (Total) KG/Year	A (Accidental) KG/Year
			Designation or Description	Emission Point 1	Emission Point 2	Emission Point 3	Emission Point 4		
210	Dust	E	OTH	VDI 2119 Blatt 2/Part 2					
				0.0	0.0	0.0	0.0	0.13	0.0
									0.13

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

Additional Data Requested from Landfill operators

For the purposes of the National Inventory on Greenhouse Gases, landfill operators are requested to provide summary data on landfill gas (Methane) flared or utilised on their facilities to accompany the figures for total methane generated. Operators should only report their Net methane (CH4) emission to the environment under T(total) KG/yr for Section A: Sector specific PRTR pollutants above. Please complete the table below:

Landfill: Please enter summary data on the quantities of methane flared and / or utilised	Bord na Mona Allen Peat Limited				
	T (Total) kg/Year	M/C/E	Method Used		Facility Total Capacity m3 per hour
			Method Code	Designation or Description	
	Total estimated methane generation (as per site model)				N/A
	Methane flared	0.0			0.0 (Total Flaring Capacity)
	Methane utilised in engine/s	0.0			0.0 (Total Utilising Capacity)
Net methane emission (as reported in Section A above)		0.0			N/A

4.2 RELEASES TO WATERS [Link to previous years emissions data](#)

[PRTR# : P0503 | Facility Name : Bord na Mona Allen Peat Limited | Filename : P0503_2012(1).xls | Return Year : 2012 |

26/03/2013 16:30

24

SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS Data on ambient monitoring of storm/surface water or groundwater, conducted as part of your licence requirements, should NOT be submitted under AER / PRTR Reporting as this only concerns Releases from your facility

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

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

SECTION B : REMAINING PRTR POLLUTANTS

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

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

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

RELEASES TO WATERS				Please enter all quantities in this section in KGs														QUANTITY		
POLLUTANT				Method Used	SW11	SW68	SW45	SW24	SW43A	SW15	SW34	SW33				A (Accident al)	F (Fugitive)			
Pollutant No.	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	Emission Point 2	Emission Point 3	Emission Point 4	Emission Point 5	Emission Point 6	Emission Point 7	Emission Point 8	Emission Point 9	T (Total) KG/Year		KG/Year	KG/Year			
240	Suspended Solids	E	OTH	G19 Based on ALPHA,1998,20th Edition, Method 2540D	1458.0	9366.0	6965.0	1009.0	1588.0	4553.0	2522.0	4239.0	0.0	31700.0	0.0	0.0	0.0			

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

SECTION A : PRTR POLLUTANTS

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

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

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

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

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

4.4 RELEASES TO LAND[Link to previous years emissions data](#)

| PRTR# : P0503 | Facility Name : Bord na Mona Allen Peat Limited | Filename : P0503_2012(1).xls | Return Year : 2012 |

26/03/2013 16:31

SECTION A : PRTR POLLUTANTS

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

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

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

RELEASES TO LAND			Please enter all quantities in this section in KGs		
POLLUTANT		METHOD		QUANTITY	
Pollutant No.	Name	M/C/E	Method Used Method Code Designation or Description	Emission Point 1	T (Total) KG/Year A (Accidental) KG/Year
				0.0	0.0

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

5. ONSITE TREATMENT & OFFSITE TRANSFERS OF WASTE

[PRTR# : P0503 | Facility Name : Bord na Mona Allen Peat Limited | Filename : P0503_2012(1).xls | Return Year : 2012]

26/03/2013 16:31

Please enter all quantities on this sheet in Tonnes

3

Transfer Destination	European Waste Code	Hazardous	Quantity (Tonnes per Year)	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	Haz Waste : Name and Licence/Permit No of Next Destination Facility Non Haz Waste: Name and Licence/Permit No of Recover/Disposer	Haz Waste : Address of Next Destination Facility Non Haz Waste: Address of Recover/Disposer	Name and License / Permit No. and Address of Final Recoverer / Disposer (HAZARDOUS WASTE ONLY)	Actual Address of Final Destination i.e. Final Recovery / Disposal Site (HAZARDOUS WASTE ONLY)
						M/C/E	Method Used					
Within the Country	01 01 02	No	427.75	wastes from mineral non-metalliferous excavation	D1	E	Volume Calculation	Onsite of generation	Bord na Mona Allen P0503-01,P0503-01 Derrygreenagh, Rochfortbridge Mullingar Co Westmeath	Derrygreenagh,Rochfortbridge,Mullingar,Co Westmeath,Ireland		
Within the Country	01 01 02	No	1255.0	wastes from mineral non-metalliferous excavation	D1	M	Weighed	Onsite of generation	Bord na Mona Allen P0503-01,P0503-01 Derrygreenagh, Rochfortbridge Mullingar Co Westmeath	Derrygreenagh,Rochfortbridge,Mullingar,Co Westmeath,Ireland		
Within the Country	02 01 04	No	367.74	waste plastics (except packaging)	R3	M	Weighed	Offsite in Ireland	Leinster Environmental Haggardstown Dundalk,WP 2008/06 Haggardstown Dundalk	Haggardstown,Dundalk,Co Louth,,Ireland		
To Other Countries	11 01 13	Yes	0.6	degreasing wastes containing dangerous substances	R11	C	Volume Calculation	Abroad	Safety Kleen Ltd ,W0099-01	Tallaght,Dublin,,,,Ireland	Solvent Recovery Management,PP33345F,Wheeland Road,Knottingly,West Yorks ,WF11 8DZ,United Kingdom	Wheeland Road,Knottingly,West Yorks ,WF11 8DZ,United Kingdom
Within the Country	13 02 05	Yes	5.95	mineral-based non-chlorinated engine, gear and lubricating oils	R1	C	Volume Calculation	Offsite in Ireland	Enva Ireland Ltd 184.1,Clonminam Ind Estate Portlaoise Co Laois	Clonminam Ind Estate,Portlaoise,Co Laois,,Ireland	Enva Ireland Ltd,184-1,Clonminam Industrial Estate,Portlaoise,Laois,,Ireland	Clonminam Industrial Estate,Portlaoise,Laois,,Ireland
Within the Country	15 01 03	No	2.24	wooden packaging absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by	R1	M	Weighed	Offsite in Ireland	AES Ltd Cappincur Tullamore,WCP-OY-08-601-01	Cappincur,Tullamore,Co Offaly,,Ireland		
To Other Countries	15 02 02	Yes	3.86	dangerous substances	R1	C	Volume Calculation	Abroad	Enva Ireland Ltd 184.1,Clonminam Ind Estate Portlaoise Co Laois	Clonminam Ind Estate,Portlaoise,Co Laois,,Ireland	Lindenschmidt Kreuztal Germany,E97095037,Linden schmidt ,Kreuztal,,,,Germany	Lindenschmidt Kreuztal,,,,Germany
To Other Countries	16 01 07	Yes	1.05	oil filters	R4	C	Volume Calculation	Abroad	Enva Ireland Ltd 184.1,Clonminam Ind Estate Portlaoise Co Laois	Clonminam Ind Estate,Portlaoise,Co Laois,,Ireland	R.D. Recycling Houthalen Belgium,Reg. no. 51727/1/KD Houthalen Belgium,R.D. Recycling ,Houthalen,,,,Belgium	R.D. Recycling ,Houthalen,,,,Belgium
Within the Country	17 04 07	No	273.1	mixed metals	R4	M	Weighed	Offsite in Ireland	AES Ltd Cappincur Tullamore,WCP-OY-08-601-01	Cappincur,Tullamore,Co Offaly,,Ireland		
Within the Country	20 03 01	No	45.82	mixed municipal waste	D1	M	Weighed	Offsite in Ireland	AES Ltd Cappincur Tullamore,WCP-OY-08-601-01	Cappincur,Tullamore,Co Offaly,,Ireland		
Within the Country	20 03 01	No	16.16	mixed municipal waste	D1	C	Volume Calculation	Offsite in Ireland	AES Ltd Cappincur Tullamore,WCP-OY-08-601-01	Cappincur,Tullamore,Co Offaly,,Ireland		
To Other Countries	16 06 01	Yes	0.84	lead batteries	R6	M	Weighed	Abroad	Enva Ireland Ltd 184.1,Clonminam Ind Estate Portlaoise Co Laois	Clonminam Ind Estate,Portlaoise,Co Laois,,Ireland	Campine Rteycling,MLAV/05-173/GVDA,Beerse,,,,,Belgium	Beerse,,,,,Belgium

* Select a row by double-clicking the Description of Waste then click the delete button



Annual Environmental Report 2011
P0503-01

March 2012

Bord na Móna today operates 5 main subsidiary companies in more than 20 locations throughout Ireland, the UK and USA. The principal businesses are in the Energy, Resource Recovery, Horticulture, Home Heating and Wastewater Treatment and Air Pollution Abatement markets. The company also engages in an extensive rehabilitation program to develop its peat lands in an environmentally sustainable manner.

A NEW CONTRACT WITH NATURE

Bord na Móna has long recognised the need to diversify its activities in order to secure a sustainable future. In this context we identified the energy and resource recovery sectors as appropriate areas of growth and development, given our assets, strengths and skills. Significant challenges face Ireland in meeting the country's needs to provide secure sustainable energy and manage waste while minimising the impact on the environment.

Bord na Móna is in a strong position to contribute to dealing with these challenges. We have a unique mixture of assets, experience and innovation which will enable us to cross-link our activities in energy, water and resource recovery to provide products and services which will meet Ireland's needs. We also have the capacity to become an exemplar for others to follow in these fields.

With this background we have scoped out a new vision for the future sustainable development of Bord na Móna.

Following on from our vision, we have developed a new mission for Bord na Móna which the Company is committed to achieving.

In 1934 the Turf Development Board was formed to 'develop and improve the turf industry.' The experience of fuel shortages during the war re-enforced the Irish State's commitment to developing the country's bogs. In 1944 the TDB was asked to devise and submit a comprehensive programme, the outcome was the transformation in 1946 of the TDB into Bord na Móna. The Board was given a mandate to increase the use of peat as a fuel and in energy production. Markets for the use of moss peat in horticulture were also developed.

In 1990 Bord na Móna implemented a divisionalised and decentralised structure, designed to delegate responsibility downwards ensuring a sharper focus on each profit centre and a greater spirit of enterprise.

Group Vision



The vision statement defines the Company's purpose, in terms of its values.

Values are guiding beliefs about how things should be done.

The vision statement communicates both the purpose and values of Bord na Móna.

For employees, it gives direction about how they are expected to behave and inspires them to give their best. Shared with customers, it shapes the customers' understanding of why they should work with Bord na Móna.

Bord na Móna will seek solutions that optimise the creative energy and potential of the organisation, driven by long term goals and the organisation's vision and mission.

In this context our devolved business units will align their vision and strategic planning with the global direction provided.

Consistent with our vision, innovation will once again return to the core of everything we do. We will capitalise on opportunities to cross fertilise our unique range of skills and technologies that add value and are socially and environmentally sustainable.

Greater focus will be placed on managing and developing our land assets in a responsible and sustainable manner. Our award winning initiatives at Lough Boora (Co. Offaly) and Oweninny (Co Mayo), provide shining examples of what can be achieved

Group

Mission

We conduct our affairs with openness, honesty and integrity.

We are Ireland's leading environmentally responsible integrated utility service provider encompassing electricity, heating solutions, resource recovery, water, horticulture and related services.

We capitalise on international opportunities where we have a competitive advantage.

We achieve continuing growth through superior customer service, outstanding quality and innovation delivered through the excellence and commitment of our people.

We engage in sustainable profitable business in the communities we serve, which is rewarding and challenging for employees and other stakeholders.

Contents

1.0 Introduction

- 1.1 IPC Licence Register No
- 1.2 Name & Location of Site
- 1.3 Brief Description of Activities
- 1.4 Environmental Management of the Company
- 1.5 Environmental Policy Statement

2.0 Summary Information

- 2.1 Emissions to Water Summary
 - 2.1.1 Silt Pond Emissions
 - 2.1.2 Yard Discharges
 - 2.1.3 Composite Sampler Report
 - 2.1.4 Emissions to Water Non-compliance's

2.2 Emissions to Air Summary

- 2.2.1 Dust Monitoring
- 2.2.2 Emissions to Air Non-compliance's

2.3 Waste Arising

- 2.3.1 Non-Hazardous Waste
- 2.3.2 Hazardous Waste

2.4 Energy and Water Consumption

- 2.4.1 Energy Consumption

2.5 Environmental Incidents and Complaints

- 2.5.1 Incidents
- 2.5.2 Complaints

3.0 Management of the Activity

3.1 Environmental Management Programme Report

3.2 Environmental Management Programme Proposal

3.3 Environmental Expenditure

4.0 Licence Specific Reports

4.1 Surface Water Discharge Monitoring Location Programme Review

4.2 Bunding Programme

4.3 Boiler Combustion Efficiency

4.4 Resource Consumption Summary

4.5 Report on de-silting Programme

4.6 Bog Development and Operational Programme

4.7 Bog Rehabilitation Report

4.8 Archaeological Report

5.0 Summary

Appendix 1: Emissions to Water Monitoring Results. (Bogs)

Appendix 2: Emissions to Water Monitoring Results. (Yards)

Appendix 3: Emissions to Water Monitoring Results. (Composite)

Appendix 4: Emissions to Air Monitoring Results.

Appendix 5: De-silting Programme Review

1.0 Introduction

1.1 IPPC Licence No 503-01

1.2 Name & Location of Site

Name: Bord Na Mona Energy Limited.

Address: Derrygreenagh Works,
Rochfortbridge,
Mullingar,
Co. Westmeath.

Telephone No: 044 9222181 Fax No. 044 9222344

Contact Name: Eamonn Mulhall

Position: Resource Manager

National Grid Reference: E249450 N238140

1.3 Description of Activities

Peat Milling Operations.

For milled peat production the bog is laid out in a series of rectangular fields of varying length and 15m wide with drains located between. There are essentially four operations involved in milled peat production:

Milling.

Harrowing.

Ridging.

Harvesting.

Milling.

Special milling machines work their way along the fields, milling approximately 15mm of peat from the top of the bog in a pass.

Harrowing

In the course of drying, the milled peat is turned a number of times to avail of the drying conditions. This is achieved with a machine called a harrow. The milled peat is harrowed until its moisture content is down to approximately 40-50%, which can take up to two to three days, weather depending.

Ridging

The dry peat is then scraped into long ridges running down the centre of each field. This is done with a ridger, a machine consisting of a series of blades in the shape of a v that opens the full width of the field.

Harvesting

During harvesting every eleventh field is used to stockpile the peat, with this field receiving the milled peat from the five fields either side.

The milled peat is then transported via the existing network of peatland railways or via road to one of the following locations.

Power station

Horticultural Factory.

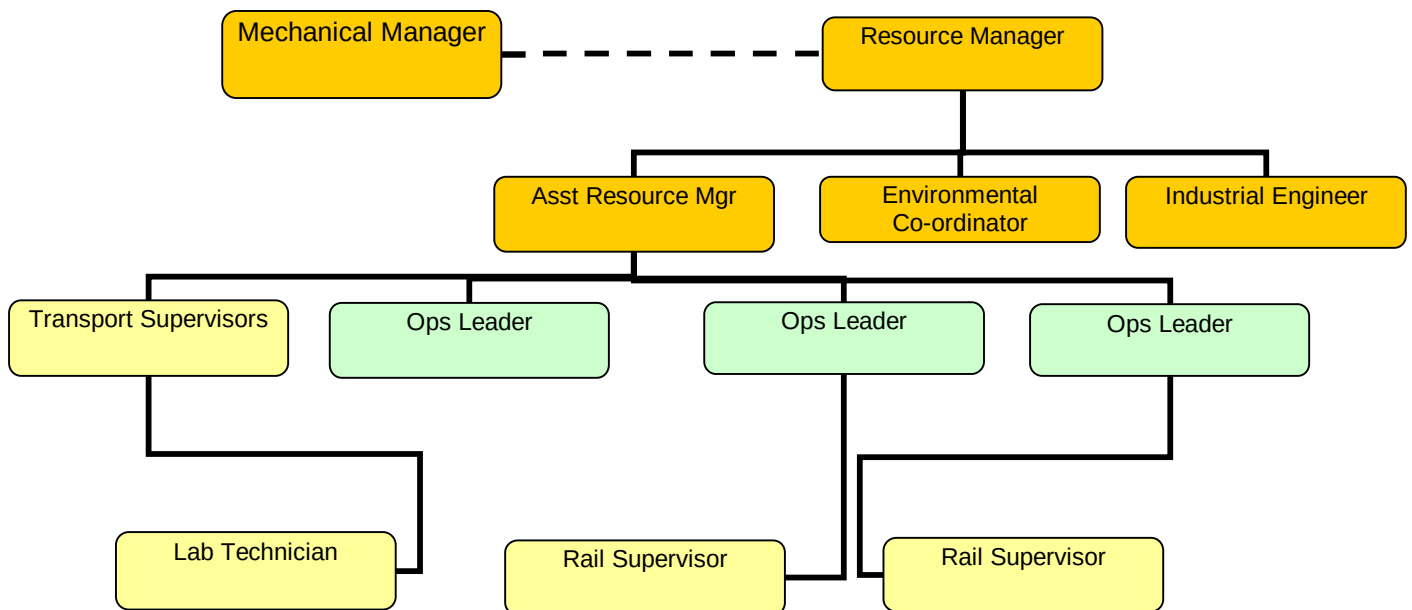
Briquette Factory.

1.4 Environmental Management of the Company

The organisational structure within the Allen Group is presented in the flow chart below.

Group

Environmental Responsibilities



1.5 Environmental Policy



Bord Na Mona Energy Limited is a commercial semi-state body with responsibility to develop Ireland's peat resources in the national interest.

Bord Na Mona Energy Limited is committed to gather and make available information on all aspects of its environmental impact and to help improve understanding among the public generally of its role and the importance of Irish peatlands.

Bord Na Mona Energy Limited recognises the importance of peatland conservation.

Bord Na Mona Energy Limited will leave behind all areas it owns as either an economically or socially integrated resource of a high environmental value.

Bord Na Mona Energy Limited seeks to conduct all aspects of its business in an environmentally sensitive value.

Bord Na Mona Energy Limited operate an environmental management system specifically addressing the following impacts.

1. Discharges to water.
2. Emissions to atmosphere.
3. Waste disposal.
4. Use of natural resources.
5. Noise, vibration, odour, dust and visual effects.
6. Natural environment and eco-system.

The environmental management system will be monitored, maintained and continually improved.

A system of regular environmental audits will be put in place.

Bord Na Mona Energy Limited will continue research and development into all aspects of its environmental impact.

This statement is published and is available at all locations within the division and its contents are brought to the attention of all employees.

2.0 Summary Information

2.1 Emissions to Water Summary

2.1.1 Silt Pond Emissions

Comment

Surface water monitoring was carried out quarterly during the reporting period. In total analysis was carried out at seven different locations. The locations were as follows, Cloncreen @ SW34, Derrylea @ SW43A, Codd Sth @ SW45, Ticknevin @ SW68, Ballykeane @ SW15, Clonad @ SW11 & Esker @ SW 24.

The parameters measured during each sampling event were as follows:
Total Phosphorus, Total Solids, Suspended Solids, pH, Ammonia, Colour and COD.

In general results were constant across all parameters at each monitoring location. October was the wettest month with 123.5mm of rainfall recorded and March the driest with 29.4 mm recorded. Flow rates appear to have had no adverse effect on suspended solids results.

The quarterly grab sampling programme proved to be 100% compliant for the year as was the 2006, 2007, 2008, 2009 & 2010 regimes.

pH values were between 6.4 and 8.3, with emission limit values being of the range 6 and 9. pH values of waters emanating from production peatlands appear to remain constant and in line with background levels. On average pH values were 0.09 pH units above 2010 levels.

Suspended solids varied from 5 mg/l to 15 mg/l and would depend on rainfall and activities (piping, ditching) etc, in the catchments at the time of sampling. All results were within the licence limit of 35mg/l. On average suspended solid results were down on 2010 levels.

Ammonia values ranged from 0.02 mg/l and 6.7 mg/l. The I/PV for A3 waters are of the range 4mg/l. It is however not unusual for surface waters emanating from production peat lands to be slightly elevated. Ammonia levels were on average above 2010 levels, with the 2011 average being 1.25 mg/l and 2010 being 1.22 mg/l.

COD values ranged from 24 mg/l to 99 mg/l. On average COD results were 14mg/l below 2010 levels. The I/PV for A3 waters is of the range 40mg/l. No result was above the Bord na Mona set trigger level of 100 mg/l.

Flow rates were similar to those recorded during the 2010 sampling events. This in part is dependent on the climatic conditions on the chosen day of sampling. October was the wettest month with 123.5mm of rainfall recorded and March the driest with 29.4 mm recorded. Flow rates appear to have had no adverse effect on suspended solids results.

Total Phosphorus results were consistently low and ranged from 0.05 mg/l to 0.16 mg/l. On average the total phosphorus result was lower than 2010, the difference being minute (0.005 mg/l).

The sampling locations will remain during 2012.

At the request of the Agency, analysis results are now demonstrated both in tabular and graphical format.

Surface Water Results are attached in Appendix 1.

2.1.2 Yard Discharges

Comment

Yard runoff monitoring took place at six locations during the reporting period. Sampling frequency was monthly and COD was the parameter requiring analysis. Results ranged from 16 mg/l to 116 mg/l. With the exception of two results, results were within Bord Na Mona set trigger levels. The two elevated results were investigated. One of the results were due to machinery being washed down at the time of sampling, the other due to the contents of a bund being evacuated at the time of sampling. Subsequent results at each of these locations were markedly reduced following subsequent sampling.

At the request of the Agency, analysis results are now demonstrated both in tabular and graphical format.

Sampling will continue at the same locations in 2012.

Yard Emission Results are attached in Appendix 2.

2.1.3 Composite Sampler Report

Comment

The composite sampler has been operating at SW 33 Cloncreen Bog during the reporting period. The parameters measured were Total Phosphorus, Total Solids, Suspended Solids, pH, Ammonia, Colour and COD, with Suspended solids being the only parameter with an emission limit value (35mg/l).

The sampler worked well during the reporting period. Results showed the location to be fully compliant during the reporting period. At the direction of the Agency the sampler was calibrated by Water Technology Ltd. Analysis of the 2011 results compared with the 2010 results indicates no great difference across all parameters.

The composite sampler will remain at this location for the foreseeable future.

Composite Sampler Results are contained in Appendix 3.

2.1.4 Emissions to Water Non-compliance's

Emissions to Water Non-Compliances 2011		
Licence: P0503-01		
Works: Allen		
Type	Non-Compliances	Location / SW Nr
Composite	0	N/A
Quarterly Grab	0	N/A
Monthly Yard	0	N/A
Totals	0	

Note: Discharge to surface waters was fully compliant during 2011.

2.2 Emissions to Air

2.2.1 Dust Monitoring

Comment

Dust monitoring was carried out on five occasions between April and September. Each monitoring event lasted between 28 and 32 days and the Bergerhoff method of collection was used.

The monitoring locations were as follows: Ballykeane DM01, Killinagh DM02, Derrybrennan DM03, Moore's Dwelling DM04 and Murphy's Dwelling DM05. The emission limit value is 350mg/m²/day. There were two non-compliances during the reporting period. These occurred at DM05 which is a new dust sensitive location and was included in the sampling regime on foot of a dust complaint. The Agency was informed at the time of both the complaint and non-compliances.

Sampling will continue at the same locations during 2012.

Dust monitoring results are contained in appendix 4.

2.2.2 Emissions to Air Non-compliance's

Dust Non-Compliances 2011	
Licence:P0503-01	
Works: Allen	
Location / DM Nr	Non-Compliances
DM-05	2
Total	2

There were two dust non-compliance recorded during the reporting period, both occurred at the Murphy Dwelling (DM-05). The Agency was informed on both occasions. 2011 proved to be a particularly difficult year in relation to dust and fire, due to exceptionally high winds and extended dry periods.

2.3 Waste Arisings

2.3.1 Non-Hazardous Waste

Non Hazardous Waste Data 2011				
Licence: P0503-01				
Works: Allen				
Type	Tonnes	EWC Code	Contractor	Licence Nr
Skips	34.31	20 03 01	AES	053/OY/39/02
Wheelie Bins	16.16	20 03 01	AES	053/OY/39/02
Polyethylene	509.86	02 01 04	Leinster Environmentals	WP 2008/06
Scrap Steel	498.82	17 04 07	AES	053/OY/39/02
Timber Pallets	0.86	15 01 03	AES	053/OY/39/02
Silt Pond Cleanings	521.24	01 01 02	Bord na Mona	IPPC P0503-01
Peat Screenings	1613.00	01 01 02	Bord na Mona	IPPC P0503-01
Totals	3194.25			

Note: Polyethylene and Scrap Steel are recycled. Skips go to an AES Mixed Recycling Facility.

2.3.2 Hazardous Waste

Hazardous Waste Data 2011					
Licence: P0503-01					
Works: Allen					
Type	Tonnes	EWC Code	Contractor	Licence Nr	Destination
Waste Oil	29.10	13 02 05	Enva Ireland Ltd Portlaoise	184-1	Portlaoise
Oil Filters	0.77	16 01 07	Enva Ireland Ltd Portlaoise	184-1	Portlaoise
Oily Rags	0.30	15 02 02	Enva Ireland Ltd Portlaoise	184-1	Portlaoise
Parts Wash	1.17	11 01 13	Safety Kleen, Tallaght, Dublin	99-1	Dublin
Total	31.34				

2.4 Energy and Water Consumption

2.4.1 Energy

Energy Consumption 2011				
Licence: P0503-01				
Works: Allen				
Units	Diesel (Litres)	Petrol (Litres)	Electricity (Units)	Peat Briquettes (Tonnes)
Totals	1251521.3	0	0	20
MW Hours	12716.7	0	0	103
Total MW Hours	12819.7			

Note: Due to issues with Electric Ireland's web site which is outside Bord Na Mona's control, accurate electrical consumption figures were not available. We are informed that this will be resolved in the coming weeks.

2.5 Environmental Incidents and Complaints

2.5.1 Incidents.

Environmental Incidents 2011	
Licence: P0503-01	
Works: Allen	
	Number
Incidents	12
Requiring corrective action	12
Category	
Water	2
Air	10
Procedural	
Miscellaneous	
Total	12

Date	Location	Type	EPA Letter Ref
02/02/2011	Figile	Complaint about silt	CT503-01/11
30/04/2011	Blackriver	Dust Complaint	503Ct/02/11
31/05/2011	Lullymore	Dust Complaint	503Ct/03/11
30/05/2011	Blackriver	Dust Complaint	503Ct/04/11
23/05/2011	Lullymore	Dust Complaint	503/Ct/05/11
25/05/2011	Clonad	Smoke Complaint	503Ct/06/11
25/05/2011	Clonad	Smoke Complaint	503Ct/07/11
24/05/2011	Clonad	Smoke Complaint	503Ct/08/11
30/05/2011	Clonad	Smoke Complaint	503Ct/09/11
15/06/2011	Blackriver	Dust non-compliance	AN503-NC-01-11
26/07/2011	Blackriver	Dust non-compliance	AN503-NC-02-11
26/10/2011	Power Station	Oil Spill in Figile	AN-503-CA-Nov-11

It was a particularly difficult year in relation to bog fires and dust complaints. Generally speaking outside of these incidents only one other incident occurred. The tables above outline the nature of the incidents and the correspondence to the Agency reference number.

2.5.2 Complaints

Environmental Complaints 2011	
Licence:P0503-01	
Works: Allen	
	Number
Complaints	9
Requiring corrective action	9
Category	
Water	1
Air	8
Procedural	
Miscellaneous	
Total	9

There were nine complaints during the reporting period, as mentioned above they primarily related to dust and fire issues and are included in the table above.

3.0 Management of the Activity

3.1 Achievement of Objectives & Targets 2011

Project	Description & Status
Project 1: Reduction of fugitive dust emissions.	Training. Train all employees in environmental matters. Training will be by means of the screening of an environmental DVD, followed by a power point presentation. Status In total 165 employees received environmental training. Hydraulic Harrows. Hydraulic harrows will be deployed at dust sensitive locations during the 2011 production season. Status One new Hydraulic Harrows was deployed during the production season at Ballykeane bog. Headland Peat Collection. Continue with the collection of headland peat, particularly at dust sensitive locations. Status Headland peat was collected as part of the peat lifting process and included in general peat return figures.
Project 2: Waste Management	Waste Streamlining. Following the purchase by Bord na Mona of AES Ltd, Meeting's with that company's management are ongoing to see how best Bord na Mona's needs can be catered for. Key account managers dedicated to Bord na Mona are in place. Status Ongoing The service included the co-ordination of all waste

	streams ensuring the correct waste stream was dealt with by the appropriate waste provider. The service also included the issuing of quarterly reports.
Project 3: Minimisation of Suspended Solids.	On Site Inspections. Train all employees in environmental matters. Training will be by means of the screening of an environmental DVD, followed by a power point presentation. Status In total 165 employees received environmental training.
Project 4: Effective spill leak management of mobile fuelling units.	Research and Development. Increased bund provisions where required, will be provided, in 2011. Status A new bunded lockup oil store was provided at Ballydermot T Centre. In addition to this containment booms were purchased and are held in storage as backup to existing stocks.
Project 5: Collection storage and reuse of polyethylene.	Identify Recyclers. Continue with the recycling of polyethylene. The sourcing of more recycling contractors will be ongoing. Status In total 509.86 tonnes of polyethylene was sent for recycling in 2011.
Project 6 Energy Management	Review of Energy Aspects As part of an energy management process, a review of energy aspects will continue to take place identifying the significant energy users of the licensee. Status Energy management is ongoing with the energy standard EN 50001 currently being implemented at Bord na Mona Mountdillon. Should this be successful it will be extended to all Bord na Mona locations.

3.2 Environmental Management Programme Proposal 2012

Project	Description & Status
Project 1: Reduction of fugitive dust emissions.	Training. 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. Hydraulic harrows will continue to be deployed at dust sensitive locations. Headland Peat Collection. Continue with the collection of headland peat, particularly at dust sensitive locations.
Project 2: Waste Management	Waste Streamlining. Continue to use AES as a waste management provider. Using their expertise in identifying potential recyclers of waste streams generated.
Project 3: Minimisation of Suspended Solids.	Training. Continue to train all new 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.
Project 4: Effective spill leak management of mobile fuelling units.	Research and Development. Increased bund provisions where required, will be provided, in 2012.
Project 5: Collection storage and reuse of polyethylene.	Identify Recyclers. Continue with the recycling of polyethylene. The sourcing of more recycling contractors will be ongoing.
Project 6: Energy Management	Review of Energy Aspects As part of an energy management process, a review of energy aspects will continue to take place identifying the significant energy users of the licensee.

3.3 Environmental Expenditure

Environmental Expenditure 2011	
Licence:P0503-01	
Works: Allen	
Description	Cost €
Capital Costs	54,712.03
Silt Control	180,607.84
Analytical & Consultancy Costs	11,521.00
EPA Fees	7,668.00
Bog Rehabilitation	87,505.02
Waste Management	56,253.76
Total	398,267.65

4.0 Licence Specific Reports

4.1 Surface Water Discharge Monitoring Location Programme Review

It is proposed to continue monitoring at the same locations in 2012 as were monitored in 2011. Should it be deemed necessary for any reason during the coming year additional monitoring will be initiated. Safe access to all monitoring locations will be maintained. In addition to this the design criteria set out in condition 6.10 of the licence is being continually assessed, with silt ponds falling short of the specifications being upgraded to meet the licence requirements.

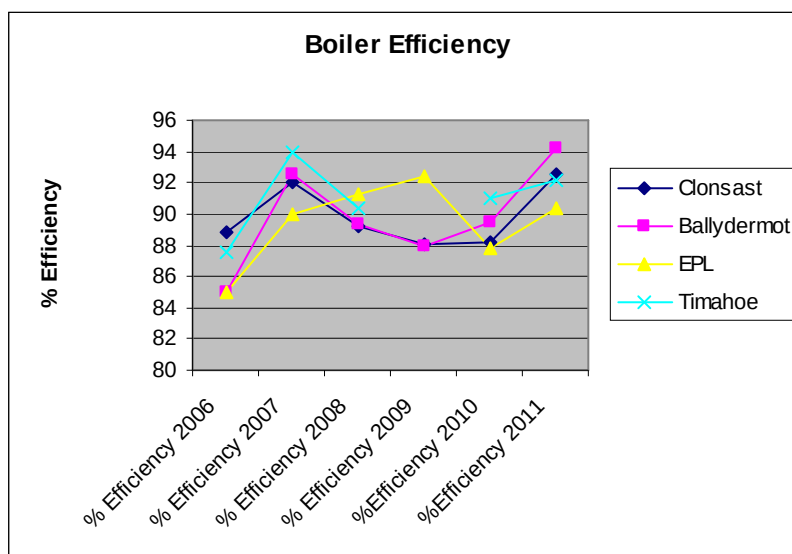
4.2 Bunding Programme

Bund Locations & Numbers Derrygreenagh Works					
IPPC Licence: P0503-01					
Location	Bund Number	Last Tested	Status Pass/Fail	Repair Date	Next Test Due
EPL Main Bund	503-37-05	Mar-11	Pass	N/A	Mar-13
Lullymore Bog Bund	503-37-06	Nov-09	Pass	N/A	Nov-11
Clonsast Heating Tank	503-37-07	Mar-11	Pass	N/A	Mar-13
Clonsast Main Bund	503-37-08	Mar-11	Pass	N/A	Mar-13
Ballyconn Main Bund	503-37-09	Mar-11	Pass	N/A	Mar-13
Ballydermot Main Bund	503-37-10	Mar-11	Pass	N/A	Mar-13
Ballydermot Heating Tank	503-37-11	Bund Decommissioned, doubled skin tank in situ.			
Timahoe Main Bund	503-37-12	Bund not in use tank not installed.			

As is evident from the table, all bunds with the exception of the Lullymore bog bund were tested and passed successfully during 2011. The next due date for testing is March 2013. The Lullymore bund is scheduled for testing in the coming weeks.

4.3 Boiler Combustion Efficiency

Boiler Efficiency 2011						
Licence: P0503-01						
Works: Allen						
Boiler Location	% Efficiency 2006	% Efficiency 2007	% Efficiency 2008	% Efficiency 2009	%Efficiency 2010	%Efficiency 2011
Clonsast	88.88	92	89.2	88.1	88.2	92.6
Ballydermot	85.04	92.5	89.4	87.9	89.5	94.2
EPL	85.01	90	91.3	92.4	87.8	90.4
Timahoe	87.5	93.9	90.4	0	91	92.2



Note: Due to an administration error the boiler at Timahoe was not tested during the 2009 reporting period.

4.4 Resource consumption summary

Resource Consumption 2011			
Licence: P0503-01			
Works: Allen			
Product	Tonnes Produced	Tonnes Sold	Customer
Milled Peat	741,742	765,361	EPL & ESB
Moss	90,000	57,999	Horticulture
Turf	15920.5	15,920.50	Private
Turf	0	105	Fuels
Totals	847,663	839,386	N/A

Proposed Production 2012	
Licence: P0503-01	
Works: Allen	
Product	Proposed Target
Milled Peat	676,529
Moss	86,000
Turf Private	15,920.50
Turf Fuels	0
Totals	778,450

4.5 De-Silting Report

Silt pond cleaning went well during the reporting period with the exception of Cavemount being cleaned once. The reason for the Cavemount ponds only receiving one cleaning is due to the fact that production at that location is now finished. The inspections would also have dictated which ponds required additional cleanings.

Silt pond cleaning details are contained in appendix 5.

4.6 Bog Development and Operational Programme.

There was approximately 55 hectares of high bog brought into production at Glashabaun North during 2001. Works extended to screw levelling, ditching and piping. An initial silt pond was constructed which is due for extension during 2012.

4.7 Bog Rehabilitation Report

- There are large areas of cutaway within the Derrygreenagh group including Clonsast North, main Clonsast, Derrycastle and Ballycon bogs that are largely cutaway although still with some areas utilised as part of the transport network.
- The ecology survey of the Allen Bogs is complete and habitat maps, ecology reports and draft rehabilitation plans for each of the sites surveyed have been developed.
- Rehabilitation plans for the Clonsast cluster will be further developed in 2012.
- A wind farm proposal has been developed for Mount Lucas and this will be installed within the current peat production area. A draft rehabilitation plan has been developed for the site to account for the wind farm use.
- Similarly, a water project development has been identified for Garryhinch Bog and a draft rehabilitation plan has been developed for the site to account for that potential after use.
- The greater part of the Ballydermot group remains in peat production with parts of Lullybeg and Clonreen becoming cutaway.
- Part of Lullymore bog has been identified as a Bord na Móna Biodiversity Area and a draft rehabilitation plan has been developed for this area.
- In 2011 an area of Lullymore Bog – approx 17 ha was leased to the Lullymore Heritage Park Group and Bord na Móna carried out some rehabilitation works to enhance the site as an amenity area.

- The Timahoe Bogs are not currently in peat production and these areas are considered stabilised through natural colonisation. Rehabilitation of the site will be further considered in 2012.
- Consultation with Heritage groups, NPWS is ongoing.

The above is an overview of the ongoing rehabilitation plan associated with this licence. There is a fully prepared plan retained at the licence site office, which includes Land Use maps for each licensed area updated in January 2012 and the habitat maps, future maps and ecology reports for each site.

4.8 Archaeological Report

There was no archaeology found or excavated in the licence area in 2011.

5.0 Summary

The Allen Group of Bogs endeavour to comply with all environmental issues under our licence, however due to the extreme windy weather in April/May we had to deal with a number of dust complaints and fires. We had a particular problem with dust in the Blackriver area which resulted in us buying trees and shrubs and sowing a shelter belt to try and alleviate the problem. Fires were a major problem this year also. While most were manageable and were dealt with quickly, one in the Clonad area caused us endless problems. We had a number of complaints about smoke, but thankfully all complainants were satisfied that we were doing our utmost to stop the problem. Although fire fighting is and always has been integral to our training procedures we have reviewed our policy again and even more emphasis will be put on prevention in future.

Water quality is important to Bord na Mona and in this regard there was no exceedance of the emission limit value in relation to suspended solids at our composite sampler or indeed during our quarterly surface water monitoring events. As always we will endeavour to keep our silt pools cleaned as often as required. This year almost all silt pools were cleaned at least twice.

There were three dust complaints and one dust non-compliance during the year. We sampled five times for dust again in 2011, twice more than our licence requires.

A new four module training programme delivered by dedicated Bord na Mona Training Specialists has also been developed during 2011/2012 and will be rolled out in the coming weeks. This new training programme includes Environmental Compliance - IPPC, Biodiversity, Archaeology and Energy Management.

A total of 165 staff were trained this year in Environmental Awareness, this will continue in 2012.

Waste streamlining is a project we are particularly interested in pursuing and hope to reduce wastes in the future and be more efficient in dealing with all aspects of waste management.

Bord na Mona are project partners of the South Eastern River Basin District Management, as set up under the Water Framework Directive.

Bord na Mona are also involved in catchment management on the River Barrow.

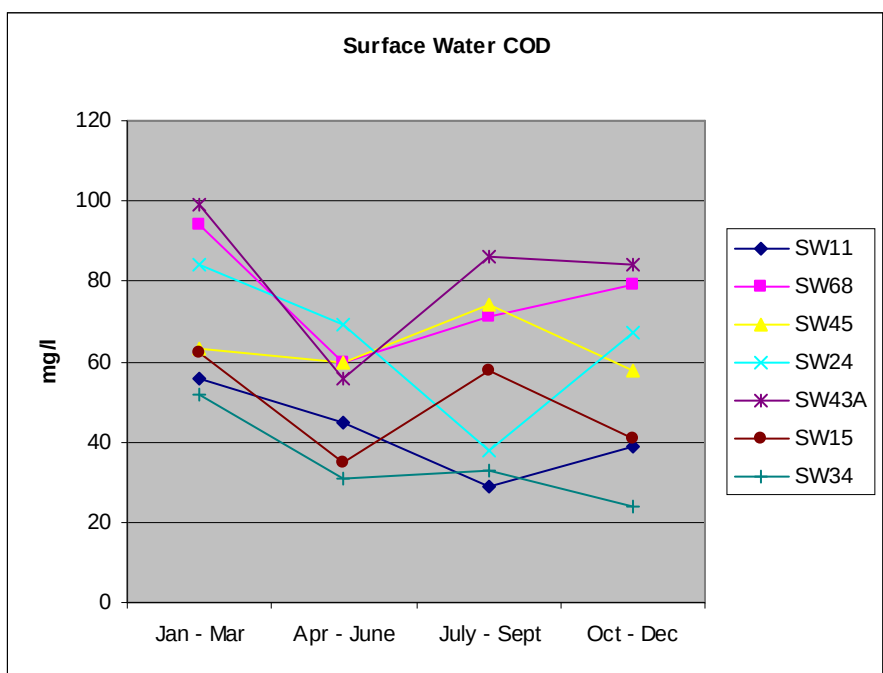
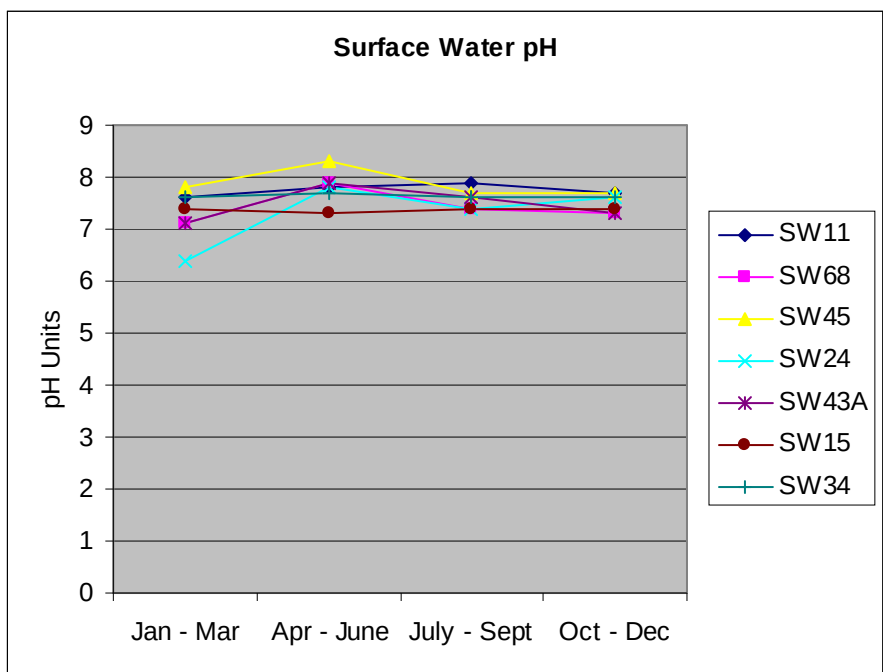
Bord na Mona Energy Ltd would like to take this opportunity to advise the Environmental Protection Agency of its continued commitment to improving its environmental performance by adopting cleaner production methods and improving its environmental protection measures.

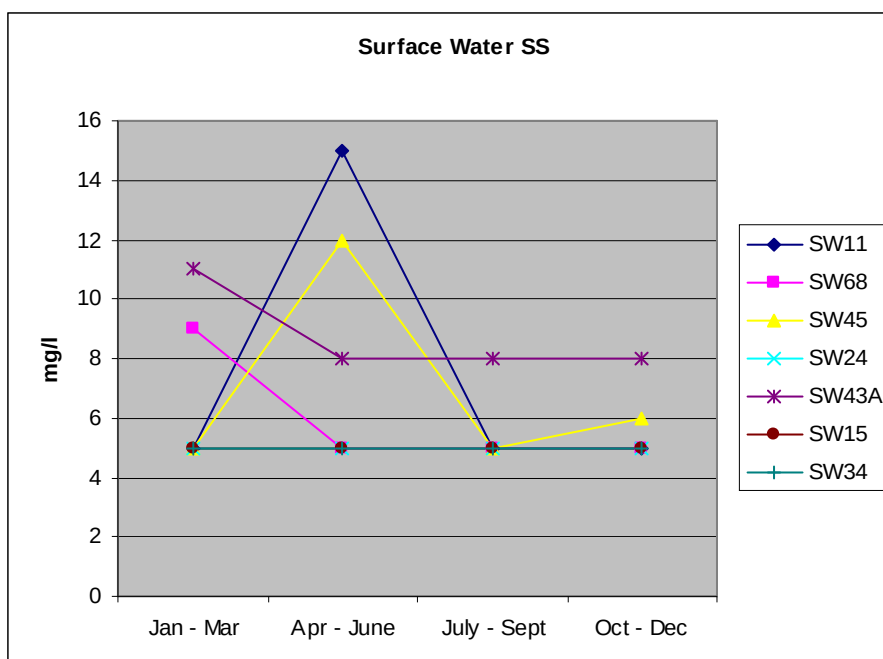
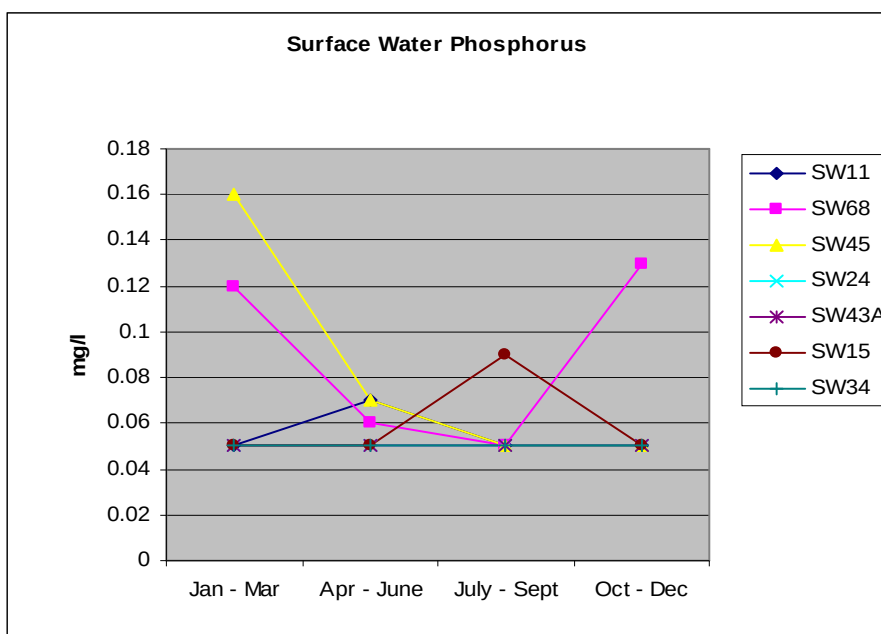
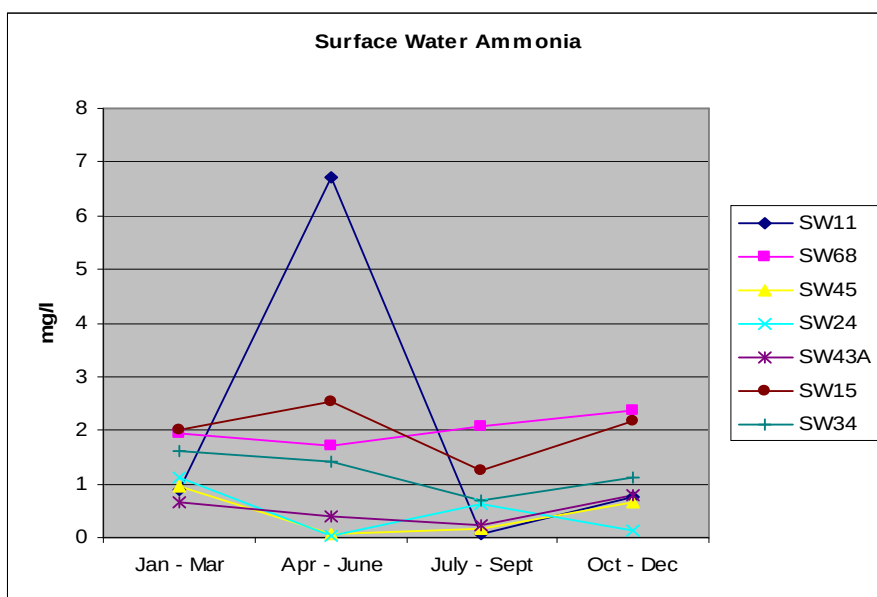
APPENDIX 1

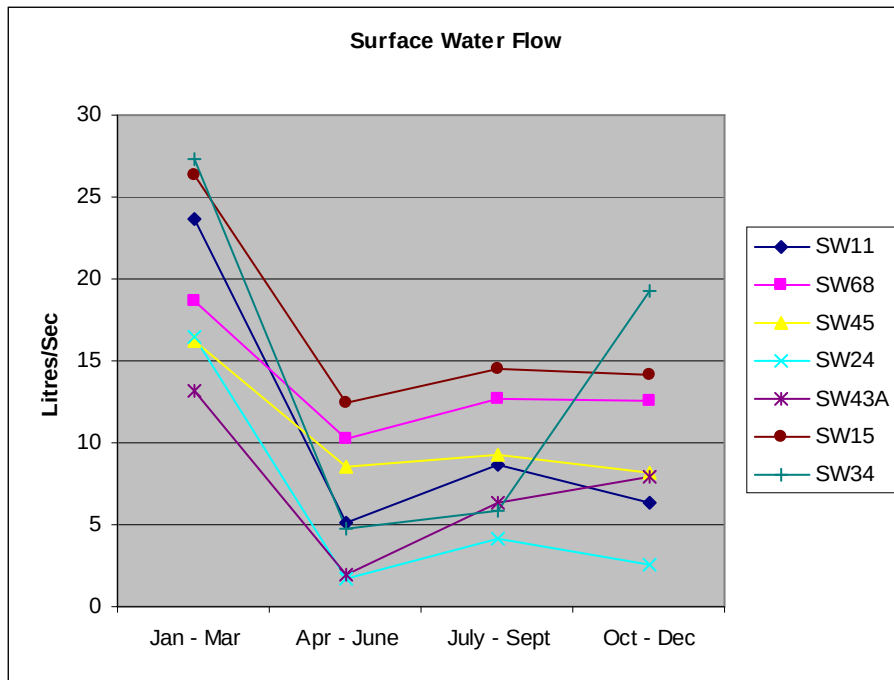
Surface Water Discharge Monitoring Results Bogs

BNM Group:	Allen			
IPC Licence No.	503			
Year	2011			
pH (units)				
	Jan - Mar	Apr - June	July - Sept	Oct - Dec
SW11	7.6	7.8	7.9	7.7
SW68	7.1	7.9	7.4	7.3
SW45	7.8	8.3	7.7	7.7
SW24	6.4	7.8	7.4	7.6
SW43A	7.1	7.9	7.6	7.3
SW15	7.4	7.3	7.4	7.4
SW34	7.6	7.7	7.6	7.6
COD (mg/l)				
	Jan - Mar	Apr - June	July - Sept	Oct - Dec
SW11	56	45	29	39
SW68	94	60	71	79
SW45	63	60	74	58
SW24	84	69	38	67
SW43A	99	56	86	84
SW15	62	35	58	41
SW34	52	31	33	24
Ammonia as N (mg/l)				
	Jan - Mar	Apr - June	July - Sept	Oct - Dec
SW11	0.89	6.7	0.08	0.76
SW68	1.94	1.72	2.06	2.36
SW45	0.96	0.06	0.17	0.65
SW24	1.13	0.02	0.62	0.12
SW43A	0.65	0.39	0.24	0.8
SW15	2	2.52	1.24	2.18
SW34	1.62	1.4	0.69	1.11
Total Phosphorus (mg/l)				
	Jan - Mar	Apr - June	July - Sept	Oct - Dec
SW11	0.05	0.07	0.05	0.05
SW68	0.12	0.06	0.05	0.13
SW45	0.16	0.07	0.05	0.05
SW24	0.05	0.05	0.05	0.05
SW43A	0.05	0.05	0.05	0.05
SW15	0.05	0.05	0.09	0.05
SW34	0.05	0.05	0.05	0.05
Suspended Solids (mg/l)				
	Jan - Mar	Apr - June	July - Sept	Oct - Dec
SW11	5	15	5	5
SW68	9	5	5	5
SW45	5	12	5	6
SW24	5	5	5	5
SW43A	11	8	8	8

SW15	5	5	5	5
SW34	5	5	5	5
Flow (l/s)				
	Jan - Mar	Apr - June	July - Sept	Oct - Dec
SW11	23.7	5.1	8.6	6.3
SW68	18.6	10.3	12.7	12.6
SW45	16.2	8.5	9.3	8.2
SW24	16.5	1.7	4.2	2.6
SW43A	13.2	1.9	6.4	7.9
SW15	26.4	12.5	14.5	14.2
SW34	27.3	4.7	5.8	19.3







APPENDIX 2

Surface Water Discharge Monitoring Results Yards

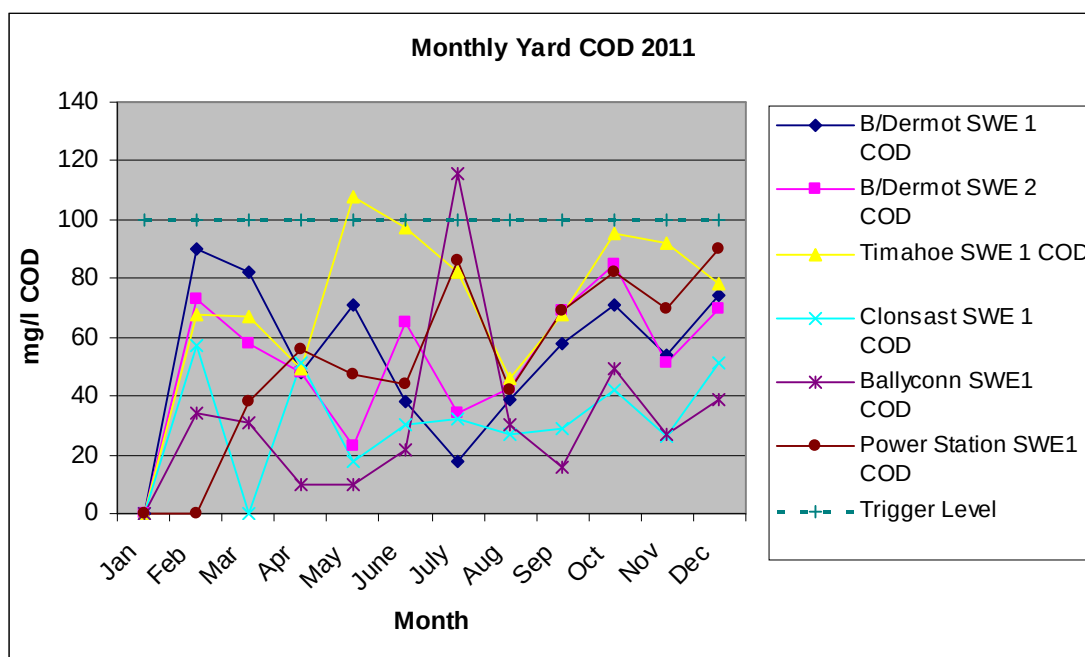
Yard Discharge Results 2011

Licence: P0503-01

Works: Allen

Month	B/Dermot SWE 1 COD	B/Dermot SWE 2 COD	Timahoe SWE 1 COD	Clonsast SWE 1 COD	Ballyconn SWE1 COD	Power Station SWE1 COD
Jan	0	0	0	0	0	0
Feb	90	73	68	57	34	0
Mar	82	58	67	0	31	38
Apr	48	48	49	51	10	56
May	71	23	108	18	10	47
June	38	65	97	30	22	44
July	18	34	82	32	116	86
Aug	39	43	46	27	30	42
Sep	58	69	68	29	16	69
Oct	71	85	95	42	49	82
Nov	54	51	92	26	27	70
Dec	74	70	78	51	39	90

0: No Flow On Day Of Sampling



APPENDIX 3

Surface Water Discharge Monitoring Results Composite

Month				Parameters							Daily Totals		
January	pH	COD	Ammonia as	Total	Suspended	Total	Colour	Flow	COD	Ammonia as	Total	Suspended	Total
2011		mg/l	N mg/l	Phosphorus	Solids	Solids	Pt Co	Daily	Kg/Day	Kg/Day	Phosphorus	Solids	Solids
SW33				mg/l	mg/l	mg/l	units	Total (litres)			Kg/Day	Kg/Day	Kg/Day
1					5	222		4225219				21.13	938.00
2					5	284		2126477				10.63	603.92
3					5	194		1964045				9.82	381.02
4					5	282		3743798				18.72	1055.75
5	7.7	22	2.08	0.05	5	283	71	2844288	62.57	5.92	0.14	14.22	804.93
6					5	316		3616186				18.08	1142.71
7					5	334		2943994				14.72	983.29
8					5	338		2684794				13.42	907.46
9					5	272		2428704				12.14	660.61
10					5	286		2462659				12.31	704.32
11					5	234		5696870				28.48	1333.07
12	7.5	75	1.56	0.05	10	246	215	10313570	773.52	16.09	0.52	103.14	2537.14
13					0	0		7442410				0.00	0.00
14					0	0		7681219				0.00	0.00
15					0	0		5559321				0.00	0.00
16					0	0		4823021				0.00	0.00
17					0	0		4823021				0.00	0.00
18					0	0		4823021				0.00	0.00
19	7.7	25	1.86	0.05	5	308	102	4823021	120.58	8.97	0.24	24.12	1485.49
20					0	0		4823021				0.00	0.00
21					0	0		3417466				0.00	0.00
22					0	0		917136				0.00	0.00
23					0	0		614252				0.00	0.00
24					5	284		1265242				6.33	359.33
25					5	286		3951677				19.76	1130.18
26	7.6	28	1.78	0.05	5	284	80	2121898	59.41	3.78	0.11	10.61	602.62
27					0	0		-11085				0.00	0.00
28					5	190		2609539				13.05	495.81
29					0	0		5533488				0.00	0.00
30					5	196		5762535				28.81	1129.46
31					5	198		5412960				27.06	1071.77

Month				Parameters							Daily Totals		
Feb	pH	COD	Ammonia as	Total	Suspended	Total	Colour	Flow	COD	Ammonia as	Total	Suspended	Total
2011		mg/l	N mg/l	Phosphorus	Solids	Solids	Pt Co	Daily	Kg/Day	Kg/Day	Phosphorus	Solids	Solids
SW33				mg/l	mg/l	mg/l	units	Total (litres)			Kg/Day	Kg/Day	Kg/Day
1	7.9	37	2.32	0.05	5	316	68	4532025	167.68	10.51	0.23	22.66	1432.12
2					0	0		5790268				0.00	0.00
3					0	0		4516214				0.00	0.00
4					0	0		-413744				0.00	0.00
5					0	0		1438906				0.00	0.00
6					0	0		5862499				0.00	0.00
7					5	272		2566339				12.83	698.04
8	8	46	1.62	0.05	5	260	88	2563661	117.93	4.15	0.13	12.82	666.55
9					17	218		2604874				44.28	567.86
10					26	238		2256768				58.68	537.11
11					7	278		-1080950				-7.57	-300.50
12					16	243		-1093306				-17.49	-265.67
13					19	244		-643637				-12.23	-157.05
14					23	232		2326752				53.52	539.81
15	7.9	50	1.44	0.08	30	238	117	2333750	116.69	3.36	0.19	70.01	555.43
16					12	290		2607638				31.29	756.22
17					12	322		1637280				19.65	527.20
18					9	308		381871				3.44	117.62
19					12	316		1188518				14.26	375.57
20					9	304		2132525				19.19	648.29
21					9	308		1567728				14.11	482.86
22	7.6	32	2.04	0.05	8	314	94	1765066	56.48	3.60	0.09	14.12	554.23
23					7	308		2151446				15.06	662.65
24					5	296		2565302				12.83	759.33
25					5	292		2514413				12.57	734.21
26					5	282		2301782				11.51	649.10
27					5	310		2507242				12.54	777.25
28					5	314		2374186				11.87	745.49

Month				Parameters							Daily Totals		
March	pH	COD	Ammonia as	Total	Suspended	Total	Colour	Flow	COD	Ammonia as	Total	Suspended	Total
2011		mg/l	N mg/l	Phosphorus	Solids	Solids	Pt Co	Daily	Kg/Day	Kg/Day	Phosphorus	Solids	Solids
SW33				mg/l	mg/l	mg/l	units	Total (litres)			Kg/Day	Kg/Day	Kg/Day
1	7.7	28	1.74	0.05	7	260	45	2296426	64.30	4.00	0.11	16.07	597.07
2					5	328		2195078				10.98	719.99
3					9	344		2504650				22.54	861.60
4					10	352		2941661				29.42	1035.46
5					10	346		3547670				35.48	1227.49
6					5	332		3493411				17.47	1159.81
7					5	332		3490301				17.45	1158.78
8	8	38	1.43	0.05	9	338	36	2967926	112.78	4.24	0.15	26.71	1003.16
9					5	348		2079389				10.40	723.63
10					5	364		2346538				11.73	854.14
11					5	358		2308781				11.54	826.54
12					5	352		2317680				11.59	815.82
13					5	356		2710195				13.55	964.83
14					5	340		2724538				13.62	926.34
15	8	21	1.16	0.05	5	352	40	2719613	57.11	3.15	0.14	13.60	957.30
16					5	440		2714688				13.57	1194.46
17					5	350		1873152				9.37	655.60
18					5	344		-241894				-1.21	-83.21
19					5	336		423852				2.12	142.41
20					5	338		1979856				9.90	669.19
21					5	348		1518998				7.59	528.61
22	8	26	0.99	0.05	5	337	40	1667347	43.35	1.65	0.08	8.34	561.90
23					5	348		-183894				-0.92	-64.00
24					5	342		887674				4.44	303.58
25					5	335		1269389				6.35	425.25
26					6	342		464383				2.79	158.82
27					5	326		635204				3.18	207.08
28					16	318		436069				6.98	138.67
29					5	334		1682640				8.41	562.00
30	8.2	18	1.38	0.05	8	328	37	1629504	29.33	2.25	0.08	13.04	534.48
31					5	352		1672147				8.36	588.60

Month				Parameters							Daily Totals		
April	pH	COD	Ammonia as	Total	Suspended	Total	Colour	Flow	COD	Ammonia as	Total	Suspended	Total
2011		mg/l	N mg/l	Phosphorus	Solids	Solids	Pt Co	Daily	Kg/Day	Kg/Day	Phosphorus	Solids	Solids
SW33				mg/l	mg/l	mg/l	units	Total (litres)			Kg/Day	Kg/Day	Kg/Day
1					5	344		1807420				9.04	621.75
2					5	326		1992230				9.96	649.47
3					5	334		1081270				5.41	361.14
4					5	326		1853220				9.27	604.15
5					5	306		1946220				9.73	595.54
6	7.8	22	1.14	0.05	5	318	38	1782310	39.21	2.03	0.09	8.91	566.77
7					5	310		1954480				9.77	605.89
8					5	294		2566200				12.83	754.46
9					5	328		1850110				9.25	606.84
10					5	338		1206930				6.03	407.94
11					5	290		598934				2.99	173.69
12					5	326		784349				3.92	255.70
13	8.1	51	0.32	0.05	6	329	37	1643190	83.80	0.53	0.08	9.86	540.61
14					5	320		618456				3.09	197.91
15					5	318		71215.5				0.36	22.65
16					5	0		-594470				-2.97	0.00
17					6	324		-50089.8				-0.30	-16.23
18					5	0		1551090				7.76	0.00
19					5	322		1239810				6.20	399.22
20	8.2	20	0.84	0.05	5	330	36	1353920	27.08	1.14	0.07	6.77	446.79
21					5	364		1134660				5.67	413.02
22					5	352		1007950				5.04	354.80
23					5	352		244428				1.22	86.04
24					5	348		560583				2.80	195.08
25					5	360		1073490				5.37	386.46
26					5	334		1144570				5.72	382.29
27					5	350		677733				3.39	237.21
28	8.1	13	0.91	0.05	5	340	40	801172	10.42	0.73	0.04	4.01	272.40
29					5	337		879358				4.40	296.34
30					5	344		1453940				7.27	500.16

Month				Parameters							Daily Totals		
May	pH	COD	Ammonia as	Total	Suspended	Total	Colour	Flow	COD	Ammonia as	Total	Suspended	Total
2011		mg/l	N mg/l	Phosphorus	Solids	Solids	Pt Co	Daily	Kg/Day	Kg/Day	Phosphorus	Solids	Solids
SW33				mg/l	mg/l	mg/l	units	Total (litres)			Kg/Day	Kg/Day	Kg/Day
1					5	340		1095600				5.48	372.50
2					5	336		2760600				13.80	927.56
3					5	358		3423930				17.12	1225.77
4	8.3	22	1	0.05	5	366	37	2065590	45.44	2.07	0.10	10.33	756.01
5					7	336		2371160				16.60	796.71
6					5	360		1571700				7.86	565.81
7					5	340		2240380				11.20	761.73
8					5	339		2822950				14.11	956.98
9					5	352		2617290				13.09	921.29
10					5	394		2434810				12.17	959.32
11	8	38	1.32	0.05	5	376	67	1066230	40.52	1.41	0.05	5.33	400.90
12					5	328		1286890				6.43	422.10
13					5	334		1116960				5.58	373.06
14					5	334		1884770				9.42	629.51
15					5	324		559034				2.80	181.13
16					5	328		745637				3.73	244.57
17					5	314		634388				3.17	199.20
18	8.1	19	1.37	0.05	8	340	46	1388520	26.38	1.90	0.07	11.11	472.10
19					5	354		1656700				8.28	586.47
20					5	362		1359910				6.80	492.29
21					5	356		941761				4.71	335.27
22					5	346		175324				0.88	60.66
23					5	340		1088930				5.44	370.24
24					5	354		1954440				9.77	691.87
25	8	30	1.34	0.05	12	346	51	3053810	91.61	4.09	0.15	36.65	1056.62
26					6	360		1322130				7.93	475.97
27					5	336		2054230				10.27	690.22
28					5	362		1398840				6.99	506.38
29					0	0		1180160				0.00	0.00
30					0	0		124222				0.00	0.00
31					0	0		104238				0.00	0.00

Month				Parameters							Daily Totals		
June	pH	COD	Ammonia as	Total	Suspended	Total	Colour	Flow	COD	Ammonia as	Total	Suspended	Total
2011		mg/l	N mg/l	Phosphorus	Solids	Solids	Pt Co	Daily	Kg/Day	Kg/Day	Phosphorus	Solids	Solids
SW33				mg/l	mg/l	mg/l	units	Total (litres)			Kg/Day	Kg/Day	Kg/Day
1	8	16	1.12	0.05	5	364	48	-366209	-5.86	-0.41	-0.02	-1.83	-133.30
2					6	356		265835				1.60	94.64
3					5	344		1056850				5.28	363.56
4					5	346		1324330				6.62	458.22
5					5	349		1308390				6.54	456.63
6					5	354		338509				1.69	119.83
7					5	358		271231				1.36	97.10
8	8.2	16	0.17	0.05	5	346	44	479572	7.67	0.08	0.02	2.40	165.93
9					5	336		1101600				5.51	370.14
10					5	264		1163940				5.82	307.28
11					5	324		1463240				7.32	474.09
12					5	322		1197540				5.99	385.61
13					5	360		321056				1.61	115.58
14					5	340		1029110				5.15	349.90
15	8.2	24	0.38	0.05	5	314	43	1311540	31.48	0.50	0.07	6.56	411.82
16					5	346		1236430				6.18	427.80
17					5	350		324874				1.62	113.71
18					6	352		301500				1.81	106.13
19					5	348		211071				1.06	73.45
20					5	346		169371				0.85	58.60
21					5	342		617173				3.09	211.07
22	8	28	1.1	0.05	5	357	50	179801	5.03	0.20	0.01	0.90	64.19
23					5	378		58884.4				0.29	22.26
24					5	372		161162				0.81	59.95
25					5	380		30266.1				0.15	11.50
26					5	379		267242				1.34	101.28
27					5	366		277217				1.39	101.46
28					5	380		604691				3.02	229.78
29	8	10	0.9	0.1	5	360	48	-170046	-1.70	-0.15	-0.02	-0.85	-61.22
30					5	352		113010				0.57	39.78

Month				Parameters							Daily Totals		
July	pH	COD	Ammonia as	Total	Suspended	Total	Colour	Flow	COD	Ammonia as	Total	Suspended	Total
2011		mg/l	N mg/l	Phosphorus	Solids	Solids	Pt Co	Daily	Kg/Day	Kg/Day	Phosphorus	Solids	Solids
SW33				mg/l	mg/l	mg/l	units	Total (litres)			Kg/Day	Kg/Day	Kg/Day
1					5	332		-60452.8				-0.30	-20.07
2					5	350		176108				0.88	61.64
3					5	364		319401				1.60	116.26
4					5	360		742532				3.71	267.31
5					5	362		695375				3.48	251.73
6	8.2	45	0.39	0.15	5	370	43	304676	13.71	0.12	0.05	1.52	112.73
7					8	359		-92152.2				-0.74	-33.08
8					7	394		231516				1.62	91.22
9					7	386		-266853				-1.87	-103.01
10					5	414		149628				0.75	61.95
11					5	412		309970				1.55	127.71
12					6	392		125639				0.75	49.25
13	7.8	38	0.76	0.08	5	396	66	69360	2.64	0.05	0.01	0.35	27.47
14					7	398		112959				0.79	44.96
15					0	0		-6098.1				0.00	0.00
16					5	380		-106808				-0.53	-40.59
17					6	362		-105430				-0.63	-38.17
18					0	0		-212542				0.00	0.00
19					0	0		-165337				0.00	0.00
20	8.1	13	0.97	0.05	6	388	65	69655.4	0.91	0.07	0.00	0.42	27.03
21					5	390		45062.6				0.23	17.57
22					0	0		107132				0.00	0.00
23					0	0		79364				0.00	0.00
24					0	0		9514.08				0.00	0.00
25					0	0		247072				0.00	0.00
26					0	0		307568				0.00	0.00
27					5	368		289402				1.45	106.50
28	8.1	48	0.26	0.05	5	374	42	30111.3	1.45	0.01	0.00	0.15	11.26
29					0	0		4904.58				0.00	0.00
30					0	0		99494.1				0.00	0.00
31					0	0		79990.1				0.00	0.00

Month				Parameters							Daily Totals		
August	pH	COD	Ammonia as	Total	Suspended	Total	Colour	Flow	COD	Ammonia as	Total	Suspended	Total
2011		mg/l	N mg/l	Phosphorus	Solids	Solids	Pt Co	Daily	Kg/Day	Kg/Day	Phosphorus	Solids	Solids
SW33				mg/l	mg/l	mg/l	units	Total (litres)			Kg/Day	Kg/Day	Kg/Day
1					0	0		59125.4				0.00	0.00
2					0	0		112247				0.00	0.00
3	8	10	0.23	0.05	5	336	42	89248.6	0.89	0.02	0.00	0.45	29.99
4					0	0		331511				0.00	0.00
5					0	0		363035				0.00	0.00
6					0	0		79664.2				0.00	0.00
7					0	0		-78931				0.00	0.00
8					0	0		-177003				0.00	0.00
9					0	0		-92072.6				0.00	0.00
10					0	0		59718.3				0.00	0.00
11	7.8	11	1.51	0.05	6	371	66	37704.3	0.41	0.06	0.00	0.23	13.99
12					0	0		234796				0.00	0.00
13					0	0		106187				0.00	0.00
14					0	0		23251.5				0.00	0.00
15					0	0		221049				0.00	0.00
16					8	348		2981300				23.85	1037.49
17	8.2	31	1.42	0.07	8	354	74	894122	27.72	1.27	0.06	7.15	316.52
18					5	344		538188				2.69	185.14
19					5	370		441756				2.21	163.45
20					5	379		501332				2.51	190.00
21					5	368		547732				2.74	201.57
22					0	0		385462				0.00	0.00
23					5	360		-194991				-0.97	-70.20
24	8.1	19	0.32	0.05	5	374	48	70793.1	1.35	0.02	0.00	0.35	26.48
25					0	0		237004				0.00	0.00
26					0	0		203724				0.00	0.00
27					0	0		-108970				0.00	0.00
28					0	0		-9377.04				0.00	0.00
29					0	0		300643				0.00	0.00
30					5	312		385477				1.93	120.27
31	8.2	10	0.2	0.05	5	309	43	399989	4.00	0.08	0.02	2.00	123.60

Month				Parameters							Daily Totals		
Sept	pH	COD	Ammonia as	Total	Suspended	Total	Colour	Flow	COD	Ammonia as	Total	Suspended	Total
2011		mg/l	N mg/l	Phosphorus	Solids	Solids	Pt Co	Daily	Kg/Day	Kg/Day	Phosphorus	Solids	Solids
SW33				mg/l	mg/l	mg/l	units	Total (litres)			Kg/Day	Kg/Day	Kg/Day
1					5	300		605872				3.03	181.76
2					5	324		788023				3.94	255.32
3					5	364		597532				2.99	217.50
4					5	346		415229				2.08	143.67
5					5	342		342042				1.71	116.98
6					5	350		931684				4.66	326.09
7	8.1	41	0.42	0.05	5	346	93	635899	26.07	0.27	0.03	3.18	220.02
8					5	340		380506				1.90	129.37
9					5	378		487308				2.44	184.20
10					5	382		418941				2.09	160.04
11					5	384		266678				1.33	102.40
12					5	380		349167				1.75	132.68
13					5	334		200074				1.00	66.82
14		17	0.41	0.05	6	402	63	127242	2.16	0.05	0.01	0.76	51.15
15					0	0		37132.6				0.00	0.00
16					0	0		143134				0.00	0.00
17					0	0		196746				0.00	0.00
18					0	0		390433				0.00	0.00
19					0	0		-205966				0.00	0.00
20					0	0		44295.4				0.00	0.00
21	8	16	0.32	0.05	5	390	56	62424.5	1.00	0.02	0.00	0.31	24.35
22					0	0		66918.4				0.00	0.00
23					0	0		-32367.2				0.00	0.00
24					0	0		-92383.7				0.00	0.00
25					0	0		157672				0.00	0.00
26					0	0		345655				0.00	0.00
27	7.9	39	0.43	0.05	5	372	241	-136652	-5.33	-0.06	-0.01	-0.68	-50.83
28					5	360		-111690				-0.56	-40.21
29					0	0		224445				0.00	0.00
30					0	0		770002				0.00	0.00

Month				Parameters							Daily Totals		
Oct	pH	COD	Ammonia as	Total	Suspended	Total	Colour	Flow	COD	Ammonia as	Total	Suspended	Total
2011		mg/l	N mg/l	Phosphorus	Solids	Solids	Pt Co	Daily	Kg/Day	Kg/Day	Phosphorus	Solids	Solids
SW33				mg/l	mg/l	mg/l	units	Total (litres)			Kg/Day	Kg/Day	Kg/Day
1					5	333		93658	0.00			0.47	31.19
2					5	338		124330	0.00			0.62	42.02
3					5	322		-235699	0.00			-1.18	-75.90
4					5	330		1782780	0.00			8.91	588.32
5	7.9	39	0.84	0.05	5	340	115	977962	38.14	0.82	0.05	4.89	332.51
6					5	366		552269	0.00			2.76	202.13
7					5	390		482544	0.00			2.41	188.19
8					5	376		444010	0.00			2.22	166.95
9					5	365		558662	0.00			2.79	203.91
10					5	358		657331	0.00			3.29	235.32
11					5	362		691718	0.00			3.46	250.40
12	7.9	14	0.43	0.05	5	350	65	542419	7.59	0.23	0.03	2.71	189.85
13					5	350		491184	0.00			2.46	171.91
14					5	378		555034	0.00			2.78	209.80
15					5	354		784426	0.00			3.92	277.69
16					5	368		585446	0.00			2.93	215.44
17					5	336		1262300	0.00			6.31	424.13
18					5	330		849485	0.00			4.25	280.33
19	7.9	39	1.46	0.05	7	320	95	615254	23.99	0.90	0.03	4.31	196.88
20					5	346		529978	0.00			2.65	183.37
21					5	358		439344	0.00			2.20	157.29
22					5	374		1901060	0.00			9.51	711.00
23					5	358		3055360	0.00			15.28	1093.82
24					5	350		2866410	0.00			14.33	1003.24
25					10	250		1460250	0.00			14.60	365.06
26	7.6	62	1	0.05	10	250	168	1108340	68.72	1.11	0.06	11.08	277.09
27					7	260		1671750	0.00			11.70	434.66
28					7	258		2877470	0.00			20.14	742.39
29					7	278		5807460	0.00			40.65	1614.47
30					5	300		9373540	0.00			46.87	2812.06
31					5	326		5242060	0.00			26.21	1708.91

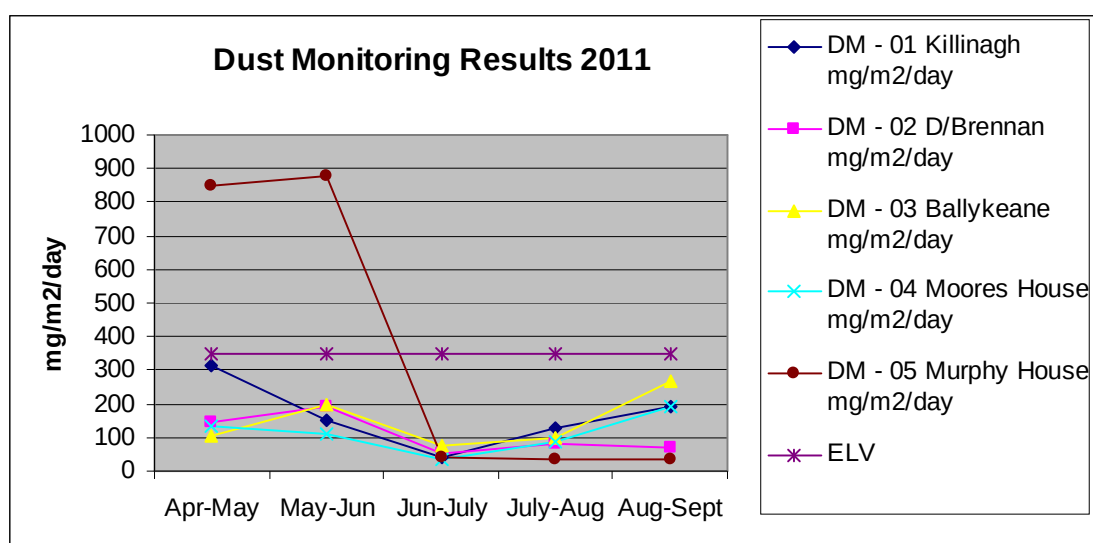
Month				Parameters							Daily Totals		
Nov	pH	COD	Ammonia as	Total	Suspended	Total	Colour	Flow	COD	Ammonia as	Total	Suspended	Total
2011		mg/l	N mg/l	Phosphorus	Solids	Solids	Pt Co	Daily	Kg/Day	Kg/Day	Phosphorus	Solids	Solids
SW33				mg/l	mg/l	mg/l	units	Total (litres)			Kg/Day	Kg/Day	Kg/Day
1					5	338		1480200				7.40	500.31
2	7.7	47	1.08	0.05	5	298	122	1137890	53.48	1.23	0.06	5.69	339.09
3					5	344		821664				4.11	282.65
4					5	358		691373				3.46	247.51
5					5	332		602467				3.01	200.02
6					5	352		271642				1.36	95.62
7					5	350		671846				3.36	235.15
8					5	364		770342				3.85	280.40
9	7.7	27	0.96	0.05	5	323	101	1137200	30.70	1.09	0.06	5.69	367.32
10					5	358		1267320				6.34	453.70
11					5	349		1340670				6.70	467.89
12					5	316		981936				4.91	310.29
13					5	324		779760				3.90	252.64
14					5	360		728957				3.64	262.42
15					5	364		844387				4.22	307.36
16					5	340		11644600				58.22	3959.16
17	7.7	33	0.12	0.05	5	330	64	8172580	269.70	0.98	0.41	40.86	2696.95
18					5	174		10035800				50.18	1746.23
19					5	310		541901				2.71	167.99
20					5	278		6562680				32.81	1824.43
21					5	288		1774740				8.87	511.13
22					5	286		998784				4.99	285.65
23					5	310		1806020				9.03	559.87
24	7.5	43	1.4	0.05	5	342	109	-45446	-1.95	-0.06	0.00	-0.23	-15.54
25					5	322		7104670				35.52	2287.70
26					5	238		10584300				52.92	2519.06
27					12	180		1388360				16.66	249.90
28					17	196		2499380				42.49	489.88
29					12	174		-84067				-1.01	-14.63
30					6	320		-2389910				-14.34	-764.77

Month				Parameters							Daily Totals		
Dec	pH	COD	Ammonia as	Total	Suspended	Total	Colour	Flow	COD	Ammonia as	Total	Suspended	Total
2011		mg/l	N mg/l	Phosphorus	Solids	Solids	Pt Co	Daily	Kg/Day	Kg/Day	Phosphorus	Solids	Solids
SW33				mg/l	mg/l	mg/l	units	Total (litres)			Kg/Day	Kg/Day	Kg/Day
1	7.7	45	0.98	0.22	34	298	74	-2443480	-109.96	-2.39	-0.54	-83.08	-728.16
2					22	234		-2610230				-57.43	-610.79
3					12	238		3482270				41.79	828.78
4					14	248		485827				6.80	120.49
5					12	228		1313970				15.77	299.59
6					13	276		1063150				13.82	293.43
7					5	261		931824				4.66	243.21
8	7.8	28	1.28	0.09	5	324	74	365299	10.23	0.47	0.03	1.83	118.36
9					5	304		798768				3.99	242.83
10					5	290		903830				4.52	262.11
11					5	298		2256680				11.28	672.49
12					5	314		-175306				-0.88	-55.05
13					5	322		-999389				-5.00	-321.80
14					5	278		2196890				10.98	610.74
15	8.1	67	1.44	0.05	10	236	130	523152	35.05	0.75	0.03	5.23	123.46
16					5	266		561254				2.81	149.29
17					5	326		500342				2.50	163.11
18					5	326		2747430				13.74	895.66
19					5	330		-1539130				-7.70	-507.91
20					6	244		-482976				-2.90	-117.85
21					5	328		1254100				6.27	411.34
22	7.7	63	0.8	0.05	6	206	134	2900280	182.72	2.32	0.15	17.40	597.46
23					17	266		4787250				81.38	1273.41
24					5	250		3584910				17.92	896.23
25					5	312		1168390				5.84	364.54
26					5	298		1067730				5.34	318.18
27					5	304		4207080				21.04	1278.95
28					5	328		7313850				36.57	2398.94
29					5	268		1562460				7.81	418.74
30	7.9	50	1.14	0.05	11	286	94	1888440	94.42	2.15	0.09	20.77	540.09
31					5	214		396922				1.98	84.94

APPENDIX 4

Dust Monitoring Results.

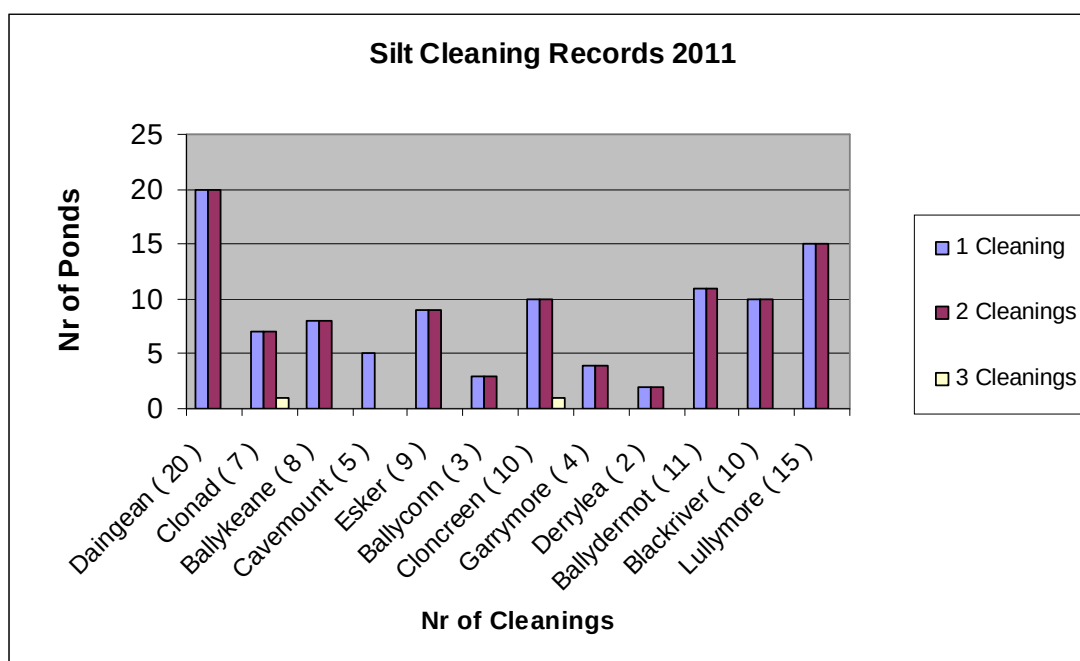
Dust Monitoring Results 2011					
Licence:P0503-01					
Works: Allen					
Sample Period	DM - 01 Killinagh mg/m2/day	DM - 02 D/Brennan mg/m2/day	DM - 03 Ballykeane mg/m2/day	DM - 04 Moores House mg/m2/day	DM - 05 Murphy House mg/m2/day
Apr-May	316	143	103	132	848
May-Jun	154	191	197	111	877
Jun-July	42	53	77	36	43
July-Aug	129	80	98	86	37
Aug-Sept	190	71	267	190	37



APPENDIX 5

De-silting Programme Review.

Siltpond Cleaning Programme 2011			
IPPC Licence: P0503-01			
Works: Allen			
Bog Area & Nr Ponds	1 Cleaning	2 Cleanings	3 Cleanings
Daingean (20)	20	20	
Clonad (7)	7	7	1
Ballykeane (8)	8	8	
Cavemount (5)	5		
Esker (9)	9	9	
Ballyconn (3)	3	3	
Cloncreen (10)	10	10	1
Garrymore (4)	4	4	
Derrylea (2)	2	2	
Ballydermot (11)	11	11	
Blackriver (10)	10	10	
Lullymore (15)	15	15	



[Guidance to completing the PRTR workbook](#)

AER Returns Workbook

Version 1.1.13

REFERENCE YEAR	2011
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1. FACILITY IDENTIFICATION

Parent Company Name	Bord na Mona Allen Peat Limited
Facility Name	Bord na Mona Allen Peat Limited
PRTR Identification Number	P0503
Licence Number	P0503-01

Waste or IPPC Classes of Activity

No.	class_name
1.4	The extraction of peat in the course of business which involves an area exceeding 50 hectares.

Address 1	Bord na Mona
Address 2	Derrygreenagh
Address 3	Rochfortbridge, Mullingar
Address 4	County Westmeath
	Westmeath
Country	Ireland
Coordinates of Location	-7.25677 53.3910
River Basin District	IEEA
NACE Code	0892
Main Economic Activity	Extraction of peat
AER Returns Contact Name	Enda McDonagh
AER Returns Contact Email Address	enda.mcdonagh@bnm.ie
AER Returns Contact Position	Head of Environment
AER Returns Contact Telephone Number	057 9345911
AER Returns Contact Mobile Phone Number	086 2370816
AER Returns Contact Fax Number	057 9345160
Production Volume	847663.0
Production Volume Units	Tonnes
Number of Installations	15
Number of Operating Hours in Year	2232
Number of Employees	140
User Feedback/Comments	
Web Address	www.bnm.ie

2. PRTR CLASS ACTIVITIES

Activity Number	Activity Name
50.1	General

3. SOLVENTS REGULATIONS (S.I. No. 543 of 2002)

Is it applicable?	No
Have you been granted an exemption ?	
If applicable which activity class applies (as per Schedule 2 of the regulations) ?	
Is the reduction scheme compliance route being used ?	

4.2 RELEASES TO WATERS

[Link to previous years emissions data](#)

[PRTR# : P0503 | Facility Name : Bord na Mona Allen Peat Limited | Filename : P0503_2011(1).xls | Return Year : 2011 |

07/06/2012 12:16

SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

Data on ambient monitoring of storm/surface water or groundwater, conducted as part of your licence requirements, should NOT be submitted under AER / PRTR Reporting as this only concerns Releases from your facility

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

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

SECTION B : REMAINING PRTR POLLUTANTS

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

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

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

RELEASES TO WATERS				Please enter all quantities in this section in KGs												
POLLUTANT			Method Used												QUANTITY	
					SW11	SW68	SW45	SW24	SW43A	SW15	SW34	SW33				
Pollutant No.	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	Emission Point 2	Emission Point 3	Emission Point 4	Emission Point 5	Emission Point 6	Emission Point 7	Emission Point 8	T (Total) KG/Year	A (Accident al) KG/Year	F (Fugitive) KG/Year	
240	Suspended Solids	E	OTH	ALPHA,1998,20th Edition, Method 2540D		2583.0	2563.0	2328.0	985.0	2028.0	2664.0	2250.0	2704.0	18105.0	0.0	0.0

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

4.3 RELEASES TO WASTEWATER OR SEWER

[Link to previous years emissions data](#)

| PRTR# : P0503 | Facility Name : Bord na Mona Allen Peat Limited | Filename : P0503_2011(1).xls

07/06/2012 12:16

SECTION A : PRTR POLLUTANTS

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

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

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

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

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

4.4 RELEASES TO LAND

[Link to previous years emissions data](#)

| PRTR# : P0503 | Facility Name : Bord na Mona Allen Peat Limited | Filename : P0503_2011(1).xls | Return Year : 2011 |

07/06/2012 12:16

SECTION A : PRTR POLLUTANTS

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

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

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

RELEASES TO LAND					Please enter all quantities in this section in KGs		
POLLUTANT		METHOD			QUANTITY		
Pollutant No.	Name	M/C/E	Method Code	Method Used Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year
					0.0	0.0	0.0

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

5. ONSITE TREATMENT & OFFSITE TRANSFERS OF WASTE

| PRTR#: P0503 | Facility Name : Bord na Mona Allen Peat Limited | Filename : P0503_2011(1).xls | Return Year : 2011 |

07/06/2012 12:16

Please enter all quantities on this sheet in Tonnes

3

Transfer Destination	European Waste Code	Hazardous	Quantity (Tonnes per Year)	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	Haz Waste : Name and Licence/Permit No of Next Destination Facility Haz Waste: Name and Licence/Permit No of Recover/Disposer	Haz Waste : Address of Next Destination Facility Non Haz Waste: Address of Recover/Disposer	Name and License / Permit No. and Address of Final Recoverer / Disposer (HAZARDOUS WASTE ONLY)	Actual Address of Final Destination i.e. Final Recovery / Disposal Site (HAZARDOUS WASTE ONLY)
						M/C/E	Method Used					
Within the Country	20 03 01	No	34.31	mixed municipal waste	D1	M	Weighed	Offsite in Ireland	AES Ltd Cappincur Tullamore,WCP-OY-08-601-01	Cappincur,Tullamore,Co Offaly,..Ireland		
Within the Country	20 03 01	No	16.16	mixed municipal waste	D1	C	Volume Calculation	Offsite in Ireland	AES Ltd Cappincur Tullamore,WCP-OY-08-601-01	Cappincur,Tullamore,Co Offaly,..Ireland		
Within the Country	02 01 04	No	509.86	waste plastics (except packaging)	R3	M	Weighed	Offsite in Ireland	Leinster Environmentals Haggardstown Dundalk,WP 2008/06 Haggardstown Dundalk	Haggardstown,Dundalk,Co Louth,..Ireland		
Within the Country	17 04 07	No	498.82	mixed metals	R4	M	Weighed	Offsite in Ireland	AES Ltd Cappincur Tullamore,WCP-OY-08-601-01	Cappincur,Tullamore,Co Offaly,..Ireland		
Within the Country	15 01 03	No	0.86	wooden packaging	R1	M	Weighed	Offsite in Ireland	AES Ltd Cappincur Tullamore,WCP-OY-08-601-01	Cappincur,Tullamore,Co Offaly,..Ireland		
Within the Country	01 01 02	No	521.24	wastes from mineral non-metalliferous excavation	D1	E	Volume Calculation	Onsite of generati	Bord na Mona Allen P0503-01,P0503-01 Derrygreenagh Rochfortbridge Mullingar Co Westmeath	Derrygreenagh,Rochfortbridg e,Mullingar,Co Westmeath,Ireland		
Within the Country	01 01 02	No	1613.0	wastes from mineral non-metalliferous excavation	D1	M	Weighed	Onsite of generati	Bord na Mona Allen P0503-01,P0503-01 Derrygreenagh Rochfortbridge Mullingar Co Westmeath	Derrygreenagh,Rochfortbridg e,Mullingar,Co Westmeath,Ireland		
Within the Country	13 02 05	Yes	29.1	mineral-based non-chlorinated engine, gear and lubricating oils	R1	C	Volume Calculation	Offsite in Ireland	Envia Ireland Ltd 184.1,Clonminam Ind Estate Portlaoise Co Laois	Clonminam Ind Estate,Portlaoise,Co Laois,..Ireland	Envia Ireland Ltd,184-1,Clonminam Industrial Estate,Portlaoise,Laois,..Ireland and R.D. Recycling Houthalen Belgium,Reg. no. 51727/1/KD Houthalen Belgium,R.D. Recycling ,Houthalen,...,Belgium	Clonminam Industrial Estate,Portlaoise,Laois,..Ireland and
To Other Countries	16 01 07	Yes	0.77	oil filters absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by	R4	C	Volume Calculation	Abroad	Envia Ireland Ltd 184.1,Clonminam Ind Estate Portlaoise Co Laois	Clonminam Ind Estate,Portlaoise,Co Laois,..Ireland	Lindenschmidt Kreuztal Germany,E97095037,Linden schmidt ,Kreuztal,...,Germany	R.D. Recycling ,Houthalen,...,Belgium
To Other Countries	15 02 02	Yes	0.3	dangerous substances	R1	C	Volume Calculation	Abroad	Envia Ireland Ltd 184.1,Clonminam Ind Estate Portlaoise Co Laois	Clonminam Ind Estate,Portlaoise,Co Laois,..Ireland	Solvent Recovery Management,PP33345F,Wh eeland Road,Knottingly,West Yorks ,WF11 8DZ,United Kingdom	Lindenschmidt ,Kreuztal,...,Germany
To Other Countries	11 01 13	Yes	1.17	degreasing wastes containing dangerous substances	R11	C	Volume Calculation	Abroad	Safety Kleen Ltd ,W0099-01	Tallaght,Dublin,...,Ireland		Wheeland Road,Knottingly,West Yorks ,WF11 8DZ,United Kingdom

* Select a row by double-clicking the Description of Waste then click the delete button

[Link to previous years waste data](#)
[Link to previous years waste summary data & percentage change](#)



Annual Environmental Report 2010
P0503-01

March 2011

Bord na Móna today operates 5 main subsidiary companies in more than 20 locations throughout Ireland, the UK and USA. The principal businesses are in the Energy, Resource Recovery, Horticulture, **Home Heating** and Wastewater Treatment and Air Pollution Abatement markets. The company also engages in an extensive rehabilitation program to develop its peat lands in an environmentally sustainable manner.

A NEW CONTRACT WITH NATURE

Bord na Móna has long recognised the need to diversify its activities in order to secure a sustainable future. In this context we identified the energy and resource recovery sectors as appropriate areas of growth and development, given our assets, strengths and skills. Significant challenges face Ireland in meeting the country's needs to provide secure sustainable energy and manage waste while minimising the impact on the environment.

Bord na Móna is in a strong position to contribute to dealing with these challenges. We have a unique mixture of assets, experience and innovation which will enable us to cross-link our activities in energy, water and resource recovery to provide products and services which will meet Ireland's needs. We also have the capacity to become an exemplar for others to follow in these fields.

With this background we have scoped out a new vision for the future sustainable development of Bord na Móna.

Following on from our vision, we have developed a new mission for Bord na Móna which the Company is committed to achieving.

In 1934 the Turf Development Board was formed to 'develop and improve the turf industry.' The experience of fuel shortages during the war re-enforced the Irish State's commitment to developing the country's bogs. In 1944 the TDB was asked to devise and submit a comprehensive programme, the outcome was the transformation in 1946 of the TDB into Bord na Móna. The Board was given a mandate to increase the use of peat as a fuel and in energy production. Markets for the use of moss peat in horticulture were also developed.

In 1990 Bord na Móna implemented a divisionalised and decentralised structure, designed to delegate responsibility downwards ensuring a sharper focus on each profit centre and a greater spirit of enterprise.

Group

Vision



The vision statement defines the Company's purpose, in terms of its values.

Values are guiding beliefs about how things should be done.

The vision statement communicates both the purpose and values of Bord na Móna.

For employees, it gives direction about how they are expected to behave and inspires them to give their best. Shared with customers, it shapes the customers' understanding of why they should work with Bord na Móna.

Bord na Móna will seek solutions that optimise the creative energy and potential of the organisation, driven by long term goals and the organisation's vision and mission.

In this context our devolved business units will align their vision and strategic planning with the global direction provided.

Consistent with our vision, innovation will once again return to the core of everything we do. We will capitalise on opportunities to cross fertilise our unique range of skills and technologies that add value and are socially and environmentally sustainable.

Greater focus will be placed on managing and developing our land assets in a responsible and sustainable manner. Our award winning initiatives at Lough Boora (Co. Offaly) and Oweninny (Co Mayo), provide shining examples of what can be achieved

Group

Mission

We conduct our affairs with openness, honesty and integrity.

We are Ireland's leading environmentally responsible integrated utility service provider encompassing electricity, heating solutions, resource recovery, water, horticulture and related services.

We capitalise on international opportunities where we have a competitive advantage.

We achieve continuing growth through superior customer service, outstanding quality and innovation delivered through the excellence and commitment of our people.

We engage in sustainable profitable business in the communities we serve, which is rewarding and challenging for employees and other stakeholders.

Contents

1.0 Introduction

- 1.1 IPC Licence Register No
- 1.2 Name & Location of Site
- 1.3 Brief Description of Activities
- 1.4 Environmental Management of the Company
- 1.5 Environmental Policy Statement

2.0 Summary Information

- 2.1 Emissions to Water Summary
 - 2.1.1 Silt Pond Emissions
 - 2.1.2 Yard Discharges
 - 2.1.3 Composite Sampler Report
 - 2.1.4 Emissions to Water Non-compliance's

2.2 Emissions to Air Summary

- 2.2.1 Dust Monitoring
- 2.2.2 Emissions to Air Non-compliance's

2.3 Waste Arising

- 2.3.1 Non-Hazardous Waste
- 2.3.2 Hazardous Waste

2.4 Energy and Water Consumption

- 2.4.1 Energy Consumption

2.5 Environmental Incidents and Complaints

- 2.5.1 Incidents
- 2.5.2 Complaints

3.0 Management of the Activity

3.1 Environmental Management Programme Report

3.2 Environmental Management Programme Proposal

3.3 Environmental Expenditure

4.0 Licence Specific Reports

4.1 Surface Water Discharge Monitoring Location Programme Review

4.2 Bunding Programme

4.3 Boiler Combustion Efficiency

4.4 Resource Consumption Summary

4.5 Report on de-silting Programme

4.6 Bog Development and Operational Programme

4.7 Bog Rehabilitation Report

4.8 Archaeological Report

5.0 Summary

Appendix 1: Emissions to Water Monitoring Results. (Bogs)

Appendix 2: Emissions to Water Monitoring Results. (Yards)

Appendix 3: Emissions to Water Monitoring Results. (Composite)

Appendix 4: Emissions to Air Monitoring Results.

Appendix 5: De-silting Programme Review

1.0 Introduction

1.1 IPPC Licence No 503-01

1.2 Name & Location of Site

Name: Bord Na Mona Energy Limited.

Address: Derrygreenagh Works,
Rochfortbridge,
Mullingar,
Co. Westmeath.

Telephone No: 044 9222181 Fax No. 044 9222344

Contact Name: Eamonn Mulhall

Position: Resource Manager

National Grid Reference: E249450 N238140

1.3 Description of Activities

Peat Milling Operations.

For milled peat production the bog is laid out in a series of rectangular fields of varying length and 15m wide with drains located between. There are essentially four operations involved in milled peat production:

Milling.

Harrowing.

Ridging.

Harvesting.

Milling.

Special milling machines work there way along the fields, milling approximately 15mm of peat of the top of the bog in a pass.

Harrowing

In the course of drying, the milled peat is turned a number of times to avail of the drying conditions. This is achieved with a machine called a harrow. The milled peat is harrowed until its moisture content is down to approximately 40-50%, which can take up to two to three days, weather depending.

Ridging

The dry peat is then scraped into long ridges running down the centre of each field. This is done with a ridger, a machine consisting of a series of blades in the shape of a v that opens the full width of the field.

Harvesting

During harvesting every eleventh field is used to stockpile the peat, with this field receiving the milled peat from the five fields either side.

The milled peat is then transported via the existing network of peatland railways or via road to one of the following locations.

Power station

Horticultural Factory.

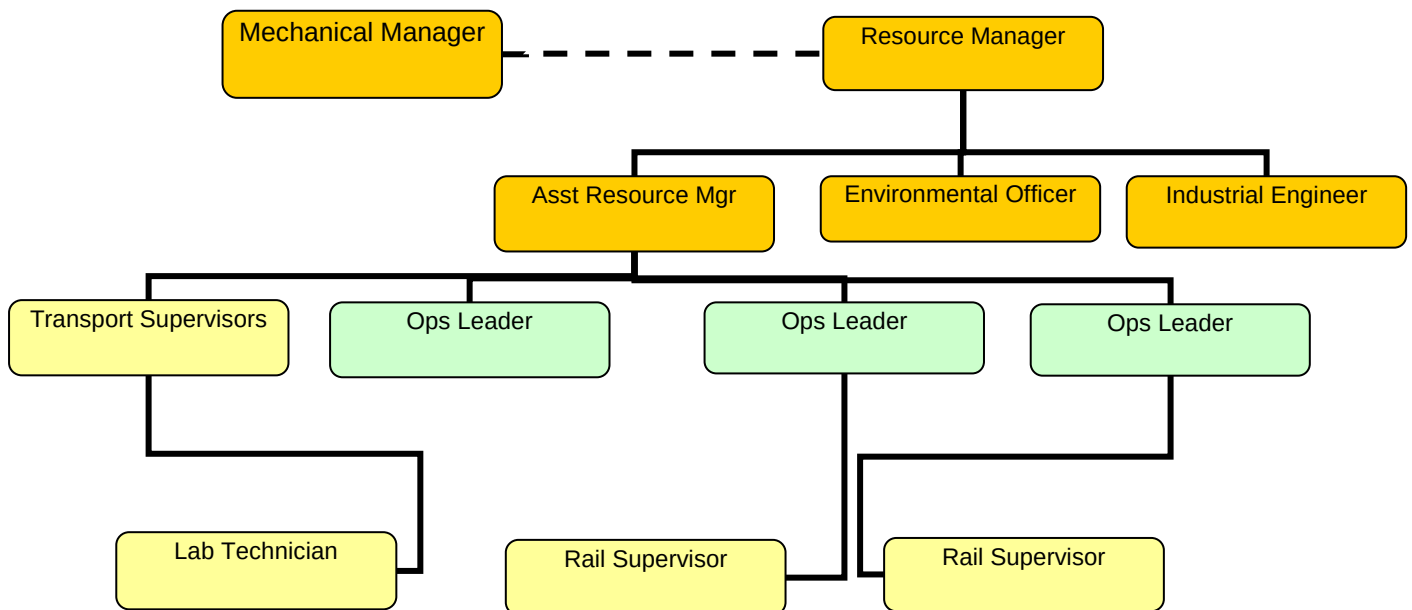
Briquette Factory.

1.4 Environmental Management of the Company

The organisational structure within the Allen Group is presented in the flow chart below.

Group

Environmental Responsibilities



1.5 Environmental Policy



Bord Na Mona Energy Limited is a commercial semi-state body with responsibility to develop Ireland's peat resources in the national interest.

Bord Na Mona Energy Limited is committed to gather and make available information on all aspects of its environmental impact and to help improve understanding among the public generally of its role and the importance of Irish peatlands.

Bord Na Mona Energy Limited recognises the importance of peatland conservation.

Bord Na Mona Energy Limited will leave behind all areas it owns as either an economically or socially integrated resource of a high environmental value.

Bord Na Mona Energy Limited seeks to conduct all aspects of its business in an environmentally sensitive value.

Bord Na Mona Energy Limited operate an environmental management system specifically addressing the following impacts.

1. Discharges to water.
2. Emissions to atmosphere.
3. Waste disposal.
4. Use of natural resources.
5. Noise, vibration, odour, dust and visual effects.
6. Natural environment and eco-system.

The environmental management system will be monitored, maintained and continually improved.

A system of regular environmental audits will be put in place.

Bord Na Mona Energy Limited will continue research and development into all aspects of its environmental impact.

This statement is published and is available at all locations within the division and its contents are brought to the attention of all employees.

2.0 Summary Information

2.1 Emissions to Water Summary

2.1.1 Silt Pond Emissions

Comment

Surface water monitoring was carried out quarterly during the reporting period. In total analysis was carried out at seven different locations. The locations were as follows, Cloncreen @ SW34, Derrylea @ SWF, Codd Sth @ SW45, Ticknevin @ SWU, Ballykeane @ SW15, Clonad @ SW11 & Esker @ SW 24.

The parameters measured during each sampling event were as follows:
Total Phosphorus, Total Solids, Suspended Solids, pH, Ammonia, Colour and COD.

In general results were constant across all parameters at each monitoring location. September was the wettest month with 169.3mm of rainfall recorded and April the driest with 37.3 mm recorded. Flow rates appear to have had no adverse effect on suspended solids results.

The quarterly grab sampling programme proved to be 100% compliant for the year as was the 2006, 2007, 2008 & 2009 regimes.

pH values were between 6.3 and 8, with emission limit values being of the range 6 and 9. pH values of waters emanating from production peatlands appear to remain constant and in line with background levels. On average pH values were 0.1 pH unit above 2009 levels.

Suspended solids varied from 5 mg/l to 19 mg/l and would depend on rainfall and activities (piping, ditching) etc, in the catchments at the time of sampling. All results were within the licence limit of 35mg/l. On average suspended solid results were well down on 2009 levels.

Ammonia values ranged from 0.09 mg/l and 2.8 mg/l. The I/PV for A3 waters are of the range 4mg/l. It is however not unusual for surface waters emanating from production peat lands to be slightly elevated. Ammonia levels were on average above 2009 levels, with the 2010 average being 1.22 mg/l and 2009 being 1 mg/l.

COD values ranged from 35 mg/l to 110 mg/l. On average COD results were below 2009 levels. The I/PV for A3 waters is of the range 40mg/l. Only one result was above the Bord na Mona set trigger level of 100 mg/l, however investigations should no evidence of any contributory factors causing such results. Subsequent results proved to be back in line with previous readings.

Flow rates were well down on 2009 sampling events. This in part is dependent on the climatic conditions on the chosen day of sampling. Also 2010 was a dryer year overall with 875 mm of rainfall recorded as opposed to 1052 mm in 2009.

Total Phosphorus results were consistently low and ranged from 0.05 mg/l to 0.14 mg/l. On average the total phosphorus result was lower than 2009, the difference being minute (0.001 mg/l).

The sampling locations will remain during 2011.

At the request of the Agency, analysis results are now demonstrated both in tabular and graphical format.

Surface Water Results are attached in Appendix 1.

2.1.2 Yard Discharges

Comment

Yard runoff monitoring took place at six locations during the reporting period. Sampling frequency was monthly and COD was the parameter requiring analysis. Results ranged from 207 mg/l to 17 mg/l. With the exception of 4 results, results were within Bord Na Mona set trigger levels. The four elevated results were all investigated. Two of the results were due to machinery being washed down at the time of sampling, One due to flood conditions and the other due to greatly reduced flow which more than likely caused the sample pot become contaminated during the sampling event. Subsequent results at each of these locations were markedly reduced following subsequent sampling. At SWE-1 Timahoe there was a marked improvement in results.

At the request of the Agency, analysis results are now demonstrated both in tabular and graphical format.

Sampling will continue at the same locations in 2011.

Yard Emission Results are attached in Appendix 2.

2.1.3 Composite Sampler Report

Comment

The composite sampler has been operating at SW 33 Cloncreen Bog during the reporting period. The parameters measured were Total Phosphorus, Total Solids, Suspended Solids, pH, Ammonia, Colour and COD, with Suspended solids being the only parameter with an emission limit value (35mg/l).

The sampler worked well during the reporting period. Results showed only one non-compliance in that time, with a suspended solids result of 63 mg/l being recorded in March. At the direction of the Agency the sampler was calibrated by an independent contractor. Due to extremely low temperatures the sampler and indeed the outfall on which the sampler is situated became frozen during parts of November and December. In general results were satisfactory with one non-compliance's being recorded for the period. Analysis of the 2009 results compared with the 2010 results indicate no great difference in results in relation to pH, Ammonia and Phosphorus, with slightly lower COD and higher Suspended Solids in 2010.

The composite sampler will remain at this location for the foreseeable future.

Composite Sampler Results are contained in Appendix 3.

2.1.4 Emissions to Water Non-compliance's

Emissions to Water Non-Compliances 2010		
Licence: P0503-01		
Works: Allen		
Type	Non-Compliances	Location / SW Nr
Composite	1	Cloncreen SW 33
Quarterly Grab	0	
Monthly Yard	0	
Totals	1	

Note:

There was one non-compliance in relation to emissions to water. This related to elevated suspended solids at Cloncreen SW 33. The Agency was informed.

2.2 Emissions to Air

2.2.1 Dust Monitoring

Comment

Dust monitoring was carried out on five occasions between April and September. Each monitoring event lasted between 28 and 32 days and the Bergerhoff method of collection was used.

The monitoring locations were as follows, Ballykeane DM01, Killinagh DM02, Derrybrennan DM03 and Moore's Dwelling DM04. The emission limit value is 350mg/m²/day. There was one non-compliance during the June-July monitoring event at Ballykeane DM-01.

Sampling will continue at the same locations during 2010.

Dust monitoring results are contained in appendix 4.

2.2.2 Emissions to Air Non-compliance's

Dust Non-Compliances 2010	
Licence:P0503-01	
Works: Allen	
Location / DM Nr	Non-Compliances
Ballykeane DM-03	1
Total	1

There was one dust non-compliance at Ballykeane DM-03. The Agency was informed. There were no complaints at the time of this non-compliance.

2.3 Waste Arisings

2.3.1 Non-Hazardous Waste

Non Hazardous Waste Data 2010				
Licence: P0503-01				
Works: Allen				
Type	Tonnes	EWC Code	Contractor	Licence Nr
Skips	41.62	20 03 01	AES	053/OY/39/02
Wheelie Bins	16.16	20 03 01	AES	053/OY/39/02
Polyethylene	299.18	02 01 04	Leinster Environmentals	WP 2004/30
Polyethylene	65.24	02 01 04	Eco Plastics	205/2005
Scrap Steel	114.61	17 04 07	AES	053/OY/39/02
Timber Pallets	1.58	15 01 03	AES	053/OY/39/02
Silt Pond Cleanings	427.75	01 01 02	Bord na Mona	IPPC P0503-01
Peat Screenings	2350.00	01 01 02	Bord na Mona	IPPC P0503-01
Totals	3316.13			

Note: Polyethylene and Scrap Steel are recycled. Skips go to an AES, Mixed Recycling Facility.

2.3.2 Hazardous Waste

Hazardous Waste Data 2010					
Licence: P0503-01					
Works: Allen					
Type	Tonnes	EWC Code	Contractor	Licence Nr	Destination
Waste Oil	10.32	13 02 05	Envia Ireland Ltd Portlaoise	184-1	Portlaoise
Oil Filters	0.38	16 01 07	Envia Ireland Ltd Portlaoise	184-1	Portlaoise
Oily Rags	0.05	15 02 02	Envia Ireland Ltd Portlaoise	184-1	Portlaoise
Waste Grease	0.20	13 08 99	Envia Ireland Ltd Portlaoise	184-1	Portlaoise
Lead Acid Batt	1.07	16 06 01	Envia Ireland Ltd Portlaoise	184-1	Portlaoise
Parts Wash	1.56	11 01 13	Safety Kleen, Tallaght, Dublin	99-1	Dublin
Total	13.59				

2.4 Energy and Water Consumption

2.4.1 Energy

The table below shows energy consumption for the year. Water is not included, as it is only used for offices, canteens and workshops on a domestic scale.

Energy Consumption 2010				
Licence: P0503-01				
Works: Allen				
Units	Diesel (Litres)	Petrol (Litres)	Electricity (Units)	Peat Briquettes (Tonnes)
Totals	1267979.1	0	1384266	20
MW Hours	12478.9	0	1384.266	100
Total MW Hours	13963.1			

Note: Bord na Mona have in the reporting period, established an Energy Management Team. The goal of the team is to reduce overall energy consumption by implementing an array of energy saving initiatives. Bord na Mona Mountdillon, P0504-01 has been selected as a location where the energy standard EN 16001 is to be implemented. Should this prove successful, the standard will be introduced at all Bord na Mona facilities.

2.5 Environmental Incidents and Complaints

2.5.1 Incidents.

Environmental Incidents 2010	
Licence: P0503-01	
Works: Allen	
	Number
Incidents	1
Requiring corrective action	1
Category	
Water	
Air	1
Procedural	
Miscellaneous	
Total	1

There was one environmental incident during the reporting period. This related to a bog fire at Garryhinch Bog. The Agency was informed at the time.

2.5.2 Complaints

Environmental Complaints 2010	
Licence:P0503-01	
Works: Allen	
	Number
Complaints	3
Requiring corrective action	3
Category	
Water	
Air	3
Procedural	
Miscellaneous	
Total	3

There were three complaints during the reporting period and they were all dust related. There were two complaints from the Blackriver area and one from the Derrybrennan area. In each case the Agency was informed.

3.0 Management of the Activity

3.1 Achievement of Objectives & Targets 2010

Project	Description & Status
Project 1: Reduction of fugitive dust emissions.	Training. Train all employees in environmental matters. Training will be by means of the screening of an environmental DVD, followed by a power point presentation. Status In total 82 employees received environmental training. Hydraulic Harrows. Hydraulic harrows will be deployed at dust sensitive locations during the 2010 production season. Status No new Hydraulic Harrows were deployed during the production season Headland Peat Collection. Continue with the collection of headland peat, particularly at dust sensitive locations. Status Headland peat was collected as part of the peat lifting process and included in general peat return figures.
Project 2: Waste Management	Waste Streamlining. Following the purchase by Bord na Mona of AES Ltd, meetings with that company's management will be ongoing to see how best Bord na Mona's needs can be catered for. Key account managers dedicated to Bord na Mona have been requested and are due to be in place in 2010. Status Ongoing The service included the co-ordination of all waste streams ensuring the correct waste stream was dealt with by the appropriate waste provider. The service also included the issuing of quarterly reports.
Project 3: Minimisation of Suspended Solids.	On Site Inspections. Train all employees in environmental matters. Training will be by means of the screening of an environmental DVD, followed by a power point presentation. Status In total 82 employees received environmental training.

Project 4: Effective spill leak management of mobile fuelling units.	Research and Development. Increased bund provisions where required, will be provided, in 2010. Status A new bunded lockup oil store was provided at Derrylea Bog. A double skinned fuel bauser and a barrel bund was provided at Garrymore Bog. In addition to this containment booms were purchased and are held in storage as backup to existing stocks.
Project 5: Collection storage and reuse of polyethylene.	Identify Recyclers. Continue with the recycling of polyethylene. The sourcing of more recycling contractors will be ongoing. Status In total 364.42 tonnes of polyethylene was sent for recycling in 2010.

3.2 Environmental Management Programme Proposal 2011

Project	Description & Status
Project 1: Reduction of fugitive dust emissions.	Training. Continue to train all employees in environmental matters. Training will be by means of the screening of an environmental DVD, followed by a power point presentation. The training programme will be revised in 2011. Hydraulic Harrows. Hydraulic harrows will continue to be deployed at dust sensitive locations. There is one new Hydraulic Harrow budgeted for in the five year plan. Headland Peat Collection. Continue with the collection of headland peat, particularly at dust sensitive locations.
Project 2: Waste Management	Waste Streamlining. Continue to use AES as a waste management provider. Using their expertise in identifying potential recyclers of waste streams generated.
Project 3: Minimisation of Suspended Solids.	Training. Continue to train all new employees in environmental matters. Training will be by means of the screening of an environmental DVD, followed by a power point presentation. The training programme will be revised in 2011.
Project 4: Effective spill leak management of mobile fuelling units.	Research and Development. Increased bund provisions where required, will be provided, in 2011.
Project 5: Collection storage and reuse of polyethylene.	Identify Recyclers. Continue with the recycling of polyethylene. The sourcing of more recycling contractors will be ongoing.
Project 6: Energy Management	Review of Energy Aspects As part of an energy management process, a review of energy aspects will take place identifying the significant energy users of the licensee.

3.3 Environmental Expenditure

Environmental Expenditure 2010	
Licence:P0503-01	
Works: Allen	
Description	Cost €
Capital Costs	26,719.00
Silt Control	182,842.00
Analytical & Consultancy Costs	11,289.00
EPA Fees	7,722.00
Bog Rehabilitation	84,528.00
Waste Management	46,616.00
Total	359,716.00

4.0 Licence Specific Reports

4.1 Surface Water Discharge Monitoring Location Programme Review

It is proposed to continue monitoring at the same locations in 2011 as were monitored in 2010. Should it be deemed necessary for any reason during the coming year additional monitoring will be initiated. Safe access to all monitoring locations will be maintained. In addition to this the design criteria set out in condition 6.10 of the licence is being continually assessed, with silt ponds falling short of the specifications being upgraded to meet the licence requirements.

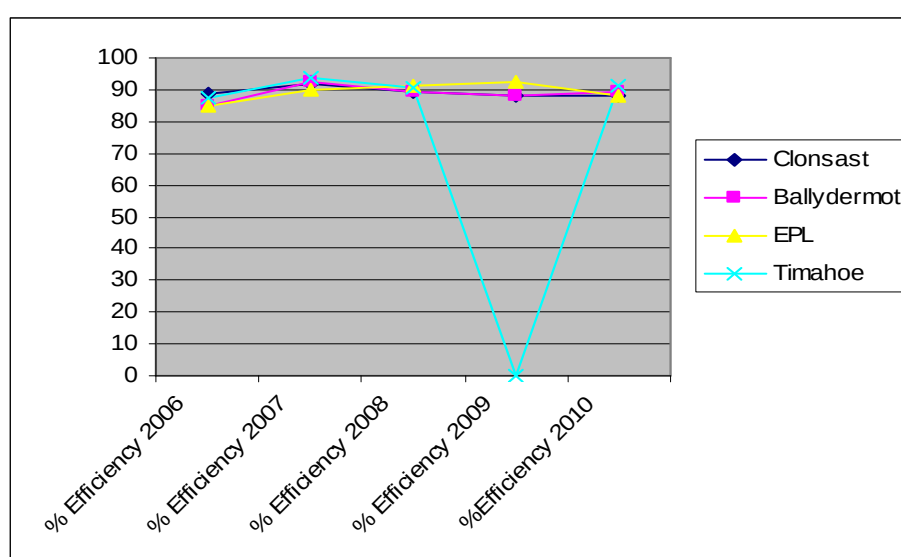
4.2 Bunding Programme

Bund Locations & Numbers Derrygreenagh Works					
IPPC Licence: P0503-01					
Location	Bund Number	Last Tested	Status Pass/Fail	Repair Date	Next Test Due
EPL Main Bund	503-37-05	Mar-09	Pass	N/A	Mar-11
Lullymore Bog Bund	503-37-06	Nov-09	Pass	N/A	Nov-11
Clonsast Heating Tank	503-37-07	Mar-09	Pass	N/A	Mar-11
Clonsast Main Bund	503-37-08	Mar-09	Pass	N/A	Mar-11
Ballyconn Main Bund	503-37-09	Mar-09	Pass	N/A	Mar-11
Ballydermot Main Bund	503-37-10	Feb-09	Pass	N/A	Feb-11
Ballydermot Heating Tank	503-37-11	Bund Decommissioned, doubled skin tank in situ.			
Timahoe Main Bund	503-37-12	Bund not in use tank not installed.			

As is evident from the table, no bunds in the licence area required testing during 2010. The next due date for testing is February 2011 at Ballydermot Bund.

4.3 Boiler Combustion Efficiency

Boiler Efficiency 2010					
Licence: P0503-01					
Works: Allen					
Boiler Location	% Efficiency 2006	% Efficiency 2007	% Efficiency 2008	% Efficiency 2009	%Efficiency 2010
Clonsast	88.88	92	89.2	88.1	88.2
Ballydermot	85.04	92.5	89.4	87.9	89.5
EPL	85.01	90	91.3	92.4	87.8
Timahoe	87.5	93.9	90.4	0	91



Note: Due to an administration error the boiler at Timahoe was not tested during the 2009 reporting period.

4.4 Resource consumption summary

Resource Consumption 2010			
Licence: P0503-01			
Works: Allen			
Product	Tonnes Produced	Tonnes Sold	Customer
Milled Peat	994,806	704,528	ESB
Moss	57,948	74,844	Horticulture
Turf	4958	4958	Private
Turf	10,000	2,145	Fuels
Totals	1,067,712	786,475	N/A

Proposed Production 2011	
Licence: P0503-01	
Works: Allen	
Product	Proposed Target
Milled Peat	736,122
Moss	55,700
Turf Private	4,958
Turf Fuels	0
Totals	796,780

4.5 De-Silting Report

Silt pond cleaning went well during the reporting period with all ponds being cleaned twice. The inspections would also have dictated which ponds required additional cleanings.

Silt pond cleaning details are contained in appendix 5.

4.6 Bog Development and Operational Programme.

There was no bog development work carried out in 2010.

4.7 Bog Rehabilitation Report

2010: Sites surveyed in the Allen Group include Killinagh, Derrybrennan and Lullybeg, and Timahoe North and South. Habitat maps and reports have been outlined for all sites and draft rehabilitation plans will be developed in 2011 for all bog areas surveyed to date. Killinagh has been planted with conifers as part of a BNM/Coillte joint project funded by the Forest Service. Lullybeg continues to be monitored and some enhancement work was carried out at the Marsh Fritillary site to improve the cover of vegetation suitable for the butterfly life cycle phases. Consultation with local community groups, NPWS and Offaly and Kildare Heritage Forums is ongoing.

4.8 Archaeological Report

There was no archaeology found or excavated in the licence area in 2010.

5.0 Summary

The Allen Group of Bogs endeavour to comply with all environmental issues under our licence. With this regard there was just one exceedence of the emission limit value in relation to suspended solids at our composite sampler. As always we will endeavour to keep our silt pools cleaned as often as required. This year all silt pools were cleaned at least twice.

There were three dust complaints and one dust non compliance during the year. We sampled five times for dust again in 2010, twice more than our licence requires, helping to minimise dust emissions. A total of 82 staff were trained this year in Environmental Awareness, this will continue in 2011, with the current training programme being revised.

Waste streamlining is a project we are particularly interested in pursuing and hope to reduce wastes in the future and be more efficient in dealing with all aspects of waste management.

Bord na Mona are project partners of the South Eastern River Basin District Management, as set up under the Water Framework Directive.

Bord na Mona are also involved in catchment management on the River Barrow.

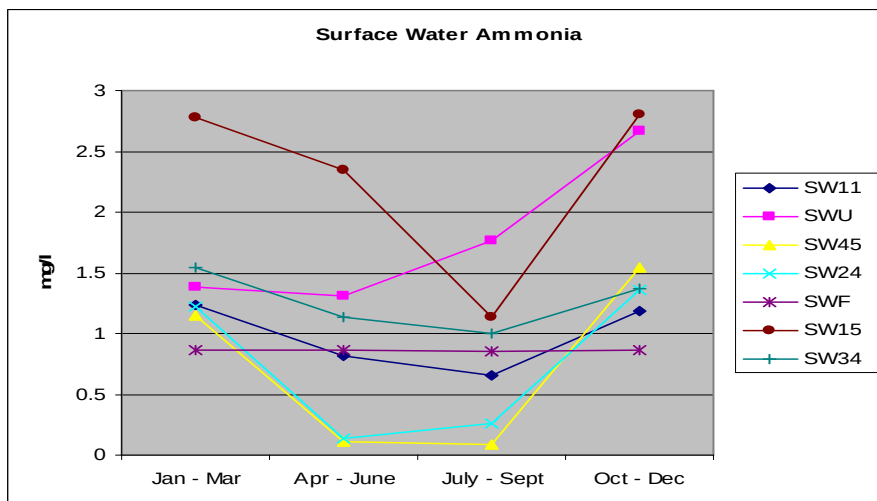
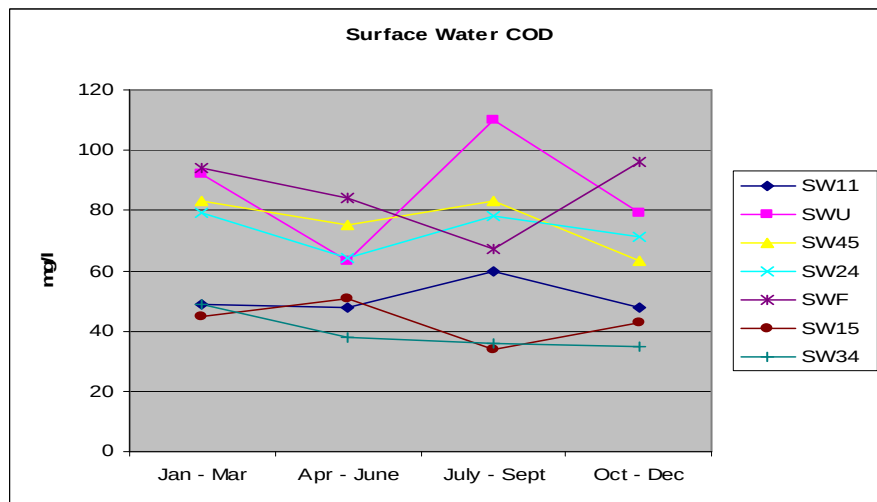
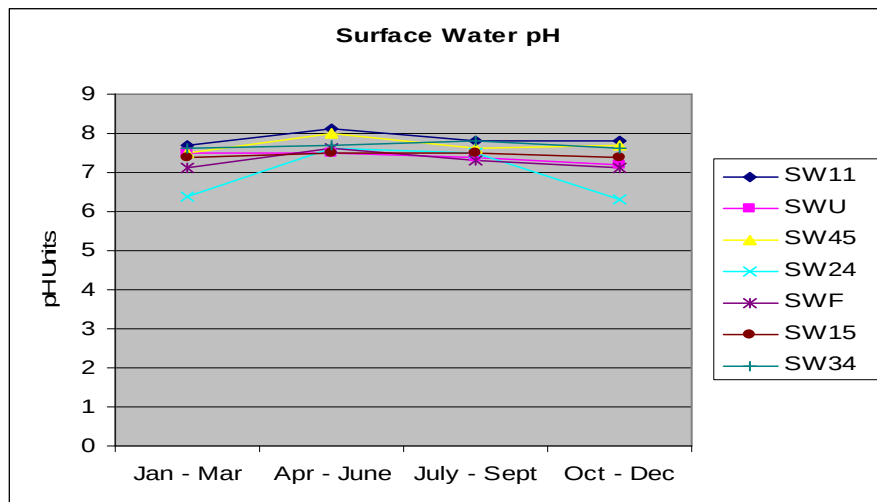
Bord na Mona Energy Ltd would like to take this opportunity to advise the Environmental Protection Agency of its continued commitment to improving its environmental performance by adopting cleaner production methods and improving its environmental protection measures.

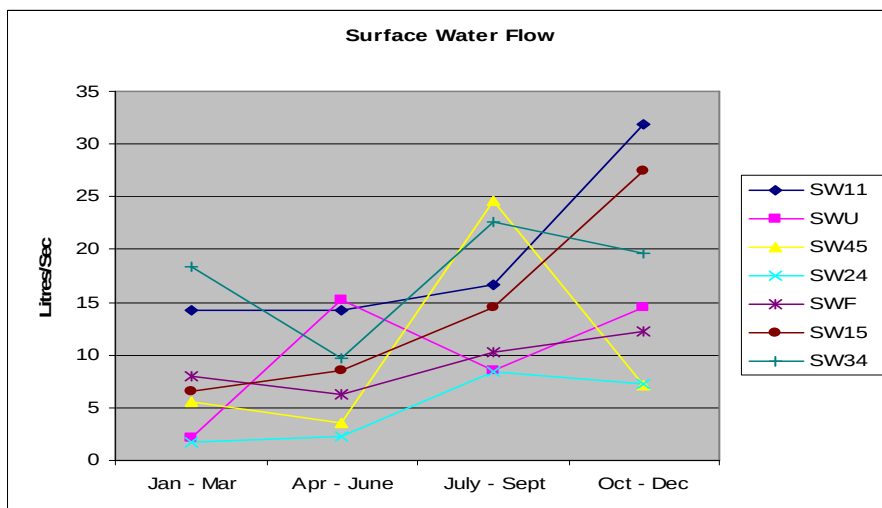
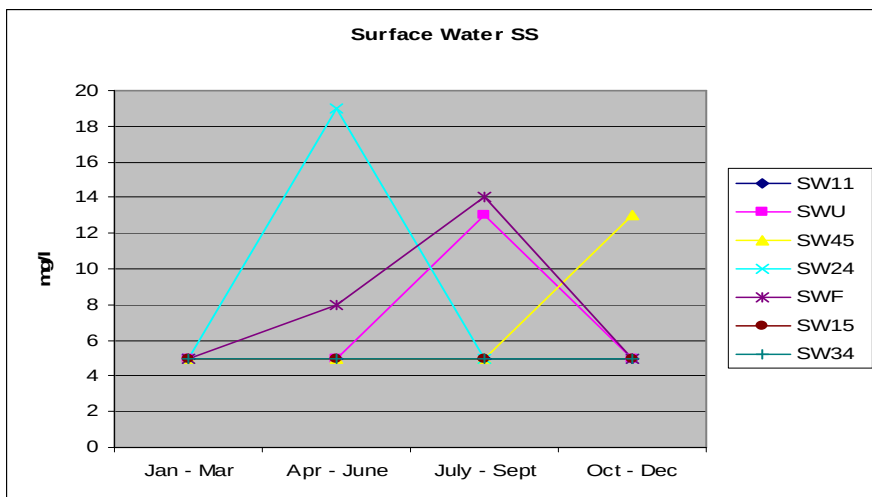
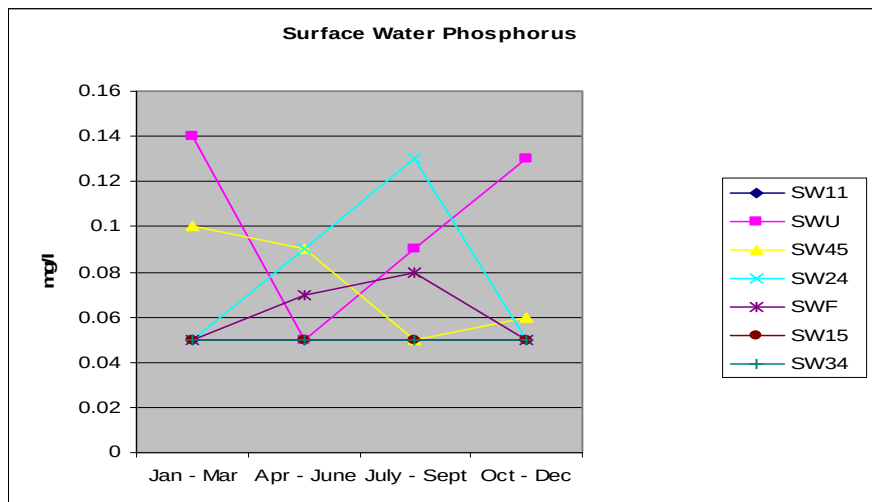
APPENDIX 1

Surface Water Discharge Monitoring Results Bogs

BNM Group:	Allen			
IPC Licence No.	503			
Year	2010			
pH (units)				
	Jan - Mar	Apr - June	July - Sept	Oct - Dec
SW11	7.7	8.1	7.8	7.8
SWU	7.5	7.5	7.4	7.2
SW45	7.5	8	7.6	7.7
SW24	6.4	7.6	7.5	6.3
SWF	7.1	7.6	7.3	7.1
SW15	7.4	7.5	7.5	7.4
SW34	7.6	7.7	7.8	7.6
COD (mg/l)				
	Jan - Mar	Apr - June	July - Sept	Oct - Dec
SW11	49	48	60	48
SWU	92	63	110	79
SW45	83	75	83	63
SW24	79	64	78	71
SWF	94	84	67	96
SW15	45	51	34	43
SW34	49	38	36	35
Ammonia as N (mg/l)				
	Jan - Mar	Apr - June	July - Sept	Oct - Dec
SW11	1.24	0.81	0.66	1.18
SWU	1.38	1.31	1.77	2.67
SW45	1.15	0.11	0.09	1.54
SW24	1.22	0.13	0.26	1.36
SWF	0.87	0.86	0.85	0.87
SW15	2.78	2.34	1.13	2.8
SW34	1.54	1.14	1	1.37
Total Phosphorus (mg/l)				
	Jan - Mar	Apr - June	July - Sept	Oct - Dec
SW11	0.05	0.05	0.05	0.05
SWU	0.14	0.05	0.09	0.13
SW45	0.1	0.09	0.05	0.06
SW24	0.05	0.09	0.13	0.05
SWF	0.05	0.07	0.08	0.05
SW15	0.05	0.05	0.05	0.05
SW34	0.05	0.05	0.05	0.05

Suspended Solids (mg/l)				
	Jan - Mar	Apr - June	July - Sept	Oct - Dec
SW11	5	5	5	5
SWU	5	5	13	5
SW45	5	5	5	13
SW24	5	19	5	5
SWF	5	8	14	5
SW15	5	5	5	5
SW34	5	5	5	5
Total Solids (mg/l)				
	Jan - Mar	Apr - June	July - Sept	Oct - Dec
SW11	356	376	276	327
SWU	228	371	242	254
SW45	148	372	206	218
SW24	94	344	178	122
SWF	372	368	408	400
SW15	260	346	312	286
SW34	374	380	340	354
Colour (pt Co Units)				
	Jan - Mar	Apr - June	July - Sept	Oct - Dec
SW11	98	89	147	95
SWU	244	130	323	247
SW45	277	155	236	174
SW24	277	127	266	250
SWF	289	131	109	276
SW15	104	88	106	89
SW34	90	60	97	79
Flow (l/s)				
	Jan - Mar	Apr - June	July - Sept	Oct - Dec
SW11	14.2	14.2	16.6	31.8
SWU	2.2	15.2	8.5	14.5
SW45	5.6	3.5	24.6	7.1
SW24	1.7	2.3	8.4	7.2
SWF	8	6.2	10.3	12.3
SW15	6.6	8.6	14.5	27.4
SW34	18.3	9.7	22.6	19.6



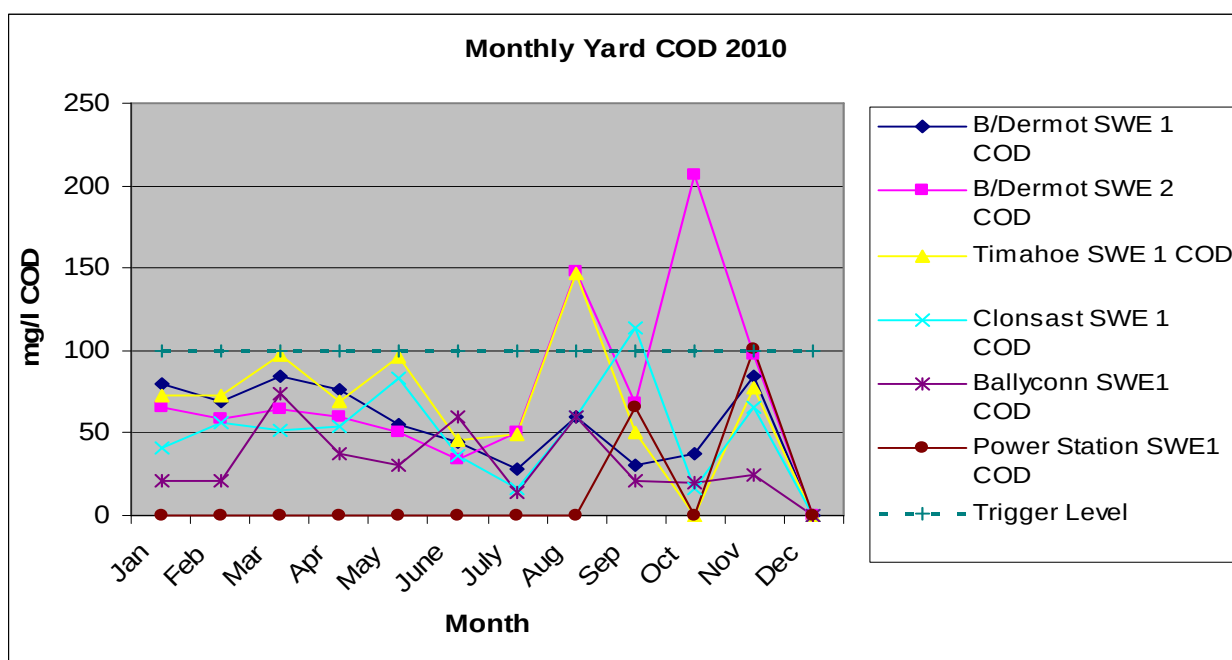


APPENDIX 2

Surface Water Discharge Monitoring Results Yards

Yard Discharge Results 2010						
Licence: P0503-01						
Works: Allen						
Month	B/Dermot SWE 1 COD	B/Dermot SWE 2 COD	Timahoe SWE 1 COD	Clonsast SWE 1 COD	Ballyconn SWE1 COD	Power Station SWE1 COD
Jan	80	66	73	41	21	0
Feb	69	59	73	56	21	0
Mar	84	64	98	52	74	0
Apr	76	60	69	54	37	0
May	55	50	96	83	31	0
June	45	34	46	36	60	0
July	28	50	49	17	14	0
Aug	60	148	147	60	60	0
Sep	30	68	51	114	21	66
Oct	38	207	0	17	20	0
Nov	84	98	78	66	25	101
Dec	0	0	0	0	0	0

0: No Flow On Day Of Sampling



APPENDIX 3

Surface Water Discharge Monitoring Results Composite

Month				Parameters							Daily Totals		
January	pH	COD	Ammonia as	Total	Suspended	Total	Colour	Flow	COD	Ammonia as	Total	Suspended	Total
2010		mg/l	N mg/l	Phosphorus	Solids	Solids	Pt Co	Daily	Kg/Day	Kg/Day	Phosphorus	Solids	Solids
SW33				mg/l	mg/l	mg/l	units	Total (litres)			Kg/Day	Kg/Day	Kg/Day
1					0	0		10936510				0.00	0.00
2					0	0		10975390				0.00	0.00
3					0	0		16510180				0.00	0.00
4					0	0		10590910				0.00	0.00
5					0	0		5101229				0.00	0.00
6	7.9	56	2.01	0.05	7	272	59	4217443	236.18	8.48	0.21	29.52	1147.14
7					0	0		6351178				0.00	0.00
8					0	0		739221				0.00	0.00
9					0	0		1234742				0.00	0.00
10					0	0		2208730				0.00	0.00
11					0	0		3832013				0.00	0.00
12					0	0		6316013				0.00	0.00
13	7.4	48	1.16	0.06	5	176	105	10375780	498.04	12.04	0.62	51.88	1826.14
14					0	0		17961700				0.00	0.00
15					9	224		13317700				119.86	2983.16
16					5	114		18601060				93.01	2120.52
17					5	90		15089760				75.45	1358.08
18					5	252		12892610				64.46	3248.94
19					5	292		17061410				85.31	4981.93
20	7.4	47	0.7	0.05	5	342	146	15741220	739.84	11.02	0.79	78.71	5383.50
21					5	186		14602460				73.01	2716.06
22					5	182		13681440				68.41	2490.02
23					5	214		15615070				78.08	3341.62
24					5	192		12734500				63.67	2445.02
25					5	236		10364540				51.82	2446.03
26					5	224		10666940				53.33	2389.39
27	7.9	56	1.92	0.05	10	232	90	10532160	589.80	20.22	0.53	105.32	2443.46
28					5	300		9300096				46.50	2790.03
29					5	300		7175520				35.88	2152.66
30					5	256		9168768				45.84	2347.20
31					12	306		7988371				95.86	2444.44

0: Insufficient amount of sample due to low flow or technical fault.

Month				Parameters							Daily Totals		
Feb	pH	COD	Ammonia as	Total	Suspended	Total	Colour	Flow	COD	Ammonia as	Total	Suspended	Total
2010		mg/l	N mg/l	Phosphorus	Solids	Solids	Pt Co	Daily	Kg/Day	Kg/Day	Phosphorus	Solids	Solids
SW33				mg/l	mg/l	mg/l	units	Total (litres)			Kg/Day	Kg/Day	Kg/Day
1					5	320		7894973				39.47	2526.39
2					5	318		8366976				41.83	2660.70
3	7.7	53	1.58	0.05	5	238	161	9126432	483.70	14.42	0.46	45.63	2172.09
4					8	222		14303520				114.43	3175.38
5					8	242		15085440				120.68	3650.68
6					5	176		13709090				68.55	2412.80
7					5	50		11778910				58.89	588.95
8					5	233		12947900				64.74	3016.86
9					7	204		10298020				72.09	2100.80
10	7.8	45	1.8	0.05	5	288	92	9459936	425.70	17.03	0.47	47.30	2724.46
11					5	240		8507376				42.54	2041.77
12					5	250		8128426				40.64	2032.11
13					5	224		8864640				44.32	1985.68
14					5	222		8381750				41.91	1860.75
15					5	218		8245844				41.23	1797.59
16					5	220		6525792				32.63	1435.67
17	7.9	33	1.8	0.05	5	226	67	8718624	287.71	15.69	0.44	43.59	1970.41
18					6	312		7479994				44.88	2333.76
19					7	280		5691686				39.84	1593.67
20					7	304		10213340				71.49	3104.86
21					6	302		10015490				60.09	3024.68
22					5	280		10017220				50.09	2804.82
23					7	294		8448537				59.14	2483.87
24	8	35	2	0.12	14	290	68	9139392	319.88	18.28	1.10	127.95	2650.42
25					13	258		15219360				197.85	3926.59
26					10	246		14281920				142.82	3513.35
27					7	252		14371780				100.60	3621.69
28					6	284		12618720				75.71	3583.72

Month				Parameters							Daily Totals		
March	pH	COD	Ammonia as	Total	Suspended	Total	Colour	Flow	COD	Ammonia as	Total	Suspended	Total
2010		mg/l	N mg/l	Phosphorus	Solids	Solids	Pt Co	Daily	Kg/Day	Kg/Day	Phosphorus	Solids	Solids
SW33				mg/l	mg/l	mg/l	units	Total (litres)			Kg/Day	Kg/Day	Kg/Day
1					5	248		10844930				54.22	2689.54
2					5	246		9099648				45.50	2238.51
3	7.9	45	1.93	0.05	5	242	81	8319024	374.36	16.06	0.42	41.60	2013.20
4					5	322		7407245				37.04	2385.13
5					5	344		9474624				47.37	3259.27
6					5	336		9165312				45.83	3079.54
7					7	332		4707850				32.95	1563.01
8					17	343		4748803				80.73	1628.84
9					16	340		5543165				88.69	1884.68
10	7.8	20	2.04	0.05	32	342	44	6582902	131.66	13.43	0.33	210.65	2251.35
11					6	314		4105210				24.63	1289.04
12					5	320		7431523				37.16	2378.09
13					7	264		6969370				48.79	1839.91
14					16	312		5697043				91.15	1777.48
15					63	354		5582736				351.71	1976.29
16					6	248		4656874				27.94	1154.90
17	8.2	24	2.35	0.11	15	242	39	8069241	193.66	18.96	0.89	121.04	1952.76
18					6	364		8585654				51.51	3125.18
19					5	362		8949312				44.75	3239.65
20					5	366		7641389				38.21	2796.75
21					5	344		10416380				52.08	3583.23
22					5	350		9356256				46.78	3274.69
23					5	360		8668512				43.34	3120.66
24	8	43	1.96	0.06	6	357	66	6541690	281.29	12.82	0.39	39.25	2335.38
25					5	110		9893664				49.47	1088.30
26					5	168		10843200				54.22	1821.66
27					8	50		17625600				141.00	881.28
28					5	72		13830910				69.15	995.83
29					5	246		10812100				54.06	2659.78
30					11	122		15680740				172.49	1913.05
31	7.7	60	0.71	0.05	13	137	187	19828850	1189.73	14.08	0.99	257.78	2716.55

Month				Parameters							Daily Totals		
April	pH	COD	Ammonia as	Total	Suspended	Total	Colour	Flow	COD	Ammonia as	Total	Suspended	Total
2009==10		mg/l	N mg/l	Phosphorus	Solids	Solids	Pt Co	Daily	Kg/Day	Kg/Day	Phosphorus	Solids	Solids
SW33				mg/l	mg/l	mg/l	units	Total (litres)			Kg/Day	Kg/Day	Kg/Day
1					5	110		12051070				60.26	1325.62
2					5	168		12319780				61.60	2069.72
3					8	50		17907260				143.26	895.36
4					5	72		20389540				101.95	1468.05
5					5	246		15390430				76.95	3786.05
6					11	122		12246340				134.71	1494.05
7	7.7	60	0.71	0.05	13	137	187	13689220	821.35	9.72	0.68	177.96	1875.42
8					7	244		9639648				67.48	2352.07
9					7	260		15366240				107.56	3995.22
10					8	300		15185660				121.49	4555.70
11					5	336		10835420				54.18	3640.70
12					5	328		7991049				39.96	2621.06
13	8.1	30	1.76	0.05	5	292	66	6265641	187.97	11.03	0.31	31.33	1829.57
14					5	324		5743440				28.72	1860.87
15					5	326		1553645				7.77	506.49
16					5	336		3836765				19.18	1289.15
17					5	350		7660742				38.30	2681.26
18					5	326		5085331				25.43	1657.82
19					6	324		5581872				33.49	1808.53
20					5	334		5090256				25.45	1700.15
21	8.1	25	1.48	0.05	6	326	35	3939408	98.49	5.83	0.20	23.64	1284.25
22					5	344		1145059				5.73	393.90
23					6	364		1144541				6.87	416.61
24					5	354		3074112				15.37	1088.24
25					5	352		1798848				8.99	633.19
26					5	350		4640112				23.20	1624.04
27					5	348		2657405				13.29	924.78
28	8.1	20	0.69	0.05	6	340	37	4096397	81.93	2.83	0.20	24.58	1392.77
29					5	338		7032701				35.16	2377.05
30					6	340		2598739				15.59	883.57

Month				Parameters							Daily Totals		
May	pH	COD	Ammonia as	Total	Suspended	Total	Colour	Flow	COD	Ammonia as	Total	Suspended	Total
2010		mg/l	N mg/l	Phosphorus	Solids	Solids	Pt Co	Daily	Kg/Day	Kg/Day	Phosphorus	Solids	Solids
SW33				mg/l	mg/l	mg/l	units	Total (litres)			Kg/Day	Kg/Day	Kg/Day
1					5	328		6273245				31.37	2057.62
2					5	344		6984490				34.92	2402.66
3					6	332		4803062				28.82	1594.62
4					7	340		3522010				24.65	1197.48
5	8.2	23	1.2	0.05	7	335	41	833527	19.17	1.00	0.04	5.83	279.23
6					5	334		2554070				12.77	853.06
7					5	332		3112301				15.56	1033.28
8					5	322		2318198				11.59	746.46
9					5	334		3490646				17.45	1165.88
10					5	344		2153347				10.77	740.75
11					5	280		2140646				10.70	599.38
12	8.1	30	0.91	0.05	5	266	53	2516486	75.49	2.29	0.13	12.58	669.39
13					5	346		2408486				12.04	833.34
14					5	336		3349987				16.75	1125.60
15					5	340		2459203				12.30	836.13
16					9	346		2631917				23.69	910.64
17					9	344		2134080				19.21	734.12
18					5	350		2170973				10.85	759.84
19	8.2	31	0.75	0.05	5	348	42	3846874	119.25	2.89	0.19	19.23	1338.71
20					6	346		2794694				16.77	966.96
21					5	318		4272135				21.36	1358.54
22					5	336		3390163				16.95	1139.09
23					5	334		2839968				14.20	948.55
24					5	351		3072730				15.36	1078.53
25					5	354		3228854				16.14	1143.01
26	8	79	0.45	0.06	6	364	60	3031949	239.52	1.36	0.18	18.19	1103.63
27					6	344		894931				5.37	307.86
28					0	0		1642637				0.00	0.00
29					9	347		2239056				20.15	776.95
30					9	320		1408838				12.68	450.83
31					5	342		1735085				8.68	593.40

0: Insufficient amount of sample due to low flow or technical fault.

Month				Parameters							Daily Totals		
June	pH	COD	Ammonia as	Total	Suspended	Total	Colour	Flow	COD	Ammonia as	Total	Suspended	Total
2010		mg/l	N mg/l	Phosphorus	Solids	Solids	Pt Co	Daily	Kg/Day	Kg/Day	Phosphorus	Solids	Solids
SW33				mg/l	mg/l	mg/l	units	Total (litres)			Kg/Day	Kg/Day	Kg/Day
1					10	280		2496960				24.97	699.15
2	7.8	86	1.74	0.06	30	310	118	13824860	1188.94	24.06	0.83	414.75	4285.71
3					13	318		9216288				119.81	2930.78
4					7	330		2906323				20.34	959.09
5					8	340		2167344				17.34	736.90
6					10	360		1991952				19.92	717.10
7					0	0		3066509				0.00	0.00
8					0	0		2633126				0.00	0.00
9	7.9	46	0.85	0.05	12	332	83	-707115	-32.53	-0.60	-0.04	-8.49	-234.76
10					5	336		642064				3.21	215.73
11					5	342		4929552				24.65	1685.91
12					5	344		5512492				27.56	1896.30
13					5	348		2761862				13.81	961.13
14					5	358		3415997				17.08	1222.93
15					5	350		3955824				19.78	1384.54
16	8.1	35	0.36	0.05	5	290	54	2385331	83.49	0.86	0.12	11.93	691.75
17					8	356		1628035				13.02	579.58
18					8	356		2212358				17.70	787.60
19					7	352		2261952				15.83	796.21
20					5	348		1645315				8.23	572.57
21					5	369		1805155				9.03	666.10
22	8.2	25	0.17	0.05	24	356	255	2302646	57.57	0.39	0.12	55.26	819.74
23					15	339		1973376				29.60	668.97
24					15	340		2269210				34.04	771.53
25					7	342		2518560				17.63	861.35
26					6	346		3285101				19.71	1136.64
27					6	340		2639779				15.84	897.52
28					5	344		2611786				13.06	898.45
29					6	364		3591994				21.55	1307.49
30	8.3	42	0.26	0.05	6	366	45	3323140	139.57	0.86	0.17	19.94	1216.27

0: Insufficient amount of sample due to low flow or technical fault.

Month				Parameters							Daily Totals		
July	pH	COD	Ammonia as	Total	Suspended	Total	Colour	Flow	COD	Ammonia as	Total	Suspended	Total
2010		mg/l	N mg/l	Phosphorus	Solids	Solids	Pt Co	Daily	Kg/Day	Kg/Day	Phosphorus	Solids	Solids
SW33				mg/l	mg/l	mg/l	units	Total (litres)			Kg/Day	Kg/Day	Kg/Day
1					8	320		4064256				32.51	1300.56
2					5	316		3959453				19.80	1251.19
3					5	348		2988403				14.94	1039.96
4					22	374		2609366				57.41	975.90
5					5	354		3291408				16.46	1165.16
6					5	386		3031517				15.16	1170.17
7	8.3	19	0.57	0.05	5	390	43	3043440	57.83	1.73	0.15	15.22	1186.94
8					6	360		3089405				18.54	1112.19
9					5	344		3295210				16.48	1133.55
10					5	354		3509050				17.55	1242.20
11					6	384		6240759				37.44	2396.45
12					6	366		8159443				48.96	2986.36
13					0	0		2172614				0.00	0.00
14	7.9	50	1.7	0.05	6	358	84	957053	47.85	1.63	0.05	5.74	342.62
15					5	394		-527282				-2.64	-207.75
16					5	332		1406074				7.03	466.82
17					5	342		6580483				32.90	2250.53
18					6	318		326402				1.96	103.80
19					5	332		2759357				13.80	916.11
20					5	336		358301				1.79	120.39
21	7.3	72	0.79	0.05	15	330	150	2199139	158.34	1.74	0.11	32.99	725.72
22					8	304		5632589				45.06	1712.31
23					5	314		3968525				19.84	1246.12
24					5	360		5368637				26.84	1932.71
25					6	351		726624				4.36	255.05
26					5	370		935194				4.68	346.02
27					5	378		1048637				5.24	396.38
28	7.8	47	0.13	0.05	5	388	86	1499645	70.48	0.19	0.07	7.50	581.86
29					5	372		1983139				9.92	737.73
30					5	358		800220				4.00	286.48
31					5	340		1333757				6.67	453.48

0: Insufficient amount of sample due to low flow or technical fault.

Month				Parameters							Daily Totals		
August	pH	COD	Ammonia as	Total	Suspended	Total	Colour	Flow	COD	Ammonia as	Total	Suspended	Total
2010		mg/l	N mg/l	Phosphorus	Solids	Solids	Pt Co	Daily	Kg/Day	Kg/Day	Phosphorus	Solids	Solids
SW33				mg/l	mg/l	mg/l	units	Total (litres)			Kg/Day	Kg/Day	Kg/Day
1					5	336		1398643				6.99	469.94
2					5	354		972173				4.86	344.15
3					5	352		1299197				6.50	457.32
4	7.9	48	1.75	0.05	13	298	108	1926720	92.48	3.37	0.10	25.05	574.16
5					5	384		3092515				15.46	1187.53
6					6	380		105892				0.64	40.24
7					5	355		2220739				11.10	788.36
8					5	402		2176675				10.88	875.02
9					5	402		1948666				9.74	783.36
10					5	400		2093126				10.47	837.25
11	8.3	35	0.47	0.05	25	408	52	1672618	58.54	0.79	0.08	41.82	682.43
12					6	326		2982960				17.90	972.44
13					6	318		3306096				19.84	1051.34
14					6	338		3470429				20.82	1173.01
15					5	340		4099421				20.50	1393.80
16					5	356		4112813				20.56	1464.16
17					5	348		4830106				24.15	1680.88
18	8.1	31	0.69	0.05	5	348	46	3072125	95.24	2.12	0.15	15.36	1069.10
19					5	328		2637014				13.19	864.94
20					5	332		2095027				10.48	695.55
21					45	328		2518646				113.34	826.12
22					5	350		1883002				9.42	659.05
23					5	322		3100810				15.50	998.46
24					5	300		2138314				10.69	641.49
25	7.9	39	0.86	0.06	5	318	49	1428451	55.71	1.23	0.09	7.14	454.25
26					5	329		1015114				5.08	333.97
27					5	296		1237162				6.19	366.20
28					5	290		1140134				5.70	330.64
29					5	316		2327443				11.64	735.47
30					5	370		3254083				16.27	1204.01
31					5	360		4369248				21.85	1572.93

Month				Parameters							Daily Totals		
Sept	pH	COD	Ammonia as	Total	Suspended	Total	Colour	Flow	COD	Ammonia as	Total	Suspended	Total
2010		mg/l	N mg/l	Phosphorus	Solids	Solids	Pt Co	Daily	Kg/Day	Kg/Day	Phosphorus	Solids	Solids
SW33				mg/l	mg/l	mg/l	units	Total (litres)			Kg/Day	Kg/Day	Kg/Day
1	8.1	37	0.37	0.05	5	358	36	4775933	176.71	1.77	0.24	23.88	1709.78
2					5	354		4357066				21.79	1542.40
3					12	358		4493923				53.93	1608.82
4					5	346		4701888				23.51	1626.85
5					5	350		3742243				18.71	1309.79
6					5	364		2597962				12.99	945.66
7					8	350		8551613				68.41	2993.06
8	7.5	49	1.68	0.05	11	366	139	4144608	203.09	6.96	0.21	45.59	1516.93
9					5	360		372410				1.86	134.07
10					5	344		2706480				13.53	931.03
11					6	334		5221670				31.33	1744.04
12					0	0		5032973				0.00	0.00
13					5	352		2456957				12.28	864.85
14					5	320		2490307				12.45	796.90
15	7.7	55	1.71	0.05	8	290	202	2754950	151.52	4.71	0.14	22.04	798.94
16					5	360		1343434				6.72	483.64
17					5	372		3248294				16.24	1208.37
18					9	324		2267568				20.41	734.69
19					8	316		2512166				20.10	793.84
20					9	314		-241307				-2.17	-75.77
21					5	348		2623363				13.12	912.93
22	7.5	46	0.94	0.05	8	304	129	2746224	126.33	2.58	0.14	21.97	834.85
23					5	348		6580483				32.90	2290.01
24					5	341		1573949				7.87	536.72
25					5	356		1499904				7.50	533.97
26					5	372		1442189				7.21	536.49
27					5	362		1217981				6.09	440.91
28					5	346		1127347				5.64	390.06
29	7.8	26	1.12	0.05	5	274	70	1594944	41.47	1.79	0.08	7.97	437.01
30					5	367		1381095				6.91	506.86

0: Insufficient amount of sample due to low flow or technical fault.

Month				Parameters							Daily Totals		
Oct	pH	COD	Ammonia as	Total	Suspended	Total	Colour	Flow	COD	Ammonia as	Total	Suspended	Total
2010		mg/l	N mg/l	Phosphorus	Solids	Solids	Pt Co	Daily	Kg/Day	Kg/Day	Phosphorus	Solids	Solids
SW33				mg/l	mg/l	mg/l	units	Total (litres)			Kg/Day	Kg/Day	Kg/Day
1					5	354		1347408				6.74	476.98
2					5	334		1413936				7.07	472.25
3					5	346		685048				3.43	237.03
4					5	322		19284				0.10	6.21
5					5	332		2175898				10.88	722.40
6	8.2	26	0.82	0.05	5	344	63	1433376	37.27	1.18	0.07	7.17	493.08
7					5	366		989798				4.95	362.27
8					5	364		1459555				7.30	531.28
9					5	370		876528				4.38	324.32
10					5	368		3004906				15.02	1105.81
11					5	368		378302				1.89	139.22
12					5	372		980122				4.90	364.61
13	7.9	41	0.7	0.05	5	372	46	1008979	41.37	0.71	0.05	5.04	375.34
14					5	390		1216080				6.08	474.27
15					5	392		1581638				7.91	620.00
16					5	400		1601683				8.01	640.67
17					5	388		945994				4.73	367.05
18					5	396		1470874				7.35	582.47
19					5	396		1418861				7.09	561.87
20	8.1	37	0.81	0.05	5	396	37	1301011	48.14	1.05	0.07	6.51	515.20
21					6	344		199420				1.20	68.60
22					5	346		1408752				7.04	487.43
23					5	349		1415318				7.08	493.95
24					5	354		1048982				5.24	371.34
25					5	354		952560				4.76	337.21
26					5	354		902189				4.51	319.37
27	7.9	42	1.39	0.05	5	344	81	2609021	109.58	3.63	0.13	13.05	897.50
28					48	326		7078925				339.79	2307.73
29					31	324		3221856				99.88	1043.88
30					0	0		5725210				0.00	0.00
31					20	288		-1135296				-22.71	-326.97

0: Insufficient amount of sample due to low flow or technical fault.

Month				Parameters							Daily Totals		
Nov	pH	COD	Ammonia as	Total	Suspended	Total	Colour	Flow	COD	Ammonia as	Total	Suspended	Total
2010		mg/l	N mg/l	Phosphorus	Solids	Solids	Pt Co	Daily	Kg/Day	Kg/Day	Phosphorus	Solids	Solids
SW33				mg/l	mg/l	mg/l	units	Total (litres)			Kg/Day	Kg/Day	Kg/Day
1					0	0		1381709				0.00	0.00
2					17	302		1654819				28.13	499.76
3	7.5	75	1.58	0.05	16	320	142	1129075	84.68	1.78	0.06	18.07	361.30
4					0	0		2685485				0.00	0.00
5					5	200		1725322				8.63	345.06
6					5	240		-523221				-2.62	-125.57
7					5	234		-459458				-2.30	-107.51
8					0	0		12606				0.00	0.00
9					0	0		7894195				0.00	0.00
10	7.6	71	1.48	0.05	11	184	178	7908451	561.50	11.70	0.40	86.99	1455.15
11					6	216		7963834				47.78	1720.19
12					7	224		7380288				51.66	1653.18
13					0	0		6593962				0.00	0.00
14					0	0		7751635				0.00	0.00
15					0	0		7801747				0.00	0.00
16					5	225		7814189				39.07	1758.19
17	7.5	62	1.5	0.05	7	244	125	7797428	483.44	11.70	0.39	54.58	1902.57
18					0	0		7797428				0.00	0.00
19					0	0		7797428				0.00	0.00
20					0	0		7797428				0.00	0.00
21					0	0		7797428				0.00	0.00
22					0	0		7797428				0.00	0.00
23					0	0		7797428				0.00	0.00
24	7.8	37	2	0.05	5	306	67	7797428	288.50	15.59	0.39	38.99	2386.01
25					0	0		7797428				0.00	0.00
26					0	0		7797428				0.00	0.00
27					0	0		7797428				0.00	0.00
28					0	0		7797428				0.00	0.00
29					0	0		7797428				0.00	0.00
30					0	0		7797428				0.00	0.00

0: Insufficient amount of sample due to low flow or technical fault.

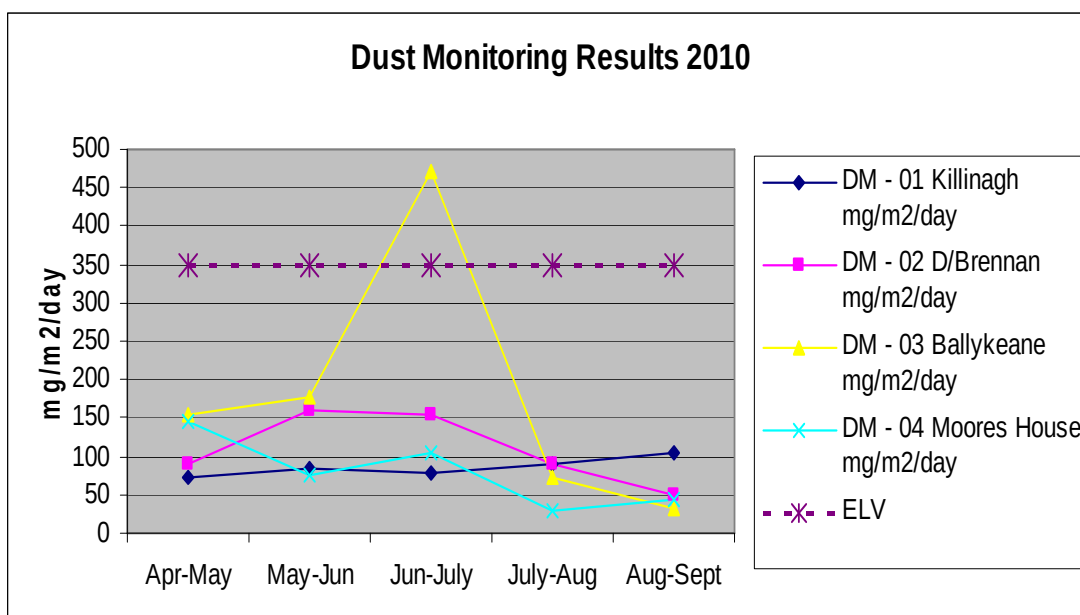
Month				Parameters							Daily Totals		
Dec	pH	COD	Ammonia as	Total	Suspended	Total	Colour	Flow	COD	Ammonia as	Total	Suspended	Total
2010		mg/l	N mg/l	Phosphorus	Solids	Solids	Pt Co	Daily	Kg/Day	Kg/Day	Phosphorus	Solids	Solids
SW33				mg/l	mg/l	mg/l	units	Total (litres)			Kg/Day	Kg/Day	Kg/Day
1	7.9	26	2.24	0.05	5	356	55	7797428	202.73	17.47	0.39	38.99	2775.88
2					0	0		7797428				0.00	0.00
3					0	0		7797428				0.00	0.00
4					0	0		7797428				0.00	0.00
5					0	0		7797428				0.00	0.00
6					0	0		7797428				0.00	0.00
7					0	0		7797428				0.00	0.00
8					0	0		7797428				0.00	0.00
9	7.6	34	2.24	0.05	5	339	46	7797428	265.11	17.47	0.39	38.99	2643.33
10					0	0		7797428				0.00	0.00
11					0	0		7797428				0.00	0.00
12					0	0		7797428				0.00	0.00
13					0	0		7797428				0.00	0.00
14					0	0		7797428				0.00	0.00
15	7.5	33	2.06	0.05	5	454	66	7797428	257.32	16.06	0.39	38.99	3540.03
16					0	0		7797428				0.00	0.00
17					0	0		4852915				0.00	0.00
18					0	0		880070				0.00	0.00
19					0	0		952301				0.00	0.00
20					0	0		949018				0.00	0.00
21					0	0		946944				0.00	0.00
22					0	0		946253				0.00	0.00
23	7.7	17	1.92	0.05	5	446	39	171979	2.92	0.33	0.01	0.86	76.70
24					0	0		-88819				0.00	0.00
25					0	0		-317814				0.00	0.00
26					0	0		-318116				0.00	0.00
27					0	0		38569				0.00	0.00
28					0	0		7418995				0.00	0.00
29	7.3	45	1.78	0.05	5	408	105	2699827	121.49	4.81	0.13	13.50	1101.53
30					5	222		3293222				16.47	731.10
31					5	236		8880069				44.40	2095.70

0: Insufficient amount of sample due to low flow or technical fault.

APPENDIX 4

Dust Monitoring Results.

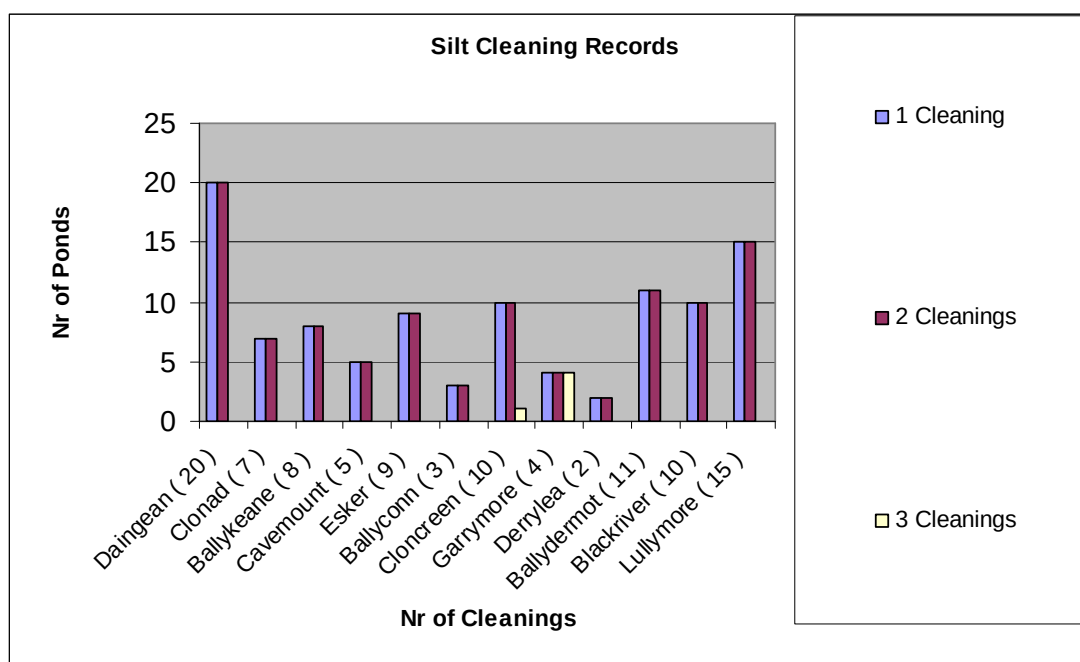
Dust Monitoring Results 2010				
Licence: P0503-01				
Works: Allen				
Sample Period	DM - 01 Killinagh mg/m ² /day	DM - 02 D/Brennan mg/m ² /day	DM - 03 Ballykeane mg/m ² /day	DM - 04 Moores House mg/m ² /day
Apr-May	72	89	155	144
May-Jun	83	160	178	77
Jun-July	78	155	472	105
July-Aug	89	89	72	28
Aug-Sept	105	50	33	44



APPENDIX 5

De-silting Programme Review.

Siltpond Cleaning Programme 2010			
IPPC Licence: P0503-01			
Works: Allen			
Bog Area & Nr Ponds	1 Cleaning	2 Cleanings	3 Cleanings
Daingean (20)	20	20	
Clonad (7)	7	7	
Ballykeane (8)	8	8	
Cavemount (5)	5	5	
Esker (9)	9	9	
Ballyconn (3)	3	3	
Cloncreen (10)	10	10	1
Garrymore (4)	4	4	4
Derrylea (2)	2	2	
Ballydermot (11)	11	11	
Blackriver (10)	10	10	
Lullymore (15)	15	15	



[Guidance to completing the PRTR workbook](#)

AER Returns Workbook

Version 1.1.11

REFERENCE YEAR	2010
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1. FACILITY IDENTIFICATION

Parent Company Name	Bord na Mona Allen Peat Limited
Facility Name	Bord na Mona Allen Peat Limited
PRTR Identification Number	P0503
Licence Number	P0503-01

Waste or IPPC Classes of Activity

No.	class_name
1.4	The extraction of peat in the course of business which involves an area exceeding 50 hectares.

Address 1	Bord na Mona
Address 2	Derrygreenagh
Address 3	Rochfortbridge, Mullingar
Address 4	County Westmeath
Country	Ireland
Coordinates of Location	-7.25761 53.3913
River Basin District	IEEA
NACE Code	0892
Main Economic Activity	Extraction of peat
AER Returns Contact Name	Enda McDonagh
AER Returns Contact Email Address	Enda.McDonagh@bnm.ie
AER Returns Contact Position	Head of Environmental Management
AER Returns Contact Telephone Number	057 93 45911
AER Returns Contact Mobile Phone Number	086 2370816
AER Returns Contact Fax Number	057 9345160
Production Volume	1067712.0
Production Volume Units	tonnes
Number of Installations	15
Number of Operating Hours in Year	2232
Number of Employees	140
User Feedback/Comments	
Web Address	www.bnm.ie

2. PRTR CLASS ACTIVITIES

Activity Number	Activity Name
50.1	General

3. SOLVENTS REGULATIONS (S.I. No. 543 of 2002)

Is it applicable?	No
Have you been granted an exemption ?	
If applicable which activity class applies (as per Schedule 2 of the regulations) ?	
Is the reduction scheme compliance route being used ?	

4.1 RELEASES TO AIR

[Link to previous years emissions data](#)

| PRTR# : P0503 | Facility Name : Bord na Mona Allen Peat Limited | Filename : P0503_2010(1).xls | Return Year : 2010 |

16/09/2011 16:50

SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

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

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

SECTION B : REMAINING PRTR POLLUTANTS

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

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

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

POLLUTANT		RELEASES TO AIR			Please enter all quantities in this section in KGs					
		METHOD			QUANTITY					
		Method Used			DM01	DM02	DM03			
Pollutant No.	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	Emission Point 2	Emission Point 3	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
					0.0	0.0	0.0	0.0576	0.0	0.0576

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

Additional Data Requested from Landfill operators

For the purposes of the National Inventory on Greenhouse Gases, landfill operators are requested to provide summary data on landfill gas (Methane) flared or utilised on their facilities to accompany the figures for total methane generated. Operators should only report their Net methane (CH4) emission to the environment under T(total) KG/yr for Section A: Sector specific PRTR pollutants above. Please complete the table below:

Landfill:	Bord na Mona Allen Peat Limited				
Please enter summary data on the quantities of methane flared and / or utilised			Method Used		Facility Total Capacity m3 per hour
	T (Total) kg/Year	M/C/E	Method Code	Designation or Description	
	Total estimated methane generation (as per site model)	0.0			N/A
	Methane flared	0.0			0.0 (Total Flaring Capacity)
	Methane utilised in engine/s	0.0			0.0 (Total Utilising Capacity)
	Net methane emission (as reported in Section A above)	0.0			N/A

4.2 RELEASES TO WATERS

[Link to previous years emissions data](#)

[PRTR# : P0503 | Facility Name : Bord na Mona Allen Peat Limited | Filename : P0503_2010(1).xls | Return Year : 2010]

18/09/2011 17:04

SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

Data on ambient monitoring of storm/surface water or groundwater, conducted as part of your licence requirements, should NOT be submitted under AER / PRTR Reporting as this only concerns Releases from your facility

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

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

SECTION B : REMAINING PRTR POLLUTANTS

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

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

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

RELEASES TO WATERS				Please enter all quantities in this section in KGs											QUANTITY		
POLLUTANT		Method Used			SW11	SWU	SW45	SW24	SWF	SW15	SW34	SW33	T (Total) KG/Year	A (Accident al) KG/Year			F (Fugitive) KG/Year
		M/C/E	Method Code	Designation or Description	Emission Point 1	Emission Point 2	Emission Point 3	Emission Point 4	Emission Point 5	Emission Point 6	Emission Point 7	Emission Point 8					
Pollutant No.	Name																
240	Suspended Solids	E	OTH	G13 Based on Alpha, 1998, 20th edition, method 25-400	3027.0	2229.0	2251.0	1313.0	2321.0	2250.0	2767.0	11547.0	27705.0	0.0	0.0		
* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button																	

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

5. ONSITE TREATMENT & OFFSITE TRANSFERS OF WASTE

| PRTR# : P0503 | Facility Name : Bord na Mona Allen Peat Limited | Filename : P0503_2010(1).xls | Return Year : 2010 |

16/09/2011 16:50

Please enter all quantities on this sheet in Tonnes

3

Transfer Destination	European Waste Code	Hazardous	Quantity (Tonnes per Year)	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	Haz Waste : Name and Licence/Permit No of Next Destination Facility Non Haz Waste : Name and Licence/Permit No of Recover/Disposer	Haz Waste : Address of Next Destination Facility Non Haz Waste : Address of Recover/Disposer	Name and License / Permit No. and Address of Final Recoverer / Disposer (HAZARDOUS WASTE ONLY)	Actual Address of Final Destination i.e. Final Recovery / Disposal Site (HAZARDOUS WASTE ONLY)
						M/C/E	Method Used					
Within the Country	20 03 01	No	41.62	mixed municipal waste	D1	M	Weighed	Offsite in Ireland	AES Ltd,053/OY/39/02	Cappincur,Tullamore,Co Offaly,,Ireland		
Within the Country	20 03 01	No	16.16	mixed municipal waste	D1	C	Volume Calculation	Offsite in Ireland	AES Ltd,053/OY/39/02	Cappincur,Tullamore,Co Offaly,,Ireland		
Within the Country	02 01 04	No	299.18	waste plastics (except packaging)	R3	M	Weighed	Offsite in Ireland	Leinster Environmental Ltd,2008/06	Haggardstown,Dundalk,Co Louth,,Ireland		
Within the Country	02 01 04	No	65.24	waste plastics (except packaging)	R3	M	Weighed	Offsite in Ireland	Eco Plastics,205/2005	Kilrush,Co Clare,,Ireland		
Within the Country	17 04 07	No	114.61	mixed metals	R4	M	Weighed	Offsite in Ireland	AES Ltd,053/OY/39/02	Cappincur,Tullamore,Co Offaly,,Ireland		
Within the Country	15 01 03	No	1.58	wooden packaging wastes from mineral non-metalliferous	R1	M	Weighed	Offsite in Ireland	AES Ltd,053/OY/39/02	Cappincur,Tullamore,Co Offaly,,Ireland		
Within the Country	01 01 02	No	427.75	excavation wastes from mineral non-metalliferous	D1	E	Volume Calculation	Onsite in Ireland	Bord na Mona Energy Ltd,P0503-01	Derrygreenagh,Rochfortbridge,Co Westmeath,,Ireland		
Within the Country	01 01 02	No	2350.0	excavation	D1	M	Weighed	Onsite in Ireland	Bord na Mona Energy Ltd,P0503-01	Derrygreenagh,Rochfortbridge,Co Westmeath,,Ireland		
Within the Country	13 02 05	Yes	10.32	mineral-based non-chlorinated engine, gear and lubricating oils	R1	C	Volume Calculation	Offsite in Ireland	Enva Ireland Ltd,184-1	Clonminam Ind Estate,Portlaoise,Co Laois,,Ireland	Enva Ireland Ltd,184-1,Clonminam Ind Estate,Portlaoise,Co Laois,,Ireland	Clonminam Ind Estate,Portlaoise,Co Laois,,Ireland
To Other Countries	16 01 07	Yes	0.38	oil filters absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by dangerous substances	R4	C	Volume Calculation	Abroad	Enva Ireland Ltd,184-1	Clonminam Ind Estate,Portlaoise,Co Laois,,Ireland	Recycling,51727/1/KD,Houthalen,,Belgium	Houthalen,,Belgium
To Other Countries	15 02 02	Yes	0.05		R1	C	Volume Calculation	Abroad	Enva Ireland Ltd,184-1	Clonminam Ind Estate,Portlaoise,Co Laois,,Ireland	Lindenschmidt,E97095037,Kreuztal,,Germany	Kreuztal,,Germany
To Other Countries	13 08 99	Yes	0.2	wastes not otherwise specified	R1	M	Weighed	Abroad	Enva Ireland Ltd,184-1	Clonminam Ind Estate,Portlaoise,Co Laois,,Ireland	Lindenschmidt,E97095037,Kreuztal,,Germany	Kreuztal,,Germany
To Other Countries	16 06 01	Yes	1.07	lead batteries	R6	M	Weighed	Abroad	Enva Ireland Ltd,184-1	Clonminam Ind Estate,Portlaoise,Co Laois,,Ireland	Recycling,MLAV/05-173/GVDA,Beerse,,Belgium	Beerse,,Belgium
To Other Countries	11 01 13	Yes	1.56	degreasing wastes containing dangerous substances	R11	C	Volume Calculation	Abroad	Safety Kleen Ltd,W0099-1	Tallaght,Dublin,,Ireland	Solvent Recovery Management,PP33345F,Wheeland Rd,Knottingly,West Yorks,WF11 8DZ,United Kingdom	Wheeland Rd,Knottingly,West Yorks,WF11 8DZ,United Kingdom

* Select a row by double-clicking the Description of Waste then click the delete button

[Link to previous years waste data](#)[Link to previous years waste summary data & percentage change](#)



Annual Environmental Report 2009
P0503-01

March 2010

Bord na Móna today operates 5 main subsidiary companies in more than 20 locations throughout Ireland, the UK and USA. The principal businesses are in the Energy, Resource Recovery, Horticulture, Home Heating and Wastewater Treatment and Air Pollution Abatement markets. The company also engages in an extensive rehabilitation program to develop its peat lands in an environmentally sustainable manner.



Bord na Móna has long recognised the need to diversify its activities in order to secure a sustainable future. In this context we identified the energy and resource recovery sectors as appropriate areas of growth and development, given our assets, strengths and skills. Significant challenges face Ireland in meeting the country's needs to provide secure sustainable energy and manage waste while minimising the impact on the environment.

Bord na Móna is in a strong position to contribute to dealing with these challenges. We have a unique mixture of assets, experience and innovation which will enable us to cross-link our activities in energy, water and resource recovery to provide products and services which will meet Ireland's needs. We also have the capacity to become an exemplar for others to follow in these fields.

With this background we have scoped out a new vision for the future sustainable development of Bord na Móna.

Following on from our vision, we have developed a new mission for Bord na Móna which the Company is committed to achieving.

In 1934 the Turf Development Board was formed to 'develop and improve the turf industry.' The experience of fuel shortages during the war re-enforced the Irish State's commitment to developing the country's bogs. In 1944 the TDB was asked to devise and submit a comprehensive programme, the outcome was the transformation in 1946 of the TDB into Bord na Móna. The Board was given a mandate to increase the use of peat as a fuel and in energy production. Markets for the use of moss peat in horticulture were also developed.

In 1990 Bord na Móna implemented a divisionalised and decentralised structure, designed to delegate responsibility downwards ensuring a sharper focus on each profit centre and a greater spirit of enterprise.

Group

Vision



The vision statement defines the Company's purpose, in terms of its values.

Values are guiding beliefs about how things should be done.

The vision statement communicates both the purpose and values of Bord na Móna.

For employees, it gives direction about how they are expected to behave and inspires them to give their best. Shared with customers, it shapes the customers' understanding of why they should work with Bord na Móna.

Bord na Móna will seek solutions that optimise the creative energy and potential of the organisation, driven by long term goals and the organisation's vision and mission.

In this context our devolved business units will align their vision and strategic planning with the global direction provided.

Consistent with our vision, innovation will once again return to the core of everything we do. We will capitalise on opportunities to cross fertilise our unique range of skills and technologies that add value and are socially and environmentally sustainable.

Greater focus will be placed on managing and developing our land assets in a responsible and sustainable manner. Our award winning initiatives at Lough Boora (Co. Offaly) and Oweninny (Co Mayo), provide shining examples of what can be achieved

Group

Mission

We conduct our affairs with openness, honesty and integrity.

We are Ireland's leading environmentally responsible integrated utility service provider encompassing electricity, heating solutions, resource recovery, water, horticulture and related services.

We capitalise on international opportunities where we have a competitive advantage.

We achieve continuing growth through superior customer service, outstanding quality and innovation delivered through the excellence and commitment of our people.

We engage in sustainable profitable business in the communities we serve, which is rewarding and challenging for employees and other stakeholders.

Contents

1.0 Introduction

- 1.1 IPC Licence Register No
- 1.2 Name & Location of Site
- 1.3 Brief Description of Activities
- 1.4 Environmental Management of the Company
- 1.5 Environmental Policy Statement

2.0 Summary Information

- 2.1 Emissions to Water Summary
 - 2.1.1 Silt Pond Emissions
 - 2.1.2 Yard Discharges
 - 2.1.3 Composite Sampler Report
 - 2.1.4 Emissions to Water Non-compliance's

2.2 Emissions to Air Summary

- 2.2.1 Dust Monitoring
- 2.2.2 Emissions to Air Non-compliance's

2.3 Waste Arising

- 2.3.1 Non-Hazardous Waste
- 2.3.2 Hazardous Waste

2.4 Energy and Water Consumption

- 2.4.1 Energy Consumption

2.5 Environmental Incidents and Complaints

- 2.5.1 Incidents
- 2.5.2 Complaints

3.0 Management of the Activity

3.1 Environmental Management Programme Report

3.2 Environmental Management Programme Proposal

3.3 Environmental Expenditure

4.0 Licence Specific Reports

4.1 Surface Water Discharge Monitoring Location Programme Review

4.2 Bunding Programme

4.3 Boiler Combustion Efficiency

4.4 Resource Consumption Summary

4.5 Report on de-silting Programme

4.6 Bog Development and Operational Programme

4.7 Bog Rehabilitation Report

4.8 Archaeological Report

5.0 Summary

Appendix 1: Emissions to Water Monitoring Results. (Bogs)

Appendix 2: Emissions to Water Monitoring Results. (Yards)

Appendix 3: Emissions to Water Monitoring Results. (Composite)

Appendix 4: Emissions to Air Monitoring Results.

Appendix 5: De-silting Programme Review

Appendix 6: AER & PRTR Data

1.0 Introduction

1.1 IPPC Licence No 503-01

1.2 Name & Location of Site

Name: Bord Na Mona Energy Limited.

Address: Derrygreenagh Works,
Rochfortbridge,
Mullingar,
Co. Westmeath.

Telephone No: 044 9222181 Fax No. 044 9222344

Contact Name: Eamonn Mulhall

Position: Resource Manager

National Grid Reference: E249450 N238140

1.3 Description of Activities

Peat Milling Operations.

For milled peat production the bog is laid out in a series of rectangular fields of varying length and 15m wide with drains located between. There are essentially four operations involved in milled peat production:

Milling.

Harrowing.

Ridging.

Harvesting.

Milling.

Special milling machines work their way along the fields, milling approximately 15mm of peat from the top of the bog in a pass.

Harrowing

In the course of drying, the milled peat is turned a number of times to avail of the drying conditions. This is achieved with a machine called a harrow. The milled peat is harrowed until its moisture content is down to approximately 40-50%, which can take up to two to three days, weather depending.

Ridging

The dry peat is then scraped into long ridges running down the centre of each field. This is done with a ridger, a machine consisting of a series of blades in the shape of a v that opens the full width of the field.

Harvesting

During harvesting every eleventh field is used to stockpile the peat, with this field receiving the milled peat from the five fields either side.

The milled peat is then transported via the existing network of peatland railways or via road to one of the following locations.

Power station

Horticultural Factory.

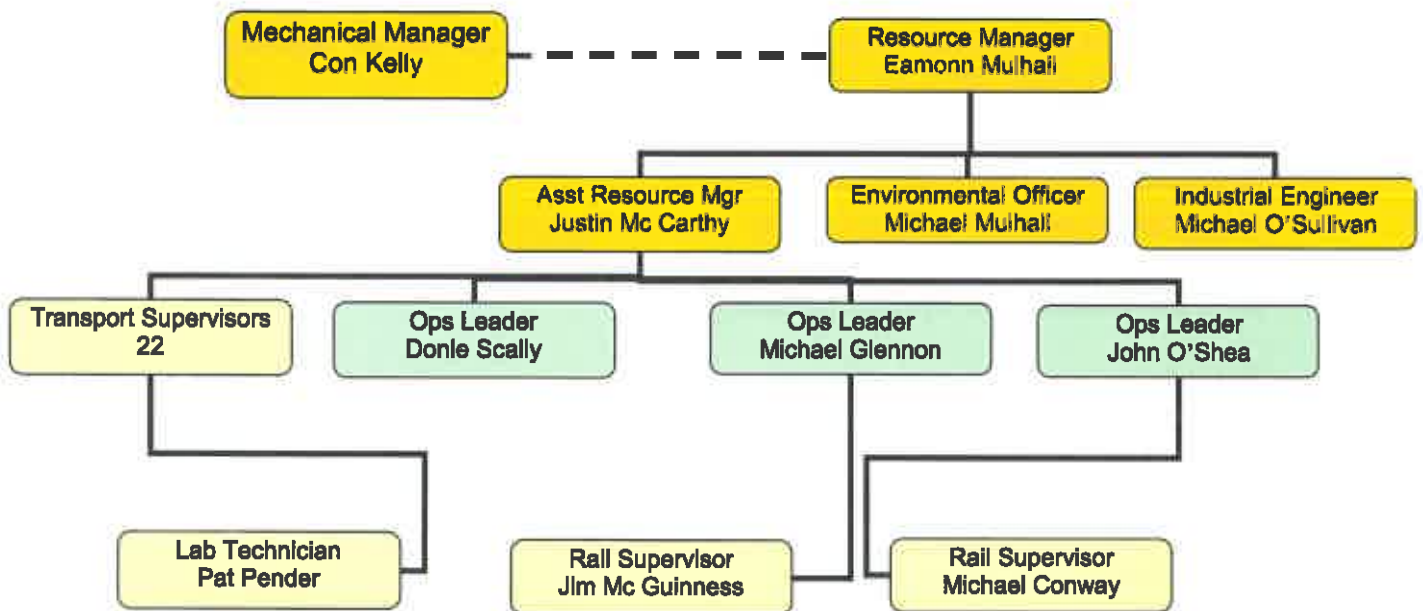
Briquette Factory.

1.4 Environmental Management of the Company

The organisational structure within the Allen Group is presented in the flow chart below.

Group

Environmental Responsibilities



1.5 Environmental Policy



Bord Na Mona Energy Limited is a commercial semi-state body with responsibility to develop Ireland's peat resources in the national interest.

Bord Na Mona Energy Limited is committed to gather and make available information on all aspects of its environmental impact and to help improve understanding among the public generally of its role and the importance of Irish peatlands.

Bord Na Mona Energy Limited recognises the importance of peatland conservation.

Bord Na Mona Energy Limited will leave behind all areas it owns as either an economically or socially integrated resource of a high environmental value.

Bord Na Mona Energy Limited seeks to conduct all aspects of its business in an environmentally sensitive value.

Bord Na Mona Energy Limited will establish an environmental management system specifically addressing the following impacts.

1. Discharges to water.
2. Emissions to atmosphere.
3. Waste disposal.
4. Use of natural resources.
5. Noise, vibration, odour, dust and visual effects.
6. Natural environment and eco-system.

The environmental management system will be monitored, maintained and continually improved.

A system of regular environmental audits will be put in place.

Bord Na Mona Energy Limited will continue research and development into all aspects of its environmental impact.

This statement is published and is available at all locations within the division and its are brought to the attention of all employees.

2.0 Summary Information

2.1 Emissions to Water Summary

2.1.1 Silt Pond Emissions

Comment

Surface water monitoring was carried out quarterly during the reporting period. In total analysis was carried out at fourteen different locations. As the locations were changed after the first quarter monitoring event, monitoring occurred initially at the original seven locations of, Derries @ SW2, Rathdrum @ SW10, Ballykeane @ SW14, Cloncreen @ SW33, Derrylea @ SW43, Blackriver @ SW65 and Ballydermot @ SW66. These were subsequently changed to seven new locations, some within the same bog but at different emission points. The new locations are as follows, Cloncreen @ SW34, Derrylea @ SWF, Codd Sth @ SW45, Ticknevin @ SWU, Ballykeane @ SW15, Clonad @ SW11 & Esker @ SW 24.

The parameters measured during each sampling event were as follows:
Total Phosphorus, Total Solids, Suspended Solids, pH, Ammonia, Colour and COD.

In general results were constant across all parameters at each monitoring location. November was the wettest month with 175.7mm of rainfall recorded and February the driest with 22.9 mm recorded. Flow rates appear to have had no adverse effect on suspended solids results.

The quarterly grab sampling programme proved to be 100% compliant for the year as was the 2006, 2007 & 2008 regimes.

pH values were between 6 and 8.2, with normal emission limit values being of the range 6 and 9. The graph clearly shows consistent trends for the period.

Suspended solids varied from 5mg/l to 44mg/l and would depend on activities (piping, ditching) etc, in the catchments at the time of sampling. With the exception of location SW U and SW 15 in quarter 4, all results were within the licence limit of 35mg/l. These two results did not however constitute a non-compliance.

Ammonia values ranged from 0.04 mg/l and 2.44 mg/l. The I/PV for A3 waters are of the range 4mg/l. It is however not unusual for surface waters emanating from production peat lands to be slightly elevated.

COD readings were on average higher at the new monitoring locations, i.e., quarters 2, 3 & 4. The I/PV for A3 waters are of the range 40mg/l. Elevated results were detected during the quarter 4 monitoring event with COD readings slightly above the Bord na Mona trigger level of 100 mg/l detected at SW 34, SW 45, SW U and SW F. All locations will be closely watched in 2010 with any continuing elevated COD trends investigated.

Flow rates were elevated in the fourth quarter monitoring event. This can be expected as November was the wettest month in 2009 with 175.7 mm of rainfall recorded. This elevated flow did appear to have a slight impact on suspended solid analysis for the period.

Total Phosphorus values ranged from 0.05 mg/l to 0.32 mg/l. These results would not cause any concern in relation to phosphorus loadings.

Surface Water Results are attached in Appendix 1.

2.1.2 Yard Discharges

Comment

Yard runoff monitoring took place at five locations during the reporting period. Sampling frequency was monthly and COD was the parameter requiring analysis. Results ranged from 10 mg/l to 454 mg/l. With the exception of Timahoe SWE-1, results were within Bord Na Mona set trigger levels. Further remediation works were carried out at Timahoe during the reporting period, which involved the installation of a new oil interceptor, which appears to have improved COD levels. There were no samples available in January 2009. At the request of the Agency the graph in appendix 2 shows COD analysis trends dating back to 2006. Sampling will continue at the same locations in 2009.

Yard Emission Results are attached in Appendix 2.

2.1.3 Composite Sampler Report

Comment

The composite sampler had been operating at Ticknevin Bog SW51A up until early May 2009. Following a proposal to move the sampler and subsequent approval, the sampler was moved to emission point SW33 at Cloncreen Bog. The sampler began operating at its new location on May 20th 2009.

The parameters measured were Total Phosphorus, Total Solids, Suspended Solids, pH, Ammonia, Colour and COD, with Suspended solids being the only parameter with an emission limit value (35mg/l).

November was the wettest month of 2009 with rainfall of 175.7 mm being recorded, while February was the driest with 22.9 mm recorded.

Initially the sampler did experience some difficulties in operation at its new location, however following some changes at the discharge point, the sampler's performance improved.

There were no non-compliances recorded during the reporting period. Composite sampling will continue at this location for the foreseeable future.

Composite Sampler Results are contained in Appendix 3.

2.1.4 Emissions to Water Non-compliance's

Emissions to Water Non-Compliances 2009		
Licence: P0503-01		
Works: Allen		
Type	Non-Compliances	Location / SW Nr
Composite	0	
Quarterly Grab	0	
Monthly Yard	1	
Totals	1	

Note:

There was one non-compliance in relation to emissions to water. This related to elevated COD at Timahoe SWE-1 and was issued as a result of an EPA audit. All scheduled monitoring proved to be 100% compliant.

2.2 Emissions to Air

2.2.1 Dust Monitoring

Comment

Dust monitoring was carried out on five occasions between April and August. Each monitoring event lasted between 28 and 32 days and the Bergerhoff method of collection was used.

The monitoring locations were as follows, Ballykeane DM01, Killinagh DM02, Derrybrennan DM03 and Moore's Dwelling DM04. The emission limit value is 350mg/m²/day and all results were within that emission limit value. No complaints of a dust nuisance were received during the reporting period.

In addition to this, some planting took place at Daingean bog, to further improve an existing shelter belt.

Sampling will continue at the same locations during 2010.

Dust monitoring results are contained in appendix 4.

2.2.2 Emissions to Air Non-compliance's

Dust Non-Compliances 2009	
Licence:P0503-01	
Works: Allen	
Location / DM Nr	Non-Compliances
	0
Total	0

2.3 Waste Arisings

2.3.1 Non-Hazardous Waste

Non Hazardous Waste Data 2009

Licence: P0503-01				
Works: Allen				
Type	Tonnes	EWC Code	Contractor	Licence Nr
Skips	37.05	20 03 01	AES	053/OY/39/02
Wheelie Bins	16.16	20 03 01	AES	053/OY/39/02
Polyethylene	126.98	02 01 04	Leinster Environmentals	2008/06
Polyethylene	171.36	02 01 04	Eco Plastics	205/2005
Scrap Steel	212.91	17 04 07	Hammond Lane	050/OY/162/04
Silt Pond Cleanings	496.85	01 01 02	Bord na Mona	IPPC P0503-01
Peat Screenings	1495.00	01 01 02	Bord na Mona	IPPC P0503-01
Totals	2556.30			

Note: Polyethylene and Scrap Steel are recycled. Skips go to an AES, Mixed Recycling Facility.

2.3.2 Hazardous Waste

Hazardous Waste Data 2009

Licence:P0503-01					
Works:Allen					
Type	Tonnes	EWC Code	Contractor	Licence Nr	Destination
Waste Oil	61.70	13 02 05	Enva Ireland Ltd Portlaoise	184-1	Portlaoise
Oil Filters	0.77	16 01 07	Enva Ireland Ltd Portlaoise	184-1	Portlaoise
Oily Rags	2.63	15 02 02	Enva Ireland Ltd Portlaoise	184-1	Portlaoise
Lead Acid Batt	2.59	16 06 01	Enva Ireland Ltd Portlaoise	184-1	Portlaoise
Fluorescent Tubes	0.00	20 02 21	Enva Ireland Ltd Portlaoise	184-1	Portlaoise
Parts Wash	1.08	11 01 13	Safety Kleen, Tallaght, Dublin	99-1	Dublin
Total	68.76				

2.4 Energy and Water Consumption

2.4.1 Energy

The table below shows energy consumption for the year. Water is not included, as it is only used for offices, canteens and workshops on a domestic scale.

Energy Consumption 2009				
Licence: P0503-01				
Works: Allen				
Units	Diesel (Litres)	Petrol (Litres)	Electricity (Units)	Peat Briquettes (Tonnes)
Totals	1179820	0	1344819	20
MW Hours	11553.3	0	1344.819	100
Total MW Hours	12998.1			

Note: The electricity consumption figure was extracted from ESB on line information systems. Some of the consumption figures relate to estimated readings which do not reflect on the exact amount of consumption. Going forward/ Bord Na Mona are liaising with the supplier, to try and eliminate all estimated readings. This will give a more precise figure in relation to consumption in the future.

2.5 Environmental Incidents and Complaints

2.5.1 Incidents.

Environmental Incidents 2009	
Licence: P0503-01	
Works: Allen	
	Number
Incidents	3
Requiring corrective action	3
Category	
Water	2
Air	1
Procedural	
Miscellaneous	
Total	3

There were a total of three incidents, relating to an oil spill, an elevated COD result and a bog fire.

2.5.2 Complaints

Environmental Complaints 2009

Licence: P0503-01

Works: Allen

	Number
Complaints	0
Requiring corrective action	
Category	
Water	
Air	
Procedural	
Miscellaneous	
Total	0

There were no complaints during the year.

3.0 Management of the Activity

3.1 Achievement of Objectives & Targets 2009

Project	Description & Status
Project 1: Reduction of fugitive dust emissions.	Training. Train all employees in environmental matters. Training will be by means of the screening of an environmental DVD, followed by a power point presentation. Status In total 50 employees received environmental training. Hydraulic Harrows. Hydraulic harrows will be deployed at dust sensitive locations during the 2009 production season. Status No new Hydraulic Harrows were deployed during the 2009 production season. This was due in part to the exceptionally wet weather which curtailed production activity and mitigated against the need for such equipment. Headland Peat Collection. Continue with the collection of headland peat, particularly at dust sensitive locations. Status Headland peat was collected as part of the peat lifting process and included in general peat return figures.
Project 2: Waste Management	Waste Streamlining. Following the purchase by Bord na Mona of AES Ltd, meetings with that company's management will be ongoing to see how best Bord na Mona's needs can be catered for. Key account managers dedicated to Bord na Mona have been requested and are due to be in place in 2009. Status A pilot programme has been put in place at Bord na Mona Boora works. Should this prove successful it will be extended to all Bord na Mona works. The service promises to include the issuing of quarterly reports on waste quantities and types.
Project 3: Minimisation of Suspended Solids.	On Site Inspections. Train all employees in environmental matters. Training will be by means of the screening of an environmental DVD, followed by a power point presentation. Status In total 50 employees received environmental training.

Project 4: Effective spill leak management of mobile fuelling units.	Research and Development. Continue to introduce rail operated fuel service wagons on a phased basis, with Derrygreenagh works budgeted to receive one wagon during 2009. Increased bund provisions where required, will be provided in 2009. Status One new rail operated fuel service wagon was introduced in 2009. In addition to this, two self bunded lock up containers were introduced in 2009. A filler slab and associated oil interceptor was fitted at Daingean Bog.
Project 5: Collection storage and reuse of polyethylene.	Identify Recyclers. Continue with the recycling of polyethylene. The sourcing of more recycling contractors will be ongoing. Status In total 205.94 tonnes of polyethylene was sent for recycling in 2009.
Project 6: PCB Directive	PCB Survey. Carry out a comprehensive survey of all PCB suspect appliances. Following this, liaise with EPA in deciding a plan of action once a definitive amount of suspect PCB holdings are agreed. Status As of December 2009, 75% of all potential Derrygreenagh PCB contained appliances have been sampled, with results indicating no PCB's present to date.

3.2 Environmental Management Programme Proposal 2010

Project	Description & Status
Project 1: Reduction of fugitive dust emissions.	Training. Continue to train all employees in environmental matters. Training will be by means of the screening of an environmental DVD, followed by a power point presentation. Hydraulic Harrows. Hydraulic harrows will continue to be deployed at dust sensitive locations. There is one new Hydraulic Harrow budgeted for in the five year plan. Headland Peat Collection. Continue with the collection of headland peat, particularly at dust sensitive locations.
Project 2: Waste Management	Waste Streamlining. Following the setting up of a pilot project at Boora works in relation to waste management. The extension of the project to other works including Allen is planned.
Project 3: Minimisation of Suspended Solids.	Training. Continue to train all new employees in environmental matters. Training will be by means of the screening of an environmental DVD, followed by a power point presentation.
Project 4: Effective spill leak management of mobile fuelling units.	Research and Development. Increased bund provisions where required, will be provided, in 2010.
Project 5: Collection storage and reuse of polyethylene.	Identify Recyclers. Continue with the recycling of polyethylene. The sourcing of more recycling contractors will be ongoing.
Project 6: Energy Management	Internal Meter Reading. As part of an energy management process a programme of internal meter readings will commence in 2010. The purpose of this exercise is to establish accurate energy consumption as to date a high percentage of electricity bills have been estimated by the supplier.

3.3 Environmental Expenditure

Environmental Expenditure 2009	
Licence:P0503-01	
Works: Allen	
Description	Cost €
Capital Costs	€25,767
Silt Control	€147,977
Analytical & Consultancy Costs	€7,239
EPA Fees	€7,532
Waste Management	€86,555
Total	€275,069

4.0 Licence Specific Reports

4.1 Surface Water Discharge Monitoring Location Programme Review

As mentioned above the surface water discharge monitoring locations were changed during the reporting period. A proposal was submitted to the Agency and approval granted. The change took place following the first quarter monitoring event. The composite sampler location was also changed during then reporting period; again permission was sought and subsequently approved. The sampler became operational in May at its new location.

4.2 Bunding Programme

Bund Locations & Numbers Allen Works						
IPPC Licence: P0503-01						
Location	Bund Number	Last Tested	Status Pass/Fail	Next Test Due	Last Tested	Status Pass/Fail
EPL Main Bund	503-37-05	Mar-09	Pass	Mar-11		
Lullymore Bog Bund	503-37-06	Nov-09	Pass	Nov-11		
Clonsast Heating Tank	503-37-07	Mar-09	Pass	Mar-11		
Clonsast Main Bund	503-37-08	Mar-09	Pass	Mar-11		
Ballyconn Main Bund	503-37-09	Dec-07	Pass	Dec-09	Mar-09	Pass
Ballydermot Main Bund	503-37-10	Feb-09	Pass	Feb-11		
Ballydermot Heating Tank	503-37-11	Jan-07	Fail	Bund Decommissioned		
Timahoe Main Bund	503-37-12	Jan-07	Pass	Jan-09		

The table above is an overview of the bund testing carried out during 2009. The bund in Timahoe was not tested as it does not contain any tanks. It had being filling with rainwater water and as a health and safety precaution, the wall was bored to ensure this water would not build up, causing a potential hazard.

4.3 Boiler Combustion Efficiency

Boiler Emissions					
Licence: P0503-01					
Works: Allen					
Boiler Location	% Efficiency 2005	% Efficiency 2006	% Efficiency 2007	% Efficiency 2008	%Efficiency 2009
Clonsast	86.4	88.88	92	89.2	88.1
Ballydermot	86.8	85.04	92.5	89.4	87.9
EPL	86.6	85.01	90	91.3	92.4
Timahoe	87.5	87.5	93.9	90.4	0



Note: Due to an administration error the boiler at Timahoe was not tested during the reporting period.

4.4 Resource consumption summary

Resource Consumption 2009			
Licence: P0503-01			
Works: Allen			
Product	Tonnes Produced	Tonnes Sold	Customer
Milled Peat	598,285	860,881	ESB
Moss	43,882	46,404	Horticulture
Turf	3,327	3,327	Private
Turf	1,500	1,500	ESB
Totals	646,994	912,112	

Proposed Production 2010	
Licence: P0503-01	
Works: Allen	
Product	Proposed Target
Milled Peat	735,258
Moss	62,616
Turf Private	4,582
Totals	802,456

4.5 De-Silting Report

Silt pond cleaning went well during the reporting period with all ponds being cleaned twice during the reporting period.

Silt pond cleaning details are contained in appendix 5.

4.6 Bog Development and Operational Programme.

There was no bog development work carried out in 2009.

4.7 Bog Rehabilitation Report

2008: Following consultation with the National Parks and Wildlife Service, an exercise was carried out, to identify potential areas within the Licence area that may be suitable for management with a biodiversity focus. Following from the initial desktop survey and mapping exercise, key areas of potential biodiversity areas within the Allen Bogs were identified. These include Ballycon, parts of Mount Lucas, Derrycricket, Derrycastle, Lullymore wetlands and Lullybeg, and Timahoe North and Timahoe South bogs.

2009: In September 2009, a large-scale baseline ecological survey of all of the Bord na Mona bogs commenced. The survey will target those areas identified during the mapping project in 2008 and will form the basis for development of *Rehabilitation Plans* for all bog areas, while also identifying areas considered as being rich biodiversity. To date, Killinagh Bog has been surveyed and mapped and there are selected sites ear-marked for survey in 2010. Possible rehabilitation measures are outlined and will be developed as these areas are removed from the peat production process.

Further consultation with the NPWS was carried out in 2009, including a meeting with Padraic Comerford and Val Swann, Eastern Region Management Staff. The outline long-term rehabilitation plans for the Allen bogs were discussed and it was agreed to notify the NPWS when potential Biodiversity Areas are identified and more site specific rehabilitation plans drawn up.

An area was also identified by Butterfly Conservation Ireland as a stronghold for Marsh Fritillary at Lullybeg, adjacent the wetlands at Lullymore. This area is being managed under agreement with Bord na Mona by BCI.

4.8 Archaeological Report

Further excavation work took place during the summer of 2009 in Ballykean Bog, at the Habitation Site.

5.0 Summary

With regard to environmental compliance at the Allen Group of Bogs, suspended solids from the quarterly grab sampling of the silt ponds and at our composite sampler were compliant. As always we will endeavour to keep our silt pools cleaned as often as required.

There were no dust complaints or dust non compliances during the year. We sampled five times for dust during 2009, twice more than our licence requires, helping with our dust suppression endeavours.

All new seasonal staff was trained during the year in Environmental Awareness and this will continue into the future.

The minor oil spill that occurred at our workshop area in Edenderry Peat tipping area was handled efficiently and steps are in place to prevent this from happening again.

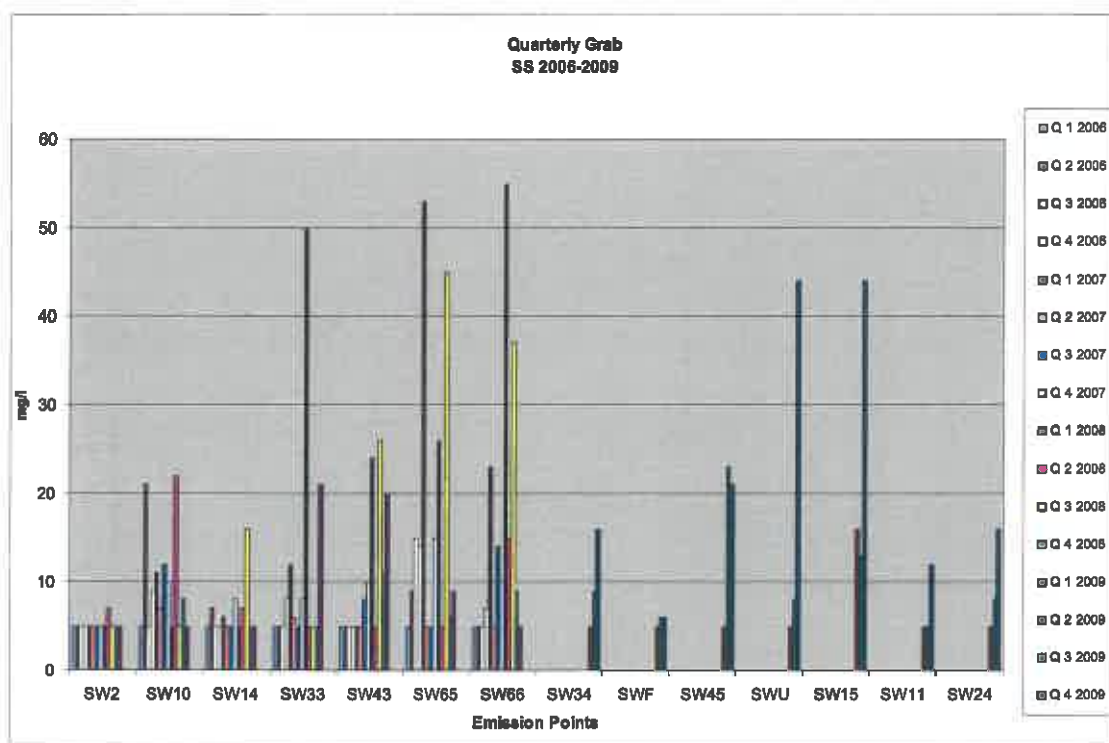
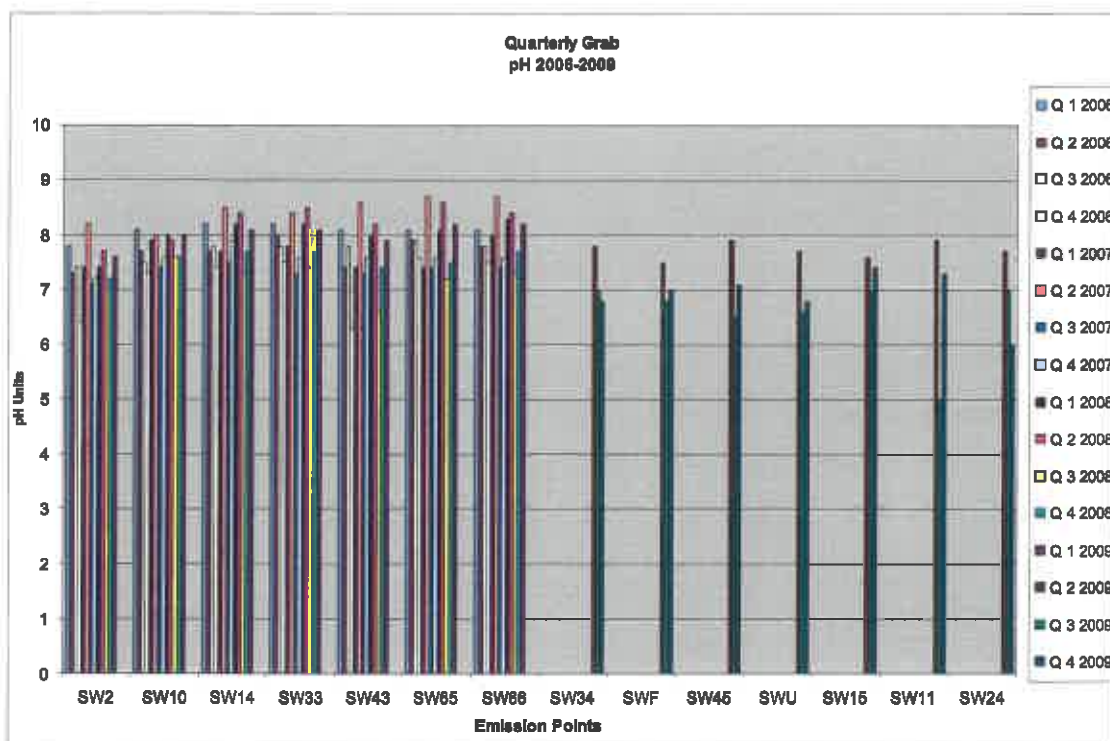
Bord na Mona are project partners of the South Eastern River Basin District Management, as set up under the Water Framework Directive.

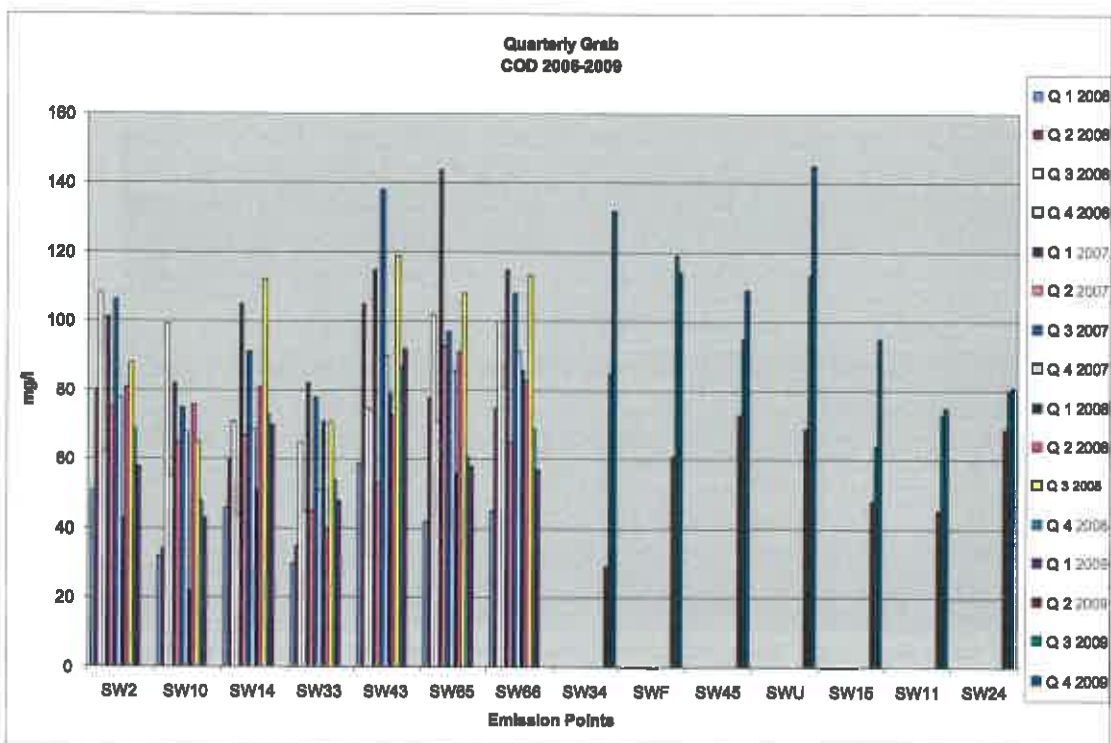
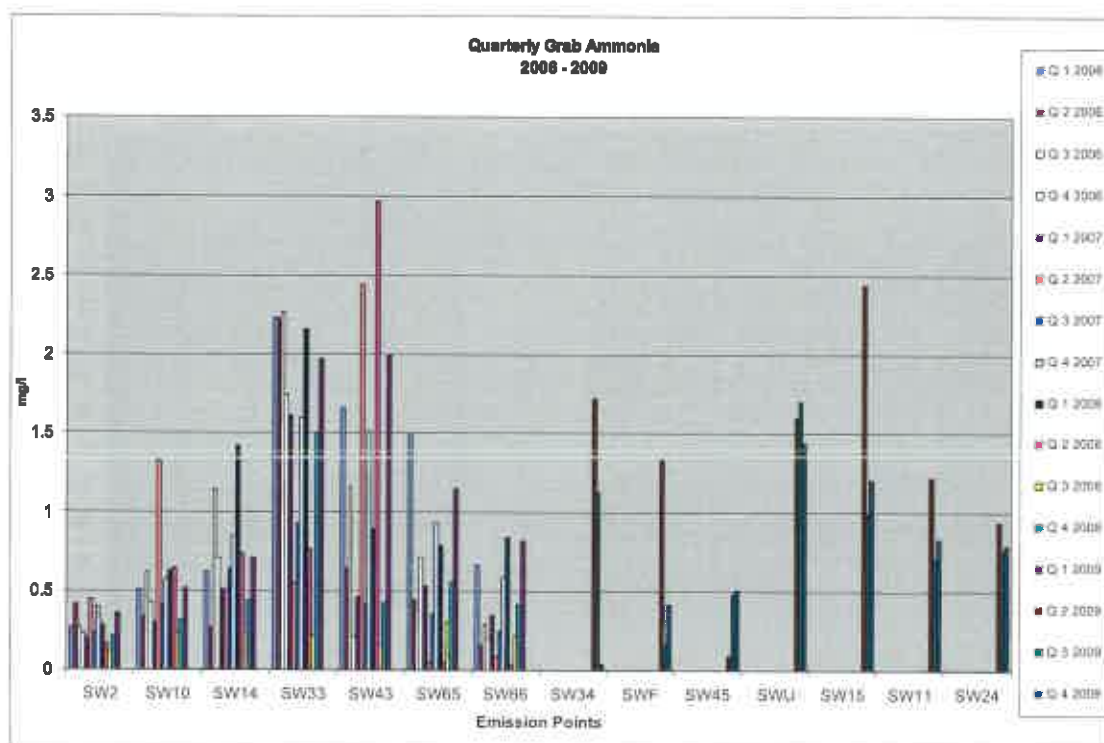
Bord na Mona are also involved in catchment management on the River Barrow.

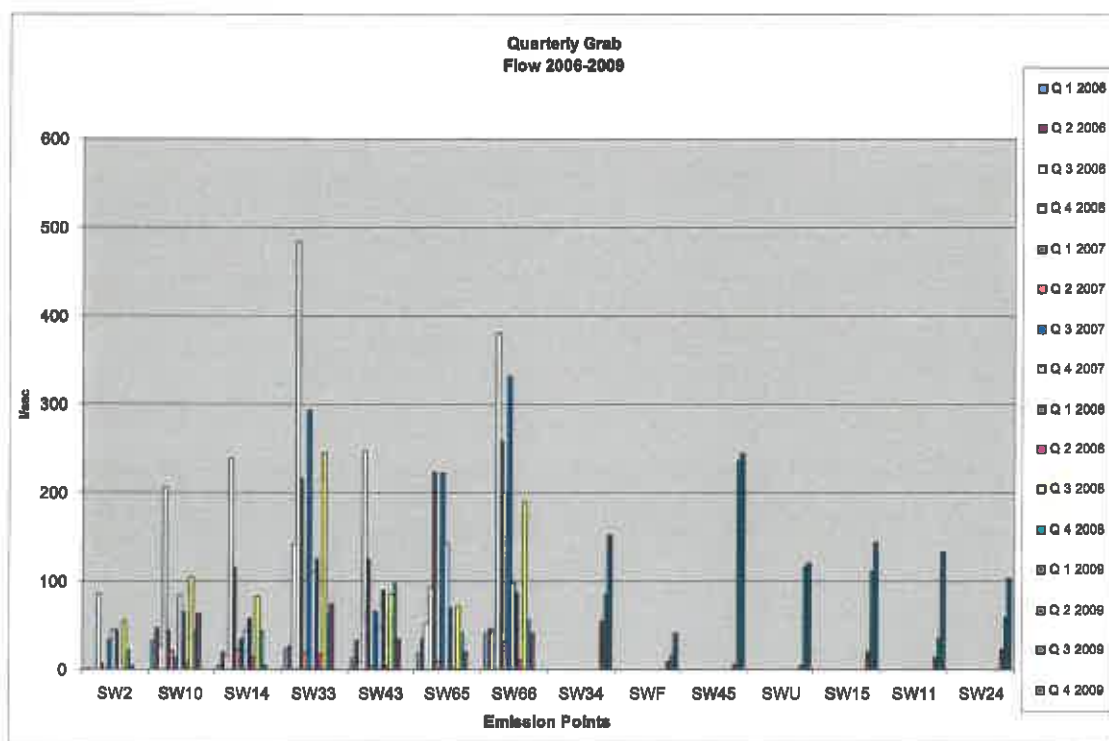
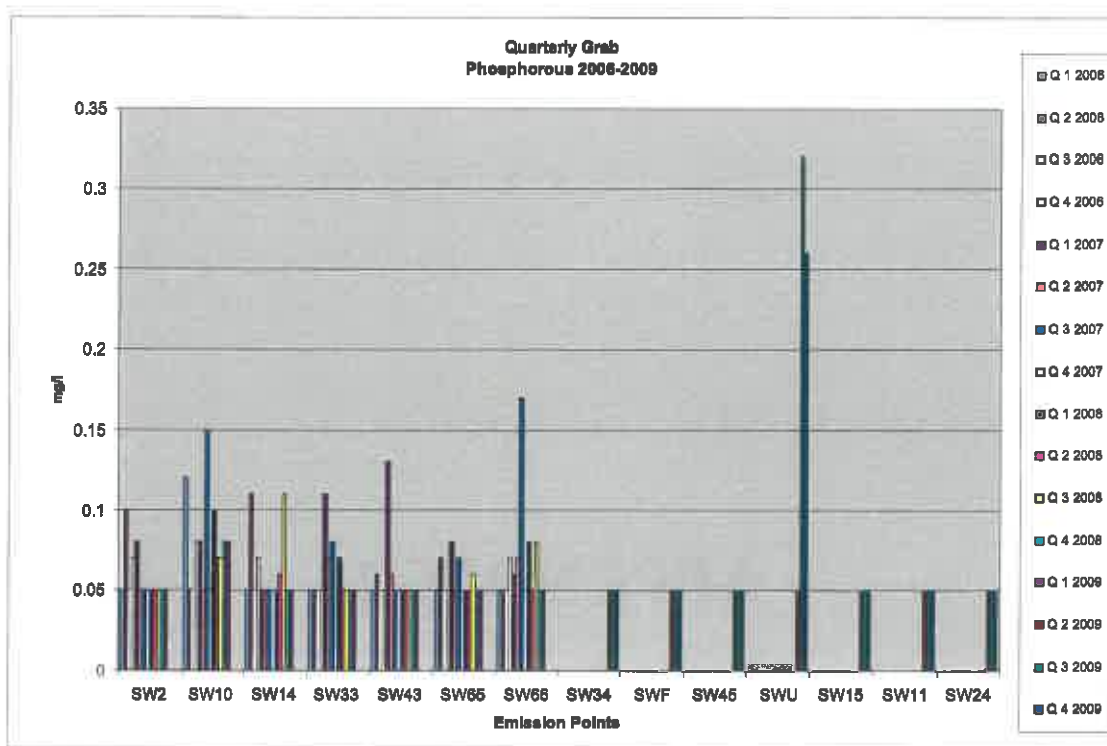
Bord na Mona Energy Ltd would like to take this opportunity to advise the Environmental Protection Agency of its continued commitment to improving its environmental performance by adopting cleaner production methods and improving its environmental protection measures.

APPENDIX 1

Surface Water Discharge Monitoring Results Bogs



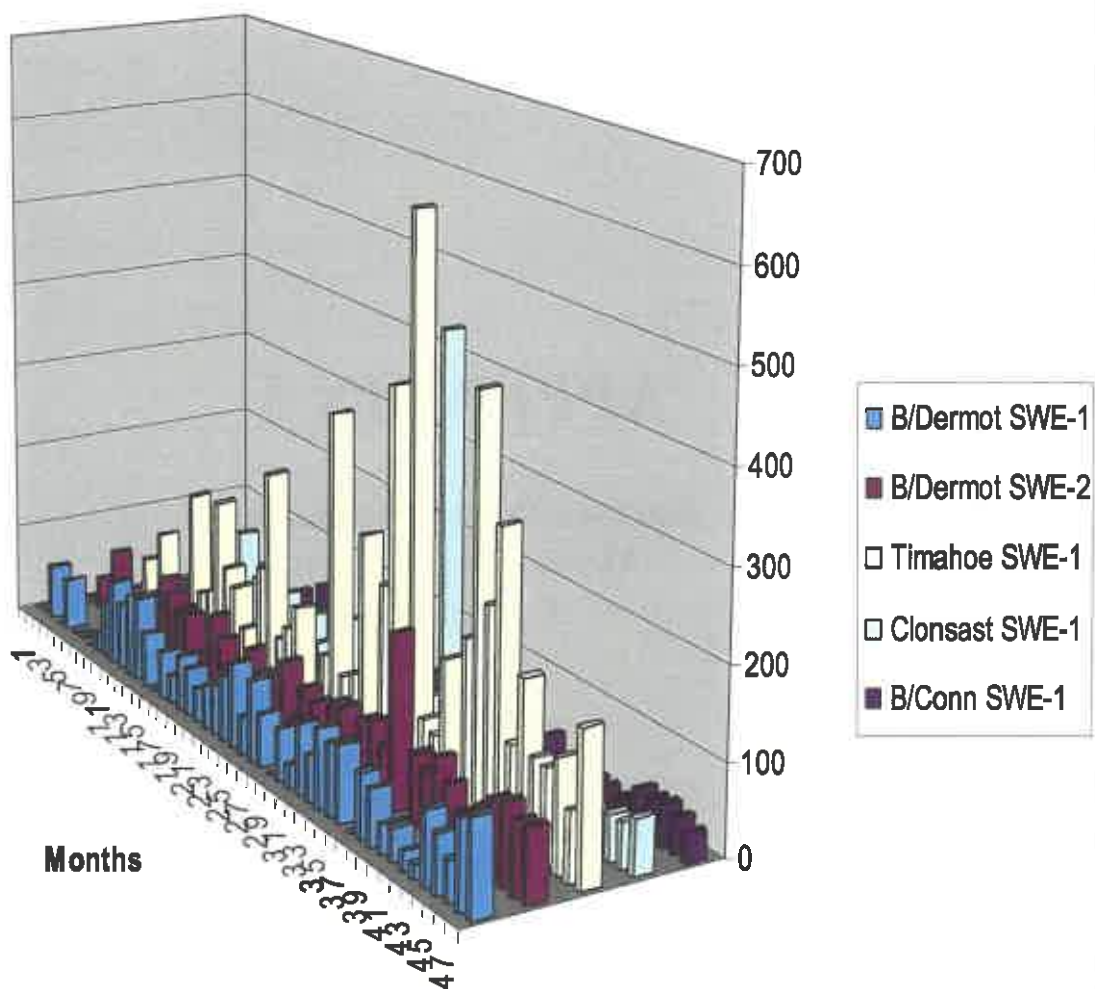




APPENDIX 2

Surface Water Discharge Monitoring Results Yards

Monthly Yard Sampling (mg/l) COD 2006 - 2009



APPENDIX 3

Surface Water Discharge Monitoring Results Composite

Month	pH	COD mg/l	Ammonia as N mg/l	Parameters Total Phosphorus mg/l	Suspended Solids mg/l	Total Solids mg/l	Colour Pt Co units	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals Total Phosphorus Kg/Day	Suspended Solids Kg/Day	Total Solids Kg/Day
January 2009 SW51A													
1					0	0		433538				0.00	0.00
2					0	0		421399				0.00	0.00
3					0	0		744785				0.00	0.00
4					0	0		1010794				0.00	0.00
5					0	0		1010794				0.00	0.00
6					0	0		1010794				0.00	0.00
7	7.6	46	0.75	0.05	6	448	54	1010794	46.50	0.76	0.05	6.06	452.84
8					0	0		1010794				0.00	0.00
9					0	0		1010794				0.00	0.00
10					0	0		1010794				0.00	0.00
11					0	0		1010794				0.00	0.00
12					0	0		1010794				0.00	0.00
13					0	0		1010794				0.00	0.00
14	8.2	89	0.52	0.08	5	220	153	1010794	89.96	0.53	0.08	5.05	222.37
15					0	0		1010794				0.00	0.00
16					0	0		1010794				0.00	0.00
17					0	0		1010794				0.00	0.00
18					0	0		1010794				0.00	0.00
19					0	0		1010794				0.00	0.00
20					0	0		1010794				0.00	0.00
21	7.3	105	0.75	0.07	10	168	267	1010794	106.13	0.76	0.07	10.11	169.81
22					0	0		1010794				0.00	0.00
23					0	0		1010794				0.00	0.00
24					0	0		1010794				0.00	0.00
25					0	0		1010794				0.00	0.00
26					0	0		1010794				0.00	0.00
27					0	0		1010794				0.00	0.00
28	7.8	55	1.44	0.1	8	207	220	1010794	55.59	1.46	0.10	8.09	209.23
29					0	0		1010794				0.00	0.00
30					0	0		1010794				0.00	0.00
31					0	0		1010794				0.00	0.00

Month	pH	COD mg/l	Ammonia as N mg/l	Parameters Total Phosphorus mg/l	Suspended Solids mg/l	Total Solids mg/l	Colour Pt Co units	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals Total Phosphorus Kg/Day	Suspended Solids Kg/Day	Total Solids Kg/Day
Feb 2009													
SW51A													
1					0	0		1010794				0.00	0.00
2					0	0		1010794				0.00	0.00
3					0	0		1010794				0.00	0.00
4	7.2	88	0.47	0.11	16	92	199	1010794	88.95	0.48	0.11	16.17	92.99
5					0	0		1010794				0.00	0.00
6					0	0		1010794				0.00	0.00
7					0	0		1010794				0.00	0.00
8					0	0		1010794				0.00	0.00
9					0	0		1010794				0.00	0.00
10					7	184		730132				5.11	134.34
11	7.5	83	1.86	0.11	10	50	199	331793	27.54	0.62	0.04	3.32	16.59
12					0	0		198357				0.00	0.00
13					0	0		145817				0.00	0.00
14					0	0		267365				0.00	0.00
15					0	0		423317				0.00	0.00
16					0	0		609924				0.00	0.00
17					0	0		156643				0.00	0.00
18	7.8	21	2.3	0.1	5	182	164	143796	3.02	0.33	0.01	0.72	26.17
19					0	0		125012				0.00	0.00
20					0	0		105477				0.00	0.00
21					0	0		105935				0.00	0.00
22					0	0		105408				0.00	0.00
23					0	0		102142				0.00	0.00
24					0	0		103585				0.00	0.00
25					0	0		115232				0.00	0.00
26	7.3	68	2.47	0.12	5	270	149	116839	7.95	0.29	0.01	0.58	31.55
27					0	0		8554				0.00	0.00
28					0	0		-273024				0.00	0.00

Month	pH	COD mg/l	Ammonia as N mg/l	Parameters		Total Phosphorus mg/l	Suspended Solids mg/l	Total Solids mg/l	Colour Pt Co units	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals		Suspended Solids Kg/Day	Total Solids Kg/Day
March 2009 SW51A													Total Phosphorus Kg/Day			
1							0	0		-273525						0.00
2							0	0		-275270						0.00
3							0	0		-283418						0.00
4	7.9	88	0.46		0.05		5	124	270	-292948	-25.78	-0.13	-0.01		-1.46	-36.33
5							6	204		-179055					-1.07	-36.53
6							5	240		-82659					-0.41	-19.84
7							5	224		-81950					-0.41	-18.36
8							6	254		-78667					-0.47	-19.98
9							5	238		-82581					-0.41	-19.65
10							5	232		-82434					-0.41	-19.12
11	7.8	90	1.38		0.05		9	243	215	-79963	-7.20	-0.11	0.00		-0.72	-19.43
12							0	0		-75764					0.00	0.00
13							0	0		-97019					0.00	0.00
14							0	0		-115353					0.00	0.00
15							0	0		-113979					0.00	0.00
16							0	0		-113011					0.00	0.00
17							0	0		-112588					0.00	0.00
18	7.8	65	2.02		0.06		5	276	165	77484	5.04	0.16	0.00		0.39	21.39
19							0	0		110376					0.00	0.00
20							0	0		182917					0.00	0.00
21							0	0		205511					0.00	0.00
22							0	0		161110					0.00	0.00
23							0	0		-26032					0.00	0.00
24							0	0		100051					0.00	0.00
25	8.2	61	1.66		0.06		5	304	148	83238	5.08	0.14	0.00		0.42	25.30
26							5	344		48825					0.24	16.80
27							5	302		209053					1.05	63.13
28							5	308		252660					1.26	77.82
29							5	310		367356					1.84	113.88
30							5	326		407411					2.04	132.82
31							5	324		335595					1.68	108.73

Month	pH	COD mg/l	Ammonia as N mg/l	Parameters Total Phosphorus mg/l	Suspended Solids mg/l	Total Solids mg/l	Colour Pt Co units	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals Total Phosphorus Kg/Day	Suspended Solids Kg/Day	Total Solids Kg/Day
April 2009 SW51A													
1	8.2	80	0.28	0.08	5	334	142	305849	24.45	0.09	0.02	1.53	102.09
2					0	0		286701				0.00	0.00
3					0	0		350292				0.00	0.00
4					0	0		246724				0.00	0.00
5					0	0		-82529				0.00	0.00
6					0	0		203921				0.00	0.00
7					0	0		63651				0.00	0.00
8	8.2	77	0.22	0.05	5	218	233	-162397	-12.50	-0.04	-0.01	-0.81	-35.40
9					0	0		-665				0.00	0.00
10					0	0		-219292				0.00	0.00
11					0	0		45550				0.00	0.00
12					0	0		-44591				0.00	0.00
13					0	0		-77933				0.00	0.00
14					0	0		-104414				0.00	0.00
15	8.2	81	0.43	0.05	5	290	182	-74529	-6.04	-0.03	0.00	-0.37	-21.61
16					0	0		-102825				0.00	0.00
17					0	0		-288066				0.00	0.00
18					0	0		-306348				0.00	0.00
19					0	0		-176532				0.00	0.00
20					0	0		-77337				0.00	0.00
21					0	0		40262				0.00	0.00
22	8.4	57	0.11	0.06	5	50	159	-30793	-1.76	0.00	0.00	-0.15	-1.54
23					0	0		220864				0.00	0.00
24					0	0		-77216				0.00	0.00
25					0	0		-70848				0.00	0.00
26					0	0		-198107				0.00	0.00
27					0	0		-169318				0.00	0.00
28					0	0		-136322				0.00	0.00
29	7.4	104	0.72	0.09	11	210	248	-59936	-6.23	-0.04	-0.01	-0.66	-12.59
30					0	0		-162276				0.00	0.00

Month	pH	COD mg/l	Ammonia as N mg/l	Parameters Total Phosphorus mg/l	Suspended Solids mg/l	Total Solids mg/l	Colour Pt Co units	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals Total Phosphorus Kg/Day	Suspended Solids Kg/Day	Total Solids Kg/Day
May 2009 SW33													
1					0	0		-160592				0.00	0.00
2					0	0		-59681				0.00	0.00
3					0	0		0				0.00	0.00
4					0	0		0				0.00	0.00
5					0	0		0				0.00	0.00
6	7.7	98	0.32	0.06	5	288	266	0				0.00	0.00
7					0	0		0				0.00	0.00
8					0	0		0				0.00	0.00
9					0	0		0				0.00	0.00
10					0	0		0				0.00	0.00
11					0	0		0				0.00	0.00
12					0	0		0				0.00	0.00
13	7.7	93	0.25	0.09	18	364	34	0				0.00	0.00
14					0	0		0				0.00	0.00
15					0	0		0				0.00	0.00
16					0	0		0				0.00	0.00
17					0	0		0				0.00	0.00
18					0	0		0				0.00	0.00
19					0	0		0				0.00	0.00
20	7.8	66	1.18	0.05	18	236	173	429166	28.32	0.51	0.02	7.72	101.28
21					0	0		362491				0.00	0.00
22					5	224		1576973				7.88	353.24
23					0	0		276437				0.00	0.00
24					0	0		669298				0.00	0.00
25					0	0		-1069546				0.00	0.00
26					0	0		618322				0.00	0.00
27	8	38	1.54	0.05	5	296	78	-819841	-31.15	-1.26	-0.04	-4.10	-242.67
28					0	0		-437495				0.00	0.00
29					0	0		-353981				0.00	0.00
30					0	0		1949789				0.00	0.00
31					0	0		2081290				0.00	0.00

Month	pH	COD mg/l	Ammonia as N mg/l	Parameters		Total Phosphorus mg/l	Suspended Solids mg/l	Total Solids mg/l	Colour Pt Co units	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals		Suspended Solids Kg/Day	Total Solids Kg/Day
June 2009 SW33																
1							0	0		-591754					0.00	0.00
2							0	0		-591373					0.00	0.00
3	8.1	32	0.6	0.05	7	332	56	449107	14.37	0.02	0.27				3.14	149.10
4					0	0		2104013							0.00	0.00
5					0	0		1626998							0.00	0.00
6					0	0		1547597							0.00	0.00
7					0	0		2041978							0.00	0.00
8					0	0		756579							0.00	0.00
9					0	0		675968							0.00	0.00
10	7.9	26	1.18	0.05	5	344	60	673479	17.51	0.03	0.79				3.37	231.68
11					0	0		428155							0.00	0.00
12					0	0		669237							0.00	0.00
13					0	0		1008202							0.00	0.00
14					0	0		1519085							0.00	0.00
15					0	0		3231879							0.00	0.00
16					6	668		3227904							19.37	2156.24
17	8	52	1.26	0.05	10	292	75	2387750	124.16	0.12	3.01				23.88	697.22
18					0	0		8159702							0.00	0.00
19					0	0		9833184							0.00	0.00
20					0	0		5554742							0.00	0.00
21					0	0		5031158							0.00	0.00
22					7	356		1055722							7.39	375.84
23					0	0		883267							0.00	0.00
24					0	0		766843							0.00	0.00
25	8	36	0.74	0.05	8	354	43	587174	21.14	0.03	0.43				4.70	207.86
26					5	284		587961							2.94	166.98
27					5	238		5916586							29.58	1408.15
28					10	262		8521891							85.22	2232.74
29					7	278		1665014							11.66	462.87
30					0	0		1452930							0.00	0.00

Month	Parameters			Daily Totals			Daily Totals						
July	pH	COD mg/l	Ammonia as N mg/l	Total Phosphorus mg/l	Suspended Solids mg/l	Total Solids mg/l	Colour Pt Co units	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Total Phosphorus Kg/Day	Suspended Solids Kg/Day	Total Solids Kg/Day
2009													
SW33													
1	7.6	43	1.33	0.05	6	282	107	832101	35.78	1.11	0.04	4.99	234.65
2					5	304		2176243				10.88	661.58
3					5	256		6979478				34.90	1786.75
4					5	278		7205501				36.03	2003.13
5					5	304		4444502				22.22	1351.13
6					5	308		3110141				15.55	957.92
7					0	0		2271888				0.00	0.00
8	7.6	65	1.39	0.05	11	344	110	796081	51.75	1.11	0.04	8.76	273.85
9					0	0		1034726				0.00	0.00
10					0	0		1035072				0.00	0.00
11					5	284		2182464				10.91	619.82
12					10	348		3126384				31.26	1087.98
13					5	280		1243382				6.22	348.15
14					5	208		2922135				14.61	607.80
15	7.6	63	0.21	0.05	5	294	186	5235494	329.84	1.10	0.26	26.18	1539.24
16					0	0		2916518				0.00	0.00
17					0	0		3950640				0.00	0.00
18					0	0		738953				0.00	0.00
19					0	0		1166314				0.00	0.00
20					0	0		4282416				0.00	0.00
21					0	0		4017254				0.00	0.00
22	7.9	45	0.86	0.05	6	310	86	3548621	159.69	3.05	0.18	21.29	1100.07
23					0	0		3543005				0.00	0.00
24					0	0		3785443				0.00	0.00
25					0	0		3529872				0.00	0.00
26					0	0		2723069				0.00	0.00
27					5	292		1079568				5.40	315.23
28					5	328		3736714				18.68	1225.64
29	8	49	0.92	0.05	5	320	114	1422662	69.71	1.31	0.07	7.11	455.25
30					5	327		2538864				12.69	830.21
31					12	332		1278634				15.34	424.51

Month	pH	COD mg/l	Ammonia as N mg/l	Parameters Total Phosphorus mg/l	Suspended Solids mg/l	Total Solids mg/l	Colour Pt Co units	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals Total Phosphorus Kg/Day	Suspended Solids Kg/Day	Total Solids Kg/Day
August 2009 SW33													
1					6	348		1632269				9.79	568.03
2					5	322		1589501				7.95	511.82
3					5	314		1370909				6.85	430.47
4					5	320		1125014				5.63	360.00
5	8.5	47	0.03	0.05	5	312	199	986256	46.35	0.03	0.05	4.93	307.71
6					22	260		1456704				32.05	378.74
7					24	318		32607				0.78	10.37
8					10	302		-193968				-1.94	-58.58
9					14	312		747161				10.46	233.11
10					25	278		738331				18.46	205.26
11					33	380		1384819				45.70	526.23
12	8.1	32	0.58	0.05	21	318	59	743541	23.79	0.43	0.04	15.61	236.45
13					0	0		752630				0.00	0.00
14					5	326		393206				1.97	128.19
15					5	342		1476922				7.38	505.11
16					0	0		1955318				0.00	0.00
17					0	0		466983				0.00	0.00
18					0	0		346913				0.00	0.00
19	7.9	22	0.48	0.05	5	320	66	337876	7.43	0.16	0.02	1.89	108.12
20					7	421		754108				5.28	317.48
21					5	262		4641149				23.21	1215.98
22					5	218		2709763				13.55	590.73
23					5	276		2386800				11.93	658.76
24					5	296		3315082				16.58	981.26
25					5	274		3865795				19.33	1059.23
26					5	260		2415398				12.08	628.00
27	8	49	1.06	0.05	5	306	108	3022790	148.12	3.20	0.15	15.11	924.97
28					5	302		2389738				11.95	721.70
29					5	326		2466461				12.33	804.07
30					5	302		1472342				7.36	444.65
31					6	298		1933114				11.60	576.07

Month	pH	COD mg/l	Ammonia as N mg/l	Parameters		Colour Pt Co	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals		Suspended Solids Kg/Day	Total Solids Kg/Day
				Total Phosphorus mg/l	Total Solids mg/l					Phosphorus Kg/Day	Total		
Sept 2009 SW33													
1					312		3209069					22.46	1001.23
2	7.6	85	1.32	0.05	18	191	2355696	200.23	3.11	0.12		42.40	574.79
3					221		3734467					18.67	825.32
4					232		3995309					19.98	926.91
5					265		12993700					64.97	3443.33
6					304		16892060					84.46	5135.19
7					286		16333920					81.67	4671.50
8					302		12846820					64.23	3879.74
9	7.9	42	0.81	0.05	318	127	12161660	510.79	9.85	0.61		60.81	3867.41
10					356		8654688					43.27	3081.07
11					340		3528922					17.64	1199.83
12					332		4000320					20.00	1328.11
13					350		2994970					14.97	1048.24
14					348		2436826					12.18	848.02
15					338		1635379					8.18	552.76
16	8.1	33	0.4	0.05	340	57	1730851	57.12	0.69	0.09		8.65	588.49
17					0		3082147					0.00	0.00
18					0		1267142					0.00	0.00
19					0		663267					0.00	0.00
20					0		2185747					0.00	0.00
21					0		656821					0.00	0.00
22					0		596316					0.00	0.00
23	7.6	32	2.24	0.09	34	40	1822954	58.33	4.08	0.16		61.98	729.18
24					5		737217					3.69	255.08
25					5		518219					2.59	190.70
26					5		206522					1.03	77.65
27					5		223569					1.12	79.59
28					5		165162					0.83	61.11
29					5		238136					1.19	82.87
30	8.2	42	0.6	0.05	379	51	180192	7.57	0.11	0.01		0.90	68.29

Month	pH	COD mg/l	Ammonia as N mg/l	Parameters Total Phosphorus mg/l	Suspended Solids mg/l	Total Solids mg/l	Colour Pt Co units	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals Total Phosphorus Kg/Day	Suspended Solids Kg/Day	Total Solids Kg/Day
Oct 2009													
SW33													
1					0	0		151140				0.00	0.00
2					0	0		154872				0.00	0.00
3					0	0		145238				0.00	0.00
4					0	0		231630				0.00	0.00
5					5	354		198832				0.99	70.39
6					5	338		378976				1.89	128.09
7	7.7	86	1.72	0.08	5	310	119	2659651	228.73	4.57	0.21	13.30	824.49
8					5	330		2898806				14.49	956.61
9					8	308		1432598				11.46	441.24
10					27	252		2030573				54.83	511.70
11					26	258		3446842				89.62	889.29
12					14	298		2334182				32.68	695.59
13					5	314		1564272				7.82	491.18
14	7.9	53	0.62	0.05	9	310	93	862773	45.73	0.53	0.04	7.76	267.46
15					11	356		274484				3.02	97.72
16					10	342		233902				2.34	79.99
17					11	336		268799				2.96	90.32
18					5	350		199714				1.00	69.90
19					11	342		707581				7.78	241.99
20	8.1	40	1.07	0.05	5	228	57	239449	9.58	0.26	0.01	1.20	54.59
21					5	310		973642				4.87	301.83
22					0	0		2264371				0.00	0.00
23					0	0		4611600				0.00	0.00
24					0	0		3631738				0.00	0.00
25					0	0		2836166				0.00	0.00
26					0	0		2829514				0.00	0.00
27					0	0		2829514				0.00	0.00
28	7.8	49	1.68	0.05	7	296	97	2829514	138.65	4.75	0.14	19.81	837.54
29					0	0		2829514				0.00	0.00
30					0	0		2829514				0.00	0.00
31					0	0		3195159				0.00	0.00

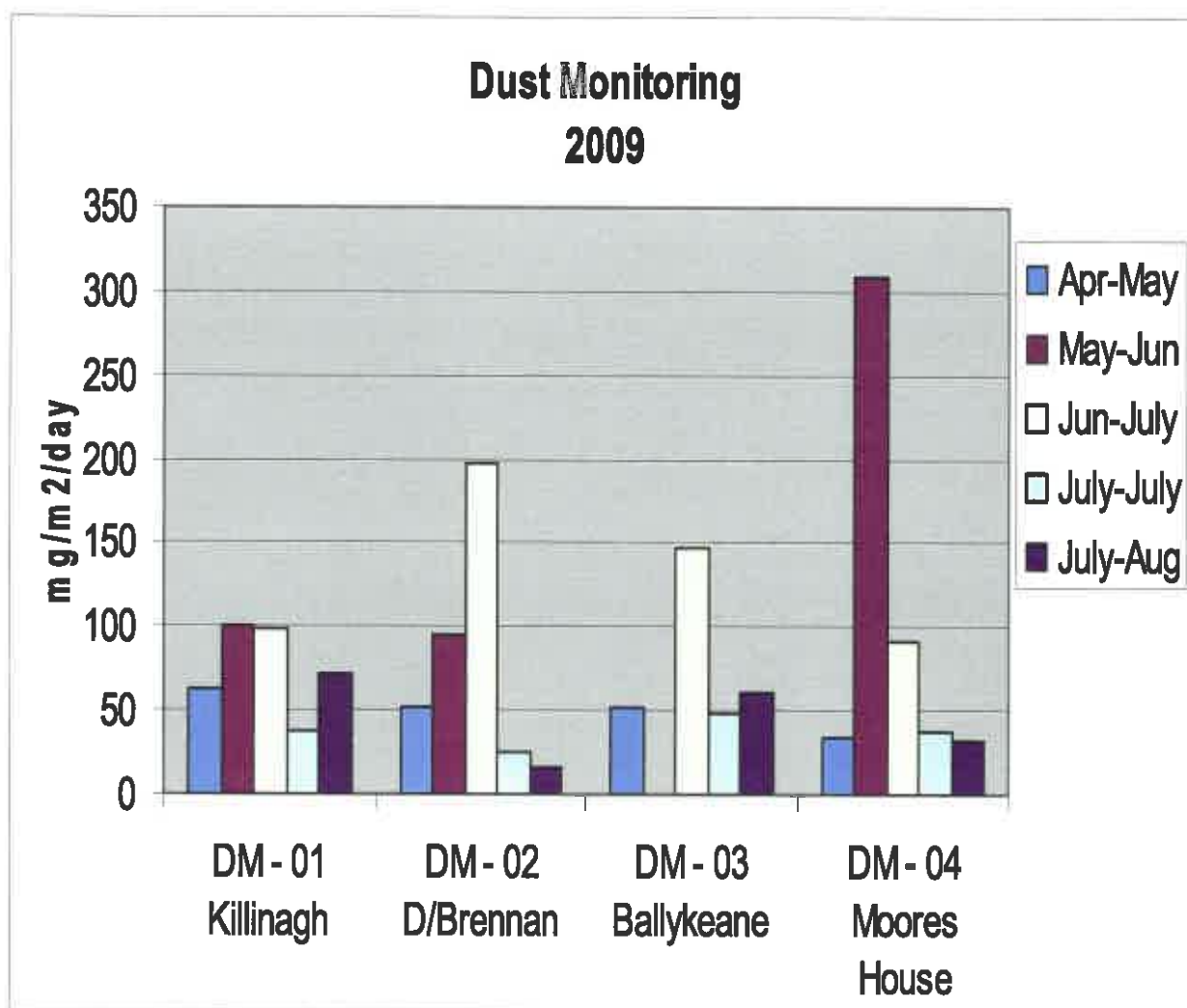
Month	pH	COD mg/l	Ammonia as N mg/l	Parameters Total Phosphorus mg/l	Suspended Solids mg/l	Total Solids mg/l	Colour Pt Co units	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals Total Phosphorus Kg/Day	Suspended Solids Kg/Day	Total Solids Kg/Day
Nov 2009													
SW33													
1					25	330		3465591				86.64	1143.65
2					9	334		3766867				33.90	1258.13
3					10	218		2915741				29.16	635.63
4	7.6	82	0.79	0.05	9	210	125	2773354	227.42	2.19	0.14	24.96	582.40
5					30	154		3199911				96.00	492.79
6					23	118		4549911				104.65	536.89
7					12	149		4637779				55.65	691.03
8					27	198		4543344				122.67	899.58
9					9	144		4295981				38.66	618.62
10					13	190		4178822				54.32	793.98
11	7.5	68	0.65	0.05	27	124	123	3012250	204.83	1.96	0.15	81.33	373.52
12					5	172		3373229				16.87	580.20
13					7	150		3023395				21.16	453.51
14					28	162		2910816				81.50	471.55
15					8	150		3020198				24.16	453.03
16					6	160		3035059				18.21	485.61
17					5	184		3767386				18.84	693.20
18	7.4	71	0.34	0.05	5	188	161	3163709	224.62	1.08	0.16	15.82	594.78
19					24	140		3587328				86.10	502.23
20					22	164		6718291				147.80	1101.80
21					23	136		9559296				219.86	1300.06
22					11	78		10178780				111.97	793.94
23					15	156		10457860				156.87	1631.43
24					18	146		16180990				291.26	2362.42
25	7	78	0.89	0.05	25	128	148	13468900	1050.57	11.99	0.67	336.72	1724.02
26					8	80		13695260				109.56	1095.62
27					0	0		11960350				0.00	0.00
28					0	0		13123300				0.00	0.00
29					0	0		22216900				0.00	0.00
30					0	0		22051240				0.00	0.00

Month	Parameters			Parameters			Parameters			Daily Totals			
Dec	pH	COD	Ammonia as	Total	Suspended	Total	Colour	Flow	COD	Ammonia as	Total	Suspended	Total
2009		mg/l	N mg/l	Phosphorus	Solids	Solids	Pt Co	Daily	Kg/Day	Kg/Day	Phosphorus	Solids	Solids
SW33				mg/l	mg/l	mg/l	units	Total (litres)			Kg/Day	Kg/Day	Kg/Day
1					0	0		18925060				0.00	0.00
2	7.5	51	1.98	0.05	10	240	113	12610940	643.16	24.97	0.63	126.11	3026.63
3					5	100		6037546				30.19	603.75
4					5	260		11757310				58.79	3056.90
5					19	280		10467360				198.88	2930.86
6					18	164		13562210				244.12	2224.20
7					18	180		7484055				134.71	1347.13
8					19	162		12604900				239.49	2041.99
9	8	53	1.53	0.05	13	100	116	18404060	975.42	28.16	0.92	239.25	1840.41
10					5	106		13550110				67.75	1436.31
11					5	82		11499840				57.50	942.99
12					5	128		12525410				62.63	1603.25
13					0	0		11419490				0.00	0.00
14					5	256		7959514				39.80	2037.64
15					5	226		6882624				34.41	1555.47
16	7.7	37	2.16	0.05	25	132	78	9692352	358.62	20.94	0.48	242.31	1279.39
17					11	252		7313587				80.45	1843.02
18					0	0		4036694				0.00	0.00
19					0	0		2279837				0.00	0.00
20					0	0		5116003				0.00	0.00
21					0	0		11803970				0.00	0.00
22					0	0		11798780				0.00	0.00
23	7.7	28	2.3	0.05	5	314	41	3934397	110.16	9.05	0.20	19.67	1235.40
24					0	0		754877				0.00	0.00
25					0	0		896573				0.00	0.00
26					0	0		716619				0.00	0.00
27					0	0		4700765				0.00	0.00
28					0	0		9383904				0.00	0.00
29					0	0		9551520				0.00	0.00
30	7.5	71	0.82	0.05	30	188	135	11477380	814.89	9.41	0.57	344.32	2157.75
31					0	0		20365340				0.00	0.00

APPENDIX 4

Dust Monitoring Results.

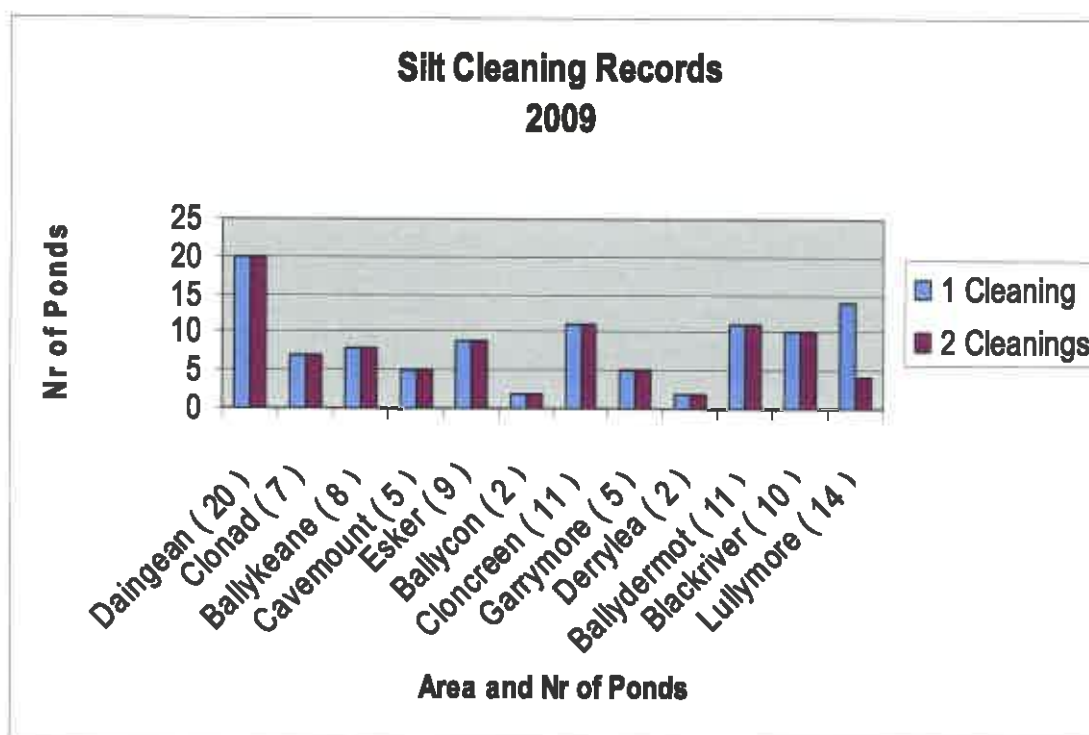
Dust Monitoring Results 2009				
Licence: P0503-01				
Works: Allen				
Sample Period	DM - 01 Killinagh	DM - 02 D/Brennan	DM - 03 Ballykeane	DM - 04 Moore's House
Apr-May	63	52	52	34
May-Jun	101	95	0	309
Jun-July	98	197	148	92
July-July	37	25	49	37
July-Aug	72	17	61	33



APPENDIX 5

De-silting Programme Review.

Siltpond Cleaning Programme 2009				
IPPC Licence: P0503-01				
Works: Allen				
Bog Area & Nr Ponds	1 Cleaning	2 Cleanings	3 Cleanings	4 Cleanings
Daingean (20)	20	20		
Clonad (7)	7	7		
Ballykeane (8)	8	8		
Cavemount (5)	5	5		
Esker (9)	9	9		
Ballycon (2)	2	2		
Cloncreen (11)	11	11		
Garrymore (5)	5	5		
Derrylea (2)	2	2		
Ballydermot (11)	11	11		
Blackriver (10)	10	10		
Lullymore (14)	14	4		



APPENDIX 6

AER & PRTR DATA



Environmental Protection Agency

 | PRTR# : P0503 | Facility Name : Bord na Mona Allen Peat Limited | Filename :
 p0503_2009(1).xls | Return Year : 2009 |

AER Returns Worksheet

Version 1.1.10

REFERENCE YEAR	2009
-----------------------	------

1. FACILITY IDENTIFICATION

Parent Company Name	Bord na Mona Allen Peat Limited
Facility Name	Bord na Mona Allen Peat Limited
PRTR Identification Number	P0503
Licence Number	P0503-01

Waste or IPPC Classes of Activity

No.	class_name
1.4	The extraction of peat in the course of business which involves an area exceeding 50 hectares.

Address 1	Bord na Mona
Address 2	Derrygreenagh
Address 3	Rochfortbridge, Mullingar
Address 4	County Westmeath
Country	Ireland
Coordinates of Location	-7.25761 53.3913
River Basin District	IEEA
NACE Code	0892
Main Economic Activity	Extraction of peat
AER Returns Contact Name	Enda McDonagh
AER Returns Contact Email Address	Enda.McDonagh@bnm.ie
AER Returns Contact Position	Head of Environmental Engineering
AER Returns Contact Telephone Number	057 93 45911
AER Returns Contact Mobile Phone Number	086 2370816
AER Returns Contact Fax Number	057 9345160
Production Volume	646994.0
Production Volume Units	Tonnes
Number of Installations	15
Number of Operating Hours in Year	2232
Number of Employees	140
User Feedback/Comments	
Web Address	www.bnm.ie

2. PRTR CLASS ACTIVITIES

Activity Number	Activity Name
50.1	General

3. SOLVENTS REGULATIONS (S.I. No. 543 of 2002)

Is it applicable?	No
Have you been granted an exemption ?	

If applicable which activity class applies (as per Schedule 2 of the regulations) ?	
Is the reduction scheme compliance route being used ?	

4.1 RELEASES TO AIR

SECTION A: INITIAL OPERATIVE SOURCE POLLUTANTS

POLLUTANT	RELEASES TO AIR		QUANTITY	
	MWCE	Method Code	T (Total) KG/Year	F (Fugitive) KG/Year
Ammonia			0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then edit the table below

SECTION B: REMAINING PEST POLLUTANTS

POLLUTANT	RELEASES TO AIR		QUANTITY	
	MWCE	Method Code	T (Total) KG/Year	F (Fugitive) KG/Year
Ammonia			0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then edit the table below

SECTION C: REMAINING POLLUTANT EMISSIONS (AS REQUIRED BY YOUR LICENSE)

POLLUTANT	RELEASES TO AIR		QUANTITY	
	MWCE	Method Code	T (Total) KG/Year	F (Fugitive) KG/Year
Ammonia			0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then edit the table below

Additional Data Requested from Landfill operators

For the purposes of the National Inventory on Greenhouse Gases, landfill operators are requested to provide summary data on landfill gas (methane) flows or utilized on their facilities to accompany the figures for total methane generated. Operators should only report data that confirms CH4 presence to the environment under typical operating conditions (i.e. under regular CH4 production). Please complete the table below:

Landfill:

Please enter summary data on the quantities of methane stored and / or utilized

Total estimated methane generation (as per cells (1) to (4))

Methane stored

Methane utilized in engines

Net methane emissions (as reported in column A above)

T (Total) tonnes		Method Used		Family Total Capacity will be used	
MWCE	Method Code	Description of Disposal	Family Total Capacity will be used	Family Total Capacity will be used	Family Total Capacity will be used
0.0			0.0 (Total Flaring Capacity)	0.0 (Total Flaring Capacity)	0.0 (Total Flaring Capacity)
0.0			0.0 (Total Utilising Capacity)	0.0 (Total Utilising Capacity)	0.0 (Total Utilising Capacity)
0.0			N/A	N/A	N/A

T (Total) tonnes		Method Used		Family Total Capacity will be used	
MWCE	Method Code	Description of Disposal	Family Total Capacity will be used	Family Total Capacity will be used	Family Total Capacity will be used
0.0			0.0 (Total Flaring Capacity)	0.0 (Total Flaring Capacity)	0.0 (Total Flaring Capacity)
0.0			0.0 (Total Utilising Capacity)	0.0 (Total Utilising Capacity)	0.0 (Total Utilising Capacity)
0.0			N/A	N/A	N/A

T (Total) tonnes		Method Used		Family Total Capacity will be used	
MWCE	Method Code	Description of Disposal	Family Total Capacity will be used	Family Total Capacity will be used	Family Total Capacity will be used
0.0			0.0 (Total Flaring Capacity)	0.0 (Total Flaring Capacity)	0.0 (Total Flaring Capacity)
0.0			0.0 (Total Utilising Capacity)	0.0 (Total Utilising Capacity)	0.0 (Total Utilising Capacity)
0.0			N/A	N/A	N/A

T (Total) tonnes		Method Used		Family Total Capacity will be used	
MWCE	Method Code	Description of Disposal	Family Total Capacity will be used	Family Total Capacity will be used	Family Total Capacity will be used
0.0			0.0 (Total Flaring Capacity)	0.0 (Total Flaring Capacity)	0.0 (Total Flaring Capacity)
0.0			0.0 (Total Utilising Capacity)	0.0 (Total Utilising Capacity)	0.0 (Total Utilising Capacity)
0.0			N/A	N/A	N/A

4.2 RELEASES TO WATERS

SECTION A: RELEASES WITH POLLUTANTS

RECEIVED TO WATERS									
USE	WATER BODY	WATER BODY ID	WATER BODY TYPE	WATER BODY CATEGORY	WATER BODY SUBCATEGORY	WATER BODY LOCATION	WATER BODY ADDRESS	WATER BODY CITY	WATER BODY STATE
WATER BODY 1	WATER BODY 1	WATER BODY 1	WATER BODY 1	WATER BODY 1	WATER BODY 1	WATER BODY 1	WATER BODY 1	WATER BODY 1	WATER BODY 1

SECTION B: RELEASES WITH POLLUTANTS

RECEIVED TO WATERS									
USE	WATER BODY	WATER BODY ID	WATER BODY TYPE	WATER BODY CATEGORY	WATER BODY SUBCATEGORY	WATER BODY LOCATION	WATER BODY ADDRESS	WATER BODY CITY	WATER BODY STATE
WATER BODY 1	WATER BODY 1	WATER BODY 1	WATER BODY 1	WATER BODY 1	WATER BODY 1	WATER BODY 1	WATER BODY 1	WATER BODY 1	WATER BODY 1

SECTION C: RELEASES WITH POLLUTANTS

RECEIVED TO WATERS									
USE	WATER BODY	WATER BODY ID	WATER BODY TYPE	WATER BODY CATEGORY	WATER BODY SUBCATEGORY	WATER BODY LOCATION	WATER BODY ADDRESS	WATER BODY CITY	WATER BODY STATE
WATER BODY 1	WATER BODY 1	WATER BODY 1	WATER BODY 1	WATER BODY 1	WATER BODY 1	WATER BODY 1	WATER BODY 1	WATER BODY 1	WATER BODY 1

4.3 RELEASES TO WASTEWATER OR SEWER

SECTION A : #NTR POLLUTANTS

OFFSITE TRANSFER OF POLLUTANTS DESTINED FOR WASTE-WATER TREATMENT OR SEWER									
POLLUTANT		METHOD		QUANTITY					
Pollutant No.	Name	NICE	Method Code	Designation or Description	Emission Point 1	T Total KG/Year		A (Accidental) KG/Year	
						0.0	0.0	0.0	F (Fugitive) KG/Year

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

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

OFFSITE TRANSFER OF POLLUTANTS DESTINED FOR WASTE-WATER TREATMENT OR SEWER									
POLLUTANT		METHOD		QUANTITY					
Pollutant No.	Name	NICE	Method Code	Designation or Description	Emission Point 1	T Total KG/Year		A (Accidental) KG/Year	
						0.0	0.0	0.0	F (Fugitive) KG/Year

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

4.4 RELEASES TO LAND

| PRTR# : p0503 | Facility Name : Bord na Mona Allen Peat Limited | Filename : p0503_2009(1).xls | Return Year : 2009 |

SECTION A : PRTR POLLUTANTS

RELEASES TO LAND				
Pollutant No.	POLLUTANT	METHOD Municipal Land Landfill Other (specify in Description)	QUANTITY	
			T (Total) KG/Year	A (Accidental) KG/Year
01	Heptachlor Epoxide	Landfill	0.0	0.0

Emission Point 1

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

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

RELEASES TO LAND				
Pollutant No.	POLLUTANT Name	METHOD Municipal Land Landfill Other (specify in Description)	QUANTITY	
			Emission Point 1	Emission Point 2
		Method Code	T (Total) KG/Year	A (Accidental) KG/Year
			0.0	0.0

Emission Point 1

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

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* Select a row by double-clicking the Description of Wastes then click the delete button



**Annual Environmental Report 2007
P0503-01**

March 2008

Contents

1.0 Introduction

- 1.1 IPC Licence Register No
- 1.2 Name & Location of Site
- 1.3 Brief Description of Activities
- 1.4 Environmental Management of the Company
- 1.5 Environmental Policy Statement

2.0 Summary Information

2.1 Emissions to Water Summary

- 2.1.1 Silt Pond Emissions
- 2.1.2 Yard Discharges
- 2.1.3 Composite Sampler Report
- 2.1.4 Emissions to Water Non-compliance's

2.2 Emissions to Air Summary

- 2.2.1 Dust Monitoring
- 2.2.2 Emissions to Air Non-compliance's

2.3 Waste Arising

- 2.3.1 Non-Hazardous Waste
- 2.3.2 Hazardous Waste

2.4 Energy and Water Consumption

- 2.4.1 Energy Consumption

2.5 Environmental Incidents and Complaints

- 2.5.1 Incidents
- 2.5.2 Complaints

3.0 Management of the Activity

- 3.1 Environmental Management Programme Report
- 3.2 Environmental Management Programme Proposal
- 3.3 Environmental Expenditure

4.0 Licence Specific Reports

- 4.1 Surface Water Discharge Monitoring Location Programme Review
- 4.2 Bunding Programme
- 4.3 Boiler Combustion Efficiency
- 4.4 Resource Consumption Summary
- 4.5 Report on de-silting Programme
- 4.6 Bog Development and Operational Programme
- 4.7 Bog Rehabilitation Report
- 4.8 Archaeological Report

5.0 Summary

Appendix 1: Emissions to Water Monitoring Results. (Bogs)

Appendix 2: Emissions to Water Monitoring Results. (Yards)

Appendix 3: Emissions to Water Monitoring Results. (Composite)

Appendix 4: Emissions to Air Monitoring Results.

Appendix 5: De-silting Programme Review

Appendix 6: AER & PRTR Data

1.0 Introduction

1.1 IPPC Licence No 503-01

1.2 Name & Location of Site

Name: Bord na Mona Energy Limited.

Address: Derrygreenagh Works,
Rochfortbridge,
Mullingar,
Co. Westmeath.

Telephone No: 044 9222181 Fax No. 044 9222344

Contact Name: Eamonn Mulhall

Position: Resource Manager

National Grid Reference: E249450 N238140

1.3 Description of Activities

Peat Milling Operations.

For milled peat production the bog is laid out in a series of rectangular fields of varying length and 15m wide with drains located between. There are essentially four operations involved in milled peat production:

Milling.

Harrowing.

Ridging.

Harvesting.

Milling.

Special milling machines work there way along the fields, milling approximately 15mm of peat of the top of the bog in a pass.

Harrowing

In the course of drying, the milled peat is turned a number of times to avail of the drying conditions. This is achieved with a machine called a harrow. The milled peat is harrowed until its moisture content is down to approximately 40-50%, which can take up to two to three days, weather depending.

Ridging

The dry peat is then scraped into long ridges running down the centre of each field. This is done with a ridger, a machine consisting of a series of blades in the shape of a v that opens the full width of the field.

Harvesting

During harvesting every eleventh field is used to stockpile the peat, with this field receiving the milled peat from the five fields either side.

The milled peat is then transported via the existing network of peatland railways or via road to one of the following locations.

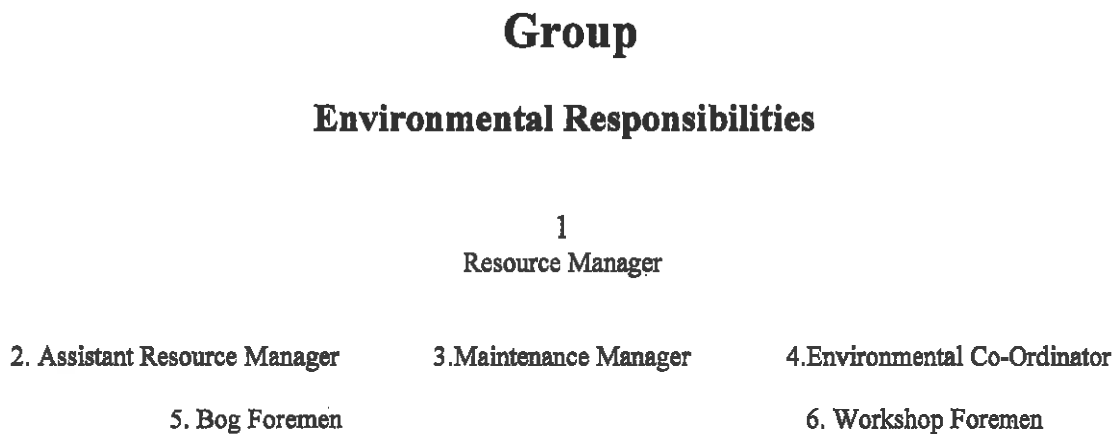
Power station

Horticultural Factory.

Briquette Factory.

1.4 Environmental Management of the Company

The organisational structure within the Allen Group is presented in the flow chart below.



- (1) Overall environmental responsibilities
- (2) All production and transport related issues
- (3) Machine maintenance
- (4) Co-ordinating environmental affairs
- (5) Environmental issues relating to peatlands
- (6) Environmental issues relating to Workshops

1.5 Environmental Policy



Bord na Mona Energy Limited is a commercial semi-state body with responsibility to develop Ireland's peat resources in the national interest.

Bord na Mona Energy Limited is committed to gather and make available information on all aspects of its environmental impact and to help improve understanding among the public generally of its role and the importance of Irish peatlands.

Bord na Mona Energy Limited recognises the importance of peatland conservation.

Bord na Mona Energy Limited will leave behind all areas it owns as either an economically or socially integrated resource of a high environmental value.

Bord na Mona Energy Limited seeks to conduct all aspects of its business in an environmentally sensitive value.

Bord na Mona Energy Limited will establish an environmental management system specifically addressing the following impacts.

1. Discharges to water.
2. Emissions to atmosphere.
3. Waste disposal.
4. Use of natural resources.
5. Noise, vibration, odour, dust and visual effects.
6. Natural environment and eco-system.

The environmental management system will be monitored, maintained and continually improved.

A system of regular environmental audits will be put in place.

Bord na Mona Energy Limited will continue research and development into all aspects of its environmental impact.

This statement is published and is available at all locations within the division and its contents are brought to the attention of all employees.

2.0 Summary Information

2.1 Emissions to Water Summary

2.1.1 Silt Pond Emissions

Comment

Surface water monitoring was carried out four times during the reporting period. In total analysis was carried out at seven different locations: These locations are as follows, Derries @ SW2, Rathdrum @ SW10, Ballykeane @ SW14, Cloncreen @ SW33, Derrylea @ SW43, Blackriver @ SW65 and Ballydermot @ SW66. The parameters measured during each sampling event were as follows.

Total Phosphorus, Total Solids, Suspended Solids, pH, Ammonia, Colour and COD. In general results were constant across all parameters at each monitoring location. May was the wettest month of 2006 with rainfall of 151mm being recorded, while June was the driest with 13.2mm recorded.

The quarterly grab sampling programme proved to be 100% compliant for the year as was the 2005 and 2006 regimes.

pH values were between 7.1 and 8.7, with normal emission limit values being of the range 6 and 9. The graph clearly shows consistent trends for the period.

Suspended solids varied from 5mg/l to 53mg/l and would depend on activities (piping, ditching) etc in the catchments at the time of sampling. With the exception of location SW65, quarter 1, which did not constitute a non compliance, all other results were within the licence limit of 35mg/l.

Ammonia values ranged from 0.05mg/l and 2.44mg/l. The I/PV for A3 waters are of the range 4mg/l. It is however not unusual for surface waters emanating from production peatlands to be slightly elevated.

COD readings were slightly elevated during the reporting period. The I/PV for A3 waters are of the range 40mg/l. All locations will be watched closely and any continuing elevated COD trends will be investigated.

Flow rates were elevated in the first and third quarter monitoring events. The third quarter event can be expected as July was the wettest month in 2007 with 144.9mm of rainfall recorded. This elevated flow did not appear to have any impact on suspended solid analysis for the period.

Total Phosphorus values ranged from 0.05 mg/l to 0.17 mg/l. These results would not cause any concern in relation to phosphorus loadings.

Currently new sampling locations are being assessed for suitability. Once finalised, a proposal to change sampling locations will be submitted to the Agency for approval.

Surface Water Results are attached in Appendix 1.

2.1.2 Yard Discharges

Comment

Yard runoff monitoring took place at five locations during the reporting period. Sampling frequency was monthly and COD was the parameter requiring analysis. Results ranged from 10 mg/l to 244 mg/l. The 244mg/l was returned from Timahoe SWE-1 and appears to have been a one off when comparing previous and subsequent results. The location will be closely monitored in 2008.

As is evident from the graph, on several occasions no sample was available on the day of sampling. This was due to no flow at the emission point as the catchments are quite small. Sampling will continue at the same locations during 2007.

Yard Emission Results are attached in Appendix 2.

2.1.3 Composite Sampler Report

Comment

The composite sampler has been operating at Ticknevin Bog SW51A during the reporting period.

The parameters measured were Total Phosphorus, Total Solids, Suspended Solids, pH, Ammonia, Colour and COD, with Suspended solids being the only parameter with an emission limit value (35mg/l). July was the wettest month of 2007 with rainfall of 144.9mm being recorded, while April was the driest with 17.4mm recorded. In general results were satisfactory with one non-compliances being recorded for the period.

Composite Sampler Results are contained in Appendix 3.

2.1.4 Emissions to Water Non-compliance's

There was one non-compliance at the composite sampler in Ticknevin. The details of which were forwarded to the Agency.

Type	Non-Compliances	Location / SW Nr.
Composite	1	Ticknevin SW 51A
Quarterly Grab	0	
Monthly Yard	NA	
Totals	1	

2.2 Emissions to Air

2.2.1 Dust Monitoring

Comment

Dust monitoring was carried out on three occasions between April and July. Each monitoring event lasted between 28 and 32 days and the Bergerhoff method of collection was used.

The monitoring locations were as follows, Ballykeane DM01, Killinagh DM02, Derrybrennan DM03 and Moore Dwelling DM04. The emission limit value was exceeded once during the period at DM04 although no complaints were received at the time.

However one complaint of a dust nature was received in relation to DM01 which proved to be fully compliant during the monitoring regime.

Sampling will continue at the same locations during 2008.

Dust monitoring results are contained in appendix 4.

2.2.2 Emissions to Air Non-compliance's

There was one non-compliance in relation to dust nuisance at Ballykeane bog. The Agency was informed of this and corrective action taken.

Location / DM N°	Non-Compliances
Ballykeane DM-04	1
Total	1

2.3 Waste Arisings

2.3.1 Non-Hazardous Waste

Non Hazardous Waste Data

Licence: P0503-01

Works: Allen

Type	Tonnes	EW Code	Contractor	Licence Nr
Municipal waste	5.00	20 03 01	AES	053/OY/39/02
Municipal waste	6.24	20 03 01	AES	053/OY/39/02
Polyethylene	636.04	02 01 04	Apec Plastics	205/2005
Scrap Steel	129.19	17 04 07	Hammond Lane	050/OY/162/04
Silt Pond Cleanings	2301.54	01 01 02	Bord na Mona	IPPC P 0503
Peat Screenings	1,535	01 04 99	Bord na Mona	IPPC P 0503
Totals	4,613.01			

2.3.2 Hazardous Waste

Hazardous Waste Data

Licence: P0503-01

Works: Allen

Type	Tonnes	EW Code	Contractor	Licence Nr	Destination
Waste Oil	2.20	13 02 05	Enva Ireland Ltd Portlaoise	184-1	Portlaoise
Oil Filters	0.77	16 01 07	Enva Ireland Ltd Portlaoise	184-1	Portlaoise
Oily Rags	0.48	15 02 02	Enva Ireland Ltd Portlaoise	184-1	Portlaoise
Lead Acid Batt	2.00	16 06 01	Enva Ireland Ltd Portlaoise	184-1	Portlaoise
Parts Wash	2.28	11 01 13	Safety Kleen, Tallaght, Dublin	99-1	Dublin
Asbestos	17.84	17 06 05	Rialta Environmentals	192-1	Dublin
Total	25.57				

2.4 Energy and Water Consumption

2.4.1 Energy

The table below shows energy consumption for the year. Water is not included, as it is only used for offices, canteens and workshops on a domestic scale. Diesel use is up on 2006 as there was increased production in 2007.

Energy Consumption

Licence: P0503-01				
Works: Allen				
Units	Diesel (Litres)	Petrol (Litres)	Electricity (Units)	Peat Briquettes (Tonnes)
Totals	1493960.2	0	815658	20
MW Hours	14629.5	0	815.658	100
Total MW Hours	15545.1			

2.5 Environmental Incidents and Complaints

2.5.1 Incidents.

There was one incident during the year this related to a fire at Ballydermot Workshop. The agency was informed and corrective action taken.

Environmental Incidents	
	Number
Incidents	1
Requiring corrective action	
Category	
Water	
Air	
Procedural	
Miscellaneous	1
Total	1

2.5.2 Complaints

There was just one complaint during the year. This related to a dust complaint from Ballykeane bog. The agency was informed of this.

Environmental Complaints	
	Number
Complaints	1
Requiring corrective action	1
Category	
Water	
Air	1
Procedural	
Miscellaneous	
Total	1

3.0 Management of the Activity

3.1 Environmental Management Programme Report 2007

Project	Description & Status
Project 1: Reduction of fugitive dust emissions.	Training. Continue to train all new employees in environmental matters. Copy environmental video to disk and distribute more widely. All new employees will be trained during the year. Status The training video was successfully transferred onto DVD and distributed to all Licence holders. The DVD was also edited to include new improved poly stripping and rolling techniques. Hydraulic Harrows. Continue to supply hydraulic harrows. Prioritising dust sensitive locations. There is one Hydraulic Harrow in operation at the moment we will continue to monitor the situation regarding introducing any more. Status One hydraulic harrow was introduced at Ballykeane bog in 2007. Headland Peat Collection. Continue with the collection of headland peat, particularly at dust sensitive locations. Supply more headland peat collection machinery as required and research efficient ways of collecting such peat for use as a saleable product. Status As the production season was greatly hampered by inclement weather, July 114.9mm and August 119.6mm of rainfall, headland peat dust was not an issue.
Project 2: Minimisation of suspended solids	On Site Inspections. A full programme of internal audits will be carried out as soon as production commences. Particular emphasis will be put on cleaner production procedures, milling, harrowing, ridging, harvesting and loading. Status A comprehensive internal audit took place, which proved very successful. Follow up audits were subsequently carried out to ensure that initial findings were addressed and closed out.
Project 3: Effective spill leak management of mobile fuelling units.	On Site Inspections. As part of the above project, service trains will also be prioritised with a fitter accompanying the auditor during inspections to highlight any risks or potential risks that may occur.

	Status In conjunction with the above, the fitter at each location audited was present to inspect the service train. Any repairs that were required were identified and rectified.
Project 4: Fire Prevention.	Fire Patrols. There will be extra emphasis on fire patrols this coming production season. Research on improved fire fighting techniques will also be investigated. The newly adopted Fire and Environmental Plan will be communicated to all personnel. Status The fire prevention plan was communicated to all personnel
Project 5: Collection storage and reuse of polyethylene.	Identify Recyclers. Continue with the recycling of polyethylene. The sourcing of more recycling contractors will be ongoing. Status During the year a total of 636 tonnes of polythene has been sent for recycling to Apec Plastics Co. Kildare.
Project 6: Provision of measures to protect Dust Sensitive Areas.	Planting. Planting is ongoing as required, with areas in the periphery of production bogs that are being developed for housing being prioritised. Status No planting took place in 2007.

3.2 Environmental Management Programme Proposal 2008

Project	Description & Status
Project 1: Reduction of fugitive dust emissions.	Training. Train all employees in environmental matters. Training will be by means of the screening of an environmental DVD, followed by a power point presentation. Hydraulic Harrows. There are no Hydraulic Harrows programmed for delivery for 2008 as there are currently ten in place with other licences being prioritised. Headland Peat Collection. Continue with the collection of headland peat, particularly at dust sensitive locations.
Project 2: Waste Management	On Site Inspections. A full programme of internal audits will be carried out as soon as production commences. This will be an annual exercise with the 2008 audit placing more emphasis on waste management.
Project 3: Minimisation of Suspended Solids.	Training. Train all employees in environmental matters. Training will be by means of the screening of an environmental DVD, followed by a power point presentation.
Project 4: Effective spill leak management of mobile fuelling units.	Research and Development. The identification and ultimately the introduction of mobile fuelling units which will enhance the spill / leak management of fuel oils. Increased bund provisions are planned for 2008, as well as two new fuel service wheeled wagons which contain banded tanks. In addition to this, one new rail operated Fuel Service Wagon will be introduced in Allen.
Project 5: Collection storage and reuse of polyethylene.	Identify Recyclers. Continue with the recycling of polyethylene. The sourcing of more recycling contractors will be ongoing. An additional poly stripper is also scheduled for 2008.
Project 6: Provision of measures to protect Dust Sensitive Areas.	Planting. Ongoing Planting is ongoing as required, with areas in the periphery of production bogs that are being developed for housing being prioritised.

3.3 Environmental Expenditure

Environmental Expenditure	
Description	Cost €
Capital Costs	€ 7,000
Silt Control	€208,672.22
Analytical & Consultancy Costs	€ 9225.61
EPA Fees	€ 7467.29
Bog Rehabilitation	€ 15,922.66
Total	€ 248,287.78

4.0 Licence Specific Reports

4.1 Surface Water Discharge Monitoring Location Programme Review

It is intended to change the monitoring locations in the forthcoming year. The Agency will be informed of the new monitoring locations.

4.2 Bunding Programme

All bunds in the licence area were integrity tested in February and March. The two bunds at Ballydermot and one at Ballycon workshops failed the test. Remedial work has been carried out at Ballycon and the other bunds are detailed to be repaired and retested in the near future. Results will be retained on file.

4.3 Boiler Combustion Efficiency

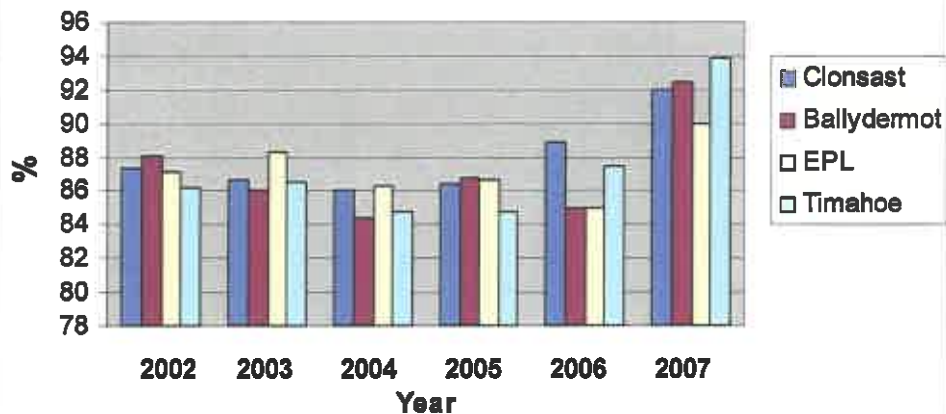
All boilers were tested in the licence area and results are shown in the table beneath. As you can see results are slightly up on last year.

Licence: P0503-01

**Works:
Allen**

Boiler Location	% Efficiency 2002	% Efficiency 2003	% Efficiency 2004	% Efficiency 2005	% Efficiency 2006	% Efficiency 2007
Clonsast	87.4	86.7	86.1	86.4	88.88	92
Ballydermot	88.1	86.1	84.4	86.8	85.04	92.5
EPL	87.1	88.3	86.3	86.6	85.01	90
Timahoe	86.2	86.5	84.7	84.7	87.5	93.9

Boiler Efficiency Chart



4.4 Resource consumption summary

Resource Consumption			
Licence: P0503-01			
Works: Allen			
Product	Tonnes Produced	Tonnes Sold	Customer
Milled Peat	953,263	876,255	ESB
Moss	0	11,295	Horticulture
Turf	6873	6873	Private
Other	0	0	N/A
Totals	960136	894423	N/A

Proposed Production 2008	
Licence: P0503-01	
Works: Allen	
Product	Proposed Target
Milled Peat	696,091
Moss	113,869
Turf	6,880
Other	0
Totals	816,840

4.5 De-Silting Report

Where possible all silt ponds were cleaned at least once during the year. Due to a dispute with a landowner ponds in the Cloncreen area were only cleaned once, however that dispute is now resolved to our satisfaction and in fact the ponds have been cleaned since the new year began.

Silt pond cleaning details are contained in appendix 5.

4.6 Bog Development and Operational Programme.

Some bog development took place in Derrylea bog area in 2007. This consisted of drainage and bog levelling. The area developed was approximately 20ha.

4.7 Bog Rehabilitation Report

Bog rehabilitation took place in Clonsast, Derrycastle, Mount Lucas and Garryhinch during 2007. This involved collection of scrap rail and levelling of old stock piles.

4.8 Archaeological Report

Allen - Excavation work at Ballykean and Lullymore East bogs. One ongoing site in Ballykean and 2 sites in Lullymore East.

5.0 Summary

With regard to environmental compliance at the Allen Group of Bogs, there was no exceedence of the emission limit value in relation to suspended solids from the quarterly grab sampling of the silt ponds. There was however one non-compliance at our composite sampler due to drainage upstream. As always we will endeavour to keep our silt pools cleaned as often as required.

There was one dust complaint during the year at Ballykeane Bog and one non-compliance at one other monitoring location. We put a new Hydraulic Harrow into operation in Ballykeane to try and help dust suppression which brings to ten Hydraulic Harrows in all in the 503 Licence area.

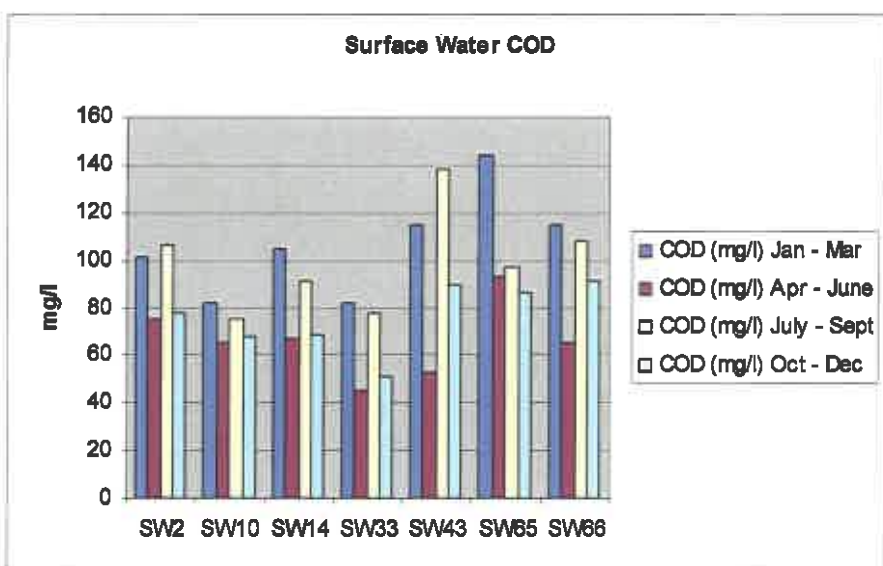
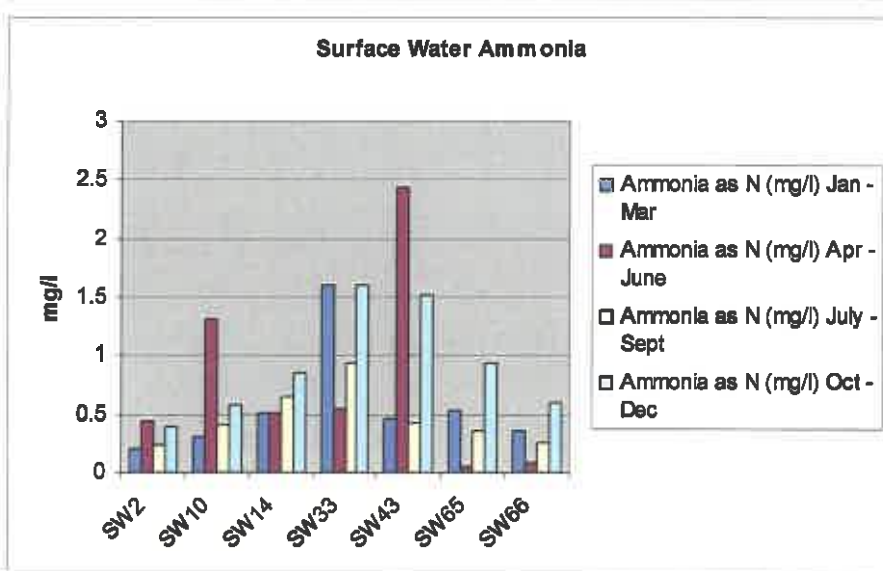
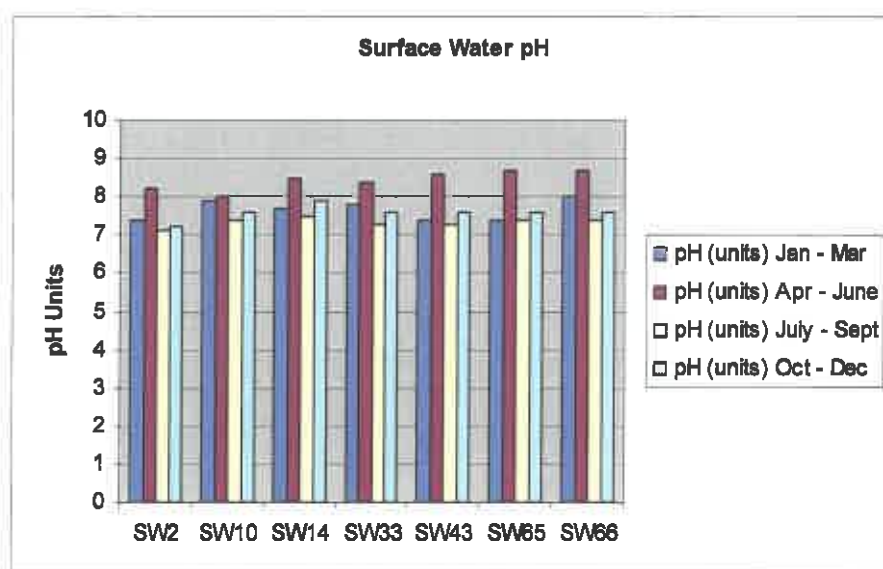
The staff awareness through training and involvement in the operation of the licence has also improved immensely. A full programme of training and awareness is due to be conducted at the works in 2008 and should be completed before production and has targeted all personnel ie. Office, Workshop, Transport and Production.

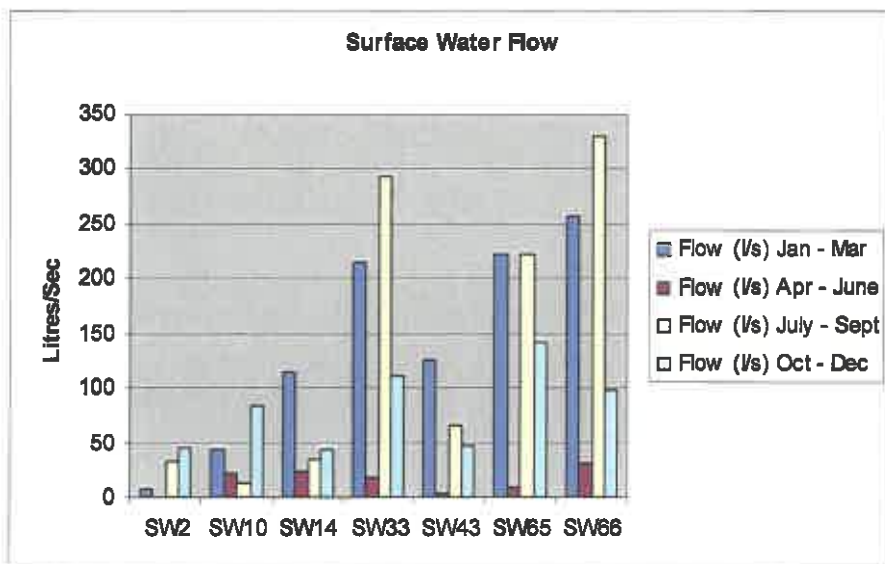
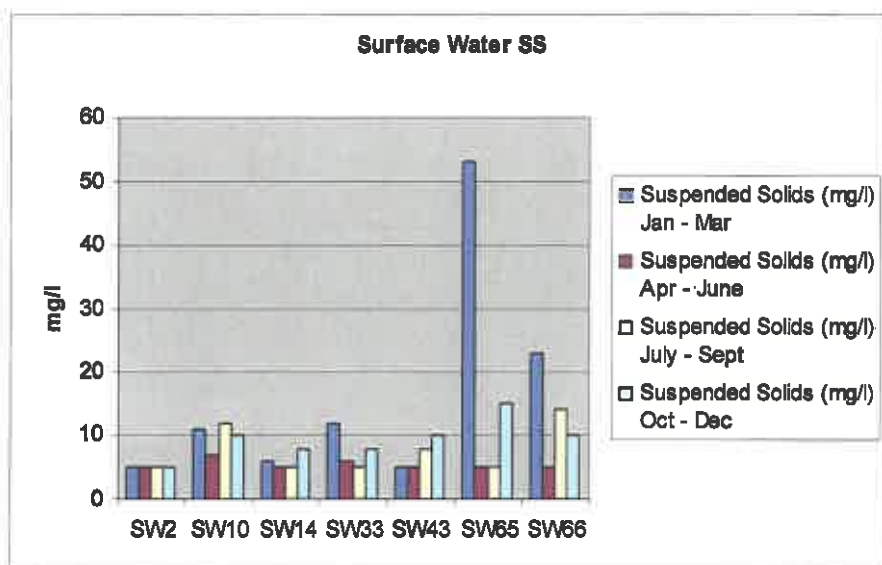
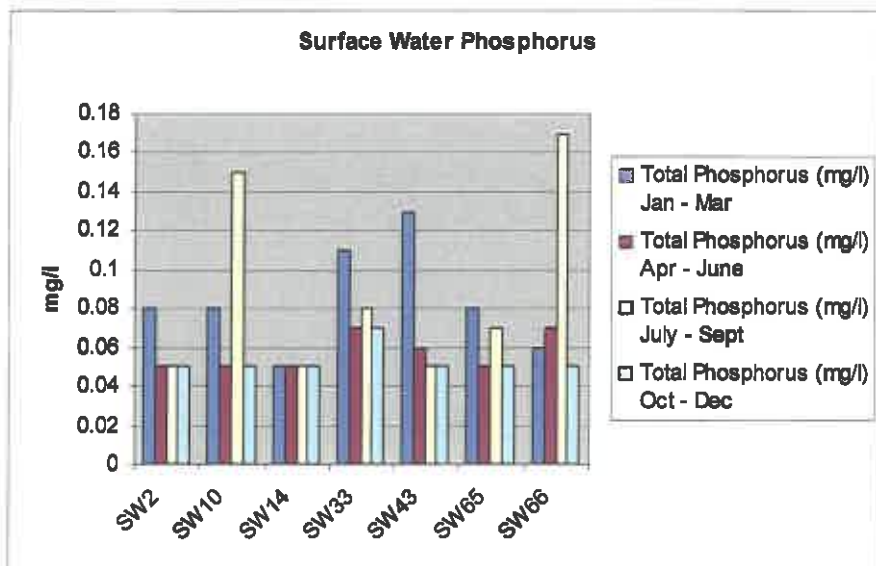
Bord na Mona are project partners of the South Eastern River Basin District Management, as set up under the Water Framework Directive.
Bord na Mona are also involved in catchment management on the River Barrow.

Bord na Mona Energy Ltd would like to take this opportunity to advise the Environmental Protection Agency of its continued commitment to improving its environmental performance by adopting cleaner production methods and improving its environmental protection measures.

APPENDIX 1

Surface Water Discharge Monitoring Results Bogs





APPENDIX 2

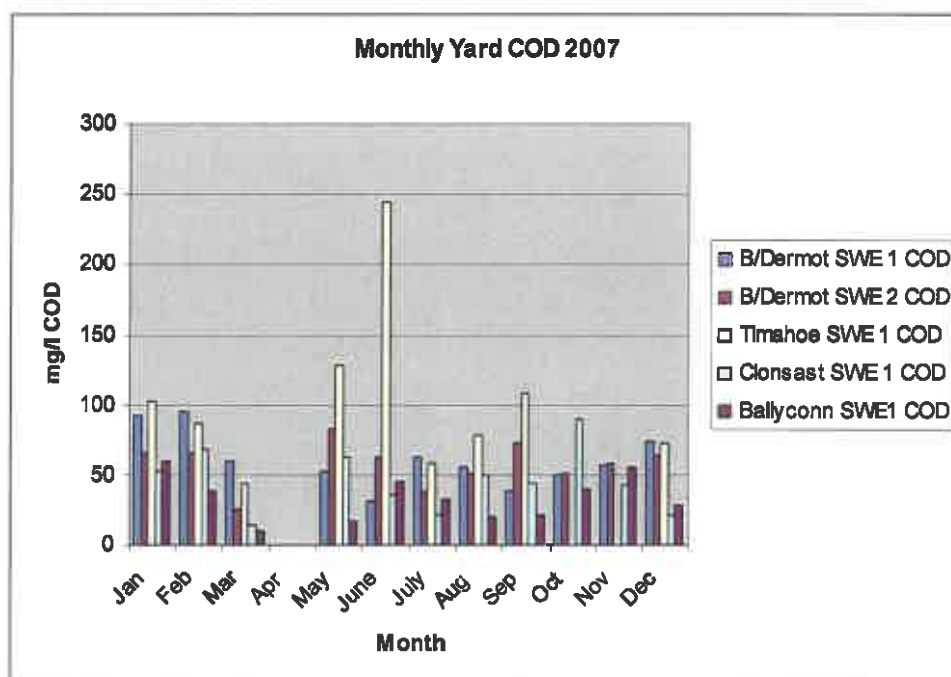
Surface Water Discharge Monitoring Results Yards

Yard Discharge Results

Licence: P0503-01

Works: Allen

Month	B/Dermot SWE 1 COD	B/Dermot SWE 2 COD	Timahoe SWE 1 COD	Clonsast SWE 1 COD	Ballyconn SWE1 COD
Jan	92	66	103	53	60
Feb	95	65	87	68	39
Mar	60	25	44	14	10
Apr	0	0	0	0	0
May	52	83	128	62	17
June	31	63	244	36	46
July	62	39	58	22	32
Aug	55	51	78	50	20
Sep	38	72	108	44	22
Oct	50	51	0	90	40
Nov	57	58	0	42	56
Dec	74	64	73	22	28



APPENDIX 3

Surface Water Discharge Monitoring Results Composite

Bord Na Mona Energy Ltd, Allen Group, Rochforbsbridge, Co Westmeath
Composite Sampler Results Licence 503

Month	pH	COD mg/l	Ammonia as N mg/l	Parameters		Colour Pt Co	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals	
				Total Phosphorus mg/l	Suspended Solids mg/l	Total Solids mg/l				Total Phosphorus Kg/Day	Suspended Solids Kg/Day
January 2007											
1					IS	IS		0.00	0.00	0.00	#VALUE!
2					IS	IS		0.00	0.00	0.00	#VALUE!
3	7.7	50	0.12	0.06	7	280	217	0.00	0.00	0.00	0.00
4					IS	IS		0.00	0.00	0.00	#VALUE!
5					IS	IS		0.00	0.00	0.00	#VALUE!
6					IS	IS		0.00	0.00	0.00	#VALUE!
7					IS	IS		0.00	0.00	0.00	#VALUE!
8					IS	IS		0.00	0.00	0.00	#VALUE!
9					IS	IS		0.00	0.00	0.00	#VALUE!
10	7.1	85	0.14	0.25	39	178	217	0.00	0.00	0.00	0.00
11					IS	IS		0.00	0.00	0.00	#VALUE!
12					IS	IS		0.00	0.00	0.00	#VALUE!
13					IS	IS		0.00	0.00	0.00	#VALUE!
14					IS	IS		0.00	0.00	0.00	#VALUE!
15					IS	IS		0.00	0.00	0.00	#VALUE!
16					IS	IS		0.00	0.00	0.00	#VALUE!
17					IS	IS		0.00	0.00	0.00	#VALUE!
18	7.8	89	0.3	0.07	5	182	194	0.00	0.00	0.00	0.00
19					IS	IS		0.00	0.00	0.00	#VALUE!
20					IS	IS		0.00	0.00	0.00	#VALUE!
21					IS	IS		0.00	0.00	0.00	#VALUE!
22					IS	IS		0.00	0.00	0.00	#VALUE!
23					IS	IS		0.00	0.00	0.00	#VALUE!
24	7.2	83	0.18	0.06	5	286	201	0.00	0.00	0.00	0.00
25					IS	IS		0.00	0.00	0.00	#VALUE!
26					IS	IS		0.00	0.00	0.00	#VALUE!
27					IS	IS		0.00	0.00	0.00	#VALUE!
28					IS	IS		0.00	0.00	0.00	#VALUE!
29					IS	IS		0.00	0.00	0.00	#VALUE!
30					IS	IS		0.00	0.00	0.00	#VALUE!
31	7.8	80	0.14	0.05	5	318		0.00	0.00	0.00	0.00

IS: Insufficient amount of sample due to low flow or sampler malfunction.

Bord Na Mona Energy Ltd, Allen Group, Rochfordsbriidge, Co Westmeath
Composite Sampler Results Licence 503

Month	Parameters			Daily Totals		
February 2007	pH	COD mg/l	Ammonia as N mg/l	Total Phosphorus mg/l	Suspended Solids mg/l	Total Solids mg/l
1					IS	IS
2					IS	IS
3					IS	IS
4					IS	IS
5					IS	IS
6					IS	IS
7	8.1	62	0.31	0.05	5	350
8					IS	128
9					IS	IS
10					IS	IS
11					IS	IS
12					IS	IS
13					IS	IS
14					IS	IS
15	8.2	56	0.23	0.05	14	313
16					IS	164
17					IS	IS
18					IS	IS
19					IS	IS
20					IS	IS
21					IS	IS
22	7.7	82	0.22	0.06	9	284
23					IS	186
24					IS	IS
25					IS	IS
26					IS	IS
27					IS	IS
28					IS	IS

IS: Insufficient amount of sample due to low flow or sampler malfunction.

Bord Na Mona Energy Ltd, Allen Group, Rochfordsbridge, Co Westmeath

Composite Sampler Results Licence 503

Month	pH	COD mg/l	Ammonia as N mg/l	Parameters		Total Solids mg/l	Colour Pt Co units	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals	
				Total Phosphorus mg/l	Suspended Solids mg/l						Total Phosphorus Kg/Day	Suspended Solids Kg/Day
March 2007	8.1	78	1.11	0.23	5	188	242		0.00	0.00	0.00	0.00
1					IS	IS			0.00	0.00	#VALUE!	#VALUE!
2					IS	IS			0.00	0.00	#VALUE!	#VALUE!
3					IS	IS			0.00	0.00	#VALUE!	#VALUE!
4					IS	IS			0.00	0.00	#VALUE!	#VALUE!
5					5	162			0.00	0.00	0.00	0.00
6					5	178			0.00	0.00	0.00	0.00
7	7.8	52	0.8	0.05	6	122	161	10130600	526.79	8.10	0.51	0.00
8					5	188		6550469	0.00	0.00	0.00	0.00
9					IS	IS		2219369	0.00	0.00	#VALUE!	#VALUE!
10					IS	IS		897610	0.00	0.00	#VALUE!	#VALUE!
11					IS	IS		897610	0.00	0.00	#VALUE!	#VALUE!
12					IS	IS		897610	0.00	0.00	#VALUE!	#VALUE!
13					IS	IS		897610	0.00	0.00	#VALUE!	#VALUE!
14	7.8	54	1.41	0.07	5	208	226	897610	48.47	1.27	0.06	0.00
15					IS	IS		897610	0.00	0.00	#VALUE!	#VALUE!
16					IS	IS		897610	0.00	0.00	#VALUE!	#VALUE!
17					IS	IS		897610	0.00	0.00	#VALUE!	#VALUE!
18					IS	IS		897610	0.00	0.00	#VALUE!	#VALUE!
19					IS	IS		897610	0.00	0.00	#VALUE!	#VALUE!
20					IS	IS		897610	0.00	0.00	#VALUE!	#VALUE!
21	7.9	76	1.59	0.07	5	186	180	897610	68.22	1.43	0.06	0.00
22					IS	IS		897610	0.00	0.00	#VALUE!	#VALUE!
23					IS	IS		897610	0.00	0.00	#VALUE!	#VALUE!
24					IS	IS		897610	0.00	0.00	#VALUE!	#VALUE!
25					IS	IS		897610	0.00	0.00	#VALUE!	#VALUE!
26					IS	IS		897610	0.00	0.00	#VALUE!	#VALUE!
27					IS	IS		897610	0.00	0.00	#VALUE!	#VALUE!
28	8	87	1.68	0.06	6	218	163	897610	78.09	1.51	0.05	0.00
29					5	222		897610	0.00	0.00	0.00	0.00
30					5	285		897610	0.00	0.00	0.00	0.00
31					50	354		897610	0.00	0.00	0.00	0.00

IS: Insufficient amount of sample due to low flow or sampler malfunction.

Bord Na Mona Energy Ltd, Allen Group, Rochfordsbidge, Co Westmeath
Composite Sampler Results Licence 503

Month	Parameters			Flow			Daily Totals						
April 2007	pH	COD mg/l	Ammonia as N mg/l	Total Phosphorus mg/l	Suspended Solids mg/l	Total Solids mg/l	Colour Pt Co units	Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Total Phosphorus Kg/Day	Suspended Solids Kg/Day	Total Solids Kg/Day
1					5	328		897610	0.00	0.00	0.00	0.00	0.00
2					5	220		897610	0.00	0.00	0.00	0.00	0.00
3					5	258		897610	0.00	0.00	0.00	0.00	0.00
4	8.3	50	1.25	0.05	5	292	140	1458427	72.92	1.82	0.07	0.00	0.00
5					5	292		889383	0.00	0.00	0.00	0.00	0.00
6					7	336		1031914	0.00	0.00	0.00	0.00	0.00
7					5	294		1438673	0.00	0.00	0.00	0.00	0.00
8					IS	IS		1296429	0.00	0.00	0.00	#VALUE!	#VALUE!
9					IS	IS		828481	0.00	0.00	0.00	#VALUE!	#VALUE!
10					5	320		857125	0.00	0.00	0.00	0.00	0.00
11	8.1	102	0.73	0.05	5	338	150	875638	89.32	0.64	0.04	0.00	0.00
12					5	344		1609853	0.00	0.00	0.00	0.00	0.00
13					5	344		1695088	0.00	0.00	0.00	0.00	0.00
14					5	328		1913381	0.00	0.00	0.00	0.00	0.00
15					5	360		1460247	0.00	0.00	0.00	0.00	0.00
16					5	354		1564871	0.00	0.00	0.00	0.00	0.00
17					5	360		1916151	0.00	0.00	0.00	0.00	0.00
18	8.5	70	0.78	0.06	5	354	158	2132283	149.26	1.66	0.13	0.00	0.00
19					5	374		2269341	0.00	0.00	0.00	0.00	0.00
20					5	368		2391040	0.00	0.00	0.00	0.00	0.00
21					5	378		2001597	0.00	0.00	0.00	0.00	0.00
22					5	416		2289891	0.00	0.00	0.00	0.00	0.00
23					5	360		2798147	0.00	0.00	0.00	0.00	0.00
24					5	338		2178980	0.00	0.00	0.00	0.00	0.00
25	8.1	71	0.43	0.05	5	298	188	1557175	110.56	0.67	0.08	0.00	0.00
26					5	340		3477374	0.00	0.00	0.00	0.00	0.00
27					5	319		1762784	0.00	0.00	0.00	0.00	0.00
28					5	334		2311142	0.00	0.00	0.00	0.00	0.00
29					5	344		1873448	0.00	0.00	0.00	0.00	0.00
30					5	332		1443365	0.00	0.00	0.00	0.00	0.00

IS: Insufficient amount of sample due to low flow or sampler malfunction.

Bord Na Mona Energy Ltd, Allen Group, Rochfordsbridge, Co Westmeath
Composite Sampler Results Licence 503

Month	pH	COD mg/l	Ammonia as N mg/l	Parameters		Colour Pt Co	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals		Suspended Solids Kg/Day	Total Solids Kg/Day
				Total Phosphorus mg/l	Suspended Solids mg/l	Total Solids mg/l				Phosphorus Kg/Day	0.00		
June 2007													
1					IS	IS	858298	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
2					IS	IS	1325981	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
3					IS	IS	1325981	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
4					IS	IS	1325981	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
5					IS	IS	1325981	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
6	8	123	0.93	0.13	10	252	1325981	163.10	1.23	0.17	0.17	0.00	0.00
7					IS	IS	1325981	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
8					IS	IS	1325981	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
9					IS	IS	1325981	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
10					IS	IS	1325981	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
11					IS	IS	1325981	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
12					IS	IS	1325981	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
13	7.6	142	1.17	0.23	26	158	1325981	188.29	1.55	0.30	0.30	0.00	0.00
14					IS	IS	1325981	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
15					IS	IS	1325981	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
16					IS	IS	1325981	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
17					IS	IS	1325981	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
18					IS	IS	1325981	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
19					IS	IS	1325981	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
20	7.2	136	1.56	0.07	11	194	1325981	180.33	2.07	0.09	0.09	0.00	0.00
21					IS	IS	1325981	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
22					5	388	1325981	0.00	0.00	0.00	0.00	0.00	0.00
23					7	402	1325981	0.00	0.00	0.00	0.00	0.00	0.00
24					7	422	1325981	0.00	0.00	0.00	0.00	0.00	0.00
25					7	432	1325981	0.00	0.00	0.00	0.00	0.00	0.00
26					6	444	1476550	0.00	0.00	0.00	0.00	0.00	0.00
27	8.6	66	0.55	0.05	7	378	525290	34.67	0.29	0.03	0.03	0.00	0.00
28					5	236	513025	0.00	0.00	0.00	0.00	0.00	0.00
29					5	210	710967	0.00	0.00	0.00	0.00	0.00	0.00
30					5	196	1758056	0.00	0.00	0.00	0.00	0.00	0.00

IS: Insufficient amount of sample due to low flow or sampler malfunction.

Composite Sampler Results

IS: Insufficient amount of sample due to low flow or sampler malfunction.

Bord Na Mona Energy Ltd, Allen Group, Rochforbsbridge, Co Westmeath
Composite Sampler Results Licence 503

Month	pH	COD mg/l	Ammonia as N mg/l	Parameters		Total Solids mg/l	Suspended Solids mg/l	Colour Pt Co units	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals	
				Phosphorus mg/l	Total mg/l							Phosphorus Kg/Day	Suspended Solids Kg/Day
August 2007													
1						290	5		1281749	0.00	0.00	0.00	0.00
2						270	6		1246271	0.00	0.00	0.00	0.00
3						290	5		1176092	0.00	0.00	0.00	0.00
4						228	5		1132990	0.00	0.00	0.00	0.00
5						144	5		957182	0.00	0.00	0.00	0.00
6						110	5		4682429	0.00	0.00	0.00	0.00
7						IS	IS		8052685	0.00	0.00	#VALUE!	#VALUE!
8	7.3	109	0.7	0.1		188	5	296	-1438704	-156.82	-1.01	-0.14	0.00
9						264	5		1643872	0.00	0.00	0.00	0.00
10						238	5		2659918	0.00	0.00	0.00	0.00
11						190	5		2917675	0.00	0.00	0.00	0.00
12						160	5		1771404	0.00	0.00	0.00	0.00
13						151	5		1946825	0.00	0.00	0.00	0.00
14						160	5		2249016	0.00	0.00	0.00	0.00
15	7.2	105	0.5	0.09		144	5	369	133605	14.03	0.07	0.01	0.00
16						208	5		2973602	0.00	0.00	0.00	0.00
17						236	7		1604229	0.00	0.00	0.00	0.00
18						150	5		-605886	0.00	0.00	0.00	0.00
19						161	5		1470517	0.00	0.00	0.00	0.00
20						152	5		1109386	0.00	0.00	0.00	0.00
21						244	5		3421394	0.00	0.00	0.00	0.00
22	7.5	95	1.66	0.05		254	5	272	1961701	186.36	3.26	0.10	0.00
23						IS	IS		-676900	0.00	0.00	#VALUE!	#VALUE!
24						312	5		-773641	0.00	0.00	0.00	0.00
25						266	5		-809737	0.00	0.00	0.00	0.00
26						268	5		621413	0.00	0.00	0.00	0.00
27						268	5		501224	0.00	0.00	0.00	0.00
28						130	5		521675	0.00	0.00	0.00	0.00
29	7.7	76	1.9	0.05		294	7	218	610275	46.38	1.16	0.03	0.00
30						300	5		552127	0.00	0.00	0.00	0.00
31						322	5		473439	0.00	0.00	0.00	0.00

IS: Insufficient amount of sample due to low flow or sampler malfunction.

Bord Na Mona Energy Ltd, Allen Group, Rochfordsbriidge, Co Westmeath

- Composite Sampler Results Licence 503

Month	Parameters			Daily Totals									
July 2007	pH	COD mg/l	Ammonia as N mg/l	Total Phosphorus mg/l	Suspended Solids mg/l	Total Solids mg/l	Colour Pt Co units	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Total Phosphorus Kg/Day	Suspended Solids Kg/Day	Total Solids Kg/Day
1					5	171		1035786	0.00	0.00	0.00	0.00	0.00
2					10	160		2288712	0.00	0.00	0.00	0.00	0.00
3					6	124		3309201	0.00	0.00	0.00	0.00	0.00
4	7.5	82	0.9	0.06	5	444	337	5395162	442.40	4.86	0.32	0.00	0.00
5					15	222		5368903	0.00	0.00	0.00	0.00	0.00
6					5	198		3158698	0.00	0.00	0.00	0.00	0.00
7					15	170		3610147	0.00	0.00	0.00	0.00	0.00
8					6	177		2389587	0.00	0.00	0.00	0.00	0.00
9					5	144		2250038	0.00	0.00	0.00	0.00	0.00
10					6	128		3128966	0.00	0.00	0.00	0.00	0.00
11	7.7	128	0.63	0.05	5	170	365	6171787	789.99	3.89	0.31	0.00	0.00
12					5	144		8996236	0.00	0.00	0.00	0.00	0.00
13					5	162		6848169	0.00	0.00	0.00	0.00	0.00
14					5	162		4249333	0.00	0.00	0.00	0.00	0.00
15					5	180		7740906	0.00	0.00	0.00	0.00	0.00
16					5	186		7235761	0.00	0.00	0.00	0.00	0.00
17					5	194		5762752	0.00	0.00	0.00	0.00	0.00
18	7.1	104	0.68	0.06	9	154	334	3808365	396.07	2.59	0.23	0.00	0.00
19					5	194		3557462	0.00	0.00	0.00	0.00	0.00
20					5	156		3440287	0.00	0.00	0.00	0.00	0.00
21					5	154		2589434	0.00	0.00	0.00	0.00	0.00
22					5	170		5782569	0.00	0.00	0.00	0.00	0.00
23					5	196		5865245	0.00	0.00	0.00	0.00	0.00
24					5	206		2319738	0.00	0.00	0.00	0.00	0.00
25	7.7	35	0.79	0.05	5	218	282	2132960	74.65	1.69	0.11	0.00	0.00
26					5	216		2188044	0.00	0.00	0.00	0.00	0.00
27					5	220		1822299	0.00	0.00	0.00	0.00	0.00
28					5	258		2345720	0.00	0.00	0.00	0.00	0.00
29					5	246		2019438	0.00	0.00	0.00	0.00	0.00
30					5	282		2293583	0.00	0.00	0.00	0.00	0.00
31					5	288		1654752	0.00	0.00	0.00	0.00	0.00

IS: Insufficient amount of sample due to low flow or sampler malfunction.

Bord Na Mona Energy Ltd, Allen Group, Rochfordsbridge, Co Westmeath
Composite Sampler Results Licence 503

Month	pH	COD mg/l	Ammonia as N mg/l	Parameters		Colour Pt Co	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals	
				Total Phosphorus mg/l	Suspended Solids mg/l	Total Solids mg/l				Phosphorus Kg/Day	Suspended Solids Kg/Day
September 2007											
1					7	354	489183	0.00	0.00	0.00	0.00
2					5	276	345698	0.00	0.00	0.00	0.00
3					5	292	371460	0.00	0.00	0.00	0.00
4					6	336	446806	0.00	0.00	0.00	0.00
5	7.4	72	1.9	0.05	5	302	409453	29.48	0.78	0.02	0.00
6					7	304	54615	0.00	0.00	0.00	0.00
7					5	318	563734	0.00	0.00	0.00	0.00
8					5	331	428509	0.00	0.00	0.00	0.00
9					9	340	457266	0.00	0.00	0.00	0.00
10					IS	IS	190758	0.00	0.00	0.00	0.00
11					IS	IS	161295	0.00	0.00	0.00	0.00
12	7.8	81	1.89	0.05	13	338	287140	23.26	0.54	0.01	0.00
13					IS	IS	237841	0.00	0.00	0.00	0.00
14					IS	IS	377352	0.00	0.00	0.00	0.00
15					IS	IS	214801	0.00	0.00	0.00	0.00
16					IS	IS	328881	0.00	0.00	0.00	0.00
17					IS	IS	287393	0.00	0.00	0.00	0.00
18					IS	IS	49571	0.00	0.00	0.00	0.00
19	7.8	80	1.97	0.05	9	304	334703	26.78	0.66	0.02	0.00
20					5	290	401139	0.00	0.00	0.00	0.00
21					IS	IS	415540	0.00	0.00	0.00	0.00
22					5	254	-118230	0.00	0.00	0.00	0.00
23					5	266	-4081	0.00	0.00	0.00	0.00
24					5	274	376415	0.00	0.00	0.00	0.00
25					5	264	351819	0.00	0.00	0.00	0.00
26	7.5	93	0.95	0.05	10	248	420343	39.09	0.40	0.02	0.00
27					5	275	383872	0.00	0.00	0.00	0.00
28					5	230	207239	0.00	0.00	0.00	0.00
29					5	226	560544	0.00	0.00	0.00	0.00
30					5	262	589642	0.00	0.00	0.00	0.00

IS: Insufficient amount of sample due to low flow or sampler malfunction.

Bord Na Mona Energy Ltd, Allen Group, Rochfordsbriidge, Co Westmeath

Composite Sampler Results Licence 503

Month	Parameters				Daily Totals								
October 2007	pH	COD mg/l	Ammonia as N mg/l	Total Phosphorus mg/l	Suspended Solids mg/l	Total Solids mg/l	Colour Pt Co units	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Total Phosphorus Kg/Day	Suspended Solids Kg/Day	Total Solids Kg/Day
1					IS	IS		611729	0.00	0.00	0.00	#VALUE!	#VALUE!
2					9	260		484937	0.00	0.00	0.00	0.00	0.00
3	7.6	93	1.58	0.05	16	214	226	409031	38.04	0.65	0.02	0.00	0.00
4					11	208		232300	0.00	0.00	0.00	0.00	0.00
5					IS	IS		-120067	0.00	0.00	0.00	#VALUE!	#VALUE!
6					IS	IS		-18180	0.00	0.00	0.00	#VALUE!	#VALUE!
7					IS	IS		-310063	0.00	0.00	0.00	#VALUE!	#VALUE!
8					IS	IS		-316634	0.00	0.00	0.00	#VALUE!	#VALUE!
9					IS	IS		-327793	0.00	0.00	0.00	#VALUE!	#VALUE!
10	7.8	84	2.2	0.05	6	276	178	-309450	-25.99	-0.68	-0.02	0.00	0.00
11					IS	IS		-157627	0.00	0.00	0.00	#VALUE!	#VALUE!
12					IS	IS		-207165	0.00	0.00	0.00	#VALUE!	#VALUE!
13					IS	IS		-102892	0.00	0.00	0.00	#VALUE!	#VALUE!
14					IS	IS		54835	0.00	0.00	0.00	#VALUE!	#VALUE!
15					5	300		242336	0.00	0.00	0.00	0.00	0.00
16					5	288		418307	0.00	0.00	0.00	0.00	0.00
17	8.1	66	1.75	0.05	5	278	153	553835	36.55	0.97	0.03	0.00	0.00
18					5	268		497314	0.00	0.00	0.00	0.00	0.00
19					5	290		527004	0.00	0.00	0.00	0.00	0.00
20					5	300		510976	0.00	0.00	0.00	0.00	0.00
21					5	310		539932	0.00	0.00	0.00	0.00	0.00
22					5	294		471595	0.00	0.00	0.00	0.00	0.00
23					5	262		516725	0.00	0.00	0.00	0.00	0.00
24	8.1	75	1.91	0.05	8	282	131	703378	52.75	1.34	0.04	0.00	0.00
25					5	262		529104	0.00	0.00	0.00	0.00	0.00
26					5	235		495815	0.00	0.00	0.00	0.00	0.00
27					5	208		636053	0.00	0.00	0.00	0.00	0.00
28					5	172		886355	0.00	0.00	0.00	0.00	0.00
29					5	242		753894	0.00	0.00	0.00	0.00	0.00
30					5	220		817837	0.00	0.00	0.00	0.00	0.00
31	7.9	73	1.77	0.05	5	232	151	953003	69.57	1.69	0.05	0.00	0.00

IS: Insufficient amount of sample due to low flow or sampler malfunction.

Bord Na Mona Energy Ltd, Allen Group, Rochfordsbridge, Co Westmeath
Composite Sampler Results Licence 503

Month	pH	COD mg/l	Ammonia as N mg/l	Parameters		Colour Pt Co	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals		Suspended Solids Kg/Day	Total Solids Kg/Day
				Total Phosphorus mg/l	Suspended Solids mg/l	Total Solids mg/l				Total Phosphorus Kg/Day	Total		
November 2007													
1					5	268	949501	0.00	0.00	0.00	0.00	0.00	0.00
2					5	276	896636	0.00	0.00	0.00	0.00	0.00	0.00
3					5	274	858325	0.00	0.00	0.00	0.00	0.00	0.00
4					5	272	820806	0.00	0.00	0.00	0.00	0.00	0.00
5					7	278	844300	0.00	0.00	0.00	0.00	0.00	0.00
6					5	286	814794	0.00	0.00	0.00	0.00	0.00	0.00
7	7.9	70	2.18	0.15	11	276	814985	57.05	1.78	0.12	0.00	0.00	0.00
8					5	294	890814	0.00	0.00	0.00	0.00	0.00	0.00
9					6	262	756931	0.00	0.00	0.00	0.00	0.00	0.00
10					5	252	688489	0.00	0.00	0.00	0.00	0.00	0.00
11					5	262	723065	0.00	0.00	0.00	0.00	0.00	0.00
12					5	238	759303	0.00	0.00	0.00	0.00	0.00	0.00
13					5	260	705169	0.00	0.00	0.00	0.00	0.00	0.00
14	8.1	67	2.12	0.05	5	260	749472	50.21	1.59	0.04	0.00	0.00	0.00
15					5	266	796751	0.00	0.00	0.00	0.00	0.00	0.00
16					5	266	837402	0.00	0.00	0.00	0.00	0.00	0.00
17					20	238	377028	0.00	0.00	0.00	0.00	0.00	0.00
18					18	158	590230	0.00	0.00	0.00	0.00	0.00	0.00
19					23	172	5185349	0.00	0.00	0.00	0.00	0.00	0.00
20					19	152	3521508	0.00	0.00	0.00	0.00	0.00	0.00
21	7.2	114	1.48	0.05	9	172	5906008	673.28	8.74	0.30	0.00	0.01	0.00
22					7	196	3236433	0.00	0.00	0.00	0.00	0.00	0.00
23					IS	IS	1974843	0.00	0.00	0.00	#VALUE!	#VALUE!	#VALUE!
24					5	214	958391	0.00	0.00	0.00	0.00	0.00	0.00
25					7	226	1304569	0.00	0.00	0.00	0.00	0.00	0.00
26					5	211	1425807	0.00	0.00	0.00	0.00	0.00	0.00
27					5	214	1567152	0.00	0.00	0.00	0.00	0.00	0.00
28	7.7	106	1.41	0.05	7	206	1498422	158.83	2.11	0.07	0.00	0.00	0.00
29					5	204	2195145	0.00	0.00	0.00	0.00	0.00	0.00
30					8	158	1569899	0.00	0.00	0.00	0.00	0.00	0.00
								0.00	0.00	0.00	0.00	0.00	0.00

IS: Insufficient amount of sample due to low flow or sampler malfunction.

Bord Na Mona Energy Ltd, Allen Group, Rochforbsbridge, Co Westmeath

- Composite Sampler Results Licence 503

Month	pH	COD mg/l	Ammonia as N mg/l	Parameters Total Phosphorus mg/l	Suspended Solids mg/l	Total Solids mg/l	Colour Pt Co units	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals Total Phosphorus Kg/Day	Suspended Solids Kg/Day	Total Solids Kg/Day
December 2007													
1					20	1421		3070221	0.00	0.00	0.00	0.00	0.00
2					26	113		4362492	0.00	0.00	0.00	0.00	0.00
3					37	118		10455310	0.00	0.00	0.00	0.00	0.00
4					21	412		10314040	0.00	0.00	0.00	0.00	0.00
5	7.3	129	1.41	0.06	19	140	195	8361837	1078.68	11.79	0.50	0.02	0.00
6					6	130		5700161	0.00	0.00	0.00	0.00	0.00
7					26	108		4655804	0.00	0.00	0.00	0.00	0.00
8					56	306		7686390	0.00	0.00	0.00	0.00	0.00
9					42	172		9830910	0.00	0.00	0.00	0.00	0.00
10	7.4	114	1.48	0.05	19	176	194	14448260	1647.10	21.38	0.72	0.03	0.00
11					IS	IS		11904220	0.00	0.00	0.00	#VALUE!	#VALUE!
12					IS	IS		9141984	0.00	0.00	0.00	#VALUE!	#VALUE!
13					13	170		7468157	0.00	0.00	0.00	0.00	0.00
14					5	118		4426272	0.00	0.00	0.00	0.00	0.00
15					7	198		2802557	0.00	0.00	0.00	0.00	0.00
16					14	192		2248906	0.00	0.00	0.00	0.00	0.00
17					10	200		1764374	0.00	0.00	0.00	0.00	0.00
18					9	296		1334794	0.00	0.00	0.00	0.00	0.00
19	7.5	63	2.55	0.05	5	242	143	1241482	78.21	3.17	0.06	0.00	0.00
20					5	184		910138	0.00	0.00	0.00	0.00	0.00
21					5	182		883440	0.00	0.00	0.00	0.00	0.00
22					5	210		737580	0.00	0.00	0.00	0.00	0.00
23					5	216		1705795	0.00	0.00	0.00	0.00	0.00
24					10	188		1188691	0.00	0.00	0.00	0.00	0.00
25					5	92		3809117	0.00	0.00	0.00	0.00	0.00
26	7.5	73	2.07	0.05	5	191	188	2239488	163.48	4.84	0.11	0.00	0.00
27					IS	IS		2270765	0.00	0.00	0.00	#VALUE!	#VALUE!
28					IS	IS		2276122	0.00	0.00	0.00	#VALUE!	#VALUE!
29					IS	IS		1983917	0.00	0.00	0.00	#VALUE!	#VALUE!
30					IS	IS		1983917	0.00	0.00	0.00	#VALUE!	#VALUE!
31					IS	IS		1983917	0.00	0.00	0.00	#VALUE!	#VALUE!

IS: Insufficient amount of sample due to low flow or sampler malfunction.

APPENDIX 4

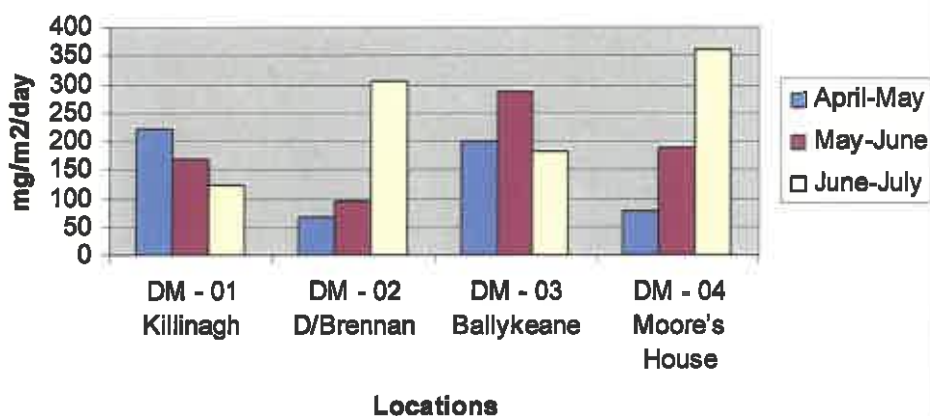
Dust Monitoring Results.

Licence: P0503-01

Works: Allen

Sample Period	DM - 01 Killinagh	DM - 02 D/Brennan	DM - 03 Ballykeane	DM - 04 Moore's House
April-May	222	67	200	78
May-June	167	94	289	189
June-July	122	305	183	361

Dust Monitoring 2007



APPENDIX 5

De-silting Programme Review.

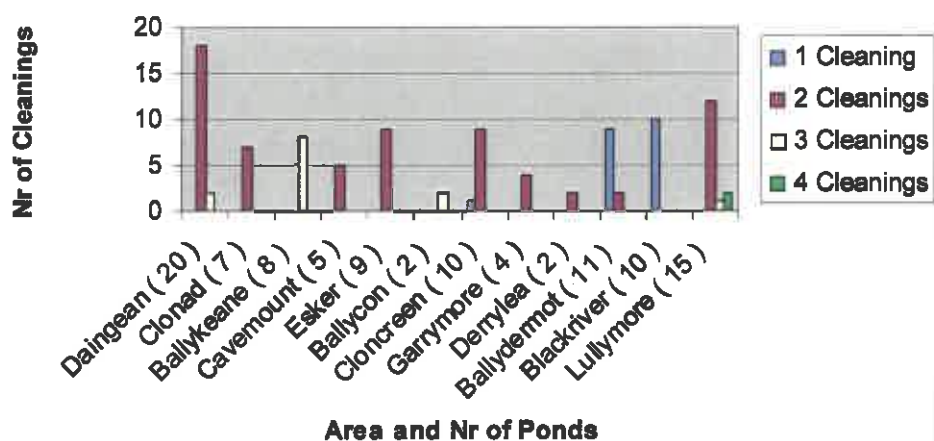
Silt pond Cleaning Programme

IPPC Licence: P0503-01

Works: Allen

Bog Area & Nr Ponds	1 Cleaning	2 Cleanings	3 Cleanings	4 Cleanings
Daingean (20)		18	2	
Clonad (7)		7		
Ballykeane (8)			8	
Cavemount (5)		5		
Esker (9)		9		
Ballycon (2)			2	
Cloncreen (10)	1	9		
Garrymore (4)		4		
Derrylea (2)		2		
Ballydermot (11)	9	2		
Blackriver (10)	10	0		
Lullymore (15)		12	1	2

Silt Cleaning Records



APPENDIX 6

AER & PRTR DATA



| PRTR# : P0503 | Facility Name : Bord na Mona Allen Peat Limited | Filename :
P0503_2007-1.xls | Return Year : 2007 |

31/03/2008 09:15

Environmental Protection Agency

AER Returns Worksheet

Version 1.0.4

REFERENCE YEAR	2007
----------------	------

1. FACILITY IDENTIFICATION

Parent Company Name	Bord na Mona Allen Peat Limited
Facility Name	Bord na Mona Allen Peat Limited
PRTR Identification Number	P0503
Licence Number	P0503-01

Waste or IPPC Classes of Activity

No.	class	name
-----	-------	------

The extraction of peat in the course of business which involves an
1 area exceeding 50 hectares.

Address 1	Bord na Mona
Address 2	Derrygreenagh
Address 3	Rochfortbridge, Mullingar
City/Town/Village	County Westmeath
Postal Code	
County	
Country	Ireland
Coordinates of Location	26602215
River Basin District	
NACE Code	0892
Main Economic Activity	Extraction of peat
Production Volume	960136
Number of Installations	15
Number of Operating Hours in Year	2232
Number of Employees	140
User Feedback/Comments	
Web Address	www.bordnamona.ie

2. PRTR CLASS ACTIVITIES

Activity Number	Activity Name
-----------------	---------------

3. SOLVENTS DIRECTIVE

Is it applicable?	No
Have you been granted an exemption ?	No
Reason for exemption	

4.1 RELEASES TO AIR

[PRTNR : P0000] [Facility Name : Bord na Mona Millar Feed Limited] [Filename : P0000_2007-1.xls] [Return Year : 2007]

31/05/2008 09:15

SECTION A : SECTION SPECIFIC PRTR POLLUTANTS

RELEASES TO AIR						
No. Annex II	POLLUTANT	METHOD		QUANTITY		
		MDE	Method Code	Emission Point 1		
				T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
		Name		Designation or Description		
					0	0
					0	0

SECTION B : REMAINING PRTR POLLUTANTS

RELEASES TO AIR						
No. Annex II	POLLUTANT	METHOD		QUANTITY		
		M/C/E	Method Code	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year
Name		Method Used				
						</

SECTION C : LICENSED POLLUTANTS

RELEASES TO AIR										
Pollutant No.	POLLUTANT	METHOD		QUANTITY						
		Name	MICRE	Method Code	Designation or Description	Method Used				
						Method Used	Method Used	Method Used	Method Used	Method Used
									</	

Additional Data Requested from Landfill operators

For the purposes of the National Inventory on Greenhouse Gases, landfill operators are requested to provide summary data on landfill gas (Methane) flared or utilised on their facilities to accompany the figures for total methane generated. Please complete the table below:

Landfill:	Bord na Mona Allen Peat Limited
Please enter summary data on the quantities of methane flared and / or utilised	T (Total) kg/Year
Methane flared	MICRE
Methane utilised in engines	Method Code
	Designation or Description
	Facility Total Capacity m ³ /hour

4.2 RELEASES TO WATERS

[PRTM : P0500 | Facility Name : Bond no More Allen Park Limited | Filename : P0500_2007-4.xls | Return Year : 2007]

31/05/2008 09:15

SECTION A : SECTOR SPECIFIC PRTM POLLUTANTS

POLLUTANT		RELEASES TO WATERS					QUANTITY		
No. Annex B	Name	MPC/E	Method Code	Method Used (Designation or Description)	Emission Point 1	T Total	KG/Year	A (Accidental)	F (Fugitive)
						0	0	0	0

SECTION B : REMAINING PRTM POLLUTANTS

POLLUTANT		RELEASES TO WATERS					QUANTITY		
No. Annex B	Name	MPC/E	Method Code	Method Used (Designation or Description)	Emission Point 1	T Total	KG/Year	A (Accidental)	F (Fugitive)
						0	0	0	0

SECTION C : LICENSED POLLUTANTS

POLLUTANT		RELEASES TO WATERS										QUANTITY		
Pollutant No.	Name	MPC/E	Method Code	Method Used (Designation or Description) G19 Based on APHA, 1996, 20th Edition, 1st ed 28-480	Emission Point 1	Emission Point 2	Emission Point 3	Emission Point 4	Emission Point 5	Emission Point 6	Emission Point 7	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
ADD	Unstabilized Solids E		OTH		4430.8	12740.5	10238.5	38882.4	13355.4	91566.3	73630	244041.9	0	0

| PRTR# : P0503 | Facility Name : Bord na Mona Allen Peat Limited | Filename : P0503_2007-1.xls | F

| PRTR# : P0503 | Facility Name : Bord na Mona Allen Peat Limited | Filename : P0503_2007-1.xls | F

SECTION A : PRTR POLLUTANTS

OFFSITE TRANSFER OF POLLUTANTS DESTINED FOR WASTE-WATER TREATMENT OR SEWER

SECTION B : LICENSED POLLUTANTS

ON-SITE CONDENSED POLYMERIZATION
OFFSITE TRANSFER OF POLLUTANTS DESTINED FOR WASTE-WATER TREATMENT OR SEWER

4.4 RELEASES TO LAND

| PRTR# : P0503 | Facility Name : Bord na Mona Allen Peat Limited | Filename : P0503_2007-1.xls | Return Year : 2007 |

31/03/2008 08:15

SECTION A : PRTR POLLUTANTS

POLLUTANT		RELEASES TO LAND			QUANTITY	
No Annex II	Name	M/C/E	METHOD		T (Total) KG/Year	A (Accidental) KG/Year
			Method Code	Method Used [Designation or Description]		
				Emission Point 1	0	0

SECTION B : LICENSED POLLUTANTS

POLLUTANT		RELEASES TO LAND			QUANTITY	
Pollutant No.	Name	M/C/E	METHOD		T (Total) KG/Year	A (Accidental) KG/Year
			Method Code	Method Used [Designation or Description]		
				Emission Point 1	0	0

Transfer Destination	European Waste Code	Hazardous	Quantity T/Year	Description of Waste	Waste Treatment Operation	MPC/E	Method Used	Location of Treatment	Name and Licence / Permit No. of Recoverer / Disposer / Broker	Address of Recoverer / Disposer / Broker	Name and Address of Final Destination i.e. Final Recovery / Disposal Site (HAZARDOUS WASTE ONLY)	Licence / Permit No. of Final Destination i.e. Final Recovery / Disposal Site (HAZARDOUS WASTE ONLY)
Within the Country	20 03 01	No	11.24 Municipal		D1	M	Weighted	Offsite in Ireland	AES LM / 053 / 01 / 39 / 02	Capricorn Tullamore Co Offaly		
Within the Country	02 01 04	No	636.04 Waste Plastic		R5	M	Weighted	Offsite in Ireland	Apac Plastic 205 / 2005	Glans Co Kildare		
Within the Country	17 04 07	No	129.19 Scrap Metal		R4	M	Weighted	Offsite in Ireland	Hammond Lums Ltd 050 / 01 / 162 / 04	Altmore Co Westmeath Derrygreagh, Rochfortbridge Co Westmeath.		
Within the Country	01 01 02	No	2301.84 Slagpond Cleanings		D1	E	Volume Calculation	Onsite in Ireland	Bord na Mona P0503-01	Derrygreagh, Rochfortbridge Co Westmeath.		
Within the Country	01 04 99	No	1635 Peat Screenings		D1	M	Weighted	Onsite in Ireland	Bord na Mona P0503-01	Derrygreagh, Rochfortbridge Co Westmeath.		
Within the Country	13 02 05	Yes	2.2 Waste Oil		R9	C	Volume Calculation	Offsite in Ireland	Envia Ireland Ltd W0184-1	Portlaoise Co Laois	Envia Ireland Portlaoise Co Laois	184-1
Within the Country	16 01 07	Yes	0.77 Oil Filters		R11	C	Volume Calculation	Offsite in Ireland	Envia Ireland Ltd W0184-1	Portlaoise Co Laois	Envia Ireland Portlaoise Co Laois	184-1
To Other Countries	15 02 02	Yes	0.48 Clay Rugs		R1	C	Volume Calculation	Abroad	Envia Ireland Ltd W0184-1	Portlaoise Co Laois	Kraupel, Lindenschmidt, Germany	E 97065037
Within the Country	16 01 01	Yes	2 Lead Acid Batteries		R6	M	Weighted	Offsite in Ireland	Envia Ireland Ltd W0184-1	Portlaoise Co Laois	Envia Ireland Portlaoise Co Laois	184-1
Within the Country	11 01 13	Yes	2 28 Parts Wash Waste		R11	C	Volume Calculation	Offsite in Ireland	Safety Kreen W0055-01	Tullaght Dublin	Tullaght Dublin	89-01
Within the Country	17 08 05	Yes	17.84 Corrugated Asbestos		D1	M	Weighted	Offsite in Ireland	Rialta Environmentals 192-1	Dublin	Kil Co Kildare	182-1



Annual Environmental Report 2006
P0503-01

March 2007

Contents

1.0 Introduction

- 1.1 IPC Licence Register No
- 1.2 Name & Location of Site
- 1.3 Brief Description of Activities
- 1.4 Environmental Management of the Company
- 1.5 Environmental Policy Statement

2.0 Summary Information

- 2.1 Emissions to Water Summary
 - 2.1.1 Silt Pond Emissions
 - 2.1.2 Yard Discharges
 - 2.1.3 Composite Sampler Report
 - 2.1.4 Emissions to Water Non-compliance's
- 2.2 Emissions to Air Summary
 - 2.2.1 Dust Monitoring
 - 2.2.2 Emissions to Air Non-compliance's
- 2.3 Waste Arising
 - 2.3.1 Non-Hazardous Waste
 - 2.3.2 Hazardous Waste
- 2.4 Energy and Water Consumption
 - 2.4.1 Energy Consumption
- 2.5 Environmental Incidents and Complaints
 - 2.5.1 Incidents
 - 2.5.2 Complaints

3.0 Management of the Activity

- 3.1 Environmental Management Programme Report
- 3.2 Environmental Management Programme Proposal
- 3.3 Environmental Expenditure

4.0 Licence Specific Reports

- 4.1 Surface Water Discharge Monitoring Location Programme Review
- 4.2 Bunding Programme
- 4.3 Boiler Combustion Efficiency
- 4.4 Resource Consumption Summary
- 4.5 Report on de-silting Programme
- 4.6 Bog Development and Operational Programme
- 4.7 Bog Rehabilitation Report
- 4.8 Archaeological Report

5.0 Summary

Appendix 1: Emissions to Water Monitoring Results. (Bogs)

Appendix 2: Emissions to Water Monitoring Results. (Yards)

Appendix 3: Emissions to Water Monitoring Results. (Composite)

Appendix 4: Emissions to Air Monitoring Results.

Appendix 5: Boiler Efficiency Results

Appendix 6: De-silting Programme Review

1.0 Introduction

1.1 IPPC Licence No

1.2 Name & Location of Site

Name: Bord na Mona Energy Limited.

Address: Derrygreenagh,
Rochfortbridge,
Mullingar,
Co. Westmeath.

Telephone No: 044 9222181 Fax No. 044 9222344

Contact Name: Paul Riordan

Position: Regional Manager

National Grid Reference: E249450 N238140

1.3 Description of Activities

Peat Milling Operations.

For milled peat production the bog is laid out in a series of rectangular fields of varying length and 15m wide with drains located between. There are essentially four operations involved in milled peat production:

Milling.

Harrowing.

Ridging.

Harvesting.

Milling.

Special milling machines work their way along the fields, milling approximately 15mm of peat of the top of the bog in a pass.

Harrowing

In the course of drying, the milled peat is turned a number of times to avail of the drying conditions. This is achieved with a machine called a harrow. The milled peat is harrowed until its moisture content is down to approximately 40-50%, which can take up to two to three days, weather depending.

Ridging

The dry peat is then scraped into long ridges running down the centre of each field. This is done with a ridger, a machine consisting of a series of blades in the shape of a v that opens the full width of the field.

Harvesting

During harvesting every eleventh field is used to stockpile the peat, with this field receiving the milled peat from the five fields either side.

The milled peat is then transported via the existing network of peatland railways or via road to one of the following locations.

Power station

Horticultural Factory.

Briquette Factory.

1.4 Environmental Management of the Company

The organisational structure within the Allen Group is presented in the flow chart below.



- (1) Overall environmental responsibilities
- (2) All production related issues
- (3) Machine maintenance
- (4) Co-ordinating environmental affairs
- (5) All peat transportation matters
- (6) Environmental issues relating to peatlands.
- (7) Environmental issues relating to Workshops.

1.5 Environmental Policy

BORD NA MÓNA
BORD NA MÓNA ENERGY LIMITED
Derrygreenagh, Rochfortbridge, Mullingar, Co-Westmeath.

Bord na Mona Energy Limited is a commercial semi-state body with responsibility to develop Irelands peat resources in the national interest.

Bord na Mona Energy Limited is committed to gather and make available information on all aspects of its environmental impact and to help improve understanding among the public generally of its role and the importance of Irish peatlands.

Bord na Mona Energy Limited recognises the importance of peatland conservation.

Bord na Mona Energy Limited will leave behind all areas it owns as either an economically or socially integrated resource of a high environmental value.

Bord na Mona Energy Limited seeks to conduct all aspects of its business in an environmentally sensitive value.

Bord na Mona Energy Limited will establish an environmental management system specifically addressing the following impacts.

- Discharges to water.
- Emissions to atmosphere.
- Waste disposal.
- Use of natural resources.
- Noise, vibration, odour, dust and visual effects.
- Natural environment and eco-system.

The environmental management system will be monitored, maintained and continually improved.

A system of regular environmental audits will be put in place.

Bord na Mona Energy Limited will continue research and development into all aspects of its environmental impact.

This statement is published and is available at all locations within the division and its contents are brought to the attention of all employees.

2.0 Summary Information

2.1 Emissions to Water Summary

2.1.1 Silt Pond Emissions

Comment

Surface water monitoring was carried out four times during the reporting period. In total analysis was carried out at seven different locations. These locations are as follows, Derries @ SW2, Rathdrum @ SW10, Ballykeane @ SW14, Cloncreen @ SW33, Derrylea @ SW43, Blackriver @ SW65 and Ballydermot @ SW66. The parameters measured during each sampling event were as follows.

Total Phosphorus, Total Solids, Suspended Solids, pH, Ammonia, Colour and COD.

In general results were constant across all parameters at each monitoring location.

May was the wettest month of 2006 with rainfall of 151mm being recorded, while June was the driest with 13.2mm recorded.

The quarterly grab sampling programme proved to be 100% compliant for the year as was the 2005 regime.

pH values were between 6.3 and 8.2, with normal emission limit values being of the range 6 and 9.

Suspended solids varied from 5mg/l to 21mg/l and would depend on activities (piping, ditching) etc in the catchments at the time of sampling. All are within the licence limit of 35mg/l.

Ammonia levels were constant across all monitoring locations, with the exception of Cloncreen @ SW33, which were consistently elevated as has been the case since monitoring began and are typical of peatland runoff. COD readings were slightly elevated during the third quarter monitoring event. This can be attributed to reduced flow rates and increased temperature during that time.

Flow rates were far greater during the last quarter sampling event, but this does not seem to have any great adverse effect on any of the parameters.

Total Phosphorus results were consistently within guidelines.

Sampling will continue at the same locations during 2007.

Surface Water Results are contained in Appendix 1

2.1.2 Yard Discharges

Comment

Yard runoff monitoring took place at five different locations during the reporting period. Sampling frequency was monthly and COD was the parameter requiring analysis. As is evident from the graph, on several occasions no sample was available on the day of sampling. This was due to no flow at the emission point as the catchments are so small.

In general results were normal with the exception of Timahoe SWE1 during the September and December monitoring events. On investigation of those results, no obvious cause for the elevated result could be found. As a follow on, results during the spring 2007 will be watched closely for elevated results and a more thorough investigation carried out if required. All the sample locations are also visually inspected on a weekly basis.

Sampling will continue at the same locations during 2007.

Yard Runoff Results are contained in Appendix 2

2.1.3 Composite Sampler Report

Comment

The composite sampler has been operating at SW during the reporting period.

The parameters measured were Total Phosphorus, Total Solids, Suspended Solids, pH, Ammonia, Colour and COD, with Suspended solids being the only parameter with an emission limit value (35mg/l). May was the wettest month of 2006 with rainfall of 151mm being recorded, while June was the driest with 13.2mm recorded.

In general results were satisfactory with no non-compliances being recorded for the period. It should be noted that the sampler because of technical difficulties was switched to time basis during the reporting period and a large portion of flow data is missing.

A proposal to relocate the composite sampler during 2007 will be submitted to the agency, as a suitable site has been identified at Ticknevin bog SW51A. This site because of its nature has the potential to give more accurate flow data when it becomes operational.

Composite Sampler Results are contained in Appendix 3

2.1.4 Emissions to Water Non-compliance's

Type	Non-Compliances	Location / SW Nr
Composite	0	
Quarterly Grab	0	
Monthly Yard	NA	
Totals	0	

2.2 Emissions to Air

2.2.1 Dust Monitoring

Comment

Dust monitoring was carried out on three occasions between May and August. Each monitoring event lasted between 28 and 32 days and the Bergerhoff method of collection was used.

The monitoring locations were as follows, Killinagh, Derrydrennan, Ballykeane and Moore's Dwelling adjacent to Killanagh Bog. With the exception of Ballykeane all results were below the emission limit value of 350 mg/m²/day set out in the licence. In the case of Ballykeane a recording of 861 mg/m²/day was recorded during the May – June monitoring event, although no complaints were received at the time. It should be noted that that particular dust gauge is situated immediately adjacent to a production area where activities during that time would have been intense.

The agency was informed at the time, and a corrective action implemented. There is an ongoing dust complaint issue at Derrybrennan, although results clearly show Bord na Mona to be operating well within the emission limit value at that location.

Sampling will continue at the same locations during 2007.

Dust Monitoring Results are contained in Appendix 4

2.2.2 Emissions to Air Non-compliance's.

Dust Non-Compliances	
Licence:P0503-01	
Works: Allen	
Location / DM Nr	Non-Compliances
DM- 03 / Ballykeane	2
Total	2

2.3 Waste Arisings

2.3.1 Non-Hazardous Waste

Non Hazardous Waste Data

Licence: P0503-01

**Works:
Derrygreenagh**

Type	Tonnes	EWC Code	Contractor	Licence Nr
Skips	0.00	20 03 01	AES	053/OY/39/02
Wheelie Bins	6.24	20 03 01	AES	053/OY/39/02
Polyethylene	579.89	02 01 04	Leinster Environmentals	WP 2004/30
Scrap Steel	165.37	17 04 07	Hammond Lane	050/OY/162/04
Timber Pallets	5.00	15 01 02	Kiawah Ltd	WP/TN/24
Silt Pond Cleanings	131.10	01 01 02	Bord na Mona	IPPC P 0503
Peat Screenings	1521.00	01 01 02	Bord na Mona	IPPC P 0503
Totals	2408.60			

Note: Polyethylene and Steel are recycled

2.3.2 Hazardous Waste

Hazardous Waste Data**Licence:P0503-01****Works:Derrygreenagh**

Type	Tonnes	EWC Code	Contractor	Licence Nr	Destination
Waste Oil	0.00	13 02 05	Enva Ireland Ltd Portlaoise	184-1	Portlaoise
Oil Filters	1.15	16 01 07	Enva Ireland Ltd Portlaoise	184-1	Portlaoise
Oily Rags	0.30	15 02 02	Enva Ireland Ltd Portlaoise	184-1	Portlaoise
Waste Grease	0.00	13 08 99	Enva Ireland Ltd Portlaoise	184-1	Portlaoise
Lead Acid Batt	0.00	16 06 01	Enva Ireland Ltd Portlaoise	184-1	Portlaoise
Fluorescent Tubes	0.00	20 02 21	Enva Ireland Ltd Portlaoise	184-1	Portlaoise
Parts Wash	1.74	11 01 13	Safety Kleen, Tallaght, Dublin	99-1	Dublin
Asbestos	14.54	17 06 05	KTK Landfill	81-3	Kilcock
Total	17.73				

2.4 Energy and Water Consumption

2.4.1 Energy

The table below shows energy consumption for the year. Water is not included, as it is only used in offices, canteens and workshops on a domestic scale. It is not used as part of the production process.

Energy Consumption

Licence: P0503-01				
Works: Allen				
Units	Diesel (Litres)	Petrol (Litres)	Electricity (Units)	Peat Briquettes (Tonnes)
Totals	780533.07	0	737.807	0
MW Hours	7643.3	0	0.737807	0
Total MW Hours	7644.0			

2.5 Environmental Incidents and Complaints

2.5.1 Incidents

There were five incidents during the reporting period, one involved water and the other four were related to dust and smoke nuisance. In all cases corrective action was taken and the agency informed.

Environmental Incidents

Licence: P0503-01

Works: Allen

	Number
Incidents	5
Requiring corrective action	5
Category	
Water	1
Air	4
Procedural	
Miscellaneous	
Total	5

2.5.2 Complaints

There were two complaints during the reporting period both were in relation to dust nuisance. On each occasion corrective action was taken and the agency informed.

Environmental Complaints

Licence:P0503

Works: Derrygreenagh

	Number
Complaints	2
Requiring corrective action	2
Category	
Water	
Air	2
Procedural	
Miscellaneous	
Total	2

3.0 Management of the Activity

3.1 Achievement of Objectives & Targets

Project	Description & Status
Project 1: Reduction of fugitive dust emissions.	Training. Achieved. All new employees received environmental training in 2006, 33 in all. Hydraulic Harrows. Ongoing. There was one new Hydraulic Harrow introduced during the year to Ballykeane bog because of two incidents of elevated dust results, this brings to ten in all in the licence area. This situation will be continually monitored but these harrows seem to be having a positive effect on dust reduction. Headland Peat Collection. Ongoing. Headland peat was collected in all productions areas, which include Ballykeane, Clonad, Cloncreen, Blackriver, Ballydermot and Lullymore. This was carried out whenever necessary. It was collected by a special Headland peat Harvester which was designed specially for the job.
Project 2: Minimisation of suspended solids	On Site Inspections. Project didn't materialise. Will commence at start of production 2007.

Project 3: Effective spill leak management of mobile fuelling units.	On Site Inspections. Project didn't materialise. Will commence at start of production 2007. Service trains are inspected continuously, a number of them have been overhauled and the rest will be done in rotation, records will be kept on file.
Project 4: Reuse of silt pond waste.	Trials. Trials in the past proved unsuccessful. For peat silt to be reused, it must be available on the production bog for transfer into the piles. 99 % of all silt ponds are located on the outfall. Another factor is contamination, as these ponds are excavated into the mineral soil to achieve gravity drainage, and as such the silt excavated from the pond is contaminated with mineral soil. Should suitable bog come into production in the future, this project will be considered.
Project 5: Collection storage and reuse of polyethylene.	Identify Recyclers. Ongoing. In the 503 licence area almost 580 tonnes of polythene was sent for recycling to Apec Plastics in Clane Co. Kildare, Waste Permit No. 205/2005. All 2006 polythene has been recycled by now and this project will be ongoing
Project 6: Provision of measures to protect Dust Sensitive Areas.	Planting. Ongoing. All existing shelter belts were maintained during the year. We continually monitor Dust Sensitive Areas and remind our staff of their responsibilities.

3.2 Environmental Management Programme Proposal 2007

Project	Description & Status
Project 1: Reduction of fugitive dust emissions.	Training. Continue to train all new employees in environmental matters. Copy environmental video to disk and distribute more widely. Hydraulic Harrows. Continue to supply hydraulic harrows. Prioritising dust sensitive locations. Headland Peat Collection. Continue with the collection of headland peat, particularly at dust sensitive locations. Supply more headland peat collection machinery as required and research efficient ways of collecting such peat for use as a saleable product. We have a Headland Peat Harvester which we will deploy to dust sensitive areas as required. We are monitoring the situation and if necessary will require a second machine in the future.
Project 2: Minimisation of suspended solids	On Site Inspections. A full programme of internal audits will be carried out as soon as production commences. Particular emphasis will be put on cleaner production procedures, milling, harrowing, ridging, harvesting and loading.
Project 3: Effective spill leak management of mobile fuelling units.	On Site Inspections. As part of the above project, service trains will also be prioritised with a fitter accompanying the auditor during inspections to highlight any risks or potential risks that may occur.
Project 4: Fire Prevention.	Fire Patrols. There will be extra emphasis on fire patrols this coming production season. Research on improved fire fighting techniques will also be investigated. The newly adopted Fire and Environmental Plan will be communicated to all personnel.
Project 5: Collection storage and reuse of polyethylene.	Identify Recyclers. Continue with the recycling of polyethylene. The sourcing of more recycling contractors will be ongoing.
Project 6: Provision of measures to protect Dust Sensitive Areas.	Planting. Ongoing Planting is ongoing as required, with areas in the periphery of production bogs that are being developed for housing being prioritised.

3.3 Environmental Expenditure

Environmental Expenditure

Licence: P0503-01

Works: Allen

Description	Cost €
Capital Costs	€8 000
Silt Control	€203 360.34
Analytical & Consultancy Costs	€9 887.70
EPA Fees	€7 880.30
Bog Rehabilitation 627Hrs @ €35	€23 345
Total	€252,233.34

4.0 Licence Specific Reports

4.1 Surface Water Discharge Monitoring Location Programme Review

A proposal to relocate some of our surface water monitoring locations will be sent to the Agency for approval in the forthcoming year. As mentioned a proposal to relocate the composite sampler is also taking place and will have been submitted prior to this report.

It had previously been in Blackriver Bog since October 2004. It was decided to do this so as to create a more representative picture of surface water runoff from the licence area. The new site was also selected because it was better suited to achieving more accurate flow data.

4.2 Bunding Programme

Bund integrity tests were carried out during the reporting period. Bunds at Ballydermot Workshop and Ballycon Workshop failed the test. A programme of remediation on these Bunds will be put in place with the work to commence summer 2007.

4.3 Boiler Combustion Efficiency

Licence: P0503-01

Works:
Allen

Boiler Location	% Efficiency 2002	% Efficiency 2003	% Efficiency 2004	% Efficiency 2005	% Efficiency 2006
Clonsast	87.4	86.7	86.1	86.4	88.88
Ballydermot	88.1	86.1	84.4	86.8	85.04
EPL	87.1	88.3	86.3	86.6	85.01
Timahoe	86.2	86.5	84.7	84.7	87.5



The actual test results are contained in Appendix 5.

4.4 Resource consumption summary

Resource Consumption			
Licence: P0503-01			
Works: Allen			
Product	Tonnes Produced	Tonnes Sold	Customer
Milled Peat	953,263	876,255	ESB
Moss	0	11,295	Horticulture
Turf	6873	6873	Private
Other	0	0	N/A
Totals	960136	894423	N/A

Proposed Production 2007	
Licence: P0503-01	
Works: Allen	
Product	Proposed Target
Milled Peat	696,091
Moss	113,869
Turf	6,880
Other	0
Totals	816,840

4.5 De-Silting Report

Where possible ponds were cleaned at least twice during the year, however where there was no production some ponds didn't need to be cleaned as often as there was no silt present when inspected.

Silt Pond Cleaning Review is attached in Appendix 6.

4.6 Bog Development and Operational Programme

There was no development in the licence area during the year.

4.7 Bog Rehabilitation Report

Bog rehabilitation took place at Ballycon bog where outfalls were blocked and fields levelled to allow the area to return to wetlands for wildlife. Also at Mount Lucas the bog was levelled where gravel excavation took place in years gone by. At Lullymore bog 124ha were drained to allow wildlife to flourish.

4.8 Archaeological Report

There was no archaeological survey carried out during the reporting period

5.0 Summary

With regard to environmental compliance at the Allen Group of Bogs, there was no exceedence of the emission limit value in relation to suspended solids from grab sampling of the silt ponds in the Surface Water Discharge Monitoring Location Programme.

There was no non-compliances in relation to the Composite Sampler during the monitoring period January to December. Dust monitoring results showed two non-compliances. There was two complaints of an environmental nature received during the reporting period. The issue of this complaint will be given priority in 2007 and all efforts will be made to minimise the impact of our operations in this area.

Bord na Mona, Allen Group, will continue to strive to maintain and improve its level of environmental compliance.

The staff awareness through training and involvement in the operation of the licence has also improved immensely. A full programme of training and awareness has been conducted at the works and has targeted all personnel ie. Office, Workshop, Transport and Production.

Bord na Mona are project partners of the South Eastern River Basin District Management, as set up under the Water Framework Directive.
Bord na Mona are also involved in catchment management on the River Barrow.

Bord na Mona Energy Ltd would like to take this opportunity to advise the Environmental Protection Agency of its continued commitment to improving its environmental performance by adopting cleaner production methods and improving its environmental protection measures.

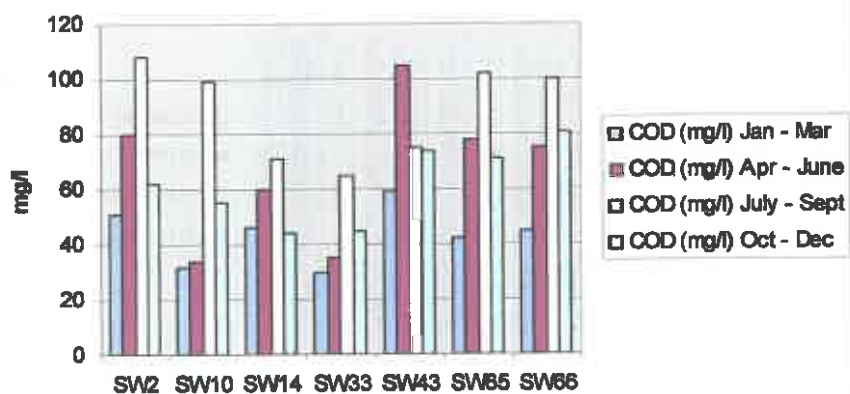
APPENDIX 1

Surface Water Discharge Monitoring Results Bogs

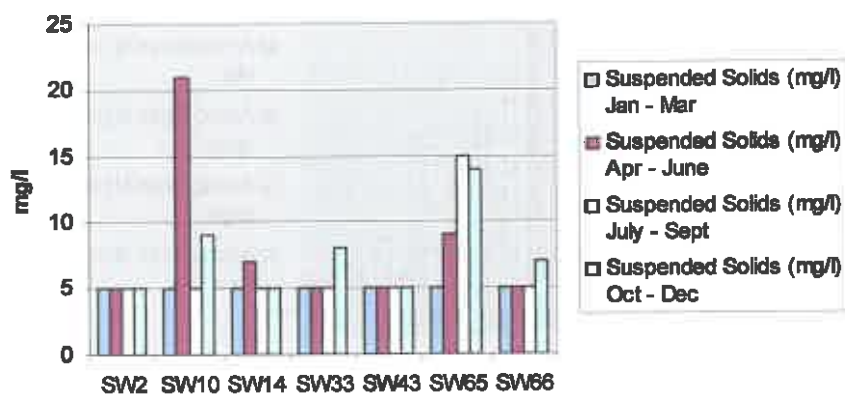
BNM Group	Allen			
IPC Licence No.	503			
pH (units)				
	Jan - Mar	Apr - June	July - Sept	Oct - Dec
SW2	7.8	7.3	7.4	6.4
SW10	8.1	7.7	7.5	7.3
SW14	8.2	7.7	7.8	7.4
SW33	8.2	8	7.8	7.5
SW43	8.1	7.4	7.8	6.3
SW65	8.1	7.9	7.9	7.6
SW66	8.1	7.8	7.8	7.5
COD (mg/l)				
	Jan - Mar	Apr - June	July - Sept	Oct - Dec
SW2	51	80	108	62
SW10	32	34	99	55
SW14	46	60	71	44
SW33	30	35	65	45
SW43	59	105	75	74
SW65	42	78	102	71
SW66	45	75	100	81
Ammonia as N (mg/l)				
	Jan - Mar	Apr - June	July - Sept	Oct - Dec
SW2	0.27	0.42	0.27	0.23
SW10	0.51	0.34	0.62	0.43
SW14	0.62	0.27	1.14	0.71
SW33	2.23	2.22	2.27	1.74
SW43	1.66	0.65	1.16	0.21
SW65	1.49	0.45	0.38	0.72
SW66	0.67	0.16	0.29	0.2
Total Phosphorus (mg/l)				
	Jan - Mar	Apr - June	July - Sept	Oct - Dec
SW2	0.05	0.1	0.05	0.07
SW10	0.12	0.05	0.05	0.08
SW14	0.05	0.11	0.05	0.07
SW33	0.05	0.05	0.05	0.05
SW43	0.05	0.06	0.05	0.05
SW65	0.05	0.07	0.05	0.05
SW66	0.05	0.05	0.05	0.07
Suspended Solids (mg/l)				
	Jan - Mar	Apr - June	July - Sept	Oct - Dec
SW2	5	5	5	5
SW10	5	21	5	9
SW14	5	7	5	5
SW33	5	5	5	8
SW43	5	5	5	5
SW65	5	9	15	14
SW66	5	5	5	7

Total Solids (mg/l)				
	Jan - Mar	Apr - June	July - Sept	Oct - Dec
SW2	170	212	180	102
SW10	478	478	278	260
SW14	440	434	260	132
SW33	322	220	360	188
SW43	264	194	344	144
SW65	304	226	288	254
SW66	303	210	288	228
Colour (pt Co Units)				
	Jan - Mar	Apr - June	July - Sept	Oct - Dec
SW2	202	306	307	244
SW10	64	82	258	175
SW14	76	139	177	152
SW33	74	108	127	149
SW43	237	434	141	350
SW65	147	232	251	204
SW66	129	199	235	241
Flow (l/s)				
	Jan - Mar	Apr - June	July - Sept	Oct - Dec
SW2	0.7	1.7	0.25	85.3
SW10	32.5	47.2	26.4	205.7
SW14	4.5	20	16.5	238.2
SW33	22.5	27	141	484.3
SW43	13.2	33.7	7.5	247.3
SW65	18.3	33.99	51.85	93.5
SW66	40.2	46	44.8	380.8

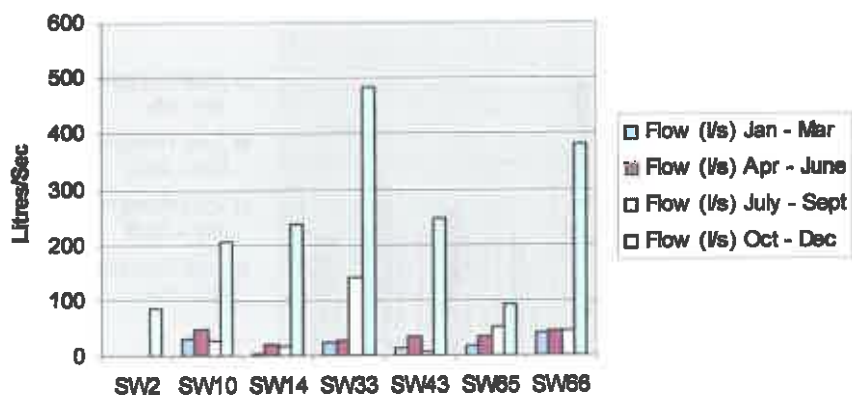
Surface Water COD

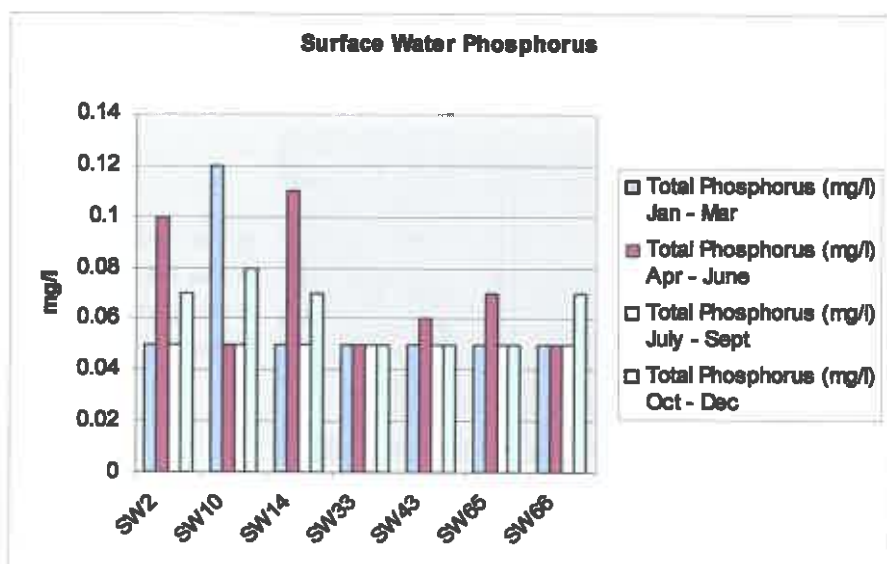
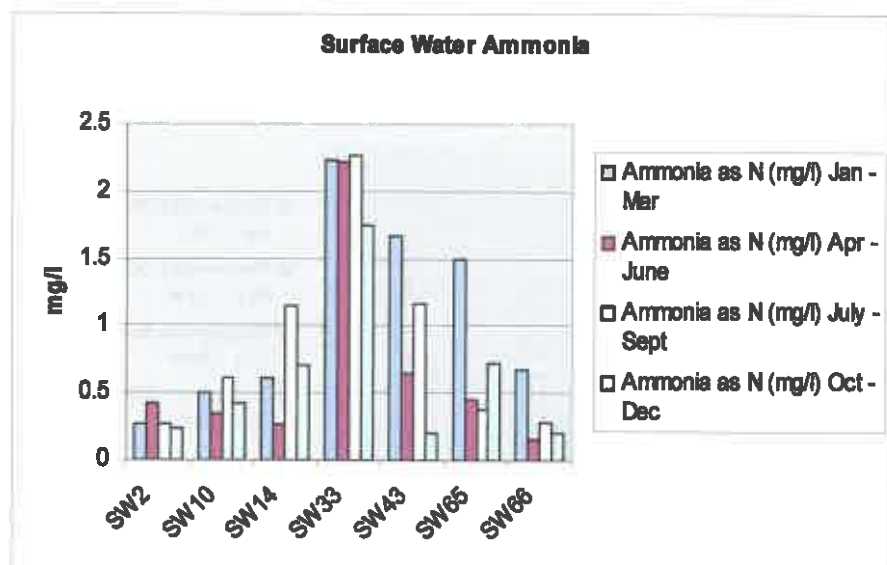
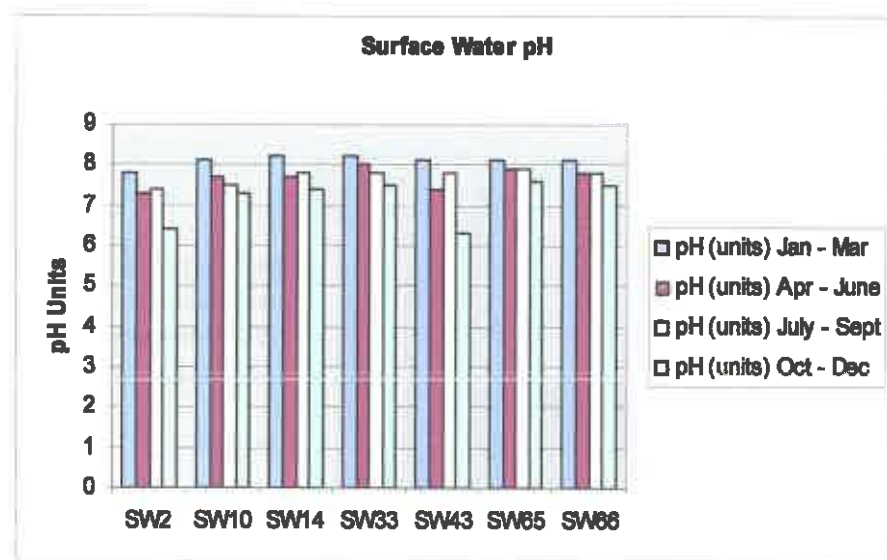


Surface Water SS



Surface Water Flow





APPENDIX 2

Surface Water Discharge Monitoring Results Yards

Yard Discharge Results

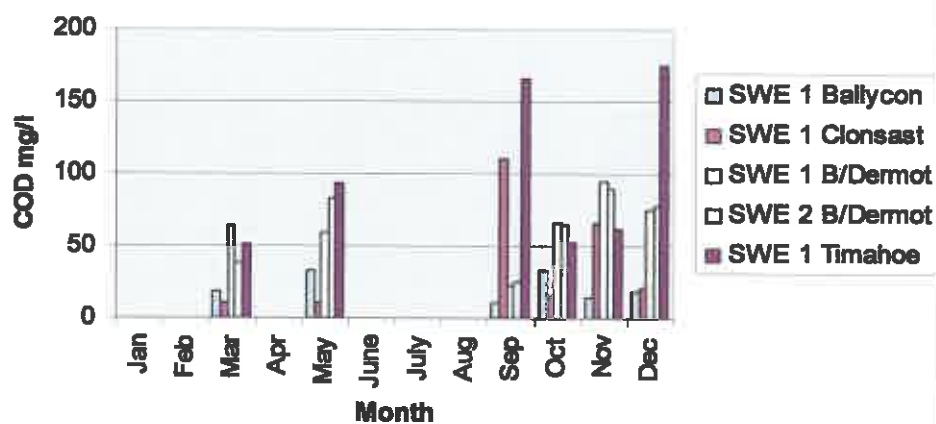
Licence: P0503-01

Works: Allen

Month	SWE 1 Ballycon	SWE 1 Clonsast	SWE 1 B/Dermot	SWE 2 B/Dermot	SWE 1 Timahoe
Jan	NF	NF	NF	NF	NF
Feb	NF	NF	NF	NF	NF
Mar	18	10	63	38	51
Apr	NF	NF	NF	NF	NF
May	33	10	59	83	94
June	NF	NF	NF	NF	NF
July	NF	NF	NF	NF	NF
Aug	NF	NF	NF	NF	NF
Sep	10	110	22	25	166
Oct	33	16	66	65	53
Nov	14	66	95	89	62
Dec	19	21	75	77	175

Note: NF denotes no flow at emission point on day of sampling

Yard Monitoring Results



APPENDIX 3

Surface Water Discharge Monitoring Results Composite

Bord Na Mona Energy Ltd, Allen Group, Rochfordsbridge, Co Westmeath
Composite Sampler Results Licence 503 SW52

Month				Parameters					
January	pH	COD	Ammonia as	Total	Suspended	Total	Colour	Flow	COD
2006		mg/l	N mg/l	Phosphorus	Solids	Solids	Pt Co	Daily	Kg/Day
				mg/l	mg/l	mg/l	units	Total (litres)	
1					IS	IS		74761060	
2					IS	IS		74761060	
3					IS	IS		74761060	
4	7.8	93	0.09	0.05	5	320	145	74761060	
5					IS	IS		74761060	
6					IS	IS		74761060	
7					IS	IS		74761060	
8					IS	IS		74761060	
9					IS	IS		74761060	
10					IS	IS		74761060	
11	7.7	70	0.17	0.05	5	278	186	74761060	
12					IS	IS		74761060	
13					IS	IS		74761060	
14					IS	IS		74761060	
15					IS	IS		74761060	
16					IS	IS		74761060	
17					IS	IS		74761060	
18	7.9	91	0.05	0.07	5	285	179	74761060	
19					5	274		69754100	
20					5	326		59922760	
21					5	256		49396070	
22					5	138		45260170	
23					5	314		45064030	
24					5	330		46313210	
25	8.3	73	0.08	0.06	5	312	130	48578990	
26					5	278		42439410	
27					5	348		40507780	
28					5	354		40507780	
29					5	344		40507780	
30					5	352		40507780	
31					5	339		40586610	

IS: Insufficient amount of sample due to low flow or sampler malfunction.

[illegible]

Bord Na Mona Energy Ltd, Allen Group, Rochfordbridge, Co Westmeath
Composite Sampler Results Licence 503 SW52

Month	pH	COD mg/l	Ammonia as N mg/l	Parameters		Suspended Solids mg/l	Total Solids mg/l	Colour Pt Co units	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals		Suspended Solids Kg/Day	Total Solids Kg/Day
				Phosphorus mg/l	Phosphorus Kg/Day										
February 2006															
1	8.1	61	0.15	0.05	5	346	107	40626140							
2					5	218		40626140							
3					5	340		39553080							
4					5	330		43612970							
5					5	338		42239980							
6					5	116		39654280							
7					5	360		39617150							
8	8	57	0.12	0.05	5	276	100	36523830							
9					5	320		43312140							
10					5	344		39867000							
11					5	326		38520060							
12					5	50		22600660							
13					5	50		582267							
14	7.8	68	0.34	0.05	5	50	176	602684							
15					5	228		85146							
16					5	280		0							
17					5	294		0							
18					5	284		0							
19					5	304		0							
20					5	214		0							
21	8.3	81	0.13	0.05	5	342	140	0							
22					5	458		0							
23					5	318		0							
24					5	324		0							
25					5	314		0							
26					5	130		0							
27					5	314		0							
28					5	252		0							

IS: Insufficient amount of sample due to low flow or sampler malfunction.

Bord Na Mona Energy Ltd, Allen Group, Rochfordbridge, Co Westmeath
Composite Sampler Results Licence 503 SW52

Month	pH	COD mg/l	Ammonia as N mg/l	Parameters		Total Solids mg/l	Suspended Solids mg/l	Colour Pt Co units	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals	
				Total Phosphorus mg/l	Total Phosphorus Kg/Day							Suspended Solids Kg/Day	Total Solids Kg/Day
March 2006													
1	8.4	62	0.11	0.05		332	5	100	0				
2						224	5		0				
3						342	5		0				
4						384	5		0				
5						346	5		0				
6						352	5		0				
7						316	5		0				
8	8.1	64	0.22	0.05		272	5	140	0				
9						322	5		0				
10						328	5		0				
11						300	6		0				
12						266	5		0				
13						302	5		0				
14						266	5		0				
15	8	50	0.09	0.05		342	5	208	0				
16						284	5		0				
17						336	5		0				
18						334	5		0				
19						230	5		0				
20						342	5		0				
21						344	5		0				
22	8.2	46	0.09	0.05		352	5	128	0				
23						336	5		0				
24						225	5		0				
25						272	5		0				
26						256	5		0				
27						176	5		0				
28						266	5		0				
29	7.9	73	0.07	0.05		234	5	172	0				
30						296	5		0				
31						306	5		0				

IS: Insufficient amount of sample due to low flow or sampler malfunction.

Sampler operating on a time basis during this period

2

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Bord Na Mona Energy Ltd, Allen Group, Rochforbsbridge, Co Westmeath
Composite Sampler Results Licence 503 SW52

Month	pH	COD mg/l	Ammonia as N mg/l	Parameters Total Phosphorus mg/l	Suspended Solids mg/l	Total Solids mg/l	Colour Pt Co units	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals Total Phosphorus Kg/Day	Suspended Solids Kg/Day	Total Solids Kg/Day
April 2006													
1					5	290		0					
2					5	280		0					
3					5	324		0					
4					5	342		0					
5	7.8	102	0.08	0.05	5	302	155	0					
6					5	350		0					
7					5	312		0					
8					5	324		0					
9					5	310		0					
10					5	344		0					
11					5	336		0					
12	8	59	0.03	0.05	5	364	124	0					
13					5	354		0					
14					5	364		0					
15					5	350		0					
16					5	324		0					
17					5	355		0					
18					5	334		0					
19	8.1	99	0.06	0.05	5	349	121	0					
20					5	292		0					
21					5	282		0					
22					5	314		0					
23					5	283		0					
24					5	328		0					
25					5	152		0					
26	8.4	71	0.03	0.05	5	358	95	0					
27					5	362		0					
28					5	360		0					
29					5	366		0					
30					5	360		0					

IS: Insufficient amount of sample due to low flow or sampler malfunction.

Bord Na Mona Energy Ltd, Allen Group, Rcnfordsbridge, Co Westmeath
Composite Sampler Results Licence 503 SW52

Month	pH	COD mg/l	Ammonia as N mg/l	Parameters Total Phosphorus mg/l	Suspended Solids mg/l	Total Solids mg/l	Colour Pt Co units	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals Total Phosphorus Kg/Day	Suspended Solids Kg/Day
May 2006												
1					5	336		0				
2					5	346		0				
3	8.1	78	0.03	0.05	5	302	114	0				
4					5	338		0				
5					5	296		0				
6					5	340		0				
7					5	344		0				
8					5	366		0				
9					5	168		0				
10	8	61	0.03	0.05	5	352	111	0				
11					28	336		0				
12					5	338		0				
13					30	334		0				
14					5	326		0				
15					38	366		0				
16					5	284		0				
17	8.2	55	0.03	0.05	20	319	139	0				
18					5	314		0				
19					5	304		0				
20					5	248		0				
21					5	190		0				
22					5	214		0				
23					5	270		0				
24	8	88	0.06	0.05	5	260	221	0				
25					5	269		0				
26					5	358		0				
27					5	302		0				
28					5	298		0				
29					5	346		0				
30					5	264		0				
31	7.9	62	0.02	0.05	5	316	153	0				

IS: Insufficient amount of sample due to low flow or sampler malfunction.

[illegible]

[illegible]

Bord Na Mona Energy Ltd, Allen Group, Rochfordbridge, Co Westmeath
Composite Sampler Results Licence 503 SW52

Month	pH		COD	Ammonia as N		Parameters		Total Solids		Colour		Flow		COD		Ammonia as		Daily Totals		Suspended Solids		Total Solids	
June 2006			mg/l	mg/l		Total Phosphorus	mg/l	Suspended Solids	mg/l	Total Solids	Pt Co units	Daily Total	(litres)	Kg/Day		Kg/Day		Kg/Day		Kg/Day		Kg/Day	
1								5	320				0										
2								6	374				0										
3								5	350				0										
4								7	354				0										
5								5	382				0										
6								5	400				0										
7	8.1		59	0.02	0.05			5	400		113		0										
8								5	376				0										
9								5	364				0										
10								5	418				0										
11								5	414				0										
12								5	400				0										
13								5	408				0										
14	8.2		23	0.02	0.05			5	390		82		0										
15								5	402				0										
16								5	398				0										
17								5	402				0										
18								5	414				0										
19								5	438				0										
20								5	398				0										
21	8.2		63	0.02	0.05			5	396		74		0										
22								5	362				0										
23								5	324				0										
24								5	350				0										
25								5	364				0										
26								5	360				0										
27								5	400				0										
28	8.4		38	0.02	0.09			5	362		66		0										
29								5	394				0										
30								5	364				0										

IS: Insufficient amount of sample due to low flow or sampler malfunction.

Bord Na Mona Energy Ltd, Allen Group, Rochfordbridge, Co Westmeath
Composite Sampler Results Licence 503 SW52

SW52	Parameters		Ammonia as		COD		Ammonia as		Daily Totals		Suspended		Total	
July	pH	COD	mg/l	N mg/l	mg/l	Total	mg/l	Solids	mg/l	mg/l	Pt Co	units	Total	mg/l
2006														
1								5	388	52842				
2								5	364	52842				
3								5	368	52842				
4								5	410	52842				
5	8.1	59		0.03	0.05			5	453	52842	77			
6								5	348	52842				
7								5	376	52842				
8								5	376	52842				
9								5	272	52842				
10								5	378	52842				
11								5	368	52842				
12	8.2	54		0.02	0.05			5	330	52842	268			
13								5	196	52842				
14								5	314	52842				
15								5	346	52842				
16								5	376	52842				
17								5	374	52842				
18								5	348	52842				
19	8	55		0.02	0.11			5	50	52842	73			
20								5	358	52842				
21								5	394	52842				
22								5	376	52842				
23								5	384	52842				
24								5	376	52842				
25								5	384	52842				
26	8.5	30		0.04	0.1			5	380	52842	73			
27								5	364	52842				
28								5	368	52842				
29								5	336	52842				
30								5	388	52842				
31								5	342	52842				

IS: Insufficient amount of sample due to low flow or sampler malfunction.

Bord Na Mona Energy Ltd, Allen Group, Rochfordbridge, Co Westmeath
Composite Sampler Results Licence 503 SW52

Month	pH	COD mg/l	Ammonia as N mg/l	Parameters Total Phosphorus mg/l	Suspended Solids mg/l	Total Solids mg/l	Colour Pt Co units	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals Total Phosphorus Kg/Day	Suspended Solids Kg/Day	Total Solids Kg/Day
August 2006													
1					5	322		52842					
2	8.1	57	0.02	0.05	5	314	89	52842					
3					5	364		52842					
4					5	352		52842					
5					5	364		52842					
6					5	374		52842					
7					5	374		52842					
8					5	350		52842					
9	7.8	35	0.03	0.05	5	428	97	52842					
10					5	344		52842					
11					5	352		52842					
12					5	358		52842					
13					5	346		52842					
14					5	346		52842					
15					5	355		52842					
16	7.7	55	0.02	0.05	5	348	69	52842					
17					5	357		52842					
18					5	354		52842					
19					5	306		52842					
20					5	278		52842					
21					5	274		52842					
22					5	280		52842					
23	7.7	77	0.02	0.1	5	272	215	52842					
24					5	243		52842					
25					5	250		52842					
26					5	308		52842					
27					5	304		52842					
28					5	342		52842					
29					5	308		52842					
30	7.9	67	0.02	0.05	5	294	155	52842					
31					5	292		52842					

IS: Insufficient amount of sample due to low flow or sampler malfunction.

Bord Na Mona Energy Ltd, Allen Group, Roinnforasbridge, Co Westmeath
Composite Sampler Results Licence 503 SW52

Month	pH	COD mg/l	Ammonia as N mg/l	Parameters Total Phosphorus mg/l	Total Solids mg/l	Colour Pt Co units	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals Total Phosphorus Kg/Day	Suspended Solids Kg/Day
September 2006											
1					5		52842				
2					5		52842				
3					5		52842				
4					5		52842				
5					5		52842				
6	7.7	97	0.02	0.05	5	252	52842				
7					5		791757				
8					5		1839695				
9					5		1768327				
10					5		9207				
11					5		6429218				
12					5		821989				
13	7.8	78	0.02	0.05	5	169	1384120				
14					5		1951804				
15					5		20270				
16					5		16989				
17					5		25739				
18					5		3003743				
19					5		282385				
20	7.7	89	0.09	0.09	5	253	12775540				
21					5		38480800				
22					5		10860480				
23					5		4408846				
24					5		17585610				
25					5		28258870				
26					5		102403				
27	7.8	96	0.02	0.05	5	279	13431140				
28					5		41770				
29					5		1853130				
30					5		22547370				

IS: Insufficient amount of sample due to low flow or sampler malfunction.

[illegible]

Bord Na Mona Energy Ltd, Allen Group, Rcnfordsbridge, Co Westmeath
Composite Sampler Results Licence 503 SW52

Month	pH	COD mg/l	Ammonia as N mg/l	Parameters		Colour Pt Co	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals	
				Total Phosphorus mg/l	Suspended Solids mg/l	Total Solids mg/l				Total Phosphorus Kg/Day	Suspended Solids Kg/Day
October 2006											
1					5	212	12863320				
2					5	226	36027940				
3					5	264	45815390				
4	7.7	103	0.02	0.05	5	288	8200908				
5					5	262	35065100				
6					5	222	30862820				
7					5	214	1431115				
8					5	256	14672580				
9					5	278	22496630				
10					5	288	19709830				
11	7.6	103	0.04	0.05	5	242	30775960				
12					5	272	6408091				
13					5	304	11611530				
14					5	312	35622				
15					5	336	23705850				
16					5	326	38745710				
17					5	34	12773580				
18	8	92	0.03	0.05	5	327	27351440				
19					5	298	137364200				
20					5	268	153031700				
21					5	290	153031700				
22					5	278	153031700				
23					5	294	153031700				
24					5	316	153031700				
25	7.9	92	0.06	0.05	5	272	153031700				
26					5	256	153031700				
27					5	252	153031700				
28					5	278	153031700				
29					5	312	153031700				
30					5	320	153031700				
31					5	333	153031700				

IS: Insufficient amount of sample due to low flow or sampler malfunction.

Bord Na Mona Energy Ltd, Allen Group, Roinfordsbridge, Co Westmeath
Composite Sampler Results Licence 503 SW52

Month	pH	COD mg/l	Ammonia as N mg/l	Parameters Total Phosphorus mg/l	Suspended Solids mg/l	Total Solids mg/l	Colour Pt Co units	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals Total Phosphorus Kg/Day	Suspended Solids Kg/Day
November 2006												
1	7.9	83	0.05	0.05	5	334	210	153031700				
2					5	338		153031700				
3					5	332		153031700				
4					5	346		153031700				
5					5	340		153031700				
6					5	350		153031700				
7					5	362		153031700				
8	7.9	10	0.05	0.14	5	332	170	153031700				
9					19	374		153031700				
10					21	356		153031700				
11					14	350		153031700				
12					19	350		153031700				
13					19	352		153031700				
14					20	352		153031700				
15	7.7	79	0.12	0.05	21	300	207	153031700				
16					5	236		153031700				
17					5	232		153031700				
18					5	270		153031700				
19					5	278		153031700				
20					5	274		153031700				
21					5	300		153031700				
22	7.7	93	0.08	0.11	5	304	238	153031700				
23					5	268		153031700				
24					5	296		153031700				
25					5	300		153031700				
26					5	298		153031700				
27					5	266		153031700				
28					5	271		153031700				
29	7.9	98	0.09	0.05	5	290	238	153031700				
30					5	290		153031700				

IS: Insufficient amount of sample due to low flow or sampler malfunction.

[illegible]

Bord Na Mona Energy Ltd, Allen Group, Roonfordsbridge, Co Westmeath
Composite Sampler Results Licence 503 SW52

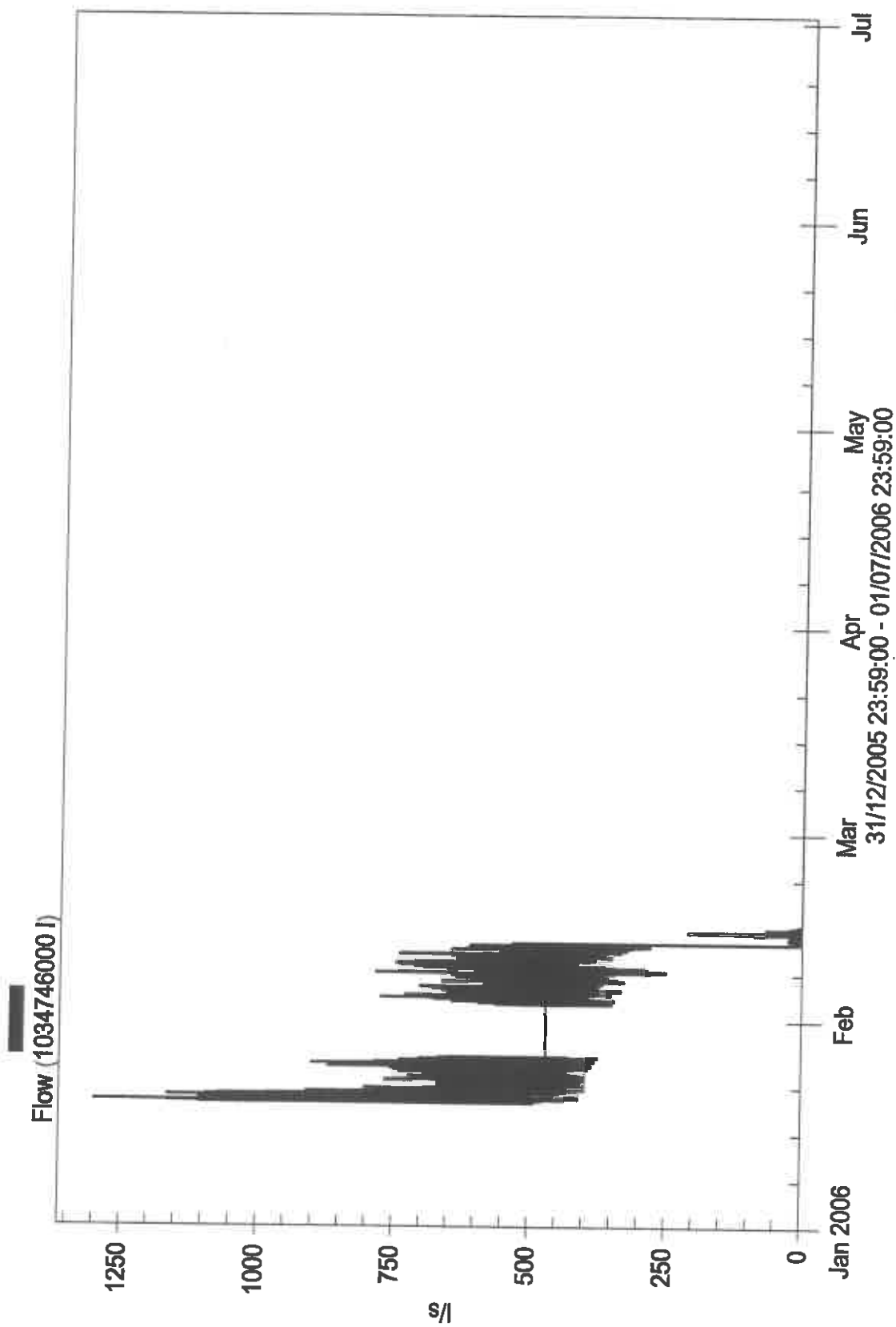
Month	pH	COD mg/l	Ammonia as N mg/l	Parameters		Suspended Solids mg/l	Total Solids mg/l	Colour Pt Co units	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals	
				Total Phosphorus mg/l	Phosphorus Kg/Day							Total Phosphorus Kg/Day	Suspended Solids Kg/Day
December 2006													
1						5	264		153031700				
2						5	280		153031700				
3						5	254		153031700				
4						5	260		153031700				
5						5	278		153031700				
6	7.7	67	0.05	0.06		5	300	246	153031700				
7						5	260		153031700				
8						5	244		153031700				
9						5	282		153031700				
10						5	284		153031700				
11						5	246		153031700				
12						5	270		153031700				
13	7.8	96	0.04	0.08		5	288	236	153031700				
14						5	276		153031700				
15						5	262		153031700				
16						IS	IS		153031700				
17						IS	IS		153031700				
18						IS	IS		153031700				
19						IS	IS		153031700				
20	7.8	86	0.09	0.07		5	330	208	153031700				
21						IS	IS		69183070				
22						IS	IS						
23						IS	IS						
24						IS	IS						
25						IS	IS						
26						IS	IS						
27	7.8	73	0.21	0.07		11	244	202					
28						IS	IS						
29						IS	IS						
30						IS	IS						
31						IS	IS						

IS: Insufficient amount of sample due to low flow or sampler malfunction.

[illegible]

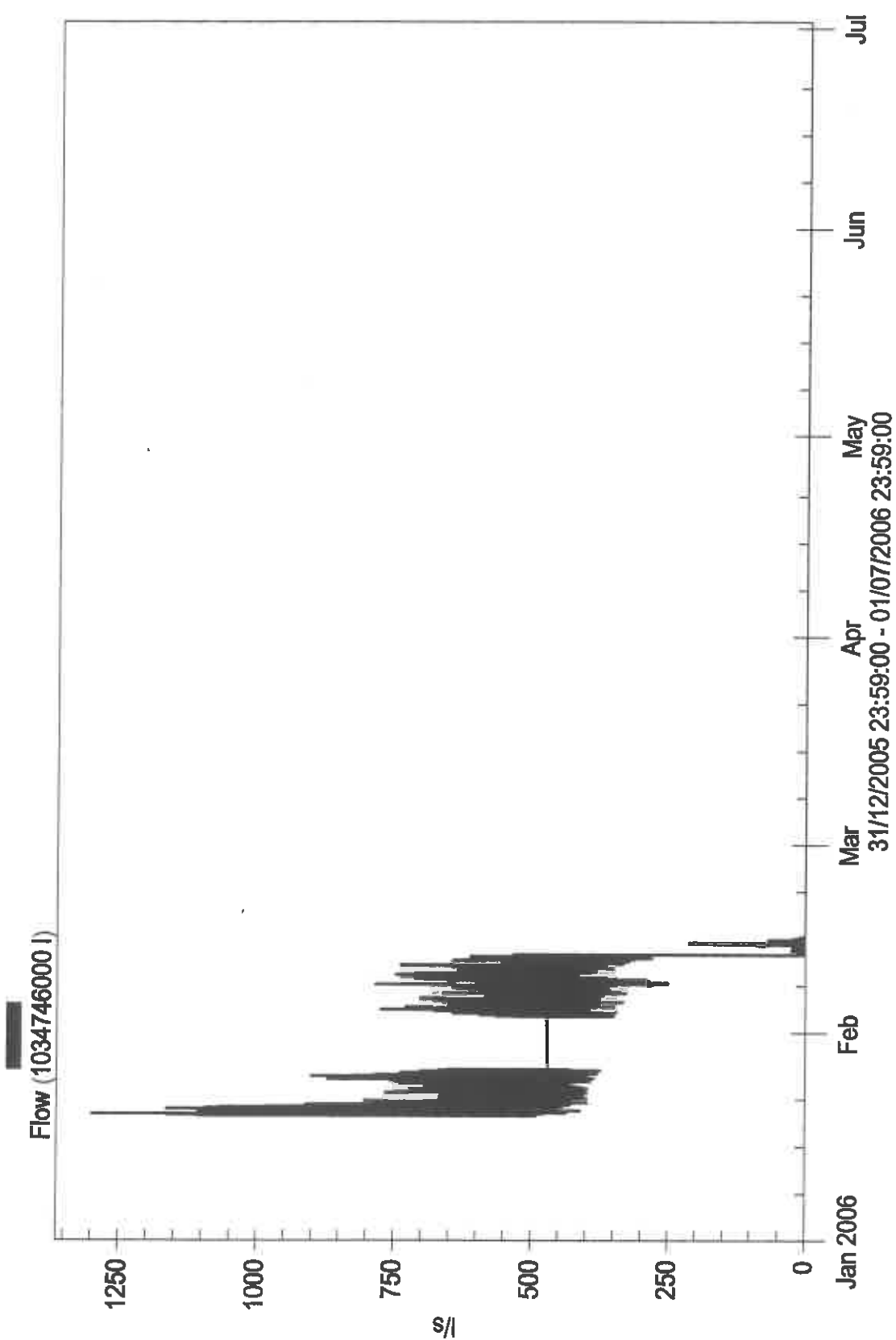
Cush Composite Sampler

January to June 2006



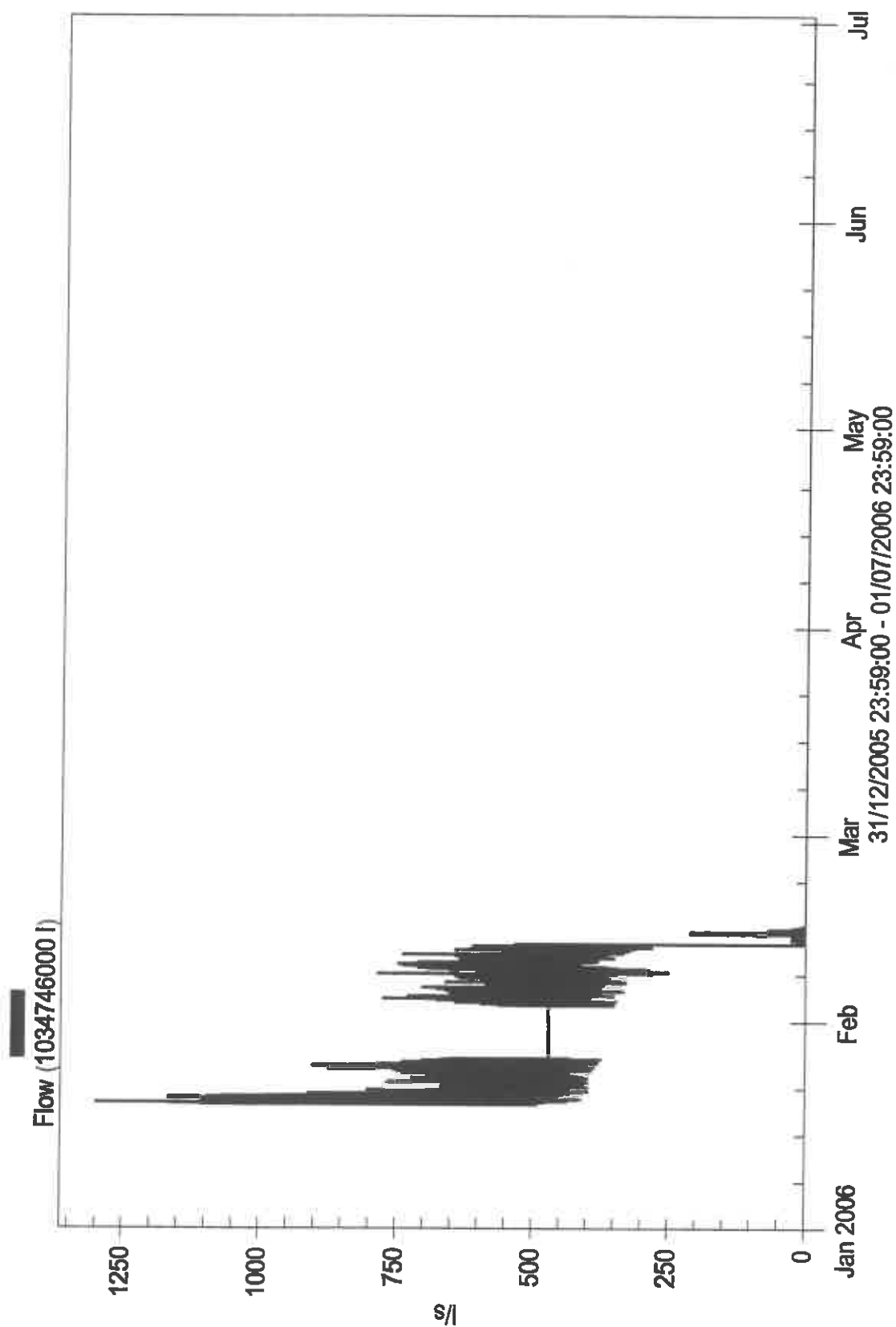
Cush Composite Sampler

January to June 2006



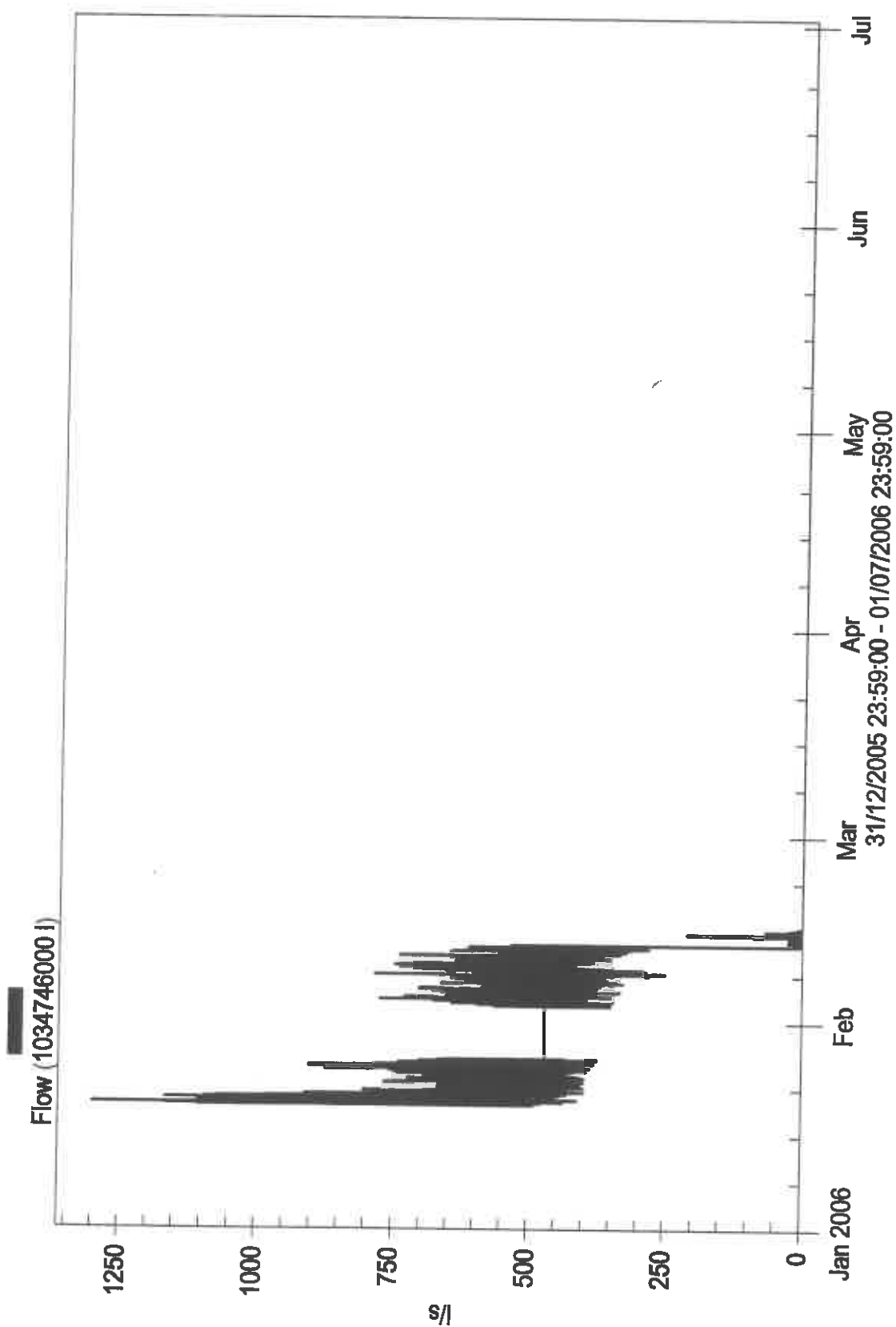
Cush Composite Sampler

January to June 2006



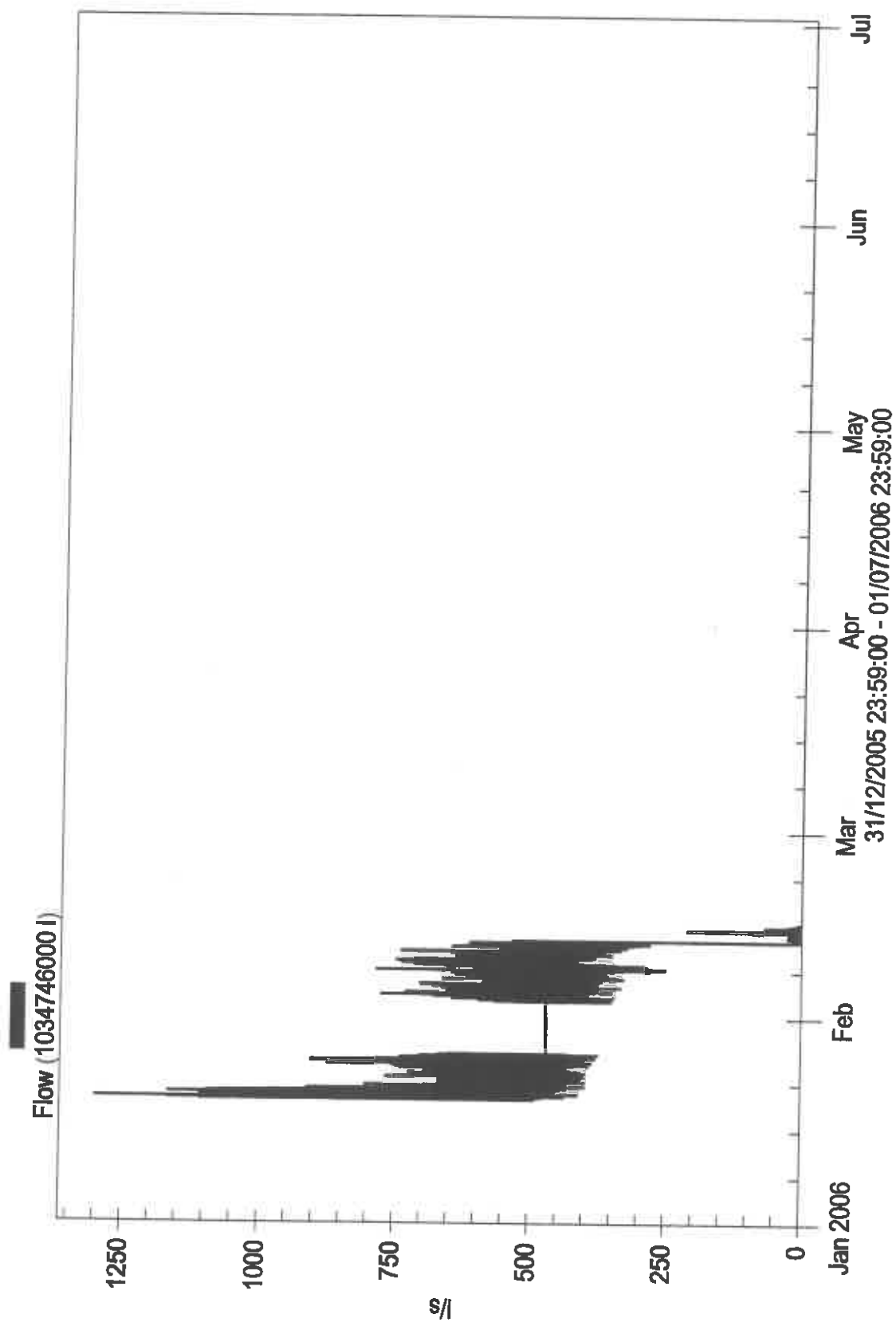
Cush Composite Sampler

January to June 2006



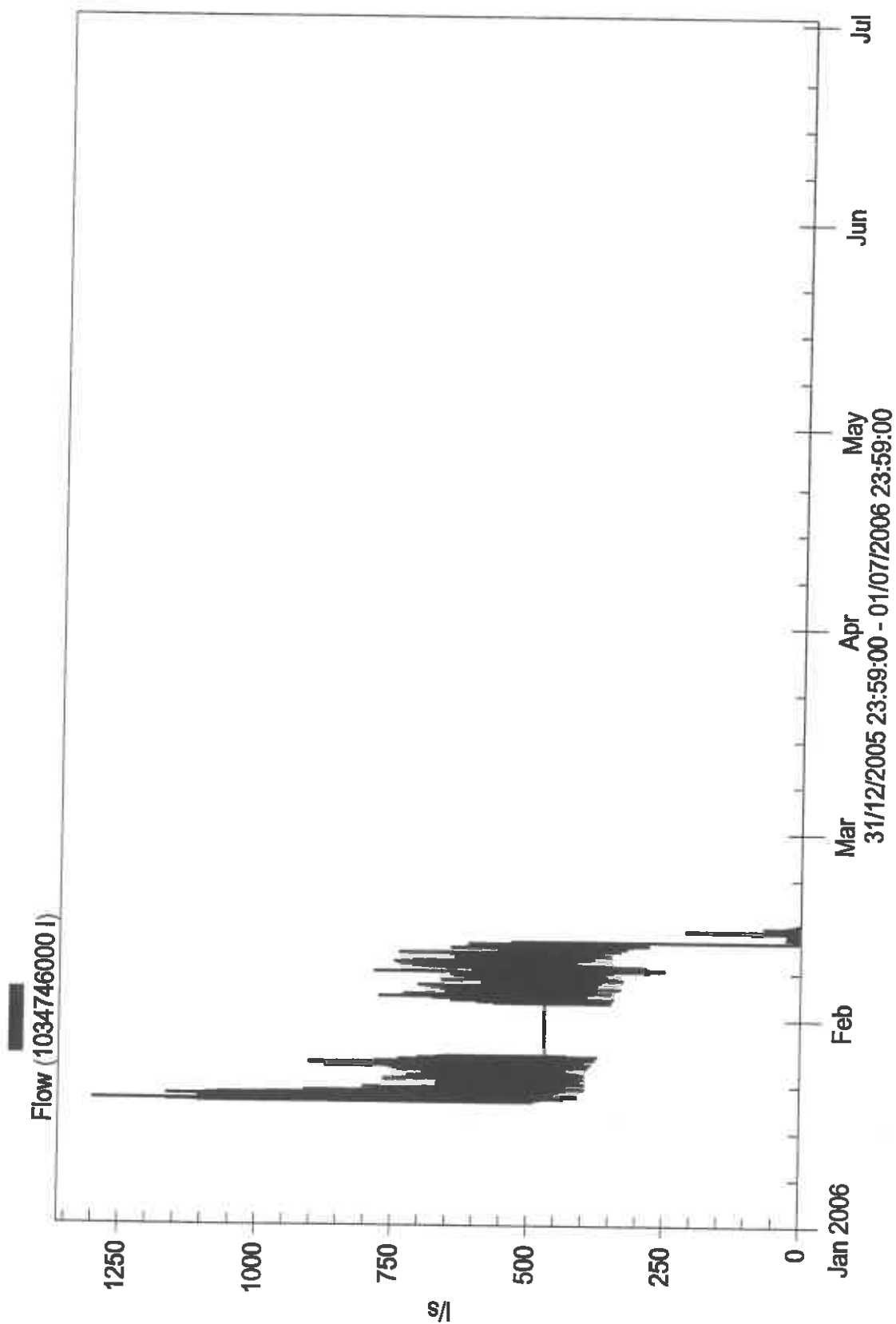
Cush Composite Sampler

January to June 2006



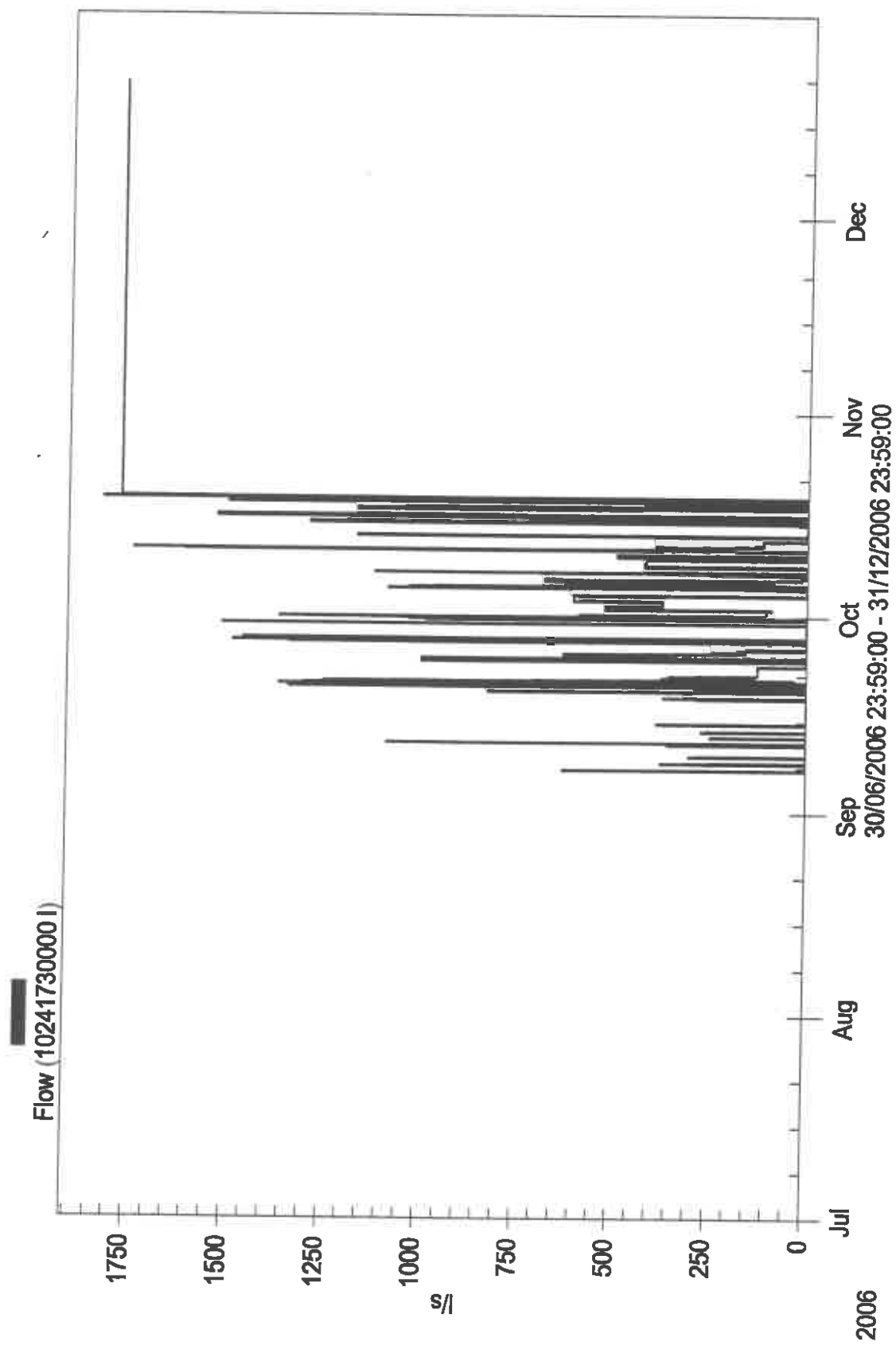
Cush Composite Sampler

January to June 2006



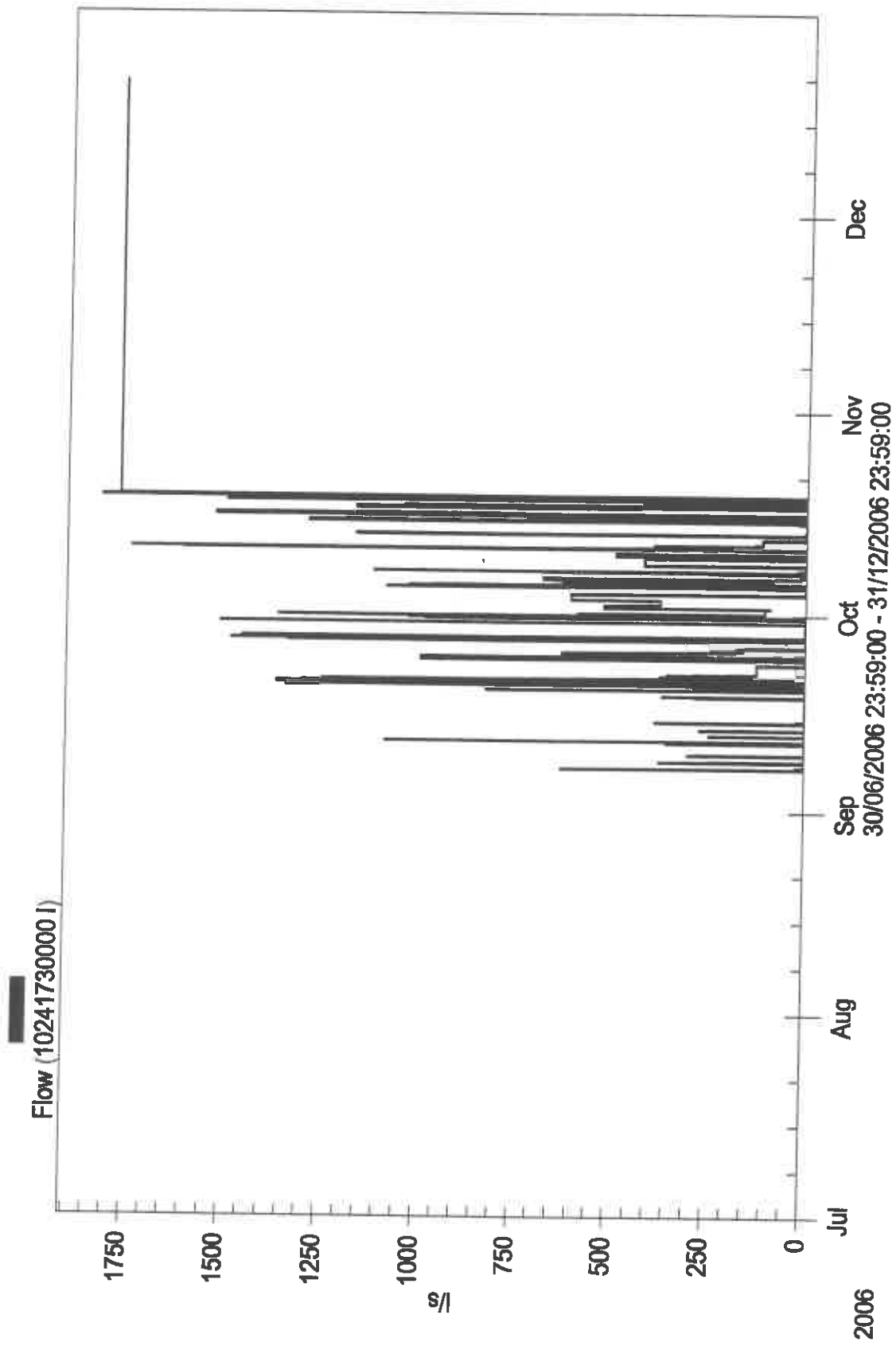
Cush Composite Sampler

July to December 2006



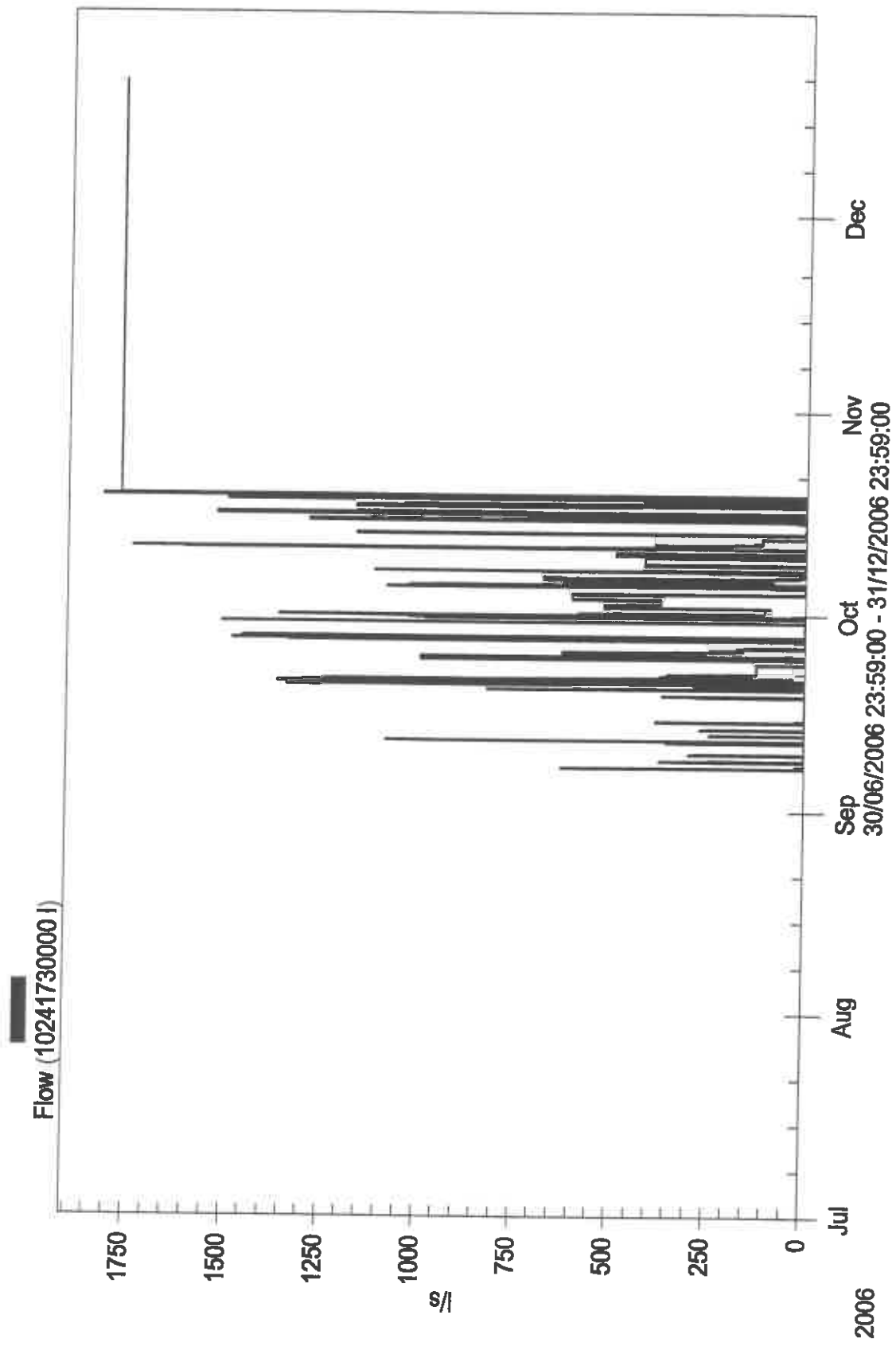
Cush Composite Sampler

July to December 2006



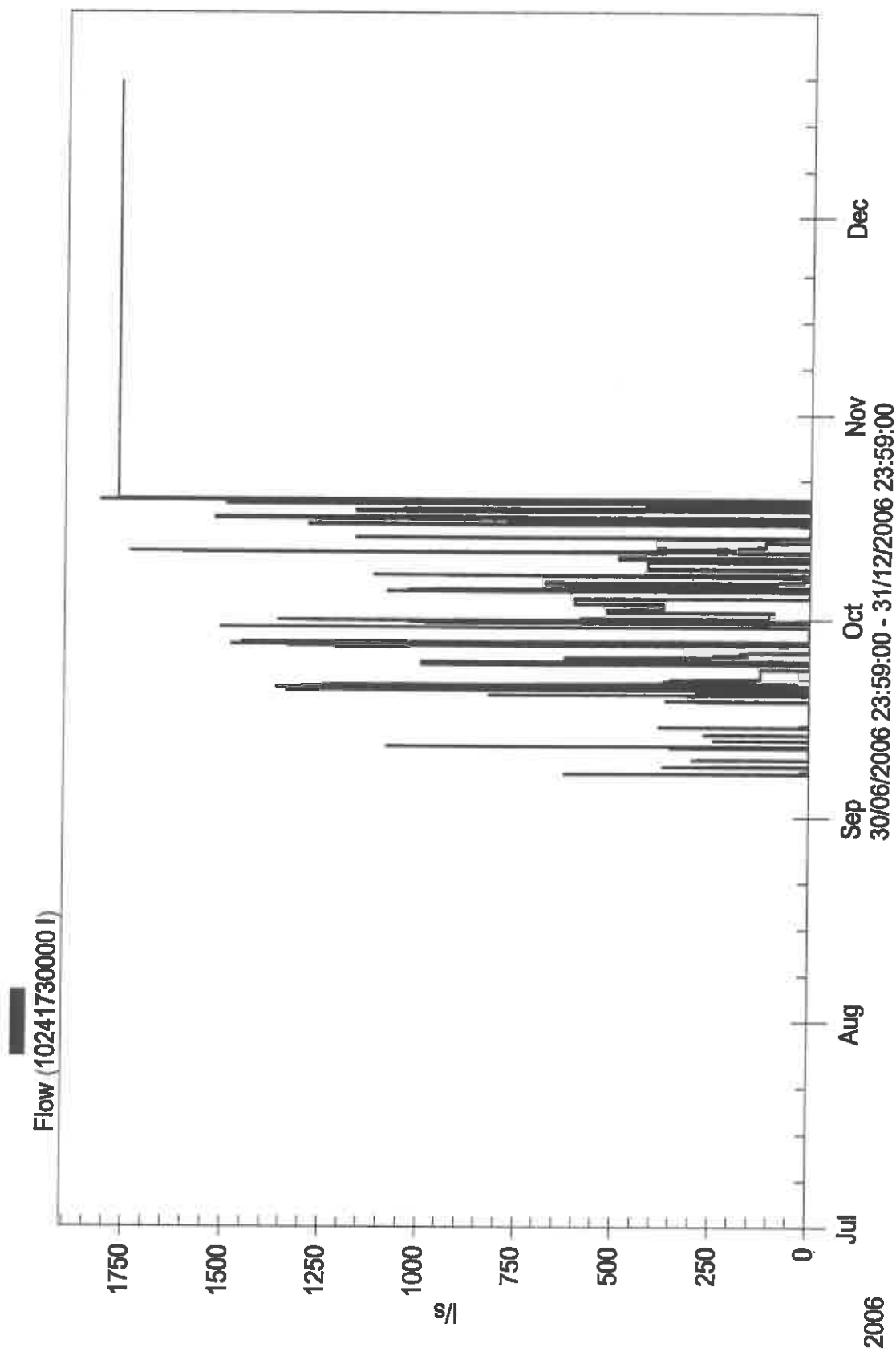
Cush Composite Sampler

July to December 2006



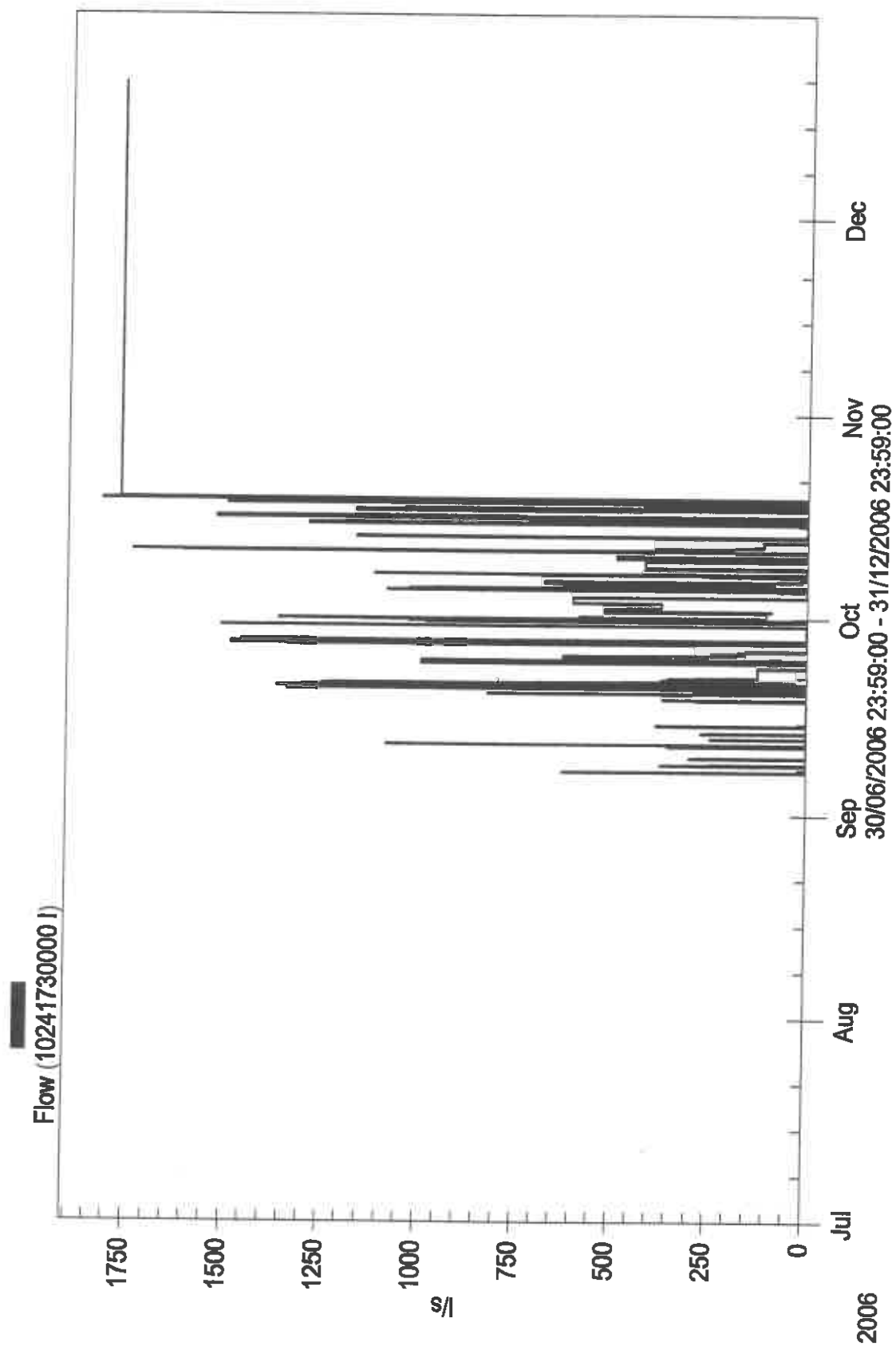
Cush Composite Sampler

July to December 2006



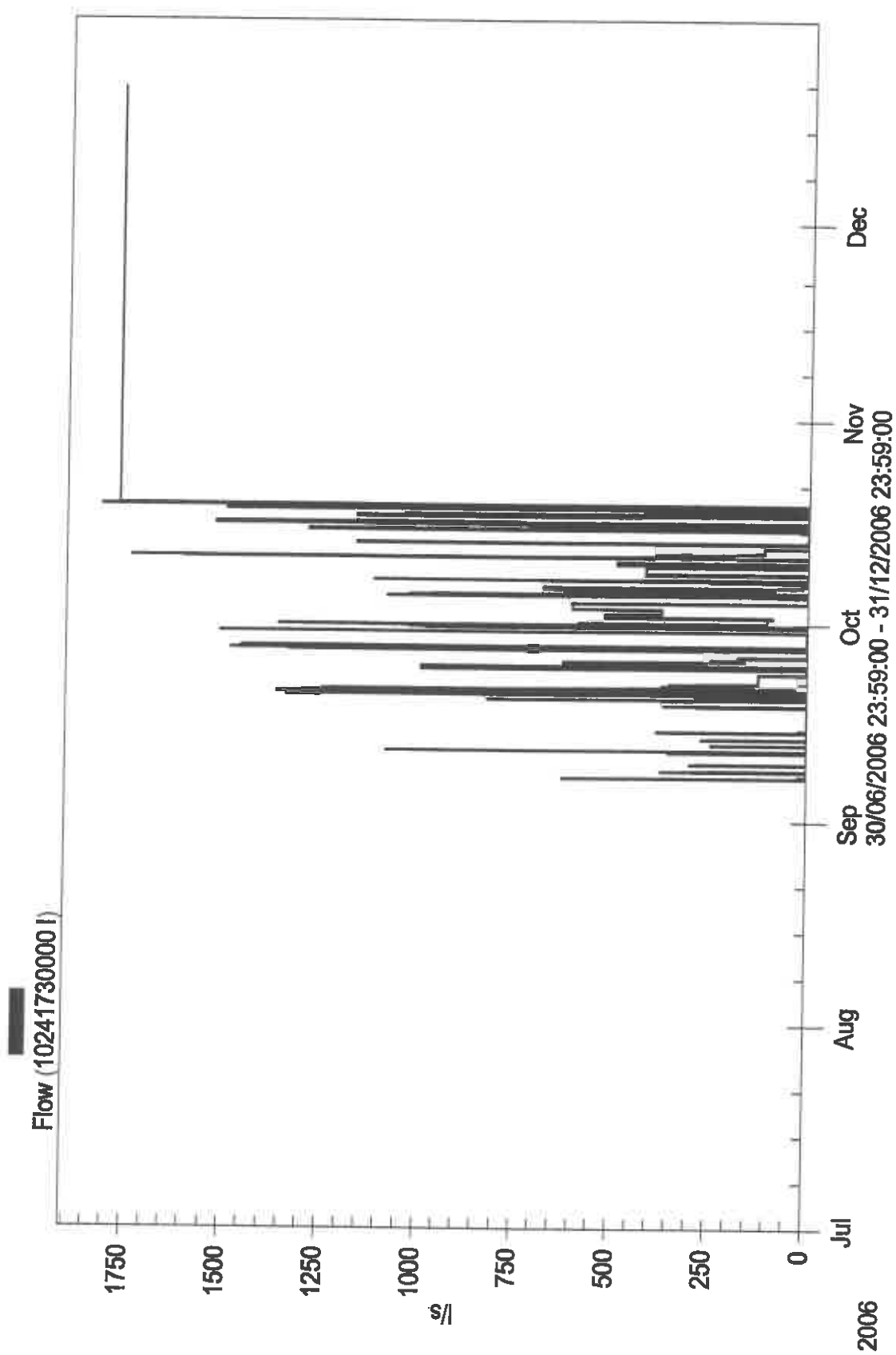
Cush Composite Sampler

July to December 2006



Cush Composite Sampler

July to December 2006



APPENDIX 4

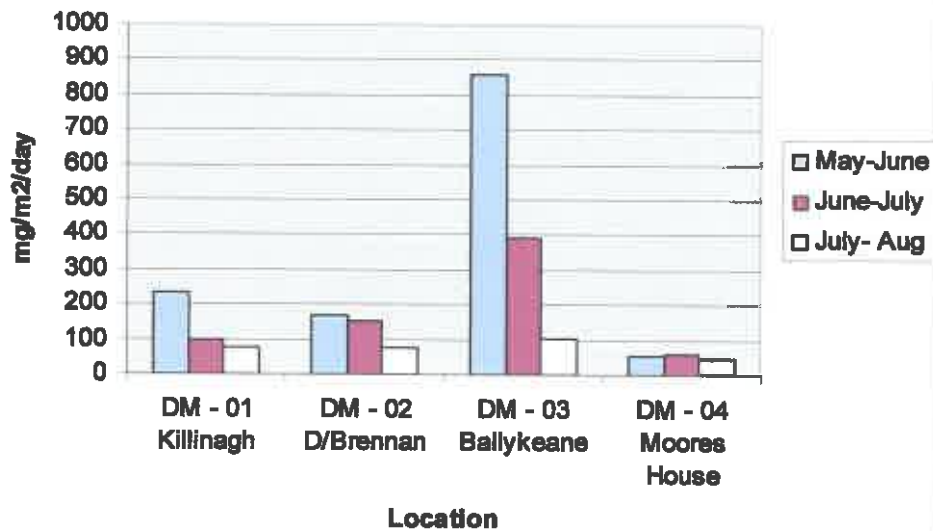
Dust Monitoring Results.

Licence: P0503-01

Works:
Allen

Sample Period	DM - 01 Killinagh	DM - 02 D/Brennan	DM - 03 Ballykeane	DM - 04 Moore's House
May-June	235	166	861	57
June-July	100	150	389	61
July-Aug	75	75	103	46

Dust Monitoring Results



APPENDIX 5

Boiler Efficiency Results



Boiler Services



Allenstown, Broadway, Co. Wexford.

Tel.: 053 - 31308 • Mobile: 087 - 2604276

Industrial • Commercial & Domestic • Service & Repairs

• Oil & Gas • Free Estimates • 23 hour Call Out • V.A.T. No. IE 3505423T

SERVICE/COMMISSION

REPORT No. 4286

CUSTOMER:

C. M. Delaney

SITE ADDRESS

Re Boilers at home

Timothy

ENGINEER
SIGNATURE

Con Morris

DATE *20/2/2006*

CUSTOMER
TEL-CONTACT

O No/JOB No

WORKING TIME

MILEAGE

MATERIALS USED

2 oil nozzles

SITE TELEPHONE No & CONTACT

BOILER No

No1

~~No2~~

~~No3~~

COMMENTS

BURNER TYPE & MAKE

Buderus G515

OUTPUT

455 KW

SERIAL No

05621820 065

BURNER

Riello RLS

SERIAL No

02377000212

GAS TRAIN SIZE REF

N/A

FUEL

GAS OIL

BOILER No

No1

~~No2~~

~~No3~~

BURNER STATUS

CO2

11.2 11.5

CO

0 0

O2

6.0 6.2

NOX

— —

FLUE TEMP GROSS

170 180

AIR INT TEMP

10 10

FLUE TEMP NETT

160 170

EFFICIENCY

87.5 90.3

FLUE DRAUGHT

MB 2 1

BOILER TEMP

80 80

GAS INLET PRESS (STATIC)

— —

GAS INLET PRESS (RUNNING)

— —

IONIZATION CURRENT UA

— —

GAS HEAD PRESS

— —

GAS RATE Pr3/M3h

— —

NOZZLE SIZE & TYPE

6.0 4.0

SMOKE No

0 0

OIL PUMP PRESS

BAR 12 12

COMBUSTION CHAMBER PRESS

0 1.5

FAN STATIC PRESS

— —

AIR SETTING

30 60

HEAD SETTING

5 5

*Cleaned & checked
Boiler
Cleaned & checked
Burner
Cleaned oil filters
Cleaned blast tube
Disperser coked up.
Replaced oil nozzles
Calibrated burner
for gas oil.
Tested boiler
emissions with
Analyser.*

AIR REQUIREMENTS BS6644

TOTAL KW INPUT

AIR REQUIREMENTS HIGH CM²

LEVEL LOW CM²

AIR AVAILABLE HIGH CM²

LEVEL LOW CM²

CUSTOMER SIGNATURE

SIGN:

PRINT:

Tel.: (057) 8756504

SERVICE BOOK

V.

HEAT SERVICES LTD

Commissioning & Service Heating Engineer

Unit 2, Mountrath Enterprise Park, Portlaoise Road, Mountrath

NAME: Bord Na Mona

ADDRESS: Clonsast Portlaoise

COUNTY: offaly

PHONE NO. (HOME): 086 6182424 PHONE NO. (WORK): Joe Ryan

COOKER ☐ BOILER MAKE ☒ Budens

MODEL GE 515

BURNER MAKE Riebo

MODEL RL 50

COOKER/BOILER SERIAL NO.

BURNER SERIAL NO.

COOKER BOILER LOCATION: INDOOR: ☒ OUTDOOR: ☐

LAST SERVICE DATE:

SERVICE DATE: 15/06/06

SERVICE DUE: 15/06/07

OIL ☐ KEROSENE ☐ DIESEL ☒ FUEL OIL ☐

GAS ☐ L.P.G ☐ TOWN GAS ☐

DESCRIPTION OF WORK:- REGULAR SERVICE YES ☒ NO ☐

NOZZLE SIZE:- U.S. Gal./h. 4.50 ANGLE 45° ☐ 60° ☒ 80° ☐ Other ☐

U.S. Gal./h. 4.50 ANGLE 45° ☐ 60° ☒ 80° ☐ Other ☐

SPRAY PATTERN			
S	☒ H	☐ B	☐ Other
S	☒ H	☐ B	☐ Other

WARRANTY: ORDER NO.:

REPLACE PARTS: no

COMMENTS: Service Budens industrial boiler + burner
check line + oil filter. clean sight glass. 2x + 1x

SERVICE ENGINEER

CUSTOMER'S SIGNATURE:

SERVICE BOOK

V.A.T. No. I.E. 6541521B

EAT SERVICES LTD.

Commissioning & Service Heating Engineers 12412

untrath Enterprise Park, Portlaoise Road, Mountrath, Co. Laois

Da Mona
Power Station

PHONE NO. (HOME): PHONE NO. (WORK):

COOKER ☐ BOILER MAKE ☒ *Readers* MODEL *GE 315*

BURNER MAKE	Relco 40	MODEL	G205
-------------	----------	-------	------

COOKER/BOILER SERIAL NO.

BURNER SERIAL NO.				
-------------------	--	--	--	--

COOKER BOILER LOCATION: INDOOR: ☒ OUTDOOR: ☐

LAST SERVICE DATE:

--	--	--	--

 SERVICE DATE: 11-06-26 SERVICE DUE: 11-08-27

OIL ☐ KEROSENE ☐ DIESEL ☒ FUEL OIL ☐ GAS ☐ L.P.G ☐ TOWN GAS ☐

DESCRIPTION OF WORK:- REGULAR SERVICE YES ☐ NO. ☒

NOZZLE SIZE:- U.S. Gal./h. 2.25 ANGLE 45° ☐ 60° ☒ 80° ☐ Other ☐ S ☒ H ☐ B ☐ Other ☐
U.S. Gal./h. ☐ ANGLE 45° ☐ 60° ☐ 80° ☐ Other ☐ S ☐ H ☐ B ☐ Other ☐

WARRANTY: _____ ORDER NO.: _____

REPLACE PARTS: no the

COMMENTS: See Broken Indystrial, under Gen. 1/2/10

SERVICE ENGINEER:

CUSTOMER'S SIGNATURE:

Oil Req. No. OFTEC G/1151/101

Gas Req. G.I. 3

SERVICE BOOK

Tel.: (057) 8756504

V.

HEAT SERVICES
0502 20075

HEAT SERVICES LTD

Commissioning & Service Heating Engineer

Unit 2, Mountrath Enterprise Park, Portlaoise Road, Mountrath

NAME: Bord Na Mone

ADDRESS: Ballydermot Works

COUNTY: Kildare

PHONE NO. (HOME): _____ PHONE NO. (WORK): _____

COOKER ☐ BOILER MAKE ☒ Buderus MODEL V.

BURNER MAKE Riello MODEL RL 50

COOKER/BOILER SERIAL NO. _____

BURNER SERIAL NO. _____

COOKER BOILER LOCATION: INDOOR: ☒ OUTDOOR: ☐

LAST SERVICE DATE: 200606 SERVICE DATE: 200606 SERVICE DUE: 200607

OIL ☐ KEROSENE ☐ DIESEL ☒ FUEL OIL ☐ GAS ☐ L.P.G ☐ TOWN GAS ☐

DESCRIPTION OF WORK:- REGULAR SERVICE YES ☒ NO ☐

NOZZLE SIZE:- U.S. Gal./h. 4.00 ANGLE 45° ☐ 60° ☒ 80° ☐ Other ☐
U.S. Gal./h. 5.00 ANGLE 45° ☐ 60° ☒ 80° ☐ Other ☐

SPRAY PATTERN

S ☒ H ☐ B ☐ Other ☐
S ☐ H ☐ B ☐ Other ☐

WARRANTY: _____ ORDER NO.: _____

REPLACE PARTS: nozzle

COMMENTS: Service Buderus oil boiler clean boiler + burner

SERVICE ENGINEER:

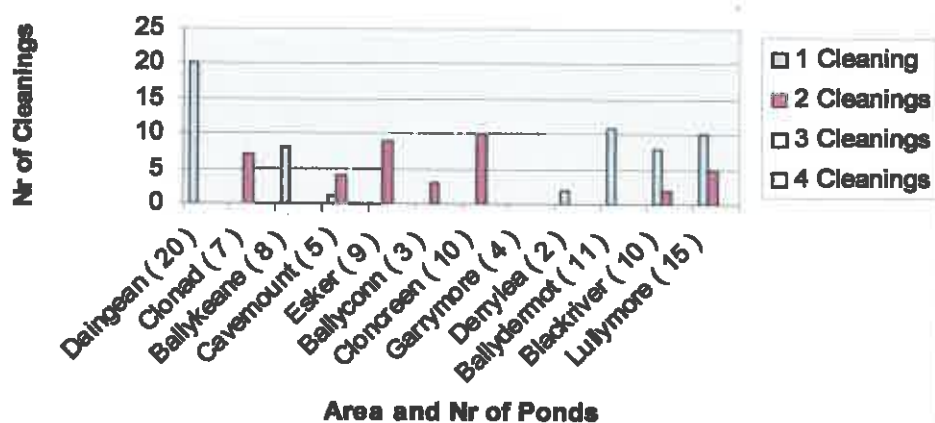
CUSTOMER'S SIGNATURE:

APPENDIX 6

De-silting Programme Review.

Works: Allen

Bog Area & Nr Ponds	1 Cleaning	2 Cleanings	3 Cleanings	4 Cleanings
Dalngean (20)	20			
Clonad (7)		7		
Ballykeane (8)	8			
Cavemount (5)	1	4		
Esker (9)		9		
Ballyconn (3)		3		
Cloncreen (10)		10		
Garrymore (4)				
Derrylea (2)	2			
Ballydermot (11)	11			
Blackriver (10)	8	2		
Lullymore (15)	10	5		

Silt Cleaning Records

BORD NA MÓNA
BORD NA MÓNA ENERGY LIMITED
Derrygreenagh, Rochfortbridge, Mullingar, Co-Westmeath.

03 APR 2006

Annual Environmental Report 2005
IPC LICENCE 503

March 2006

3.0 Management of the Activity

3.1 Environmental Management Programme Report

3.2 Environmental Management Programme Proposal

3.3 Environmental Expenditure

4.0 Licence Specific Reports

4.1 Surface Water Discharge Monitoring Location Programme Review

4.2 Bunding Programme

4.3 Boiler Combustion Efficiency

4.4 Resource Consumption Summary

4.5 Report on de-silting Programme

4.6 Bog Development and Operational Programme

4.7 Bog Rehabilitation Report

4.8 Archaeological Report

5.0 Summary

Appendix 1: Composite Sampler Results

Contents

1.0 Introduction

- 1.1 IPC Licence Register No
- 1.2 Name & Location of Site
- 1.3 Brief Description of Activities
- 1.4 Environmental Management of the Company
- 1.5 Environmental Policy Statement

2.0 Summary Information

2.1 Emissions to Water Summary

- 2.1.1 Silt Pond Emissions
- 2.1.2 Yard Discharges
- 2.1.3 Composite Sampler Report
- 2.1.4 Non-compliance's

2.2 Emissions to Air Summary

- 2.2.1 Dust Monitoring
- 2.2.2 Non-compliance's

2.3 Waste Arisings

- 2.3.1 Non-Hazardous Waste
- 2.3.2 Hazardous Waste

2.4 Energy and Water Consumption

- 2.4.1 Energy Consumption

2.5 Environmental Incidents and Complaints

- 2.5.1 Incidents
- 2.5.2 Complaints

1.3 Description of Activities

The Allen Group of bogs are situated in counties Kildare and Offaly and are generally bounded by the Grand Canal to the North, the Barrow River and tributaries to the South, Nass to the East and Tullamore to the West.

These bogs comprise most of the bogland area that was formerly referred to as the Bog of Allen.

The Allen Group has a total acquired area of 21,150 hectares of which 3,595 nett hectares were in production in 2005.

The Allen Group currently employs 109 permanent workers and used 76 seasonal workers in the 2005 production season

Transport operations are carried out on a seven day cycle throughout the year.

Production operations are typically carried out over a seven day week (weather permitting) for 12 to 15 hours per day.

Peat Milling Operations.

For milled peat production the bog is laid out in a series of rectangular fields of varying length and 15m wide with drains located between. There are essentially four operations involved in milled peat production:

Milling.

Harrowing.

Ridging.

Harvesting.

Milling.

Special milling machines work there way along the fields, milling approximately 15mm of peat of the top of the bog in a pass.

Harrowing

In the course of drying, the milled peat is turned a number of times to avail of the drying conditions. This is achieved with a machine called a harrow. The milled peat is harrowed until its moisture content is down to approximately 40-50%, which can take up to two to three days, weather depending.

Ridging

The dry peat is then scraped into long ridges running down the centre of each field. This is done with a ridger, a machine consisting of a series of blades in the shape of a v that opens the full width of the field.

Harvesting

During harvesting every eleventh field is used to stockpile the peat, with this field receiving the milled peat from the five fields either side.

The milled peat is then transported via the existing network of peatland railways or via road to one of the following locations.

Power station (EPL)

Horticultural Factory.

Briquette Factory.

1.0 Introduction

1.1 IPC Licence No 503

1.2 Name & Location of Site

Name: Bord na Mona Energy Limited.

Address: Allen Group
Derrygreenagh Works
Rochfortbridge
Mullingar
Co Westmeath.

Telephone No: 044 / 22181 Fax No: 044 / 22344

Contact Name: Paul Riordan

Position: Regional Manager.

National Grid Reference: E249450 N238140

1.5 Environmental Policy



Bord na Mona Energy Limited is a commercial semi-state body with responsibility to develop Irelands peat resources in the national interest.

Bord na Mona Energy Limited is committed to gather and make available information on all aspects of its environmental impact and to help improve understanding among the public generally of its role and the importance of Irish peatlands.

Bord na Mona Energy Limited recognises the importance of peatland conservation.

Bord na Mona Energy Limited will leave behind all areas it owns as either an economically or socially integrated resource of a high environmental value.

Bord na Mona Energy Limited seeks to conduct all aspects of its buisness in an environmentally sensitive value.

Bord na Mona Energy Limited will establish an environmental management system specifically addressing the following impacts.

- Discharges to water.
- Emissions to atmosphere.
- Waste disposal.
- Use of natural resources.
- Noise, vibration, odour, dust and visual effects.
- Natural environment and eco-system.

The environmental management system will be monitored, maintained and continually improved.

A system of regular environmental audits will be put in place.

Bord na Mona Energy Limited will continue research and development into all aspects of its environmental impact.

This statement is published and is available at all locations within the division and its contents are brought to the attention of all employees.

1.4 Environmental Management of the Company

The organisational structure within the Allen Group is presented in the flow chart below.



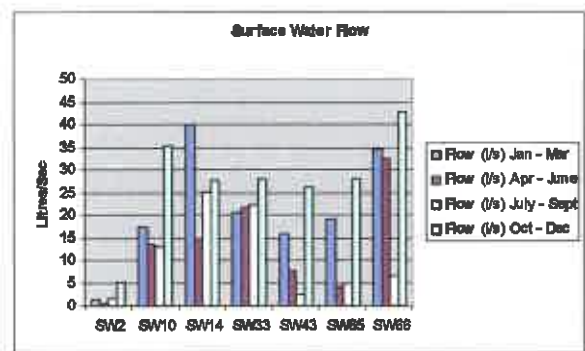
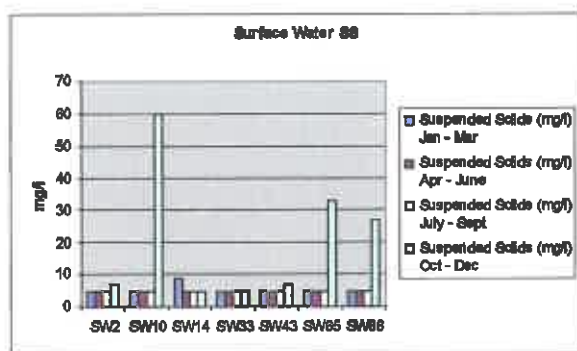
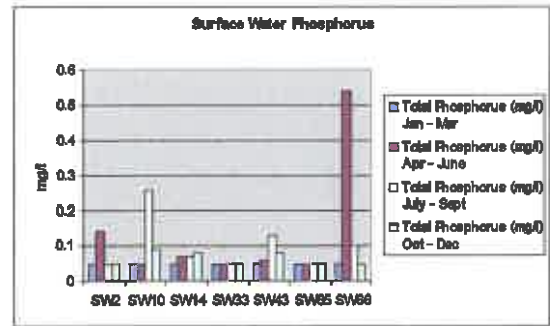
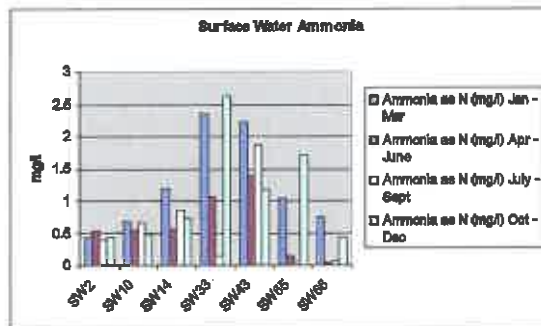
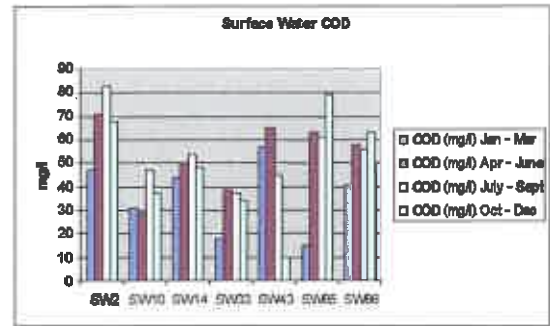
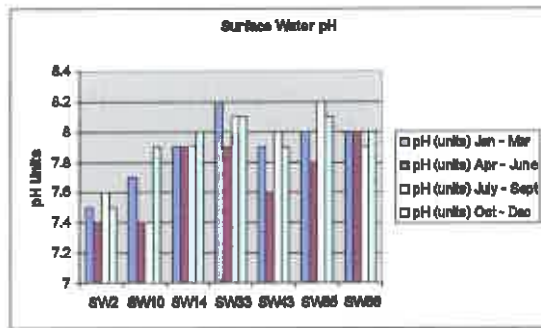
- (1) Overall environmental responsibilities
- (2) Records of complaints and registers
- (3) All production related issues
- (4) Machine maintenance
- (5) Co-ordinating environmental affairs
- (6) All peat transportation matters
- (7) Silt pond maintenance, tea centres, codes of practice
- (8) Fuel loading, oil traps, weekly workshop inspections.

2.0 Summary Information

2.1 Emissions to Water Summary

2.1.1 Silt Pond Emissions

The following graphs compare results obtained during the reporting period at all surface water monitoring points.



Comment

In general results were good on all parameters analysed. Suspended solids were within the emission limit value of 35mg/litre. Elevated ammonia detected at SW 33 & 43 can be common in waters emanating from certain peatlands. Due to the fact that 2005 was the fifth driest year since records began in 1956, flow rates during the period were a lot less than in previous years.

2.2 Emissions to Air

2.2.1 Dust Monitoring

The table below contains the dust emissions for each dust monitoring location within the Allen Group. Monitoring took place on three separate occasions during the period, May and August 2005.

May - June

Emission Point	Parameter	Emission (mg/m ² /day)	Emission Limit Value	Compliant
DM 01	Dust	39	(350mg/m ² /Day)	YES
DM 02	Dust	-	(350mg/m ² /Day)	YES
DM 03	Dust	311	(350mg/m ² /Day)	YES
DM 04	Dust	44	(350mg/m ² /Day)	YES

June - July

Emission Point	Parameter	Emission (mg/m ² /day)	Emission Limit Value	Compliant
DM 01	Dust	42	(350mg/m ² /Day)	YES
DM 02	Dust	119	(350mg/m ² /Day)	YES
DM 03	Dust	226	(350mg/m ² /Day)	YES
DM 04	Dust	83	(350mg/m ² /Day)	YES

July - Aug

Emission Point	Parameter	Emission (mg/m ² /day)	Emission Limit Value	Compliant
DM 01	Dust	53	(350mg/m ² /Day)	YES
DM 02	Dust	125	(350mg/m ² /Day)	YES
DM 03	Dust	285	(350mg/m ² /Day)	YES
DM 04	Dust	71	(350mg/m ² /Day)	YES

Note: DM 01= Killinagh Bog. DM 02 = Derrybrennan Bog. DM 03 = Ballykeane
DM 04 = Moore Household (Lullymore)

2.2.2 Non-compliance's

There were no non-compliances in relation to dust monitoring during the period. The sample pot seems to have been tampered with at DM-02 during the May – June period and analysis could not be carried out.

2.1.2 Yard Discharges

The tables below are a summary of the COD emissions to surface waters from yards and workshops within the Allen Group.

Ballycon SWE-1

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
COD mg/l	10	21	20	44	-	16	-	-	46	60	-	20

Clonsast SWE-1

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
COD mg/l	10	10	10	19	-	23	-	-	105	95	-	32

Ballydermot SWE-1

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
COD mg/l	75	65	60	46	-	47	-	-	49	148	-	60

Ballydermot SWE-2

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
COD mg/l	32	56	32	60	-	83	-	-	58	38	-	47

Timahoe SWE-1

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
COD mg/l	91	54	41	57	-	-	-	-	81	150	-	110

Note: No samples were available on the day of sampling in the months May, July, August & November.

2.1.3 Composite Sampler Report

The composite sampler results are attached in the appendices. The sampler was moved during the reporting period in order to get some background information for a trial currently in progress. The sampler will remain at its present location for the foreseeable future. There were no non-compliances in relation to composite sampling. This backs up the argument of the above mentioned trial, details of which will be submitted to the agency during the year.

2.1.4 Non-compliance's

There were no non-compliance, in relation to silt pond sampling during the reporting period.

Waste Management Record (hazardous)IPC Licence no. : 503**Works : Ballydermot**

WASTE DESCRIPTION	EWC CODE	TONNES	NAME OF CONTRACTOR	DESTINATION	DATE	LICENCE NR
Parts Wash Kerosene	11 01 13	90 L	Safety Kleen	Dublin	11/01/2005	99-1
Parts Wash Kerosene	11 01 13	60 L	Safety Kleen	Dublin	22/06/2005	99-1
Parts Wash Kerosene	11 01 13	60 L	Safety Kleen	Dublin	22/09/2005	99-1
Oily Rags	13 08 99	240 L	Atlas Waste Oil	Portlaoise	06/12/2005	184-1

Works : Clonsast

WASTE DESCRIPTION	EWC CODE	TONNES	NAME OF CONTRACTOR	DESTINATION	DATE	LICENCE NR
Parts Wash Kerosene	11 01 13	90 L	Safety Kleen	Dublin	19/01/2005	99-1
Parts Wash Kerosene	11 01 13	60 L	Safety Kleen	Dublin	08/03/2005	99-1
Oily Rags	13 08 99	240 L	Atlas Waste Oil	Portlaoise	12/04/2005	184-1
Parts Wash Kerosene	11 01 13	60 L	Safety Kleen	Dublin	25/08/2005	99-1
Oily Rags	13 08 99	240 L	Atlas Waste Oil	Portlaoise	17/11/2005	184-1

2.3 Waste Arisings

2.3.1 Non-Hazardous Waste

The following table lists the quantities of the wastes generated from January-December 2005 from all of the Allen Group.

Waste Type	Quantity (Tonnes)
Silt Pond Waste	1989 *
Polyethylene	406.48
Scrap Metal	420.630
Mixed Municipal Waste	3.84
Total	2819.95

Note: * Estimated.

Scrap Metal and Polyethylene are both recycled.

2.3.2 Hazardous Waste

Derrygreenagh being a central location, is used as a collection point for all hazardous wastes emanating from all the areas in both the Allen and Derrygreenagh Groups. All waste oils, filters and spent batteries, etc are collected centrally at Derrygreenagh before being removed by a licenced waste contractor such as Atlas Waste Oil, Hammond Lane, Returnabatt, etc.

The only exceptions to the above are in Ballydermott and Clonsast workshops and at Edenderry Power Station where the waste streams are now being dealt with directly from each location. The tables overleaf list the wastes disposed of from these locations during the reporting period.

A system is in place where by every area has its own waste oil and filter barrel.

These barrels are painted yellow to distinguish them from ordinary barrels and are clearly marked waste filters or waste oil.

When the barrels are getting near full, the area team leader informs our Derrygreenagh stores and a truck is dispatched to collect the full barrels and replace them with empties. Any spent batteries will also be collected if the need arises.

Records of all the hazardous wastes handled by the Allen and Derrygreenagh Groups from January-December 2005 have been submitted with the Derrygreenagh AER.

2.4 Energy and Water Consumption

2.4.1 Energy

The table below is a summary of the energy consumption for the Allen Group, from the dates January – December 2005.

Water is not included, as it is not used as part of the production process. It is only used in offices, canteens and workshops on a domestic scale.

None of the boilers in the Allen Group are briquette fired.

Fuel	Volume M ³	Tonnes	MW/Hours
Jan - Dec 2005			
Diesel	1232.19	1022.71	12068.09
Petrol	0.977	0.737	8.82
Electricity			79.638
Total	1233.167	1023.447	12156.548

2.5 Environmental Incidents and Complaints

2.5.1 Incidents

There was one incident within the Allen Group, during the reporting period, this involved a fire on Bord na Mona bog. The Agency was informed.

Environmental Incidents	Number of Incidents
Incidents	
Incidents requiring corrective action	1
Categories of Incident	
Air	√
Miscellaneous	

2.5.2 Complaints

There was one complaint within the Allen Group, during the reporting period. The Agency was informed.

Environmental Complaints	Number of complaints
Complaints received	
Complaints requiring corrective action	1
Categories of complaint	
Air	√

Works: EPL

WASTE DESCRIPTION	EWV CODE	TONNES	NAME OF CONTRACTOR	DESTINATION	DATE	LICENCE NR
Waste Oil	13 02 08	2.5	Atlas Waste Oil	Portlaoise	11/02/2005	184-1
Oily Rags	13 08 99	240 L	Atlas Waste Oil	Portlaoise	12/04/2005	184-1
Parts Wash Kerosene	11 01 13	90 L	Safety Kleen	Dublin	20/07/2005	99-1
Waste Oil	13 02 08	10	Atlas Waste Oil	Portlaoise	10/08/2005	184-1
Parts Wash Kerosene	11 01 13	90 L	Safety Kleen	Dublin	13/09/2005	99-1
Parts Wash Kerosene	11 01 13	90 L	Safety Kleen	Dublin	25/08/2005	99-1
Oily Rags	13 08 99	240 L	Atlas Waste Oil	Portlaoise	17/11/2005	184-1

Project 5. Collection, storage and re-use of polythene.	Polythene collection is ongoing in BNM, and volumes collected and recycled are recorded in the Non-hazardous Waste records in the AER. All bogs now have a hard standing area, where the rolls of polythene are stored for collection and subsequent recycling. In addition to this, procedures have been put in-place, and are highlighted during training, about best practice for stripping, collection and storage. All areas have a pollyroller device. A total of 237 tonnes of polyethylene was recycled in 2005.
Project 6. Condition 2.2.2 (v) <i>Provision of measures to protect dust sensitive areas.</i>	DSL's have been identified within the licence area. Existing shelter belts were maintained where required during the reporting period. During production such areas are closely monitored and operatives continually reminded of their responsibilities.

3.0 Management of the Activity

3.1 Environmental Management Programme Report 2005

Environmental Management Report for 2005

Project	
Project 1. Reduction of fugitive dust emissions.	Training All employees both permanent and seasonal were shown the cleaner production and environmental video during the year as part of an ongoing training programme. Each training group were also given a talk on the video by the environmental co-ordinator followed by a questions and answers session. Details of attendants retained on the training file. An internal audit of all IPC licensed sites also occurred during 2005. This included an assessment of the dust prevention measures in-place or planned. A copy of the audit findings is on file at each works. Hydraulic Harrows Hydraulic harrows are currently in operation at appropriate areas / locations Headland Peat Collection There is one headland peat collector in operation This has proved very successful in reducing headland peat.
Project 2. Minimisation of Suspended Solids	This project is on-going and is primarily one of training for all production personnel, and is covered in the Cleaner Production Video, as in Project 1 (Training).
Project 3. Effective spill/leak management of mobile fuelling tanks	All of BNM's production bogs now have locations highlighted as being suitable for re-fuelling on the bog. These locations have been chosen having due regard to location of watercourses and drains. Mobile fuelling tanks are currently being upgraded on a phased basis with 2 tanks fully overhauled in 2005.
Project 4. Re-use of silt pond waste	This project will be kept active should any opportunities for re-using silt pond waste arise.

Project 5. Collection, storage and re-use of polythene.	An invitation to tender for the recycling of BNM's polythene was sent to a number of interested companies in 2005. Six companies expressed interest, and are currently being assessed as to environmental compliance with permitting regulations, collection methods, waste records transfer etc. It is proposed to select one or two of these companies to contract the recycling of the BNM Polythene in 2006. The Polyrollers developed in BNM will be removing and wrapping polythene in the coming months. This year will have a renewed emphasis on the reduction of peat and water presence in the rolls. Derrygreenagh are to receive two more Polyrollers in 2006.
Project 6. Condition 2.2.2 (v) <i>Provision of measures to protect dust sensitive areas.</i>	Identify areas where shelter belts may be planted, where no complaints were received but may in time become dust sensitive due to encroaching housing development.

3.2 Environmental Management Programme Proposal for 2006

Environmental Management Programme Proposal for 2006	
Project	
Project 1. Reduction of fugitive dust emissions.	Training Training of all new operatives will take place in 2006. Any changes in working procedures should they occur, will also be communicated to all personnel. Headland Peat Continue with the practice of lifting headland peat at the various dust sensitive locations on a rotational basis. Identify any potential dust sensitive location before production begins and include same in the roster. Hydraulic harrows Continue using hydraulic harrows in areas of sensitivity and identify any potential dust sensitive locations where additional harrows may be required.
Project 2. Minimisation of Suspended Solids	Inspections during 2005 primarily targeted tea centres, oil stores, workshops etc. It is proposed to carry out inspections at production locations during 2006, looking at cleaner production, dust sensitive areas, silt pond maintenance etc. The results of these inspections will be reported to the General Manager and any corrective actions will be maintained on file.
Project 3. Effective spill/leak management of mobile fuelling tanks	These areas will also be inspected as part of the proposed inspections under Project 6 above. Compliance with Conditions 9.1.1 to 9.1.14 will be checked and any improvements and corrective actions will be documented and maintained on file. The overhaul of all service trains will continue on a phased basis. The use of designated service areas will continue.
Project 4. Re-use of silt pond waste	This project will be kept active should any opportunities for re-using silt pond waste arise.

4.5 De-Silting Report

Summary Data Table of Ponds De-Silted From Jan-December 2005

Bog	No Silt Ponds	Cleaned Once	Cleaned Twice	Cleaned Three Times	Notes
Derries	8	5	1		*
Rathdrum	4	2			
Clonad	4	2	1	1	
Cloncreen	6		5	1	
Esker	7	7			
Cavemount	5		5		
Ballykeane	5			5	
Codd South	2	2			
Ballydermot N	1	1			
Ballydermot S	1	1			
Clonsast N	2				*
Ballycon	3	3			**
Garrymore	4	4			*
Derrylea	2	1			*
Glashabaun N	2	2			
Codd N	4	4			
Ticknevin	2	2			*
Glashabaun S	3	3			
D/brennan	5	5			
Killinagh	3				*
Lodge	2	2			
Bulge	2	2			*
Barnaran	2	2			
Blackriver	2	2			

*: No production. **: Bog cut out, no activity at this Bog.

Note: Any pond which was not cleaned twice, is due to the fact that inspections showed those ponds did not require a second cleaning.

4.6 Bog Development and Operational Programme

The majority of bog development is complete within the Allen Group. During the reporting period development was on going on Rathdrum bog. This development work comprised of ditching, screw leveling and piping. Narrow gauge industrial rail line was also laid into Rathdrum Bog

There will be 3,628.04 nett hectares in production in the 2006 season, yielding 797,431 tonnes @ 55% moisture content.

3.3 Environmental Expenditure

The table below lists the environmental costs incurred by the Allen Group between January-December 2005.

In calculating the environmental costs 70% of the total costs were attributed to Licence 503 and 30% to Licence 501.

Expenditure Related to the Operation of the Allen IPC Licence During the Period January – December 2003	
Description	Cost (€)
Machine hours @ €42/hour	517,376
Labour	246,369
Materials	82,672
Overheads (ESB, Phones, Consumables)	14,000
Laboratory Analysis	18,112
EPA Fees	8,274
Total €	886,803

4.0 Licence Specific Reports

4.1 Surface Water Discharge Monitoring Location Programme Review

The surface water discharge monitoring location programme remains the same as was submitted and accepted by the Agency in June 2000.

Pipes have been fitted at each location in order to accommodate flow metres and the provision of safe access is also ongoing.

Emission point signs have been designed and are in place.

4.2 Bunding Programme

The bunding programme for large scale oil storage facilities is complete and works certified.

4.3 Boiler Combustion Efficiency

Boiler efficiency tests were carried out during the year. The results of these tests are shown in the table below.

A full breakdown of these tests are retained on file at our Derrygreenagh office.

Boiler Location	Date Tested	% Efficiency
Ballydermot	15/11/2005	86.8
Clonsast	15/12/2005	86.4
Power Station	15/12/2005	86.6

4.4 Resource consumption summary

There was a total of 758,475 tonnes of milled peat produced across the licence area in the production season 2005.

There was also a total of 841,061 tonnes of stock peat sold during the reporting period. Of this total, 795,400 tonnes were sold to Edenderry Power Limited, 5,828 tonnes to West Offaly Power Station, 23,502 tonnes to Derrinlough Briquette Factory and 16,331 tonnes to Kilberry Moss Factory.

4.7 Bog Rehabilitation Report

There was bog rehabilitation carried out at Ballyconn, Clonsast and Mount Lucas bogs during the reporting period.

Management guidelines for the planning and implementation of cutaway bog rehabilitation have been adopted and the document is currently available for inspection on file at the Derrygreenagh office.

4.8 Archaeological Report

Archaeological excavations were carried out at Daingean, Ballykene and Clonad bogs.

5.0 Summary

With regard to environmental compliance at the Allen Group of Bogs, there was no exceedence of the emission limit value in relation to suspended solids from grab sampling of the silt ponds in the Surface Water Discharge Monitoring Location Programme.

There was no non-compliances in relation to the Composite Sampler during the monitoring period January to December. Dust monitoring results showed no non-compliance. There was one complaints of an environmental nature received during the reporting period. The issue of this complaint will be given priority in 2006 and all efforts will be made to minimise the impact of our operations in this area.

Bord na Mona, Allen Group, will continue to strive to maintain and improve its level of environmental compliance.

The staff awareness through training and involvement in the operation of the licence has also improved immensely. A full programme of training and awareness has been conducted at the works and has targeted all personnel ie. Office, Workshop, Transport and Production.

Bord na Mona are project partners of the South Eastern River Basin District Management, as set up under the Water Framework Directive.

Bord na Mona are also involved in catchment management on the River Barrow.

Bord na Mona Energy Ltd would like to take this opportunity to advise the Environmental Protection Agency of its continued commitment to improving its environmental performance by adopting cleaner production methods and improving its environmental protection measures.

APPENDIX 1

Composite Sampler Results

Bord Na Mona Energy Ltd, Allen Group, Rockfordsbridge, Co Westmeath
Composite Sampler Results Licence 503

Month	pH	COD mg/l	Ammonia as N mg/l	Parameters		Total Solids		Colour Pt Co	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals Total Phosphorus Kg/Day	Suspended Solids Kg/Day	Total Solids Kg/Day
Jan 2005		mg/l	N mg/l	Total Phosphorus mg/l	Suspended Solids mg/l	Total Solids mg/l		units		Kg/Day	Kg/Day	Kg/Day	Kg/Day	Kg/Day
1					5	312								
2					5	322								
3					5	320								
4					5	332								
5	8.1	39	0.05	0.05	6	310		175						
6					5	324								
7					5	400								
8					5	316								
9					8	260								
10					5	324								
11					5	313								
12	7.5	64	0.14	0.05	5	332		187						
13					IS	IS								
14					IS	IS								
15					IS	IS								
16					IS	IS								
17					IS	IS								
18					IS	IS								
19	7.6	72	0.24	0.05	9	198		145						
20					IS	IS								
21					IS	IS								
22					IS	IS								
23					IS	IS								
24					IS	IS								
25					IS	IS								
26	7.8	45	0.14	0.05	5	212		157						
27					IS	IS								
28					IS	IS								
29					IS	IS								
30					IS	IS								
31					IS	IS								

All flow data up to July 2005 was lost due to a technical fault in the storage of the data.
 IS: Insufficient amount of sample due to low flow or sampler malfunction.

Bord Na Mona Energy Ltd, Allen Group, Rochforbsbridge, Co Westmeath
Composite Sampler Results Licence 503

Month	Parameters			Colour		Flow		COD		Ammonia as		Daily Totals		Suspended		Total	
Feb	pH	COD	Ammonia as	Total	Solids	Pt Co	Daily	Kg/Day	Kg/Day	Ammonia as	Phosphorus	Phosphorus	Solids	Solids	Kg/Day	Solids	Kg/Day
2005		mg/l	N mg/l	mg/l	mg/l	units	Total (litres)										
1				IS	IS												
2	7.9	53	0.09	0.05	5	139											
3				IS	IS												
4				IS	IS												
5				IS	IS												
6				IS	IS												
7				IS	IS												
8				IS	IS												
9	8.1	81	0.14	0.05	14	131											
10				IS	IS												
11				IS	IS												
12				IS	IS												
13				IS	IS												
14				IS	IS												
15				IS	IS												
16	7.9	59	0.09	0.05	5	150											
17				IS	IS												
18				IS	IS												
19				IS	IS												
20				IS	IS												
21				IS	IS												
22				IS	IS												
23	7.9	40	2.33	0.05	13	99											
24				IS	IS												
25				IS	IS												
26				IS	IS												
27				IS	IS												
28				IS	IS												

* All flow data up to July 2005 was lost due to a technical fault in the storage of the data.
 IS: Insufficient amount of sample due to low flow or sampler malfunction.

Bord Na Mona Energy Ltd, Allen Group, Roslardsbridge, Co Westmeath
Composite Sampler Results Licence 503

Month	pH	COD mg/l	Ammonia as N mg/l	Parameters		Suspended		Total	Colour	Flow	COD	Ammonia as	Daily Totals		Suspended	Total
Mar 2005				Total Phosphorus mg/l	Solids mg/l	Solids mg/l	Solids mg/l	Solids mg/l	Pt Co units	Daily Total (litres)	Kg/Day	Kg/Day	Phosphorus Kg/Day	Solids Kg/Day	Solids Kg/Day	Solids Kg/Day
1					IS	IS	IS	IS								
2	8	52	0.28	0.05	5	5	5	210	148							
3					5	5	5	356								
4					26	26	26	400								
5					5	5	5	334								
6					5	5	5	50								
7					5	5	5	320								
8					5	5	5	328								
9	8.1	57	0.09	0.05	5	5	5	546	97							
10					7	7	7	366								
11					5	5	5	538								
12					5	5	5	394								
13					5	5	5	306								
14					5	5	5	386								
15	8	52	0.11	0.05	5	5	5	374	114							
16					5	5	5	328								
17					8	8	8	338								
18					5	5	5	357								
19					5	5	5	368								
20					5	5	5	348								
21					5	5	5	322								
22					19	19	19	178								
23	8	66	0.1	0.05	9	9	9	280	197							
24					5	5	5	296								
25					5	5	5	296								
26					5	5	5	300								
27					6	6	6	314								
28					8	8	8	316								
29					5	5	5	338								
30	7.9	72	0.07	0.05	6	6	6	298	166							
31					5	5	5	298								

All flow data up to July 2005 was lost.

All flow data up to July 2005 was lost due to a technical fault in the storage of the data.

IS: Insufficient amount of sample due to low flow or sampler malfunction.

Bord Na Mona Energy Ltd, Allen Group, Rochforbsbridge, Co Westmeath
Composite Sampler Results Licence 503

Month	Parameters			Colour Pt Co	Flow		COD Kg/Day	Ammonia as Kg/Day	Daily Totals		Total Solids Kg/Day
	pH	COD mg/l	Ammonia as N mg/l	Total Phosphorus mg/l	Suspended Solids mg/l	Total Solids mg/l					
Apr 2005											
1					5	256					
2					5	224					
3					5	278					
4					5	244					
5					5	259					
6	7.8	55	0.12	0.09	5	182	205				
7					5	346					
8					5	288					
9					5	350					
10					5	334					
11					5	366					
12					5	350					
13	8.3	60	0.04	0.05	5	348	127				
14					5	320					
15					5	332					
16					5	269					
17					5	268					
18					5	186					
19					5	278					
20	7.9	75	0.04	0.05	5	308	178				
21					5	330					
22					8	344					
23					5	326					
24					5	344					
25					5	370					
26					5	364					
27	8.3	59	0.03	0.05	5	286	138				
28					7	322					
29					5	122					
30					7	356					

All flow data up to July 2005 was lost due to a technical fault in the storage of the data.
 IS: Insufficient amount of sample due to low flow or sampler malfunction.

Bord Na Mona Energy Ltd, Allen Group, Roslardsbridge, Co Westmeath
Composite Sampler Results Licence 503

Month	pH	COD mg/l	Ammonia as N mg/l	Parameters		Total Solids mg/l	Suspended Solids mg/l	Colour Pt Co units	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals		Suspended Solids Kg/Day	Total Solids Kg/Day
				Phosphorus mg/l	Phosphorus mg/l							Phosphorus Kg/Day	Total Kg/Day		
May 2005															
1						332	5								
2						328	7								
3						280	5								
4	7.8	76	0.09	0.08		282	5	199							
5						204	5								
6						300	5								
7						292	5								
8						278	6								
9						332	6								
10						336	5								
11	8	56	0.09	0.05		338	5	119							
12						356	5								
13						370	7								
14						310	5								
15						346	6								
16						358	5								
17						362	5								
18	8	42	0.04	0.05		316	5	94							
19						216	5								
20						286	5								
21						260	5								
22						316	5								
23						264	5								
24						194	5								
25	7.9	72	0.07	0.05		288	5	176							
26						276	5								
27						284	5								
28						236	5								
29						280	5								
30						290	5								
31						316	5								

All flow data up to July 2005 was lost due to a technical fault in the storage of the data.
 IS: Insufficient amount of sample due to low flow or sampler malfunction.

Bord Na Mona Energy Ltd, Allen Group, Rochforbsbridge, Co Westmeath
Composite Sampler Results Licence 503

Month	pH	COD mg/l	Ammonia as N mg/l	Parameters Total Phosphorus mg/l	Suspended Solids mg/l	Total Solids mg/l	Colour Pt Co units	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals Total Phosphorus Kg/Day	Suspended Solids Kg/Day	Total Solids Kg/Day
June 2005	8	75	0.02	0.05	5	310	135						
1													
2													
3													
4													
5													
6													
7													
8	8.1	46	0.03	0.05	5	280	133						
9													
10													
11													
12													
13													
14													
15	8	69	0.02	0.05	5	362	80						
16													
17													
18													
19													
20													
21													
22	8.2	51	0.02	0.05	5	382	94						
23													
24													
25													
26													
27													
28													
29	8.7	42	0.03	0.05	5	367	76						
30													
31													

All flow data up to July 2005 was lost due to a technical fault in the storage of the data.
 IS: Insufficient amount of sample due to low flow or sampler malfunction.

Bord Na Mona Energy Ltd, Allen Group, Roselfordsbridge, Co Westmeath
Composite Sampler Results Licence 503

Month	pH	COD mg/l	Ammonia as N mg/l	Parameters		Total Solids mg/l	Suspended Solids mg/l	Total Solids mg/l	Colour Pt Co units	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals	
July 2005				Total Phosphorus mg/l									Total Phosphorus Kg/Day	Suspended Solids Kg/Day
1						5	5	306						
2						5	5	346						
3						5	5	350						
4						5	5	356						
5						5	5	328						
6	8.4	49	0.02	0.09		5	5	372	71					
7						IS	IS	IS						
8						IS	IS	IS						
9						IS	IS	IS						
10						IS	IS	IS						
11						IS	IS	IS						
12						IS	IS	IS						
13	8	60	0.04	0.05		5	5	412	92					
14						IS	IS	IS						
15						IS	IS	IS						
16						IS	IS	IS						
17						IS	IS	IS						
18						IS	IS	IS						
19						IS	IS	IS						
20	8	52	0.04	0.05		5	5	368	82					
21						IS	IS	IS						
22						IS	IS	IS						
23						IS	IS	IS		65567.8				
24						IS	IS	IS		65567.8				
25						IS	IS	IS		65567.8				
26						IS	IS	IS		65567.8				
27	7.7	42	0.02	0.05		5	5	346		64588.7				0.32
28						5	5	381	86	46499.6	1.95	0.00	0.00	0.23
29						5	5	344		55971				0.28
30						5	5	330		279177.5				1.40
31						5	5	324		1193112				5.97
*						5	5	299		1253332				6.27

All flow data up to July 2005 was lost due to a technical fault in the storage of the data.
 IS: Insufficient amount of sample due to low flow or sampler malfunction.

Bord Na Mona Energy Ltd, Allen Group, Rochforbsbridge, Co Westmeath
Composite Sampler Results Licence 503

Month	pH		COD	Ammonia as		Parameters		Colour		Flow	Daily Totals		Suspended		Total
August			mg/l	N	mg/l	Phosphorus		Total	Pt Co	Daily	Phosphorus	Kg/Day	Kg/Day	Solids	Solids
2005						mg/l		mg/l	units	Total (litres)	Kg/Day				Kg/Day
1										432687.5				2.16	125.48
2										175695.4				0.88	51.30
3	8.1	42		0.12	0.07				120	142586.2	5.99	0.01		0.71	44.20
4										145435.8				0.73	45.96
5										124536				0.62	39.85
6										118599.9				0.59	38.19
7										99286.4				0.50	33.66
8										35252.3				0.18	12.41
9										36689					
10	7.9	51		0.03	0.17					38637.6	1.97	0.01	0.23		13.68
11										22842.9					
12										70129.6					
13										80271.6					
14										54144.8			0.48		24.40
15										47690.5					
16										26851.4					
17	8	67		0.02	0.05				92	27637.5	1.85	0.00	0.14		8.46
18										27486					
19										25709.6					
20										21860.3					
21										21602.3					
22										22131.3					
23										22729.9					
24	7.7	31		0.02	0.05				100	22706.5	0.70	0.00	0.11		8.27
25										102566.4					
26										98114.5					
27										14593.3					
28										-16759.6					
29										364850.1					
30										404621.3					
31	7.7	63		0.02	0.05				101	387539.3	24.41	0.01	0.02	2.33	127.89

IS: Insufficient amount of sample due to low flow or sampler malfunction.

Bord Na Mona Energy Ltd, Allen Group, Roslardsbridge, Co Westmeath
Composite Sampler Results Licence 503

Month	pH	Parameters		Colour Pt Co	Flow Daily Total (litres)	COD Kg/Day	Ammonia as N mg/l	Daily Totals		Suspended Solids Kg/Day	Total Solids Kg/Day
		COD mg/l	Ammonia as N mg/l	Total Phosphorus mg/l	Suspended Solids mg/l	Total Solids mg/l	Total Phosphorus mg/l	Phosphorus Kg/Day	Ammonia as Kg/Day	Phosphorus Kg/Day	Total Solids Kg/Day
Sep 2005											
1					IS	IS					
2					IS	IS					
3					IS	IS					
4					IS	IS					
5					IS	IS					
6					IS	IS					
7	7.6	22	0.03	0.06	5	360			0.01	0.02	98.30
8					IS	IS					
9					IS	IS					
10					IS	IS					
11					IS	IS					
12					IS	IS					
13					IS	IS					
14	7.6	59	0.02	0.05	5	348			0.00	0.18	12.24
15					IS	IS					
16					IS	IS					
17					IS	IS					
18					IS	IS					
19					IS	IS					
20					IS	IS					
21	7.6	49	0.02	0.05	5	324			0.00	0.05	3.25
22					5	314				0.07	4.28
23					5	302				0.14	8.27
24					6	318				0.71	37.70
25					5	322				0.21	13.37
26					5	326				0.12	7.64
27					5	320				0.99	63.40
28	8.2	45	0.05	0.05	5	220			0.02	0.02	100.06
29					6	314				0.83	43.58
30					5	298				0.82	48.73

IS: Insufficient amount of sample due to low flow or sampler malfunction.

Bord Na Mona Energy Ltd, Allen Group, Rochforbsbridge, Co Westmeath
Composite Sampler Results Licence 503

Month	pH	COD mg/l	Ammonia as N mg/l	Parameters				Colour Pt Co units	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals		Suspended Solids Kg/Day	Total Solids Kg/Day
				Total Phosphorus mg/l	Suspended Solids mg/l	Total Solids mg/l	Total Phosphorus Kg/Day								
Oct 2005															
1					5	304	124605.2						0.62		37.88
2					5	302	121279.1						0.61		36.63
3					5	308	130287.5						0.65		40.13
4					5	320	127805.9						0.64		40.90
5	7.7	74	0.02	0.05	5	316	92965.9	6.88	0.00	0.00		0.46		29.38	
6					IS	IS	98146.5								
7					5	316	169633.5								53.60
8					IS	IS	221092.4						0.85		
9					5	314	144475.7							0.72	45.37
10					5	328	416033.5						2.08		136.46
11					5	258	2136367						10.68		551.18
12	7.8	72	0.19	0.05	5	260	5609607	403.89	1.07	0.28		28.05			1458.50
13					5	248	4976709					24.88			1234.22
14					5	232	1172519						5.86		272.02
15					5	248	243160.7						1.22		60.30
16					5	260	103652.4						0.52		26.95
17					5	268	139560.6						0.70		37.40
18					5	274	91415.1						0.46		25.05
19	8.2	78	0.11	0.05	5	270	187672.2	14.64	0.02	0.01		0.94			50.67
20					5	376	131192.2					0.66			49.33
21					5	290	1617936					8.09			469.20
22					5	304	4313858					21.57			1311.41
23					5	316	3435395					17.18			1085.58
24					5	244	16293660					81.47			3975.65
25					5	180	21055940					105.28			3790.07
26	7.5	98	0.21	0.05	5	150	11335120	1110.84	2.38	0.57		56.68			1700.27
27					5	222	7080779					35.40			1571.93
28					5	288	4720519					23.60			1359.51
29					5	238	5153777					25.77			1226.60
30					5	234	10576210					52.88			2474.83
31					5	258	12043390					60.22			3107.19

IS: Insufficient amount of sample due to low flow or sampler malfunction.

Bord Na Mona Energy Ltd, Allen Group, Roslinda, Co Westmeath
Composite Sampler Results Licence 503

Month	pH	COD mg/l	Ammonia as N mg/l	Parameters		Total Solids mg/l	Suspended Solids mg/l	Colour Pt Co units	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals		Total Solids Kg/Day	Total Solids Kg/Day
				Total Phosphorus mg/l								Total Phosphorus Kg/Day			
1						294	5		12452600					62.26	3661.06
2	7.3	115	0.16	0.07		200	5	254	17760410	2042.45	2.84	1.24		88.80	3552.08
3						214	5		36556160					182.78	7823.02
4						278	5		38602460					193.01	10731.48
5						256	5		26188990					130.94	6704.38
6						284	20		19132850					382.66	5433.73
7						298	5		7224732					36.12	2152.97
8						208	5		8782270					43.91	1826.71
9						288	5		7477949					37.39	2153.65
10	7.7	28	0.02	0.05		286	5	221	6321685	177.01	0.13	0.32		31.61	1808.00
11						IS	IS		6399996						
12						IS	IS		6617630						
13						IS	IS		5834815						
14						IS	IS		4932560						
15						IS	IS		4473156						
16	7.8	81	0.02	0.05		324	5	178	1136684	92.07	0.02	0.06		5.68	368.29
17						IS	IS		2057238						
18						IS	IS		308784.8						
19						IS	IS		373029						
20						IS	IS		84149.2						
21						IS	IS		127699.6						
22						IS	IS		150718.8						
23	7.7	70	0.1	0.05		346	5	117	162371.9	11.37	0.02	0.01		0.81	56.18
24						IS	IS		168303.2						
25						IS	IS		TF						
26						IS	IS		TF						
27						IS	IS		TF						
28						IS	IS		TF						
29						IS	IS		TF						
30	7.7	70	0.22	0.05		258	5	133	TF						

IS: Insufficient amount of sample due to low flow or sampler malfunction.

TF: No flow data due to technical fault

Bord Na Mona Energy Ltd, Allen Group, Rochforbsbridge, Co Westmeath
Composite Sampler Results Licence 503

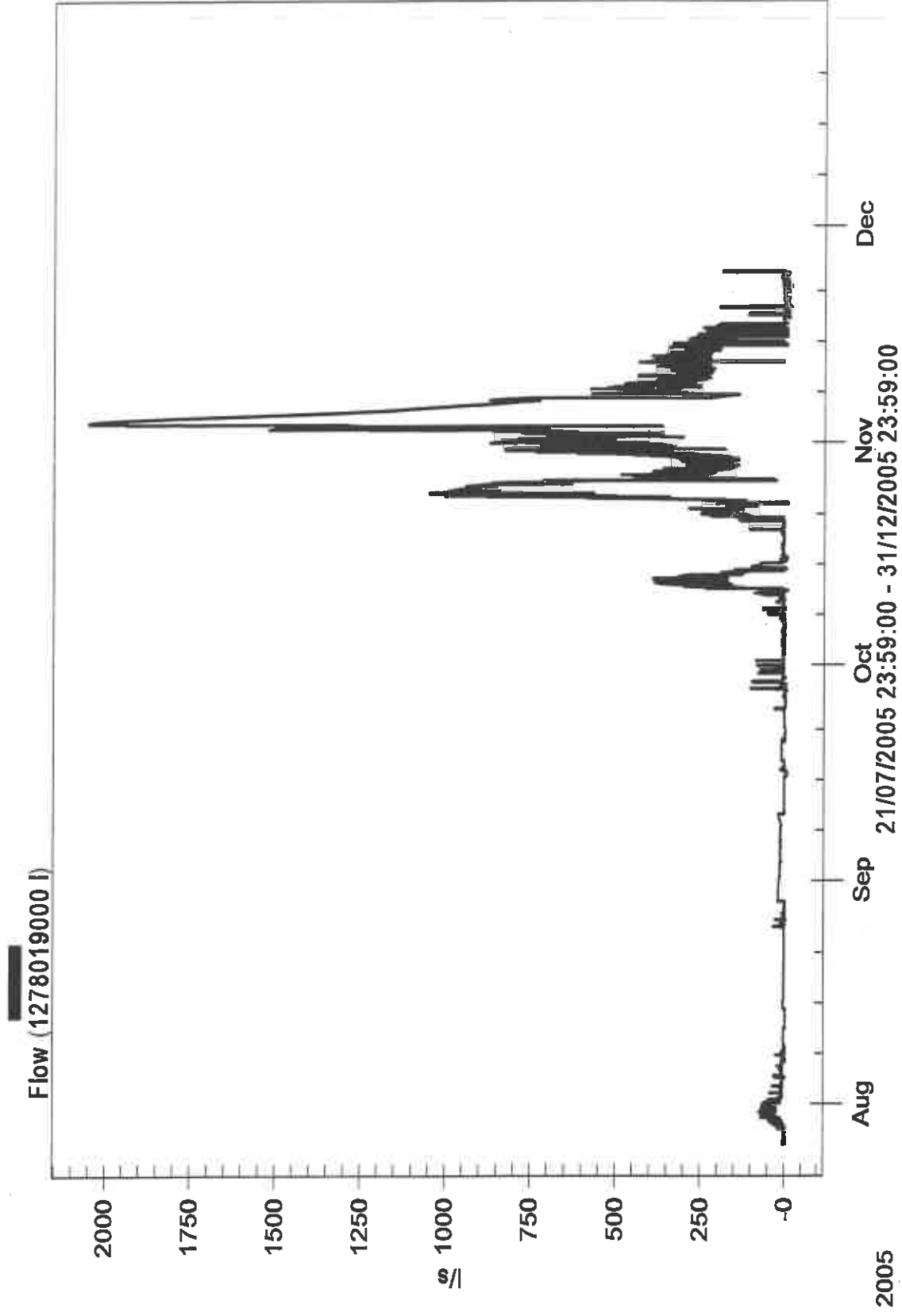
Month	pH		COD mg/l		Ammonia as N mg/l		Parameters Total Phosphorus mg/l		Suspended Solids mg/l		Total Solids mg/l		Colour Pt Co	Flow Daily Total (litres)		COD Kg/Day		Ammonia as Kg/Day		Daily Totals Total Phosphorus Kg/Day		Suspended Solids Kg/Day		Total Solids Kg/Day			
Dec 2005																											
1										IS	IS	IS			TF												
2										IS	IS	IS			TF												
3										IS	IS	IS			TF												
4										IS	IS	IS			TF												
5										IS	IS	IS			TF												
6										IS	IS	IS			TF												
7	7.6	93	0.18	0.06					7	272	191			TF													
8									IS	IS				TF													
9									IS	IS				TF													
10									IS	IS				TF													
11									IS	IS				TF													
12									IS	IS				TF													
13									IS	IS				TF													
14	7.8	71	0.04	0.05					5	372	141			TF													
15									28	204				TF													
16									5	352				TF													
17									5	356				TF													
18									5	334				TF													
19									5	340				TF													
20									6	324				TF													
21	7.6	56	0.05	0.05					32	340	106			TF													
22									IS	IS				TF													
23									IS	IS				TF													
24									IS	IS				TF													
25									IS	IS				TF													
26									IS	IS				TF													
27									IS	IS				TF													
28	7.9	47	0.1	0.05					5	366	101			TF													
29									IS	IS				TF													
30									IS	IS				TF													
31									IS	IS				TF													

IS: Insufficient amount of sample due to low flow or sampler malfunction.

TF: No flow data due to technical fault

Cushina Composite Flow Rates 2005

Flowlink 4 for Windows





...received... 01 APR 2005

Annual Environmental Report IPC LICENCE 503

March 2005

Contents

1.0 Introduction

- 1.1 IPC Licence Register No
- 1.2 Name & Location of Site
- 1.3 Brief Description of Activities
- 1.4 Environmental Management of the Company
- 1.5 Environmental Policy Statement

2.0 Summary Information

2.1 Emissions to Water Summary

- 2.1.1 Silt Pond Emissions
- 2.1.2 Yard Discharges
- 2.1.3 Composite Sampler Report
- 2.1.4 Non-compliance's

2.2 Emissions to Air Summary

- 2.2.1 Dust Monitoring
- 2.2.2 Non-compliance's

2.3 Waste Arisings

- 2.3.1 Non-Hazardous Waste
- 2.3.2 Hazardous Waste

2.4 Energy and Water Consumption

- 2.4.1 Energy Consumption

2.5 Environmental Incidents and Complaints

- 2.5.1 Incidents
- 2.5.2 Complaints

3.0 Management of the Activity

- 3.1 Environmental Management Programme Report
- 3.2 Environmental Management Programme Proposal
- 3.3 Environmental Expenditure

4.0 Licence Specific Reports

- 4.1 Surface Water Discharge Monitoring Location Programme Review
- 4.2 Bunding Programme
- 4.3 Boiler Combustion Efficiency
- 4.4 Resource Consumption Summary
- 4.5 Report on de-silting Programme
- 4.6 Bog Development and Operational Programme
- 4.7 Bog Rehabilitation Report
- 4.8 Archaeological Report

5.0 Summary

Appendix 1: Composite Sampler Results

Contents

1.0 Introduction

- 1.1 IPC Licence Register No
- 1.2 Name & Location of Site
- 1.3 Brief Description of Activities
- 1.4 Environmental Management of the Company
- 1.5 Environmental Policy Statement

2.0 Summary Information

2.1 Emissions to Water Summary

- 2.1.1 Silt Pond Emissions
- 2.1.2 Yard Discharges
- 2.1.3 Composite Sampler Report
- 2.1.4 Non-compliance's

2.2 Emissions to Air Summary

- 2.2.1 Dust Monitoring
- 2.2.2 Non-compliance's

2.3 Waste Arisings

- 2.3.1 Non-Hazardous Waste
- 2.3.2 Hazardous Waste

2.4 Energy and Water Consumption

- 2.4.1 Energy Consumption

2.5 Environmental Incidents and Complaints

- 2.5.1 Incidents
- 2.5.2 Complaints

3.0 Management of the Activity

3.1 Environmental Management Programme Report

3.2 Environmental Management Programme Proposal

3.3 Environmental Expenditure

4.0 Licence Specific Reports

4.1 Surface Water Discharge Monitoring Location Programme Review

4.2 Bunding Programme

4.3 Boiler Combustion Efficiency

4.4 Resource Consumption Summary

4.5 Report on de-silting Programme

4.6 Bog Development and Operational Programme

4.7 Bog Rehabilitation Report

4.8 Archaeological Report

5.0 Summary

Appendix 1: Composite Sampler Results

1.0 Introduction

1.1 IPC Licence No **503**

1.2 Name & Location of Site

Name: Bord na Mona Energy Limited.

Address: Allen Group
Derrygreenagh Works
Rochfortbridge
Mullingar
Co Westmeath.

Telephone No: 044 / 22181 Fax No: 044 / 22344

Contact Name: Paul Riordan

Position: Regional Manager.

National Grid Reference: E249450 N238140

1.3 Description of Activities

The Allen Group of bogs are situated in counties Kildare and Offaly and are generally bounded by the Grand Canal to the North, the Barrow River and tributaries to the South, Nass to the East and Tullamore to the West.

These bogs comprise most of the bogland area that was formerly referred to as the Bog of Allen.

The Allen Group has a total acquired area of 21,150 hectares of which 3,836.2 nett hectares were in production in 2004.

The Allen Group currently employs 151 permanent workers and used 35 seasonal workers in the 2004 production season

Transport operations are carried out on a seven day cycle throughout the year.

Production operations are typically carried out over a seven day week (weather permitting) for 12 to 15 hours per day.

Peat Milling Operations.

For milled peat production the bog is laid out in a series of rectangular fields of varying length and 15m wide with drains located between. There are essentially four operations involved in milled peat production:

Milling.

Harrowing.

Ridging.

Harvesting.

Milling.

Special milling machines work there way along the fields, milling approximately 15mm of peat of the top of the bog in a pass.

Harrowing

In the course of drying, the milled peat is turned a number of times to avail of the drying conditions. This is achieved with a machine called a harrow. The milled peat is harrowed until its moisture content is down to approximately 40-50%, which can take up to two to three days, weather depending.

Ridging

The dry peat is then scraped into long ridges running down the centre of each field. This is done with a ridger, a machine consisting of a series of blades in the shape of a v that opens the full width of the field.

Harvesting

During harvesting every eleventh field is used to stockpile the peat, with this field receiving the milled peat from the five fields either side.

The milled peat is then transported via the existing network of peatland railways or via road to one of the following locations.

Power station (EPL)

Horticultural Factory.

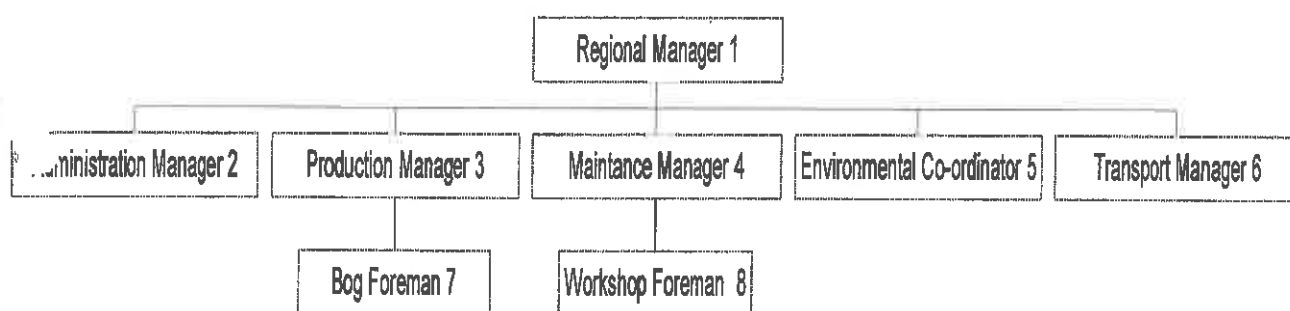
Briquette Factory.

1.4 Environmental Management of the Company

The organisational structure within the Allen Group is presented in the flow chart below.

Allen Group

Environmental Responsibilities



- (1) Overall environmental responsibilities
- (2) Records of complaints and registers
- (3) All production related issues
- (4) Machine maintenance
- (5) Co-ordinating environmental affairs
- (6) All peat transportation matters
- (7) Silt pond maintenance, tea centres, codes of practice
- (8) Fuel loading, oil traps, weekly workshop inspections.

1.5 Environmental Policy



Bord na Mona Energy Limited is a commercial semi-state body with responsibility to develop Irelands peat resources in the national interest.

Bord na Mona Energy Limited is committed to gather and make available information on all aspects of its environmental impact and to help improve understanding among the public generally of its role and the importance of Irish peatlands.

Bord na Mona Energy Limited recognises the importance of peatland conservation.

Bord na Mona Energy Limited will leave behind all areas it owns as either an economically or socially integrated resource of a high environmental value.

Bord na Mona Energy Limited seeks to conduct all aspects of its buisness in an environmentally sensitive value.

Bord na Mona Energy Limited will establish an environmental management system specifically addressing the following impacts.

- Discharges to water.
- Emissions to atmosphere.
- Waste disposal.
- Use of natural resources.
- Noise, vibration, odour, dust and visual effects.
- Natural environment and eco-system.

The environmental management system will be monitored, maintained and continually improved.

A system of regular environmental audits will be put in place.

Bord na Mona Energy Limited will continue research and development into all aspects of its environmental impact.

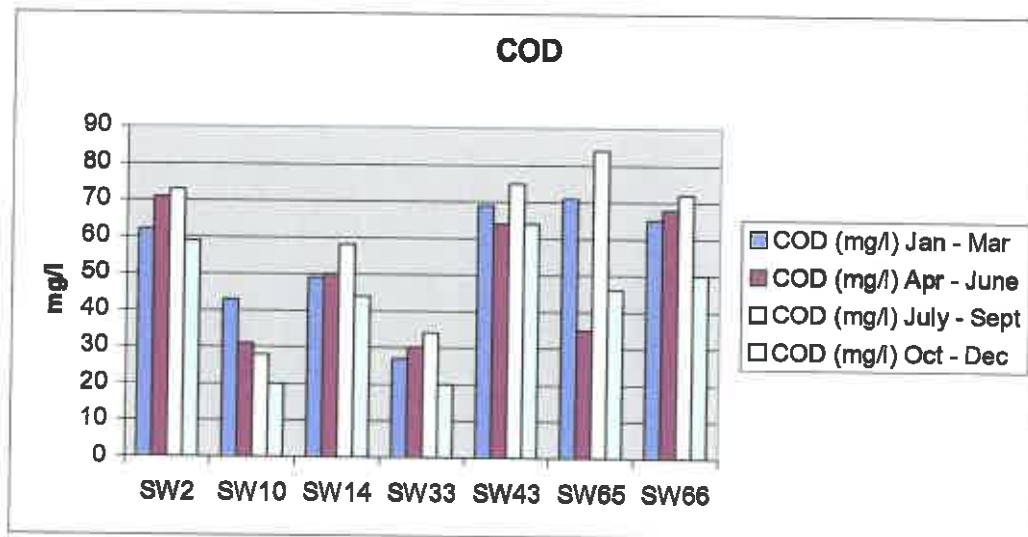
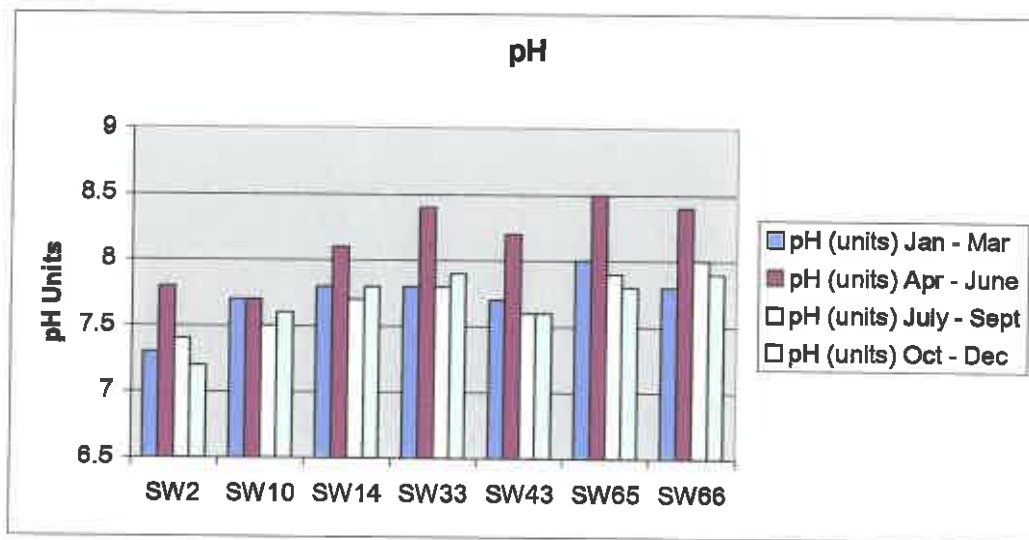
This statement is published and is available at all locations within the division and its contents are brought to the attention of all employees.

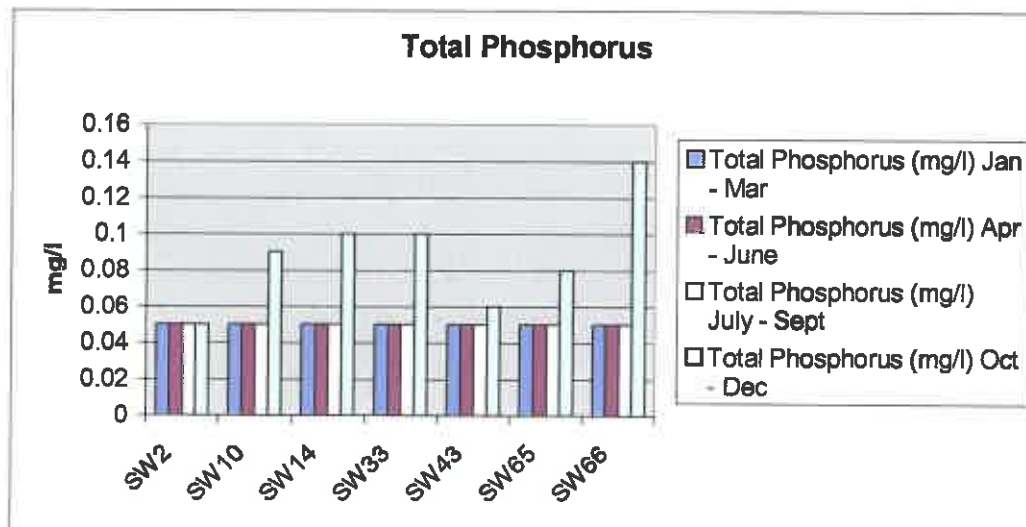
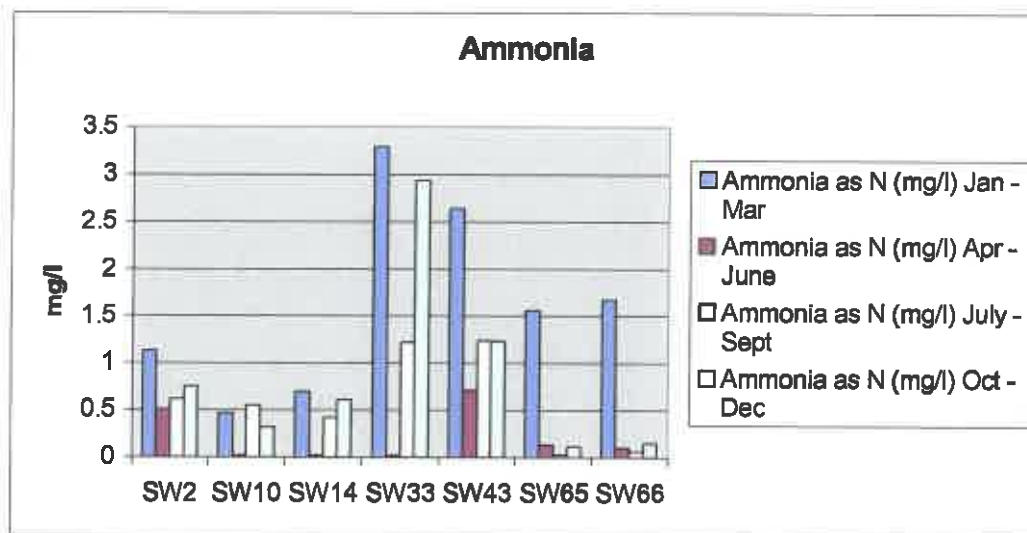
2.0 Summary Information

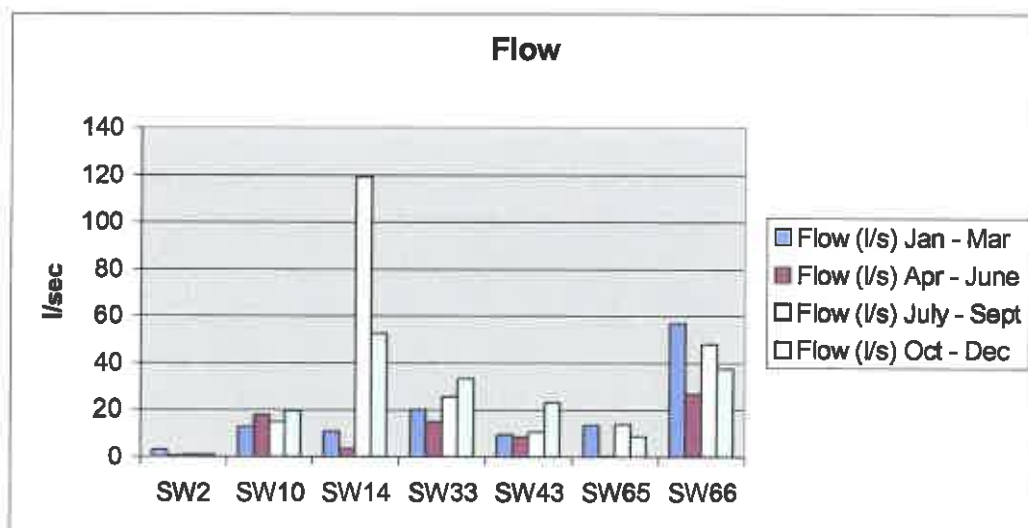
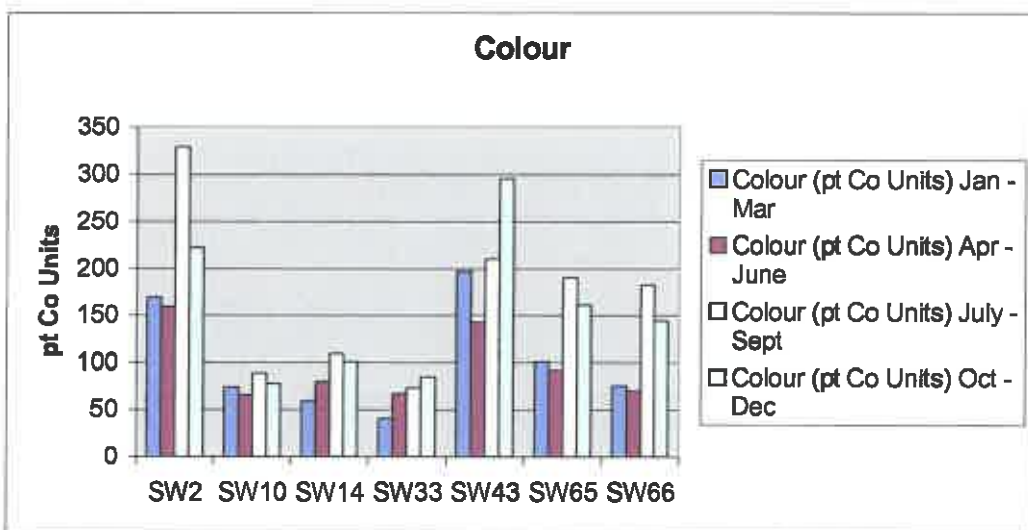
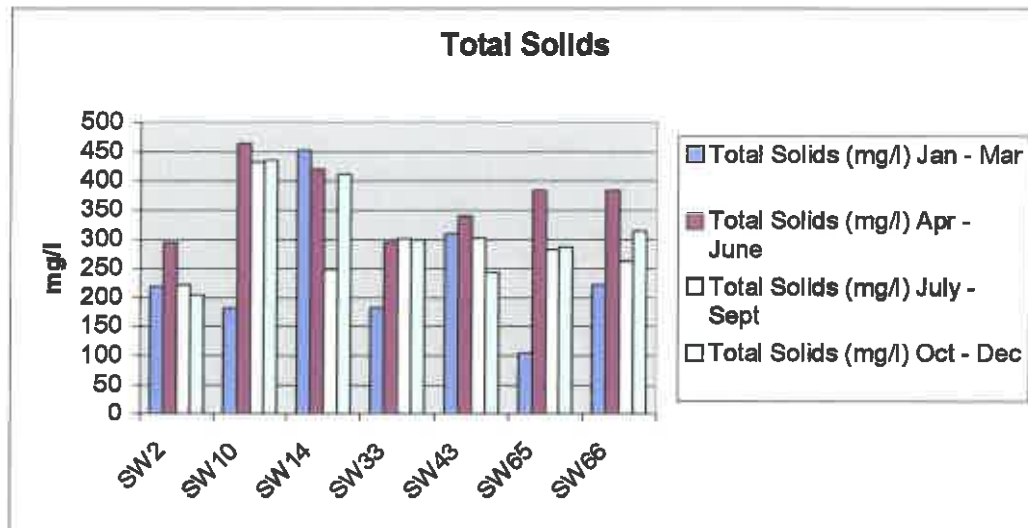
2.1 Emissions to Water Summary

2.1.1 Silt Pond Emissions

The following graphs compare results obtained during the reporting period at all surface water monitoring points. It is proposed to relocate some of the monitoring locations in the forthcoming year. A proposal will be submitted outlining the reasons for these proposed moves.







2.1.2 Yard Discharges

The tables below are a summary of the COD emissions to surface waters from yards and workshops within the Allen Group.

Ballycon SWE-1

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
COD mg/l			31		77	29	70	12	33	33		32

Clonsast SWE-1

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
COD mg/l			10		10	25	51	28	10	86		30

Ballydermot SWE-1

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
COD mg/l			42		42	33	58	124	20	25		54

Ballydermot SWE-2

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
COD mg/l			59		74	41	47	34	67	30		49

Timahoe SWE-1

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
COD mg/l			81		67	51	98	54	81	67		64

Note: No samples were available on the day of sampling in the months January, February, April & November.

2.1.3 Composite Sampler Report

The composite sampler results are attached in the appendices. The sampler was moved during the reporting period in order to get some background information for a trial currently in progress. It was also moved as its last location, a pump site, was not flowing enough to give continuous flow data. This lack of data is evident on the attached graphs (Appendix1) The sampler will remain at its present location for the foreseeable future. The emission limit value was exceeded once during the reporting period when the sampler was at its previous location.

2.1.4 Non-compliance's

There were no non-compliance, in relation to silt pond sampling during the reporting period.

2.2 Emissions to Air

2.2.1 Dust Monitoring

The table below contains the dust emissions for each dust monitoring location within the Allen Group. Monitoring took place on three separate occasions during the period, June and August 2004. The location of DM – 03 is under review. At present it is situated very close to the production area and will inevitably come in contact with dust. It may be best located closer to the nearest sensitive location on the adjacent lands.

June - Jul

Emission Point	Parameter	Emission (mg/m ² /day)	Emission Limit Value	Compliant
DM 01	Dust	178	(350mg/m ² /Day)	YES
DM 02	Dust	172	(350mg/m ² /Day)	YES
DM 03	Dust	947	(350mg/m ² /Day)	NO
DM 04	Dust	43	(350mg/m ² /Day)	YES

Jul - Jul

Emission Point	Parameter	Emission (mg/m ² /day)	Emission Limit Value	Compliant
DM 01	Dust	123	(350mg/m ² /Day)	YES
DM 02	Dust	43	(350mg/m ² /Day)	YES
DM 03	Dust	74	(350mg/m ² /Day)	YES
DM 04	Dust	31	(350mg/m ² /Day)	YES

Jul - Aug

Emission Point	Parameter	Emission (mg/m ² /day)	Emission Limit Value	Compliant
DM 01	Dust	154	(350mg/m ² /Day)	YES
DM 02	Dust	68	(350mg/m ² /Day)	YES
DM 03	Dust	61	(350mg/m ² /Day)	YES
DM 04	Dust	111	(350mg/m ² /Day)	YES

Note: DM 01= Killinagh Bog. DM 02 = Derrybrennan Bog. DM 03 = Ballykeane
DM 04 = Moore Household (Lullymore)

2.2.2 Non-compliance's

Date	Non-compliance	Cause	Corrective Action
July	Exceedence of ELV at DM-03	Strong winds and very dry weather	Site visit and operatives spoken to Emphasis put on codes of practice pertaining to dust control.

2.3 Waste Arisings

2.3.1 Non-Hazardous Waste

The following table lists the quantities of the wastes generated from January-December 2004 from all of the Allen Group.

Waste Type	Quantity (Tonnes)
Silt Pond Waste	2136
Polyethylene	127.17
Scrap Metal	487.630
Mixed Municipal Waste	25.38
Total	2776.18

Note: Scrap Metal and Polyethylene are both recycled.

2.3.2 Hazardous Waste

Derrygreenagh being a central location, is used as a collection point for all hazardous wastes emanating from all the areas in both the Allen and Derrygreenagh Groups. All waste oils, filters and spent batteries, etc are collected centrally at Derrygreenagh before being removed by a licenced waste contractor such as Atlas Waste Oil, Hammond Lane, Returnabatt, etc.

The only exceptions to the above are in Ballydermott and Clonsast workshops where the waste streams are now being dealt with directly from each location. The tables overleaf list the wastes disposed of from these locations during the reporting period.

A system is in place where by every area has its own waste oil and filter barrel. These barrels are painted yellow to distinguish them from ordinary barrels and are clearly marked waste filters or waste oil.

When the barrels are getting near full, the area team leader informs our Derrygreenagh stores and a truck is dispatched to collect the full barrels and replace them with empties. Any spent batteries will also be collected if the need arises.

Records of all the hazardous wastes handled by the Allen and Derrygreenagh Groups from January-December 2004 have been submitted with the Derrygreenagh AER.

BORD NA MÓNA

BORD NA MÓNA ENERGY LIMITED
Derrygreenagh, Rochfortbridge, Mullingar, Co-Westmeath.

Waste Management Record (hazardous)

Group : Allen Group

IPC Licence no. : 503

Works : Ballydermot

WASTE DESCRIPTION	EWC CODE	TONNES	NAME OF CONTRACTOR	DESTINATION	DATE	REJECTED CONSIGNMENTS
Oily rags	150201	240L	Atlas Waste Oil	Portlaoise	10/05/04	NA
Fluorescent Tube	200121	0.020	Irish Lamp Recycling	Athy Co Kildare	11/05/04	NA
Oily rags	150201	240L	Atlas Waste Oil	Portlaoise	25/11/04	NA

Works : Clonsast

WASTE DESCRIPTION	EWC CODE	TONNES	NAME OF CONTRACTOR	DESTINATION	DATE	REJECTED CONSIGNMENTS
Waste Oil	130202	1500L	Atlas Waste Oil	Portlaoise	28/05/04	NA
Oil Filters	160107	660L	Atlas Waste Oil	Portlaoise	09/08/04	NA
Oily rags	150201	240L	Atlas Waste Oil	Portlaoise	02/12/04	NA

2.4 Energy and Water Consumption

2.4.1 Energy

The table below is a summary of the energy consumption for the Allen Group, from the dates January – December 2004.

Water is not included, as it is not used as part of the production process. It is only used in offices, canteens and workshops on a domestic scale.

None of the boilers in the Allen Group are briquette fired.

Fuel	Volume M ³	Tonnes	MW/Hours
Jan - Dec 2004			
Diesel	1260	1046	12342
Petrol	1.070	0.807	9.65
Electricity	NA	NA	119.965
Total	1261.070	1046.807	12471.615

2.5 Environmental Incidents and Complaints

2.5.1 Incidents

There were three incidents within the Allen Group, during the reporting period, these involved the illegal dumping of asbestos on Bord na Mona property and a fire on Bord na Mona bog.

Environmental Incidents	Number of Incidents
Incidents	3
Incidents requiring corrective action	3
Categories of Incident	
Air	1
Miscellaneous	2

2.5.2 Complaints

There were two complaints within the Allen Group, during the reporting period The Agency was informed.

Environmental Complaints	Number of complaints
Complaints received	2
Complaints requiring corrective action	2
Categories of complaint	
Air	2

3.0 Management of the Activity

3.1 Environmental Management Programme Report 2004

Environmental Management Report for 2004

Project	
Project 1. Reduction of fugitive dust emissions.	Training The Cleaner Production Video was completed in May 2004. The video covers all aspects of the IPC Licence, and in particular, cleaner production methods, good & bad practice, pollution prevention and codes of practice. A quiz on the contents of the video and items relating to the target audience, accompanies the 1 hour training session. During 2004, training with the video occurred at 4 of the IPC licensed sites and targeted management and production personnel. An internal audit of all IPC licensed sites also occurred during May and June of 2004. This included an assessment of the dust prevention measures in-place or planned during 2004. A copy of the audit findings is on file at each works. Based on these audits, various projects were put in-place regarding training for personnel at these dust sensitive locations and new machines for targeting dust problems from headland peat. Project works for 2004 includes: Hydraulic Harrows As was proposed for 2004, 8 newly fabricated hydraulic harrows were purchased and distributed to Dust Sensitive Locations within the 9 IPC licensed sites. These have proved successful in reducing dust generation at DSL sites. Headland Peat Collection BNM recently took delivery of 4 new mechanical bin harvesters. These were manufactured in Finland, and are currently being modified in Ireland. These types of harvesters are specifically for use in lifting dry peat from headlands at DSL's and will be engaged alone in tackling dust sensitive areas in each licence, for the 2005 production season. In addition two Headland Harvester units will be in operation. These units operated in Boora and Mountdillon in 2004, and will continue to operate in these areas. In total, these 6 units will operate specifically at DSL' in Peco bogs, and will be assessed during the 2005 season, as to their effectiveness at reducing headland peat and reducing incidents of dust generation. The total expenditure on the additional bin harvesters, hydraulic harrows, and the polyrollers (project 5) for the 2004 season is €670,600, which is €400,000 above what was budgeted.
Project 2. Minimisation of Suspended Solids	This project is on-going and is primarily one of training for all production personnel, and is covered in the Cleaner Production Video, as in Project 1 (Training).

Project 3. Effective spill/leak management of mobile fuelling tanks	All of BNM's production bogs now have locations highlighted as being suitable for re-fuelling on the bog, and this is being brought to the attention of all personnel. These locations have been chosen having due regard to location of water courses and drains.
Project 4. Re-use of silt pond waste	There are over 850 silt ponds in operation in the 9 IPC Licensed BNM bogs. These are located in low areas on the bog perimeters, due to drainage requirements. All of these ponds are excavated into the mineral layer, and as a result of this, all silt removed from the ponds have high levels of grit, stones etc. All of these make the peat unsuitable for combustion purposes. In addition, over 95% of the silt excavated is water, which would require it to be spread out on the bog to be allowed to dry to the required moisture content. Given the small volumes of silt excavated, it is therefore not feasible to reuse this silt pond waste.
Project 5. Collection, storage and re-use of polythene.	Polythene collection is ongoing in BNM, and volumes collected and recycled are recorded in the Non-hazardous Waste records in the AER. The 25 new polystrippers proposed in last years EMP, were delivered in 04' and are currently being used to strip polythene from stockpiles. This new system now produces a roll of polythene which is cleaner, easier to handle, and consequently more attractive for recycling. All bogs now have a hard standing area, where the rolls of polythene are stored for collection and subsequent recycling. In addition to this, procedures have been put in-place, and are highlighted during training, about best practice for stripping, collection and storage. There are currently three potential contractors that could take the waste polythene for recycling. All involve shredding, washing and either baling or pelletising the polythene and BNM are currently assessing each contractor to assess their suitability, environmental compliance etc. Once the back-log has been recycled, and BNM have all of the strippers in place, the day to day recycling of the polythene removed each year will be more efficient.
Project 6. Condition 2.2.2 (v) Provision of measures to protect dust sensitive areas.	All DSL's have been identified within the Allen group. Where required shelter belts were maintained.

3.1 Environmental Management Programme Proposal for 2005

Environmental Management Programme Proposal for 2005	
Project	
Project 1. Reduction of fugitive dust emissions.	Training Continue with the training programme for 2005. 15 Training sessions have already taken place at 6 of the IPC Licensed works, since January 05' This has targeted management and production personnel (teamleaders) and will be extended to include all seasonal staff to be engaged this year. It is targeted to have all production personnel trained by the commencement of production for 2005. Headland Peat The 6 new headland peat harvester units will be deployed for the 2005 production season. These units are a mixture of the bin harvester system (4 units) and the same field harvester (2 units), and will be operated in dust sensitive locations. The bin harvester units, while having been experimented with previously in BNM, are a relatively new technology in BNM's modern day operations, and so will be monitored closely over the coming season to assess their performance. All trials, observations and tests will be monitored and recorded by the EMP system as to their effectiveness and suitability. Hydraulic harrows 14 new hydraulic harrows have been made over 04/05 and will be in operation between now and the end of 2005. In line with BNM's policy to fabricate 40 hydraulic harrows over 5 years, this current no. brings the total to-date to 22 in operation by the end of 05' This is well ahead of what was planned in the 2004 EMP proposal. In addition, 3 new units are budgeted for fabrication by the end of 05. When completed, all DSL's will be equipped with a hydraulic harrow.
Project 2. Minimisation of Suspended Solids	This project is on-going and is primarily one of training for all production personnel, and is covered in the Cleaner Production Video, as in Project 1 (Training). It will also include inspections at a number of production units during the 05 production season, to assess compliance with the good practice and codes of practice developed by BNM and communicated through the training programmes and the video.

Project 3. Effective spill/leak management of mobile fuelling tanks	As reported in the 2004 EMP report, all areas have designated areas for re-fuelling. This project is therefore completed. Compliance with the original requirements of this project will however be checked through the inspections as highlighted in project 2 above. Specific training has also been provided for oil spill management and clean-up, as part of the management of oil spill kits and procedures etc. and will continue to be facilitated during 2005.
Project 4. Re-use of silt pond waste	This project is also not feasible, as highlighted in the 2004 report, but will be reviewed where necessary, if a use (other than fuel use) emerges.
Project 5. Collection, storage and re-use of polythene.	Banner recycling are currently taking BNM's rolled and loose polythene, for recycling to their permitted yards in Co.Clare. Two additional interested parties are also being investigated, one locally in Co Kildare and a potential recycler in Belgium who may be in a position to reuse the polythene to process pellets to be used in the manufacture of new polythene to be used by BNM. An additional order for 22 polyrollers have been placed, to be delivered by the end of March, so that all bog units will have a roller for stripping piles. This will put an end to loose polythene gathering around the bog.
Project 6. Condition 2.2.2 (v) <i>Provision of measures to protect dust sensitive areas.</i>	This project is on-going. All dust sensitive locations will have bergerhoff dust gauges installed for the 2005 season. Areas have also been identified that may become dust sensitive due to future house development. At such locations planting will be carried out in the forthcoming year.

3.3 Environmental Expenditure

The table below lists the environmental costs incurred by the Allen Group between January-December 2004.

In calculating the environmental costs 70% of the total costs were attributed to Licence 503 and 30% to Licence 501.

Expenditure Related to the Operation of the Allen IPC Licence During the Period January – December 2003	
Description	Cost (€)
Machine hours @ €40/hour	490,880
Labour	183,213
Materials	66,934
Overheads (ESB, Phones, Consumables)	14,000
Laboratory Analysis	18,960
EPA Fees	9,093
Total €	783,080

4.0 Licence Specific Reports

4.1 Surface Water Discharge Monitoring Location Programme Review

The surface water discharge monitoring location programme remains the same as was submitted and accepted by the Agency in June 2000.

Pipes have been fitted at each location in order to accommodate flow metres and the provision of safe access is also ongoing.

Emission point signs have been designed and are in place.

Additional work has also been carried out at these locations as part of the ongoing silt pond upgrade programme.

A proposal to relocate some of the sampling locations will be submitted to the agency in 2005.

4.2 Bunding Programme

The bunding programme for large scale oil storage facilities is complete and works certified.

4.3 Boiler Combustion Efficiency

Boiler efficiency tests were carried out during the year. The results of these tests are shown in the table below.

A full breakdown of these tests are retained on file at our Derrygreenagh office.

Boiler Location	Date Tested	% Efficiency
Ballydermot	17/12/04	84.4
Timahoe	05/01/05	84.7
Clonsast	07/12/04	86.1
Power Station	08/11/04	86.3

4.4 Resource consumption summary

There was a total of 803,368 tonnes of milled peat produced across the licence area in the production season 2004.

There was also a total of 991,773 tonnes of stock peat sold during the reporting period. Of this total, 941,262 tonnes were sold to Edenderry Power Limited, 18,592 tonnes to Lough Ree Power Station, 31,852 tonnes to Derrinlough Briquette Factory, 40 tonnes to Kilberry Moss Factory and 27 tonnes to Lullymore Factory

4.5 De-Silting Report

Summary Data Table of Ponds De-Silted From Jan-December 2004

Bog	No Silt Ponds	Cleaned Once	Cleaned Twice	Cleaned Three Times	Notes
Derries	8	4			*
Rathdrum	4	2			*
Clonad	4	4	4	2	
Cloncreen	6	6	6		
Esker	7	7	7		
Cavemount	5	5	5		
Ballykeane	5	5	5	2	
Codd South	2	2	2		
Ballydermot N	1	1	1		
Ballydermot S	1	1	1		
Clonsast N	2	2			*
Ballycon	3	3			**
Garrymore	4	4			*
Derrylea	2	2			
Glashabaun N	2	2			
Codd N	4	4			
Ticknevin	2	2			*
Glashabaun S	3	3			
D/brennan	5				
Killinagh	3				*
Lodge	2	2			
Bulge	2	2			*
Barnaran	2	2	2		
Blackriver	2	2			

*: No production. **: Bog cut out, no activity at this Bog.

Note: Any pond which was not cleaned at least twice, as required by the licence, is due to the fact that inspections showed those ponds not requiring a second cleaning.

4.6 Bog Development and Operational Programme

The majority of bog development is complete within the Allen Group. During the reporting period development was on going on Rathdrum bog. This development work comprised of ditching, screw leveling and piping.

There will be 3,628.04 nett hectares in production in the 2005 season, yielding 752,987 tonnes @ 55% moisture content.

4.7 Bog Rehabilitation Report

There was no bog rehabilitation carried out within the Allen group during the reporting period.

Management guidelines for the planning and implementation of cutaway bog rehabilitation have been adopted and the document is currently available for inspection on file at the Derrygreenagh office.

4.8 Archaeological Report

BnM Excavations and Finds Retrieval 2004

Jane Whitaker, Wetland Projects Manager, ADS Ltd

Introduction

In June and July 2004 ADS Ltd., carried out thirteen excavations in Bord na Móna's Clonad and Ballykean Bogs, Co. Offaly.

Since becoming archaeological consultants to BnM in 1998 ADS have carried out over 100 excavations in 15 BnM bogs in Counties Longford and Offaly. During this time a number of interesting discoveries have been made including the re-evaluation of some site classifications, the date ranges of the sites and their relationship with the surrounding landscape.

Clonad Bog

Clonad Bog is 411 hectares in size and is located southwest of Daingean. Seven sites were excavated in Clonad Bog, following on from field survey in 2001. In the southeastern part of the bog excavation concentrated on three toghers running northeast to southwest across the bog in close proximity to one another (04E0723, 04E0724 and 04E0727) and part of a possible fourth togher (04E0726). Two of these sites were dated to the Bronze Age. 04E0723 was 650BC±9BC in date and was the southernmost of the three adjacent sites. It was 264m in length and was composed of transversely laid planks and roundwoods supported by longitudinal roundwoods and brushwoods. The site to the north (04E0724) was dated to 926BC±9. This single plank walkway was excavated in three locations in 6 x 4m cuttings. It is possible that the central site (04E0727) has a date somewhere between the two dates mentioned above and that the sites show a continuation of use of a known routeway across Clonad Bog popular in the Bronze Age. A small fragmentary site was also excavated in the vicinity of these trackways (04E0725) but given the nature of the site the results were inconclusive. An area identified as a complex during the survey was excavated by means of five cuttings (04E0729). This complex was within an area measuring 20 x 70m in size and contained several sightings of wooden features that were not clearly identified as individual structures during the survey recording. Excavation shows that this area is most likely the junction of a number of small trackways whose identification was made harder by the presence of a peat stockpile over the field in which they were located. A substantial Bronze Age transverse plank trackway orientated from northwest to southeast and apparently terminating at a gravel knoll/bog island was excavated in five cuttings, averaging 10 x 4m in size, and traced as far as possible (04E0722). Its construction and the materials used were relatively uniform along its length. The trackway was built in a remarkably straight line over a distance of 600m and does not appear to respect local topography as evidenced by the variation in the number of construction layers used and the repairs that were carried out.

Ballykean Bog

South of Clonad Bog and immediately north of the Geashill to Walsh Island road is Ballykean Bog. This bog is 415 hectares in size and 45 archaeological sightings were recorded by the LAWU during survey work in 2003. The majority of these sites were located in the southern part of the bog in Kilbeg townland. Many were fragmentary sites exposed on the field surface several of which were isolated single pieces of worked wood. A total of six sites were excavated in 2004. Excavation revealed four toghers running east-west across the bog. One of these (04E0800) was a Bronze Age (1600±9BC-1454±9BC) single plank trackway running for over 900m, with the longitudinals resting on transverses and fixed to the bog by means of pegs through central mortices. Another trackway (04E0797), running across the bog for 643m, displayed an identical method of construction and may be in part contemporary as it too was dated to the Bronze Age (1425±9BC). The fragmentary remains of another togher (04E0801), interpreted in the survey as a post row, appears to be the remains of a similar single plank trackway. The third togher (04E0799), which had been previously identified as two sites, was shown to be a single trackway, 2m in width and traced for a length of 96m. This site was constructed mainly from longitudinal planks and roundwoods. Two brushwood sites (04E0798 & 04E0802) proved to contain very little wood and results from these were inconclusive. The excavations were accompanied by a programme of environmental sampling.

5.0 Summary

With regard to environmental compliance at the Allen Group of Bogs, there was no exceedence of the emission limit value in relation to suspended solids from grab sampling of the silt ponds in the Surface Water Discharge Monitoring Location Programme.

There was no non-compliances in relation to the Composite Sampler during the monitoring period January to December. Dust monitoring results showed two non-compliances at dust sensitive locations. There were two complaints of an environmental nature received during the reporting period.

The staff awareness through training and involvement in the operation of the licence has also improved immensely. A full programme of training and awareness has been conducted at the works and has targeted all personnel ie. Office, Workshop, Transport and Production.

Bord na Mona are project partners of the South Eastern River Basin District Management, as set up under the Water Framework Directive.

Bord na Mona are also involved in catchment management on the River Barrow.

Bord na Mona Energy Ltd would like to take this opportunity to advise the Environmental Protection Agency of its continued commitment to improving its environmental performance by adopting cleaner production methods and improving its environmental protection measures.

APPENDIX 1

Composite Sampler Results

Bord Na Mona Energy Ltd, Allen Group, Rochfordsbridge, Co Westmeath
Composite Sampler Results Licence 503

Month	pH	COD mg/l	Ammonia as N mg/l	Parameters		Colour Pt Co	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals		Suspended Solids Kg/Day	Total Solids Kg/Day
January 2004				Total Phosphorus mg/l	Suspended Solids mg/l	Total Solids mg/l				Total Phosphorus Kg/Day			
1					5	234	13980820					69.90	3271.51
2					21	258	3791511					79.62	978.21
3					5	132	4853574					24.27	640.67
4					5	195	1899325					9.50	370.37
5	7.8	76	1.18	0.06	5	180	1555751	118.24	1.84	0.09		7.78	280.04
6					5	148	2180999					10.90	322.79
7					30	180	2056847					61.71	370.23
8					12	168	4284842					51.42	719.85
9					8	184	2643578					21.15	486.42
10					5	130	1849186					9.25	240.39
11					5	166	2748976					13.74	456.33
12					5	138	1901840					9.51	262.45
13	7.2	49	0.87	0.05	7	218	3386896	165.96	2.95	0.17		23.71	738.34
14					5	178	1664549					8.32	296.29
15					6	216	4830692					28.98	1043.43
16					5	302	7970320					39.85	2407.04
17					13	82	7839802					101.92	642.86
18					14	144	2835642					39.70	408.33
19					5	202	1667816					8.34	336.90
20	6.7	35	1.15	0.05	8	192	1341630	46.96	1.54	0.07		10.73	257.59
21					IS	IS	1207260						
22					5	150	1161557					5.81	174.23
23					8	195	1881468					15.05	366.89
24					5	174	1828062					9.14	318.08
25					5	158	1301703					6.51	205.67
26					29	214	688272					19.96	147.29
27					IS	IS	1147953						
28	7.6	71	1.96	0.05	5	174	671563	47.68	1.32	0.03		3.36	116.85
29					IS	IS	3703018						
30					IS	IS	5880211						
31					IS	IS	5880211						

IS: Insufficient amount of sample due to low flow or sampler malfunction.

Bord Na Mona Energy Ltd, Allen Group, Achfordsbridge, Co Westmeath
Composite Sampler Results Licence 503

Month	pH	COD mg/l	Ammonia as N mg/l	Parameters Total Phosphorus mg/l	Suspended Solids mg/l	Total Solids mg/l	Colour Pt Co units	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals Total Phosphorus Kg/Day	Suspended Solids Kg/Day	Total Solids Kg/Day
February 2004													
1					IS	IS		5880211					
2					IS	IS		5880211					
3	6.6	86	0.7	0.05	6	196	291	5880211	505.70	4.12	0.29	35.28	1152.52
4					IS	IS		5951043					
5					8	180		2826910				22.62	508.84
6					5	198		162743				0.81	32.22
7					5	160		162743				0.81	26.04
8					5	204		162743				0.81	33.20
9					5	208		162743				0.81	33.85
10					13	208		162743				2.12	33.85
11	8	88	1.16	0.09	5	168	263	162743	14.32	0.19	0.01	0.81	27.34
12					IS	IS		162743					
13					IS	IS		162743					
14					IS	IS		162743					
15					IS	IS		162743					
16					IS	IS		162743					
17					IS	IS		162743					
18	7.5	89	1.95	0.05	5	158	206	162743	14.48	0.32	0.01	0.81	25.71
19					IS	IS		162743					
20					IS	IS		162743					
21					IS	IS		162743					
22					IS	IS		162743					
23					IS	IS		162743					
24					IS	IS		162743					
25	7.6	66	2.26	0.09	5	256	164	162743	10.74	0.37	0.01	0.81	41.66
26					IS	IS		162743					
27					IS	IS		162743					
28					IS	IS		162743					
29					IS	IS		162743					
30													
31													

IS: Insufficient amount of sample due to low flow or sampler malfunction.

Bord Na Mona Energy Ltd, Allen Group, Rochfordsbridge, Co Westmeath
Composite Sampler Results Licence 503

Month	pH	COD mg/l	Ammonia as N mg/l	Parameters		Total Solids mg/l	Suspended Solids mg/l	Total Solids mg/l	Colour Pt Co units	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals		Suspended Solids Kg/Day	Total Solids Kg/Day
March 2004				Total Phosphorus mg/l									Total Phosphorus Kg/Day			
1						IS	IS	IS		162743						
2						IS	IS	IS		162743						
3	7.7	49	2.29	0.05		5	5	304	147	162743	7.97	0.37	0.01		0.81	49.47
4						IS	IS	IS		162743						
5						IS	IS	IS		162743						
6						IS	IS	IS		162743						
7						IS	IS	IS		162743						
8						IS	IS	IS		162743						
9						IS	IS	IS		162743						
10	7.7	82	1.49	0.05		8	8	330	171	162743	13.34	0.24	0.01		1.30	53.71
11						IS	IS	IS		162743						
12						IS	IS	IS		162743						
13						IS	IS	IS		162743						
14						IS	IS	IS		162743						
15						IS	IS	IS		162743						
16						IS	IS	IS		162743						
17	8	79	1.15	0.05		7	7	192	173	162743	12.86	0.19	0.01		1.14	31.25
18						CAL	CAL	CAL		162743						
19						CAL	CAL	CAL		162743						
20						CAL	CAL	CAL		162743						
21						CAL	CAL	CAL		162743						
22						CAL	CAL	CAL		162743						
23						CAL	CAL	CAL		162743						
24						CAL	CAL	CAL		162743						
25						CAL	CAL	CAL		162743						
26						CAL	CAL	CAL		162743						
27						CAL	CAL	CAL		162743						
28						CAL	CAL	CAL		162743						
29						CAL	CAL	CAL		162743						
30						CAL	CAL	CAL		162743						
31	7.7	58	0.75	0.05		5	5	308	200	162743	9.44	0.12	0.01		0.81	50.12

IS: Insufficient amount of sample due to low flow or sampler malfunction.

CAL: Sampler away for calibration and service

[illegible]

Bord Na Mona Energy Ltd, Allen Group, Rochforbsbridge, Co Westmeath
Composite Sampler Results Licence 503

Month	pH	COD mg/l	Ammonia as N mg/l	Parameters Total Phosphorus mg/l	Suspended Solids mg/l	Total Solids mg/l	Colour Pt Co units	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals Total Phosphorus Kg/Day	Suspended Solids Kg/Day	Total Solids Kg/Day
May 2004													
1					IS	IS		30525					
2					IS	IS		46605					
3					IS	IS		32287					
4					IS	IS		250542					
5	8	100	0.11	0.15	64	337	171	348877	34.89	0.04	0.05	22.33	117.57
6					IS	IS		186745					
7					IS	IS		145301					
8					IS	IS		111479					
9					IS	IS		112133					
10					IS	IS		110877					
11					IS	IS		94719					
12	7.9	107	0.74	0.26	10	272	193	105327	11.27	0.08	0.03	1.05	28.65
13					IS	IS		133975					
14					IS	IS		90100					
15					IS	IS		53985					
16					IS	IS		78032					
17					IS	IS		36390					
18					IS	IS		42437					
19	8.2	94	0.08	0.05	6	314	186		0.00	0.00	0.00	0.00	0.00
20					5	254			0.00	0.00	0.00	0.00	0.00
21					5	250			0.00	0.00	0.00	0.00	0.00
22					5	258			0.00	0.00	0.00	0.00	0.00
23					5	262			0.00	0.00	0.00	0.00	0.00
24					5	266			0.00	0.00	0.00	0.00	0.00
25					5	254			0.00	0.00	0.00	0.00	0.00
26	8.5	94	0.05	0.05	7	272	176		0.00	0.00	0.00	0.00	0.00
27					16	276			0.00	0.00	0.00	0.00	0.00
28					5	296			0.00	0.00	0.00	0.00	0.00
29					5	258			0.00	0.00	0.00	0.00	0.00
30					5	272			0.00	0.00	0.00	0.00	0.00
31					5	290			0.00	0.00	0.00	0.00	0.00

IS: Insufficient amount of sample due to low flow or sampler malfunction.

Bord Na Mona Energy Ltd, Allen Group, Achfordsbridge, Co Westmeath
Composite Sampler Results Licence 503

Month	pH	COD mg/l	Parameters		Total Phosphorus mg/l	Suspended Solids mg/l	Total Solids mg/l	Colour Pt Co units	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals		Suspended Solids Kg/Day	Total Solids Kg/Day
			Ammonia as N mg/l	Phosphorus mg/l								Phosphorus Kg/Day	Total Kg/Day		
June 2004															
1						5	292			0.00	0.00	0.00	0.00	0.00	0.00
2	8.2	120	0.11	0.07		5	278	169		0.00	0.00	0.00	0.00	0.00	0.00
3						IS	IS			0.00	0.00	#VALUE!	#VALUE!	#VALUE!	#VALUE!
4						IS	IS			0.00	0.00	#VALUE!	#VALUE!	#VALUE!	#VALUE!
5						IS	IS			0.00	0.00	#VALUE!	#VALUE!	#VALUE!	#VALUE!
6						IS	IS			0.00	0.00	#VALUE!	#VALUE!	#VALUE!	#VALUE!
7						IS	IS			0.00	0.00	#VALUE!	#VALUE!	#VALUE!	#VALUE!
8						IS	IS			0.00	0.00	#VALUE!	#VALUE!	#VALUE!	#VALUE!
9	8	86	0.12	0.3		5	274	164		0.00	0.00	0.00	0.00	0.00	0.00
10						5	210			0.00	0.00	0.00	0.00	0.00	0.00
11						38	238			0.00	0.00	0.00	0.00	0.00	0.00
12						5	220			0.00	0.00	0.00	0.00	0.00	0.00
13						5	194			0.00	0.00	0.00	0.00	0.00	0.00
14						5	162			0.00	0.00	0.00	0.00	0.00	0.00
15						5	190			0.00	0.00	0.00	0.00	0.00	0.00
16	8.1	73	0.11	0.05		14	218	175		0.00	0.00	0.00	0.00	0.00	0.00
17						5	150			0.00	0.00	0.00	0.00	0.00	0.00
18						26	248			0.00	0.00	0.00	0.00	0.00	0.00
19						5	220			0.00	0.00	0.00	0.00	0.00	0.00
20						5	104			0.00	0.00	0.00	0.00	0.00	0.00
21						5	128			0.00	0.00	0.00	0.00	0.00	0.00
22						5	198			0.00	0.00	0.00	0.00	0.00	0.00
23	8.1	88	0.22	0.05		5	258	185		0.00	0.00	0.00	0.00	0.00	0.00
24						5	188			0.00	0.00	0.00	0.00	0.00	0.00
25						5	232			0.00	0.00	0.00	0.00	0.00	0.00
26						5	222			0.00	0.00	0.00	0.00	0.00	0.00
27						5	202			0.00	0.00	0.00	0.00	0.00	0.00
28						6	214			0.00	0.00	0.00	0.00	0.00	0.00
29						5	210			0.00	0.00	0.00	0.00	0.00	0.00
30	8	108	0.62	0.05		5	232	304		0.00	0.00	0.00	0.00	0.00	0.00
31										0.00	0.00	0.00	0.00	0.00	0.00

IS: Insufficient amount of sample due to low flow or sampler malfunction.

Bord Na Mona Energy Ltd, Allen Group, Rochfordsbridge, Co Westmeath
Composite Sampler Results Licence 503

Month	pH	COD mg/l	Ammonia as N mg/l	Parameters		Colour Pt Co units	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals		Suspended Solids Kg/Day	Total Solids Kg/Day
				Phosphorus mg/l	Suspended Solids mg/l					Phosphorus Kg/Day	Total Kg/Day		
July 2004													
1					5	234		0.00	0.00	0.00	0.00	0.00	0.00
2					5	230		0.00	0.00	0.00	0.00	0.00	0.00
3					5	224		0.00	0.00	0.00	0.00	0.00	0.00
4					5	248		0.00	0.00	0.00	0.00	0.00	0.00
5					5	232		0.00	0.00	0.00	0.00	0.00	0.00
6					5	240		0.00	0.00	0.00	0.00	0.00	0.00
7	8.2	128	0.12	0.05	5	228		0.00	0.00	0.00	0.00	0.00	0.00
8					IS	IS		0.00	0.00	0.00	#VALUE!	#VALUE!	#VALUE!
9					5	244		0.00	0.00	0.00	0.00	0.00	0.00
10					5	244		0.00	0.00	0.00	0.00	0.00	0.00
11					7	259		0.00	0.00	0.00	0.00	0.00	0.00
12					IS	IS		0.00	0.00	0.00	#VALUE!	#VALUE!	#VALUE!
13					5	238		0.00	0.00	0.00	0.00	0.00	0.00
14	8.4	92	0.28	0.05	5	250		0.00	0.00	0.00	0.00	0.00	0.00
15					5	210		0.00	0.00	0.00	0.00	0.00	0.00
16					5	226		0.00	0.00	0.00	0.00	0.00	0.00
17					6	187		0.00	0.00	0.00	0.00	0.00	0.00
18					IS	IS		0.00	0.00	0.00	#VALUE!	#VALUE!	#VALUE!
19					IS	IS		0.00	0.00	0.00	#VALUE!	#VALUE!	#VALUE!
20					IS	IS		0.00	0.00	0.00	#VALUE!	#VALUE!	#VALUE!
21	8	128	0.05	0.1	5	240		0.00	0.00	0.00	0.00	0.00	0.00
22					5	226		0.00	0.00	0.00	0.00	0.00	0.00
23					5	216		0.00	0.00	0.00	0.00	0.00	0.00
24					5	153		0.00	0.00	0.00	0.00	0.00	0.00
25					5	100		0.00	0.00	0.00	0.00	0.00	0.00
26					5	132		0.00	0.00	0.00	0.00	0.00	0.00
27					5	218		0.00	0.00	0.00	0.00	0.00	0.00
28	8.3	94	0.05	0.09	5	102		0.00	0.00	0.00	0.00	0.00	0.00
29					5	260		0.00	0.00	0.00	0.00	0.00	0.00
30					13	280		0.00	0.00	0.00	0.00	0.00	0.00
31					5	278		0.00	0.00	0.00	0.00	0.00	0.00

IS: Insufficient amount of sample due to low flow or sampler malfunction.

Bord Na Mona Energy Ltd, Allen Group, Achfordsbridge, Co Westmeath
Composite Sampler Results Licence 303

Month	pH	COD mg/l	Ammonia as N mg/l	Parameters		Total Solids mg/l	Suspended Solids mg/l	Colour Pt Co units	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals	
				Total Phosphorus mg/l								Total Phosphorus Kg/Day	Suspended Solids Kg/Day
August 2004													
1						260	5			0.00	0.00	0.00	0.00
2						268	5			0.00	0.00	0.00	0.00
3						250	5			0.00	0.00	0.00	0.00
4						162	5			0.00	0.00	0.00	0.00
5	7.5	107	0.82	0.05		178	5	280		0.00	0.00	0.00	0.00
6						164	5			0.00	0.00	0.00	0.00
7						160	5			0.00	0.00	0.00	0.00
8						196	5			0.00	0.00	0.00	0.00
9						198	5			0.00	0.00	0.00	0.00
10						188	5			0.00	0.00	0.00	0.00
11						170	5			0.00	0.00	0.00	0.00
12	7.8	102	0.08	0.05		170	5	264		0.00	0.00	0.00	0.00
13						228	5			0.00	0.00	0.00	0.00
14						230	5			0.00	0.00	0.00	0.00
15						235	5			0.00	0.00	0.00	0.00
16						210	5			0.00	0.00	0.00	0.00
17						238	5			0.00	0.00	0.00	0.00
18	8.1	102	0.06	0.05		222	5	279		0.00	0.00	0.00	0.00
19						212	5			0.00	0.00	0.00	0.00
20						174	5			0.00	0.00	0.00	0.00
21						184	5			0.00	0.00	0.00	0.00
22						208	5			0.00	0.00	0.00	0.00
23						180	5			0.00	0.00	0.00	0.00
24						168	5			0.00	0.00	0.00	0.00
25	7.5	88	0.16	0.05		178	5	346		0.00	0.00	0.00	0.00
26						88	5			0.00	0.00	0.00	0.00
27						70	5			0.00	0.00	0.00	0.00
28						172	5			0.00	0.00	0.00	0.00
29						144	5			0.00	0.00	0.00	0.00
30						176	5			0.00	0.00	0.00	0.00
31						128	5			0.00	0.00	0.00	0.00

IS: Insufficient amount of sample due to low flow or sampler malfunction.

Bord Na Mona Energy Ltd, Allen Group, Rochfordsbridge, Co Westmeath
Composite Sampler Results Licence 503

Month	pH	COD mg/l	Ammonia as N mg/l	Parameters		Total Solids mg/l	Suspended Solids mg/l	Colour Pt Co	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals		Suspended Solids Kg/Day	Total Solids Kg/Day
				Phosphorus mg/l	Phosphorus mg/l							Phosphorus Kg/Day	Phosphorus Kg/Day		
September 2004															
1	7.9	95	0.02	0.05		52	5	338		0.00	0.00	0.00	0.00	0.00	0.00
2						264	5			0.00	0.00	0.00	0.00	0.00	0.00
3						293	5			0.00	0.00	0.00	0.00	0.00	0.00
4						260	5			0.00	0.00	0.00	0.00	0.00	0.00
5						244	5			0.00	0.00	0.00	0.00	0.00	0.00
6						IS	IS			0.00	0.00	0.00	0.00	0.00	0.00
7						IS	IS			0.00	0.00	#VALUE!	#VALUE!	#VALUE!	#VALUE!
8	8.1	93	0.02	0.05		242	5	338		0.00	0.00	#VALUE!	#VALUE!	#VALUE!	#VALUE!
9						IS	IS			0.00	0.00	0.00	0.00	0.00	0.00
10						220	5			0.00	0.00	0.00	0.00	0.00	0.00
11						252	5			0.00	0.00	0.00	0.00	0.00	0.00
12						98	5			0.00	0.00	0.00	0.00	0.00	0.00
13						122	5			0.00	0.00	0.00	0.00	0.00	0.00
14						102	5			0.00	0.00	0.00	0.00	0.00	0.00
15	8.2	100	0.02	0.05		210	5	286		0.00	0.00	0.00	0.00	0.00	0.00
16						176	8			0.00	0.00	0.00	0.00	0.00	0.00
17						222	5			0.00	0.00	0.00	0.00	0.00	0.00
18						134	6			0.00	0.00	0.00	0.00	0.00	0.00
19						IS	IS			0.00	0.00	#VALUE!	#VALUE!	#VALUE!	#VALUE!
20						IS	IS			0.00	0.00	#VALUE!	#VALUE!	#VALUE!	#VALUE!
21						IS	IS			0.00	0.00	#VALUE!	#VALUE!	#VALUE!	#VALUE!
22	7.4	96	0.29	0.05		132	5	252		0.00	0.00	0.00	0.00	0.00	0.00
23						IS	IS			0.00	0.00	#VALUE!	#VALUE!	#VALUE!	#VALUE!
24						IS	IS			0.00	0.00	#VALUE!	#VALUE!	#VALUE!	#VALUE!
25						IS	IS			0.00	0.00	#VALUE!	#VALUE!	#VALUE!	#VALUE!
26						IS	IS			0.00	0.00	#VALUE!	#VALUE!	#VALUE!	#VALUE!
27						IS	IS			0.00	0.00	#VALUE!	#VALUE!	#VALUE!	#VALUE!
28						IS	IS			0.00	0.00	#VALUE!	#VALUE!	#VALUE!	#VALUE!
29	7.7	90	0.09	0.05		220	6	244		0.00	0.00	0.00	0.00	0.00	0.00
30						IS	IS			0.00	0.00	#VALUE!	#VALUE!	#VALUE!	#VALUE!

IS: Insufficient amount of sample due to low flow or sampler malfunction.

Bord Na Mona Energy Ltd, Allen Group Ochfordsbridge, Co Westmeath
Composite Sampler Results Licence 303

Month	pH	COD mg/l	Ammonia as N mg/l	Parameters		Total Solids mg/l	Suspended Solids mg/l	Colour Pt Co units	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals		Suspended Solids Kg/Day	Total Solids Kg/Day
				Phosphorus mg/l	Total Phosphorus mg/l							Total Phosphorus Kg/Day	Total Phosphorus Kg/Day		
October 2004															
1						IS	IS			0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
2						IS	IS			0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
3						IS	IS			0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
4						IS	IS			0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
5						IS	IS			0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
6	7.4	99	0.4		0.05	11	162	270		0.00	0.00	0.00	0.00	0.00	0.00
7						IS	IS			0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
8						IS	IS			0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
9						IS	IS			0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
10						IS	IS			0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
11						IS	IS			0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
12						IS	IS			0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
13	7.8	56	0.02		0.05	5	294	139		0.00	0.00	0.00	0.00	0.00	0.00
14						5	248			0.00	0.00	0.00	0.00	0.00	0.00
15						5	264		5787021					28.94	1527.77
16						5	274		11005980					55.03	3015.64
17						5	282		11005980					55.03	3103.69
18						5	280		11005980					55.03	3081.67
19						5	274		11005980					55.03	3015.64
20	8.2	54	0.07		0.05	6	254	120	11005980	594.32	0.77	0.55		66.04	2795.52
21						8	264		11005980					88.05	2905.58
22						10	268		11005980					110.06	2949.60
23						8	286		11005980					88.05	3147.71
24						8	258		11005980					88.05	2839.54
25						12	264		11005980					132.07	2905.58
26						12	270		11005980					132.07	2971.61
27	7.8	67	0.11		0.05	6	258	196	11005980	737.40	1.21	0.55		66.04	2839.54
28						5	262		11005980					55.03	2883.57
29						13	166		11005980					143.08	1826.99
30						10	280		11005980					110.06	3081.67
31						6	336		11005980					66.04	3698.01

IS: Insufficient amount of sample due to low flow or sampler malfunction.

Bord Na Mona Energy Ltd, Allen Group, Rochfordsbridge, Co Westmeath
Composite Sampler Results Licence 503

Month	pH	COD mg/l	Ammonia as N mg/l	Parameters: Total Phosphorus mg/l	Suspended Solids mg/l	Total Solids mg/l	Colour Pt Co units	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals Total Phosphorus Kg/Day	Suspended Solids Kg/Day	Total Solids Kg/Day
November 2004													
1					5	309		11005980				55.03	3400.85
2					5	204		11005980				55.03	2245.22
3	8	90	0.06	0.05	6	284	192	11005980	990.54	0.66	0.55	66.04	3125.70
4					5	344		10971230				54.86	3774.10
5					5	130		8845255				44.23	1149.88
6					6	348		6669710				40.02	2321.06
7					5	360		6451994				32.26	2322.72
8					5	326		6159775				30.80	2008.09
9					5	364		6365172				31.83	2316.92
10	8.1	65	0.05	0.05	5	342	156	6205730	403.37	0.31	0.31	31.03	2122.36
11					8	350		5716161				45.73	2000.66
12					5	204		5482684				27.41	1118.47
13					6	304		5270981				31.63	1602.38
14					5	188		4829891				24.15	908.02
15					5	260		4572961				22.86	1188.97
16					6	318		4586651				27.52	1458.56
17	8.1	29	0.03	0.05	5	328	117	4887198	141.73	0.15	0.24	24.44	1603.00
18					5	54		5979134				29.90	322.87
19					5	160		19061830				95.31	3049.89
20					5	54		18954080				94.77	1023.52
21					5	300			0.00	0.00	0.00	0.00	0.00
22					6	88			0.00	0.00	0.00	0.00	0.00
23					5	210			0.00	0.00	0.00	0.00	0.00
24	7.8	55	0.04	0.05	5	254	198		0.00	0.00	0.00	0.00	0.00
25					5	322			0.00	0.00	0.00	0.00	0.00
26					5	332			0.00	0.00	0.00	0.00	0.00
27					5	299			0.00	0.00	0.00	0.00	0.00
28					5	324			0.00	0.00	0.00	0.00	0.00
29					5	284			0.00	0.00	0.00	0.00	0.00
30					5	312			0.00	0.00	0.00	0.00	0.00

IS: Insufficient amount of sample due to low flow or sampler malfunction.

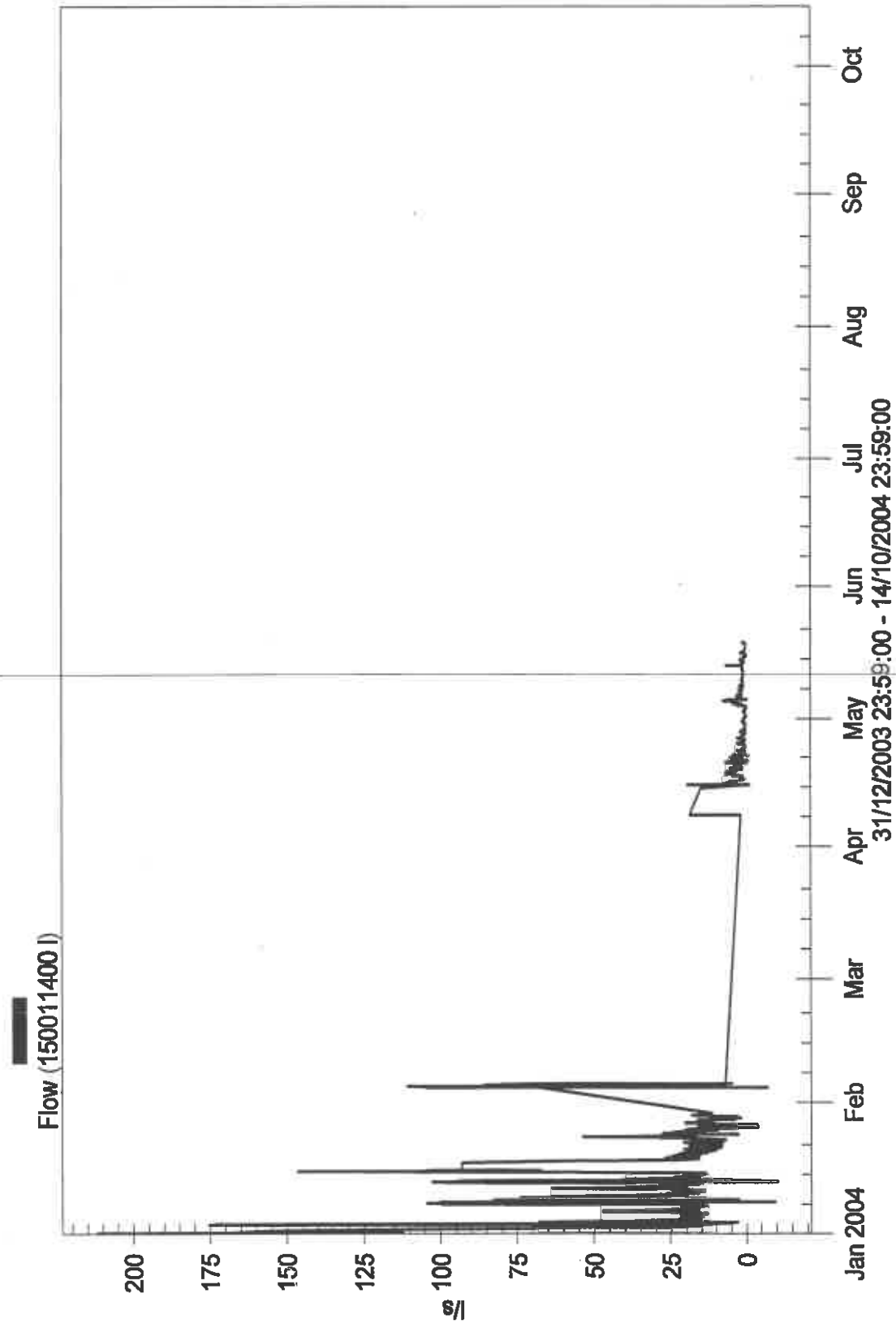
Bord Na Mona Energy Ltd, Allen Group, Achfordsbridge, Co Westmeath
Composite Sampler Results Licence 503

Month	pH	COD mg/l	Ammonia as N mg/l	Parameters Total Phosphorus mg/l	Suspended Solids mg/l	Total Solids mg/l	Colour Pt Co	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Total Phosphorus Kg/Day	Suspended Solids Kg/Day	Total Solids Kg/Day
December 2004													
1	7.9	61	0.11	0.1	8	334	123		0.00	0.00	0.00	0.00	0.00
2					5	370			0.00	0.00	0.00	0.00	0.00
3					5	300			0.00	0.00	0.00	0.00	0.00
4					5	344			0.00	0.00	0.00	0.00	0.00
5					5	290			0.00	0.00	0.00	0.00	0.00
6					5	282			0.00	0.00	0.00	0.00	0.00
7					5	378			0.00	0.00	0.00	0.00	0.00
8	8.1	50	0.03	0.05	5	340	140		0.00	0.00	0.00	0.00	0.00
9					5	62			0.00	0.00	0.00	0.00	0.00
10					5	237			0.00	0.00	0.00	0.00	0.00
11					5	268			0.00	0.00	0.00	0.00	0.00
12					5	212			0.00	0.00	0.00	0.00	0.00
13					5	314			0.00	0.00	0.00	0.00	0.00
14					5	332			0.00	0.00	0.00	0.00	0.00
15	8.1	10	1.87	0.05	5	170	130		0.00	0.00	0.00	0.00	0.00
16					5	294			0.00	0.00	0.00	0.00	0.00
17					5	170			0.00	0.00	0.00	0.00	0.00
18					5	119			0.00	0.00	0.00	0.00	0.00
19					5	158			0.00	0.00	0.00	0.00	0.00
20					5	336			0.00	0.00	0.00	0.00	0.00
21					14	94			0.00	0.00	0.00	0.00	0.00
22	8	83	0.17	0.05	5	198	204		0.00	0.00	0.00	0.00	0.00
23					5	260			0.00	0.00	0.00	0.00	0.00
24					6	252			0.00	0.00	0.00	0.00	0.00
25					5	280			0.00	0.00	0.00	0.00	0.00
26					7	294			0.00	0.00	0.00	0.00	0.00
27					5	166			0.00	0.00	0.00	0.00	0.00
28					5	116			0.00	0.00	0.00	0.00	0.00
29	7.6	33	0.15	0.05	5	260	184		0.00	0.00	0.00	0.00	0.00
30									0.00	0.00	0.00	0.00	0.00
31									0.00	0.00	0.00	0.00	0.00

IS: Insufficient amount of sample due to low flow or sampler malfunction.

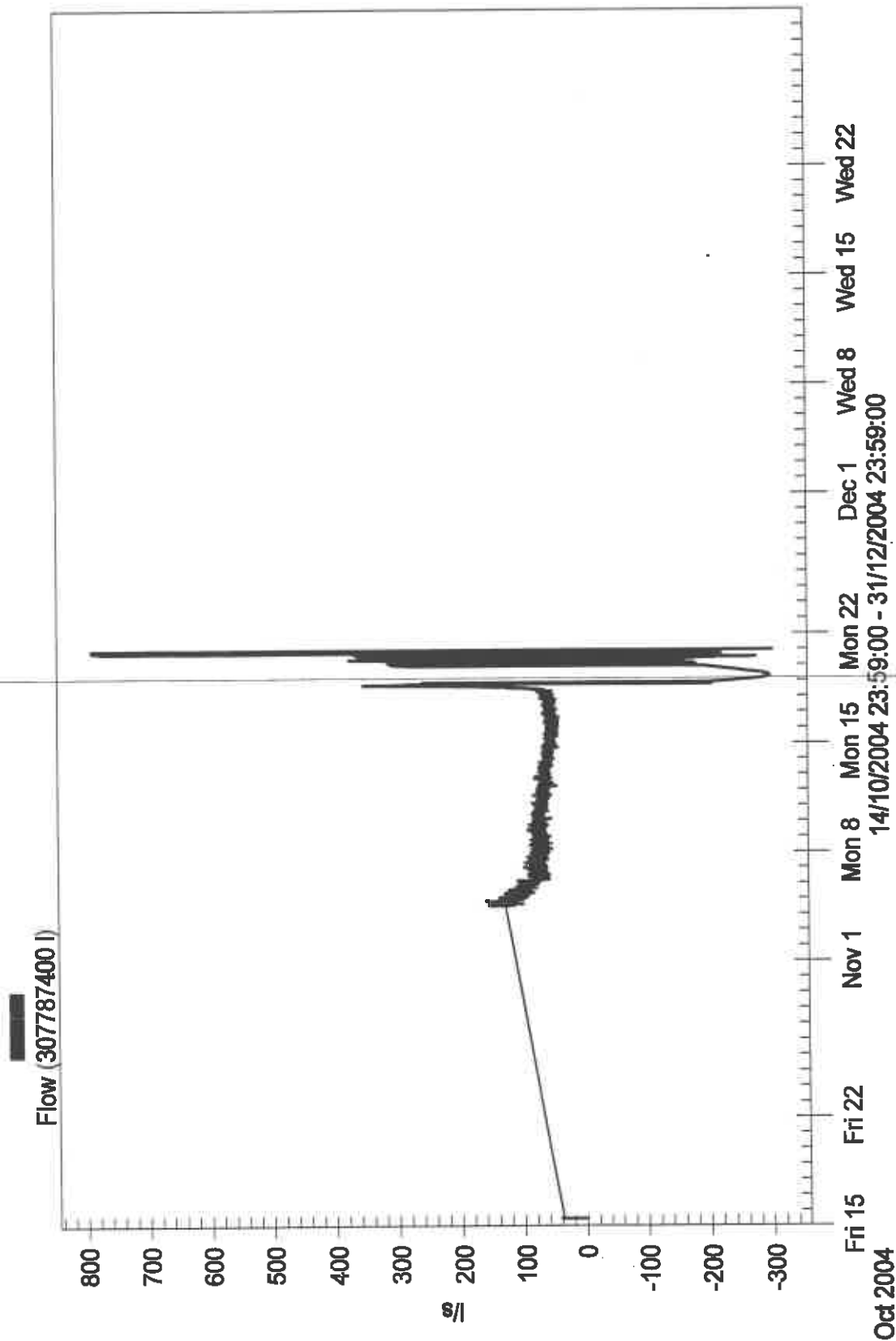
Allen Composite Sampler (Codd)

Jan to October



Allen Composite Sampler (Cush)

October to December





Annual Environmental Report
IPC LICENCE 503

March 2004

Contents

1 Introduction

- 1.1 IPC Licence Register No
- 1.2 Name & Location of Site
- 1.3 Brief Description of Activities
- 1.4 Environmental Management of the Company
- 1.5 Environmental Policy Statement

2 Summary Information

2.1 Emissions to Water Summary

- 2.1.1 Silt Pond Emissions
- 2.1.2 Yard Discharges
- 2.1.3 Composite Sampler Report
- 2.1.4 Non-compliance's

2.2 Emissions to Air Summary

- 2.2.1 Dust Monitoring
- 2.2.2 Non-compliance's

2.3 Waste Arisings

- 2.3.1 Non-Hazardous Waste
- 2.3.2 Hazardous Waste

2.4 Energy and Water Consumption

- 2.4.1 Energy Consumption

2.5 Environmental Incidents and Complaints

- 2.5.1 Incidents
- 2.5.2 Complaints

3.0 Management of the Activity

3.1 Environmental Management Programme Report

3.2 Environmental Management Programme Proposal

3.3 Environmental Expenditure

4.0 Licence Specific Reports

4.1 Surface Water Discharge Monitoring Location Programme Review

4.2 Bunding Programme

4.3 Boiler Combustion Efficiency

4.4 Resource Consumption Summary

4.5 Report on de-silting Programme

4.6 Bog Development and Operational Programme

4.7 Bog Rehabilitation Report

4.8 Archaeological Report

5.0 Summary

Appendix 1: Composite Sampler Results

1 Introduction

1.1 IPC Licence No 503

1.2 Name & Location of Site

Name: Bord na Mona Energy Limited.

**Address: Allen Group
Derrygreenagh Works
Rochfortbridge
Mullingar
Co Westmeath.**

Telephone No: 044 / 22181 Fax No: 044 / 22344

Contact Name: Paul Riordan

Position: Regional Manager.

National Grid Reference: E249450 N238140

1.3 Description of Activities

The Allen Group of bogs are situated in counties Kildare and Offaly and are generally bounded by the Grand Canal to the North, the Barrow River and tributaries to the South, Nass to the East and Tullamore to the West.

These bogs comprise most of the bogland area that was formerly referred to as the Bog of Allen.

The Allen Group has a total acquired area of 21,150 hectares of which 3785 nett hectares were in production in 2003.

The Allen Group currently employs 151 permanent workers and used 35 seasonal workers in the 2003 production season

Transport operations are carried out on a seven day cycle throughout the year.

Production operations are typically carried out over a seven day week (weather permitting) for 12 to 15 hours per day.

Peat Milling Operations.

For milled peat production the bog is laid out in a series of rectangular fields of varying length and 15m wide with drains located between. There are essentially four operations involved in milled peat production:

- Milling.
- Harrowing.
- Ridging.
- Harvesting.

Milling.

Special milling machines work their way along the fields, milling approximately 15mm of peat of the top of the bog in a pass.

Harrowing

In the course of drying, the milled peat is turned a number of times to avail of the drying conditions. This is achieved with a machine called a harrow. The milled peat is harrowed until its moisture content is down to approximately 40-50%, which can take up to two to three days, weather depending.

Ridging

The dry peat is then scraped into long ridges running down the centre of each field. This is done with a ridger, a machine consisting of a series of blades in the shape of a v that opens the full width of the field.

Harvesting

During harvesting every eleventh field is used to stockpile the peat, with this field receiving the milled peat from the five fields either side.

The milled peat is then transported via the existing network of peatland railways to one of the following locations.

- Power station (EPL)
- Horticultural Factory.

1.4 Environmental Management of the Company

The organisational structure within the Allen Group is presented in the flow chart below.

Allen Group

Environmental Responsibilities



- (1) Overall environmental responsibilities
- (2) Records of complaints and registers
- (3) All production related issues
- (4) Machine maintenance
- (5) Co-ordinating environmental affairs
- (6) All peat transportation matters
- (7) Silt pond maintenance, tea centres, codes of practice
- (8) Fuel loading, oil traps, weekly workshop inspections.

1.5 Environmental Policy



Bord na Mona Energy Limited is a commercial semi-state body with responsibility to develop Irelands peat resources in the national interest.

Bord na Mona Energy Limited is committed to gather and make available information on all aspects of its environmental impact and to help improve understanding among the public generally of its role and the importance of Irish peatlands.

Bord na Mona Energy Limited recognises the importance of peatland conservation.

Bord na Mona Energy Limited will leave behind all areas it owns as either an economically or socially integrated resource of a high environmental value.

Bord na Mona Energy Limited seeks to conduct all aspects of its buisness in an environmentally sensitive value.

Bord na Mona Energy Limited will establish an environmental management system specifically addressing the following impacts.

- Discharges to water.
- Emissions to atmosphere.
- Waste disposal.
- Use of natural resources.
- Noise, vibration, odour, dust and visual effects.
- Natural environment and eco-system.

The environmental management system will be monitored, maintained and continually improved.

A system of regular environmental audits will be put in place.

Bord na Mona Energy Limited will continue research and development into all aspects of its environmental impact.

This statement is published and is available at all locations within the division and its contents are brought to the attention of all employees.

2 Summary Information

2.1 Emissions to Water Summary

2.1.1 Silt Pond Emissions

The following tables contain a summary of the emissions to surface waters from within the Allen Group.

Silt Pond No: DS 5		SW No. 2				
Reporting Period (Jan-Dec 2003)		Jan/Feb/Mar	April/May/June	July/Aug/Sept	Oct/Nov/Dec	ELV
Parameter	Emission (mg/l)	Emission (mg/l)	Emission (mg/l)	Emission (mg/l)	Emission (mg/l)	(mg/l)
pH units	7.4	7.6	7.5	7.1	7.2	~
Flow (L/sec)	4.5	4.2	0.33	7.2	7.2	~
Suspended Solids (mg/l)	7	6	41	<5	<5	35mg/l
Total Solids (mg/l)	232	174	351	120	120	~
Total Phosphorus (mg/l)	<0.05	<0.05	0.08	<0.05	<0.05	~
Ammonia (mg/l)	0.5	0.4	0.97	0.84	0.84	~
Colour (Pt Co units)	237	311	163	200	200	~
COD (mg/l)	47	83	116	72	72	~
						Compliant
						NO

SW No. 10					
Silt Pond No: RD 17					
Reporting Period (Jan-Dec 2003)					
Parameter	Jan/Feb/Mar	April/May/June	July/Aug/Sept	Oct/Nov/Dec	E L V
	Emission (mg/l)	Emission (mg/l)	Emission (mg/l)	Emission (mg/l)	(mg/l)
pH units	7.7	7.9	7.7	7.6	~
Flow (L/sec)	35.78	40.27	8.3	21.3	~
Suspended Solids (mg/l)	10	6	14	<5	35mg/l
Total Solids (mg/l)	394	436	460	259	~
Total Phosphorus (mg/l)	0.07	0.07	0.09	<0.05	~
Ammonia (mg/l)	0.6	0.5	0.46	0.95	~
Colour (Pt Co units)	98	103	70	124	~
COD (mg/l)	26	44	38	42	~
					Compliant

SW No. 14					
Silt Pond No: BK 23					
Reporting Period (Jan-Dec 2003)					
Parameter	Jan/Feb/Mar	April/May/June	July/Aug/Sept	Oct/Nov/Dec	E L V
	Emission (mg/l)	Emission (mg/l)	Emission (mg/l)	Emission (mg/l)	(mg/l)
pH units	7.9	7.9	7.8	7.7	~
Flow (L/sec)	163.9	55.22	22	11.30	~
Suspended Solids (mg/l)	6	<5	<5	<5	35mg/l
Total Solids (mg/l)	264	240	378	360	~
Total Phosphorus (mg/l)	<0.05	<0.05	<0.05	<0.05	~
Ammonia (mg/l)	1.0	0.8	0.28	0.72	~
Colour (Pt Co units)	99	171	106	105	~
COD (mg/l)	40	67	75	48	~
					Compliant

Silt Pond No: CC 51
Reporting Period
(Jan-Dec 2003)

SW No. 33

Parameter	Jan/Feb/Mar Emission (mg/l)	April/May/June Emission (mg/l)	July/Aug/Sept Emission (mg/l)	Oct/Nov/Dec Emission (mg/l)	E L V (mg/l)	Compliant
pH units	8.0	7.9	8.1	7.9	~	
Flow (L/sec)	21.5	106	6.5	53	~	
Suspended Solids (mg/l)	<5	<5	<5	<5	35mg/l	YES
Total Solids (mg/l)	304	232	294	312	~	
Total Phosphorus (mg/l)	<0.05	<0.05	0.05	<0.05	~	
Ammonia (mg/l)	2.5	2.3	0.26	2.66	~	
Colour (Pt Co units)	87	186	103	94	~	
COD (mg/l)	28	71	54	40	~	

Silt Pond No: DL 67
Reporting Period
(Jan-Dec 2003)

SW No. 43

Parameter	Jan/Feb/Mar Emission (mg/l)	April/May/June Emission (mg/l)	July/Aug/Sept Emission (mg/l)	Oct/Nov/Dec Emission (mg/l)	E L V (mg/l)	Compliant
pH units	7.7	7.8	8.0	7.7	~	
Flow (L/sec)	23.2	26.8	3.09	11.86	~	
Suspended Solids (mg/l)	10	<5	<5	<5	35mg/l	YES
Total Solids (mg/l)	242	220	370	254	~	
Total Phosphorus (mg/l)	0.05	<0.05	<0.05	<0.05	~	
Ammonia (mg/l)	2.3	1	1.92	1.77	~	
Colour (Pt Co units)	255	400	162	279	~	
COD (mg/l)	52	89	73	75	~	

Silt Pond No: BR 94**SW No. 65****Reporting Period****(Jan-Dec 2003)**

Parameter	Jan/Feb/Mar Emission (mg/l)	April/May/June Emission (mg/l)	July/Aug/Sept Emission (mg/l)	Oct/Nov/Dec Emission (mg/l)	E L V (mg/l)	Compliant
pH units	7.8	8.1	8.2	7.7	~	
Flow (L/sec)	26.5	40.34	1.05	26.3	~	
Suspended Solids (mg/l)	5	<5	<5	<5	35mg/l	YES
Total Solids (mg/l)	260	250	310	286	~	
Total Phosphorus (mg/l)	0.05	<0.05	<0.05	<0.05	~	
Ammonia (mg/l)	1.0	0.4	0.05	0.50	~	
Colour (Pt Co units)	163	252	169	209	~	
COD (mg/l)	47	85	92	80	~	

Silt Pond No:BN 98**SW No. 66****Reporting Period****(Jan-Dec 2003)**

Parameter	Jan/Feb/Mar Emission (mg/l)	April/May/June Emission (mg/l)	July/Aug/Sept Emission (mg/l)	Oct/Nov/Dec Emission (mg/l)	E L V (mg/l)	Compliant
pH units	8.0	8.1	8.1	7.8	~	
Flow (L/sec)	18.1	42.2	5.56	49.7	~	
Suspended Solids (mg/l)	<5	<5	<5	<5	35mg/l	YES
Total Solids (mg/l)	326	274	328	270	~	
Total Phosphorus (mg/l)	0.05	<0.05	0.05	<0.05	~	
Ammonia (mg/l)	1.1	0.3	0.16	0.79	~	
Colour (Pt Co units)	148	204	139	190	~	
COD (mg/l)	42	31	81	57	~	

2.1.2 Yard Discharges

The tables below are a summary of the COD emissions to surface waters from yards and workshops within the Allen Group.

Ballycon SWE-1

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
COD mg/l	40	18		45	28	76	40			28		

Clonsast SWE-1

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
COD mg/l	13	15		10	13	10	59			78		

Ballydermot SWE-1

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
COD mg/l	76	56		36	37	28	36			36		

Ballydermot SWE-2

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
COD mg/l	71	76		59	49	53	25			56		

Timahoe SWE-1

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
COD mg/l	77	80		51	28	71	50			61		

Note: Due to the unusually dry year, fewer samples were available. In fact no samples were available on the day of sampling in the months March, August, September, November & December.

2.1.3 Composite Sampler Report

All the analysis results and flow data for the composite sampler are included in the appendix. The sampler location was changed from Barnaran bog to Codd South bog during the reporting period.

2.1.4 Non-compliance's

There were no non-compliance, in relation to silt pond sampling during the reporting period, although the emission limit value was exceeded on one occasion at one sampling location.

2.2 Emissions to Air

2.2.1 Dust Monitoring

The table below contains the dust emissions for each dust monitoring location within the Allen Group. Monitoring took place on three separate occasions during the periods, June – July, July – August, August – September 2003.

June - Jul

Emission Point	Parameter	Emission (mg/m ² /day)	Emission Limit Value	Compliant
DM 01	Dust	89	(350mg/m ² /Day)	YES
DM 02	Dust	128	(350mg/m ² /Day)	YES
DM 03	Dust	228	(350mg/m ² /Day)	YES
DM 04	Dust	61	(350mg/m ² /Day)	YES

Jul - Aug

Emission Point	Parameter	Emission (mg/m ² /day)	Emission Limit Value	Compliant
DM 01	Dust	255	(350mg/m ² /Day)	YES
DM 02	Dust	50	(350mg/m ² /Day)	YES
DM 03	Dust	255	(350mg/m ² /Day)	YES
DM 04	Dust	350	(350mg/m ² /Day)	YES

Aug - Sep

Emission Point	Parameter	Emission (mg/m ² /day)	Emission Limit Value	Compliant
DM 01	Dust	65	(350mg/m ² /Day)	YES
DM 02	Dust	48	(350mg/m ² /Day)	YES
DM 03	Dust	839	(350mg/m ² /Day)	NO
DM 04	Dust	991	(350mg/m ² /Day)	NO

Note: DM 01= Killinagh Bog. DM 02 = Derrybrennan Bog. DM 03 = Ballykeane
DM 04 = Moore Household (Lullymore)

2.2.2 Non-compliance's

Date	Non-compliance	Cause	Corrective Action
Aug	Exceedence of ELV at DM-03 and DM-04	Strong winds and very dry weather	Production stopped on two occasions during sampling period

2.3 Waste Arisings

2.3.1 Non-Hazardous Waste

The following table lists the quantities of the wastes generated from January-December 2003 from all of the Allen Group.

Waste Type	Quantity (Tonnes)
Silt Pond Waste	1780
Polyethylene	509.320
Scrap Metal	62.970
Mixed Municipal Waste	17.430
Total	2369.72

Note: Scrap Metal and Polyethylene are both recycled.

2.3.2 Hazardous Waste

Derrygreenagh being a central location, is used as a collection point for all hazardous wastes emanating from all the areas in both the Allen and Derrygreenagh Groups. All waste oils, filters, spent batteries, etc are collected centrally at Derrygreenagh before being removed by a licenced waste contractor such as Atlas Waste Oil, Hammond Lane, Returnabatt, etc.

A system is in place where by every area has its own waste oil and filter barrel.

These barrels are painted yellow to distinguish them from ordinary barrels and are clearly marked waste filters or waste oil.

When the barrels are getting near full, the area team leader informs our Derrygreenagh stores and a truck is dispatched to collect the full barrels and replace them with empties. Any spent batteries will also be collected if the need arises.

Records of all the hazardous wastes handled by the Allen and Derrygreenagh Groups from January-December 2003 have been submitted with the Derrygreenagh AER.

2.4 Energy and Water Consumption

2.4.1 Energy

The table below is a summary of the energy consumption for the Allen Group, from the dates January – December 2003.

Water is not included, as it is not used as part of the production process. It is only used in offices, canteens and workshops on a domestic scale.

None of the boilers in the Allen Group are briquette fired.

Fuel	Volume M ³	Tonnes	MW/Hours
Jan - Dec 2003			
Diesel	1646	1366	16118
Petrol	1.098	0.828	9.91
Electricity	NA	NA	128.25
Total	1647.098	1366.028	16256.16

2.5 Environmental Incidents and Complaints

2.5.1 Incidents

There were four incident within the Allen Group, during the reporting period

Environmental Incidents	Number of Incidents
Incidents	4
Incidents requiring corrective action	4
Categories of Incident	
Odour	
Noise	
Water	
Air	3
Procedural	1
Miscellaneous	

2.5.2

There were three complaints within the Allen Group, during the reporting period The Agency was informed.

Environmental Complaints	Number of complaints
Complaints received	3
Complaints requiring corrective action	3
Categories of complaint	
Odour	
Noise	
Water	
Air	3
Procedural	
Miscellaneous	

3.0 Management of the Activity

3.1 Environmental Management Programme Report 2003

Environmental Management Programme Report 2003	
Project	
Project 1. Reduction of fugitive dust emissions.	Training Training was provided for all personnel during 2002, and will be repeated in 2004. This will be in the form of a Cleaner Production Video, which is currently in production. This video deals with all dust related production issues and identifies good practice and codes of practice for peat production in Dust Sensitive Locations (DSL's). Headland Peat Headland peat is another potential source of dust generation from bog production traffic. This was address by the introduction of a pilot production unit, involving a dedicated unit for the collection of headland peat in the Boora Group of Bogs (IPC 500). This unit, made up of one same field harvester and 4/5 tractor and haku trailers units was in operation in the Boora group during 2003. Its main function was to gather all headland peat from the different units as often as possible, so as to reduce the volumes of loose peat dry peat that can cause dust problems. It has proved successful, and it is proposed to extend this programme in 2004. Hydraulic harrows Plans for the fabrication of hydraulically operated harrows were completed in 2003, and an order was placed for 8 harrows for the 2004 production season.

Project 2. Minimisation of Suspended Solids	Various projects are currently underway to address these issues. As already discussed the Cleaner Production Video examines bad production methods that can lead to waste peat entering the drainage system and subsequently the silt pond network. These can occur during bog maintenance, milling, harrowing, ridging, harvesting and loading. The video highlights these practices and demonstrates improvements that can be achieved through better driving and operation. Other projects such as the hydraulic harrows and the collection of the headland peat are also related to cleaner production which will have a positive impact on waste minimisation and the reduction of waste peat that can potentially find its way into drainage network.
Project 3. Effective spill/leak management of mobile fuelling tanks	Mobile fuelling locations identified, and posted at each tea centre. The upgrading and overhaul of all mobile fuelling units is ongoing, with each unit being brought to the workshop for repairs / improvements. Codes of practice adopted and standard operating procedures in place as well as an emergency response procedure in the event of an oil spillage.
Project 4. Re-use of silt pond waste	No work has been carried out on this project to-date. It was proposed to monitor a silt pond constructed on the headland at Giltown, in the Kilberry group of Bogs. Its close proximity to the production fields and stockpiles made it suitable for potentially reusing the waste peat excavated from the silt pond. This project will be examined again in 2004.
Project 5. Collection, storage and re-use of polythene.	Polythene for recycling has been collected from around the production areas, and stockpiled at a hard surface for baling/collection. A new mechanical method of stripping piles and rolling the polythene on a spool was developed and contracts for fabrication of 20 units externally, was agreed. This will produce a more compact and cleaner method of removing and transporting the polythene to a storage area. Polythene baled and loose has sent for recycling to various contractors and records of these are kept on file at the associated works. (see 2.3 Waste Arising). In total, approximately 1500 tonnes have been baled & collected, 700-800 tonnes of this recycled into pellets.

3.2 Environmental Management Programme Proposal for 2004

Project	Environmental Management Programme for 2004
Project 1. Reduction of fugitive dust emissions.	Continue with the completion of the Cleaner Production Video for 2004. A two day internal audit will be conducted on site and will include an assessment of dust protection measures in place at Dust Sensitive Locations Project works for 2004 includes: Hydraulic Harrows Eight Hydraulic Harrows have been fabricated in 2004, specifically for Dust Sensitive Locations. These hydraulic harrows will allow the spoons to be lifted when not on the production fields. This will assist in reducing dust generation by the following: 1. Less harrowing of headlands and passways, will reduce the suspension of dust particles 2. The headland peat will not be broken down and dried as much from harrowing, which will reduce the volumes that may become suspended. 3. It will also leave it a better condition for subsequent collection by the proposed headland peat units. It is proposed to have these 8 new hydraulic harrows in operation by the 2004 production season. There is a 5 year policy in BNM to fabricate an additional 40 hydraulic harrows, which will include some for the 2005 production season. The total cost of this proposed work is circa €650,000 over the 5 years and will represent 15% of the total no. of harrows in operation. Headland Peat Collection Following the success of the headland collection trials in Boora in 2003, a machine design for mass manufacture was agreed and tendered outside BNM for manufacture. These units are planned for mid production season in Derrygreenagh, Mountdillon, Boora, Blackwater, Derryfadda & Littleton. In addition to these machines, 26 Tractor and Haku trailer units will be employed to transport the peat from the headland to the Haku piles, at an over all cost of €1.7 million. All of the above modifications/new methods of production will be assessed, throughout the production year, to measure their performance and identify any potential improvements. The EMP will be updated on a regular basis to reflect these assessments.

Project 2. Minimisation of Suspended Solids	Work on this project is also covered by the Cleaner Production Video. Once completed it will be presented as part of the 2004 training programme and will target all production staff in all of the IPC Licence areas. It will cover all areas of production and will identify cleaner production methods aimed at reducing the generation of waste peat. All of the projects for 2004, covered under Project 1, will also have a positive effect on the minimisation of suspended solids, as it will allow for the collection of more loose peat on the headlands that would previously have been unsuitable as fuel peat.
Project 3. Effective spill/leak management of mobile fuelling tanks	The continuing overhaul of all mobile fuelling units. The training of all relevant personnel in the safe handling of fuels in accordance with the adopted codes of practice and the training of all relevant personnel in the use of emergency spill kits.
Project 4. Re-use of silt pond waste	A silt pond has been constructed, on the headland at Giltown Bog in the Kilberry Group of Bogs, where trials will be carried out to examine the potential for re-using the silt waste from the silt pond as the main product, or as a by-product. This project was due to commence in 2002, but failed to do so, due to the weather conditions during the 2002 production season.
Project 5. Collection, storage and re-use of polythene.	Collection of polythene is on-going. This is mainly the back-log of polythene. There are currently 20 of the new polythene strippers being manufactured and are currently being delivered. All of the strippers will be delivered by the end of April, and will be assigned to the different locations within BNM. An additional 3 – 4 will also be fabricated by the late 04, early 05' this will bring to 25 the no in operation. There are currently three potential contractors that could take the waste polythene for recycling. All involve shredding, washing and either baling or pelletising the polythene and BNM are currently assessing each contractor to assess their suitability, environmental compliance etc. Once the back-log has been recycled, and BNM have all of the strippers in place, the day to day recycling of the polythene removed each year will be more efficient.

3.3 Environmental Expenditure

The table below lists the environmental costs incurred by the Allen Group between January-December 2003.

In calculating the environmental costs 70% of the total costs were attributed to Licence 503 and 30% to Licence 501.

Expenditure Related to the Operation of the Allen IPC Licence During the Period January – December 2003	
Description	Cost (€)
Machine hours @ €40/hour	421,760
Labour	143,575
Materials	65,921
Overheads (ESB, Phones, Consumables)	14,000
Laboratory Analysis	17,355
EPA Fees	8,469
Total €	671,080

4 Licence Specific Reports

4.1 Surface Water Discharge Monitoring Location Programme Review

The surface water discharge monitoring location programme remains the same as was submitted and accepted by the Agency in June 2000.

Pipes have been fitted at each location in order to accommodate flow metres and the provision of safe access is also ongoing.

Emission point signs have been designed and are in place.

Additional work has also being carried out at these locations as part of the ongoing silt pond upgrade programme.

Monitoring will be carried out at these same locations in the forthcoming year and reported on in next years AER.

4.2 Bunding Programme

The bunding programme for large scale oil storage facilities is complete and works certified.

4.3 Boiler Combustion Efficiency

Boiler efficiency tests were carried out during the year. The results of these tests are shown in the table below.

A full breakdown of these tests are retained on file at our Derrygreenagh office.

Boiler Location	Date Tested	% Efficiency
Ballydermot	27/07/03	86.1
Clonsast	09/12/03	86.7
Power Station	22/07/03	88.3

4.4 Resource consumption summary

There was a total of 1,032,294 tonnes of milled peat produced across the licence area in the production season 2003.

There was also a total of 964,985 tonnes of stock peat sold during the reporting period. Of this total, 831,618 tonnes were sold to Edenderry Power Limited, 12,639 tonnes to Blackwater Power Station, 77,847 tonnes to Derrinlough Briquette Factory and 42,881 tonnes to Kilberry Moss Factory.

4.5 De-Silting Report

Summary Data Table of Ponds De-Silted From Jan-December 2003

Bog	No Silt Ponds	Cleaned Once	Cleaned Twice	Cleaned Three Times	Notes
Derries	8	8			*
Rathdrum	4	4			*
Clonad	4	4			
Cloncreen	6		6		
Esker	7	7			
Cavemount	5	5			
Ballykeane	5		5	2	
Codd South	2	2			
Ballydermot N	1	1			
Ballydermot S	1	1			
Clonsast N	2	2			*
Ballycon	3	3			**
Garrymore	4	4			*
Trylea	2	2			
Glashabaun N	2		2		
Codd N	4		4		
Ticknevin	2		2		*
Glashabaun S	3	3			
D/brennan	5	5			
Killinagh	3		3		
Lodge	2		2		
Bulge	2	2			
Barnaran	2	2			
Blackriver	2	2			

*: No production. **: Bog cut out, no activity at this Bog.

4 Bog Development and Operational Programme

The majority of bog development is complete within the Allen Group. During the reporting period development was on going on Rathdrum bog. This development work comprised of ditching, screw leveling and piping.

There will be 3,836.2 nett hectares in production in the 2004 season, yeilding 786,371 tonnes @ 55% moisture content.

4.7 Bog Rehabilitation Report

There was no bog rehabilitation carried out within the Allen group during the reporting period.

Management guidelines for the planning and implementation of cutaway bog rehabilitation have been adopted and the document is currently available for inspection on file at the Derrygreenagh office.

4.8 Archaeological Report

The 2003 archaeological mitigation project was eleven weeks in duration and was overseen by Jane Whitaker, ADS Ltd. During this time two archaeological teams under the direction of Jane Whitaker and Eoin Corcoran, ADS Ltd. carried out the excavation of 36 archaeological sites in Cloncreen Bog, Co. Offaly as well as investigating the find spot of human remains in Ballivor Bog, Co. Westmeath (Licence 501).

The excavated sites ranged from localised scatters of wood to platforms, trackways and four enigmatic carved wooden totem-pole type artefacts. The sites were located in the northeastern corner of Cloncreen bog and the majority were already exposed on the field surface. Several of the sites incorporated hurdle panels. One of the trackway sites was 25m in length and was Late Neolithic / Early Bronze Age in date with part of its construction containing a large hurdle panel that was 3m in length and 1m in width. Underneath this hurdle panel was an earlier, larger, hurdle panel measuring 5m in length and 1.3m in width. Another isolated, hurdle panel was also excavated near this site, this time dated to the Middle Bronze Age. This hurdle may have been used as a small platform as it had no other apparent function. It was well made and had the remains of a withe (a piece of narrow twisted rod used as rope or string) securing the sails at one end. A Neolithic trackway located along the eastern extent of the bog running in a north/south direction was also constructed in hurdle-like fashion. There was a single site incorporating split planks and larger timbers excavated during the mitigation programme. This fact combined with the use of hurdle panels in several of the sites may suggest that the available woodland in the surrounding was made up of the smaller native species of trees. It is hoped that wood species identification and other environmental specialist work may help build up a fuller picture of the local environment of Cloncreen Bog during the late Neolithic and Early Bronze Age.

Four carved wooden artefacts or possible totem poles were also recovered during the excavations. Two of these were partially exposed on the field surface while the other two artefacts were uncovered during the course of the excavations. The artefacts were large pieces of alder averaging over 1m in length and 30cm in diameter. All were very similar having a defined 'head' shape with several notches carved along their bodies all of which tapered to a point at the base. Although all were found lying flat, it is thought that they may have originally been placed upright in the bog. While anthropomorphic artefacts have been recovered from bogs all around Europe there are no definite comparisons for these figures which makes them some of the most important finds of the excavations programme so far.

The find spot of the partial human remains found in Ballivor Bog in February 2003 was investigated in detail in August. The area was shovel scraped and trowelled but no further remains were uncovered during this work. This area is to be monitored if further production is carried out in close proximity to the find spot.

5 Summary

With regard to environmental compliance at the Allen Group of Bogs, there was one exceedence of the emission limit value in relation to suspended solids from grab sampling of the silt ponds in the Surface Water Discharge Monitoring Location Programme.

There was one non-compliance in relation to the Composite Sampler during the monitoring period January to December. Dust monitoring results showed two non-compliances at dust sensitive locations. There were three complaints of an environmental nature received during the reporting period.

The staff awareness through training and involvement in the operation of the licence has also improved immensely. A full programme of training and awareness has been conducted at the works and has targeted all personnel ie. Office, Workshop, Transport and Production.

Bord na Mona are project partners of the Southeastern River Basin District Management, as set up under the Water Framework Directive.

Bord na Mona are also involved in catchment management on the River Barrow.

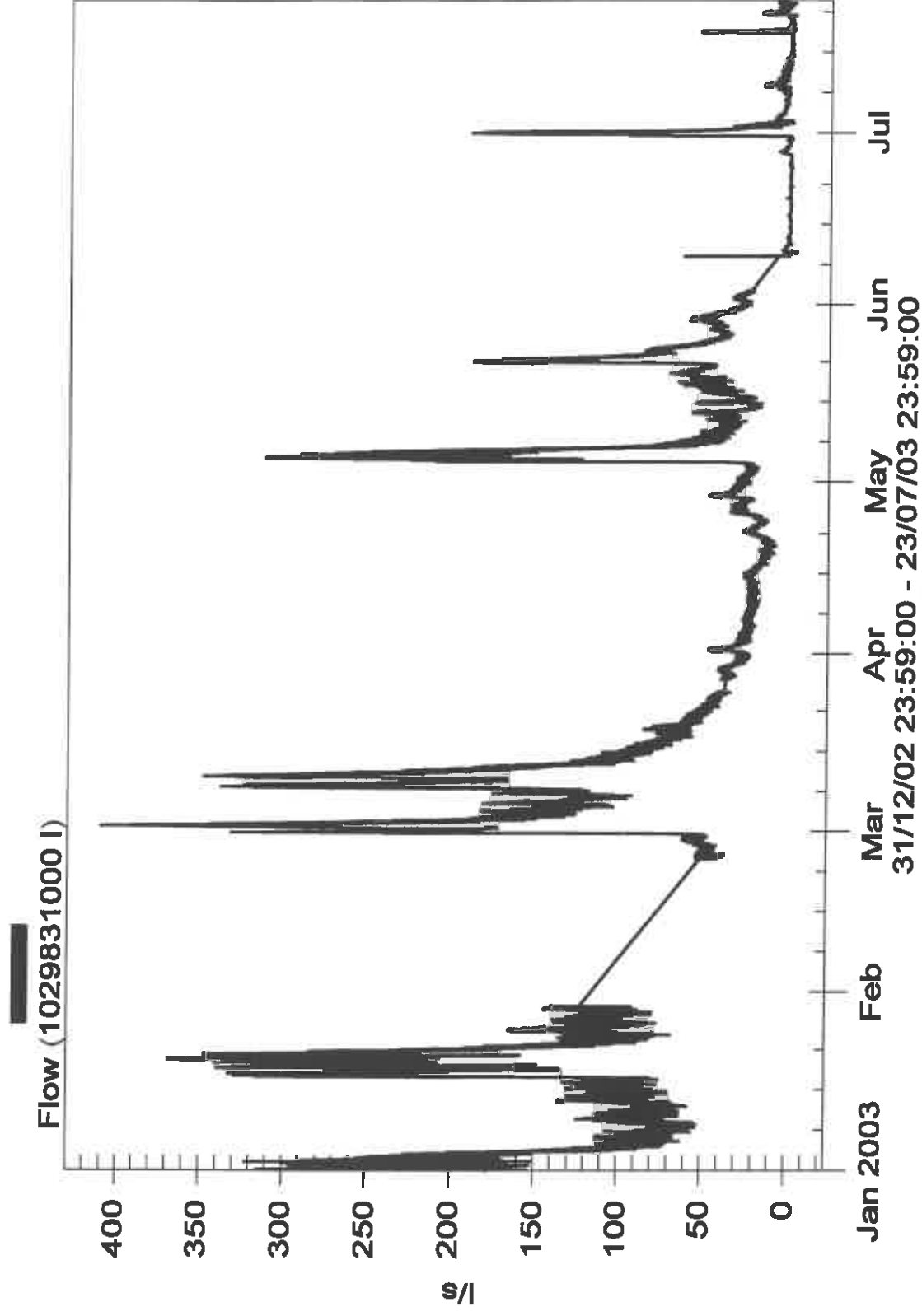
Bord na Mona Energy Ltd would like to take this opportunity to advise the Environmental Protection Agency of its continued commitment to improving its environmental performance by adopting cleaner production methods and improving its environmental protection measures.

APPENDIX 1

Composite Sampler Results

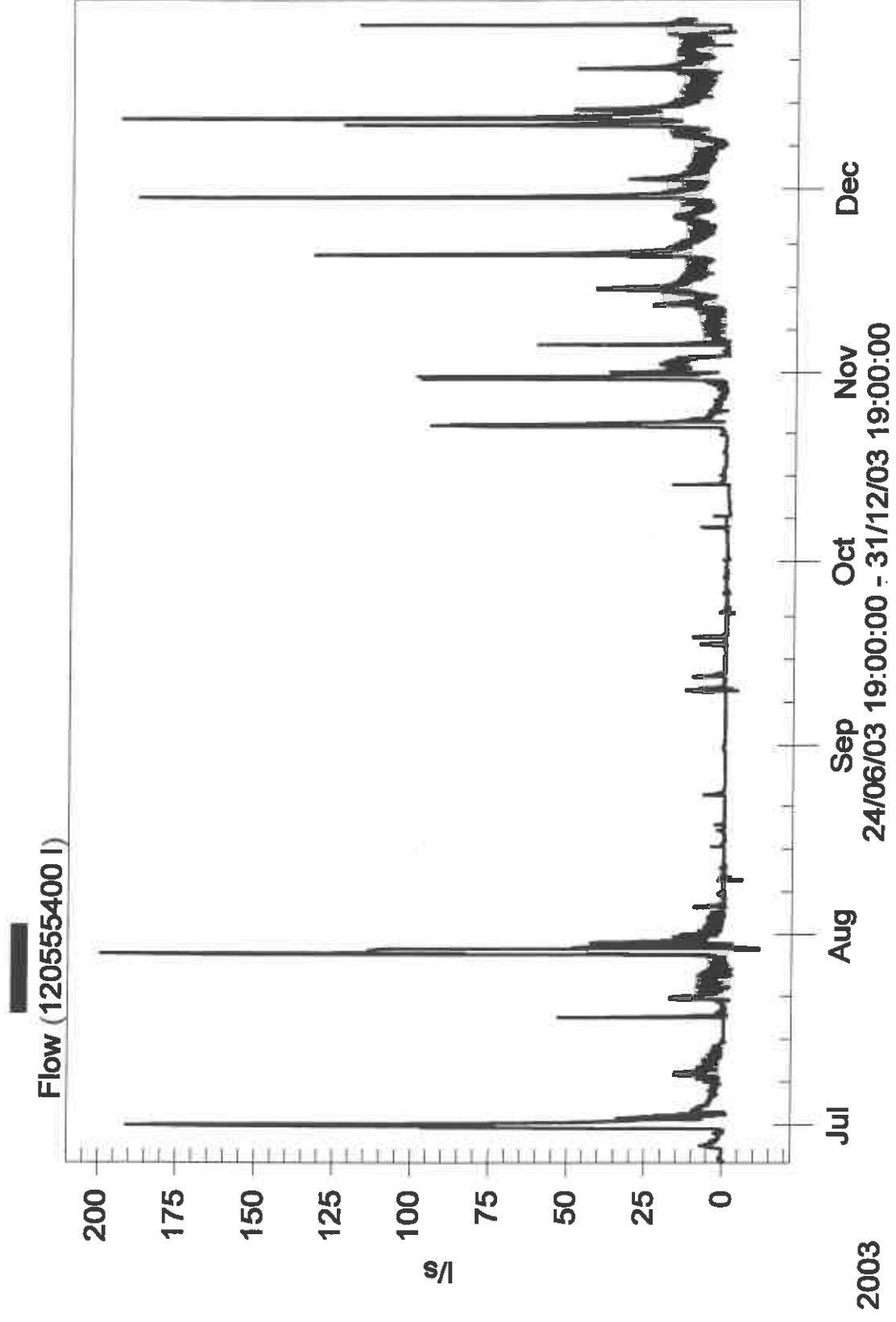
Barnaran Bog (BN91) Composite Sampler

01/01/03 to 23/07/03



Coda Bog (CDS71) Composite Sampler

24/06-03 to 31/12/03



Bord Na Mona Energy Ltd, Allen Group, Rochforbsbridge, Co Westmeath
Composite Sampler Results Licence 63

Month	pH	COD mg/l	Ammonia as N mg/l	Parameters		Total Solids mg/l	Colour Pt Co units	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals		Suspended Solids Kg/Day	Total Solids Kg/Day
				Phosphorus mg/l	Suspended Solids mg/l						Phosphorus Kg/Day	Total		
January 2003														
1					8	154		18967720	0.00	0.00	0.00	0.00	151.74	2921.03
2					5	210		21633120	0.00	0.00	0.00	0.00	108.17	4542.96
3					5	210		18133980	0.00	0.00	0.00	0.00	90.67	3808.14
4					6	224		11804240	0.00	0.00	0.00	0.00	70.83	2644.15
5	7.4	111	0.3	0.15	5	264	280	8037270	892.14	2.41	1.21	40.19	40.19	2121.84
6					5	260		7463632	0.00	0.00	0.00	0.00	37.32	1940.54
7					5	287		6939769	0.00	0.00	0.00	0.00	34.70	1991.71
8					5	234		5996087	0.00	0.00	0.00	0.00	29.98	1403.08
9					5	168		7326364	0.00	0.00	0.00	0.00	36.63	1230.83
10					5	270		7778356	0.00	0.00	0.00	0.00	38.89	2100.16
11					5	198		7244412	0.00	0.00	0.00	0.00	36.22	1434.39
12	7.5	74	1.8	0.05	5	114	213	6946196	514.02	12.50	0.35	34.73	45.87	2036.44
13					5	222		9173154	0.00	0.00	0.00	0.00	42.53	1531.12
14					5	180		8506214	0.00	0.00	0.00	0.00	45.00	1674.11
15					5	186		9000569	0.00	0.00	0.00	0.00	45.96	1507.36
16					5	164		9191222	0.00	0.00	0.00	0.00	212.93	2895.85
17					10	136		21293050	0.00	0.00	0.00	0.00	116.31	2481.30
18					6	128		19385170	0.00	0.00	0.00	0.00	293.59	#VALUE!
19	7.7	82	0.6	0.06	13	IS	303	22584000	1851.89	13.55	1.36	#VALUE!	#VALUE!	#VALUE!
20					IS	IS		23035500	0.00	0.00	0.00	#VALUE!	#VALUE!	#VALUE!
21					IS	IS		22099250	0.00	0.00	0.00	#VALUE!	#VALUE!	#VALUE!
22					IS	IS		13313540	0.00	0.00	0.00	#VALUE!	#VALUE!	#VALUE!
23					IS	IS		9508112	0.00	0.00	0.00	#VALUE!	#VALUE!	#VALUE!
24					IS	IS		9157276	0.00	0.00	0.00	#VALUE!	#VALUE!	#VALUE!
25					IS	IS		10937240	0.00	0.00	0.00	#VALUE!	#VALUE!	#VALUE!
26	7.5	74	1	0.06	5	176	281	9655516	714.51	9.66	0.58	48.28	1699.37	#VALUE!
27					IS	IS		10196600	0.00	0.00	0.00	#VALUE!	#VALUE!	#VALUE!
28					IS	IS		9604365	0.00	0.00	0.00	#VALUE!	#VALUE!	#VALUE!
29					5	260		6966701	0.00	0.00	0.00	0.00	34.83	1811.34
30					5	240		4426186	0.00	0.00	0.00	0.00	22.13	1062.28
31					6	326		4426186	0.00	0.00	0.00	0.00	26.56	1442.94

IS: Insufficient amount of sample due to low flow or sampler malfunction.

Composite Sampler Results Licence!

[illegible]

IS: Insufficient amount of sample due to low flow or sampler malfunction.

Licence

IS: Insufficient amount of sample due to low flow or sampler malfunction.

Bord Na Mona Energy Ltd, Allen Group, Rochforbsbridge, Co Westmeath
Composite Sampler Results Licence ~ 3

Month	pH	COD mg/l	Ammonia as N mg/l	Parameters		Total Solids mg/l	Colour Pt Co units	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals		Suspended Solids Kg/Day	Total Solids Kg/Day
April 2003				Total Phosphorus mg/l	Suspended Solids mg/l						Total Phosphorus Kg/Day			
1					5	274		2988605	0.00	0.00	0.00		14.94	818.88
2					5	286		2697043	0.00	0.00	0.00		13.49	771.35
3					5	182		2325191	0.00	0.00	0.00		11.63	423.18
4					5	358		2235549	0.00	0.00	0.00		11.18	800.33
5					5	336		2077570	0.00	0.00	0.00		10.39	698.06
6					9	342		2063013	0.00	0.00	0.00		18.57	705.55
7	8.4	83	0.2	0.09	6	360	136	2043576	169.62	0.41	0.18		12.26	735.69
8					5	270		1941632	0.00	0.00	0.00		9.71	524.24
9					5	378		1833662	0.00	0.00	0.00		9.17	693.12
10					5	433		1859858	0.00	0.00	0.00		9.30	805.32
11					5	330		1831517	0.00	0.00	0.00		9.16	604.40
12					5	368		1819664	0.00	0.00	0.00		9.10	669.64
13					5	316		1798662	0.00	0.00	0.00		8.99	568.38
14	8.4	74	0.2	0.06	6	330	103	2015714	149.16	0.40	0.12		12.09	665.19
15					5	244		1831185	0.00	0.00	0.00		9.16	446.81
16					5	250		1489013	0.00	0.00	0.00		7.45	372.25
17					5	268		1286446	0.00	0.00	0.00		6.43	344.77
18					6	258		1152812	0.00	0.00	0.00		6.92	297.43
19					7	388		1133906	0.00	0.00	0.00		7.94	439.96
20					16	382		1067521	0.00	0.00	0.00		17.08	407.79
21	8.5	79	0.2	0.08	11	362	114	1467146	115.90	0.29	0.12		16.14	531.11
22					5	274		1938123	0.00	0.00	0.00		9.69	531.05
23					6	354		1592843	0.00	0.00	0.00		9.56	563.87
24					5	360		1474781	0.00	0.00	0.00		7.37	530.92
25					6	366		2315263	0.00	0.00	0.00		13.89	847.39
26					5	366		2576592	0.00	0.00	0.00		12.88	943.03
27					8	330		2348498	0.00	0.00	0.00		18.79	775.00
28	8.5	68	0.2	0.06	5	332	102	2958796	201.20	0.59	0.18		14.79	982.32
29					5	250		2800230	0.00	0.00	0.00		14.00	700.06
30					5	160		2499948	0.00	0.00	0.00		12.50	399.99
31														

IS: Insufficient amount of sample due to low flow or sampler malfunction.

Bord Na Mona Energy Ltd, Allen Group, Rochforbsbridge, Co Westmeath
Composite Sampler Results Licens_003

Month	pH	COD mg/l	Ammonia as N/mg/l	Parameters Total Phosphorus mg/l	Suspended Solids mg/l	Total Solids mg/l	Colour Pt Co units	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals Total Phosphorus Kg/Day	Suspended Solids Kg/Day	Total Solids Kg/Day
May 2003													
1					5	272		2339943	0.00	0.00	0.00	11.70	636.46
2					5	86		2113709	0.00	0.00	0.00	10.57	181.78
3					6	146		1947509	0.00	0.00	0.00	11.69	284.34
4					7	180		9164540	0.00	0.00	0.00	64.15	1649.62
5	7.7	95	1.1	0.09	15	86	240	19757640	1876.98	21.73	1.78	296.36	1699.16
6					5	170		15336350	0.00	0.00	0.00	76.68	2607.18
7					5	214		6088237	0.00	0.00	0.00	30.44	1302.88
8					5	224		4405005	0.00	0.00	0.00	22.03	986.72
9					5	240		3971852	0.00	0.00	0.00	19.86	953.24
10					5	264		3305774	0.00	0.00	0.00	16.53	872.72
11					5	282		3150596	0.00	0.00	0.00	15.75	888.47
12	8	73	0.2	0.05	5	268	185	3394222	247.78	0.68	0.17	16.97	909.65
13					5	93		3175611	0.00	0.00	0.00	15.88	295.33
14					5	296		2311838	0.00	0.00	0.00	11.56	684.30
15					5	242		2496920	0.00	0.00	0.00	12.48	604.25
16					5	284		3378733	0.00	0.00	0.00	16.89	959.56
17					5	286		3950851	0.00	0.00	0.00	19.75	1129.94
18					5	274		4385531	0.00	0.00	0.00	21.93	1201.84
19	8.2	69	0.4	0.05	5	242	210	4722869	325.88	1.89	0.24	23.61	1142.93
20					5	256		4846264	0.00	0.00	0.00	24.23	1240.64
21					5	252		5624351	0.00	0.00	0.00	28.12	1417.34
22					5	206		11718170	0.00	0.00	0.00	58.59	2413.94
23					5	233		7090172	0.00	0.00	0.00	35.45	1652.01
24					5	258		6042369	0.00	0.00	0.00	30.21	1558.93
25					5	268		4202359	0.00	0.00	0.00	21.01	1126.23
26	8	88	0.04	0.05	5	257	257	3323696	292.49	0.13	0.17	16.62	854.19
27					5	242		3673904	0.00	0.00	0.00	18.37	889.08
28					5	278		3716568	0.00	0.00	0.00	18.58	1033.21
29					5	230		4385692	0.00	0.00	0.00	21.93	1008.71
30					5	232		3554409	0.00	0.00	0.00	17.77	824.62
31					5	272		2547785	0.00	0.00	0.00	12.74	693.00

IS: Insufficient amount of sample due to low flow or sampler malfunction.

Bord Na Mona Energy Ltd, Allen Group, Rochforbsbridge, Co Westmeath
Composite Sampler Results Licence 3

Month	pH	COD mg/l	Ammonia as N mg/l	Parameters		Colour Pt Co units	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals		Suspended Solids Kg/Day	Total Solids Kg/Day
June 2003				Total Phosphorus mg/l	Suspended Solids mg/l	Total Solids mg/l				Phosphorus Kg/Day			
1					5	244	2374098	0.00	0.00	0.00		11.87	579.28
2	8.1	77	0.2	0.05	5	292	2543240	195.83	0.51	0.13		12.72	742.63
3					IS	IS	1358541	0.00	0.00	0.00		#VALUE!	#VALUE!
4					IS	IS	642263	0.00	0.00	0.00		#VALUE!	#VALUE!
5					IS	IS	642263	0.00	0.00	0.00		#VALUE!	#VALUE!
6					IS	IS	642263	0.00	0.00	0.00		#VALUE!	#VALUE!
7					IS	IS	642263	0.00	0.00	0.00		#VALUE!	#VALUE!
8					IS	IS	642263	0.00	0.00	0.00		#VALUE!	#VALUE!
9					IS	IS	506881	0.00	0.00	0.00		#VALUE!	#VALUE!
10					IS	IS	268863	0.00	0.00	0.00		#VALUE!	#VALUE!
11					IS	IS	144664	0.00	0.00	0.00		#VALUE!	#VALUE!
12					IS	IS	113266	0.00	0.00	0.00		#VALUE!	#VALUE!
13					IS	IS	50550	0.00	0.00	0.00		#VALUE!	#VALUE!
14					IS	IS	41116	0.00	0.00	0.00		#VALUE!	#VALUE!
15	8.2	100	0.2	0.06	10	262	31324	3.13	0.01	0.00		0.31	8.21
16					IS	IS	68119	0.00	0.00	0.00		#VALUE!	#VALUE!
17					IS	IS	23005	0.00	0.00	0.00		#VALUE!	#VALUE!
18					IS	IS	14756	0.00	0.00	0.00		#VALUE!	#VALUE!
19					IS	IS	45148	0.00	0.00	0.00		#VALUE!	#VALUE!
20					IS	IS	41633	0.00	0.00	0.00		#VALUE!	#VALUE!
21					IS	IS	47955	0.00	0.00	0.00		#VALUE!	#VALUE!
22	8	101	0.2	0.1	6	224	29907	3.02	0.01	0.00		0.18	6.70
23					IS	IS	30212	0.00	0.00	0.00		#VALUE!	#VALUE!
24					IS	IS	11441	0.00	0.00	0.00		#VALUE!	#VALUE!
25					IS	IS	32650	0.00	0.00	0.00		#VALUE!	#VALUE!
26					IS	IS	16333	0.00	0.00	0.00		#VALUE!	#VALUE!
27					IS	IS	297075	0.00	0.00	0.00		#VALUE!	#VALUE!
28					IS	IS	174233	0.00	0.00	0.00		#VALUE!	#VALUE!
29	8	95	0.3	0.1	14	253	84650	8.04	0.03	0.01		1.19	21.42
30					5	190	5865242	0.00	0.00	0.00		28.33	1076.40
31													

IS: Insufficient amount of sample due to low flow or sampler malfunction.

Bord Na Mona Energy Ltd, Allen Group. Rochforbsbridge, Co Westmeath
Composite Sampler Results Licence 33

Month	pH	COD mg/l	Ammonia as N mg/l	Parameters Total Phosphorus mg/l	Suspended Solids mg/l	Total Solids mg/l	Colour Pt Co units	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals Total Phosphorus Kg/Day	Suspended Solids Kg/Day	Total Solids Kg/Day
July 2003													
1					6	194		5554988	0.00	0.00	0.00	33.33	1077.67
2					IS	IS		1122585	0.00	0.00	0.00	#VALUE!	#VALUE!
3					IS	IS		637925	0.00	0.00	0.00	#VALUE!	#VALUE!
4					IS	IS		416721	0.00	0.00	0.00	#VALUE!	#VALUE!
5					IS	IS		282421	0.00	0.00	0.00	#VALUE!	#VALUE!
6	7.6	156	0.8	0.08	5	197	426	232687	36.30	0.19	0.02	1.16	45.84
7					15	242		200738	0.00	0.00	0.00	3.01	48.58
8					5	220		271755	0.00	0.00	0.00	1.36	59.79
9					5	166		737998	0.00	0.00	0.00	3.69	122.51
10					5	216		384052	0.00	0.00	0.00	1.92	82.96
11					5	202		300035	0.00	0.00	0.00	1.50	60.61
12					5	226		150868	0.00	0.00	0.00	0.75	34.10
13	7.7	110	0.15	0.09	5	174	396	156750	17.24	0.02	0.01	0.78	27.27
14					IS	IS		35708	0.00	0.00	0.00	#VALUE!	#VALUE!
15					IS	IS		-17777	0.00	0.00	0.00	#VALUE!	#VALUE!
16					IS	IS		-15555	0.00	0.00	0.00	#VALUE!	#VALUE!
17					IS	IS		-14587	0.00	0.00	0.00	#VALUE!	#VALUE!
18					IS	IS		571522	0.00	0.00	0.00	#VALUE!	#VALUE!
19					IS	IS		39732	0.00	0.00	0.00	#VALUE!	#VALUE!
20	7.8	105	0.13	0.07	6	218	360	14781	1.55	0.00	0.00	0.09	3.22
21					5	202		591716	0.00	0.00	0.00	2.96	119.53
22					9	202		360900	0.00	0.00	0.00	3.25	72.90
23					8	194		409280	0.00	0.00	0.00	3.27	79.40
24					10	222		308638	0.00	0.00	0.00	3.09	68.52
25					10	202		274376	0.00	0.00	0.00	2.74	55.42
26					5	200		131709	0.00	0.00	0.00	0.66	26.34
27	7.7	92	0.06	0.07	5	336	362	48046	4.42	0.00	0.00	0.24	16.14
28					IS	IS		3874452	0.00	0.00	0.00	#VALUE!	#VALUE!
29					IS	IS		7304946	0.00	0.00	0.00	#VALUE!	#VALUE!
30					IS	IS		2390397	0.00	0.00	0.00	#VALUE!	#VALUE!
31					IS	IS		790187	0.00	0.00	0.00	#VALUE!	#VALUE!

IS: Insufficient amount of sample due to low flow or sampler malfunction.

Bord Na Mona Energy Ltd, Allen Group. Rochforbsbridge, Co Westmeath

Composite Sampler Results Licens 3

Month	pH	COD mg/l	Ammonia as N mg/l	Parameters		Total Solids mg/l	Colour Pt Co units	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals		Suspended Solids Kg/Day	Total Solids Kg/Day
				Total Phosphorus mg/l	Suspended Solids mg/l						Total Phosphorus Kg/Day	Total Solids Kg/Day		
August 2003														
1					IS	IS		335060	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
2					IS	IS		207473	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
3					IS	IS		135425	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
4	7.3	194	0.02	0.39	34	182	434	108233	21.00	0.00	0.04	3.68	3.68	19.70
5					IS	IS		108350	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
6					IS	IS		11468	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
7					IS	IS		39219	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
8					IS	IS		14293	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
9					IS	IS		2881	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
10					IS	IS		9852	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
11	7.6	136	0.63	0.18	12	249	500	30057	4.09	0.02	0.01	0.36	0.36	7.48
12					IS	IS		6628	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
13					IS	IS		14647	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
14					IS	IS		13257	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
15					IS	IS		40004	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
16					IS	IS		13712	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
17					IS	IS		23088	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
18					IS	IS		39979	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
19	7.5	128	0.02	0.08	5	250	449	23702	3.03	0.00	0.00	0.12	0.12	5.93
20					IS	IS		10657	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
21					IS	IS		10101	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
22					IS	IS		8160	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
23					IS	IS		110233	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
24					IS	IS		63305	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
25					IS	IS		8002	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
26					IS	IS		6175	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
27	7.8	110	0.06	0.06	5	282	420	5799	0.64	0.00	0.00	0.03	0.03	1.64
28					IS	IS		6285	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
29					IS	IS		7445	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
30					IS	IS		7753	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
31					IS	IS		32623	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!

IS: Insufficient amount of sample due to low flow or sampler malfunction.

Bord Na Mona Energy Ltd, Allen Group, Rochforbsbridge, Co Westmeath
Composite Sampler Results Licence 23

Month	pH	COD mg/l	Ammonia as N mg/l	Parameters		Total Solids mg/l	Colour Pt Co units	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals		Suspended Solids Kg/Day	Total Solids Kg/Day
				Total Phosphorus mg/l	Suspended Solids mg/l						Phosphorus Kg/Day	Phosphorus Kg/Day		
1					IS	IS		17274	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
2	7.9	133	0.28	0.08	5	282	396	10952	1.46	0.00	0.00	0.00	0.05	3.09
3					IS	IS		10254	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
4					IS	IS		9816	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
5					IS	IS		10381	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
6					IS	IS		10568	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
7					IS	IS		7771	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
8					IS	IS		14038	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
9	7.7	111	0.02	0.06	6	280	355	95690	10.62	0.00	0.01	0.01	0.57	26.79
10					IS	IS		226657	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
11					IS	IS		28940	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
12					IS	IS		180399	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
13					IS	IS		14424	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
14					IS	IS		13944	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
15					IS	IS		9172	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
16	7.8	108	0.1	0.08	8	206	330	4444	0.48	0.00	0.00	0.00	0.04	0.92
17					IS	IS		76674	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
18					IS	IS		79606	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
19					IS	IS		-9598	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
20					IS	IS		-11200	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
21	7.7	119	0.12	0.08	11	288	302	-11565	-1.38	0.00	0.00	0.00	-0.13	-3.33
22					IS	IS		-6230	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
23					IS	IS		-6318	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
24					IS	IS		-12363	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
25					IS	IS		-12412	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
26					IS	IS		500	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
27					IS	IS		12908	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
28	7.9	56	0.08	0.05	5	238	245	22747	1.27	0.00	0.00	0.00	0.11	5.41
29					IS	IS		-1249	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
30					IS	IS		9227	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!
31														

IS: Insufficient amount of sample due to low flow or sampler malfunction.

Bord Na Mona Energy Ltd, Allen Group, Rochforbsbridge, Co Westmeath
Composite Sampler Results Licence 53

Month	pH	COD mg/l	Ammonia as N mg/l	Parameters Total Phosphorus mg/l	Suspended Solids mg/l	Total Solids mg/l	Colour Pt Co units	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals Total Phosphorus Kg/Day	Suspended Solids Kg/Day	Total Solids Kg/Day
October 2003													
1					IS	IS		-13211	0.00	0.00	0.00	#VALUE!	#VALUE!
2					IS	IS		-11835	0.00	0.00	0.00	#VALUE!	#VALUE!
3					IS	IS		-6982	0.00	0.00	0.00	#VALUE!	#VALUE!
4					IS	IS		5891	0.00	0.00	0.00	#VALUE!	#VALUE!
5	7.9	129	0.05	0.12	IS	290	221	5411	0.70	0.00	0.00	0.36	1.57
6					IS	IS		85506	0.00	0.00	0.00	#VALUE!	#VALUE!
7					IS	IS		31242	0.00	0.00	0.00	#VALUE!	#VALUE!
8					IS	IS		-15623	0.00	0.00	0.00	#VALUE!	#VALUE!
9					IS	IS		-57185	0.00	0.00	0.00	#VALUE!	#VALUE!
10					IS	IS		-50911	0.00	0.00	0.00	#VALUE!	#VALUE!
11					IS	IS		-31823	0.00	0.00	0.00	#VALUE!	#VALUE!
12	8.2	120	0.05	0.05	IS	133	226	-21584	-2.59	0.00	0.00	-0.97	-2.87
13					IS	IS		88084	0.00	0.00	0.00	#VALUE!	#VALUE!
14					IS	IS		107211	0.00	0.00	0.00	#VALUE!	#VALUE!
15					IS	IS		115798	0.00	0.00	0.00	#VALUE!	#VALUE!
16					IS	IS		69418	0.00	0.00	0.00	#VALUE!	#VALUE!
17					IS	IS		45947	0.00	0.00	0.00	#VALUE!	#VALUE!
18					IS	IS		59543	0.00	0.00	0.00	#VALUE!	#VALUE!
19	7.9	119	0.04	0.06	9	172	214	60799	7.24	0.00	0.00	0.55	10.46
20					21	199		41590	0.00	0.00	0.00	0.87	8.28
21					8	210		82253	0.00	0.00	0.00	0.66	17.27
22					5	136		167480	0.00	0.00	0.00	0.84	22.78
23					5	154		4202448	0.00	0.00	0.00	21.01	647.18
24					5	154		751374	0.00	0.00	0.00	3.76	115.71
25					5	162		391556	0.00	0.00	0.00	1.96	63.43
26					5	156		294353	0.00	0.00	0.00	1.47	45.92
27	7.3	107	1.15	0.05	5	165	242	210272	22.50	0.24	0.01	1.05	34.69
28					26	195		113591	0.00	0.00	0.00	2.95	22.15
29					19	156		123050	0.00	0.00	0.00	2.34	19.20
30					8	176		1041117	0.00	0.00	0.00	8.33	183.24
31					6	134		3366044	0.00	0.00	0.00	20.20	451.05

IS: Insufficient amount of sample due to low flow or sampler malfunction.

Bord Na Mona Energy Ltd, Allen Group, Rochforbsbridge, Co Westmeath
Composite Sampler Results Licence 3

Month	pH	COD mg/l	Ammonia as N mg/l	Parameters		Colour Pt Co units	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals	
				Total Phosphorus mg/l	Suspended Solids mg/l					Total Phosphorus Kg/Day	Suspended Solids Kg/Day
November 2003											
1					5		1531709	0.00	0.00	0.00	7.66
2					5		1482884	0.00	0.00	0.00	7.41
3	7.9	81	1.08	0.11	7	257	742986	60.18	0.80	0.08	5.20
4					5		57674	0.00	0.00	0.00	0.29
5					5		844187	0.00	0.00	0.00	4.22
6					5		327379	0.00	0.00	0.00	1.64
7					5		402423	0.00	0.00	0.00	2.01
8					8		408475	0.00	0.00	0.00	3.27
9					5		400738	0.00	0.00	0.00	2.00
10					8		305993	0.00	0.00	0.00	2.45
11	8	121	1.13	0.05	5	243	409506	49.55	0.46	0.02	2.05
12					5		1247751	0.00	0.00	0.00	6.24
13					5		724963	0.00	0.00	0.00	3.62
14					7		1926137	0.00	0.00	0.00	13.48
15					10		1478423	0.00	0.00	0.00	14.76
16					5		1068083	0.00	0.00	0.00	5.34
17					5		946535	0.00	0.00	0.00	4.73
18	7.8	117	1.12	0.05	5	265	936140	109.53	1.05	0.05	4.68
19					5		835539	0.00	0.00	0.00	4.18
20					14		4858181	0.00	0.00	0.00	68.01
21					5		1401993	0.00	0.00	0.00	7.01
22					5		1115259	0.00	0.00	0.00	5.58
23					5		785726	0.00	0.00	0.00	3.93
24					5		719135	0.00	0.00	0.00	3.60
25					6		947074	0.00	0.00	0.00	5.68
26	7.8	57	1.51	0.05	5	238	1243991	70.91	1.88	0.06	6.22
27					9		803032	0.00	0.00	0.00	7.23
28					6		771231	0.00	0.00	0.00	4.63
29					10		4955093	0.00	0.00	0.00	49.55
30					8		1728494	0.00	0.00	0.00	13.83
31											

IS: Insufficient amount of sample due to low flow or sampler malfunction.

Bord Na Mona Energy Ltd, Allen Group, Rochforbsbridge, Co Westmeath
Composite Sampler Results Licence 563

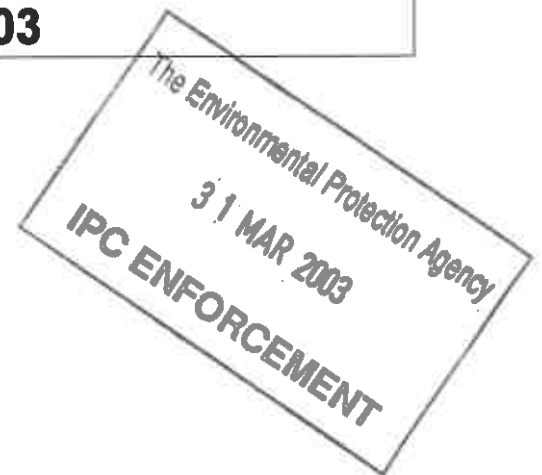
Month	pH	COD mg/l	Ammonia as N mg/l	Parameters Total Phosphorus mg/l	Suspended Solids mg/l	Total Solids mg/l	Colour Pt Co units	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals Total Phosphorus Kg/Day	Suspended Solids Kg/Day	Total Solids Kg/Day
December 2003													
1					5	164		973955	0.00	0.00	0.00	4.87	159.73
2	7.3	93	1.43	0.05	29	176	157	1604453	149.21	2.29	0.08	46.53	282.38
3					5	178		1084704	0.00	0.00	0.00	5.42	193.08
4					5	92		881342	0.00	0.00	0.00	4.41	81.08
5					5	198		703359	0.00	0.00	0.00	3.52	139.27
6					5	138		649387	0.00	0.00	0.00	3.25	89.62
7					5	188		517634	0.00	0.00	0.00	2.59	97.32
8	7.4	88	1.49	0.05	5	188	238	280404	24.68	0.42	0.01	1.40	52.72
9					5	238		971677	0.00	0.00	0.00	4.86	231.26
10					5	210		1187011	0.00	0.00	0.00	5.94	249.27
11					7	173		3596777	0.00	0.00	0.00	25.18	622.24
12					5	148		6179288	0.00	0.00	0.00	30.90	914.53
13					5	168		2897926	0.00	0.00	0.00	14.49	486.85
14					5	168		1908468	0.00	0.00	0.00	9.54	320.62
15	7.6	126	1.09	0.09	28	188	268	1154191	145.43	1.26	0.10	32.32	216.99
16					5	124		991832	0.00	0.00	0.00	4.96	122.99
17					5	174		883461	0.00	0.00	0.00	4.42	153.72
18					5	186		713555	0.00	0.00	0.00	3.57	132.72
19					5	178		779720	0.00	0.00	0.00	3.90	138.79
20					5	136		1941271	0.00	0.00	0.00	9.71	264.01
21					5	170		1202337	0.00	0.00	0.00	6.01	204.40
22	7.5	39	1.14	0.09	20	216	241	884298	34.49	1.01	0.08	17.69	191.01
23					6	152		1201522	0.00	0.00	0.00	7.21	182.63
24					5	202		1015905	0.00	0.00	0.00	5.08	205.21
25					5	118		962710	0.00	0.00	0.00	4.81	113.60
26					IS	IS		447585	0.00	0.00	0.00	#VALUE!	#VALUE!
27					6	256		1339623	0.00	0.00	0.00	8.04	342.94
28					14	120		1307364	0.00	0.00	0.00	18.30	156.88
29	6.5	47	1.48	0.05	6	114	267	1062451	49.94	1.57	0.05	6.37	121.12
30					5	190		1320078	0.00	0.00	0.00	6.60	250.81
31					5	184		5318823	0.00	0.00	0.00	26.59	978.66

IS: Insufficient amount of sample due to low flow or sampler malfunction.



**Annual Environmental Report
IPC LICENCE 503**

March 2003



Contents

1 Introduction

- 1.1 Company Details
- 1.2 Activities
- 1.3 Environmental Policy
- 1.4 Environmental Management of the Company

2 Summary Information

- 2.1 Emissions to Water Summary
 - 2.1.1 Silt Pond Emissions
 - 2.1.2 Yard Run-off
 - 2.1.3 Composite Sampler Report
 - 2.1.4 Non-compliance's
- 2.2 Emissions to Air
 - 2.2.1 Dust Monitoring
 - 2.2.2 Non-compliance's
- 2.3 Waste Arisings
 - 2.3.1 Hazardous Waste
 - 2.3.2 Non-Hazardous Waste
- 2.4 Energy Consumption
- 2.5 Environmental Incidents and Complaints

3 Management of the Activity

- 3.1 Environmental Management Programme Report
- 3.2 Environmental Expenditure

4 Licence Specific Reports

4.1 Surface Water Discharge Monitoring Location Programme Review

4.2 Bunding Programme

4.3 Boiler Combustion Efficiency

4.4 Resource Consumption Summary

4.5 De-silting Report

4.6 Bog Development and Operational Programme

4.7 Bog Rehabilitation Report

5 Summary

Appendix 1: Composite Sampler Results

1 Introduction

1.1 Company Details

Name: Bord na Mona Energy Limited.

Address: Allen Group
Derrygreenagh Works
Rochfortbridge
Mullingar
Co Westmeath.

Telephone No: 044 / 22181 **Fax No:** 044 / 22344

Contact Name: Paul Riordan

Position: Regional Manager.

National Grid Reference: E249450 N238140

1.2 Activities

The Allen Group of bogs are situated in counties Kildare and Offaly and are generally bounded by the Grand Canal to the North, the Barrow River and tributaries to the South, Nass to the East and Tullamore to the West.

These bogs comprise most of the bogland area that was formerly referred to as the Bog of Allen.

The Allen Group has a total acquired area of 21,150 hectares of which 2826 nett hectares were in production in 2002.

The Allen Group currently employs 151 permanent workers and used 35 seasonal workers in the 2002 production season

Transport operations are carried out on a seven day cycle throughout the year.

Production operations are typically carried out over a seven day week (weather permitting) for 12 to 15 hours per day.

Peat Milling Operations.

For milled peat production the bog is laid out in a series of rectangular fields of varying length and 15m wide with drains located between. There are essentially four operations involved in milled peat production:

- Milling.
- Harrowing.
- Ridging.
- Harvesting.

Milling.

Special milling machines work there way along the fields, milling approximately 15mm of peat of the top of the bog in a pass.

Harrowing

In the course of drying, the milled peat is turned a number of times to avail of the drying conditions. This is achieved with a machine called a harrow. The milled peat is harrowed until its moisture content is down to approximately 40-50%, which can take up to two to three days, weather depending.

Ridging

The dry peat is then scraped into long ridges running down the centre of each field. This is done with a ridger, a machine consisting of a series of blades in the shape of a v that opens the full width of the field.

Harvesting

During harvesting every eleventh field is used to stockpile the peat, with this field receiving the milled peat from the five fields either side.

The milled peat is then transported via the existing network of peatland railways to one of the following locations.

- Power station (EPL)
- Horticultural Factory.

1.3 Environmental Policy



Bord na Mona Energy Limited is a commercial semi-state body with responsibility to develop Ireland's peat resources in the national interest.

Bord na Mona Energy Limited is committed to gather and make available information on all aspects of its environmental impact and to help improve understanding among the public generally of its role and the importance of Irish peatlands.

Bord na Mona Energy Limited recognises the importance of peatland conservation.

Bord na Mona Energy Limited will leave behind all areas it owns as either an economically or socially integrated resource of a high environmental value.

Bord na Mona Energy Limited seeks to conduct all aspects of its business in an environmentally sensitive value.

Bord na Mona Energy Limited will establish an environmental management system specifically addressing the following impacts.

- Discharges to water.
- Emissions to atmosphere.
- Waste disposal.
- Use of natural resources.
- Noise, vibration, odour, dust and visual effects.
- Natural environment and eco-system.

The environmental management system will be monitored, maintained and continually improved.

A system of regular environmental audits will be put in place.

Bord na Mona Energy Limited will continue research and development into all aspects of its environmental impact.

This statement is published and is available at all locations within the division and its contents are brought to the attention of all employees.

1.4 Environmental Management of the Company

The organisational structure within the Allen Group is presented in the flow chart below.



- (1) Overall environmental responsibilities
- (2) Records of complaints and registers
- (3) All production related issues
- (4) Machine maintenance
- (5) Co-ordinating environmental affairs
- (6) All peat transportation matters
- (7) Silt pond maintenance, tea centres, codes of practice
- (8) Fuel loading, oil traps, weekly workshop inspections.

2.1 Emissions to Water Summary

The following tables contain a summary of the emissions to surface waters from within the Allen Group.

The following tables contain a summary of the emissions to surface waters from within the Allen Group.

Allen Group Annual Environmental Report 2002

Silt Pond No: RD 17
Reporting Period
(Jan-Dec 2002)

SW No. 10

Parameter	Jan/Feb/Mar Emission (mg/l)	April/May/June Emission (mg/l)	July/Aug/Sept Emission (mg/l)	Oct/Nov/Dec Emission (mg/l)	E L V	Compliant
pH units	8.1	8.2	7.9	7.5	~	
Flow (L/sec)	74.9	131	22.5	97.8	~	
Suspended Solids (mg/l)	19	21	5	7	35mg/l	YES
Total Solids (mg/l)	472	530	440	350	~	
Total Phosphorus (mg/l)	0.08	0.08	0.09	0.09	~	
Ammonia (mg/l)	0.8	<0.2	0.7	0.4	~	
Colour (Pt Co units)	102	76	85	164	~	
COD (mg/l)	56	18	26	60	~	

Silt Pond No: BK 23
Reporting Period
(Jan-Dec 2002)

SW No. 14

Parameter	Jan/Feb/Mar Emission (mg/l)	April/May/June Emission (mg/l)	July/Aug/Sept Emission (mg/l)	Oct/Nov/Dec Emission (mg/l)	E L V	Compliant
pH units	8.1	8.1	8.0	7.5	~	
Flow (L/sec)	57.9	25	25	59.4	~	
Suspended Solids (mg/l)	<5	<5	<5	33	35mg/l	YES
Total Solids (mg/l)	412	356	442	306	~	
Total Phosphorus (mg/l)	<0.05	<0.05	0.14	0.10	~	
Ammonia (mg/l)	0.6	0.5	1.2	0.5	~	
Colour (Pt Co units)	134	138	69	164	~	
COD (mg/l)	55	59	38	95	~	

Silt Pond No: CC 51
Reporting Period
(Jan-Dec 2002)
SW No. 33

Parameter	Jan/Feb/Mar Emission (mg/l)	April/May/June Emission (mg/l)	July/Aug/Sept Emission (mg/l)	Oct/Nov/Dec Emission (mg/l)	E L V (mg/l)	Compliant
pH units	8.4	8.3	8.3	7.6	~	
Flow (L/sec)	34.1	32	12.8	220.4	~	
Suspended Solids (mg/l)	10	<5	<5	22	35mg/l	YES
Total Solids (mg/l)	248	280	284	148	~	
Total Phosphorus (mg/l)	<0.05	<0.05	<0.05	<0.05	~	
Ammonia (mg/l)	0.4	2.5	0.7	1.1	~	
Colour (Pt Co units)	111	126	64	180	~	
COD (mg/l)	42	54	20	67	~	

Silt Pond No: DL 67
Reporting Period
(Jan-Dec 2002)
SW No. 43

Parameter	Jan/Feb/Mar Emission (mg/l)	April/May/June Emission (mg/l)	July/Aug/Sept Emission (mg/l)	Oct/Nov/Dec Emission (mg/l)	E L V (mg/l)	Compliant
pH units	8.0	7.9	8.0	7.1	~	
Flow (L/sec)	27.8	55	6.61	154	~	
Suspended Solids (mg/l)	8	5	<5	12	35mg/l	YES
Total Solids (mg/l)	228	226	324	124	~	
Total Phosphorus (mg/l)	<0.05	<0.05	<0.05	<0.05	~	
Ammonia (mg/l)	1.6	1.0	2.9	0.4	~	
Colour (Pt Co units)	362	415	106	438	~	
COD (mg/l)	79	84	39	94	~	

Silt Pond No: BR 94
Reporting Period
(Jan-Dec 2002)
SW No. 65

Parameter	Jan/Feb/Mar Emission (mg/l)	April/May/June Emission (mg/l)	July/Aug/Sept Emission (mg/l)	Oct/Nov/Dec Emission (mg/l)	EL V (mg/l)	Compliant
pH units	7.9	8.0	8.2	7.2	~	
Flow (L/sec)	21.5	70	12.3	210.6	~	
Suspended Solids (mg/l)	<5	<5	<5	31	35mg/l	YES
Total Solids (mg/l)	256	240	369	162	~	
Total Phosphorus (mg/l)	0.08	<0.05	<0.05	0.11	~	
Ammonia (mg/l)	1.2	0.7	<2	0.5	~	
Colour (Pt Co units)	214	245	95	284	~	
COD (mg/l)	70	83	42	94	~	

Silt Pond No:BN 98
Reporting Period
(Jan-Dec 2002)
SW No. 66

Parameter	Jan/Feb/Mar Emission (mg/l)	April/May/June Emission (mg/l)	July/Aug/Sept Emission (mg/l)	Oct/Nov/Dec Emission (mg/l)	EL V (mg/l)	Compliant
pH units	8.3	8.1	7.8	7.2	~	
Flow (L/sec)	50	65	21.2	701	~	
Suspended Solids (mg/l)	6	<5	8	26	35mg/l	YES
Total Solids (mg/l)	298	244	352	170	~	
Total Phosphorus (mg/l)	0.06	<0.05	<0.05	0.10	~	
Ammonia (mg/l)	1.0	0.4	<0.2	0.5	~	
Colour (Pt Co units)	200	242	71	274	~	
COD (mg/l)	64	76	37	90	~	

2.1.2 Yard Run-off

- The tables below are a summary of the COD emissions to surface waters from yards and workshops within the Allen Group.

Ballycon SWE-1

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
COD mg/l	44	44	17	15	25	-	-	-	-	61	26	47

Clonsast SWE-1

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
COD mg/l	14	31	34	26	11	-	-	-	-	11	10	74

Ballydermot SWE-1

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
COD mg/l	65	76	70	48	55	-	-	-	-	29	80	79

Ballydermot SWE-2

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
COD mg/l	62	63	54	42	62	-	-	-	-	113	76	48

Timahoe SWE-1

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
COD mg/l	28	38	104	40	47	-	-	-	-	10	80	65

Note: There was no sample available on the day of sampling in the months June, July, August & September.

2.1.3 Composite Sampler Programme

A proposal will be submitted to the Agency, to relocate the composite sampler in June 2003. At that time it will have been in operation for two years at its present location. Attached in Appendix 1 are the results of the monitoring carried out using the composite sampler in 2002. There was one non-compliance in relation to composite sampling during the reporting period.

2.1.4 Non-compliance's

There was one non-compliance, in relation to silt pond sampling during the reporting period, the details are included in the table below.

Date	Non-compliance	Cause	Corrective Action
28/11/02	SS from SW02. Emission Limit Value was exceeded ie. (108mg/l Vs 35mg/l)	Sample pot was contaminated while taking sample	Greater precaution taken while taking samples, particularly when sampling SW's, of very low flow.

2.2 Emissions to Air

2.2.1 Dust Monitoring

The table below contains the dust emissions for each dust monitoring location within the Allen Group. Monitoring took place on three separate occasions during the periods, June – July, July – August, August – September 2002.

June - Jul

Emission Point	Parameter	Emission (mg/m ² /day)	Emission Limit Value	Compliant
DM 01	Dust	68	(350mg/m ² /Day)	YES
DM 02	Dust	31	(350mg/m ² /Day)	YES
DM 03	Dust	43	(350mg/m ² /Day)	YES

Jul - Aug

Emission Point	Parameter	Emission (mg/m ² /day)	Emission Limit Value	Compliant
DM 01	Dust	234	(350mg/m ² /Day)	YES
DM 02	Dust	55	(350mg/m ² /Day)	YES
DM 03	Dust	123	(350mg/m ² /Day)	YES

Aug - Sep

Emission Point	Parameter	Emission (mg/m ² /day)	Emission Limit Value	Compliant
DM 01	Dust	24	(350mg/m ² /Day)	YES
DM 02	Dust	43	(350mg/m ² /Day)	YES
DM 03	Dust	129	(350mg/m ² /Day)	YES

Note: DM 01= Killinagh Bog. DM 02 = Derrybrennan Bog. DM 03 = Ballykeane

2.2.2 Non-compliance's

There was no non-compliance, in relation to air in the reporting period.

2.3 Waste Arisings

2.3.1 Hazardous Waste

Derrygreenagh being a central location, is used as a collection point for all hazardous wastes emanating from all the areas in both the Allen and Derrygreenagh Groups. All waste oils, filters, spent batteries, etc are collected centrally at Derrygreenagh before being removed by a licenced waste contractor such as Atlas Waste Oil, Hammond Lane, Returnabatt, etc.

A system is in place where by every area has its own waste oil and filter barrel. These barrels are painted yellow to distinguish them from ordinary barrels and are clearly marked waste filters or waste oil.

When the barrels are getting near full, the area team leader informs our Derrygreenagh stores and a truck is dispatched to collect the full barrels and replace them with empties. Any spent batteries will also be collected if the need arises.

Records of all the hazardous wastes handled by the Allen and Derrygreenagh Groups from January-December 2002 have been submitted with the Derrygreenagh AER.

2.3.2 Non-Hazardous Waste

The following table lists the quantities of the wastes generated from January-December 2002 from all of the Allen Group.

Waste Type	Quantity (Tonnes)
Silt Pond Waste	1479
Polyethylene	242.67
Scrap Metal	140.78
Mixed Municipal Waste	17.500
Total	1879.95

Note: Scrap Metal and Polyethylene are both recycled.

2.4 Energy Consumption

The table below is a summary of the energy consumption for the Allen Group, from the dates January – December 2002.

Water is not included, as it is not used as part of the production process. It is only used in offices, canteens and workshops on a domestic scale.

None of the boilers in the Allen Group are briquette fired.

Fuel	Volume M ³	Tonnes	MW/Hours
Jan - Dec 2002			
Diesel	567	470.75	5554.85
Petrol	2.177	1.64	19.63
Electricity	NA	NA	102.78
Total	569.177	472.39	5677.26

2.5 Environmental Incidents and Complaints

There was no incident within the Allen Group, during the reporting period

Environmental Incidents	Number of Incidents
Incidents	0
Incidents requiring corrective action	0
Categories of Incident	
Odour	
Noise	
Water	
Air	
Procedural	
Miscellaneous	

There was one complaint within the Allen Group, during the reporting period The Agency was informed.

Environmental Complaints	Number of complaints
Complaints received	1
Complaints requiring corrective action	1
Categories of complaint	
Odour	
Noise	
Water	
Air	
Procedural	
Miscellaneous	✓

3.0 Management of the Activity

3.1 Environmental Management Programme Report

Project	Description	Status
Project 1 & Project 2	(1)The reduction of fugitive dust emissions. (2)The minimisation of suspended solids movement to surface waters. (3)The examination of production machine modification. (4)The results of dust monitoring.	Projects ongoing, with production methods and training continuously being assessed for improvement, although production machine modification is behind schedule due to the inclement weather experienced during the 02 season. All personnel have been trained.
Project 3	Rationalisation of surface water discharge points.	Project Complete where feasible.
Project 4	Investigation of reed bed systems for final polish of silt pond discharges.	Project complete and retained on file. Report concludes that reed beds are not suitable for Bord na Mona's silt treatment systems.
Project 5	The separation of flood water and external runoff from production runoff.	Project Complete where feasible.
Project 6	The effective spill/leak management of mobile fueling units by implementing a programme of training and adopting Codes of Practice.	1: Procedures in place. 2: Training complete 3: ERP in place. 4: Upgrading of fueling units ongoing.
Project 7	Programme of bunding at all bulk diesel storage facilities	Project complete and works certified.
Project 8	Investigation into the reuse of silt pond waste	A silt pond has been constructed, in the Kilberry Group of Bogs, where trials will be carried out to examine the potential for re-using the silt waste from the silt pond as the main product, or as a by-product. This project was due to commence in 2002, but failed to do so, due to the weather conditions during the 2002 production season.
Project 9	Study into the collection storage and reuse of polyethylene covering	Recycling company sourced, recycling ongoing, with records on file
Project 10	Examination of the use of reusable materials in the protection of stockpiles	Project Completed by Polymer Institute, Athlone I. T., report on file.
Project 11	Examination of wind power technology for pumped drainage.	Project complete, report on file. Concludes that wind power pumping not suitable to Bord na Mona's requirements

3.2 Environmental Expenditure

The table below lists the environmental costs incurred by the Allen Group between January-December 2002.

In calculating the environmental costs 70% of the total costs were attributed to Licence 503 and 30% to Licence 501.

Expenditure Related to the Operation of the Allen IPC Licence During the Period January – December 2002	
Description	Cost (€)
Machine hours @ €40/hour	404,320
Labour	127,796
Materials	74,032
Overheads (ESB, Phones, Consumables)	14,000
Laboratory Analysis	17,500
EPA Fees	6,514
Total €	€ 644,162

4 Licence Specific Reports

4.1 Surface Water Discharge Monitoring Location Programme Review

The surface water discharge monitoring location programme remains the same as was submitted and accepted by the Agency in June 2000.

Pipes have been fitted at each location in order to accommodate flow metres and the provision of safe access is also ongoing.

Emission point signs have been designed and are in place.

Additional work has also being carried out at these locations as part of the ongoing silt pond upgrade programme.

Monitoring will be carried out at these same locations in the forthcoming year and reported on in next years AER.

4.2 Bunding Programme

The bunding programme for large scale oil storage facilities is complete and works certified.

4.3 Boiler Combustion Efficiency

Boiler efficiency tests were carried out during the year. The results of these tests are shown in the table below.

A full breakdown of these tests are retained on file at our Derrygreenagh office.

Boiler Location	Date Tested	% Efficiency
Ballydermot	09/12/02	88.1
Clonsast	21/10/02	87.4
Power Station	09/12/02	87.1

4.4 Resource consumption summary

There was a total of 588,328 tonnes of milled peat produced across the licence area in the production season 2002.

There was also a total of 1,010,469 tonnes of stock peat sold during the reporting period. Of this total, 937,716 tonnes were sold to Edenderry Power Limited, 14,967 tonnes to Derrinlough Briquette Factory and 57,786 tonnes to Kilberry Moss Factory.

4.5 De-Silting Report

Summary Data Table of Ponds De-Silted From Jan-December 2002

Bog	No Silt Ponds	Cleaned Once	Cleaned Twice	Cleaned Three Times	Notes
Derries	8	2			*
Rathdrum	4	2	1		*
Clonad	4	3			
M Lucas	2				**
Cloncreen	6	4	2		
Esker	7	7			
Cavemount	5	5			
Ballykeane	5	2	3		
Codd South	2				
Ballydermot N	1	1			
Ballydermot S	1	1			
Clonsast N	2	2			*
Ballycon	3	3			**
Garrymore	4	4			*
Derrylea	2	2			
Glashabaun N	2	1		1	
Codd N	4	3	1		
Ticknevin	2		2		*
Glashabaun S	3	3			
D/brennan	5	1	3		
Killinagh	3				
Lodge	2		2		
Bulge	2	1			
Barnaran	2	1			
Blackriver	2	1	1		

*: No production. **: Bog cut out, no activity at this Bog.

It should be noted that the unusually inclement weather experienced during the year, greatly hampered the silt pond cleaning programme.

4.6 Bog Development and Operational Programme

The majority of bog development is complete within the Allen Group. During the reporting period development was on going on Rathdrum bog. This development work comprised of ditching, screw leveling and piping.

The cutting of sod turf at Timahoe North (Dwg 8.1K) is currently being explored.

There will be 3846 nett hectares in production in the 2003 season, yeilding 807,336 tonnes @ 55% moisture content.

4.7 Bog Rehabilitation Report

Management guidelines for the planning and implementation of cutaway bog rehabilitation have been adopted and the document is currently available for inspection on file at the Derrygreenagh office.

5 Summary

With regard to environmental compliance at the Allen Group of Bogs, there was one non-compliance in the quarterly grab sampling of the ponds in the Surface Water Discharge Monitoring Location Programme.

There was one non-compliance in relation to the Composite Sampler during the monitoring period January to December. Dust monitoring results showed no non-compliances at dust sensitive locations. There was one complaint of an environmental nature received during the reporting period.

The staff awareness through training and involvement in the operation of the licence has also improved immensely. A full programme of training and awareness has been conducted at the works and has targeted all personnel ie. Office, Workshop, Transport and Production.

Bord na Mona are project partners of the Southeastern River Basin District Management, as set up under the Water Framework Directive.

Bord na Mona are also involved in catchment management on the River Barrow.

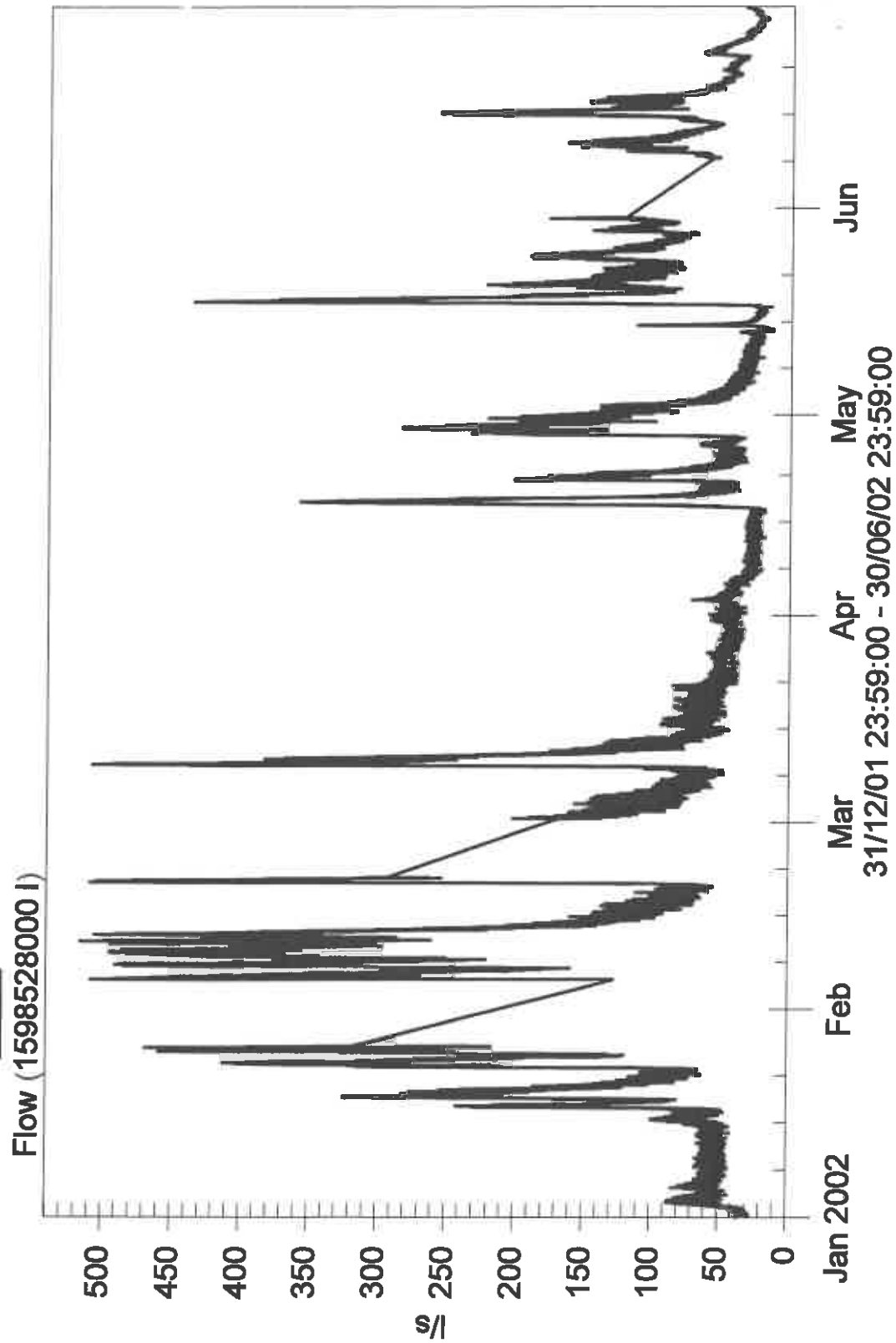
Bord na Mona Energy Ltd would like to take this opportunity to advise the Environmental Protection Agency of its continued commitment to improving its environmental performance by adopting cleaner production methods and improving its environmental protection measures.

APPENDIX 1

Composite Sampler Results

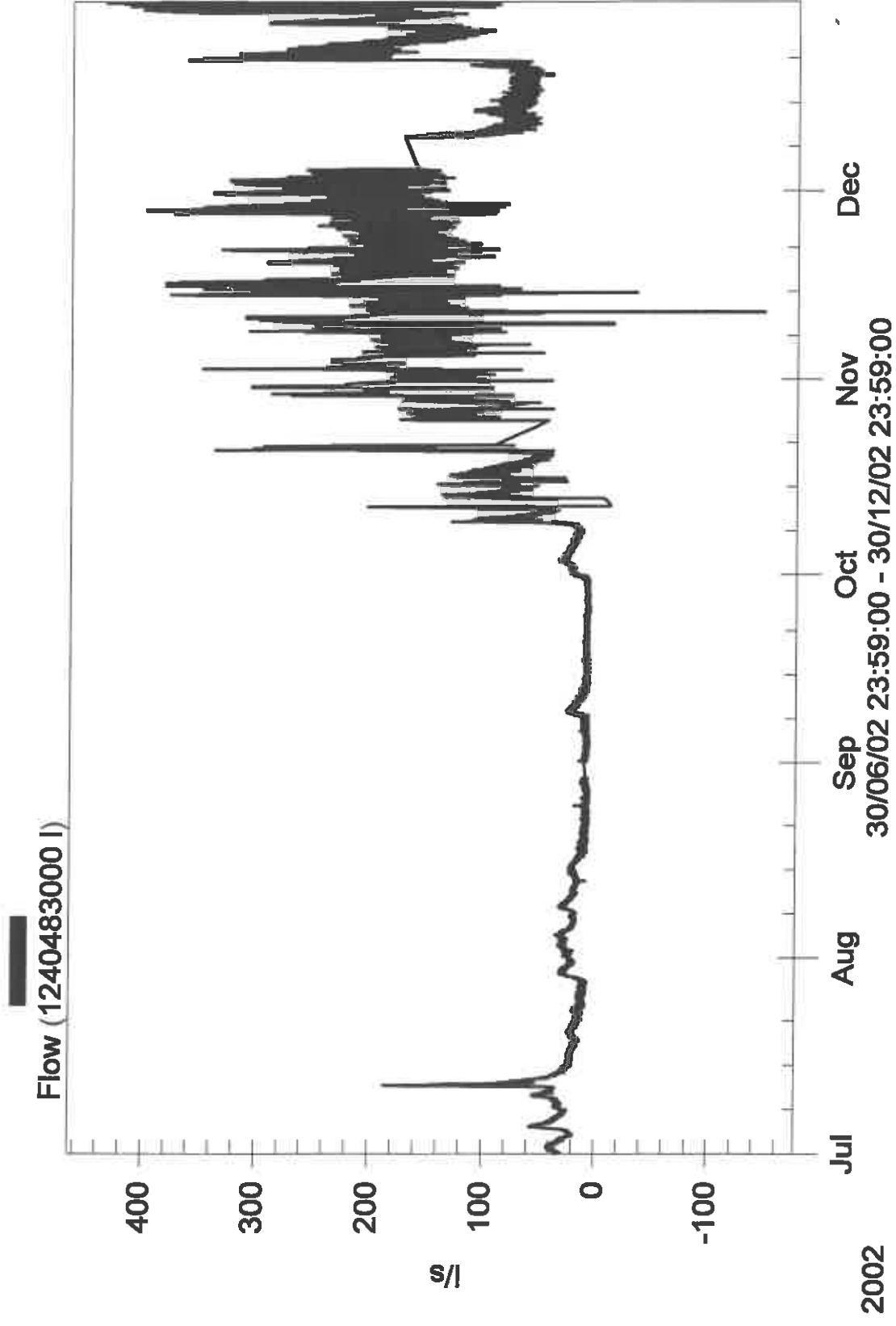
Allen Composite Sampler

Jan - June 02



Allen Composite Sampler

July - Dec 02



Bord Na Mona Energy Ltd, Allen Group, Rochfordsbridge, Co Westmeath

[illegible]

IS: Insufficient amount of sample due to low flow or sampler malfunction.

Bord Na Mona Energy Ltd, Allen Group, Rochforbsbridge, Co Westmeath
Composite Sampler Results Licence 503

Month	pH	COD mg/l	Ammonia as N mg/l	Parameters Total Phosphorus mg/l	Suspended Solids mg/l	Total Solids mg/l	Colour Pt Co units	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals Total Phosphorus Kg/Day	Suspended Solids Kg/Day	Total Solids Kg/Day
February 2002													
1					IS	IS		11035870	0.00	0.00	0.00	#VALUE!	#VALUE!
2					IS	IS		11035870	0.00	0.00	0.00	#VALUE!	#VALUE!
3					IS	IS		11035870	0.00	0.00	0.00	#VALUE!	#VALUE!
4	7.4	77	0.7	0.05	10	228	288	11035870	849.76	7.73	0.55	110.36	2516.18
5					9	168		26168740	0.00	0.00	0.00	235.52	4396.35
6					8	194		25784070	0.00	0.00	0.00	206.27	5002.11
7					5	192		30045550	0.00	0.00	0.00	150.23	5768.75
8					6	132		29386210	0.00	0.00	0.00	176.32	3878.98
9					6	206		38085460	0.00	0.00	0.00	228.51	7845.60
10					5	212		32982160	0.00	0.00	0.00	164.91	6992.22
11	7.7	83	0.5	0.05	IS	IS	299	32857100	2727.14	16.43	1.64	#VALUE!	#VALUE!
12					19	130		31687200	0.00	0.00	0.00	602.06	4119.34
13					17	192		15795550	0.00	0.00	0.00	268.52	3032.75
14					27	212		11291280	0.00	0.00	0.00	304.86	2393.75
15					29	160		10030350	0.00	0.00	0.00	290.88	1604.86
16					22	150		8643432	0.00	0.00	0.00	190.16	1296.51
17					22	146		7485808	0.00	0.00	0.00	164.69	1092.93
18					21	166		6815415	0.00	0.00	0.00	143.12	1131.36
19	7.8	89	0.8	0.07	20	164	280	9760311	868.67	7.81	0.68	195.21	1600.69
20					5	102		28722510	0.00	0.00	0.00	143.61	2929.70
21					IS	IS		14679360	0.00	0.00	0.00	#VALUE!	#VALUE!
22					IS	IS		14679360	0.00	0.00	0.00	#VALUE!	#VALUE!
23					IS	IS		14679360	0.00	0.00	0.00	#VALUE!	#VALUE!
24					IS	IS		14679360	0.00	0.00	0.00	#VALUE!	#VALUE!
25					IS	IS		14679360	0.00	0.00	0.00	#VALUE!	#VALUE!
26	7.1	91	0.8	0.05	10	172	254	14679360	1335.82	11.74	0.73	146.79	2524.85
27					IS	IS		14679360	0.00	0.00	0.00	#VALUE!	#VALUE!
28					IS	IS		14679360	0.00	0.00	0.00	#VALUE!	#VALUE!
29													
30													
31													

IS: Insufficient amount of sample due to low flow or sampler malfunction.

Bord Na Mona Energy Ltd, Allen Group, Rochforbsbridge, Co Westmeath
Composite Sampler Results Licence 503

Month	pH	COD mg/l	Ammonia as N mg/l	Parameters		Total Solids mg/l	Colour Pt Co units	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals		Total Solids
				Phosphorus mg/l	Suspended Solids mg/l						Phosphorus Kg/Day	Suspended Solids Kg/Day	
March 2002													
1					5	186		14213270	0.00	0.00	0.00	71.07	2643.67
2					5	166		11208690	0.00	0.00	0.00	56.04	1860.64
3					5	192		9849362	0.00	0.00	0.00	49.25	1891.08
4	8.2	74	1.2	0.05	5	226	236	8888714	657.76	10.67	0.44	44.44	2008.85
5					5	246		7740509	0.00	0.00	0.00	38.70	1904.17
6					5	258		6813121	0.00	0.00	0.00	34.07	1757.79
7					5	262		6191091	0.00	0.00	0.00	30.96	1622.07
8					5	272		5779652	0.00	0.00	0.00	28.90	1572.07
9					5	260		24979470	0.00	0.00	0.00	124.90	6494.66
10					5	216		25424940	0.00	0.00	0.00	127.12	5491.79
11	8.2	79	0.9	0.07	5	170	284	13476840	1064.67	12.13	0.94	67.38	2291.06
12					6	198		9684426	0.00	0.00	0.00	58.11	1917.52
13					8	228		7356409	0.00	0.00	0.00	58.85	1677.26
14					15	272		5723359	0.00	0.00	0.00	85.85	1556.75
15					5	258		6075941	0.00	0.00	0.00	30.38	1567.59
16					5	256		6120937	0.00	0.00	0.00	30.60	1566.96
17					5	256		5543448	0.00	0.00	0.00	27.72	1419.12
18					5	266		5616240	0.00	0.00	0.00	28.08	1493.92
19	8.4	69	0.2	0.05	5	234	199	5485602	378.51	1.10	0.27	27.43	1283.63
20					IS	IS		5346928	0.00	0.00	0.00	#VALUE!	#VALUE!
21					5	262		5247282	0.00	0.00	0.00	26.24	1374.79
22					5	272		4367873	0.00	0.00	0.00	21.84	1188.06
23					5	278		4146480	0.00	0.00	0.00	20.73	1152.72
24					5	258		4032881	0.00	0.00	0.00	20.16	1040.48
25					6	328		4127250	0.00	0.00	0.00	24.76	1353.74
26	8.4	71	0.8	0.05	7	342	186	4172743	296.26	3.34	0.21	29.21	1427.08
27					5	350		3823350	0.00	0.00	0.00	19.12	1338.17
28					5	348		3642625	0.00	0.00	0.00	18.21	1267.63
29					5	334		3667576	0.00	0.00	0.00	18.34	1224.97
30					5	380		3735760	0.00	0.00	0.00	18.68	1419.59
31					5	366		4182987	0.00	0.00	0.00	20.91	1530.97

IS: Insufficient amount of sample due to low flow or sampler malfunction.

Bord Na Mona Energy Ltd, Allen Group, Rochfordsbridge, Co Westmeath
Composite Sampler Results Licence 503

Month	pH	COD mg/l	Ammonia as N mg/l	Parameters		Suspended Solids mg/l	Total Solids mg/l	Colour Pt Co units	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals		Suspended Solids Kg/Day	Total Solids Kg/Day
				Total Phosphorus mg/l	Total Phosphorus Kg/Day										
April 2002															
1					5	458			3908580	0.00	0.00	0.00		19.54	1790.13
2	8.4	43	1	0.08	5	330	110		3727494	160.28	3.73	0.30		18.64	1230.07
3					5	286			4385103	0.00	0.00	0.00		21.93	1254.14
4					5	256			3680830	0.00	0.00	0.00		18.40	942.29
5					5	290			3566938	0.00	0.00	0.00		17.83	1034.41
6					5	300			3148721	0.00	0.00	0.00		15.74	944.62
7					5	300			2490969	0.00	0.00	0.00		12.45	747.29
8					5	402			2380471	0.00	0.00	0.00		11.90	956.95
9	8.5	71	0.3	0.05	5	300	142		2411462	171.21	0.72	0.12		12.06	723.44
10					5	316			2334398	0.00	0.00	0.00		11.67	737.67
11					5	328			2285095	0.00	0.00	0.00		11.43	749.51
12					5	316			2353977	0.00	0.00	0.00		11.77	743.86
13					5	330			2371677	0.00	0.00	0.00		11.86	782.65
14					5	322			2404279	0.00	0.00	0.00		12.02	774.18
15					5	336			2308218	0.00	0.00	0.00		11.54	775.56
16	8.4	68	0.2	0.05	5	328	112		2127934	144.70	0.43	0.11		10.64	697.96
17					5	302			13875620	0.00	0.00	0.00		69.38	4190.44
18					5	176			16176820	0.00	0.00	0.00		80.88	2847.12
19					5	204			5052602	0.00	0.00	0.00		25.26	1030.73
20					5	214			4489066	0.00	0.00	0.00		22.45	960.66
21					5	258			11985370	0.00	0.00	0.00		59.93	3092.23
22					5	344			8469904	0.00	0.00	0.00		42.35	2913.65
23	8.2	65	0.6	0.05	6	354	130		4507810	293.01	2.70	0.23		27.05	1595.76
24					5	368			3760765	0.00	0.00	0.00		18.80	1383.96
25					5	268			3889281	0.00	0.00	0.00		19.45	1042.33
26					IS	IS			4395544	0.00	0.00	0.00	#VALUE!	#VALUE!	#VALUE!
27					IS	IS			5078548	0.00	0.00	0.00	#VALUE!	#VALUE!	#VALUE!
28					IS	IS			16411730	0.00	0.00	0.00	#VALUE!	#VALUE!	#VALUE!
29					IS	IS			16773750	0.00	0.00	0.00	#VALUE!	#VALUE!	#VALUE!
30	8	86	0.5	0.06	5	240	290		14034040	1206.93	7.02	0.84		70.17	3368.17
31															

IS: Insufficient amount of sample due to low flow or sampler malfunction.

Bord Na Mona Energy Ltd, Allen Group, Rochforbsbridge, Co Westmeath
Composite Sampler Results Licence 503

Month	pH	COD mg/l	Ammonia as N mg/l	Parameters		Total Solids mg/l	Colour Pt Co units	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals	
				Total Phosphorus mg/l	Suspended Solids mg/l						Total Phosphorus Kg/Day	Suspended Solids Kg/Day
May 2002												
1					5	280		10565890	0.00	0.00	0.00	52.83
2					5	286		8620626	0.00	0.00	0.00	43.10
3					5	304		5052968	0.00	0.00	0.00	25.26
4					5	310		4158811	0.00	0.00	0.00	20.79
5					5	312		3434925	0.00	0.00	0.00	17.17
6					5	300		3173924	0.00	0.00	0.00	15.87
7	8.3	69	0.2	0.05	5	342	189	2862738	197.53	0.57	0.14	14.31
8					5	308		2759155	0.00	0.00	0.00	13.80
9					5	320		2615159	0.00	0.00	0.00	13.08
10					5	322		2568724	0.00	0.00	0.00	12.84
11					5	322		2456019	0.00	0.00	0.00	12.28
12					5	338		2190378	0.00	0.00	0.00	10.95
13					5	416		2129125	0.00	0.00	0.00	10.65
14	8.7	46	0.4	0.05	5	462	74	3559398	163.73	1.42	0.18	17.80
15					5	324		2254831	0.00	0.00	0.00	11.27
16					5	320		1927911	0.00	0.00	0.00	9.64
17					5	294		10691740	0.00	0.00	0.00	53.46
18					5	192		23671470	0.00	0.00	0.00	118.36
19					5	218		9771316	0.00	0.00	0.00	48.86
20					5	204		13479180	0.00	0.00	0.00	67.40
21	8.4	93	0.5	0.05	5	214	325	11283840	1049.40	5.64	0.56	56.42
22					5	166		9877032	0.00	0.00	0.00	49.39
23					5	260		8750018	0.00	0.00	0.00	43.75
24					5	242		12548490	0.00	0.00	0.00	62.74
25					5	168		11488610	0.00	0.00	0.00	57.44
26					11	232		9018312	0.00	0.00	0.00	99.20
27					5	244		7428116	0.00	0.00	0.00	37.14
28	8.3	89	0.3	0.05	6	308	260	9071503	807.36	2.72	0.45	54.43
29					5	222		8911249	0.00	0.00	0.00	44.56
30					5	258		8076135	0.00	0.00	0.00	40.38
31					5	250		5009645	0.00	0.00	0.00	25.05

IS: Insufficient amount of sample due to low flow or sampler malfunction.

Bord Na Mona Energy Ltd, Allen Group, Rochfordsbridge, Co Westmeath
Composite Sampler Results Licence 503

Month	pH	GOD mg/l	Ammonia as N mg/l	Parameters		Total Solids mg/l	Suspended Solids mg/l	Total Solids mg/l	Colour Pt-Co units	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals		Suspended Solids Kg/Day	Total Solids Kg/Day
June 2002				Total Phosphorus mg/l									Total Phosphorus Kg/Day			
1						254	5	254		5009645	0.00	0.00	0.00		25.05	1272.45
2						244	6	244		5009645	0.00	0.00	0.00		30.06	1222.35
3						256	5	256		5009645	0.00	0.00	0.00		25.05	1282.47
4	8.6	86	0.2	0.05		228	5	228	262	5009645	430.83	1.00	0.25		25.05	1142.20
5						IS	IS	IS		5009645	0.00	0.00	0.00		#VALUE!	#VALUE!
6						240	5	240		5009645	0.00	0.00	0.00		25.05	1202.31
7						270	5	270		5009645	0.00	0.00	0.00		25.05	1352.60
8						278	5	278		5193339	0.00	0.00	0.00		25.97	1443.75
9						264	5	264		7685268	0.00	0.00	0.00		38.43	2028.91
10						256	5	256		10931210	0.00	0.00	0.00		54.66	2798.39
11	8.2	86	0.2	0.05		230	5	230	302	8835005	759.81	1.77	0.44		44.18	2032.05
12						208	5	208		6269958	0.00	0.00	0.00		31.35	1304.15
13						242	6	242		5084819	0.00	0.00	0.00		30.51	1230.53
14						248	5	248		8714152	0.00	0.00	0.00		43.57	2161.11
15						218	5	218		14802850	0.00	0.00	0.00		74.01	3227.02
16						216	5	216		9458368	0.00	0.00	0.00		47.29	2043.01
17						180	7	180		9099869	0.00	0.00	0.00		63.70	1637.98
18	8.2	100	0.2	0.05		221	7	221	281	5501725	550.17	1.10	0.28		38.51	1215.88
19						270	5	270		4618411	0.00	0.00	0.00		23.09	1246.97
20						274	5	274		3874621	0.00	0.00	0.00		19.37	1061.65
21						298	5	298		3842442	0.00	0.00	0.00		19.21	1145.05
22						262	5	262		3638477	0.00	0.00	0.00		18.19	953.28
23						284	65	284		3540529	0.00	0.00	0.00		230.13	1005.51
24						292	5	292		4804541	0.00	0.00	0.00		24.02	1402.93
25	8.2	78	0.2	0.05		296	5	296	223	3842251	299.70	0.77	0.19		19.21	1137.31
26						338	5	338		2859560	0.00	0.00	0.00		14.30	966.53
27						286	6	286		2552806	0.00	0.00	0.00		15.32	730.10
28						316	5	316		2112413	0.00	0.00	0.00		10.56	667.52
29						293	5	293		2057647	0.00	0.00	0.00		10.29	602.89
30						300	5	300		2460020	0.00	0.00	0.00		12.30	738.01
31																

IS: Insufficient amount of sample due to low flow or sampler malfunction.

Bord Na Mona Energy Ltd, Allen Group, Rochforbsbridge, Co Westmeath
Composite Sampler Results Licence 503

Month	pH	COD mg/l	Ammonia as N mg/l	Parameters Total Phosphorus mg/l	Total Solids mg/l	Colour Pt Co	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Phosphorus Kg/Day	Daily Totals Total Solids	Total Solids
July 2002												
1					336		3062413	0.00	0.00	0.00	15.31	1028.97
2	8.6	75	0.2	0.08	282	170	3132696	234.95	0.63	0.25	15.66	883.42
3					292		2303907	0.00	0.00	0.00	11.52	672.74
4					300		2156001	0.00	0.00	0.00	10.78	646.80
5					284		4118837	0.00	0.00	0.00	20.59	1169.75
6					308		3003671	0.00	0.00	0.00	15.02	925.13
7					264		2409259	0.00	0.00	0.00	12.05	636.04
8					290		2751525	0.00	0.00	0.00	13.76	797.94
9	8.2	73	0.2	0.05	284	165	3038433	221.81	0.61	0.15	15.19	862.91
10					306		3979852	0.00	0.00	0.00	19.90	1217.83
11					293		6828491	0.00	0.00	0.00	34.14	2000.75
12					258		5582267	0.00	0.00	0.00	27.91	1440.22
13					244		3065665	0.00	0.00	0.00	15.33	748.02
14					308		2304648	0.00	0.00	0.00	11.52	709.83
15					276		1930988	0.00	0.00	0.00	9.65	532.95
16	8.2	82	0.2	0.05	298	200	1876850	153.90	0.38	0.09	9.38	559.30
17					290		1725679	0.00	0.00	0.00	8.63	500.45
18					320		1554557	0.00	0.00	0.00	7.77	497.46
19					330		1637054	0.00	0.00	0.00	16.37	540.23
20					327		1781984	0.00	0.00	0.00	8.91	582.71
21					342		1522566	0.00	0.00	0.00	9.14	520.72
22					476		1283910	0.00	0.00	0.00	6.42	611.14
23	8.4	76	0.2	0.08	344	138	1325184	100.71	0.27	0.11	15.90	455.86
24					400		1098152	0.00	0.00	0.00	5.49	439.26
25					356		1078060	0.00	0.00	0.00	5.39	383.79
26					342		994791	0.00	0.00	0.00	4.97	340.22
27					318		923585	0.00	0.00	0.00	8.31	293.70
28					366		1124099	0.00	0.00	0.00	16.86	411.42
29					310		2346865	0.00	0.00	0.00	18.77	727.53
30	8.5	71	0.2	0.05	320	138	2244107	159.33	0.45	0.11	11.22	718.11
31					326		1858213	0.00	0.00	0.00	9.29	605.78

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**Bord Na Mona Energy Ltd, Allen Group, Rochfordsbridge, Co Westmeath
Composite Sampler Results Licence 503**

Month	pH	COD mg/l	Ammonia as N mg/l	Parameters Total Phosphorus mg/l	Total Solids mg/l	Colour Pt Co units	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals Total Phosphorus Kg/Day	Suspended Solids Kg/Day	Total Solids Kg/Day
August 2002												
1					5		2157348	0.00	0.00	0.00	10.79	681.72
2					5		2373687	0.00	0.00	0.00	11.87	873.52
3					5		2512514	0.00	0.00	0.00	12.56	834.15
4					5		2587533	0.00	0.00	0.00	12.94	884.94
5					5		2117712	0.00	0.00	0.00	10.59	626.84
6	8.2	72	0.2	0.07	5	150	1684898	121.31	0.34	0.12	8.42	566.13
7					5		1710274	0.00	0.00	0.00	8.55	509.66
8					12		1969874	0.00	0.00	0.00	23.64	665.82
9					15		2387530	0.00	0.00	0.00	35.81	787.88
10					8		1894693	0.00	0.00	0.00	15.16	606.30
11					10		1674397	0.00	0.00	0.00	16.74	512.37
12					7		1520459	0.00	0.00	0.00	10.64	498.71
13	8.3	64	0.2	0.05	10	127	1487179	95.18	0.30	0.07	14.87	493.74
14					5		1782140	0.00	0.00	0.00	8.91	588.11
15					5		1779971	0.00	0.00	0.00	8.90	655.03
16					5		1456818	0.00	0.00	0.00	7.28	163.16
17					5		1091858	0.00	0.00	0.00	5.46	449.85
18					5		1036914	0.00	0.00	0.00	5.18	383.66
19					8		907461	0.00	0.00	0.00	7.26	357.54
20	8.4	71	0.2	0.05	5	118	846266	60.08	0.17	0.04	4.23	286.04
21					13		793686	0.00	0.00	0.00	10.32	288.90
22					8		736381	0.00	0.00	0.00	5.89	287.19
23					8		749962	0.00	0.00	0.00	6.00	302.98
24					8		738560	0.00	0.00	0.00	5.91	298.38
25					5		744221	0.00	0.00	0.00	3.72	273.87
26					6		667301	0.00	0.00	0.00	4.00	241.56
27	8.4	68	0.2	0.06	8	108	672736	45.75	0.13	0.04	5.38	213.26
28					5		811352	0.00	0.00	0.00	4.06	253.14
29					5		873456	0.00	0.00	0.00	4.37	310.95
30					8		884909	0.00	0.00	0.00	7.08	346.88
31					5		884909	0.00	0.00	0.00	4.42	343.34

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Bord Na Mona Energy Ltd, Allen Group, Rochfordsbridge, Co Westmeath
Composite Sampler Results Licence 503

Month	pH	COD mg/l	Ammonia as N mg/l	Parameters		Suspended		Total Solids mg/l	Colour Pt Co units	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals		Suspended Solids Kg/Day	Total Solids Kg/Day
				Phosphorus mg/l	Total mg/l	Solids mg/l	Phosphorus Kg/Day						Total Kg/Day			
September 2002																
1						5	404			870098	0.00	0.00	0.00	4.35		351.52
2						5	390			752050	0.00	0.00	0.00	3.76		293.30
3	8.5	68	0.2	0.12		6	458		96	687206	46.73	0.14	0.08	4.12		314.74
4						20	380			678003	0.00	0.00	0.00	13.56		257.64
5						10	332			734781	0.00	0.00	0.00	7.35		243.95
6						9	378			779891	0.00	0.00	0.00	7.02		294.80
7						5	394			784543	0.00	0.00	0.00	3.92		309.11
8						5	358			1033256	0.00	0.00	0.00	5.17		369.91
9						6	310			1870976	0.00	0.00	0.00	11.23		580.00
10	8.6	58	0.2	0.05		5	332		83	1468034	85.15	0.29	0.07	7.34		487.39
11						5	334			1161917	0.00	0.00	0.00	5.81		388.08
12						5	332			862122	0.00	0.00	0.00	4.31		286.22
13						5	340			736424	0.00	0.00	0.00	3.68		250.38
14						5	354			702526	0.00	0.00	0.00	3.51		248.69
15						5	312			687862	0.00	0.00	0.00	3.44		214.61
16						5	326			676502	0.00	0.00	0.00	3.38		220.54
17	8.3	62	0.2	0.05		5	482		179	683301	42.36	0.14	0.03	3.42		329.35
18						5	300			686568	0.00	0.00	0.00	3.43		205.97
19						5	322			693629	0.00	0.00	0.00	3.47		223.35
20						5	356			681948	0.00	0.00	0.00	3.41		242.77
21						8	376			662039	0.00	0.00	0.00	5.30		248.93
22						5	346			682254	0.00	0.00	0.00	3.41		236.06
23						6	344			675152	0.00	0.00	0.00	4.05		232.25
24	8.3	58	0.2	0.05		5	340		84	626156	36.32	0.13	0.03	3.13		212.89
25						8	248			566470	0.00	0.00	0.00	4.53		140.48
26						5	194			621458	0.00	0.00	0.00	3.11		120.56
27						5	204			606398	0.00	0.00	0.00	3.03		123.71
28						5	100			628823	0.00	0.00	0.00	3.14		62.88
29						5	260			642078	0.00	0.00	0.00	3.21		166.94
30						5	364			939672	0.00	0.00	0.00	4.70		342.04
31																

IS: Insufficient amount of sample due to low flow or sampler malfunction.

**Bord Na Mona Energy Ltd, Allen Group, Rochforbsbridge, Co Westmeath
Composite Sampler Results Licence 503**

Month	pH	COD mg/l	Ammonia as N mg/l		Parameters Total Phosphorus mg/l		Total Solids mg/l	Suspended Solids mg/l	Colour Pt Co units	Flow		COD Kg/Day	Ammonia as Kg/Day	Daily Totals		Suspended Solids Kg/Day	Total Solids Kg/Day
October 2002										Daily	Total (litres)						
1	8.3	61	0.2	0.05		5	374	92		1783870		108.82	0.36	0.09		8.92	667.17
2						5	346			1998044		0.00	0.00	0.00		9.99	691.32
3						5	368			2439000		0.00	0.00	0.00		12.20	897.55
4						5	369			2105863		0.00	0.00	0.00		10.53	777.06
5						5	408			1803978		0.00	0.00	0.00		9.02	736.02
6						5	376			1590773		0.00	0.00	0.00		7.95	598.13
7						5	356			1419639		0.00	0.00	0.00		7.10	505.39
8	8.5	61	0.2	0.06		5	340	81		1497680		91.36	0.30	0.09		7.49	509.21
9						5	324			6235776		0.00	0.00	0.00		31.18	2020.39
10						5	238			5667281		0.00	0.00	0.00		28.34	1348.81
11						5	241			5535168		0.00	0.00	0.00		27.68	1333.98
12						5	338			-880899		0.00	0.00	0.00		-4.40	-297.74
13						5	256			7577864		0.00	0.00	0.00		37.89	1939.93
14						5	236			6934194		0.00	0.00	0.00		34.67	1636.47
15	8.1	91	0.2	0.05		5	222			7067768		643.17	1.41	0.35		35.34	1569.04
16						5	256			6695704		0.00	0.00	0.00		33.48	1714.10
17						5	324			8095717		0.00	0.00	0.00		40.48	2623.01
18						5	256			6382133		0.00	0.00	0.00		31.91	1633.83
19						5	186			4634147		0.00	0.00	0.00		23.17	861.95
20						5	208			7365194		0.00	0.00	0.00		36.83	1531.96
21						11	142			12727990		0.00	0.00	0.00		140.01	1807.37
22	7.3	95	0.2	0.06		16	184	266		3722026		353.59	0.74	0.22		59.55	684.85
23						5	226			3722026		0.00	0.00	0.00		18.61	841.18
24						5	214			3722026		0.00	0.00	0.00		18.61	796.51
25						5	168			7862760		0.00	0.00	0.00		39.31	1320.94
26						5	320			11499620		0.00	0.00	0.00		57.50	3679.88
27						8	166			9066220		0.00	0.00	0.00		72.53	1504.99
28						5	246			9514711		0.00	0.00	0.00		47.57	2340.62
29	7.8	88	0.2	0.05		8	245	243		16462010		1448.66	3.29	0.82		131.70	4033.19
30						11	161			18872650		0.00	0.00	0.00		207.60	3038.50
31						5	252			16453430		0.00	0.00	0.00		82.27	4146.26

IS: Insufficient amount of sample due to low flow or sampler malfunction.

Bord Na Mona Energy Ltd, Allen Group, Rochforbsbridge, Co Westmeath
Composite Sampler Results Licence 503

Month	pH	COD mg/l	Ammonia as N mg/l	Parameters		Total Solids mg/l	Colour Pt Co units	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals		Suspended Solids Kg/Day	Total Solids Kg/Day
				Phosphorus mg/l	Total mg/l						Phosphorus Kg/Day	Total Kg/Day		
November 2002														
1						113		12326110	0.00	0.00	0.00	0.00	1392.85	2908.96
2						8		15331460	0.00	0.00	0.00	0.00	122.65	3648.89
3						28		19023130	0.00	0.00	0.00	0.00	532.65	4869.92
4						IS		16804030	0.00	0.00	0.00	#VALUE!	#VALUE!	#VALUE!
5	7.6	56	0.6	0.05	258	20	286	12836420	718.84	7.70	0.64	256.73	256.73	3311.80
6					186	5		12115620	0.00	0.00	0.00	0.00	60.58	2253.51
7					264	5		13755270	0.00	0.00	0.00	0.00	68.78	3631.39
8					236	5		14058220	0.00	0.00	0.00	0.00	70.29	3317.74
9					220	5		15295550	0.00	0.00	0.00	0.00	76.48	3365.02
10					214	5		23809360	0.00	0.00	0.00	0.00	119.05	5095.20
11					212	5		12402470	0.00	0.00	0.00	0.00	62.01	2629.32
12	7.8	86	0.2	0.05	224	5	322	14111190	1213.56	2.82	0.71	70.56	70.56	3160.91
13					208	5		14500870	0.00	0.00	0.00	0.00	72.50	3016.18
14					84	5		18423810	0.00	0.00	0.00	0.00	92.12	1547.60
15					226	32		20957770	0.00	0.00	0.00	0.00	670.65	4736.46
16					158	5		26793340	0.00	0.00	0.00	0.00	133.97	4233.35
17					151	5		15789240	0.00	0.00	0.00	0.00	78.95	2384.18
18					226	5		15154920	0.00	0.00	0.00	0.00	75.77	3425.01
19	7.4	88	0.6	0.05	136	5	340	17501290	1540.11	10.50	0.88	87.51	87.51	2380.18
20					188	5		16134010	0.00	0.00	0.00	0.00	80.67	3033.19
21					148	5		17558600	0.00	0.00	0.00	0.00	87.79	2598.67
22					178	5		14567770	0.00	0.00	0.00	0.00	72.84	2593.06
23					159	6		14857140	0.00	0.00	0.00	0.00	89.14	2362.29
24					226	5		15717100	0.00	0.00	0.00	0.00	78.59	3552.06
25					262	10		15781880	0.00	0.00	0.00	0.00	157.82	4134.85
26	7.4	89	0.4	0.06	162	8	327	15825150	1408.44	6.33	0.95	126.60	126.60	2563.67
27					134	5		20522200	0.00	0.00	0.00	0.00	102.61	2749.97
28					138	5		23756270	0.00	0.00	0.00	0.00	118.78	3278.37
29					178	5		17320880	0.00	0.00	0.00	0.00	86.60	3083.12
30					204	5		20179580	0.00	0.00	0.00	0.00	100.90	4116.63
31														

IS: Insufficient amount of sample due to low flow or sampler malfunction.

Bord Na Mona Energy Ltd, Allen Group, Rochforbsbridge, Co Westmeath
Composite Sampler Results Licence 503

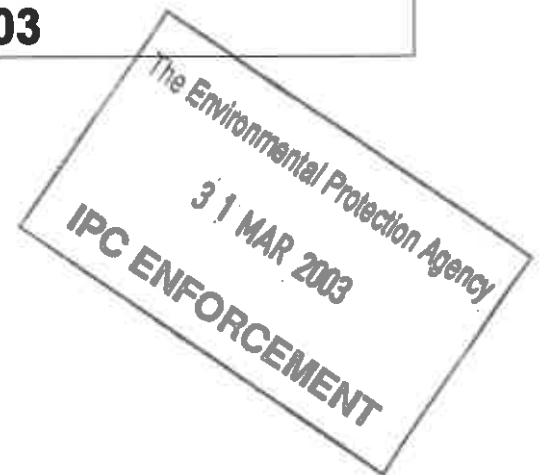
Month	pH	COD mg/l	Ammonia as N mg/l		Parameters Total mg/l		Suspended Solids mg/l	Total Solids mg/l	Colour Pt Co units	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals		Suspended Solids Kg/Day	Total Solids Kg/Day
					Phosphorus								Phosphorus Kg/Day			
December 2002																
1							5	168		19088410	0.00	0.00	0.00		95.44	3206.85
2							6	IS		21954350	0.00	0.00	0.00		131.73	#VALUE!
3	7.5	90	0.2	0.05			5	62	335	17630900	1586.78	3.53	0.88		88.15	1093.12
4							IS	IS		15551310	0.00	0.00	0.00		#VALUE!	#VALUE!
5							IS	IS		14685410	0.00	0.00	0.00		#VALUE!	#VALUE!
6							IS	IS		14685410	0.00	0.00	0.00		#VALUE!	#VALUE!
7							IS	IS		14685410	0.00	0.00	0.00		#VALUE!	#VALUE!
8							IS	IS		14685410	0.00	0.00	0.00		#VALUE!	#VALUE!
9							6	234		12636860	0.00	0.00	0.00		75.82	2957.03
10							5	272		7948599	0.00	0.00	0.00		39.74	2162.02
11							5	274		6368979	0.00	0.00	0.00		31.84	1745.10
12							14	272		6108435	0.00	0.00	0.00		85.52	1661.49
13							9	290		7248830	0.00	0.00	0.00		65.24	2102.16
14							12	288		6592889	0.00	0.00	0.00		79.11	1898.75
15	7.3	90	0.4	0.07			34	284	201	6311622	568.05	2.52	0.44		214.60	1792.50
16							6	282		5852809	0.00	0.00	0.00		35.12	1650.49
17							5	275		5751094	0.00	0.00	0.00		28.76	1581.55
18							6	290		5761672	0.00	0.00	0.00		34.57	1670.88
19							6	168		5413106	0.00	0.00	0.00		32.48	909.40
20							5	192		6420866	0.00	0.00	0.00		32.10	1232.81
21							6	222		11837110	0.00	0.00	0.00		71.02	2627.84
22	7.8	79	0.6	0.05			14	72	245	22252310	1757.93	13.35	1.11		311.53	1602.17
23							6	194		19815490	0.00	0.00	0.00		118.89	3844.21
24							6	144		16239760	0.00	0.00	0.00		97.44	2338.53
25							6	126		12594720	0.00	0.00	0.00		75.57	1586.93
26							5	116		12127750	0.00	0.00	0.00		60.64	1406.82
27							IS	IS		18644590	0.00	0.00	0.00		#VALUE!	#VALUE!
28							IS	IS		15498480	0.00	0.00	0.00		#VALUE!	#VALUE!
29							15	112		23845530	0.00	0.00	0.00		357.68	2670.70
30							5	102		27997970	0.00	0.00	0.00		139.99	2855.79
31							5	126			0.00	0.00	0.00		0.00	0.00

IS: Insufficient amount of sample due to low flow or sampler malfunction.



**Annual Environmental Report
IPC LICENCE 503**

March 2003



Contents

1 Introduction

- 1.1 Company Details
- 1.2 Activities
- 1.3 Environmental Policy
- 1.4 Environmental Management of the Company

2 Summary Information

- 2.1 Emissions to Water Summary
 - 2.1.1 Silt Pond Emissions
 - 2.1.2 Yard Run-off
 - 2.1.3 Composite Sampler Report
 - 2.1.4 Non-compliance's
- 2.2 Emissions to Air
 - 2.2.1 Dust Monitoring
 - 2.2.2 Non-compliance's
- 2.3 Waste Arisings
 - 2.3.1 Hazardous Waste
 - 2.3.2 Non-Hazardous Waste
- 2.4 Energy Consumption
- 2.5 Environmental Incidents and Complaints

3 Management of the Activity

- 3.1 Environmental Management Programme Report
- 3.2 Environmental Expenditure

4 Licence Specific Reports

4.1 Surface Water Discharge Monitoring Location Programme Review

4.2 Bunding Programme

4.3 Boiler Combustion Efficiency

4.4 Resource Consumption Summary

4.5 De-silting Report

4.6 Bog Development and Operational Programme

4.7 Bog Rehabilitation Report

5 Summary

Appendix 1: Composite Sampler Results

1 Introduction

1.1 Company Details

Name: Bord na Mona Energy Limited.

Address: Allen Group
Derrygreenagh Works
Rochfortbridge
Mullingar
Co Westmeath.

Telephone No: 044 / 22181 **Fax No:** 044 / 22344

Contact Name: Paul Riordan

Position: Regional Manager.

National Grid Reference: E249450 N238140

1.2 Activities

The Allen Group of bogs are situated in counties Kildare and Offaly and are generally bounded by the Grand Canal to the North, the Barrow River and tributaries to the South, Nass to the East and Tullamore to the West.

These bogs comprise most of the bogland area that was formerly referred to as the Bog of Allen.

The Allen Group has a total acquired area of 21,150 hectares of which 2826 nett hectares were in production in 2002.

The Allen Group currently employs 151 permanent workers and used 35 seasonal workers in the 2002 production season

Transport operations are carried out on a seven day cycle throughout the year.

Production operations are typically carried out over a seven day week (weather permitting) for 12 to 15 hours per day.

Peat Milling Operations.

For milled peat production the bog is laid out in a series of rectangular fields of varying length and 15m wide with drains located between. There are essentially four operations involved in milled peat production:

- Milling.
- Harrowing.
- Ridging.
- Harvesting.

Milling.

Special milling machines work there way along the fields, milling approximately 15mm of peat of the top of the bog in a pass.

Harrowing

In the course of drying, the milled peat is turned a number of times to avail of the drying conditions. This is achieved with a machine called a harrow. The milled peat is harrowed until its moisture content is down to approximately 40-50%, which can take up to two to three days, weather depending.

Ridging

The dry peat is then scraped into long ridges running down the centre of each field. This is done with a ridger, a machine consisting of a series of blades in the shape of a v that opens the full width of the field.

Harvesting

During harvesting every eleventh field is used to stockpile the peat, with this field receiving the milled peat from the five fields either side.

The milled peat is then transported via the existing network of peatland railways to one of the following locations.

- Power station (EPL)
- Horticultural Factory.

1.3 Environmental Policy



Bord na Mona Energy Limited is a commercial semi-state body with responsibility to develop Ireland's peat resources in the national interest.

Bord na Mona Energy Limited is committed to gather and make available information on all aspects of its environmental impact and to help improve understanding among the public generally of its role and the importance of Irish peatlands.

Bord na Mona Energy Limited recognises the importance of peatland conservation.

Bord na Mona Energy Limited will leave behind all areas it owns as either an economically or socially integrated resource of a high environmental value.

Bord na Mona Energy Limited seeks to conduct all aspects of its business in an environmentally sensitive value.

Bord na Mona Energy Limited will establish an environmental management system specifically addressing the following impacts.

- Discharges to water.
- Emissions to atmosphere.
- Waste disposal.
- Use of natural resources.
- Noise, vibration, odour, dust and visual effects.
- Natural environment and eco-system.

The environmental management system will be monitored, maintained and continually improved.

A system of regular environmental audits will be put in place.

Bord na Mona Energy Limited will continue research and development into all aspects of its environmental impact.

This statement is published and is available at all locations within the division and its contents are brought to the attention of all employees.

1.4 Environmental Management of the Company

The organisational structure within the Allen Group is presented in the flow chart below.



- (1) Overall environmental responsibilities
- (2) Records of complaints and registers
- (3) All production related issues
- (4) Machine maintenance
- (5) Co-ordinating environmental affairs
- (6) All peat transportation matters
- (7) Silt pond maintenance, tea centres, codes of practice
- (8) Fuel loading, oil traps, weekly workshop inspections.

2.1 Emissions to Water Summary

The following tables contain a summary of the emissions to surface waters from within the Allen Group.

The following tables contain a summary of the emissions to surface waters from within the Allen Group.

Allen Group Annual Environmental Report 2002

Silt Pond No: RD 17
Reporting Period
(Jan-Dec 2002)

SW No. 10

Parameter	Jan/Feb/Mar Emission (mg/l)	April/May/June Emission (mg/l)	July/Aug/Sept Emission (mg/l)	Oct/Nov/Dec Emission (mg/l)	E L V	Compliant
pH units	8.1	8.2	7.9	7.5	~	
Flow (L/sec)	74.9	131	22.5	97.8	~	
Suspended Solids (mg/l)	19	21	5	7	35mg/l	YES
Total Solids (mg/l)	472	530	440	350	~	
Total Phosphorus (mg/l)	0.08	0.08	0.09	0.09	~	
Ammonia (mg/l)	0.8	<0.2	0.7	0.4	~	
Colour (Pt Co units)	102	76	85	164	~	
COD (mg/l)	56	18	26	60	~	

Silt Pond No: BK 23
Reporting Period
(Jan-Dec 2002)

SW No. 14

Parameter	Jan/Feb/Mar Emission (mg/l)	April/May/June Emission (mg/l)	July/Aug/Sept Emission (mg/l)	Oct/Nov/Dec Emission (mg/l)	E L V	Compliant
pH units	8.1	8.1	8.0	7.5	~	
Flow (L/sec)	57.9	25	25	59.4	~	
Suspended Solids (mg/l)	<5	<5	<5	33	35mg/l	YES
Total Solids (mg/l)	412	356	442	306	~	
Total Phosphorus (mg/l)	<0.05	<0.05	0.14	0.10	~	
Ammonia (mg/l)	0.6	0.5	1.2	0.5	~	
Colour (Pt Co units)	134	138	69	164	~	
COD (mg/l)	55	59	38	95	~	

Silt Pond No: CC 51
Reporting Period
(Jan-Dec 2002)
SW No. 33

Parameter	Jan/Feb/Mar Emission (mg/l)	April/May/June Emission (mg/l)	July/Aug/Sept Emission (mg/l)	Oct/Nov/Dec Emission (mg/l)	E L V (mg/l)	Compliant
pH units	8.4	8.3	8.3	7.6	~	
Flow (L/sec)	34.1	32	12.8	220.4	~	
Suspended Solids (mg/l)	10	<5	<5	22	35mg/l	YES
Total Solids (mg/l)	248	280	284	148	~	
Total Phosphorus (mg/l)	<0.05	<0.05	<0.05	<0.05	~	
Ammonia (mg/l)	0.4	2.5	0.7	1.1	~	
Colour (Pt Co units)	111	126	64	180	~	
COD (mg/l)	42	54	20	67	~	

Silt Pond No: DL 67
Reporting Period
(Jan-Dec 2002)
SW No. 43

Parameter	Jan/Feb/Mar Emission (mg/l)	April/May/June Emission (mg/l)	July/Aug/Sept Emission (mg/l)	Oct/Nov/Dec Emission (mg/l)	E L V (mg/l)	Compliant
pH units	8.0	7.9	8.0	7.1	~	
Flow (L/sec)	27.8	55	6.61	154	~	
Suspended Solids (mg/l)	8	5	<5	12	35mg/l	YES
Total Solids (mg/l)	228	226	324	124	~	
Total Phosphorus (mg/l)	<0.05	<0.05	<0.05	<0.05	~	
Ammonia (mg/l)	1.6	1.0	2.9	0.4	~	
Colour (Pt Co units)	362	415	106	438	~	
COD (mg/l)	79	84	39	94	~	

Silt Pond No: BR 94
Reporting Period
(Jan-Dec 2002)
SW No. 65

Parameter	Jan/Feb/Mar Emission (mg/l)	April/May/June Emission (mg/l)	July/Aug/Sept Emission (mg/l)	Oct/Nov/Dec Emission (mg/l)	EL V (mg/l)	Compliant
pH units	7.9	8.0	8.2	7.2	~	
Flow (L/sec)	21.5	70	12.3	210.6	~	
Suspended Solids (mg/l)	<5	<5	<5	31	35mg/l	YES
Total Solids (mg/l)	256	240	369	162	~	
Total Phosphorus (mg/l)	0.08	<0.05	<0.05	0.11	~	
Ammonia (mg/l)	1.2	0.7	<2	0.5	~	
Colour (Pt Co units)	214	245	95	284	~	
COD (mg/l)	70	83	42	94	~	

Silt Pond No:BN 98
Reporting Period
(Jan-Dec 2002)
SW No. 66

Parameter	Jan/Feb/Mar Emission (mg/l)	April/May/June Emission (mg/l)	July/Aug/Sept Emission (mg/l)	Oct/Nov/Dec Emission (mg/l)	EL V (mg/l)	Compliant
pH units	8.3	8.1	7.8	7.2	~	
Flow (L/sec)	50	65	21.2	701	~	
Suspended Solids (mg/l)	6	<5	8	26	35mg/l	YES
Total Solids (mg/l)	298	244	352	170	~	
Total Phosphorus (mg/l)	0.06	<0.05	<0.05	0.10	~	
Ammonia (mg/l)	1.0	0.4	<0.2	0.5	~	
Colour (Pt Co units)	200	242	71	274	~	
COD (mg/l)	64	76	37	90	~	

2.1.2 Yard Run-off

- The tables below are a summary of the COD emissions to surface waters from yards and workshops within the Allen Group.

Ballycon SWE-1

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
COD mg/l	44	44	17	15	25	-	-	-	-	61	26	47

Clonsast SWE-1

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
COD mg/l	14	31	34	26	11	-	-	-	-	11	10	74

Ballydermot SWE-1

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
COD mg/l	65	76	70	48	55	-	-	-	-	29	80	79

Ballydermot SWE-2

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
COD mg/l	62	63	54	42	62	-	-	-	-	113	76	48

Timahoe SWE-1

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
COD mg/l	28	38	104	40	47	-	-	-	-	10	80	65

Note: There was no sample available on the day of sampling in the months June, July, August & September.

2.1.3 Composite Sampler Programme

A proposal will be submitted to the Agency, to relocate the composite sampler in June 2003. At that time it will have been in operation for two years at its present location. Attached in Appendix 1 are the results of the monitoring carried out using the composite sampler in 2002. There was one non-compliance in relation to composite sampling during the reporting period.

2.1.4 Non-compliance's

There was one non-compliance, in relation to silt pond sampling during the reporting period, the details are included in the table below.

Date	Non-compliance	Cause	Corrective Action
28/11/02	SS from SW02. Emission Limit Value was exceeded ie. (108mg/l Vs 35mg/l)	Sample pot was contaminated while taking sample	Greater precaution taken while taking samples, particularly when sampling SW's, of very low flow.

2.2 Emissions to Air

2.2.1 Dust Monitoring

The table below contains the dust emissions for each dust monitoring location within the Allen Group. Monitoring took place on three separate occasions during the periods, June – July, July – August, August – September 2002.

June - Jul

Emission Point	Parameter	Emission (mg/m ² /day)	Emission Limit Value	Compliant
DM 01	Dust	68	(350mg/m ² /Day)	YES
DM 02	Dust	31	(350mg/m ² /Day)	YES
DM 03	Dust	43	(350mg/m ² /Day)	YES

Jul - Aug

Emission Point	Parameter	Emission (mg/m ² /day)	Emission Limit Value	Compliant
DM 01	Dust	234	(350mg/m ² /Day)	YES
DM 02	Dust	55	(350mg/m ² /Day)	YES
DM 03	Dust	123	(350mg/m ² /Day)	YES

Aug - Sep

Emission Point	Parameter	Emission (mg/m ² /day)	Emission Limit Value	Compliant
DM 01	Dust	24	(350mg/m ² /Day)	YES
DM 02	Dust	43	(350mg/m ² /Day)	YES
DM 03	Dust	129	(350mg/m ² /Day)	YES

Note: DM 01= Killinagh Bog. DM 02 = Derrybrennan Bog. DM 03 = Ballykeane

2.2.2 Non-compliance's

There was no non-compliance, in relation to air in the reporting period.

2.3 Waste Arisings

2.3.1 Hazardous Waste

Derrygreenagh being a central location, is used as a collection point for all hazardous wastes emanating from all the areas in both the Allen and Derrygreenagh Groups. All waste oils, filters, spent batteries, etc are collected centrally at Derrygreenagh before being removed by a licenced waste contractor such as Atlas Waste Oil, Hammond Lane, Returnabatt, etc.

A system is in place where by every area has its own waste oil and filter barrel. These barrels are painted yellow to distinguish them from ordinary barrels and are clearly marked waste filters or waste oil.

When the barrels are getting near full, the area team leader informs our Derrygreenagh stores and a truck is dispatched to collect the full barrels and replace them with empties. Any spent batteries will also be collected if the need arises.

Records of all the hazardous wastes handled by the Allen and Derrygreenagh Groups from January-December 2002 have been submitted with the Derrygreenagh AER.

2.3.2 Non-Hazardous Waste

The following table lists the quantities of the wastes generated from January-December 2002 from all of the Allen Group.

Waste Type	Quantity (Tonnes)
Silt Pond Waste	1479
Polyethylene	242.67
Scrap Metal	140.78
Mixed Municipal Waste	17.500
Total	1879.95

Note: Scrap Metal and Polyethylene are both recycled.

2.4 Energy Consumption

The table below is a summary of the energy consumption for the Allen Group, from the dates January – December 2002.

Water is not included, as it is not used as part of the production process. It is only used in offices, canteens and workshops on a domestic scale.

None of the boilers in the Allen Group are briquette fired.

Fuel	Volume M ³	Tonnes	MW/Hours
Jan - Dec 2002			
Diesel	567	470.75	5554.85
Petrol	2.177	1.64	19.63
Electricity	NA	NA	102.78
Total	569.177	472.39	5677.26

2.5 Environmental Incidents and Complaints

There was no incident within the Allen Group, during the reporting period

Environmental Incidents	Number of Incidents
Incidents	0
Incidents requiring corrective action	0
Categories of Incident	
Odour	
Noise	
Water	
Air	
Procedural	
Miscellaneous	

There was one complaint within the Allen Group, during the reporting period The Agency was informed.

Environmental Complaints	Number of complaints
Complaints received	1
Complaints requiring corrective action	1
Categories of complaint	
Odour	
Noise	
Water	
Air	
Procedural	
Miscellaneous	✓

3.0 Management of the Activity

3.1 Environmental Management Programme Report

Project	Description	Status
Project 1 & Project 2	(1)The reduction of fugitive dust emissions. (2)The minimisation of suspended solids movement to surface waters. (3)The examination of production machine modification. (4)The results of dust monitoring.	Projects ongoing, with production methods and training continuously being assessed for improvement, although production machine modification is behind schedule due to the inclement weather experienced during the 02 season. All personnel have been trained.
Project 3	Rationalisation of surface water discharge points.	Project Complete where feasible.
Project 4	Investigation of reed bed systems for final polish of silt pond discharges.	Project complete and retained on file. Report concludes that reed beds are not suitable for Bord na Mona's silt treatment systems.
Project 5	The separation of flood water and external runoff from production runoff.	Project Complete where feasible.
Project 6	The effective spill/leak management of mobile fueling units by implementing a programme of training and adopting Codes of Practice.	1: Procedures in place. 2: Training complete 3: ERP in place. 4: Upgrading of fueling units ongoing.
Project 7	Programme of bunding at all bulk diesel storage facilities	Project complete and works certified.
Project 8	Investigation into the reuse of silt pond waste	A silt pond has been constructed, in the Kilberry Group of Bogs, where trials will be carried out to examine the potential for re-using the silt waste from the silt pond as the main product, or as a by-product. This project was due to commence in 2002, but failed to do so, due to the weather conditions during the 2002 production season.
Project 9	Study into the collection storage and reuse of polyethylene covering	Recycling company sourced, recycling ongoing, with records on file
Project 10	Examination of the use of reusable materials in the protection of stockpiles	Project Completed by Polymer Institute, Athlone I. T., report on file.
Project 11	Examination of wind power technology for pumped drainage.	Project complete, report on file. Concludes that wind power pumping not suitable to Bord na Mona's requirements

3.2 Environmental Expenditure

The table below lists the environmental costs incurred by the Allen Group between January-December 2002.

In calculating the environmental costs 70% of the total costs were attributed to Licence 503 and 30% to Licence 501.

Expenditure Related to the Operation of the Allen IPC Licence During the Period January – December 2002	
Description	Cost (€)
Machine hours @ €40/hour	404,320
Labour	127,796
Materials	74,032
Overheads (ESB, Phones, Consumables)	14,000
Laboratory Analysis	17,500
EPA Fees	6,514
Total €	€ 644,162

4 Licence Specific Reports

4.1 Surface Water Discharge Monitoring Location Programme Review

The surface water discharge monitoring location programme remains the same as was submitted and accepted by the Agency in June 2000.

Pipes have been fitted at each location in order to accommodate flow metres and the provision of safe access is also ongoing.

Emission point signs have been designed and are in place.

Additional work has also being carried out at these locations as part of the ongoing silt pond upgrade programme.

Monitoring will be carried out at these same locations in the forthcoming year and reported on in next years AER.

4.2 Bunding Programme

The bunding programme for large scale oil storage facilities is complete and works certified.

4.3 Boiler Combustion Efficiency

Boiler efficiency tests were carried out during the year. The results of these tests are shown in the table below.

A full breakdown of these tests are retained on file at our Derrygreenagh office.

Boiler Location	Date Tested	% Efficiency
Ballydermot	09/12/02	88.1
Clonsast	21/10/02	87.4
Power Station	09/12/02	87.1

4.4 Resource consumption summary

There was a total of 588,328 tonnes of milled peat produced across the licence area in the production season 2002.

There was also a total of 1,010,469 tonnes of stock peat sold during the reporting period. Of this total, 937,716 tonnes were sold to Edenderry Power Limited, 14,967 tonnes to Derrinlough Briquette Factory and 57,786 tonnes to Kilberry Moss Factory.

4.5 De-Silting Report

Summary Data Table of Ponds De-Silted From Jan-December 2002

Bog	No Silt Ponds	Cleaned Once	Cleaned Twice	Cleaned Three Times	Notes
Derries	8	2			*
Rathdrum	4	2	1		*
Clonad	4	3			
M Lucas	2				**
Cloncreen	6	4	2		
Esker	7	7			
Cavemount	5	5			
Ballykeane	5	2	3		
Codd South	2				
Ballydermot N	1	1			
Ballydermot S	1	1			
Clonsast N	2	2			*
Ballycon	3	3			**
Garrymore	4	4			*
Derrylea	2	2			
Glashabaun N	2	1		1	
Codd N	4	3	1		
Ticknevin	2		2		*
Glashabaun S	3	3			
D/brennan	5	1	3		
Killinagh	3				
Lodge	2		2		
Bulge	2	1			
Barnaran	2	1			
Blackriver	2	1	1		

*: No production. **: Bog cut out, no activity at this Bog.

It should be noted that the unusually inclement weather experienced during the year, greatly hampered the silt pond cleaning programme.

4.6 Bog Development and Operational Programme

The majority of bog development is complete within the Allen Group. During the reporting period development was on going on Rathdrum bog. This development work comprised of ditching, screw leveling and piping.

The cutting of sod turf at Timahoe North (Dwg 8.1K) is currently being explored.

There will be 3846 nett hectares in production in the 2003 season, yeilding 807,336 tonnes @ 55% moisture content.

4.7 Bog Rehabilitation Report

Management guidelines for the planning and implementation of cutaway bog rehabilitation have been adopted and the document is currently available for inspection on file at the Derrygreenagh office.

5 Summary

With regard to environmental compliance at the Allen Group of Bogs, there was one non-compliance in the quarterly grab sampling of the ponds in the Surface Water Discharge Monitoring Location Programme.

There was one non-compliance in relation to the Composite Sampler during the monitoring period January to December. Dust monitoring results showed no non-compliances at dust sensitive locations. There was one complaint of an environmental nature received during the reporting period.

The staff awareness through training and involvement in the operation of the licence has also improved immensely. A full programme of training and awareness has been conducted at the works and has targeted all personnel ie. Office, Workshop, Transport and Production.

Bord na Mona are project partners of the Southeastern River Basin District Management, as set up under the Water Framework Directive.

Bord na Mona are also involved in catchment management on the River Barrow.

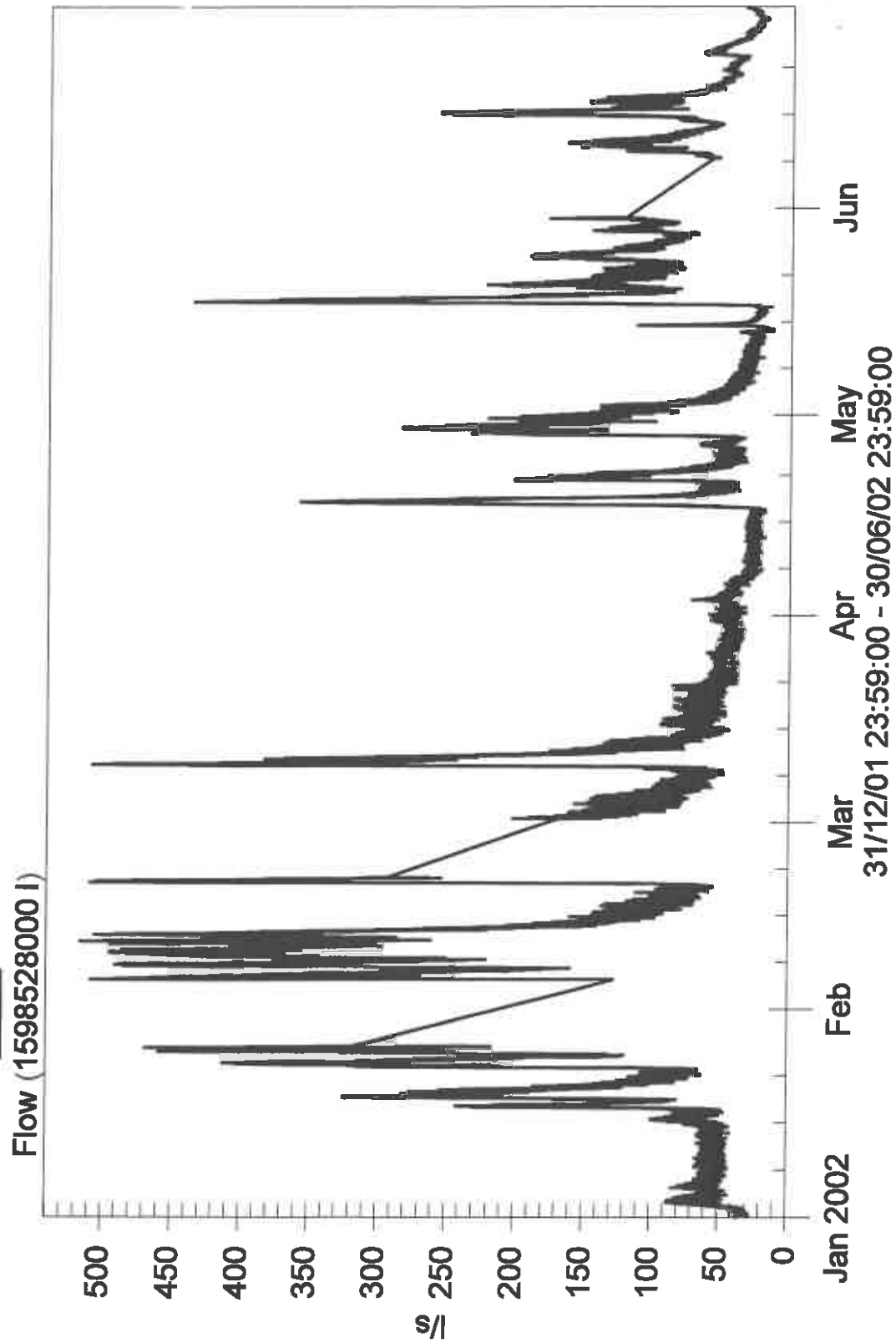
Bord na Mona Energy Ltd would like to take this opportunity to advise the Environmental Protection Agency of its continued commitment to improving its environmental performance by adopting cleaner production methods and improving its environmental protection measures.

APPENDIX 1

Composite Sampler Results

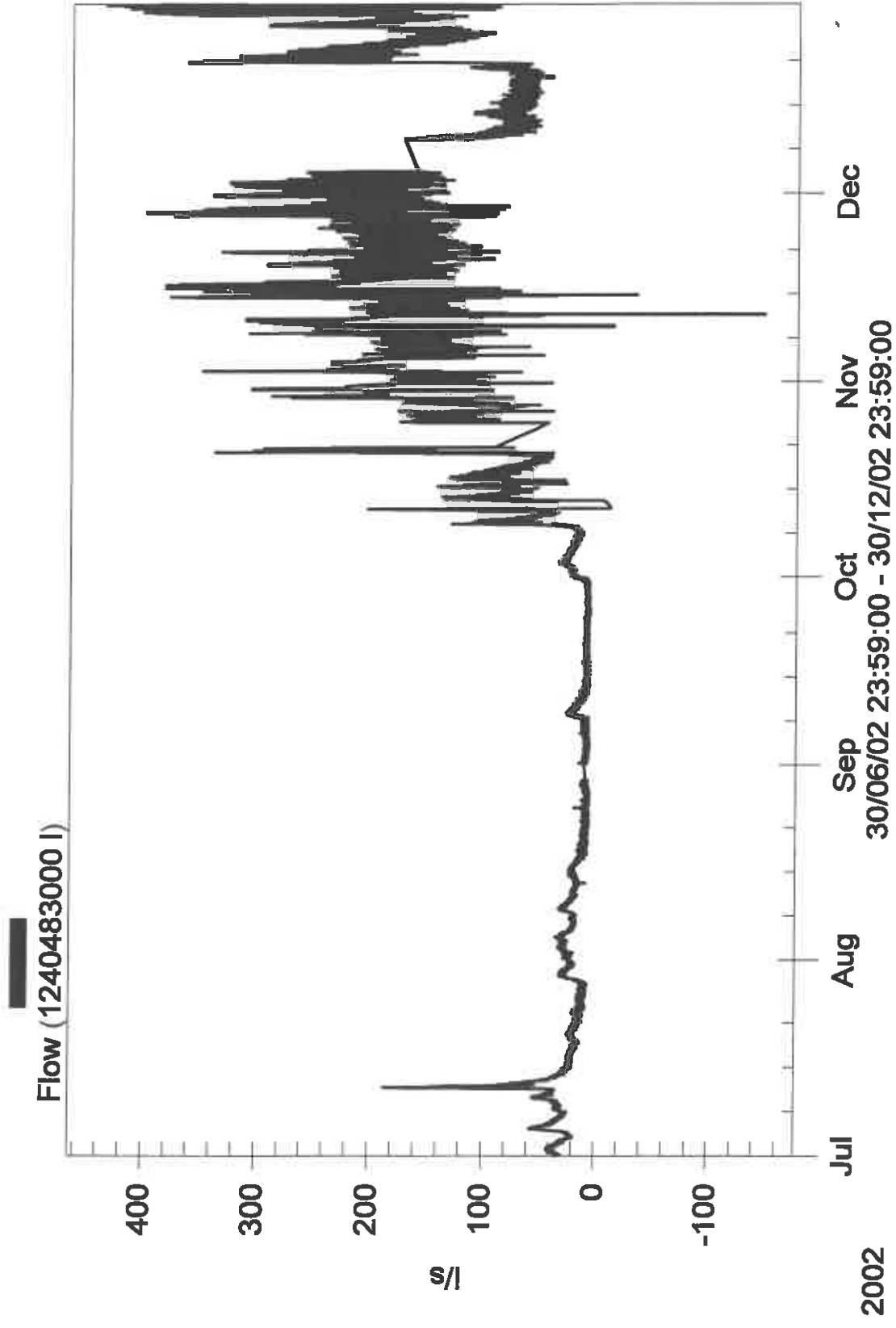
Allen Composite Sampler

Jan - June 02



Allen Composite Sampler

July - Dec 02



Bord Na Mona Energy Ltd, Allen Group, Rochfordsbridge, Co Westmeath
Composite Sampler Results Licence 503

Month	pH	COD mg/l	Ammonia as N		Parameters		Colour Pt Co	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals	
			mg/l	mg/l	Total Phosphorus mg/l	Suspended Solids mg/l	Total Solids mg/l				Phosphorus Kg/Day	Suspended Solids Kg/Day
January 2002												
1						IS	IS	2750901	0.00	0.00	0.00	#VALUE!
2						IS	IS	3724619	0.00	0.00	0.00	#VALUE!
3	8	63	2.3	0.05		8	238	5674629	357.50	13.05	0.28	45.40
4						5	314	5085409	0.00	0.00	0.00	25.43
5						5	308	5401596	0.00	0.00	0.00	27.01
6						5	298	4895982	0.00	0.00	0.00	24.48
7						5	280	4668015	0.00	0.00	0.00	23.34
8						5	330	4612027	0.00	0.00	0.00	23.06
9						5	294	4610567	0.00	0.00	0.00	23.05
10	7.9	66	2	0.05		5	250	4718040	311.39	9.44	0.24	23.59
11						5	372	4664292	0.00	0.00	0.00	23.32
12						5	258	4635268	0.00	0.00	0.00	23.18
13						22	474	4646918	0.00	0.00	0.00	102.23
14						IS	IS	4882091	0.00	0.00	0.00	#VALUE!
15						IS	IS	6359393	0.00	0.00	0.00	#VALUE!
16						IS	IS	5618306	0.00	0.00	0.00	#VALUE!
17	8.4	63	1.2	0.05		8	318	13386590	843.36	16.06	0.67	107.09
18						5	290	13999970	0.00	0.00	0.00	70.00
19						6	222	20155270	0.00	0.00	0.00	120.93
20						5	226	12777860	0.00	0.00	0.00	63.89
21						5	242	8669093	0.00	0.00	0.00	43.35
22						5	252	7596708	0.00	0.00	0.00	37.98
23						8	250	22876810	0.00	0.00	0.00	183.01
24	7.6	77	1	0.05		6	226	21739000	1673.90	21.74	1.09	130.43
25						6	184	22406750	0.00	0.00	0.00	134.44
26						42	202	17967820	0.00	0.00	0.00	754.65
27						29	180	11035870	0.00	0.00	0.00	320.04
28						IS	IS	11035870	0.00	0.00	0.00	#VALUE!
29						IS	IS	11035870	0.00	0.00	0.00	#VALUE!
30						IS	IS	11035870	0.00	0.00	0.00	#VALUE!
31	7.8	95	0.9	0.05		33	192	11035870	1048.41	9.93	0.55	364.18
												2118.89

IS: Insufficient amount of sample due to low flow or sampler malfunction.

Bord Na Mona Energy Ltd, Allen Group, Rochfordsbridge, Co Westmeath
Composite Sampler Results Licence 503

Month	pH	COD mg/l	Ammonia as N mg/l	Parameters Total Phosphorus mg/l	Suspended Solids mg/l	Total Solids mg/l	Colour Pt Co units	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals Total Phosphorus Kg/Day	Suspended Solids Kg/Day	Total Solids Kg/Day
February 2002													
1					IS	IS		11035870	0.00	0.00	0.00	#VALUE!	#VALUE!
2					IS	IS		11035870	0.00	0.00	0.00	#VALUE!	#VALUE!
3					IS	IS		11035870	0.00	0.00	0.00	#VALUE!	#VALUE!
4	7.4	77	0.7	0.05	10	228	288	11035870	849.76	7.73	0.55	110.36	2516.18
5					9	168		26168740	0.00	0.00	0.00	235.52	4396.35
6					8	194		25784070	0.00	0.00	0.00	206.27	5002.11
7					5	192		30045550	0.00	0.00	0.00	150.23	5768.75
8					6	132		29386210	0.00	0.00	0.00	176.32	3878.98
9					6	206		38085460	0.00	0.00	0.00	228.51	7845.60
10					5	212		32982160	0.00	0.00	0.00	164.91	6992.22
11	7.7	83	0.5	0.05	IS	IS	299	32857100	2727.14	16.43	1.64	#VALUE!	#VALUE!
12					19	130		31687200	0.00	0.00	0.00	602.06	4119.34
13					17	192		15795550	0.00	0.00	0.00	268.52	3032.75
14					27	212		11291280	0.00	0.00	0.00	304.86	2393.75
15					29	160		10030350	0.00	0.00	0.00	290.88	1604.86
16					22	150		8643432	0.00	0.00	0.00	190.16	1296.51
17					22	146		7485808	0.00	0.00	0.00	164.69	1092.93
18					21	166		6815415	0.00	0.00	0.00	143.12	1131.36
19	7.8	89	0.8	0.07	20	164	280	9760311	868.67	7.81	0.68	195.21	1600.69
20					5	102		28722510	0.00	0.00	0.00	143.61	2929.70
21					IS	IS		14679360	0.00	0.00	0.00	#VALUE!	#VALUE!
22					IS	IS		14679360	0.00	0.00	0.00	#VALUE!	#VALUE!
23					IS	IS		14679360	0.00	0.00	0.00	#VALUE!	#VALUE!
24					IS	IS		14679360	0.00	0.00	0.00	#VALUE!	#VALUE!
25					IS	IS		14679360	0.00	0.00	0.00	#VALUE!	#VALUE!
26	7.1	91	0.8	0.05	10	172	254	14679360	1335.82	11.74	0.73	146.79	2524.85
27					IS	IS		14679360	0.00	0.00	0.00	#VALUE!	#VALUE!
28					IS	IS		14679360	0.00	0.00	0.00	#VALUE!	#VALUE!
29													
30													
31													

IS: Insufficient amount of sample due to low flow or sampler malfunction.

Bord Na Mona Energy Ltd, Allen Group, Rochforbsbridge, Co Westmeath
Composite Sampler Results Licence 503

Month	pH	COD mg/l	Ammonia as N mg/l	Parameters		Colour Pt Co	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals		Total Solids
				Total Phosphorus mg/l	Suspended Solids mg/l					Total Phosphorus Kg/Day	Suspended Solids Kg/Day	
March 2002												
1					5		14213270	0.00	0.00	0.00	71.07	2643.67
2					5		11208690	0.00	0.00	0.00	56.04	1860.64
3					5		9849362	0.00	0.00	0.00	49.25	1891.08
4	8.2	74	1.2	0.05	5	236	8888714	657.76	10.67	0.44	44.44	2008.85
5					5		7740509	0.00	0.00	0.00	38.70	1904.17
6					5		6813121	0.00	0.00	0.00	34.07	1757.79
7					5		6191091	0.00	0.00	0.00	30.96	1622.07
8					5		5779652	0.00	0.00	0.00	28.90	1572.07
9					5		24979470	0.00	0.00	0.00	124.90	6494.66
10					5		25424940	0.00	0.00	0.00	127.12	5491.79
11	8.2	79	0.9	0.07	5	284	13476840	1064.67	12.13	0.94	67.38	2291.06
12					6		9684426	0.00	0.00	0.00	58.11	1917.52
13					8		7356409	0.00	0.00	0.00	58.85	1677.26
14					15		5723359	0.00	0.00	0.00	85.85	1556.75
15					5		6075941	0.00	0.00	0.00	30.38	1567.59
16					5		6120937	0.00	0.00	0.00	30.60	1566.96
17					5		5543448	0.00	0.00	0.00	27.72	1419.12
18					5		5616240	0.00	0.00	0.00	28.08	1493.92
19	8.4	69	0.2	0.05	5	199	5485602	378.51	1.10	0.27	27.43	1283.63
20					IS		5346928	0.00	0.00	0.00	#VALUE!	#VALUE!
21					5		5247282	0.00	0.00	0.00	26.24	1374.79
22					5		4367873	0.00	0.00	0.00	21.84	1188.06
23					5		4146480	0.00	0.00	0.00	20.73	1152.72
24					5		4032881	0.00	0.00	0.00	20.16	1040.48
25					6		4127250	0.00	0.00	0.00	24.76	1353.74
26	8.4	71	0.8	0.05	7	186	4172743	296.26	3.34	0.21	29.21	1427.08
27					5		3823350	0.00	0.00	0.00	19.12	1338.17
28					5		3642625	0.00	0.00	0.00	18.21	1267.63
29					5		3667576	0.00	0.00	0.00	18.34	1224.97
30					5		3735760	0.00	0.00	0.00	18.68	1419.59
31					5		4182987	0.00	0.00	0.00	20.91	1530.97

IS: Insufficient amount of sample due to low flow or sampler malfunction.

Bord Na Mona Energy Ltd, Allen Group, Rochfordsbridge, Co Westmeath
Composite Sampler Results Licence 503

Month	pH	COD mg/l	Ammonia as N mg/l	Parameters		Suspended Solids mg/l	Total Solids mg/l	Colour Pt Co units	Flow		COD Kg/Day	Ammonia as Kg/Day	Daily Totals		Suspended Solids Kg/Day	Total Solids Kg/Day
				Total Phosphorus mg/l	Total Phosphorus mg/l				Daily	Total (litres)			Phosphorus Kg/Day	Total Kg/Day		
April 2002																
1					5	458			3908580		0.00	0.00	0.00		19.54	1790.13
2	8.4	43	1	0.08	5	330	110		3727494	160.28	3.73	0.30	0.30		18.64	1230.07
3					5	286			4385103	0.00	0.00	0.00	0.00		21.93	1254.14
4					5	256			3680830	0.00	0.00	0.00	0.00		18.40	942.29
5					5	290			3566938	0.00	0.00	0.00	0.00		17.83	1034.41
6					5	300			3148721	0.00	0.00	0.00	0.00		15.74	944.62
7					5	300			2490969	0.00	0.00	0.00	0.00		12.45	747.29
8					5	402			2380471	0.00	0.00	0.00	0.00		11.90	956.95
9	8.5	71	0.3	0.05	5	300	142		2411462	171.21	0.72	0.12	0.12		12.06	723.44
10					5	316			2334398	0.00	0.00	0.00	0.00		11.67	737.67
11					5	328			2285095	0.00	0.00	0.00	0.00		11.43	749.51
12					5	316			2353977	0.00	0.00	0.00	0.00		11.77	743.86
13					5	330			2371677	0.00	0.00	0.00	0.00		11.86	782.65
14					5	322			2404279	0.00	0.00	0.00	0.00		12.02	774.18
15					5	336			2308218	0.00	0.00	0.00	0.00		11.54	775.56
16	8.4	68	0.2	0.05	5	328	112		2127934	144.70	0.43	0.11	0.11		10.64	697.96
17					5	302			13875620	0.00	0.00	0.00	0.00		69.38	4190.44
18					5	176			16176820	0.00	0.00	0.00	0.00		80.88	2847.12
19					5	204			5052602	0.00	0.00	0.00	0.00		25.26	1030.73
20					5	214			4489066	0.00	0.00	0.00	0.00		22.45	960.66
21					5	258			11985370	0.00	0.00	0.00	0.00		59.93	3092.23
22					5	344			8469904	0.00	0.00	0.00	0.00		42.35	2913.65
23	8.2	65	0.6	0.05	6	354	130		4507810	293.01	2.70	0.23	0.23		27.05	1595.76
24					5	368			3760765	0.00	0.00	0.00	0.00		18.80	1383.96
25					5	268			3889281	0.00	0.00	0.00	0.00		19.45	1042.33
26					IS	IS			4395544	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!	#VALUE!
27					IS	IS			5078548	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!	#VALUE!
28					IS	IS			16411730	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!	#VALUE!
29					IS	IS			16773750	0.00	0.00	0.00	0.00	#VALUE!	#VALUE!	#VALUE!
30	8	86	0.5	0.06	5	240	290		14034040	1206.93	7.02	0.84	0.84		70.17	3368.17
31																

IS: Insufficient amount of sample due to low flow or sampler malfunction.

Bord Na Mona Energy Ltd, Allen Group, Rochforbsbridge, Co Westmeath
Composite Sampler Results Licence 503

Month	pH	COD mg/l	Ammonia as N mg/l	Parameters		Total Solids mg/l	Colour Pt Co units	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals		Total Solids	Total
				Total Phosphorus mg/l	Suspended Solids mg/l						Total Phosphorus Kg/Day	Suspended Solids Kg/Day		
May 2002														
1					5	280		10565890	0.00	0.00	0.00	52.83	2958.45	
2					5	286		8620626	0.00	0.00	0.00	43.10	2465.50	
3					5	304		5052968	0.00	0.00	0.00	25.26	1536.10	
4					5	310		4158811	0.00	0.00	0.00	20.79	1289.23	
5					5	312		3434925	0.00	0.00	0.00	17.17	1071.70	
6					5	300		3173924	0.00	0.00	0.00	15.87	952.18	
7	8.3	69	0.2	0.05	5	342	189	2862738	197.53	0.57	0.14	14.31	979.06	
8					5	308		2759155	0.00	0.00	0.00	13.80	849.82	
9					5	320		2615159	0.00	0.00	0.00	13.08	836.85	
10					5	322		2568724	0.00	0.00	0.00	12.84	827.13	
11					5	322		2456019	0.00	0.00	0.00	12.28	790.84	
12					5	338		2190378	0.00	0.00	0.00	10.95	740.35	
13					5	416		2129125	0.00	0.00	0.00	10.65	885.72	
14	8.7	46	0.4	0.05	5	462	74	3559398	163.73	1.42	0.18	17.80	1644.44	
15					5	324		2254831	0.00	0.00	0.00	11.27	730.57	
16					5	320		1927911	0.00	0.00	0.00	9.64	616.93	
17					5	294		10691740	0.00	0.00	0.00	53.46	3143.37	
18					5	192		23671470	0.00	0.00	0.00	118.36	4544.92	
19					5	218		9771316	0.00	0.00	0.00	48.86	2130.15	
20					5	204		13479180	0.00	0.00	0.00	67.40	2749.75	
21	8.4	93	0.5	0.05	5	214	325	11283840	1049.40	5.64	0.56	56.42	2414.74	
22					5	166		9877032	0.00	0.00	0.00	49.39	1639.59	
23					5	260		8750018	0.00	0.00	0.00	43.75	2275.00	
24					5	242		12548490	0.00	0.00	0.00	62.74	3036.73	
25					5	168		11488610	0.00	0.00	0.00	57.44	1930.09	
26					11	232		9018312	0.00	0.00	0.00	99.20	2092.25	
27					5	244		7428116	0.00	0.00	0.00	37.14	1812.46	
28	8.3	89	0.3	0.05	6	308	260	9071503	807.36	2.72	0.45	54.43	2794.02	
29					5	222		8911249	0.00	0.00	0.00	44.56	1978.30	
30					5	258		8076135	0.00	0.00	0.00	40.38	2083.64	
31					5	250		5009645	0.00	0.00	0.00	25.05	1252.41	

IS: Insufficient amount of sample due to low flow or sampler malfunction.

Bord Na Mona Energy Ltd, Allen Group, Rochfordsbridge, Co Westmeath
Composite Sampler Results Licence 503

Month	pH	GOD mg/l	Ammonia as N mg/l	Parameters		Total Solids mg/l	Suspended Solids mg/l	Total Solids mg/l	Colour Pt-Co units	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals		Suspended Solids Kg/Day	Total Solids Kg/Day
June 2002				Total Phosphorus mg/l									Total Phosphorus Kg/Day			
1						254	5	254		5009645	0.00	0.00	0.00		25.05	1272.45
2						244	6	244		5009645	0.00	0.00	0.00		30.06	1222.35
3						256	5	256		5009645	0.00	0.00	0.00		25.05	1282.47
4	8.6	86	0.2	0.05		228	5	228	262	5009645	430.83	1.00	0.25		25.05	1142.20
5						IS	IS	IS		5009645	0.00	0.00	0.00		#VALUE!	#VALUE!
6						240	5	240		5009645	0.00	0.00	0.00		25.05	1202.31
7						270	5	270		5009645	0.00	0.00	0.00		25.05	1352.60
8						278	5	278		5193339	0.00	0.00	0.00		25.97	1443.75
9						264	5	264		7685268	0.00	0.00	0.00		38.43	2028.91
10						256	5	256		10931210	0.00	0.00	0.00		54.66	2798.39
11	8.2	86	0.2	0.05		230	5	230	302	8835005	759.81	1.77	0.44		44.18	2032.05
12						208	5	208		6269958	0.00	0.00	0.00		31.35	1304.15
13						242	6	242		5084819	0.00	0.00	0.00		30.51	1230.53
14						248	5	248		8714152	0.00	0.00	0.00		43.57	2161.11
15						218	5	218		14802850	0.00	0.00	0.00		74.01	3227.02
16						216	5	216		9458368	0.00	0.00	0.00		47.29	2043.01
17						180	7	180		9099869	0.00	0.00	0.00		63.70	1637.98
18	8.2	100	0.2	0.05		221	7	221	281	5501725	550.17	1.10	0.28		38.51	1215.88
19						270	5	270		4618411	0.00	0.00	0.00		23.09	1246.97
20						274	5	274		3874621	0.00	0.00	0.00		19.37	1061.65
21						298	5	298		3842442	0.00	0.00	0.00		19.21	1145.05
22						262	5	262		3638477	0.00	0.00	0.00		18.19	953.28
23						284	65	284		3540529	0.00	0.00	0.00		230.13	1005.51
24						292	5	292		4804541	0.00	0.00	0.00		24.02	1402.93
25	8.2	78	0.2	0.05		296	5	296	223	3842251	299.70	0.77	0.19		19.21	1137.31
26						338	5	338		2859560	0.00	0.00	0.00		14.30	966.53
27						286	6	286		2552806	0.00	0.00	0.00		15.32	730.10
28						316	5	316		2112413	0.00	0.00	0.00		10.56	667.52
29						293	5	293		2057647	0.00	0.00	0.00		10.29	602.89
30						300	5	300		2460020	0.00	0.00	0.00		12.30	738.01
31																

IS: Insufficient amount of sample due to low flow or sampler malfunction.

Bord Na Mona Energy Ltd, Allen Group, Rochforbsbridge, Co Westmeath
Composite Sampler Results Licence 503

Month	pH	COD mg/l	Ammonia as N mg/l	Parameters		Total Solids mg/l	Suspended Solids mg/l		Total Solids mg/l	Colour Pt Co units	Flow		COD Kg/Day	Ammonia as Kg/Day	Daily Totals		Suspended Solids Kg/Day	Total Solids Kg/Day
July 2002				Phosphorus mg/l							Daily Total (litres)				Phosphorus Kg/Day			
1						336	5		336		3062413		0.00	0.00	0.00		15.31	1028.97
2	8.6	75	0.2	0.08		282	5		282	170	3132696		234.95	0.63	0.25		15.66	883.42
3						292	5		292		2303907		0.00	0.00	0.00		11.52	672.74
4						300	5		300		2156001		0.00	0.00	0.00		10.78	646.80
5						284	5		284		4118837		0.00	0.00	0.00		20.59	1169.75
6						308	5		308		3003671		0.00	0.00	0.00		15.02	925.13
7						264	5		264		2409259		0.00	0.00	0.00		12.05	636.04
8						290	5		290		2751525		0.00	0.00	0.00		13.76	797.94
9	8.2	73	0.2	0.05		284	5		284	165	3038433		221.81	0.61	0.15		15.19	862.91
10						306	5		306		3979852		0.00	0.00	0.00		19.90	1217.83
11						293	5		293		6828491		0.00	0.00	0.00		34.14	2000.75
12						258	5		258		5582267		0.00	0.00	0.00		27.91	1440.22
13						244	5		244		3065665		0.00	0.00	0.00		15.33	748.02
14						308	5		308		2304648		0.00	0.00	0.00		11.52	709.83
15						276	5		276		1930988		0.00	0.00	0.00		9.65	532.95
16	8.2	82	0.2	0.05		298	5		298	200	1876850		153.90	0.38	0.09		9.38	559.30
17						290	5		290		1725679		0.00	0.00	0.00		8.63	500.45
18						320	5		320		1554557		0.00	0.00	0.00		7.77	497.46
19						330	10		330		1637054		0.00	0.00	0.00		16.37	540.23
20						327	5		327		1781984		0.00	0.00	0.00		8.91	582.71
21						342	6		342		1522566		0.00	0.00	0.00		9.14	520.72
22						476	5		476		1283910		0.00	0.00	0.00		6.42	611.14
23	8.4	76	0.2	0.08		344	12		344	138	1325184		100.71	0.27	0.11		15.90	455.86
24						400	5		400		1098152		0.00	0.00	0.00		5.49	439.26
25						356	5		356		1078060		0.00	0.00	0.00		5.39	383.79
26						342	5		342		994791		0.00	0.00	0.00		4.97	340.22
27						318	9		318		923585		0.00	0.00	0.00		8.31	293.70
28						366	15		366		1124099		0.00	0.00	0.00		16.86	411.42
29						310	8		310		2346865		0.00	0.00	0.00		18.77	727.53
30	8.5	71	0.2	0.05		320	5		320	138	2244107		159.33	0.45	0.11		11.22	718.11
31						326	5		326		1858213		0.00	0.00	0.00		9.29	605.78

IS: Insufficient amount of sample due to low flow or sampler malfunction.

Bord Na Mona Energy Ltd, Allen Group, Rochfordsbridge, Co Westmeath
Composite Sampler Results Licence 503

Month	pH	COD mg/l	Ammonia as N mg/l	Parameters		Total Solids		Colour Pt Co	Flow	COD	Ammonia as	Daily Totals		Suspended Solids		Total
August 2002				Total Phosphorus mg/l	Suspended Solids mg/l	Total Solids mg/l		units	Daily Total (litres)	Kg/Day	Kg/Day	Phosphorus Kg/Day		Solids Kg/Day		Solids Kg/Day
1					5	316			2157348	0.00	0.00	0.00	0.00	10.79		681.72
2					5	368			2373687	0.00	0.00	0.00	0.00	11.87		873.52
3					5	332			2512514	0.00	0.00	0.00	0.00	12.56		834.15
4					5	342			2587533	0.00	0.00	0.00	0.00	12.94		884.94
5					5	296			2117712	0.00	0.00	0.00	0.00	10.59		626.84
6	8.2	72	0.2	0.07	5	336		150	1684898	121.31	0.34	0.12	8.42	566.13		566.13
7					5	298			1710274	0.00	0.00	0.00	0.00	8.55		509.66
8					12	338			1969874	0.00	0.00	0.00	0.00	23.64		665.82
9					15	330			2387530	0.00	0.00	0.00	0.00	35.81		787.88
10					8	320			1894693	0.00	0.00	0.00	0.00	15.16		606.30
11					10	306			1674397	0.00	0.00	0.00	0.00	16.74		512.37
12					7	328			1520459	0.00	0.00	0.00	0.00	10.64		498.71
13	8.3	64	0.2	0.05	10	332		127	1487179	95.18	0.30	0.07	14.87	493.74		493.74
14					5	330			1782140	0.00	0.00	0.00	0.00	8.91		588.11
15					5	368			1779971	0.00	0.00	0.00	0.00	8.90		655.03
16					5	112			1456818	0.00	0.00	0.00	0.00	7.28		163.16
17					5	412			1091858	0.00	0.00	0.00	0.00	5.46		449.85
18					5	370			1036914	0.00	0.00	0.00	0.00	5.18		383.66
19					8	394			907461	0.00	0.00	0.00	0.00	7.26		357.54
20	8.4	71	0.2	0.05	5	338		118	846266	60.08	0.17	0.04	4.23	286.04		286.04
21					13	364			793686	0.00	0.00	0.00	0.00	10.32		288.90
22					8	390			736381	0.00	0.00	0.00	0.00	5.89		287.19
23					8	404			749962	0.00	0.00	0.00	0.00	6.00		302.98
24					8	404			738560	0.00	0.00	0.00	0.00	5.91		298.38
25					5	368			744221	0.00	0.00	0.00	0.00	3.72		273.87
26					6	362			667301	0.00	0.00	0.00	0.00	4.00		241.56
27	8.4	68	0.2	0.06	8	317		108	672736	45.75	0.13	0.04	5.38	213.26		213.26
28					5	312			811352	0.00	0.00	0.00	0.00	4.06		253.14
29					5	356			873456	0.00	0.00	0.00	0.00	4.37		310.95
30					8	392			884909	0.00	0.00	0.00	0.00	7.08		346.88
31					5	388			884909	0.00	0.00	0.00	0.00	4.42		343.34

IS: Insufficient amount of sample due to low flow or sampler malfunction.

**Bord Na Mona Energy Ltd, Allen Group, Rochforbsbridge, Co Westmeath
Composite Sampler Results Licence 503**

Month	pH	COD mg/l	Ammonia as N mg/l	Parameters		Suspended		Total Solids mg/l	Colour Pt Co units	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals		Suspended Solids Kg/Day	Total Solids Kg/Day
				Phosphorus mg/l	Phosphorus	Solids mg/l	Phosphorus Kg/Day						Phosphorus Kg/Day			
September 2002																
1						5	404			870098	0.00	0.00	0.00	4.35		351.52
2						5	390			752050	0.00	0.00	0.00	3.76		293.30
3	8.5	68	0.2	0.12		6	458	96		687206	46.73	0.14	0.08	4.12		314.74
4						20	380			678003	0.00	0.00	0.00	13.56		257.64
5						10	332			734781	0.00	0.00	0.00	7.35		243.95
6						9	378			779891	0.00	0.00	0.00	7.02		294.80
7						5	394			784543	0.00	0.00	0.00	3.92		309.11
8						5	358			1033256	0.00	0.00	0.00	5.17		369.91
9						6	310			1870976	0.00	0.00	0.00	11.23		580.00
10	8.6	58	0.2	0.05		5	332	83		1468034	85.15	0.29	0.07	7.34		487.39
11						5	334			1161917	0.00	0.00	0.00	5.81		388.08
12						5	332			862122	0.00	0.00	0.00	4.31		286.22
13						5	340			736424	0.00	0.00	0.00	3.68		250.38
14						5	354			702526	0.00	0.00	0.00	3.51		248.69
15						5	312			687862	0.00	0.00	0.00	3.44		214.61
16						5	326			676502	0.00	0.00	0.00	3.38		220.54
17	8.3	62	0.2	0.05		5	482	179		683301	42.36	0.14	0.03	3.42		329.35
18						5	300			686568	0.00	0.00	0.00	3.43		205.97
19						5	322			693629	0.00	0.00	0.00	3.47		223.35
20						5	356			681948	0.00	0.00	0.00	3.41		242.77
21						8	376			662039	0.00	0.00	0.00	5.30		248.93
22						5	346			682254	0.00	0.00	0.00	3.41		236.06
23						6	344			675152	0.00	0.00	0.00	4.05		232.25
24	8.3	58	0.2	0.05		5	340	84		626156	36.32	0.13	0.03	3.13		212.89
25						8	248			566470	0.00	0.00	0.00	4.53		140.48
26						5	194			621458	0.00	0.00	0.00	3.11		120.56
27						5	204			606398	0.00	0.00	0.00	3.03		123.71
28						5	100			628823	0.00	0.00	0.00	3.14		62.88
29						5	260			642078	0.00	0.00	0.00	3.21		166.94
30						5	364			939672	0.00	0.00	0.00	4.70		342.04
31																

IS: Insufficient amount of sample due to low flow or sampler malfunction.

Bord Na Mona Energy Ltd, Allen Group, Rochforbsbridge, Co Westmeath
Composite Sampler Results Licence 503

Month	pH	COD mg/l	Ammonia as N mg/l		Parameters Total mg/l		Total Solids mg/l	Suspended Solids mg/l	Colour Pt Co units	Flow		COD Kg/Day	Ammonia as Kg/Day	Daily Totals		Suspended Solids Kg/Day	Total Solids Kg/Day
October 2002										Daily	Total (litres)						
1	8.3	61	0.2	0.05			374	5	92	1783870		108.82	0.36	0.09		8.92	667.17
2							346	5		1998044		0.00	0.00	0.00		9.99	691.32
3							368	5		2439000		0.00	0.00	0.00		12.20	897.55
4							369	5		2105863		0.00	0.00	0.00		10.53	777.06
5							408	5		1803978		0.00	0.00	0.00		9.02	736.02
6							376	5		1590773		0.00	0.00	0.00		7.95	598.13
7							356	5		1419639		0.00	0.00	0.00		7.10	505.39
8	8.5	61	0.2	0.06			340	5	81	1497680		91.36	0.30	0.09		7.49	509.21
9							324	5		6235776		0.00	0.00	0.00		31.18	2020.39
10							238	5		5667281		0.00	0.00	0.00		28.34	1348.81
11							241	5		5535168		0.00	0.00	0.00		27.68	1333.98
12							338	5		-880899		0.00	0.00	0.00		-4.40	-297.74
13							256	5		7577864		0.00	0.00	0.00		37.89	1939.93
14							236	5		6934194		0.00	0.00	0.00		34.67	1636.47
15	8.1	91	0.2	0.05			222	5		7067768		643.17	1.41	0.35		35.34	1569.04
16							256	5		6695704		0.00	0.00	0.00		33.48	1714.10
17							324	5		8095717		0.00	0.00	0.00		40.48	2623.01
18							256	5		6382133		0.00	0.00	0.00		31.91	1633.83
19							186	5		4634147		0.00	0.00	0.00		23.17	861.95
20							208	5		7365194		0.00	0.00	0.00		36.83	1531.96
21							142	11		12727990		0.00	0.00	0.00		140.01	1807.37
22	7.3	95	0.2	0.06			184	16	266	3722026		353.59	0.74	0.22		59.55	684.85
23							226	5		3722026		0.00	0.00	0.00		18.61	841.18
24							214	5		3722026		0.00	0.00	0.00		18.61	796.51
25							168	5		7862760		0.00	0.00	0.00		39.31	1320.94
26							320	5		11499620		0.00	0.00	0.00		57.50	3679.88
27							166	8		9066220		0.00	0.00	0.00		72.53	1504.99
28							246	5		9514711		0.00	0.00	0.00		47.57	2340.62
29	7.8	88	0.2	0.05			245	8	243	16462010		1448.66	3.29	0.82		131.70	4033.19
30							161	11		18872650		0.00	0.00	0.00		207.60	3038.50
31							252	5		16453430		0.00	0.00	0.00		82.27	4146.26

IS: Insufficient amount of sample due to low flow or sampler malfunction.

Bord Na Mona Energy Ltd, Allen Group, Rochforbsbridge, Co Westmeath
Composite Sampler Results Licence 503

Month	pH	COD mg/l	Ammonia as N mg/l	Parameters		Total Solids mg/l	Colour Pt Co units	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals		Suspended Solids Kg/Day	Total Solids Kg/Day
				Phosphorus mg/l	Total mg/l						Phosphorus Kg/Day	Total Kg/Day		
November 2002														
1						113		12326110	0.00	0.00	0.00	0.00	1392.85	2908.96
2						8		15331460	0.00	0.00	0.00	0.00	122.65	3648.89
3						28		19023130	0.00	0.00	0.00	0.00	532.65	4869.92
4						IS		16804030	0.00	0.00	0.00	#VALUE!	#VALUE!	#VALUE!
5	7.6	56	0.6	0.05	258	20	286	12836420	718.84	7.70	0.64	256.73	256.73	3311.80
6					186	5		12115620	0.00	0.00	0.00	0.00	60.58	2253.51
7					264	5		13755270	0.00	0.00	0.00	0.00	68.78	3631.39
8					236	5		14058220	0.00	0.00	0.00	0.00	70.29	3317.74
9					220	5		15295550	0.00	0.00	0.00	0.00	76.48	3365.02
10					214	5		23809360	0.00	0.00	0.00	0.00	119.05	5095.20
11					212	5		12402470	0.00	0.00	0.00	0.00	62.01	2629.32
12	7.8	86	0.2	0.05	224	5	322	14111190	1213.56	2.82	0.71	70.56	70.56	3160.91
13					208	5		14500870	0.00	0.00	0.00	0.00	72.50	3016.18
14					84	5		18423810	0.00	0.00	0.00	0.00	92.12	1547.60
15					226	32		20957770	0.00	0.00	0.00	0.00	670.65	4736.46
16					158	5		26793340	0.00	0.00	0.00	0.00	133.97	4233.35
17					151	5		15789240	0.00	0.00	0.00	0.00	78.95	2384.18
18					226	5		15154920	0.00	0.00	0.00	0.00	75.77	3425.01
19	7.4	88	0.6	0.05	136	5	340	17501290	1540.11	10.50	0.88	87.51	87.51	2380.18
20					188	5		16134010	0.00	0.00	0.00	0.00	80.67	3033.19
21					148	5		17558600	0.00	0.00	0.00	0.00	87.79	2598.67
22					178	5		14567770	0.00	0.00	0.00	0.00	72.84	2593.06
23					159	6		14857140	0.00	0.00	0.00	0.00	89.14	2362.29
24					226	5		15717100	0.00	0.00	0.00	0.00	78.59	3552.06
25					262	10		15781880	0.00	0.00	0.00	0.00	157.82	4134.85
26	7.4	89	0.4	0.06	162	8	327	15825150	1408.44	6.33	0.95	126.60	126.60	2563.67
27					134	5		20522200	0.00	0.00	0.00	0.00	102.61	2749.97
28					138	5		23756270	0.00	0.00	0.00	0.00	118.78	3278.37
29					178	5		17320880	0.00	0.00	0.00	0.00	86.60	3083.12
30					204	5		20179580	0.00	0.00	0.00	0.00	100.90	4116.63
31														

IS: Insufficient amount of sample due to low flow or sampler malfunction.

Bord Na Mona Energy Ltd, Allen Group, Rochforbsbridge, Co Westmeath
Composite Sampler Results Licence 503

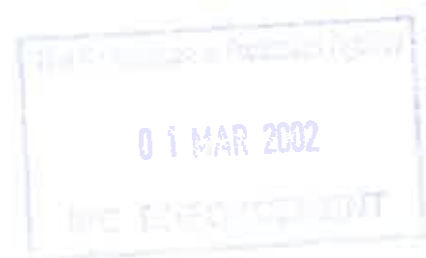
Month	pH	COD mg/l	Ammonia as N mg/l		Parameters Total mg/l		Suspended Solids mg/l	Total Solids mg/l	Colour Pt Co units	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals		Suspended Solids Kg/Day	Total Solids Kg/Day
					Phosphorus								Phosphorus Kg/Day			
December 2002																
1							5	168		19088410	0.00	0.00	0.00		95.44	3206.85
2							6	IS		21954350	0.00	0.00	0.00		131.73	#VALUE!
3	7.5	90	0.2	0.05			5	62	335	17630900	1586.78	3.53	0.88		88.15	1093.12
4							IS	IS		15551310	0.00	0.00	0.00		#VALUE!	#VALUE!
5							IS	IS		14685410	0.00	0.00	0.00		#VALUE!	#VALUE!
6							IS	IS		14685410	0.00	0.00	0.00		#VALUE!	#VALUE!
7							IS	IS		14685410	0.00	0.00	0.00		#VALUE!	#VALUE!
8							IS	IS		14685410	0.00	0.00	0.00		#VALUE!	#VALUE!
9							6	234		12636860	0.00	0.00	0.00		75.82	2957.03
10							5	272		7948599	0.00	0.00	0.00		39.74	2162.02
11							5	274		6368979	0.00	0.00	0.00		31.84	1745.10
12							14	272		6108435	0.00	0.00	0.00		85.52	1661.49
13							9	290		7248830	0.00	0.00	0.00		65.24	2102.16
14							12	288		6592889	0.00	0.00	0.00		79.11	1898.75
15	7.3	90	0.4	0.07			34	284	201	6311622	568.05	2.52	0.44		214.60	1792.50
16							6	282		5852809	0.00	0.00	0.00		35.12	1650.49
17							5	275		5751094	0.00	0.00	0.00		28.76	1581.55
18							6	290		5761672	0.00	0.00	0.00		34.57	1670.88
19							6	168		5413106	0.00	0.00	0.00		32.48	909.40
20							5	192		6420866	0.00	0.00	0.00		32.10	1232.81
21							6	222		11837110	0.00	0.00	0.00		71.02	2627.84
22	7.8	79	0.6	0.05			14	72	245	22252310	1757.93	13.35	1.11		311.53	1602.17
23							6	194		19815490	0.00	0.00	0.00		118.89	3844.21
24							6	144		16239760	0.00	0.00	0.00		97.44	2338.53
25							6	126		12594720	0.00	0.00	0.00		75.57	1586.93
26							5	116		12127750	0.00	0.00	0.00		60.64	1406.82
27							IS	IS		18644590	0.00	0.00	0.00		#VALUE!	#VALUE!
28							IS	IS		15498480	0.00	0.00	0.00		#VALUE!	#VALUE!
29							15	112		23845530	0.00	0.00	0.00		357.68	2670.70
30							5	102		27997970	0.00	0.00	0.00		139.99	2855.79
31							5	126			0.00	0.00	0.00		0.00	0.00

IS: Insufficient amount of sample due to low flow or sampler malfunction.

BORD NA MÓNA
BORD NA MÓNA ENERGY LIMITED
Derrygreenagh, Rochfortbridge, Mullingar, Co-Westmeath.

Annual Environmental Report
IPC LICENCE 503

March 2002



Contents

1.0 Introduction

- 1.1 Company Details
- 1.2 Activities
- 1.3 Environmental Policy
- 1.4 Environmental Management of the Company

2.0 Summary Information

2.1 Emissions to Water Summary

- 2.1.1 Silt Pond Emissions
- 2.1.2 Surface Water Discharge Monitoring Location Programme Review
- 2.1.3 Yard Run-off
- 2.1.4 Composite Sampler Report
- 2.1.5 Bunding Programme

2.2 Emissions to Air

- 2.2.1 Dust Monitoring
- 2.2.2 Boiler Combustion Efficiency

2.3 Waste Arisings

- 2.3.1 Hazardous Waste
- 2.3.2 Non-Hazardous Waste

2.4 Energy and Water Consumption

2.5 Environmental Incidents and Complaints

2.6 De-silting Report

2.7 Silt Pond Upgrade Programme

2.8 Bog Development and Operational Programme

3.0 Management of the Activity

3.1 Environmental Management Programme Report

3.2 Environmental Expenditure

3.3 Bog Rehabilitation Report

4.0 Summary

Appendix 1: Composite Sampler Report

Appendix 2: EMP Project 4

Appendix 3: EMP Project 8

Appendix 4: EMP Project 9

Appendix 5: EMP Project 10

Appendix 6: EMP Project 11

1 Introduction

1.1 Company Details

Name: Bord na Mona Energy Limited.

**Address: Allen Group
Derrygreenagh Works
Rochfortbridge
Mullingar
Co Westmeath.**

Telephone No: 044 / 22181 Fax No: 044 / 22344

Contact Name: Finn Campbell

Position: General Manager.

National Grid Reference: E249450 N238140

1.2 Activities

The Allen Group of bogs are situated in counties Kildare and Offaly and are generally bounded by the Grand Canal to the North, the Barrow River and tributaries to the South, Nass to the East and Tullamore to the West.

These bogs comprise most of the bogland area that was formerly referred to as the Bog of Allen.

The Allen Group has a total acquired area of 21,150 hectares. The nett production area will be 9,200 hectares when all the areas are developed.

The Allen Group currently employs 156 permanent and 79 seasonal workers.

Transport operations are carried out on a seven day cycle throughout the year.

Production operations are typically carried out over a seven day week (weather permitting) for 12 to 15 hours per day.

Peat Milling Operations.

For milled peat production the bog is laid out in a series of rectangular fields of varying length and 15m wide with drains located between. There are essentially four operations involved in milled peat production:

- Milling.
- Harrowing.
- Ridging.
- Harvesting.

Milling.

Special milling machines work there way along the fields, milling approximately 15mm of peat of the top of the bog in a pass.

Harrowing

In the course of drying, the milled peat is turned a number of times to avail of the drying conditions. This is achieved with a machine called a harrow. The milled peat is harrowed until its moisture content is down to approximately 40-50%, which can take up to two to three days, weather depending.

Ridging

The dry peat is then scraped into long ridges running down the centre of each field. This is done with a ridger, a machine consisting of a series of blades in the shape of a v that opens the full width of the field.

Harvesting

During harvesting every eleventh field is used to stockpile the peat, with this field receiving the milled peat from the five fields either side.

The milled peat is then transported via the existing network of peatland railways to one of the following locations.

- Power station (EPL)
- Horticultural Factory.

1.3 Environmental Policy



Bord na Mona Energy Limited is a commercial semi-state body with responsibility to develop Ireland's peat resources in the national interest.

Bord na Mona Energy Limited is committed to gather and make available information on all aspects of its environmental impact and to help improve understanding among the public generally of its role and the importance of Irish peatlands.

Bord na Mona Energy Limited recognises the importance of peatland conservation.

Bord na Mona Energy Limited will leave behind all areas it owns as either an economically or socially integrated resource of a high environmental value.

Bord na Mona Energy Limited seeks to conduct all aspects of its business in an environmentally sensitive value.

Bord na Mona Energy Limited will establish an environmental management system specifically addressing the following impacts.

- Discharges to water.
- Emissions to atmosphere.
- Waste disposal.
- Use of natural resources.
- Noise, vibration, odour, dust and visual effects.
- Natural environment and eco-system.

The environmental management system will be monitored, maintained and continually improved.

A system of regular environmental audits will be put in place.

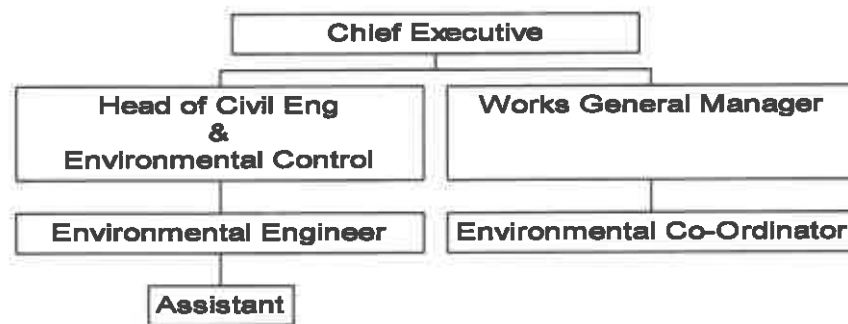
Bord na Mona Energy Limited will continue research and development into all aspects of its environmental impact.

This statement is published and is available at all locations within the division and its contents are brought to the attention of all employees.

1.4 Environmental Management of the Company

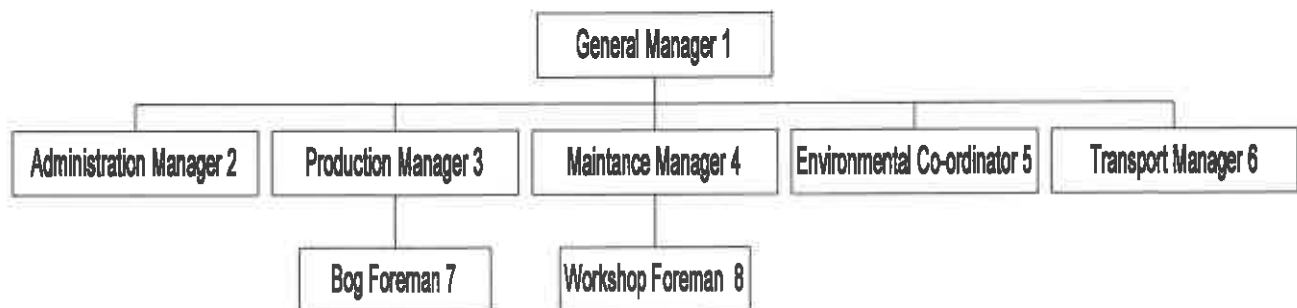
The organisational structure within Bord na Mona and the Allen Group is presented in the flow charts below.

Environmental Responsibilities



Allen Group

Environmental Responsibilities



- (1) Overall environmental responsibilities
- (2) Records of complaints and registers
- (3) All production related issues
- (4) Machine maintenance
- (5) Co-ordinating environmental affairs
- (6) All peat transportation matters
- (7) Silt pond maintenance, tea centres, codes of practice
- (8) Fuel loading, oil traps, weekly workshop inspections.

2 Summary Information

2.1 Emissions to Water Summary

2.1.1 Silt Pond Emissions

The following tables contain a summary of the emissions to surface waters from within the Allen Group.

Silt Pond No: DS 5 Reporting Period (Jan-Dec 2001)						
Parameter	Dec/Jan/Feb/Mar	April/May/June	July/Aug/Sept	Oct/Nov/Dec	Emission Limit	
	Emission (mg/l)	Emission (mg/l)	Emission (mg/l)	Emission (mg/l)	Value	(mg/l)
pH units	7.2	7.4	6.1	7.3	~	~
Flow (L/sec)	55.7	3.7	88	5.7	~	~
Suspended Solids (mg/l)	10	<5	32	22	35mg/l	
Total Solids (mg/l)	174	50	224	176	~	~
Total Phosphorus (mg/l)	<0.05	<0.05	<0.05	0.35	~	~
Ammonia (mg/l)	0.6	0.6	0.7	1.4	~	~
Colour (Pt Co units)	282	292	247	251	~	~
COD (mg/l)	54	64	117	99	~	~

Silt Pond No: RD 17**SW No. 10****Reporting Period
(Jan-Dec 2001)**

Parameter	Dec/Jan/Feb/Mar	April/May/June	July/Aug/Sept	Oct/Nov/Dec	Emission Limit
	Emission (mg/l)	Emission (mg/l)	Emission (mg/l)	Emission (mg/l)	Value (mg/l)
pH units	7.8	7.9	7.1	7.8	~
Flow (L/sec)	167.8	47	144	45.3	~
Suspended Solids (mg/l)	47	14	12	11	35mg/l
Total Solids (mg/l)	398	390	252	406	~
Total Phosphorus (mg/l)	<0.05	<0.05	0.11	<0.05	~
Ammonia (mg/l)	0.6	0.5	1.6	0.4	~
Colour (Pt Co units)	146	112	342	140	~
COD (mg/l)	46	39	107	62	~

Silt Pond No: BK 23**SW No. 14****Reporting Period
(Jan-Dec 2001)**

Parameter	Dec/Jan/Feb/Mar	April/May/June	July/Aug/Sept	Oct/Nov/Dec	Emission Limit
	Emission (mg/l)	Emission (mg/l)	Emission (mg/l)	Emission (mg/l)	Value (mg/l)
pH units	7.7	7.9	7.1	8	~
Flow (L/sec)	204.5	32.2	NA	78	~
Suspended Solids (mg/l)	11	20	<5	9	35mg/l
Total Solids (mg/l)	256	376	192	324	~
Total Phosphorus (mg/l)	<0.05	0.1	<0.05	<0.05	~
Ammonia (mg/l)	0.6	0.4	1	1.2	~
Colour (Pt Co units)	183	114	247	114	~
COD (mg/l)	60	64	<10	67	~

Silt Pond No: CC 51**SW No. 33****Reporting Period
(Jan-Dec 2001)**

Parameter	Dec/Jan/Feb/Mar	April/May/June	July/Aug/Sept	Oct/Nov/Dec	Emission Limit
	Emission (mg/l)	Emission (mg/l)	Emission (mg/l)	Emission (mg/l)	Value (mg/l)
pH units	7.7	8	7.3	8.3	~
Flow (L/sec)	274	34.9	163.2	30.3	~
Suspended Solids (mg/l)	70	7	<5	8	35mg/l
Total Solids (mg/l)	170	200	250	292	~
Total Phosphorus (mg/l)	<0.05	0.08	<0.05	<0.05	~
Ammonia (mg/l)	2.6	2	4.6	2.8	~
Colour (Pt Co units)	188	124	202	85	~
COD (mg/l)	38	48	70	48	~

Silt Pond No: DL 67**SW No. 43****Reporting Period
(Jan-Dec 2001)**

Parameter	Dec/Jan/Feb/Mar	April/May/June	July/Aug/Sept	Oct/Nov/Dec	Emission Limit
	Emission (mg/l)	Emission (mg/l)	Emission (mg/l)	Emission (mg/l)	Value (mg/l)
pH units	7.6	Foot & Mouth	7.2	7.7	~
Flow (L/sec)	38.5		20.6	14.1	~
Suspended Solids (mg/l)	37		10	6	35mg/l
Total Solids (mg/l)	138		264	282	~
Total Phosphorus (mg/l)	<0.05		<0.05	<0.05	~
Ammonia (mg/l)	1.0		1.6	2	~
Colour (Pt Co units)	433		499	350	~
COD (mg/l)	68		124	80	~

Silt Pond No: BR 94**SW No. 65****Reporting Period****(Jan-Dec 2001)**

Parameter	Dec/Jan/Feb/Mar	April/May/June	July/Aug/Sept	Oct/Nov/Dec	Emission Limit
	Emission (mg/l)	Emission (mg/l)	Emission (mg/l)	Emission (mg/l)	Value (mg/l)
pH units	7.8	7.9	7.1	7.7	~
Flow (L/sec)	212.38	42.1	175.8	51	~
Suspended Solids (mg/l)	55	8	7	<5	35mg/l
Total Solids (mg/l)	274	238	164	280	~
Total Phosphorus (mg/l)	<0.05	0.06	<0.05	<0.05	~
Ammonia (mg/l)	1.0	0.5	1.0	1.1	~
Colour (Pt Co units)	276	247	372	183	~
COD (mg/l)	86	67	118	69	~

Silt Pond No:BN 97**SW No. 66****Reporting Period****(Jan-Dec 2001)**

Parameter	Dec/Jan/Feb/Mar	April/May/June	July/Aug/Sept	Oct/Nov/Dec	Emission Limit
	Emission (mg/l)	Emission (mg/l)	Emission (mg/l)	Emission (mg/l)	Value (mg/l)
pH units	8.0	8.1	7.7	8	~
Flow (L/sec)	265	33.7	358	41	~
Suspended Solids (mg/l)	33	6	68	13	35mg/l
Total Solids (mg/l)	264	156	270	330	~
Total Phosphorus (mg/l)	<0.05	0.05	<0.05	<0.05	~
Ammonia (mg/l)	0.5	0.4	0.8	0.7	~
Colour (Pt Co units)	282	155	318	150	~
COD (mg/l)	64	57	102	98	~

2.1.2 Surface Water Discharge Monitoring Location Programme Review

The surface water discharge monitoring location programme remains the same as was submitted and accepted by the Agency in June 2000.

Pipes have been fitted at each location in order to accommodate flow metres and the provision of safe access is also ongoing.

Emission point signs have been designed and are in place.

Additional work has also been carried out at these locations as part of the ongoing silt pond upgrade programme.

Monitoring will be carried out at these same locations in the forthcoming year and reported on in next years AER.

2.1.3 Yard Run-off

The table below is a summary of the emissions to surface waters from yards and workshops within the Allen Group. This summary is the average of the results submitted, covering the period Jan – Dec 2001.

Jan - Dec 2001 Ballycon :SWE-1		
Parameter	Average Emission (mg/l)	Emission Limit Value (ELV) (mg/l)
COD	27.5	~

Jan - Dec 2001 Clonsast :SWE-1		
Parameter	Average Emission (mg/l)	Emission Limit Value (ELV) (mg/l)
COD	39.1	~

Jan - Dec 2001 Ballydermot :SWE-1		
Parameter	Average Emission (mg/l)	Emission Limit Value (ELV) (mg/l)
COD	73.7	~

Jan - Dec 2001 Ballydermot :SWE-2		
Parameter	Average Emission	Emission Limit Value (ELV)
	(mg/l)	(mg/l)
COD	68	~

Jan - Dec 2001 Timahoe :SWE-1		
Parameter	Average Emission	Emission Limit Value (ELV)
	(mg/l)	(mg/l)
COD	52.5	~

2.1.4 Composite Sampler Programme

Attached in Appendix 1 are the results of the monitoring carried out using the composite sampler.

Sampling began on June 5th 2001 and has been continuous ever since.

In the attached Appendix, the results for each day of sampling are shown.

The days where there are no results can be attributed to, battery failure, pump tubing failure or no flow at the location.

A graph showing flow rates for the period is also contained in the Appendix.

2.1.5 Bunding Programme

New bunds were constructed at Ballycon, Clonsast, Ballydermot, Timahoe and Lullymore.

Incorporated into this work was a fill area, which will satisfy condition 9.1.7 of the Allen Licence. The bund size will satisfy condition 9.1.4.

Bund integrity tests were carried out during the year on the Ballycon and Ballydermot bunds and the results of this were submitted to the agency on 29th Nov in a letter Ref (AN503/Bund 001). The remainder of the bunds will be tested in the forthcoming year.

2.2 Emissions to Air

2.2.1 Dust Monitoring Locations Programme

The table below contains the average dust emissions for each dust monitoring location within the Allen Group. Monitoring took place on three separate occasions during the periods, June – July, July – August, August – September 2001.

June - Jul

Emission Point	Parameter	Emission (mg/m ² /day)	Emission Limit Value
DM 01	Dust	205	(350mg/m ² /Day)
DM 02	Dust	72	(350mg/m ² /Day)
DM 03	Dust	761	(350mg/m ² /Day)
DM 04	Dust	41.7	(350mg/m ² /Day)

Jul - Aug

Emission Point	Parameter	Emission (mg/m ² /day)	Emission Limit Value
DM 01	Dust	107	(350mg/m ² /Day)
DM 02	Dust	83	(350mg/m ² /Day)
DM 03	Dust	65	(350mg/m ² /Day)
DM 04	Dust	71	(350mg/m ² /Day)

Aug - Sep

Emission Point	Parameter	Emission (mg/m ² /day)	Emission Limit Value
DM 01	Dust	712	(350mg/m ² /Day)
DM 02	Dust	36	(350mg/m ² /Day)
DM 03	Dust	59	(350mg/m ² /Day)
DM 04	Dust	74	(350mg/m ² /Day)

Note: DM 01= Killinagh Bog. DM 02 = Derrybrennan Bog. DM 03 = Ballykeane Bog. DM 04 = Cloncreen Bog.

DM 04 is located at the Mulrennan dwelling adjacent to Cloncreen bog, the results are those also used in the monitoring requirements of Waste Licence 49-1.

IT was noted that an error was made by the laboratory in calculating the amount of dust present in the dust gauges during monitoring in the production season past, therefore the agency was not informed of any non-compliances at the time. The correct results have been included in the previous tables and non-compliances highlighted.

2.2.2 Boiler Combustion Efficiency

Boiler Details

There are currently boilers at Clonsast, Ballydermot, Timahoe and at Edenderry Power. The boilers at Ballydermot, Timahoe and Clonsast are all of the same make and size ie Buderus, Logano, GE515, capable of delivering 593KW of power from a diesel fired burner.

The boiler at Edenderry Power is of the same make, but a GE315 model, capable of delivering 240KW of power.

These boilers operate from Oct-Mar approximately.

Boiler efficiency tests were carried out during the year. The results of these tests are shown in the table below.

A full breakdown of the tests are retained on file at our Derrygreenagh office.

Boiler Location	Date Tested	% Efficiency Low Fire	% Efficiency High Fire
Ballydermot	03/10/01	83.3	86.1
Timahoe	03/10/01	88.1	86.2

Note: Testing of the boilers at Clonsast and Edenderry Power also took place unfortunately the results of this testing were not received in time to include in this report.

2.3Waste Arisings

2.3.1 Hazardous Waste

Derrygreenagh being a central location, is used as a collection point for all hazardous wastes emanating from all the areas in both the Allen and Derrygreenagh Groups. All waste oils, filters, spent batteries, etc are collected centrally at Derrygreenagh before being removed by a licenced waste contractor such as Atlas Waste Oil, Hammond Lane, Returnabatt, etc.

A system is in place where by every area has its own waste oil and filter barrel. These barrels are painted yellow to distinguish them from ordinary barrels and are clearly marked waste filters or waste oil.

When the barrels are getting near full, the area team leader informs our Derrygreenagh stores and a truck is dispatched to collect the full barrels and replace them with empties. Any spent batteries will also be collected if the need arises.

Records of all the hazardous wastes handled by the Allen and Derrygreenagh Groups from January-December 2001 have been submitted with the Derrygreenagh AER

2.3.2 Non-Hazardous Waste

The non-hazardous waste produced by the Allen Group consists mainly of silt pond waste, mixed municipal waste and scrap metal. Midland Refuse and Erwin Cobb have a contract to collect the waste from the various tea centres across the region by way of a wheelie bin system. Rentabin Tullamore (Alina Waste) were used for skip hire although this has recently changed to a new contractor with a Local Authority Waste Permit.

In calculating the amounts of waste sent off site via wheelie bins a figure of 40kg, 110kg and 180kg was used for bin sizes 240 litre, 660 litre and 1100 litre respectively.

Silt pond cleanings are anhydrous (2% solid matter) and their weight is calculated accordingly (tonnes dry weight).

The whole waste system is at the moment being reviewed within the Allen Group with the option of recycling being examined to reduce the amount of waste going to landfill.

Of the total amount of non-hazardous waste produced by the Allen group, 76 % came from silt pond waste, 17% from scrap metal and 7 % was the result of municipal waste.

Of this municipal waste 79% came from the workshops and the remaining 21% came from the tea centres.

The following table lists the quantities of the wastes generated from January-December 2001 from all of the Allen Group.

Waste Type	Quantity (Tonnes)
Silt Pond Waste	450
Scrap Metal	101.210
Mixed Municipal Waste	38.240
Total	589.450

2.4 Energy and Water Consumption

The table below is a summary of the energy consumption for the Allen Group, from the dates January – December 2001.

Water is not included, as it is not used as part of the production process. It is only used in offices, canteens and workshops on a domestic scale.

None of the boilers in the Allen Group are briquette fired.

Bord na Mona Group : Allen
IPC Licence No.: 503
Energy Consumption
Summary

Fuel	Volume M ³	Tonnes	MW/Hours
Jan - Dec 2001			
Diesel	894	742	8755.6
Petrol	3.63	2.740	32.80
Electricity	NA	NA	1155.2
Total	897.63	744.740	9943.6

2.5 Environmental Incidents and Complaints

There was no incident within the Allen Group, during the reporting period

Environmental Incidents	Number of Incidents
Incidents	0
Incidents requiring corrective action	
Categories of Incident	
Odour	
Noise	
Water	
Air	
Procedural	
Miscellaneous	

There were two complaints within the Allen Group, during the reporting period The Agency was informed on both occasions.

Environmental Complaints	Number of complaints
Complaints received	2
Complaints requiring corrective action	2
Categories of complaint	
Odour	
Noise	
Water	
Air	1
Procedural	
Miscellaneous	1

There were eight Non-Compliances within the Allen Group, during the reporting period.

Environmental Non-Compliances	Number of Non-Compliances
Issued by EPA	5
As a result of monitoring	3
Categories of complaint	
Odour	
Noise	
Water	1
Air	3
Procedural	4
Miscellaneous	

2.6 De-Silting Report**Summary Data Table of Ponds De-Silted From Jan-December 2001**

Bog	No Silt Ponds	Cleaned Once	Cleaned Twice	Cleaned Three Times	Notes
Derries	10		10		
Rathdrum	8		8		
Clonad	7		7		
M Mor	2				***
M Lucas	2				**
Cloncreen	11		10	1	
Esker	9	9			
Cavemount	4		3		
Ballykeane	8		8		
Codd South	2				*
Ballydermot N	2	2			
Ballydermot S	2				
Clonsast N	1	1			
Ballycon	3	2			
Garryhinch	0				
Garrymore	5	5			
Derrylea	3	2			
Derryounce					**
Glashabaun N	2	2			
Codd N	5	5			
Ticknevin	2	2			
Glashabaun S	3		3		
D/brennan	5		4		
Killinagh	3		3		
Lodge	2	2			
Bulge	3	2			
Barnaran	2	2			
Blackriver	3	3			
Timahoe N&S					*

*: Bog still under development, no production.

**: Bog cut out, no production at this Bog.

***: Water diverted away due to rationalisation work.

>: More than.

% Ponds Cleaned Jan-Dec 2001

% Ponds Not Cleaned	% Ponds Cleaned Once	% Ponds Cleaned Twice	% Ponds Cleaned Thrice
11%	36%	52%	1%

Special long reach machines are primarily used in the cleaning of the ponds, although more conventional machines that have been working on the silt pond up-grade programme are also being used to clean ponds.

A new improved fortnightly inspection and cleaning roster is currently being developed.

2.7 Silt pond Up-Grade Programme

The work so far has included the construction of new ponds, the enlargement of ponds where necessary, the installation of controlled inlet and outlet pipes, and the construction of pond by-passes, to accommodate cleaning and flood conditions. Further to this, operatives cleaning ponds have been instructed to deepen the ponds if possible in order to increase the volume.

Progress so far has included programme one, and the majority of stage one of programme two.

Stage two of programme two is also ongoing. It is difficult to say exactly how long it will take to fully complete.

2.8 Bog Development and Operational Programme

The majority of bog development is complete within the Allen Group. During the reporting period development was on going on Ticknevin and Rathdrum bogs. This development work comprised of ditching, screw leveling and piping.

3.0 Management of the Activity

3.1 Environmental Management Programme Report

Project	Description	Status
Project 1 & Project 2	(1) The reduction of fugitive dust emissions. (2) The minimisation of suspended solids movement to surface waters. (3) The examination of production machine modification. (4) The results of dust monitoring.	1&3: Training complete, Codes of practice in place. 2: See appendix 2. 4: See appendix 2
Project 3	Rationalisation of surface water discharge points.	M/Mor Bog – Complete Bulge Bog – Under review Clonad Bog – Complete
Project 4	Investigation of reed bed systems for final polish of silt pond discharges.	Study complete See appendix: 3
Project 5	The separation of flood water and external runoff from production runoff.	Rathdrum Bog – Complete where feasible Ballykeane Bog – Not feasible Blackriver Bog – Under review
Project 6	The effective spill/leak management of mobile fueling units by implementing a programme of training and adopting Codes of Practice.	1: Survey complete. 2: Procedures in place. 3: Training complete 4: ERP in place.
Project 7	Programme of bunding at all bulk diesel storage facilities	Bunding complete.
Project 8	Investigation into the reuse of silt pond waste	Study about to begin See appendix: 4
Project 9	Study into the collection storage and reuse of polyethylene covering	Project in progress See appendix: 5
Project 10	Examination of the use of reusable materials in the protection of stockpiles	Study in progress See appendix: 6
Project 11	Examination of wind power technology for pumped drainage.	Study ongoing See appendix: 7

3.2 Environmental Expenditure

The table below lists the environmental costs incurred by the Allen Group between January-December 2001.

In calculating the environmental costs 70% of the total costs were attributed to Licence 503 and 30% to Licence 501.

Expenditure Related to the Operation of the Allen IPC Licence During the Period January – December 2001	
Description	Cost (€)
Capital Costs	64,610
Machine hours @ €40/hour	435,520
Labour	108,885
Materials	17,532
Overheads (ESB, Phones, Consumables)	5,000
Laboratory Analysis	10,000
EPA Fees	5,920
Total €	€ 647,467

3.3 Bog Rehabilitation Report

Management guidelines for the planning and implementation of cutaway bog rehabilitation have been adopted and the document is currently available for inspection on file at the Derrygreenagh office.

4.0 Summary

With regard to environmental compliance at the Allen Group of Bogs, there were no non-compliances in the quarterly grab sampling of the ponds in the Surface Water Discharge Monitoring Location Programme.

There was one non-compliance in relation to the Composite Sampler during the operation period June to the end of December. Dust monitoring results showed two non-compliances at dust sensitive locations. There was one complaint of an environmental nature received during the reporting period.

The staff awareness through training and involvement in the operation of the licence has also improved immensely. A full programme of training and awareness has been conducted at the works and has targeted all personnel ie. office, workshop, transport and production.

Bord na Mona are participating in the three Rivers project, (Boyne, Liffey and Suir) water quality, monitoring and management.

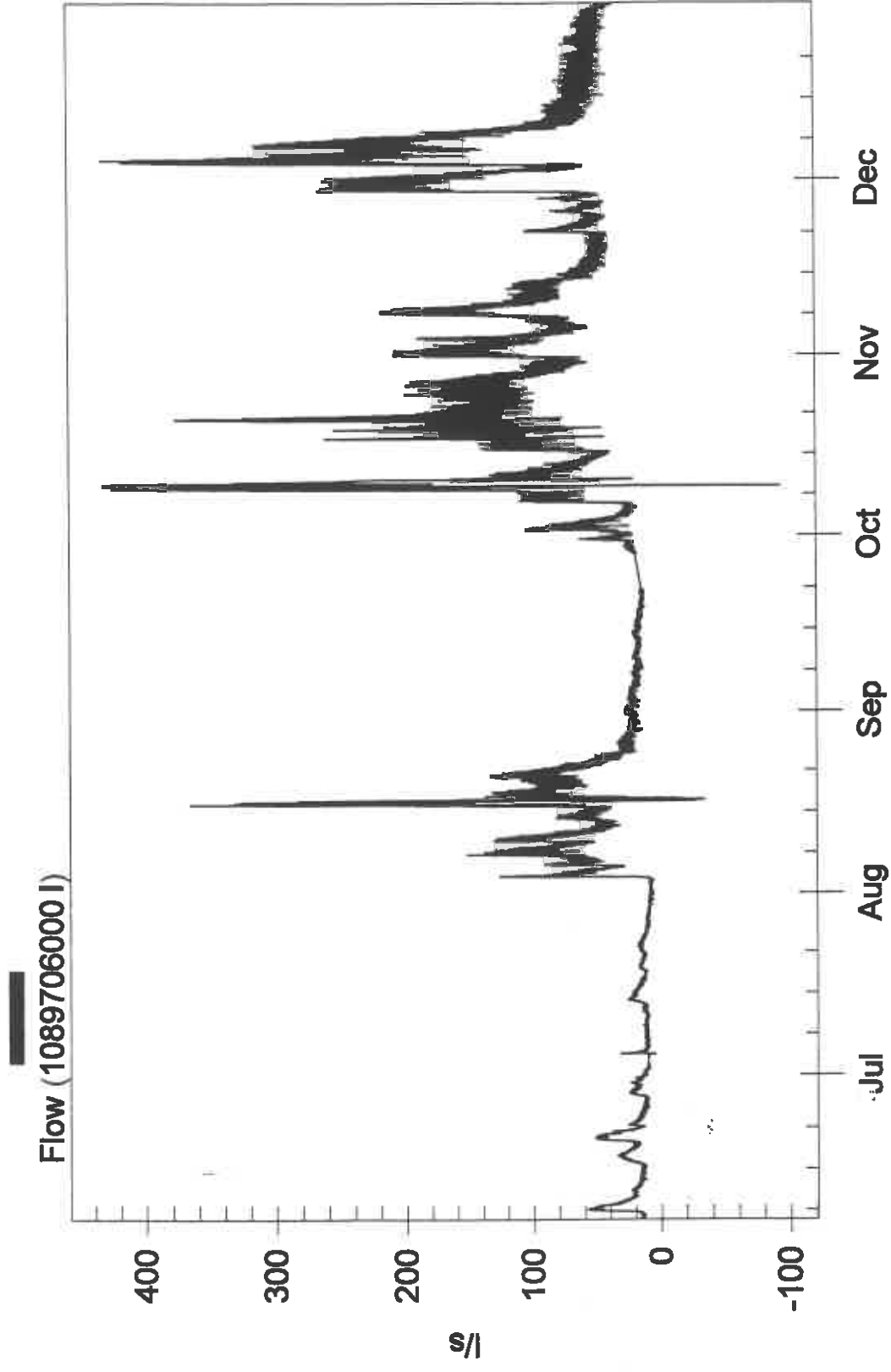
Bord na Mona are also involved in catchment management on the River Barrow.

Bord na Mona Energy Ltd would like to take this opportunity to advise the Environmental Protection Agency of its continued commitment to improving its environmental performance by adopting cleaner production methods and improving its environmental protection measures.

APPENDIX 1

Allen Flow Rate Graph

From June 06/01 to Dec. 31/01



2001

Bord Na Mona Energy Ltd, Allen Group, Rochfordbridge, Mullingar Co Westmeath.
Composite Sampler Results

Month	pH	COD mg/l	Ammonia as N mg/l	Parameters			Colour Pt Co units	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Daily Totals		Total Solids Kg/Day	Total Kg/Day
				Total Phosphorus mg/l	Suspended Solids mg/l	Total Solids mg/l					Total Phosphorus Kg/Day	Total Solids Kg/Day		
June 2001														
1														
2														
3														
4														
5					5	366								
6					5	360								
7					5	376		1255756				6.28	472.16	
8					5	370		3187251				15.94	1179.28	
9					5	354		3476562				17.38	1230.70	
10					5	320		2113457				10.57	676.31	
11	8.3	68	0.2	0.07	5	350	171	1786580	121.49	0.36	0.13	8.93	625.30	
12					5	266		1615143				8.08	429.63	
13					5	158		1347266						
14					5	194		1281347				6.41	248.58	
15					5	38		1233191				6.17	46.86	
16					5	326		1497648				7.49	488.23	
17					5	428		2518941				12.59	1078.11	
18	8.2	76	0.2	0.05	5	140	144	2314847	175.93	0.46	0.12	94.91	324.08	
19					5	312		1735928				8.68	541.61	
20					9	318		3010895				27.10	957.46	
21					5	284		3589929				17.95	1019.54	
22					5	320		1790243				8.95	572.88	
23					5	258		1785714				8.93	460.71	
24					7	180		1378955				9.65	248.21	
25	8.4	85	0.2	0.05	5	316	169	1216390	103.39	0.24	0.06	6.08	384.38	
26					6	306		1054990				6.33	322.83	
27					8	314		1002479				8.02	314.78	
28					9	298		1769613				15.93	527.34	
29					16	310		1639038				26.22	508.10	
30								1629280						

A minus figure usually means the pond was flooded or backflowing

Bord Na Mona Energy Ltd, Allen Group, Rochfordbridge, Mullingar Co Westmeath
Composite Sampler Results

July 2001	pH	COD mg/l	Ammonia as N mg/l	Total Phosphorus mg/l	Suspended Solids mg/l	Total Solids mg/l	Colour Pt Co units	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Total Phosphorus Kg/Day	Suspended Solids Kg/Day	Total Solids Kg/Day
1								1223062					
2								972563					
3					150	494		855922				128.39	422.83
4					16	346		858090				13.73	296.90
5					10	346		1134429				11.34	392.51
6					5	362		949647				4.75	343.77
7					11	372		947522				10.42	352.48
8					12	370		967230				11.61	357.88
9	8.4	82	0.2	0.05	7	352	140	968860	79.28	0.19	0.05	6.77	340.33
10					10	368		974339				9.74	358.56
11					9	374		913823				8.22	341.77
12					5	352		1055084				5.28	371.39
13					5	356		1105627				5.53	393.60
14					6	358		1862447				11.17	666.76
15	7.8	72	0.2	0.05	7	356	130	1752795	126.20	0.35	0.09	12.27	624.00
16					5	332		1482470				7.41	492.18
17					5	336		1266864				6.33	425.67
18					7	316		1081823				7.57	341.86
19					5	364		1168502				5.84	425.33
20					5	368		1293770				6.47	476.11
21					7	364		1155680				8.09	420.67
22					5	340		1182095				5.91	401.91
23	8.3	77	0.2	0.05	7	352	130	1350484	103.99	0.27	0.07	9.45	475.37
24					5	368		1254940				6.27	461.82
25					5	406		1053413				5.27	427.69
26					5	344		926557				4.63	318.74
27					5	370		877697				4.39	324.75
28					5	410		859300				4.30	352.31
29					5	342		780070				3.90	266.78
30	8.4	68	0.2	0.05	5	390	124	721025	49.03	0.14	0.04	3.61	281.20
31					5	310		686972				3.43	212.96

A minus figure usually means the pond was flooded or backflowing

Bord Na Mona Energy Ltd, Allen Group, Rochfordbridge, Mullingar Co Westmeath
Composite Sampler Results

August 2001	pH	COD mg/l	Ammonia as N mg/l	Total Phosphorus mg/l	Suspended Solids mg/l	Total Solids mg/l	Colour Pt Co units	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Total Phosphorus Kg/Day	Suspended Solids Kg/Day	Total Solids Kg/Day
1								647439					
2								645515					
3								651055					
4								4707127					
5								4848814					
6	7.6	56	1.1	0.07	9	440	111	4645384	260.14	5.11	0.33	41.81	2043.97
7					8	410		5405166				43.24	2216.12
8					5	386		8769806				43.85	3385.15
9					6	412		8115532				48.69	3343.60
10					6	434		7444683				44.67	3230.99
11					5	450		7777251				38.89	3499.76
12					5	448		4530437				22.65	2029.64
13	8.2	59	2.7	0.25	7	418	90	3706960	218.71	10.01	0.93	25.95	1549.51
14					5	438		5173785				25.87	2266.12
15					10	222		4807889				48.08	1067.35
16					7	274		8334652				58.34	2283.69
17					5	342		13992860				69.96	4785.56
18					5	398		8004950				40.02	3185.97
19					5	370		7689425				38.45	2845.09
20	8	67	2	0.05	5	386	170	7120050	477.04	14.24	0.36	35.60	2748.34
21					5	270		8094933				40.47	2185.63
22					5	280		7813108				39.07	2187.67
23					5	276		5230759				26.15	1443.69
24								3570734					
25								2791524					
26								2328000					
27	7.7	96	0.2	0.05	5	338	298	2360089	226.57	0.47	0.12	11.80	797.71
28								2162014					
29								1899729					
30								1806743					
31								1740580					

A minus figure usually means the pond was flooded or backflowing

Bord Na Mona Energy Ltd, Allen Group, Rochfordbridge, Mullingar Co Westmeath
Composite Sampler Results

September 2001	pH	COD mg/l	Ammonia as N mg/l	Total Phosphorus mg/l	Suspended Solids mg/l	Total Solids mg/l	Colour Pt Co units	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Total Phosphorus Kg/Day	Suspended Solids Kg/Day	Total Solids Kg/Day
1								2054248					
2								1915313					
3	7.9	81	0.2	0.05	5	290	199	1875803	151.94	0.38	0.09	9.38	543.98
4					5	292		1856452				9.28	542.08
5					5	294		1771779				8.86	520.90
6					5	308		1597430				7.99	492.01
7					5	310		1581757				7.91	490.34
8					5	312		1543189				7.72	481.47
9					5	312		1416519				7.08	441.95
10	8.5	68	0.2	0.05	5	314	163	1500646	102.04	0.30	0.08	7.50	471.20
11					5	300		1531714				7.66	459.51
12					9	322		1418414				12.77	456.73
13					5	328		1421601				7.11	466.29
14					5	322		1577726				7.89	508.03
15					5	334		1482279				7.41	495.08
16	8.3	66	0.2	0.05	5	336	129	1411183	93.14	0.28	0.07	7.06	474.16
17					5	324		1327846				6.64	430.22
18					5	318		1309062				6.55	416.28
19					5	298		1189109				5.95	354.35
20					5	330		1138509				5.69	375.71
21					5	300		1132525				5.66	339.76
22					5	310		1434955				7.17	444.84
23					5	304		1581466				7.91	480.77
24	8.3	65	0.2	0.05	5	326	125	1581466	102.80	0.32	0.08	7.91	515.56
25					5	344		1581466				7.91	544.02
26					5	320		1581466				7.91	506.07
27					5	318		1581466				7.91	502.91
28					5	248		1640186				8.20	406.77
29					5	322		1962004				9.81	631.77
30					5	302		2540738				12.70	767.30

A minus figure usually means the pond was flooded or backflowing

Bord Na Mona Energy Ltd, Allen Group, Rochfordbridge, Mullingar Co Westmeath
Composite Sampler Results

October 2001	pH	COD mg/l	Ammonia as N mg/l	Total Phosphorus mg/l	Suspended Solids mg/l	Total Solids mg/l	Colour Pt Co units	Flow Daily Total (litres)	COD Kg/Day	Ammonia as N Kg/Day	Total Phosphorus Kg/Day	Suspended Solids Kg/Day	Total Solids Kg/Day
1	8.2	72	3.5	0.05	5	286	226	2868448	206.53	10.04	0.14	14.34	820.38
2					5	254		4832947				24.16	1227.57
3					5	270		5613799				28.07	1515.73
4					5	276		3540605				17.70	977.21
5					5	258		2236346				11.18	576.98
6					5	240		2060860				10.30	494.61
7					5	246		5952889				29.76	1464.41
8	7.9	96	0.7	0.05	10	154	330	7296988	700.51	5.11	0.36	72.97	1123.74
9					7	218		17216260				120.51	3753.14
10					5	202		22127030				110.64	4469.66
11					6	208		10769660				64.62	2240.09
12					6	250		8285764				49.71	2071.44
13					7	332		6333350				44.33	2102.67
14					12	228		5092561				61.11	1161.10
15	7.9	91	0.2	0.05	11	278	338	4044953	368.09	0.81	0.20	44.49	1124.50
16					5	340		8526531				42.63	2899.02
17					5	204		9501447				47.51	1938.30
18					5	186		11787040				58.94	2192.39
19								12398320					
20								13282770					
21								19281630					
22	7.3	88	0.3	0.05	5	256	313	14500180	1276.02	4.35	0.73	72.50	3712.05
23					5	128		12517540				62.59	1602.25
24					5	262		11087240				55.44	2904.86
25					18	62		12537410				225.67	777.32
26								12995220					
27								12506000					
28								12247810					
29								9271826					
30								7581289					
31								6990437					

A minus figure usually means the pond was flooded or backflowing

Bord Na Mona Energy Ltd, Allen Group, Rochfordbridge, Mullingar Co Westmeath
Composite Sampler Results

November 2001	pH	COD mg/l	Ammonia as N mg/l	Total Phosphorus mg/l	Suspended Solids mg/l	Total Solids mg/l	Colour Pt Co units	Flow Daily Total (litres)	COD Kg/Day	Ammonia as Kg/Day	Total Phosphorus Kg/Day	Suspended Solids Kg/Day	Total Solids Kg/Day
1								10540370					
2								13680380					
3								11562280					
4								10807040					
5	8	88	0.2	0.05	8	248	251	7453304	655.89	1.49	0.37	59.63	1848.42
6					5	310		6297147				31.49	1952.12
7					5	254		7186655				35.93	1825.41
8					5	488		11464140				57.32	5594.50
9					5	300		14676920				73.38	4403.08
10					24	270		10170830				244.10	2746.12
11					17	300		8463469				143.88	2539.04
12	8.2	83	0.3	0.05	5	302	264	8083709	670.95	2.43	0.40	40.42	2441.28
13					5	214		8427124				42.14	1803.40
14					5	226		7245766				36.23	1637.54
15					NA			5494687					
16					NA			4791919					
17					NA			4431477					
18					NA			4266245					
19	7.7	71	0.7	0.05	5	256	207	4067119	288.77	2.85	0.20	20.34	1041.18
20					5	274		3929765				19.65	1076.76
21					5	270		4109203				20.55	1109.48
22					5	84		4862755				24.31	408.47
23					5	112		6003417				30.02	672.38
24					5	5		4713428				23.57	23.57
25	8.2	76	0.8	0.05	5	94	228	4333450	329.34	3.47	0.22	21.67	407.34
26					5	270		5322037				26.61	1436.95
27					5	268		4441647				22.21	1190.36
28					5	272		5609992				28.05	1525.92
29					5	190		9424640				47.12	1790.68
30					5	214		19090880				95.45	4085.45

A minus figure usually means the pond was flooded or backflowing

Bord Na Mona Energy Ltd, Allen Group, Rochfordbridge, Mullingar Co Westmeath.

Composite Sampler Results

December 2001	pH	COD mg/l	Ammonia as N mg/l	Total Phosphorus mg/l	Suspended Solids mg/l	Total Solids mg/l	Colour Pt Co units	Flow Daily Total (litres)	COD Kg/Day	Ammonia as N Kg/Day	Total Phosphorus Kg/Day	Suspended Solids Kg/Day	Total Solids Kg/Day
1					5	198		18474170				92.37	3620.94
2	7.8	84	1	0.05	5	230	309	15123110	1270.34	15.12	0.76	75.62	3478.32
3					5	150		9004553				45.02	1350.68
4					10	100		20938640				209.39	2093.86
5					5	92		24911360				124.56	2291.85
6					5	154		19288160				96.44	2970.38
7					5	68		20619080				103.10	1402.10
8					5	136		19630940				98.15	2669.81
9	7.9	85	0.8	0.05	5	166	296	14036400	1193.09	11.23	0.70	70.18	2330.04
10					5	326		10090080				50.45	3289.37
11					5	266		7213457				36.07	1918.78
12					5	282		6260396				31.30	1765.43
13					5	302		6103959				30.52	1843.40
14					5	284		6138238				30.69	1743.26
15					5	282		5606550				28.03	1581.05
16	7.9	71	2.1	0.05	5	308	212	5226603	371.09	10.98	0.26	26.13	1609.79
17					5			5351691				26.76	
18					5			5286981				26.43	
19					5			5134094				25.67	
20	8.1	66	2	0.05	5	248	178	5052526	333.47	10.11	0.25	25.26	1253.03
21					5			4918067				24.59	
22					5			4994438				24.97	
23					5			4850185				24.25	
24					5			4656298				23.28	
25					5			4972967				24.86	
26					5			4766918				23.83	
27	8.3	71	2.2	0.15	5	192	164	4531970	321.77	9.97	0.68	22.66	870.14
28					6			4666538				28.00	
29					16			4525277				72.40	
30					5			4466226				22.33	
31					11			3732831				41.06	

A minus figure usually means the pond was flooded or backflowing

APPENDIX 2

Environmental Management Programme Report

Project 1.

Condition 5.4 of the Allen licence calls for an emission limit of 350mg/m²/day in accordance with the Batneec guidelines, with regard to dust emissions from milled peat production bogs. Condition 2.2.2 (iv) of the Environmental Management Programme calls for the reduction of fugitive dust emissions during loading and transfer operations on the bog and during unloading operations at the tippler and works yard areas. Also Condition (v) calls for the provision of measures to protect dust sensitive areas.

Project Summary:

The Environmental code of Practice for Bord na Mona Works which is included in Attachment no.10 of the Attachments Folder, under the Allen application documents, cover the control of fugitive dust emissions.

1. Training for operatives at the various production cycles will be carried out to cover all locations and the existing dust sensitive locations in the Allen group (Ballykeane, Derrydrennan, Killinagh & Cloncreen). This will also incorporate a system of Cleaner Production Methods training, so as to implement the Codes of Practice in relation to dust and increase the awareness of Bord na Mona's production personnel to fugitive dust emissions and waste minimisation.
2. The programme will also include examining production machines, regarding process modifications and improved process control with the objective of increasing production efficiency, while reducing emissions. This will be carried out, with technical assistance from the Research & Development dept.
3. Procedures will be prepared so as to ensure compliance with condition 5.5 of the licence, in relation to dust control.
4. The results from the monitoring of the dust sensitive locations in accordance with condition 5.3 of the licence, will also be examined and used in improving process control

Project Report:

(3) With regard to examining production machines, in relation to process modifications and improved process control, it is proposed to examine three elements of the peat harvester in relation to dust control. Once a production field has been milled, harrowed, ridged it is ready for lifting on the belt of a peat harvester and deposited into a central stockpile for storage or sale. During this process, dust can be generated at various points on the harvester, ie the belt transfer points, the potato chain elevator and while discharging onto the stockpile.

It is proposed to assess these dust sensitive points on the machine by investigating methods of covering or dust proofing these locations on the lift of the harvester and on the jib. Trials on the suitability and benefits of this dust suppression system will be assessed in Monettia bog, in the Boora group of bogs. Here its performance and environmental benefits will be assessed along side existing harvesters and a report will be submitted on its feasibility in the Annual Environmental Report 2003.

It is proposed to start the pilot project by March 31st.

(4) There were two non-compliances and no complaints in relation to dust during the production year past. This would indicate that the training given to operatives and the codes of practice adopted were a success. See dust monitoring results section 2.2.1 in the body of the report.

Environmental Management Programme Report

Project 2.

Schedule 1 (i) of the Allen licence calls for an emission limit of 35mg/litre in accordance with the Batneec guidelines, with regard to silt emissions from milled peat production bogs. Condition 2.2.2 (i) of the Environmental Management Programme calls for the minimisation of suspended solids movement to surface water systems via peatland surface water drainage channels during development and operation of boglands, to be addressed.

Project Summary:

1. The program will look at improving process control and will involve a programme of cleaner production methods being implemented in the various stages of the production cycle, as waste minimisation measures.
2. A large part of the programme will involve training for management and operatives involved at the various stages of a production cycle i.e. milling, harrowing, ridging, harvesting, loading, ditching etc.
3. Procedures will be prepared, which will highlight the best practice in milled peat production. These procedures will be used to implement the Codes of Practice in peat production and will assist in waste minimisation.
4. Process modification will also be examined with the assistance of the Research & Development Dept, which may improve the efficiency of the production machines, reducing the amount of milled peat lost as silt.

Project Report:

With regard to process modifications, to reduce peat loss on the bog, inspections will be carried out during the next production season, to see what improvements can be effected to reduce losses and leakages of peat from Millers, Harrows, Ridgers & Harvestors. These machines will be tested at Monnetia in the Boora Group and will involve looking at belt seals, hydraulic harrows, ridger blades, offset millers etc.

These modifications will be examined along side existing machines to quantify any benefits that may be achieved. A report on this project will be submitted as part of the 2002 AER.

APPENDIX 3

Environmental Management Programme Report

Project 4.

Condition 2.2.2 (iii) calls for the Investigation of reed-bed systems for final polish of silt pond discharges to be addressed. Condition 9.1.7.

Project Summary:

This project will be a desk-based study to examine the different types of reed-beds in use and the different types of wastewater's that are suitable for final polishing.

1. An Engineer will be appointed to examine and research existing systems that may be in use, and assess their suitability, advantaged/disadvantages etc to the Bord na Mona situation. He/She will liaise with 3rd level Institutions who may be carrying out research into reed-bed systems and their applications for final polishing of wastewater.
2. If the above research shows that demonstrating the effectiveness or not of the system, warrants a pilot area to be selected and a reed-bed constructed, then a test area will be selected
3. If the research shows that the system is not suitable for final polishing of silt pond discharges, the rationale for this will be included in the AER.

Project Report:

The potential for using reedbed systems for the final polishing of silt pond discharges.

The installation of reedbed treatment systems for the final polishing of silt pond waste is not, in most respects, a feasible option for Bord na Mona. The results collected from composite samplers at two sites (Allen and Blackwater) and also from grab samples at these sites (see report on silt pond efficiency) indicate that BOD, suspended solids, phosphorus and ammonia values are below environmental quality standards given by the EPA. The Lough Ree, Lough Derg study found similar results except that ammonia levels emanating from the worked bog were high. This meant that ammonia levels in the little Cloghan River were elevated downstream of the operational site. If reedbeds could be proven to significantly reduce ammonia from silt pond discharges their installation would be justified, however for the greater part, discharges from worked bogs into catchments satisfy environmental quality standards and literature shows that ammonia removal efficiency is unreliable and unpredictable (Jing *et al.*, 2001, Steer *et al.*, 2002, Luederitz *et al.*, 2001). TMER results (Leuderitz *et al.*, 2001) would indicate that reedbed treatment systems would not be a desirable option for the final polishing of silt pond waste. Practical problems would also arise in terms of site accessibility and the difficulty of working with peat.

Silt removal efficiency trial of Bord na Mona settlement ponds.

The results of efficiency tests from this study indicate that the Barnaran and Creggan ponds were not very efficient but as explained, water entering the ponds in most cases had low suspended solid concentrations. As the amount of silt entering the pond increased, the representative efficiency of the ponds was revealed. Despite this, the requirements of the license were still fulfilled in terms of concentrations of suspended solids in the outflow from the pond.

The results achieved in this test are not typical as previous tests by Hannon and Coffey (1980) and Harkins (1991) have shown silt ponds to be highly efficient at removing peat silt. This is due to the fact that the majority of the silt is retained on the bog in the old sod trenches in the case of Barnaran, while Creggan bog is pumped drainage with the silt being retained in the pump sump. It is proposed to sample another pond, which is a more representative example of a gravity drained system, in the coming year. Operational practices and improved maintenance of the ponds would also ensure greater silt removal efficiency.

APPENDIX 4

Environmental Management Programme Report

Project 8.

Condition 2.2.2 (vii) of the EMP calls for an investigation into the reuse of silt pond waste.

Project Summary:

The difficulty with reusing peat silt is the contamination of the peat by subsoil, because of the location of the silt ponds. This results in high ash content.

1. The project will select 1 to 2 ponds in the Bord na Mona Energy Ltd group, with a view to examining the possibilities of silt containment in intermediate settlement ponds.
2. Examine the methods used for extracting the silt and the physical make-up of the silt once it has been mechanically taken from the silt pond with regard to contamination.
3. Methods for incorporating the silt back into the stockpiles will be examined for feasibility, effectiveness etc.
4. Alternative uses for the silt will also be explored, either for further use within Bord na Mona Energy Ltd, or for public use.

Two suitable ponds will be introduced to the project on a phased basis, to conduct trials. The results from the first pond will determine whether a second test site worth exploring.

Project Report:

Suitable locations for examining the possibility of reusing silt pond waste will be selected prior to the 2002 production season and monitored in the second half of the year.

APPENDIX 5

Environmental Management Programme Report

Project 9.

Condition 2.2.2 (viii) of the EMP calls for the collection, storage, and reuse of polythene covering to be explored.

Project Summary:

1. The project will initially be in the form of desk based study, to examine the methods available for the removal, collection and the storage of the stockpile covering.
2. It will also cover research into the development of a Bord na Mona specific machine/method for the effectiveness and economical removal of the covering
3. Polythene reuse will be examined in relation to reuse in Bord na Mona Energy Ltd, other divisions in Bord na Mona Ltd, or other industry.

The collection and reuse of the material will also be examined in conjunction with the licensed waste contractor, engaged to recycle the used polythene covering. The company is actively pursuing these objectives with Shabra Plastics and is also exploring other outlets for the waste polythene.

Project Report:

Trials were carried out by a private company (Banner Re-cycling) on the baling of used polythene for removal to a recycling depot. The loose polythene is brought to the nearest hard stand on site and is baled into approx. 400 kg square bales. It is then in a suitable form for transportation for recycling. The company will soon have a dedicated machine for Bord Na Mona use.

Baling took place at Boora and Coolnamona and this will be extended to all Works.

Bord Na Mona have an agreement with Shabra Plastics Ltd. (Monaghan) to re-cycle this polythene and during the year 2001, 185 Tonnes was delivered to them . Shabra use this high grade material to manufacture a raw material in bead form for use in other industries.

We are at present in discussions with two companies regarding re-cycling our used polythene into Bio-Bead for use by Bord Na Mona Environmental Ltd in its products.

APPENDIX 6

Environmental Management Programme Report

Project 10.

Condition 2.2.2 (ix) of the EMP calls for an examination of the use of reusable material for stockpile protection.

Project Summary:

1. This project will be initially in the form of a desk-based study, to examine the various materials on the market, which may suit stockpile protection.
2. It will re-examine previous Bord na Mona research into alternative stockpile protection measures and assess any advances in technology.
It will take into account, the methods of application, life of the product, methods of removal, recyclability, and economics etc and its suitability to Bord na Mona's requirements

This will be reported, on a quarterly basis, to the Head of Civil Engineering & Environmental Control and the results of the research documented.

Project Report:

Currently Bord na Mona use 350 gauge, 89 micron, low density black polythene for stockpile protection for a variety of reasons.

1. Weight per roll of polythene, is suitable for transport on the bog, where low bearing pressures are important.
2. It is also suitable for handling and covering of the stockpile on the bog and when removing during peat sales.
3. The polythene is also suitable for baling for recycling (see project 9).

Bord na Mona have also commissioned a study on biodegradable polymers used in the manufacture of film. The objectives of the study are to compare biodegradable films to polyethylene film for use as peat protective cover. The comparison will be based on product performance, end of life, degradation processes, product shelf life and cost.

The report will detail the current state of the art in commercially available biodegradable polymers. Polymer converters manufacturing biodegradable film will also be detailed. The comparison of biodegradable polymers to polyethylene will also be reported with particular emphasis on the performance requirements of Bord na Mona

The project, which is being carried out by the Polymer Development Centre, in The Athlone Business & Technology Park, has commenced since 11/02/02, and a report is due by 11/03/02

APPENDIX 7

Environmental Management Programme Report

Project 11.

Condition 2.2.2 (x) of the EMP calls for the examination of wind power technology for pumped drainage.

Project Summary:

- 1 It will also involve examining previous research carried out by Bord na Mona and assessing changes in technology.
The project will initially be in the form of desk based study, to examine the technology availability, the pumping requirements of the various licensed activities, wind regimes, and the suitability of bogs for the installation of wind powered pumps.

Project Report:

Previous studies into utilising wind power technology for pumped drainage in Bord na Mona have show it to be unfeasible, for a number of reasons.

1. In order for a wind powered pump to operate when required ie. after periods of rainfall, wind is required. As rainfall is not always accompanied with high winds, a separate electrical pump would be required , therefore installation costs would be higher as both systems would be required on site. The requirement for a reliable and responsive pumping system is very important when operating in a production bog as it provides for the drainage of the catchment in situations where gravity drainage is no longer possible. The drainage is important in order to maintain the production fields for production operations and for the protection of existing stock on the bog.
2. Typical Bord na Mona pumping capacity is approx 2.47 l/sec/hectare. Wind pumping capacity of one wind pump investigated was found to be 20,000 to 40,000 litres depending on water head, which converts to 0.46l/sec, which is less than one fifth of the Bord na Mona requirements.
3. Wind regimes on BNM bogs at low heights are not suitable for wind power due to low wind speeds and obstacles on the bog surface and surrounding land such a forestry plantations which create "wind shade".
4. Due to the lack of wind data availability for the majority of Ireland, a wind test mast would have to be installed at each site to assess the potential wind regime. This would have to remain on site for 12mths to establish reliable wind speed data. These test masts would also require planning permission.
5. All wind turbines, regardless of hub height require planning permission from the local authority, and may require some environmental monitoring, or even an EIS.

However, regardless of the above, Bord na Mona is advances advances in technology regarding wind energy, and will continue to monitor and examine any possible uses in pumped drainage.

BORD NA MÓNA
BORD NA MÓNA ENERGY LIMITED
Derrygreenagh, Rochfortbridge, Mullingar, Co-Westmeath.

Annual Environmental Report

March 2001

EPA

IPC ENFORCEMENT WEXFORD.

Main File ✓

Public File ✓

Evaluation File mg

Date 21/3/01

For Assessment by Inspector



Contents

1.0 Introduction

1.1 Company Details

1.2 Activities

1.3 Environmental Policy

1.4 Environmental Management of the Company

2.0 Summary Information

2.1 Emissions to Water Summary

2.1.1 Silt Pond Emissions

2.1.2 Surface Water Discharge Monitoring Location Programme Review

2.1.3 Yard Run-off

2.1.4 Composite Sampler Proposal

2.1.5 Bunding Programme

Emissions to Air

2.2.1 Dust Monitoring Locations Programme

2.2.2 Boiler Combustion Efficiency

2.3 Waste Arisings

2.3.1 Hazardous Waste

2.3.2 Non-Hazardous Waste

2.4 Energy and Water Consumption

2.5 Environmental Incidents and Complaints

2.6 De-silting Report

2.7 Silt Pond Upgrade Programme

2.8 Bog Development and Operational Programme

2.9 AER Summary Data Table

3.0 Management of the Activity

3.1 Environmental Management Programme Report

3.2 Environmental Management Programme Proposal

3.3 Environmental Expenditure

3.4 Bog Rehabilitation Report

4.0 Summary

Appendix 1: Environmental Management Plan Proposal.

Appendix 2: Silt Pond Upgrade Programme.

Appendix 3: Complaints Log Form.

Appendix 4: Silt Pond Inspection Form.

Appendix 5: Workshop Inspection Form.

Appendix 6: Waste Receipts.

Appendix 7: Boiler efficiency report

1 Introduction

1.1 Company Details

Name: **Bord na Mona Energy Limited.**

Address: **Derrygreenagh Group
Derrygreenagh Works
Rochfortbridge
Mullingar
Co Westmeath.**

Telephone No: **044 / 22181** **Fax No: 044 / 22344**

Contact Name: **Finn Campbell**

Position: **General Manager.**

National Grid Reference: **E249450 N238140**

1.2 Activities

The Allen Group of bogs are situated in counties Kildare and Offaly and are generally bounded by the Grand Canal to the North, the Barrow River and tributaries to the South, Nass to the East and Tullamore to the West.

These bogs comprise most of the bogland area that was formerly referred to as the Bog of Allen.

The Allen Group has a total acquired area of 21,150 hectares. The nett production area will be 9,200 hectares when all the areas are developed.

The Allen Group currently employs 160 permanent and 40 seasonal workers.

Transport operations are carried out on a seven day cycle throughout the year.

Production operations are typically carried out over a seven day week (weather permitting) for 12 to 15 hours per day.

Peat Milling Operations.

For milled peat production the bog is laid out in a series of rectangular fields of varying length and 15m wide with drains located between. There are essentially four operations involved in milled peat production:

- Milling.
- Harrowing.
- Ridging.
- Harvesting.

Milling.

Special milling machines work their way along the fields, milling approximately 15mm of peat from the top of the bog in a pass.

Harrowing

In the course of drying, the milled peat is turned a number of times to avail of the drying conditions. This is achieved with a machine called a harrow. The milled peat is harrowed until its moisture content is down to approximately 40-50%, which can take up to two to three days, weather depending.

Ridging

The dry peat is then scraped into long ridges running down the centre of each field. This is done with a ridger, a machine consisting of a series of blades in the shape of a v that opens the full width of the field.

Harvesting

During harvesting every eleventh field is used to stockpile the peat, with this field receiving the milled peat from the five fields either side.

The milled peat is then transported via the existing network of peatland railways to one of the following locations.

- Power station (ESB)
- Briquette Factory.
- Horticultural Factory.

1.3 Environmental Policy



Bord na Mona Energy Limited is a commercial semi-state body with responsibility to develop Irelands peat resources in the national interest.

Bord na Mona Energy Limited is committed to gather and make available information on all aspects of its environmental impact and to help improve understanding among the public generally of its role and the importance of Irish peatlands.

Bord na Mona Energy Limited recognises the importance of peatland conservation.

Bord na Mona Energy Limited will leave behind all areas it owns as either an economically or socially integrated resource of a high environmental value.

Bord na Mona Energy Limited seeks to conduct all aspects of its buisness in an environmentally sensitive value.

Bord na Mona Energy Limited will establish an environmental management system specifically addressing the following impacts.

- Discharges to water.
- Emissions to atmosphere.
- Waste disposal.
- Use of natural resources.
- Noise, vibration, odour, dust and visual effects.
- Natural environment and eco-system.

The environmental management system will be monitored, maintained and continually improved.

A system of regular environmental audits will be put in place.

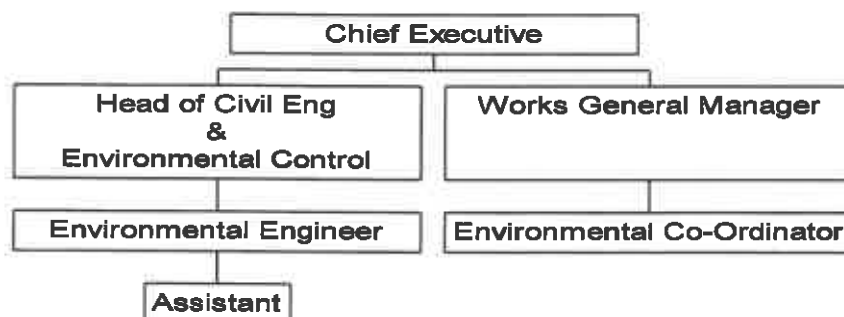
Bord na Mona Energy Limited will continue research and development into all aspects of its environmental impact.

This statement is published and is available at all locations within the division and its contents are brought to the attention of all employees.

1.4 Environmental Management of the Company

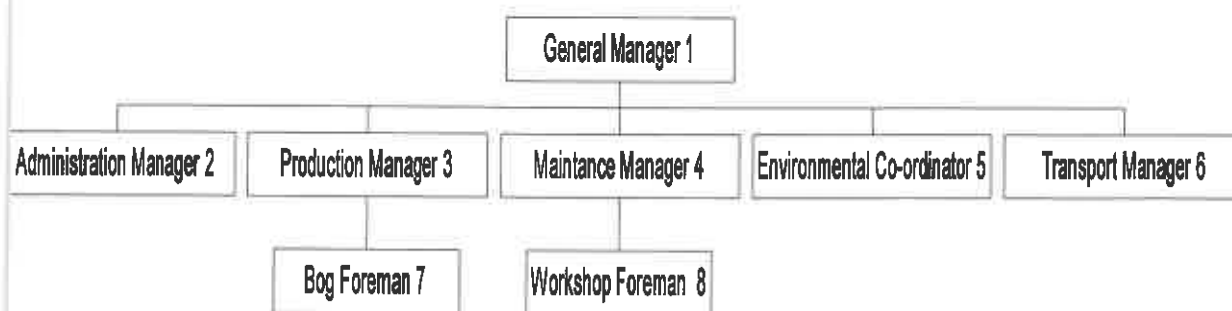
The organisational structure within the Allen Group is presented in the flow charts below.

Environmental Responsibilities



Allen Group

Environmental Responsibilities



- (1) Overall environmental responsibilities
- (2) Records of complaints and registers
- (3) All production related issues
- (4) Machine maintenance
- (5) Co-ordinating environmental affairs
- (6) All peat transportation matters
- (7) Silt pond maintenance, tea centres codes of practice
- (8) Fuel loading, oil traps, weekly workshop inspections.

2 Summary Information

2.1 Emissions to Water Summary

2.1.1 Silt Pond Emissions

The attached tables are a summary of the emissions to surface waters from within the Allen Group. As the emission sampling point proposal, was not required to be submitted, until six months after our IPC licence was issued, only one round of sample results, covering Sep/Oct/Nov could be submitted with the AER.

Therefore the results in the table are the actual results as opposed to an average. As part of the silt pond upgrade programme a number of the sampling points have been improved over the past months. These improvements include the enlargement of ponds where required and the installation of piped outlets, to accommodate the measurement of flow. A copy of a silt pond inspection form is attached in **Appendix 4**

Bord na Mona Group : Allen
IPC Licence No.: 503
Emissions to water summary

Location : SW2

Sept/Oct/Nov (Final Quarter 2000)

Parameter	Average Emission (mg/l)	Emission Limit Value (ELV) (mg/l)
pH units	7.3	
Flow (L/sec)	No Flow	
Suspended Solids (mg/l)	<5	35mg/l
Total Solids (mg/l)	*	
Total Phosphorus (mg/l)	<0.05	
Ammonia (mg/l)	0.8	
Colour (Pt Co units)	364	
COD (mg/l)	98	

Location : SW10**Sept/Oct/Nov (Final Quarter 2000)**

Parameter	Average Emission (mg/l)	Emission Limit Value (ELV) (mg/l)
pH units	7.4	
Flow (L/sec)	15.8 (L/S)	
Suspended Solids (mg/l)	9	35mg/l
Total Solids (mg/l)	*	
Total Phosphorus (mg/l)	0.05	
Ammonia (mg/l)	0.9	
Colour (Pt Co units)	164	
COD (mg/l)	63	

Location : SW14**Sept/Oct/Nov (Final Quarter 2000)**

Parameter	Average Emission (mg/l)	Emission Limit Value (ELV) (mg/l)
pH units	7.8	
Flow (L/sec)	No Flow	
Suspended Solids (mg/l)	<5	35mg/l
Total Solids (mg/l)	*	
Total Phosphorus (mg/l)	<0.05	
Ammonia (mg/l)	0.6	
Colour (Pt Co units)	98	
COD (mg/l)	55	

Location : SW33**Sept/Oct/Nov (Final Quarter 2000)**

Parameter	Average Emission (mg/l)	Emission Limit Value (ELV) (mg/l)
pH units	7.7	
Flow (L/sec)	17.4 (L/S)	
Suspended Solids (mg/l)	<5	35mg/l
Total Solids (mg/l)	*	
Total Phosphorus (mg/l)	<0.05	
Ammonia (mg/l)	2.6	
Colour (Pt Co units)	98	
COD (mg/l)	46	

Location : SW43**Sept/Oct/Nov (Final Quarter 2000)**

Parameter	Average Emission (mg/l)	Emission Limit Value (ELV) (mg/l)
pH units	7.9	
Flow (L/sec)	5.9 (L/S)	
Suspended Solids (mg/l)	14	35mg/l
Total Solids (mg/l)	*	
Total Phosphorus (mg/l)	<0.05	
Ammonia (mg/l)	3.6	
Colour (Pt Co units)	156	
COD (mg/l)	67	

Location : SW65**Sept/Oct/Nov (Final Quarter 2000)**

Parameter	Average Emission (mg/l)	Emission Limit Value (ELV) (mg/l)
pH units	7.9	
Flow (L/sec)	7.7 (L/S)	
Suspended Solids (mg/l)	<5	35mg/l
Total Solids (mg/l)	*	
Total Phosphorus (mg/l)	<0.05	
Ammonia (mg/l)	<0.2	
Colour (Pt Co units)	176	
COD (mg/l)	82	

Location : SW66**Sept/Oct/Nov (Final Quarter 2000)**

Parameter	Average Emission (mg/l)	Emission Limit Value (ELV) (mg/l)
pH units	8.1	
Flow (L/sec)	12.8 (L/S)	
Suspended Solids (mg/l)	<5	35mg/l
Total Solids (mg/l)	*	
Total Phosphorus (mg/l)	<0.05	
Ammonia (mg/l)	<0.2	
Colour (Pt Co units)	97	
COD (mg/l)	63	

*: Total solids to be included in future results.

2.1.2 Surface Water Discharge Monitoring Location Programme Review

The surface water discharge monitoring location programme remains the same as was submitted and accepted by the Agency in June 2000.

Pipes have been fitted at each location in order to accommodate flow metres and the provision of safe access is also ongoing.

Emission point signs have been designed for these sampling points and are being put in place.

Monitoring May to December 2000

Emission Pt.	Parameter	Emission Mg/l	Emission Limit Value (ELV) Mg/l for 75% of grab samples.	% Compliance
Sw no.2	Suspended Solids	< 5	35mg/l	100%
Sw no.10	Suspended Solids	9	35mg/l	100%
Sw no.14	Suspended Solids	< 5	35mg/l	100%
Sw no.33	Suspended Solids	< 5	35mg/l	100%
Sw no.43	Suspended Solids	14	35mg/l	100%
Sw no.65	Suspended Solids	< 5	35mg/l	100%
Sw no.66	Suspended Solids	< 5	35mg/l	100%

2.1.2 Surface Water Discharge Monitoring Location Programme Review

The surface water discharge monitoring location programme remains the same as was submitted and accepted by the Agency in June 2000.

Pipes have been fitted at each location in order to accommodate flow metres and the provision of safe access is also ongoing.

Emission point signs have been designed for these sampling points and are being put in place.

Monitoring May to December 2000

Emission Pt.	Parameter	Emission Mg/l	Emission Limit Value (ELV) Mg/l for 75% of grab samples.	% Compliance
Sw no.2	Suspended Solids	< 5	35mg/l	100%
Sw no.10	Suspended Solids	9	35mg/l	100%
Sw no.14	Suspended Solids	< 5	35mg/l	100%
Sw no.33	Suspended Solids	< 5	35mg/l	100%
Sw no.43	Suspended Solids	14	35mg/l	100%
Sw no.65	Suspended Solids	< 5	35mg/l	100%
Sw no.66	Suspended Solids	< 5	35mg/l	100%

2.1.3 Yard Run-off

The attached tables are a summary of the emissions to surface waters from yards and workshops within the Allen Group. This summary is the average of the results submitted, covering the periods June/July/August and Sept/Oct/Nov 2000.

At present work is on going on the rationalisation of yard run off at the various workshops, in order to ensure that all run off be diverted through a properly designed oil trap as per condition 9.1.8. Signs have also been designed for the emission points and are being put in place.

Some of this work is being carried out in conjunction with the construction of adequate bunding at the various locations. A copy of a workshop/yard inspection form is attached in **Appendix 5**

Bord na Mona Group : Allen.

IPC Licence No.: 503

Emissions to water summary yards/workshops

Location :Clonsast SWE-1.

**June - December
2000**

Parameter	Average Emission (mg/l)	Emission Limit Value (ELV) (mg/l)
COD (mg/l)	20	NA

Location :Ballydermot SWE-1.

**June - December
2000**

Parameter	Average Emission (mg/l)	Emission Limit Value (ELV) (mg/l)
COD (mg/l)	37	NA

Location :Ballydermot SWE-2.
June - December
2000

Parameter	Average Emission (mg/l)	Emission Limit Value (ELV) (mg/l)
COD (mg/l)	69	NA

Location :Timahoe SWE-1.
June - December
2000

Parameter	Average Emission (mg/l)	Emission Limit Value (ELV) (mg/l)
COD (mg/l)	127	NA

Location :Timahoe SWE-2.
June - December
2000

Parameter	Average Emission (mg/l)	Emission Limit Value (ELV) (mg/l)
COD (mg/l)	73	NA

Location :Ballycon SWE-1.
June - December
2000

Parameter	Average Emission (mg/l)	Emission Limit Value (ELV) (mg/l)
COD (mg/l)	29	NA

2.1.4 Composite Sampler Programme

A composite sampler location proposal has been submitted to the Agency and accepted verbally. This acceptance occurred after december 2000 and therefore no results are available for submission in this AER.

However work on the installation of the sampler is underway and monitoring will commence in the near future.

Selection of sampling programme.

Our proposal is based around the provision of equipment, which would require going to each site once a week rather than daily.

The equipment would have the following features:

a) Multi-bottled. We propose that the sampler would have 8 x 2 litre bottles. (This will allow for a full weeks sampling to be carried out, where upon each bottle would represent exactly 24 hours flow. These samples would be taken flow proportional over this 24 hour period.

b) **Portable and battery operated.**

No permanent power source available

c) **Built in data logger.**

This will store the flow and sampling data for each week, which could be downloaded when the samples are being collected.

Our proposal is as follows:

For sampling we propose the Isco 6700 8 x 2 litre composite sampler which is set up at the proposed site and would collect a full week of flow proportional 24 hour samples. The sampler is powered by a deep discharge marine lead acid battery.

For flow measurement, we propose that a concrete pipe be installed at the end of the silt pond. The flow would then be measured by the Isco 710 Ultrasonic Flow Module, which plugs into the sampler. Flow data is stored on the sampler and can be accessed using the Isco 581 Manual transfer device.

The operator would thus have a weekly requirement to arrive at each site with a 2nd newly charged battery which he would exchange, the 581 RTD to down load the flow data and 7 collection bottles to take the samples and restart the sampler.

The most recent 24 hour sample of the 7 should be considered for any specific parameter that may be required to be analysed within 24 hrs.

The parameters to be analysed are below in accordance with Schedule 1(ii)
Monitoring of Emissions to Water:

Parameter	Monitoring Frequency	Location of analysis
pH units	Weekly	On-site
Flow l/sec	Daily	On-site
Suspended Solids mg/l	Daily	Laboratory
Total Solids mg/l	Daily	Laboratory
Total Phosphorus mg/l	Weekly	Laboratory
Ammonia (as N) mg/l	Weekly	Laboratory
Colour Hazen units	Weekly	Laboratory
COD mg/l	Weekly	Laboratory

2.1.5 Bunding Programme

At present tenders are out for the provision of adequate bunding at our oil/diesel storage facilities. The successful contractor will be expected to commence the work by the beginning of March 2001.

A number of locations have been identified for the construction of bunds, some at existing storage/loading facilities and some at completely new locations.

Bunds will be constructed at Ballycon, Clonsast, Ballydermot, Lullymore and Timahoe.

Incorporated into this work will be the construction of a fill area, which will satisfy condition 9.1.7 of the Allen Licence.

The bund sizes will satisfy condition 9.1.4

Testing of these bunds will be carried out as per condition 9.1.6 and the results of this testing will be reported on as part of next years AER.

2.2 Emissions to Air

2.2.1 Dust Monitoring Locations Programme

Approval for the dust sensitive locations was not received until after production finished in 2000 therefore no results can be reported on in this AER.

In order to comply with Condition 5.4 of the licence in relation to Dust Sensitive Locations the following sampling method are proposed to be adopted for the 2001 production season.

Methodology

Dust monitoring will be conducted using the Bergerhoff method as referred to in the TA-Luft guidelines (VDI-guidelines 2119/Part 2). The input of the atmospheric material will be determined over a planned period of measurement, probably one month, by exposing the collection pots. The sample is then evaporated down and the dry residue is determined gravimetrically, the result being reported in mg/m²/d.

In addition to this a control sampler will be set up in a location free from the influence of peat production in order to establish the background levels.

The apparatus consists of a plastic collecting pot and a post with a protective basket, set at 1500mm above the ground level in accordance with the guidelines set out in the VDI 2119/Part 2.

Measurement, collection and determination will be carried out in accordance with the guidelines in an ILAB accredited laboratory. The environmental co-ordinator will change the sample pots or an employee nominated by him/her. The samples will be sent to the laboratory under a strict chain of custody and the results will be reported on each year as part of the AER.

In addition to this, Bord na Mona have adopted the following codes of practice in relation to dust.

Dust Control

- Identify and record sensitive areas.
- Plant shelter belts in sensitive areas.
- Avoid harvesting in sensitive areas during windy weather.
- Use grassed passways for machinery.
- Keep headlands clean-remove loose peat.
- Slow down when travelling along dusty headlands.
- When harvesting keep jib low on stockpile.
- Roll final harvest on uncovered stockpiles
- Plant shelter belts around outloading facilities.
- Clean road crossings after use.

2.2.2 Boiler Combustion Efficiency

The boiler at Derrygreenagh works was tested in April 1999 as part of the original application for the Allen group. Allen didn't receive its licence until April 2000 therefore under condition 5.1 of the licence, testing will be required in 2001 and the results will be submitted in next years AER.

The results of the boiler efficiency test are attached in **Appendix 7**.

Boiler Details

There are currently boilers at Clonsast, Ballydermot, Timahoe and at Edenderry Power. The boilers at Ballydermot, Timahoe and Clonsast are all of the same make and size ie Buderus, Logano, GE515, capable of delivering 593KW of power from a diesel fired burner. The boiler at Edenderry Power is of the same make, but a GE315 model, capable of delivering 240KW of power.

These boilers operate from Oct-Mar approximately.

2.3 Waste Arisings

2.3.1 Hazardous Waste

Derrygreenagh being a central location, is used as a collection point for all hazardous wastes emanating from all the areas in both the Allen and Derrygreenagh Groups. All waste oils, filters, spent batteries, etc are collected centrally at Derrygreenagh before being removed by a licenced waste contractor such as Atlas Waste Oil, Hammond Lane, Returnabatt, etc.

A system is in place where by every area has its own waste oil and filter barrel. These barrels are painted yellow to distinguish them from ordinary barrels and are clearly marked waste filters or waste oil.

When the barrels are getting near full, the area team leader informs our Derrygreenagh stores and a truck is dispatched to collect the full barrels and replace them with empties. Any spent batteries will also be collected if the need arises.

Records of all the hazardous wastes handled by the Allen and Derrygreenagh Groups from May-December 2000 have been submitted with the Derrygreenagh AER.

2.3 Waste Arisings

2.3.1 Hazardous Waste

Derrygreenagh being a central location, is used as a collection point for all hazardous wastes emanating from all the areas in both the Allen and Derrygreenagh Groups. All waste oils, filters, spent batteries, etc are collected centrally at Derrygreenagh before being removed by a licenced waste contractor such as Atlas Waste Oil, Hammond Lane, Returnabatt, etc.

A system is in place where by every area has its own waste oil and filter barrel. These barrels are painted yellow to distinguish them from ordinary barrels and are clearly marked waste filters or waste oil.

When the barrels are getting near full, the area team leader informs our Derrygreenagh stores and a truck is dispatched to collect the full barrels and replace them with empties. Any spent batteries will also be collected if the need arises.

Records of all the hazardous wastes handled by the Allen and Derrygreenagh Groups from May-December 2000 have been submitted with the Derrygreenagh AER.

2.3.2 Non-Hazardous Waste

The non-hazardous waste produced by the Allen Group consists mainly of mixed municipal waste, scrap metal and silt pond waste. Midland Refuse has a contract to collect the waste from the various tea centres across the region by way of a wheelie bin system. Rentabin Tullamore (Alina Waste) and Erwin Cobbe were also used for skip hire.

Of the total amount of non-hazardous waste produced by the Allen group, 96.4% was attributed to silt pond waste, 2.4% came from scrap metal and 1.2% was the result of municipal waste.

Of this municipal waste 89.5% came from the workshops and the remaining 10.5% came from the tea centres.

Silt pond cleanings are anhydrous (2% solid matter) and their weight is calculated accordingly (tonnes dry weight). This will explain the great difference in the tonnage's between 1998 and May-Dec 2000 in the summary data tables.

The following table lists the quantities of the wastes generated from May-December 2000 from all of the Allen Group.

2.4 Energy and Water Consumption

The table below is a summary of the energy consumption for the Allen Group, from the dates May – December 2000.

Water is not included, as it is not used as part of the production process and is only used on a domestic scale at tea centres, canteens and offices.

None of the boilers in the Allen group are briquette fired.

Bord na Mona Group : Allen

IPC Licence No.: 503

Energy Consumption Summary

Fuel	Volume	Tonnes	MW/Hours
May - Dec 2000			
Diesel	987m3	819	9675
Petrol	3.36m3	2.54	30.42
Electricity	NA	NA	745
Peat Briquettes	NA	NA	NA

2.5 Environmental Incidents and Complaints

There were two incidents within the Allen Group which occurred between May-December 2000. Although only minor incidents, the Agency was informed.

Environmental Incidents	Number of Incidents
Incidents	2
Incidents requiring corrective action	1
Categories of Incident	
Odour	
Noise	
Water	1
Air	
Procedural	
Miscellaneous	

There was one complaint within the Allen Group, which was received in August 2000. The Agency had received the complaint and forwarded it to the Allen Group. A letter was written to the Agency explaining the situation and the matter was laid to rest.

Environmental Complaints	Number of complaints
Complaints received	1
Complaints requiring corrective action	1
Categories of complaint	
Odour	
Noise	
Water	1
Air	
Procedural	
Miscellaneous	

A copy of a complaint form is attached in **Appendix 3**

2.6 De-Silting Report

The table below is a summary of the silt pond cleaning, within the Allen Group from May-December 2000.

Special long reach machines are primarily used in the cleaning of the ponds, although more conventional machines that have been working on the silt pond up-grade programme are also being used if the pond they are working on needs to be cleaned. Fortnightly Silt Pond inspections are also on going and a cleaning roster will be established from these inspection records.

All the inspection forms are on file at the Derrygreenagh office.

Summary Data Table of Ponds De-Silted From May-December 2000

Bog	No Silt Ponds	Cleaned Once	Cleaned Twice	Cleaned Three Times	Notes
Derries	10	8			
Rathdrum	8	7			
Clonad	7	4	3		
M Mor	2	2			
M Lucas	2				*
Cloncreen	11	2	8	1	
Esker	9	8			
Cavemount	4	1	3		
Ballykeane	8		8		
Codd South	2				**
Ballydermot N	2				
Ballydermot S	2				
Clonsast N	0				
Ballycon	3	2			
Garryhinch	0				
Garrymore	5				
Derrylea	3				
Derryounce					*
Glashabaun N	2	2			
Codd N	5	1			
Ticknevin	2	2			
Glashabaun S	3	2			
D/brennan	5	3			
Killinagh	3	2			
Lodge	2				
Bulge	2				
Barnaran	2	2			
Blackriver	2	2			
Timahoe N&S					***

*: Bog cutaway, no production.

**: Ponds awaiting the installation of pumps, which are to be installed before the start of production 2001.

***: Bog in the very early stages of development, no production in 2001.

BORD NA MÓNA

BORD NA MÓNA ENERGY LIMITED
Derrygreenagh, Rochfortbridge, Mullingar, Co-Westmeath.

Condition 6.9

“Within six months of the date of grant of this licence (28th Apr 2000), the licensee shall submit a programme, for agreement with the Agency, to upgrade the sedimentation pond treatment system. The programme shall, *inter alia*, address provision of additional ponds, weir or pipe installation (inlet and outlet), pond configuration, use of baffles, performance efficiency and frequency of de-silting. The upgrade shall have regard to the minimum silt pond specifications detailed in Condition 6.10”

Programme 2 (Silt Pond Upgrade Programme)

Allen silt pond upgrade programme will address the ponds serving production bogs which are not up to the design standards as set out in the licence document, and in condition 6.10.

It is proposed that the silt pond upgrade programme will first prioritise the ponds in areas adjacent to the rivers Figile and Cushina.

57% of the ponds in the Group are not up to design standard. Approximately thirty thousand cubic metres of excavation will achieve 100% coverage and the bogs have been prioritised as follows.

BOG	NO OF SILT PONDS	PRIORITY
Ballykeane	7	1
Blackriver	4	2
Glash Sth	3	3
Garrymore	3	4
Clonad	5	5
Cavemount	3	6
Derries	7	7
Rathdrum	4	8
Derrybrennan	1	9
Killinagh	3	10
Lullymore	2	11

Stage1 of the programme will be spread out over an 18 month period starting on November 1st 2000. In addition to increasing the pond capacities, the programme will address the addition, where possible, of weirs or pipe installation, in order to increase the control over the discharges. These and the use of baffles, changes in pond configuration, etc will be studied in accordance with the requirements of the EMP (Allen 001-EMP).

BORD NA MÓNA

BORD NA MÓNA ENERGY LIMITED
Derrygreenagh, Rochfortbridge, Mullingar, Co-Westmeath.

Stage 2 of the programme will examine the remaining 43% of the ponds, which are currently up to the required size, for the addition of weirs, baffles etc. This final stage of the programme will also be spread out over an 18 mth period so as to satisfy condition 6.10 in the time period required (3 years).

BOG	NO OF SILT PONDS	PRIORITY
Cloncreen	5	1
B/Dermot Nth	1	2
B/Dermot Sth	1	3
Codd Nth	3	4
Ballycon	1	5
Ballykeane	1	6
Garrymore	2	7
Barnaran	1	8
Derrybrennan	3	9
Lodge	1	10
Derries	2	11
Rathdrum	1	12
Esker	2	13

The above roster of work may deviate from time to time, as a machine working in a particular bog may remain in that bog to complete both stages of programme 2, before moving to the next bog.

All new ponds installed in any of the bogs in the Allen Group in future will be designed and installed to achieve the minimum design criteria as set out in condition 6.10.



Appendix 3

BORD NA MÓNA

BORD NA MÓNA ENERGY LIMITED Environmental Management Complaint Form

Works:

Bog:

Ref No.:

Date:

Method of Complaint :

Letter ___ Telephone Call ___ Interface ___ Other ___

Date Received :

Name Of Complainant :

Address :

Telephone No's :

Ph. _____

Mob. _____

Complaint Description

Location affected (if relevant) :

Townland : _____ Co.: _____

Name of Present Land Owner (if different) _____

Address : _____

Name of Previous Land Owner (if known) : _____

Address : _____

Complaint Received By :

Complaint Forwarded to for Inspection : Mr Joe Ryan.

Investigation Report

Resolution

Work Progress

Date Resolved :

Signed : _____



Appendix 4

Silt Pond Fortnightly Inspection

Works :

IPC Licence no.:

Bog :

Silt Pond no.:

SW no.

[illegible]



Appendix 5

Surface & Groundwater Protection Weekly Inspections

Works : Derrygreenagh.

IPC Licence no.: 503

Area: Ballydermot.

Overground Pipeline

DESCRIPTION	CHECKED BY	DATE	COMMENT
Diesel			
Diesel			
Diesel			
Diesel			
Diesel			

Oil Traps/Interceptors

DESCRIPTION	CHECKED BY	DATE	COMMENT
Oil Traps			
Oil Traps			
Oil Traps			
Oil Traps			
Oil Traps			

Surface Water Discharges

DESCRIPTION	CHECKED BY	DATE	COMMENT
Main Outlet			
Main Outlet			
Main Outlet			
Main Outlet			
Main Outlet			



Appendix 6

MIDLAND REFINANCE SERVICES (LAOIS) LTD.

90, MAIN STREET,
FORTLAOISE,
CO. LAOIS.

Tel: (0502) 20770

17 JUL 2000

ME

V.A.T. Number: - IE 46325210

I N V O I C E

To: BORD NA MONA, (JOE RYAN)
DERRYGREENAGH,
ROCHFORDBRIDGE,
MULLINGAR, CO. WEXFORD.

37/339001

From Date: - 01-07-2000
To Date: - 01-07-2001

Account Number: - B0901500

Invoice Number: - 9146

Quantity	Description	Monthly Rent	V.A.T. Rate	Extension
-13	Medium Bin	140.00	12.5 %	1680.00



WAS 14

JOE RYAN RANG MIDLAND 247-00
To AMMEN

1-37-2206-72

NET VALUE	1680.00
V.A.T.	210.00
TOTAL	1890.00

Westmeath County Council
County Buildings
Mullingar
Co Westmeath

WASTE MANAGEMENT (PERMIT) REGULATIONS, 1998

Permit to treat and store metal waste at Hammond Lane Metal Co. Ltd, The Batteries,
Athlone, Co Westmeath, granted to The Hammond Lane Metal Co., Pigeon House
Road, Dublin 4 in accordance with conditions set out hereunder and as authorised by

County Manager Order No 848-200 dated 6 Nov, 2000.

Waste Permit

WP 1

Register Number:

Applicant:

Mr Tony McCarth, The Hammond Lane
Metal Co., The Batteries, Athlone, Co
Westmeath

Location of Facility:

The Batteries, Athlone, Co. Westmeath

Comhairle Chontae na h-Iarmhí
Westmeath County Council

Áras an Chontae,
An Muileann gCearr,
Contae na h-Iarmhí.



County Buildings,
Mullingar,
Co. Westmeath.

Telephone: (044) 40861

e-mail: secretar@westmeathcoco.ie

Fax: (044) 42330

15 July, 1999

Seamus Dolan,
Alina Plant Hire,
Cappincur,
Tullamore,
Co Offaly

Our Ref. SS/PC/EN

Re: Use of Ballydonagh & Marlinstown Landfill Sites

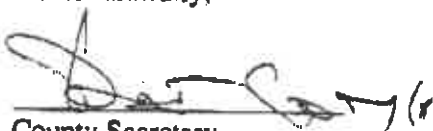
Dear Sir,

I confirm that you are authorised to use Council Landfill Sites at;

Ballydonagh, Athlone and
Marlinstown, Mullingar

in the current calender year subject to maintaining your account within the agreed credit limits.

Yours faithfully,


County Secretary

Please address all correspondence to the County Secretary

WIN COBBE

W. COBBE,
WELINGTON,
LAOIS.
Phone: (0502) 23227/23018
Fax No: (0502) 43649



V-41935

WASTE DISPOSAL
CABIN MIRE

Bord Na Mona
Ballydermot,
Rathangan,
Co. Kildare.

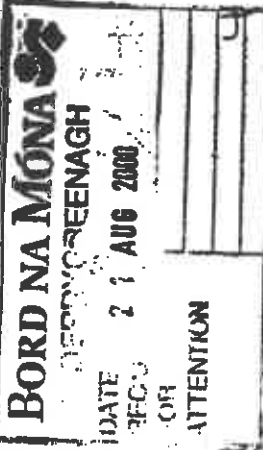
INVOICE NO 40391

DATE 31-May-00

VAT NO. IE 9D26480E

ACCOUNT NO.	REF. NO.	LOCATION	ORDER NO.
00005061			37/35018

DATE	DOCKET	DESCRIPTION	QUANTITY	PRICE	VAT CODE
01/05/00	1100	1100 Ltr. Mini Bin @ 60.00	1.00	60.00	1
31/05/00	59791	1100 Ltr. Mini Bin @ 500.00 Rent on bin from May '99	1.00	500.00	1



9584

BATCH 5784

VAT ANALYSIS		
CODE	RATE	GOODS VALUE
1	12.50%	560.00
		70.00

TOTAL GOODS	TOTAL VAT	INVOICE TOTAL
560.00	70.00	630.00

TERMS: 30 DAYS FROM DATE OF INVOICE

WIN COBBE

WASTE DISPOSAL
CABIN HIRE



V-4193

Bord Na Mona
Ballydermot,
Rathangan,
Co. Kildare.

INVOICE NO 40878

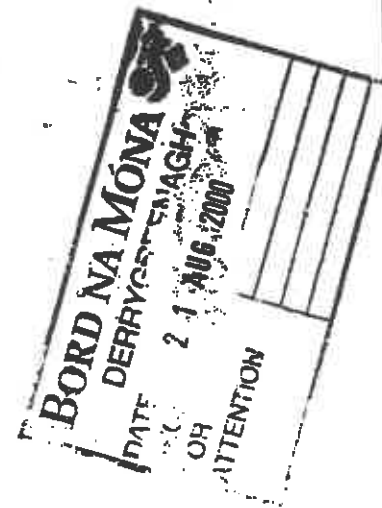
DATE 30-Jun-00

VAT NO. IE 9D26480E

ACCOUNT NO.	REF. NO.	LOCATION	ORDER NO.
00005061			3735018

DATE	DOCKET	DESCRIPTION	QUANTITY	PRICE	VAT
------	--------	-------------	----------	-------	-----

Rental
01/06/00 1100 1100 Ltr. Mini Bin @ 60.00 1.00 60.00 1



49583

CODE	RATE	GOODS VALUE	VAT VALUE
1	12.50%	60.00	7.50

TOTAL GOODS	TOTAL VAT	INVOICE TOTAL
60.00	7.50	67.50

TERMS: 30 DAYS FROM DATE OF INVOICE

BATCH 5784

ERWIN COBBE

KILBRIDE,
PORTARLINGTON,
CO. LAOIS.
Phone: (0502) 23227/23018
Fax No: (0502) 43649

WASTE DISPOSAL
CASH HIRE



Bord Na Mona
Ballydermot,
Rathangan,
Co. Kildare.

INVOICE NO 41363

DATE 31-Jul-00

VAT NO. IE 9026480E

ACCOUNT NO.	REF. NO.	LOCATION	ORDER NO.		
00005061			3135212		
DATE	DOCKET	DESCRIPTION	QUANTITY	PRICE	VAT CODE
Rental					
01/07/00	1100	1100 ltr. Mini Bin @ 60.00	1.00	60.00	1

49903

49903

VAT ANALYSIS		
CODE	RATE	GOODS VALUE
1	12.50%	60.00
		VAT VALUE 7.50

TOTAL GOODS	TOTAL VAT	INVOICE TOTAL
60.00	7.50	67.50

TERMS: 30 DAYS FROM DATE OF INVOICE

ERWIN COBBE

KILBRIDE,
PORTARLINGTON,
CO. LAOIS.
Phone: (0502) 23227/23018
Fax No: (0502) 43649

WASTE DISPOSAL
CABIN HIRE



Bord Na Mona
Ballydermot,
Rathangan,
Co. Kildare.

INVOICE NO 41882

DATE 31-Aug-00

VAT NO. IE 9D26480E

ACCOUNT NO.	REF. NO.	LOCATION	ORDER NO.
00005061			37/36241.

DATE	DOCKET	DESCRIPTION	QUANTITY	PRICE	VAT CODE
Rental 01/08/00	1100	1100 Ltr. Mini Bin @ 60.00	1.00	60.00	1

BORD NA MÓNA
DERRYGREENAGH

DATE 12 SEP 2000
REC'D
FOR
ATTENTION

VAT ANALYSIS			
CODE	RATE	GOODS VALUE	VAT VALUE
1	12.50%	60.00	7.50

TOTAL GOODS	TOTAL VAT	INVOICE TOTAL
60.00	7.50	67.50

TERMS: 30 DAYS FROM DATE OF INVOICE

51464

ERWIN COBBE

KILBRIDE,
PORTARLINGTON.
CO. LAOIS.

Phone: (0502) 23227/23018
Fax No: (0502) 43649

WASTE DISPOSAL
CABIN HIRE



Bord Na Mona
Ballydermot,
Rathangan,
Co. Kildare.

INVOICE NO 42379

DATE 30-Sep-00

VAT NO. IE 9D26480E

ACCOUNT NO.	REF. NO.	LOCATION	ORDER NO.
00005061			37/37883

DATE	DOCKET	DESCRIPTION	QUANTITY	PRICE	VAT CODE
Rental 01/09/00	1100	1100 Ltr. Mini Bin @ 60.00	1.00	60.00	1

53784.

VAT ANALYSIS			
CODE	RATE	GOODS VALUE	VAT VALUE
1	12.50%	60.00	7.50

TOTAL GOODS	TOTAL VAT	INVOICE TOTAL
60.00	7.50	67.50

TERMS: 30 DAYS FROM DATE OF INVOICE

L & WIN CODER

KILBRIDE,
PORTARLINGTON,
CO. LAOIS.

Phone: (0502) 23227/23018
Fax No: (0502) 43649

WASTE DISPOSAL
CABIN HIRE



Bord Na Mona
Ballydermot,
Rathangan,
Co. Kildare.

INVOICE NO 42833

DATE 31-Oct-00

VAT NO. IE 9D26480E

ACCOUNT NO.	REF. NO.	LOCATION	ORDER NO.
00005061			

DATE	DOCKET	DESCRIPTION	QUANTITY	PRICE	VAT CODE
01/10/00	1100	1100 Ltr. Mini Bin @ 60.00	1.00	60.00	1

1 - ALBERT LTD. - 31201

Handwritten signature and date 31/10/00

VAT ANALYSIS			
CODE	RATE	GOODS VALUE	VAT VALUE
1	12.50%	60.00	7.50

TOTAL GOODS	TOTAL VAT	INVOICE TOTAL
60.00	7.50	67.50

TERMS: 30 DAYS FROM DATE OF INVOICE

**KILBRIDE,
PORTARLINGTON,
CO. LAOIS.**

Phone: (0502) 23227/23018
Fax No: (0502) 43649

**WASTE DISPOSAL
CABIN HIRE**

Bord Na Mona
Ballydermot,
Rathangan,
Co. Kildare.



INVOICE NO 43308

VAT NO. IE 9D28480E

DATE

30-Nov-00

ACCOUNT NO.	REF. NO.	LOCATION	ORDER NO.
00005061			

DATE	DOCKET	DESCRIPTION	QUANTITY	PRICE	VAT CODE
01/11/00	1100	1100 Ltr. Mini Bin @ 60.00	1.00	60.00	1

Rental

1100 Ltr. Mini Bin @ 60.00

1100 Ltr. Mini Bin @ 60.00

1100 Ltr. Mini Bin @ 60.00

VAT ANALYSIS

CODE	RATE	GOODS VALUE	VAT VALUE
1	12.50%	60.00	7.50

TOTAL GOODS	TOTAL VAT	INVOICE TOTAL
60.00	7.50	67.50

TERMS: 30 DAYS FROM DATE OF INVOICE

ERWIN CUBBER

ILBRIDE.
ORTARLINGTON.
O. LAOIS.
Phone: (0502) 23227/23018
Fax No: (0502) 43649

WASTE DISPOSAL
CABIN HIRE



Bord Na Mona
Ballydermot,
Kathangan,
Co. Kildare.

INVOICE NO 43798

DATE 31-Dec-00

VAT NO. IE 9026480E

ACCOUNT NO	REF NO	LOCATION	ORDER NO
005061			37/42007

DATE	DOCKET	DESCRIPTION	QUANTITY	PRICE	VAT CODE
12/12/00	1100	1100 Ltr. Mini 5in @ 60.00	1.00	60.00	1

VAT ANALYSIS

QTY	RATE	GOODS VALUE	VAT VALUE
1	12.50%	60.00	7.50

TOTAL GOODS	TOTAL VAT	INVOICE TOTAL
60.00	7.50	67.50

TERMS: 30 DAYS FROM DATE OF INVOICE

Por 59503



Appendix 7

***TOTAL DUST AND PARTICULATE
EMISSIONS ANALYSIS FROM BOILER
STACKS AT PRE-SELECTED LOCATIONS
IN COMPLIANCE WITH THE
REQUIREMENTS OF BORD NA
MÓNA'S INTEGRATED POLLUTION
CONTROL LICENCE APPLICATION***

REPORT NO:

K960-D

ATTENTION:

Mr. Paul Riordan
Bord na Móna Energy Limited
Boora Group
c/o Boora Works
Leabeg
Tullamore
Co. Offaly

Mr. Finn Campbell
Bord na Móna Allen Peat Limited
Allen Group
c/o Derrygreenagh Works
Rochfordbridge
Mullingar
Co. Westmeath

PREPARED BY:

Paul Chadwick
Environmental Consultant

DATE:

26 April 1999

CONFIDENTIAL

1.0 INTRODUCTION

In compliance with the requirements of their Integrated Pollution Control Licence Application, Bord na Móna are required to assess the nature of boiler emissions from various works within the company. As a basis for a preliminary assessment it was proposed to sample the boiler stacks from two works, namely Boora Works (Boora Group) and Derrygreenagh works (Derrygreenagh Group) which are deemed representative of the total dust and particulate emissions from the peat briquette boilers that are generated at other works sites within Bord na Móna .

Bord na Móna Environmental Ltd. was commissioned to conduct this monitoring programme. The Boora and Derrygreenagh works facilities were visited by Environmental Consultants from Bord na Móna Environmental Ltd. on the 21st and 23rd of April 1999, respectively, for the purpose of monitoring the following emission points:

Emission Point Reference	Location	Description
AB-1	Boora Works	Boiler Emission
AB-1	Derrygreenagh Works	Boiler Emission

The locations of the boiler emissions sampling points are accurately marked on Appendix 1 (taken from Drawing 11.2 of the Drawing's Folder of the Boora Group IPC Licence Application) and Appendix 2 (taken from Drawing 11.2 of the Drawing's Folder of the Derrygreenagh Group IPC Licence Application), respectively.

This report details the sampling and analytical methodologies employed.

2.0 METHODOLOGY**2.1 Volume Flow and Temperature**

Volume flow was measured in accordance with ASTM standard test method D3154-91 for average velocity in a duct (pitot tube method). A standard L-type pitot tube and digital manometer were used to record velocity pressures. A K-type thermocouple was used for measuring temperature.

2.2 Total Dust and Particulates

The total dust and particulates was determined in accordance with US EPA standard methods. Samples were collected isokinetically on pre-weighed filters using an Anderson Universal stack sampler. Where access was prohibited an in-stack sampling procedure was employed. The weight gain was determined gravimetrically using 5 point calibrated balances.

2.3 Quality Control

The Environmental Limited Laboratory complex have been awarded ILAB accreditation by the ILAB secretariat. A stringent six point quality control approach is at present implemented in the laboratories.

- (i) Controlled chain of custody.
- (ii) Operator competence - all analysts must be suitably qualified to carry out the required analysis.
- (iii) Certified Reference Materials (CRM). The accuracy of a series of determinations is checked against known standards.
- (iv) Duplicate - 10% duplication is normal.
- (v) Quality Control Charts.
- (v) Inter Laboratory Testing - The Environmental Limited Laboratories are members of the WASP Interproficiency Testing Scheme and the W.R.C. Aquacheck Scheme. The Laboratory also participates in the Environmental Protection Agency's Intercalibration Programme and is listed on the Agency's Draft Register of Quality Approved Testing Laboratories for 1998/99.

2.4 Control Chain Of Custody

As part of the Quality System in place in Bord na Móna, Environmental Limited, measures are taken to ensure controlled chain of custody. An outline of the chain of custody is given overleaf.



Appendix 1

BORD NA MÓNA 

BORD NA MÓNA ENERGY LIMITED
Derrygreenagh, Rochfortbridge, Mullingar, Co-Westmeath.

Environmental Management Programme Proposal
For
Bord na Mona Energy Ltd
(Allen Group), Rochfortbridge, Mullingar, Co Westmeath.

IPC Licence No. ***503***

Report No. ***AN001-EMP***

Date: ***February /01***

Environmental Management Policy



BORD NA MÓNA ENERGY LIMITED
Derrygreenagh, Rochfortbridge, Mullingar, Co-Westmeath.

Bord na Mona Energy Limited is a commercial semi-state body with responsibility to develop Ireland's peat resources in the national interest.

Bord na Mona Energy Limited is committed to gather and make available information on all aspects of its environmental impact and to help improve understanding among the public generally of its role and the importance of Irish peatlands.

Bord na Mona Energy Limited recognises the importance of peatland conservation.

Bord na Mona Energy Limited will leave behind all areas it owns as either an economically or socially integrated resource of a high environmental value.

Bord na Mona Energy Limited seeks to conduct all aspects of its business in an environmentally sensitive value.

Bord na Mona Energy Limited will establish an environmental management system specifically addressing the following impacts.

- Discharges to water.
- Emissions to atmosphere.
- Waste disposal.
- Use of natural resources.
- Noise, vibration, odour, dust and visual effects.
- Natural environment and eco-system.

The environmental management system will be monitored, maintained and continually improved.

A system of regular environmental audits will be put in place.

Bord na Mona Energy Limited will continue research and development into all aspects of its environmental impact.

This statement is published and is available at all locations within the division and its contents are brought to the attention of all employees.

Environmental Management Programme

1. Purpose

The purpose of the environmental management programme is to ensure that Bord na Mona Energy Ltd's objectives and targets regarding improving environmental performance, are supported by a realistic programme which is implemented throughout the organisation.

The EMP will be prepared by the Environmental Management Systems team and will be reported on and up-dated, quarterly to account for improvements, resulting from the phased introduction of the objectives and targets programme

2 Scope

All operations shall be assessed and all practicable options for the use of cleaner technology and the reduction and minimisation of waste shall be reviewed in accordance with the licence.

3 Definitions

Emissions:

Any Discharge (Air, Water, Waste or Noise) as identified by the IPC Licence, generated by activities associated with Bord na Mona Energy Ltd, (Allen Group), Rochfortbridge, Mullingar, Co Westmeath.

Targets:

Detailed performance requirement, quantified where practicable, applicable to the organisation or parts thereof, that arises from the environmental objectives, that need to be set in order to meet the objectives.

Objectives:

Overall environmental goal, arising from the environmental policy, that an organisation sets itself to achieve, and which is quantified where practicable.

Target Date:

The date or time frame by which the ultimate target (aim or goal) will be achieved. Target dates may also be set for the completion of the objectives.

Person Responsible:

The Employee(s) with the overall responsibility of ensuring that the targets and objectives are completed on schedule.

4.0 Programme Title

4.1 Fugitive Air Emissions Programme *EMP 1*

4.2 Minimising surfacewater emissions *EMP2*
-Wastewater Generation and Treatment

4.3 Minimising surfacewater & groundwater *EMP3*
Emissions
-Accidental Emissions
(stormwater management &
bunding and storage of oils)

4.4 Waste Management *EMP4*

4.5 Energy Usage *EMP5*

5.0 Procedure

- 5.1 *Monitoring Programme: All emissions shall be monitored as specified in the IPC Licence schedules:*
 - 5.1.1 *Emissions to Atmosphere (cdn. 5.3)*
 - 5.1.2 *Emissions to Water (cdn. 6.2)*
 - 5.1.3 *Waste Management (cdn. 7.3)*
 - 5.1.4 *Water Protection (cdn. 9.1.2)*
- 5.2 *On a quarterly basis and at any other time deemed necessary by the Environmental Management Team, Forms EMP 1 to EMP 5 shall be checked for achievement of targets and completion of the objectives listed for the previous year.*
- 5.3 *If all targets have been achieved and the objectives completed the form shall be signed off by the Works Manager*
- 5.4 *In the event of any objective not being achieved or any targets not completed, an explanation shall be appended to the form. New targets and objectives shall be listed as specified in 5.6 through 5.7 of this procedure on the appropriate form for the following year. The Works Manager shall then sign the form.*
- 5.5 *On an annual basis, following the preparation of these forms, and at any other time deemed necessary by the Environmental Management Team, a report on the Conditions 2.2.1. through to 2.2.3 of the IPC Licence, shall be prepared by the Works Manager noting the success or failure to meet targets and objectives. The original shall be filed and copies sent to the Head of Civil Engineering & Environmental Control and the Environmental Protection Agency, PO Box 3000, Johnstown Castle Estate, Co, Wexford.*
- 5.6 *On an annual basis and at any other time deemed necessary by the Environmental Management Team, all, operations carried out at the Bord na Mona Energy Ltd facility shall be listed in forms EMP 1 to EMP 5 by the Environmental Management Team.*
- 5.7 *On examination of Forms EMP 1 to EMP 5, and by addressing the following environmental improvements, realistic targets and objectives for the reduction of the emission/energy demand, shall be undertaken.*

- *Process modification:*
(cleaner production machines) - cdn 2.2.2(i). Where reasonably practical, machines will be modified to reduce emissions.

- *Improving process control:*
(cleaner production methods) – ditching, milling, harrowing, ridging, harvesting & loading etc. cdn 2.2.2(i, ii, x)

- *Recovering, reusing and recycling material:*
Polythene, oil, filters, batteries, etc. cdn 2.2.2(vi, vii)

- *Reduction/Alternative material usage:*
Polythene, oil, filters, batteries etc cdn 2.2.2(viii)

- *Identifying, quantifying and reducing fugitive emissions:*
Silt & dust emissions etc. cdn 2.2.2(iv)

- *Preventing incidents with potential for undesirable environmental consequences:*
oil spillage's, works explosions/fires, bog fires etc. cdn 2.2.2(v, xi, xii)

- *Preparing, implementing and reviewing contingency plans:*
Spill/leak management, emergency response procedure etc. 2.2.2(xi) & 13.1.

- *Savings in energy and material usage:*
Polythene, electricity etc. cdn 2.2.2(ix)

- *Employee training:*
IPC management, cleaner production, sampling etc. cdn 2.2.2(i)

- *Alternative methods of Treatment:*
Reed beds, separation of storm water etc. cdn 2.2.2(iii, x)

In setting targets and objectives, account should be taken of compliance with the IPC Licence conditions and schedules and Bord na Mona Energy Ltd's financial, operational and business requirements.

The following projects will be undertaken by Bord na Mona Energy Ltd, Allen Group as required under Condition 2.2 Environmental Management Programme (EMP).

BORD NA MÓNA

BORD NA MÓNA ENERGY LIMITED

Derrygreenagh, Rochfortbridge, Mullingar, Co-Westmeath.

Fugitive Air Emissions Programme (EMP1)

Activity/Emission	Objective	Objective Date	Target	Person Responsible
Emissions to Atmosphere	Achieve air/dust emission limits as in IPC Licence			
	Reduce fugitive dust emissions	March 2002	Reduction of fugitive dust emissions during loading and production operations on the bog to be examined and a plan put in place. (Project 1)	Production Manager Foreman Environmental Co-ordinator



BORD NA MÓNA ENERGY LIMITED
Derrygreenagh, Rochfortbridge, Mullingar, Co-Westmeath.

Wastewater Generation and Treatment (EMP2)

Activity/Emission	Objective	Objective Date	Target	Person responsible
Emissions to Water	Silt reduction	March 2002	Minimisation of suspended solids movement to surface water drainage channels during development and production operations on peatlands. (Project 2)	Production Manager Foreman Environmental Co-ordinator
	Emission pt's Reduction	Feb 2002	Rationalisation of surface water discharge pt's examined and a plan put in place. (Project 3)	Production Manager Foreman Environmental Co-ordinator
	Improve treatment Efficiency	March 2002	Investigation of reed-bed systems for final polish of silt pond discharges (Project 4)	Head of Civil Engineering & Environmental Control
	Effluent reduction	Feb 2002	Separation of flood water and external catchment Run-off from production run-off. Proposals to separate put forward. (Project 5)	Production Manager Foreman Environmental Co-ordinator

Accidental Emissions Programme (EMP3)

Activity/Emission	Objective	Objective Date	Target	Person Responsible
Accidental Emissions	Fuel transfer Management	March 2002	Effective spill/leak management of mobile fuelling units to be examined (Project 6)	Maintenance Manager Foreman Environmental Coordinator
	Fuel storage Management	Nov 2002	Diesel and oil storage upgrade program (Project 7)	Maintenance Manager Foreman Environmental Co-ordinator

BORD NA MÓNA

BORD NA MÓNA ENERGY LIMITED

Derrygreenagh, Rochfortbridge, Mullingar, Co-Westmeath.

Waste Management Programme (EMP4)

Activity/Emission	Objective	Objective Date	Target	Person Responsible
Waste Emissions	Waste reduction	Feb 2003	Investigation into the reuse of silt pond waste (Project 8)	Head of Civil Engineering & Environmental Control
	Waste reduction	March 2002	Investigation into the collection, storage and reuse of polythene covering (Project 9)	Head of Civil Engineering & Environmental Control
	Alternative stock Protection	March 2002	Possible use of reusable material for stockpile protection (Project 10)	Head of Civil Engineering & Environmental Control



BORD NA MÓNA ENERGY LIMITED

Derrygreenagh, Rochfortbridge, Mullingar, Co-Westmeath.

Energy Reduction Programme (EMP5)

Activity/Emission	Objective	Objective Date	Target	Person Responsible
Energy Consumption	Reduction of Energy Requirements at Bord na Mona Energy Ltd (Allen Group)	Dec 2001	Investigation into the use of wind power technology for pumped drainage (Project 11)	Head of Civil Engineering & Environmental Control

Relationship to Objectives and Targets

In accordance with Bord na Mona Energy Ltd's commitment to minimise its impact on the environment, Bord na Mona Energy Ltd (Allen Ref. 503) will undertake the following projects during 2001 as required under section 2.2.2. (Environmental Management Programme)

Rational for undertaking this specific project.

Project 1.

Condition 5.4 of the Allen licence calls for an emission limit of 350mg/m²/day in accordance with the Batneec guidelines, with regard to dust emissions from milled peat production bogs. Condition 2.2.2 (iv) of the Environmental Management Programme calls for the reduction of fugitive dust emissions during loading and transfer operations on the bog and during unloading operations at the tippler and works yard areas. Also Condition (v) calls for the provision of measures to protect dust sensitive areas.

Target

Bord na Mona Energy Ltd (Allen Group) aim to reduce fugitive dust emissions from milled peat production bogs by implementing a programme of training for operatives and applying the Bord na Mona Codes of Practice in relation to dust control. This project will also cover measures to protect the dust sensitive areas in the Allen Group as highlighted in the Dust Monitoring Locations proposal

Project Summary:

The Environmental code of Practice for Bord na Mona Works which is included in Attachment no.10 of the Attachments Folder, under the Allen application documents, cover the control of fugitive dust emissions.

1. Training for operatives at the various production cycles will be carried out to cover all locations and the existing dust sensitive locations in the Allen group (Killinagh, Derrybrennan & Ballykeane). This will also incorporate a system of Cleaner Production Methods training, so as to implement the Codes of Practice in relation to dust and increase the awareness of Bord na Mona's production personnel to fugitive dust emissions and waste minimisation.
2. The programme will also include examining production machines, regarding process modifications and improved process control with the objective of increasing production efficiency, while reducing emissions. This will be carried out, with technical assistance from the Research & Development dept.
3. Procedures will be prepared so as to ensure compliance with condition 5.5 of the licence, in relation to dust control.
4. The results from the monitoring of the dust sensitive locations in accordance with condition 5.3 of the licence, will also be examined and used in improving process control

Designation of responsibility

1. Training for Management and Team-leaders will be carried out by IBEC in consultation with the Civil Engineering and Environmental Control Dept.
2. Research & Development/Environmental Control/Management, will look at improving process control/modifications in order to increase efficiency and reduce waste.
3. Procedures will be prepared by the Environmental Control dept in close consultation with Management, so as to ensure compliance with condition 5.5 of the licence, in relation to dust control.
4. Monitoring results from the sensitive areas in accordance with condition 5.3 of the licence will be examined by all parties, in an effort to improve process control/efficiency

The programme will be reviewed and documented by the Environmental Co-ordinator on a quarterly basis, to assess the progress and success of the programme

Time-frame

1. Training – Management (IBEC) January 31st
 - Teamleaders (IBEC) February 28th 2001
 - Seasonals (Internal) April 30th
2. Research & Development – March 31st 2002
3. Procedures – March 31st 2001
4. Monitoring results – March 31st 2002

Project 2.

Rational for Undertaking this specific project

Schedule 1 (i) of the Allen licence calls for an emission limit of 35mg/litre in accordance with the Batneec guidelines, with regard to silt emissions from milled peat production bogs. Condition 2.2.2 (i) of the Environmental Management Programme calls for the minimisation of suspended solids movement to surface water systems via peatland surface water drainage channels during development and operation of boglands, to be addressed.

Target

Bord na Mona Energy Ltd (Allen Group) aim to reduce peat silt emissions from milled peat production bogs by implementing a programme of improving process control.

Project Summary:

1. The program will look at improving process control and will involve a programme of cleaner production methods being implemented in the various stages of the production cycle, as waste minimisation measures.
2. A large part of the programme will involve training for management and operatives involved at the various stages of a production cycle i.e. milling, harrowing, ridging, harvesting, loading, ditching etc.
3. Procedures will be prepared, which will highlight the best practice in milled peat production. These procedures will be used to implement the Codes of Practice in peat production and will assist in waste minimisation.
4. Process modification will also be examined with the assistance of the Research & Development Dept, which may improve the efficiency of the production machines, reducing the amount of milled peat lost as silt.

Designation of responsibility

1. This part of the programme will involve Management, Environmental Control and Research & Development looking at cleaner production methods and assessing their feasibility.
2. Training for Management, Teamleaders and Seasonals will be provided internally, and will be based on the operating procedures and the Codes of Practice.
3. The operating procedures will be prepared by the Environmental Control dept in consultation with Management.
4. Process modifications/improvements will be examined by the Environmental Control and Research & Development depts, and their feasibility assessed in consultation with Management

The programme will be assessed quarterly, by the Environmental Co-ordinator and the findings documented and reported to the General Manager. Annual refresher courses will be provided

Time-frame

1. Cleaner Production Methods – March 2002
2. Training – Management (IBEC) January 31st
- Teamleaders (IBEC) February 28th
- Seasonals (Internal) April 30th } 2001
3. Operating Procedures – March 31st
4. Process modifications/improvements – March 31st 2002

Project 3.

Rational for undertaking this specific project.

Condition 2.2.2 (ii) of the licence calls for the rationalisation of surface water discharge pts from production bog to be addressed.

Target

Bord na Mona Energy Ltd (Allen Group) aim to examined drainage layouts on production bog to see if discharge points can be combined to allow for more control over the emissions.

Project Summary:

All drainage channels will be examined in relation to flow direction and catchment make-up to explore the possibility of reducing the emission points in the Allen Group of bogs.

It will initially be in the form of a desk-based study, examining bog layouts, contours, drainage patterns etc to assess the feasibility of changes to the drainage patterns. This may provide for easier management of the silt pond system, in relation to maintenance of the ponds.

The programme will have three phase's run over 12 mths, in which all of the production bogs will be examined on a quarterly roster, as displayed in the Gantt chart below

1. Survey of the bogs in each quarter will involve, checking drainage levels, contours, catchments etc and assessing the advantages and disadvantages of implementing the rationalisation of surface water discharge in each production bog.
2. A decision will be made on the feasibility of changing the drainage network in each production bog, to facilitate a reduction in emission points.
3. If feasible, the work will be implemented by the Bog Foreman.

Designation of responsibility

1. The survey will be carried out by the Environmental Coordinator, with assistance from the survey team if required.
2. The survey will be the basis of the second stage which will involve the Production Manager, Bog Foreman and the Environmental Co-ordinator. This and such factors as production requirements, logistics etc. will decide on the feasibility of implementing the changes to each specific production bog.
3. If the outcome of stage 2 recommends the changes to the drainage pattern, the Bog Foreman will implement the necessary work.

Time-frame

Stage	2001												2002	
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb
1														
2														
3														
4														

M Mor Bog

Bulge Bog

Clonad Bog

Codd North Bog

Rational for undertaking this specific project.	Project 4. Condition 2.2.2 (iii) calls for the Investigation of reed-bed systems for final polish of silt pond discharges to be addressed. Condition 9 1.7.
Target	Bord na Mona Energy Ltd (Allen Group) aim to examine the feasibility of using reed-bed systems for the final polishing of silt pond discharges.
Designation of Responsibility	Project Summary: This project will be a desk-based study to examine the different types of reed-beds in use and the different types of wastewater's that are suitable for final polishing. 1. An Engineer will be appointed to examine and research existing systems that may be in use, and assess their suitability, advantaged/disadvantages etc to the Bord na Mona situation. He/She will liaise with 3rd level Institutions who may be carrying out research into reed-bed systems and their applications for final polishing of wastewater. 2. If the above research shows that demonstrating the effectiveness or not of the system, warrants a pilot area to be selected and a reed-bed constructed, then a test area will be selected 3. If the research shows that the system is not suitable for final polishing of silt pond discharges, the rationale for this will be included in the AER. The Head of Civil Engineering & Environmental Control is responsible for the implementation of this project. Technical assistance will be provided by the Research & Development Dept and the program will be assessed quarterly. A report on the program will be included as part of the AER 1. The research end of the programme will be carried out by the research Engineer and will be reported to Head of Civil Engineering & Environmental Control on a quarterly basis. 2. The Head of Civil Engineering & Environmental Control, Research & Development Depts and the Research Engineer will be responsible for the assessment of the results and will decide on its feasibility. 3. The Head of Civil Engineering & Environmental Control will be responsible for reporting on the research and the rationale for selecting a pilot project or not. The progress of the programme will be assessed by the Head of Civil Engineering & Environmental Control on quarterly basis, and any changes to the programme will be implemented.
ne-frame	1. Research – Dec 31st 2. Assess feasibility of pilot project - Feb 2002 3. Report on rationale – AER March 2002

Project 5.

Rational for undertaking this specific project.

Condition 2.2.2 (xi) calls for the separation of storm water runoff from process and non-process areas to be examined.

Target

Bord na Mona Energy Ltd (Allen Group) aim to reduce the volume of effluent discharging from production bog by, where possible, only treating discharges from production bogs.

Project Summary:

By examining process and non-process water, the volumes of effluent requiring treatment can be reduced. Process water originates from production bog, while non-process water is water from surrounding farmland, which enters the bog drainage system and discharges through the silt pond. The programme will involve three phase's, which will be used to assess all of the bogs, spread over 12 months, and carried out over the four quarters as in the Gantt Chart below

1. The project will initially be in the form of a survey, which will identify the sources of the extraneous water and suggest alternative drainage routes.
2. These areas will then be assessed on the ground for the feasibility of alterations to the existing drainage system and the benefits, if any, of doing so. This will provide for more efficient treatment methods and the reduction of non-process water, which is currently being treated.
3. Any production bog, on which such work would be feasible and beneficial, will be carried out.

Designation of responsibility

The Production Manager, Bog Foreman and Environmental Co-ordinator will be responsibility for the implementation of this program in the time frame agreed below. The progress of the program will be assessed by the Environmental Co-ordinator on a quarterly basis and reported to the General Manager. The results of the program will also be reported on as part of the AER.

Time-frame

Stage	2001												2002	
	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb
1	Rathdrum Bog													
2						Ballykeane Bog								
3								Blackriver Bog						
4											Ballycon Bog			

Project 6.

Rational for undertaking this specific project.

Condition 2.2.2 (xii) calls for the effective spill/leak management of mobile fuelling units to be addressed. Condition 9.1.7 also calls for the loading and unloading of fuel oils to fixed fuel storage tanks to be carried out in areas protected against spillage.

Target

Bord na Mona Energy Ltd (Allen Group) aim to examine the methods of fuel distribution and delivery, using mobile fuelling units to provide for more effective spill/leak management.

Project Summary:

1. This programme will initially involve surveying the current situation in a bog for re-fuelling either production machines or fixed fuel storage tanks, so as to protect the environment from spills or leaks should they occur.
2. A large part of the programme will involve developing operating procedures for the loading and unloading of the fuel oil, to prevent accidental spillage and oil wastage.
3. Operatives will be trained in the safe transfer of fuel from the service wagon/fixed tank to the production machine.
4. The Emergency Response Procedure will be implemented regarding oil spills and will be available at all the works and personnel concerned made aware of its content.

In the workshops and yards, oil spill kits and suitable dry peat will be made available for clean-ups and personnel trained to deal with oil spills

Designation of responsibility

1. The Production Manager, Bog Foreman, and Environmental Co-ordinator will assess the current Re-fuelling methods and the logistics associated with each production bog, to see if measures can be taken to reduce the risk to surface waters from diesel/oil spills
2. Operating procedures will be prepared by the Civil Engineering & Environmental Control Dept. to cover all re-fuelling operations.
3. Training will be provided by the Environmental Co-ordinator and the appropriate Line Manager with regard to safe practice, to all personnel involved in re-fuelling operations, at the works or on the production bog
4. The Maintenance/Production Manager will be responsible for implementing the Emergency Response Procedure and making its contents and application known to all personnel.

The Environmental Co-ordinator will review, on a quarterly basis, the progress of the programme and report it to the General Manager.

Time-frame

1. Survey – July 31st 2001
2. Prepare operating procedures – Feb 28th 2001
3. Training – Nov 30th 2001
4. ERP – March 2002

Rational for undertaking this specific project.	Project 7. Condition 9.1.4 calls for all tank and drum storage to be rendered impervious to the materials stored therein.
Target	Bord na Mona Energy Ltd (Allen Group) aim to adhere to the requirements by implementing a programme of bunding at all diesel storage locations in the workshop and in the bog. Project Summary: All diesel storage locations will be examined under the terms of the licence. Diesel storage and distribution networks will be studied to allow for improvements or adjustments should they be necessary. The program will also cover the rationalisation of the existing diesel/oil storage tanks so as to reduce the bunding requirements and the risk to environment. 1. Analyse oil/diesel storage requirements, with a view to reducing the volumes stored on site, so as to reduce the risk to the environment. 2. Plans for bunding improvements to exist tanks, decommissioning of dis-used tanks and a construction program for new un-bunded tanks will be put in place. 3. Contracts will be placed for the above construction/improvements etc. 4. All bunds will be constructed and certified. The above phased programme will fulfil the requirements of condition 9.1.4, and their integrity will be reported on, in accordance with condition 9.1.6
Designation of responsibility	The Production Manager, Maintenance Manager, Foremen and Environmental Co-ordinator will be responsible for the implementation of this program both on the bog and in the yards. It will be assessed quarterly by the Environmental Co-ordinator and reported to the General Manager. 1. The General Manager, Maintenance Manager and Environmental Co-ordinator will be responsible for the initial assessment 2. The bunding programme will be planned out between the General Manager and Civil Section 3. The Contracts will be placed by either the General Manager or the Civil Section 4. The Bunds will be inspected and certified by Donal Wynne B.E. C.Eng. FIEI, Head of Civil Engineering & Environmental Control.
Time-frame	1. Initial Assessment - Feb 28th 2001 2. Bunding Programme - March 31st 2001 3. Contracts placed - March 31st 2001 4. Inspection and certification - 18 mths from licence issue date

lational for ndertaking this pecific project.	Project 8. Condition 2.2.2 (vii) of the EMP calls for an investigation into the reuse of silt pond waste
arget	Bord na Mona Energy Ltd (Allen Group) aim to adhere to the objectives of the EMP by examining the feasibility of reusing the waste silt taken from the silt ponds bi-annually. Project Summary: The difficulty with reusing peat silt is the contamination of the peat by subsoil, because of the location of the silt ponds. This results in high ash content. 1. The project will select 1 to 2 ponds in the Bord na Mona Energy Ltd group, with a view to examining the possibilities of silt containment in intermediate settlement ponds. 2. Examine the methods used for extracting the silt and the physical make-up of the silt once it has been mechanically taken from the silt pond with regard to contamination. 3. Methods for incorporating the silt back into the stockpiles will be examined for feasibility, effectiveness etc. 4. Alternative uses for the silt will also be explored, either for further use within Bord na Mona Energy Ltd, or for public use. Two suitable ponds will be introduced to the project on a phased basis, to conduct trials. The results from the first pond will determine whether a second test site is worth exploring.
esignation of esponsibility	The Head of Civil Engineering & Environmental Control is responsible for the implementation of this project. This will be achieved with the assistance of the Research & Development Dept and with input from the various works. Its progress and effectiveness will be assessed quarterly, and the findings reported on annually as part of the AER. 1. Management and the Environmental Control Dept. will select Area 1, based on the peat type, pond Location, subsoil type etc. Area 2 will be selected, based on the outcome of Area 1. 2. The Civil Engineering & Environmental Control and the Research & Development Depts, will be responsible for examining the silt extraction methods, silt composition etc. 3. The Civil Engineering & Environmental Control and the Research & Development Depts will also look at methods for recycling silt, back into Production. 4. Alternative uses for peat silt may arise out of the above projects and this will be explored by both depts.
ime-frame	1. Pond Selection – Area 1 – April 30th 2001 Conduct trials May – Sept 2001 Area 2 – April 30th 2002 Conduct trials May – Sept 2002 2. Silt extraction – Feb 28th 2002 3. Waste minimisation – Feb 28th 2002 4. Alternative uses – Feb 28th 2003

Rationale for undertaking this specific project.	Project 9.. Condition 2.2.2 (viii) of the EMP calls for the collection, storage, and reuse of polythene covering to be explored.
Target	Bord na Mona Energy Ltd (Allen Group) aim to adhere to the objectives of the EMP by examining the feasibility of the collection, storage and reuse of polythene covering taken from the stockpiles.
	Project Summary: 1. The project will initially be in the form of desk based study, to examine the methods available for the removal, collection and the storage of the stockpile covering. 2. It will also cover research into the development of a Bord na Mona specific machine/method for the effectiveness and economical removal of the covering 3. Polythene reuse will be examined in relation to reuse in Bord na Mona Energy Ltd, other divisions in Bord na Mona Ltd, or other industry. The collection and reuse of the material will also be examined in conjunction with the licensed waste contractor, engaged to recycle the used polythene covering. The company is actively pursuing these objectives with Shabra Plastics and is also exploring other outlets for the waste polythene.
Designation of responsibility	The Head of Civil Engineering & Environmental Control is responsible for the implementation of this project. The Research & Development dept will also be engaged to provide technical assistance and the program will be reported on quarterly, for its effectiveness and progress. A report on the results/finding will be submitted annually as part of the AER.
Time-frame	1&2 Paul Riordan, Boora Group will research the collection and storage of polythene and methods for its removal and transportation. This will be reported on in all the IPC Licences. 3. The Head of Civil Engineering & Environmental Control and the Research & Development depts will be responsible for this stage of the programme and will report on the findings to Management 1. Research/Recycling – On-going process 2. Re-use – March 2002

Rational for undertaking this specific project.	Project 10. Condition 2.2.2 (ix) of the EMP calls for an examination of the use of reusable material for stockpile protection.
Target	Bord na Mona Energy Ltd (Allen Group) aim to adhere to the objectives of the EMP by examining the feasibility of using a re-usable material for stockpile protection of peat after the production season has finished. Project Summary: 1. This project will be initially in the form of a desk-based study, to examine the various materials on the market, which may suit stockpile protection. 2. It will re-examine previous Bord na Mona research into alternative stockpile protection measures and assess any advances in technology. It will take into account, the methods of application, life of the product, methods of removal, recyclability, and economics etc and its suitability to Bord na Mona's requirements This will be reported, on a quarterly basis, to the Head of Civil Engineering & Environmental Control and the results of the research documented.
Designation of responsibility	The Head of Civil Engineering & Environmental Control is responsible for the implementation of this project. Technical assistance will be provided by the Research & Development Dept, and its progress will be monitored by quarterly assessment. It will be reported on annually as part of the AER 1&2 An Engineer will be appointed to investigate current methods in use and any past research into alternative methods of stockpile protection.
Time-frame	1&2 Research/Development -- March 2002

Rationale for undertaking this specific project.	Project 11. Condition 2.2.2 (x) of the EMP calls for the examination of wind power technology for pumped drainage.
Target	Bord na Mona Energy Ltd (Allen Group) aim to adhere to the objectives of the EMP by examining the feasibility of using wind power to operate pumped drainage, where it is required.
	Project Summary: 1 It will also involve examining previous research carried out by Bord na Mona and assessing changes in technology. The project will initially be in the form of desk based study, to examine the technology availability, the pumping requirements of the various licensed activities, wind regimes, and the suitability of bogs for the installation of wind powered pumps.
Designation of responsibility	The Head of Civil Engineering & Environmental Control is responsible for the implementation of this project. Technical assistance will be provided by the Research & Development Dept in assessing its feasibility and relevance to Bord na Mona Energy Ltd's activities. It will be reviewed quarterly, for progress and will be reported on as part of the AER 1 An Engineer will be appointed to carry out a desk based study regarding previous research into wind power, carried out by Bord na Mona Energy Ltd. He/She will report to the Head Of Civil Engineering & Environmental Control on a quarterly basis. A decision on how to proceed with the project will be taken, based on the out come of the research, regarding a test site.
Time-frame	1 Research/Desk study – Dec 2001



Appendix 2

BORD NA MÓNA 

BORD NA MÓNA ENERGY LIMITED
Derrygreenagh, Rochfortbridge, Mullingar, Co-Westmeath.

Allen IPC Licence
Ref. 503

Silt Pond Up-Grade Programme

Date: ***18 October 2000***

BORD NA MÓNA
BORD NA MÓNA ENERGY LIMITED
Derrygreenagh, Rochfortbridge, Mullingar, Co-Westmeath.

Register No.: 503

Company Name.: Bord na Mona Energy Ltd
(Allen Group)

Required Submission date.: November 2000

Report Name.: Silt Pond Up-Grade Programme Proposal.
Condition (6.6, 6.9,& 6.10)

In order to meet the requirements of conditions 6.6, 6.9, & 6.10 of the Allen Licence (ref. 503) the following works will be undertaken by the General Manager of the Allen Group.

Condition 6.6

"The Licence shall, within six months of the date of grant of this licence (28th Apr 2000) submit to the Agency for agreement, a programme to ensure that all drainage water from all boglands in the licensed area is discharged via an appropriately designed silt pond treatment arrangement. The programme, to be implemented within a period agreed with the agency, shall ensure that all discharges associated with operational boglands should be prioritised within this programme."

Programme 1 (100% effluent treatment)

There are currently six discharge pts in the Allen Group of bogs, which are not covered by a silt pond treatment system. These are in Bulge, Codd Nth, Codd Sth Clonsast, Clonsast Nth and Garryhinch bogs (see drg's 11.1f, 11.1h, 11.1j, 11.1l) and will be prioritised within the Group.

Therefore, appropriately designed silt ponds will be installed on the six discharge points to bring the treatment capacity to 100% for all the bogs in the Allen Group. It is proposed to start this programme by November 1st 2000, and complete the Programme by November 1st 2001.

Timahoe and Ticknevin bogs, which are in the development stage will be included in Programme 1 in Spring 2001. At this stage, catchments will be assessed, and appropriately designed silt ponds will be installed.

% Ponds Cleaned May-Dec 2000

% Ponds Not Cleaned	% Ponds Cleaned Once	% Ponds Cleaned Twice	% Ponds Cleaned Thrice
31.3%	47%	20.7%	1%

A copy of a silt pond inspection form is attached in **Appendix 4**

2.7 Silt pond Up Grade Programme

A silt pond up-grade programme has been submitted and accepted by the Agency.

A copy of this programme is attached in **Appendix 2**.

This programme has been ongoing from receipt of licence and some ponds have been improved in order to meet condition 6.1 of the Allen licence.

The work so far has included the construction of new ponds, the enlargement of ponds where necessary, the installation of controlled inlet and outlet pipes, and the construction of pond by-passes, to accommodate cleaning and flood conditions.

Further to this, operatives cleaning ponds have been instructed to deepen the ponds if possible in order to increase the volume.

The work began on Clonad, The Derries and Ballykeane bogs, which are almost complete, and is about to move to Codd North bog in March 2001.

The work completed so far has included programme one and some of stages one and two of programme two of the silt pond up-grade programme.

2.8 Bog Development and Operational Programme

Since the Allen application was submitted, development work has been ongoing in the licence area.

The following bogs have been under development.

Ticknevin.

This bog has an overall size of approximately 1143 acres.

Of this approximately 750 acres have been identified, for the production of milled peat. There will be production on 337 acres of this in the 2001 production season. Three new silt ponds have been included in the initial development work, which will suffice this year's production. On a long-term basis the bog will be included in the Allen silt pond up-grade programme.

Garryhinch

This is an old sod turf bog which has been almost totally cut away. Of the original 2146 acres, there will only be production on 180 acres in the 2001 production season. At present the old Bagger trenches are serving as silt traps. On a long term basis this bog will be included in the silt pond up-grade programme.

Sheridans (Codd North)

This is also an old sod turf bog, which has been converted to milled peat production. A new silt pond has been constructed to meet the requirements of the licence. There will be 150 acres in production in the 2001 season at this site.

Expressed as a percentage these bogs equate to 10% of the total number of bogs in the group.

2.8 AER Summary Data Table

Summary Of Emissions									
Company	Bord na Mona Energy								
Address	Derrygreenagh, Rochfortbridge, Mullingar, Co- Westmeath								
Contact Name	Finn Campbell								
Telephone	044/22181								
E-mail	Finn.campbell@bnm.ie								
GPS Co-ordinates(4N,4E)	E249450 N238140								
IPC Register Number	503								
IPC Class	1								
IPPC Class									
NOSE-P Code									
NACE CODES									
Section	C								
Sub-Section	A								
Division									
Group									
Class	1.4								

Emissions to Waters		Freshwater		or Sewer		or Sea	
Indicate with "X" if emissions are to :		Licensed emission		1998		1999	
Parameter	Unit	Not applicable see 2.1.1		2000		2001	
Volume	M ³						
Suspended Solids	Kg						
BOD	Kg						
COD	Kg						
Total Dissolved Solids	Kg						
Total Nitrogen	Kg						
Phosphate	Kg						
Toxicity	TU						
Hg	Kg						
Cd	Kg						
Pb	Kg						
Cr	Kg						
As	Kg						
Zn	Kg						
Cu	Kg						
Ni	Kg						
% Compliance	%						
Number of samples							

Emissions to air						
Parameter	Unit	Licensed emission	1998	1999	2000	2001
Particulates	Kg	Not applicable see 2.2.1				
Sox	Kg					
Nox	Kg					
Co2	Kg					
TA Luft Class I	Kg					
TA Luft Class II	Kg					
TA Luft Class III	Kg					
Total Organic (as C)	Kg					
Non-Methane VOC	Kg					
Ammonia	Kg					
Total Heavy Metals	Kg					
% Compliance	%					
Number of samples						

Boiler Emissions to air									
Parameter	Unit	Licensed emission	1998	1999	2000	2001			
Dust	Kg	Not applicable see 2.2.2							
Sox	Kg								
Nox	Kg								
CO2	Kg								
CO	Kg								

Energy Consumption		Unit	Sulphur Content	1998	1999	May-Dec 2000	2001
Heavy Fuel Oil	M ³					NA	
Light Fuel Oil	M ³					987	
Natural Gas	M ³					NA	
Electricity	MW					745	
Coal	Kg					NA	
Environmental Complaints				1998	1999	May-Dec 2000	2001
Categories of complaint			Complaints received			1	
			Complaints requiring corrective action			1	
				1998	1999	2000	2001
			Odour				
			Noise				
			Water			1	
			Air				
			Procedural				
			Miscellaneous				

Water	Unit	1998	1999	2000	2001
On-site groundwater use	m ³			N/A	
On-site surface water use	m ³			N/A	
Municipal water use	m ³			N/A	

Allen Group, Annual Environmental Report 2000

*: The figures for silt pond waste are tonnes dry weight.

Waste	1998	1999	May-Dec 2000	2001
Total quantity of waste produced in calendar year(Tonnes)	10042		2167	
total quantity of waste disposed of on-site	8598		2096	
total quantity of waste disposed of off-site	15		21	
total quantity of waste recovered on-site	0		0	
total quantity of waste recovered off-site	1429		50	
Quantity of non-hazardous waste produced in calendar year	9995		2167	
quantity of non-hazardous waste disposed of on-site	8593		2096	
quantity of non-hazardous waste disposed of off-site	15		21	
quantity of non-hazardous waste recovered on-site	0		0	
quantity of non-hazardous waste recovered off-site	1387		50	
Quantity of hazardous waste produced in calendar year (Tonnes)	47.72		See 2.3.1	
quantity of hazardous waste disposed of on-site	5.3		Ditto	
quantity of hazardous waste disposed of off-site	0		Ditto	
quantity of hazardous waste recovered on-site	0		Ditto	
quantity of hazardous waste recovered off-site	42.42		Ditto	

3.0 Management of the Activity

3.1 Environmental Management Programme Report

The Allen updated Environmental Management Programme was submitted after december 2000, but some of the works specified in that document are at present in progress.

Training has taken place for both management and operatives as stated in project one and two of the EMP.

Codes of practice for all aspects of Bord na Mona's operations are in place.

Emergency Response Procedures have also been put in place.

Projects 6 & 7 of the EMP are currently under way. This was mentioned earlier under section 2.1.5 Bunding Programme.

3.2 Environmental Management Programme Proposal

As stated above an updated Environmental Management Programme has only been submitted in Feb 2001.

A copy of this is attached in **Appendix 1**.

3.3 Environmental Expenditure

The table below lists the environmental costs incurred by the Allen Group between May-December 2000.

Expenditure Related to the Operation of the Allen IPC Licence During the Period March 2000 – December 2000	
Description	Cost (£)
Capital Costs	5138
Plant	180000
Labour	40000
Materials	8500
Overheads (ESB, Phones, Consumables)	150
External Environmental Consultancy	1000
EPA Fees	2778
Total	237566

3.4 Bog Rehabilitation Report

The above mentioned report is not due for submission until October 2001, therefore a summary will appear in next years AER based on that report.

A present, there are a number of cutaway bogs within the licensed area. Some of these bogs are planted, more are idle and one at Derryounce has had an artificial lake constructed.

4.0 Summary

As the reporting period only covered date of licence to December 2000 and the Quarterly results only cover Sept/Oct/Nov, an accurate assessment of the results cannot be made. However, the AER for 2002 will include a full set of quarterly results from the grab sampling and a full years composite sampling results allowing a more representative and accurate assessment of Bord na Mona Energy's impacts on the environment. The attached Environmental Management Programme has been implemented throughout the group, operating procedures have been put in place, and training has been provided for all personnel involved in compliance with the licence.

Bord na Mona Energy Ltd would like to take this opportunity to advise the Environmental Protection Agency of its continued commitment to improving its environmental performance by adopting cleaner production methods and improving its environmental protection measures.