Appendix 6. Annual Environmental Reports 2017-2019 and Silt Pond Cleaning records 2019.

Facility Information Summary	
AER Reporting Year	2017
Licence Register Number	P0500-01
Name of site	Bord na Mona Boora
Site Location	Leabeg, Boora, Tullamore, Co Offaly
NACE Code	0892
Class/Classes of Activity	1.4
National Grid Reference (6E, 6 N)	180050, 319540

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 559486 tonnes. Infrastructurally, there was no new bog development. There were no environmental complaints received during 2017.There were twelve incidents ,one in relation to dust and the remainder to water. In relation to silt pond cleaning, 100% of ponds received two cleanings with inspections dictating if a pond required further cleaning.A number of energy efficient initiatives are in place in terms of fuel and electricity usage.Lubricant training for better management of oils, greases and coolant was completed.Formalised management meetings take place weekly with environmental issues on the agenda for discussion. We had a successful audit of operations in relation to our Quality Management System to I.S. EN ISO 9001:2015. We are "committed to conducting all aspects of our business activities with a focus on minimising the impact on the environment". Rehabilitation works are described in an attachment.

Declaration:

All the data and information presented in this report has been checked and certified as being

[signature]	4/4/2018
Signature Group/Facility manager (or nominated, suitably qualified and experienced deputy)	Date

AIR-summary template	Lic No:	P0500-01	Year	2017

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	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 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

AIR-summary template	Lic No:	P0500-01	Year	2017

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 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-01	Total Particulates	350mg/m2/day	84	Daily average < ELV	mg/m2/day	19488	372	0	1	Reported to Agency
DM-02	Total Particulates	350mg/m2/day	84	Daily average < ELV	mg/m2/day	20636	228	0	0	
DM-03	Total Particulates	350mg/m2/day	84	Daily average < ELV	mg/m2/day	13216	183	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:	P0500-01	Year	2017

Solvent use and management on site

8 Do you have a total Emission Limit Value of direct and fugitive emissions on site? if yes please fill out tables A4 and A5

No	

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

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

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

Table A5: Solvent Mass Balance summary

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

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER) Lic No: P0500-01 Year 2017

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

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)

					Additional information
3	Was there any result in breach of licence requirements? If yes please provide brief details in the comment section of Table W3 below			Yes	
4	Was all monitoring carried out in accordance with EPA guidance and checklists for Quality of Aqueous Monitoring Data Reported to the EPA? If no please detail what areas require improvement in additional information box	External /Internal Lab Quality checklist	Assessment of results checklist	Yes	Surface water monitoring was carried out on a quarterly basis. The results of which are attached. Monthly COD yard runoff results are also 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
												APHA / AWWA "Standard Methods"	4500-NH3	NA	One off Grab sample
												APHA / AWWA "Standard Methods"	4500-NH3	NA	One off Grab sample

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: P0500-01 Year 2017

Continuous monitoring

			Additional Information
5	Does your site carry out continuous emissions to water/sewer monitoring?	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 176 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

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:	P0500-01	Year	2017	

Bund testing

dropdown menu click to see options

			Additional information
1	Are you required by your licence to undertake integrity testing on bunds and containment structures ? if yes please fill out table B1 below listing all **new bunds and containment structures** on site, in addition to **all bunds which failed** the integrity test-**all bunding structures which failed including mobile bunds must be listed in the table below, please include all bunds outside the licenced testing period** (mobile bunds and chemstore included)	Yes	There was no requirement to test the bunds in 2017
2	Please provide integrity testing frequency period	Other (2 Yearly)	
3	Does the site maintain a register of bunds, underground pipelines (including stormwater and foul), Tanks, sumps and containers? (containers refers to "Chemstore" type units and mobile bunds)	Yes	
4	How many bunds are on site?	9	Two additional bunds to be included in future tests.
5	How many of these bunds have been tested within the required test schedule?	9	All passed in 2016
6	How many mobile bunds are on site?	27	This includes barrel trays located within workshops
7	Are the mobile bunds included in the bund test schedule?	No	
8	How many of these mobile bunds have been tested within the required test schedule?	NA	
9	How many sumps on site are included in the integrity test schedule?	NA	
10	How many of these sumps are integrity tested within the test schedule?	NA	
	Please list any sump integrity failures in table B1		
11	Do all sumps and chambers have high level liquid alarms?	N/A	
12	If yes to Q11 are these failsafe systems included in a maintenance and testing programme?	N/A	
13	Is the Fire Water Retention Pond included in your integrity test programme?	N/A	

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

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

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

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

Pipeline/underground structure testing

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

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

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

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

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

Groundwater/Soil monitoring template	Lic No:	P0500-01	Year	2017

			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 Report (link in cell G8) and submit separately through ALDER as a licensee return AND answer questions 5-12 below. Groundwater monitoring template	SELECT		Please enter interpretation of data here
5	Is the contamination related to operations at the facility (either current and/or historic)	N/A		
6	Have actions been taken to address contamination issues?If yes please summarise remediation strategies proposed/undertaken for the site	N/A		
7	Please specify the proposed time frame for the remediation strategy	N/A		
8	Is there a licence condition to carry out/update ELRA for the site?	N/A		
9	Has any type of risk assesment been carried out for the site?	N/A		
10	Has a Conceptual Site Model been developed for the site?	N/A		
11	Have potential receptors been identified on and off site?	N/A		
12	Is there evidence that contamination is migrating offsite?	N/A		

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

Groundwater/Soil monitoring template Lic No: P0500-01 Year 2017

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)

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

Table 3: Soil results

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

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

Environmental Liabilities template	Lic No:	P0500-01	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: P0500-01 Year 2017

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	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. Deploy Hydraulic Harrows at dust sensitive areas headland Peat collection.	90	In total 33 Personnel received training in 2017. Training now also includes an energy awareness component. Ten hydraulic harrows were deployed at five production areas including all dust sensitive areas. Headland peat was collected at six production areas and returned as part of overall production.	Individual	Improved Environmental Management Practices
Waste reduction/Raw material usage efficiency	Waste Streamlining.It is planned to continue with and where possible improve the current waste management service provided by AES Ltd	100	Quarterly waste reports are returned for records/filing and waste streams are segrated on site to maximise recycling potential which was installed in 2015	Section Head	Improved Environmental Management Practices
Reduction of emissions to Water	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.	90	In total 33 Personnel received training in 2017. All silt ponds were cleaned at least twice as per licence condition .	Individual	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 222.82 tonnes were sent off site for recycling. Procurement also exploring the possibility of securing further recyclers.	Individual	Improved Environmental Management Practices
Energy Efficiency/Utility conservation	As part of an energy management process, an ongoing review of energy usage is in place.	100	There was reduced activity at Boora Workshop .The unoccupied areas are sectioned of. Consequently there is no requirement for lighting or heating in those areas. The site achieved the Energy standard ISO50001 during the reporting period.	Section Head	Improved Environmental Management Practices

Noise monitoring summary report	Lic No:	P0500-01	Year	2017

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 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:	P0500-01	Year	2017

				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	SEAI - Large Industry Energy Network (LIEN)	Yes	The site attained accrediation 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)	13280.71	11375		
Total Energy Generated (MWHrs)				
Total Renewable Energy Generated (MWHrs)				
Electricity Consumption (MWHrs)	678.142	611.494		
Fossil Fuels Consumption:				
Heavy Fuel Oil (m3)				
Light Fuel Oil (m3)	1240.28	1057.016		
Natural gas (m3)				
Coal/Solid fuel (metric tonnes)	17.6	4.5		
Peat (metric tonnes)				
Renewable Biomass				
Renewable energy generated on site				

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

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

Table R2 Water usage on site

					Water Emissions	Water Consumption	
Water use	Water extracted Previous year m3/yr.	Water extracted Current year m3/yr.	Production +/- % compared to previous reporting year**	Energy Consumption +/- % vs overall site production*	Volume Discharged back to environment(m^3yr):	Volume used i.e not discharged to environment e.g. released as steam m3/yr	Unaccounted for Water:
Groundwater							
Surface water							
Public supply							
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: P0500-01 Year 2017

Table R3 Waste Stream Summary

	Total	Landfill	Incineration	Recycled	Other
Hazardous (Tonnes)	1.95	0	0.28	1.67	0
Non-Hazardous (Tonnes)	1104.72	57.84	0	334.95	711.94

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: P0500-01 Year 2017

Complaints

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	Additional information

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		

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

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

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

Table 2 Incidents summary

Date of occurrence	Incident nature	Location of occurrence	Incident category*please refer to guidance	Receptor	Cause of incident	Other cause(please specify)	Activity in progress at time of incident	Communication	Occurrence	Corrective action<20 words	Preventative action <20 words	Resolution status	Resolution date	Likelihood of reoccurence
30/03/2017	Breach of ELV	SW 10 Noggus Bog	1. Minor	Water	Other (add details)Water allowed to enter		Normal activities	EPA Ref. No. INCI012003	New	Water diverted to fully use pond	NA	Complete	03/04/2017	Low
30/03/2017	Breach of ELV	SW 14 (The Derries) Boora	1. Minor	Water	Not related to site activities		Normal activities	EPA Ref No. INCI012010	New	Pond recently cleaned water disturbed	NA	Complete	18/04/2017	Low
30/03/2017	Breach of ELV	SW 14A (The Derries) Boora	1. minor	Water	Not related to site activities		Normal activities	EPA REF NO INCIO12011	New	Pond recently cleaned water disturbed	NA	Complete	18/04/2017	Low
30/03/2017	Trigger level reached	SW 10 Noggus Bog	1. Minor	Water	Not related to site activities		Normal activities	EPA REF NO INCIO12014	New	No likely cause	NA	Complete	18/04/2017	Low
08/06/2017	Breach of ELV	Sw 7 Drinagh	1. Minor	Water	Not related to site activities		Normal activities	EPA Ref No.INCIO12304	New	High Rainfall	Water slowing dev	Complete	23/06/2017	Low
08/06/2017	Trigger level reached	Sw 7 Drinagh	1. Minor	Water	Not related to site activities		Normal activities	EPA Ref No.INCIO12305	New	No likely cause	na	Complete	16/06/2017	Low
13/09/2017	Oil in drain	Boora	1. Minor	Water	Not related to site activities		Normal activities	EPA Ref No.INCIO12879	New	Cause not Discovered	Have taken two gr	Complete	28/09/2017	Low
30/06/2017	Trigger level reached	Sw 35	1. Minor	Water	Not related to site activities		Normal activities	EPA Ref No.INCIO13315	New	No likely cause	NA	Complete	30/06/2017	Low
30/06/2017	Trigger level reached	Sw 33	1. Minor	Water	Not related to site activities		Normal activities	EPA Ref No. INCIO13316	New	No likely cause	NA	Complete	30/06/2017	Low
11/10/2017	Trigger level reached	Sw 4	1. Minor	Water	Not related to site activities		Normal activities	EPA Ref No. INCIO13317	New	No likely cause	na	Complete	11/10/2017	Low
19/07/2017	Breach of ELV	DM1 Clongawney	1. Minor	Air	Not related to site activities		Normal activities	EPA Ref.INCIO 13318	New	Employees instructed on dangers of activities that give rise to dust.	No production in windy conditions	Complete	26/09/2017	Low
14/09/2017	Trigger level reached	Sw 7 Drinagh	1. Minor	Water	Not related to site activities		Normal activities	EPA Ref No.INCIO13319	New	No likely cause	na	Complete	27/09/2017	Low

Total number of incidents current year	12
Total number of incidents previous year	3
% reduction/ increase 0%	300%

WASTE SUMMARY Lic No: P0500-01 Year 2017

SECTION A-PRTR ON SITE WASTE TREATMENT AND WASTE TRANSFERS TAB- TO BE COMPLETED BY ALL IPPC AND WASTE FACILITIES PRTR facility logon dropdown list click to see options

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

			Additional Information
1	Were any wastes accepted onto your site for recovery or disposal or treatment prior to recovery or disposal within the boundaries of your facility ?; (waste generated within your boundaries is to be captured through PRTR reporting)	N/A	
	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	SELECT	
3	Was waste accepted onto your site that was generated outside the Republic of Ireland? If yes please state the quantity in tonnes in additional information	SELECT	

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

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

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

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

SECTION D-TO BE COMPLETED BY LANDFILL SITES ONLY

Table 2 Waste type and tonnage-landfill only

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

Table 3 General information-Landfill only

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

WASTE SUMMARY Lic No: P0500-01 Year 2017

Table 4 Environmental monitoring-landfill only

Landfill Manual-Monitoring Standards

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

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

Table 5 Capping-Landfill only

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

*please note this includes daily cover area

Table 6 Leachate-Landfill only

9	Is leachate from your site treated in a Waste Water Treatment Plant?	SELECT
10	Is leachate released to surface water? If yes please complete leachate mass load information below	SELECT

Volume of leachate in reporting year(m3)	Leachate (BOD) mass load (kg/annum)	Leachate (COD) mass load (kg/annum)	Leachate (NH4) mass load (kg/annum)	Leachate (Chloride) mass load kg/annum	Leachate treatment on-site	Specify type of leachate treatment	Comments

Please ensure that all information reported in the landfill gas section is consistent with the Landfill Gas Survey submitted in conjunction with PRTR returns

Table 7 Landfill Gas-Landfill only

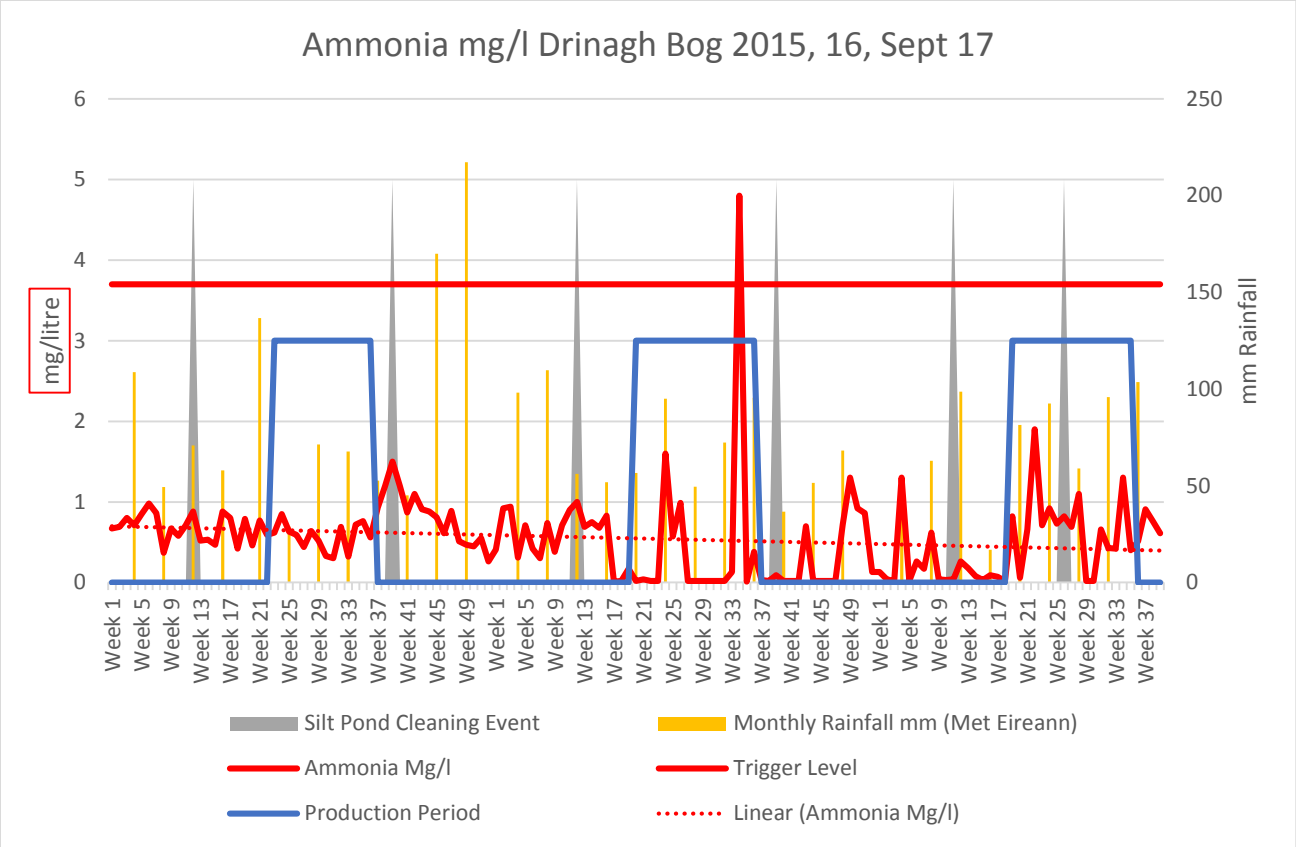
Gas Captured&Treated by LFG System m3	Power generated (MW / KWh)	Used on-site or to national grid	Was surface emissions monitoring performed during the reporting year?	Comments
			SELECT	

Boora
Decommissioning and Rehabilitation
AER Overview 2017.

Within the Boora licensed area (P0500-01) there was no entire bog units available for rehabilitation in 2017. Ongoing monitoring of cutaway within the Boora area was carried out with Kilaranny, Belair North and Lemonaghan bogs being re-surveyed.
An invasive aquatic plant species (Parrots Feather *Myriophyllum aquaticum*) was identified in the amenity areas of Boora in 2016, actions to control its spread have been enacted along with the notification of the presence of this species to the relevant authorities.
A section of deep peat restoration was carried out in Clongawney Bog in 2017 (28 ha). Peat dams were used to block the drains on a section of bog that had formerly been in industrial peat production.
Draft rehabilitation plans for the Boora 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.

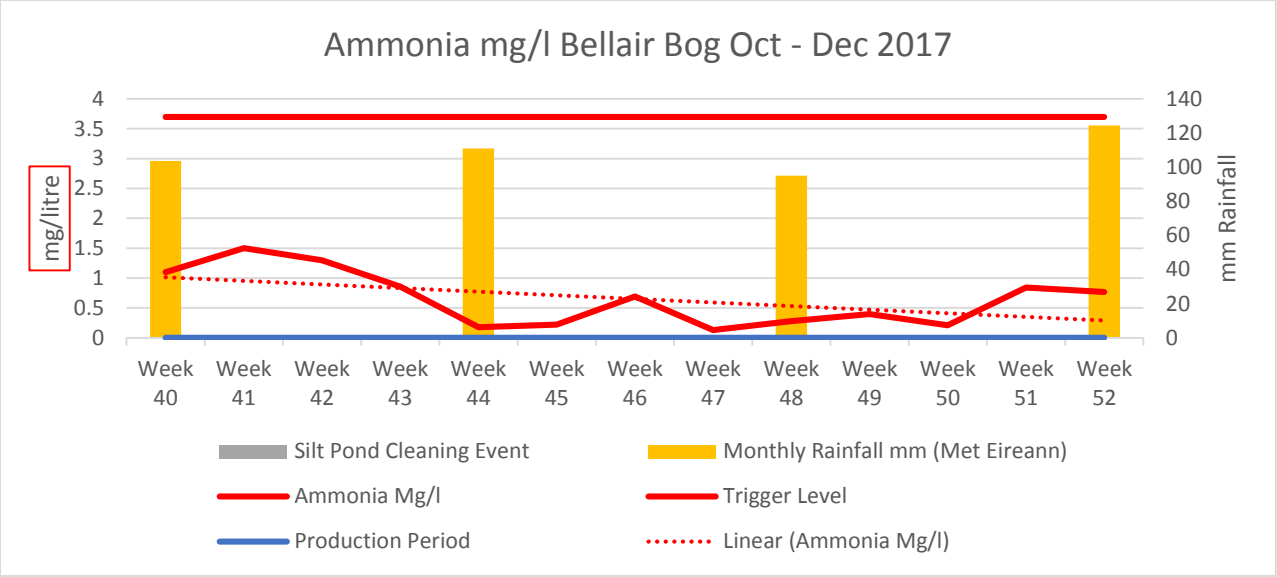
Siltpond Monitoring Frequency
Bord na Mona Boora
IPPC Licence P0500-01

X	Y	Bog	SW	Monitoring	Sampled	pH	SS	TS	Ammonia	TP	COD	Colour
213631.82	220692.54	Noggusboy	SW-10	Q1 17	30/03/2017	7.5	247	488	0.35	0.05	110	127
214515.48	219480.49	West Boora	SW-11	Q1 17	30/03/2017	7.5	28	412	1.5	0.05	57	130
215354.86	221941.82	Derries	SW-14	Q1 17	30/03/2017	7.5	75	370	0.02	0.05	96	253
214889.87	221778.27	Derries	SW-14A	Q1 17	30/03/2017	7.4	53	342	0.02	0.05	89	239
220650.17	210315.60	Derrinboy	SW-38	Q2 17	29/06/2017	7.9	5	292	1.3	0.05	66	109
220483.33	210276.48	Derrinboy	SW-39	Q2 17	29/06/2017	7.4	5	188	0.35	0.05	66	204
219663.49	210038.82	Derrinboy	SW-40	Q2 17	29/06/2017	7.5	5	236	0.58	0.05	48	101
215361.95	232964.99	Bellair South	SW-33	Q2 17	29/06/2017	7.1	12	150	1.1	0.05	101	298
214495.84	232937.68	Bellair South	SW-34	Q2 17	29/06/2017	7.5	5	170	0.5	0.05	69	210
214987.18	232598.43	Bellair South	SW-34A	Q2 17	29/06/2017	6.3	14	112	0.63	0.05	92	302
213906.46	231884.67	Bellair South	SW-35	Q2 17	29/06/2017	6.3	9	129	2	0.05	121	306
215477.01	233062.25	Bellair North	SW-37B	Q2 17	29/06/2017	7.4	5	260	1.4	0.05	78	301
204681.49	214416.93	Clongawney	SW-1	Q3 17	11/10/2017	7.6	5	266	0.93	0.05	63	166
205641.50	213067.71	Clongawney	SW-3	Q3 17	11/10/2017	7.8	9	282	1.5	0.05	44	119
206319.95	215656.92	Clongawney	SW-4	Q3 17	11/10/2017	7.4	5	246	0.06	0.05	116	319
207679.57	215615.99	Clongawney	SW-5	Q3 17	11/10/2017	7.6	5	234	0.7	0.05	55	111
208818.04	215648.99	Drinagh	SW-7	Q3 17	11/10/2017	7.7	5	316	0.83	0.05	49	128
212017.45	214103.39	Drinagh	SW-8	Q3 17	11/10/2017	7.9	5	232	2.9	0.05	56	146
224321.91	224780.07	Kilaranny	SW-24	Q3 17	11/10/2017	7.8	13	512	0.06	0.05	55	161
224248.46	223524.04	Kilaranny	SW-24A	Q3 17	11/10/2017	7.7	5	490	1.3	0.05	48	122
217008.23	222986.75	Turraun	SW-15	Q4 17	13/12/2017	7.3	6	440	0.14	0.05	82	192
219378.47	224050.10	Turraun	SW-16	Q4 17	13/12/2017	7.4	7	258	0.82	0.05	70	212
219721.73	224554.04	Pollagh	SW-17	Q4 17	13/12/2017	7	5	212	1.9	0.05	63	231
221729.61	226112.15	Pollagh	SW-17A	Q4 17	13/12/2017	7.4	5	374	0.34	0.05	67	169
220331.44	222549.88	Oughter	SW-18	Q4 17	13/12/2017	7.4	8	288	0.46	0.05	64	223
216627.57	234827.38	Bellair North	SW-36	Q4 17	13/12/2017	6.8	5	82	0.37	0.05	60	182
219056.10	234057.41	Bellair North	SW-37	Q4 17	13/12/2017	7	7	140	0.44	0.05	62	223
216202.99	234373.11	Bellair North	SW-37A	Q4 17	13/12/2017	4.9	7	74	0.39	0.05	67	166



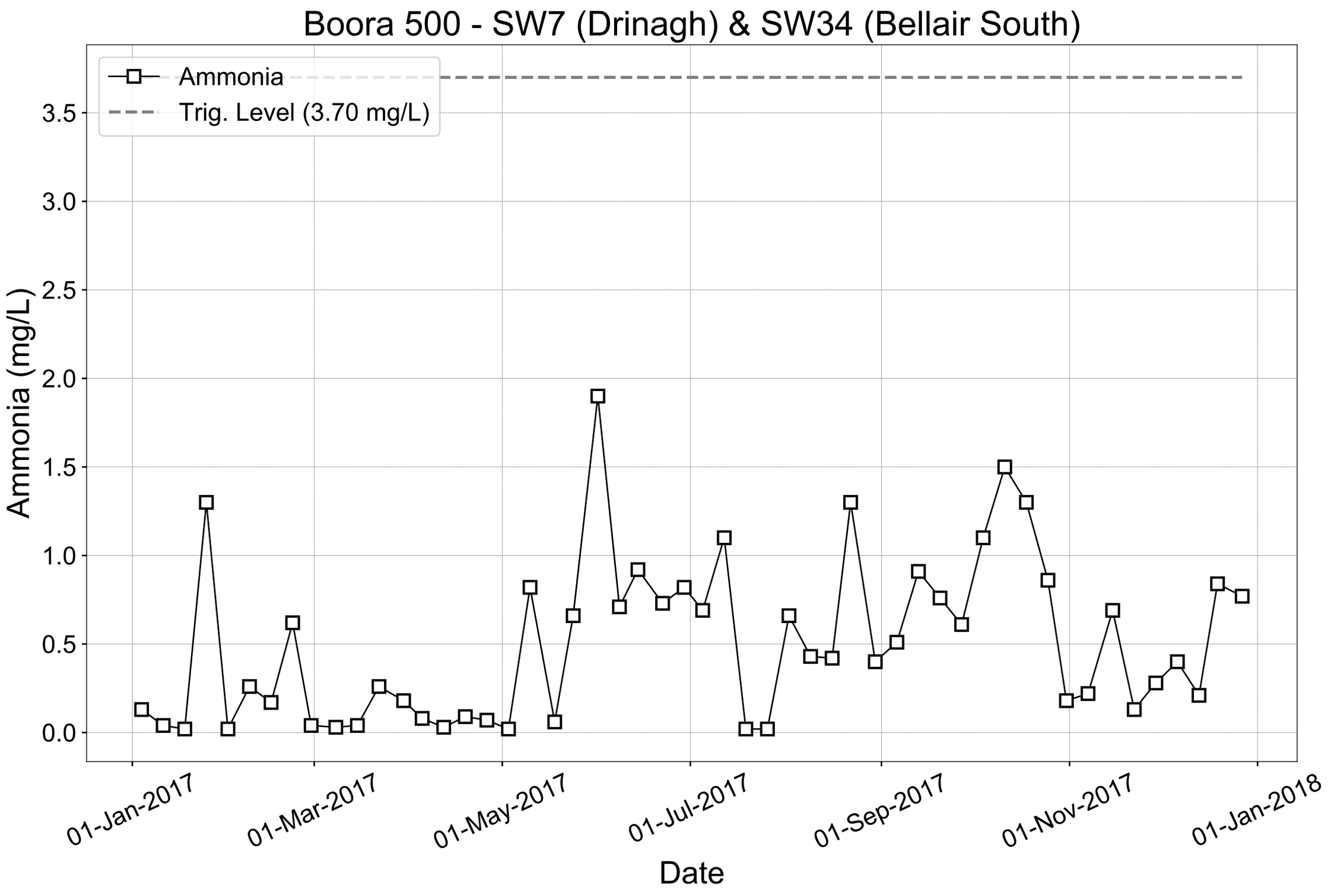
Drinagh Bog

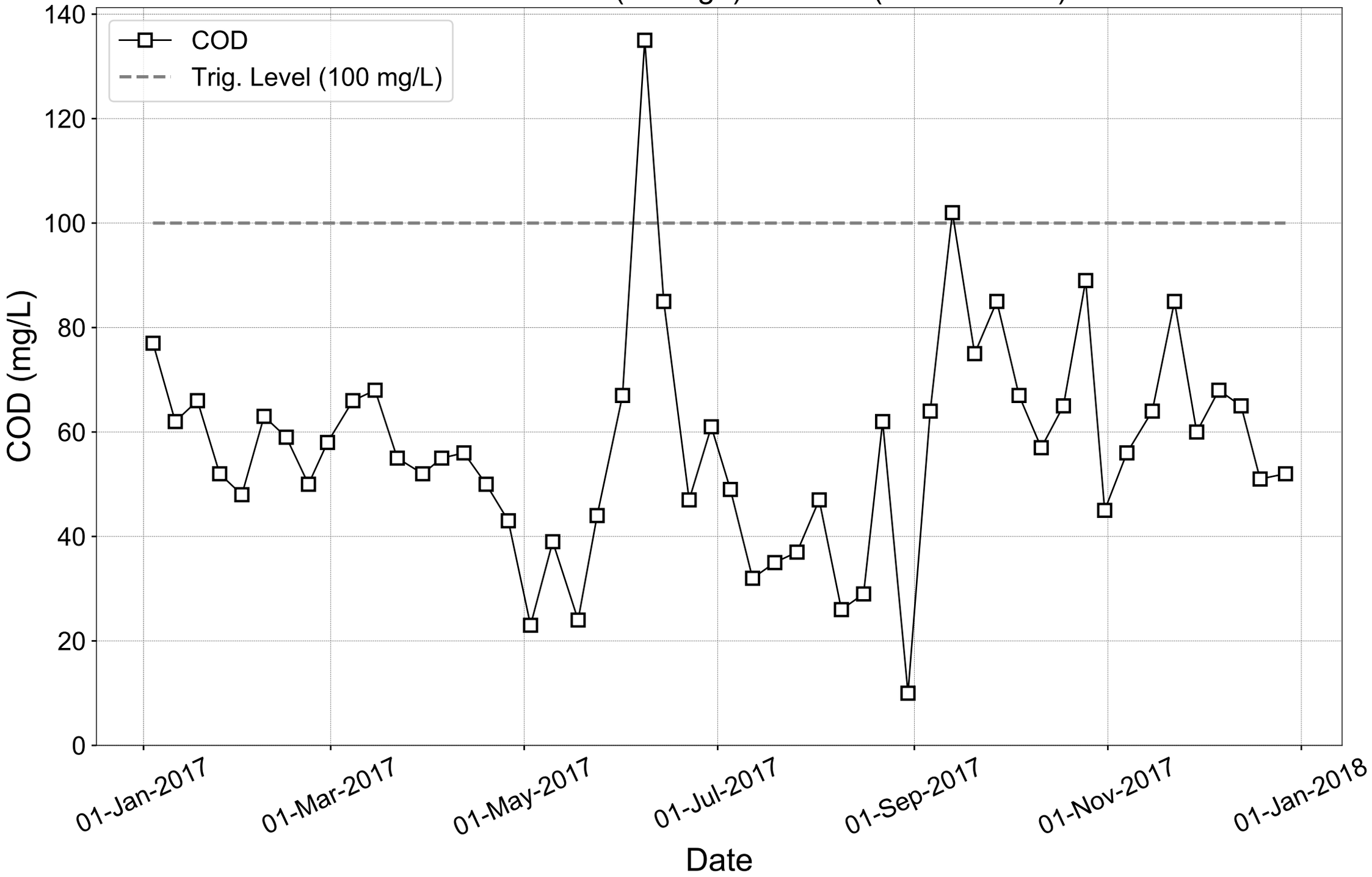
Drinagh bog is an active production bog with the composite sampler located here during 2015, 16 and up to September 2017. The composite sampler takes a flow proportional composite sample over a 24 hour period. The sampler had 35% downtime during the period being reported, but suitable weekly grab samples were taken during these downtimes, primarily due to battery fault, flooding events or sampler away for service/overhaul. The ammonia trigger level of 3.7mg/l, as agreed with the Agency, was not exceeded during the period being reported. Combining the 2015, 16 & 17 results above show concentrations trending downwards over the 2-3 year period 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 disharging from the peatlands. The only link expected would be that related to rainfall events and seasonal weather patterns and the subsequent surfacewater runoff and associated ammonia concentrations.

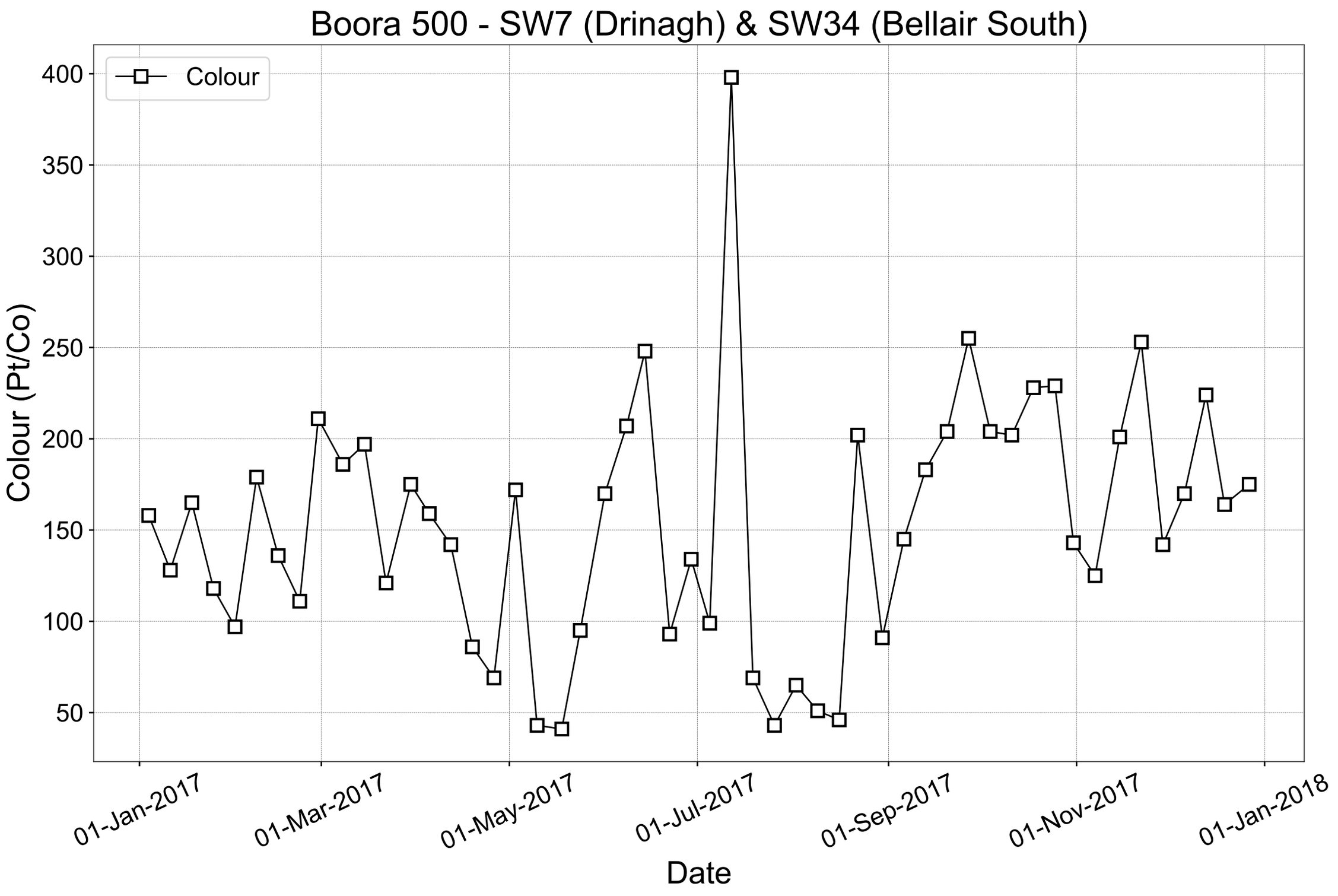


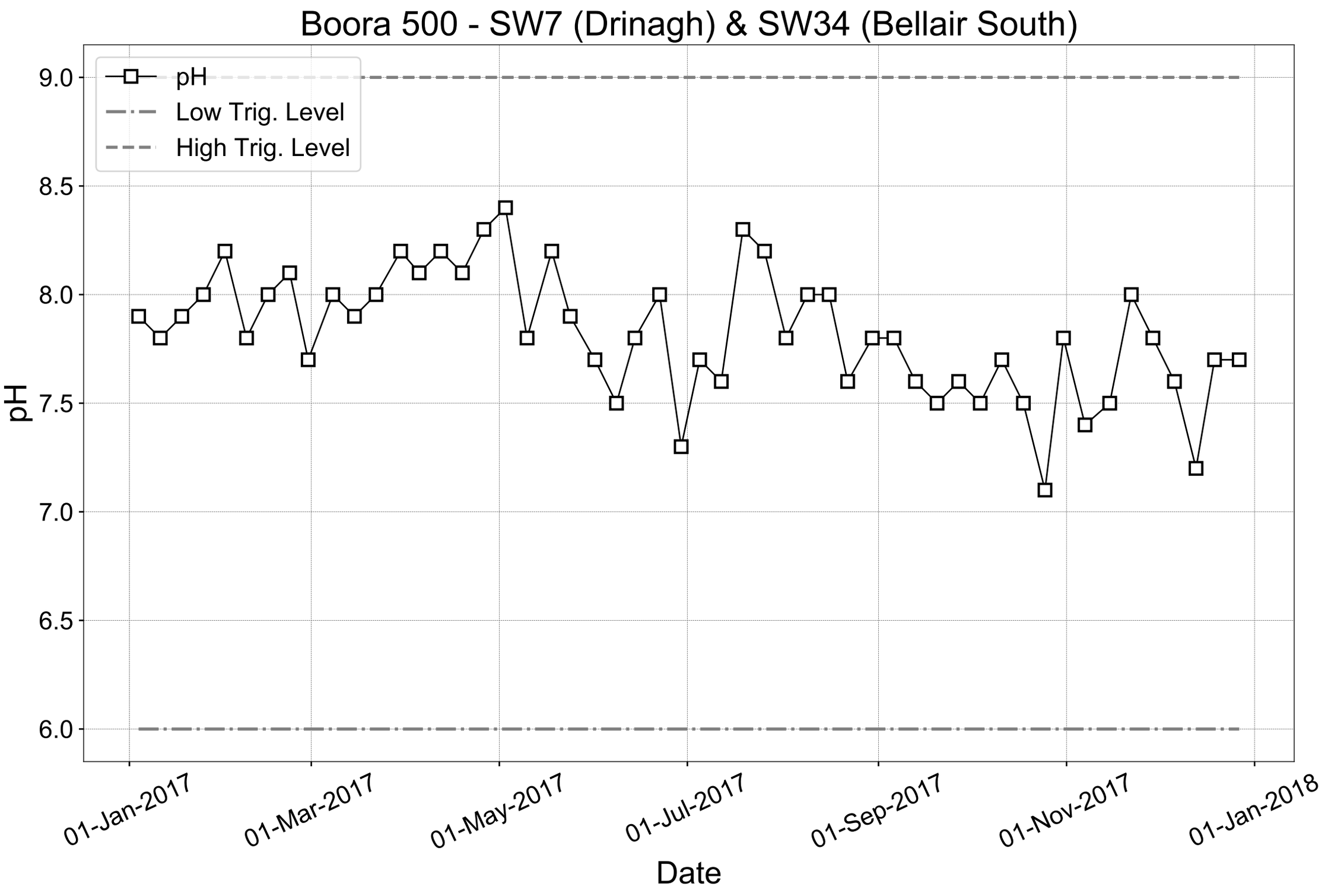
Bellair Bog

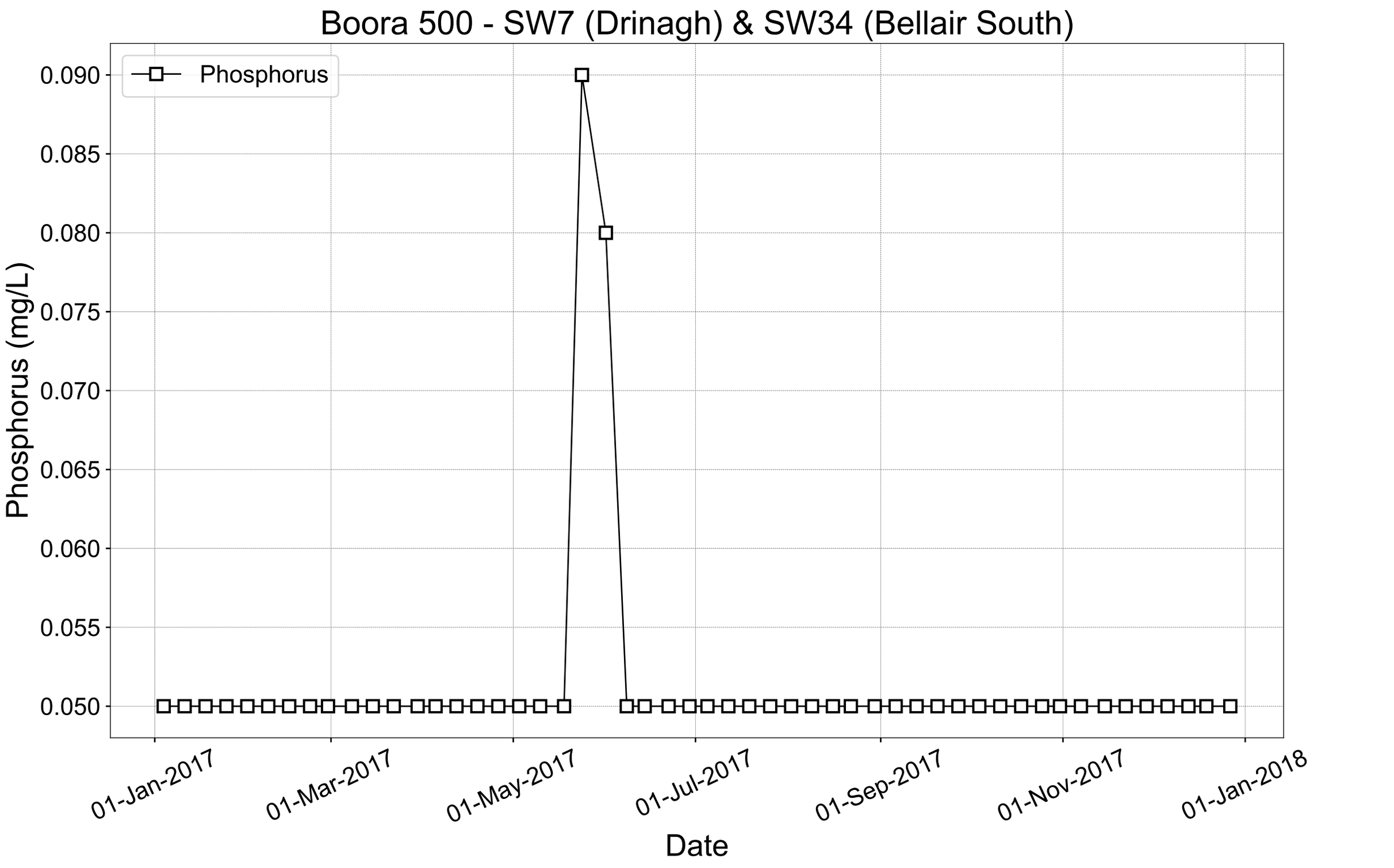
Bellair bog is an active production bog with the composite sampler located here from the last week in September 2017. The composite sampler takes a flow proportional composite sample over a 24 hour period. The sampler had 85**%** downtime during the period being reported, but suitable weekly grab samples were taken during these downtimes, primarily due to battery fault, flooding events or the sampler was being serviced/overhauled. The ammonia trigger level of 3.7mg/l, as agreed with the Agency, was exceeded once during the period being reported. The above graph show concentrations trending downwards over the initial 3 month period 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. The sampler will remain at this emission point for 2018 and in Aer 2018, data will give a better indication of ongoing trends. It is not possible to idnetify any obvious link between the summer production, winter maintenance or silt pond maintenance events on the concentration of ammonia disharging from the peatlands, as these all occurred in the months prior to the location of the sampler at Bellair bog. The only link expected would be that related to rainfall events and seasonal weather patterns and the subsequent surfacewater runoff and associated ammonia concentrations.

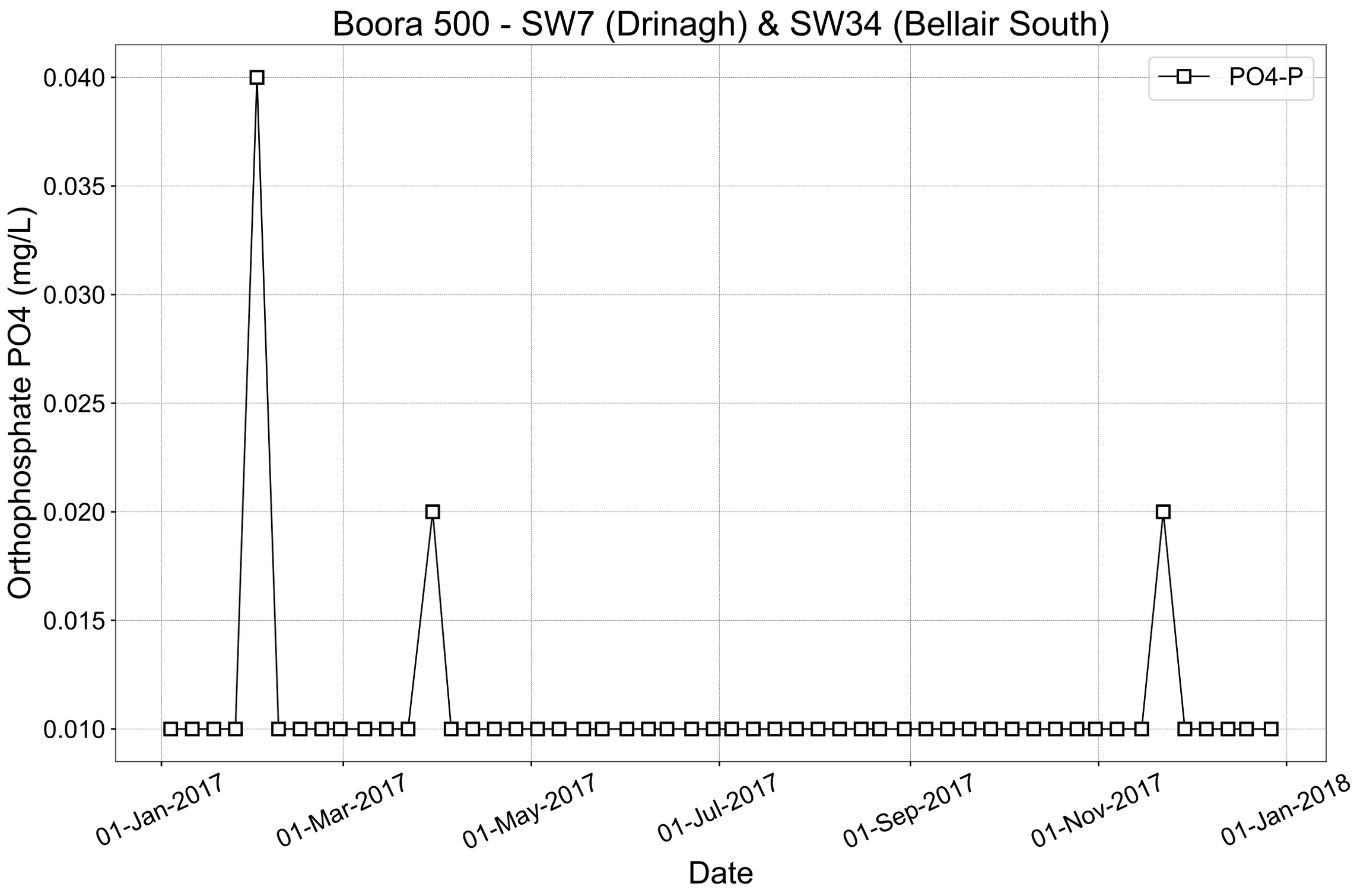

Boora 500 - SW7 (Drinagh) & SW34 (Bellair South)
Ammonia
Trig. Level (3.70 mg/L)
Ammonia (mg/L)
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
01-Jan-2017
01-Mar-2017
01-May-2017
01-Jul-2017
01-Sep-2017
01-Nov-2017
01-Jan-2018
Date

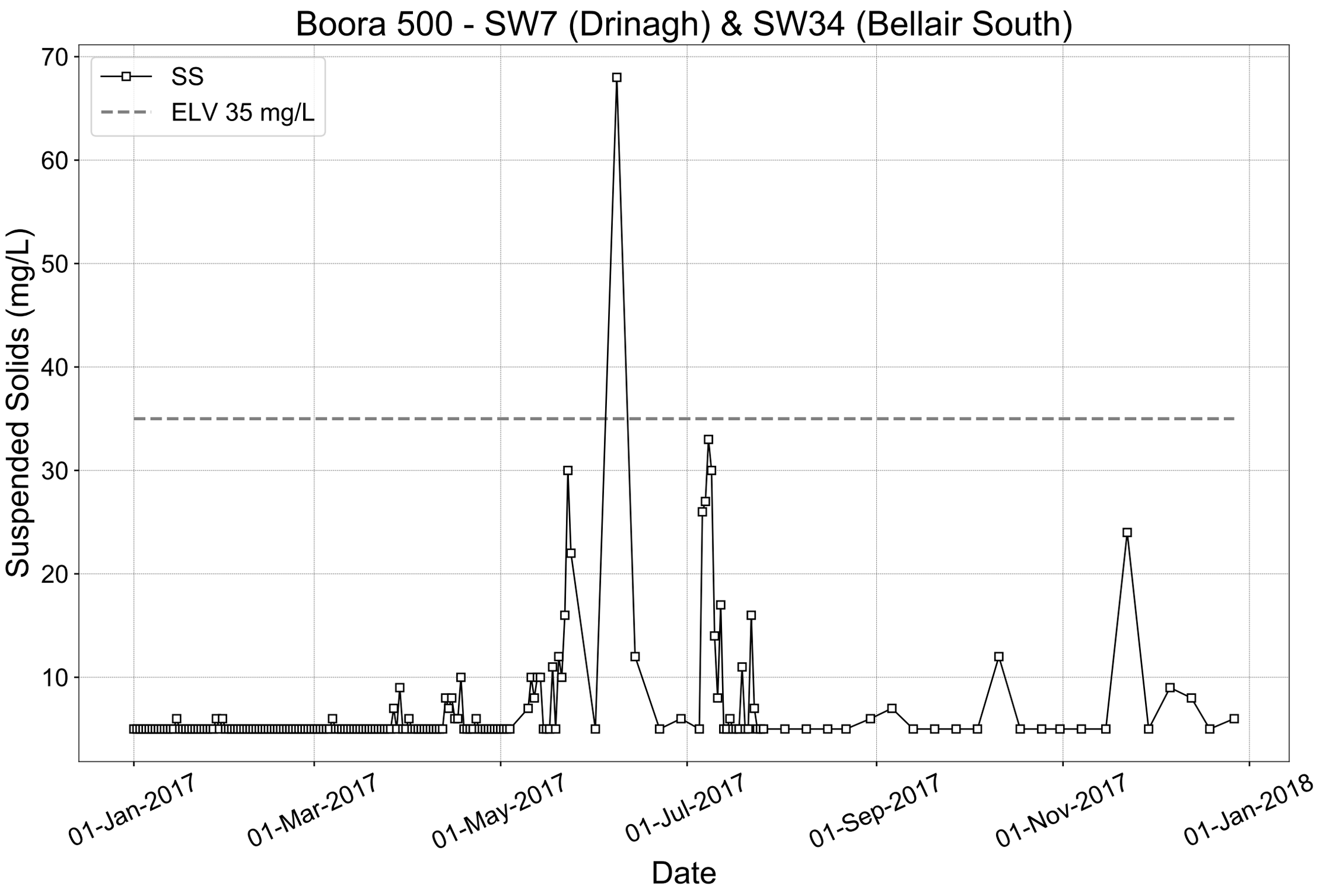

Boora 500 - SW7 (Drinagh) & SW34 (Bellair South)
COD
Trig. Level (100 mg/L)
COD (mg/L)
0
20
40
60
80
100
120
140
01-Jan-2017
01-Mar-2017
01-May-2017
01-Jul-2017
01-Sep-2017
01-Nov-2017
01-Jan-2018
Date

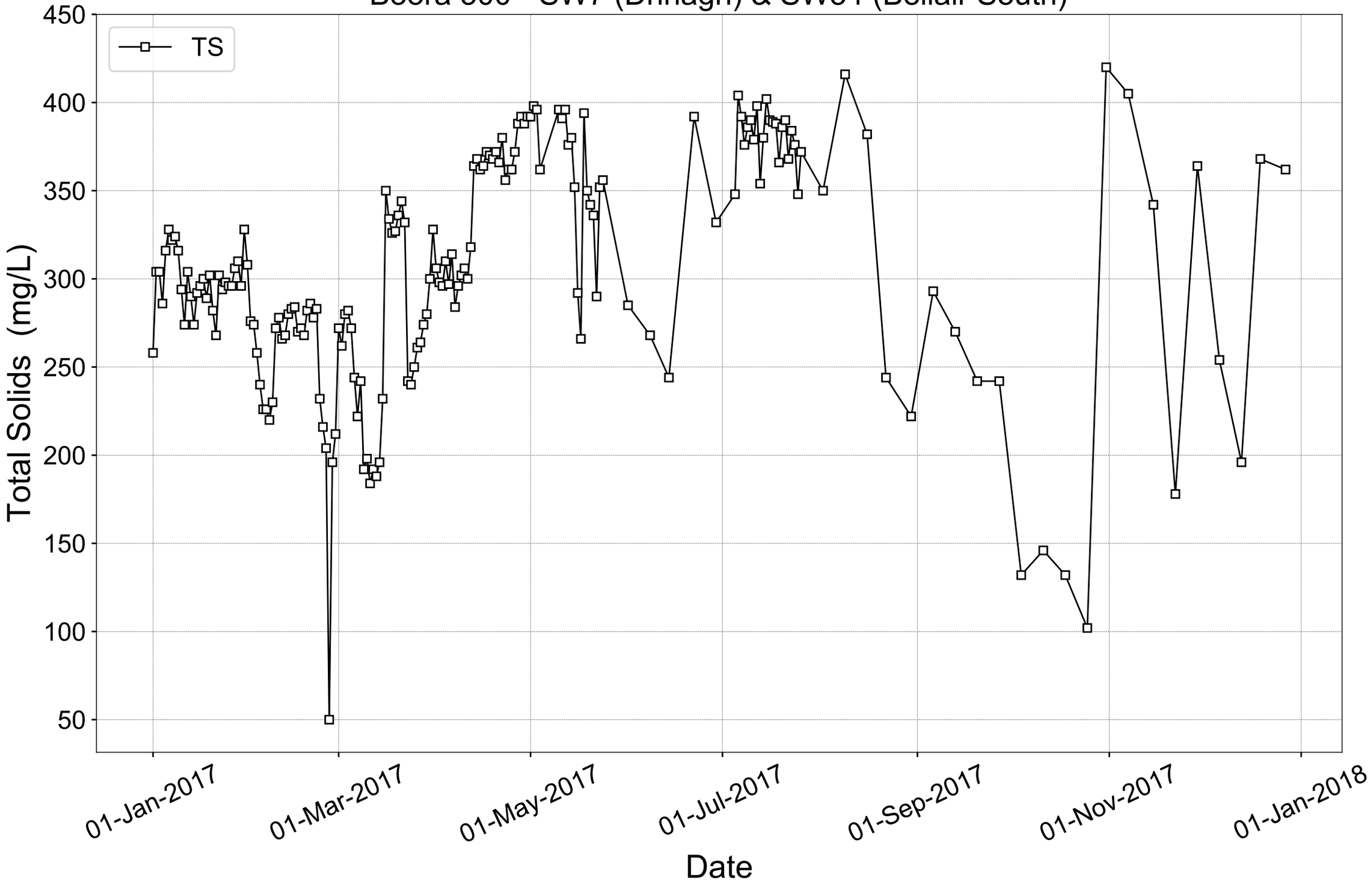

Boora 500 - SW7 (Drinagh) & SW34 (Bellair South)
Colour
Colour (Pt/Co)
400
350
300
250
200
150
100
50
01-Jan-2017
01-Mar-2017
01-May-2017
01-Jul-2017
01-Sep-2017
01-Nov-2017
01-Jan-2018
Date


Boora 500 - SW7 (Drinagh) & SW34 (Bellair South)
pH
Low Trig. Level
High Trig. Level
9.0
8.5
8.0
7.5
7.0
6.5
6.0
pH
01-Jan-2017
01-Mar-2017
01-May-2017
01-Jul-2017
01-Sep-2017
01-Nov-2017
01-Jan-2018
Date


Boora 500 - SW7 (Drinagh) & SW34 (Bellair South)
Phosphorus
0.090
0.085
0.080
0.075
0.070
0.065
0.060
0.055
0.050
Phosphorus (mg/L)
01-Jan-2017
01-Mar-2017
01-May-2017
01-Jul-2017
01-Sep-2017
01-Nov-2017
01-Jan-2018
Date


Boora 500 - SW7 (Drinagh) & SW34 (Bellair South)
PO4-P
Orthophosphate PO4 (mg/L)
0.040
0.035
0.030
0.025
0.020
0.015
0.010
01-Jan-2017
01-Mar-2017
01-May-2017
01-Jul-2017
01-Sep-2017
01-Nov-2017
01-Jan-2018
Date


Boora 500 - SW7 (Drinagh) & SW34 (Bellair South)
SS
ELV 35 mg/L
Suspended Solids (mg/L)
70
60
50
40
30
20
10
01-Jan-2017
01-Mar-2017
01-May-2017
01-Jul-2017
01-Sep-2017
01-Nov-2017
01-Jan-2018
Date


Boora 500 - SW7 (Drinagh) & SW34 (Bellair South)
TS
Total Solids (mg/L)
450
400
350
300
250
200
150
100
50
01-Jan-2017
01-Mar-2017
01-May-2017
01-Jul-2017
01-Sep-2017
01-Nov-2017
01-Jan-2018
Date

Licence: P0500-01														
Works: Boora														
Month	**SWE 1A**	**SWE 1B**	**SWE 2**	**SWE 3**	**SWE 3A**	**SWE 4A**	**SWE 4B**	**SWE 5A**	**SWE 5B**	**SWE 6A**	**SWE 6B**	**SWE 7**	**SWE 8**	**SWE 9**
Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mar	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0
May	0	0	0	0	0	0	0	0	0	0	0	0	0	0
June	51	21	48	0	0	0	0	0	0	66	0	0	0	0
July	51	36	32	0	0	0	0	0	0	31	30	25	29	24
Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	57
Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	42
Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nov	31	15	54	52	0	0	0	0	0	50	0	0	0	0
Dec	22	13	0	0	0	0	0	19	0	51	24	0	0	0
Note: 0 denotes no flow at emission point on day of sampling														

Guidance to completing the PRTR workbook

PRTR Returns Workbook

Version 1.1.19

REFERENCE YEAR	2017

1. FACILITY IDENTIFICATION

Parent Company Name	Bord na Mona Energy Limited
Facility Name	Bord na Mona Energy Limited Leabeg
PRTR Identification Number	P0500
Licence Number	P0500-01

Classes of Activity

No.	class_name
-	Refer to PRTR class activities below

Address 1	Boora Group
Address 2	c/o Boora Works
Address 3	Leabeg, Tullamore,
Address 4	
	Offaly
Country	Ireland
Coordinates of Location	-7.72946 53.2273
River Basin District	IEGBNISH
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	559486.0
Production Volume Units	Tonnes
Number of Installations	13
Number of Operating Hours in Year	2232
Number of Employees	124
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# : P0500 | Facility Name : Bord na Mona Energy Limited Leabeg | Filename : P0500_2017.xls | Return Year : 2017 | 04/04/2018 12:11

SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

RELEASES TO AIR					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 PRTR POLLUTANTS

RELEASES TO AIR					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 C : REMAINING POLLUTANT EMISSIONS (As required in your Licence)

RELEASES TO AIR					Please enter all quantities in this section in KGs					
POLLUTANT		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
210	**Dust**	E	OTH	VDI 2119 Blatt 2/Part 2	0.0	0.0	0.0	0.05334	0.0	0.05334

* 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 Energy Limited Leabeg

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

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			
			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 PRTR POLLUTANTS

RELEASES TO WATERS					Please enter all quantities in this section in KGs			
POLLUTANT					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 C : REMAINING POLLUTANT EMISSIONS (as required in your Licence)

RELEASES TO WATERS					Please enter all quantities in this section in KGs			
POLLUTANT					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
240	**Suspended Solids**	E	OTH	G/19 Based on ALPHA,1998,20th Edition, Method 2540D	0.0	0.0	0.0	0.0

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

4.3 RELEASES TO WASTEWATER OR SEWER

Link to previous years emissions data

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

SECTION A : PRTR POLLUTANTS

RELEASES TO LAND					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
					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		
			Method Used				
Pollutant No.	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

5. ONSITE TREATMENT & OFFSITE TRANSFERS OF WASTE

Please enter all quantities on this sheet in Tonnes

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	711.94	wastes from mineral non-metalliferous excavation	D1	E	Volume Calculation	Onsite of generati	Bord na Mona Boora,P0500-01	Boora,Leabeg,Tullamore,Co Offaly,Ireland		
Within the Country	02 01 04	No	222.82	waste plastics (except packaging)	R3	M	Weighed	Offsite in Ireland	Leinster Environmental Ltd,WP 2008/06	Haggardstown,Dundalk,Co Louth,,Ireland		
To Other Countries	13 02 05	Yes	0.0	mineral-based non-chlorinated engine, gear and lubricating oils	R1	C	Volume Calculation	Abroad	Enva Ireland Ltd,W184-01	Clonminam Ind Estate,Portlaoise,Co Laois,,Ireland	R.D. Recycling,Reg no 51727/1KD,Houthalen,Belgium,.,.,Belgium	Houthalen,Belgium,.,.,Belgium
Within the Country	15 01 03	No	2.13	wooden packaging	R3	M	Weighed	Offsite in Ireland	AES Ltd,WP-OY-08-601-01	Cappincur,Tullamore,Co Offaly,,Ireland		
To Other Countries	15 02 02	Yes	0.28	absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by dangerous substances	R1	C	Volume Calculation	Abroad	Enva Ireland Ltd,W184-01	Clonminam Ind Estate,Portlaoise,Co Laois,,Ireland	Lindenschmidt,Reg no E97095037,Kreuztal,.,.,.,Germany	Kreuztal,.,.,.,Germany
To Other Countries	16 01 07	Yes	0.37	oil filters	R4	C	Volume Calculation	Abroad	Enva Ireland Ltd,W184-01	Clonminam Ind Estate,Portlaoise,Co Laois,,Ireland	R.D. Recycling,Reg no 51727/1KD,Houthalen,Belgium,.,.,Belgium	Houthalen,Belgium,.,.,Belgium
Within the Country	17 04 07	No	110.0	mixed metals	R4	M	Weighed	Offsite in Ireland	AES Ltd,WP-OY-08-601-01	Cappincur,Tullamore,Co Offaly,,Ireland		
Within the Country	20 03 01	No	32.5	mixed municipal waste	D5	M	Weighed	Offsite in Ireland	AES Ltd,WP-OY-08-601-01	Cappincur,Tullamore,Co Offaly,,Ireland		
Within the Country	20 03 01	No	25.34	mixed municipal waste	D5	M	Volume Calculation	Offsite in Ireland	AES Ltd,WP-OY-08-601-01	Cappincur,Tullamore,Co Offaly,,Ireland		
To Other Countries	16 06 01	Yes	1.32	lead batteries	R6	M	Weighed	Abroad	Enva Ireland Ltd,W184-01	Clonminam Ind Estate,Portlaoise,Co Laois,,Ireland	Campine Recycling,MLAV/05-173/GUDA,Beerse,.,.,.,Belgium	Beerse,.,.,.,Belgium

* 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	2017
Licence Register Number	P0501-01
Name of site	Bord na Mona Derrygreenagh
Site Location	Derrygreenagh, Rochfortbridge, Co Westmeath
NACE Code	0892
Class/Classes of Activity	1.4
National Grid Reference (6E, 6 N)	249450, 238140

A description of the activities/processes at the site for the reporting year. This should include information such as production increases or decreases on site, any infrastructural changes, environmental performance which was measured during the reporting year **and an overview of compliance with your licence** listing all exceedances of licence limits (where applicable) and what they relate to e.g. air, water, noise.	Activities on site can be divided into two components, firstly the milling, harrowing, ridiging 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 299,912 tonnes which was up on the 2016 figure. Infrastructurally, there was no bog development. Quarterly grab sampling was 100% compliant, with the continuous composite sampling returning no non-compliances for suspended solids. There was one environmental complaint received during the reporting period, this was dust related and was resolved to the satisfaction of the complainant. A shelter belt 200m long was planted to alleviate the problem.In relation to silt pond cleaning, almost 90% of ponds received two cleanings, inspections dictating cleaning schedules. Bord na Mona liaised with Meath and Offaly Co.Councils to reduce littering in litter hotspots 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.

E. Mulhall	8-3-18
Signature Group/Facility manager (or nominated, suitably qualified and experienced deputy)	Date

AIR-summary template Lic No: P0501-01 Year 2017

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	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	Reported to the Agency ref INCI012674.
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
DM-01	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: P0501-01 Year 2017

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-01	Total Particulates	350	140 DAYS	Daily average < ELV	mg/m2/day	11340	113	0	0	Dust monitioring took place on 5 occasions for 28 days each time between April and September
DM-02	Total Particulates	350	140 DAYS	Daily average < ELV	mg/m2/day	15204	214	0	0	
DM-03	Total Particulates	350	140 DAYS	Daily average < ELV	mg/m2/day	21364	350	0	0	
DM-04	Total Particulates	350	140 DAYS	Daily average < ELV	mg/m2/day	28560	605	0	1	Reported to Agency on 14/08/2017.I NCI012674
	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 — SELECT

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

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

Reporting year	Total solvent input on site (kg)	Total VOC emissions to Air from entire site (direct and fugitive)	Total VOC emissions as %of solvent input	Total Emission Limit Value (ELV) in licence or any revision 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 gases(kg)	Solvents lost in water (kg)	Collected waste solvent (kg)	Fugitive Organic Solvent (kg)	Solvent released in other ways e.g. by-passes (kg)	Solvents destroyed onsite through physical reaction e.g.	Total emission of Solvent to air (kg)
							Total	

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER) Lic No: P0501-01 Year 2017

			Additional information
1	Does your site have licensed emissions direct to surface water or direct to sewer? If yes please complete table W2 and W3 below for the current reporting year and answer further questions. If **you do not have** licenced emissions you only need to complete table W1 and or W2 for storm water analysis and visual inspections	Yes	The continuous monitoring sampler was relocated during the reporting period. The sampler also experienced technical difficulties at both sites 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.
2	Was it a requirement of your licence to carry out visual inspections on any surface water discharges or watercourses on or near your site? If yes please complete table W2 below summarising only any evidence of contamination noted during visual inspections	Yes	Monthly COD of yard run-off is attached.

Table W1 Storm water monitoring

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

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

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

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

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

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

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

Emission reference no:	Emission released to	Parameter/ SubstanceNote 1	Type of sample	Frequency of monitoring	Averaging period	ELV or trigger values in licence or any revision thereof[Note 2]	Licence Compliance criteria	Measured value	Unit of measurement	Compliant with licence	Method of analysis	Procedural reference source	Procedural reference standard number	Annual mass load (kg)	Comments

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

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

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER) Lic No: P0501-01 Year 2017

Continuous monitoring

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

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

6	Did continuous monitoring equipment experience downtime? **If yes please record downtime in table W4 below**	Yes	Total of 70 days over 365 days
7	Do you have a proactive service contract for each piece of continuous monitoring equipment on site?	Yes	
8	Did abatement system bypass occur during the reporting year? **If yes please complete table W5 below**	No	

Table W4: Summary of average emissions -continuous monitoring

Emission reference no:	Emission released to	Parameter/ Substance	ELV or trigger values in licence or any revision thereof	Averaging Period	Compliance Criteria	Units of measurement	Annual Emission for current reporting year (kg)	% change +/- from previous reporting year	Monitoring Equipment downtime (hours)	Number of ELV exceedences in reporting year	Comments
										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: P0501-01 Year 2017

Bund testing

dropdown menu click to see options

			Additional information
1	Are you required by your licence to undertake integrity testing on bunds and containment structures ? if yes please fill out table B1 below listing all **new bunds and containment structures** on site, in addition to **all bunds which failed** the integrity test-**all bunding structures which failed including mobile bunds must be listed in the table below, please include all bunds outside the licenced testing period** (mobile bunds and chemstore included)	Yes	All bunds requiring an integrity test in 2017 were tested and passed.
2	Please provide integrity testing frequency period	Other (2 Yearly)	
3	Does the site maintain a register of bunds, underground pipelines (including stormwater and foul), Tanks, sumps and containers? (containers refers to "Chemstore" type units and mobile bunds)	Yes	
4	How many bunds are on site?	2	
5	How many of these bunds have been tested within the required test schedule?	1	1 decommissioned, 1 tested in 2017
6	How many mobile bunds are on site?	9	
7	Are the mobile bunds included in the bund test schedule?	No	
8	How many of these mobile bunds have been tested within the required test schedule?	0	
9	How many sumps on site are included in the integrity test schedule?	0	
10	How many of these sumps are integrity tested within the test schedule?	0	
	Please list any sump integrity failures in table B1		
11	Do all sumps and chambers have high level liquid alarms?	N/A	
12	If yes to Q11 are these failsafe systems included in a maintenance and testing programme?	N/A	
13	Is the Fire Water Retention Pond included in your integrity test programme?	N/A	

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

Bund/Containment structure ID	Type	Specify Other type	Product containment	Actual capacity	Capacity required*	Type of integrity test	Other test type	Test date	Integrity reports maintained on site?	Results of test	Integrity test failure explanation <50 words	Corrective action taken	Scheduled date for retest	Results of retest(if in current reporting year)
Derrygreenagh Bund NO:501-37-01	reinforced concrete		Gas Oil	110,592	45000	Hydraulic test		22/05/2017	Yes	Pass	N/A	N/A	N/A	N/A
						Hydraulic test								

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

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

Pipeline/underground structure testing

			No underground tanks or pipelines on site
1	Are you required by your licence to undertake integrity testing* on underground structures e.g. pipelines or sumps etc ? if yes please fill out table 2 below listing all underground structures and pipelines on site **which failed the integrity test and all which have not been tested withing the integrity test period as specified**	Yes	
2	Please provide integrity testing frequency period	SELECT	
	*please note integrity testing means water tightness testing for process and foul pipelines (as required under your licence)		

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

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

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

Groundwater/Soil monitoring template	Lic No:	P0501-01	Year	2017

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

Table 1: Upgradient Groundwater monitoring results

Date of sampling	Sample location reference	Parameter/ Substance	Methodology	Monitoring frequency	Maximum Concentration++	Average Concentration+	unit	GTV's*	SELECT**	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

Groundwater/Soil monitoring template Lic No: P0501-01 Year 2017

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)

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

Table 3: Soil results

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

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

Environmental Liabilities template	Lic No:	P0501-01	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: P0501-01 Year 2017

Highlighted cells contain dropdown menu click to view

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

Environmental Management Programme (EMP) report

Objective Category	Target	Status (% completed)	How target was progressed	Responsibility	Intermediate outcomes
Reduction of emissions to Air	Continue to train all employees in environmental matters. Training will be by means of a new four module training programme delivered by dedicated Bord na Mona training specialists. This new training programme includes environmental compliance-IPPC, Biodiversity, Archaeology and Energy management. Hydraulic harrows will be deployed at dust sensitive locations. Continue with the collection of headland peat.	90	In total 73 personnel received training during 2017. Hydraulic harrows were depolyed at 4 locations. Headland peat was collected at all locations and returned with production figures.	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	80	Monthly waste reports are returned for records/filing and waste streams are segrated on site to maximise recycling potential.	Section Head	Improved Environmental Management Practices
Waste reduction/Raw material usage efficiency	Continue with the recycling of polyethylene. The sourcing of more recycling contractors will be ongoing.	100	In total 119.14 tonnes of polyethlene 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	100	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. Continue with the collection of headland peat.	90	In total 73 Personnel received training in 2017. Personnel are trained every two years in Environmental matters. Headland peat was collected at all locations and included as part of overall peat returns.	Individual	Improved Environmental Management Practices

Noise monitoring summary report	Lic No:	P0501-01	Year	2017

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 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: P0501-01 Year 2017

			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	SEAI - Large Industry Energy Network (LIEN) Yes	The site attained accrediation 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	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)	5907	6913	NA	NA
Total Energy Generated (MWHrs)				
Total Renewable Energy Generated (MWHrs)				
Electricity Consumption (MWHrs)	300.277	318.403	NA	NA
Fossil Fuels Consumption:				
Heavy Fuel Oil (m3)				
Light Fuel Oil (m3)	551.885	649.037		
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

	Total	Landfill	Incineration	Recycled	Other
Hazardous (Tonnes)	17.82	0	1.62	16.2	0
Non-Hazardous (Tonnes)	560.32	20.06		370.56	169.7

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: P0504-01 Year 2017

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 — One complaint was received in Ballybeg Bog Area relating to dust, this was reported to the Agency. RefLR029212

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	Dust		Complaint received at Ballybeg Bog relating to dust nuisance.	Peat production was suspended and personnel reminded of their environmental responsibilities. 200m shelter belt sown.	Complete	11/05/2017	Reported to the Agency ref: LR029212 on 08/06/2017
	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

Complaints and Incidents summary template Lic No: P0504-01 Year 2017

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 reoccurence
07/06/2017	Trigger level reached	Rossan SW-43	1. Minor	Water	Other (add details)	Naturally occurring	Normal activities	EPA INCI012535	New	Investigate	None Required	Complete	27/07/2017	Medium
20/06/2017	Trigger level reached	Rossan SW-43	1. Minor	Water	Other (add details)	Naturally occurring	Normal activities	EPA INCI012538	New	Investigate	None Required	Complete	21/07/2017	Medium
13/07/2017	Breach of ELV	Ballybeg DM-04	1. Minor	Air	Other (add details)	Dust from nearby trees	Normal activities	EPA INCI012674	New	Investigate	Move dust gauge	Complete	14/08/2017	Low
01/09/2017	Trigger level reached	Derryhinch SW-2	1. Minor	Water	Other (add details)	Naturally occurring	Normal activities	EPA INCI013178	New	Investigate	None Required	Complete	19/10/2017	Medium
01/09/2017	Trigger level reached	Derryhinch SW-3	1. Minor	Water	Other (add details)	Naturally occurring	Normal activities	EPA INCI0013180	New	Investigate	None Required	Complete	19/10/2017	Medium
07/11/2017	Trigger level reached	Rossan SW-43	1. Minor	Water	Other (add details)	Naturally occurring	Normal activities	EPA INCI013385	New	Investigate	None Required	Complete	21/11/2017	Medium

Total number of incidents current year	6
Total number of incidents previous year	4
% reduction/ increase	50%

WASTE SUMMARY	Lic No:	P0501-01	Year	2017
SECTION A-PRTR ON SITE WASTE TREATMENT AND WASTE TRANSFERS TAB- TO BE COMPLETED BY ALL IPPC AND WASTE FACILITIES		PRTR facility logon	dropdown list click to see options	

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

			Additional Information
1	Were any wastes accepted onto your site for recovery or disposal or treatment prior to recovery or disposal within the boundaries of your facility ?; (waste generated within your boundaries is to be captured through PRTR reporting)	N/A	
	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	N/A	
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	N/A	

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

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

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

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

SECTION D-TO BE COMPLETED BY LANDFILL SITES ONLY

Table 2 Waste type and tonnage-landfill only

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

Table 3 General information-Landfill only

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

WASTE SUMMARY Lic No: P0501-01 Year 2017

Table 4 Environmental monitoring-landfill only

Landfill Manual-Monitoring Standards

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

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

Table 5 Capping-Landfill only

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

*please note this includes daily cover area

Table 6 Leachate-Landfill only

9	Is leachate from your site treated in a Waste Water Treatment Plant?	SELECT
10	Is leachate released to surface water? If yes please complete leachate mass load information below	SELECT

Volume of leachate in reporting year(m3)	Leachate (BOD) mass load (kg/annum)	Leachate (COD) mass load (kg/annum)	Leachate (NH4) mass load (kg/annum)	Leachate (Chloride) mass load kg/annum	Leachate treatment on-site	Specify type of leachate treatment	Comments

Please ensure that all information reported in the landfill gas section is consistent with the Landfill Gas Survey submitted in conjunction with PRTR returns

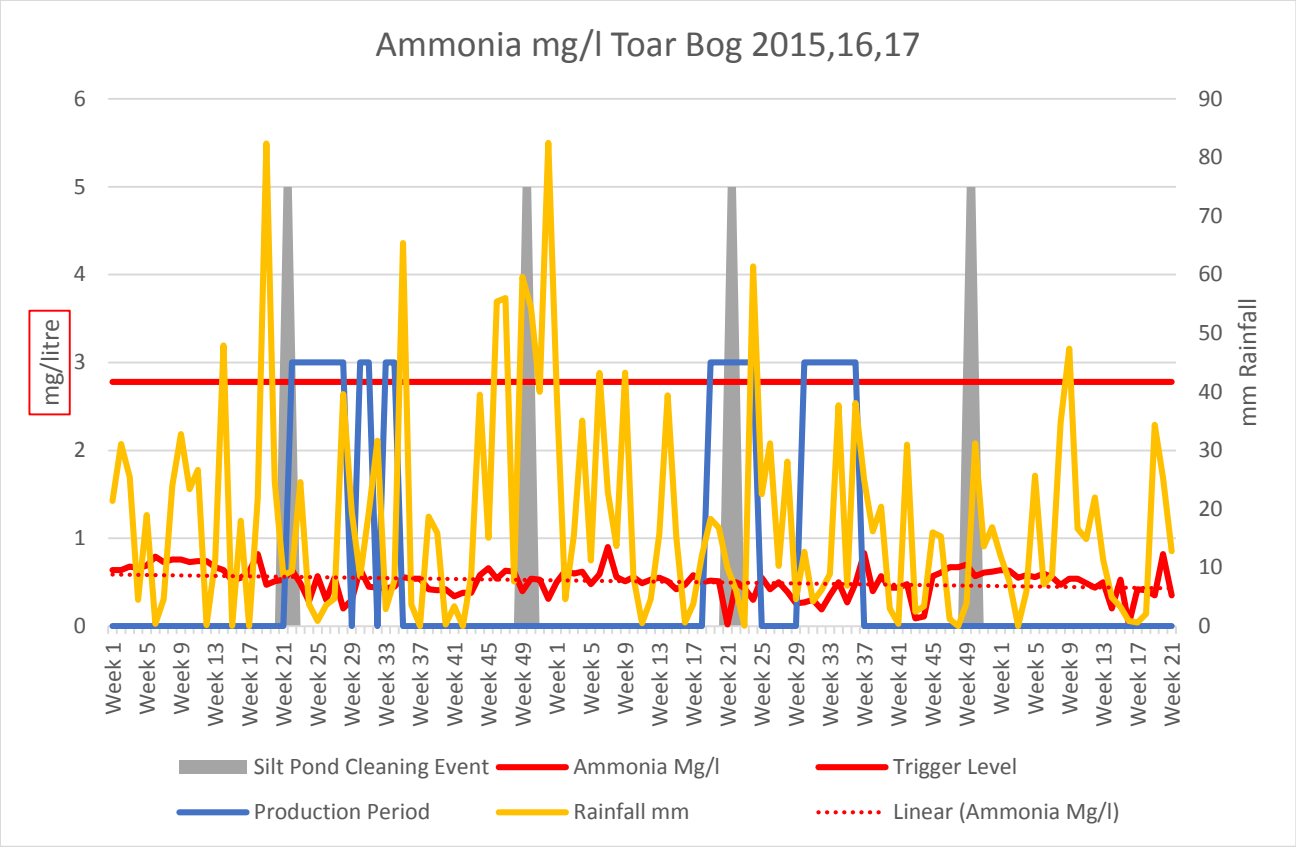
Table 7 Landfill Gas-Landfill only

Gas Captured&Treated by LFG System m3	Power generated (MW / KWh)	Used on-site or to national grid	Was surface emissions monitoring performed during the reporting year?	Comments
			SELECT	

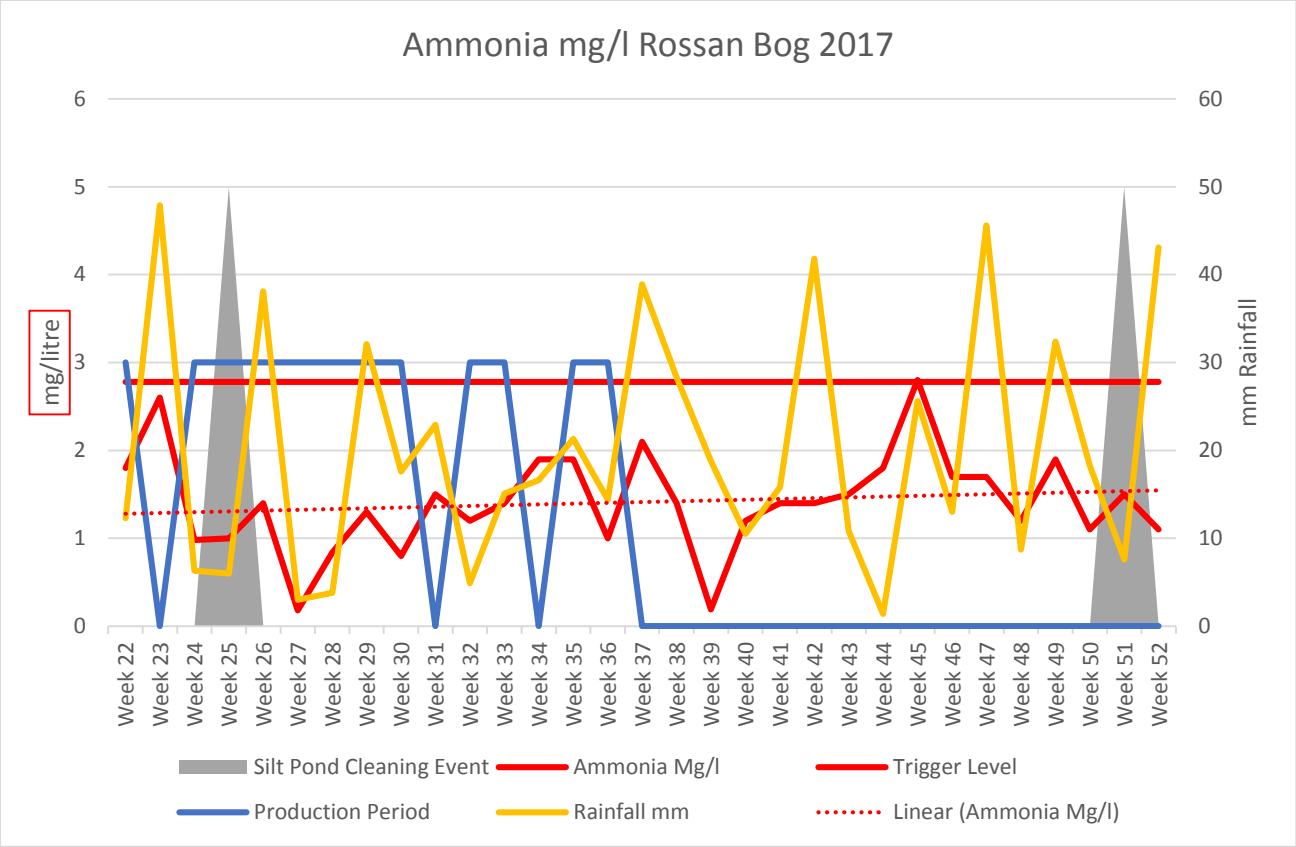
Derrygreenagh
Decommissioning and Rehabilitation
AER Overview 2017.

Within the Derrygreenagh licensed area (P0501-01) there were no entire bog units available for rehabilitation in 2017. Ongoing monitoring of cutaway within the Derrygreenagh licensing area included the re-survey of Drumman bog.
Active rehabilitation work was carried out in Cavemount bog in 2017 with some hydrological management. An overflow pipe was constructed in 2017 to manage the maximum winter water levels. 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.
Bog restoration and drain-blocking is being carried out at a remnant section of high bog at Daingean Rathdrum. This work is due to be finished in 2018.
Draft rehabilitation plans for the Derrygreenagh bogs licensed area, including more detailed draft plans for each component bog unit were submitted to the EPA in 2013 and these were reviewed and updated in 2015, and 2017.
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.

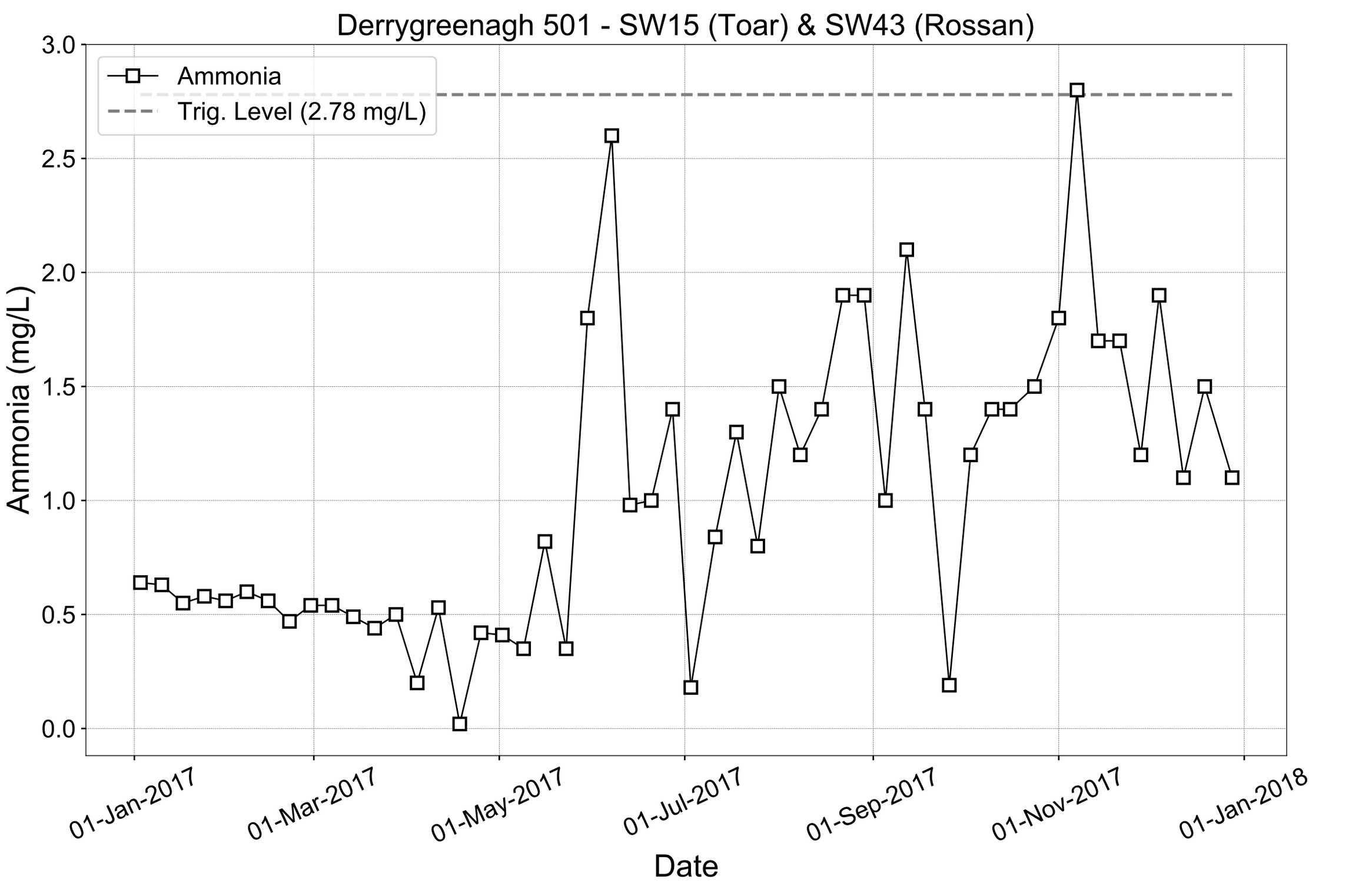
IPC License P0501-01 Quarterly Grab Sampling Results 2017												
X	Y	Bog	SW	Monitoring	Sampled	pH	SS	TS	Ammonia	TP	COD	Colour
265888.99	253456.63	Ballivor	SW-39	Q1 17	13/03/2017	7.6	5	206	0.29	0.05	64	142
266366.86	251598.58	Ballivor	SW-40	Q1 17	13/03/2017	7.4	5	320	0.64	0.05	98	287
266386.45	251579.18	Ballivor	SW-41	Q1 17	13/03/2017	7.2	6	176	0.67	0.05	71	220
To Be Confirmed	To Be Confirmed	Rossan	SW-42	Q1 17	13/03/2017	7.3	5	146	1.7	0.05	71	255
259965.18	243847.63	Rossan	SW-43	Q1 17	13/03/2017	7.3	5	205	1.3	0.05	71	242
To Be Confirmed	To Be Confirmed	Rossan	SW-44	Q2 17	08/05/2017	7.6	5	289	0.88	0.05	72	148
258846.25	243853.76	Rossan	SW-45	Q2 17	08/05/2017	7.3	5	254	1.4	0.05	65	178
260629.22	242141.39	Rossan	SW-46	Q2 17	08/05/2017	7.3	5	278	1.4	0.05	74	231
260145.55	242266.71	Rossan	SW-47	Q2 17	08/05/2017	7.7	11	320	1.3	0.08	72	122
To Be Confirmed	To Be Confirmed	Rossan	SW-48	Q2 17	08/05/2017	7.6	5	260	1.1	0.05	52	96
255381.16	243606.05	Derryhinch	SW-1	Q3 17	01/09/2017	7.6	5	226	0.71	0.08	39	86
254528.83	242354.28	Derryhinch	SW-2	Q3 17	01/09/2017	7.3	5	278	3	0.05	30	75
253369.19	242417.94	Derryhinch	SW-3	Q3 17	01/09/2017	7.5	5	284	3	0.05	28	61
252602.78	242540.17	Derryhinch	SW-4	Q3 17	01/09/2017	7.7	5	314	0.14	0.05	33	108
252623.61	241470.16	Carrick	SW-4A	Q3 17	01/09/2017	7.9	9	316	1	0.05	39	118
252468.68	240919.32	Carrick	SW-5	Q3 17	01/09/2017	7.7	6	370	1.4	0.05	44	119
252409.71	241163.33	Carrick	SW-6	Q3 17	01/09/2017	7.8	5	442	0.1	0.05	24	51
252473.21	241162.01	Carrick	SW-7	Q3 17	01/09/2017	7.8	6	430	0.09	0.05	24	49
252275.61	239871.62	Drumman	SW-8	Q3 17	01/09/2017	7.9	7	366	0.19	0.05	38	93
252950.37	238421.69	Drumman	SW-9	Q3 17	01/09/2017	7.6	6	274	0.02	0.05	42	122
251559.92	235341.71	Ballybeg	SW-11	Q4 17	17/11/2017	7.2	5	500	0.1	0.05	48	90
252206.09	235207.02	Ballybeg	SW-12	Q4 17	17/11/2017	7.2	5	324	0.05	0.05	100	278
251880.6	234593.13	Ballybeg	SW-13	Q4 17	17/11/2017	7.3	5	516	1.1	0.06	45	60
252250.49	235061.45	Ballybeg	SW-13A	Q4 17	17/11/2017	7.3	6	514	0.9	0.05	45	69
240485.16	235706.33	Torr	SW-14	Q4 17	16/11/2017	7	6	256	1.5	0.05	66	219
244391.76	235128.93	Torr	SW-15	Q4 17	16/11/2017	7.2	5	438	0.52	0.05	34	71
244435.64	235093.42	Torr	SW-16	Q4 17	16/11/2017	7.2	7	466	0.43	0.05	44	65
240425.65	234997.32	Torr	SW-17	Q4 17	23/11/2017	7.2	6	406	0.22	0.05	75	186
259415.3	256855.75	Bracklin	SW-29	Q4 17	23/11/2017	7.1	5	240	0.4	0.05	97	319
259519.45	257618.44	Bracklin	SW-30	Q4 17	23/11/2017	6.2	7	106	0.5	0.05	55	252

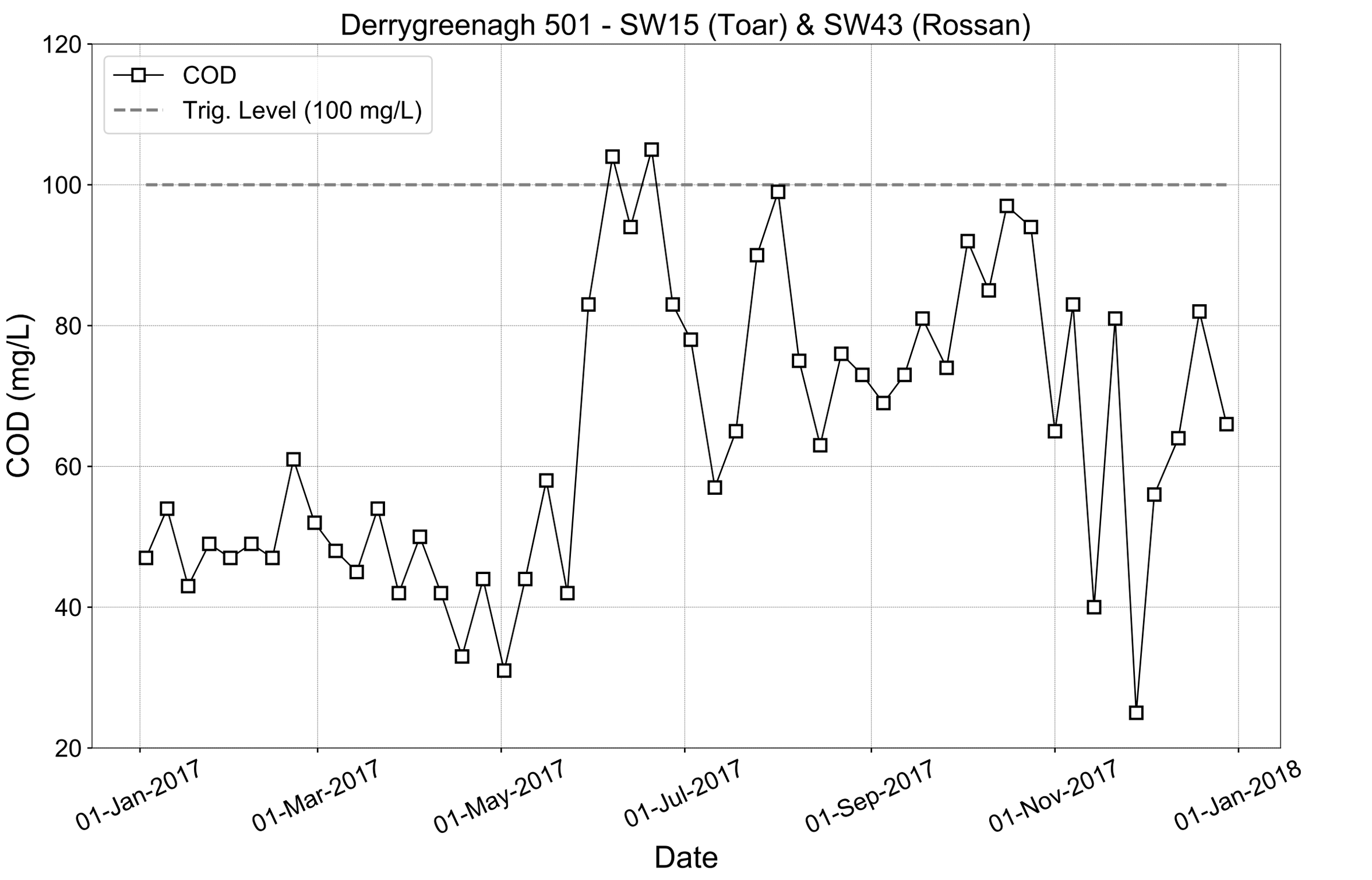


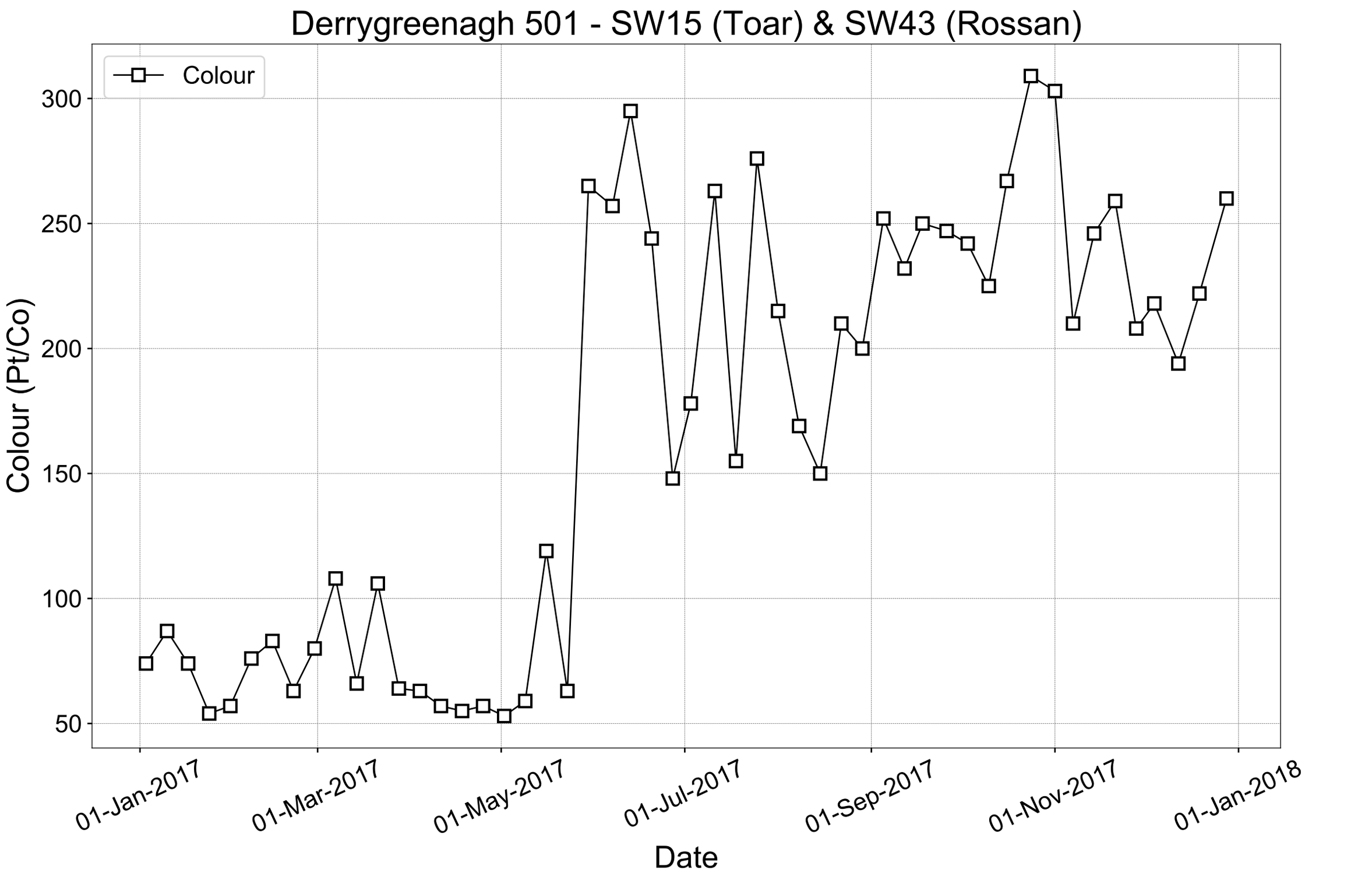
Toar bog is an active production bog with the composite sampler located here during 2015, 2016 and until May 2017 where it was moved to Rossan Bog within the Derrygreenagh IPC Licence. The composite sampler takes a flow proportional composite sample over a 24 hour period. The sampler had 0% downtime during this reporting period and returned 21 weekly ammonia results during the period of its location at Toar bog . The ammonia trigger level of 2.78mg/l, as agreed with the Agency, was not exceeded during the period. Combining the 2015,16 and May 2017 results above shows concentrations trending downwards over this 2.5 year period 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.

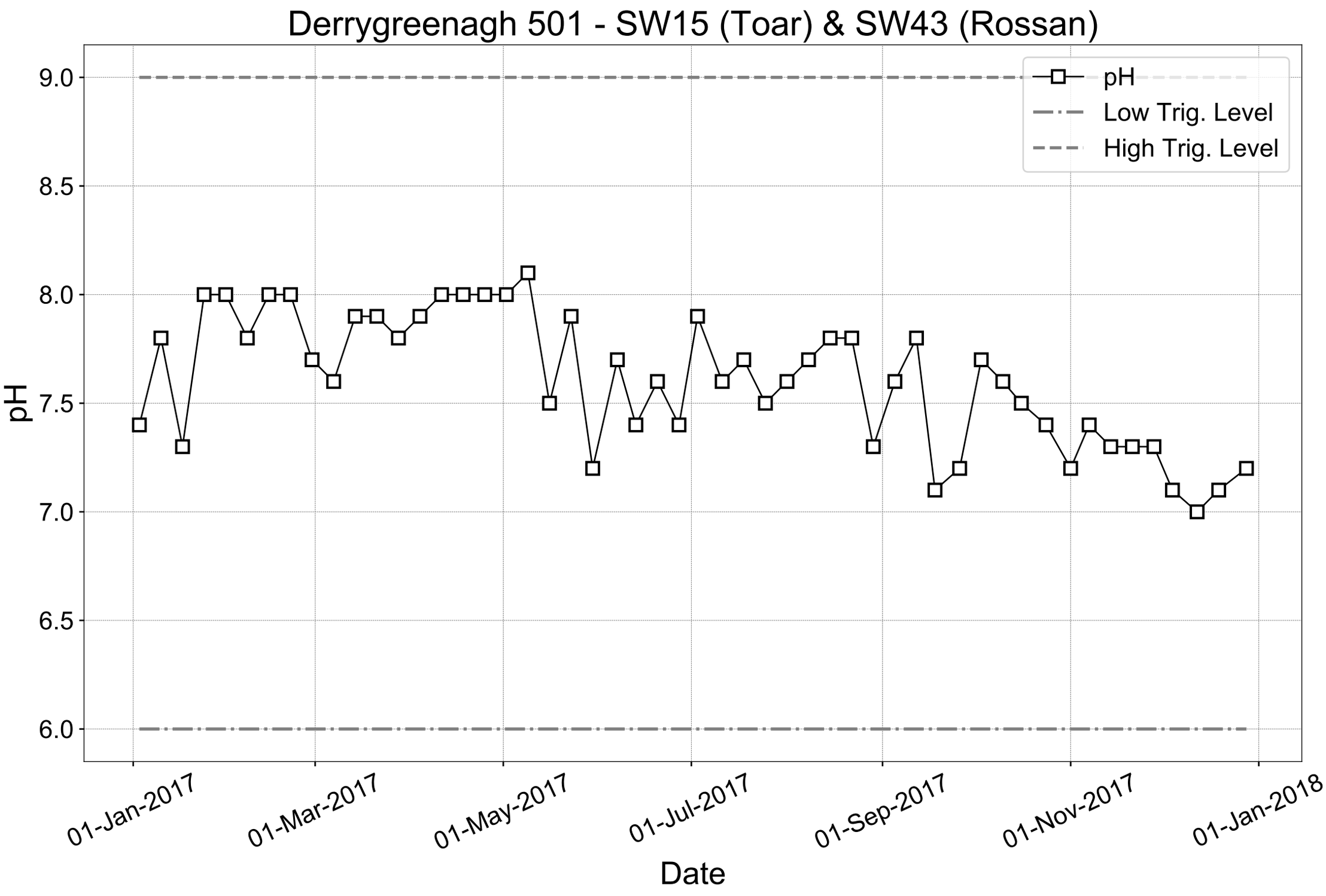


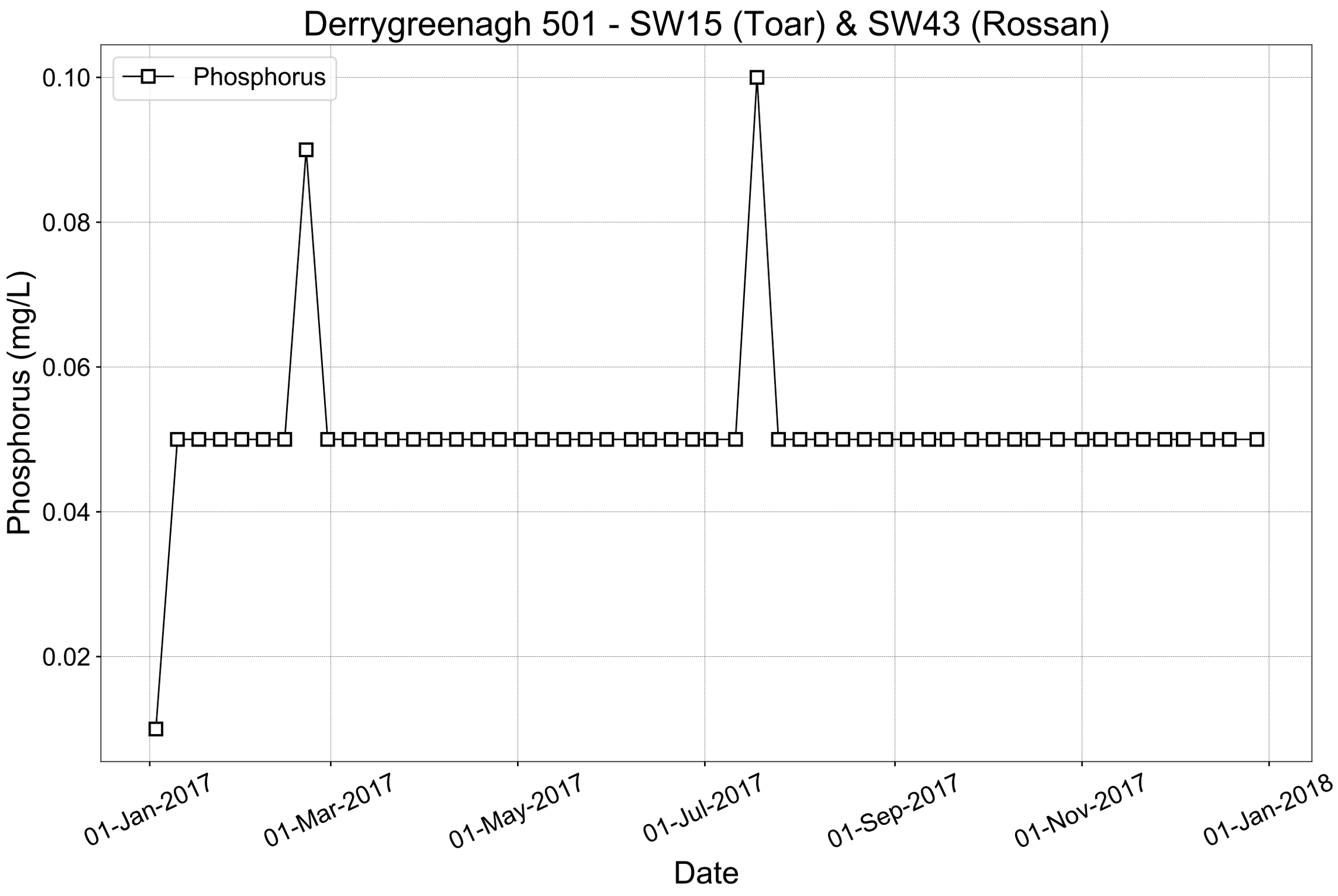
Rossan bog is an active horticultural production bog with the composite sampler located here from May 2017 where it was moved from Toar Bog within the Derrygreenagh IPC Licence. The composite sampler takes a flow proportional composite sample over a 24 hour period. The sampler had 0% downtime during this reporting period and returned 31 weekly ammonia results during the period. The ammonia trigger level of 2.78mg/l, as agreed with the Agency, was marginally exceeded once during the period. There sampling period of 31 weeks showed a slight increasing trend in ammonia, but as per previous sampler relocations, it will need up to two years at this locations and associated weekly ammonia spanning two seasonal production periods to establish the trend. 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.

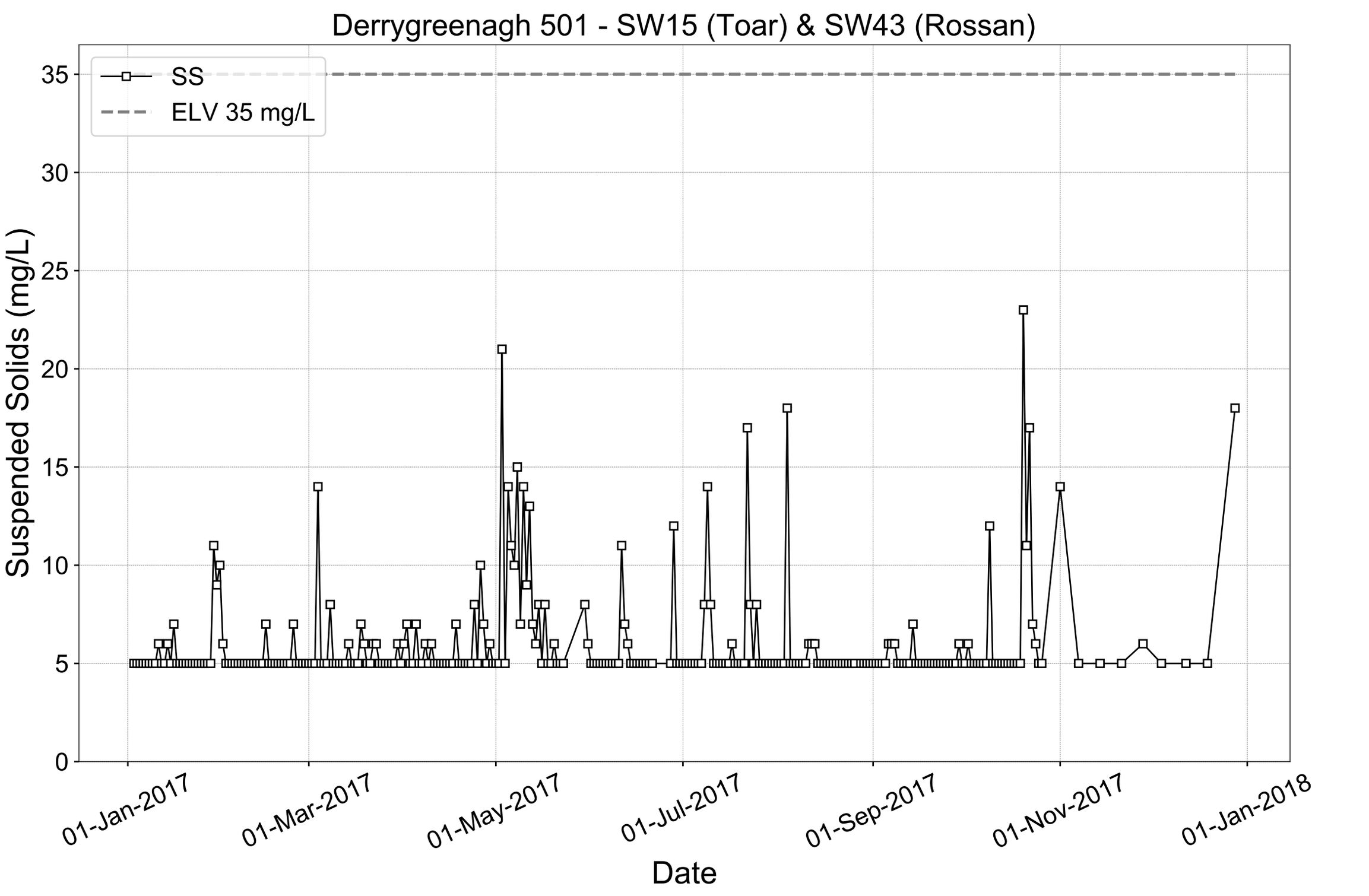

Derrygreenagh 501 - SW15 (Toar) & SW43 (Rossan)
Ammonia
Trig. Level (2.78 mg/L)
Ammonia (mg/L)
3.0
2.5
2.0
1.5
1.0
0.5
0.0
01-Jan-2017
01-Mar-2017
01-May-2017
01-Jul-2017
01-Sep-2017
01-Nov-2017
01-Jan-2018
Date

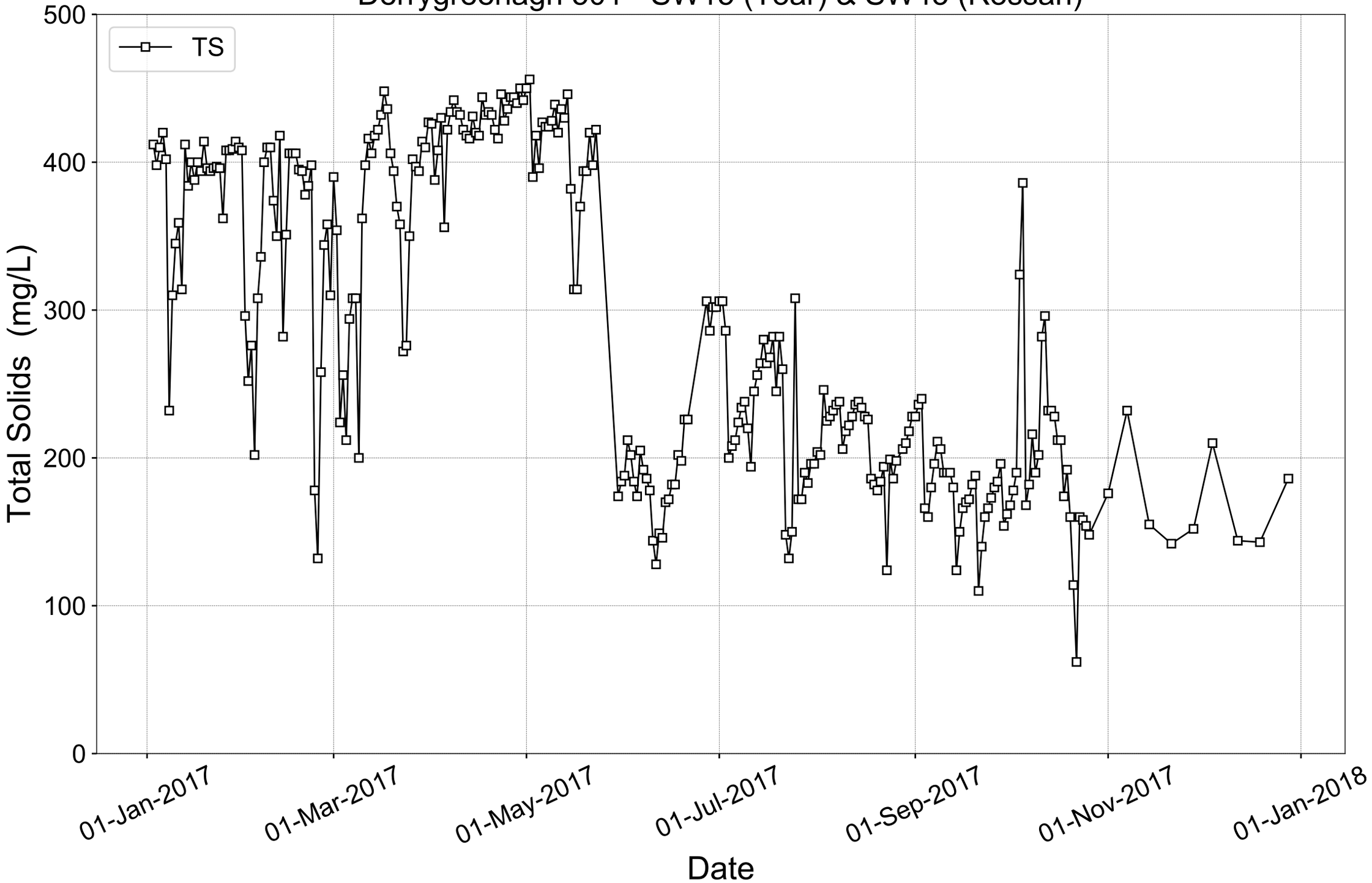

Derrygreenagh 501 - SW15 (Toar) & SW43 (Rossan)
COD
Trig. Level (100 mg/L)
COD (mg/L)
120
100
80
60
40
20
01-Jan-2017
01-Mar-2017
01-May-2017
01-Jul-2017
01-Sep-2017
01-Nov-2017
01-Jan-2018
Date


Derrygreenagh 501 - SW15 (Toar) & SW43 (Rossan)
Colour
Colour (Pt/Co)
300
250
200
150
100
50
01-Jan-2017
01-Mar-2017
01-May-2017
01-Jul-2017
01-Sep-2017
01-Nov-2017
01-Jan-2018
Date


Derrygreenagh 501 - SW15 (Toar) & SW43 (Rossan)
pH
Low Trig. Level
High Trig. Level
9.0
8.5
8.0
7.5
7.0
6.5
6.0
pH
01-Jan-2017
01-Mar-2017
01-May-2017
01-Jul-2017
01-Sep-2017
01-Nov-2017
01-Jan-2018
Date


Derrygreenagh 501 - SW15 (Toar) & SW43 (Rossan)
Phosphorus
0.10
0.08
0.06
0.04
0.02
Phosphorus (mg/L)
01-Jan-2017
01-Mar-2017
01-May-2017
01-Jul-2017
01-Sep-2017
01-Nov-2017
01-Jan-2018
Date


Derrygreenagh 501 - SW15 (Toar) & SW43 (Rossan)
SS
ELV 35 mg/L
Suspended Solids (mg/L)
0
5
10
15
20
25
30
35
01-Jan-2017
01-Mar-2017
01-May-2017
01-Jul-2017
01-Sep-2017
01-Nov-2017
01-Jan-2018
Date


Derrygreenagh 501 - SW15 (Toar) & SW43 (Rossan)
TS
Total Solids (mg/L)
500
400
300
200
100
0
01-Jan-2017
01-Mar-2017
01-May-2017
01-Jul-2017
01-Sep-2017
01-Nov-2017
01-Jan-2018
Date

Yard Discharge Results 2017		
Licence: P0501-01		
Works: Derrygreenagh		
Month	**D/Greenagh SWE 2 COD**	**Rossan SWE 1 COD**
Jan	30	64
Feb	52	70
Mar	41	34
Apr	40	11
May	36	31
June	33	83
July	23	20
Aug	14	87
Sep	34	41
Oct	39	91
Nov	46	69
Dec	30	70

Guidance to completing the PRTR workbook

PRTR Returns Workbook

Version 1.1.19

REFERENCE YEAR	2017

1. FACILITY IDENTIFICATION

Parent Company Name	Bord na Mona Energy Limited
Facility Name	Bord na Móna Energy Limited (Derrygreenagh)
PRTR Identification Number	P0501
Licence Number	P0501-01

Classes of Activity

No.	class_name
-	Refer to PRTR class activities below

Address 1	Derrygreenagh Group
Address 2	c/o Derrygreenagh Works
Address 3	Rochfortbridge
Address 4	Mullingar
	Westmeath
Country	Ireland
Coordinates of Location	-7.25676 53.3910
River Basin District	IEEA
NACE Code	0892
Main Economic Activity	Extraction of peat
AER Returns Contact Name	Enda Mc Donagh
AER Returns Contact Email Address	enda.mcdonagh@bnm.ie
AER Returns Contact Position	Head of Environment
AER Returns Contact Telephone Number	0579345911
AER Returns Contact Mobile Phone Number	0862370816
AER Returns Contact Fax Number	0579345160
Production Volume	299912.0
Production Volume Units	Tonnes
Number of Installations	6
Number of Operating Hours in Year	2216
Number of Employees	60
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

SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

RELEASES TO AIR					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 PRTR POLLUTANTS

RELEASES TO AIR					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 C : REMAINING POLLUTANT EMISSIONS (As required in your Licence)

RELEASES TO AIR					Please enter all quantities in this section in KGs						
POLLUTANT		METHOD							QUANTITY		
			Method Used		DM01	DM02	DM03	DM04			
Pollutant No.	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	Emission Point 2	Emission Point 3	Emission Point 4	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
210	**Dust**	E	OTH	VDI 2119 Blatt 2/Part 2	0.0	0.0	0.0	0.0	0.076468	0.0	0.076468

* 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 Móna Energy Limited (Derrygreenagh)

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

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			
			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 PRTR POLLUTANTS

RELEASES TO WATERS					Please enter all quantities in this section in KGs			
POLLUTANT					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 C : REMAINING POLLUTANT EMISSIONS (as required in your Licence)

RELEASES TO WATERS					Please enter all quantities in this section in KGs				
POLLUTANT					QUANTITY				
			Method Used		SW15	SW43			
Pollutant No.	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	Emission Point 2	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	0.0	0.0	0.0	0.0	0.0

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

4.3 RELEASES TO WASTEWATER OR SEWER

Link to previous years emissions data

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

SECTION A : PRTR POLLUTANTS

RELEASES TO LAND					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
					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		
			Method Used				
Pollutant No.	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

5. ONSITE TREATMENT & OFFSITE TRANSFERS OF WASTE

Please enter all quantities on this sheet in Tonnes

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	169.7	wastes from mineral non-metalliferous excavation	D1	E	Volume Calculation	Onsite of generati	Bord na Mona Energy Ltd,P0501-01	Derrygreenagh,Rochfortbridge,Mullingar,Co Westmeath,Ireland		
Within the Country	02 01 04	No	119.14	waste plastics (except packaging)	R5	M	Weighed	Offsite in Ireland	Walker Recycling,NWCPO-14-11464-01	Clonkeen,Portlaoise,Co Laois,,Ireland		
To Other Countries	08 01 11	Yes	0.25	waste paint and varnish containing organic solvents or other dangerous substances	R2	M	Weighed	Abroad	Enva Ireland Ltd,184-1	Clonminam Ind Estate,Portlaoise,Co Laois,,Ireland	Recyfuel Ltd,BE0459.735.458,Enghis,.,.,.,Belgium	Enghis,.,.,.,Belgium
To Other Countries	11 01 13	Yes	0.39	degreasing wastes containing dangerous substances	R11	C	Volume Calculation	Abroad	Safety Kleen Ltd,99-1	Tallaght,.,.,.,Ireland	Solvent Recovery Management,PP33345F,Wheeland Rd,Knottingly,West Yorks,WF11 8DZ,United Kingdom	Wheeland Rd,Knottingly,West Yorks,WF11 8DZ,United Kingdom
Within the Country	13 02 05	Yes	10.45	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 Ltd,184-1,Clonminam Industrial Estate,Portlaoise,Laois,,Ireland	Clonminam Industrial Estate,Portlaoise,Laois,,Ireland
Within the Country	13 05 03	Yes	2.62	interceptor sludges	R1	C	Volume Calculation	Offsite in Ireland	Enva Ireland Ltd,184-1	Clonminam Ind Estate,Portlaoise,Co Laois,,Ireland	Enva Ltd,184-1,Clonminam Industrial Estate,Portlaoise,Laois,,Ireland	Clonminam Industrial Estate,Portlaoise,Laois,,Ireland
Within the Country	15 01 03	No	14.26	wooden packaging	R1	M	Weighed	Offsite in Ireland	AES Ltd,WP-OY-08-061-01	Cappincur,Tullamore,Co Offaly,,Iceland		
To Other Countries	15 02 02	Yes	1.62	absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by dangerous substances	R1	C	Volume Calculation	Abroad	Enva Ireland Ltd,184-1	Clonminam Ind Estate,Portlaoise,Co Laois,,Ireland	Lindenschmidt,Reg no E97095037,IINDENSCHMIDT,Kreuztal,.,.,Germany	IINDENSCHMIDT,Kreuztal,.,.,Germany
To Other Countries	16 01 07	Yes	1.6	oil filters	R4	C	Volume Calculation	Abroad	Enva Ireland Ltd,184-1	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	0.82	lead batteries	R4	M	Weighed	Abroad	Enva Ireland Ltd,184-1	Clonminam Ind Estate,Portlaoise,Co Laois,,Ireland	Campine Recycling,MLAV/05-173/GVDA,Beerse,.,.,.,Belgium	Beerse,.,.,.,Belgium
Within the Country	17 04 07	No	54.8	mixed metals	R4	M	Weighed	Offsite in Ireland	AES Ltd,WP-OY-08-061-01	Cappincur,Tullamore,Co Offaly,,Iceland		
Within the Country	20 03 01	No	12.1	mixed municipal waste	D5	M	Weighed	Offsite in Ireland	AES Ltd,WP-OY-08-061-01	Cappincur,Tullamore,Co Offaly,,Iceland		
Within the Country	20 03 01	No	7.96	mixed municipal waste	D5	M	Volume Calculation	Offsite in Ireland	AES Ltd,WP-OY-08-061-01	Cappincur,Tullamore,Co Offaly,,Iceland		
Within the Country	17 09 04	No	180.0	mixed construction and demolition wastes other than those mentioned in 17 09 01, 17 09 02 and 17 09 03	R5	E	Volume Calculation	Offsite in Ireland	Anthony Cocoman,NWCPO-10-10642-02	Cloncant,Clonbullogue,Tullamore,Co Offaly,Ireland		
Within the Country	**20 01 21**	**Yes**	0.08	fluorescent tubes and other mercury-containing waste	R4	M	Weighed	Offsite in Ireland	KMK Metal Recycling Ltd,NWCPO-08-10607-02	Cappincur Ind Estate,Daingean Rd,Tullamore ,Co Offaly,Ireland	DELA GmbH,E11315322,Alte,Landstr 4,Essen,.,Germany	Alte,Landstr 4,Essen,.,Germany
Within the Country	16 02 14	No	2.36	discarded equipment other than those mentioned in 16 02 09 to 16 02 13	R4	M	Weighed	Offsite in Ireland	KMK Metal Recycling Ltd,NWCPO-08-10607-02	Cappincur Ind Estate,Daingean Rd,Tullamore ,Co Offaly,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	2017
Licence Register Number	P0502-01
Name of site	Bord na Mona Blackwater
Site Location	Shannonbridge, Athlone, Co Westmeath
NACE Code	0892
Class/Classes of Activity	1.4
National Grid Reference (6E, 6 N)	200125, 225050

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 966254 tonnes. Infrastructurally, there was no bog development. There was nine incidents,two in relation to dust and seven were trigger level breaches in relation to water. In relation to silt pond cleaning, 100% of ponds received two cleanings with some ponds receiving additional cleanings. A number of energy efficient initiatives are in place in terms of fuel and electricity usage. Lean Processes, Continuous Improvement initiatives and Visual Management have been introduced to raise standards,maintain compliance and drive efficiency. One of its programmes is designed to keep employees up to date on all aspects of Environmental & Energy Management. Lubricant training for better management of oils, greases and coolant was completed.Formalised management meetings take place weekly with environmental issues on the agenda for discussion. We had a successful audit of operations in relation to our Quality Management System to I.S. EN ISO 9001:2015.We are "committed to conducting all aspects of our business activities with a focus on minimising the impact on the environment". Rehabilitation works are desribed in an attachment.

Declaration:

All the data and information presented in this report has been checked and certified as being

	4/4/2018
Signature Group/Facility manager (or nominated, suitably qualified and experienced deputy)	Date

AIR-summary template	Lic No:	P0502-01	Year	2017

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	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 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

AIR-summary template	Lic No:	P0502-01	Year	2017

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 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-01	Total Particulates	350mg/m2/day	84	Daily average < ELV	mg/m2/day	34048	805	0	1	Repoerted to Agency
DM-02	Total Particulates	350mg/m2/day	84	Daily average < ELV	mg/m2/day	30856	694	0	1	Repoerted to Agency
DM-03	Total Particulates	350mg/m2/day	84	Daily average < ELV	mg/m2/day	11872	138	0	0	
DM-04	Total Particulates	350mg/m2/day	84	Daily average < ELV	mg/m2/day	22344	339	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:	P0502-01	Year	2017

Solvent use and management on site

8 Do you have a total Emission Limit Value of direct and fugitive emissions on site? if yes please fill out tables A4 and A5

No	

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

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

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

Table A5: Solvent Mass Balance summary

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

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER) Lic No: P0502-01 Year 2017

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

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)

					Additional information
3	Was there any result in breach of licence requirements? If yes please provide brief details in the comment section of Table W3 below			Yes	
4	Was all monitoring carried out in accordance with EPA guidance and checklists for Quality of Aqueous Monitoring Data Reported to the EPA? If no please detail what areas require improvement in additional information box	External /Internal Lab Quality checklist	Assessment of results checklist	Yes	Surface water monitoring was carried out on a quarterly basis. The results of which are attached. Monthly COD yard runoff results are also 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 therof Note 2	Licence Compliance criteria	Measured value	Unit of measurement	Compliant with licence	Method of analysis	Procedural reference source	Procedural reference standard number	Annual mass load (kg)	Comments

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

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

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER) Lic No: P0502-01 Year 2017

Continuous monitoring

			Additional Information
5	Does your site carry out continuous emissions to water/sewer monitoring?	Yes	
	If yes please summarise your continuous monitoring data below in Table W4 and compare it to its relevant Emission Limit Value (ELV)		
6	Did continuous monitoring equipment experience downtime? **If yes please record downtime in table W4 below**	Yes	Total of 162 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

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: P0502-01 Year 2017

Bund testing — dropdown menu click to see options

			Additional information
1	Are you required by your licence to undertake integrity testing on bunds and containment structures ? if yes please fill out table B1 below listing all **new bunds and containment structures** on site, in addition to **all bunds which failed** the integrity test-**all bunding structures which failed including mobile bunds must be listed in the table below, please include all bunds outside the licenced testing period** (mobile bunds and chemstore included)	Yes	There was no requirement to test the bunds in 2017
2	Please provide integrity testing frequency period	Other (2 Yearly)	
3	Does the site maintain a register of bunds, underground pipelines (including stormwater and foul), Tanks, sumps and containers? (containers refers to "Chemstore" type units and mobile bunds)	Yes	
4	How many bunds are on site?	11	
5	How many of these bunds have been tested within the required test schedule?	9	All passed in 2016
6	How many mobile bunds are on site?	45	This includes barrel trays located within workshops
7	Are the mobile bunds included in the bund test schedule?	No	
8	How many of these mobile bunds have been tested within the required test schedule?	0	
9	How many sumps on site are included in the integrity test schedule?	0	
10	How many of these sumps are integrity tested within the test schedule?	0	
	Please list any sump integrity failures in table B1		
11	Do all sumps and chambers have high level liquid alarms?	N/A	
12	If yes to Q11 are these failsafe systems included in a maintenance and testing programme?	N/A	
13	Is the Fire Water Retention Pond included in your integrity test programme?	N/A	

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

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

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

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

Pipeline/underground structure testing

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

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

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

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

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

Groundwater/Soil monitoring template	Lic No:	P0502-01	Year	2017

			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 Report (link in cell G8) and submit separately through ALDER as a licensee return AND answer questions 5-12 below. Groundwater monitoring template	SELECT		
5	Is the contamination related to operations at the facility (either current and/or historic)	N/A		
6	Have actions been taken to address contamination issues?If yes please summarise remediation strategies proposed/undertaken for the site	N/A		
7	Please specify the proposed time frame for the remediation strategy	N/A		
8	Is there a licence condition to carry out/update ELRA for the site?	N/A		
9	Has any type of risk assesment been carried out for the site?	N/A		
10	Has a Conceptual Site Model been developed for the site?	N/A		
11	Have potential receptors been identified on and off site?	N/A		
12	Is there evidence that contamination is migrating offsite?	N/A		Please enter interpretation of data here

Table 1: Upgradient Groundwater monitoring results

Date of sampling	Sample location reference	Parameter/ Substance	Methodology	Monitoring frequency	Maximum Concentration++	Average Concentration+	unit	GTV's*	SELECT**	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

Groundwater/Soil monitoring template Lic No: P0502-01 Year 2017

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)

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

Table 3: Soil results

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

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

Environmental Liabilities template	Lic No:	P0502-01	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:	P0502-01	Year	2017

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	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 .Employees get environmental training at a minium of every two years and updates are carried out from time to time in addition to that .	98	In total 102 Personnel received training in 2017.Ten Hydraulic Harrows were deployed at six locations including the four sensitive areas. Headland peat was collected in five areas and returned with overall production figures.	Individual	Improved Environmental Management Practices
Waste reduction/Raw material usage efficiency	Waste Streamlining.It is planned to continue with and where possible improve the current waste management service provided by AES Ltd	100	Quarterly waste reports are returned for records/filing and waste streams are segrated on site to maximise recycling potential.	Section Head	Improved Environmental Management Practices
Reduction of emissions to Water	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.	90	In total 102 Personnel received training in 2017. Silt pond cleaning and upgrade was on target with two machines designated full time at silt control.	Individual	Improved Environmental Management Practices
Materials Handling/Storage/Bunding	Increased bund capacity will be provided where required. Bund integrity testing will be carried out where required.	90	There were no additional bund requirements.	Individual	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 599 tonnes were sent off site for recycling. Procurement also exploring the possibility of securing further recyclers.	Individual	Improved Environmental Management Practices
Groundwater protection	It is proposed to upgrade existing septic tank systems where required.	95	Septic tanks are continually being assessed and upgrade works scheduled where required.	Section Head	Improved Environmental Management Practices

Noise monitoring summary report	Lic No:	P0502-01	Year	2017

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 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:	P0502-01	Year	2017

			Additional information
1	When did the site carry out the most recent energy efficiency audit? Please list the recommendations in table 3 below		
2	Is the site a member of any accredited programmes for reducing energy usage/water conservation such as the SEAI programme linked to the right? If yes please list them in additional information	SEAI - Large Industry Energy Network (LIEN)	
3	Where Fuel Oil is used in boilers on site is the sulphur content compliant with licence conditions? Please state percentage in additional information	No	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)	23559.287	12464.785		
Total Energy Generated (MWHrs)				
Total Renewable Energy Generated (MWHrs)				
Electricity Consumption (MWHrs)	2311.256	1683.585		
Fossil Fuels Consumption:				
Heavy Fuel Oil (m3)				
Light Fuel Oil (m3)	2091	1950.703		
Natural gas (m3)				
Coal/Solid fuel (metric tonnes)	6.2	8		
Peat (metric tonnes)				
Renewable Biomass				
Renewable energy generated on site				

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

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

Table R2 Water usage on site

					Water Emissions	Water Consumption	
Water use	Water extracted Previous year m3/yr.	Water extracted Current year m3/yr.	Production +/- % compared to previous reporting year**	Energy Consumption +/- % vs overall site production*	Volume Discharged back to environment(m^3yr):	Volume used i.e not discharged to environment e.g. released as steam m3/yr	Unaccounted for Water:
Groundwater							
Surface water							
Public supply							
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: P0502-01 Year 2017

Table R3 Waste Stream Summary

	Total	Landfill	Incineration	Recycled	Other
Hazardous (Tonnes)	20.58	0	0.08	20.5	
Non-Hazardous (Tonnes)	5070.47	83.78		784.35	4202.33

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: P0502-01 Year 2017

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		

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 reoccurence
01/06/2017	Trigger level reached	SW 94 Bunnahinly	1. Minor	Water	Not related to site activities		Normal activities	EPA Ref no. INCIO12493	New	None	NA	Complete	01/06/2017	Low
19/05/2017	Breach of ELV	Lismanny DM01	1. Minor	Air	Windy conditions		Normal activities	EPA Ref no. INCIO12711	New	Stop during windy conditions	Stop during windy conditions	Complete	21/07/2017	Low
27/06/2017	Trigger level reached	SW 51	1. Minor	Water	Not related to site activities		Normal activities	EPA Ref no.INCIO12712	New	None	na	Complete	28/06/2017	Low
19/07/2017	Breach of ELV	Cuillagh DM2	1. Minor	Air	Windy conditions		Normal activities	EPA Ref No.INCIO12945	New	Stop harvesting in windy conditions	Toolbox talks to e	Complete	19/08/2017	Low
27/06/2017	Trigger level reached	SW 52 Cloniffe .	1. Minor	Water	Not related to site activities		Normal activities	EPA Ref No. INCIO13312	New	NONE	NA	Complete	27/06/2017	Low
18/10/2017	Trigger level reached	SW 94 Bunnahinly	1. Minor	Water	Not related to site activities		Normal activities	EPA Ref No. INCIO13313	New	None	NA	Complete	18/10/2017	Low
19/12/2017	Trigger level reached	SW 94 Bunnahinly	1. Minor	Water	Not related to site activities		Normal activities	EPA Ref No. INCIO13823	New	None	NA	Complete	19/12/2017	Low
13/12/2017	Trigger level reached	SW 94 Bunnahinly	1. Minor	Water	Not related to site activities		Normal activities	EPA Ref No. INCIO13824	New	None	NA	Complete	13/12/2017	Low
06/12/2017	Trigger level reached	SW 37 Bloomhill	1. Minor	Water	Not related to site activities		Normal activities	EPA Ref No. INCIO13826	New	None	NA	Complete	16/12/2017	Low

Total number of incidents current year	9
Total number of incidents previous year	4
% reduction/ increase	125.00%

WASTE SUMMARY Lic No: P0502-01 Year 2017

SECTION A-PRTR ON SITE WASTE TREATMENT AND WASTE TRANSFERS TAB- TO BE COMPLETED BY ALL IPPC AND WASTE FACILITIES

PRTR facility logon

dropdown list click to see options

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

			Additional Information
1	Were any wastes accepted onto your site for recovery or disposal or treatment prior to recovery or disposal within the boundaries of your facility ?; (waste generated within your boundaries is to be captured through PRTR reporting)	N/A	
	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	SELECT	
3	Was waste accepted onto your site that was generated outside the Republic of Ireland? If yes please state the quantity in tonnes in additional information	SELECT	

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

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

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

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

SECTION D-TO BE COMPLETED BY LANDFILL SITES ONLY

Table 2 Waste type and tonnage-landfill only

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

Table 3 General information-Landfill only

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

WASTE SUMMARY	Lic No:	P0502-01	Year	2017

Table 4 Environmental monitoring-landfill only

Landfill Manual-Monitoring Standards

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

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

Table 5 Capping-Landfill only

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

*please note this includes daily cover area

Table 6 Leachate-Landfill only

9	Is leachate from your site treated in a Waste Water Treatment Plant?	SELECT
10	Is leachate released to surface water? If yes please complete leachate mass load information below	SELECT

Volume of leachate in reporting year(m3)	Leachate (BOD) mass load (kg/annum)	Leachate (COD) mass load (kg/annum)	Leachate (NH4) mass load (kg/annum)	Leachate (Chloride) mass load kg/annum	Leachate treatment on-site	Specify type of leachate treatment	Comments

Please ensure that all information reported in the landfill gas section is consistent with the Landfill Gas Survey submitted in conjunction with PRTR returns

Table 7 Landfill Gas-Landfill only

Gas Captured&Treated by LFG System m3	Power generated (MW / KWh)	Used on-site or to national grid	Was surface emissions monitoring performed during the reporting year?	Comments
			SELECT	

Blackwater
Decommissioning and Rehabilitation
AER Overview 2017.

Several bogs within the Blackwater bogs licensed area (P0502-01) have been identified as having bog restoration value. Bog restoration work (drain-blocking) has been completed in sub-sections of Clonboley I and Clonboley II (Knock Bog and Clera Island Bog). Restoration work at the Killeglan network of bogs is ongoing and proving successful. These bogs are currently being considered for SAC/NHA designation by the NPWS as part of the National Raised Bog Special Area of Conservation Management Plan and the National Review of Raised Bog NHAs. A Greenhouse Gas Monitoring programme is ongoing at Moyarwood Bog (a continuation of the NEROS (EPA-funded project)) to investigate carbon fluxes on this restored bog (completed in 2018). The funding has been taken over by Bord na Mona. An additional site established at Blackwater Bog was part of REEDFLUX (EPA/BnM funded project) to investigate carbon fluxes of specific cutaway communities including Reedbeds has been finalised (April 2015).
A small area of Clooniff Bog has been rehabilitated in order to create a wetland (8 ha). Wetland vegetation have been introduced here in order to speed up the establishment of wetland vegetation such as common reed, reed mace and reed canary grass. It is intended to re-direct water from industrial peat production areas into this wetland during 2018.
Ongoing monitoring of peatland areas was carried out within the Blackwater licensing area with Clera Island Bog being re-surveyed using the eco-tope monitoring system. Lismanny bog was also resurveyed as part of the ongoing biodiversity survey.
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 at Bunihinly 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.
Draft rehabilitation plans for the Blackwater 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.
Japanese Knotweed (Invasive species) control is ongoing at Attymon. A small area was sprayed with herbicide in 2017.
A section of remnant bog at the south of Lismanny Bog has been leased to the local community, restoration work is due to begin on this section in 2018. New signage will also be erected and this will complement the existing board walk that was constructed in 2009.
Ballydangan Bog has been managed for conservation since 2009. Many stakeholders are involved in this project which entails managing the site for the conservation of ground nesting birds, specifically Curlew and Red Grouse. In November 2017, Ministers Heather Humphries and Denis Naughton visited the project and acknowledged the work being carried out.
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

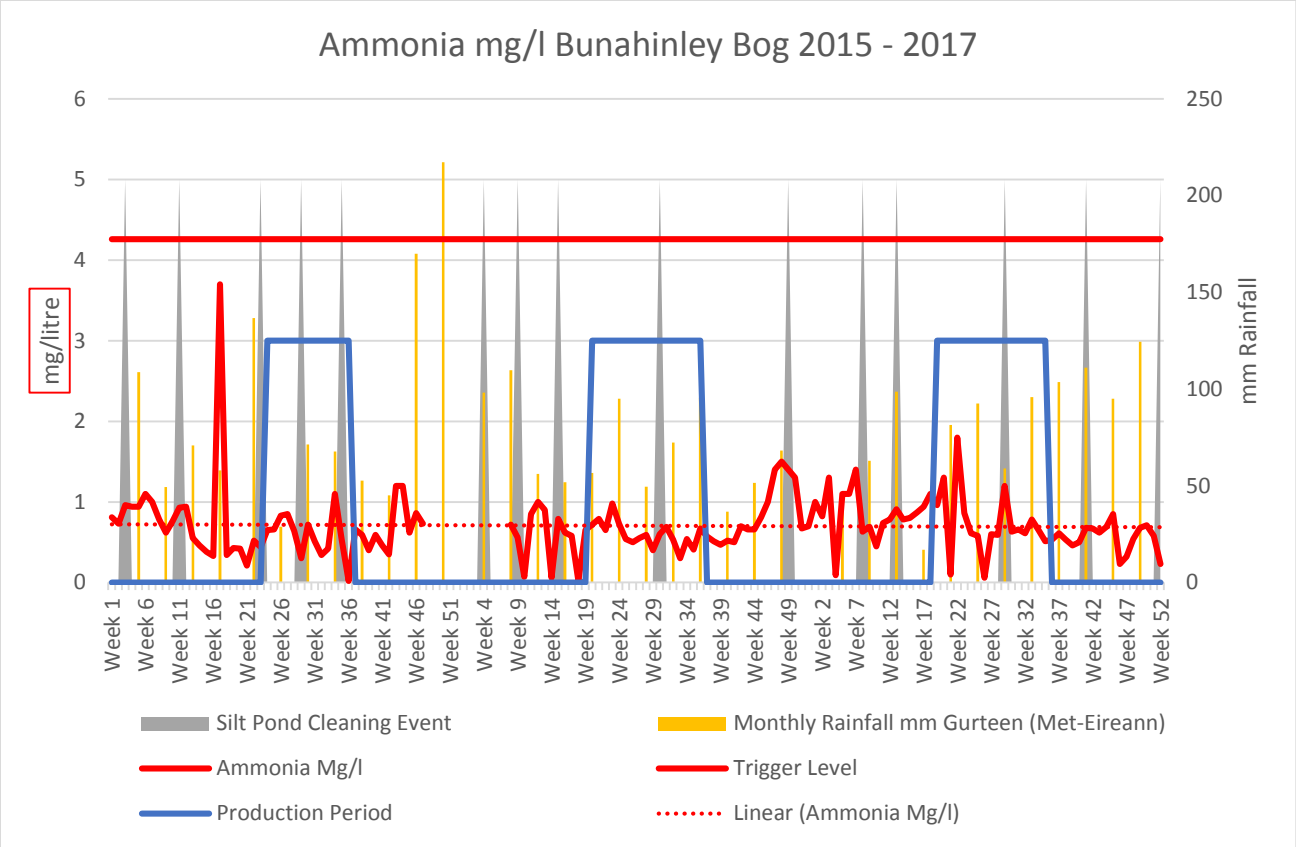
Regional Planning Authority as well as a range of local community groups and Heritage Officers from counties Laois, Offaly, Kildare, Roscommon, Longford, Meath, Galway, Westmeath and Dublin.
A copy of our Biodiversity Action Plan is available to view and download at http://www.bordnamona.ie/our-company/biodiversity/
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.

Siltpond Monitoring Frequency & Results

Bord na Mona Blackwater

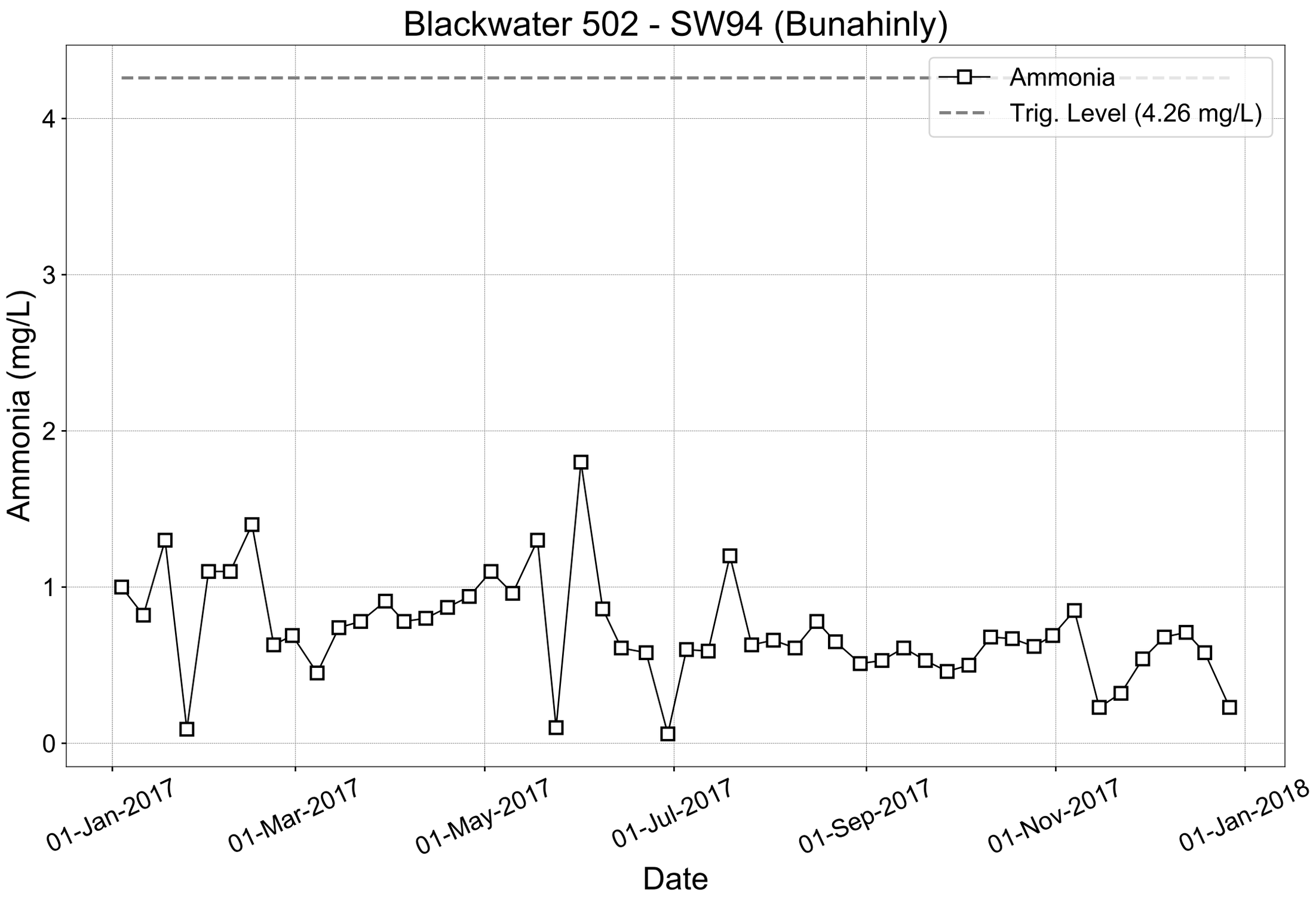
IPPC Licence P0502-01

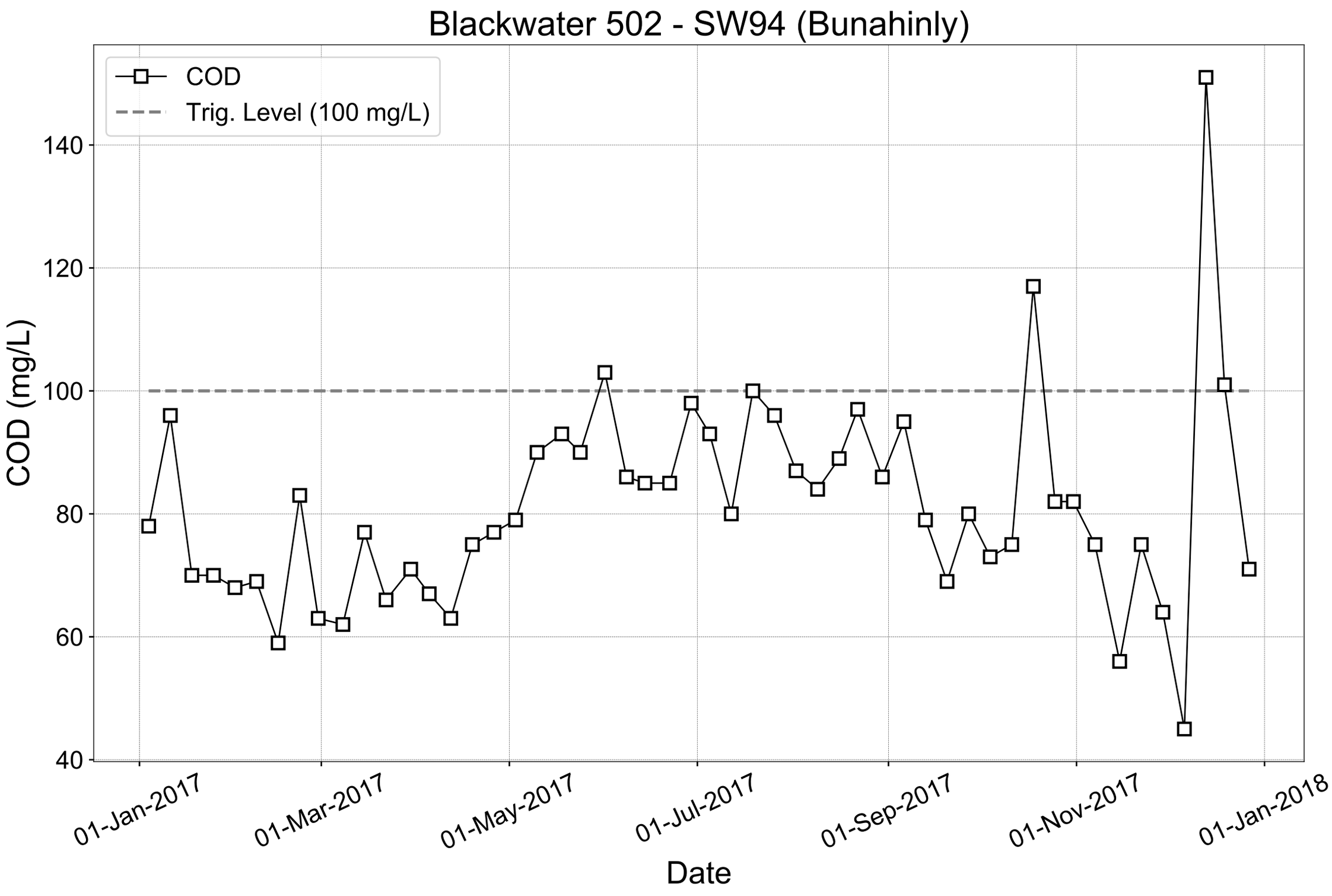
X	Y	Bog	SW	Monitoring	Sampled	pH	SS	TS	Ammonia	TP	COD	Colour
179707.29	248776.74	Boughill	SW-137	Q1 17	30/03/2017	7	5	103	1.3	0.05	74	234
196289.52	229517.21	Clooniff	SW-54	Q1 17	30/03/2017	6.5	5	106	0.43	0.05	89	279
206721.04	238609.93	Bunahinly	SW-92	Q1 17	30/03/2017	6.5	5	92	0.57	0.05	66	218
206662.99	238274.82	Bunahinly	SW-93	Q1 17	30/03/2017	6.2	5	196	0.4	0.05	73	262
197086.52	222116.69	Garryduff	SW-13	Q1 17	30/03/2017	7.5	5	346	0.61	0.05	49	147
196834.5	231514.48	Clooniff	SW-58	Q1 17	30/03/2017	6.7	5	70	0.07	0.05	65	285
179332.06	244537.9	Gowla	SW-127	Q1 17	30/03/2017	7.6	5	216	0.32	0.08	67	214
188124.43	227737.31	Culliaghmore	SW-1	Q2 17	29/06/2017	7.6	5	386	0.09	0.05	59	76
189325.60	226464.60	Culliaghmore	SW-2	Q2 17	29/06/2017	7.9	5	276	0.2	0.05	39	69
189939.96	226469.40	Culliaghmore	SW-3	Q2 17	29/06/2017	8	5	328	3.2	0.05	55	94
188449.77	226433.58	Culliaghmore	SW-4	Q2 17	29/06/2017	8.4	5	223	0.05	0.05	48	113
189010.02	226437.01	Culliaghmore	SW-5	Q2 17	29/06/2017	7.6	5	210	0.56	0.05	67	179
194628.63	226099.90	Cornaveagh	SW-47	Q2 17	29/06/2017	8	5	254	1.9	0.05	50	105
196839.94	227791.83	Cornaveagh	SW-48	Q2 17	29/06/2017	7.7	16	226	2.1	0.05	80	228
196073.07	226174.31	Cornaveagh	SW-50	Q2 17	29/06/2017	8.2	5	360	1	0.05	35	58
197786.75	230319.32	Clooniff	SW-51	Q2 17	29/06/2017	7.4	17	174	2.5	0.05	110	252
197784.04	230364.06	Clooniff	SW-52	Q2 17	29/06/2017	7.4	10	230	1.2	0.05	106	191
196003.55	230845.12	Clooniff	SW-53	Q2 17	29/06/2017	7.1	5	130	0.02	0.05	97	359
197925.10	231099.16	Clooniff	SW-57	Q2 17	29/06/2017	8.5	35	196	0.04	0.05	93	96
199765.54	230706.39	Coolumber	SW-60	Q2 17	29/06/2017	7.6	24	284	2.3	0.05	90	148
198231.11	231265.33	Clooniff	SW-61	Q2 17	29/06/2017	7.9	5	336	0.06	0.05	33	64
190499.55	225107.26	Lismanny	SW-7	Q3 17	11/10/2017	7.8	27	304	2.2	0.05	81	136
192303.22	225342.18	Lismanny	SW-9	Q3 17	11/10/2017	8	5	476	3.4	0.05	50	94
194242.55	224648.00	Garryduff	SW-11	Q3 17	11/10/2017	7.9	5	388	1.3	0.05	47	84
194949.25	224611.01	Garryduff	SW-12	Q3 17	11/10/2017	7.9	5	500	1.2	0.05	44	54
197086.52	222116.69	Garryduff	SW-13	Q3 17	11/10/2017	7.9	5	436	0.32	0.05	46	100
200109.89	220928.62	Kilmacshane	SW-14	Q3 17	11/10/2017	8	8	406	0.88	0.05	48	83
199114.52	217827.05	Kilmacshane	SW-16	Q3 17	11/10/2017	7.8	5	268	0.08	0.05	73	103
200866.74	217504.84	Kilmacshane	SW-17	Q3 17	11/10/2017	7.8	5	172	0.69	0.05	60	172
198151.68	221499.90	Kilmacshane	SW-18	Q3 17	11/10/2017	7.9	5	318	0.52	0.05	46	106
201608.72	218385.31	Kilmacshane	SW-19	Q3 17	11/10/2017	8	5	442	0.44	0.05	58	231
209315.20	230290.00	Ballaghurt	SW-23	Q3 17	11/10/2017	7.6	5	318	0.98	0.05	52	149
209356.83	229725.69	Ballaghurt	SW-24	Q3 17	11/10/2017	7.7	5	321	0.89	0.05	53	140
209442.00	229429.71	Ballaghurt	SW-26	Q3 17	11/10/2017	7.8	5	300	0.28	0.05	53	115
209411.14	230131.84	Ballaghurt	SW-98	Q3 17	11/10/2017	7.6	5	332	0.91	0.05	60	136
204488.47	230990.35	Bloomhill	SW-29	Q4 17	13/12/2017	6.9	8	138	1.3	0.05	65	250
205547.62	232711.03	Bloomhill	SW-30	Q4 17	13/12/2017	7.8	5	412	0.28	0.05	44	90
205451.06	232775.35	Bloomhill	SW-32	Q4 17	13/12/2017	7.6	5	314	2.2	0.05	52	119
205115.69	233023.61	Bloomhill	SW-33	Q4 17	13/12/2017	7.6	5	404	0.45	0.05	50	101
204905.69	233024.27	Bloomhill	SW-34	Q4 17	13/12/2017	7.5	5	416	0.28	0.05	53	95
204763.10	232973.54	Bloomhill	SW-35	Q4 17	13/12/2017	7.6	5	294	1.7	0.05	64	140
207534.45	232106.89	Bloomhill	SW-36	Q4 17	13/12/2017	7	5	158	1.6	0.05	80	211
207678.88	232177.99	Bloomhill	SW-37	Q4 17	13/12/2017	6.7	5	244	0.18	0.12	148	306
208168.42	232535.60	Bloomhill	SW-38	Q4 17	13/12/2017	7.2	5	336	0.15	0.05	56	57
207782.39	233800.82	Bloomhill	SW-39	Q4 17	13/12/2017	7.4	5	250	1.1	0.05	10	130
207534.25	234227.54	Bloomhill	SW-40	Q4 17	13/12/2017	7.3	9	264	0.56	0.05	86	214
207054.61	234796.69	Bloomhill	SW-41	Q4 17	13/12/2017	7	5	162	1.2	0.05	71	161
206343.39	234493.76	Bloomhill	SW-42	Q4 17	13/12/2017	7.7	5	284	1.2	0.05	57	119
205823.99	234334.45	Bloomhill	SW-43	Q4 17	13/12/2017	6.7	5	90	1.2	0.05	60	208

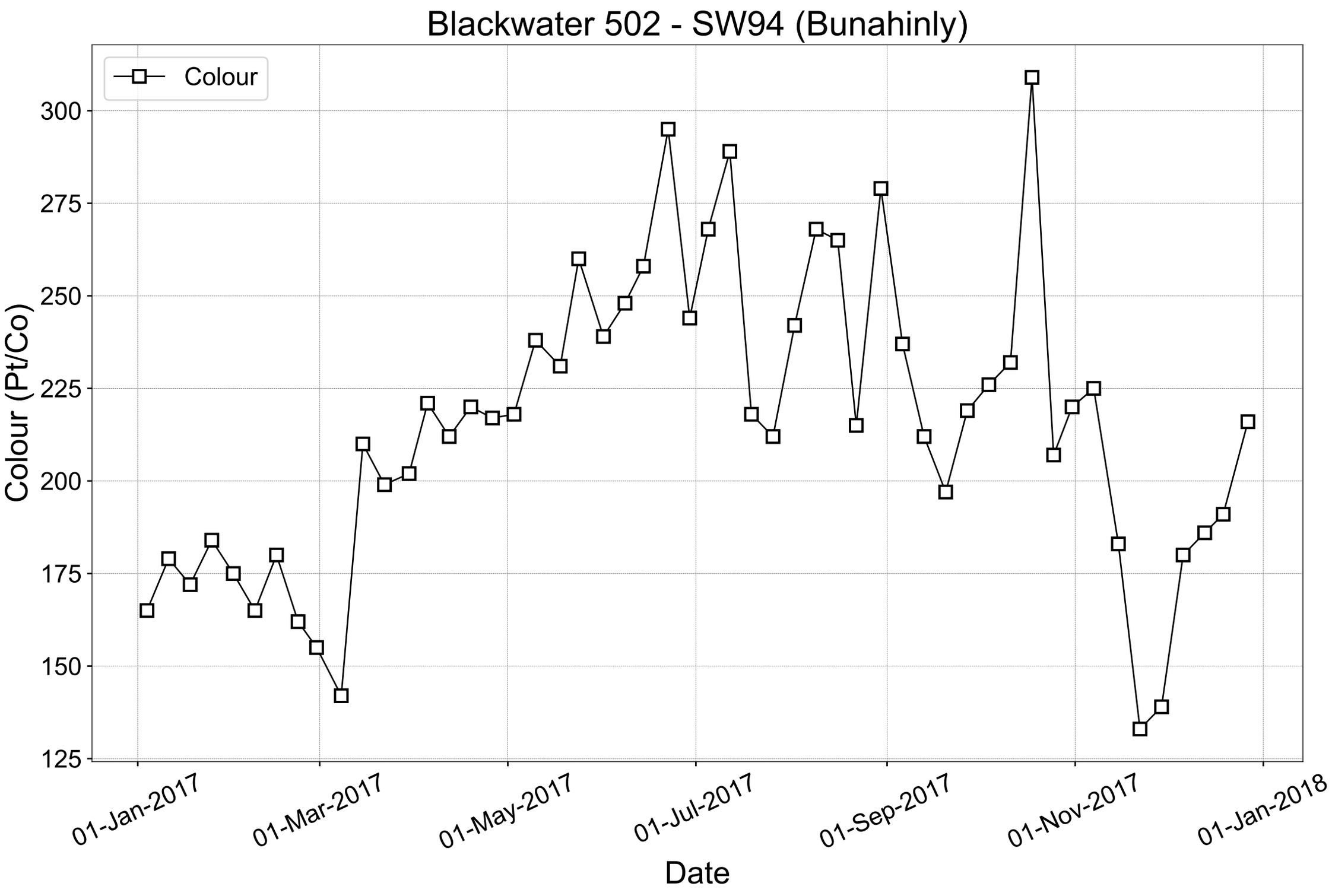


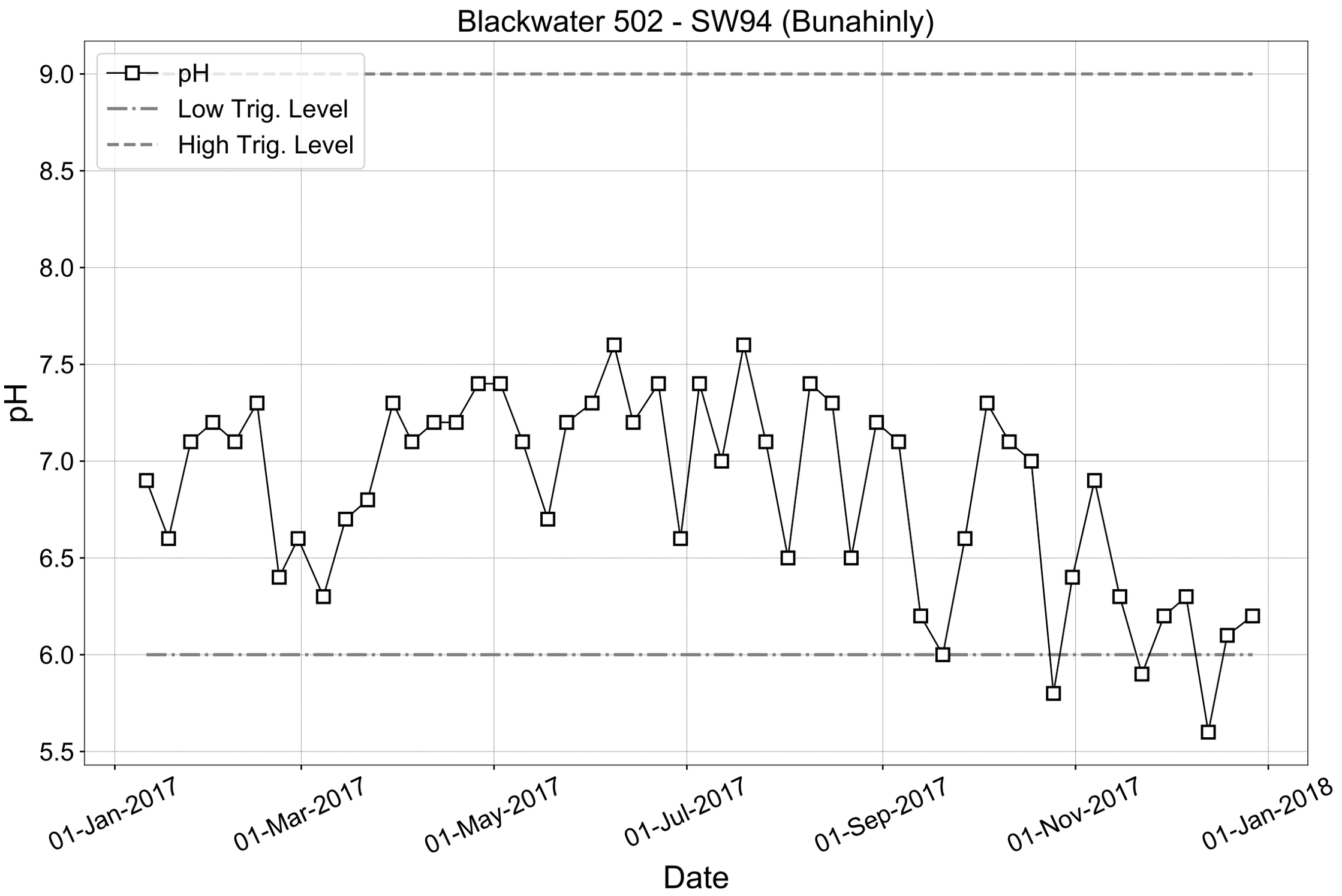
Bunahinly Bog

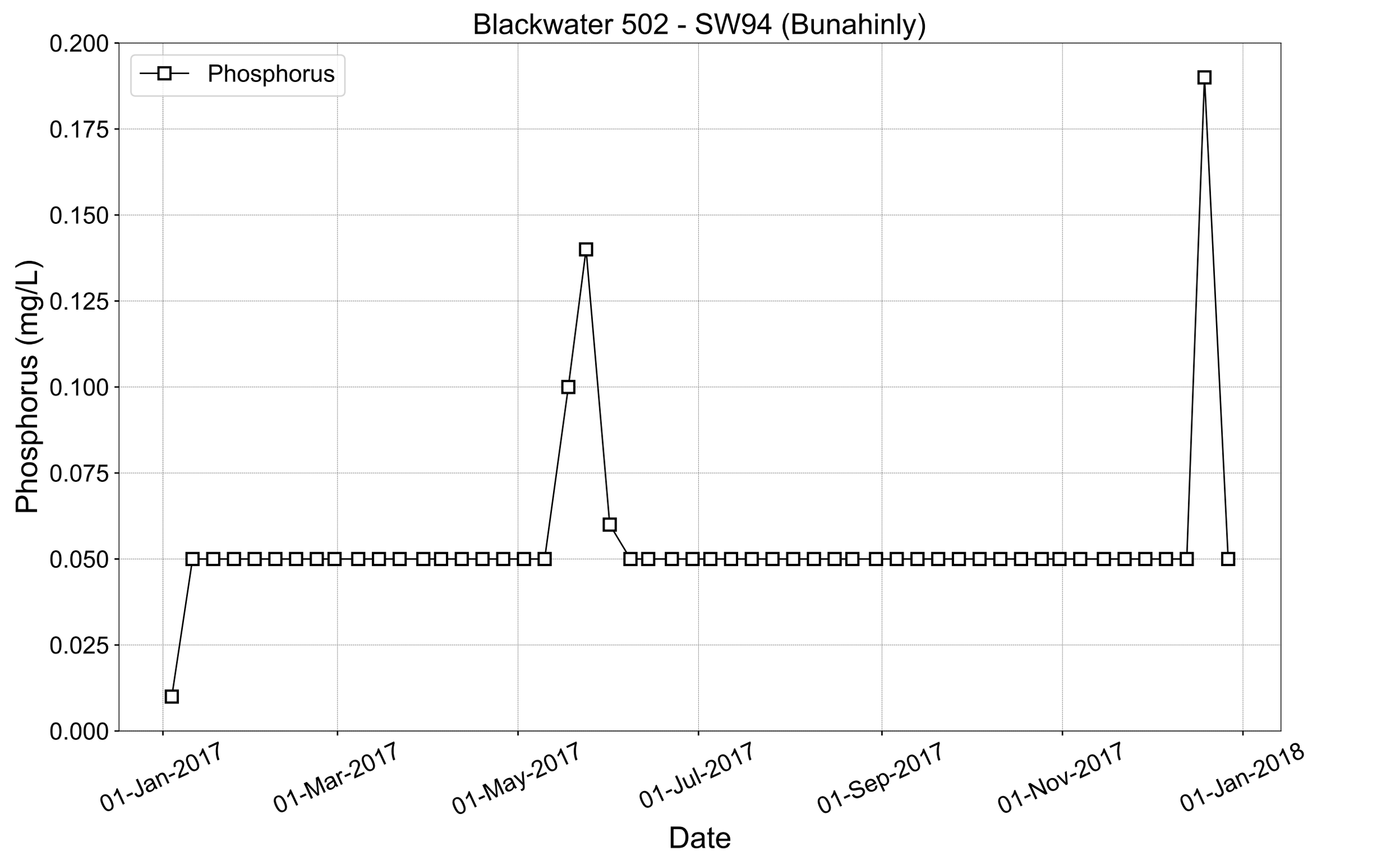
Bunahinly Bog is an active production bog with the composite sampler located here during 2015, 2016 and 2017. The composite sampler takes a flow proportional composite sample over a 24 hour period. The sampler had 45% downtime during the period mainly due to the fact that it is located on the silt pond outlet from Bunahinly Bog which has negative flow during winter flooding events, resulting in zero discharge during these events and limited safe access for a weekly grab sample. The ammonia trigger level of 4.26mg/l, as agreed with the Agency, was not exceeded during the period. Overall the results are trending level and slightly downwards as peat extraction continues and this is in-line with the level or 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 disharging from the peatlands. The only link expected would be that related to rainfall events and seasonal weather patterns and the subsequent surfacewater runoff and associated ammonia concentrations.

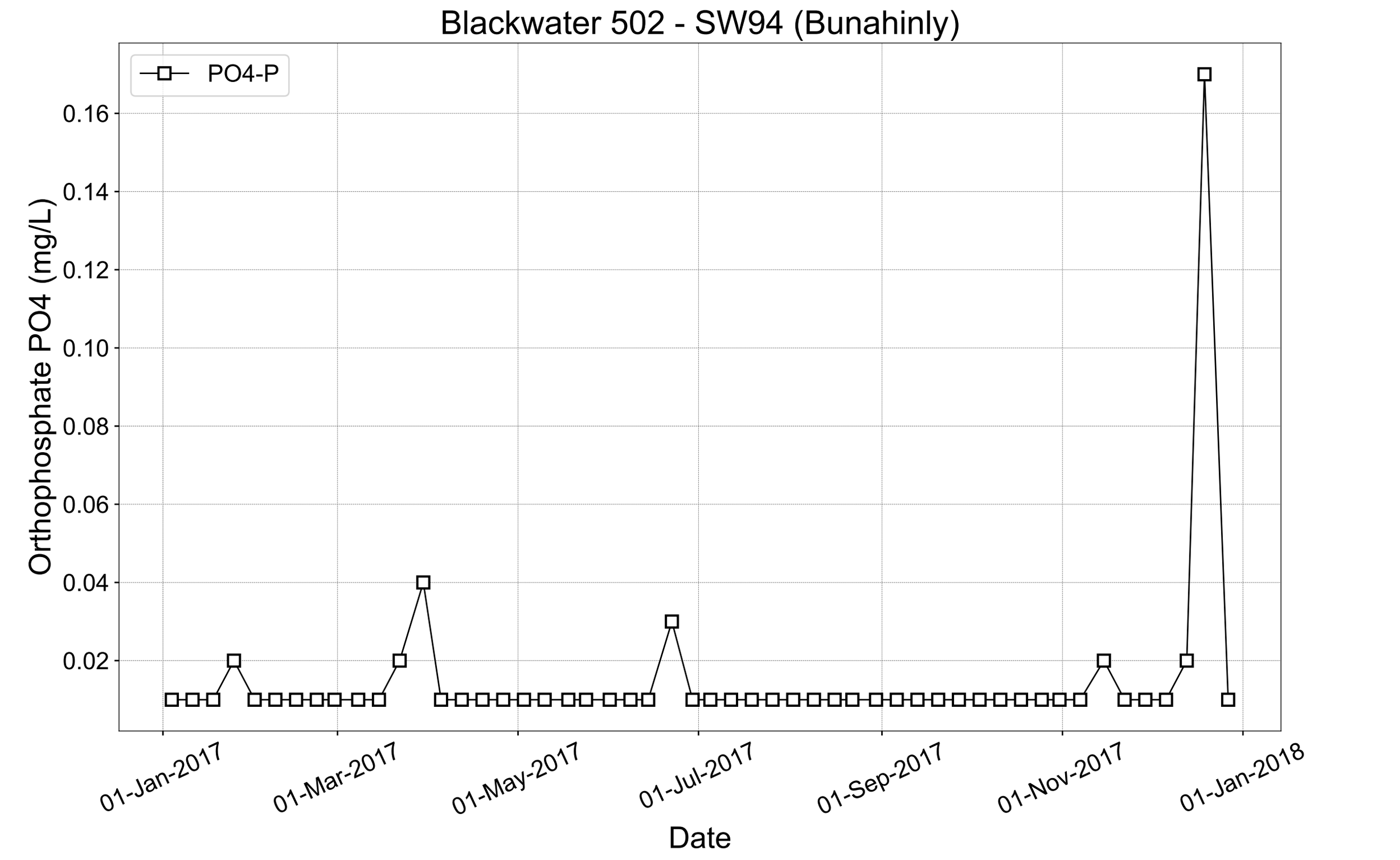

Blackwater 502 - SW94 (Bunahinly)
Ammonia
Trig. Level (4.26 mg/L)
Ammonia (mg/L)
0
1
2
3
4
01-Jan-2017
01-Mar-2017
01-May-2017
01-Jul-2017
01-Sep-2017
01-Nov-2017
01-Jan-2018
Date

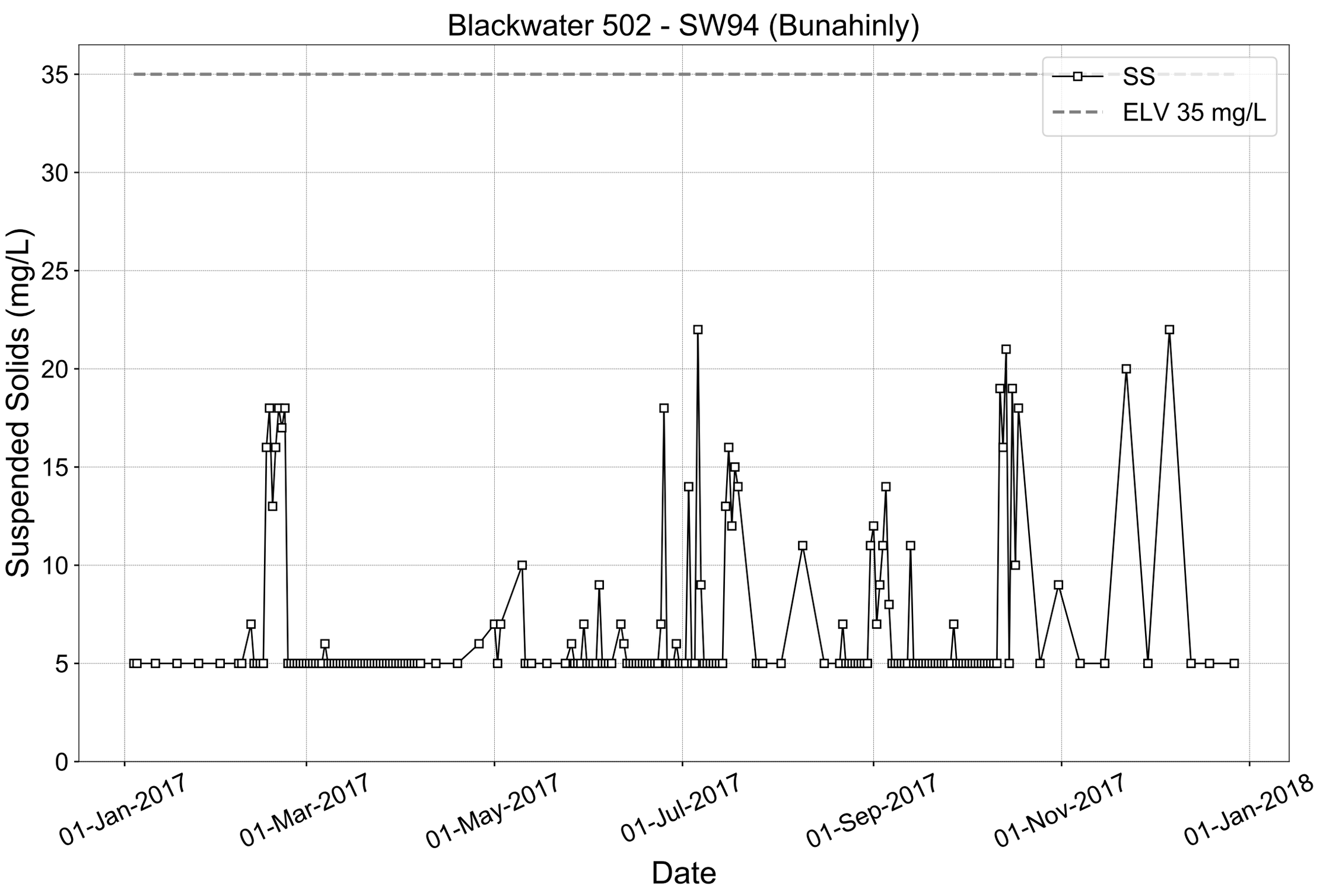

Blackwater 502 - SW94 (Bunahinly)
COD
Trig. Level (100 mg/L)
COD (mg/L)
140
120
100
80
60
40
01-Jan-2017
01-Mar-2017
01-May-2017
01-Jul-2017
01-Sep-2017
01-Nov-2017
01-Jan-2018
Date

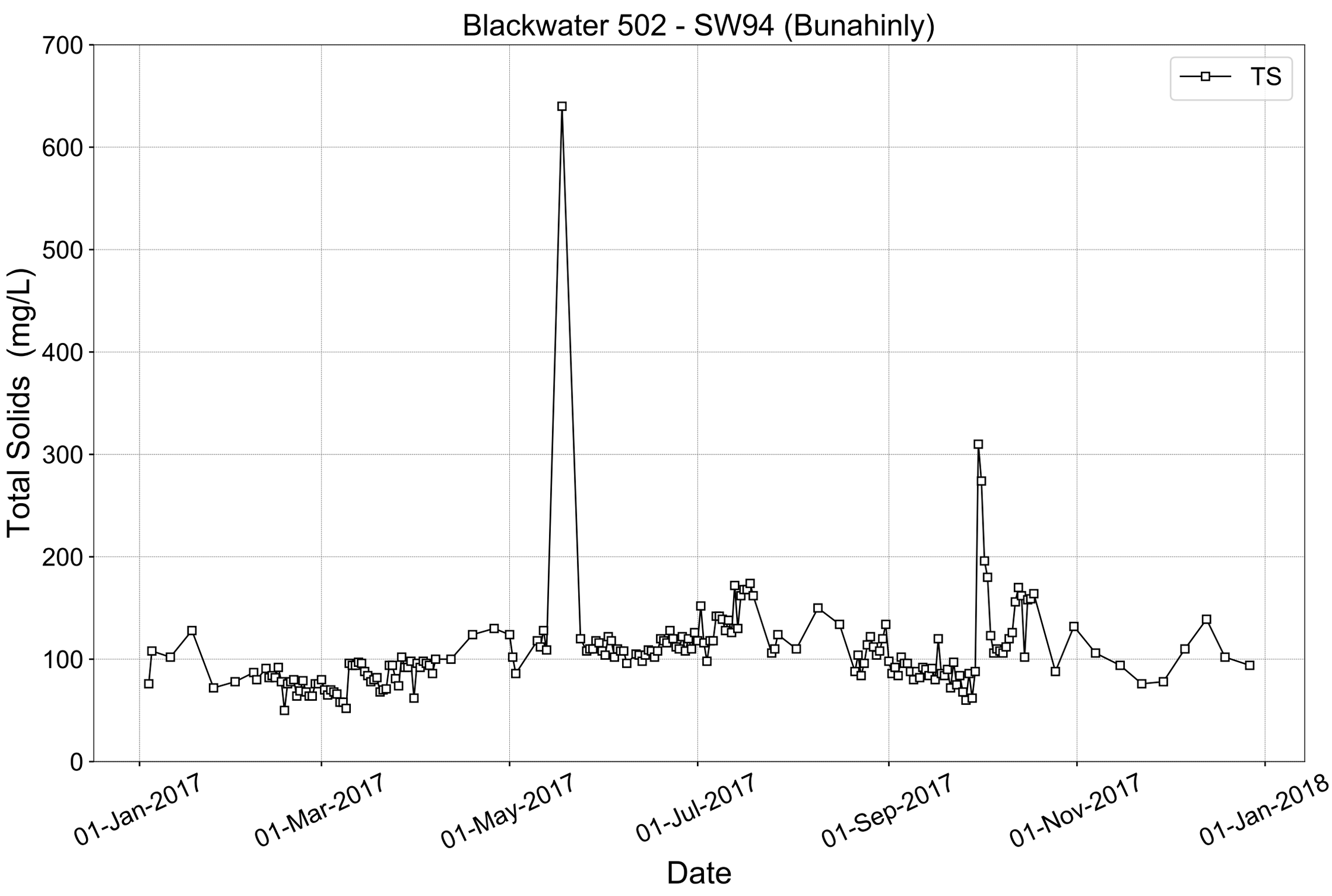

Blackwater 502 - SW94 (Bunahinly)
Colour
Colour (Pt/Co)
300
275
250
225
200
175
150
125
01-Jan-2017
01-Mar-2017
01-May-2017
01-Jul-2017
01-Sep-2017
01-Nov-2017
01-Jan-2018
Date


Blackwater 502 - SW94 (Bunahinly)
pH
Low Trig. Level
High Trig. Level
9.0
8.5
8.0
7.5
7.0
6.5
6.0
5.5
pH
01-Jan-2017
01-Mar-2017
01-May-2017
01-Jul-2017
01-Sep-2017
01-Nov-2017
01-Jan-2018
Date


Blackwater 502 - SW94 (Bunahinly)
Phosphorus
Phosphorus (mg/L)
0.200
0.175
0.150
0.125
0.100
0.075
0.050
0.025
0.000
01-Jan-2017
01-Mar-2017
01-May-2017
01-Jul-2017
01-Sep-2017
01-Nov-2017
01-Jan-2018
Date


Blackwater 502 - SW94 (Bunahinly)
PO4-P
Orthophosphate PO4 (mg/L)
0.16
0.14
0.12
0.10
0.08
0.06
0.04
0.02
01-Jan-2017
01-Mar-2017
01-May-2017
01-Jul-2017
01-Sep-2017
01-Nov-2017
01-Jan-2018
Date


Blackwater 502 - SW94 (Bunahinly)
SS
ELV 35 mg/L
Suspended Solids (mg/L)
0
5
10
15
20
25
30
35
01-Jan-2017
01-Mar-2017
01-May-2017
01-Jul-2017
01-Sep-2017
01-Nov-2017
01-Jan-2018
Date


Blackwater 502 - SW94 (Bunahinly)
TS
Total Solids (mg/L)
0
100
200
300
400
500
600
700
01-Jan-2017
01-Mar-2017
01-May-2017
01-Jul-2017
01-Sep-2017
01-Nov-2017
01-Jan-2018
Date

Yard Discharge Results
Licence: P0502-01
Works: Blackwater 2017

Month	SWE 1 COD mg/l	SWE2 COD mg/l	SWE3 COD mg/l	SWE4 COD mg/l	SWE5 COD mg/l	SWE6 COD mg/l	SWE7 COD mg/l	SWE8 COD mg/l	SWE9 COD mg/l	SWE10 COD mg/l	SWE11 COD mg/l
Jan	0	0	0	0	0	0	29	38	0	0	0
Feb	69	0	0	29	0	0	0	0	0	0	0
Mar	0	0	20	0	0	0	24	33	40	0	0
Apr	0	0	0	0	0	0	0	0	0	32	78
May	0	0	0	0	0	0	0	0	0	0	0
June	0	42	0	0	0	39	20	41	62	0	0
July	0	0	0	0	0	42	34	54	48	0	0
Aug	0	0	0	0	0	0	0	0	0	0	0
Sep	0	0	0	0	0	0	33	83	64	0	0
Oct	0	0	0	30	0	0	19	69	15	0	0
Nov	50	0	55	0	0	0	0	0	0	91	76
Dec	26	0	0	27	0	0	0	0	0	0	0

Note: 0 denotes no flow at emission point on day of sampling

Environmental Protection Agency

Guidance to completing the PRTR workbook

PRTR Returns Workbook

Version 1.1.19

REFERENCE YEAR	2017

1. FACILITY IDENTIFICATION

Parent Company Name	Bord na Mona Energy Limited
Facility Name	Bord na Móna Energy Limited (Blackwater)
PRTR Identification Number	P0502
Licence Number	P0502-01

Classes of Activity

No.	class_name
-	Refer to PRTR class activities below

Address 1	Blackwater Group
Address 2	c/o Blackwater Works
Address 3	Blackwater, Shannonbridge,
Address 4	Athlone
	Westmeath
Country	Ireland
Coordinates of Location	-7.99822 53.2758
River Basin District	IEGBNISH
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	966254.0
Production Volume Units	Tonnes
Number of Installations	21
Number of Operating Hours in Year	2232
Number of Employees	193
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# : P0502 | Facility Name : Bord na Móna Energy Limited (Blackwater) | Filename : P0502_2017.xls | Return Year : 2017 | 04/04/2018 12:22

SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

RELEASES TO AIR					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 PRTR POLLUTANTS

RELEASES TO AIR					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 C : REMAINING POLLUTANT EMISSIONS (As required in your Licence)

RELEASES TO AIR					Please enter all quantities in this section in KGs						
POLLUTANT		METHOD			QUANTITY						
			Method Used		DM01	DM02	DM03	DM04			
Pollutant No.	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	Emission Point 2	Emission Point 3	Emission Point 4	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
210	Dust	E	OTH	VDI 2119 Blatt 2/Part 2	0.0	0.0	0.0	0.0	0.09912	0.0	0.09912

* 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 Móna Energy Limited (Blackwater)

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

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			
			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 PRTR POLLUTANTS

RELEASES TO WATERS					Please enter all quantities in this section in KGs			
POLLUTANT					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 C : REMAINING POLLUTANT EMISSIONS (as required in your Licence)

RELEASES TO WATERS					Please enter all quantities in this section in KGs			
POLLUTANT					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
240	**Suspended Solids**	E	OTH	G/19 Based on ALPHA,1998,20th Edition, Method 2540D	0.0	0.0	0.0	0.0

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

4.3 RELEASES TO WASTEWATER OR SEWER

Link to previous years emissions data

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

SECTION A : PRTR POLLUTANTS

RELEASES TO LAND					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
					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		
			Method Used				
Pollutant No.	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

5. ONSITE TREATMENT & OFFSITE TRANSFERS OF WASTE

Please enter all quantities on this sheet in Tonnes

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	2305.33	wastes from mineral non-metalliferous excavation	D1	E	Volume Calculation	Onsite of generati	Bord na Mona Blackwater,P0502-01	Blackwater Bog,Shannonbridge,Co Offaly,.,Ireland		
Within the Country	01 01 02	No	1897.0	wastes from mineral non-metalliferous excavation	D1	M	Weighed	Onsite of generati	Bord na Mona Blackwater,P0502-01	Blackwater Bog,Shannonbridge,Co Offaly,.,Ireland		
Within the Country	**02 01 04**	**No**	599.6	waste plastics (except packaging)	R3	M	Weighed	Offsite in Ireland	Ryston Industeries,WFP-KE-12-0066-01	Castledermot,Kildare,.,.,Iceland		
To Other Countries	11 01 13	Yes	0.42	degreasing wastes containing dangerous substances	R11	C	Volume Calculation	Abroad	Safety Kleen Ltd,WP 99-01	Tallaght,Dublin,.,.,Ireland	Solvent Recovery Managemant,PP33345F,Wheeland Road,Knottingly,West Yorks,WF11 8DZ,United Kingdom	Wheeland Road,Knottingly,West Yorks,WF11 8DZ,United Kingdom
To Other Countries	13 02 05	Yes	17.7	mineral-based non-chlorinated engine, gear and lubricating oils	R1	C	Volume Calculation	Abroad	Enva Ireland Ltd,WP 184-01	Clonminam Ind Est,Portlaoise,Co Laois,.,Ireland	R.D. Recycling,Reg no 51727/1/KD,Houthalen,.,.,., Germany	Houthalen,.,.,.,Germany
To Other Countries	15 02 02	Yes	0.08	absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by dangerous substances	R1	M	Weighed	Abroad	Enva Ireland Ltd,WP 184-01	Clonminam Ind Est,Portlaoise,Co Laois,.,Ireland	Lindenschmidt,E97095037,Kreuztal,.,.,.,Germany	Kreuztal,.,.,.,Germany
Within the Country	13 05 07	Yes	0.0	oily water from oil/water separators	R1	C	Volume Calculation	Offsite in Ireland	Enva Ireland Ltd,WP 184-01	Clonminam Ind Est,Portlaoise,Co Laois,.,Ireland	Enva Ireland Ltd,184-1,Clonminan Ind Est,.,.,Portlaoise,Ireland	Clonminan Ind Est,.,.,Portlaoise,Ireland
Within the Country	15 01 03	No	10.16	wooden packaging	R1	M	Weighed	Offsite in Ireland	AES Ltd,WP-OY-08-601-01	Cappincur,Tullamore,Co Offaly,.,Ireland		
To Other Countries	16 01 07	Yes	0.77	oil filters	R4	C	Volume Calculation	Abroad	Enva Ireland Ltd,WP 184-01	Clonminam Ind Est,Portlaoise,Co Laois,.,Ireland	R.D. Recycling,Reg no 51727/1/KD,Houthalen,.,.,., Germany	Houthalen,.,.,.,Germany
To Other Countries	16 06 01	Yes	1.61	lead batteries	R6	M	Weighed	Abroad	Enva Ireland Ltd,WP 184-01	Clonminam Ind Est,Portlaoise,Co Laois,.,Ireland	Campine Recycling,Reg no MLAV/05-173/GVDA,Beerse,.,.,.,Belgium	Beerse,.,.,.,Belgium
Within the Country	17 04 07	No	169.96	mixed metals	R4	M	Weighed	Offsite in Ireland	AES Ltd,WP-OY-08-601-01	Cappincur,Tullamore,Co Offaly,.,Ireland		
Within the Country	15 01 01	No	3.48	paper and cardboard packaging	R3	M	Weighed	Offsite in Ireland	Security In Shredding Ltd,WCP-KK-08-0502-01	Neanagh,Co Tipperary,.,.,Ireland		
Within the Country	20 01 35	Yes	0.52	discarded electrical and electronic equipment other than those mentioned in 20 01 21 and and 20 01 23 containing hazardous components	R4	M	Weighed	Offsite in Ireland	KMK Metals,WO113-04 WCPO-08-10607-02	Tullamore,.,.,.,Ireland	KMK Metals,WO114-04 WCPO-08-10607-02,Tullamore,.,.,.,Ireland	Tullamore,.,.,.,Ireland
Within the Country	20 03 01	No	33.21	mixed municipal waste	D1	M	Weighed	Offsite in Ireland	AES Ltd,WP-OY-08-601-01	Cappincur,Tullamore,Co Offaly,.,Ireland		
Within the Country	20 03 01	No	15.63	mixed municipal waste	D1	E	Volume Calculation	Offsite in Ireland	Barna Waste Ltd,WCP-08-0604-01	Headford Road,Galway,Co Galway,.,Ireland		
Within the Country	20 03 01	No	34.95	mixed municipal waste	D1	M	Volume Calculation	Offsite in Ireland	AES Ltd,WP-OY-08-601-01	Cappincur,Tullamore,Co Offaly,.,Ireland		
Within the Country	16 06 04	No	0.63	alkaline batteries (except 16 06 03)	R4	M	Weighed	Offsite in Ireland	KMK Metals,WO113-04 WCPO-08-10607-02	Tullamore,.,.,.,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	2017
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, ridiging 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.

E. Mulhall	8-3-18
Signature Group/Facility manager (or nominated, suitably qualified and experienced deputy)	Date

AIR-summary template	Lic No:	P0503-01	Year	2017

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	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	Reported to the Agency ref INCI012523.
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

AIR-summary template Lic No: P0503-01 Year 2017

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 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	16828	150	0	0	Dust monitioring 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	35644	552	0	1	Reported to Agency on 20/07/2017. INCI012523
DM-05	Total Particulates	350	140 DAYS	Daily average < ELV	mg/m2/day	24892	315	0	0	
DM-06	Total Particulates	350	140 DAYS	Daily average < ELV	mg/m2/day	26376	289	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

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 gases(kg)	Solvents lost in water (kg)	Collected waste solvent (kg)	Fugitive Organic Solvent (kg)	Solvent released in other ways e.g. by-passes (kg)	Solvents destroyed onsite through physical reaction e.g.	Total emission of Solvent to air (kg)
							Total	

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER) Lic No: P0503-01 Year 2017

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

					Additional information
3	Was there any result in breach of licence requirements? If yes please provide brief details in the comment section of Table W3 below			No	
4	Was all monitoring carried out in accordance with EPA guidance and checklists for Quality of Aqueous Monitoring Data Reported to the EPA? If no please detail what areas require improvement in additional information box	External /Internal Lab Quality checklist	Assessment of results checklist	Yes	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 2017

Continuous monitoring

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

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)		One bund requiring an integrity test in 2017 passed. One bund was decommissioned following a 2016 retest failure.
1		Yes	
2	Please provide integrity testing frequency period	Other (2 Yearly)	
3	Does the site maintain a register of bunds, underground pipelines (including stormwater and foul), Tanks, sumps and containers? (containers refers to "Chemstore" type units and mobile bunds)	Yes	
4	How many bunds are on site?	4	
5	How many of these bunds have been tested within the required test schedule?	4	Two bunds due for testing in 2018.
6	How many mobile bunds are on site?	13	
7	Are the mobile bunds included in the bund test schedule?	No	
8	How many of these mobile bunds have been tested within the required test schedule?	0	
9	How many sumps on site are included in the integrity test schedule?	0	
10	How many of these sumps are integrity tested within the test schedule?	0	
	Please list any sump integrity failures in table B1		
11	Do all sumps and chambers have high level liquid alarms?	SELECT	
12	If yes to Q11 are these failsafe systems included in a maintenance and testing programme?	SELECT	
13	Is the Fire Water Retention Pond included in your integrity test programme?	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
Ballycon Main Bund 503-37-09	reinforced concrete		Gas Oil	346500 litres 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

			Commentary
	Has integrity testing been carried out in accordance with licence requirements and are all structures tested in line with BS8007/EPA Guidance? bunding and storage guidelines	Yes	
16	Are channels/transfer systems to remote containment systems tested?	No	
17	Are channels/transfer systems compliant in both integrity and available volume?	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 withing the integrity test period as specified**	Yes	No underground pipe lines that require testing
2	Please provide integrity testing frequency period	Other (Every 3 Years)	
	*please note integrity testing means water tightness testing for process and foul pipelines (as required under your licence)		

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

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

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

Groundwater/Soil monitoring template	Lic No:	P0503-01	Year	2017

			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 Report (link in cell G8) and submit separately through ALDER as a licensee return AND answer questions 5-12 below. Groundwater monitoring template	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 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)

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

Table 3: Soil results

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

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

Environmental Liabilities template	Lic No:	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

	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 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 segrated 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 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 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

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 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	2017

				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	SEAI - Large Industry Energy Network (LIEN)	Yes	The site attained accrediation 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^3yr):	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

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

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

Complaints and Incidents summary template Lic No: P0503-01 Year 2017

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	There were 10 incidents of which 6 related to Trigger levels, 3 related to fire and 1 was a dust emission limit exceedence.

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

Table 2 Incidents summary

Date of occurrence	Incident nature	Location of occurrence	Incident category*please refer to guidance	Receptor	Cause of incident	Other cause(please specify)	Activity in progress at time of incident	Communication	Occurrence	Corrective action<20 words	Preventative action <20 words	Resolution status	Resolution date	Likelihood of reoccurence
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
SECTION A-PRTR ON SITE WASTE TREATMENT AND WASTE TRANSFERS TAB- TO BE COMPLETED BY ALL IPPC AND WASTE FACILITIES		PRTR facility logon	dropdown list click to see options	

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

			Additional Information
1	Were any wastes accepted onto your site for recovery or disposal or treatment prior to recovery or disposal within the boundaries of your facility ?; (waste generated within your boundaries is to be captured through PRTR reporting) If yes please enter details in table 1 below	SELECT	
2	Did your site have any rejected consignments of waste in the current reporting year? If yes please give a brief explanation in the additional information	SELECT	
3	Was waste accepted onto your site that was generated outside the Republic of Ireland? If yes please state the quantity in tonnes in additional information	SELECT	

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

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

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

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

SECTION D-TO BE COMPLETED BY LANDFILL SITES ONLY

Table 2 Waste type and tonnage-landfill only

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

Table 3 General information-Landfill only

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

WASTE SUMMARY Lic No: P0503-01 Year 2017

Table 4 Environmental monitoring-landfill only

Landfill Manual-Monitoring Standards

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

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

Table 5 Capping-Landfill only

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

*please note this includes daily cover area

Table 6 Leachate-Landfill only

9	Is leachate from your site treated in a Waste Water Treatment Plant?	SELECT
10	Is leachate released to surface water? If yes please complete leachate mass load information below	SELECT

Volume of leachate in reporting year(m3)	Leachate (BOD) mass load (kg/annum)	Leachate (COD) mass load (kg/annum)	Leachate (NH4) mass load (kg/annum)	Leachate (Chloride) mass load kg/annum	Leachate treatment on-site	Specify type of leachate treatment	Comments

Please ensure that all information reported in the landfill gas section is consistent with the Landfill Gas Survey submitted in conjunction with PRTR returns

Table 7 Landfill Gas-Landfill only

Gas Captured&Treated by LFG System m3	Power generated (MW / KWh)	Used on-site or to national grid	Was surface emissions monitoring performed during the reporting year?	Comments
			SELECT	

Allen
Decommissioning and Rehabilitation
AER Overview 2017.

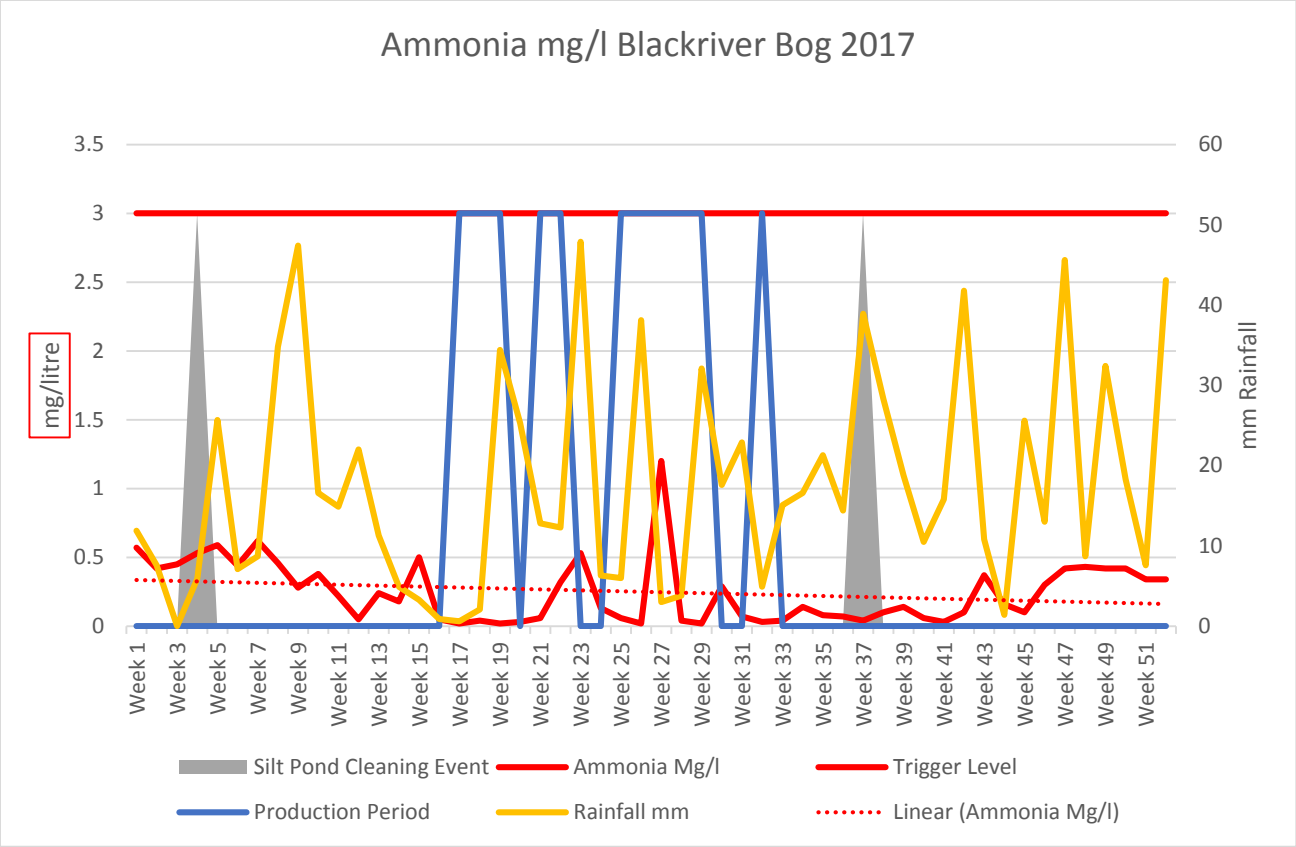
Within the Allen licensed area (P0503-01), there were no entire bog units available for rehabilitation in 2017.
Active rehabilitation work was carried out in one area with further hydrological management maintenance work carried out in Lullymore as part of the long term rehabilitation of this site.
A 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 in 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.

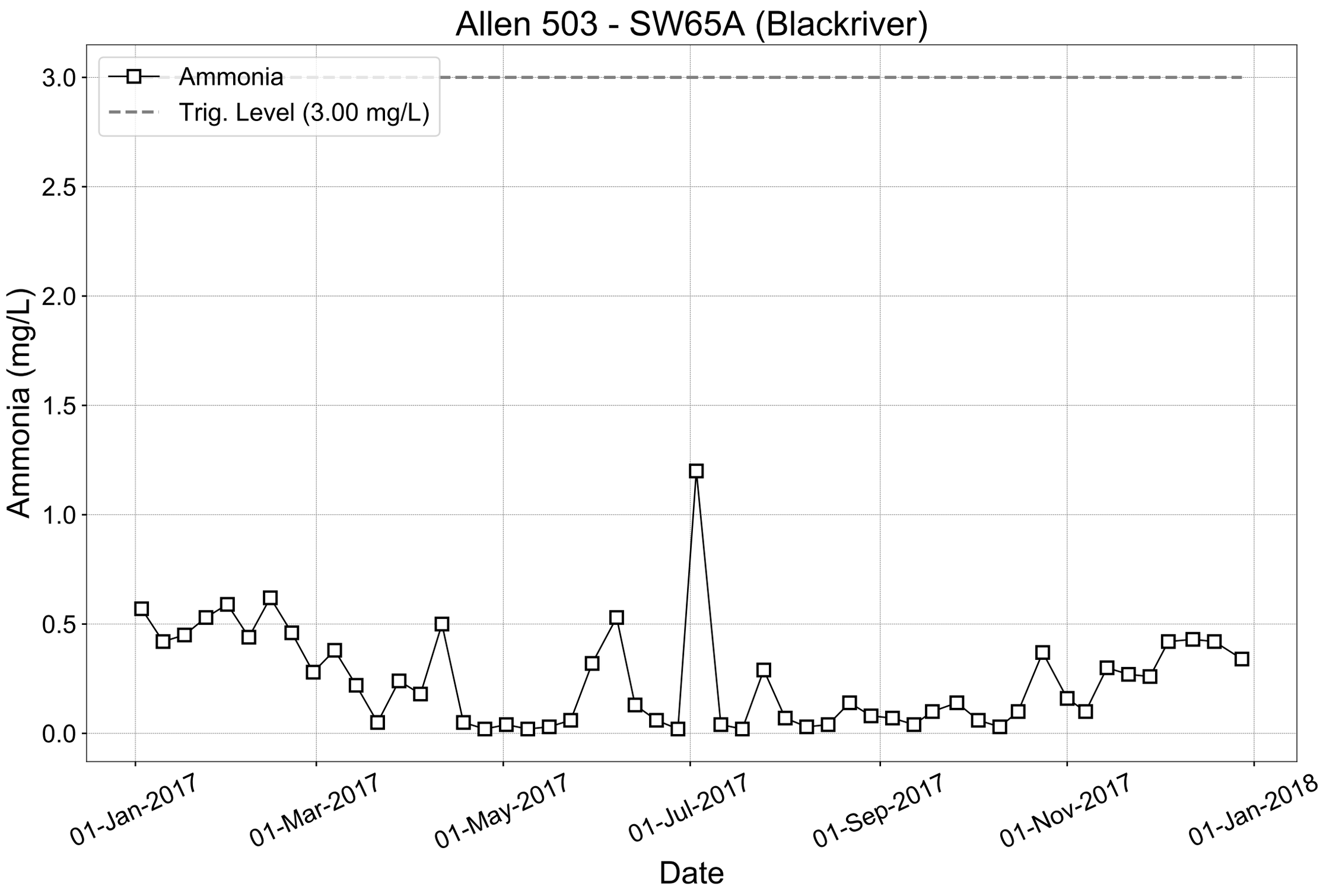
Bord na Mona Allen P0503-01

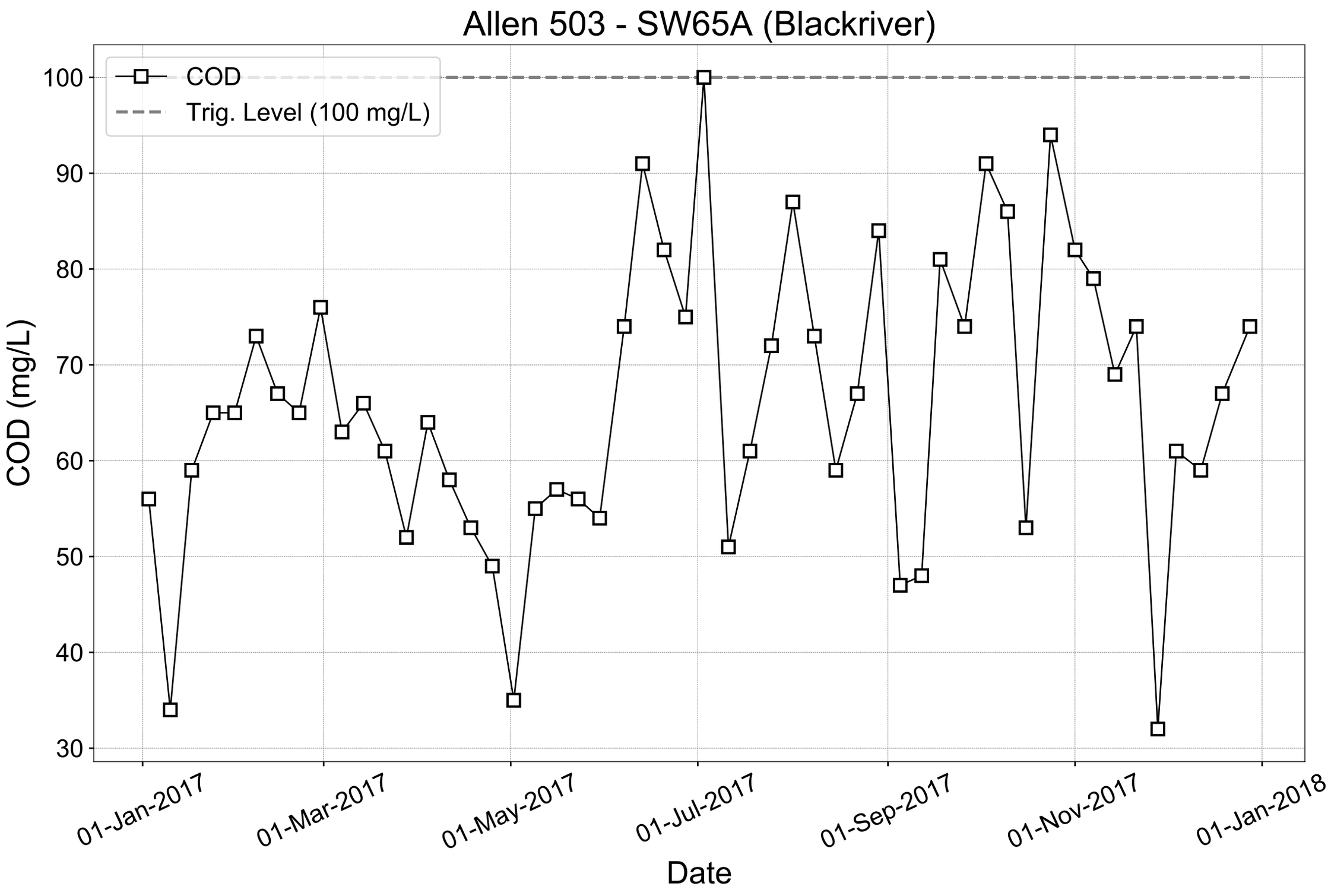
Quarterly Grab 2017

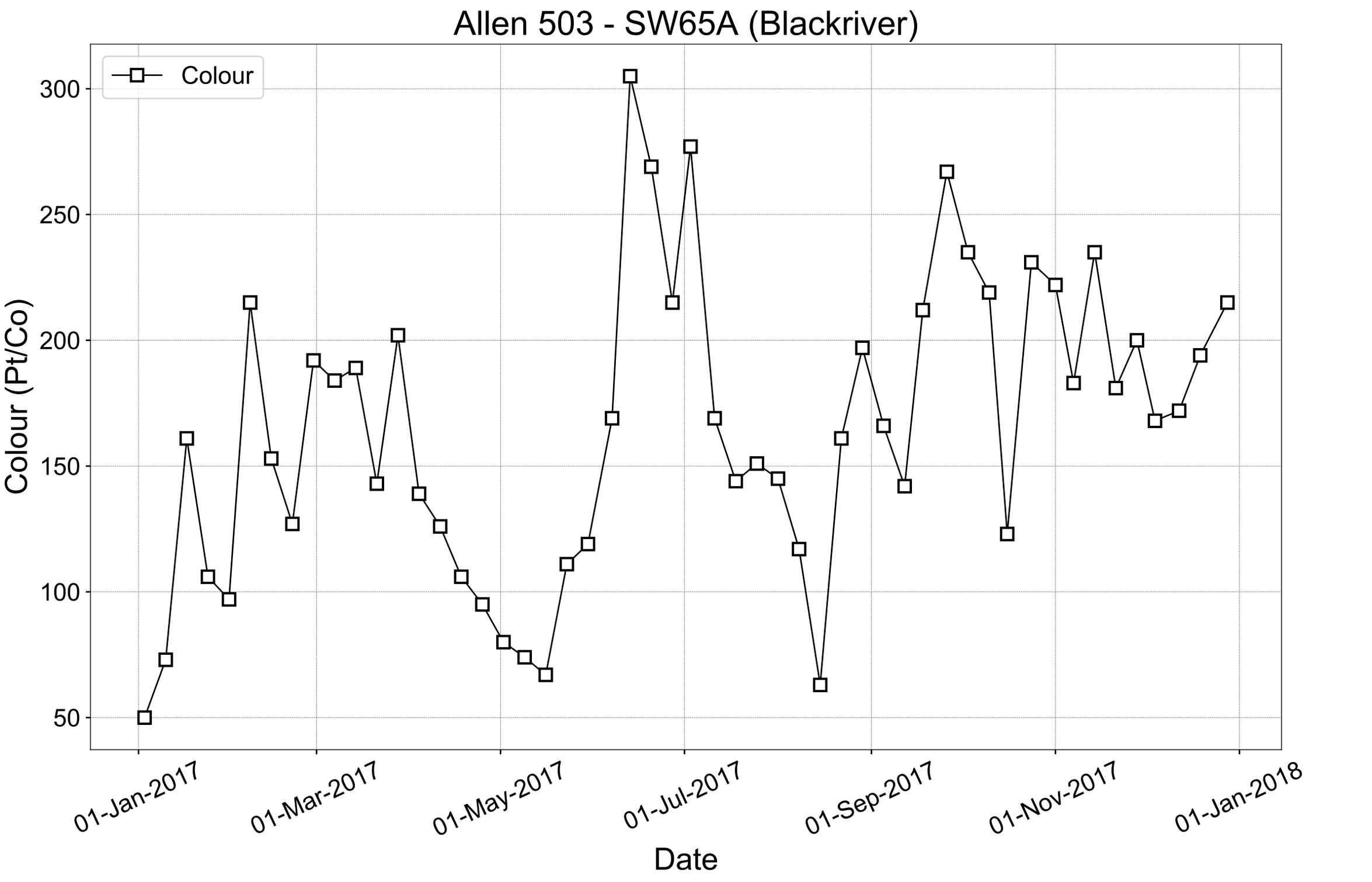
X	Y	Bog	SW	Monitoring	Status	Drainage	Upgrade Status	RBD	Receiving Water Quality	Sampled Date	pH	SS	TS	Ammonia	TP	COD	Colour
250869.07	219763.05	Ballykeane	SW-14	Q1 17	Operational	Gravity	Complete	SERBD	Moderate	02/03/2017	7.8	8	255	1	0.05	62	147
249524.55	220230.29	Ballykeane	SW-16	Q1 17	Operational	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

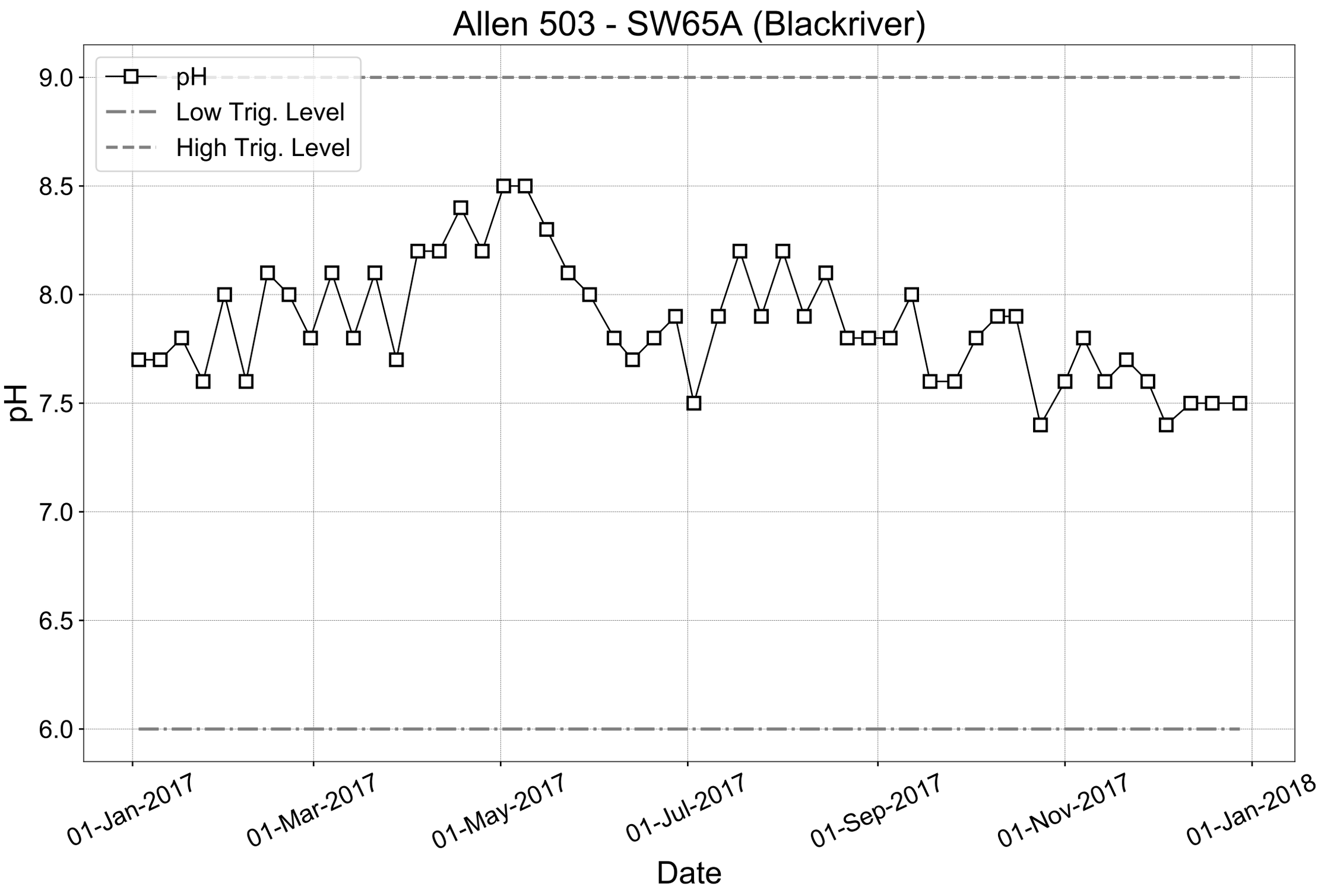


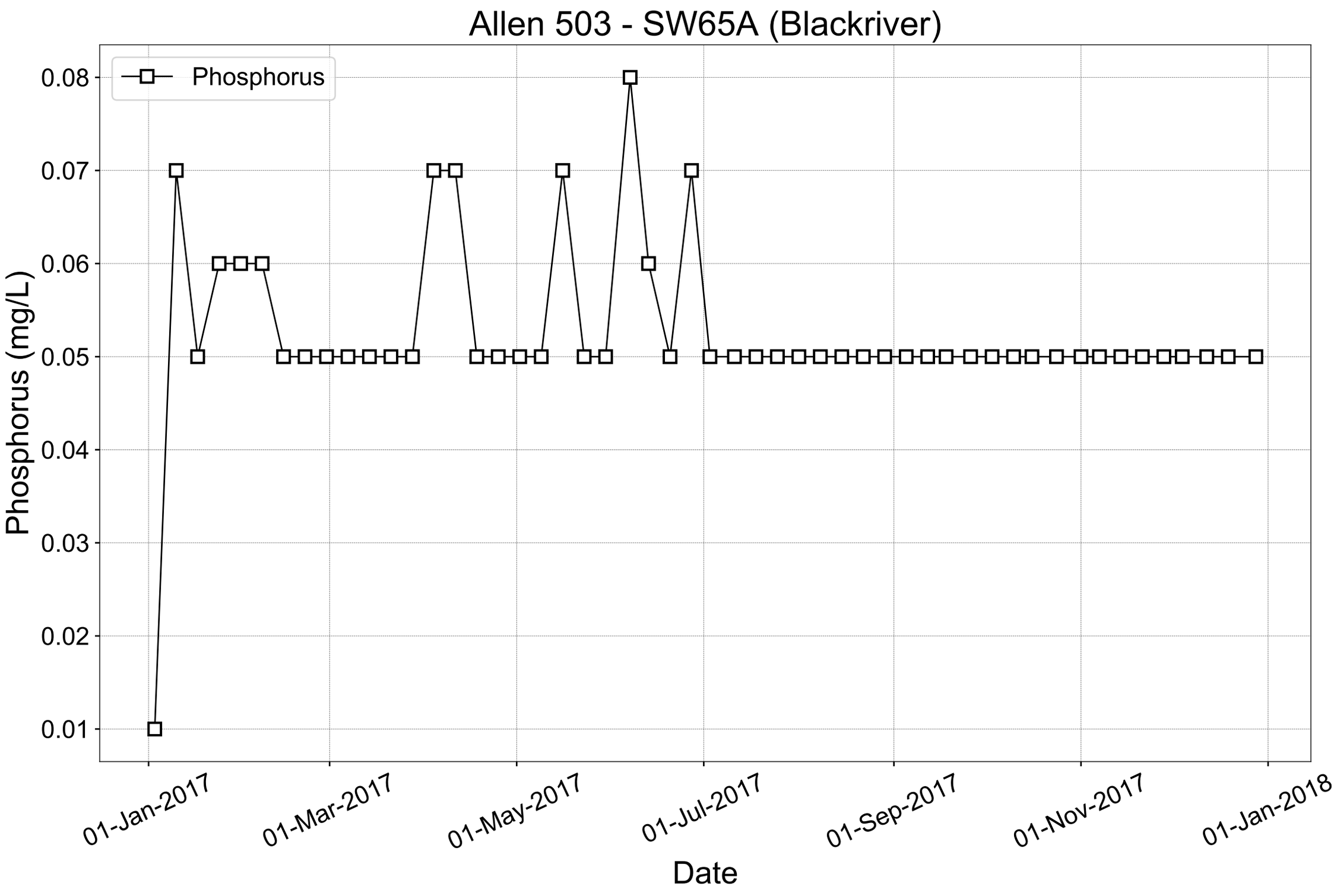
Blackriver bog is an active fuel peat production bog with the composite sampler located here in January 2017. The composite sampler takes a flow proportional composite sample over a 24 hour period. The sampler had 0% downtime during the period and returned 52 weekly ammonia results during the period 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.

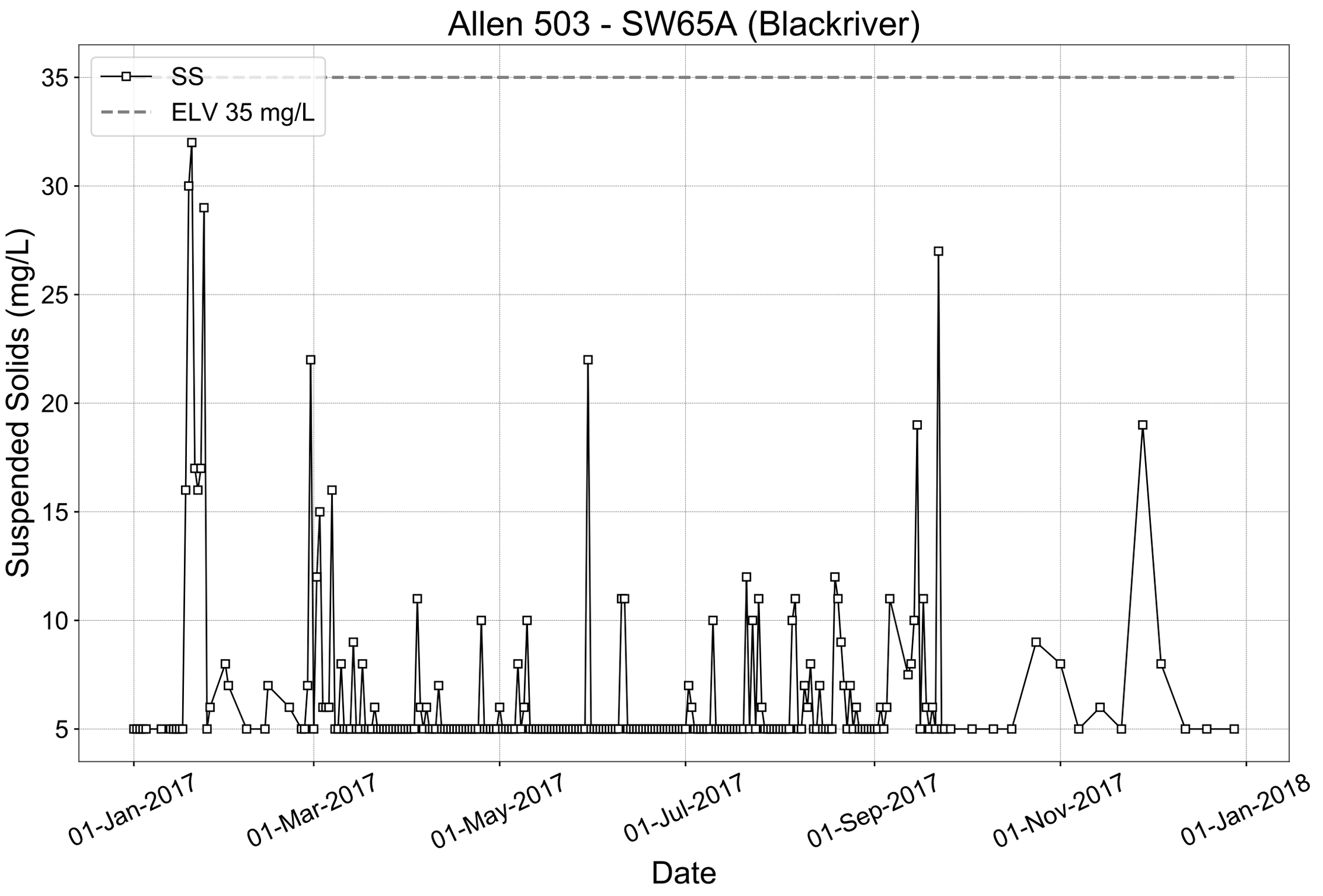

Allen 503 - SW65A (Blackriver)
Ammonia
Trig. Level (3.00 mg/L)
Ammonia (mg/L)
3.0
2.5
2.0
1.5
1.0
0.5
0.0
01-Jan-2017
01-Mar-2017
01-May-2017
01-Jul-2017
01-Sep-2017
01-Nov-2017
01-Jan-2018
Date

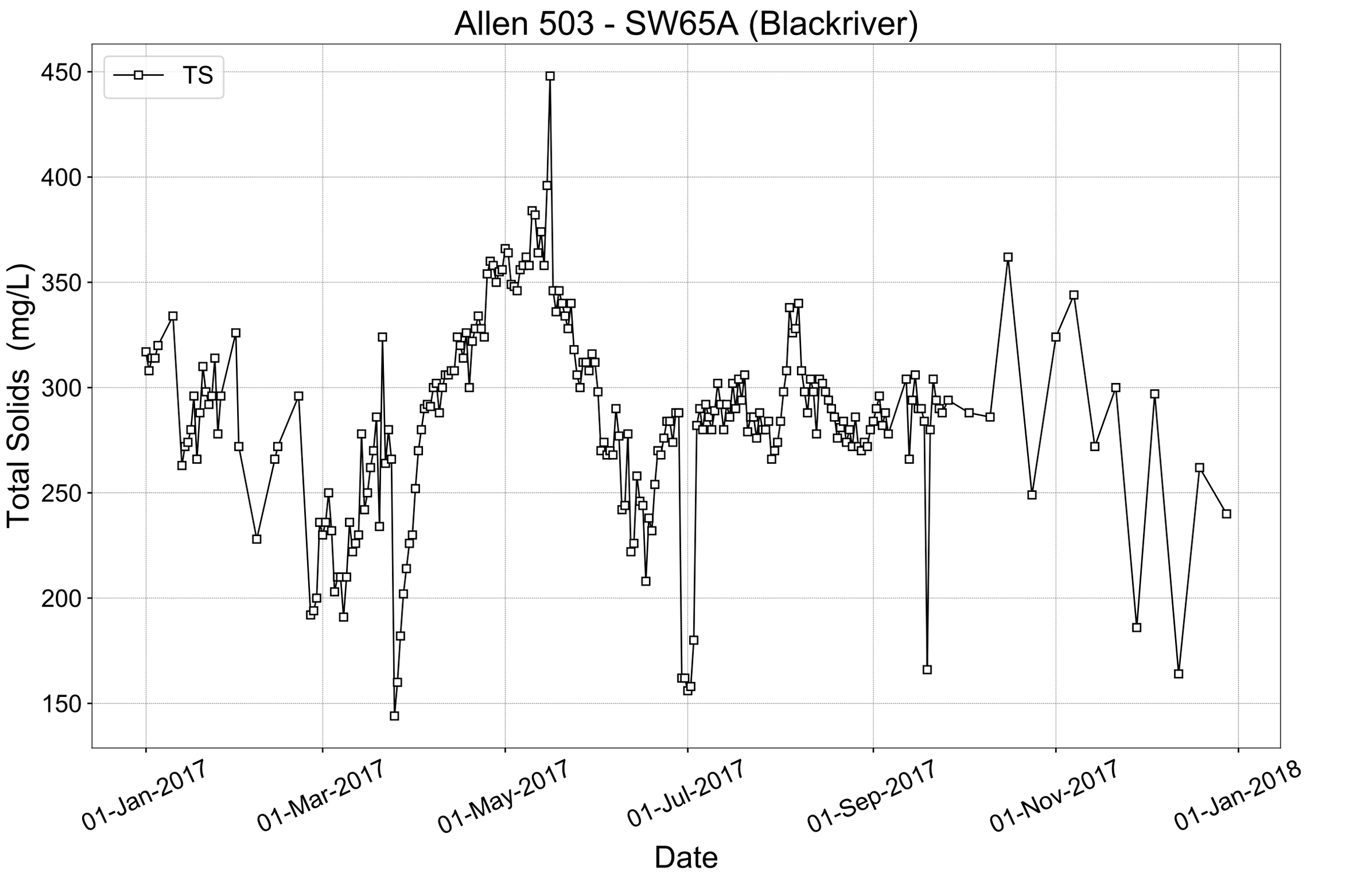

Allen 503 - SW65A (Blackriver)
COD
Trig. Level (100 mg/L)
COD (mg/L)
100
90
80
70
60
50
40
30
01-Jan-2017
01-Mar-2017
01-May-2017
01-Jul-2017
01-Sep-2017
01-Nov-2017
01-Jan-2018
Date


Allen 503 - SW65A (Blackriver)
Colour
Colour (Pt/Co)
300
250
200
150
100
50
01-Jan-2017
01-Mar-2017
01-May-2017
01-Jul-2017
01-Sep-2017
01-Nov-2017
01-Jan-2018
Date


Allen 503 - SW65A (Blackriver)
pH
Low Trig. Level
High Trig. Level
9.0
8.5
8.0
7.5
7.0
6.5
6.0
pH
01-Jan-2017
01-Mar-2017
01-May-2017
01-Jul-2017
01-Sep-2017
01-Nov-2017
01-Jan-2018
Date


Allen 503 - SW65A (Blackriver)
Phosphorus
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
Phosphorus (mg/L)
01-Jan-2017
01-Mar-2017
01-May-2017
01-Jul-2017
01-Sep-2017
01-Nov-2017
01-Jan-2018
Date


Allen 503 - SW65A (Blackriver)
SS
ELV 35 mg/L
Suspended Solids (mg/L)
35
30
25
20
15
10
5
01-Jan-2017
01-Mar-2017
01-May-2017
01-Jul-2017
01-Sep-2017
01-Nov-2017
01-Jan-2018
Date


Allen 503 - SW65A (Blackriver)
TS
Total Solids (mg/L)
450
400
350
300
250
200
150
01-Jan-2017
01-Mar-2017
01-May-2017
01-Jul-2017
01-Sep-2017
01-Nov-2017
01-Jan-2018
Date

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

Guidance to completing the PRTR workbook

PRTR Returns Workbook

Version 1.1.19

REFERENCE YEAR	2017

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

SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

RELEASES TO AIR					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 PRTR POLLUTANTS

RELEASES TO AIR					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 C : REMAINING POLLUTANT EMISSIONS (As required in your Licence)

RELEASES TO AIR					Please enter all quantities in this section in KGs						
POLLUTANT		METHOD			QUANTITY						
			Method Used		DM02	DM03	DM05	DM06			
Pollutant No.	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	Emission Point 2	Emission Point 3	Emission Point 4	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
210	**Dust**	E	OTH	VDI 2119 Blatt 2/Part 2	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**	**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

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			
			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 PRTR POLLUTANTS

RELEASES TO WATERS					Please enter all quantities in this section in KGs			
POLLUTANT					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 C : REMAINING POLLUTANT EMISSIONS (as required in your Licence)

RELEASES TO WATERS					Please enter all quantities in this section in KGs			
POLLUTANT					QUANTITY			
			Method Used		SW65A			
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	0.0	0.0	0.0	0.0

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

4.3 RELEASES TO WASTEWATER OR SEWER

Link to previous years emissions data

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_2017.xls | Return Year : 2017 | 08/03/2018 10:34

SECTION A : PRTR POLLUTANTS

RELEASES TO LAND					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
					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		
			Method Used				
Pollutant No.	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

5. ONSITE TREATMENT & OFFSITE TRANSFERS OF WASTE

Please enter all quantities on this sheet in Tonnes

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	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,Lindenschmidt ,Kreuztal,.,.,Germany	Lindenschmidt ,Kreuztal,.,.,Germany
Within the Country	15 01 03	No	0.0	wooden packaging	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	absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by 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,Lindenschmidt ,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 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	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	2017
Licence Register Number	P0504-01
Name of site	Bord na Mona Mountdillon
Site Location	Mountdillon, Lanesboro, Co Longford
NACE Code	0892
Class/Classes of Activity	1.4
National Grid Reference (6E, 6 N)	E204720. N268880

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 624,826 tonnes which was 77.4% of target. This impacted on headland peat harvesting. Infrastructurally, there was bog development works at Coolcraff bog in Cuil na Gun. Works included ditching and levelling on an area of approximately 180 hectares and the construction of appropriately sized silt settlement ponds. There was 6 environmental complaints received during the reporting period, this was reported to the Agency through ALDER. In relation to silt pond cleaning, 100% of ponds received two cleanings with some ponds receiving three. The site had four trigger level exceedences for COD, three in relation to quarterly grab results and one in relation to the automatic composite sampler. There was two trigger level exceedences for Ammonia on the automatic sampler.In relation to dust monitoring there was one exceedance of the Licence limit. 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

Signature Group/Facility manager	Date
Eoin Hynes	6/3/2018

AIR-summary template	Lic No:	P0504-01	Year	2017

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	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: P0504-01 Year 2017

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-01	Total Particulates	350mg/m2/day	84	Daily average < ELV	mg/m2/day	63281	120	0	0	
DM-02	Total Particulates	350mg/m2/day	84	Daily average < ELV	mg/m2/day	13817	367	0	1	Reported to EPA
DM-05	Total Particulates	350mg/m2/day	84	Daily average < ELV	mg/m2/day	10359	195	0	0	
DM-06	Total Particulates	350mg/m2/day	84	Daily average < ELV	mg/m2/day	11130	224	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

Solvent use and management on site

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

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

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

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

Table A5: Solvent Mass Balance summary

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

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER) Lic No: P0504-01 Year 2017

			Additional information
1	Does your site have licensed emissions direct to surface water or direct to sewer? If yes please complete table W2 and W3 below for the current reporting year and answer further questions. If **you do not have** licenced emissions you only need to complete table W1 and or W2 for storm water analysis and visual inspections	Yes	The continuous monitoring sampler was relocated during the reporting period. The sampler also experienced technical difficulties at both sites 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.
2	Was it a requirement of your licence to carry out visual inspections on any surface water discharges or watercourses on or near your site? If yes please complete table W2 below summarising only any evidence of contamination noted during visual inspections	Yes	Monthly COD analysis of yard runoff is attached in a separate document.

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)

					Additional information
3	Was there any result in breach of licence requirements? If yes please provide brief details in the comment section of Table W3 below			Yes	
4	Was all monitoring carried out in accordance with EPA guidance and checklists for Quality of Aqueous Monitoring Data Reported to the EPA? If no please detail what areas require improvement in additional information box	External /Internal Lab Quality checklist	Assessment of results checklist	Yes	Surface water monitoring was carried out on a quarterly basis. The results of which are attached. Monthly COD yard runoff results are also attached.

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

Emission reference no:	Emission released to	Parameter/ SubstanceNote 1	Type of sample	Frequency of monitoring	Averaging period	ELV or trigger values in licence or any revision thereof[Note 2]	Licence Compliance criteria	Measured value	Unit of measurement	Compliant with licence	Method of analysis	Procedural reference source	Procedural reference standard number	Annual mass load (kg)	Comments

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

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

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER) Lic No: P0504-01 Year 2017

Continuous monitoring

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

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

6	Did continuous monitoring equipment experience downtime? **If yes please record downtime in table W4 below**	Yes	145 days in 365 due to technical difficulties which are currently being addressed.
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. The samplers were also sent away for major overhaul and component replacement.
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

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: P0504-01 Year 2017

Bund testing

dropdown menu click to see options

			Additional information
1	Are you required by your licence to undertake integrity testing on bunds and containment structures ? if yes please fill out table B1 below listing all **new bunds and containment structures** on site, in addition to **all bunds which failed** the integrity test-**all bunding structures which failed including mobile bunds must be listed in the table below, please include all bunds outside the licenced testing period** (mobile bunds and chemstore included)	Yes	All Bunds were tested in 2017 and passed the integrity test.
2	Please provide integrity testing frequency period	Other (2 Yearly)	
3	Does the site maintain a register of bunds, underground pipelines (including stormwater and foul), Tanks, sumps and containers? (containers refers to "Chemstore" type units and mobile bunds)	Yes	
4	How many bunds are on site?	5	
5	How many of these bunds have been tested within the required test schedule?	5	All Bunds were tested in 2017
6	How many mobile bunds are on site?	7	
7	Are the mobile bunds included in the bund test schedule?	No	
8	How many of these mobile bunds have been tested within the required test schedule?	0	
9	How many sumps on site are included in the integrity test schedule?	0	
10	How many of these sumps are integrity tested within the test schedule?	0	
	Please list any sump integrity failures in table B1		
11	Do all sumps and chambers have high level liquid alarms?	N/A	
12	If yes to Q11 are these failsafe systems included in a maintenance and testing programme?	N/A	
13	Is the Fire Water Retention Pond included in your integrity test programme?	N/A	

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

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

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

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

Pipeline/underground structure testing

			Petrol tank Tested 19 March 2016 and Passed. It is scheduled for retest in 2018.
1	Are you required by your licence to undertake integrity testing* on underground structures e.g. pipelines or sumps etc ? if yes please fill out table 2 below listing all underground structures and pipelines on site **which failed the integrity test and all which have not been tested withing the integrity test period as specified**	Yes	
2	Please provide integrity testing frequency period	Other (2 Yearly)	

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

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

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

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

Groundwater/Soil monitoring template	Lic No:	P0504-01	Year	2017

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

Groundwater/Soil monitoring template Lic No: P0504-01 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)

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

Table 3: Soil results

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

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

Environmental Liabilities template	Lic No:	P0504-01	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: P0504-01 Year 2017

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	**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.** There are currently 13 Hydraulic Harrows in operation in Mountdillon. **Headland Peat Collection**. Continue with the collection of headland peat, particularly at dust sensitive locations.	90	In total 103 Personnel received training in 2017. There was no headland peat collected in the 2017 season due to a poor production season which resulted in a reduction in the availibility of headland peat. Thirteen hydraulic harrows were deployed during the 2017 production season.	Individual	Improved Environmental Management Practices
Waste reduction/Raw material usage efficiency	Waste Streamlining.It is planned to continue with and where possible improve the current waste management service provided by AES Ltd	100	Quarterly waste reports are returned for records/filing and waste streams are segrated on site to maximise recycling potential.	Section Head	Improved Environmental Management Practices
Reduction of emissions to Water	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.	90	In total 103 Personnel received training in 2017. There was no headland peat collected in the 2017 season due to a poor production season which resulted in a reduction in the availibility of headland peat. Thirteen hydraulic harrows were deployed during the 2017 production season.	Individual	Improved Environmental Management Practices
Materials Handling/Storage/Bunding	Increased bund capacity will be provided where required. Bund integrity testing will be carried out where required.	80	There were no additional bund requirements. Bund integrity testing will be carried out in 2017	Individual	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 433.88 tonnes were sent off site for recycling. Procurement also exploring the possibility of securing further recyclers.	Individual	Improved Environmental Management Practices
Energy Efficiency/Utility conservation	Continue with the implementation process of the Energy Standard 50001.	100	The site successfully retained the energy standard 50001. Energy management is ongoing at the site	Section Head	Improved Environmental Management Practices
Groundwater protection	It is proposed to upgrade existing septic tank systems where required.	90	Septic tanks are continually being assessed and upgrade works scheduled where required.	Section Head	Improved Environmental Management Practices

Noise monitoring summary report	Lic No:	P0504-01	Year	2017

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 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:	P0504-01	Year	2017

				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	SEAI - Large Industry Energy Network (LIEN)	Yes	The site retained accrediation 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		No	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)	16754	11762		
Total Energy Generated (MWHrs)				
Total Renewable Energy Generated (MWHrs)				
Electricity Consumption (MWHrs)	2082.17	1712.11		
Fossil Fuels Consumption:				
Heavy Fuel Oil (m3)				
Light Fuel Oil (m3)	1443.98	1157.59		-24.74%
Natural gas (m3)				
Coal/Solid fuel (metric tonnes)				
Peat (metric tonnes)				
Renewable Biomass				
Renewable energy generated on site				

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

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

Table R2 Water usage on site

					Water Emissions	Water Consumption	
Water use	Water extracted Previous year m3/yr.	Water extracted Current year m3/yr.	Production +/- % compared to previous reporting year**	Energy Consumption +/- % vs overall site production*	Volume Discharged back to environment(m^3yr):	Volume used i.e not discharged to environment e.g. released as steam m3/yr	Unaccounted for Water:
Groundwater							
Surface water							
Public supply							
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)	24.42			24.42	
Non-Hazardous (Tonnes)	4006.63	20.31		528.26	3458.06

Resource Usage/Energy efficiency summary Lic No: P0504-01 Year 2017

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: P0504-01 Year 2017

Complaints		
		Additional information
Have you received any environmental complaints in the current reporting year? If yes please complete summary details of complaints received on site in table 1 below	Yes	All reported to the Agency

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
28/01/2017	Air		Complaint about smoke from bog fire affecting house	BNM personell extinguished fire	Complete	29/01/2017	Reported on Alder on 01/02/2017 Ref. No. LR027193
02/05/2017	Air		Dust affecting house	Both parties have agreed a resoulution	Complete	01/06/2017	Reported on Alder on 05/05/2017 Ref. No. LR028790
06/05/2017	Air		Dust affecting house	All work and machinery stopped immeadiately	Complete	06/05/2017	Reported on Alder on 19/05/2017 Ref. No. LR028985
30/04/2017	Air		Dust affecting house	Tanker of water used to dampen down passway	Ongoing		Reported on Alder on 05/05/2017 Ref. No. LR028792
10/05/2017	Air		Dust affecting house	All work and machinery stopped immeadiately	Ongoing		Reported on Alder on 19/05/2017 Ref. No. LR028983
10/05/2017	Water		Report of silt in river	On inspection no silt was found	Complete	24/05/2017	Reported on Alder on 24/05/2017 Ref. No. LR029038

Total complaints open at start of reporting year	2
Total new complaints received during reporting year	4
Total complaints closed during reporting year	4
Balance of complaints end of reporting year	2

Complaints and Incidents summary template Lic No: P0504-01 Year 2017

Incidents		
		Additional information
Have any incidents occurred on site in the current reporting year? Please list all incidents for current reporting year in Table 2 below	Yes	All reported to the Agency

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

Table 2 Incidents summary

Date of occurrence	Incident nature	Location of occurrence	Incident category*please refer to guidance	Receptor	Cause of incident	Other cause(please specify)	Activity in progress at time of incident	Communication	Occurrence	Corrective action<20 words	Preventative action <20 words	Resolution status	Resolution date	Likelihood of reoccurence
14/02/2017	Trigger level reached	SW62 Clooneeny	1. Minor	Water	Not related to site activities		Normal activities	EPA Ref. No. INCI011736	New	Inspected internal outfall on 02/03/2017	NA	Complete	02/03/2017	Medium
04/04/2017	Trigger level reached	SW77A Corlea	1. Minor	Water	Not related to site activities		Normal activities	EPA Ref No. INCI012052	New	Inspected internal outfall on 07/04/2017	NA	Complete	07/04/2017	Medium
10/07/2017	Breach of ELV	Cloonshannagh Bog	1. Minor	Air	Adverse weather		Normal activities	EPA RefNo. Incl012790	New	All personell spoken to regarding environmental responsibilities	All personell have received environmental training	Complete	28/07/2017	Medium
01/08/2017	Trigger level reached	SW77A Corlea	1. Minor	Water	Not related to site activities		Normal activities	EPA Ref No. INCI012791	New	Inspected internal outfall on 04/08/2017	NA	Complete	04/08/2017	Medium
30/06/2017	Uncontrolled release	Grid Ref. E632130 N772688	1. Minor	Water	Unauthorized Contractor /turfcutting		Normal activities	EPA Ref No. INCI012401	New	Notified the responsible person and advised to cease	Exclude the illegal turfcutter from entering BNM property without consent	Complete	03/07/2017	Low
25/10/2017	Trigger level reached	SW 22 Granaghan	1. Minor	Water	Any chemical breakdown in exceedance in trigger level for COD is caused by naturally occurring chemicals in peatlands as no chemicals are add to the process		Normal activities	EPA Ref No. INCI013328	New	There was no activity upstream of this point that would lead to exceedance in trigger level, therefore no corrective actions are possible	There was no activity upstream of this point that would lead to exceedance in trigger level, therefore no corrective actions are possible	Complete	25/10/2017	Low
25/10/2017	Trigger level reached	SW 20 Mountdillon	1. Minor	Water	Any chemical breakdown in exceedance in trigger level for COD is caused by naturally occurring chemicals in peatlands as no chemicals are add to the process		Normal activities	EPA Ref No. INCI013327	New	There was no activity upstream of this point that would lead to exceedance in trigger level, therefore no corrective actions are possible	There was no activity upstream of this point that would lead to exceedance in trigger level, therefore no corrective actions are possible	Complete	25/10/2017	Low
25/10/2017	Trigger level reached	SW 19 Mountdillon	1. Minor	Water	Any chemical breakdown in exceedance in trigger level for COD is caused by naturally occurring chemicals in peatlands as no chemicals are add to the process		Normal activities	EPA Ref No. INCI013325		There was no activity upstream of this point that would lead to exceedance in trigger level, therefore no corrective actions are possible	There was no activity upstream of this point that would lead to exceedance in trigger level, therefore no corrective actions are possible	Complete	25/10/2017	Low

Total number of incidents current year	8
Total number of incidents previous year	8
% reduction/ increase	0.00%

WASTE SUMMARY	Lic No:	P0504-01	Year	2017
SECTION A-PRTR ON SITE WASTE TREATMENT AND WASTE TRANSFERS TAB- TO BE COMPLETED BY ALL IPPC AND WASTE FACILITIES		PRTR facility logon	dropdown list click to see options	

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

			Additional Information
1	Were any wastes accepted onto your site for recovery or disposal or treatment prior to recovery or disposal within the boundaries of your facility ?; (waste generated within your boundaries is to be captured through PRTR reporting) If yes please enter details in table 1 below	N/A	
2	Did your site have any rejected consignments of waste in the current reporting year? If yes please give a brief explanation in the additional information	SELECT	
3	Was waste accepted onto your site that was generated outside the Republic of Ireland? If yes please state the quantity in tonnes in additional information	SELECT	

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

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

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

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

SECTION D-TO BE COMPLETED BY LANDFILL SITES ONLY

Table 2 Waste type and tonnage-landfill only

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

Table 3 General information-Landfill only

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

WASTE SUMMARY Lic No: P0504-01 Year 2017

Table 4 Environmental monitoring-landfill only

Landfill Manual-Monitoring Standards

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

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

Table 5 Capping-Landfill only

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

*please note this includes daily cover area

Table 6 Leachate-Landfill only

9	Is leachate from your site treated in a Waste Water Treatment Plant?	SELECT
10	Is leachate released to surface water? If yes please complete leachate mass load information below	SELECT

Volume of leachate in reporting year(m3)	Leachate (BOD) mass load (kg/annum)	Leachate (COD) mass load (kg/annum)	Leachate (NH4) mass load (kg/annum)	Leachate (Chloride) mass load kg/annum	Leachate treatment on-site	Specify type of leachate treatment	Comments

Please ensure that all information reported in the landfill gas section is consistent with the Landfill Gas Survey submitted in conjunction with PRTR returns

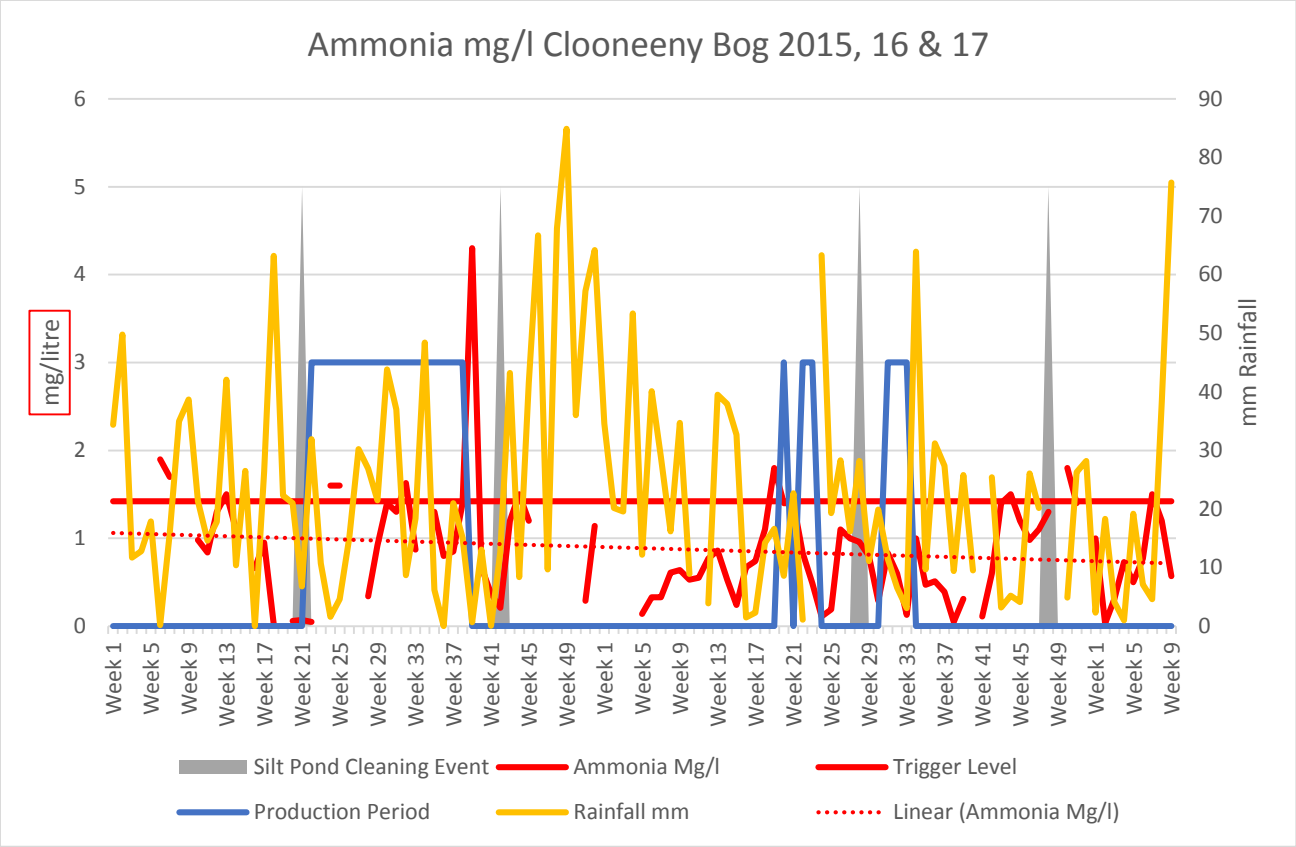
Table 7 Landfill Gas-Landfill only

Gas Captured&Treated by LFG System m3	Power generated (MW / KWh)	Used on-site or to national grid	Was surface emissions monitoring performed during the reporting year?	Comments
			SELECT	

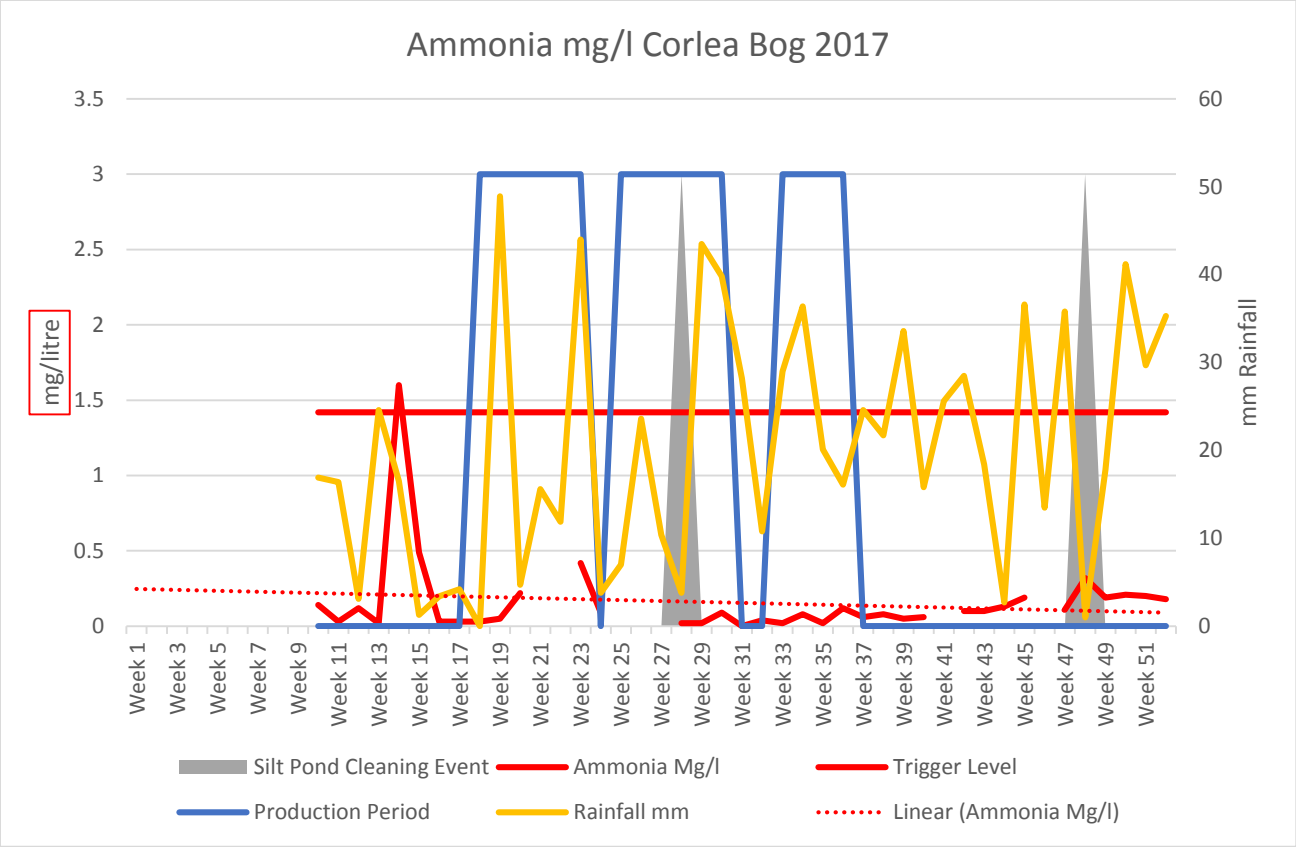
Mount Dillon
Decommissioning and Rehabilitation
AER Overview 2017.

Within the Mount Dillion licensed area (P0504-01) there were no entire bog units available for rehabilitation in 2017. Ongoing monitoring of cutaway areas was carried out within the Mount Dillon area with Derryadd 2 and Derryarogue Bogs having been re-surveyed in 2017.
Draft rehabilitation plans for the Mount Dillon 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.
Active rehabilitation work was carried out within two areas of Lough Bannow (27 ha) and Coolnagun Bog (31 ha) as part of the long term rehabilitation of these sites. Intensive drain-blocking and re-wetting was carried out in bog remnant and deep peat bog areas. The work at Lough Bannow will help support the Lough Bawn pNHA by consolidating the butter zone around this pNHA.
An amenity walkway has also been constructed at Corlea Bog in an area of rehabilitated cutaway now leased to the local community. This was a joint project between Bord na Móna and Longford County Council.
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 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.

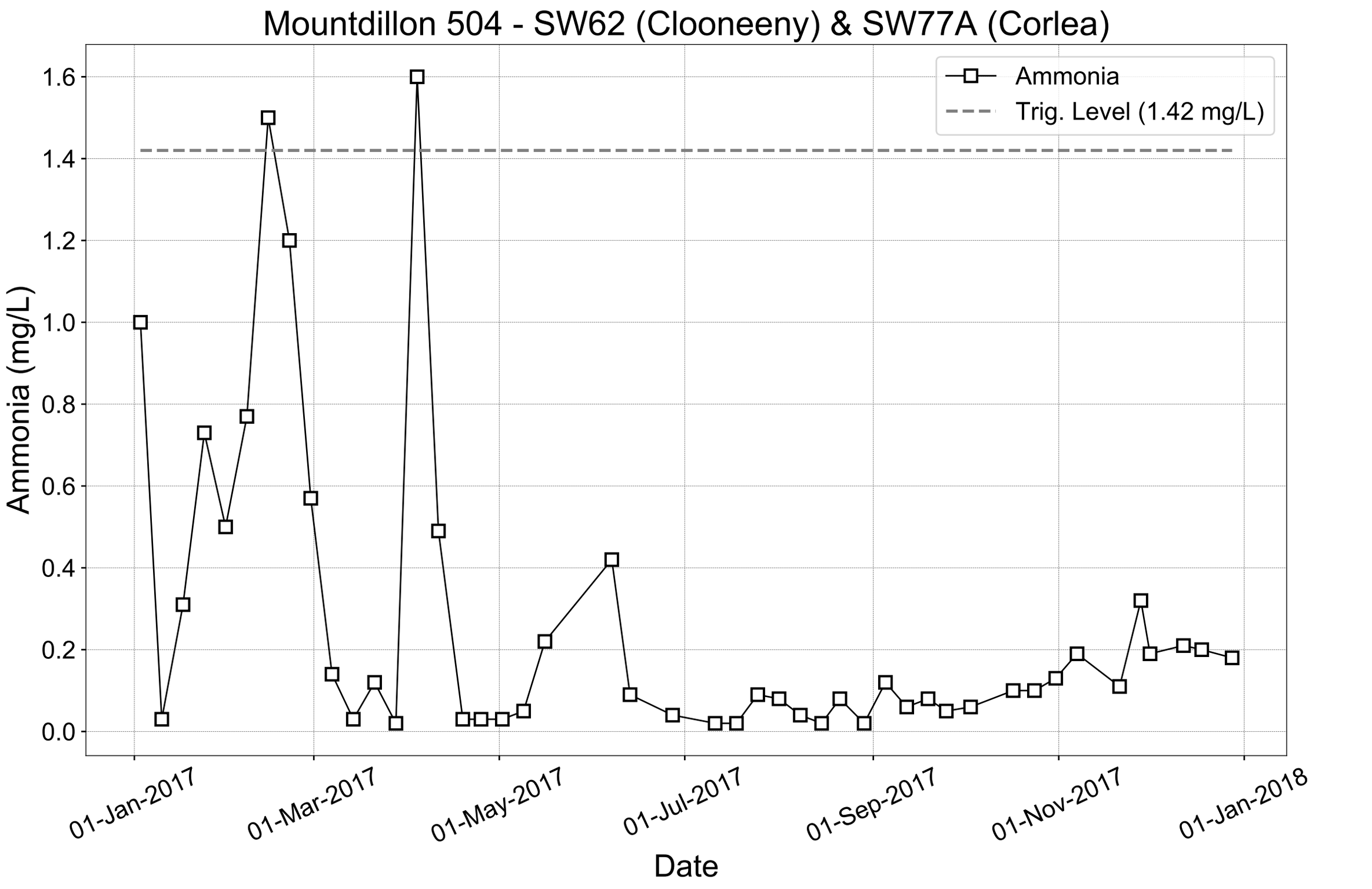
IPC License P0504-01 Quarterly Grab Sampling 2017												
X	Y	Bog	SW	Monitoring	Sampled	pH	SS	TS	Ammonia	TP	COD	Colour
207066.22	270009.38	Killashee	SW-71A	Q1 17	20/03/2017	6.7	6	76	1	0.05	55	188
206957.05	270175.39	Killashee	SW-71B	Q1 17	20/03/2017	7.6	10	280	0.5	0.05	51	220
206552.83	271606.89	Killashee	SW-71C	Q1 17	20/03/2017	7.9	5	338	0.13	0.05	49	119
205264.48	266929.73	Derryadd	SW-72	Q1 17	20/03/2017	7.8	8	362	0.58	0.05	59	122
205704.47	264985.60	Derryadd	SW-73	Q1 17	20/03/2017	7.7	12	349	1.1	0.05	52	126
206483.50	264717.84	Loughbannow	SW-74	Q1 17	20/03/2017	7.9	7	306	0.29	0.05	52	142
209520.92	261717.87	Loughbannow	SW-77	Q2 17	29/05/2017	7.9	14	292	0.11	0.05	41	111
210699.18	261574.22	Corlea	SW-77A	Q2 17	29/05/2017	7.6	5	208	0.21	0.05	57	210
207855.20	263302.19	Loughbannow	SW-78	Q2 17	29/05/2017	7.8	5	296	0.3	0.05	23	115
205488.20	261055.08	Derrycolumb	SW-88	Q2 17	29/05/2017	7.9	6	632	0.2	0.05	40	114
206320.96	260736.89	Derrycolumb	SW-88A	Q2 17	29/05/2017	7.7	5	320	0.37	0.05	39	124
206675.47	260347.41	Derrycolumb	SW-89	Q2 17	29/05/2017	7.7	5	374	0.17	0.05	50	144
209457.03	259759.30	Derrycolumb	SW-90	Q2 17	31/05/2017	7.7	6	280	0.46	0.05	42	110
207371.13	259735.70	Derrycolumb	SW-91	Q2 17	31/05/2017	7.8	5	408	0.26	0.05	42	116
208445.3	261154.8	Derrycolumb	SW91-A	Q2 17	31/05/2017	7.9	7	368	0.32	0.05	57	108
208008.49	259636.58	Derrycolumb	SW-92	Q2 17	31/05/2017	7.5	5	219	3.9	0.05	48	144
206651.08	262095.91	Derrycolumb	SW-93	Q2 17	31/05/2017	7.8	6	628	0.53	0.05	51	111
206995.27	262194.95	Derrycolumb	SW-93A	Q2 17	31/05/2017	7.6	10	308	0.05	0.05	42	125
205264.48	266929.73	Derryadd	SW-72	Q3 17	27/07/2017	7.6	5	256	0.43	0.06	67	177
204007.27	264128.46	Derryshannoge	SW-81	Q3 17	27/07/2017	7.8	21	282	0.16	0.05	68	147
204924.46	264012.79	Derryshannoge	SW-82	Q3 17	27/07/2017	7.7	19	362	0.3	0.05	57	116
204271.29	265669.06	Derryshannoge	SW-85	Q3 17	27/07/2017	7.4	5	340	0.12	0.05	93	312
204673.67	264817.11	Derryshannoge	SW-86	Q3 17	27/07/2017	7.7	12	324	0.15	0.05	91	174
205440.03	264471.90	Derryshannoge	SW-87	Q3 17	27/07/2017	8	5	332	0.02	0.07	46	80
209712.71	257877.59	Edera	SW-94	Q3 17	14/08/2017	8	9	399	0.1	0.05	36	77
210769.22	258184.69	Edera	SW-95	Q3 17	14/08/2017	7.7	8	286	0.37	0.1	41	155
211324.98	256892.74	Edera	SW-96	Q3 17	14/08/2017	7.9	5	318	0.17	0.05	41	108
211251.58	256376.68	Edera	SW-97	Q3 17	14/08/2017	7.8	5	316	0.02	0.07	28	72
209397.17	257668.64	Edera	SW-98	Q3 17	14/08/2017	8.1	10	354	0.09	0.05	34	66
209104.06	257598.54	Edera	SW-99	Q3 17	14/08/2017	8	5	380	0.02	0.05	17	32
200798.96	275520.06	Mountdillon	SW-18	Q4 17	25/10/2017	7.7	6	287	0.19	0.05	92	191
200723.37	275195.91	Mountdillon	SW-18A	Q4 17	25/10/2017	7.7	5	310	0.17	0.07	61	125
200579.43	275879.05	Mountdillon	SW-19	Q4 17	25/10/2017	7.5	5	180	0.09	0.05	116	376
199243.17	274640.01	Curraghroe	SW-20	Q4 17	25/10/2017	7.8	5	315	0.11	0.07	104	241
199241.03	275382.10	Grannaghan	SW-21	Q4 17	25/10/2017	7.8	6	304	0.21	0.05	98	233
199522.07	275622.16	Grannaghan	SW-22	Q4 17	25/10/2017	7.5	15	202	0.46	0.05	107	193
199949.40	276004.88	Grannaghan	SW-22A	Q4 17	25/10/2017	6.3	5	82	0.44	0.05	72	199
199698.09	276893.88	Grannaghan	SW-23	Q4 17	25/10/2017	7.5	5	218	0.03	0.05	89	178
199038.96	274095.83	Erenagh	SW-24	Q4 17	25/10/2017	7.4	5	184	0.06	0.05	96	212
198696.43	272374.18	Erenagh	SW-25	Q4 17	25/10/2017	7.8	5	370	0.02	0.05	74	129
198696.31	272347.40	Cloontuskert	SW-26	Q4 17	25/10/2017	7.7	8	312	0.6	0.05	27	183
197304.69	271399.80	Cloontuskert	SW-33	Q4 17	25/10/2017	No sample available on day of sampling due to no flow						

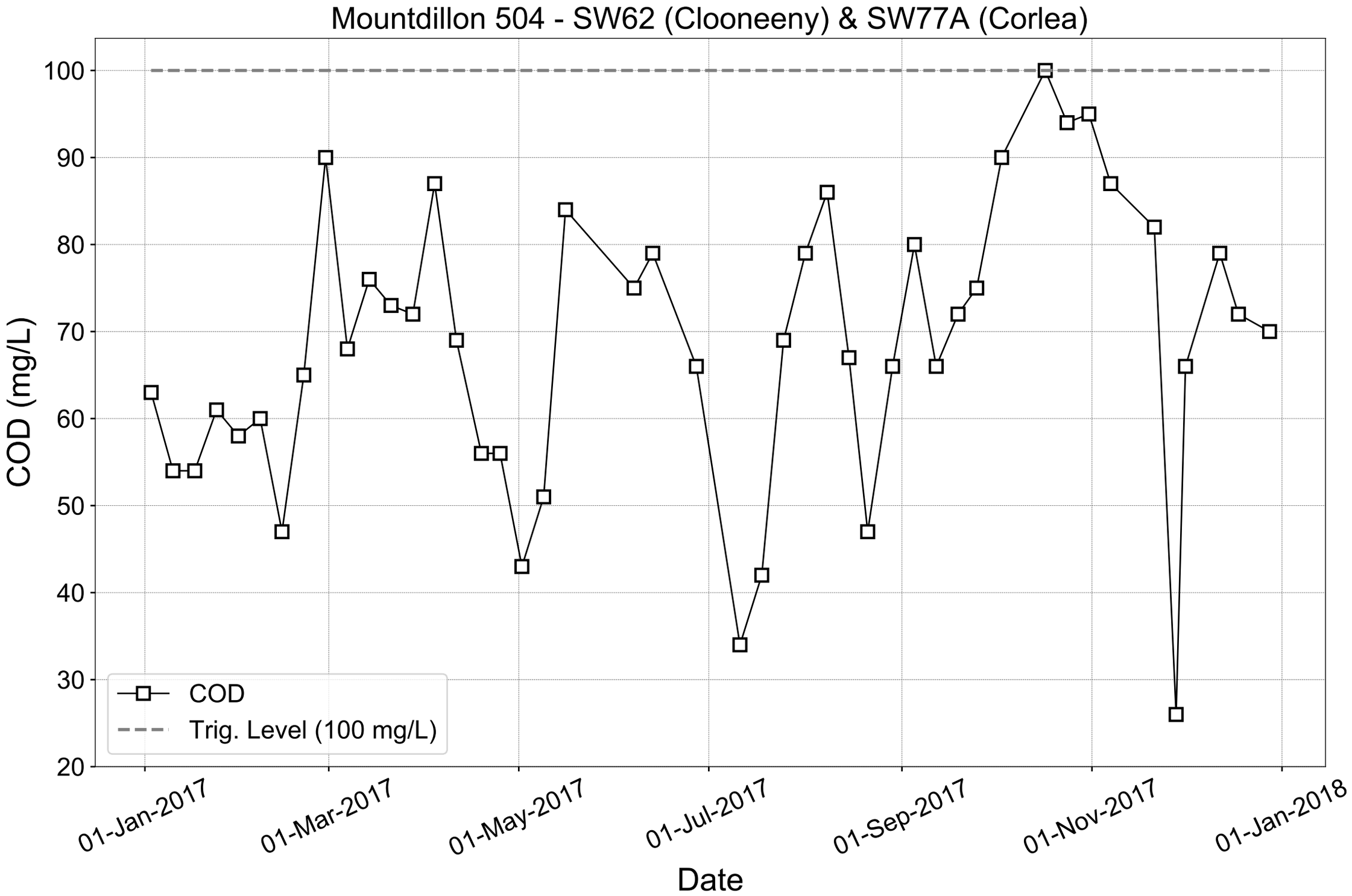


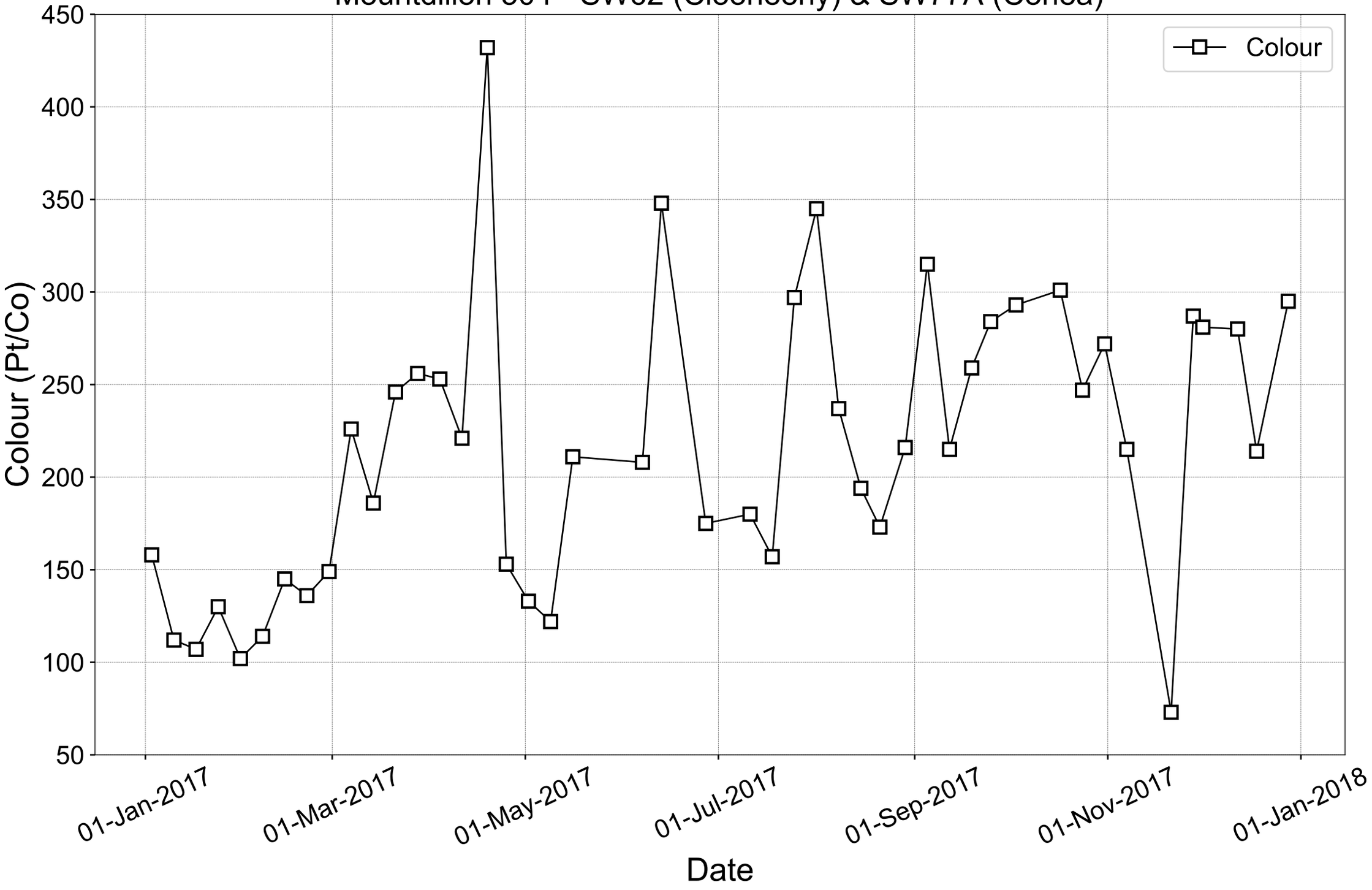
Clooneeny bog is an active production bog with the composite sampler located here during 2015, 16 & 17. The composite sampler takes a flow proportional composite sample over a 24 hour period. This location returned 9 weekly ammonia results during the 2017 period (Jan to Feb) of its location at Clooneeny Bog during this reporting period, which is a return of 100%, The ammonia trigger level of 1.42mg/l, as agreed with the Agency, was marginally exceeded once during the reporting period. Overall the results are maintaining much the same downward trend as reported in 2015 and 2016, 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. It has been established that the most relevant influencing variable on Ammonia is rainfall and the trend analysis above indicates linkage between high rainfall events and higher ammonia concentrations.

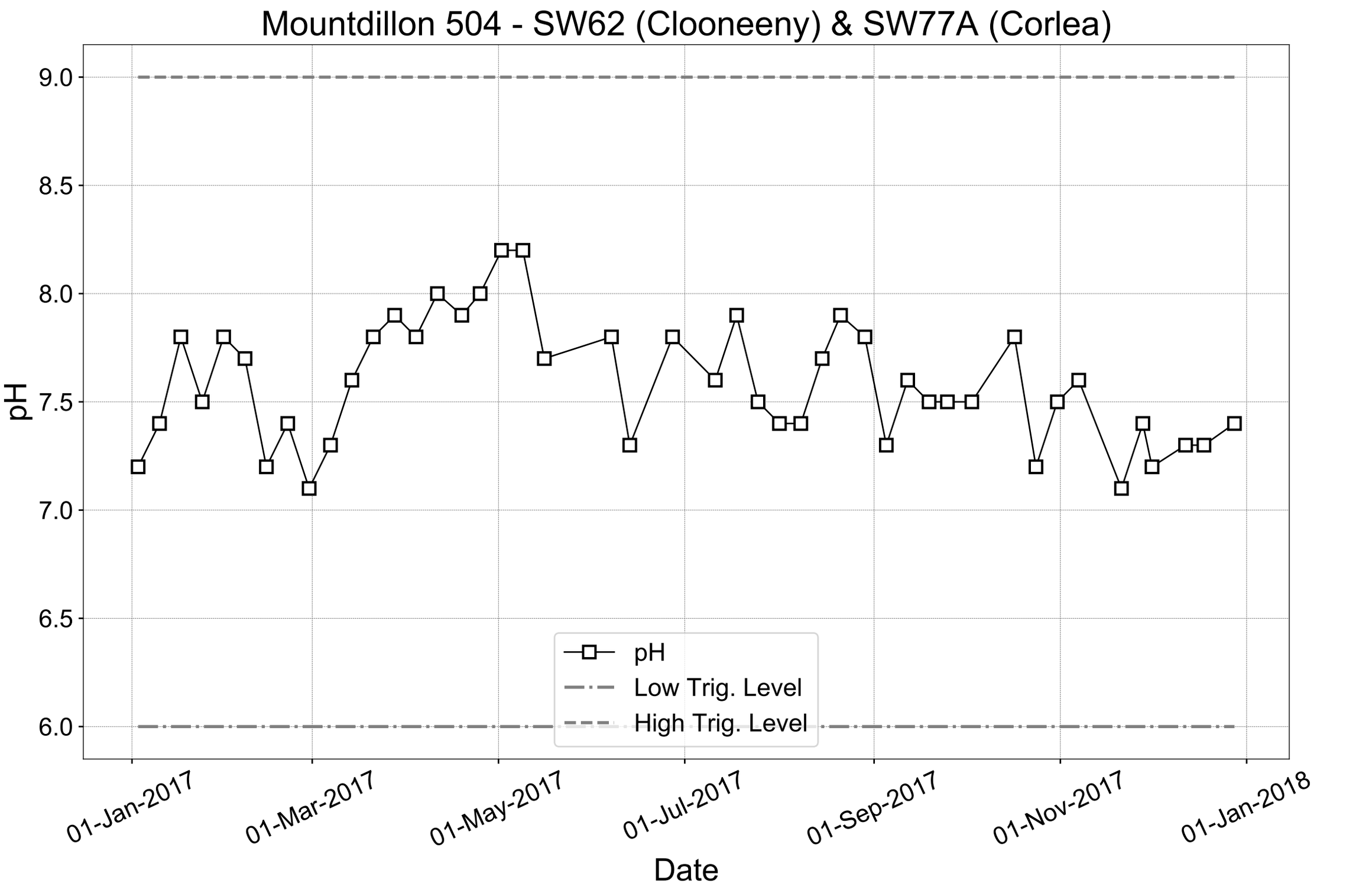


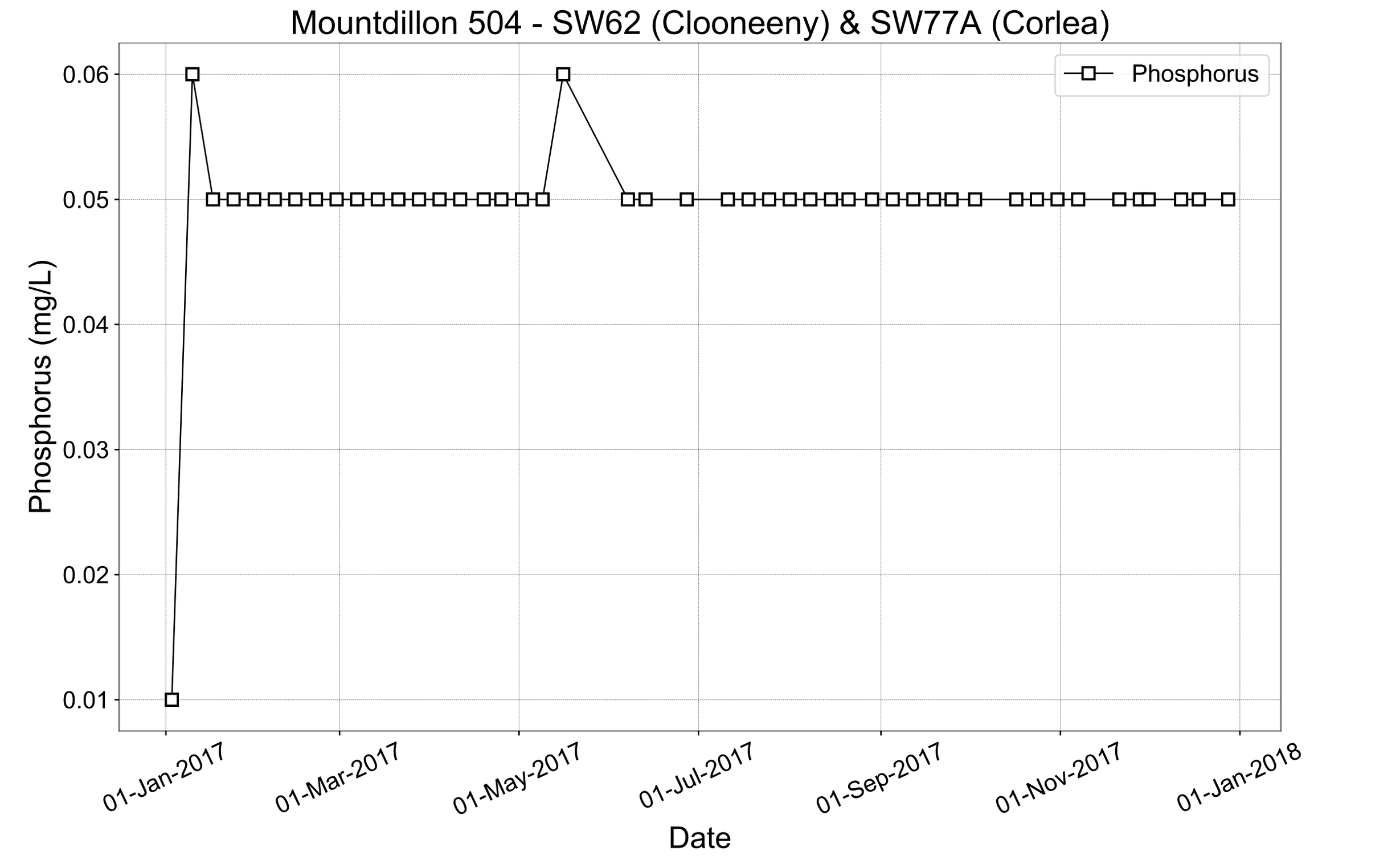
Corlea bog is an active production bog with the composite sampler relocated to this bog at SW 77A in March 2017. The composite sampler takes a flow proportional composite sample over a 24 hour period. This location returned 31 weekly ammonia results during the 2017 period (March to December) at its location at Corlea Bog during this reporting period, which is a return of 83%. The balance of weeks where no sample was returned was during periods when there was no summer discharge, water was backed up in the Winter/Spring from the receiving water or technical issues The ammonia trigger level of 1.42mg/l, as agreed with the Agency, was exceeded once during the reporting period. Overall the results are maintaining a downward trend 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. This location will need up to two years data to better inform this Ammonia trend. It has been established that the most relevant influencing variable on Ammonia is rainfall and the trend analysis above indicates linkage between high rainfall events and ammonia concentrations.

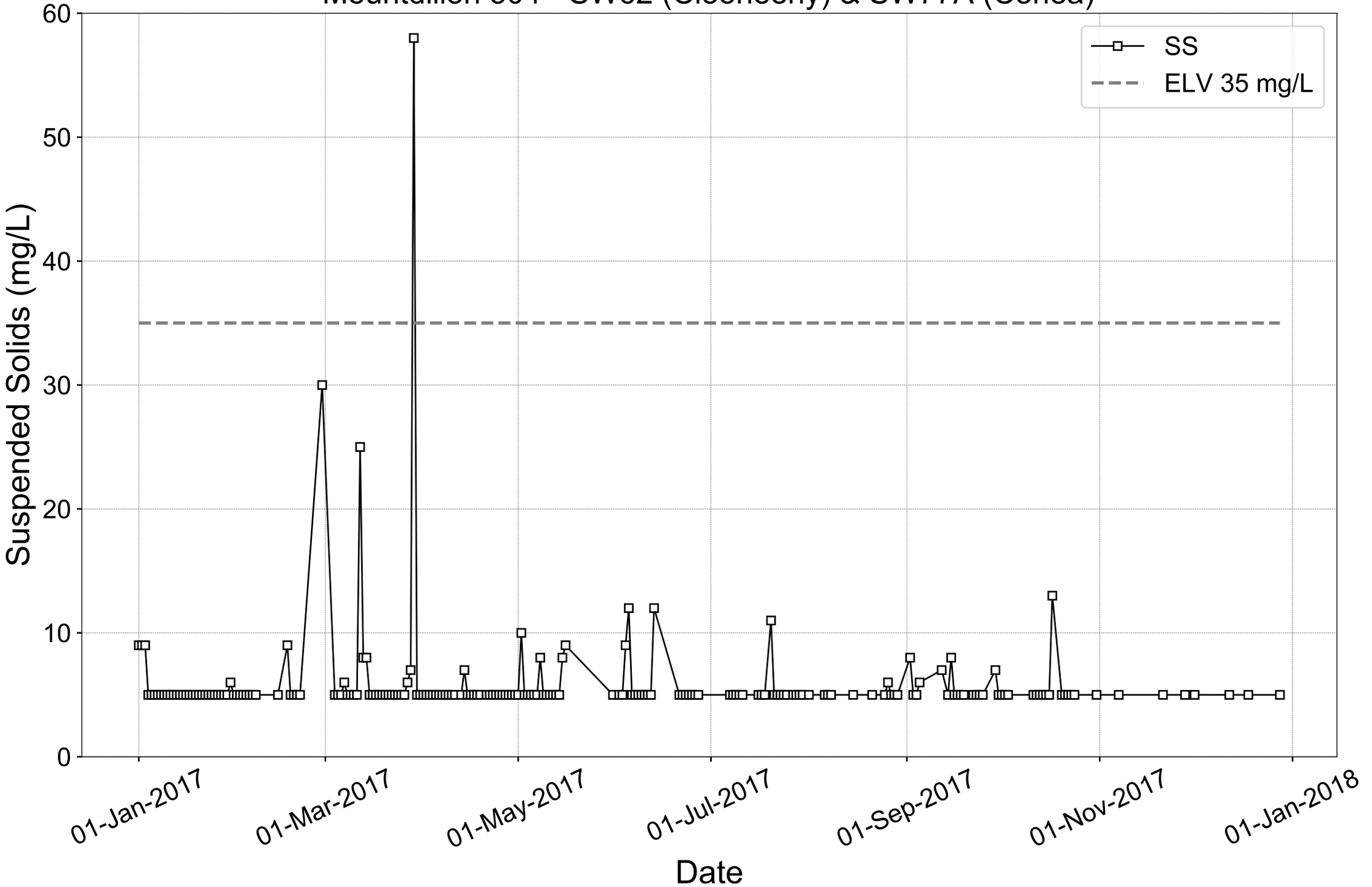

Mountdillon 504 - SW62 (Clooneeny) & SW77A (Corlea)
Ammonia
Trig. Level (1.42 mg/L)
Ammonia (mg/L)
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
01-Jan-2017
01-Mar-2017
01-May-2017
01-Jul-2017
01-Sep-2017
01-Nov-2017
01-Jan-2018
Date

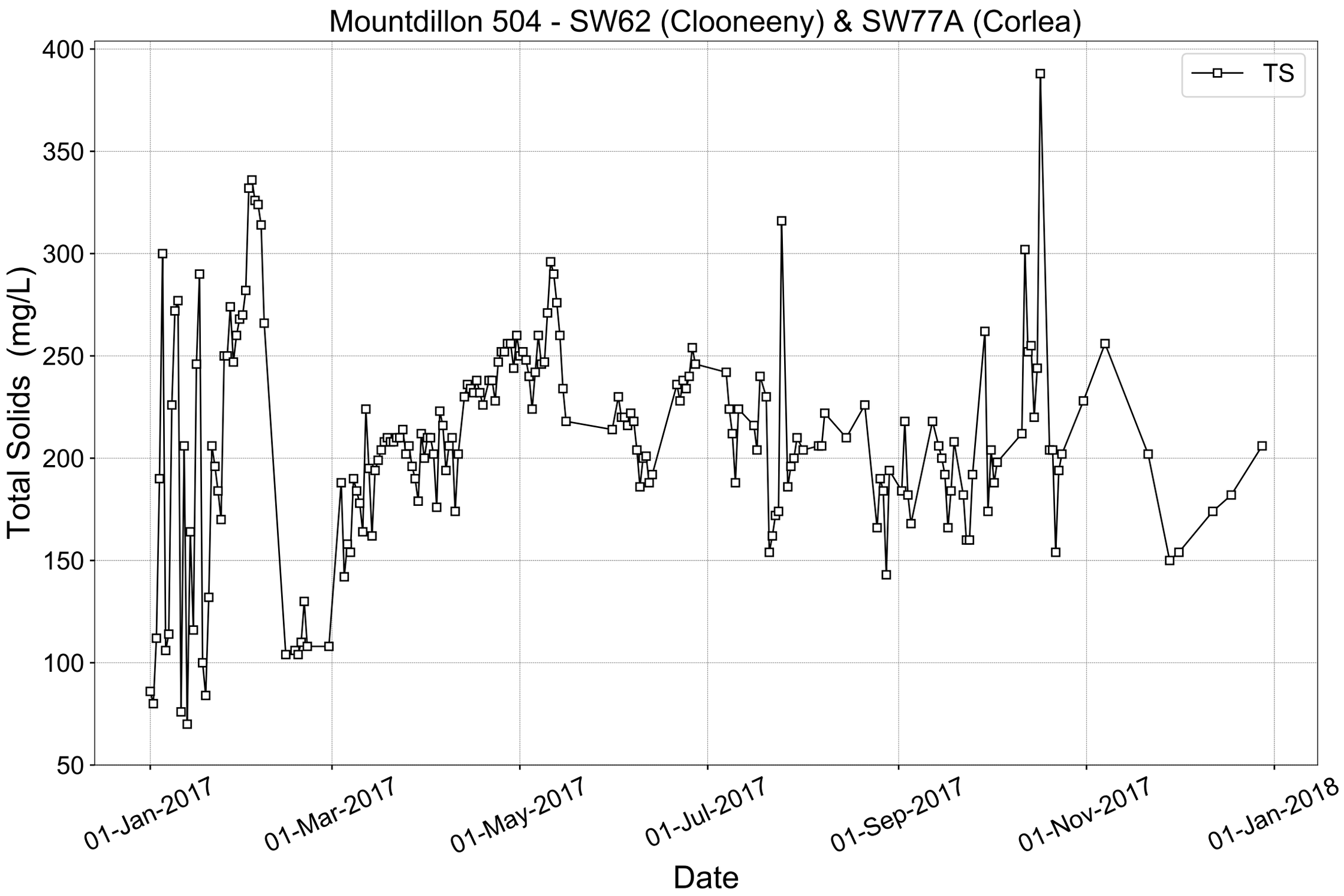

Mountdillon 504 - SW62 (Clooneeny) & SW77A (Corlea)
COD (mg/L)
100
90
80
70
60
50
40
30
20
COD
Trig. Level (100 mg/L)
01-Jan-2017
01-Mar-2017
01-May-2017
01-Jul-2017
01-Sep-2017
01-Nov-2017
01-Jan-2018
Date


Mountdillon 504 - SW62 (Clooneeny) & SW77A (Corlea)
Colour
Colour (Pt/Co)
450
400
350
300
250
200
150
100
50
01-Jan-2017
01-Mar-2017
01-May-2017
01-Jul-2017
01-Sep-2017
01-Nov-2017
01-Jan-2018
Date


Mountdillon 504 - SW62 (Clooneeny) & SW77A (Corlea)
pH
9.0
8.5
8.0
7.5
7.0
6.5
6.0
pH
Low Trig. Level
High Trig. Level
01-Jan-2017
01-Mar-2017
01-May-2017
01-Jul-2017
01-Sep-2017
01-Nov-2017
01-Jan-2018
Date


Mountdillon 504 - SW62 (Clooneeny) & SW77A (Corlea)
Phosphorus
Phosphorus (mg/L)
0.06
0.05
0.04
0.03
0.02
0.01
01-Jan-2017
01-Mar-2017
01-May-2017
01-Jul-2017
01-Sep-2017
01-Nov-2017
01-Jan-2018
Date


Mountdillon 504 - SW62 (Clooneeny) & SW77A (Corlea)
SS
ELV 35 mg/L
Suspended Solids (mg/L)
0
10
20
30
40
50
60
01-Jan-2017
01-Mar-2017
01-May-2017
01-Jul-2017
01-Sep-2017
01-Nov-2017
01-Jan-2018
Date


Mountdillon 504 - SW62 (Clooneeny) & SW77A (Corlea)
TS
Total Solids (mg/L)
400
350
300
250
200
150
100
50
01-Jan-2017
01-Mar-2017
01-May-2017
01-Jul-2017
01-Sep-2017
01-Nov-2017
01-Jan-2018
Date

Yard Discharge Results 2017

Licence: P0504-01

Works: Mt Dillon

Month	W/Shop SWE 1 COD	W/Shop SWE 2 COD	Yard SWE 1 COD	Yard SWE 2 COD	C na Gun SWE1 COD	P Station SWE 1 COD
Jan	71	52	**NF**	**NF**	67	**NF**
Feb	64	59	**NF**	**NF**	58	**NF**
Mar	84	65	50	**NF**	**NF**	**NF**
Apr	73	49	**NF**	**NF**	64	**NF**
May	52	37	**NF**	**NF**	49	**NF**
June	50	29	**NF**	**NF**	38	**NF**
July	26	34	**NF**	**NF**	42	**NF**
Aug	62	**NF**	**NF**	**NF**	**NF**	**NF**
Sep	**NF**	**NF**	**NF**	**NF**	**NF**	**NF**
Oct	88	58	**NF**	**NF**	80	**NF**
Nov	96	**NF**	**NF**	**NF**	**NF**	**NF**
Dec	82	14	**NF**	**NF**	**NF**	**NF**

Note: NF denotes no flow at emission point on day of sampling

Guidance to completing the PRTR workbook

PRTR Returns Workbook

Version 1.1.19

REFERENCE YEAR	2017

1. FACILITY IDENTIFICATION

Parent Company Name	Bord na Mona Energy Limited
Facility Name	Bord na Mona Lanesboro (Longford)
PRTR Identification Number	P0504
Licence Number	P0504-01

Classes of Activity

No.	class_name
-	Refer to PRTR class activities below

Address 1	Mountdillon Group
Address 2	c/o Mountdillon Works
Address 3	Lanesboro
Address 4	
	Longford
Country	Ireland
Coordinates of Location	-7.92868 53.6697
River Basin District	IEGBNISH
NACE Code	0892
Main Economic Activity	Extraction of peat
AER Returns Contact Name	Enda Mc Donagh
AER Returns Contact Email Address	enda.mcdonagh@bnm.ie
AER Returns Contact Position	Head of Environment
AER Returns Contact Telephone Number	0579345911
AER Returns Contact Mobile Phone Number	0862370816
AER Returns Contact Fax Number	0579345160
Production Volume	624826.0
Production Volume Units	Tonnes
Number of Installations	19
Number of Operating Hours in Year	2232
Number of Employees	142
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# : P0504 | Facility Name : Bord na Mona Lanesboro (Longford) | Filename : P0504_2017.xls | Return Year : 2017 | 08/03/2018 09:49

SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

RELEASES TO AIR					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 PRTR POLLUTANTS

RELEASES TO AIR					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 C : REMAINING POLLUTANT EMISSIONS (As required in your Licence)

RELEASES TO AIR					Please enter all quantities in this section in KGs						
POLLUTANT		METHOD			QUANTITY						
			Method Used		DM01	DM02	DM05	DM06			
Pollutant No.	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	Emission Point 2	Emission Point 3	Emission Point 4	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
210	Dust	E	OTH	VDI 2119 Blatt 2/Part 2	0.0	0.0	0.0	0.0	0.04494	0.0	0.04494

* 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 Lanesboro (Longford)

Please enter summary data on the quantities of methane flared and / or utilised	T (Total) kg/Year	M/C/E	Method Used: Method Code	Method Used: 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# : P0504 | Facility Name : Bord na Mona Lanesboro (Longford) | Filename : P0504_2017.xls | Return Year : 2017 | 08/03/2018 09:50

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			
			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 PRTR POLLUTANTS

RELEASES TO WATERS					Please enter all quantities in this section in KGs			
POLLUTANT					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 C : REMAINING POLLUTANT EMISSIONS (as required in your Licence)

RELEASES TO WATERS					Please enter all quantities in this section in KGs				
POLLUTANT					QUANTITY				
			Method Used		SW62	SW77A			
Pollutant No.	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	Emission Point 2	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	0.0	0.0	0.0	0.0	0.0

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

4.3 RELEASES TO WASTEWATER OR SEWER

Link to previous years emissions data

| PRTR# : P0504 | Facility Name : Bord na Mona Lanesboro (Longford) | Filename : P0504_2017.xls 08/03/2018 09:51

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

SECTION A : PRTR POLLUTANTS

RELEASES TO LAND					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
					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		
			Method Used				
Pollutant No.	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

5. ONSITE TREATMENT & OFFSITE TRANSFERS OF WASTE

Please enter all quantities on this sheet in Tonnes

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	1463.98	wastes from mineral non-metalliferous excavation	D1	E	Volume Calculation	Onsite of generati	Bord na Mona Energy Ltd,P0504-01	Mountdillon,Lanesboro,Longford,.,Ireland		
Within the Country	01 01 02	No	1994.08	wastes from mineral non-metalliferous excavation	D1	M	Weighed	Onsite of generati	Bord na Mona Energy Ltd,P0504-01	Mountdillon,Lanesboro,Longford,.,Ireland		
Within the Country	02 01 04	No	0.0	waste plastics (except packaging)	R3	M	Weighed	Offsite in Ireland	AES Ltd,053/OY/39/02	Cappincur,Tullamore,Offaly,.,Ireland		
Within the Country	02 01 04	No	433.88	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	0.42	degreasing wastes containing dangerous substances	R2	C	Volume Calculation	Abroad	Safety Clean Ltd,99-1	Tallaght,Dublin,.,.,Ireland	Solvent Recovery Management,PP33345F,Weeland Rd,Knottingly,West Yorks,WF118DZ,United Kingdom	Weeland Rd,Knottingly,West Yorks,WF118DZ,United Kingdom
Within the Country	13 02 05	Yes	12.4	mineral-based non-chlorinated engine, gear and lubricating oils	R1	C	Volume Calculation	Offsite in Ireland	Enva Ireland Ltd,184-1	Clonminam Indust Estate,Portlaoise,Laois,.,Ireland	Enva Ireland Ltd,184-1,Clonminam Indust Estate,Portlaoise,Laois,.,Ireland	Clonminam Indust Estate,Portlaoise,Laois,.,Ireland
Within the Country	15 01 01	No	2.56	paper and cardboard packaging	R3	M	Weighed	Offsite in Ireland	Mulleadys Ltd,S/E 152/2002	Drumlish,Longford,.,.,Ireland		
Within the Country	15 01 03	No	3.16	wooden packaging	R1	M	Weighed	Offsite in Ireland	AES Ltd,053/OY/39/02	Cappincur,Tullamore,Offaly,.,Ireland		
To Other Countries	15 02 02	Yes	0.45	absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by dangerous substances	R1	M	Weighed	Abroad	Enva Ireland Ltd,184-1 Clonminam Indust Estate Portlaoise Laois . Ireland	Clonminam Indust Estate,Portlaoise,Laois,.,Ireland	Lindenschmidt ,E97095037,Kreuztal,.,.,.,Germany	Kreuztal,.,.,.,Germany
To Other Countries	16 01 07	Yes	2.28	oil filters	R4	C	Volume Calculation	Abroad	Enva Ireland Ltd,184-1	Clonminam Indust Estate,Portlaoise,Laois,.,Ireland	RD Recycling,51727/1/KD,Hauthalen,.,.,.,Belgium	Hauthalen,.,.,.,Belgium
Within the Country	17 04 07	No	76.15	mixed metals	R4	M	Weighed	Offsite in Ireland	AES Ltd,053/OY/39/02	Cappincur,Tullamore,Offaly,.,Ireland		
Within the Country	20 03 01	No	19.36	mixed municipal waste	D5	M	Weighed	Offsite in Ireland	AES Ltd,053/OY/39/02	Cappincur,Tullamore,Offaly,.,Ireland		
Within the Country	20 03 01	No	0.95	mixed municipal waste	D5	C	Volume Calculation	Offsite in Ireland	AES Ltd,053/OY/39/02	Cappincur,Tullamore,Offaly,.,Ireland		
Within the Country	20 03 04	No	12.4	septic tank sludge	R10	C	Volume Calculation	Offsite in Ireland	Tank Pipe & Drain,NWCPO-09-10630-02	Clonterm,Longford,.,.,Ireland		
To Other Countries	**16 06 01**	**Yes**	0.53	lead batteries	R4	M	Weighed	Abroad	Enva Ireland Ltd,184-1	Clonminam Indust Estate,Portlaoise,Laois,.,Ireland	Campine Recycling,MLAV/05-173/GVDA,Beerse,.,.,.,Belgium	Beerse,.,.,.,Belgium
Within the Country	13 05 03	Yes	8.28	interceptor sludges	R1	C	Volume Calculation	Offsite in Ireland	Enva Ireland Ltd,184-1 Clonminam Indust Estate Portlaoise Laois . Ireland	Clonminam Indust Estate,Portlaoise,Laois,.,Ireland		
Within the Country	16 06 04	No	0.11	alkaline batteries (except 16 06 03)	R4	M	Weighed	Offsite in Ireland	KMK Metal Recycling Ltd,NWCPO-08-10607-02	Cappincur Ind Estate,Daingean Rd,Tullamore ,Co Offaly,Ireland		
Within the Country	20 01 21	Yes	0.06	fluorescent tubes and other mercury-containing waste	R4	M	Weighed	Offsite in Ireland	KMK Metal Recycling Ltd,NWCPO-08-10607-02	Cappincur Ind Estate,Daingean Rd,Tullamore ,Co Offaly,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	2017
Licence Register Number	P0506-01
Name of site	Bord na Mona Kilberry
Site Location	Bord na Mona, Leabeg, Tullamore, Co Offaly
NACE Code	0892
Class/Classes of Activity	1.4
National Grid Reference (6E, 6 N)	180050, 319540

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, ridiging and harvesting of peat into stockpiles and secondly the transportation of that peat via an internal rail network to the lorry outloading facilities for transportation to a Power Station, Moss Peat Factory or direct to the Docks. Production achieved was approximately 194227 tonnes. Infrastructurally, there was no bog development. From an environmental perspective silt pond upgrade work is ongoing . Dust monitoring was fully compliant during the reporting period. The quarterly grab sampling was 100% compliant, with only 4 trigger levels reached, 4 x Cod . The composite sampling regeime was also 100% compliant in relation to ELV's. There were 10 trigger levels reached during the reporting period, 1 related to Ammonia and 9 related to COD. There was one environmental complaint received during the reporting period, which was resolved. In relation to silt pond cleaning, 100 % of ponds received two cleanings, some individual ponds received more, inspections dictating cleaning schedules. Decommissioning and Rehabilitation works are described in an attachment. The composite sampler experienced some technical difficulties during the reporting period and it was therefore decided to send it away for a complete service / overhaul which included the replacement of some of the major component parts.

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	Date
Group/Facility manager (or nominated, suitably qualified and experienced deputy)	08/03/2018

AIR-summary template

Lic No: P0506-01 Year 2017

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	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	All results within license limits
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	yes	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: P0506-01 Year 2017

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-01	Total Particulates	350	Daily	Daily average < ELV	mg/m2/day	0.03626	344	0	0	
	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 — No

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

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

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

Table A5: Solvent Mass Balance summary

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

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER) Lic No: P0506-01 Year 2017

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

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	All suspended results within license ELV
4	Was all monitoring carried out in accordance with EPA guidance and checklists for Quality of Aqueous Monitoring Data Reported to the EPA? If no please detail what areas require improvement in additional information box	External /Internal Lab Quality checklist	Assessment of results checklist	SELECT	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 therof[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:	P0506-01	Year	2017

Continuous monitoring

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

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

6	Did continuous monitoring equipment experience downtime? **If yes please record downtime in table W4 below**	Yes	151 Day in 365
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

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: P0506-01 Year 2017

Bund testing — dropdown menu click to see options

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

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

Pipeline/underground structure testing

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

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

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

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

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

Groundwater/Soil monitoring template	Lic No:	P0506-01	Year	2017

			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		
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

Table 1: Upgradient Groundwater monitoring results

Groundwater/Soil monitoring template Lic No: P0506-01 Year 2017

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)

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

Table 3: Soil results

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

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

Environmental Liabilities template	Lic No:	P0506-01	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:	P0506-01	Year	2017

	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	**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. Deploy Hydraulic Harrows at dust sensitive areas **Headland Peat** Collection. Continue with the collection of headland peat, particularly at dust sensitive locations.	100	In total 13 personnel received training in 2017. Hydraulic harrows were depolyed at dust sensitive areas. Headland peat was collected during the production season.	Section Head	Reduced emissions
Waste reduction/Raw material usage efficiency	Waste Streamlining.It is planned to continue with and where possible improve the current waste management service provided by AES Ltd	100	Quarterly waste reports are returned for records/filing and waste streams are segrated on site to maximise recycling potential.	Individual	Improved Environmental Management Practices
Reduction of emissions to Water	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.	100	In total 13 personnel received training in 2017. Training covered SOP's in relation to silt control and general IPC license awareness.	Section Head	Reduced emissions
Materials Handling/Storage/Bunding	Increased bund capacity will be provided where required.	0	No additional bund capacity was required during 2017	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 186.86 tonnes were sent off site for recycling. Procurement also exploring the possibility of securing further recyclers.	Individual	Reduced emissions
Sphagnum Project	A small scale trial is to commence in 2012. Its purpose is to trial grow sphagnum moss on a small area of cutaway in Kilberry bog.	100	The Kiberry Sphagnum farming project is progressing with plots still in early stages of development. Establishment of Sphagnum has been slow due to flucating water levels. Some plots are developing well.	Individual	Improved Environmental Management Practices

Noise monitoring summary report	Lic No:	P0506-01	Year	2017

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 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:	P0506-01	Year	2017

				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	SEAI - Large Industry Energy Network (LIEN)	Yes	The site attained accrediation 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)	2546.993	2785.44		
Total Energy Generated (MWHrs)				
Total Renewable Energy Generated (MWHrs)				
Electricity Consumption (MWHrs)	142.83	141.9		
Fossil Fuels Consumption:				
Heavy Fuel Oil (m3)				
Light Fuel Oil (m3)	236.607	260.166		
Natural gas (m3)				
Coal/Solid fuel (metric tonnes)				
Peat (metric tonnes)				
Renewable Biomass				
Renewable energy generated on site				

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

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

Table R2 Water usage on site

					Water Emissions	**Water Consumption**	
Water use	Water extracted Previous year m3/yr.	Water extracted Current year m3/yr.	Production +/- % compared to previous reporting year**	Energy Consumption +/- % vs overall site production*	Volume Discharged back to environment(m^3yr):	Volume used i.e not discharged to environment e.g. released as steam m3/yr	Unaccounted for Water:
Groundwater							
Surface water							
Public supply							
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: P0506-01 Year 2017

Table R3 Waste Stream Summary					
	Total	Landfill	Incineration	Recycled	Other
Hazardous (Tonnes)	18.74	0	0.29	18.45	0
Non-Hazardous (Tonnes)	406.08	10.61	0	148.47	247

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: P0506-01 Year 2017

Complaints

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		Additional information
	Yes	There was one environmental complaints during reporting period

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
19/03/2017	Water		Claim of peat silt on turf bank outfall and access road.	Bord na Mona cleaned drain and levelled the access road.	Complete	20/04/2017	

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

Have any incidents occurred on site in the current reporting year? Please list all incidents for current reporting year in Table 2 below		Additional information
	Yes	All reportable incidents related to trigger levels for Ammonia and COD

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

Table 2 Incidents summary

Date of occurrence	Incident nature	Location of occurrence	Incident category*please refer to guidance	Receptor	Cause of incident	Other cause(please specify)	Activity in progress at time of incident	Communication	Occurrence	Corrective action<20 words	Preventative action <20 words	Resolution status	Resolution date	Likelihood of reoccurence
14/03/2017	Trigger level reached	SW6A Ummerus	1. Minor	Water	Other (add details)	Naturally Occuring	Normal activities	INCI011854	New	Inspected Outfall	NA	Complete	30/03/2017	Medium
15/05/2017	Trigger level reached	SW4 Ummerus	1. Minor	Water	Other (add details)	Naturally Occuring	Normal activities	INCI012197	New	Inspected Outfall	NA	Complete	02/06/2017	Medium
09/06/2017	Trigger level reached	SW1 Kilberry	1. Minor	Water	Other (add details)	Naturally Occuring	Normal activities	INCI012298	New	Inspected Outfall	NA	Complete	30/06/2017	Medium
09/06/2017	Trigger level reached	SW2 Kilberry	1. Minor	Water	Other (add details)	Naturally Occuring	Normal activities	INCI012340	New	Inspected Outfall	NA	Complete	03/07/2017	Medium
09/06/2017	Trigger level reached	SW3 Kilberry	1. Minor	Water	Other (add details)	Naturally Occuring	Normal activities	INCI012393	New	Inspected Outfall	NA	Complete	29/06/2017	Medium
12/06/2017	Trigger level reached	SW4 Ummerus	1. Minor	Water	Other (add details)	Naturally Occuring	Normal activities	INCI012434	New	Inspected Outfall	NA	Complete	07/072017	Medium
06/06/2017	Trigger level reached	SW4 Ummerus	1. Minor	Water	Other (add details)	Naturally Occuring	Normal activities	INCI012509	New	Inspected Outfall	NA	Complete	20/07/2017	Medium
03/07/2017	Trigger level reached	SW4 Ummerus	1. Minor	Water	Other (add details)	Naturally Occuring	Normal activities	INCI012471	New	Inspected Outfall	NA	Complete	24/07/2017	Medium
24/07/2017	Trigger level reached	SW4 Ummerus	1. Minor	Water	Other (add details)	Naturally Occuring	Normal activities	INCI012623	New	Inspected Outfall	NA	Complete	10/08/2017	Medium
01/08/2017	Trigger level reached	SW4 Ummerus	1. Minor	Water	Other (add details)	Naturally Occuring	Normal activities	INCI012700	New	Inspected Outfall	NA	Complete	23/08/2017	Medium
01/08/2017	Trigger level reached	SW4 Ummerus	1. Minor	Water	Other (add details)	Naturally Occuring	Normal activities	INCI012787	New	Inspected Outfall	NA	Complete	29/09/2017	Medium
08/092017	Trigger level reached	SW4 Ummerus	1. Minor	Water	Other (add details)	Naturally Occuring	Normal activities	INCI012852	New	Inspected Outfall	NA	Complete	30/09/2017	Medium
18/09/2017	Trigger level reached	SW4 Ummerus	1. Minor	Water	Other (add details)	Naturally Occuring	Normal activities	INCI012942	New	Inspected Outfall	NA	Complete	03/10/2017	Medium
11/12/2017	Trigger level reached	SW4 Ummerus	1. Minor	Water	Other (add details)	Naturally Occuring	Normal activities	INCI1013618	New	Inspected Outfall	NA	Complete	10/01/2018	Medium

Total number of incidents current year	14
Total number of incidents previous year	12
% reduction/ increase	16%

WASTE SUMMARY Lic No: P0506-01 Year 2017

SECTION A-PRTR ON SITE WASTE TREATMENT AND WASTE TRANSFERS TAB- TO BE COMPLETED BY ALL IPPC AND WASTE FACILITIES PRTR facility logon dropdown list click to see options

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

			Additional Information
1	Were any wastes accepted onto your site for recovery or disposal or treatment prior to recovery or disposal within the boundaries of your facility ?; (waste generated within your boundaries is to be captured through PRTR reporting)	SELECT	
	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	SELECT	
3	Was waste accepted onto your site that was generated outside the Republic of Ireland? If yes please state the quantity in tonnes in additional information	SELECT	

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

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

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

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

SECTION D-TO BE COMPLETED BY LANDFILL SITES ONLY

Table 2 Waste type and tonnage-landfill only

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

Table 3 General information-Landfill only

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

WASTE SUMMARY Lic No: P0506-01 Year 2017

Table 4 Environmental monitoring-landfill only

Landfill Manual-Monitoring Standards

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

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

Table 5 Capping-Landfill only

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

*please note this includes daily cover area

Table 6 Leachate-Landfill only

9	Is leachate from your site treated in a Waste Water Treatment Plant?	SELECT
10	Is leachate released to surface water? If yes please complete leachate mass load information below	SELECT

Volume of leachate in reporting year(m3)	Leachate (BOD) mass load (kg/annum)	Leachate (COD) mass load (kg/annum)	Leachate (NH4) mass load (kg/annum)	Leachate (Chloride) mass load kg/annum	Leachate treatment on-site	Specify type of leachate treatment	Comments

Please ensure that all information reported in the landfill gas section is consistent with the Landfill Gas Survey submitted in conjunction with PRTR returns

Table 7 Landfill Gas-Landfill only

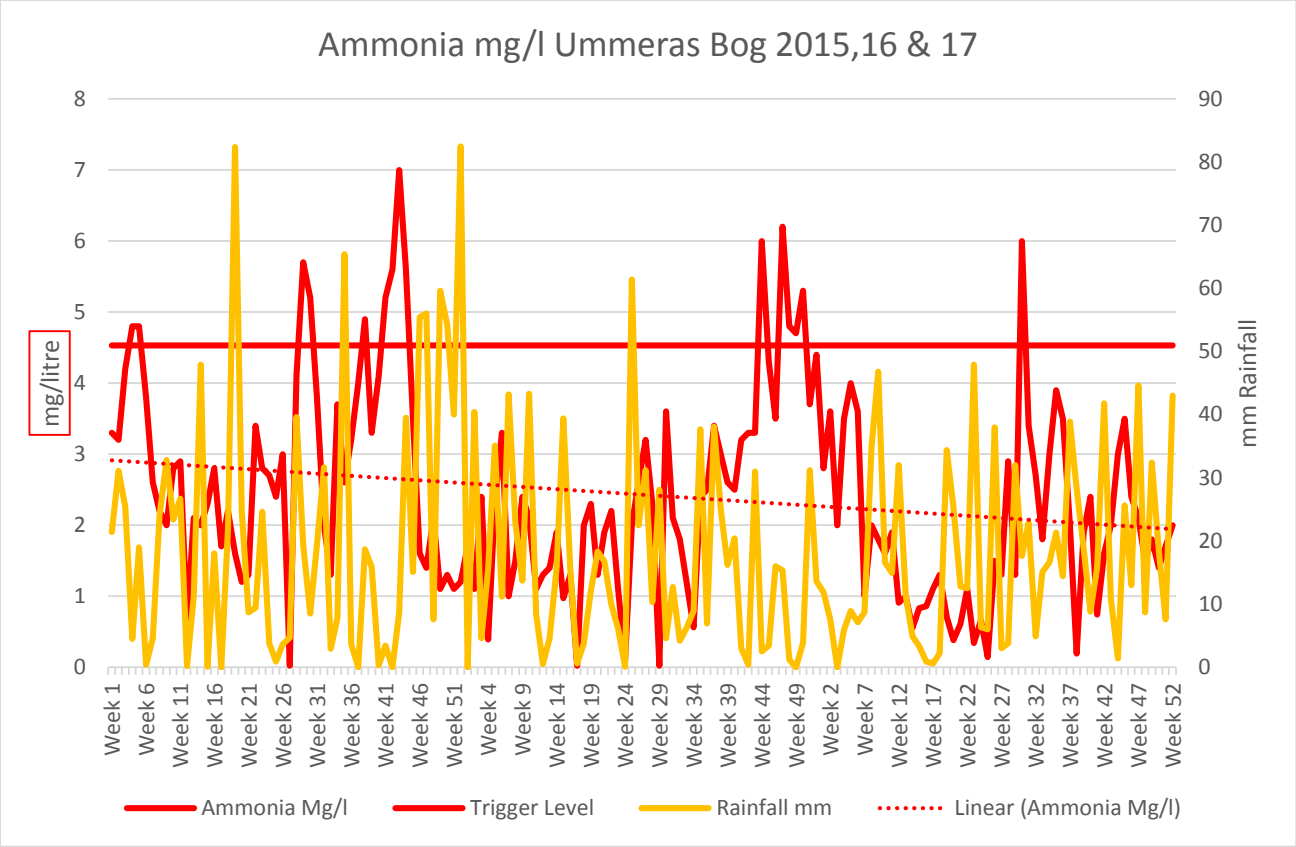
Gas Captured&Treated by LFG System m3	Power generated (MW / KWh)	Used on-site or to national grid	Was surface emissions monitoring performed during the reporting year?	Comments
			SELECT	

Kilberry
Decommissioning and Rehabilitation
AER Overview 2017.

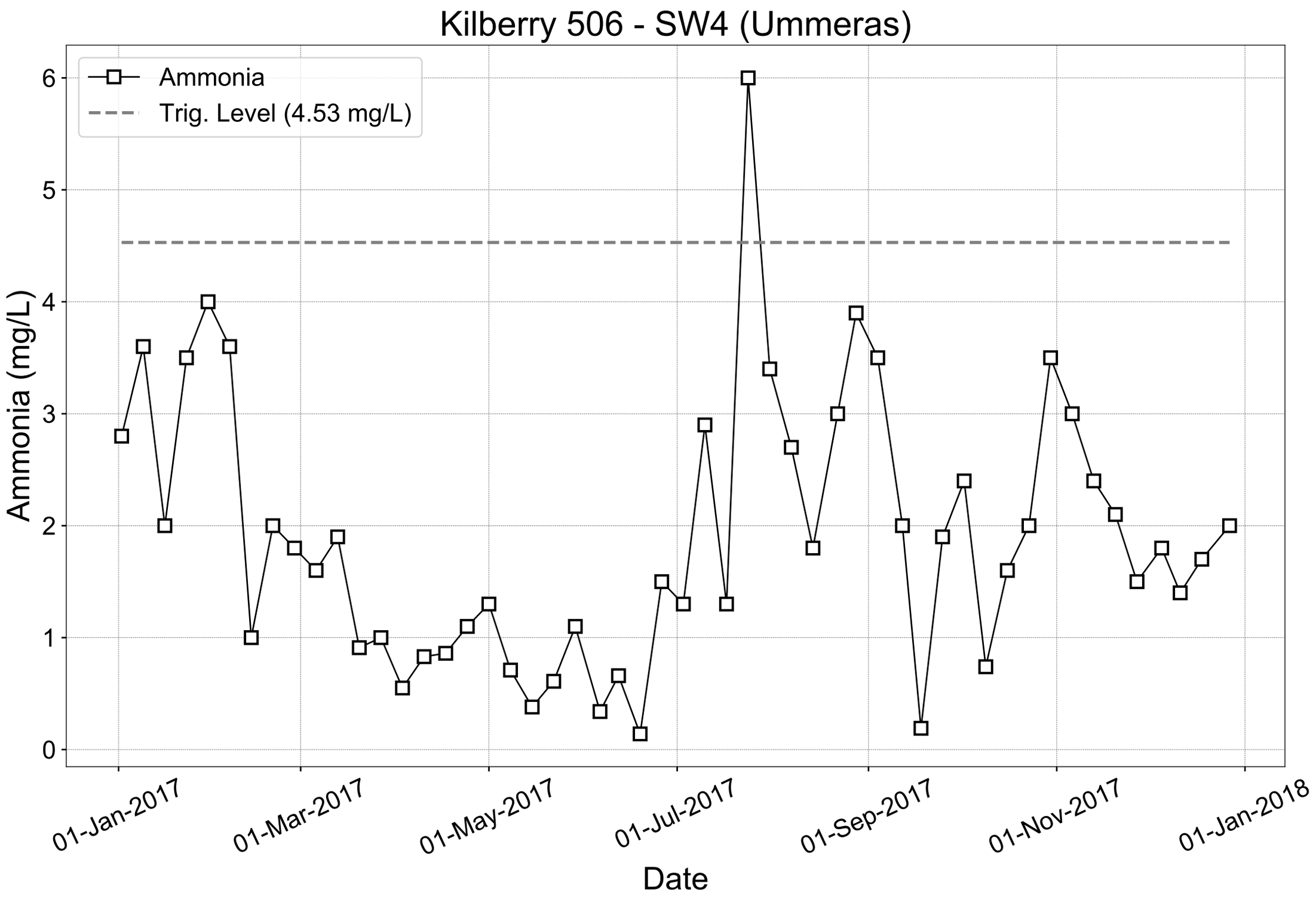
Within the Kilberry licensed area (P0506-01) there were no bog areas available for rehabilitation in 2017. Ongoing monitoring of cutaway within the Kilberry bogs was carried out with re-survey work carried out on Mouds bog.
Draft rehabilitation plans for the Kilberry bogs licensed area, including more 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.
Ongoing rehabilitation trials (cutaway re-wetting and *Sphagnum* inoculation) are being monitoring at Kilberry Bog.
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.

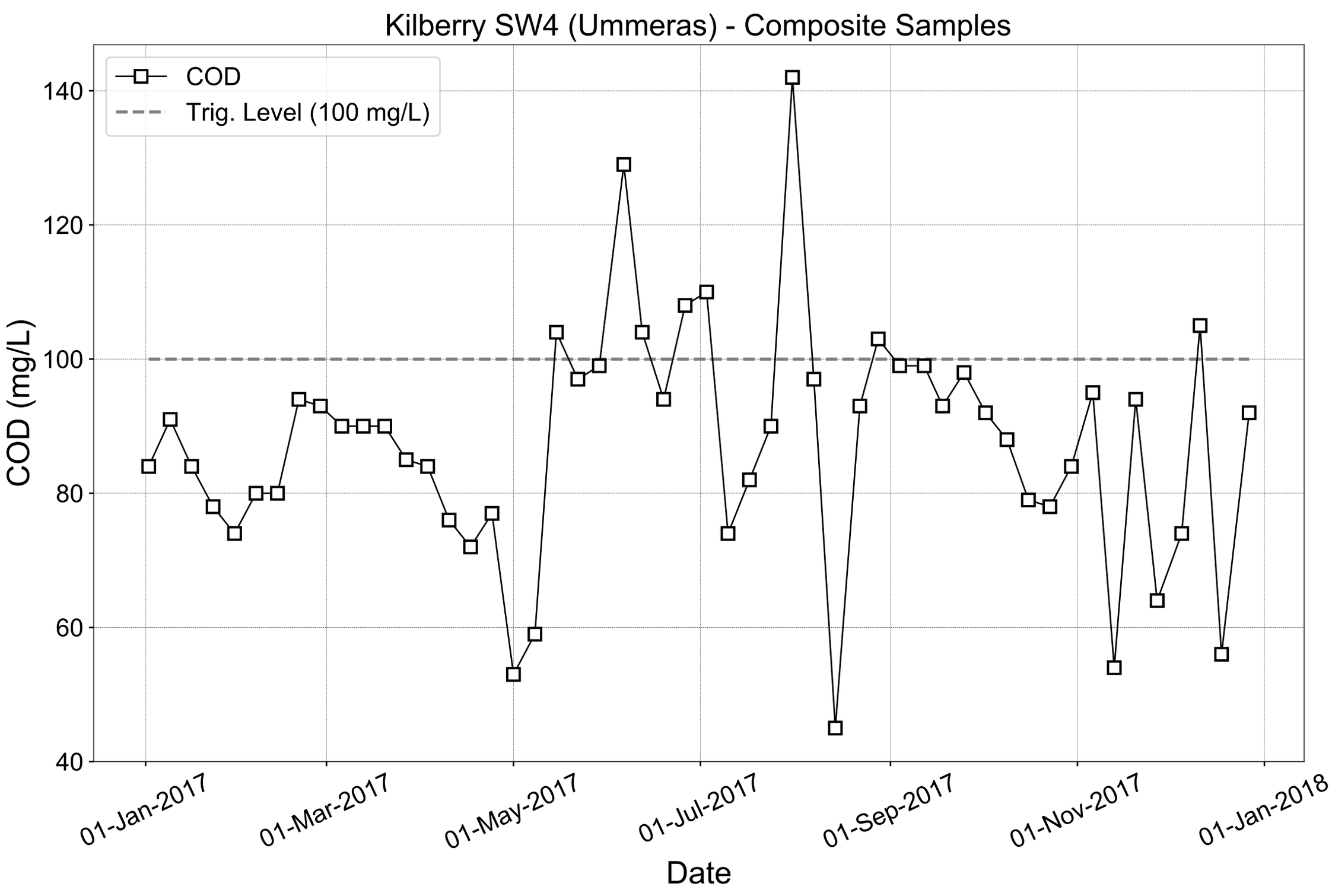
Bord na Mona Kilberry
IPPC Licence P0506-01
Quarterly Grab 2017

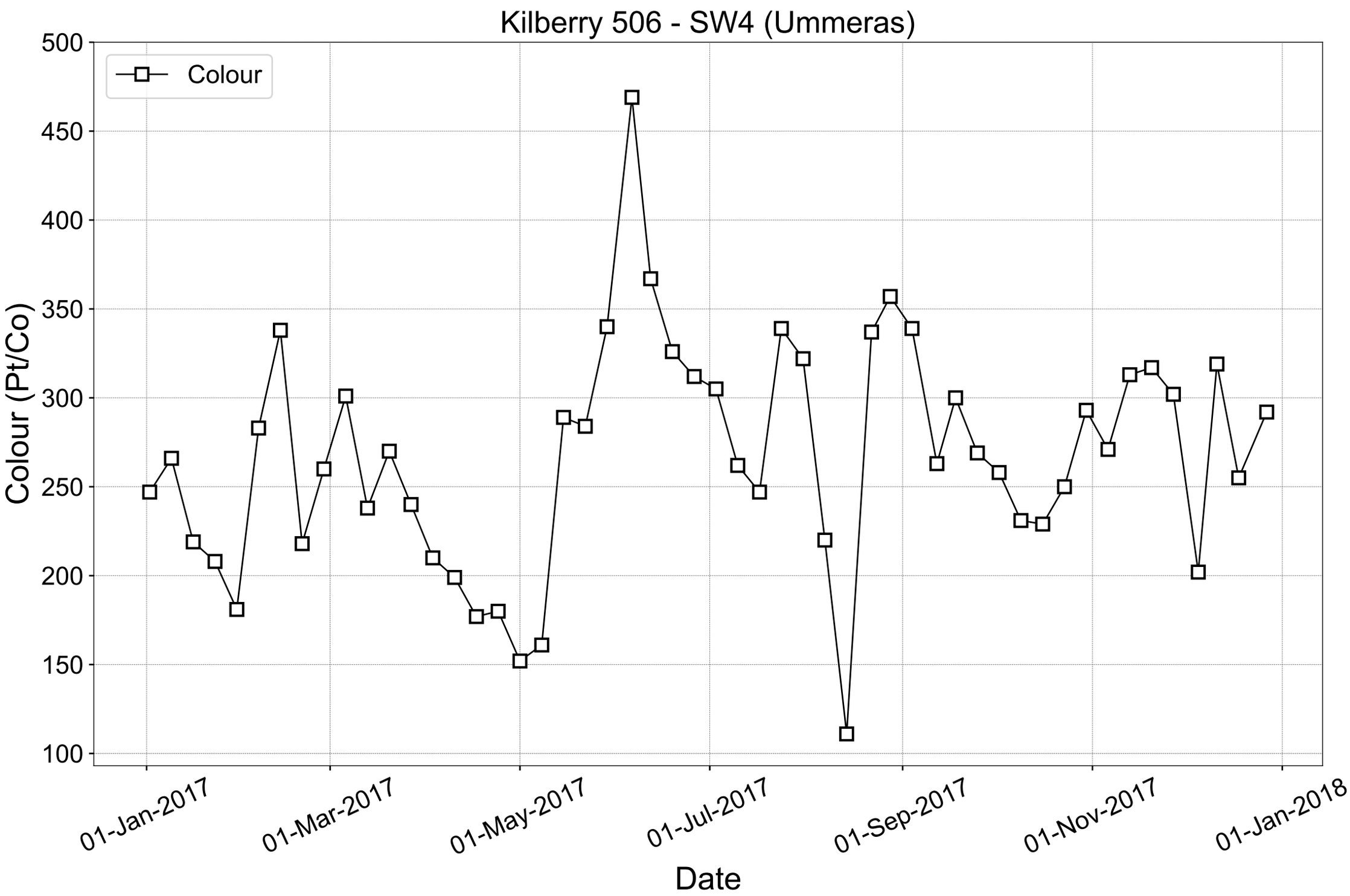
X	Y	Bog	SW	Monitoring	Sampled	pH	SS	TS	Ammonia	TP	COD	Colour
262581.53	214669.12	Ummeras	SW-6	Q1 17	14/03/2017	7.4	5	248	2.5	0.05	90	332
262280.17	215578.65	Ummeras	SW-6A	Q1 17	14/03/2017	7.8	5	294	1.3	0.05	100	255
283610.02	228467.98	Prosperous	SW-15	Q1 17	14/03/2017	7.7	5	212	3.6	0.05	58	159
266654.80	199892.88	Kilberry	SW-1	Q2 17	09/06/2017	7.4	5	161	3.3	0.05	108	345
267239.42	201958.36	Kilberry	SW-2	Q2 17	09/06/2017	7.1	5	156	0.76	0.06	112	450
267200.77	201949.29	Kilberry	SW-3	Q2 17	09/06/2017	7.1	5	158	1.1	0.06	115	453
268870.08	199128.68	Kilberry	SW-3A	Q2 17	09/06/2017	7	6	126	2.1	0.05	96	334
270082.33	199354.32	Kilberry	SW-3B	Q2 17	09/06/2017	7.9	8	258	0.08	0.08	82	125
270684.25	201649.88	Kilberry	SW3-C	Q2 17	09/06/2017	7.8	5	260	0.08	0.05	97	243
279548.84	233696.75	Gilltown	SW-7	Q3 17	15/09/2017	7.6	5	157	2.2	0.05	48	114
280775.39	233404.44	Gilltown	SW-9	Q3 17	15/09/2017	7.9	5	192	1.9	0.05	71	99
279677.46	231646.85	Gilltown	SW-11	Q3 17	15/09/2017	7.7	7	90	2.7	0.05	69	218
283497.47	230604.25	Prosperous	SW-16	Q3 17	15/09/2017	7.2	5	110	0.38	0.05	62	234
284083.62	229490.13	Prosperous	SW-17	Q3 17	15/09/2017	7.8	5	188	2.1	0.05	61	106
283610.02	228467.98	Prosperous	SW-15	Q3 17	15/09/2017	7.4	7	112	0.39	0.05	68	191
282032.94	221405.51	Allen	SW-13	Q4 17	05/12/2017	7.4	5	372	1.6	0.05	41	221
279374.51	221128.33	Allen	SW-14	Q4 17	01/12/2017	5.1	5	94	0.6	0.05	79	224
279522.44	220979.75	Allen	SW-14A	Q4 17	01/12/2017	5.6	2	126	0.16	0.05	101	397

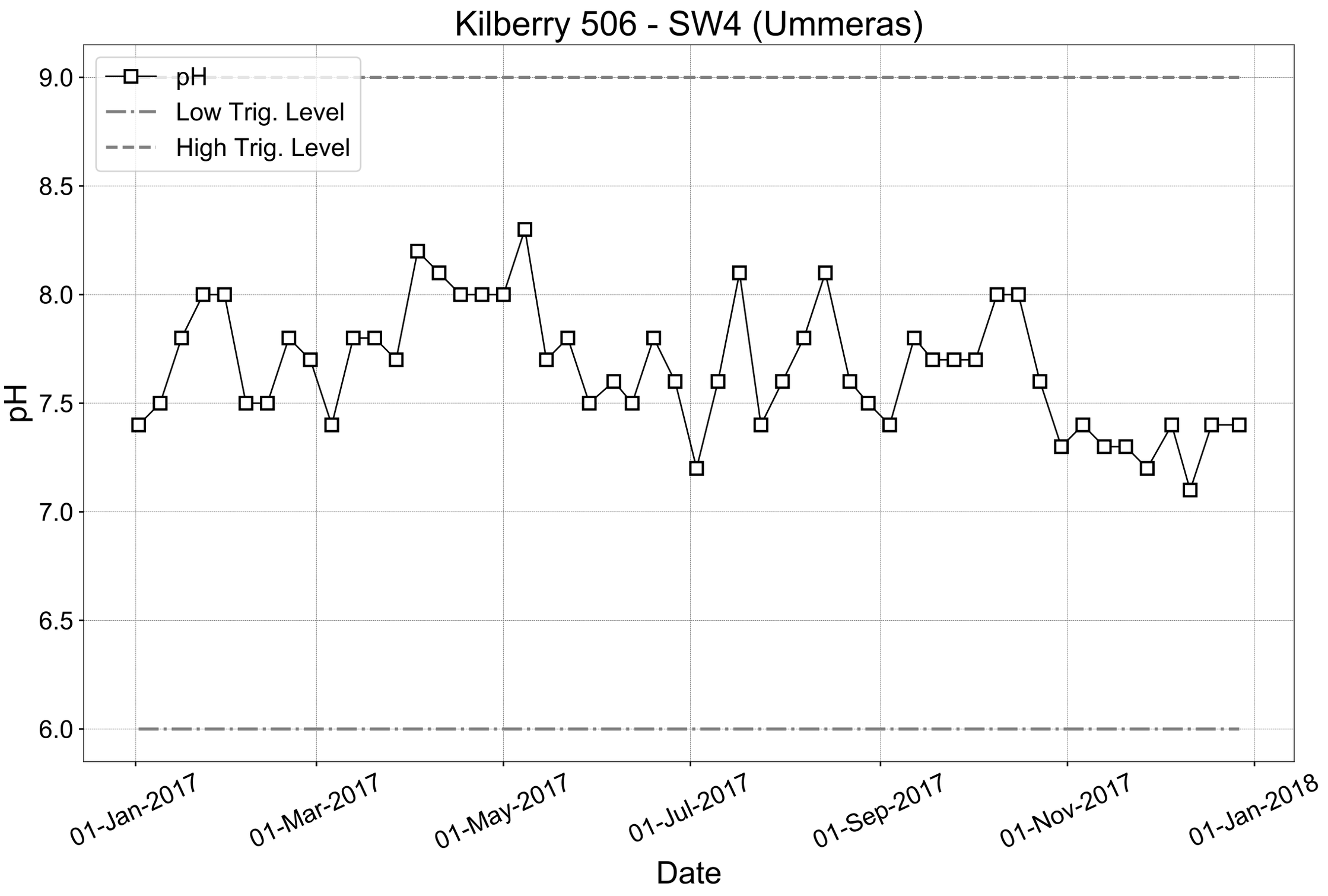


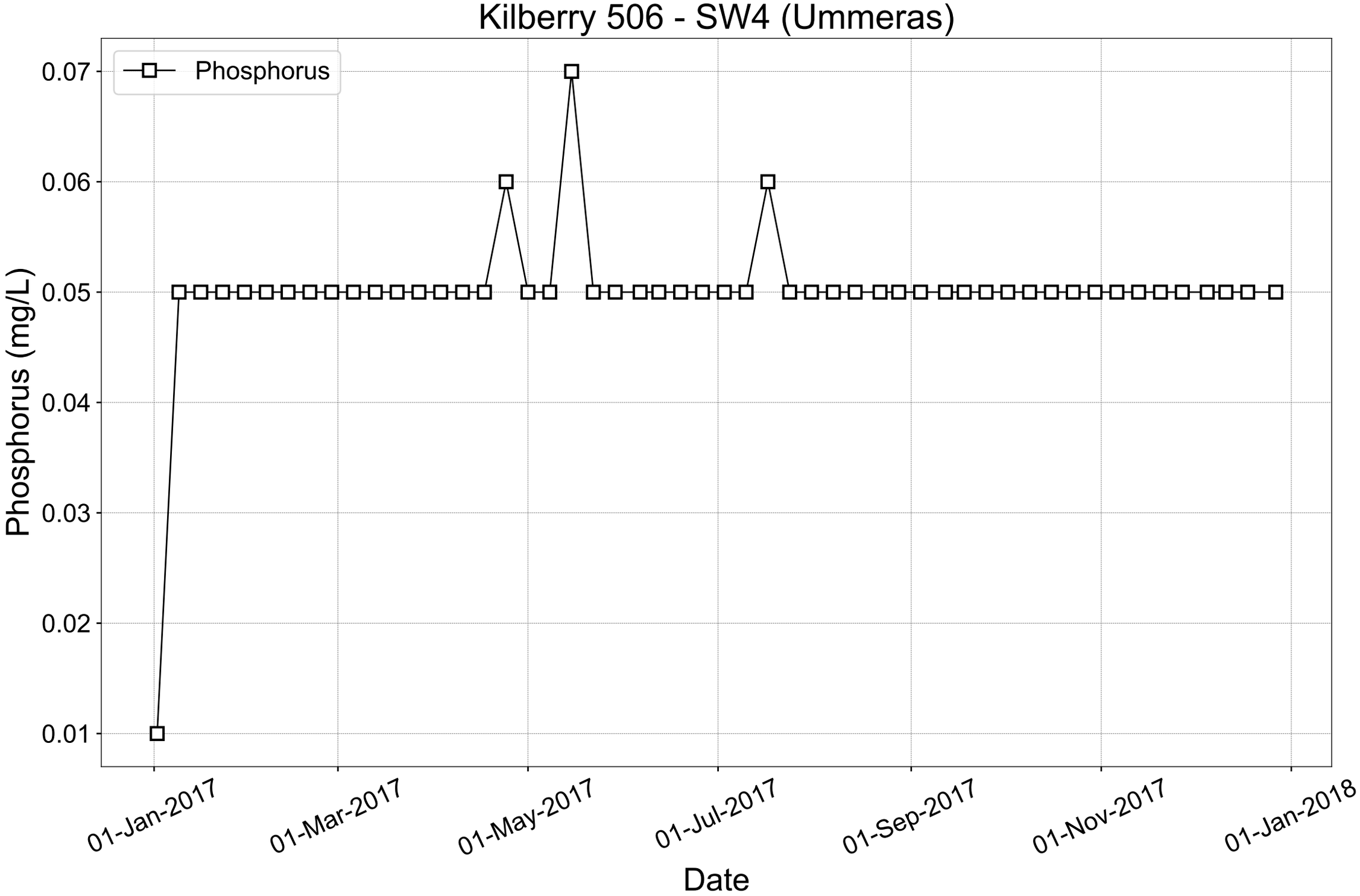
Ummeras bog is an active production bog with the composite sampler located here during 2015, 16 & 17. The composite sampler takes a flow proportional composite sample over a 24 hour period. The sampler had limited downtime during the period and returned 52 weekly ammonia results during the period of this 2017 AER. The ammonia trigger level of 4.53mg/l, as agreed with the Agency, was exceeded once during the reporting period. Overall the results, which showed a neutral trend in 15 and 16 has started to show a downward trend over the 3yrs data analysis as peat extraction continues and this is in-line with typical trends submitted to the EPA in 2013 as required by condition 6.14. It has been established that the most relevant influencing variable on Ammonia is rainfall and the trend analysis above indicates linkage between high rainfall events and ammonia concentrations.

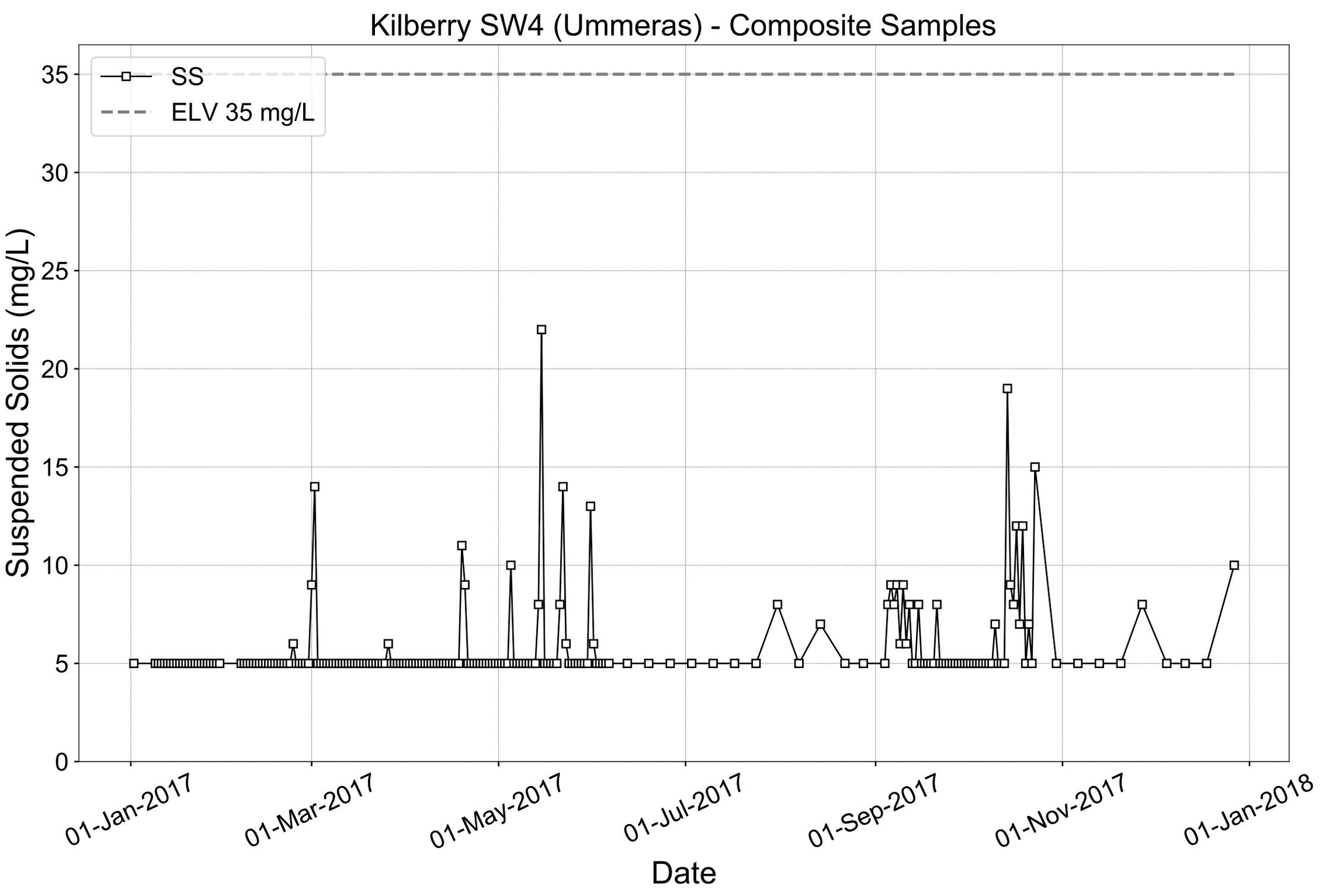

Kilberry 506 - SW4 (Ummeras)
Ammonia
Trig. Level (4.53 mg/L)
Ammonia (mg/L)
0
1
2
3
4
5
6
01-Jan-2017
01-Mar-2017
01-May-2017
01-Jul-2017
01-Sep-2017
01-Nov-2017
01-Jan-2018
Date

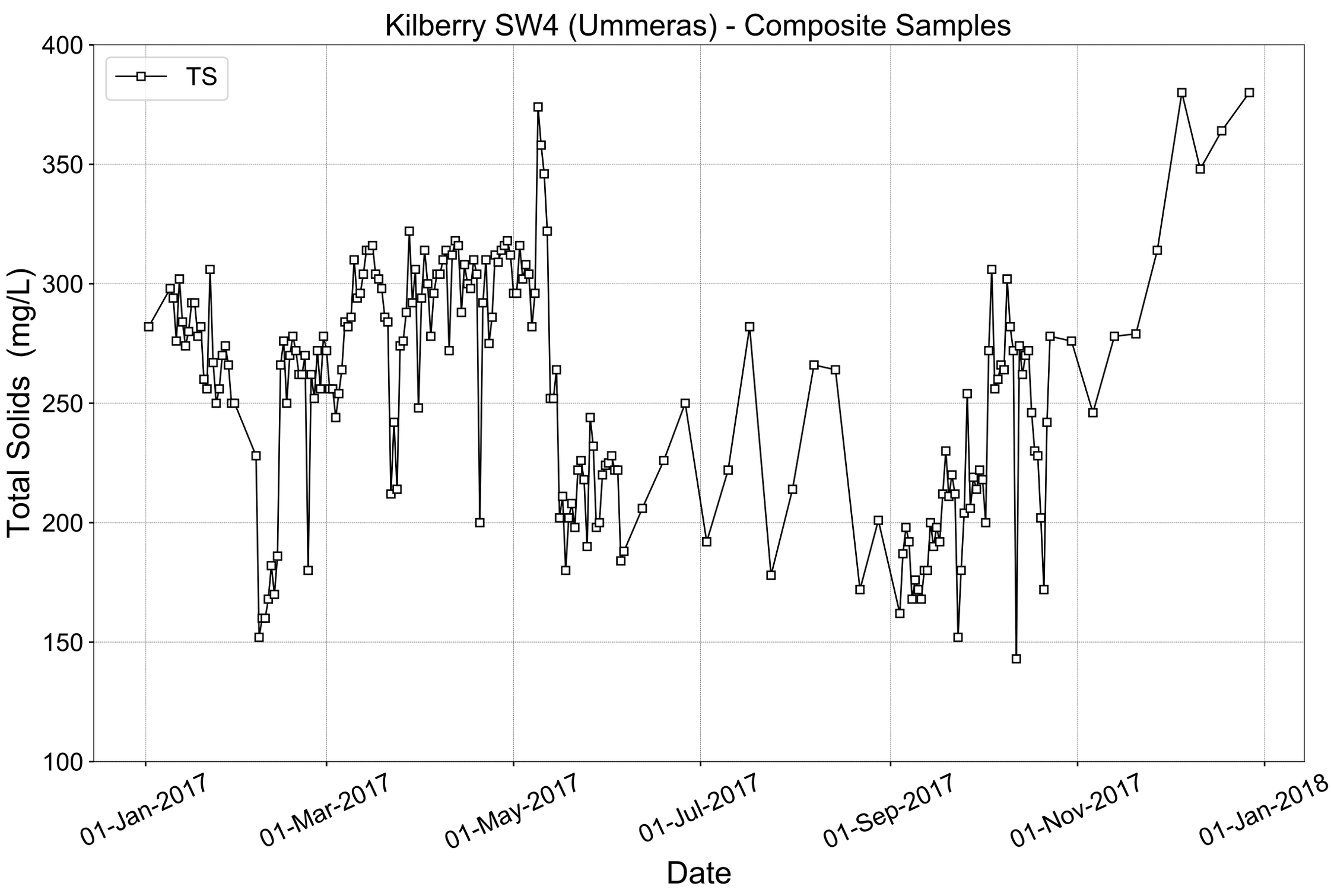

Kilberry SW4 (Ummeras) - Composite Samples
COD
Trig. Level (100 mg/L)
COD (mg/L)
140
120
100
80
60
40
01-Jan-2017
01-Mar-2017
01-May-2017
01-Jul-2017
01-Sep-2017
01-Nov-2017
01-Jan-2018
Date


Kilberry 506 - SW4 (Ummeras)
Colour
Colour (Pt/Co)
500
450
400
350
300
250
200
150
100
01-Jan-2017
01-Mar-2017
01-May-2017
01-Jul-2017
01-Sep-2017
01-Nov-2017
01-Jan-2018
Date


Kilberry 506 - SW4 (Ummeras)
pH
Low Trig. Level
High Trig. Level
9.0
8.5
8.0
7.5
7.0
6.5
6.0
pH
01-Jan-2017
01-Mar-2017
01-May-2017
01-Jul-2017
01-Sep-2017
01-Nov-2017
01-Jan-2018
Date


Kilberry 506 - SW4 (Ummeras)
Phosphorus
0.07
0.06
0.05
0.04
0.03
0.02
0.01
Phosphorus (mg/L)
01-Jan-2017
01-Mar-2017
01-May-2017
01-Jul-2017
01-Sep-2017
01-Nov-2017
01-Jan-2018
Date


Kilberry SW4 (Ummeras) - Composite Samples
SS
ELV 35 mg/L
Suspended Solids (mg/L)
0
5
10
15
20
25
30
35
01-Jan-2017
01-Mar-2017
01-May-2017
01-Jul-2017
01-Sep-2017
01-Nov-2017
01-Jan-2018
Date


Kilberry SW4 (Ummeras) - Composite Samples
TS
Total Solids (mg/L)
400
350
300
250
200
150
100
01-Jan-2017
01-Mar-2017
01-May-2017
01-Jul-2017
01-Sep-2017
01-Nov-2017
01-Jan-2018
Date

Yard Discharge Quarterly Results 2					
Licence: P0506-01					
Works: Kilberry					
Month	**Ummerus SWE 1 COD**	**Allen SWE 1 COD**	**Gilltown SWE 1 COD**	**Prosperous SWE 1 COD**	**Trigger Levels**
Jan					100
Feb					100
Mar	72	52	55	70	100
Apr					100
May					100
June	90	63	46	55	100
July					100
Aug					100
Sep	40	85	73	84	100
Oct					100
Nov					100
Dec	55	59	46	50	100

Guidance to completing the PRTR workbook

PRTR Returns Workbook

Version 1.1.19

REFERENCE YEAR	2017

1. FACILITY IDENTIFICATION

Parent Company Name	Bord na Móna Energy Limited
Facility Name	Bord na Móna Energy Limited (Kilberry)
PRTR Identification Number	P0506
Licence Number	P0506-01

Classes of Activity

No.	class_name
	Refer to PRTR class activities below

Address 1	Kilberry Group
Address 2	c/o Ballivor Works
Address 3	Ballivor, Navan
Address 4	
	Meath
Country	Ireland
Coordinates of Location	-7.02977 53.5322
River Basin District	IEEA
NACE Code	0892
Main Economic Activity	Extraction of peat
AER Returns Contact Name	Enda Mc Donagh
AER Returns Contact Email Address	enda.mcdonagh@bnm.ie
AER Returns Contact Position	Head Of Environmental Management
AER Returns Contact Telephone Number	0579345911
AER Returns Contact Mobile Phone Number	0862370816
AER Returns Contact Fax Number	0579345160
Production Volume	194227.0
Production Volume Units	Tonnes
Number of Installations	5
Number of Operating Hours in Year	2216
Number of Employees	50
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# : P0506 | Facility Name : Bord na Móna Energy Limited (Kilberry) | Filename : P0506_2017.xls | Return Year : 2017 | 08/03/2018 11:18

SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

RELEASES TO AIR					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 PRTR POLLUTANTS

RELEASES TO AIR					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 C : REMAINING POLLUTANT EMISSIONS (As required in your Licence)

RELEASES TO AIR					Please enter all quantities in this section in KGs			
POLLUTANT		METHOD			QUANTITY			
			Method Used		DM01			
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
210	**Dust**	E	OTH	VDI 2119 Blatt 2/Part 2	0.0	0.03626	0.0	0.03626

* 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 Móna Energy Limited (Kilberry)

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

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			
			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 PRTR POLLUTANTS

RELEASES TO WATERS					Please enter all quantities in this section in KGs			
POLLUTANT					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 C : REMAINING POLLUTANT EMISSIONS (as required in your Licence)

RELEASES TO WATERS					Please enter all quantities in this section in KGs			
POLLUTANT					QUANTITY			
			Method Used		SW4			
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	0.0	0.0	0.0	0.0

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

4.3 RELEASES TO WASTEWATER OR SEWER

Link to previous years emissions data

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

SECTION A : PRTR POLLUTANTS

RELEASES TO LAND					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
					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		
			Method Used				
Pollutant No.	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

5. ONSITE TREATMENT & OFFSITE TRANSFERS OF WASTE

Please enter all quantities on this sheet in Tonnes

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	247.0	wastes from mineral non-metalliferous excavation	D1	E	Volume Calculation	Onsite of generati	Bord na Mona Energy Ltd,IPPC P0506-01	Boora,Leabeg,Tullamore,Co Offaly,Ireland		
Within the Country	02 01 04	No	129.86	waste plastics (except packaging)	R3	M	Weighed	Offsite in Ireland	Ryston Industeries Ltd,WFP-KE-12-0066-01 & WCP-KE-10-0569-01	Castledermot,Co Kildare,,.,.,Ireland		
Within the Country	13 02 05	Yes	2.24	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 Environmental Ltd,184-1,Clominam Ind Est,.,Portlaoise,Co Laois ,Ireland	Clominam Ind Est,.,Portlaoise,Co Laois ,Ireland
Within the Country	17 04 07	No	9.41	mixed metals	R4	M	Weighed	Offsite in Ireland	AES Ltd,053/OY/39/02	Cappincue,Tullamore,Co Offaly,.,Ireland		
Within the Country	20 03 01	No	9.6	mixed municipal waste	D5	M	Weighed	Offsite in Ireland	AES Ltd,053/OY/39/02	Cappincue,Tullamore,Co Offaly,.,Ireland		
Within the Country	20 03 01	No	1.01	mixed municipal waste	D5	M	Weighed	Offsite in Ireland	AES Ltd,053/OY/39/02	Cappincue,Tullamore,Co Offaly,.,Ireland		
Within the Country	20 03 04	No	9.23	septic tank sludge	R10	C	Volume Calculation	Offsite in Ireland	Enva Ireland Ltd,184-1	Clonminam Ind Estate,Portlaoise,Co Laois,.,Ireland		
Within the Country	13 05 03	Yes	16.0	interceptor sludges	R1	C	Volume Calculation	Offsite in Ireland	Enva Ireland Ltd,184-1	Clonminam Ind Estate,Portlaoise,Co Laois,.,Ireland		
To Other Countries	16 01 07	Yes	0.21	oil filters	R4	C	Volume Calculation	Abroad	Enva Ireland Ltd,184-1	Clonminam Ind Estate,Portlaoise,Co Laois,.,Ireland	R.D. Recycling,Reg no 51727/1/KD,Houthalen,.,.,.,Belgium	Houthalen,.,.,.,Belgium
Within the Country To Other Countries	15 02 02	Yes	0.29	absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by dangerous substances	R1	C	Volume Calculation	Offsite in Ireland Abroad	Enva Ireland Ltd,184-1	Clonminam Ind Estate,Portlaoise,Co Laois,.,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	2017
Licence Register Number	P0507-01
Name of site	Bord na Mona Cuil na Mona
Site Location	Boora, Leabeg, Tullamore, Co Offaly
NACE Code	0892
Class/Classes of Activity	1.4
National Grid Reference (6E, 6 N)	180050, 319540

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, ridiging and harvesting of peat into stockpiles and secondly the transportation of that peat via an internal rail network to the lorry outloading facilities for transportation to a Moss Peat Factory or direct to the Docks.There was no Production achieved . Infrastructurally, there was no bog development. From an environmental perspective silt pond upgrade work is ongoing . The quarterly grab sampling was 100% compliant with the licence ELV, with 3 trigger level relating to COD and 1 Ammonia reached. The composite sampling regeime was also fully compliant with ELV, with trigger levels reached on 16 occasions for COD. There were no environmental complaint 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. The composite sampler experienced some technical difficulties during the reporting period and it was therefore decided to send it away for a complete service / overhaul which included the replacement of some of the major component parts.

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	Date
Group/Facility manager (or nominated, suitably qualified and experienced deputy)	08/03/2018.

AIR-summary template	Lic No:	P0507-01	P0507-01	2017

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	There are no dust sensetive locations or dust monitoring locations within the licence area

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	NA	
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	NA	

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? 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)	SELECT	
5	Did continuous monitoring equipment experience downtime? If yes please record downtime in table A2 below	SELECT	
6	Do you have a proactive service agreement for each piece of continuous monitoring equipment?	SELECT	
7	Did your site experience any abatement system bypasses? If yes please detail them in table A3 below	SELECT	

AIR-summary template Lic No: P0507-01 P0507-01 2017

Table A2: Summary of average emissions -continuous monitoring

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

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 — SELECT

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

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

Reporting year	Total solvent input on site (kg)	Total VOC emissions to Air from entire site (direct and fugitive)	Total VOC emissions as %of solvent input	Total Emission Limit Value (ELV) in licence or any revision 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 gases(kg)	Solvents lost in water (kg)	Collected waste solvent (kg)	Fugitive Organic Solvent (kg)	Solvent released in other ways e.g. by-passes (kg)	Solvents destroyed onsite through physical reaction e.g. incineration(kg)	Total emission of Solvent to air (kg)
							Total	

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER) Lic No: P0507-01 Year P0507-01

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

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)

				Additional information
3	Was there any result in breach of licence requirements? If yes please provide brief details in the comment section of Table W3 below		SELECT	
4	Was all monitoring carried out in accordance with EPA guidance and checklists for Quality of Aqueous Monitoring Data Reported to the EPA? If no please detail what areas require improvement in additional information box	External /Internal Lab Quality checklist / Assessment of results checklist	Yes	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: P0507-01 Year P0507-01

Continuous monitoring

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

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

6	Did continuous monitoring equipment experience downtime? **If yes please record downtime in table W4 below**	Yes	Total of 66 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

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: P0507-01 | Year 2017

Bund testing — dropdown menu click to see options

			Additional information
1	Are you required by your licence to undertake integrity testing on bunds and containment structures ? if yes please fill out table B1 below listing all **new bunds and containment structures** on site, in addition to **all bunds which failed** the integrity test-**all bunding structures which failed including mobile bunds must be listed in the table below, please include all bunds outside the licenced testing period** (mobile bunds and chemstore included)	Yes	No fixed Bunds on site.
2	Please provide integrity testing frequency period	Other (2 Yearly)	
3	Does the site maintain a register of bunds, underground pipelines (including stormwater and foul), Tanks, sumps and containers? (containers refers to "Chemstore" type units and mobile bunds)	Yes	There are no fixed bunds in the Cuil na Mona licence and therefore integrity testing is not an issue. Bulk fuel is stored at Cuil na Mona factory which is not part of the licence footprint.
4	How many bunds are on site?	0	
5	How many of these bunds have been tested within the required test schedule?	0	
6	How many mobile bunds are on site?	5	This includes barrel trays located within workshops
7	Are the mobile bunds included in the bund test schedule?	No	
8	How many of these mobile bunds have been tested within the required test schedule?	0	
9	How many sumps on site are included in the integrity test schedule?	0	
10	How many of these sumps are integrity tested within the test schedule?	0	
	Please list any sump integrity failures in table B1		
11	Do all sumps and chambers have high level liquid alarms?	SELECT	
12	If yes to Q11 are these failsafe systems included in a maintenance and testing programme?	SELECT	
13	Is the Fire Water Retention Pond included in your integrity test programme?	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)
	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

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

Pipeline/underground structure testing

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

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

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

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

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

Groundwater/Soil monitoring template	Lic No:	P0507-01	Year	2017

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

Groundwater/Soil monitoring template Lic No: P0507-01 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)

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

Table 3: Soil results

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

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

Environmental Liabilities template	Lic No:	P0507-01	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:	P0507-01	Year	2017

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	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. Deploy Hydraulic Harrows at dust sensitive areas Headland Peat Collection. Continue with the collection of headland peat, particularly at dust sensitive locations.	70	No personnel received training in 2017 as no production, with limited activities in general.	Section Head	Improved Environmental Management Practices
Waste reduction/Raw material usage efficiency	Waste Streamlining.It is planned to continue with and where possible improve the current waste management service provided by AES Ltd	100	Quarterly waste reports are returned for records/filing and waste streams are segrated on site to maximise recycling potential. As activities limited there was no waste produced in 2017.	Section Head	Improved Environmental Management Practices
Reduction of emissions to Water	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.	100	No personnel received training in 2017 as no production, with limited activities in general.	Section Head	Improved Environmental Management Practices
Materials Handling/Storage/Bunding	Increased bund capacity will be provided where required.	0	No additional bund capacity was required during 2017	Individual	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	No polyethyelene was sent off site in 2017. Procurement also exploring the possibility of securing further recyclers.	Individual	Improved Environmental Management Practices

Noise monitoring summary report	Lic No:	P0507-01	Year	2017

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 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:	P0507-01	Year	2017

				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	SEAI - Large Industry Energy Network (LIEN)	Yes	The site attained accrediation 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)	691.818	88.81		
Total Energy Generated (MWHrs)				
Total Renewable Energy Generated (MWHrs)				
Electricity Consumption (MWHrs)	3.116	7.044		
Fossil Fuels Consumption:				
Heavy Fuel Oil (m3)				
Light Fuel Oil (m3)	67.779	8.048		
Natural gas (m3)				
Coal/Solid fuel (metric tonnes)				
Peat (metric tonnes)				
Renewable Biomass				
Renewable energy generated on site				

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

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

Table R2 Water usage on site

					Water Emissions	Water Consumption	
Water use	Water extracted Previous year m3/yr.	Water extracted Current year m3/yr.	Production +/- % compared to previous reporting year**	Energy Consumption +/- % vs overall site production*	Volume Discharged back to environment(m^3yr):	Volume used i.e not discharged to environment e.g. released as steam m3/yr	Unaccounted for Water:
Groundwater							
Surface water							
Public supply							
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: P0507-01 Year 2017

Table R3 Waste Stream Summary

	Total	Landfill	Incineration	Recycled	Other
Hazardous (Tonnes)	0	0	0	0	0
Non-Hazardous (Tonnes)	140.4	0	0	0	140.4

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: P0507-01 Year 2017

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	There were no complaints of an environmental nature.

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		

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

Complaints and Incidents summary template Lic No: P0507-01 Year 2017

Incidents		
		Additional information
Have any incidents occurred on site in the current reporting year? Please list all incidents for current reporting year in Table 2 below	Yes	All reportable incidents related to trigger levels for Ammonia and COD

*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	Likelihood of reoccurence
27/02/2017	Trigger level reached	SW8 Cuil na Mona	1. Minor	Water	Other (add details)	Naturally Occuring	Normal activities	INCI011766	New	Inspected Outfall	ENSURE SILT PONDS ARE CLEANED AS PER LICENCE CONDITION	Complete	Medium
07/03/2017	Trigger level reached	SW8 Cuil na Mona	1. Minor	Water	Other (add details)	Naturally Occuring	Normal activities	INCI011814	Recurring	Inspected Outfall	ENSURE SILT PONDS ARE CLEANED AS PER LICENCE CONDITION	Complete	Medium
13/03/2017	Trigger level reached	SW8 Cuil na Mona	1. Minor	Water	Other (add details)	Naturally Occuring	Normal activities	INCI011855	Recurring	Inspected Outfall	ENSURE SILT PONDS ARE CLEANED AS PER LICENCE CONDITION	Complete	Medium
20/03/2017	Trigger level reached	SW8 Cuil na Mona	1. Minor	Water	Other (add details)	Naturally Occuring	Normal activities	INCI010966	New	Inspected Outfall	ENSURE SILT PONDS ARE CLEANED AS PER LICENCE CONDITION	Complete	Medium
15/05/2017	Trigger level reached	SW8 Cuil na Mona	1. Minor	Water	Other (add details)	Naturally Occuring	Normal activities	INCI012342	New	Inspected Outfall	ENSURE SILT PONDS ARE CLEANED AS PER LICENCE CONDITION	Complete	Medium
09/06/2017	Trigger level reached	SW9 Cuil na Mona	1. Minor	Water	Other (add details)	Naturally Occuring	Normal activities	INCI012341	New	Inspected Outfall	ENSURE SILT PONDS ARE CLEANED AS PER LICENCE CONDITION	Complete	Medium
09/06/2017	Trigger level reached	SW14a Cuil na Mona	1. Minor	Water	Other (add details)	Naturally Occuring	Normal activities	INCI012394	New	Inspected Outfall	ENSURE SILT PONDS ARE CLEANED AS PER LICENCE CONDITION	Complete	Medium
12/06/2017	Trigger level reached	SW8 Cuil na Mona	1. Minor	Water	Other (add details)	Naturally Occuring	Normal activities	INCI012435	New	Inspected Outfall	ENSURE SILT PONDS ARE CLEANED AS PER LICENCE CONDITION	Complete	Medium
19/07/2017	Trigger level reached	SW8 Cuil na Mona	1. Minor	Water	Other (add details)	Naturally Occuring	Normal activities	INCI012506	New	Inspected Outfall	ENSURE SILT PONDS ARE CLEANED AS PER LICENCE CONDITION	Complete	Medium
22/08/2017	Trigger level reached	SW16 Cuil na Mona	1. Minor	Water	Other (add details)	Naturally Occuring	Normal activities	INCI012788	New	Inspected Outfall	ENSURE SILT PONDS ARE CLEANED AS PER LICENCE CONDITION	Complete	Medium
18/09/2017	Trigger level reached	SW8 Cuil na Mona	1. Minor	Water	Other (add details)	Naturally Occuring	Normal activities	INCI012943	Recurring	Inspected Outfall	ENSURE SILT PONDS ARE CLEANED AS PER LICENCE CONDITION	Complete	Medium
28/09/2017	Trigger level reached	SW1 Cuil na Mona	1. Minor	Water	Other (add details)	Naturally Occuring	Normal activities	INCI013018	New	Inspected Outfall	ENSURE SILT PONDS ARE CLEANED AS PER LICENCE CONDITION	Complete	Medium
25/09/2017	Trigger level reached	SW8 Cuil na Mona	1. Minor	Water	Other (add details)	Naturally Occuring	Normal activities	INCI013160	Recurring	Inspected Outfall	ENSURE SILT PONDS ARE CLEANED AS PER LICENCE CONDITION	Complete	Medium
09/10/2017	Trigger level reached	SW8 Cuil na Mona	1. Minor	Water	Other (add details)	Naturally Occuring	Normal activities	INCI013248	Recurring	Inspected Outfall	ENSURE SILT PONDS ARE CLEANED AS PER LICENCE CONDITION	Complete	Medium
16/10/2017	Trigger level reached	SW8 Cuil na Mona	1. Minor	Water	Other (add details)	Naturally Occuring	Normal activities	INCI013290	Recurring	Inspected Outfall	ENSURE SILT PONDS ARE CLEANED AS PER LICENCE CONDITION	Complete	Medium
23/10/2017	Trigger level reached	SW8 Cuil na Mona	1. Minor	Water	Other (add details)	Naturally Occuring	Normal activities	INCI013338	Recurring	Inspected Outfall	ENSURE SILT PONDS ARE CLEANED AS PER LICENCE CONDITION	Complete	Medium
31/10/2017	Trigger level reached	SW8 Cuil na Mona	1. Minor	Water	Other (add details)	Naturally Occuring	Normal activities	INCI013391	Recurring	Inspected Outfall	ENSURE SILT PONDS ARE CLEANED AS PER LICENCE CONDITION	Complete	Medium
20/11/2017	Trigger level reached	SW8 Cuil na Mona	1. Minor	Water	Other (add details)	Naturally Occuring	Normal activities	INCI013465	Recurring	Inspected Outfall	ENSURE SILT PONDS ARE CLEANED AS PER LICENCE CONDITION	Complete	Medium
11/12/2017	Trigger level reached	SW8 Cuil na Mona	1. Minor	Water	Other (add details)	Naturally Occuring	Normal activities	INCI013619	Recurring	Inspected Outfall	ENSURE SILT PONDS ARE CLEANED AS PER LICENCE CONDITION	Complete	Medium
12/06/2017	Trigger level reached	SW6 Cuil na Mona	1. Minor	Water	Other (add details)	Naturally Occuring	Normal activities	INCI012299	Recurring	Inspected Outfall	ENSURE SILT PONDS ARE CLEANED AS PER LICENCE CONDITION	Complete	Medium

Total number of incidents current year	20
Total number of incidents previous year	11
% reduction/ increase	81

WASTE SUMMARY Lic No: P0507-01 Year 2017

SECTION A-PRTR ON SITE WASTE TREATMENT AND WASTE TRANSFERS TAB- TO BE COMPLETED BY ALL IPPC AND WASTE FACILITIES PRTR facility logon dropdown list click to see options

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

			Additional Information
1	Were any wastes accepted onto your site for recovery or disposal or treatment prior to recovery or disposal within the boundaries of your facility ?; (waste generated within your boundaries is to be captured through PRTR reporting)	SELECT	
	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	SELECT	
3	Was waste accepted onto your site that was generated outside the Republic of Ireland? If yes please state the quantity in tonnes in additional information	SELECT	

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

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

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

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

SECTION D-TO BE COMPLETED BY LANDFILL SITES ONLY

Table 2 Waste type and tonnage-landfill only

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

WASTE SUMMARY Lic No: P0507-01 Year 2017

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

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

Table 5 Capping-Landfill only

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

*please note this includes daily cover area

Table 6 Leachate-Landfill only

9	Is leachate from your site treated in a Waste Water Treatment Plant?	SELECT
10	Is leachate released to surface water? If yes please complete leachate mass load information below	SELECT

Volume of leachate in reporting year(m3)	Leachate (BOD) mass load (kg/annum)	Leachate (COD) mass load (kg/annum)	Leachate (NH4) mass load (kg/annum)	Leachate (Chloride) mass load kg/annum	Leachate treatment on-site	Specify type of leachate treatment	Comments

Please ensure that all information reported in the landfill gas section is consistent with the Landfill Gas Survey submitted in conjunction with PRTR returns

Table 7 Landfill Gas-Landfill only

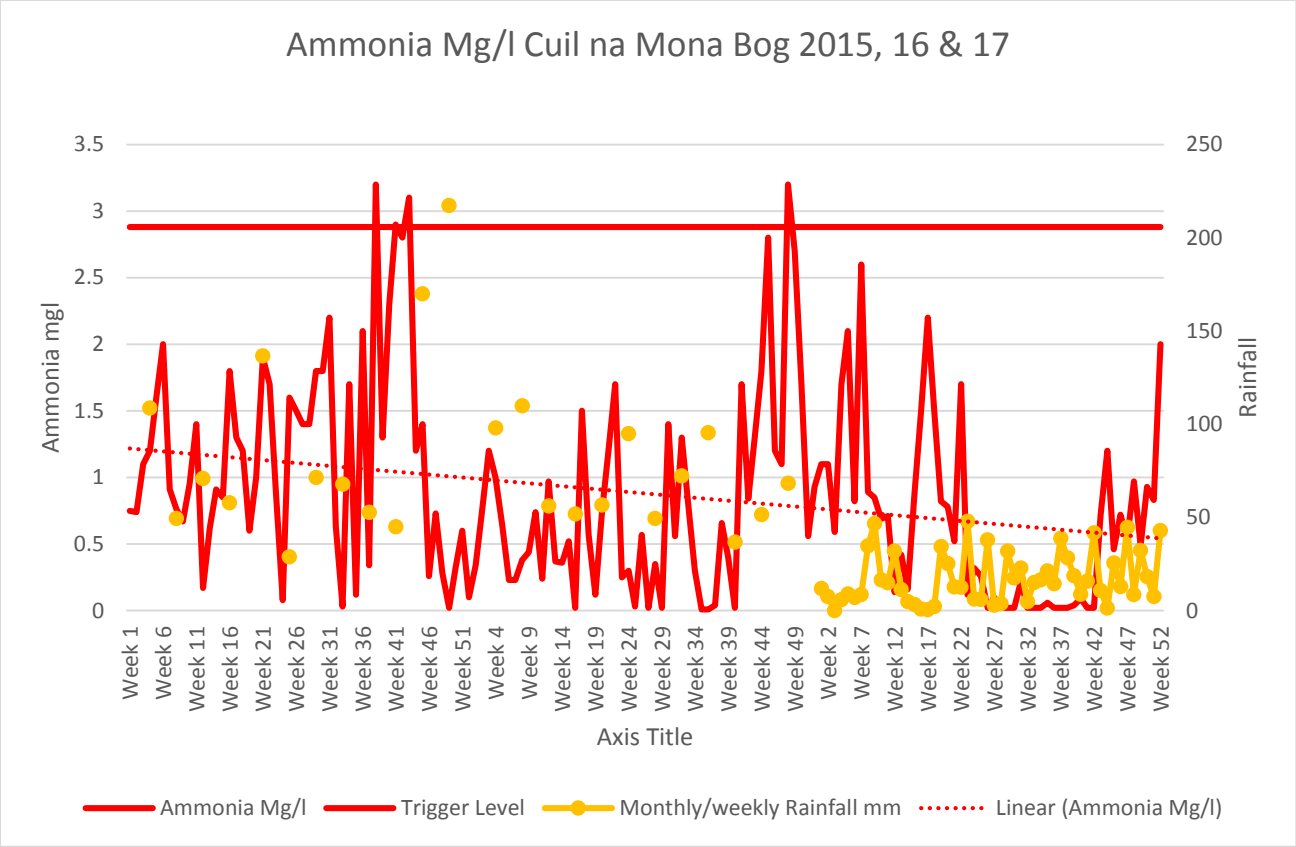
Gas Captured&Treated by LFG System m3	Power generated (MW / KWh)	Used on-site or to national grid	Was surface emissions monitoring performed during the reporting year?	Comments
			SELECT	

Cuil na Mona
Decommissioning and Rehabilitation
AER Overview 2017.

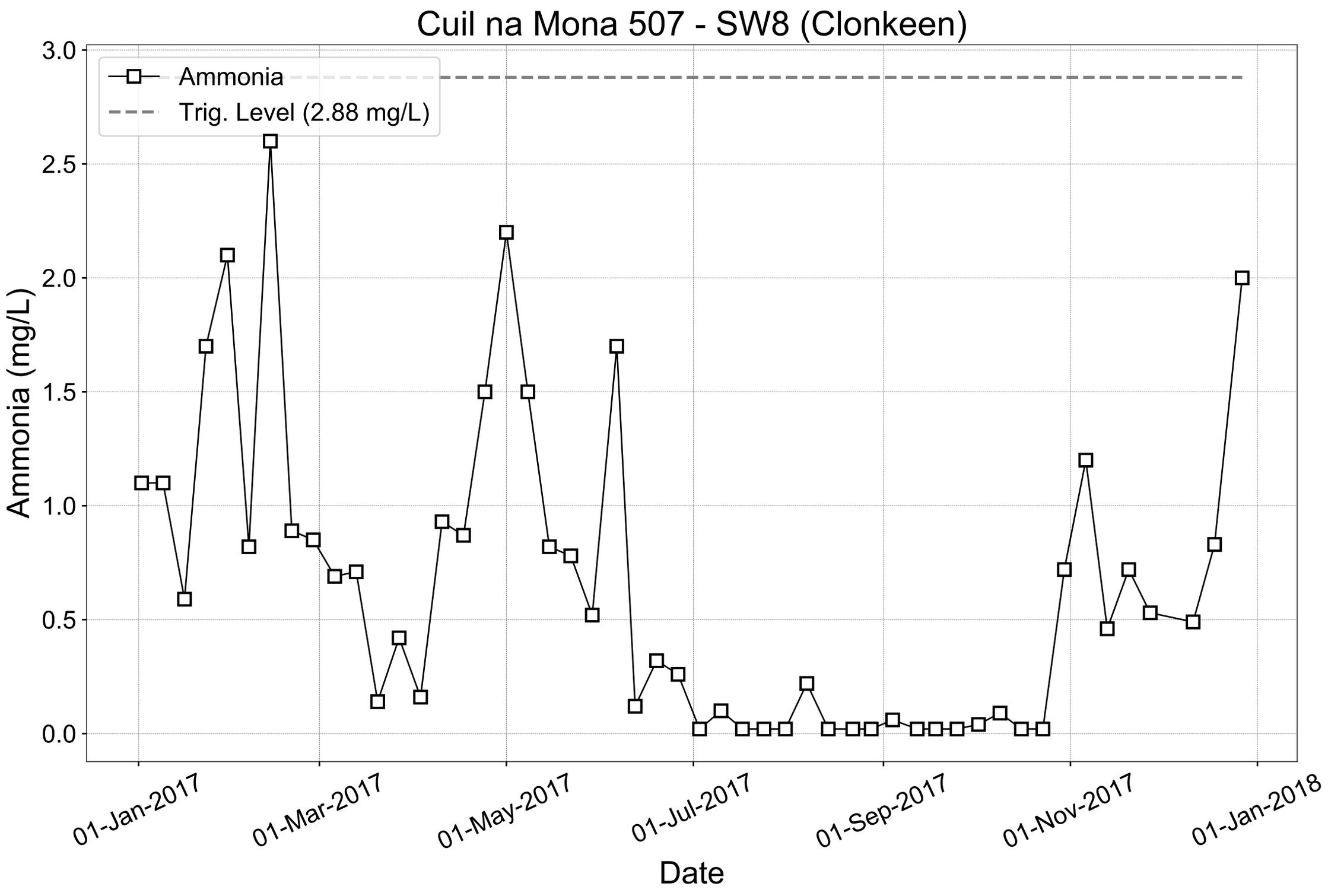
Within the Cuil na Mona licensed area (P0507-01) there were no entire bog units available for rehabilitation in 2017. Ongoing monitoring of cutaway within the Cuil na Mona bogs was carried out. Biomass trials have been established in Cuil na Mona in 2016.
Draft rehabilitation plans for the Cuil na Mona 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.
Rehabilitation work was carried out on a small area of cutaway in Cashel bog (38 ha) in 2017. This area of naturally colonising cutaway was re-wetted by drain-blocking.
Abbeyliex Bog has now been removed from the Cuil na Mona IPC licenced area. An EPA inspection audit was carried out in 2017 and the EPA inspector was satisfied that Abbeyleix bog has been decommissioned and successfully rehabilitated. This bog, still in the ownership of BnM, is now leased to the local community for amenity, conservation and education.
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.

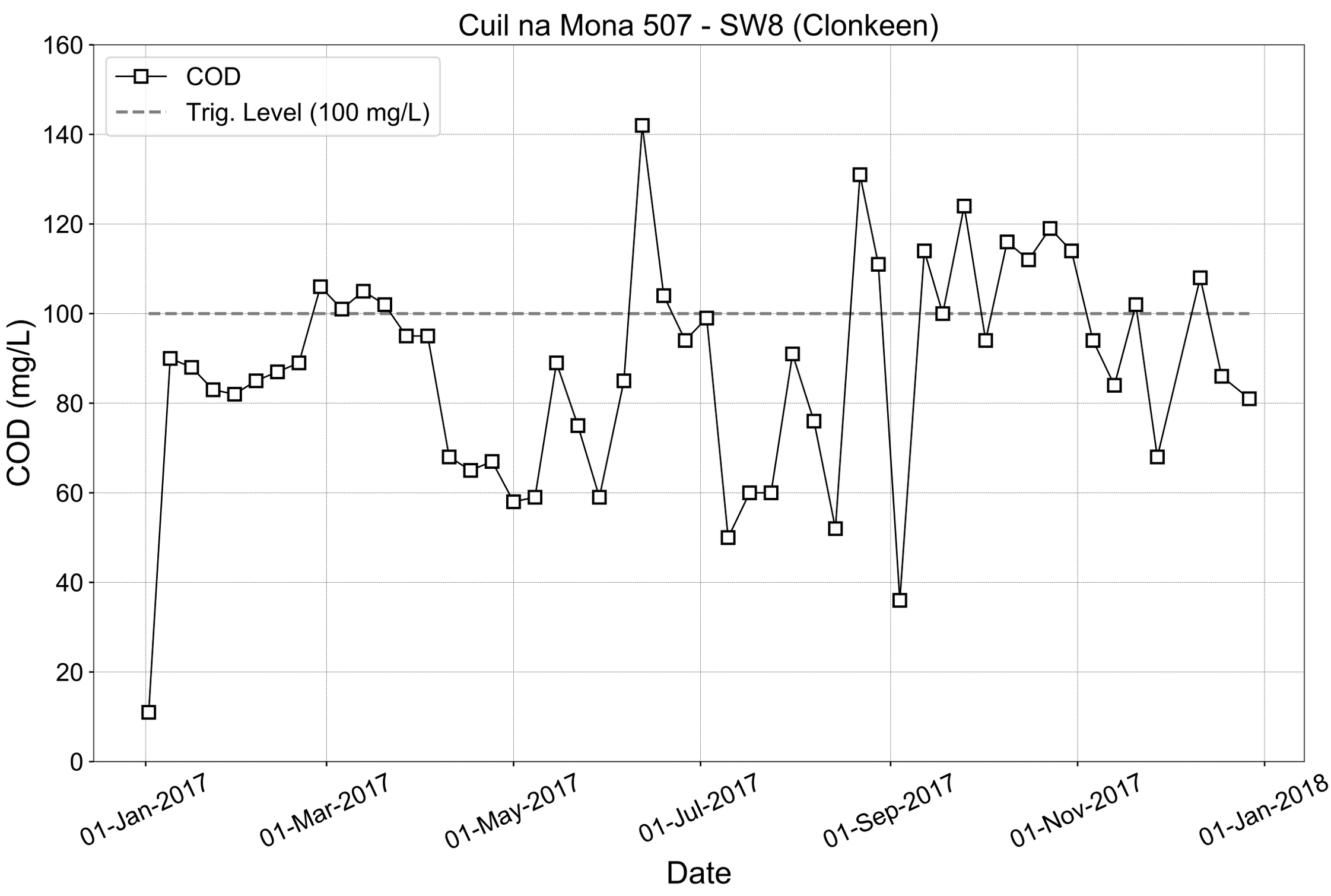
Bord na Mona Cuil na Mona
IPPC Licence P0507-01
Quarterly Grab 2017

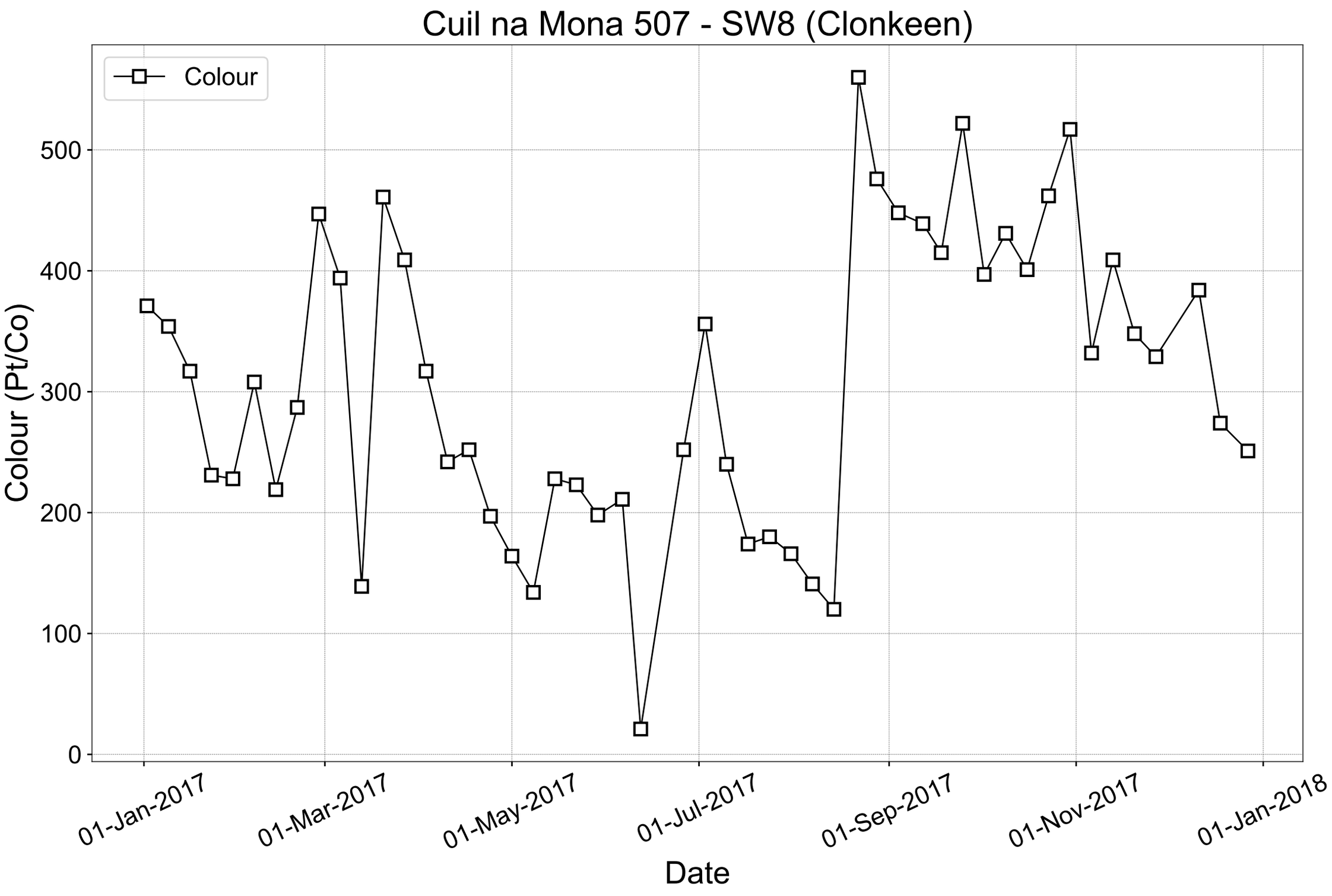
X	Y	Bog	SW	Monitoring	Sampled	pH	SS	TS	Ammonia	TP	COD	Colour
246065.49	191080.85	Cashel	SW-17	Q1 17	14/03/2017	7.1	5	112	0.1	0.06	85	392
241983.51	195773.17	Coolnamona	SW-8	Q1 17	14/03/2017	7.2	5	186	0.06	0.05	104	410
244939.80	195193.19	Coolnacarton	SW-13	Q1 17	14/03/2017	7.6	12	308	0.64	0.05	72	227
241044.03	196363.06	Coolnamona	SW-6	Q2 17	09/06/2017	7.1	5	158	0.65	0.05	107	422
243248.85	196667.60	Coolnamona	SW-9	Q2 17	09/06/2017	7.5	8	266	0.48	0.05	120	516
244939.80	195193.19	Coolnacarton	SW-13	Q2 17	09/06/2017	7.3	5	176	1	0.05	90	367
243650.14	192140.24	Coolnacarton	SW-14	Q2 17	09/06/2017	7.2	5	140	1.8	0.05	87	273
243409.81	192198.71	Coolnacarton	SW-14A	Q2 17	09/06/2017	7.2	5	194	0.78	0.05	106	421
241454.18	198643.31	Coolnamona	SW-1	Q3 17	28/09/2017	7.8	5	166	3.5	0.05	78	185
240535.90	197955.63	Coolnamona	SW-2	Q3 17	28/08/2017	7.5	5	116	0.83	0.05	66	308
242328.78	198179.85	Coolnamona	SW-3	Q3 17	28/09/2017	7.6	5	264	0.81	0.05	86	275
241983.51	195773.17	Coolnamona	SW-8	Q3 17	28/09/2017	7.3	5	172	0.55	0.05	100	426
242800.57	192359.54	Coolnacarton	SW-12	Q4 17	07/12/2017	7.4	5	258	1	0.05	77	260
245488.42	191084.90	Cashel	SW-16	Q4 17	07/12/2017	7	7	158	0.9	0.05	86	329
246075.03	192615.14	Cashel	SW-18	Q4 17	07/12/2017	7.4	13	278	1.7	0.05	92	253
246065.49	191080.85	Cashel	SW-17	Q4 17	07/12/2017	7.3	6	226	1.1	0.05	98	328

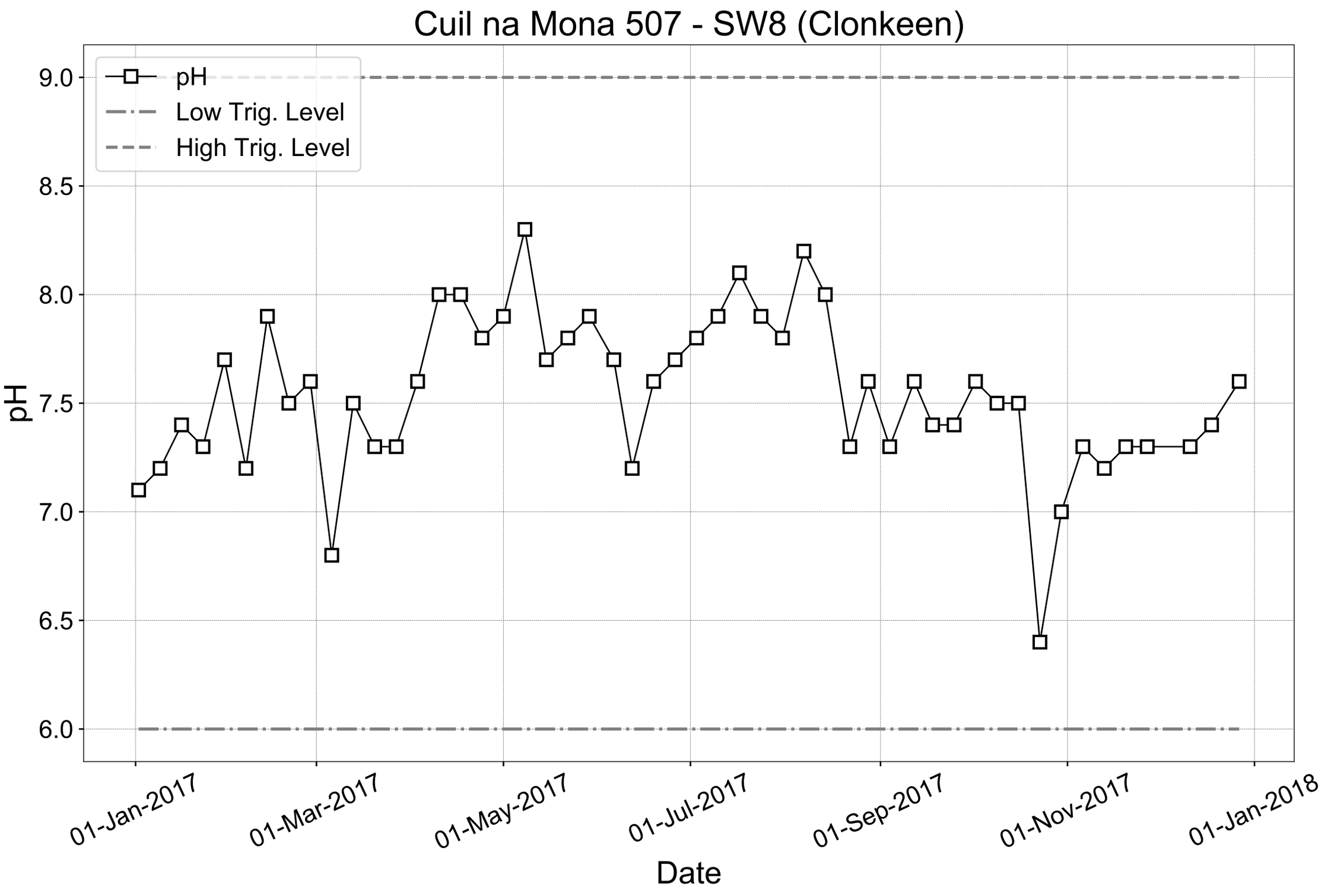


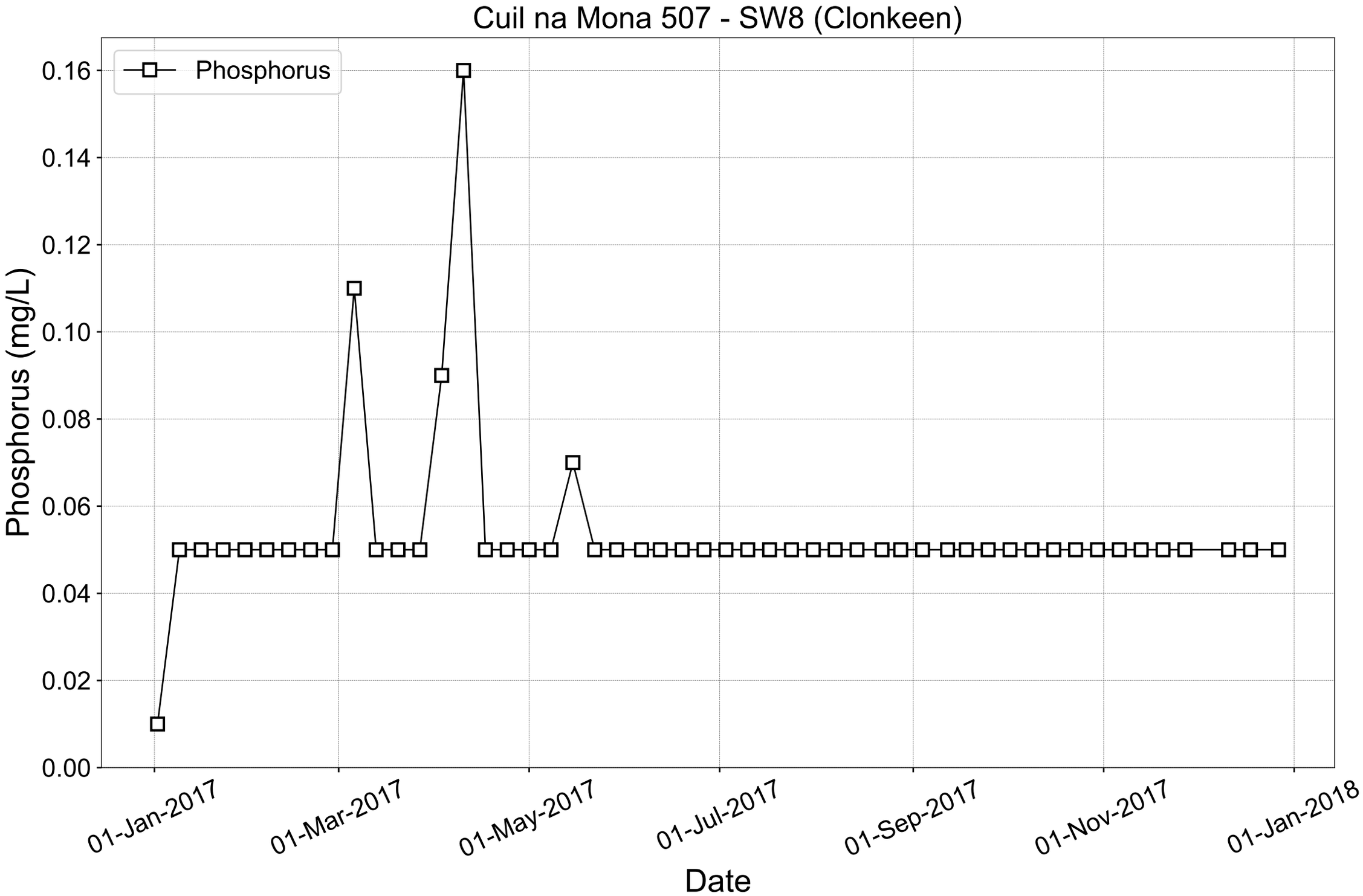
Cuil na Mona bog was not in active production during 2017 with the composite sampler located here during 2015, 2016 & 2017. The composite sampler takes a flow proportional composite sample over a 24 hour period. The sampler had limited downtime during the period but returned 52 weekly ammonia results during the period of this 2017 AER. The ammonia trigger level of 2.88mg/l, as agreed with the Agency, was not exceeded during the period. Combining the 2015, 16 & 17 results above, shows concentrations continuing to trend downwards and this is in-line with the downwards/level trends submitted to the EPA in 2013 as required by condition 6.14. As has been establish previously, there is no obvious link between activities and ammonia concentrations. Comparing monthly rainfall from the nearest met station at Gurteen shows an expected link between rainfall and higher ammonia concentrations.

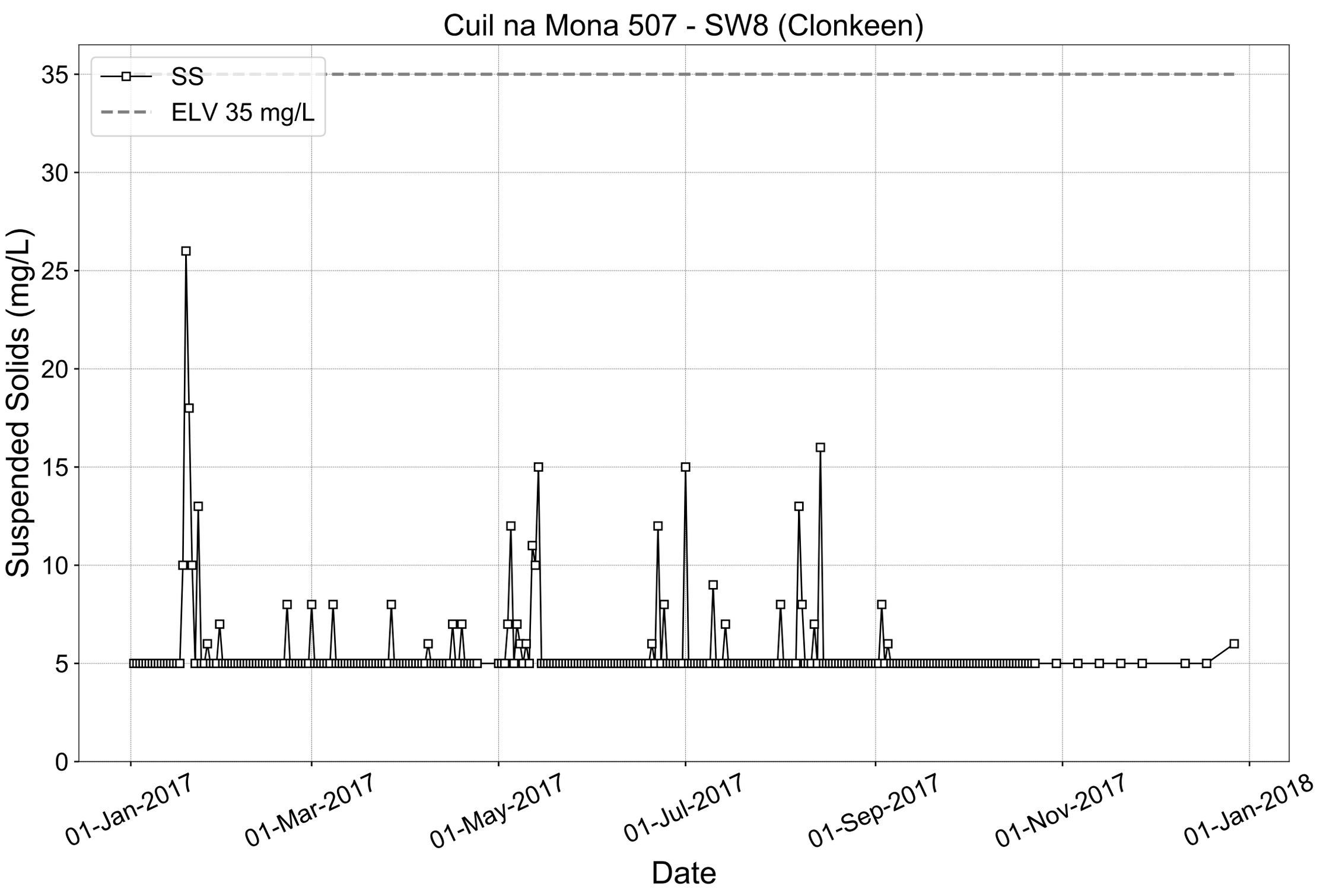

Cuil na Mona 507 - SW8 (Clonkeen)
Ammonia
Trig. Level (2.88 mg/L)
Ammonia (mg/L)
3.0
2.5
2.0
1.5
1.0
0.5
0.0
01-Jan-2017
01-Mar-2017
01-May-2017
01-Jul-2017
01-Sep-2017
01-Nov-2017
01-Jan-2018
Date

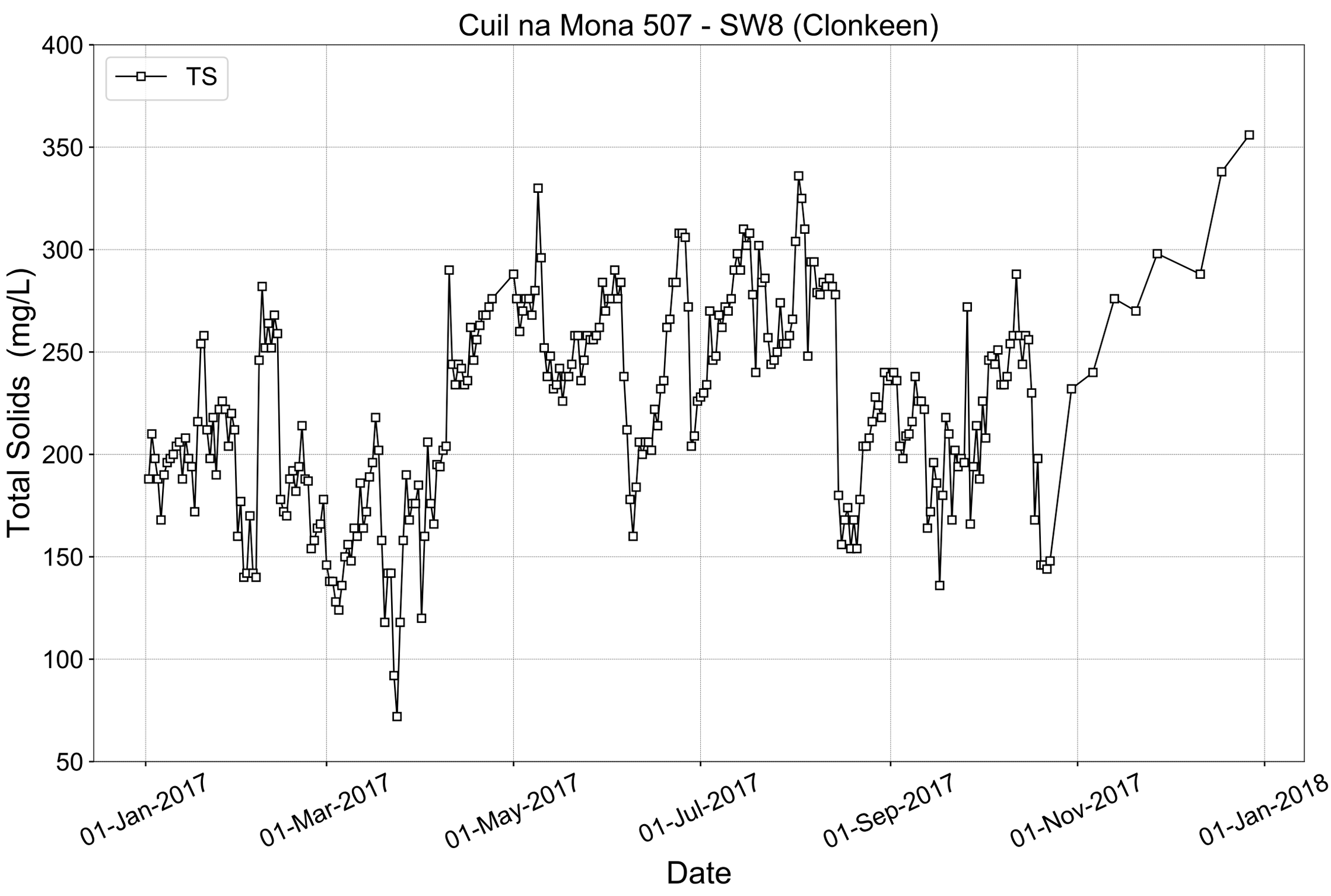

Cuil na Mona 507 - SW8 (Clonkeen)
COD
Trig. Level (100 mg/L)
COD (mg/L)
160
140
120
100
80
60
40
20
0
01-Jan-2017
01-Mar-2017
01-May-2017
01-Jul-2017
01-Sep-2017
01-Nov-2017
01-Jan-2018
Date


Cuil na Mona 507 - SW8 (Clonkeen)
Colour
Colour (Pt/Co)
0
100
200
300
400
500
01-Jan-2017
01-Mar-2017
01-May-2017
01-Jul-2017
01-Sep-2017
01-Nov-2017
01-Jan-2018
Date


Cuil na Mona 507 - SW8 (Clonkeen)
pH
Low Trig. Level
High Trig. Level
9.0
8.5
8.0
7.5
7.0
6.5
6.0
pH
01-Jan-2017
01-Mar-2017
01-May-2017
01-Jul-2017
01-Sep-2017
01-Nov-2017
01-Jan-2018
Date


Cuil na Mona 507 - SW8 (Clonkeen)
Phosphorus
Phosphorus (mg/L)
0.16
0.14
0.12
0.10
0.08
0.06
0.04
0.02
0.00
01-Jan-2017
01-Mar-2017
01-May-2017
01-Jul-2017
01-Sep-2017
01-Nov-2017
01-Jan-2018
Date


Cuil na Mona 507 - SW8 (Clonkeen)
SS
ELV 35 mg/L
Suspended Solids (mg/L)
0
5
10
15
20
25
30
35
01-Jan-2017
01-Mar-2017
01-May-2017
01-Jul-2017
01-Sep-2017
01-Nov-2017
01-Jan-2018
Date


Cuil na Mona 507 - SW8 (Clonkeen)
TS
Total Solids (mg/L)
400
350
300
250
200
150
100
50
01-Jan-2017
01-Mar-2017
01-May-2017
01-Jul-2017
01-Sep-2017
01-Nov-2017
01-Jan-2018
Date

Environmental Protection Agency

Guidance to completing the PRTR workbook

PRTR Returns Workbook

Version 1.1.19

REFERENCE YEAR	2017

1. FACILITY IDENTIFICATION

Parent Company Name	Bord na Mona Energy Limited
Facility Name	Bord Na Mona Energy Limited (Boora)
PRTR Identification Number	P0507
Licence Number	P0507-01

Classes of Activity

No.	class_name
-	Refer to PRTR class activities below

Address 1	Cúil na Móna Group
Address 2	c/o Boora Works
Address 3	Boora
Address 4	
	Offaly
Country	Ireland
Coordinates of Location	-7.02972 53.5322
River Basin District	IEEA
NACE Code	0892
Main Economic Activity	Extraction of peat
AER Returns Contact Name	Enda Mc Donagh
AER Returns Contact Email Address	enda.mcdonagh@bnm.ie
AER Returns Contact Position	Head Of Environmental Management
AER Returns Contact Telephone Number	0579345911
AER Returns Contact Mobile Phone Number	0862370816
AER Returns Contact Fax Number	0579345160
Production Volume	0.0
Production Volume Units	Tonnes
Number of Installations	2
Number of Operating Hours in Year	2216
Number of Employees	2
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	

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# : P0507 | Facility Name : Bord Na Mona Energy Limited (Boora) | Filename : P0507_2017.xls | Return Year : 2017 | 08/03/2018 11:30

SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

RELEASES TO AIR					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 PRTR POLLUTANTS

RELEASES TO AIR					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 C : REMAINING POLLUTANT EMISSIONS (As required in your Licence)

RELEASES TO AIR					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

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 Energy Limited (Boora)

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# : P0507 | Facility Name : Bord Na Mona Energy Limited (Boora) | Filename : P0507_2017.xls | Return Year : 2017 | 08/03/2018 11:31

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			
			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 PRTR POLLUTANTS

RELEASES TO WATERS					Please enter all quantities in this section in KGs			
POLLUTANT					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 C : REMAINING POLLUTANT EMISSIONS (as required in your Licence)

RELEASES TO WATERS					Please enter all quantities in this section in KGs			
POLLUTANT					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

4.3 RELEASES TO WASTEWATER OR SEWER

Link to previous years emissions data

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

SECTION A : PRTR POLLUTANTS

RELEASES TO LAND					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
					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		
			Method Used				
Pollutant No.	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

5. ONSITE TREATMENT & OFFSITE TRANSFERS OF WASTE

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	140.4	wastes from mineral non-metalliferous excavation	D1	E	Volume Calculation	Onsite of generati	Bord na Mona Energy Ltd,IPPC P0507-01	Boora,Leabeg,Tullamore,Co Offaly,Ireland		
Within the Country	02 01 04	No	0.0	waste plastics (except packaging)	R3	M	Weighed	Offsite in Ireland	Ryston Industeries Ltd,WFP-KE-12-0066-01 & WCP-KE-10-0569-01	Castledermot,Co Kildare,.,.,Ireland		
Within the Country	20 03 01	No	0.0	mixed municipal waste	D1	E	Volume Calculation	Offsite in Ireland	AES Ltd,053/OY/39/02	Cappincue,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

Annual Environmental Report 2018

Bord na Mona Energy Ltd
(Boora Group of Bogs)
IPC Licence P0500-01

LEABEG, TULLAMORE, CO. OFFALY, IRELAND
TELEPHONE: (05793) 45900. INT: +353-5793-45900. FAX :(05793) 45160. INT: +353-5793-45160

Facility Information Summary	
AER Reporting Year	2018
Licence Register Number	P0500-01
Name of site	Bord na Mona Boora
Site Location	Leabeg, Boora, Tullamore, Co Offaly
NACE Code	0892
Class/Classes of Activity	1.4
National Grid Reference (6E, 6 N)	180050, 319540
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 at the 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 Electricity Generating Station and lorry outloading facilities. Production achieved was approximately 748996 tonnes. Infrastructurally, there was no new bog development. There were no environmental complaints received during 2018. There were 5 incidents 1 in relation to dust and the remainder to water. In relation to silt pond cleaning, 100% of ponds received two cleanings with inspections dictating if a pond received further cleaning. A number of initiatives are in place in terms of fuel and electricity usage. Formalised management meetings take place weekly with environmental issues on the agenda for discussion. We are operating a Quality Management System to I.S. EN ISO 9001:2015. We are "committed to conducting all aspects of our business activities with a focus on minimising the impact on the environment". Rehabilitation works are described in an attachment.

Declaration:

All the data and information presented in this report has been checked and certified as being

9/Kelly	26/2/2019
Signature Group/Facility manager (or nominated, suitably qualified and experienced deputy)	Date

AIR-summary template

Lic No: P0500-01 Year 2018

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	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 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: P0500-01 Year 2018

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-01	Total Particulates	350mg/m2/day	84	Daily average < ELV	mg/m2/day	29120	651	0	1	Reported to Agency
DM-02	Total Particulates	350mg/m2/day	84	Daily average < ELV	mg/m2/day	14224	250	0	0	
DM-03	Total Particulates	350mg/m2/day	84	Daily average < ELV	mg/m2/day	19348	360	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

Solvent use and management on site

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

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

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

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

Table A5: Solvent Mass Balance summary

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

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER) Lic No: P0500-01 Year 2018

			Additional information
1	Does your site have licensed emissions direct to surface water or direct to sewer? If yes please complete table W2 and W3 below for the current reporting year and answer further questions. If **you do not have** licenced emissions you only need to complete table W1 and or W2 for storm water analysis and visual inspections	Yes	The continuous monitoring sampler was relocated during the reporting period. The sampler experienced technical difficulties. It was therefore decided to present the sampling results in graphical form as an attachment.
2	Was it a requirement of your licence to carry out visual inspections on any surface water discharges or watercourses on or near your site? If yes please complete table W2 below summarising only any evidence of contamination noted during visual inspections	Yes	Monthly COD analysis of yard runoff is attached in a separate document.

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)

				Additional information
3	Was there any result in breach of licence requirements? If yes please provide brief details in the comment section of Table W3 below		Yes	
4	Was all monitoring carried out in accordance with EPA guidance and checklists for Quality of Aqueous Monitoring Data Reported to the EPA? If no please detail what areas require improvement in additional information box	External /Internal Lab Quality checklist / Assessment of results checklist	Yes	Surface water monitoring was carried out on a quarterly basis. The results of which are attached. Monthly COD yard runoff results are also 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 therof[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
												APHA / AWWA "Standard Methods"	4500-NH3	NA	One off Grab sample
												APHA / AWWA "Standard Methods"	4500-NH3	NA	One off Grab sample

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: P0500-01 Year 2018

Continuous monitoring

			Additional Information
5	Does your site carry out continuous emissions to water/sewer monitoring?	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 166 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

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: P0500-01 Year 2018

Bund testing

dropdown menu click to see options

			Additional information
1	Are you required by your licence to undertake integrity testing on bunds and containment structures ? if yes please fill out table B1 below listing all **new bunds and containment structures** on site, in addition to **all bunds which failed** the integrity test-**all bunding structures which failed including mobile bunds must be listed in the table below, please include all bunds outside the licenced testing period** (mobile bunds and chemstore included)	Yes	
2	Please provide integrity testing frequency period	Other (2 Yearly)	
3	Does the site maintain a register of bunds, underground pipelines (including stormwater and foul), Tanks, sumps and containers? (containers refers to "Chemstore" type units and mobile bunds)	Yes	
4	How many bunds are on site?	11	
5	How many of these bunds have been tested within the required test schedule?	9	2 remaining bunds scheduled to be tested in 2019
6	How many mobile bunds are on site?	27	This includes barrel trays located within workshops
7	Are the mobile bunds included in the bund test schedule?	No	
8	How many of these mobile bunds have been tested within the required test schedule?	NA	
9	How many sumps on site are included in the integrity test schedule?	NA	
10	How many of these sumps are integrity tested within the test schedule?	NA	
	Please list any sump integrity failures in table B1		
11	Do all sumps and chambers have high level liquid alarms?	N/A	
12	If yes to Q11 are these failsafe systems included in a maintenance and testing programme?	N/A	
13	Is the Fire Water Retention Pond included in your integrity test programme?	N/A	

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

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

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

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

Pipeline/underground structure testing

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

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

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

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

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

Groundwater/Soil monitoring template	Lic No:	P0500-01	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 interpretaion as an additional section in this AER
2	Are you required to carry out soil monitoring as part of your licence requireme	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. Groundwater monitoring template	SELECT		
5	Is the contamination related to operations at the facility (either current and/or historic)	N/A		
6	Have actions been taken to address contamination issues?If yes please summarise remediation strategies proposed/undertaken for the site	N/A		
7	Please specify the proposed time frame for the remediation strategy	N/A		
8	Is there a licence condition to carry out/update ELRA for the site?	N/A		
9	Has any type of risk assesment been carried out for the site?	N/A		
10	Has a Conceptual Site Model been developed for the site?	N/A		
11	Have potential receptors been identified on and off site?	N/A		
12	Is there evidence that contamination is migrating offsite?	N/A		Please enter interpretation of data here

Table 1: Upgradient Groundwater monitoring results

Date of sampling	Sample location reference	Parameter/ Substance	Methodology	Monitoring frequency	Maximum Concentration++	Average Concentration+	unit	GTV's*	SELECT**	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)

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

Table 3: Soil results

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

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

Environmental Liabilities template	Lic No:	P0500-01	Year	2018

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

complete

		Commentary
ELRA initial agreement status	Not a Licence Requirement	
ELRA review status	NA	
Amount of Financial Provision cover required as determined by the latest ELRA	NA	
Financial Provision for ELRA status	NA	
Financial Provision for ELRA - amount of cover	NA	
Financial Provision for ELRA - type	NA	
Financial provision for ELRA expiry date	NA	
Closure plan initial agreement status	NA	Internal Budget Provision
Closure plan review status	NA	Internal Budget Provision
Financial Provision for Closure status	NA	Internal Budget Provision
Financial Provision for Closure - amount of cover	NA	Internal Budget Provision
Financial Provision for Closure - type	NA	Internal Budget Provision
Financial provision for Closure expiry date	NA	

Environmental Management Programme/Continuous Improvement Programme template

Lic No: P0500-01 Year 2018

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	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. Deploy Hydraulic Harrows at dust sensitive areas headland Peat collection.	90	In total 71 Personnel received training in 2018. Training now also includes an energy awareness component. Ten hydraulic harrows were deployed at five production areas including all dust sensitive areas. Headland peat was collected at six production areas and returned as part of overall production.	Individual	Improved Environmental Management Practices
Waste reduction/Raw material usage efficiency	Waste Streamlining.It is planned to continue with and where possible improve the current waste management service provided by AES Ltd	100	Quarterly waste reports are returned for records/filing and waste streams are segrated on site to maximise recycling potential.	Section Head	Improved Environmental Management Practices
Reduction of emissions to Water	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.	90	All silt ponds were cleaned at least twice as per licence condition .	Individual	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 49.54 tonnes were sent off site for recycling. Procurement also exploring the possibility of securing further recyclers.	Individual	Improved Environmental Management Practices
Energy Efficiency/Utility conservation	As part of an energy management process, an ongoing review of energy usage is in place.	100	There was further reduced activity at Boora Workshop .The unoccupied areas are sectioned of. Consequently there is no requirement for lighting or heating in those areas. The site achieved the Energy standard ISO50001 during the reporting period.	Section Head	Improved Environmental Management Practices

Noise monitoring summary report

Lic No: P0500-01 Year 2018

Was noise monitoring a licence requirement for the AER period?		No
If yes please fill in table N1 noise summary below		
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
Does your site have a noise reduction plan		NA
When was the noise reduction plan last updated?		Enter date
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: P0500-01 Year 2018

			Additional information
1	When did the site carry out the most recent energy efficiency audit? Please list the recommendations in table 3 below	Sep-18	Report on file
2	Is the site a member of any accredited programmes for reducing energy usage/water conservation such as the SEAI programme linked to the right? If yes please list them in additional information	SEAI - Large Industry Energy Network (LIEN) Yes	ISO50001 accreditation attained from Certification Europe
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)	11375	14335.26		
Total Energy Generated (MWHrs)				
Total Renewable Energy Generated (MWHrs)				
Electricity Consumption (MWHrs)	611.494	657.287		
Fossil Fuels Consumption:				
Heavy Fuel Oil (m3)				
Light Fuel Oil (m3)	1057.016	1346.125		
Natural gas (m3)				
Coal/Solid fuel (metric tonnes)	4.5	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^3yr) :	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: P0500-01 Year 2018

Table R3 Waste Stream Summary

	Total	Landfill	Incineration	Recycled	Other
Hazardous (Tonnes)	4.5	0	0	0	0
Non-Hazardous (Tonnes)	821.12	0	0	0	0

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: P0500-01 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	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		

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

Complaints and Incidents summary template Lic No: P0500-01 Year 2018

Table 2 Incidents summary

Date of occurrence	Incident nature	Location of occurrence	Incident category*please refer to guidance	Receptor	Cause of incident	Other cause(please specify)	Activity in progress at time of incident	Communication	Occurrence	Corrective action<20 words	Preventative action <20 words	Resolution status	Resolution date	Likelihood of reoccurence
16/05/2018	Trigger level reached	SW34 Composite sampler - Bellair	1. Minor	Water	Not related to site activities		Normal activities	EPA Ref No. INCIO14667	New	Follow up sampling and monitoring	NA	Complete	17/05/2018	Low
06/06/2018	Trigger level reached	SW34 Composite sampler - Bellair	1. Minor	Water	Not related to site activities		Normal activities	EPA Ref No. INCI014668	New	Follow up sampling and monitoring	NA	Complete	07/06/2018	Low
07/06/2018	Breach of ELV	SW34 Composite sampler - Bellair	1. Minor	Water	Adverse weather - Wind		Normal activities	EPA Ref No. INCI015097	New	Follow up sampling and monitoring	Dust control measures to remain in place	Complete	12/06/2018	Low
29/08/2018	Breach of ELV	SW34 Composite sampler - Bellair	1. Minor	Water	Not related to site activities		Normal activities	EPA Ref No. INCI015799	New	Follow up sampling and monitoring	NA	Complete	29/08/2018	Low
12/05/2018	Breach of ELV	DM01 - Clongawney	1. Minor	Air	Adverse weather - Wind		Normal activities	EPA Ref No. INCI016023	New	Follow up sampling and monitoring	Production to cease during high winds	Complete	27/06/2018	Low

Total number of incidents current year	4
Total number of incidents previous year	12
% reduction/ increase 0%	67%

WASTE SUMMARY	Lic No:	P0500-01	Year	2018
SECTION A-PRTR ON SITE WASTE TREATMENT AND WASTE TRANSFERS TAB- TO BE COMPLETED BY ALL IPPC AND WASTE FACILITIES	PRTR facility logon	dropdown list click to see options		

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

			Additional Information
1	Were any wastes accepted onto your site for recovery or disposal or treatment prior to recovery or disposal within the boundaries of your facility ?; (waste generated within your boundaries is to be captured through PRTR reporting) If yes please enter details in table 1 below	N/A	
2	Did your site have any rejected consignments of waste in the current reporting year? If yes please give a brief explanation in the additional information	SELECT	
3	Was waste accepted onto your site that was generated outside the Republic of Ireland? If yes please state the quantity in tonnes in additional information	SELECT	

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

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

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

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

WASTE SUMMARY Lic No: P0500-01 Year 2018

SECTION D-TO BE COMPLETED BY LANDFILL SITES ONLY

Table 2 Waste type and tonnage-landfill only

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

Table 3 General information-Landfill only

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

Table 4 Environmental monitoring-landfill only Landfill Manual-Monitoring Standards

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

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

Table 5 Capping-Landfill only

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

*please note this includes daily cover area

Table 6 Leachate-Landfill only

9	Is leachate from your site treated in a Waste Water Treatment Plant?	SELECT
10	Is leachate released to surface water? If yes please complete leachate mass load information below	SELECT

Volume of leachate in reporting year(m3)	Leachate (BOD) mass load (kg/annum)	Leachate (COD) mass load (kg/annum)	Leachate (NH4) mass load (kg/annum)	Leachate (Chloride) mass load kg/annum	Leachate treatment on-site	Specify type of leachate treatment	Comments

Please ensure that all information reported in the landfill gas section is consistent with the Landfill Gas Survey submitted in conjunction with PRTR returns

Table 7 Landfill Gas-Landfill only

Gas Captured&Treated by LFG System m3	Power generated (MW / KWh)	Used on-site or to national grid	Was surface emissions monitoring performed during the reporting year?	Comments
			SELECT	

Waste Summary Continued	Lic No:	P0500-01	Year	2018

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	49.54	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)	ADN Materials Ltd., Lossetts, Carrickmacross, Co. Monaghan - WFP-MN-12-0001-04	Ireland
13 02 05*	mineral-based non-chlorinated engine, gear and lubricating oils	Yes	4.5	Enva Ireland Limited - L1745	R01 - Use principally as a fuel or other means to generate energy	R.D. Recycling, Houthalen, Reg No: 51727/1KD	Belgium
17 04 07	mixed metals	No	73.74	AES Ltd WP-OY-08-601-02	R04 - Recycling/reclamation of metals and metal compounds	AES LTD, Cappincur, Tullamore, Co. Offaly - WP-OY-08-601-01	Ireland
20 03 01 B	Municipal mixed residual non-household	No	11.82	AES Ltd WP-OY-08-601-02	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 A	Municipal mixed residual household	No	9.68	AES Ltd WP-OY-08-601-02	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
11 01 13*	degreasing wastes containing hazardous substances	Yes	1.75	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

Boora

Decommissioning and Rehabilitation
Bog Rehabilitation Progress Report 2018.

Within the Boora licensed area (P0500-01) there was one entire bog unit (Derrybrat) available for rehabilitation in 2018. Ongoing monitoring of cutaway sites within the Boora Bog Group was carried out with bogs such as Noggusboy West, Belair South and Turraun re-surveyed in 2018. The surveys comprised of baseline walkover surveys to identify and map pioneer and established habitats on the cutaway.

An invasive aquatic plant species (Parrots Feather *Myriophyllum aquaticum*) was identified in the amenity areas of Boora in 2016, actions to control its spread have been enacted along with the notification of the presence of this species to the relevant authorities.

Cutaway rehabilitation commenced at Derrybrat Bog in 2018 (68 ha). Peat dams were used to block the drains on a section of bog that had formerly been managed for industrial peat production. The work aims to raise water levels at this site to stabilise the bog (establish wetland habitats), control silt run-off and slow water movement off the bog.

Rehabilitation of the cutaway at the Derries was also undertaken in 2018. Targeted drain blocking was undertaken in a section of cutaway (16 ha) in the western section of the site while surface water levels were adjusted to optimal levels where wetlands have established in the centre of the site.

Draft rehabilitation plans for the Boora 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/

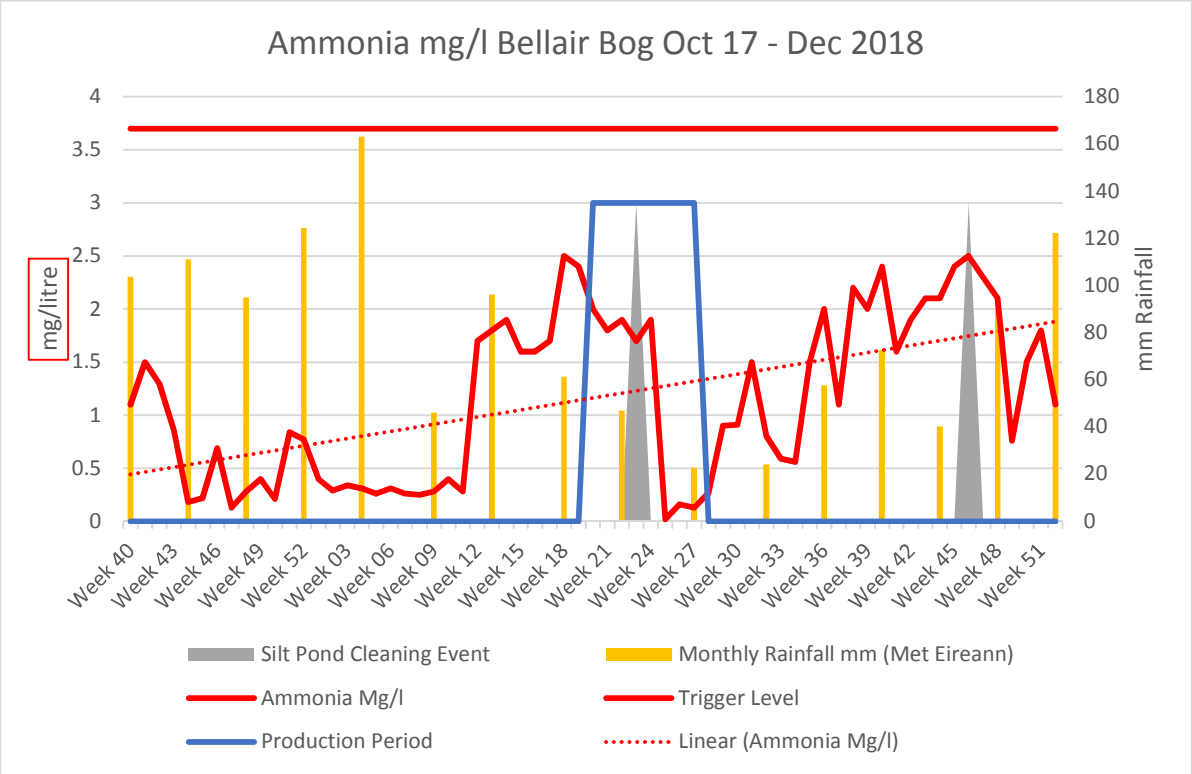
As required by condition *10.2 Cutaway Bog Rehabilitation Plans*, draft peatland rehabilitation plans for all the individual bog units were submitted to the agency in 2013, reviewed and amended in 2015 and re-submitted to the agency in 2015. All draft rehabilitation plans have been reviewed in 2017. 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 (Mona Herbs), this project is ongoing.

Bord na Mona Boora PO500-01

Grab Sampling 2018

X	Y	Bog	SW	Monitoring	Sampled	pH	SS	TS	Ammonia	TP	COD	Colour
217216.92	227527.32	Lemonaghan	SW-19	Q1 18	Grab	7.4	5	222	1.4	0.05	56	217
217481.75	227345.36	Lemonaghan	SW-19A	Q1 18	Grab	8	5	356	0.51	0.05	43	86
214970.51	226491.33	Lemonaghan	SW-19B	Q1 18	Grab	8.1	5	330	0.61	0.05	35	88
218645.63	229597.18	Lemonaghan	SW-22	Q1 18	Grab	7.9	5	364	0.16	0.05	16	69
216900.19	229545.11	Lemonaghan	SW-22A	Q1 18	Grab	7.8	5	180	2.6	0.05	34	90
216151.75	230069.09	Lemonaghan	SW-22B	Q1 18	Grab	7.9	5	190	3	0.05	43	118
215947.19	230315.10	Lemonaghan	SW-22C	Q1 18	Grab	6.2	5	70	0.26	0.05	46	189
215079.20	231196.83	Lemonaghan	SW-22D	Q1 18	Grab	5.6	5	60	0.7	0.05	57	164
218809.08	227041.46	Lemonaghan	SW-23	Q2 18	Grab	8.1	11	408	0.28	0.23	50	67
208557.05	205482.23	Killaun	SW-29	Q2 18	Grab	8.1	5	240	0.05	0.06	97	307
208726.96	206088.96	Killaun	SW-29A	Q2 18	Grab	7.8	5	282	0.03	0.05	87	182
209922.39	207800.47	Killaun	SW-30	Q2 18	Grab	7.7	5	305	0.65	0.05	77	177
208127.88	210599.82	Galros	SW-32	Q2 18	Grab	8	5	452	0.67	0.05	14	25
234556.96	216406.12	Monettia	SW-25	Q2 18	Grab	7.8	5	546	0.32	0.05	30	37
237185.96	215178.41	Monettia	SW-26	Q2 18	Grab	7.6	5	352	1.7	0.06	25	67
237043.63	216670.04	Monettia	SW-26A	Q2 18	Grab	7.8	5	426	0.29	0.05	20	48
212352.39	217427.89	Drinagh	SW-9	Q3 18	Grab	8.1	5	420	0.02	0.05	29	40
212948.34	217756.09	Derrybrat	SW-9A	Q3 18	Grab	8	5	314	0.05	0.05	37	38
213631.82	220692.54	Noggusboy	SW-10	Q3 18	Grab	7.6	5	560	0.19	0.017	57	-
214515.48	219480.49	West Boora	SW-11	Q3 18	Grab	7.7	5	358	1.5	0.05	52	173
215354.86	221941.82	Derries	SW-14	Q3 18	grab	7.6	5	396	0.02	0.05	33	66
214889.87	221778.27	Derries	SW-14A	Q3 18	grab	7.9	21	336	0.78	0.05	60	125
236128.81	221965.17	Derryclure	SW-28	Q3 18	grab	7.6	12	392	0.02	0.31	72	-
236939.60	220629.01	Derryclure	SW-27	Q3 18	grab	7.8	5	430	0.52	0.05	44	45
220650.17	210315.60	Derrinboy	SW-38	Q4 18	Grab	7.3	18	136	0.67	0.06	84	145
220483.33	210276.48	Derrinboy	SW-39	Q4 18	Grab	7.2	18	174	0.65	0.05	83	140
219663.49	210038.82	Derrinboy	SW-40	Q4 18	Grab	7.1	8	84	0.83	0.06	48	170
215361.95	232965	Bellair South	SW-33	Q4 18	Grab	6.7	5	78	1.3	0.05	66	199
214495.84	232938	Bellair South	SW-34	Q4 18	Grab	7.2	5	98	1.3	0.05	62	236
214987.18	232598	Bellair South	SW-34A	Q4 18	Grab	7.1	5	128	1.8	0.07	59	228
213906.46	231885	Bellair South	SW-35	Q4 18	Grab	5.8	5	100	0.44	0.06	73	186
215477.01	233062	Bellair North	SW-37B	Q4 18	Grab	7.2	5	368	0.46	0.05	72	217

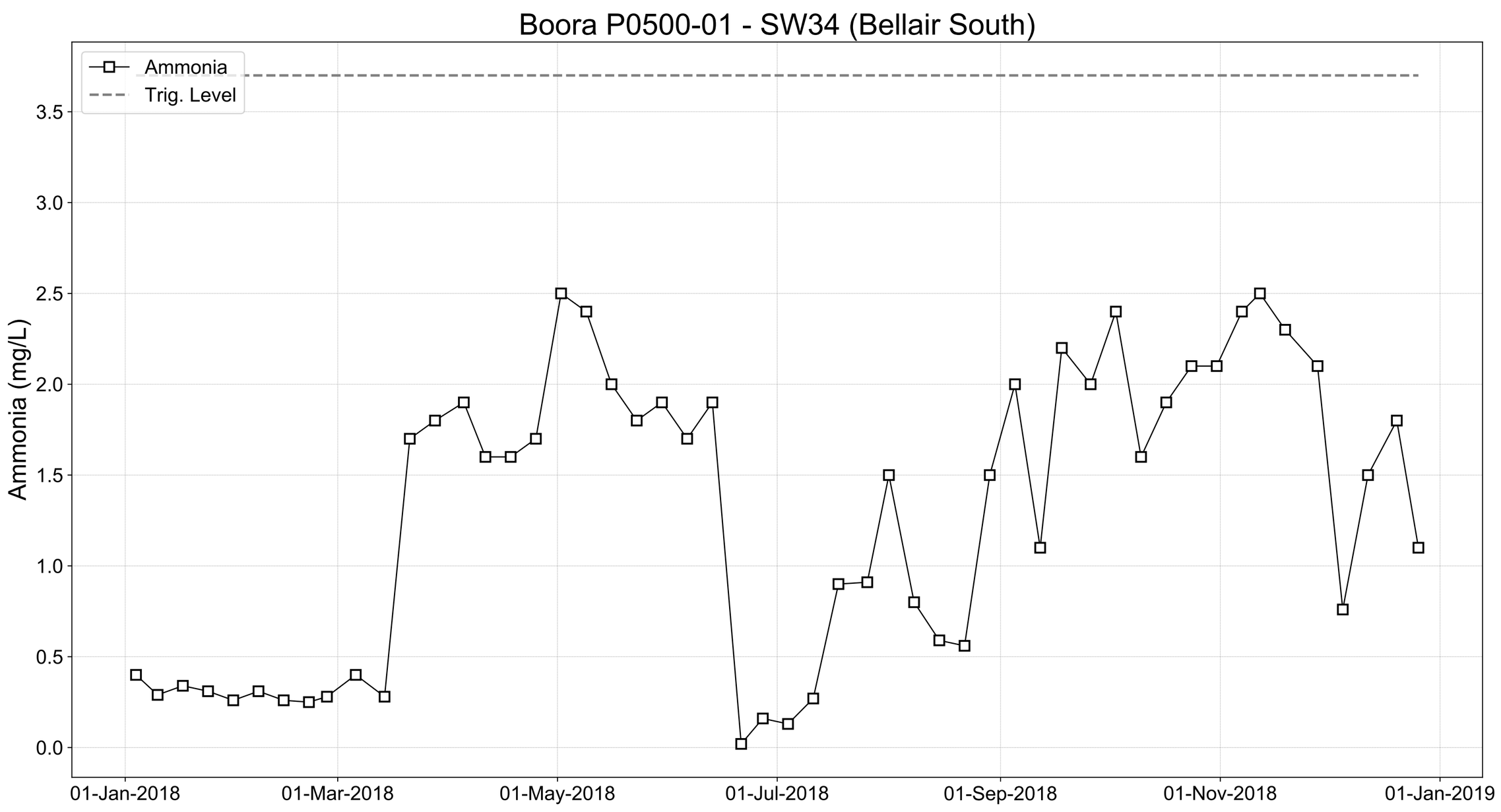


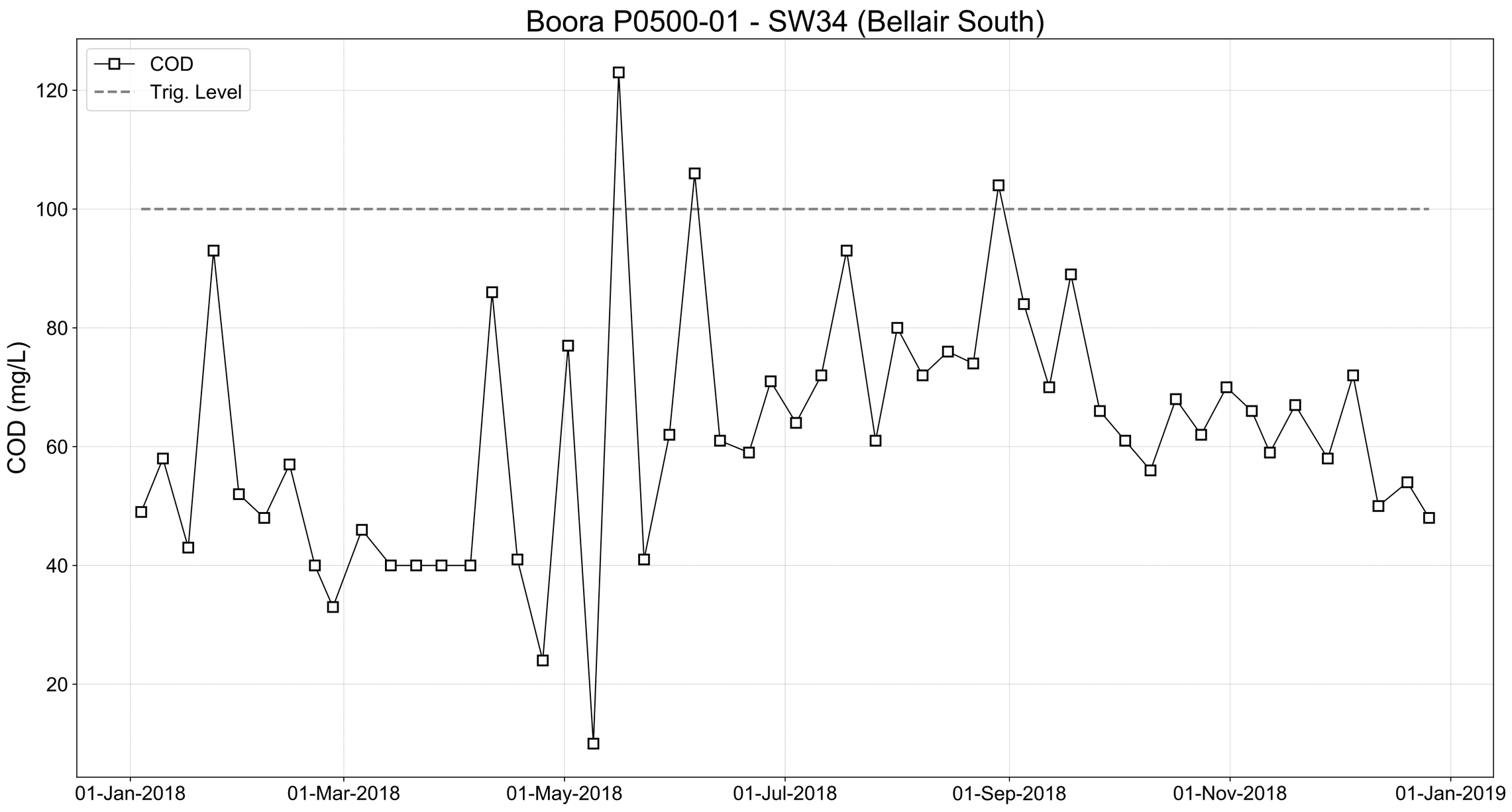
Bellair Bog

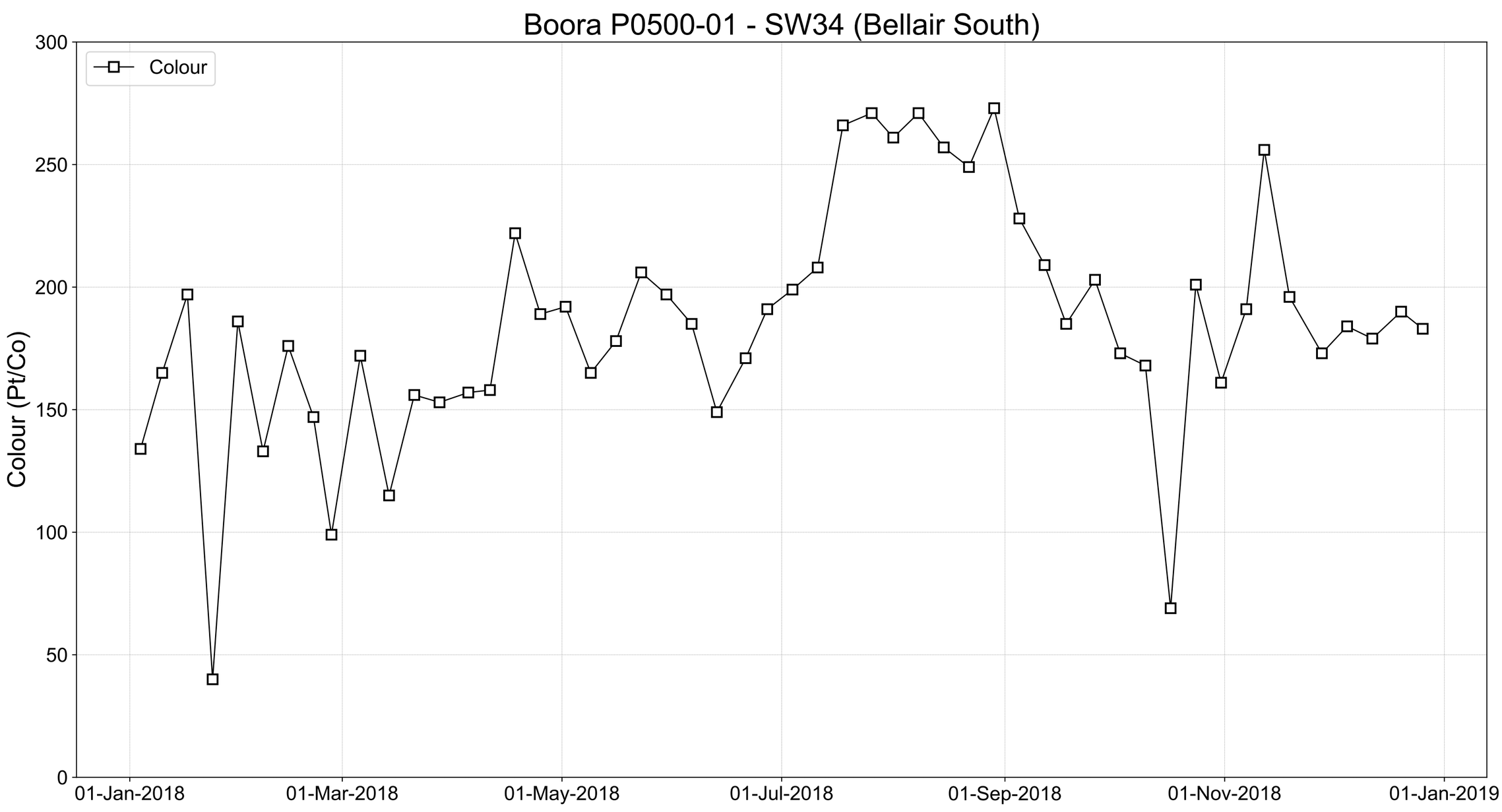
Bellair bog is an active production bog with the composite sampler located here from the last week in September 2017 to December 2018. The composite sampler takes a flow proportional composite sample over a 24 hour period. The sampler had 45**%** downtime during the period being reported, but suitable weekly grab samples were taken during these downtimes, primarily due to battery fault, flood events, the sampler was being serviced/overhauled or due to technical faults. The ammonia trigger level of 3.7mg/l, as agreed with the Agency, was not exceeded during the period being reported. The above graph show concentrations trending upwards over the 15-month period, as peat extraction continues.

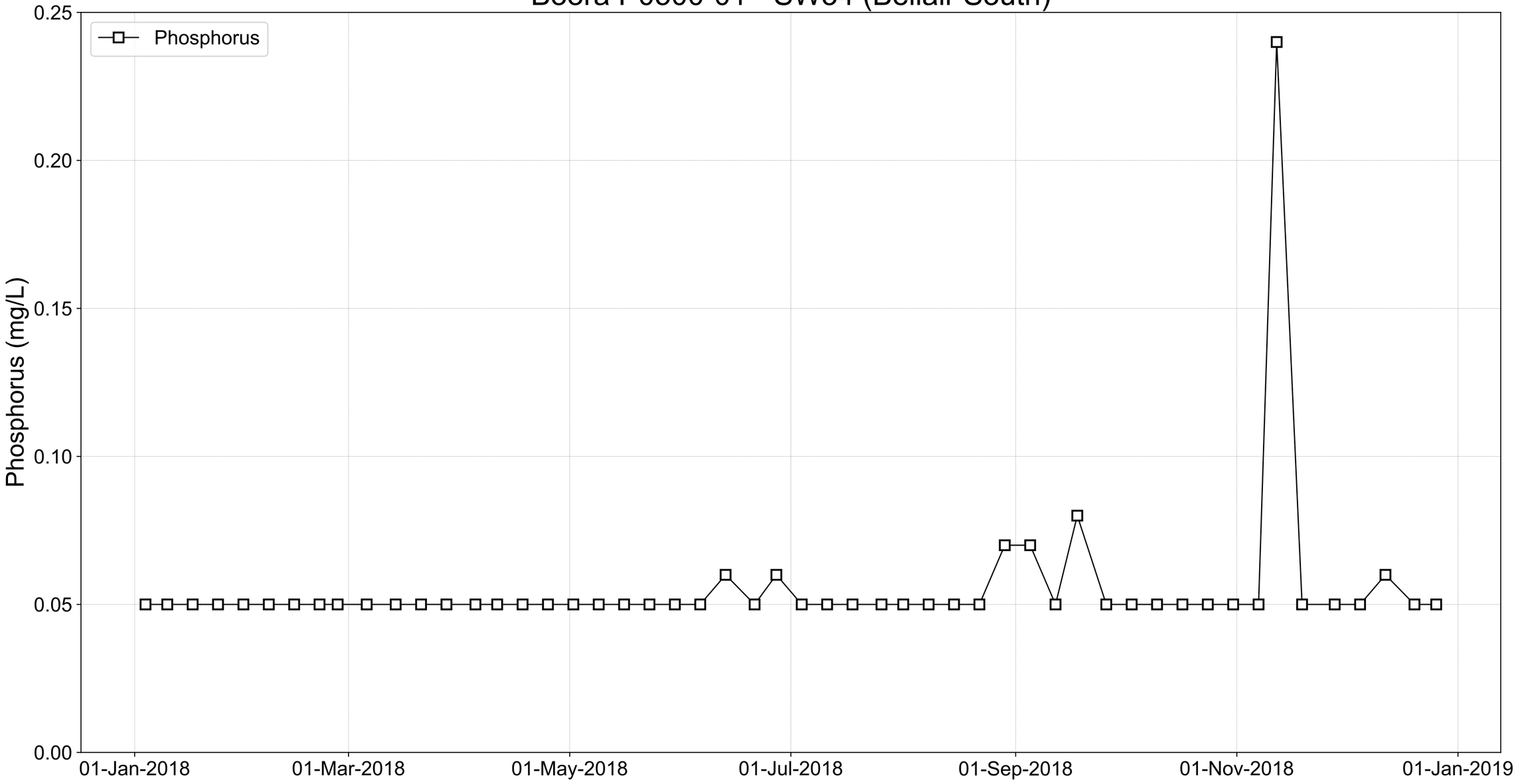
It is not possible to identify any obvious link between the summer production, winter maintenance or silt pond maintenance events on the concentration of ammonia disharging from the peatlands. The only link expected would be that related to rainfall events and seasonal weather patterns and the subsequent surfacewater runoff and associated ammonia concentrations, but again this is not evident except during the latter half of 2018.

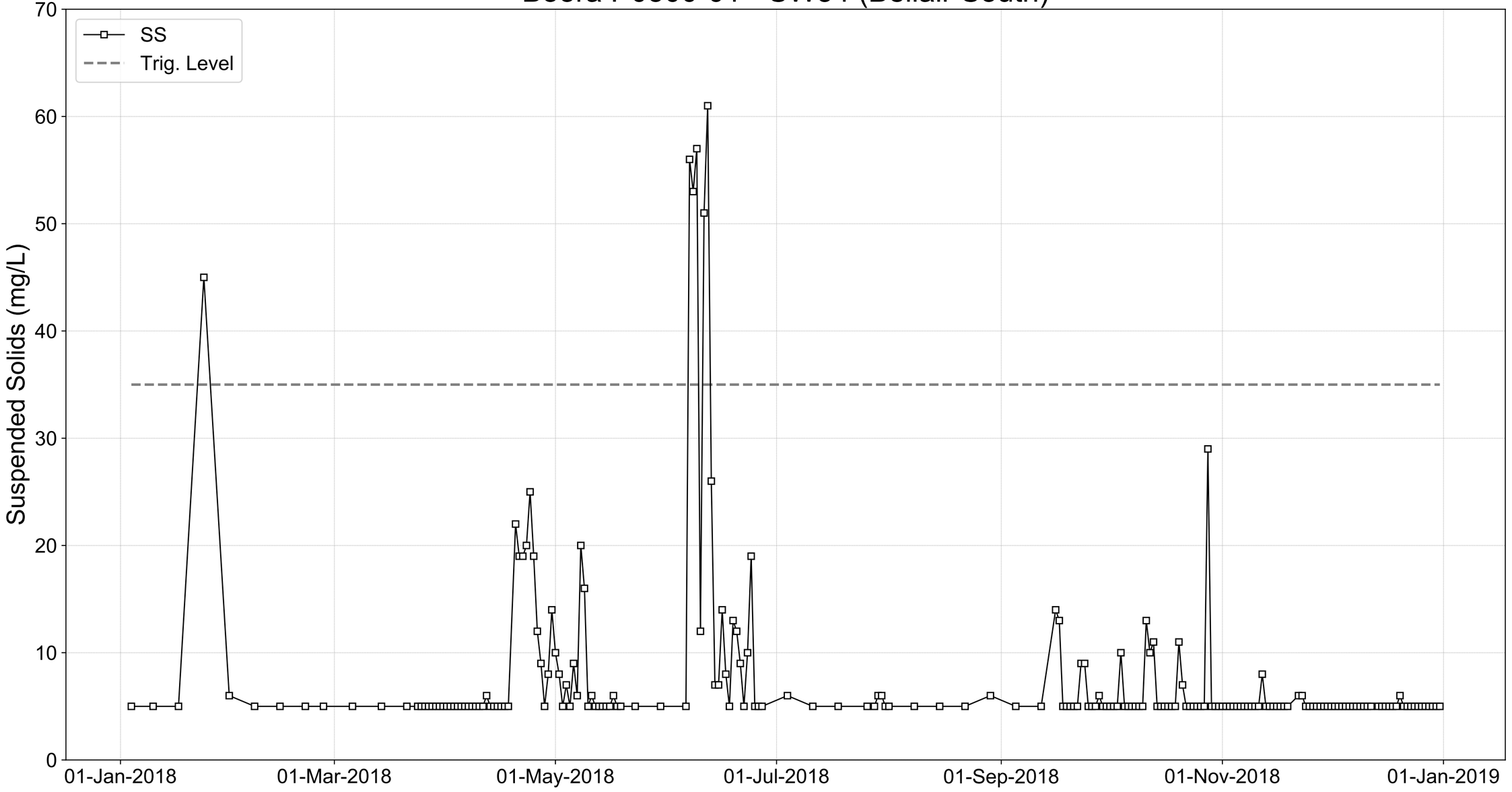
The sampler at this location may be relocated to fill any information gaps on other peatland catchments and to reflect the need to support the information gathering required for the Water Framework Directive's River Basin Management Plan. There is also an EPA lead research project commencing in 2019, 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.

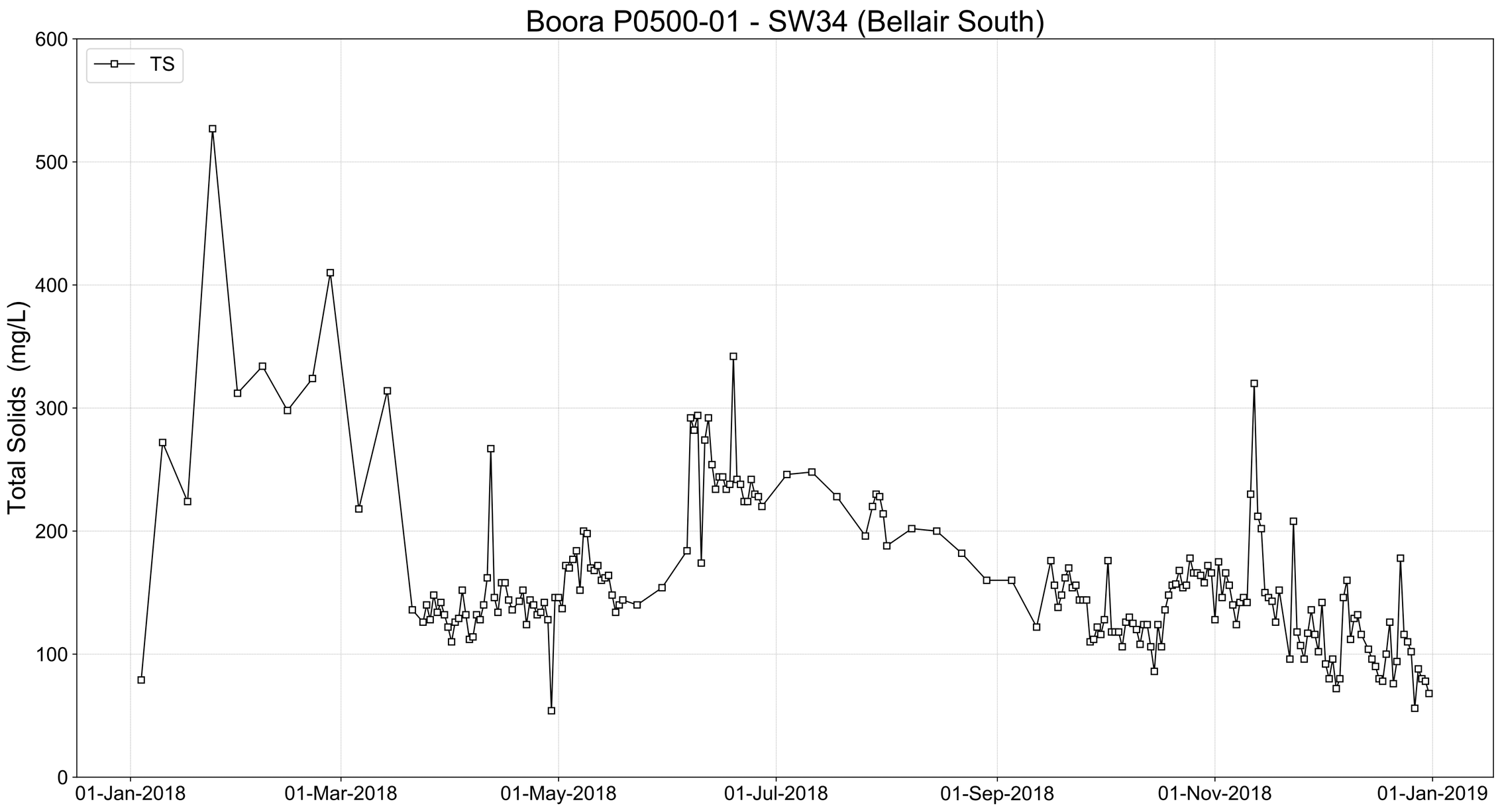

Boora P0500-01 - SW34 (Bellair South)
Ammonia
Trig. Level
Ammonia (mg/L)
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
01-Jan-2018
01-Mar-2018
01-May-2018
01-Jul-2018
01-Sep-2018
01-Nov-2018
01-Jan-2019

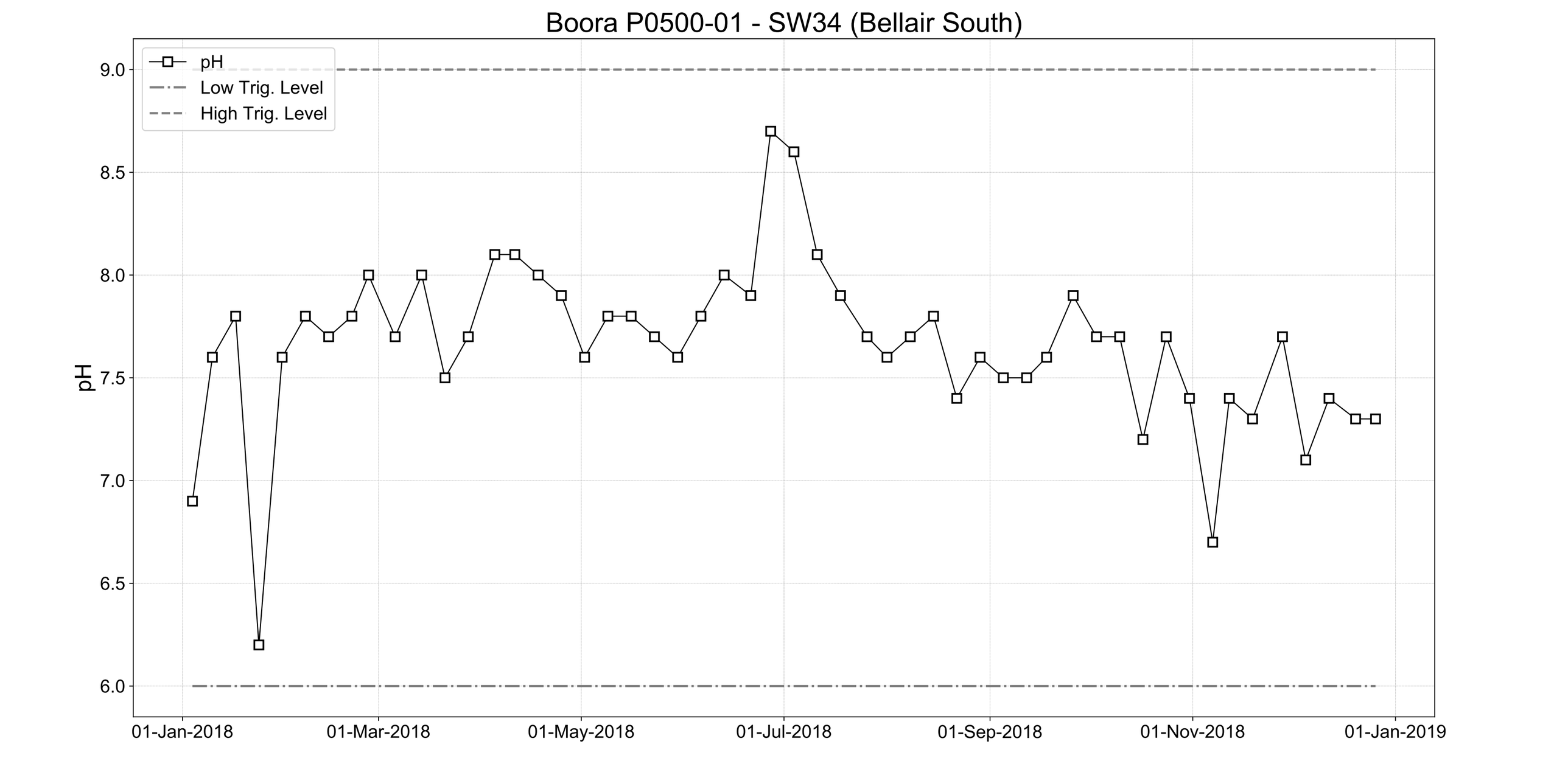

Boora P0500-01 - SW34 (Bellair South)
COD
Trig. Level
COD (mg/L)
120
100
80
60
40
20
01-Jan-2018
01-Mar-2018
01-May-2018
01-Jul-2018
01-Sep-2018
01-Nov-2018
01-Jan-2019


Boora P0500-01 - SW34 (Bellair South)
Colour
Colour (Pt/Co)
300
250
200
150
100
50
0
01-Jan-2018
01-Mar-2018
01-May-2018
01-Jul-2018
01-Sep-2018
01-Nov-2018
01-Jan-2019


Boora P0500-01 - SW34 (Bellair South)
Phosphorus
Phosphorus (mg/L)
0.25
0.20
0.15
0.10
0.05
0.00
01-Jan-2018
01-Mar-2018
01-May-2018
01-Jul-2018
01-Sep-2018
01-Nov-2018
01-Jan-2019


Boora P0500-01 - SW34 (Bellair South)
SS
Trig. Level
Suspended Solids (mg/L)
0
10
20
30
40
50
60
70
01-Jan-2018
01-Mar-2018
01-May-2018
01-Jul-2018
01-Sep-2018
01-Nov-2018
01-Jan-2019


Boora P0500-01 - SW34 (Bellair South)
TS
Total Solids (mg/L)
600
500
400
300
200
100
0
01-Jan-2018
01-Mar-2018
01-May-2018
01-Jul-2018
01-Sep-2018
01-Nov-2018
01-Jan-2019


Boora P0500-01 - SW34 (Bellair South)
pH
Low Trig. Level
High Trig. Level
9.0
8.5
8.0
7.5
7.0
6.5
6.0
pH
01-Jan-2018
01-Mar-2018
01-May-2018
01-Jul-2018
01-Sep-2018
01-Nov-2018
01-Jan-2019

Yard Discharge Results 2018

Licence: P0500-01

Works: Boora

Month	SWE 1A	SWE 1B	SWE 2	SWE 3	SWE 3A	SWE 4A	SWE 4B	SWE 5A	SWE 5B	SWE 6A	SWE 6B	SWE 7	SWE 8	SWE 9
Jan	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mar	**83**	**13**	0	0	0	0	0	0	0	0	0	0	0	0
Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0
May	**39**	**51**	0	0	0	0	0	0	0	**48**	0	0	0	0
June	0	0	0	0	0	0	0	0	0	0	0	0	0	0
July	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nov	**18**	**10**	0	0	0	0	0	0	0	**68**	**10**	0	0	0
Dec	**10**	**32**	**12**	0	0	0	0	0	0	**53**	**56**	0	0	0

Note: 0 denotes no flow at emission point on day of sampling

Extractive Waste Management Plan Implementation AER Update.

March 2019.

IPC Licence P0500-01.

1.0 Extractive Wastes.

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

- Silt Pond excavations and maintenance
- Bog Timbers

There has been no change to the type and nature of these 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.
- Bog timbers arise from the active production footprint and are naturally occurring. The active footprint is dictated by the peat production targets and customer supply contract and service level agreements.

4.0 Treatment

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

5.0 Recovery

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

6.0 Disposal

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

Annual Environmental Report 2018

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

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Facility Information Summary	
AER Reporting Year	2018
Licence Register Number	P0501-01
Name of site	Bord na Mona Derrygreenagh
Site Location	Derrygreenagh, Rochfortbridge, Co Westmeath
NACE Code	0892
Class/Classes of Activity	1.4
National Grid Reference (6E, 6 N)	249450, 238140

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

Activities on site can be divided into two components, firstly the milling, harrowing, ridiging 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 268,559 tonnes which was slightly up on the 2017 figure. Infrastructurally, there was no bog development. Quarterly grab sampling was 100% compliant, with the continuous composite sampling returning no non-compliances for suspended solids. There were three environmental complaints received during the reporting period, this was dust related and was resolved to the satisfaction of the complainants. 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. In relation to silt pond cleaning, 75% of ponds received two cleanings.The remaining 25% of silt ponds serviced a bog that was not operational in 2018 but were cleaned in December 2017, June 2018 and again in January 2019, so did receive two cleaning within the 12month period. Inspections dictate 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.

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

AIR-summary template

Lic No: P0501-01 Year 2018

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	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 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: P0501-01 Year 2018

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-01	Total Particulates	350	140 DAYS	Daily average < ELV	mg/m2/day	8176	71	0	0	Dust monitioring took place on 5 occasions for 28 days each time between April and September
DM-02	Total Particulates	350	140 DAYS	Daily average < ELV	mg/m2/day	14448	178	0	0	
DM-03	Total Particulates	350	140 DAYS	Daily average < ELV	mg/m2/day	30688	305	0	0	
DM-04	Total Particulates	350	140 DAYS	Daily average < ELV	mg/m2/day	14280	178	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

Solvent use and management on site

8 Do you have a total Emission Limit Value of direct and fugitive emissions on site? if yes please fill out tables A4 and A5 SELECT

Table A4: Solvent Management Plan Summary Total VOC Emission limit value Solvent regulations Please refer to linked solvent regulations to complete table 5 and 6

Reporting year	Total solvent input on site (kg)	Total VOC emissions to Air from entire site (direct and fugitive)	Total VOC emissions as %of solvent input	Total Emission Limit Value (ELV) in licence or any revision 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: P0501-01 Year 2018

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

Table W1 Storm water monitoring

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

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

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

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

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

3	Was there any result in breach of licence requirements? If yes please provide brief details in the comment section of Table W3 below		No	
4	Was all monitoring carried out in accordance with EPA guidance and checklists for Quality of Aqueous Monitoring Data Reported to the EPA? If no please detail what areas require improvement in additional information box	External /Internal Lab Quality checklist / Assessment of results checklist	Yes	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 therof[Note 2]	Licence Compliance criteria	Measured value	Unit of measurement	Compliant with licence	Method of analysis	Procedural reference source	Procedural reference standard number	Annual mass load (kg)	Comments

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

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

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER) Lic No: P0501-01 Year 2018

Continuous monitoring

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

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

6	Did continuous monitoring equipment experience downtime? **If yes please record downtime in table W4 below**	Yes	Total of 101 days over 365 days
7	Do you have a proactive service contract for each piece of continuous monitoring equipment on site?	Yes	
8	Did abatement system bypass occur during the reporting year? **If yes please complete table W5 below**	No	

Table W4: Summary of average emissions -continuous monitoring

Emission reference no:	Emission released to	Parameter/ Substance	ELV or trigger values in licence or any revision thereof	Averaging Period	Compliance Criteria	Units of measurement	Annual Emission for current reporting year (kg)	% change +/- from previous reporting year	Monitoring Equipment downtime (hours)	Number of ELV exceedences in reporting year	Comments
SW43	Water	Suspended Solids	35	24 hour	All results < 1.5 times ELV, plus from ten 8 results must be ELV >	mg/L				0	
SW43	Water	Ammonia (as N)	2.78	Weekly	NA	mg/L					
SW43	Water	Total phosphorus	NA	Weekly	NA	mg/L					
SW43	Water	COD	100	Weekly	NA	mg/L					
SW43	Water	volumetric flow	NA	24 hour	NA	m3/day			2424		Down time due to battery failure, and sampler repairs. Agency informed of repairs.
SW43	Water	Total Dissolved Solids	NA	Weekly	NA	mg/L					

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

Table W5: Abatement system bypass reporting table

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

*Measures taken or proposed to reduce or limit bypass frequency

Bund/Pipeline testing template

Lic No: P0501-01 Year 2018

Bund testing

dropdown menu click to see options

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

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

Bund/Containment structure ID	Type	Specify Other type	Product containment	Actual capacity	Capacity required*	Type of integrity test	Other test type	Test date	Integrity reports maintained on site?	Results of test	Integrity test failure explanation <50 words	Corrective action taken	Scheduled date for retest	Results of retest(if in current reporting year)
Derrygreenagh Bund NO:501-37-01	reinforced concrete		Gas Oil	110,592	45000	Hydraulic test		22/05/2017	Yes	Pass	N/A	N/A	N/A	N/A

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

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

bunding and storage guidelines

Pipeline/underground structure testing

1	Are you required by your licence to undertake integrity testing* on underground structures e.g. pipelines or sumps etc ? if yes please fill out table 2 below listing all underground structures and pipelines on site **which failed the integrity test and all which have not been tested withing the integrity test period as specified**	Yes	No underground tanks or pipelines on site
2	Please provide integrity testing frequency period	SELECT	

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

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

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

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

Groundwater/Soil monitoring template	Lic No:	P0501-01	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 interpretaion as an additional section in this AER
2	Are you required to carry out soil monitoring as part of your licence requireme	no		
3	Do you extract groundwater for use on site? If yes please specify use in comment section	yes	Drinking water well	
4	Do monitoring results show that groundwater generic assessment criteria such as GTVs or IGVs are exceeded or is there an upward trend in results for a substance? If yes, please complete the Groundwater Monitoring Guideline Template Report (link in cell G8) and submit separately through ALDER as a licensee return AND answer questions 5-12 below. Groundwater monitoring template	no		
5	Is the contamination related to operations at the facility (either current and/or historic)	no		
6	Have actions been taken to address contamination issues?If yes please summarise remediation strategies proposed/undertaken for the site	N/A		
7	Please specify the proposed time frame for the remediation strategy	N/A		
8	Is there a licence condition to carry out/update ELRA for the site?	N/A		
9	Has any type of risk assesment been carried out for the site?	N/A		
10	Has a Conceptual Site Model been developed for the site?	N/A		
11	Have potential receptors been identified on and off site?	N/A		
12	Is there evidence that contamination is migrating offsite?	N/A		Please enter interpretation of data here

Table 1: Upgradient Groundwater monitoring results

Date of sampling	Sample location reference	Parameter/ Substance	Methodology	Monitoring frequency	Maximum Concentration++	Average Concentration+	unit	GTV's*	SELECT**	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

Groundwater/Soil monitoring template Lic No: P0501-01 Year 2018

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)

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

Table 3: Soil results

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

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

Environmental Liabilities template	Lic No:	P0501-01	Year 2018	2018

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

		Commentary
ELRA initial agreement status	Not a licence requirement	
ELRA review status	NA	
Amount of Financial Provision cover required as determined by the latest ELRA	NA	
Financial Provision for ELRA status	NA	
Financial Provision for ELRA - amount of cover	NA	
Financial Provision for ELRA - type	NA	
Financial provision for ELRA expiry date	NA	
Closure plan initial agreement status	NA	Internal budget provision
Closure plan review status	NA	Internal budget provision
Financial Provision for Closure status	NA	Internal budget provision
Financial Provision for Closure - amount of cover	NA	Internal budget provision
Financial Provision for Closure - type	NA	Internal budget provision
Financial provision for Closure expiry date	NA	

Environmental Management Programme/Continuous Improvement Programme template

Lic No: P0501-01 Year 2018

Highlighted cells contain dropdown menu click to view

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

Environmental Management Programme (EMP) report

Objective Category	Target	Status (% completed)	How target was progressed	Responsibility	Intermediate outcomes
Reduction of emissions to Air	Continue to train all employees in environmental matters. Training will be by means of a new four module training programme delivered by dedicated Bord na Mona training specialists. This new training programme includes environmental compliance-IPPC, Biodiversity, Archaeology and Energy management. Hydraulic harrows will be deployed at dust sensitive locations. Continue with the collection of headland peat.	90	In total 34 personnel received training during 2018. Hydraulic harrows were depolyed at 4 locations. Headland peat was collected at all locations and returned with production figures.	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	80	Installed a waste management system. Monthly waste reports are returned for records/filing and waste streams are segrated on site to maximise recycling potential.	Section Head	Improved Environmental Management Practices
Waste reduction/Raw material usage efficiency	Continue with the recycling of polyethylene. The sourcing of more recycling contractors will be ongoing.	100	In total 80.9 tonnes of polyethlene were sent off site for recycling. Procurement also exploring the possibility of securing further recyclers. In an attempt to curtail illegal dumping on Bord na Mona remain in contact with Meath and Westmeath Co Councils.	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	100	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. Continue with the collection of headland peat.	90	In total 34 Personnel received training in 2018. Personnel are trained every two years in Environmental matters. Headland peat was collected at all locations and included as part of overall peat returns.	Individual	Improved Environmental Management Practices

Noise monitoring summary report

Lic No: P0501-01 Year 2018

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 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: P0501-01 Year 2018

			Additional information
1	When did the site carry out the most recent energy efficiency audit? Please list the recommendations in table 3 below	Sep-18	Report on file
2	Is the site a member of any accredited programmes for reducing energy usage/water conservation such as the SEAI programme linked to the right? If yes please list them in additional information	SEAI - Large Industry Energy Network (LIEN) Yes	ISO50001 accreditation attained from Certification Europe
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	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)	6100	5858	NA	NA
Total Energy Generated (MWHrs)				
Total Renewable Energy Generated (MWHrs)				
Electricity Consumption (MWHrs)	451	226	NA	NA
Fossil Fuels Consumption:				
Heavy Fuel Oil (m3)				
Light Fuel Oil (m3)	555.988	1692		
Natural gas (m3)				
Coal/Solid fuel (metric tonnes)				
Peat (metric tonnes)				
Renewable Biomass				
Renewable energy generated on site				

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

Table R2 Water usage on site

					Water Emissions	Water Consumption	
Water use	Water extracted Previous year m3/yr.	Water extracted Current year m3/yr.	Production +/- % compared to previous reporting year**	Energy Consumption +/- % vs overall site production*	Volume Discharged back to environment(m^3yr) :	Volume used i.e not discharged to environment e.g. released as steam m3/yr	Unaccounted for Water:
Groundwater							
Surface water							
Public supply							
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)	92.8				
Non-Hazardous (Tonnes)	332.73				

Table R4: Energy Audit finding recommendations

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

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

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

Complaints and Incidents summary template Lic No: P0501-01 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
04/04/2018	Dust		Complaint about dust blowing into adjoining land and silage	Moved stockpile	Complete	05/04/2018	Reported to Agency Ref:LR034726
14/06/2018	Dust		Complaint about dust blowing into their house and property	No peat production adjacent to the homeowner in question	Complete	15/06/2018	Reported to the Agency Ref:LR035599
25/08/2018	Dust		Complaint about dust blowing into their house and property	Employees reminded of their environmental training.	Complete	25/08/2018	Reported to the Agency Ref:LR036695
	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

Complaints and Incidents summary template Lic No: P0501-01 Year 2018

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 reoccurence
16/02/2018	Trigger level reached	Lisclogher SW-20	1. Minor	Water	Other (add details)	Unknown	Normal activities	EPA INCI014018	New	Investigate	None Required	Complete	07/03/2018	Low
05/04/2018	Spillage	Toar Bog	1. Minor	Ground	Other (add details)	Plant or equipment breakdown	Normal activities	EPA INCI014221	New	Investigate	Material excavated and removed. Incident reporting re-emphasised to all personnel.	Complete	05/04/2018	Low
24/04/2018	Trigger level reached	Rossan Bog SW-43	1. Minor	Water	Other (add details)	Unknown	Normal activities	EPA INCI014395	New	Investigate	None Required	Complete	15/05/2018	Medium
07/06/2018	Trigger level reached	Ballivor Bog SW-35	1. Minor	Water	Other (add details)	Unknown	Normal activities	EPA INCI014714	New	Investigate	None Required	Complete	02/07/2018	Medium
07/06/2018	Trigger level reached	Ballivor Bog SW-38	1. Minor	Water	Other (add	Unknown	Normal activities	EPA INCI014715	New	Investigate	None Required	Complete	02/07/2018	Medium
07/06/2018	Trigger level reached	Ballivor Bog SW-39	1. Minor	Water	Other (add details)	Unknown	Normal activities	EPA INCI014716	New	Investigate	None Required	Complete	02/07/2018	Medium
07/06/2018	Trigger level reached	Ballivor Bog SW-40	1. Minor	Water	Other (add details)	Unknown	Normal activities	EPA INCI014717	New	Investigate	None Required	Complete	02/07/2018	Medium
07/06/2018	Trigger level reached	Ballivor Bog SW-41	1. Minor	Water	Other (add details)	Unknown	Normal activities	EPA INCI014719	New	Investigate	None Required	Complete	02/07/2018	Medium
07/06/2018	Trigger level reached	Carranstown Bog SW-31	1. Minor	Water	Other (add details)	Unknown	Normal activities	EPA INCI014720	New	Investigate	None Required	Complete	02/07/2018	Medium
07/06/2018	Trigger level reached	Carranstown Bog SW-32	1. Minor	Water	Other (add details)	Unknown	Normal activities	EPA INCI014732	New	Investigate	None Required	Complete	02/07/2018	Medium
07/06/2018	Trigger level reached	Carranstown Bog SW-33	1. Minor	Water	Other (add details)	Unknown	Normal activities	EPA INCI014733	New	Investigate	None Required	Complete	02/07/2018	Medium
07/06/2018	Trigger level reached	Carranstown Bog SW-34	1. Minor	Water	Other (add details)	Unknown	Normal activities	EPA INCI014734	New	Investigate	None Required	Complete	02/07/2018	Medium
12/06/2018	Trigger level reached	Rossan Bog SW-43	1. Minor	Water	Other (add details)	Unknown	Normal activities	EPA INCI014736	Recurring	Investigate	None Required	Complete	02/07/2018	Medium
26/06/2018	Trigger level reached	Rossan Bog SW-43	1. Minor	Water	Other (add details)	Unknown	Normal activities	EPA INCI014737	New	Investigate	None Required	Complete	02/07/2018	Medium
01/10/2018	Trigger level reached	Rossan Bog SW-43	1. Minor	Water	Other (add details)	Unknown	Normal activities	EPA INCI015376	Recurring	Investigate	None Required	Complete	18/10/2018	Medium
11/10/2018	Trigger level reached	Ballybeg Bog SW-12	1. Minor	Water	Other (add details)	Unknown	Normal activities	EPA INCI015377	New	Investigate	None Required	Complete	18/10/2018	Medium
11/10/2018	Trigger level reached	Ballybeg Bog SW-13	1. Minor	Water	Other (add details)	Unknown	Normal activities	EPA INCI015378	New	Investigate	None Required	Complete	18/10/2018	Medium
11/10/2018	Trigger level reached	Ballybeg Bog SW-13A	1. Minor	Water	Other (add details)	Unknown	Normal activities	EPA INCI015379	New	Investigate	None Required	Complete	18/10/2018	Medium
11/10/2018	Trigger level reached	Toar Bog SW-14	1. Minor	Water	Other (add details)	Unknown	Normal activities	EPA INCI015380	New	Investigate	None Required	Complete	18/10/2018	Medium
15/10/2018	Trigger level reached	Rossan Bog SW-43	1. Minor	Water	Other (add details)	Unknown	Normal activities	EPA INCI015381	Recurring	Investigate	None Required	Complete	18/10/2018	Medium
24/09/2018	Trigger level reached	Rossan Bog SW-43	1. Minor	Water	Other (add details)	Unknown	Normal activities	EPA INCI015382	Recurring	Investigate	None Required	Complete	25/09/2018	Medium
06/11/2018	Trigger level reached	Rossan Bog SW-43	1. Minor	Water	Other (add details)	Unknown	Normal activities	EPA INCI015641	Recurring	Investigate	None Required	Complete	05/12/2018	Medium
Total number of incidents current year	22													
Total number of incidents previous year	6													
% reduction/ increase	366%													

WASTE SUMMARY	Lic No:	P0501-01	Year	2018
SECTION A-PRTR ON SITE WASTE TREATMENT AND WASTE TRANSFERS TAB- TO BE COMPLETED BY ALL IPPC AND WASTE FACILITIES		PRTR facility logon	dropdown list click to see options	

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

			Additional Information
1	Were any wastes accepted onto your site for recovery or disposal or treatment prior to recovery or disposal within the boundaries of your facility ?; (waste generated within your boundaries is to be captured through PRTR reporting) If yes please enter details in table 1 below	N/A	
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	N/A	
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	N/A	

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

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

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

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

SECTION D-TO BE COMPLETED BY LANDFILL SITES ONLY

Table 2 Waste type and tonnage-landfill only

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

WASTE SUMMARY	Lic No:	P0501-01	Year	2018

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	

Table 4 Environmental monitoring-landfill only Landfill Manual-Monitoring Standards

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

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

Table 5 Capping-Landfill only

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

*please note this includes daily cover area

Table 6 Leachate-Landfill only

9	Is leachate from your site treated in a Waste Water Treatment Plant?	SELECT
10	Is leachate released to surface water? If yes please complete leachate mass load information below	SELECT

Volume of leachate in reporting year(m3)	Leachate (BOD) mass load (kg/annum)	Leachate (COD) mass load (kg/annum)	Leachate (NH4) mass load (kg/annum)	Leachate (Chloride) mass load kg/annum	Leachate treatment on-site	Specify type of leachate treatment	Comments

Please ensure that all information reported in the landfill gas section is consistent with the Landfill Gas Survey submitted in conjunction with PRTR returns

Table 7 Landfill Gas-Landfill only

Gas Captured&Treated by LFG System m3	Power generated (MW / KWh)	Used on-site or to national grid	Was surface emissions monitoring performed during the reporting year?	Comments
			SELECT	

Waste Summary Continued Lic No: P0501-01 Year 2018

European Waste Code (EWC)	Description of Waste (in line with applicable EWC code)	Hazardous - Yes/No	Quantity (Tonnes)	Name & Permit No. of Agent/Carrier	Treatment Type – Recovered / Disposed / Recycled	Name, Address & Licence/Permit No. of FINAL Destination	Location of Treatment - Country
02 01 04	waste plastics (except packaging)	No	80.9	ADN Materials Ltd.WFP-MN-12-0001-04	R05 - Recycling/reclamation of other inorganic materials	ADN Materials Ltd., Lossetts, Carrickmacross, Co. Monaghan - WFP-MN-12-0001-04	Ireland
08 01 11*	waste paint and varnish containing organic solvents or other hazardous substances	Yes	1	Enva Ireland Limited (Portlaoise) - W0184	R02 - Solvent reclamation/regeneration	Recyfuel Ltd., Enghis - BE0459.735.458	Belgium
11 01 13*	degreasing wastes containing hazardous substances	Yes	0.27	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	10.37	Enva Ireland Limited (Portlaoise) - W0184	R01 - Use principally as a fuel or other means to generate energy	Enva Ireland Limited, Clonminam Industrial Estate, Portlaoise - W0184	Ireland
13 05 03*	interceptor sludges	Yes	46.14	Enva Ireland Limited (Portlaoise) - W0184	R01 - Use principally as a fuel or other means to generate energy	Enva Ireland Limited, Clonminam Industrial Estate, Portlaoise - W0184	Ireland
15 01 03	wooden packaging	No	12.08	AES Ltd WP-OY-08-601-01	R01 - Use principally as a fuel or other means to generate energy	AES LTD, Cappincur, Tullamore, Co. Offaly - WP-OY-08-601-01	Ireland
15 02 02*	absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by hazardous substances	Yes	1.01	Enva Ireland Limited (Portlaoise) - W0184	R01 - Use principally as a fuel or other means to generate energy	Lindenschmidt, Kreutzal - Reg No: E97095037	Germany
16 01 07*	oil filters	Yes	1.06	Enva Ireland Limited (Portlaoise) - W0184	R04 - Recycling/reclamation of metals and metal compounds	R.D. Recycling, Houthalen, Reg No: 51727/1KD	Belgium
16 06 01*	lead batteries	Yes	0.96	Enva Ireland Limited (Portlaoise) - W0184	R04 - Recycling/reclamation of metals and metal compounds	Campine Recycling, Beerse - MLAV/05173/GVDA	Belgium
17 04 07	mixed metals	No	57.78	AES Ltd WP-OY-08-601-01	R04 - Recycling/reclamation of metals and metal compounds	AES LTD, Cappincur, Tullamore, Co. Offaly - WP-OY-08-601-01	Ireland
20 03 01 A	Municipal mixed residual household	No	5.79	AES Ltd WP-OY-08-601-01	D05 - Specially engineered landfill (e.g. placement into lined discrete cells which are capped and isolated from one another and the environment, etc.)	AES LTD, Cappincur, Tullamore, Co. Offaly - WP-OY-08-601-01	Ireland
20 03 01 B	Municipal mixed residual non-household	No	20.62	AES Ltd WP-OY-08-601-01	D05 - Specially engineered landfill (e.g. placement into lined discrete cells which are capped and isolated from one another and the environment, etc.)	AES LTD, Cappincur, Tullamore, Co. Offaly - WP-OY-08-601-01	Ireland
17 05 03*	soil and stones containing hazardous substances	Yes	31.98	Enva Ireland Limited (Portlaoise) - W0184	D10 - Incineration on land	Enva Ireland Limited, Clonminam Industrial Estate, Portlaoise - W0184	Ireland

Derrygreenagh

Decommissioning and Rehabilitation
Bog Rehabilitation Progress Report 2018.

Within the Derrygreenagh licensed area (P0501-01) there were no entire bog units available for rehabilitation in 2018. Ongoing monitoring of cutaway within the Derrygreenagh licensing area included the re-survey of Drumman bog.
Monitoring of cutaway sites within the Derrygreenagh Bog Group is ongoing 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.

Some fertiliser (Ground Rock Phosphate) was applied to an area within Derryarkin Bog in 2018 to speed up natural recolonization, as part of the rehabilitation plan for this bog.

Bog restoration and drain-blocking is being carried out at a remnant section of high bog at Daingean Rathdrum. This work was completed in 2018.

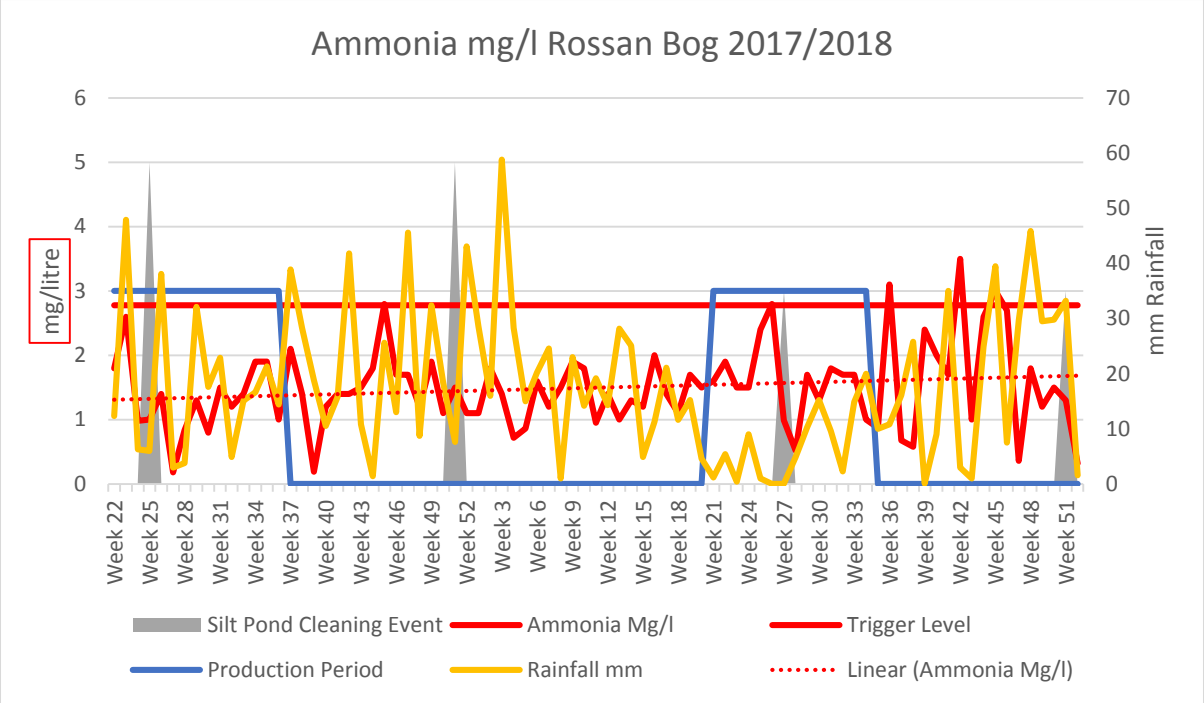
Draft rehabilitation plans for the Derrygreenagh bogs licensed area, including more detailed draft plans for each component bog unit were submitted to the EPA in 2013 and these were reviewed and updated in 2015, and 2017.

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.
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.

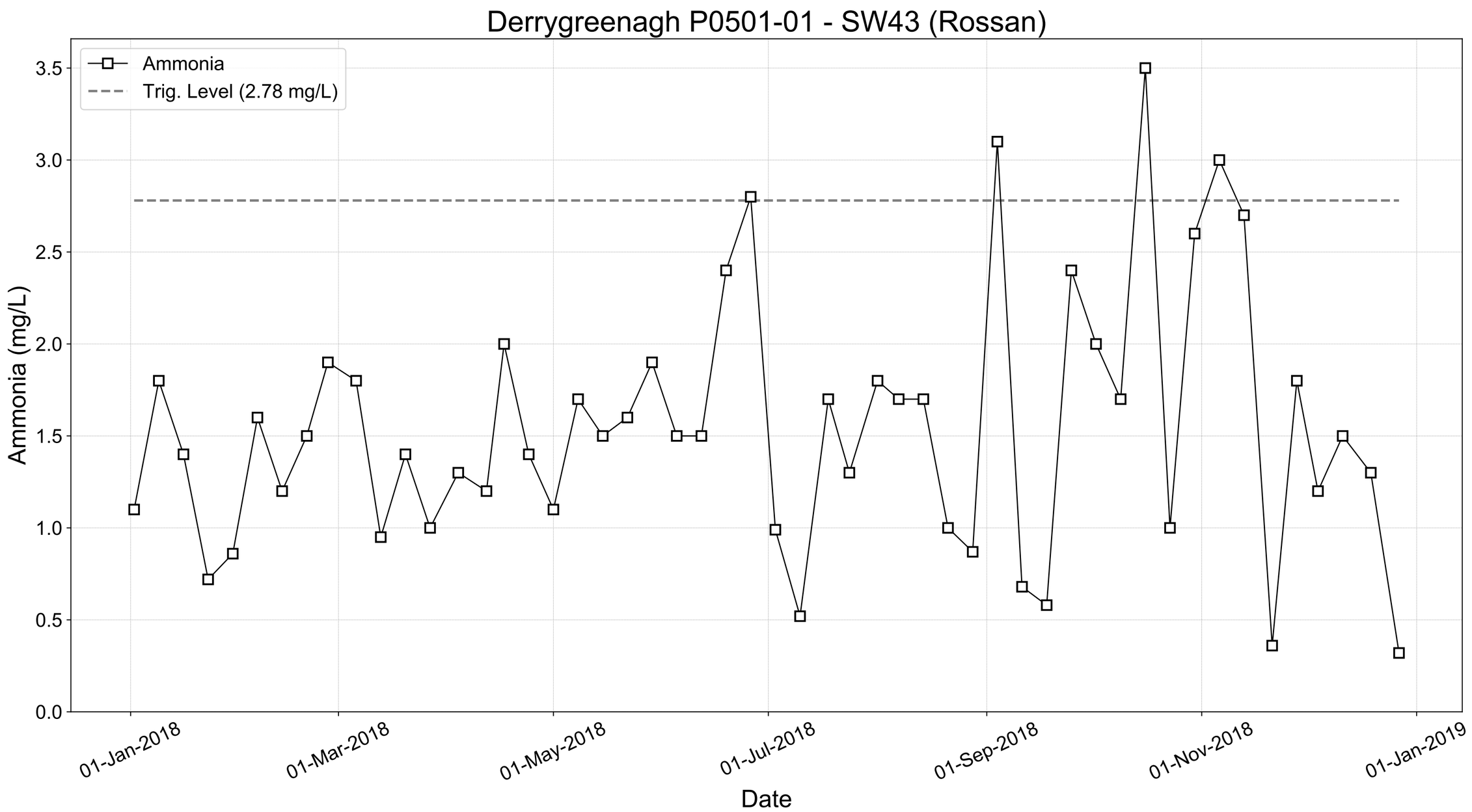
Bord na Mona Derrygreenagh PO501-01												
Grab Sampling 2018												
X	Y	Bog	SW	Monitoring	Sampled	pH	SS	TS	Ammonia	TP	COD	Colour
262436.96	258824.82	Lisclogher	SW-19	Q1 18	16/02/2018	6.8	5	124	0.1	0.05	72	340
262935.72	258722.5	Lisclogher	SW-20	Q1 18	16/02/2018	5.8	5	160	0.14	0.05	119	548
262969.12	258691.34	Lisclogher	SW-21	Q1 18	16/02/2018	5.4	5	116	0.11	0.05	96	417
263432.94	258465.16	Lisclogher	SW-22	Q1 18	16/02/2018	6.9	5	164	0.96	0.05	93	544
263467.21	258446.56	Lisclogher	SW-23	Q1 18	16/02/2018	7.3	5	196	1.6	0.06	82	399
263740.8	258367.96	Lisclogher	SW-24	Q1 18	16/02/2018	4.3	5	60	0.09	0.05	47	212
266022.62	259613.57	Lisclogher	SW-25	Q1 18	20/02/2018	7.4	5	358	2.9	0.12	85	277
260583.98	256514.28	Bracklin	SW-26	Q1 18	16/02/2018	6.4	5	96	0.71	0.06	57	191
260609.41	256526.33	Bracklin	SW-27	Q1 18	16/02/2018	7.1	5	224	1.6	0.05	72	326
263649.63	255035.41	Carranstown	SW-31	Q2 18	07/06/2018	7.6	5	171	0.03	0.05	126	230
265553.99	255989.11	Carranstown	SW-32	Q2 18	07/06/2018	7.6	5	394	0.54	0.1	140	176
265632.83	254865.04	Carranstown	SW-33	Q2 18	07/06/2018	7.1	35	414	2.8	0.65	124	178
265886.95	254984.18	Carranstown	SW-34	Q2 18	07/06/2018	7.4	12	432	0.99	0.12	142	272
265140.06	254114.54	Ballivor	SW-35	Q2 18	07/06/2018	7.7	15	476	0.06	0.09	144	242
265878.97	253506.58	Ballivor	SW-38	Q2 18	07/06/2018	8	8	212	0.24	0.08	136	238
265888.99	253456.63	Ballivor	SW-39	Q2 18	07/06/2018	7.9	5	286	0.07	0.11	115	104
266366.86	251598.58	Ballivor	SW-40	Q2 18	07/06/2018	7.6	9	436	1.6	0.12	124	134
266386.45	251579.18	Ballivor	SW-41	Q2 18	07/06/2018	7.8	6	356	0.02	0.07	110	102
255381.16	243606.05	Derryhinch	SW-1	Q3 18	10/09/2018	7.7	7	344	0.51	0.09	78	95
254528.83	242354.28	Derryhinch	SW-2	Q3 18	10/09/2018	7.6	5	228	1.1	0.06	61	119
253369.19	242417.94	Derryhinch	SW-3	Q3 18	10/09/2018	7.7	5	214	2.3	0.05	49	201
252602.78	242540.17	Derryhinch	SW-4	Q3 18	10/09/2018	7.8	5	432	0.08	0.05	52	105
252623.61	241470.16	Carrick	SW-4A	Q3 18	10/09/2018	7.9	5	288	0.95	0.05	61	227
252468.68	240919.32	Carrick	SW-5	Q3 18	10/09/2018	7.5	5	394	0.09	0.05	42	59
252409.71	241163.33	Carrick	SW-6	Q3 18	10/09/2018	7.6	5	462	0.1	0.05	42	66
252473.21	241162.01	Carrick	SW-7	Q3 18	10/09/2018	7.6	5	462	0.09	0.06	42	142
252275.61	239871.62	Drumman	SW-8	Q3 18	10/09/2018	8	5	366	0.35	0.05	50	166
252950.37	238421.69	Drumman	SW-9	Q3 18	10/09/2018	7.5	5	240	0.04	0.07	62	146
251559.92	235341.71	Ballybeg	SW-11	Q4 18	15/10/2018	7.2	5	418	0.12	0.05	61	119
252206.09	235207.02	Ballybeg	SW-12	Q4 18	15/10/2018	7.1	5	358	3	0.05	83	213
251880.6	234593.13	Ballybeg	SW-13	Q4 18	15/10/2018	7.3	5	368	3.7	0.05	74	184
252250.49	235061.45	Ballybeg	SW-13A	Q4 18	15/10/2018	7.2	5	402	3	0.05	71	148
240485.16	235706.33	Toar	SW-14	Q4 18	11/10/2018	7.2	14	396	3.2	0.05	35	42
244391.76	235128.93	Toar	SW-15	Q4 18	11/10/2018	7.5	9	418	0.42	0.05	37	44
244435.64	235093.42	Toar	SW-16	Q4 18	11/10/2018	7.8	5	452	0.15	0.25	44	59
240425.65	234997.32	Toar	SW-17	Q4 18	11/10/2018	8.1	5	328	0.02	0.1	10	32
259415.3	256855.75	Bracklin	SW-29	Q4 18	15/10/2018	7	5	164	2.6	0.28	91	345
259519.45	257618.44	Bracklin	SW-30	Q4 18	15/10/2018	6.6	5	136	2.4	0.05	95	90

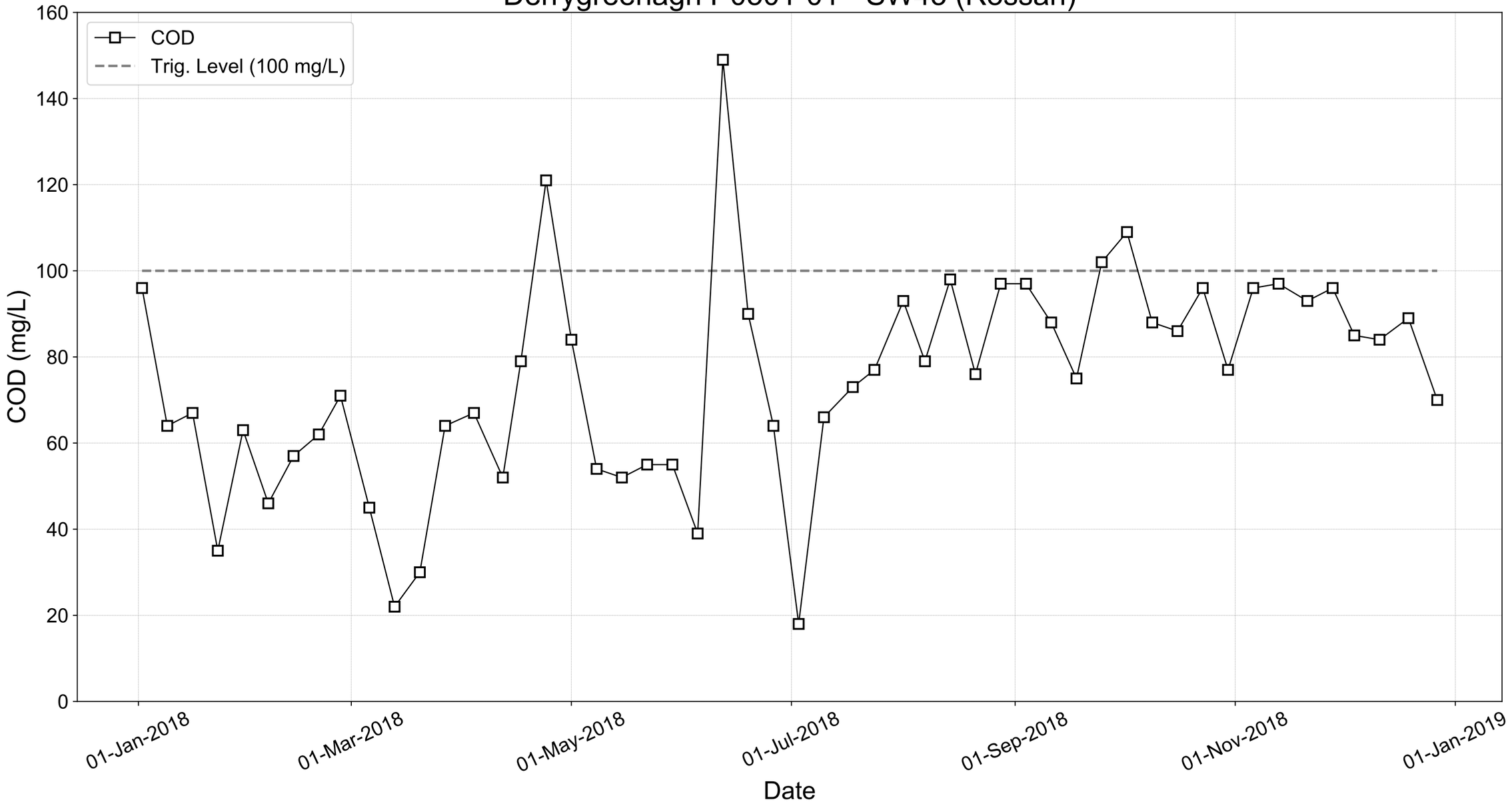


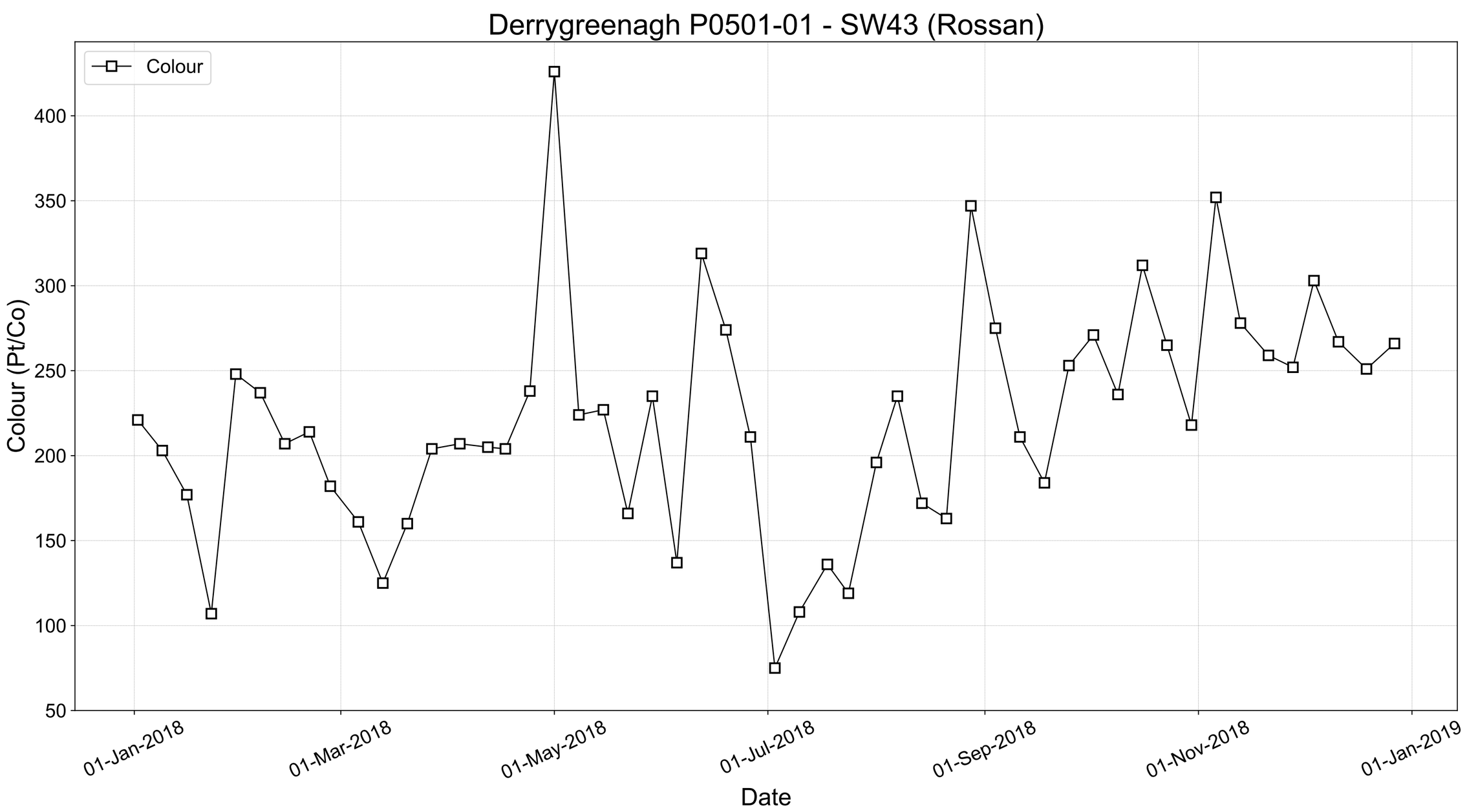
Rossan bog is an active horticultural production bog with the composite sampler located here from May 2017 where it was moved from Toar Bog within the Derrygreenagh IPC Licence. The composite sampler takes a flow proportional composite sample over a 24 hour period. The sampler had 0% downtime during this reporting period and returned 52 weekly ammonia results during the period. The ammonia trigger level of 2.78mg/l, as agreed with the Agency, was exceeded four times during the period, all reported to the Agency. Overall the sampling period of 82 weeks showed a slightly increasing trend in ammonia.

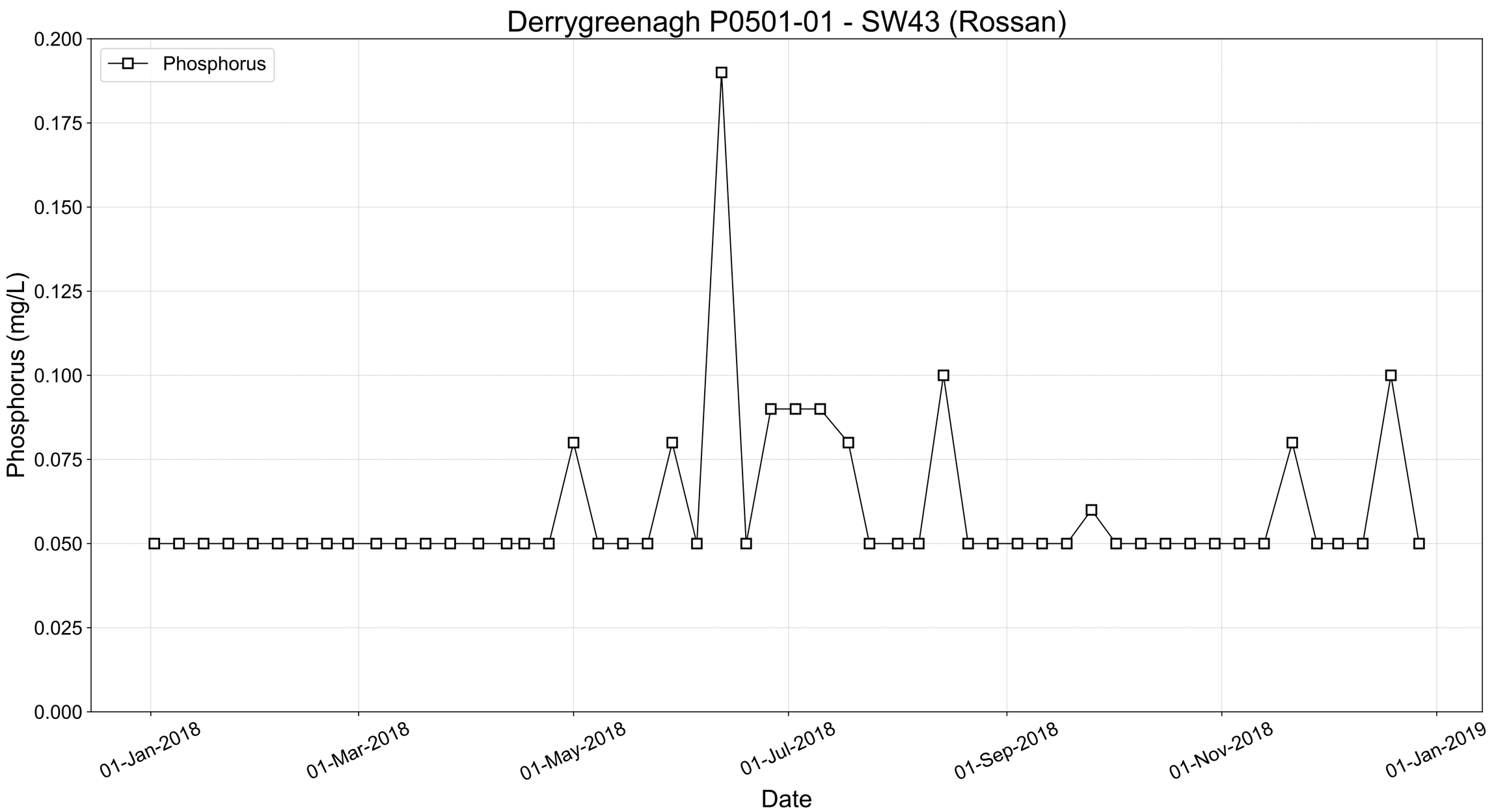
There is no obvious link between the summer production, winter maintenance, or silt pond maintenance events on the concentration of Ammonia discharging from this peatland. The only link expected would be that related to rainfall events and seasonal weather patterns and the subsequent surfacewater runoff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

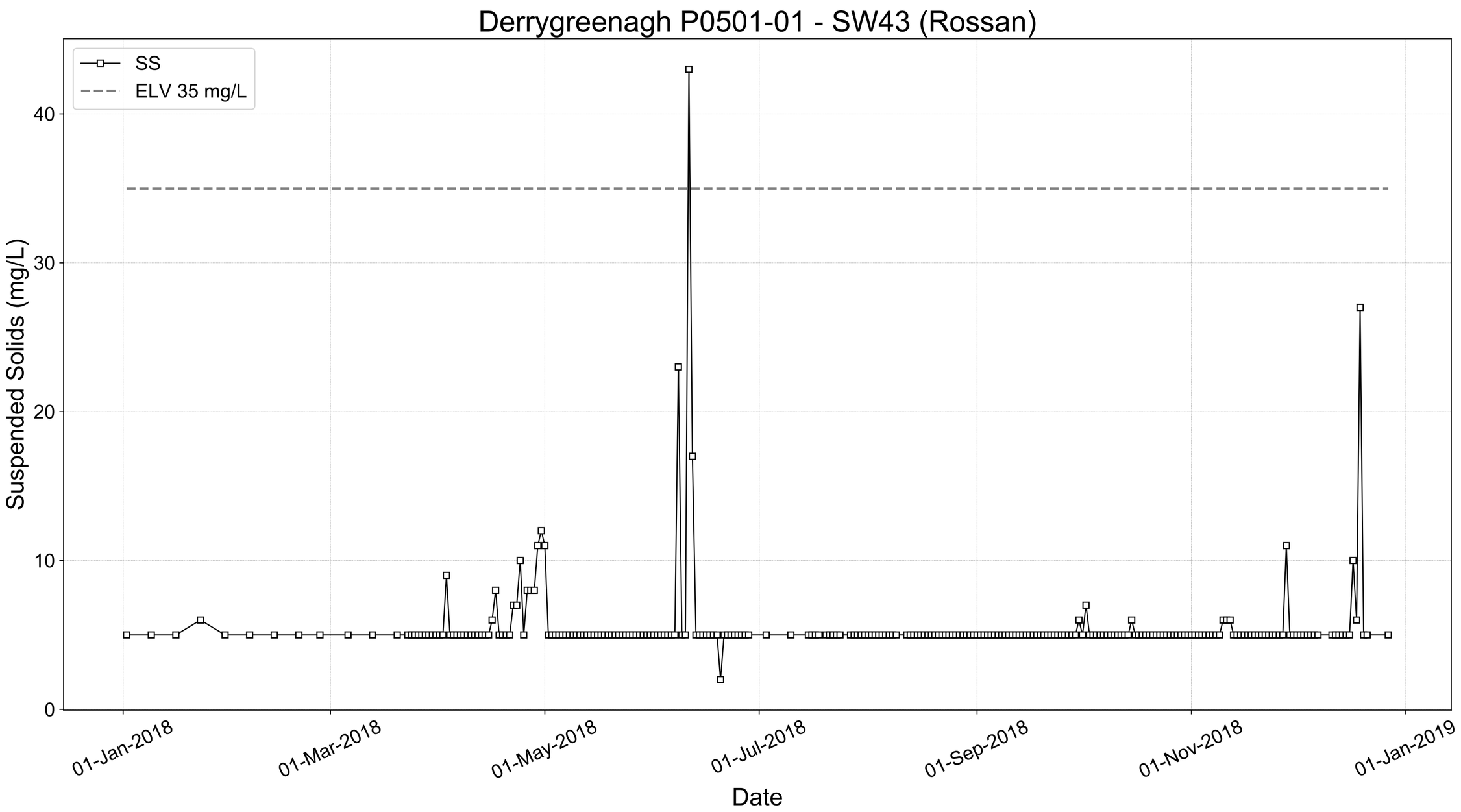
The sampler at this location may be relocated to fill any information gaps on other peatland catchments and to reflect the need to support the information gathering required for the Water Framework Directive's River Basin Management Plan. There is also an EPA lead research project commencing in 2019,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

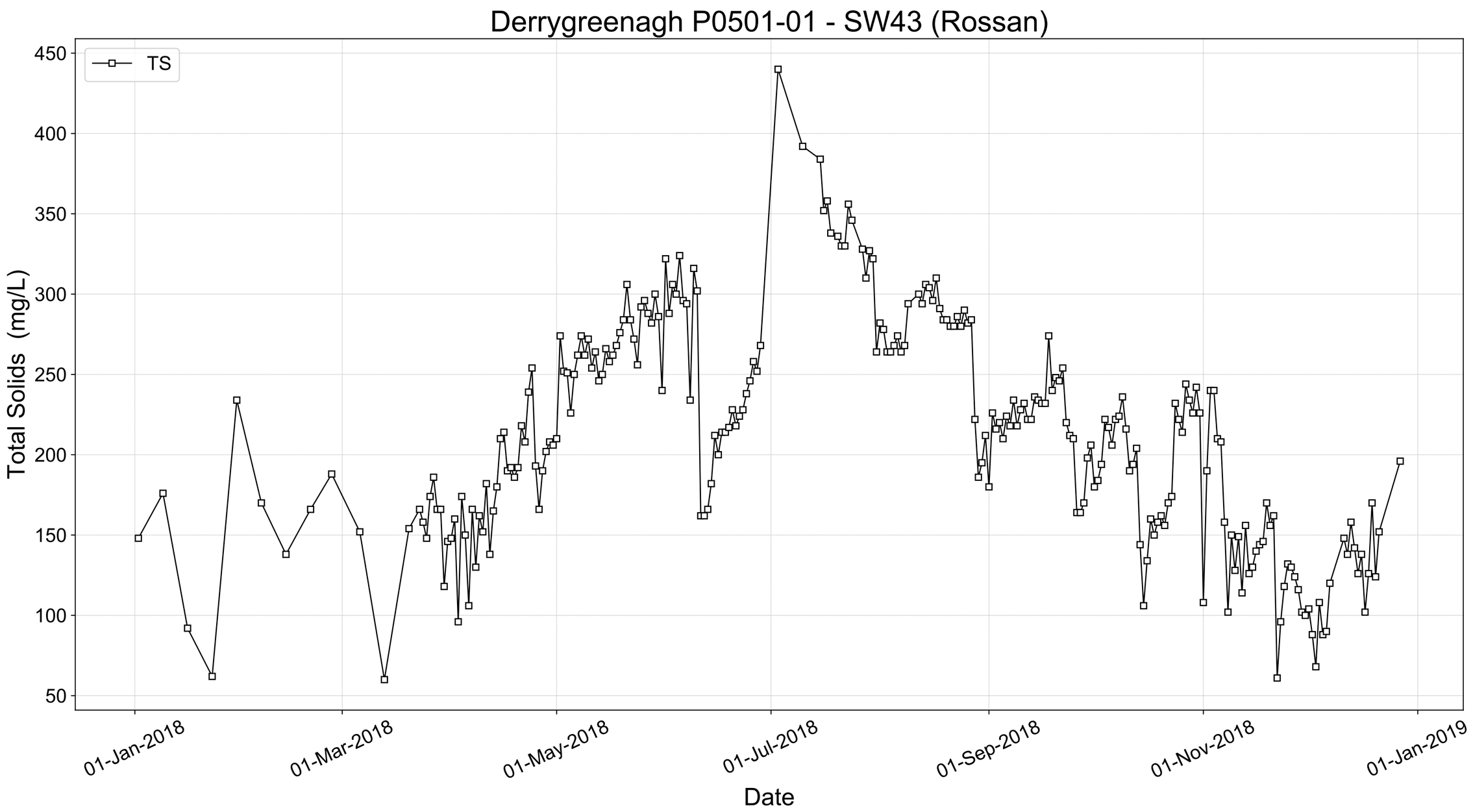

Derrygreenagh P0501-01 - SW43 (Rossan)
Ammonia
Trig. Level (2.78 mg/L)
Ammonia (mg/L)
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
01-Jan-2018
01-Mar-2018
01-May-2018
01-Jul-2018
01-Sep-2018
01-Nov-2018
01-Jan-2019
Date

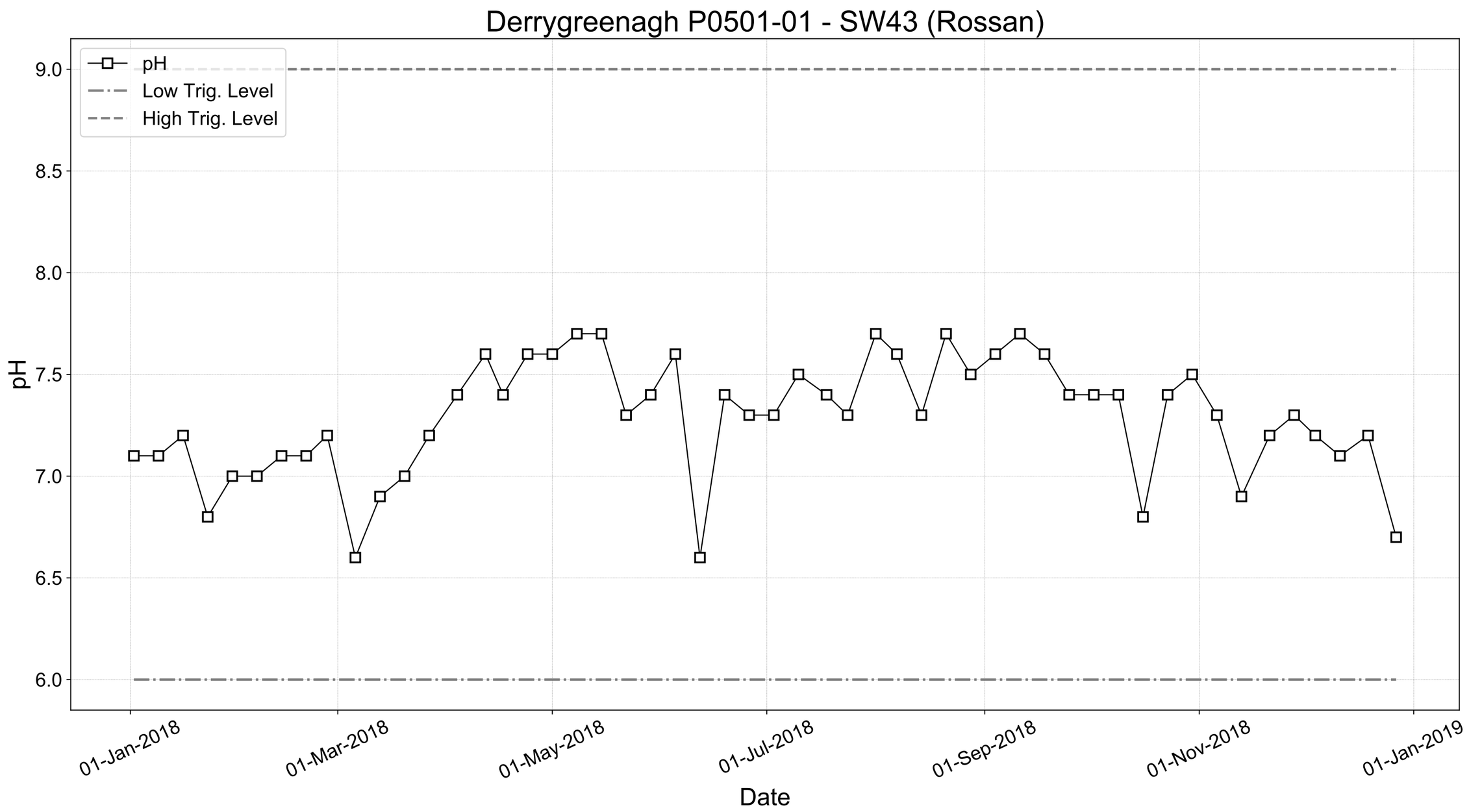

Derrygreenagh P0501-01 - SW43 (Rossan)
COD
Trig. Level (100 mg/L)
COD (mg/L)
0
20
40
60
80
100
120
140
160
01-Jan-2018
01-Mar-2018
01-May-2018
01-Jul-2018
01-Sep-2018
01-Nov-2018
01-Jan-2019
Date


Derrygreenagh P0501-01 - SW43 (Rossan)
Colour
Colour (Pt/Co)
400
350
300
250
200
150
100
50
01-Jan-2018
01-Mar-2018
01-May-2018
01-Jul-2018
01-Sep-2018
01-Nov-2018
01-Jan-2019
Date


Derrygreenagh P0501-01 - SW43 (Rossan)
Phosphorus
Phosphorus (mg/L)
0.200
0.175
0.150
0.125
0.100
0.075
0.050
0.025
0.000
01-Jan-2018
01-Mar-2018
01-May-2018
01-Jul-2018
01-Sep-2018
01-Nov-2018
01-Jan-2019
Date


Derrygreenagh P0501-01 - SW43 (Rossan)
SS
ELV 35 mg/L
Suspended Solids (mg/L)
0
10
20
30
40
01-Jan-2018
01-Mar-2018
01-May-2018
01-Jul-2018
01-Sep-2018
01-Nov-2018
01-Jan-2019
Date


Derrygreenagh P0501-01 - SW43 (Rossan)
TS
Total Solids (mg/L)
450
400
350
300
250
200
150
100
50
01-Jan-2018
01-Mar-2018
01-May-2018
01-Jul-2018
01-Sep-2018
01-Nov-2018
01-Jan-2019
Date


Derrygreenagh P0501-01 - SW43 (Rossan)
pH
Low Trig. Level
High Trig. Level
9.0
8.5
8.0
7.5
7.0
6.5
6.0
pH
01-Jan-2018
01-Mar-2018
01-May-2018
01-Jul-2018
01-Sep-2018
01-Nov-2018
01-Jan-2019
Date

Yard Discharge Results 2018

Licence: P0501-01

Works: Derrygreenagh

Month	D/Greenagh SWE 2 COD	Rossan SWE 1 COD
Jan	49	52
Feb	18	56
Mar	18	29
Apr	32	53
May	10	48
June	0	0
July	0	0
Aug	0	0
Sep	40	68
Oct	10	21
Nov	21	60
Dec	34	21

Note: 0 denotes no flow at emission point on day of sampling

Extractive Waste Management Plan Implementation AER Update.

March 2019.

IPC Licence P0501-01.

1.0 Extractive Wastes.

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

- Silt Pond excavations and maintenance
- Bog Timbers

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

2.0 Condition 7.5 Extractive Waste Management

- An extractive waste management plan (EWMP) was submitted to the Agency in September 2012 and was approved.
- The EWMP was reviewed in September 2017. There were no substantial changes to the operation of the plan, associated waste facilities or to the waste deposited.

3.0 Minimisation

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

4.0 Treatment

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

5.0 Recovery

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

6.0 Disposal

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

Annual Environmental Report 2018

Bord na Mona Energy Ltd
(Blackwater Group of Bogs)
IPC Licence P0502-01

LEABEG, TULLAMORE, CO. OFFALY, IRELAND
TELEPHONE: (05793) 45900. INT: +353-5793-45900. FAX :(05793) 45160. INT: +353-5793-45160

Facility Information Summary

AER Reporting Year	2018
Licence Register Number	P0502-01
Name of site	Bord na Mona Blackwater
Site Location	Shannonbridge, Athlone, Co Westmeath
NACE Code	0892
Class/Classes of Activity	1.4
National Grid Reference (6E, 6 N)	200125, 225050

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 at the 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 Electricity Generating Station and lorry outloading facilities. Production achieved was approximately 1064910 tonnes. Infrastructurally, there was no new bog development. There were 3 environmental complaints during the year. There were 4 incidents and they all related to water. In relation to silt pond cleaning, 100% of ponds received two cleanings with inspections dictating if a pond received further cleaning. A number of initiatives are in place in terms of fuel and electricity usage. Formalised management meetings take place weekly with environmental issues on the agenda for discussion. We are operating a Quality Management System to I.S. EN ISO 9001:2015. We are "committed to conducting all aspects of our business activities with a focus on minimising the impact on the environment". Rehabilitation works are described in an attachment.

Declaration:

All the data and information presented in this report has been checked and certified as being

P Kelly	26/2/2019
Signature Group/Facility manager (or nominated, suitably qualified and experienced deputy)	Date

AIR-summary template

Lic No: P0502-01 Year 2018

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	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 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		

ask M.Mulhall

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: P0502-01 Year 2018

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-01	Total Particulates	350mg/m2/day	84	Daily average < ELV	mg/m2/day	14840	278	0	0	
DM-02	Total Particulates	350mg/m2/day	84	Daily average < ELV	mg/m2/day	9100	194	0	0	
DM-03	Total Particulates	350mg/m2/day	84	Daily average < ELV	mg/m2/day	11648	253	0	0	
DM-04	Total Particulates	350mg/m2/day	84	Daily average < ELV	mg/m2/day	9156	151	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

Solvent use and management on site

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

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

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

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

Table A5: Solvent Mass Balance summary

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

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER) Lic No: P0502-01 Year 2018

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

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)

				Additional information
3	Was there any result in breach of licence requirements? If yes please provide brief details in the comment section of Table W3 below		Yes	
4	Was all monitoring carried out in accordance with EPA guidance and checklists for Quality of Aqueous Monitoring Data Reported to the EPA? If no please detail what areas require improvement in additional information box	External /Internal Lab Quality checklist	Assessment of results checklist	Surface water monitoring was carried out on a quarterly basis. The results of which are attached. Monthly COD yard runoff results are also attached.
			Yes	

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

Emission reference no:	Emission released to	Parameter/ SubstanceNote 1	Type of sample	Frequency of monitoring	Averaging period	ELV or trigger values in licence or any revision thereof[Note 2]	Licence Compliance criteria	Measured value	Unit of measurement	Compliant with licence	Method of analysis	Procedural reference source	Procedural reference standard number	Annual mass load (kg)	Comments

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: P0502-01 Year 2018

Continuous monitoring

			Additional Information
5	Does your site carry out continuous emissions to water/sewer monitoring?	Yes	
	If yes please summarise your continuous monitoring data below in Table W4 and compare it to its relevant Emission Limit Value (ELV)		
6	Did continuous monitoring equipment experience downtime? **If yes please record downtime in table W4 below**	Yes	Total of 115 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

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: P0502-01 Year 2018

Bund testing

dropdown menu click to see options

			Additional information
1	Are you required by your licence to undertake integrity testing on bunds and containment structures ? if yes please fill out table B1 below listing all **new bunds and containment structures** on site, in addition to **all bunds which failed** the integrity test-**all bunding structures which failed including mobile bunds must be listed in the table below, please include all bunds outside the licenced testing period** (mobile bunds and chemstore included)	Yes	
2	Please provide integrity testing frequency period	Other (2 Yearly)	
3	Does the site maintain a register of bunds, underground pipelines (including stormwater and foul), Tanks, sumps and containers? (containers refers to "Chemstore" type units and mobile bunds)	Yes	
4	How many bunds are on site?	13	
5	How many of these bunds have been tested within the required test schedule?	11	2 bunds scheduled to be tested in 2019
6	How many mobile bunds are on site?	45	This includes barrel trays located within workshops
7	Are the mobile bunds included in the bund test schedule?	No	
8	How many of these mobile bunds have been tested within the required test schedule?	0	
9	How many sumps on site are included in the integrity test schedule?	0	
10	How many of these sumps are integrity tested within the test schedule?	0	
	Please list any sump integrity failures in table B1		
11	Do all sumps and chambers have high level liquid alarms?	N/A	
12	If yes to Q11 are these failsafe systems included in a maintenance and testing programme?	N/A	
13	Is the Fire Water Retention Pond included in your integrity test programme?	N/A	

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

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

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

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

bunding and storage guidelines

Pipeline/underground structure testing

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

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

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

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

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

Groundwater/Soil monitoring template	Lic No:	P0502-01	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 interpretaion as an additional section in this AER
2	Are you required to carry out soil monitoring as part of your licence requiremer	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. Groundwater monitoring template	SELECT		
5	Is the contamination related to operations at the facility (either current and/or historic)	N/A		
6	Have actions been taken to address contamination issues?If yes please summarise remediation strategies proposed/undertaken for the site	N/A		
7	Please specify the proposed time frame for the remediation strategy	N/A		
8	Is there a licence condition to carry out/update ELRA for the site?	N/A		
9	Has any type of risk assesment been carried out for the site?	N/A		
10	Has a Conceptual Site Model been developed for the site?	N/A		
11	Have potential receptors been identified on and off site?	N/A		
12	Is there evidence that contamination is migrating offsite?	N/A		Please enter interpretation of data here

Table 1: Upgradient Groundwater monitoring results

Date of sampling	Sample location reference	Parameter/ Substance	Methodology	Monitoring frequency	Maximum Concentration++	Average Concentration+	unit	GTV's*	SELECT**	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)

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

Table 3: Soil results

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

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

Environmental Liabilities template	Lic No:	P0502-01	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: P0502-01 Year 2018

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	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 .Employees get environmental training at a minium of every two years and updates are carried out from time to time in addition to that .	98	In total 162 Personnel received training in 2018. Ten Hydraulic Harrows were deployed at six locations including the four sensitive areas. Headland peat was collected in five areas and returned with overall production figures.	Individual	Improved Environmental Management Practices
Waste reduction/Raw material usage efficiency	Waste Streamlining.It is planned to continue with and where possible improve the current waste management service provided by AES Ltd	100	Quarterly waste reports are returned for records/filing and waste streams are segrated on site to maximise recycling potential.	Section Head	Improved Environmental Management Practices
Reduction of emissions to Water	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.	90	Silt pond cleaning and upgrade was on target with two machines designated full time at silt control.	Individual	Improved Environmental Management Practices
Materials Handling/Storage/Bunding	Increased bund capacity will be provided where required. Bund integrity testing will be carried out where required.	90	There were no additional bund requirements.	Individual	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 360.84 tonnes were sent off site for recycling.	Individual	Improved Environmental Management Practices
Groundwater protection	It is proposed to upgrade existing septic tank systems where required.	95	Septic tanks are continually being assessed and upgrade works scheduled where required.	Section Head	Improved Environmental Management Practices

Noise monitoring summary report

Lic No: P0502-01 Year 2018

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 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: P0502-01 Year 2018

			Additional information
1	When did the site carry out the most recent energy efficiency audit? Please list the recommendations in table 3 below		
2	Is the site a member of any accredited programmes for reducing energy usage/water conservation such as the SEAI programme linked to the right? If yes please list them in additional information	SEAI - Large Industry Energy Network (LIEN)	
3	Where Fuel Oil is used in boilers on site is the sulphur content compliant with licence conditions? Please state percentage in additional information	No	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)	12464.785	21439.87		
Total Energy Generated (MWHrs)				
Total Renewable Energy Generated (MWHrs)				
Electricity Consumption (MWHrs)	1683.585	1425		
Fossil Fuels Consumption:				
Heavy Fuel Oil (m3)				
Light Fuel Oil (m3)	1950.703	1969.774		
Natural gas (m3)				
Coal/Solid fuel (metric tonnes)	8			
Peat (metric tonnes)				
Renewable Biomass				
Renewable energy generated on site				

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

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

Table R2 Water usage on site

					Water Emissions	Water Consumption	
Water use	Water extracted Previous year m3/yr.	Water extracted Current year m3/yr.	Production +/- % compared to previous reporting year**	Energy Consumption +/- % vs overall site production*	Volume Discharged back to environment(m^3yr) :	Volume used i.e not discharged to environment e.g. released as steam m3/yr	Unaccounted for Water:
Groundwater							
Surface water							
Public supply							
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: P0502-01 Year 2018

Table R3 Waste Stream Summary

	Total	Landfill	Incineration	Recycled	Other
Hazardous (Tonnes)	22.65				
Non-Hazardous (Tonnes)	4864.95				

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: P0502-01 Year 2018

Complaints

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	Additional information

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
05/09/2018	Air		Dust Complaint in Drumlosh Roscommon	The person was contacted and visited and issue is resolved	Complete	20/07/2018	
05/09/2018	Air		Dust Complaint	Env. Coordinator met with complainant to resolve the matter	Complete	11/07/2018	Boundary Estate Officer would meet with complainant at later date to discuss further

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: P0502-01 Year 2018

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 reoccurence
04/01/2018	Trigger level reached	SW 50 - Corneveagh	1. Minor	Water	Not related to site activities		Normal activities	EPA Ref No. INCI014669	New	None	NA	Complete	05/01/2018	Low
24/01/2018	Trigger level reached	SW 50 - Corneveagh	1. Minor	Water	Not related to site activities		Normal activities	EPA Ref No. INCI014670	New	None	NA	Complete	25/01/2018	Low
09/02/2018	Trigger level reached	SW 50 - Corneveagh	1. Minor	Water	Not related to site activities		Normal activities	EPA Ref No. INCI014671	New	None	NA	Complete	09/02/2018	Low
24/01/2018	Breach of ELV	SW 50 - Corneveagh	1. Minor	Water	Adverse weather		Normal activities	EPA Ref No. INCI014672	New	Weekly monitoring	Silt pond and all feeder silt ponds drains inspected	Complete	05/02/2018	Low

Total number of incidents current year	4
Total number of incidents previous year	9
% reduction	55.56%

WASTE SUMMARY	Lic No:	P0502-01	Year	2018
SECTION A-PRTR ON SITE WASTE TREATMENT AND WASTE TRANSFERS TAB- TO BE COMPLETED BY ALL IPPC AND WASTE FACILITIES		PRTR facility logon	dropdown list click to see options	

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

			Additional Information
1	Were any wastes accepted onto your site for recovery or disposal or treatment prior to recovery or disposal within the boundaries of your facility ?; (waste generated within your boundaries is to be captured through PRTR reporting) If yes please enter details in table 1 below	N/A	
2	Did your site have any rejected consignments of waste in the current reporting year? If yes please give a brief explanation in the additional information	SELECT	
3	Was waste accepted onto your site that was generated outside the Republic of Ireland? If yes please state the quantity in tonnes in additional information	SELECT	

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

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

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

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

WASTE SUMMARY Lic No: P0502-01 Year 2018

SECTION D-TO BE COMPLETED BY LANDFILL SITES ONLY

Table 2 Waste type and tonnage-landfill only

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

Table 3 General information-Landfill only

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

Table 4 Environmental monitoring-landfill only Landfill Manual-Monitoring Standards

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

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

Table 5 Capping-Landfill only

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

*please note this includes daily cover area

Table 6 Leachate-Landfill only

9	Is leachate from your site treated in a Waste Water Treatment Plant?	SELECT
10	Is leachate released to surface water? If yes please complete leachate mass load information below	SELECT

Volume of leachate in reporting year(m3)	Leachate (BOD) mass load (kg/annum)	Leachate (COD) mass load (kg/annum)	Leachate (NH4) mass load (kg/annum)	Leachate (Chloride) mass load kg/annum	Leachate treatment on-site	Specify type of leachate treatment	Comments

Please ensure that all information reported in the landfill gas section is consistent with the Landfill Gas Survey submitted in conjunction with PRTR returns

Table 7 Landfill Gas-Landfill only

Gas Captured& Treated by LFG System m3	Power generated (MW / KWh)	Used on-site or to national grid	Was surface emissions monitoring performed during the reporting year?	Comments
			SELECT	

Waste Summary Continued Lic No: P0502-01 Year 2018

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
20 03 01 B	Municipal mixed residual non-household	No	47.6	AES Ltd WP-OY-08-601-02	D01 - Deposit into or on to land (e.g. landfill, etc.)	AES LTD, Cappincur, Tullamore, Co. Offaly - WP-OY-08-601-01	Ireland
20 03 01 A	Municipal mixed residual household	No	115	AES Ltd WP-OY-08-601-01	D01 - Deposit into or on to land (e.g. landfill, etc.)	AES LTD, Cappincur, Tullamore, Co. Offaly - WP-OY-08-601-01	Ireland
17 04 07	mixed metals	No	182.69	AES Ltd WP-OY-08-601-00	R04 - Recycling/reclamation of metals and metal compounds	AES LTD, Cappincur, Tullamore, Co. Offaly - WP-OY-08-601-01	Ireland
15 01 03	wooden packaging	No	8.72	AES Ltd WP-OY-08-601-01	R01 - Use principally as a fuel or other means to generate energy	AES LTD, Cappincur, Tullamore, Co. Offaly - WP-OY-08-601-01	Ireland
13 02 05*	mineral-based non-chlorinated engine, gear and lubricating oils	Yes	18.9	Enva Ireland Limited - L1745	R01 - Use principally as a fuel or other means to generate energy	R.D. Recycling, Houthalen, Reg No: 51727/1KD	Belgium
16 01 07*	oil filters	Yes	2	Enva Ireland Limited - L1745	R04 - Recycling/reclamation of metals and metal compounds	R.D. Recycling, Houthalen, Reg No: 51727/1KD	Belgium
11 01 13*	degreasing wastes containing hazardous substances	Yes	1.75	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
02 01 04	waste plastics (except packaging)	No	360	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)	ADN Materials Ltd., Lossetts, Carrickmacross, Co. Monaghan - WFP-MN-12-0001-04	Ireland

Blackwater

Decommissioning and Rehabilitation
Bog Rehabilitation Progress Report 2018.

Several bogs within the Blackwater bogs licensed area (P0502-01) have been identified as having bog restoration value. Bog restoration work (drain-blocking) has been completed in sub-sections of Clonboley I, Clonboley II (Knock Bog and Clera Island Bog) and Killeglan. Restoration work at the Newtown/Lough Gore network of bogs is ongoing and proving successful. These bogs are currently being considered for SAC/NHA designation by the NPWS as part of the National Raised Bog Special Area of Conservation Management Plan and the National Review of Raised Bog NHAs. A Greenhouse Gas Monitoring programme has finished at Moyarwood Bog (a continuation of the NEROS (EPA-funded project)) to investigate carbon fluxes on this restored bog (completed in 2018). An additional site established at Blackwater Bog was part of REEDFLUX (EPA/BnM funded project) to investigate carbon fluxes of specific cutaway communities including Reedbeds has been finalised (April 2015).

A small area of Clooniff Bog has been rehabilitated in order to create a wetland (8 ha). Wetland vegetation have been introduced here in order to speed up the establishment of wetland vegetation such as common reed, reed mace and reed canary grass. It is intended to re-direct water from industrial peat production areas into this wetland during 2019.

Rehabilitation is ongoing (commenced in 2018) in Cloonkeen Bog. This work primarily involves targeted drain blocking at the site to raise water levels as part of the rehabilitation work programme for Cloonkeen.
Ongoing monitoring of peatland areas was carried out within the Blackwater licensing area with Newtown-Lough Gore being re-surveyed to identify areas of active raised bog and to inform the raised bog restoration work programme for this site. Cuilliaghmore, Tirrur Derrymore and Cornafulla bog were also resurveyed as part of the ongoing biodiversity survey.
Draft rehabilitation plans for the Blackwater 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.
Japanese Knotweed (Invasive species) control is ongoing at Attymon. A small area was sprayed with herbicide in 2017 and 2018.
A section of remnant bog at the south of Lismanny Bog has been leased to the local community, restoration work is due to begin on this section in 2019. New signage was erected and this will complement the existing board walk that was constructed in 2009.

Ballydangan Bog has been managed for conservation since 2009. Many stakeholders are involved in this project which entails managing the site for the conservation of ground nesting birds, specifically Curlew and Red Grouse.

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/

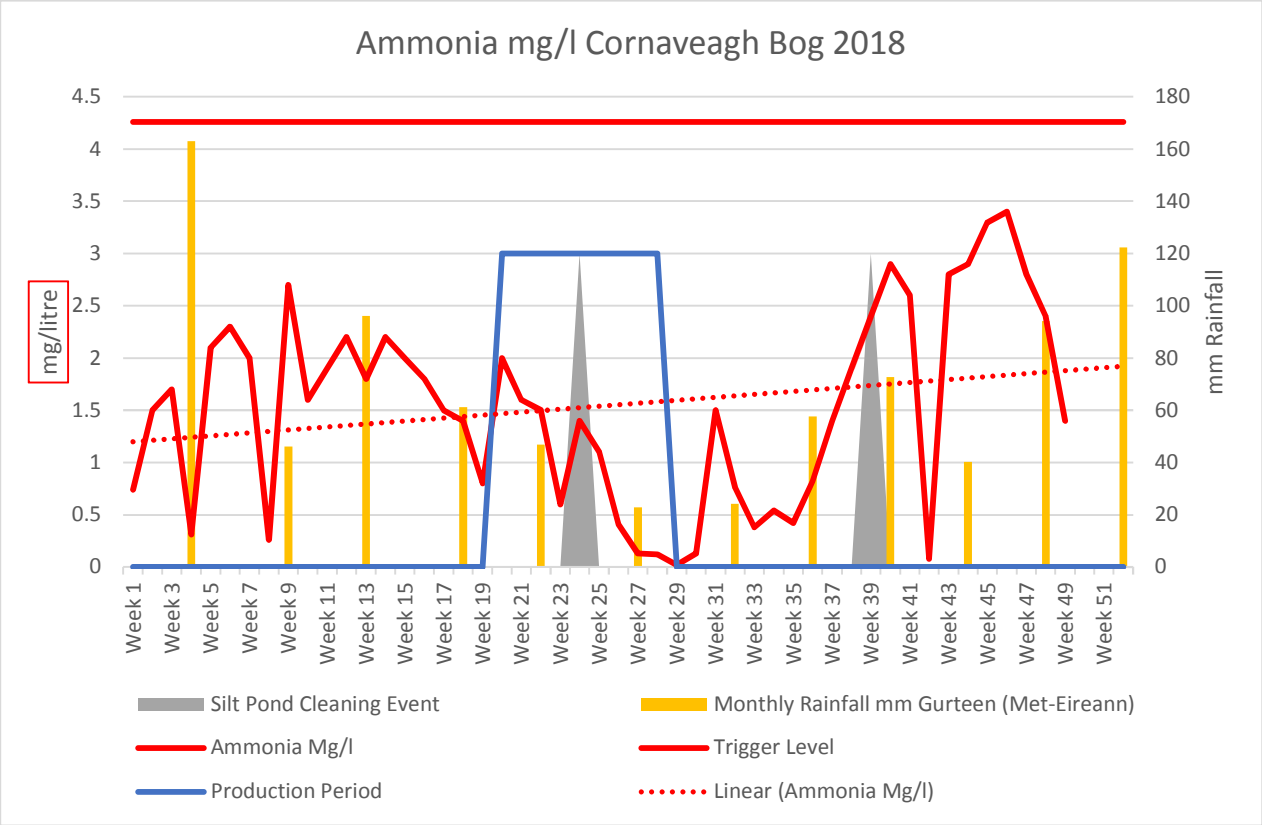
As required by condition *10.2 Cutaway Bog Rehabilitation Plans*, draft peatland rehabilitation plans for all the individual bog units were submitted to the agency in 2013, reviewed and amended in 2015 and re-submitted to the agency in 2015. All draft rehabilitation plans have been reviewed in 2017. 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 - Blackwater PO502-01

Grab Sampling 2018

X	Y	Bog	SW	Monitoring	pH	SS	TS	Ammonia	TP	COD	Colour
204193.18	233292.08	Bloomhill	SW-45	Q1 18	7.5	5	134	1.5	0.05	46	119
209103.76	233133.72	Bloomhill	SW-46	Q1 18	7.9	5	410	0.04	0.05	43	108
206357.24	236321.59	Kilgarvin	SW-88	Q1 18	7.2	5	62	1.3	0.05	47	293
207140.85	235210.03	Kilgarvin	SW-89	Q1 18	7.7	5	146	4	0.05	43	142
207016.78	235121.11	Kilgarvin	SW-89A	Q1 18	7.7	5	182	3.8	0.05	46	132
208033.11	235779.32	Kilgarvin	SW-90	Q1 18	7.3	5	108	1.6	0.05	55	189
206651.86	235235.78	Kilgarvin	SW-91	Q1 18	7.8	5	396	4.4	0.05	36	211
206721.04	238609.93	Bunahinly	SW-92	Q1 18	6.7	5	88	0.17	0.05	52	183
206662.99	238274.82	Bunahinly	SW-93	Q1 18	6.2	5	70	0.23	0.05	70	215
205547.19	238164.83	Bunahinly	SW-94	Q1 18	7.2	5	106	0.9	0.05	41	167
206521.02	236852.02	Kilgarvin	SW-95	Q1 18	7.5	5	132	0.37	0.05	35	64
206966.18	236771.02	Kilgarvin	SW-96	Q1 18	7.4	5	153	0.02	0.05	75	220
206284.38	240035.71	Bunahinly	SW-97	Q1 18	7.5	5	192	0.15	0.05	69	153
196289.52	229517.21	Clooniff	SW-54	Q1 18	6.2	5	136	0.56	0.05	79	253
178464.41	246488.91	Gowla	SW-125	Q2 18	7.2	5	132	1	0.19	95	337
179332.06	244537.90	Gowla	SW-127	Q2 18	7.5	5	182	0.29	0.17	84	277
179271.28	244726.80	Gowla	SW-128	Q2 18	7.6	5	206	0.35	0.09	73	231
180966.12	244030.48	Derryfadda Bog	SW-107	Q2 18	7.6	5	234	2.2	0.05	56	176
180631.06	243928.81	Killaderry	SW-108	Q2 18	7.7	5	252	0.27	0.05	51	113
181456.84	243133.74	Killaderry	SW-109	Q2 18	7.7	5	220	1.2	0.05	69	197
182202.14	242638.34	Killaderry	SW-110	Q2 18	7.8	5	230	0.34	0.05	60	124
182203.20	241175.49	Killaderry	SW-114	Q2 18	7.7	5	214	1.7	0.05	73	227
181563.73	241235.50	Killaderry	SW-115	Q2 18	7.8	5	284	2.8	0.07	28	124
182457.16	240577.59	Castlegar	SW-117	Q2 18	7.9	5	302	0.55	0.09	54	174
182399.93	239909.95	Castlegar	SW-118	Q2 18	7.8	5	186	0.71	0.05	89	324
182686.37	241713.45	Killaderry	SW-111	Q2 18	7.5	5	198	0.1	0.05	71	223
182715.77	241407.91	Killaderry	SW-112	Q2 18	7.4	5	190	0.78	0.05	33	177
182704.22	240840.26	Killaderry	SW-113	Q2 18	7.7	6	288	0.28	0.05	70	210
182093.30	245946.00	Derryfadda Bog	SW-99	Q3 18	5.9	5	104	0.79	0.05	66	195
182388.81	245823.47	Derryfadda Bog	SW-100	Q3 18	7.1	5	110	0.64	0.05	62	286
182316.10	245297.50	Derryfadda Bog	SW-101	Q3 18	7.3	5	134	0.29	0.07	57	165
182139.73	245264.91	Derryfadda Bog	SW-102	Q3 18	7.2	5	156	0.02	0.05	78	302
183228.01	244324.76	Derryfadda Bog	SW-103	Q3 18	7.3	5	164	0.91	0.05	62	181
183590.31	240198.77	Castlegar	SW-119	Q3 18	7	5	118	2	0.05	60	181
184106.45	239849.36	Castlegar	SW-120	Q3 18	7.5	5	198	0.09	0.05	46	99
184125.26	239565.89	Castlegar	SW-121	Q3 18	5.1	5	135	0.02	0.05	121	425
184137.69	239522.07	Castlegar	SW-122	Q3 18	7.3	5	114	0.55	0.05	76	149
184479.03	239013.00	Castlegar	SW-123	Q3 18	7.3	5	170	0.97	0.05	74	208
183794.87	237417.33	Castlegar	SW-124	Q3 18	7.3	5	174	0.68	0.05	64	179
202648.98	224016.88	Blackwater Bog	SW-78	Q3 18	7.6	5	326	5.1	0.05	72	164
202934.41	224449.28	Blackwater Bog	SW-79	Q3 18	7.7	5	470	0.11	0.05	26	50
203526.10	225073.81	Blackwater Bog	SW-83	Q3 18	7.2	5	248	1.5	0.05	107	282
199689.01	233276.13	Cornafulla/Drumlosh	SW-64	Q4 18	7.4	5	168	2.5	0.08	67	218
201775.03	232438.69	Cornafulla/Drumlosh	SW-65	Q4 18	7.5	5	138	2	0.05	58	202
203060.63	233050.47	Cornafulla/Drumlosh	SW-67	Q4 18	6.3	5	152	1	0.05	77	198
202543.37	234207.99	Cornafulla/Drumlosh	SW-68	Q4 18	7.3	5	132	2.3	0.08	63	210
201809.59	235011.17	Cornafulla/Drumlosh	SW-69	Q4 18	7.3	5	150	2.5	0.05	66	179
200852.36	234070.07	Cornafulla/Drumlosh	SW-72	Q4 18	7	5	176	0.08	0.05	104	280
205374.69	227140.73	Derryharney	SW-20	Q4 18	7.4	5	198	1.6	0.05	62	161
206237.59	227777.74	Derryharney	SW-21	Q4 18	7.3	5	176	1.7	0.05	55	203
206148.95	228425.87	Derryharney	SW-22	Q4 18	7.4	6	272	1.5	0.05	68	140
206514.58	228337.68	Derryharney	SW-28	Q4 18	7.7	5	314	0.48	0.05	54	107
204150.77	225621.38	Blackwater Bog	SW-81	Q4 18	7.9	5	226	0.72	0.05	50	134
204328.91	225955.12	Blackwater Bog	SW-82	Q4 18	7.4	5	206	2.5	0.05	81	250
204544.16	226075.53	Blackwater Bog	SW-84	Q4 18	6.6	5	270	3.4	0.05	85	283
204397.36	225985.10	Blackwater Bog	SW-86	Q4 18	7.5	36	210	1.1	0.08	113	152

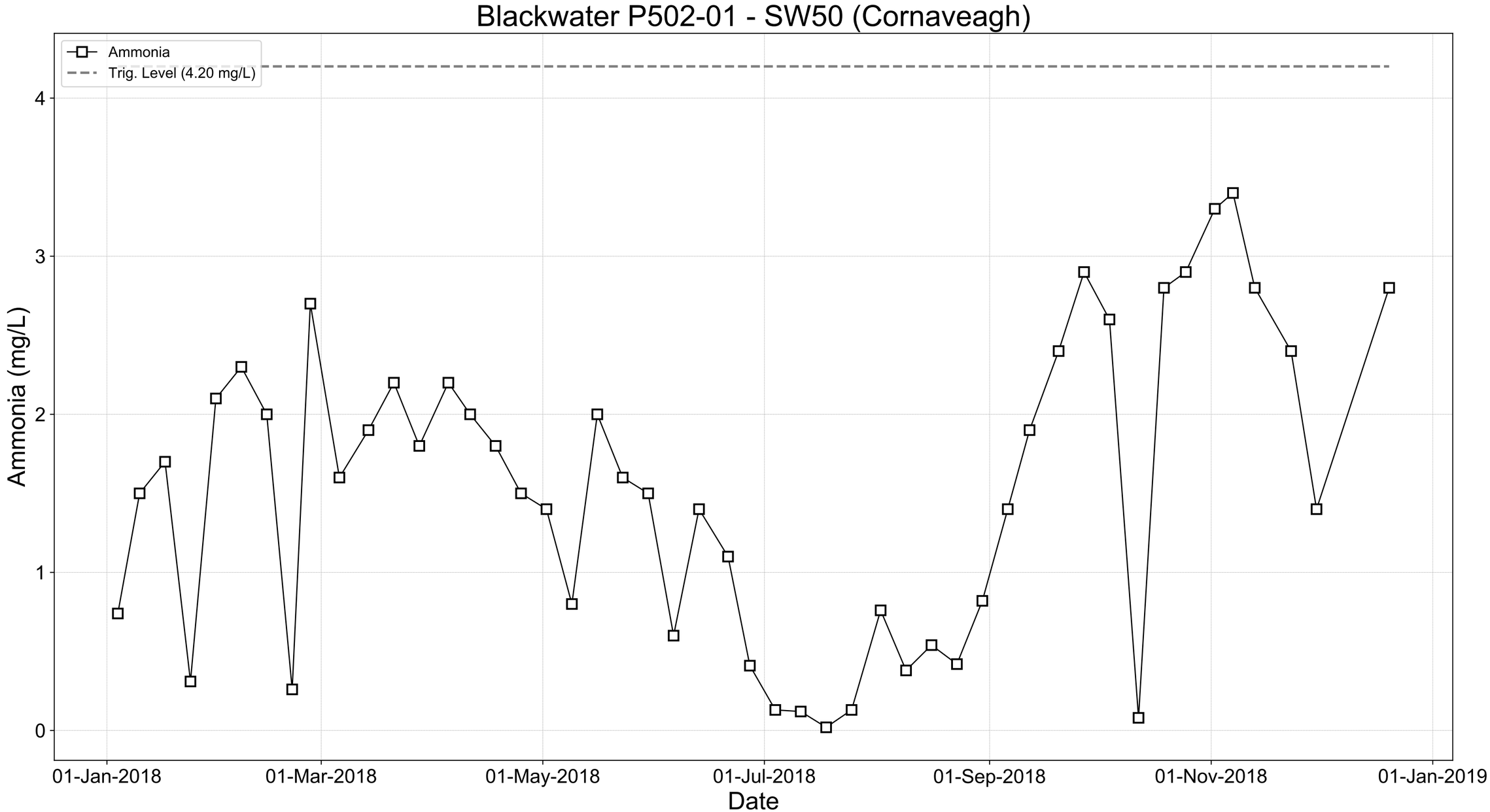


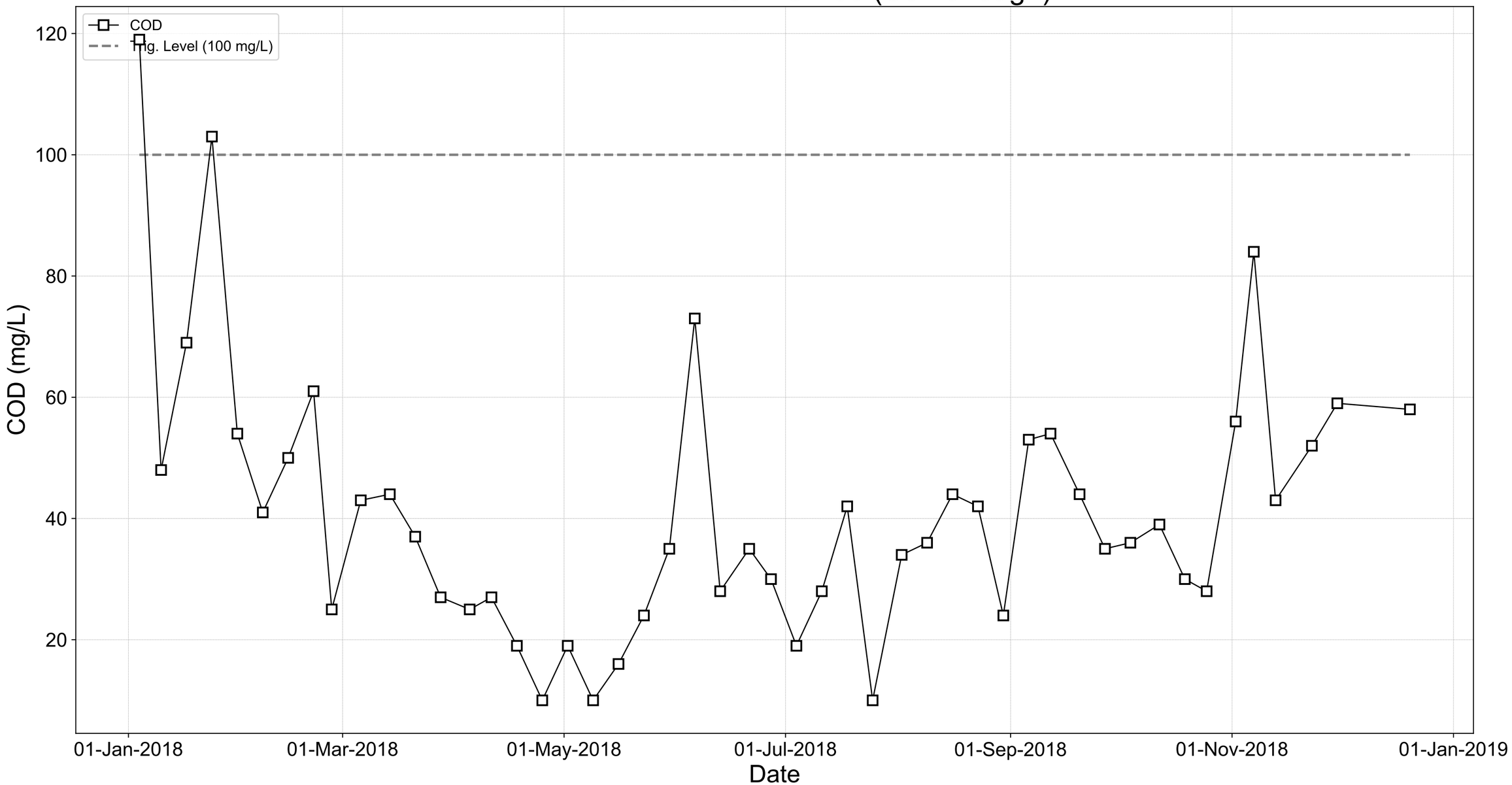
Cornaveagh Bog

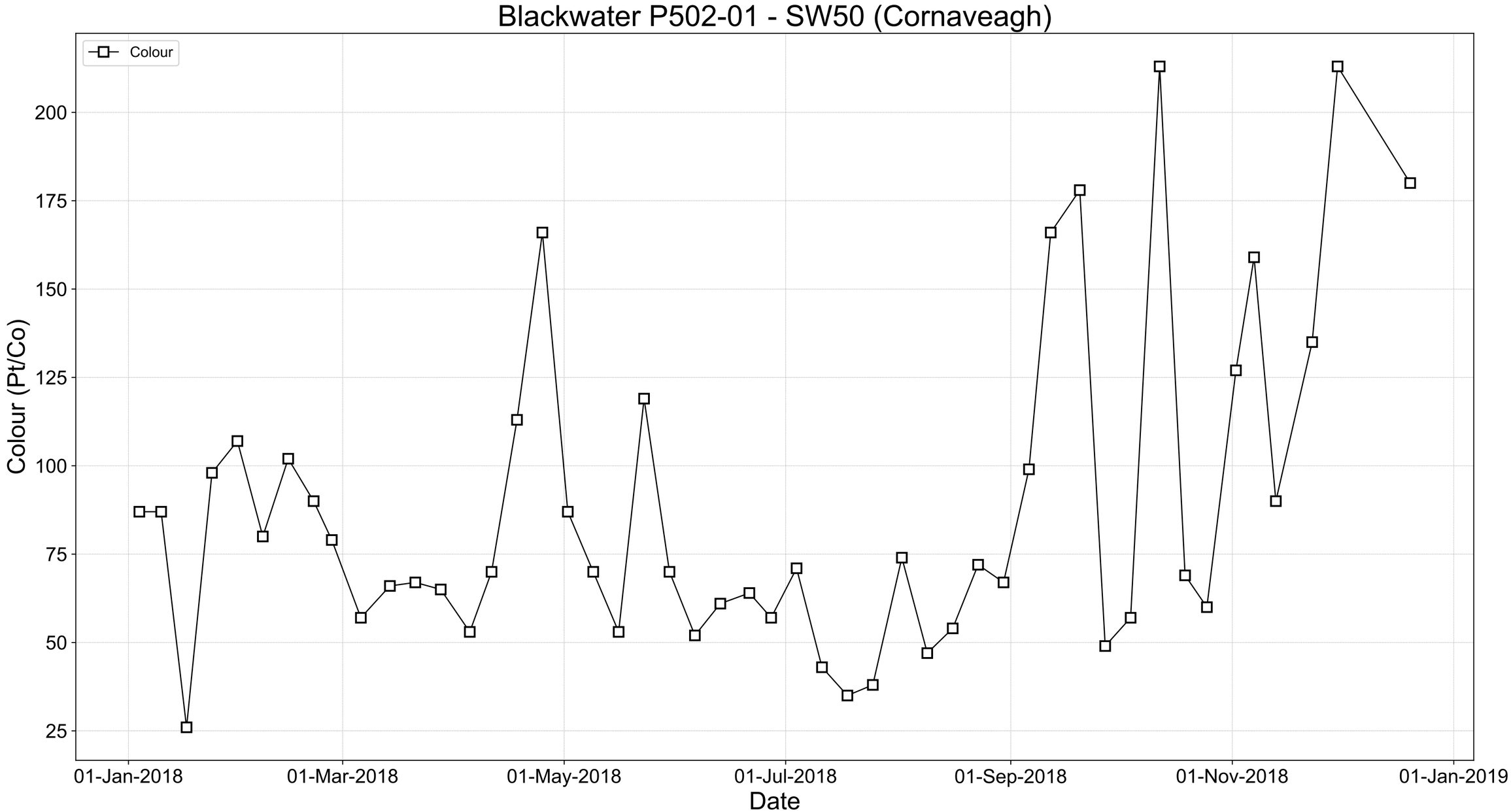
Cornaveagh Bog is an active production bog with the composite sampler located here during 2018. The composite sampler takes a flow proportional composite sample over a 24 hour period. The sampler had 42% downtime during the period mainly because it is located on the silt pond outlet from Cornaveagh Bog which has negative flow during winter flooding events, resulting in zero discharge during these events and limited safe access for a weekly grab sample. The ammonia trigger level of 4.26mg/l, as agreed with the Agency, was not exceeded during the period.

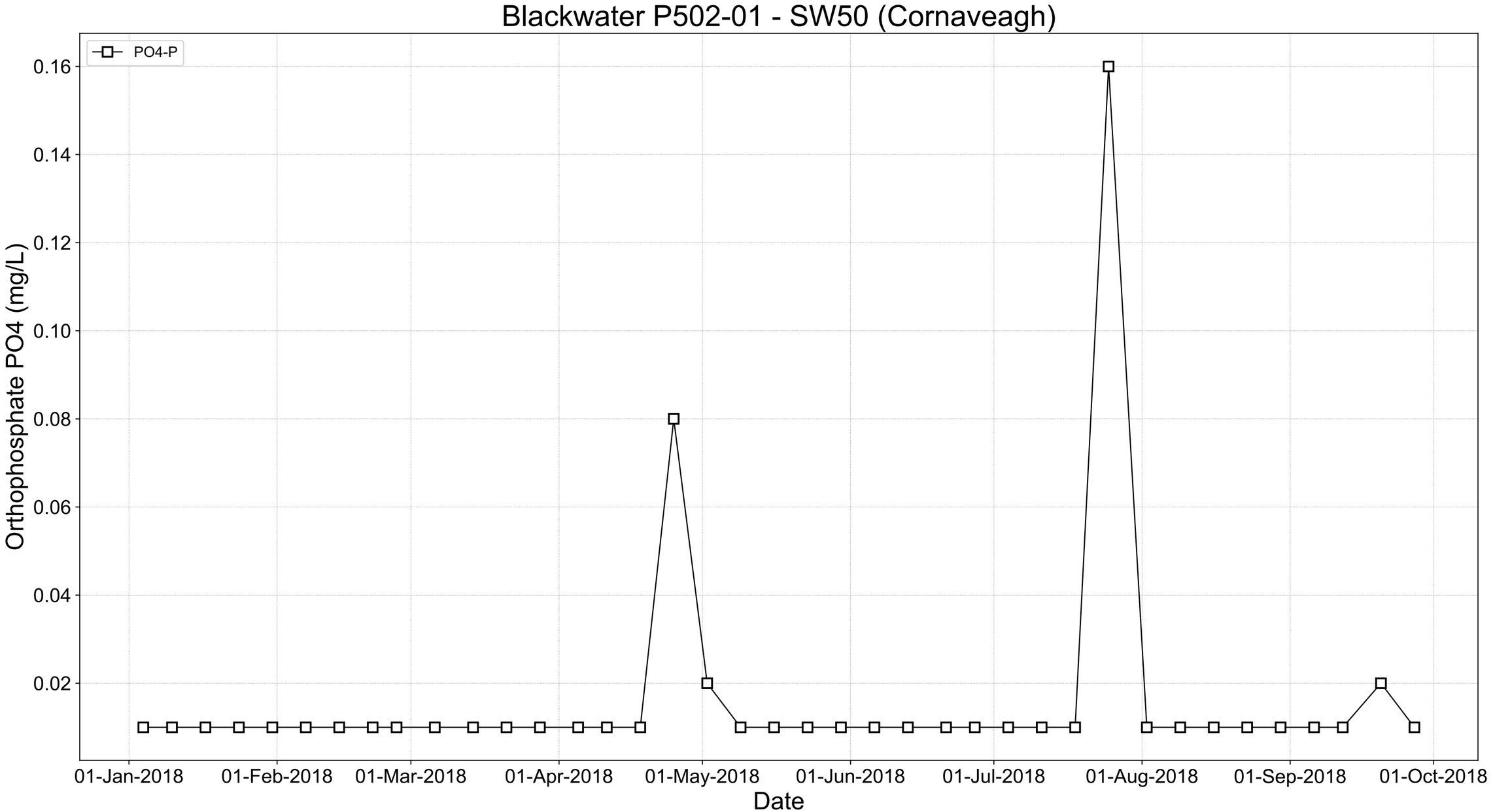
There is no obvious link between the summer production, winter maintenance or silt pond maintenance events on the concentration of ammonia disharging from the peatlands. The only link expected would be that related to rainfall events and seasonal weather patterns and the subsequent surfacewater runoff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

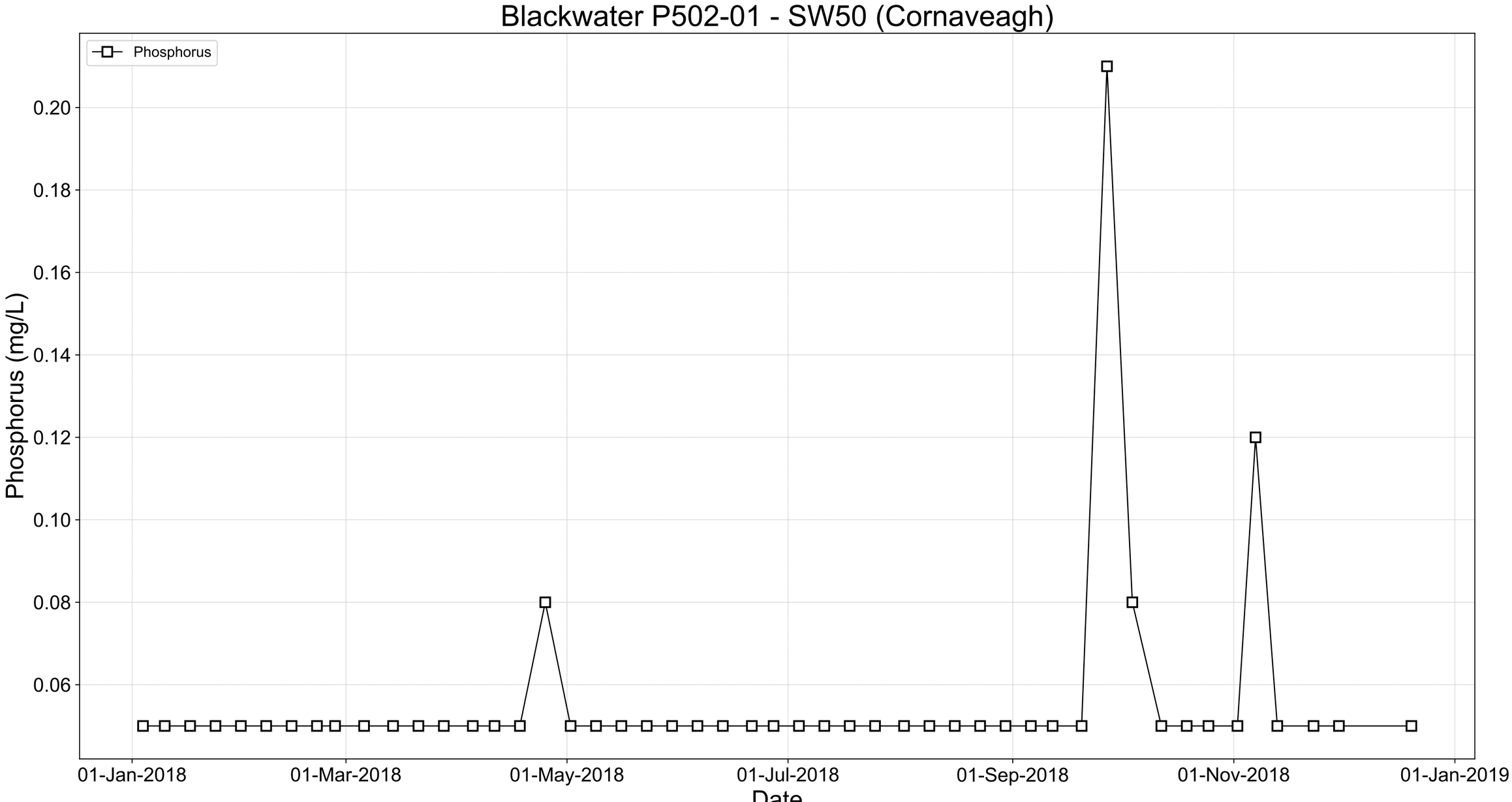
The sampler at this location may be relocated to fill any information gaps on other peatland catchments and to reflect the need to support the information gathering required for the Water Framework Directive's River Basin Management Plan. There is also an EPA lead research project commencing in 2019,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

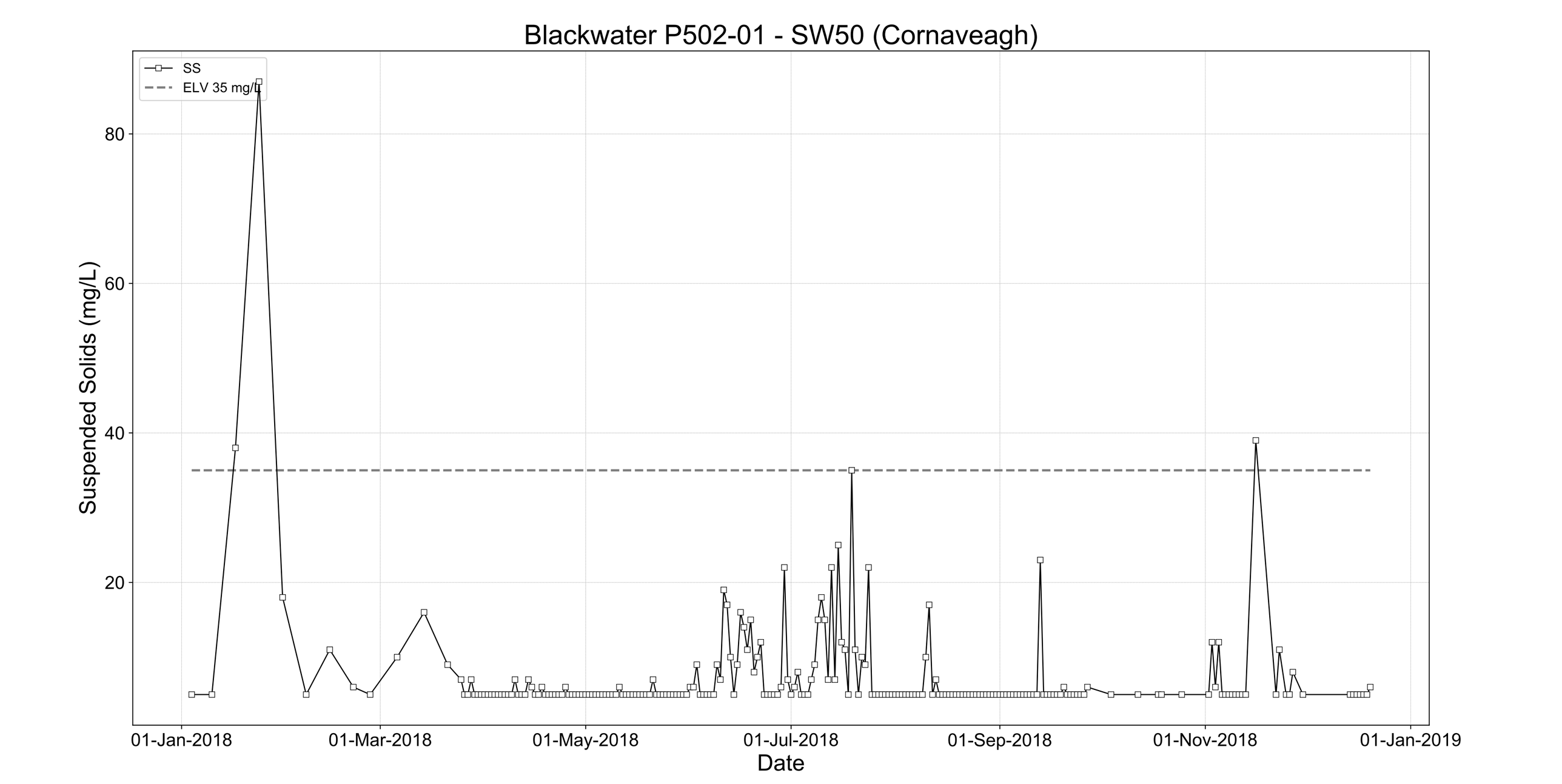

Blackwater P502-01 - SW50 (Cornaveagh)
Ammonia
Trig. Level (4.20 mg/L)
Ammonia (mg/L)
0
1
2
3
4
01-Jan-2018
01-Mar-2018
01-May-2018
01-Jul-2018
01-Sep-2018
01-Nov-2018
01-Jan-2019
Date

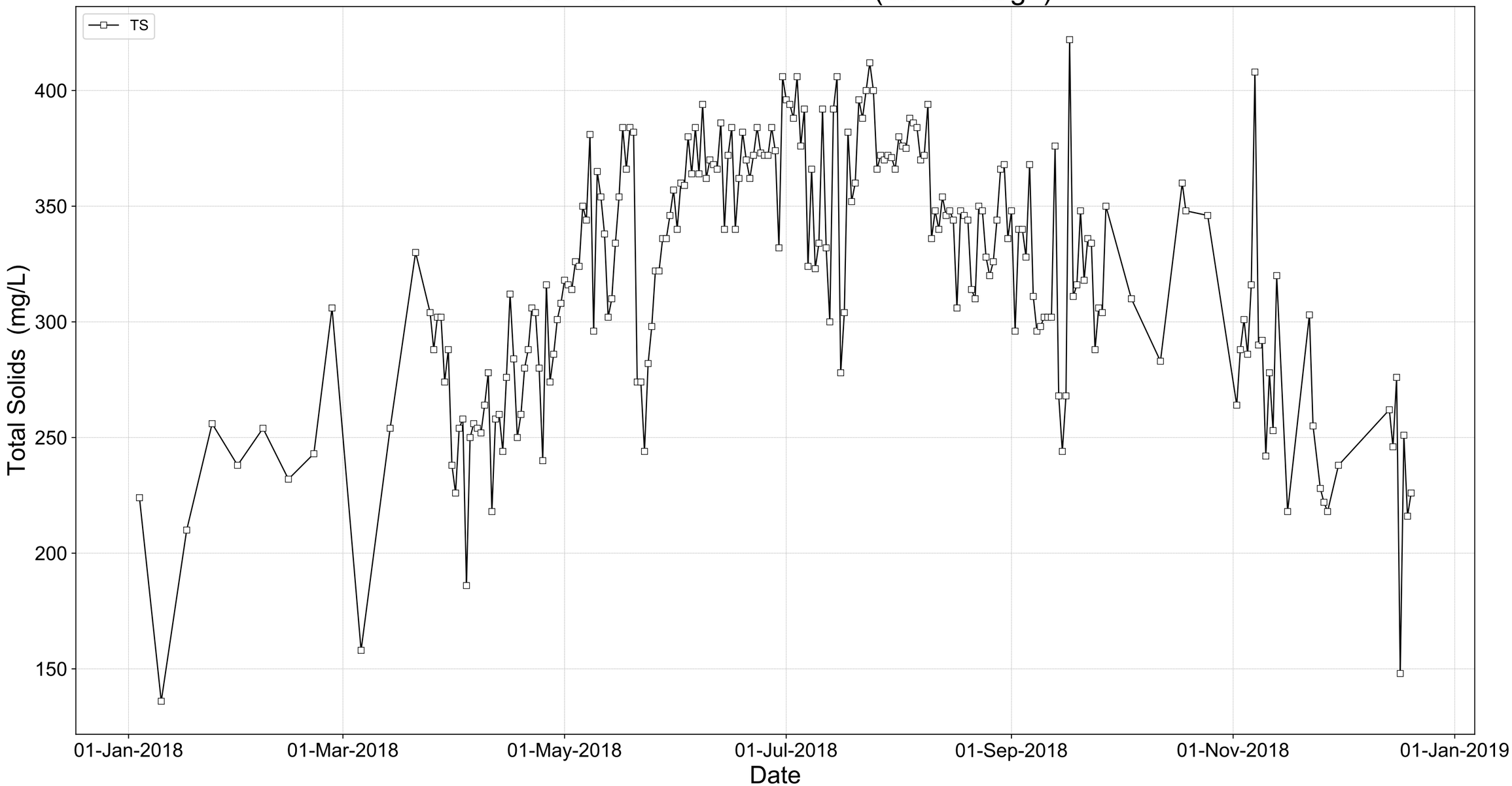

Blackwater P502-01 - SW50 (Cornaveagh)
COD
Trig. Level (100 mg/L)
COD (mg/L)
120
100
80
60
40
20
01-Jan-2018
01-Mar-2018
01-May-2018
01-Jul-2018
01-Sep-2018
01-Nov-2018
01-Jan-2019
Date

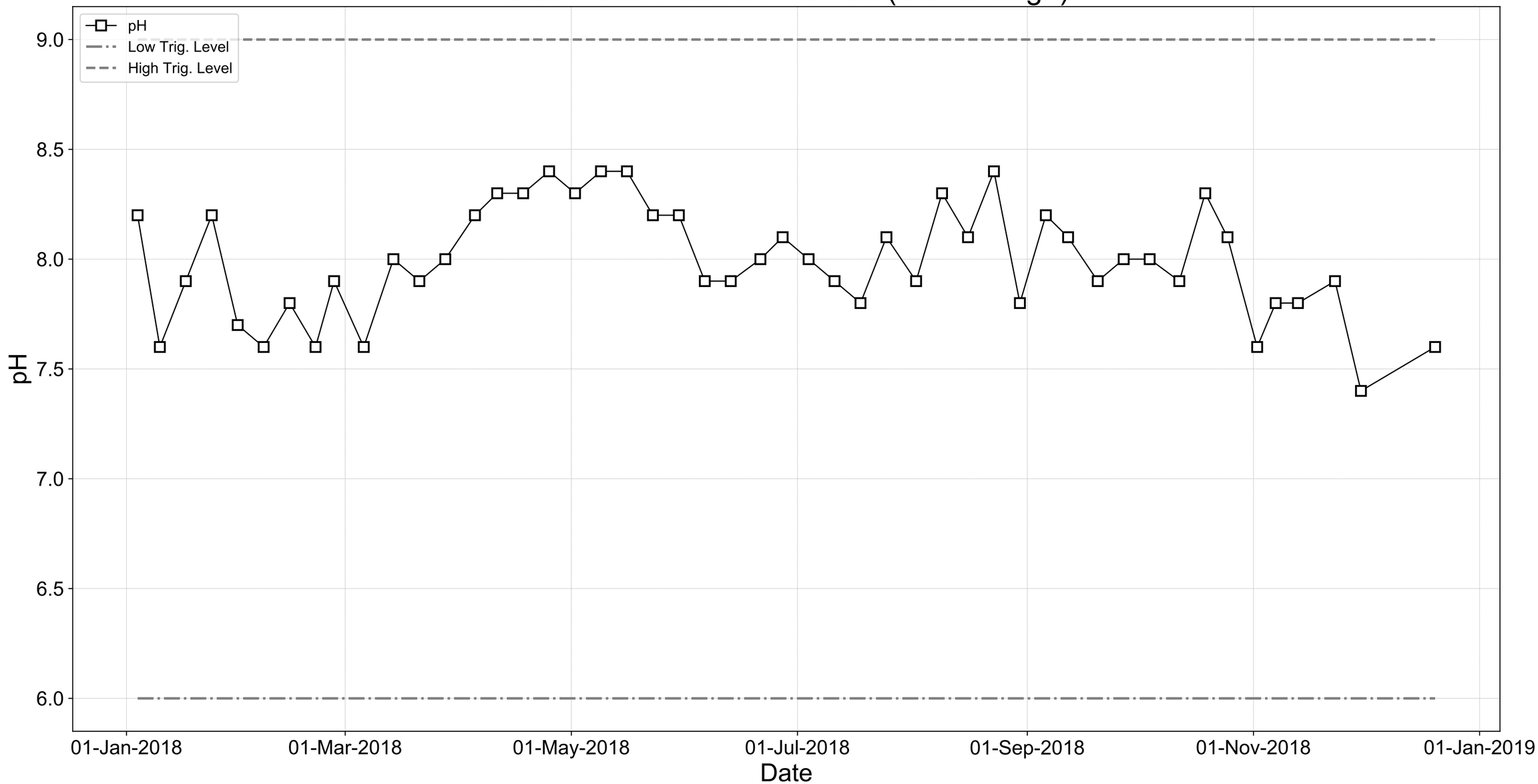

Blackwater P502-01 - SW50 (Cornaveagh)
Colour
Colour (Pt/Co)
200
175
150
125
100
75
50
25
01-Jan-2018
01-Mar-2018
01-May-2018
01-Jul-2018
01-Sep-2018
01-Nov-2018
01-Jan-2019
Date


Blackwater P502-01 - SW50 (Cornaveagh)
PO4-P
Orthophosphate PO4 (mg/L)
0.16
0.14
0.12
0.10
0.08
0.06
0.04
0.02
01-Jan-2018
01-Feb-2018
01-Mar-2018
01-Apr-2018
01-May-2018
01-Jun-2018
01-Jul-2018
01-Aug-2018
01-Sep-2018
01-Oct-2018
Date


Blackwater P502-01 - SW50 (Cornaveagh)
Phosphorus
Phosphorus (mg/L)
0.20
0.18
0.16
0.14
0.12
0.10
0.08
0.06
01-Jan-2018
01-Mar-2018
01-May-2018
01-Jul-2018
01-Sep-2018
01-Nov-2018
01-Jan-2019
Date


Blackwater P502-01 - SW50 (Cornaveagh)
SS
ELV 35 mg/L
Suspended Solids (mg/L)
80
60
40
20
01-Jan-2018
01-Mar-2018
01-May-2018
01-Jul-2018
01-Sep-2018
01-Nov-2018
01-Jan-2019
Date


Blackwater P502-01 - SW50 (Cornaveagh)
TS
Total Solids (mg/L)
400
350
300
250
200
150
01-Jan-2018
01-Mar-2018
01-May-2018
01-Jul-2018
01-Sep-2018
01-Nov-2018
01-Jan-2019
Date


Blackwater P502-01 - SW50 (Cornaveagh)
pH
Low Trig. Level
High Trig. Level
9.0
8.5
8.0
7.5
7.0
6.5
6.0
pH
01-Jan-2018
01-Mar-2018
01-May-2018
01-Jul-2018
01-Sep-2018
01-Nov-2018
01-Jan-2019
Date

Yard Discharge Results

Licence: P0502-01

Works: Blackwater 2018

Month	SWE 1 COD mg/l	SWE2 COD mg/l	SWE3 COD mg/l	SWE4 COD mg/l	SWE5 COD mg/l	SWE6 COD mg/l	SWE7 COD mg/l	SWE8 COD mg/l	SWE9 COD mg/l	SWE10 COD mg/l	SWE11 COD mg/l
Jan	30	0	0	0	0	0	0	0	0	0	0
Feb	19	0	20	0	0	0	118	37	28	0	0
Mar	69	0	0	36	0	0	96	10	20	0	0
Apr	10	0	81	0	0	0	51	34	10	0	0
May	75	0	0	0	0	0	65	64	58	0	0
June	0	0	0	0	0	0	0	0	0	0	0
July	0	0	0	0	0	0	0	0	0	0	0
Aug	38	0	0	37	0	0	22	30	0	0	0
Sep	0	0	0	0	0	0	0	0	0	0	0
Oct	0	0	0	0	0	0	0	0	0	0	0
Nov	38	0	10	10	0	0	0	0	0	10	84
Dec	0	0	0	0	0	0	0	0	0	0	0

Note: 0 denotes no flow at emission point on day of sampling

Extractive Waste Management Plan Implementation AER Update.

March 2019.

IPC Licence P0502-01.

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 West Offaly 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

LEABEG, TULLAMORE, CO. OFFALY, IRELAND
TELEPHONE: (05793) 45900. INT: +353-5793-45900. FAX :(05793) 45160. INT: +353-5793-45160

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, ridiging 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.

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

AIR-summary template

Lic No: P0503-01 Year 2018

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	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

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 monitioring 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

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

				Additional information
3	Was there any result in breach of licence requirements? If yes please provide brief details in the comment section of Table W3 below		No	
4	Was all monitoring carried out in accordance with EPA guidance and checklists for Quality of Aqueous Monitoring Data Reported to the EPA? If no please detail what areas require improvement in additional information box	External /Internal Lab Quality checklist / Assessment of results checklist	Yes	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 2018

Continuous monitoring

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

Bund testing

dropdown menu click to see options

			Additional information
1	Are you required by your licence to undertake integrity testing on bunds and containment structures ? if yes please fill out table B1 below listing all **new bunds and containment structures** on site, in addition to **all bunds which failed** the integrity test-**all bunding structures which failed including mobile bunds must be listed in the table below, please include all bunds outside the licenced testing period** (mobile bunds and chemstore included)	Yes	
2	Please provide integrity testing frequency period	Other (2 Yearly)	
3	Does the site maintain a register of bunds, underground pipelines (including stormwater and foul), Tanks, sumps and containers? (containers refers to "Chemstore" type units and mobile bunds)	Yes	
4	How many bunds are on site?	3	
5	How many of these bunds have been tested within the required test schedule?	3	Two bunds tested and passed in 2018. One bund tested and passed in 2017.
6	How many mobile bunds are on site?		
7	Are the mobile bunds included in the bund test schedule?	No	Visually inspected
8	How many of these mobile bunds have been tested within the required test schedule?	0	
9	How many sumps on site are included in the integrity test schedule?	0	
10	How many of these sumps are integrity tested within the test schedule? **Please list any sump integrity failures in table B1**	0	
11	Do all sumps and chambers have high level liquid alarms?	SELECT	
12	If yes to Q11 are these failsafe systems included in a maintenance and testing programme?	SELECT	
13	Is the Fire Water Retention Pond included in your integrity test programme?	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

			Commentary
15	Has integrity testing been carried out in accordance with licence requirements and are all structures tested in line with BS8007/EPA Guidance? bunding and storage guidelines	Yes	
16	Are channels/transfer systems to remote containment systems tested?	No	
17	Are channels/transfer systems compliant in both integrity and available volume?	No	

Pipeline/underground structure testing

1	Are you required by your licence to undertake integrity testing* on underground structures e.g. pipelines or sumps etc ? if yes please fill out table 2 below listing all underground structures and pipelines on site **which failed the integrity test and all which have not been tested withing the integrity test period as specified**	Yes	No underground pipe lines that require testing
2	Please provide integrity testing frequency period	Other (Every 3 Years)	

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

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

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

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

Groundwater/Soil monitoring template	Lic No:	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 interpretaion as an additional section in this AER
2	Are you required to carry out soil monitoring as part of your licence requireme	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. Groundwater monitoring template	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

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)

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

Table 3: Soil results

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

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

	Environmental Liabilities template	Lic No:	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

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 segrated 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

Noise monitoring summary report

Lic No: P0503-01 Year 2018

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 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

				Additional information
1	When did the site carry out the most recent energy efficiency audit? Please list the recommendations in table 3 below		Sep-18	Report on file
2	Is the site a member of any accredited programmes for reducing energy usage/water conservation such as the SEAI programme linked to the right? If yes please list them in additional information	SEAI - Large Industry Energy Network (LIEN)	Yes	ISO50001 accreditation attained from Certification Europe
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	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^3yr) :	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

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

Complaints and Incidents summary template Lic No: P0503-01 Year 2018

Incidents

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

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

Table 2 Incidents summary

Date of occurrence	Incident nature	Location of occurrence	Incident category*please refer to guidance	Receptor	Cause of incident	Other cause(please specify)	Activity in progress at time of incident	Communication	Occurrence	Corrective action<20 words	Preventative action <20 words	Resolution status	Resolution date	Likelihood of reoccurence
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 Bord na Mona bog of Timahoe North.	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 INC015676	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 logon	dropdown list click to see options	

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

			Additional Information
1	Were any wastes accepted onto your site for recovery or disposal or treatment prior to recovery or disposal within the boundaries of your facility ?; (waste generated within your boundaries is to be captured through PRTR reporting) If yes please enter details in table 1 below	SELECT	
2	Did your site have any rejected consignments of waste in the current reporting year? If yes please give a brief explanation in the additional information	SELECT	
3	Was waste accepted onto your site that was generated outside the Republic of Ireland? If yes please state the quantity in tonnes in additional information	SELECT	

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

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

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

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

SECTION D-TO BE COMPLETED BY LANDFILL SITES ONLY

Table 2 Waste type and tonnage-landfill only

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

WASTE SUMMARY Lic No: P0503-01 Year 2018

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

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

Table 5 Capping-Landfill only

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

*please note this includes daily cover area

Table 6 Leachate-Landfill only

9 Is leachate from your site treated in a Waste Water Treatment Plant? SELECT

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

Volume of leachate in reporting year(m3)	Leachate (BOD) mass load (kg/annum)	Leachate (COD) mass load (kg/annum)	Leachate (NH4) mass load (kg/annum)	Leachate (Chloride) mass load kg/annum	Leachate treatment on-site	Specify type of leachate treatment	Comments

Please ensure that all information reported in the landfill gas section is consistent with the Landfill Gas Survey submitted in conjunction with PRTR returns

Table 7 Landfill Gas-Landfill only

Gas Captured&Treated by LFG System m3	Power generated (MW / KWh)	Used on-site or to national grid	Was surface emissions monitoring performed during the reporting year?	Comments
			SELECT	

Waste Summary Continued	Lic No:	P0503-01	Year	2018

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	Enva Ireland Limited (Portlaoise) - W0184	R03 - Recycling/reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes)	Enva 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	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	1.7	Enva Ireland Limited (Portlaoise) - W0184	R01 - Use principally as a fuel or other means to generate energy	Lindenschmidt, Kreutzal - Reg No: E97095037	Germany
16 01 07*	oil filters	Yes	4.78	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	5.84	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	565.48	Enva Ireland Limited (Portlaoise) - W0184	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	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	Enva Ireland Limited (Portlaoise) - W0184	R02 - Solvent reclamation/regeneration	Enva 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 in 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.

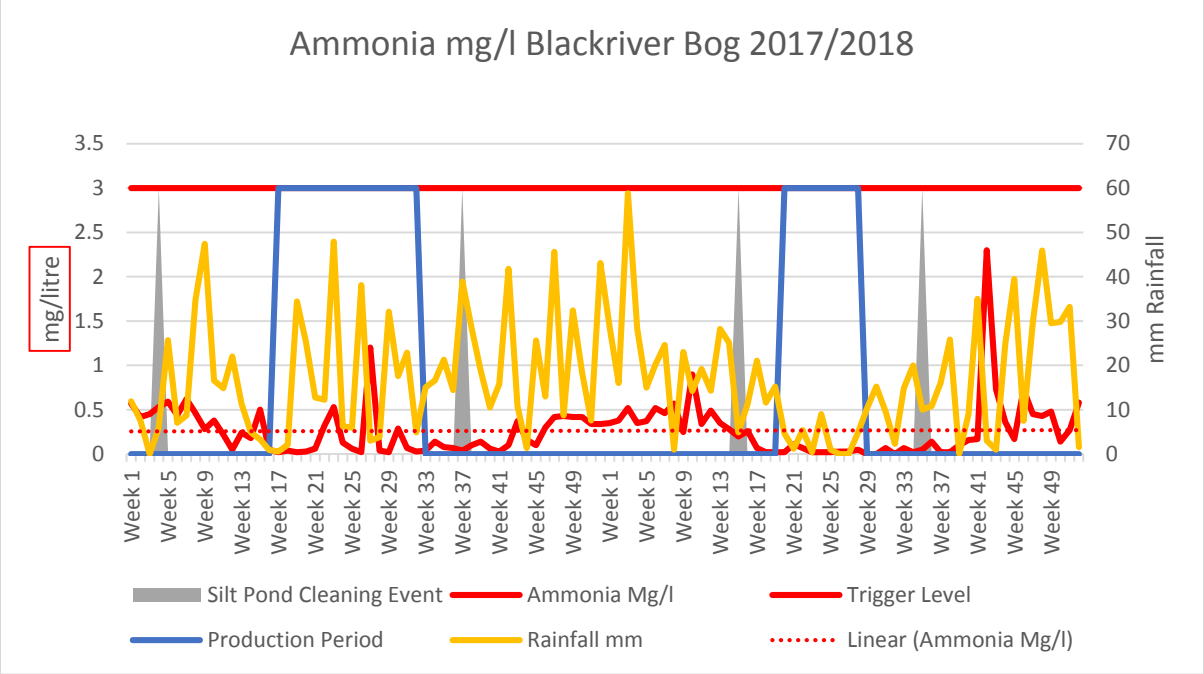
Draft rehabilitation plans for the Allen bogs licensed area, including more detailed draft plans for each component bog unit were submitted to the EPA in 2013 and these were reviewed and updated in 2015 and 2017.

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.

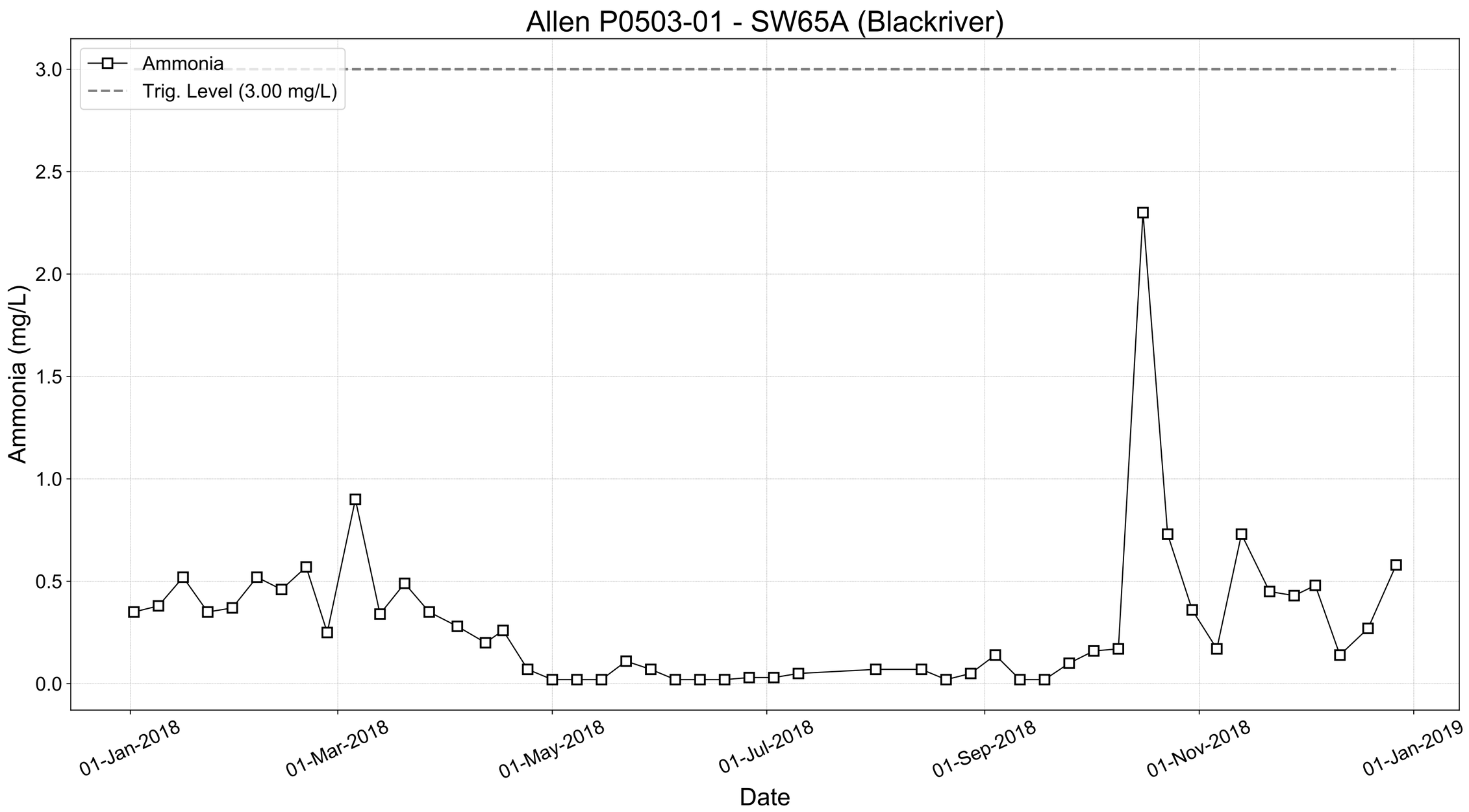
Bord na Mona Allen PO503-01												
Quarterely Grab 2018												
X	Y	Bog	SW	Monitoring	Sample Date	pH	SS	TS	Ammonia	TP	COD	Colour
248527.2	224119.1	Mountlucas	SW-11A	Q1 18	21/03/2018	7.9	5	370	1.1	0.05	35	70
247623.23	225441.21	Clonad	SW-12	Q1 18	21/03/2018	7.4	5	230	0.54	0.08	69	163
245572.38	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

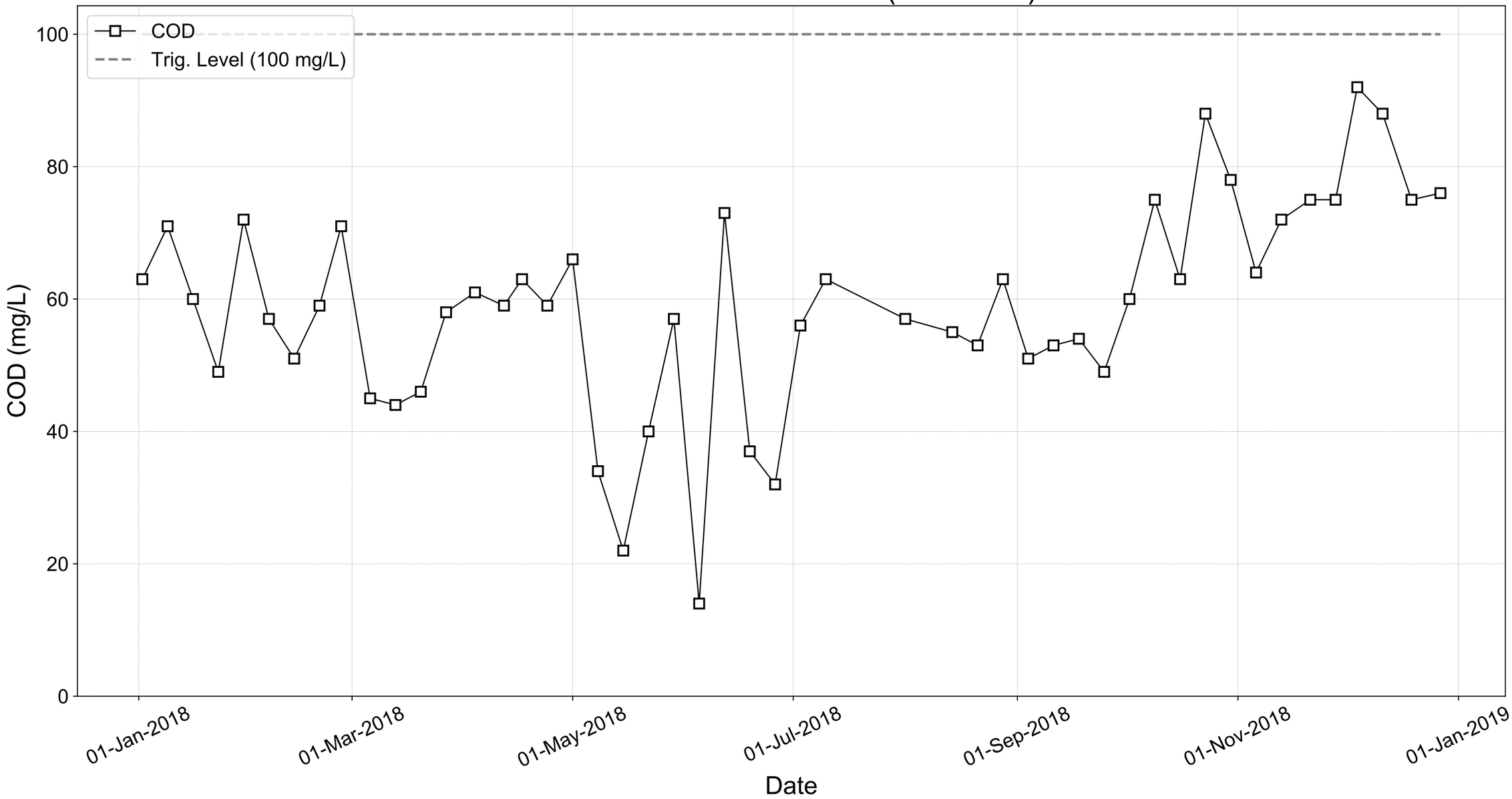


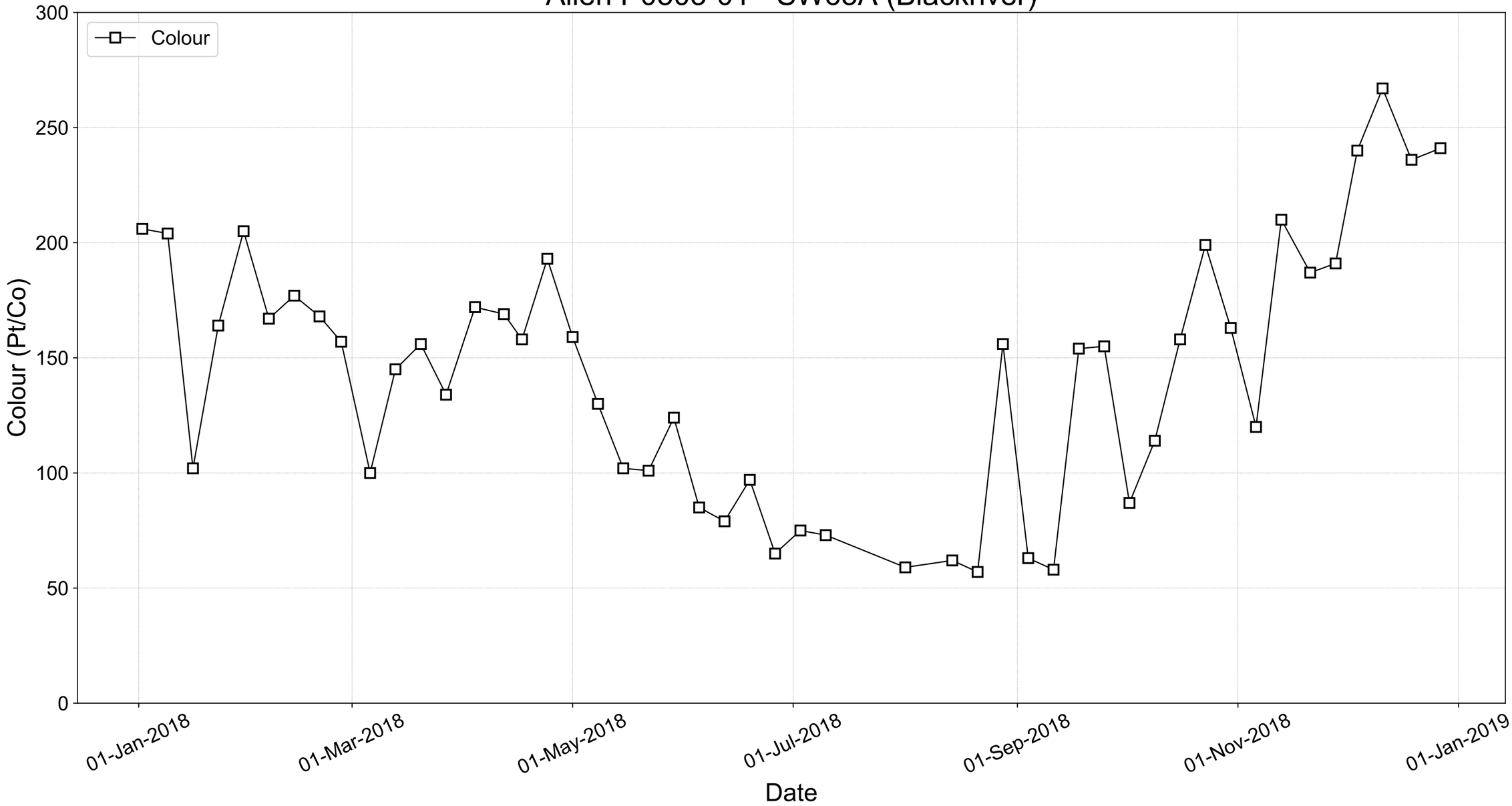
Blackriver bog is an active fuel peat production bog with the composite sampler located here during 2017 and 2018. The composite sampler takes a flow proportional composite sample over a 24 hour period. The sampler had 5.0% downtime during the period and returned 49 weekly ammonia results during the 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.

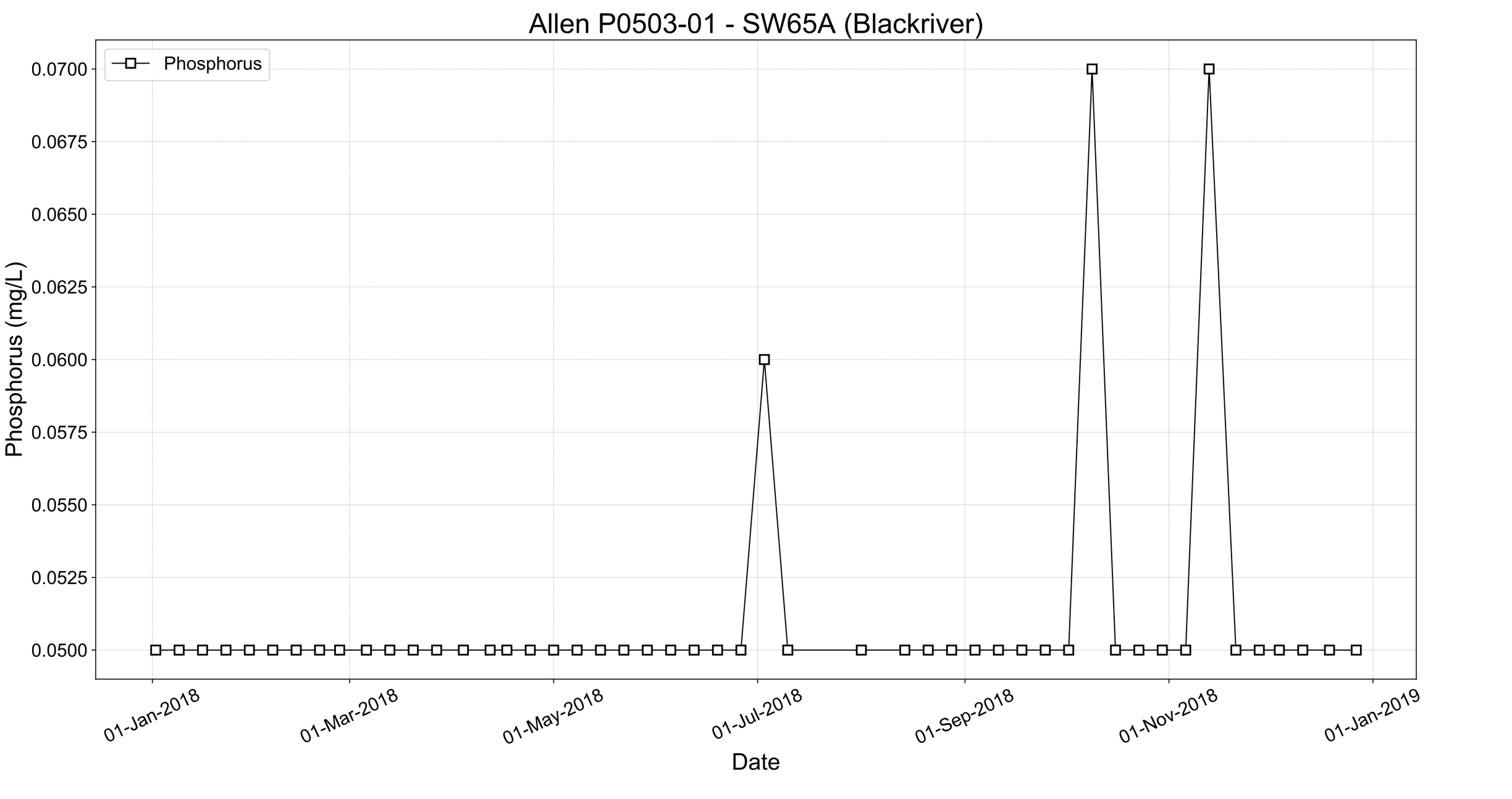
There is no obvious link between the summer production, winter maintenance, or silt pond maintenance events on the concentration of Ammonia discharging from this peatland. The only link expected would be that related to rainfall events, seasonal weather patterns and the subsequent surface water runoff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

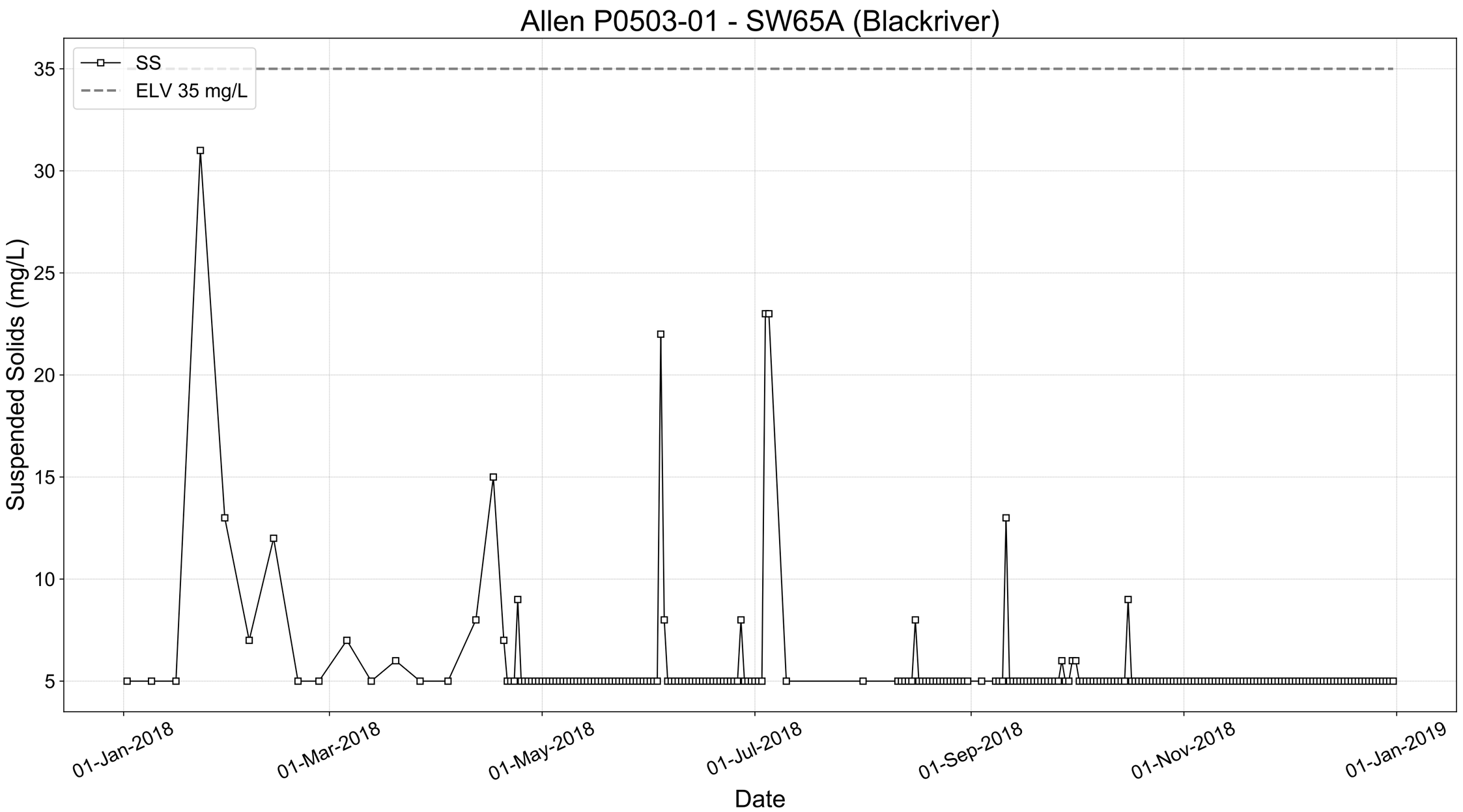
The sampler at this location may be relocated to fill any information gaps on other peatland catchments and to reflect the need to support the information gathering required for the Water Framework Directive's River Basin Management Plan. There is also an EPA lead research project commencing in 2019, 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.

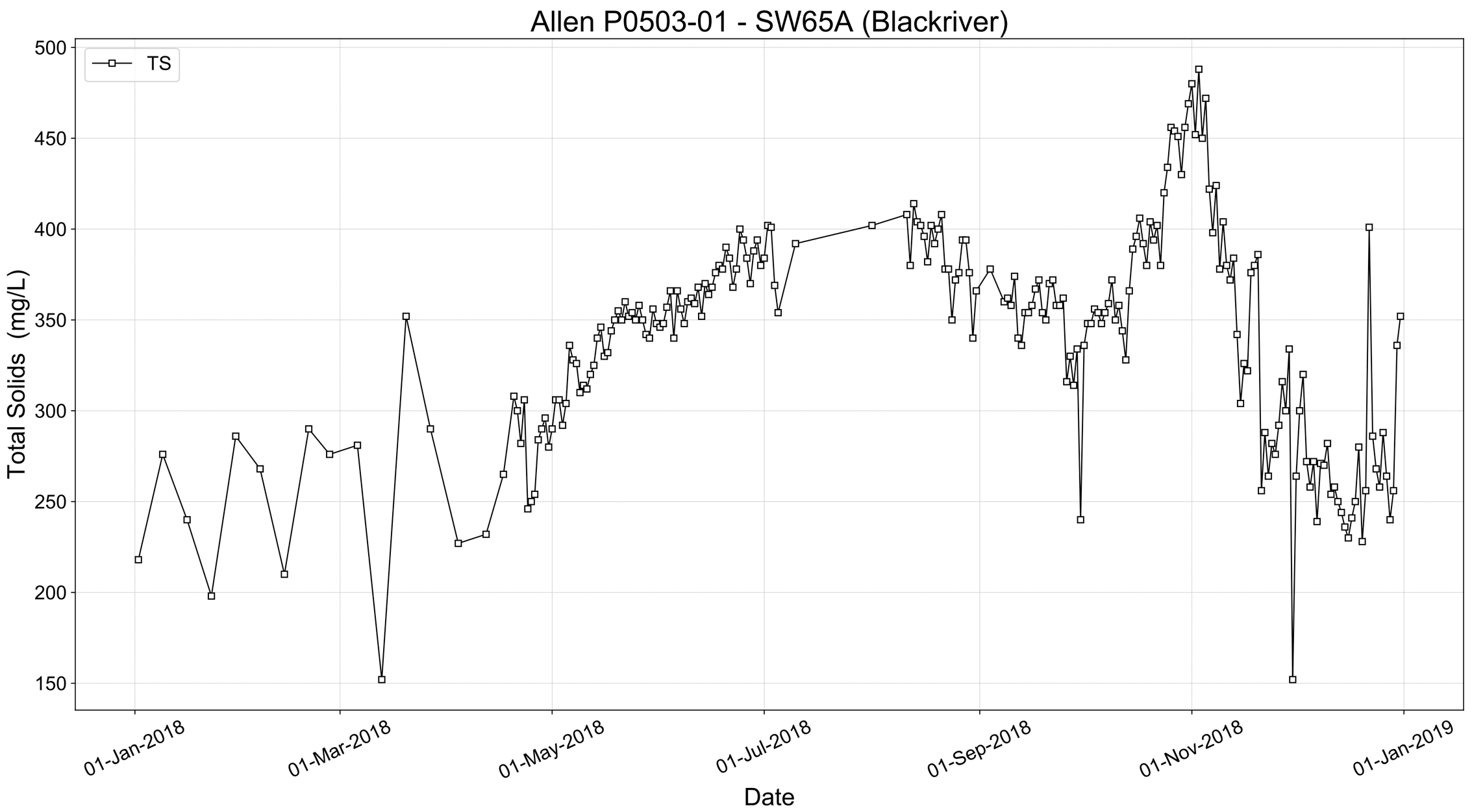

Allen P0503-01 - SW65A (Blackriver)
Ammonia
Trig. Level (3.00 mg/L)
Ammonia (mg/L)
3.0
2.5
2.0
1.5
1.0
0.5
0.0
01-Jan-2018
01-Mar-2018
01-May-2018
01-Jul-2018
01-Sep-2018
01-Nov-2018
01-Jan-2019
Date

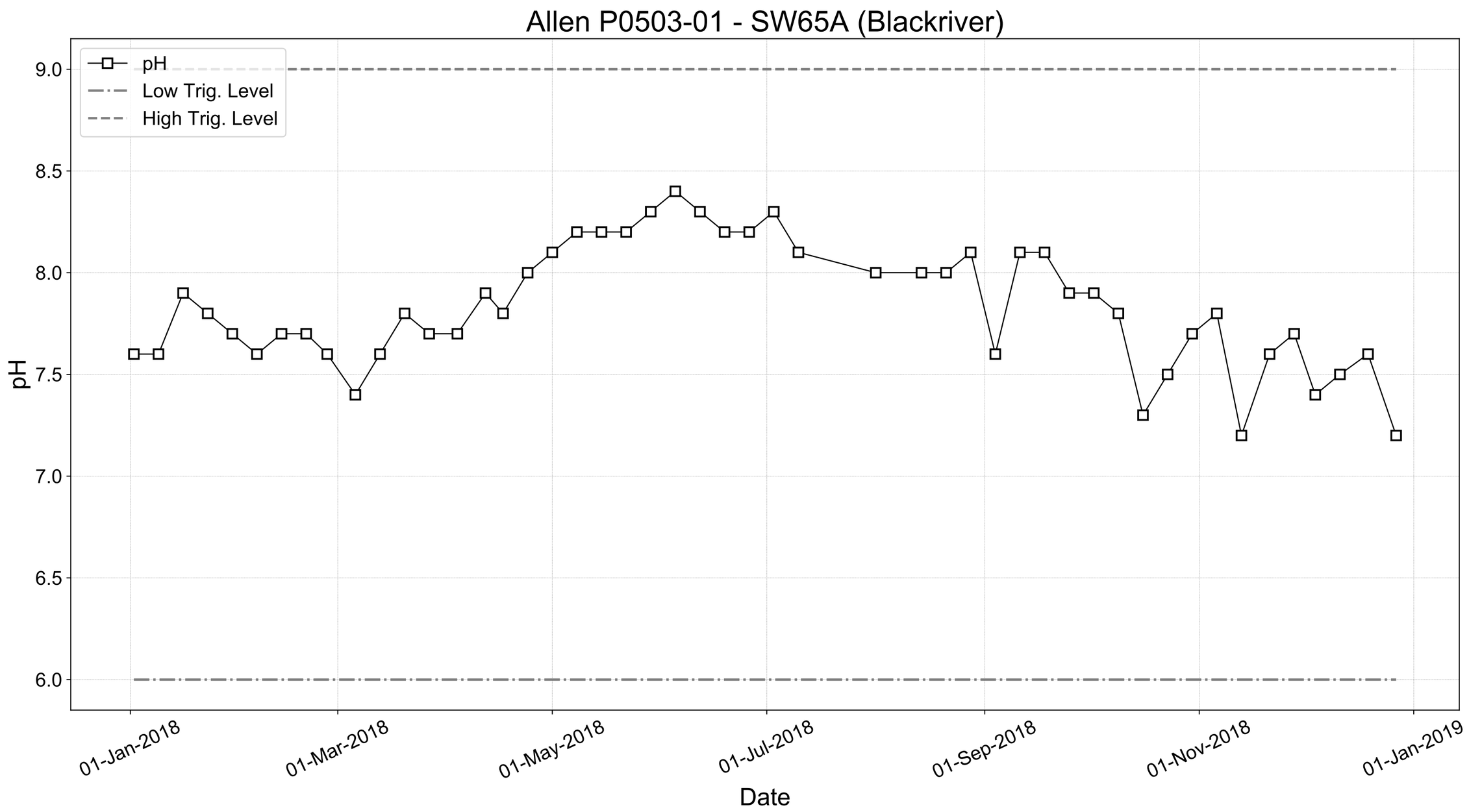

Allen P0503-01 - SW65A (Blackriver)
COD
Trig. Level (100 mg/L)
COD (mg/L)
100
80
60
40
20
0
01-Jan-2018
01-Mar-2018
01-May-2018
01-Jul-2018
01-Sep-2018
01-Nov-2018
01-Jan-2019
Date


Allen P0503-01 - SW65A (Blackriver)
Colour
Colour (Pt/Co)
300
250
200
150
100
50
0
01-Jan-2018
01-Mar-2018
01-May-2018
01-Jul-2018
01-Sep-2018
01-Nov-2018
01-Jan-2019
Date


Allen P0503-01 - SW65A (Blackriver)
Phosphorus
Phosphorus (mg/L)
0.0700
0.0675
0.0650
0.0625
0.0600
0.0575
0.0550
0.0525
0.0500
01-Jan-2018
01-Mar-2018
01-May-2018
01-Jul-2018
01-Sep-2018
01-Nov-2018
01-Jan-2019
Date


Allen P0503-01 - SW65A (Blackriver)
SS
ELV 35 mg/L
Suspended Solids (mg/L)
35
30
25
20
15
10
5
01-Jan-2018
01-Mar-2018
01-May-2018
01-Jul-2018
01-Sep-2018
01-Nov-2018
01-Jan-2019
Date


Allen P0503-01 - SW65A (Blackriver)
TS
Total Solids (mg/L)
500
450
400
350
300
250
200
150
01-Jan-2018
01-Mar-2018
01-May-2018
01-Jul-2018
01-Sep-2018
01-Nov-2018
01-Jan-2019
Date


Allen P0503-01 - SW65A (Blackriver)
pH
Low Trig. Level
High Trig. Level
9.0
8.5
8.0
7.5
7.0
6.5
6.0
pH
01-Jan-2018
01-Mar-2018
01-May-2018
01-Jul-2018
01-Sep-2018
01-Nov-2018
01-Jan-2019
Date

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.

Annual Environmental Report 2018

Bord na Mona Energy Ltd
(Mountdillon Group of Bogs)
IPC Licence P0504-01

LEABEG, TULLAMORE, CO. OFFALY, IRELAND
TELEPHONE: (05793) 45900. INT: +353-5793-45900. FAX :(05793) 45160. INT: +353-5793-45160

Facility Information Summary	
AER Reporting Year	2018
Licence Register Number	P0504-01
Name of site	Bord na Mona Mountdillon
Site Location	Mountdillon, Lanesboro, Co Longford
NACE Code	0892
Class/Classes of Activity	1.4
National Grid Reference (6E, 6 N)	E204720. N268880

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 853187 tonnes which was 118% of target, headland peat amounted to 3246 tonnes collected. Infrastructurally, there was bog development works at Coolcraff bog in Cuil na Gun. Works included ditching and levelling on an area of approximately 180 hectares and the construction of appropriately sized silt settlement ponds. There was 10 environmental complaints received during the reporting period, this was reported to the Agency through ALDER. In relation to silt pond cleaning, 100% of ponds received two cleanings with some ponds receiving three. The site had four trigger level exceedences for COD in relation to quarterly grab results, there was one trigger level exceedence for Ammonia in relation to quarterly grab results. 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

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

AIR-summary template

Lic No: PO-504-01 Year 2018

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	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 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: PO-504-01 Year 2018

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-01	Total Particulates	350mg/m2/day	84	Daily average < ELV	mg/m2/day	4396	117	0	0	
DM-02	Total Particulates	350mg/m2/day	84	Daily average < ELV	mg/m2/day	5992	122	0	0	
DM-05	Total Particulates	350mg/m2/day	84	Daily average < ELV	mg/m2/day	7280	166	0	0	
DM-06	Total Particulates	350mg/m2/day	84	Daily average < ELV	mg/m2/day	5180	133	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

Solvent use and management on site

8 Do you have a total Emission Limit Value of direct and fugitive emissions on site? if yes please fill out tables A4 and A5

No

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

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

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

Table A5: Solvent Mass Balance summary

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

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER) Lic No: PO-504-01 Year 2018

		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 analysis of yard runoff is attached in a separate document.

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)

		Additional information
Was there any result in breach of licence requirements? If yes please provide brief details in the comment section of Table W3 below	NO	
Was all monitoring carried out in accordance with EPA guidance and checklists for Quality of Aqueous Monitoring Data Reported to the EPA? If no please detail what areas require improvement in additional information box (External /Internal Lab Quality checklist; Assessment of results checklist)	Yes	Surface water monitoring was carried out on a quarterly basis. The results of which are attached. Monthly COD yard runoff results are also attached.

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

Emission reference no:	Emission released to	Parameter/ SubstanceNote 1	Type of sample	Frequency of monitoring	Averaging period	ELV or trigger values in licence or any revision thereof[Note 2]	Licence Compliance criteria	Measured value	Unit of measurement	Compliant with licence	Method of analysis	Procedural reference source	Procedural reference standard number	Annual mass load (kg)	Comments

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

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

	AER Monitoring returns summary template-WATER/WASTEWATER(SEWER)	Lic No:	PO-504-01	Year	2018

Continuous monitoring

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

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

6	Did continuous monitoring equipment experience downtime? **If yes please record downtime in table W4 below**	Yes	250 days in 365. See note below
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
SW77A	Water	Suspended Solids	35	24 hour	Not lifted	mg/L			6000		Down time is usually due to no flow and battery failure issues. However
SW77A	Water	Ammonia (as N)	NA	Weekly		mg/L					
SW77A	Water	Total phosphorus	NA	Weekly	NA	mg/L					
SW77A	Water	COD	NA	Weekly	NA	mg/L					
SW77A	Water	volumetric flow	NA	24 hour	NA	m3/day					
SW77A	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: PO-504-01 Year 2018

Bund testing

dropdown menu click to see options

			Additional information
1	Are you required by your licence to undertake integrity testing on bunds and containment structures ? if yes please fill out table B1 below listing all **new bunds and containment structures** on site, in addition to **all bunds which failed** the integrity test-**all bunding structures which failed including mobile bunds must be listed in the table below, please include all bunds outside the licenced testing period** (mobile bunds and chemstore included)	Yes	
2	Please provide integrity testing frequency period	Other (2 Yearly)	
3	Does the site maintain a register of bunds, underground pipelines (including stormwater and foul), Tanks, sumps and containers? (containers refers to "Chemstore" type units and mobile bunds)	Yes	
4	How many bunds are on site?	5	
5	How many of these bunds have been tested within the required test schedule?	5	All Bunds were tested in 2017
6	How many mobile bunds are on site?	7	
7	Are the mobile bunds included in the bund test schedule?	No	
8	How many of these mobile bunds have been tested within the required test schedule?	0	
9	How many sumps on site are included in the integrity test schedule?	0	
10	How many of these sumps are integrity tested within the test schedule? **Please list any sump integrity failures in table B1**	0	
11	Do all sumps and chambers have high level liquid alarms?	N/A	
12	If yes to Q11 are these failsafe systems included in a maintenance and testing programme?	N/A	
13	Is the Fire Water Retention Pond included in your integrity test programme?	N/A	

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

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

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

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

Pipeline/underground structure testing

1	Are you required by your licence to undertake integrity testing* on underground structures e.g. pipelines or sumps etc ? if yes please fill out table 2 below listing all underground structures and pipelines on site **which failed the integrity test and all which have not been tested withing the integrity test period as specified**	Yes	Petrol tank Tested 04 April 2018 and Passed
2	Please provide integrity testing frequency period	Other (2 Yearly)	

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

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

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

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

Groundwater/Soil monitoring template	Lic No:	PO-504-01	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 interpretaion as an additional section in this AER
2	Are you required to carry out soil monitoring as part of your licence requireme	no		
3	Do you extract groundwater for use on site? If yes please specify use in comment section	no		
4	Do monitoring results show that groundwater generic assessment criteria such as GTVs or IGVs are exceeded or is there an upward trend in results for a substance? If yes, please complete the Groundwater Monitoring Guideline Template Report (link in cell G8) and submit separately through ALDER as a licensee return AND answer questions 5-12 below. Groundwater monitoring template	SELECT		
5	Is the contamination related to operations at the facility (either current and/or historic)	N/A		
6	Have actions been taken to address contamination issues?If yes please summarise remediation strategies proposed/undertaken for the site	N/A		
7	Please specify the proposed time frame for the remediation strategy	N/A		
8	Is there a licence condition to carry out/update ELRA for the site?	N/A		
9	Has any type of risk assesment been carried out for the site?	N/A		
10	Has a Conceptual Site Model been developed for the site?	N/A		
11	Have potential receptors been identified on and off site?	N/A		
12	Is there evidence that contamination is migrating offsite?	N/A		Please enter interpretation of data here

Table 1: Upgradient Groundwater monitoring results

Date of sampling	Sample location reference	Parameter/ Substance	Methodology	Monitoring frequency	Maximum Concentration++	Average Concentration+	unit	GTV's*	SELECT**	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)

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

Table 3: Soil results

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

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

Environmental Liabilities template	Lic No:	PO-504-01	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: PO-504-01 Year 2018

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	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. There are currently 7 Hydraulic Harrows in operation in Mountdillon. Headland Peat Collection. Continue with the collection of headland peat, particularly at dust sensitive locations.	90	In total 70 Personnel received training in 2018. There was a total of 3246 tonnes of headland peat collected in the 2018 season. 7 hydraulic harrows were deployed during the 2018 production season.	Individual	Improved Environmental Management Practices
Waste reduction/Raw material usage efficiency	Waste Streamlining.It is planned to continue with and where possible improve the current waste management service provided by AES Ltd	100	Installed a waste management system. Quarterly waste reports are returned for records/filing and waste streams are segrated on site to maximise recycling potential.	Section Head	Improved Environmental Management Practices
Reduction of emissions to Water	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.	90	In total 70 Personnel received training in 2018. There was a total of 3246 tonnes of headland peat collected in the 2018 season.	Individual	Improved Environmental Management Practices
Materials Handling/Storage/Bunding	Increased bund capacity will be provided where required. Bund integrity testing will be carried out where required.	80	There were no additional bund requirements. Bund integrity testing will be carried out in 2017	Individual	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 176 tonnes of polythene were sent off site for recycling. Procurement also exploring the possibility of securing further	Individual	Improved Environmental Management Practices
Energy Efficiency/Utility conservation	Continue with the implementation process of the Energy Standard 50001.	100	The site successfully managed the energy standard 50001. Energy management is ongoing at the site with further external audits due in 2016.	Section Head	Improved Environmental Management Practices
Groundwater protection	It is proposed to upgrade existing septic tank systems where required.	90	Septic tanks are continually being assessed and upgrade works scheduled where required.	Section Head	Improved Environmental Management Practices

Noise monitoring summary report

Lic No: PO-504-01 Year 2018

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 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: PO-504-01 Year 2018

			Additional information
1	When did the site carry out the most recent energy efficiency audit? Please list the recommendations in table 3 below	Jul-13	
2	Is the site a member of any accredited programmes for reducing energy usage/water conservation such as the SEAI programme linked to the right? If yes please list them in additional information	SEAI - Large Industry Energy Network (LIEN) Yes	The site secured accrediation 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	No	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)	11762	15225		
Total Energy Generated (MWHrs)				
Total Renewable Energy Generated (MWHrs)				
Electricity Consumption (MWHrs)	1712	1639.399		
Fossil Fuels Consumption:				
Heavy Fuel Oil (m3)				
Light Fuel Oil (m3)	1157	1,337.08		
Natural gas (m3)				
Coal/Solid fuel (metric tonnes)				
Peat (metric tonnes)				
Renewable Biomass				
Renewable energy generated on site				

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

Table R2 Water usage on site

					Water Emissions	Water Consumption	
Water use	Water extracted Previous year m3/yr.	Water extracted Current year m3/yr.	Production +/- % compared to previous reporting year**	Energy Consumption +/- % vs overall site production*	Volume Discharged back to environment(m^3yr) :	Volume used i.e not discharged to environment e.g. released as steam m3/yr	Unaccounted for Water:
Groundwater							
Surface water							
Public supply							
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)	16.3				
Non-Hazardous (Tonnes)	4607.92				

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: | PO-504-01 | 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
17/05/2018	Air		Dust affecting house	Both parties have agreed a resoulution	Complete	23/05/2018	Reported on Alder on 22/05/2018 Ref. No. LR034978
24/06/2018	Air		Dust affecting house	Both parties have agreed a resoulution	Complete	???	Reported on Alder on 06/07/2018 Ref. No. R.I 009450
14/06/2018	Air		Dust affecting house	Both parties have agreed a resoulution	Complete	???	Reported on Alder on 11/07/2018 Ref. No. LR035720
21/05/2018	Air		Dust affecting house	Both parties have agreed a resoulution	Complete	22/05/2018	Reported on Alder on 30/05/2018 Ref. No. LR035040
14/06/2018	Air		Dust affecting house	Both parties have agreed a resoulution	Complete		Reported on Alder on 1/07/2018 Ref. No. LR035721
07/07/2018	Air		Dust affecting house	Both parties have agreed a resoulution	Complete		Reported on Alder on 26/07/2018 Ref. No. LR036048
07/07/2018	Air		Dust affecting house	Both parties have agreed a resoulution	Complete		Reported on Alder on 26/07/2018 Ref. No. LR036047
07/07/2018	Air		Dust affecting house	Both parties have agreed a resoulution	Complete		Reported on Alder on 26/07/2018 Ref. No. LR036044
12/07/2018	Air		Dust affecting house	Both parties have agreed a resoulution	Complete		Reported on Alder on 26/07/2018 Ref. No. LR036053

Total complaints open at start of reporting year	0
Total new complaints received during reporting year	9
Total complaints closed during reporting year	9
Balance of complaints end of reporting year	0

Complaints and Incidents summary template Lic No: PO-504-01 Year 2018

Incidents

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

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

Table 2 Incidents summary

Date of occurrence	Incident nature	Location of occurrence	Incident category*please refer to guidance	Receptor	Cause of incident	Other cause(please specify)	Activity in progress at time of incident	Communication	Occurrence	Corrective action<20 words	Preventative action <20 words	Resolution status	Resolution date	Likelihood of reoccurence
09/03/2018	Trigger level reached	SW2 Derrymoylin	1. Minor	Water	Not related to site activities		No activity	EPA Ref. No. INC1014120	New	There was no activity upstream of this point that would lead to exceedance in trigger level, therefore no corrective actions are possible	NA	Complete	09/03/2018	Medium
02/05/2018	Trigger level reached	SW16 Derrycashel	1. Minor	Water	Not related to site activities		No activity	EPA Ref No. INCI014397	New	There was no activity upstream of this point that would lead to exceedance in trigger level, therefore no corrective actions are possible	NA	Complete	07/05/2018	Medium
02/05/2018	Trigger level reached	SW 17 Mountdillon	1. Minor	Water	Not related to site activities		No activity	EPA RefNo. Incl014398	New	There was no activity upstream of this point that would lead to exceedance in trigger level, therefore no corrective actions are possible	NA	Complete	07/05/2018	Medium
02/05/2018	Trigger level reached	SW 17A Mountdillon	1. Minor	Water	Not related to site activities		No activity	EPA Ref No. INCI014399	New	There was no activity upstream of this point that would lead to exceedance in trigger level, therefore no corrective actions are possible	NA	Complete	07/05/2018	Medium
27/08/2018	Trigger level reached	SW 53 Begnagh	1. Minor	Water	Not related to site activities		No activity	EPA Ref No. INCI015141	New	There was no activity upstream of this point that would lead to exceedance in trigger level, therefore no	NA		03/09/2018	Low

Total number of incidents current year	5
Total number of incidents previous year	8
% reduction/ increase 45%	

WASTE SUMMARY	Lic No:	PO-504-01	Year	2018
SECTION A-PRTR ON SITE WASTE TREATMENT AND WASTE TRANSFERS TAB- TO BE COMPLETED BY ALL IPPC AND WASTE FACILITIES		PRTR facility logon	dropdown list click to see options	

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

			Additional Information
1	Were any wastes accepted onto your site for recovery or disposal or treatment prior to recovery or disposal within the boundaries of your facility ?; (waste generated within your boundaries is to be captured through PRTR reporting) If yes please enter details in table 1 below	N/A	
2	Did your site have any rejected consignments of waste in the current reporting year? If yes please give a brief explanation in the additional information	SELECT	
3	Was waste accepted onto your site that was generated outside the Republic of Ireland? If yes please state the quantity in tonnes in additional information	SELECT	

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

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

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

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

WASTE SUMMARY	Lic No:	PO-504-01	Year	2018

SECTION D-TO BE COMPLETED BY LANDFILL SITES ONLY

Table 2 Waste type and tonnage-landfill only

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

Table 3 General information-Landfill only

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

Table 4 Environmental monitoring-landfill only Landfill Manual-Monitoring Standards

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

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

Table 5 Capping-Landfill only

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

*please note this includes daily cover area

Table 6 Leachate-Landfill only

9	Is leachate from your site treated in a Waste Water Treatment Plant?	SELECT
10	Is leachate released to surface water? If yes please complete leachate mass load information below	SELECT

Volume of leachate in reporting year(m3)	Leachate (BOD) mass load (kg/annum)	Leachate (COD) mass load (kg/annum)	Leachate (NH4) mass load (kg/annum)	Leachate (Chloride) mass load kg/annum	Leachate treatment on-site	Specify type of leachate treatment	Comments

Please ensure that all information reported in the landfill gas section is consistent with the Landfill Gas Survey submitted in conjunction with PRTR returns

Table 7 Landfill Gas-Landfill only

Gas Captured&Treated by LFG System m3	Power generated (MW / KWh)	Used on-site or to national grid	Was surface emissions monitoring performed during the reporting year?	Comments
			SELECT	

Waste Summary Continued Lic No: P0504-01 Year 2018

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	176.02	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)	ADN Materials Ltd., Lossetts, Carrickmacross, Co. Monaghan - WFP-MN-12-0001-04	Ireland
13 02 05*	mineral-based non-chlorinated engine, gear and lubricating oils	Yes	4.7	Enva Ireland Limited (Portlaoise) - W0184	R01 - Use principally as a fuel or other means to generate energy	Enva Ireland Limited, Clonminam Industrial Estate, Portlaoise - W0184	Ireland
15 01 01	paper and cardboard packaging	No	5.52	Mulleady's Limited (Drumlish) - W0169	R03 - Recycling/reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes)	Mulleady's Limited, Cloonagh Drumlish, Co. Longford - W0169	Ireland
15 01 03	wooden packaging	No	5.52	AES Ltd WP-OY-08-601-01	R01 - Use principally as a fuel or other means to generate energy	AES LTD, Cappincur, Tullamore, Co. Offaly - WP-OY-08-601-01	Ireland
15 02 02*	absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by hazardous substances	Yes	0.15	Enva Ireland Limited - L1745	R01 - Use principally as a fuel or other means to generate energy	Lindenschmidt, Kreutzal - Reg No: E97095037	Germany
16 01 07*	oil filters	Yes	1.32	Enva Ireland Limited (Portlaoise) - W0184	R04 - Recycling/reclamation of metals and metal compounds	R.D. Recycling, Houthalen, Reg No: 51727/1KD	Belgium
16 06 01*	lead batteries	Yes	1.79	Enva Ireland Limited (Portlaoise) - W0184	R04 - Recycling/reclamation of metals and metal compounds	Campine Recycling, Beerse - MLAV/05173/GVDA	Belgium
11 01 13*	degreasing wastes containing hazardous substances	Yes	0.09	Safety Kleen Ireland Ltd - W0099	R02 - Solvent reclamation/regeneration	Solvent Recovery Management, PP33345F, Wheeland Rd., Knottingly, West Yorks	UK
13 05 03*	interceptor sludges	Yes	8.24	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	75.94	AES Ltd WP-OY-08-601-01	R04 - Recycling/reclamation of metals and metal compounds	AES LTD, Cappincur, Tullamore, Co. Offaly - WP-OY-08-601-01	Ireland
20 03 01 A	Municipal mixed residual household	No	0.86	AES Ltd WP-OY-08-601-01	D05 - Specially engineered landfill (e.g. placement into lined discrete cells which are capped and isolated from one another and the environment, etc.)	AES LTD, Cappincur, Tullamore, Co. Offaly - WP-OY-08-601-01	Ireland
20 03 01 B	Municipal mixed residual non-household	No	18.42	AES Ltd WP-OY-08-601-01	D05 - Specially engineered landfill (e.g. placement into lined discrete cells which are capped and isolated from one another and the environment, etc.)	AES LTD, Cappincur, Tullamore, Co. Offaly - WP-OY-08-601-01	Ireland
20 01 21*	Household waste fluorescent lamps and other mercury containing waste	Yes	0.06	KMK Metals Recycling Ltd. - L2952	R04 - Recycling/reclamation of metals and metal compounds	KMK Metals Recycling Ltd, Cappincur Industrial Estate, Daingean Rd, Cappincur, Tullamore, Co. Offaly - L2952	Ireland

Mount Dillon

Decommissioning and Rehabilitation
Bog Rehabilitation Progress Report 2018.

Within the Mount Dillion licensed area (P0504-01) there were two entire bog units available for rehabilitation in 2018 – Corlea and Clonwhealan. Ongoing monitoring of cutaway areas was carried out within the Mount Dillon area with Granaghan and Derraghan having been resurveyed in 2018. In addition, baseline ecology surveys were also undertaken at Mostrim and Clynan bogs to inform the Bord na Móna raised bog restoration work programme. Both of these sites constitute large sections of remnant high bog and were re-surveyed in 2018.

Draft rehabilitation plans for the Mount Dillon 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.

Active rehabilitation work was carried out within Corlea (135ha) and Clonwhealan Bog (65ha) as part of the long-term rehabilitation of these sites. Intensive drain-blocking and re-wetting was carried out in bog remnants and deep peat bog areas. An amenity walkway has also been constructed at Corlea Bog in an area of rehabilitated cutaway now leased to the local community. This was a joint project between Bord na Móna and Longford County Council.

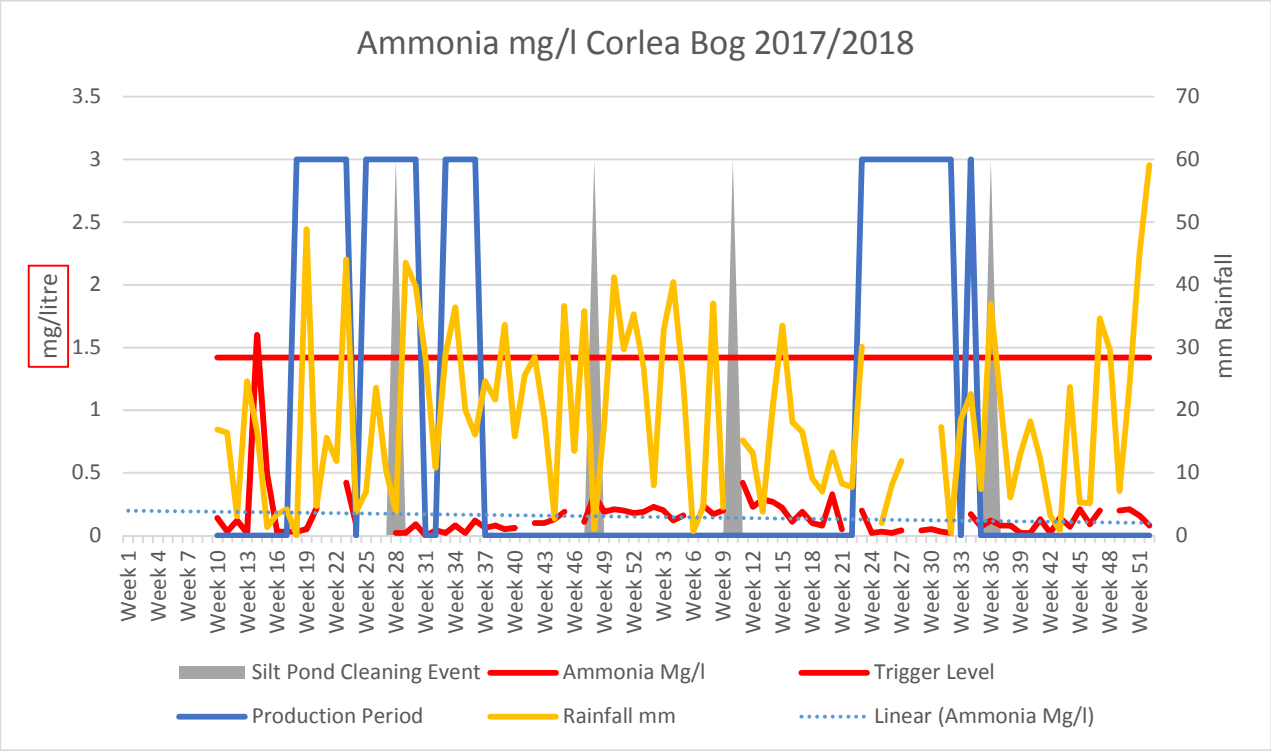
The new Biodiversity Action Plan (2016-2021) was launched in 2016 with the annual Biodiversity Action Plan review day being held in May 2018, this included an update on progress of this plan, bog restoration and cutaway rehabilitation for a wide range on statutory and non-statutory consultees including 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.

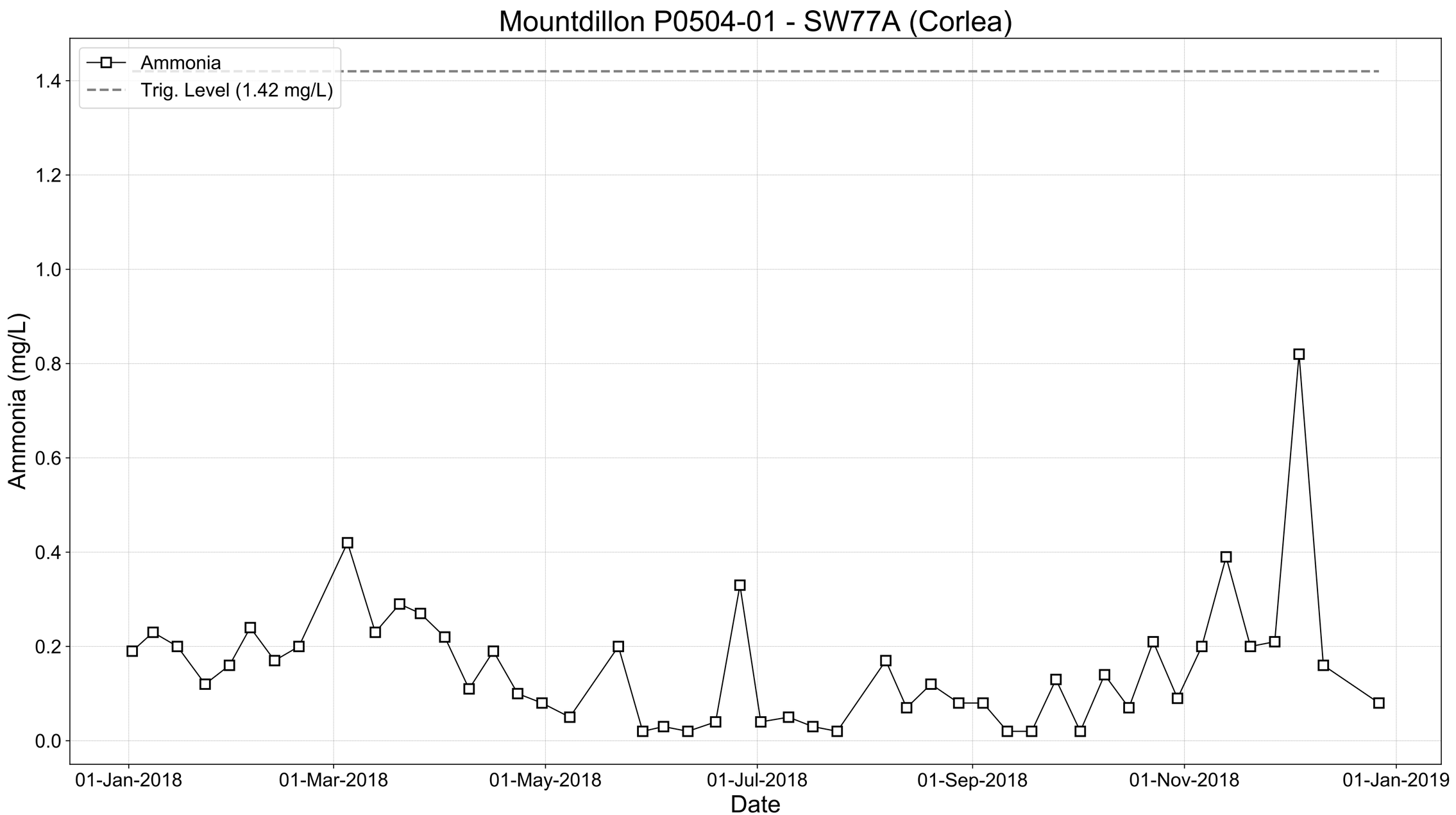
Organic certification was sought for the majority of the Bord na Móna property with the aim of using some areas for the cultivation of plants for use in herbal medicine, this project is ongoing.

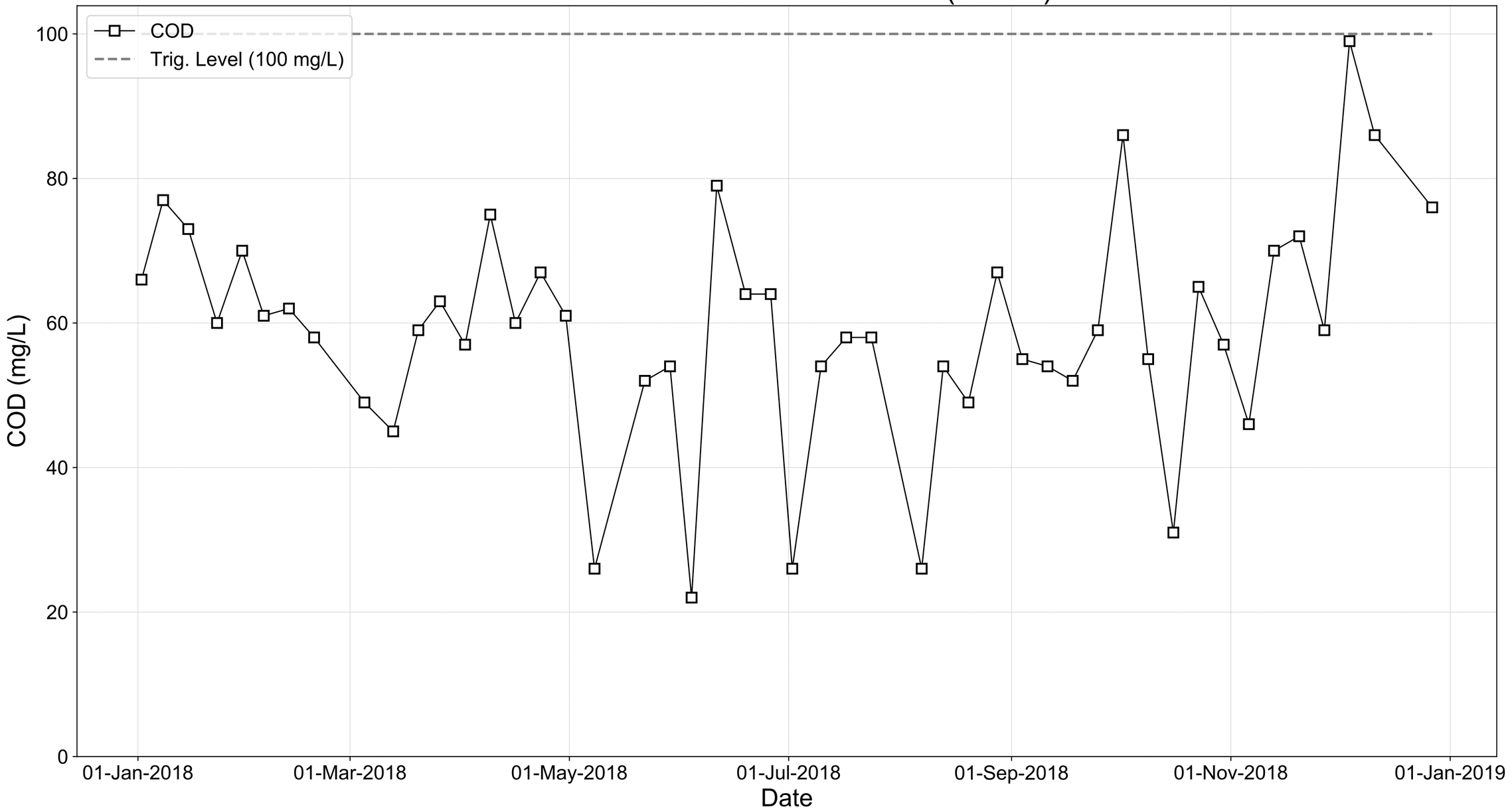
IPPC Licence P0504-01 Quarterley Grab Sampling												
X	Y	Bog	SW	Monitoring	Sampled	pH	SS	TS	Ammonia	TP	COD	Colour
203231.82	282838.72	Derrymoylin	SW-1	Q1 18	**09/03/2018**	**7.5**	**5**	**374**	**0.28**	**0.05**	**44**	**91**
203249.23	283476.42	Derrymoylin	SW-2	Q1 18	**09/03/2018**	**7.6**	**5**	**163**	**2.1**	**0.05**	**17**	**63**
202651.77	284748.83	Derrymoylin	SW-3	Q1 18	**09/03/2018**	**7.8**	**5**	**232**	**0.5**	**0.05**	**46**	**121**
203369.33	285381.69	Derrymoylin	SW-4	Q1 18	**09/03/2018**	**7.6**	**5**	**150**	**0.28**	**0.05**	**51**	**196**
203500.28	285433.11	Derrymoylin	SW-5	Q1 18	**09/03/2018**	**7.9**	**5**	**310**	**0.28**	**0.05**	**40**	**119**
201425.36	279968.71	Cloonshannagh	SW-6	Q1 18	**09/03/2018**	**7.9**	**5**	**286**	**0.23**	**0.09**	**38**	**124**
202255.50	279742.53	Cloonshannagh	SW-7	Q1 18	**20/03/2018**	**6.2**	**36**	**100**	**0.61**	**0.05**	**99**	**124**
202994.69	279668.44	Cloonshannagh	SW-8	Q1 18	**20/03/2018**	**7.8**	**5**	**420**	**0.05**	**0.05**	**52**	**112**
204893.25	280860.61	Cloonshannagh	SW-10	Q1 18	**20/03/2018**	**7.7**	**5**	**330**	**0.36**	**0.05**	**40**	**82**
202604.45	281233.03	Cloonshannagh	SW-11	Q1 18	**20/03/2018**	**7.9**	**5**	**478**	**0.3**	**0.05**	**40**	**100**
202802.57	282212.51	Cloonshannagh	SW-11A	Q1 18	**20/03/2018**	**7.9**	**5**	**464**	**0.25**	**0.05**	**65**	**133**
201386.06	280466.96	Cloonshannagh	SW-12	Q1 18	**20/03/2018**	**7.9**	**5**	**401**	**0.25**	**0.07**	**63**	**164**
204457.50	279959.37	Cloonshannagh	SW-9	Q2 18	**30/04/2018**	**7.7**	**5**	**332**	**0.35**	**0.05**	**28**	**286**
204693.18	280062.24	Cloonshannagh	SW-9A	Q2 18	**30/04/2018**	**8**	**5**	**296**	**0.17**	**0.05**	**49**	**334**
203087.79	277486.67	Derrycashel	SW-13	Q2 18	**30/04/2018**	**8**	**5**	**380**	**0.11**	**0.05**	**53**	**198**
202836.32	277415.17	Derrycashel	SW-14	Q2 18	**30/04/2018**	**7.6**	**5**	**206**	**0.06**	**0.05**	**58**	**423**
202442.72	277238.02	Derrycashel	SW-15	Q2 18	**02/05/2018**	**8.2**	**5**	**392**	**0.08**	**0.05**	**53**	**99**
201764.79	277022.51	Derrycashel	SW-16	Q2 18	**02/05/2018**	**7.7**	**5**	**258**	**0.63**	**0.05**	**107**	**283**
201541.73	272805.72	Mountdillon	SW-17	Q2 18	**02/05/2018**	**7.4**	**5**	**264**	**0.24**	**0.74**	**118**	**310**
201616.81	273699.66	Mountdillon	SW-17A	Q2 18	**02/05/2018**	**7.7**	**5**	**262**	**0.19**	**0.07**	**117**	**314**
199917.99	273798.51	Mountdillon	SW-18B	Q2 18	**02/05/2018**	**7.8**	**5**	**294**	**0.55**	**0.05**	**43**	**129**
198682.39	271189.62	Cloontuskert	SW-27	Q2 18	**02/05/2018**	**8.1**	**5**	**314**	**0.27**	**0.06**	**52**	**126**
197846.35	270246.30	Moher	SW-31	Q2 18	**02/05/2018**	**7.7**	**5**	**220**	**0.21**	**0.05**	**61**	**231**
197403.85	270894.69	Moher	SW-32	Q2 18	**No Flow**	**NF**	**NF**	**NF**	**NF**	**NF**	**NF**	**NF**
TBC	TBC	Mostrim	SW-120	Q2 18	**05/04/2018**	**Lab error**	**5**	**92**	**0.57**	**0.05**	**56**	**301**
TBC	TBC	Mostrim	SW-121	Q2 18	**05/04/2018**	**Lab error**	**5**	**73**	**0.52**	**0.05**	**59**	**171**
TBC	TBC	Mostrim	SW-115	Q2-18	**05/04/2018**	**Lab error**	**5**	**72**	**0.69**	**0.05**	**61**	**181**
TBC	TBC	Mostrim	SW-116	Q2-18	**05/04/2018**	**Lab error**	**5**	**130**	**2.2**	**0.05**	**79**	**301**
TBC	TBC	Mostrim	SW-117	Q2-18	**05/04/2018**	**Lab error**	**5**	**72**	**0.95**	**0.05**	**65**	**222**
TBC	TBC	Mostrim	SW118	Q2-18	**05/04/2018**	**Lab error**	**5**	**142**	**0.62**	**0.06**	**73**	**306**
TBC	TBC	Mostrim	SW-119	Q2-18	**05/04/2018**	**Lab error**	**5**	**166**	**1.1**	**0.06**	**47**	**176**
206115.80	274878.92	Knappoge	SW-49	Q3 18	**09/08/2018**	**7.4**	**5**	**236**	**0.12**	**0.14**	**32**	**67**
205061.08	275562.80	Killashee	SW-49A	Q3 18	**09/08/2018**	**7.7**	**5**	**246**	**0.06**	**0.05**	**45**	**137**
204667.95	274040.57	Knappoge	SW-50	Q3 18	**09/08/2018**	**7.7**	**5**	**376**	**0.19**	**0.05**	**35**	**78**
206887.04	274473.24	Begnagh	SW-51	Q3 18	**09/08/2018**	**8.2**	**10**	**380**	**0.06**	**0.07**	**64**	**132**
206975.29	274705.14	Begnagh	SW-52	Q3 18	**09/08/2018**	**7.8**	**5**	**244**	**0.72**	**0.13**	**68**	**263**
207813.09	274377.81	Begnagh	SW-53	Q3 18	**27/08/2018**	**6.5**	**5**	**132**	**0.969**	**0.05**	**110**	**350**
208041.06	273513.98	Begnagh	SW-54	Q3 18	**27/08/2018**	**7.3**	**5**	**180**	**0.88**	**0.05**	**95**	**437**
207856.06	273044.13	Begnagh	SW-55	Q3 18	**27/08/2018**	**6.5**	**5**	**214**	**1**	**0.06**	**83**	**313**
209203.68	273164.02	Clooneeny	SW-56	Q3 18	**27/08/2018**	**7.5**	**5**	**330**	**0.43**	**0.06**	**63**	**346**
209144.76	273279.48	Clooneeny	SW-57	Q3 18	**27/08/2018**	**7.4**	**5**	**250**	**0.32**	**0.06**	**69**	**217**
209068.65	274509.95	Clooneeny	SW-58	Q3 18	**No Flow**	**NF**	**NF**	**NF**	**NF**	**NF**	**NF**	**NF**
210209.83	274038.53	Clooneeny	SW-59	Q3 18	**11/09/2018**	**7.5**	**5**	**332**	**0.12**	**0.08**	**27**	**72**
204286.21	272640.87	Derryaroge	SW-35	Q4 18	**12/11/2018**	**7.4**	**5**	**398**	**0.35**	**0.05**	**58**	**281**
203400.35	272510.11	Derryaroge	SW-36	Q4 18	**12/11/2018**	**7.1**	**5**	**210**	**0.39**	**0.05**	**77**	**260**
202650.72	273122.31	Derryaroge	SW-37	Q4 18	**12/11/2018**	**7.2**	**5**	**338**	**0.57**	**0.05**	**63**	**164**
202502.01	272689.16	Derryaroge	SW-38	Q4 18	**21/11/2018**	**7.6**	**5**	**490**	**1.1**	**0.05**	**62**	**96**
202410.69	271393.37	Derryarogue	SW-39	Q4 18	**21/11/2018**	**7.4**	**5**	**242**	**1**	**0.05**	**78**	**241**
203095.63	273341.49	Derryaroge	SW-40	Q4 18	**21/11/2018**	**5.7**	**5**	**286**	**0.77**	**0.05**	**54**	**173**
203260.27	271785.26	Derryaroge	SW-41	Q4 18	**21/11/2018**	**7**	**5**	**364**	**0.69**	**0.05**	**51**	**107**
203148.87	271351.76	Derryaroge	SDW-41A	Q4 18	**21/11/2018**	**0.05**	**12**	**410**	**1.5**	**0.05**	**77**	**157**
202357.87	272474.81	Derryaroge	SW-42	Q4 18	**04/12/2018**	**7.2**	**5**	**240**	**0.11**	**0.05**	**91**	**281**
203187.11	271923.18	Derryaroge	SW-43	Q4 18	**04/12/2018**	**7.6**	**5**	**425**	**0.1**	**0.05**	**79**	**157**
202284.33	271432.46	Cloonbony	SW-44	Q4 18	**04/12/2018**	**7.4**	**5**	**390**	**1**	**0.05**	**47**	**114**
202116.64	271257.33	Cloonbony	SW-45	Q4 18	**No Flow**	**NF**	**NF**	**NF**	**NF**	**NF**	**NF**	**NF**
202183.21	271461.75	Cloonbony	SW-46	Q4 18	**No Flow**	**NF**	**NF**	**NF**	**NF**	**NF**	**NF**	**NF**
202000.58	272467.09	Derryaroge	SW-47	Q4 18	**No Flow**	**NF**	**NF**	**NF**	**NF**	**NF**	**NF**	**NF**

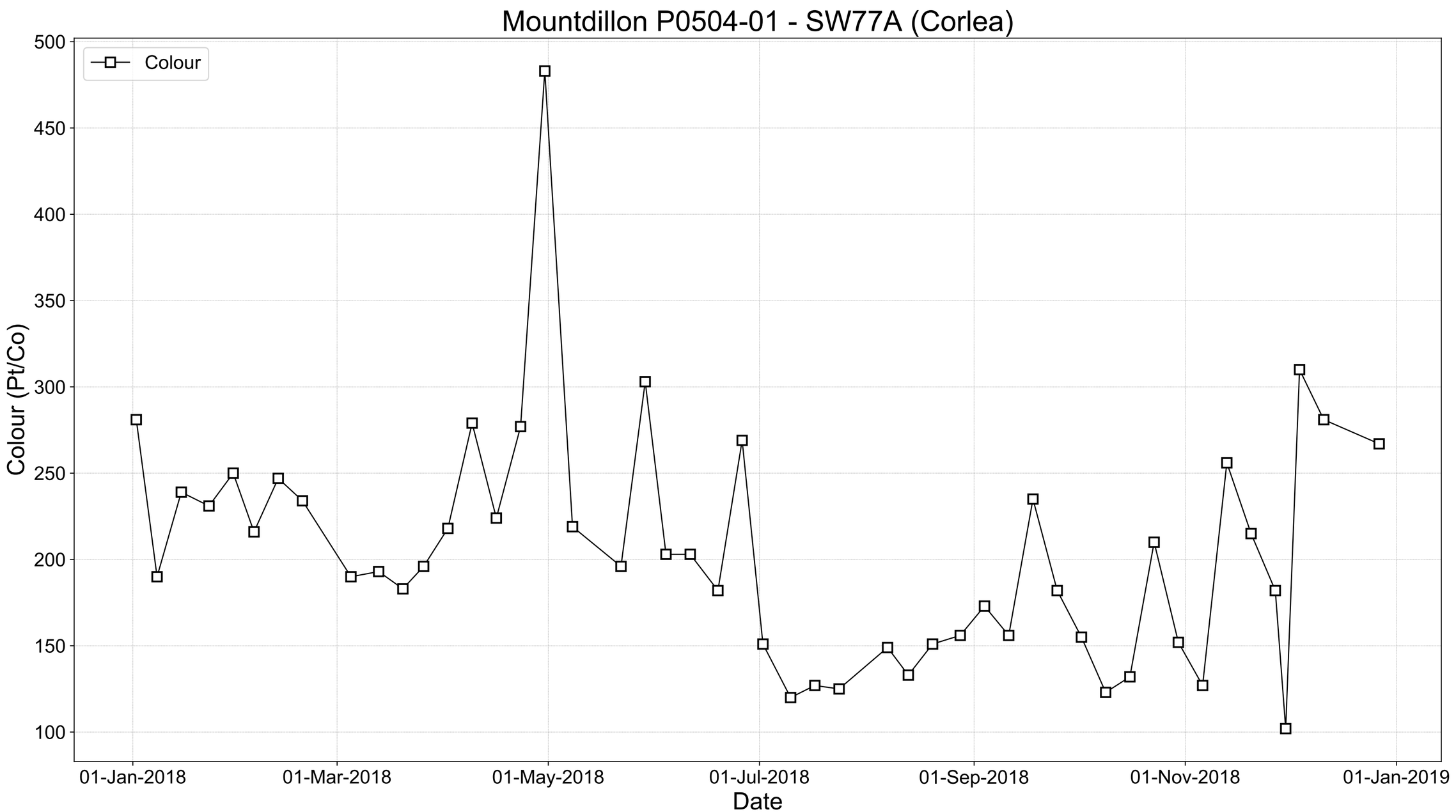


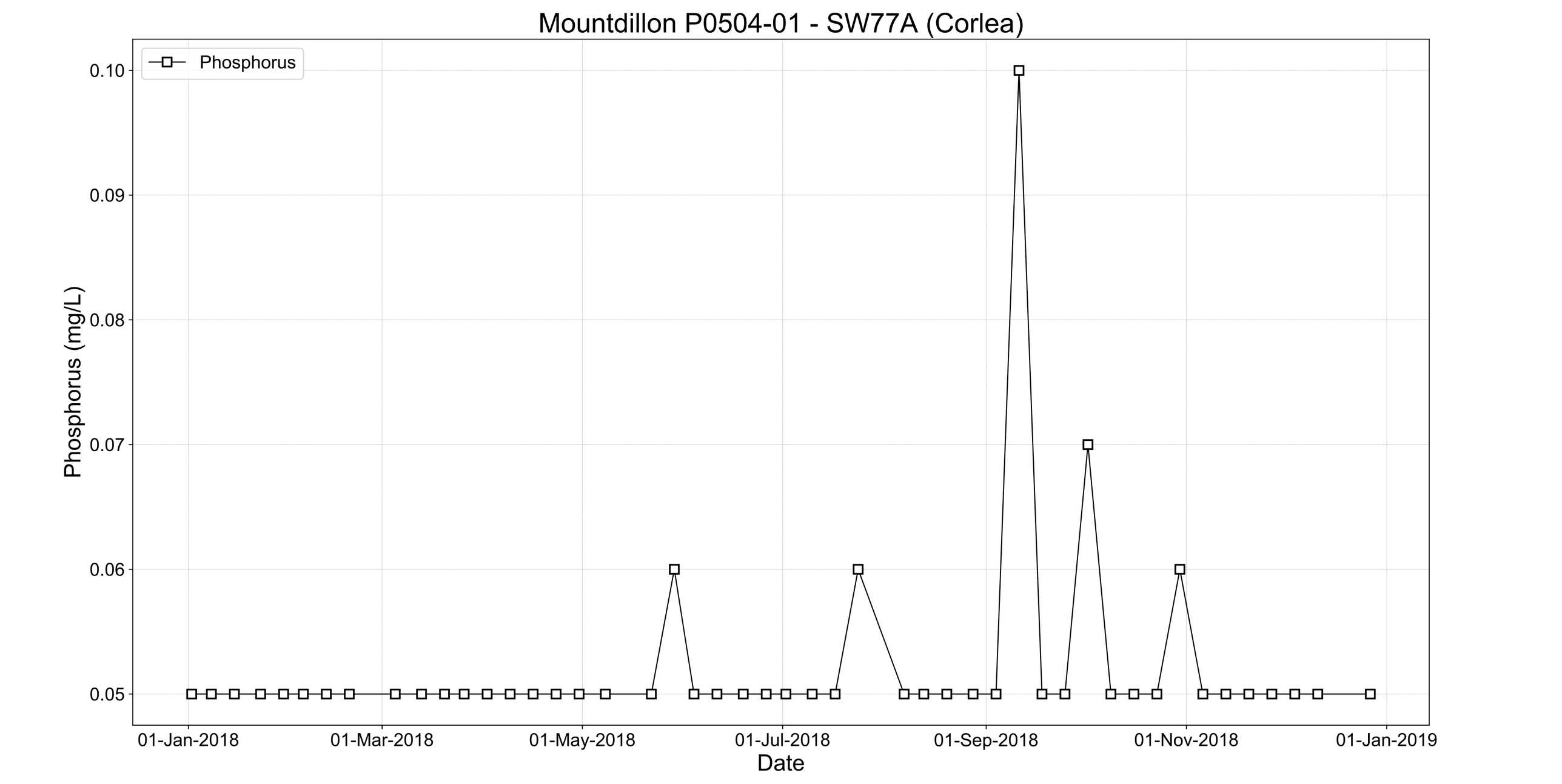
Corlea bog is an active production bog with the composite sampler relocated to this bog in March 2017 and it remains at this location for the reporting period. The composite sampler takes a flow proportional composite sample over a 24-hour period. This location returned 46 weekly ammonia results during the 2018 period, which is a return of 88%. The balance of weeks where no sample was returned was during periods when there was no summer discharge, water was backed up in the Winter/Spring seasons or for technical issues. The ammonia trigger level of 1.42mg/l, as agreed with the Agency, was not exceeded during the reporting period. Overall the results are maintaining a downward trend 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. It has been established that the most relevant influencing variable on Ammonia is rainfall and the trend analysis above indicates linkage between rainfall and ammonia concentrations.

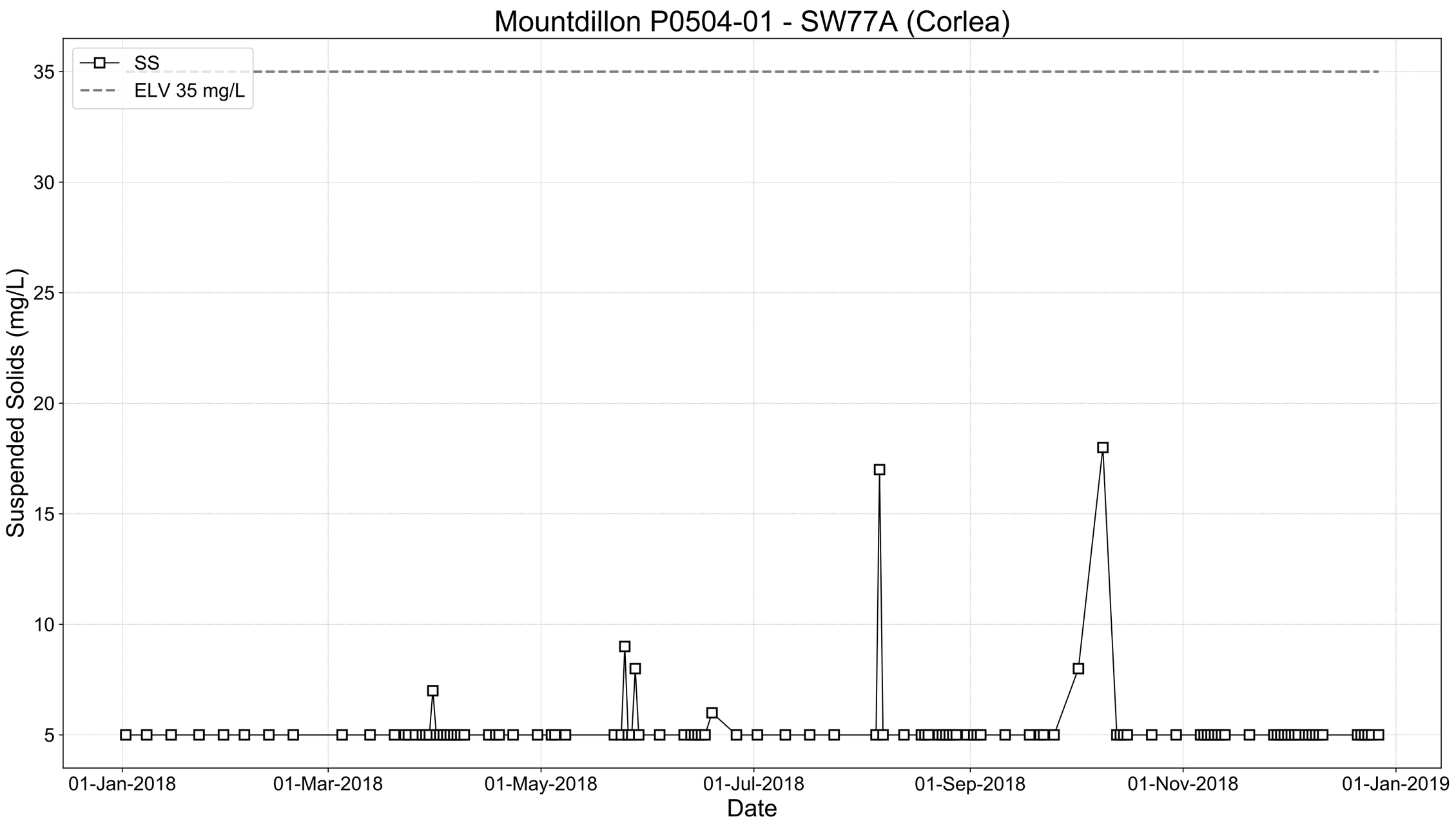
The sampler at this location may be relocated to fill any information gaps on other peatland catchments and to reflect the need to support the information gathering required for the Water Framework Directive's River Basin Management Plan. There is also an EPA lead research project commencing in 2019, 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.

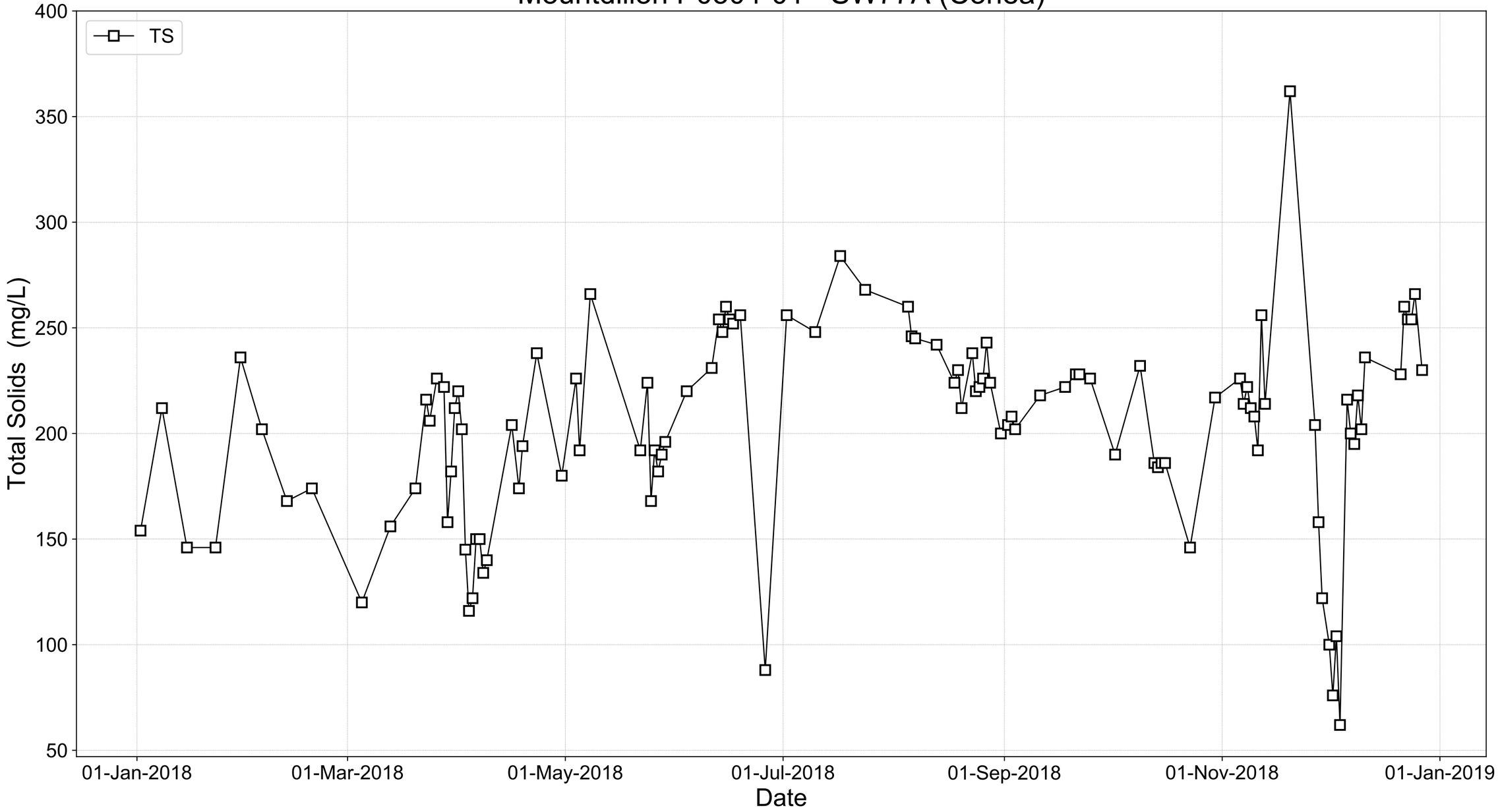

Mountdillon P0504-01 - SW77A (Corlea)
Ammonia
Trig. Level (1.42 mg/L)
Ammonia (mg/L)
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
01-Jan-2018
01-Mar-2018
01-May-2018
01-Jul-2018
01-Sep-2018
01-Nov-2018
01-Jan-2019
Date

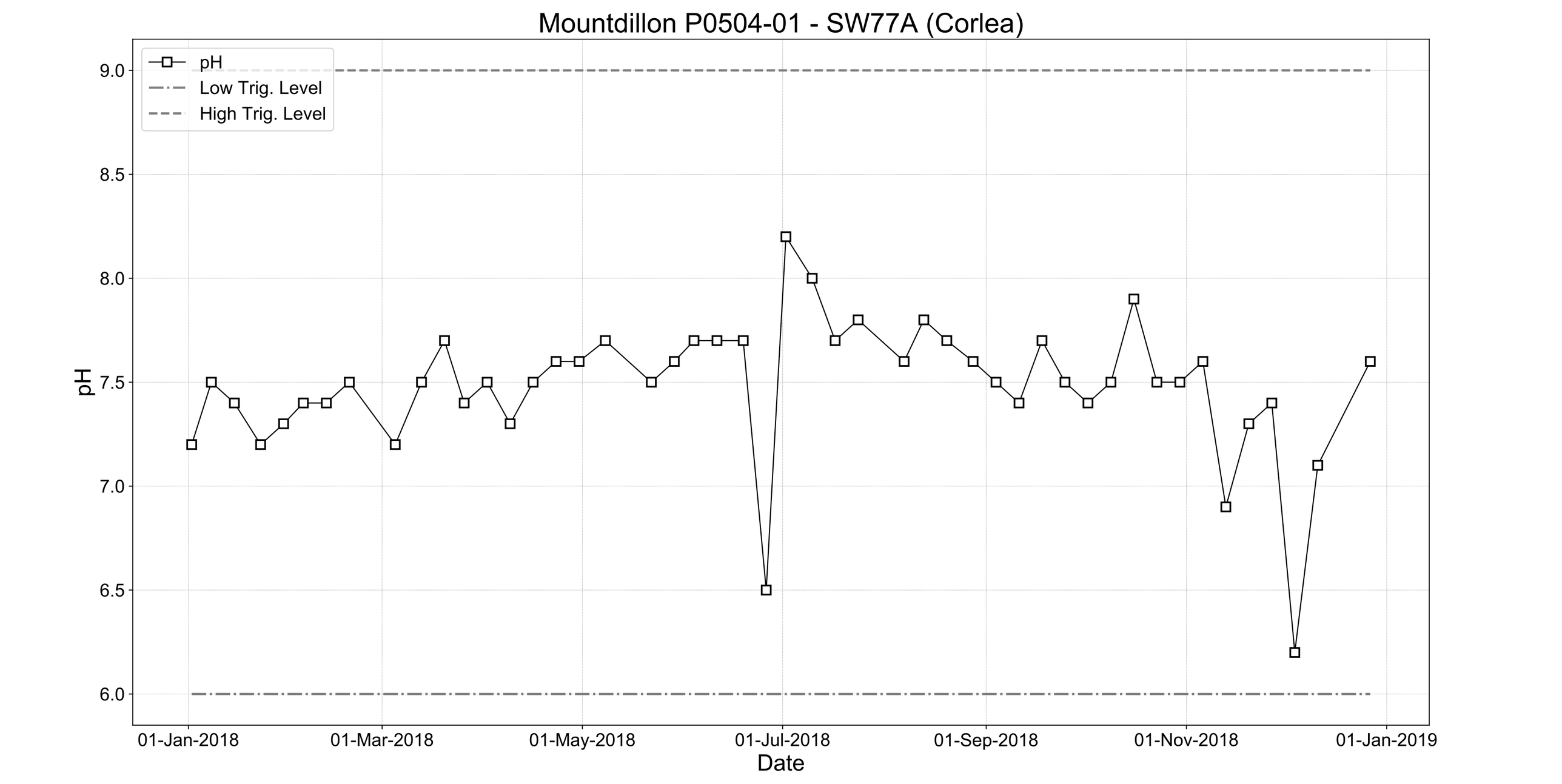

Mountdillon P0504-01 - SW77A (Corlea)
COD
Trig. Level (100 mg/L)
COD (mg/L)
100
80
60
40
20
0
01-Jan-2018
01-Mar-2018
01-May-2018
01-Jul-2018
01-Sep-2018
01-Nov-2018
01-Jan-2019
Date


Mountdillon P0504-01 - SW77A (Corlea)
Colour
Colour (Pt/Co)
500
450
400
350
300
250
200
150
100
01-Jan-2018
01-Mar-2018
01-May-2018
01-Jul-2018
01-Sep-2018
01-Nov-2018
01-Jan-2019
Date


Mountdillon P0504-01 - SW77A (Corlea)
Phosphorus
Phosphorus (mg/L)
0.10
0.09
0.08
0.07
0.06
0.05
01-Jan-2018
01-Mar-2018
01-May-2018
01-Jul-2018
01-Sep-2018
01-Nov-2018
01-Jan-2019
Date


Mountdillon P0504-01 - SW77A (Corlea)
SS
ELV 35 mg/L
Suspended Solids (mg/L)
35
30
25
20
15
10
5
01-Jan-2018
01-Mar-2018
01-May-2018
01-Jul-2018
01-Sep-2018
01-Nov-2018
01-Jan-2019
Date


Mountdillon P0504-01 - SW77A (Corlea)
TS
Total Solids (mg/L)
400
350
300
250
200
150
100
50
01-Jan-2018
01-Mar-2018
01-May-2018
01-Jul-2018
01-Sep-2018
01-Nov-2018
01-Jan-2019
Date


Mountdillon P0504-01 - SW77A (Corlea)
pH
Low Trig. Level
High Trig. Level
9.0
8.5
8.0
7.5
7.0
6.5
6.0
pH
01-Jan-2018
01-Mar-2018
01-May-2018
01-Jul-2018
01-Sep-2018
01-Nov-2018
01-Jan-2019
Date

Yard Discharge Results 2018

Licence: P0504-01

Works: Mt Dillon

Month	W/Shop SWE 1 COD	W/Shop SWE 2 COD	Yard SWE 1 COD	Yard SWE 2 COD	C na Gun SWE1 COD	P Station SWE 1 COD
Jan	64	43	12	28	NF	NF
Feb	66	42	NF	10	NF	NF
Mar	49	29	NF	14	NF	NF
Apr	70	54	NF	NF	61	NF
May	NF	NF	NF	NF	NF	NF
June	68	46	11	10	NF	NF
July	NF	NF	NF	NF	NF	NF
Aug	44	70	NF	NF	NF	NF
Sep	49	40	NF	NF	17	NF
Oct	NF	NF	NF	NF	NF	NF
Nov	75	65	NF	NF	NF	NF
Dec	NF	NF	NF	NF	NF	NF
Total						

Note: NF denotes no flow at emission point on day of sampling

Extractive Waste Management Plan Implementation AER Update.

March 2019.

IPC Licence P0504-01.

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 Lough Ree 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 Energy Ltd
(Kilberry Group of Bogs)
IPC Licence P0506-01

LEABEG, TULLAMORE, CO. OFFALY, IRELAND
TELEPHONE: (05793) 45900. INT: +353-5793-45900. FAX :(05793) 45160. INT: +353-5793-45160

Facility Information Summary	
AER Reporting Year	2018
Licence Register Number	P0506-01
Name of site	Bord na Mona Kilberry
Site Location	Bord na Mona, Leabeg, Tullamore, Co Offaly
NACE Code	0892
Class/Classes of Activity	1.4
National Grid Reference (6E, 6 N)	180050, 319540

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, ridiging and harvesting of peat into stockpiles and secondly the transportation of that peat via an internal rail network to the lorry outloading facilities for transportation to a Power Station, Moss Peat Factory or direct to the Docks. Production achieved was approximately 211,839 tonnes. Infrastructurally, there was no bog development during the period. From an environmental perspective silt pond upgrade work was ongoing during the period . Dust monitoring was fully compliant during the reporting period. Trigger levels were reached 9 times for COD during quarterly grab sampling with these exceedances included. The composite sampling regime was 100% compliant in relation to Suspended Solids ELV's. There were 15 Ammonia trigger levels reached during the reporting period, and 8 related to COD. These were all investigated and closed out, with the main causation concluded to be related to naturally occurring peat formation. There were no environmental complaints received during the reporting period. In relation to silt pond cleaning, 100 % of ponds received two cleanings, some individual ponds received more, inspections dictating cleaning schedules. Decommissioning and Rehabilitation works are described in an attachment. The composite sampler experienced some technical difficulties during the reporting period which have since been rectified. During the period there were various returns made to the EPA including the Draft Kilberry Rehabilitation Plan, consent for wildcrafting trials, Management and waste management changes.

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

AIR-summary template

Lic No: P0506-01 Year 2018

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	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	All results within license limits
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	yes	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: P0506-01 Year 2018

Table A2: Summary of average emissions -continuous monitoring

Emission reference no:	Parameter/ Substance	ELV in licence or any revision therof	Averaging Period (days)	Compliance Criteria	Units of measurement	Annual Emission	Annual maximum	Monitoring Equipment downtime (days)	Number of ELV exceedences in current reporting year	Comments
DM-01	Total Particulates	350	280	Daily average < ELV	mg/m2/day	38276	233	56	0	Dust gauge damaged twice during the annual monitoring period

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 — No

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

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

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

Table A5: Solvent Mass Balance summary

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

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER) Lic No: P0506-01 Year 2018

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

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	All suspended results within license ELV
4	Was all monitoring carried out in accordance with EPA guidance and checklists for Quality of Aqueous Monitoring Data Reported to the EPA? If no please detail what areas require improvement in additional information box	External /Internal Lab Quality checklist	Assessment of results checklist	SELECT	Surface water monitoring was carried out on a quarterly basis. The results of which are attached.

AER Monitoring returns summary template-WATER/WASTEWATER(SEWE Lic No: P0506-01 Year 2018

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

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

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

6	Did continuous monitoring equipment experience downtime? **If yes please record downtime in table W4 below**	Yes	137 Days in 365
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

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: P0506-01 Year 2018

Bund testing

dropdown menu click to see options

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

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

Pipeline/underground structure testing

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

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

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

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

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

Groundwater/Soil monitoring template	Lic No:	P0506-01	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 interpretaion as an additional section in this AER
2	Are you required to carry out soil monitoring as part of your licence requiremer	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		
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

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)

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

Table 3: Soil results

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

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

	Environmental Liabilities template	Lic No:	P0506-01	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: P0506-01 Year 2018

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	**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. Deploy Hydraulic Harrows at dust sensitive areas in addition to headland Peat Collection. Continue with the collection of headland peat, particularly at dust sensitive locations.	100	In total 9 personnel received training in 2018. Hydraulic harrows were depolyed at dust sensitive areas. Headland peat was collected during the production season.	Section Head	Reduced emissions
Waste reduction/Raw material usage efficiency	Waste Streamlining.It is planned to continue with and where possible improve the current waste management service provided by AES Ltd	100	Quarterly waste reports are returned for records/filing and waste streams are segrated on site to maximise recycling potential.	Individual	Improved Environmental Management Practices
Reduction of emissions to Water	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.	100	In total 9 personnel received training in 2018. Training covered SOP's in relation to silt control and general IPC license awareness.	Section Head	Reduced emissions
Materials Handling/Storage/Bunding	Increased bund capacity will be provided where required.	0	No additional bund capacity was required during 2018	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	Zero tonnes were sent off site for recycling in 2018.	Individual	Reduced emissions
Sphagnum Project	A small scale trial is commenced in 2012. Its purpose is to trial grow sphagnum moss on a small area of cutaway in Kilberry bog.	100	The Kiberry Sphagnum farming project is progressing with plots still in early stages of development. Establishment of Sphagnum has been slow due to flucating water levels. Some plots are developing well.	Individual	Improved Environmental Management Practices

Noise monitoring summary report	Lic No:	P0506-01	Year	2018

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 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:	P0506-01	Year	2018

				Additional information
1	When did the site carry out the most recent energy efficiency audit? Please list the recommendations in table 3 below		Sep-18	Report on file
2	Is the site a member of any accredited programmes for reducing energy usage/water conservation such as the SEAI programme linked to the right? If yes please list them in additional information	SEAI - Large Industry Energy Network (LIEN)	Yes	ISO50001 accreditation attained from Certification Europe
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)	2785.44	2575.86		
Total Energy Generated (MWHrs)				
Total Renewable Energy Generated (MWHrs)				
Electricity Consumption (MWHrs)	141.9	158.445		
Fossil Fuels Consumption:				
Heavy Fuel Oil (m3)				
Light Fuel Oil (m3)	260.166	237.911		
Natural gas (m3)				
Coal/Solid fuel (metric tonnes)				
Peat (metric tonnes)				
Renewable Biomass				
Renewable energy generated on site				

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

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

Table R2 Water usage on site

					Water Emissions	Water Consumption	
Water use	Water extracted Previous year m3/yr.	Water extracted Current year m3/yr.	Production +/- % compared to previous reporting year**	Energy Consumption +/- % vs overall site production*	Volume Discharged back to environment(m^3yr) :	Volume used i.e not discharged to environment e.g. released as steam m3/yr	Unaccounted for Water:
Groundwater							
Surface water							
Public supply							
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: P0506-01 Year 2018

Table R3 Waste Stream Summary

	Total	Landfill	Incineration	Recycled	Other
Hazardous (Tonnes)	3.61				
Non-Hazardous (Tonnes)	26.48				

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: P0506-01 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	No	There was no environmental complaints during reporting period

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

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

Complaints and Incidents summary template Lic No: P0506-01 Year 2018

Table 2 Incidents summary

Date of occurrence	Incident nature	Location of occurrence	Incident category*please refer to guidance	Receptor	Cause of incident	Other cause(please specify)	Activity in progress at time of incident	Communication	Occurrence	Corrective action<20 words	Preventative action <20 words	Resolution status	Resolution date	Likelihood of reoccurence
06/11/2018	Trigger level reached	Ummeras Composite sampler - SW4	1. Minor	Water	Not related to site activities	n/a	Normal activities	INCI015480	Recurring	Outfall upstream of sampler to be inspected	Continue to monitor results for elevated COD levels	Complete	20/11/2019	Low
06/11/2018	Trigger level reached	Ummeras Composite sampler - SW4	1. Minor	Water	Not related to site activities	n/a	Normal activities	INCI015479	Recurring	Outfall upstream of sampler to be inspected	Continue to monitor results for elevated Ammonia levels	Complete	20/11/2019	Low
30/10/2018	Trigger level reached	Ummeras Composite sampler - SW4	1. Minor	Water	Not related to site activities	n/a	Normal activities	INCI015478	Recurring	Outfall upstream of sampler to be inspected	Continue to monitor results for elevated readings	Complete	20/11/2018	Low
23/10/2018	Trigger level reached	Ummeras Composite sampler - SW4	1. Minor	Water	Not related to site activities	n/a	Normal activities	INCI015430	Recurring	Outfall upstream of sampler to be inspected	Continue to monitor results for elevated readings	Complete	30/10/2018	Low
16/10/2018	Trigger level reached	Ummeras Composite sampler - SW4	1. Minor	Water	Not related to site activities	n/a	Normal activities	INCI015403	Recurring	Outfall upstream of sampler to be inspected	Continue to monitor results for elevated readings	Complete	30/10/2018	Low
02/10/2018	Trigger level reached	Ummeras Composite sampler - SW4	1. Minor	Water	Not related to site activities	n/a	Normal activities	INCI015280	Recurring	Outfall upstream of sampler to be inspected	Continue to monitor results for elevated readings	Complete	09/10/2018	Low
02/10/2018	Trigger level reached	Ummeras Composite sampler - SW4	1. Minor	Water	Not related to site activities	5	Normal activities	INCI015279	Recurring	Outfall upstream of sampler to be inspected	Continue to monitor results for elevated readings	Complete	09/10/2018	Low
25/09/2018	Trigger level reached	Ummeras Composite sampler - SW4	1. Minor	Water	Not related to site activities	n/a	Normal activities	INCI015234	Recurring	Outfall upstream of sampler to be inspected	Continue to monitor results for elevated readings	Complete	28/09/2018	Low
10/09/2018	Trigger level reached	Ummeras Composite sampler - SW4	1. Minor	Water	Not related to site activities	n/a	Normal activities	INCI015165	Recurring	Outfall upstream of sampler to be inspected	Continue to monitor results for elevated readings	Complete	20/09/2018	Low
05/09/2018	Trigger level reached	Ummeras Composite sampler - SW4	1. Minor	Water	Not related to site activities	n/a	Normal activities	INCI015131	Recurring	Outfall upstream of sampler to be inspected	Continue to monitor results for elevated readings	Complete	12/09/2018	Low
05/09/2018	Trigger level reached	Ummeras Composite sampler - SW4	1. Minor	Water	Not related to site activities	n/a	Normal activities	INCI015130	Recurring	Outfall upstream of sampler to be inspected	Continue to monitor results for elevated readings	Complete	12/09/2018	Low
05/09/2018	Trigger level reached	Ummeras Composite sampler - SW4	1. Minor	Water	Not related to site activities	n/a	Normal activities	INCI015129	Recurring	Outfall upstream of sampler to be inspected	Continue to monitor results for elevated readings	Complete	12/09/2018	Low
05/09/2018	Trigger level reached	Ummeras Composite sampler - SW4	1. Minor	Water	Not related to site activities	n/a	Normal activities	INCI015127	Recurring	Outfall upstream of sampler to be inspected	Continue to monitor results for elevated readings	Complete	12/09/2018	Low
28/08/2018	Trigger level reached	Ummeras Composite sampler - SW4	1. Minor	Water	Not related to site activities	n/a	Normal activities	INCI015090	Recurring	Outfall upstream of sampler to be inspected	Continue to monitor results for elevated readings	Complete	05/09/2018	Low
21/08/2018	Trigger level reached	Ummeras Composite sampler - SW4	1. Minor	Water	Not related to site activities	n/a	Normal activities	INCI015057	Recurring	Outfall upstream of sampler to be inspected	Continue to monitor results for elevated readings	Complete	27/08/2018	Low
13/08/2018	Trigger level reached	Ummeras Composite sampler - SW4	1. Minor	Water	Not related to site activities	n/a	Normal activities	INCI015030	Recurring	Outfall upstream of sampler to be inspected	Continue to monitor results for elevated readings	Complete	21/08/2018	Low
13/08/2018	Trigger level reached	Ummeras Composite sampler - SW4	1. Minor	Water	Not related to site activities	n/a	Normal activities	INCI015029	Recurring	Outfall upstream of sampler to be inspected	Continue to monitor results for elevated readings	Complete	21/08/2018	Low
30/07/2018	Trigger level reached	Ummeras Composite sampler - SW4	1. Minor	Water	Not related to site activities	n/a	Normal activities	INCI014946	Recurring	Outfall upstream of sampler to be inspected	Continue to monitor results for elevated readings	Complete	03/08/2018	Low
11/06/2018	Trigger level reached	Ummeras Composite sampler - SW4	1. Minor	Water	Not related to site activities	n/a	Normal activities	INCI014830	Recurring	Outfall upstream of sampler to be inspected	Continue to monitor results for elevated readings	Complete	18/07/2018	Low
07/06/2018	Trigger level reached	Ummeras Composite sampler - SW4	1. Minor	Water	Not related to site activities	n/a	Normal activities	INCI014788	Recurring	Outfall upstream of sampler to be inspected	Continue to monitor results for elevated readings	Complete	16/07/2018	Low
07/06/2018	Trigger level reached	Ummeras Composite sampler - SW4	1. Minor	Water	Not related to site activities	n/a	Normal activities	INCI014787	Recurring	Outfall upstream of sampler to be inspected	Continue to monitor results for elevated readings	Complete	16/07/2018	Low
07/06/2018	Trigger level reached	Ummeras Composite sampler - SW4	1. Minor	Water	Not related to site activities	n/a	Normal activities	INCI014786	Recurring	Outfall upstream of sampler to be inspected	Continue to monitor results for elevated readings	Complete	16/07/2018	Low
07/06/2018	Trigger level reached	Ummeras Composite sampler - SW4	1. Minor	Water	Not related to site activities	n/a	Normal activities	INCI014785	Recurring	Outfall upstream of sampler to be inspected	Continue to monitor results for elevated readings	Complete	16/07/2018	Low
07/06/2018	Trigger level reached	Ummeras Composite sampler - SW4	1. Minor	Water	Not related to site activities	n/a	Normal activities	INCI014784	Recurring	Outfall upstream of sampler to be inspected	Continue to monitor results for elevated readings	Complete	16/07/2018	Low

Total number of incidents current year	25
Total number of incidents previous year	14
% reduction/ increase	79%

*Please see further detailes on all incidents which have been logged and communicated through the EDEN reporting system

WASTE SUMMARY	Lic No:	P0506-01	Year	2018

SECTION A-PRTR ON SITE WASTE TREATMENT AND WASTE TRANSFERS TAB- TO BE COMPLETED BY ALL IPPC AND WASTE FACILITIES

PRTR facility logon

dropdown list click to see options

Please insert details of waste transferred off site in the adjoining Waste Management Record tab.

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

			Additional Information
1	Were any wastes accepted onto your site for recovery or disposal or treatment prior to recovery or disposal within the boundaries of your facility ?; (waste generated within your boundaries is to be captured through PRTR reporting) If yes please enter details in table 1 below	SELECT	
2	Did your site have any rejected consignments of waste in the current reporting year? If yes please give a brief explanation in the additional information	SELECT	
3	Was waste accepted onto your site that was generated outside the Republic of Ireland? If yes please state the quantity in tonnes in additional information	SELECT	

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

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

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

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

WASTE SUMMARY Lic No: P0506-01 Year 2018

SECTION D-TO BE COMPLETED BY LANDFILL SITES ONLY

Table 2 Waste type and tonnage-landfill only

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

Table 3 General information-Landfill only

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

Table 4 Environmental monitoring-landfill only Landfill Manual-Monitoring Standards

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

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

Table 5 Capping-Landfill only

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

*please note this includes daily cover area

Table 6 Leachate-Landfill only

9	Is leachate from your site treated in a Waste Water Treatment Plant?	SELECT
10	Is leachate released to surface water? If yes please complete leachate mass load information below	SELECT

Volume of leachate in reporting year(m3)	Leachate (BOD) mass load (kg/annum)	Leachate (COD) mass load (kg/annum)	Leachate (NH4) mass load (kg/annum)	Leachate (Chloride) mass load kg/annum	Leachate treatment on-site	Specify type of leachate treatment	Comments

Please ensure that all information reported in the landfill gas section is consistent with the Landfill Gas Survey submitted in conjunction with PRTR returns

Table 7 Landfill Gas-Landfill only

Gas Captured&Treated by LFG System m3	Power generated (MW / KWh)	Used on-site or to national grid	Was surface emissions monitoring performed during the reporting year?	Comments
			SELECT	

Waste Summary Continued Lic No: P0506-01 Year 2018

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
13 02 05*	mineral-based non-chlorinated engine, gear and lubricating oils	Yes	1.59	Enva Ireland Limited - L1745	R01 - Use principally as a fuel or other means to generate energy	Enva Ireland Limited, Clonminam Industrial Estate, Portlaoise - W0184	Ireland
16 01 07*	oil filters	Yes	0.42	Enva Ireland Limited (Portlaoise) - W0184	R04 - Recycling/reclamation of metals and metal compounds	R.D. Recycling, Houthalen, Reg No: 51727/1KD	Belgium
11 01 13*	degreasing wastes containing hazardous substances	Yes	1.6	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
20 03 01 A	Municipal mixed residual household	No	0.74	AES Ltd WP-OY-08-601-01	D05 - Specially engineered landfill (e.g. placement into lined discrete cells which are capped and isolated from one another and the environment, etc.)	AES LTD, Cappincur, Tullamore, Co. Offaly - WP-OY-08-601-01	Ireland
20 03 01 B	Municipal mixed residual non-household	No	5.18	AES Ltd WP-OY-08-601-01	D05 - Specially engineered landfill (e.g. placement into lined discrete cells which are capped and isolated from one another and the environment, etc.)	AES LTD, Cappincur, Tullamore, Co. Offaly - WP-OY-08-601-01	Ireland
17 04 07	mixed metals	No	20.56	AES Ltd WP-OY-08-601-01	R04 - Recycling/reclamation of metals and metal compounds	AES LTD, Cappincur, Tullamore, Co. Offaly - WP-OY-08-601-01	Ireland

Bord na Mona Kilberry
Grab Sampling 2018

X	Y	Bog	SW	Monitoring	Sampled	pH	SS	TS	Ammonia	TP	COD	Colour
266654.80	199892.88	Kilberry	SW-1	Q2 18	07/06/2018	7.4	5	230	3.3	0.07	149	319
267239.42	201958.36	Kilberry	SW-2	Q2 18	07/06/2018	7.8	9	220	1.4	0.19	148	266
267200.77	201949.29	Kilberry	SW-3	Q2 18	07/06/2018	7.6	5	229	2.4	0.06	11	244
268870.08	199128.68	Kilberry	SW-3A	Q2 18	07/06/2018	7.8	5	294	0.18	0.07	138	288
270082.33	199354.32	Kilberry	SW-3B	Q2 18	07/06/2018	8	5	336	0.17	0.05	135	227
270684.25	201649.88	Kilberry	SW3-C	Q2 18	07/06/2018	7.2	5	168	0.99	0.15	147	478
266654.80	199892.88	Kilberry	SW-1	Q3 18	06/09/2018	7.3	5	296	2.1	0.16	111	254
267239.42	201958.36	Kilberry	SW-2	Q3 18	06/09/2018	8.2	5	202	0.3	0.05	74	176
267200.77	201949.29	Kilberry	SW-3	Q3 18	06/09/2018	7.9	5	232	2.8	0.07	88	258
268870.08	199128.68	Kilberry	SW-3A	Q3 18	06/09/2018	7.3	5	148	3.9	0.06	110	364
270082.33	199354.32	Kilberry	SW-3B	Q3 18	06/09/2018	7.3	5	158	4	0.05	122	444
270684.25	201649.88	Kilberry	SW3-C	Q3 18	06/09/2018	7.3	5	152	4	0.05	107	351
282032.94	221405.51	Allen	SW-13	Q4 18	04/12/2018	5.3	5	124	0.2	0.05	77	382
279374.51	221128.33	Allen	SW-14	Q4 18	04/12/2018	5.4	5	102	0.32	0.05	88	384
279522.44	220979.75	Allen	SW-14A	Q4 18	04/12/2018	5.4	5	130	0.19	0.05	80	383
263559.73	214906.67	Ummeras	SW-5	Q1 18	22/03/2018	7.7	5	265	1.4	0.05	64	207
262581.53	214669.12	Ummeras	SW-6	Q1 18	22/03/2018	7.5	5	198	0.7	0.05	69	296
262280.17	215578.65	Ummeras	SW-6A	Q1 18	22/03/2018	7.8	5	264	1.4	0.05	48	138
262597.34	216781.70	Ummeras	SW-4	Q1 18	22/03/2018	7.6	5	270	1.5	0.05	71	270

* Note samples taken in Q3 were a repeat of samples taken in Q2.

Kilberry

Decommissioning and Rehabilitation
Bog Rehabilitation Progress Report 2018.

Within the Kilberry licensed area (P0506-01) there were no new entire bog areas available for rehabilitation in 2018. Monitoring of cutaway within the Kilberry bogs is ongoing with baseline ecological survey updated in Ummeras. Industrial peat production has now ceased in Ummeras and rehabilitation is expected to take place in 2019 after peat stock removal and decommissioning.

Ongoing rehabilitation trials (cutaway re-wetting and *Sphagnum* inoculation) are being monitoring at Kilberry Bog. Rehabilitation (field-drain blocking) was carried out in part of the cutaway in Kilberry during 2018/2019.

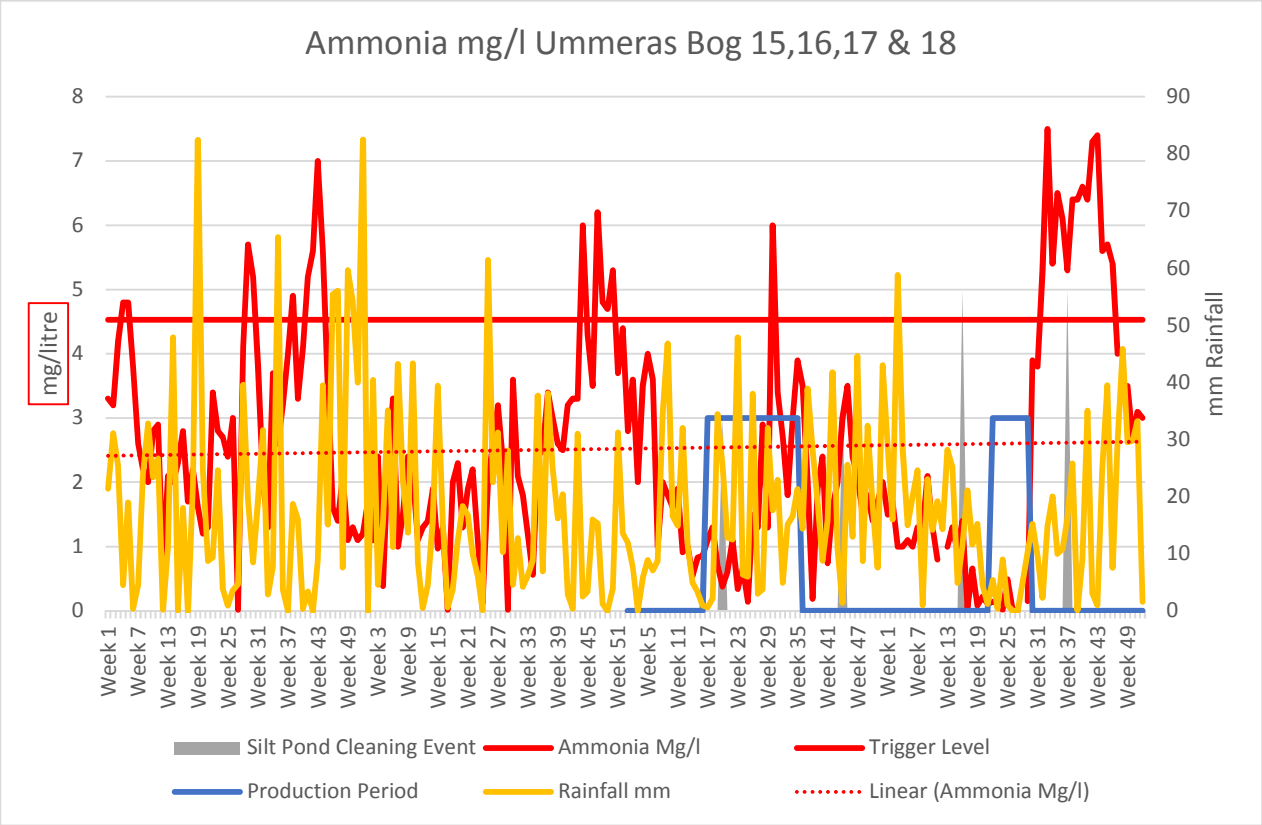
Draft rehabilitation plans for the Kilberry bogs licensed area, including more detailed draft plans for each component bog unit were submitted to the EPA in 2013 and these were reviewed and updated in 2015 and 2017.

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.

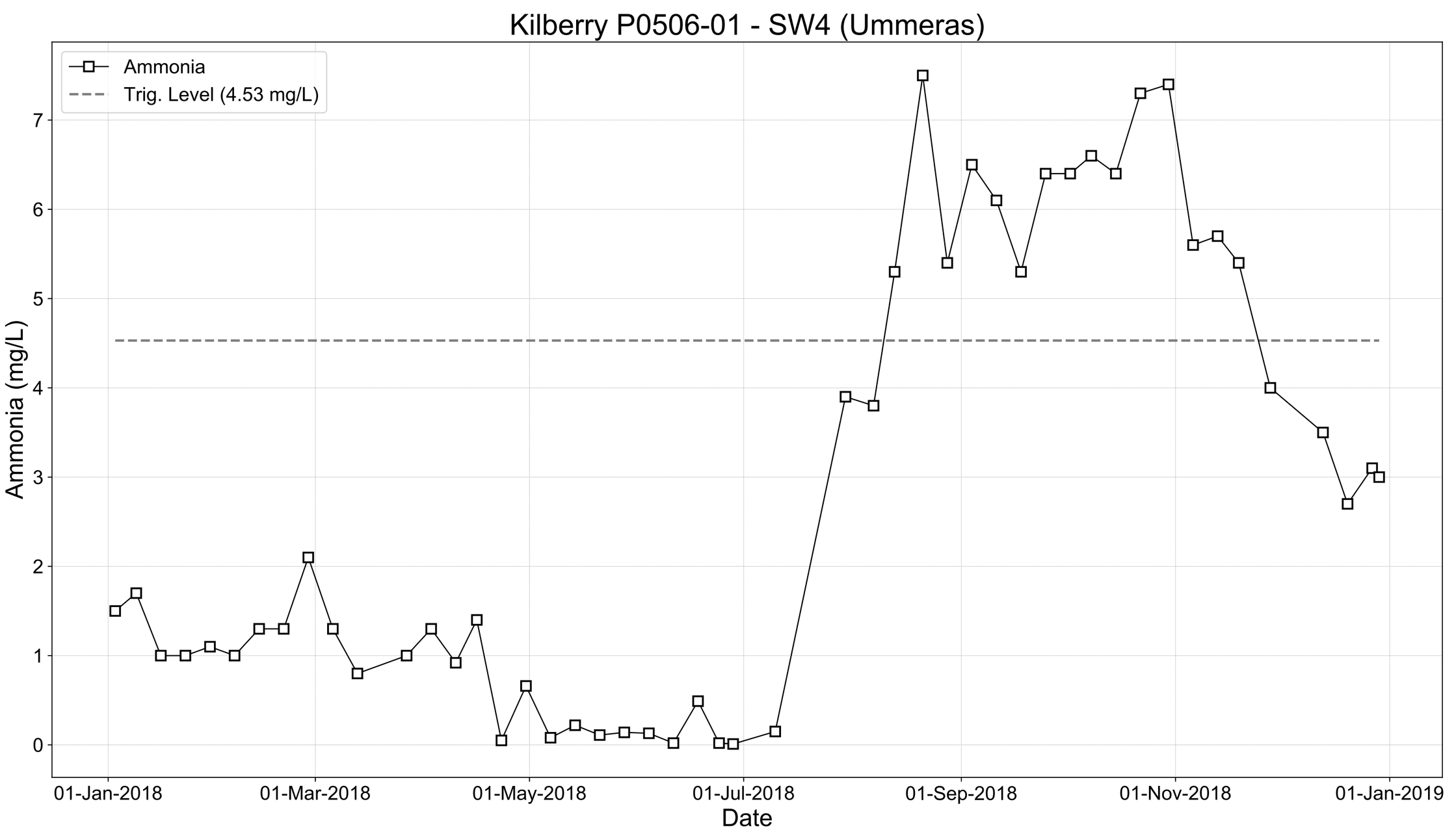
Organic certification was sought for the majority of the Bord na Móna property with the aim of using some areas for the cultivation of plants for use in herbal medicine, this project is ongoing.

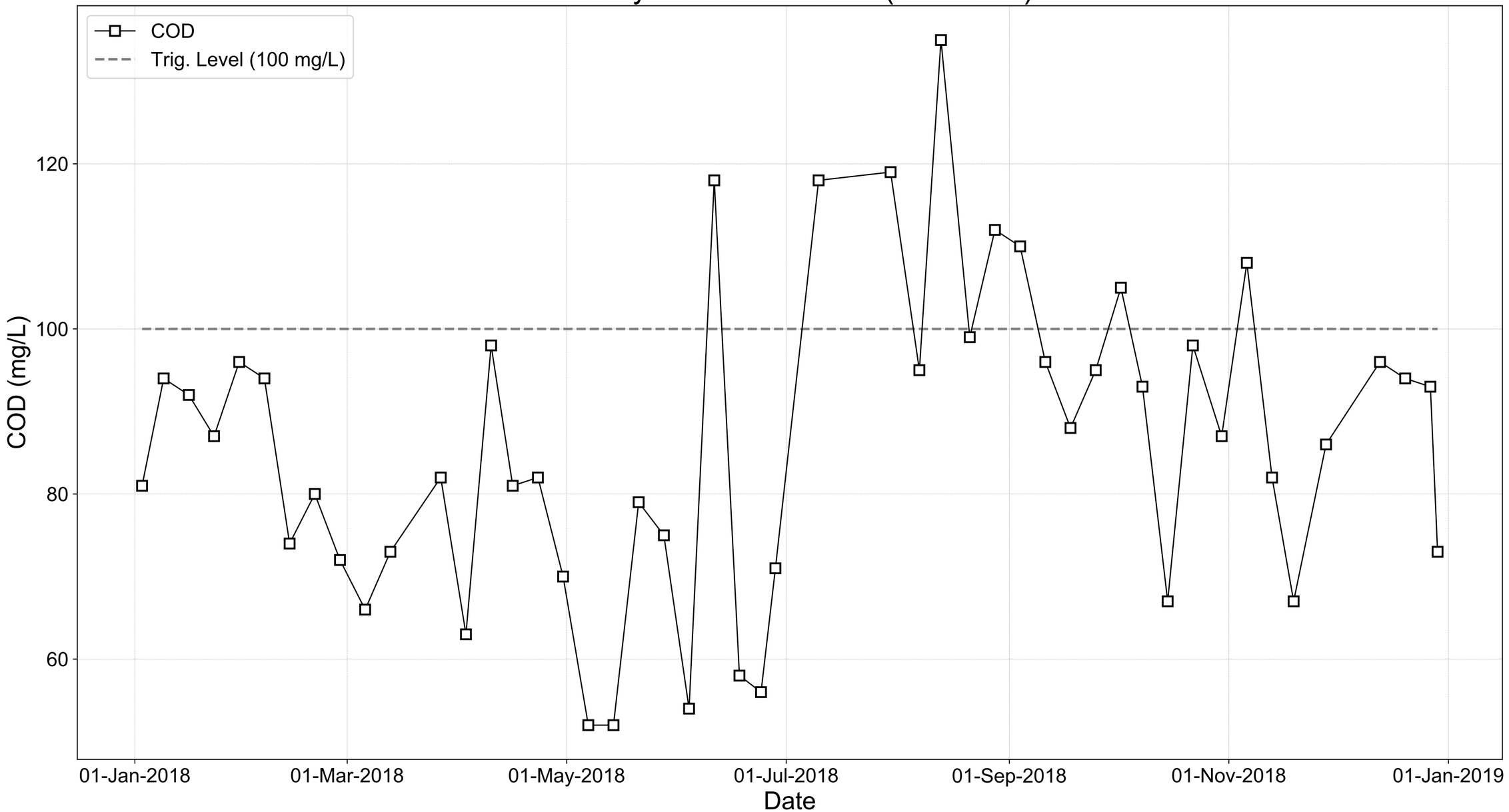


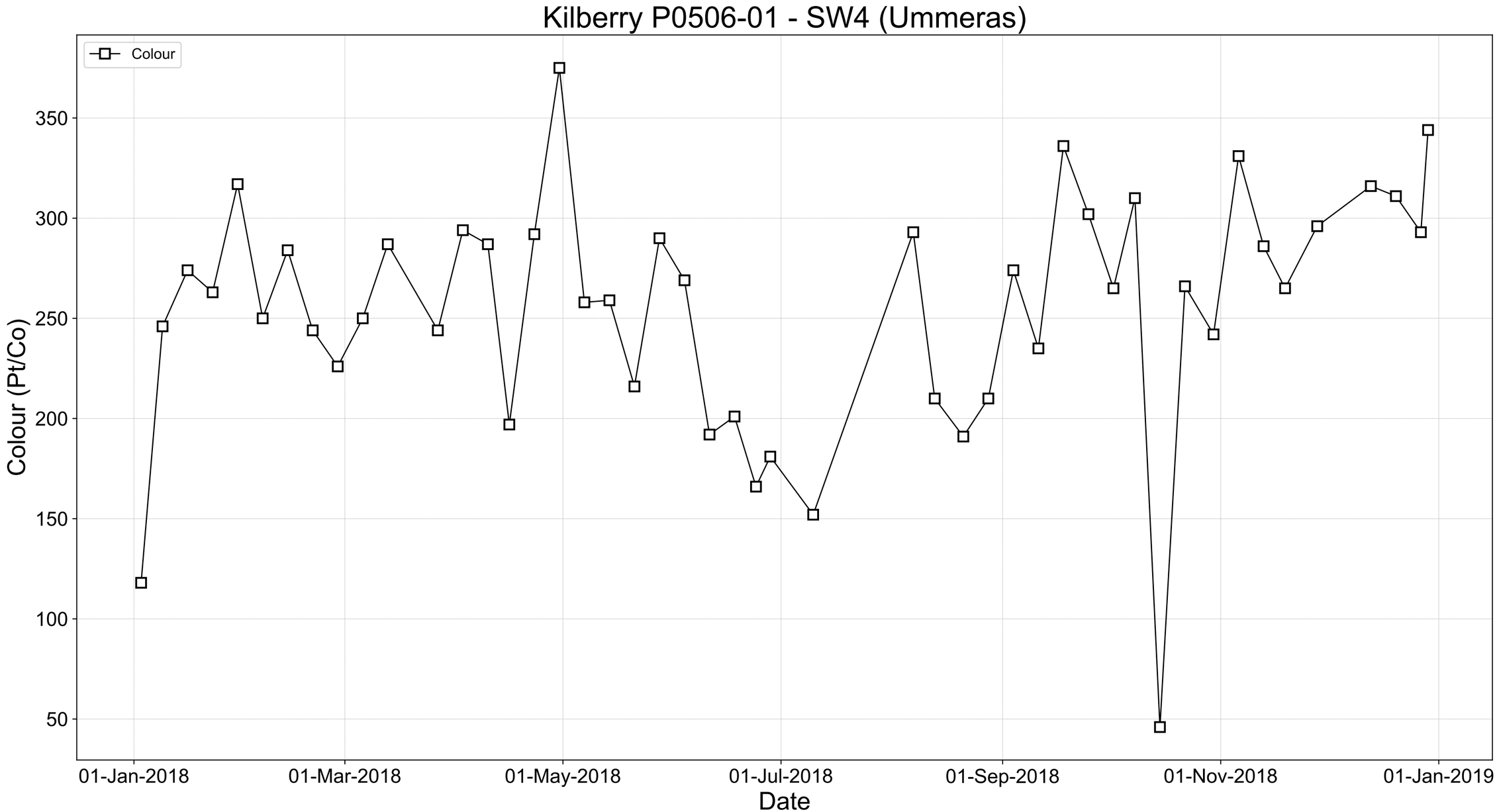
Ummeras bog is an active production bog with the composite sampler located here from 2015 to 2018. The composite sampler takes a flow proportional composite sample over a 24 hour period. The sampler had 50% downtime during the period and but returned 52 weekly ammonia results during the period of this 2018 AER, which were composite and grab samples. The ammonia trigger level of 4.53mg/l, as agreed with the Agency, was exceeded 15 times during the reporting period, all of which were reported to the EPA.

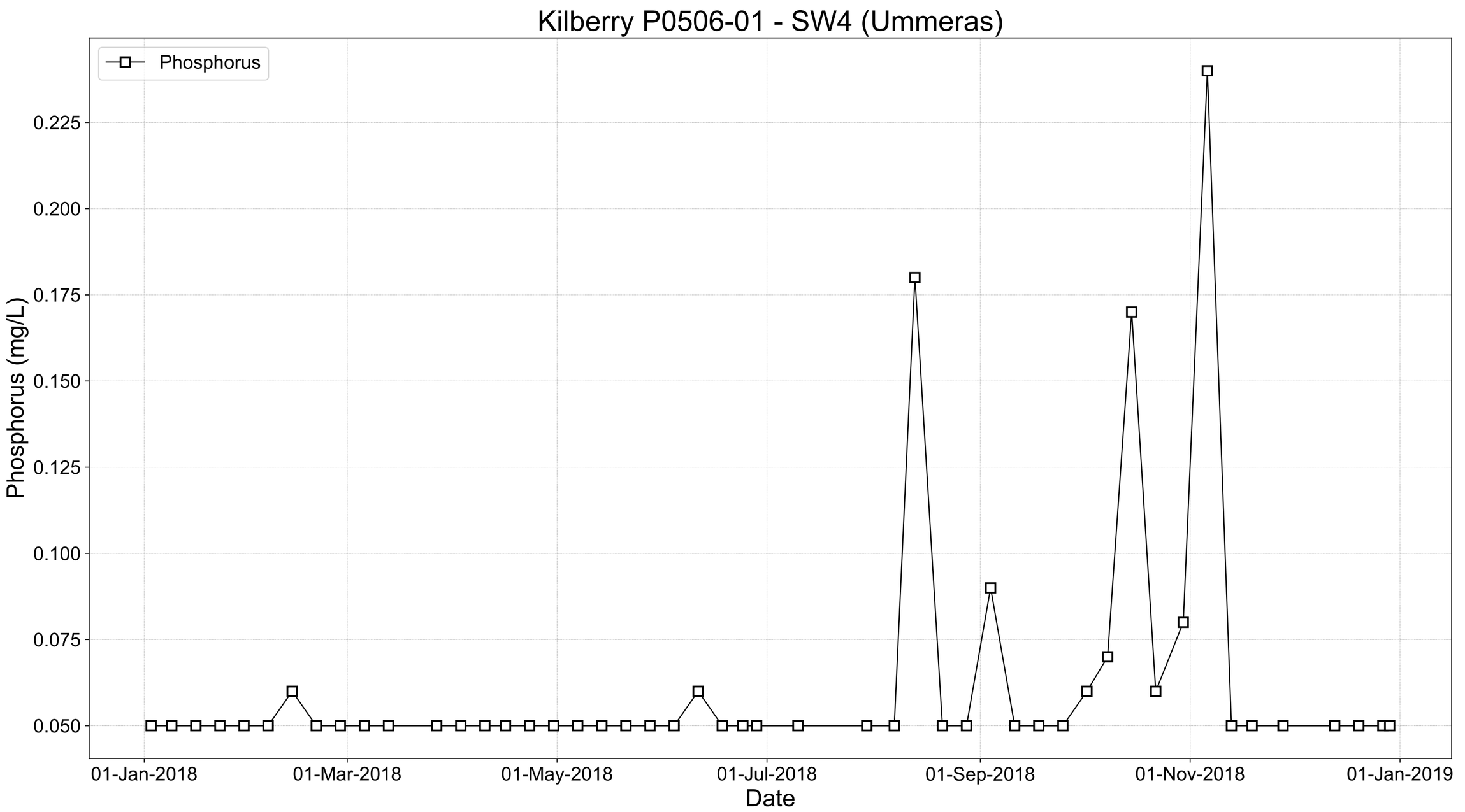
Overall the results in the previous 3 yrs. showed a downward trend which has switched to a neutral trend over the past 4 years and this is broadly in-line with typical trends submitted to the EPA in 2013 as required by condition 6.14. It has been established that the most relevant influencing variable on Ammonia is rainfall and the trend analysis above indicates linkage between high rainfall events and ammonia concentrations.

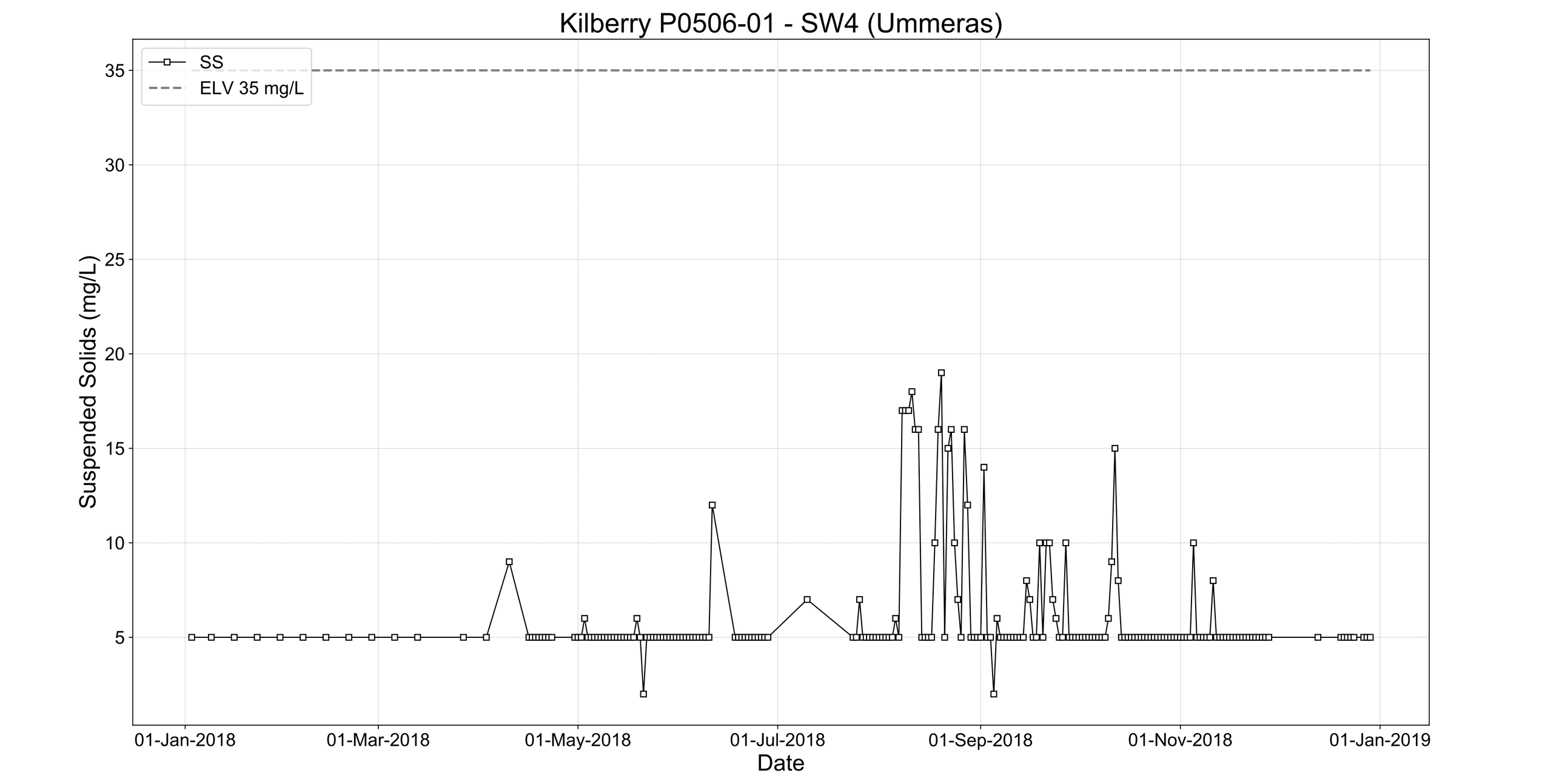
The sampler at this location may be relocated to fill any information gaps on other peatland catchments and to reflect the need to support the information gathering required for the Water Framework Directive's River Basin Management Plan. There is also an EPA lead research project commencing in 2019, 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.

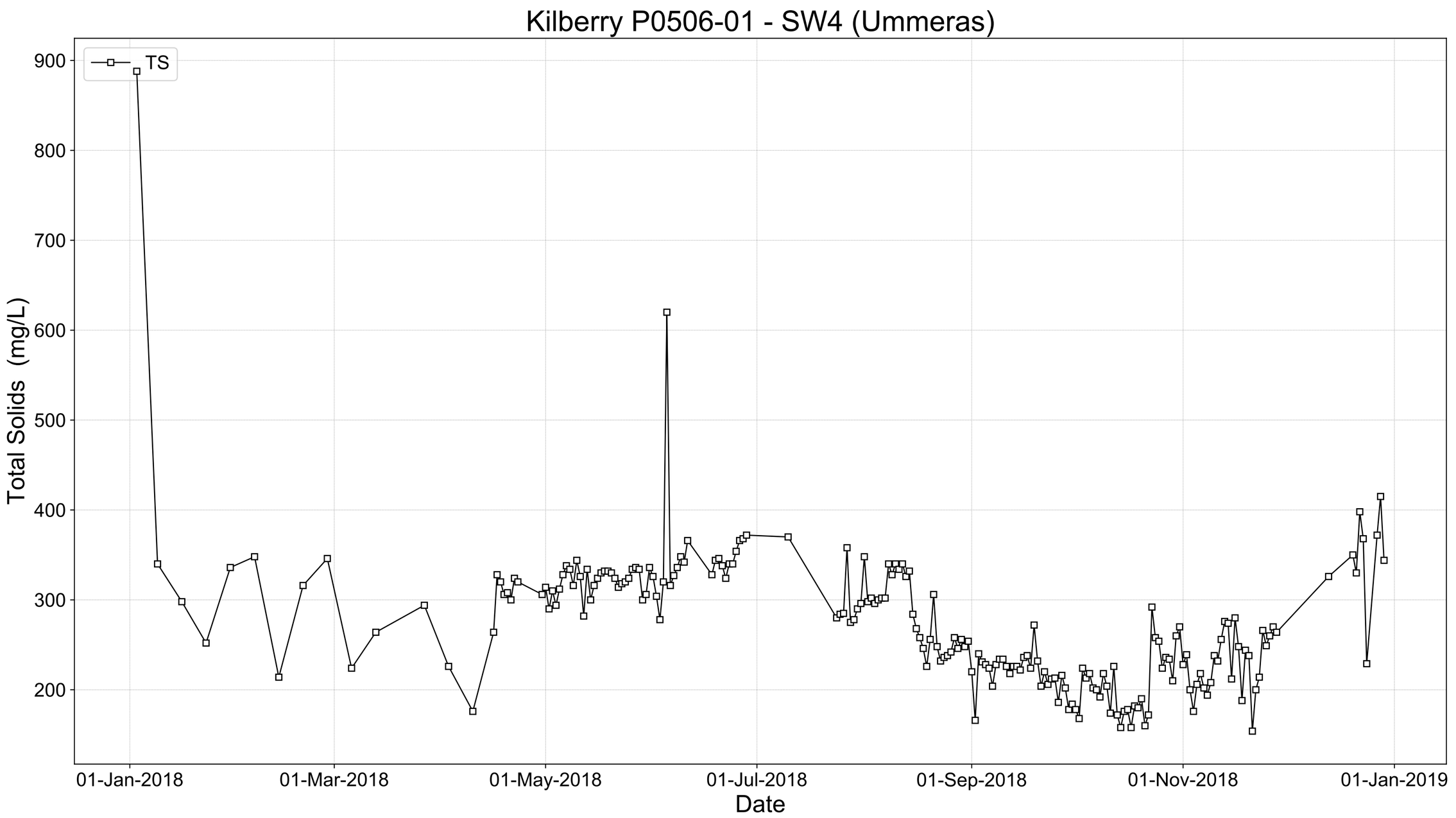

Kilberry P0506-01 - SW4 (Ummeras)
Ammonia
Trig. Level (4.53 mg/L)
Ammonia (mg/L)
0
1
2
3
4
5
6
7
01-Jan-2018
01-Mar-2018
01-May-2018
01-Jul-2018
01-Sep-2018
01-Nov-2018
01-Jan-2019
Date

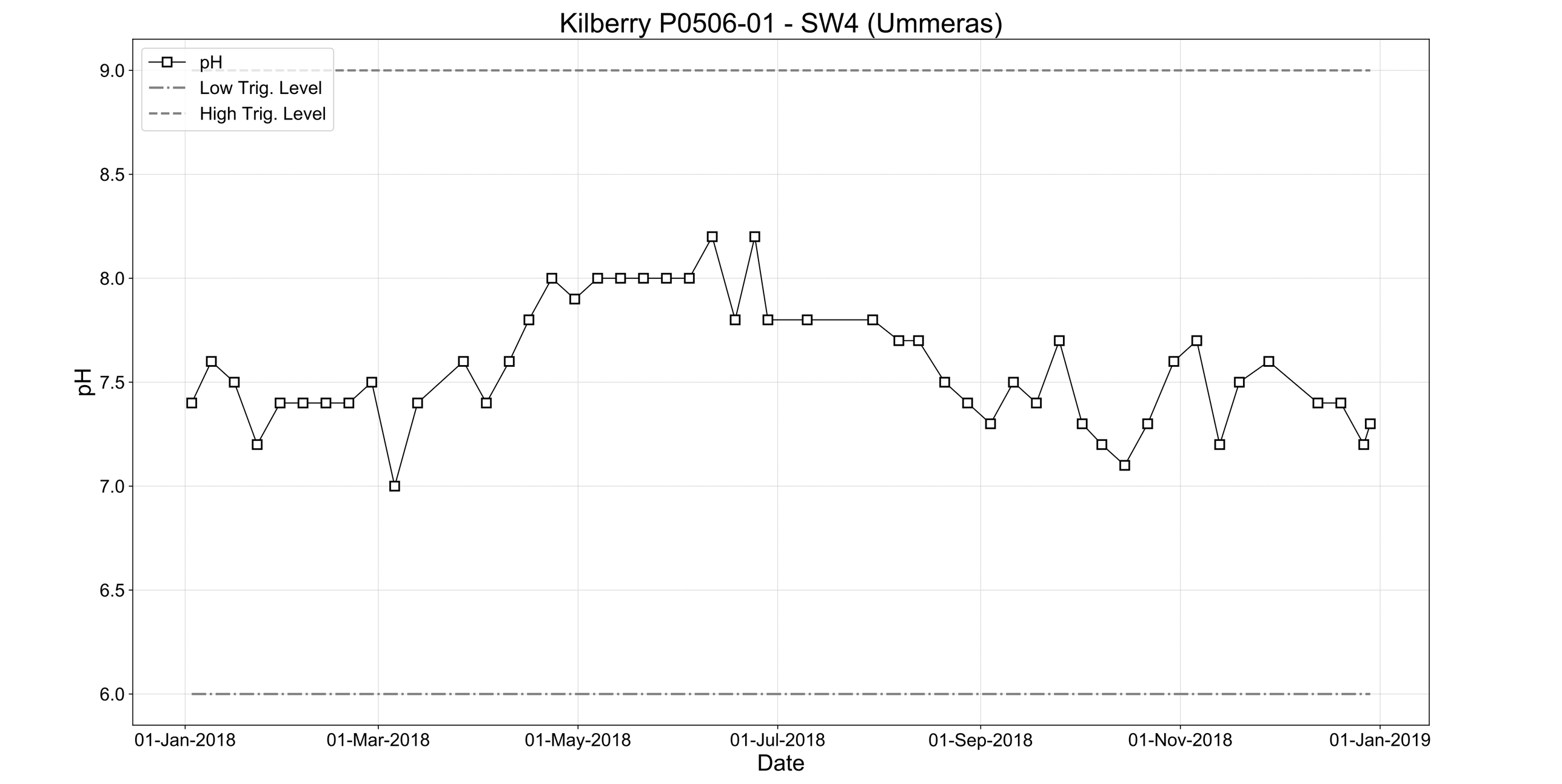

Kilberry P0506-01 - SW4 (Ummeras)
COD
Trig. Level (100 mg/L)
COD (mg/L)
120
100
80
60
01-Jan-2018
01-Mar-2018
01-May-2018
01-Jul-2018
01-Sep-2018
01-Nov-2018
01-Jan-2019
Date


Kilberry P0506-01 - SW4 (Ummeras)
Colour
Colour (Pt/Co)
350
300
250
200
150
100
50
01-Jan-2018
01-Mar-2018
01-May-2018
01-Jul-2018
01-Sep-2018
01-Nov-2018
01-Jan-2019
Date


Kilberry P0506-01 - SW4 (Ummeras)
Phosphorus
Phosphorus (mg/L)
0.225
0.200
0.175
0.150
0.125
0.100
0.075
0.050
01-Jan-2018
01-Mar-2018
01-May-2018
01-Jul-2018
01-Sep-2018
01-Nov-2018
01-Jan-2019
Date


Kilberry P0506-01 - SW4 (Ummeras)
SS
ELV 35 mg/L
Suspended Solids (mg/L)
35
30
25
20
15
10
5
01-Jan-2018
01-Mar-2018
01-May-2018
01-Jul-2018
01-Sep-2018
01-Nov-2018
01-Jan-2019
Date


Kilberry P0506-01 - SW4 (Ummeras)
TS
Total Solids (mg/L)
900
800
700
600
500
400
300
200
01-Jan-2018
01-Mar-2018
01-May-2018
01-Jul-2018
01-Sep-2018
01-Nov-2018
01-Jan-2019
Date


Kilberry P0506-01 - SW4 (Ummeras)
pH
Low Trig. Level
High Trig. Level
9.0
8.5
8.0
7.5
7.0
6.5
6.0
pH
01-Jan-2018
01-Mar-2018
01-May-2018
01-Jul-2018
01-Sep-2018
01-Nov-2018
01-Jan-2019
Date

Yard Discharge Results 2018					
Licence: P0506-01					
Works: Kilberry					
Month	**Ummerus SWE 1 COD**	**Allen SWE 1 COD**	**Gilltown SWE 1 COD**	**Prosperous SWE 1 COD**	**Trigger Levels**
Jan	0	0	0	0	100
Feb	77	78	50	41	100
Mar	0	0	0	0	100
Apr	0	0	0	0	100
May	0	0	0	0	100
June	0	0	0	0	100
July	0	0	0	0	100
Aug	0	0	0	0	100
Sep	0	0	0	0	100
Oct	56	65	52	58	100
Nov	0	0	0	0	100
Dec	0	0	0	0	100

Note: 0 denotes no flow at emission point on day of sampling

Extractive Waste Management Plan Implementation AER Update.

March 2019.

IPC Licence P0506-01.

1.0 Extractive Wastes.

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

- Silt Pond excavations and maintenance
- Bog Timbers

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

2.0 Condition 7.5 Extractive Waste Management

- An extractive waste management plan (EWMP) was submitted to the Agency in September 2012 and was approved.
- The EWMP was reviewed in September 2017. There were no substantial changes to the operation of the plan, associated waste facilities or to the waste deposited.

3.0 Minimisation

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

4.0 Treatment

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

5.0 Recovery

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

6.0 Disposal

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

Annual Environmental Report 2018

Bord na Mona Energy Ltd
(Cuil na Mona Group of Bogs)
IPC Licence P0507-01

LEABEG, TULLAMORE, CO. OFFALY, IRELAND
TELEPHONE: (05793) 45900. INT: +353-5793-45900. FAX :(05793) 45160. INT: +353-5793-45160

Facility Information Summary	
AER Reporting Year	2018
Licence Register Number	P0507-01
Name of site	Bord na Mona Cuil na Mona
Site Location	Boora, Leabeg, Tullamore, Co Offaly
NACE Code	0892
Class/Classes of Activity	1.4
National Grid Reference (6E, 6 N)	180050, 319540

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, ridiging and harvesting of peat into stockpiles and secondly the transportation of that peat via an internal rail network to the lorry outloading facilities for transportation to a Moss Peat Factory or direct to the Docks. There was no Production achieved in 2018. Infrastructurally, there was no bog development during the period. From an environmental perspective silt pond upgrade work was ongoing during the period . The quarterly grab sampling was 100% compliant with the Suspended Solids ELV, with 4 trigger level exceedances relating to COD reached. The composite sampling regime was 100% compliant in relation to Suspended Solids ELV's and Ammonia with 4 COD trigger levels exceedances, all reported to the EPA. There were no 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. The composite sampler experienced some technical difficulties during the reporting period. During the period there were various returns made to the EPA including the Draft Cuil na Mona Rehabilitation Plan, consent for wildcrafting trials, Management and waste management changes.

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	Date
Group/Facility manager (or nominated, suitably qualified and experienced deputy)	02/04/2019

AIR-summary template	Lic No:	P0507-01	P0507-01	2018

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	There are no dust sensetive locations or dust monitoring locations within the licence area

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	NA	
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	NA	

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? 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)	SELECT	
5	Did continuous monitoring equipment experience downtime? If yes please record downtime in table A2 below	SELECT	
6	Do you have a proactive service agreement for each piece of continuous monitoring equipment?	SELECT	
7	Did your site experience any abatement system bypasses? If yes please detail them in table A3 below	SELECT	

AIR-summary template Lic No: P0507-01 P0507-01 2018

Table A2: Summary of average emissions -continuous monitoring

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

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 — SELECT

Table A4: Solvent Management Plan Summary Total VOC Emission limit value Solvent regulations — Please refer to linked solvent regulations to complete table 5 and 6

Reporting year	Total solvent input on site (kg)	Total VOC emissions to Air from entire site (direct and fugitive)	Total VOC emissions as %of solvent input	Total Emission Limit Value (ELV) in licence or any revision 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 gases(kg)	Solvents lost in water (kg)	Collected waste solvent (kg)	Fugitive Organic Solvent (kg)	Solvent released in other ways e.g. by-passes (kg)	Solvents destroyed onsite through physical reaction e.g. incineration(kg)	Total emission of Solvent to air (kg)
							Total	

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER) Lic No: P0507-01 Year 2018

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

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)

				Additional information
3	Was there any result in breach of licence requirements? If yes please provide brief details in the comment section of Table W3 below		SELECT	
4	Was all monitoring carried out in accordance with EPA guidance and checklists for Quality of Aqueous Monitoring Data Reported to the EPA? If no please detail what areas require improvement in additional information box	External /Internal Lab Quality checklist; Assessment of results checklist	Yes	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: P0507-01 Year 2018

Continuous monitoring

			Additional Information
5	Does your site carry out continuous emissions to water/sewer monitoring?	Yes	
	If yes please summarise your continuous monitoring data below in Table W4 and compare it to its relevant Emission Limit Value (ELV)		
6	Did continuous monitoring equipment experience downtime? **If yes please record downtime in table W4 below**	Yes	Total of 119 days over 365 days. Majority of "downtime" was due to no water flow as we experienced an unusally prolonged hot summer.
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

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: P0507-01 | Year 2018

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)	Yes	No fixed Bunds on site.
Please provide integrity testing frequency period	Other (2 Yearly)	
Does the site maintain a register of bunds, underground pipelines (including stormwater and foul), Tanks, sumps and containers? (containers refers to "Chemstore" type units and mobile bunds)	Yes	There are no fixed bunds in the Cuil na Mona licence and therefore integrity testing is not an issue. .
How many bunds are on site?	0	
How many of these bunds have been tested within the required test schedule?	0	N/A
How many mobile bunds are on site?	5	This includes barrel trays located within workshops
Are the mobile bunds included in the bund test schedule?	No	
How many of these mobile bunds have been tested within the required test schedule?	0	
How many sumps on site are included in the integrity test schedule?	0	
How many of these sumps are integrity tested within the test schedule?	0	
Please list any sump integrity failures in table B1		
Do all sumps and chambers have high level liquid alarms?	SELECT	
If yes to Q11 are these failsafe systems included in a maintenance and testing programme?	SELECT	
Is the Fire Water Retention Pond included in your integrity test programme?	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)
	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

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

bunding and storage guidelines

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 withing the integrity test period as specified**	SELECT	
Please provide integrity testing frequency period	SELECT	

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

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

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

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

Groundwater/Soil monitoring template	Lic No:	P0507-01	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 interpretaion as an additional section in this AER
2	Are you required to carry out soil monitoring as part of your licence requiremer	No		
3	Do you extract groundwater for use on site? If yes please specify use in comment section	No		
4	Do monitoring results show that groundwater generic assessment criteria such as GTVs or IGVs are exceeded or is there an upward trend in results for a substance? If yes, please complete the Groundwater Monitoring Guideline Template Report (link in cell G8) and submit separately through ALDER as a licensee return AND answer questions 5-12 below. Groundwater monitoring template	SELECT		
5	Is the contamination related to operations at the facility (either current and/or historic)	SELECT		
6	Have actions been taken to address contamination issues?If yes please summarise remediation strategies proposed/undertaken for the site	SELECT		
7	Please specify the proposed time frame for the remediation strategy	SELECT		
8	Is there a licence condition to carry out/update ELRA for the site?	SELECT		
9	Has any type of risk assesment been carried out for the site?	SELECT		
10	Has a Conceptual Site Model been developed for the site?	SELECT		
11	Have potential receptors been identified on and off site?	SELECT		
12	Is there evidence that contamination is migrating offsite?	SELECT		Please enter interpretation of data here

Table 1: Upgradient Groundwater monitoring results

Date of sampling	Sample location reference	Parameter/ Substance	Methodology	Monitoring frequency	Maximum Concentration++	Average Concentration+	unit	GTV's*	SELECT**	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)

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

Table 3: Soil results

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

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

	Environmental Liabilities template	Lic No:	P0507-01	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:	P0507-01	Year	2018

	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	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.	70	1 person received training in 2018 as there was no production, with limited activities in general.	Section Head	Improved Environmental Management Practices
Waste reduction/Raw material usage efficiency	Waste Streamlining.It is planned to continue with and where possible improve the current waste management service provided by AES Ltd	100	Quarterly waste reports are returned for records/filing and waste streams are segrated on site to maximise recycling potential. As activities limited there was no waste produced in 2018.	Section Head	Improved Environmental Management Practices
Reduction of emissions to Water	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.	100	1 person received training in 2018 as there was no production, with limited activities in general.	Section Head	Improved Environmental Management Practices
Materials Handling/Storage/Bunding	Increased bund capacity will be provided where required.	0	No additional bund capacity was required during 2018	Individual	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	No polyethyelene was sent off site in 2018.	Individual	Improved Environmental Management Practices

Noise monitoring summary report

Lic No: P0507-01 Year 2018

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 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: P0507-01 Year 2018

			Additional information
1	When did the site carry out the most recent energy efficiency audit? Please list the recommendations in table 3 below	Sep-18	
2	Is the site a member of any accredited programmes for reducing energy usage/water conservation such as the SEAI programme linked to the right? If yes please list them in additional information	SEAI - Large Industry Energy Network (LIEN) Yes	The site attained accrediation 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)	88.81	414		
Total Energy Generated (MWHrs)				
Total Renewable Energy Generated (MWHrs)				
Electricity Consumption (MWHrs)	7.044	7.11		
Fossil Fuels Consumption:				
Heavy Fuel Oil (m3)				
Light Fuel Oil (m3)	8.048	40		
Natural gas (m3)				
Coal/Solid fuel (metric tonnes)				
Peat (metric tonnes)				
Renewable Biomass				
Renewable energy generated on site				

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

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

Table R2 Water usage on site

					Water Emissions	Water Consumption	
Water use	Water extracted Previous year m3/yr.	Water extracted Current year m3/yr.	Production +/- % compared to previous reporting year**	Energy Consumption +/- % vs overall site production*	Volume Discharged back to environment(m^3yr) :	Volume used i.e not discharged to environment e.g. released as steam m3/yr	Unaccounted for Water:
Groundwater							
Surface water							
Public supply							
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: P0507-01 Year 2018

Table R3 Waste Stream Summary

	Total	Landfill	Incineration	Recycled	Other
Hazardous (Tonnes)	0	0	0	0	0
Non-Hazardous (Tonnes)	0	0	0	0	0

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: P0507-01 | 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	No	There were no complaints of an environmental nature

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		

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

Complaints and Incidents summary template Lic No: P0507-01 Year 2018

Incidents		
		Additional information
Have any incidents occurred on site in the current reporting year? Please list all incidents for current reporting year in Table 2 below	Yes	All reportable incidents related to trigger levels for COD

*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	Likelihood of reoccurence
11/06/2018	Trigger level reached	SW8 Cuil na Mona	1. Minor	Water	Other (add details)	Naturally Occuring	Normal activities	INCI014831	New	Inspected Outfall	Ensure silt ponds are cleaned as per licence condition	Complete	Medium
07/06/2018	Trigger level reached	SW8 Cuil na Mona	1. Minor	Water	Other (add details)	Naturally Occuring	Normal activities	INCI014783	New	Inspected Outfall	Ensure silt ponds are cleaned as per licence condition	Complete	Medium
07/06/2018	Trigger level reached	SW3 Cuil na Mona	1. Minor	Water	Other (add details)	Naturally Occuring	Normal activities	INCI014782	New	Inspected Outfall	Ensure silt ponds are cleaned as per licence condition	Complete	Medium
07/06/2018	Trigger level reached	SW2 Cuil na Mona	1. Minor	Water	Other (add details)	Naturally Occuring	Normal activities	INCI014781	New	Inspected Outfall	Ensure silt ponds are cleaned as per licence condition	Complete	Medium
07/06/2018	Trigger level reached	SW1 Cuil na Mona	1. Minor	Water	Other (add details)	Naturally Occuring	Normal activities	INCI014780	New	Inspected Outfall	Ensure silt ponds are cleaned as per licence condition	Complete	Medium
09/01/2018	Trigger level reached	SW8 Cuil na Mona	1. Minor	Water	Other (add details)	Naturally Occuring	Normal activities	INCI013810	New	Inspected Outfall	Ensure silt ponds are cleaned as per licence condition	Complete	Medium

Total number of incidents current year	6
Total number of incidents previous year	20
% reduction/ increase	70% reduction

WASTE SUMMARY	Lic No:	P0507-01	Year	2018
SECTION A-PRTR ON SITE WASTE TREATMENT AND WASTE TRANSFERS TAB- TO BE COMPLETED BY ALL IPPC AND WASTE FACILITIES		PRTR facility logon	dropdown list click to see options	

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

			Additional Information
1	Were any wastes accepted onto your site for recovery or disposal or treatment prior to recovery or disposal within the boundaries of your facility ?; (waste generated within your boundaries is to be captured through PRTR reporting) If yes please enter details in table 1 below	SELECT	
2	Did your site have any rejected consignments of waste in the current reporting year? If yes please give a brief explanation in the additional information	SELECT	
3	Was waste accepted onto your site that was generated outside the Republic of Ireland? If yes please state the quantity in tonnes in additional information	SELECT	

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

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

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

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

WASTE SUMMARY Lic No: P0507-01 Year 2018

SECTION D-TO BE COMPLETED BY LANDFILL SITES ONLY

Table 2 Waste type and tonnage-landfill only

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

Table 3 General information-Landfill only

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

Table 4 Environmental monitoring-landfill only Landfill Manual-Monitoring Standards

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

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

Table 5 Capping-Landfill only

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

*please note this includes daily cover area

Table 6 Leachate-Landfill only

9	Is leachate from your site treated in a Waste Water Treatment Plant?	SELECT
10	Is leachate released to surface water? If yes please complete leachate mass load information below	SELECT

Volume of leachate in reporting year(m3)	Leachate (BOD) mass load (kg/annum)	Leachate (COD) mass load (kg/annum)	Leachate (NH4) mass load (kg/annum)	Leachate (Chloride) mass load kg/annum	Leachate treatment on-site	Specify type of leachate treatment	Comments

Please ensure that all information reported in the landfill gas section is consistent with the Landfill Gas Survey submitted in conjunction with PRTR returns

Table 7 Landfill Gas-Landfill only

Gas Captured&Treated by LFG System m3	Power generated (MW / KWh)	Used on-site or to national grid	Was surface emissions monitoring performed during the reporting year?	Comments
			SELECT	

Waste Summary Continued Lic No: P0507-01 Year 2018

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

*Note: No waste taken off site in 2018

Cuil na Mona

Decommissioning and Rehabilitation
Bog Rehabilitation Progress Report 2018.

Within the Cuil na Mona licensed area (P0507-01) there were no entire bog units available for rehabilitation in 2018. Monitoring of cutaway within the Cuil na Mona bogs is ongoing. Biomass trials have been established in Cuil na Mona in 2016. Rehabilitation work was carried out on a small area of cutaway in Cashel bog (38 ha) in 2017. This area of naturally colonising cutaway was re-wetted by drain-blocking.

There is ongoing monitoring of this area and BnM facilitated a field-trip to the site last year from the Laois Heritage Forum, who were interested in the re-wetting project.
Abbeyliex Bog has now been removed from the Cuil na Mona IPC licenced area. An EPA inspection audit was carried out in 2017 and the EPA inspector was satisfied that Abbeyleix bog has been decommissioned and successfully rehabilitated. This bog, still in the ownership of BnM, is now leased to the local community for amenity, conservation and education.

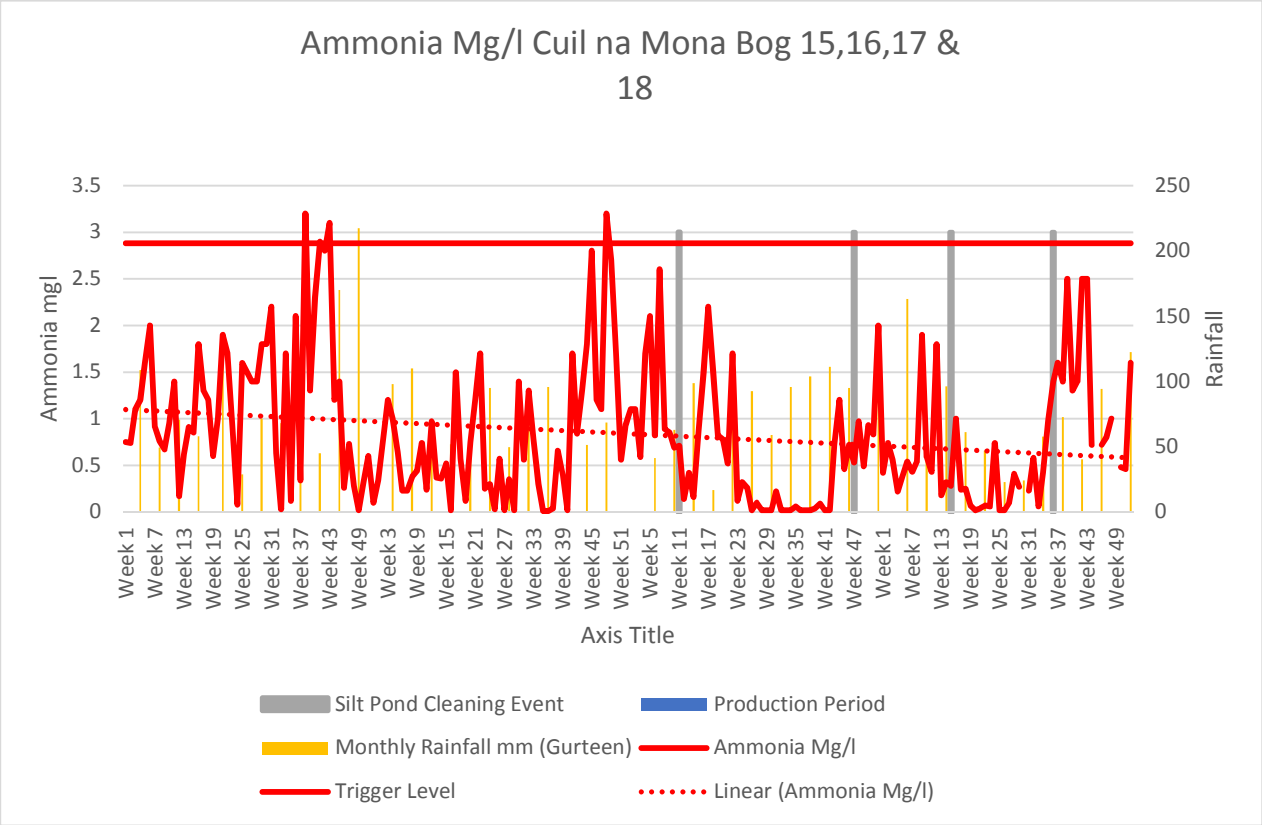
The new Biodiversity Action Plan (2016-2021) was launched in 2016 with the annual Biodiversity Action Plan review day being held in February 2017, this included an update on the progress of this plan, bog restoration and cutaway rehabilitation for a wide range on statutory and non-statutory consultees 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 Cuil na Mona - IPC Licence PO507-01
Quarterely Grab Sampling 2018

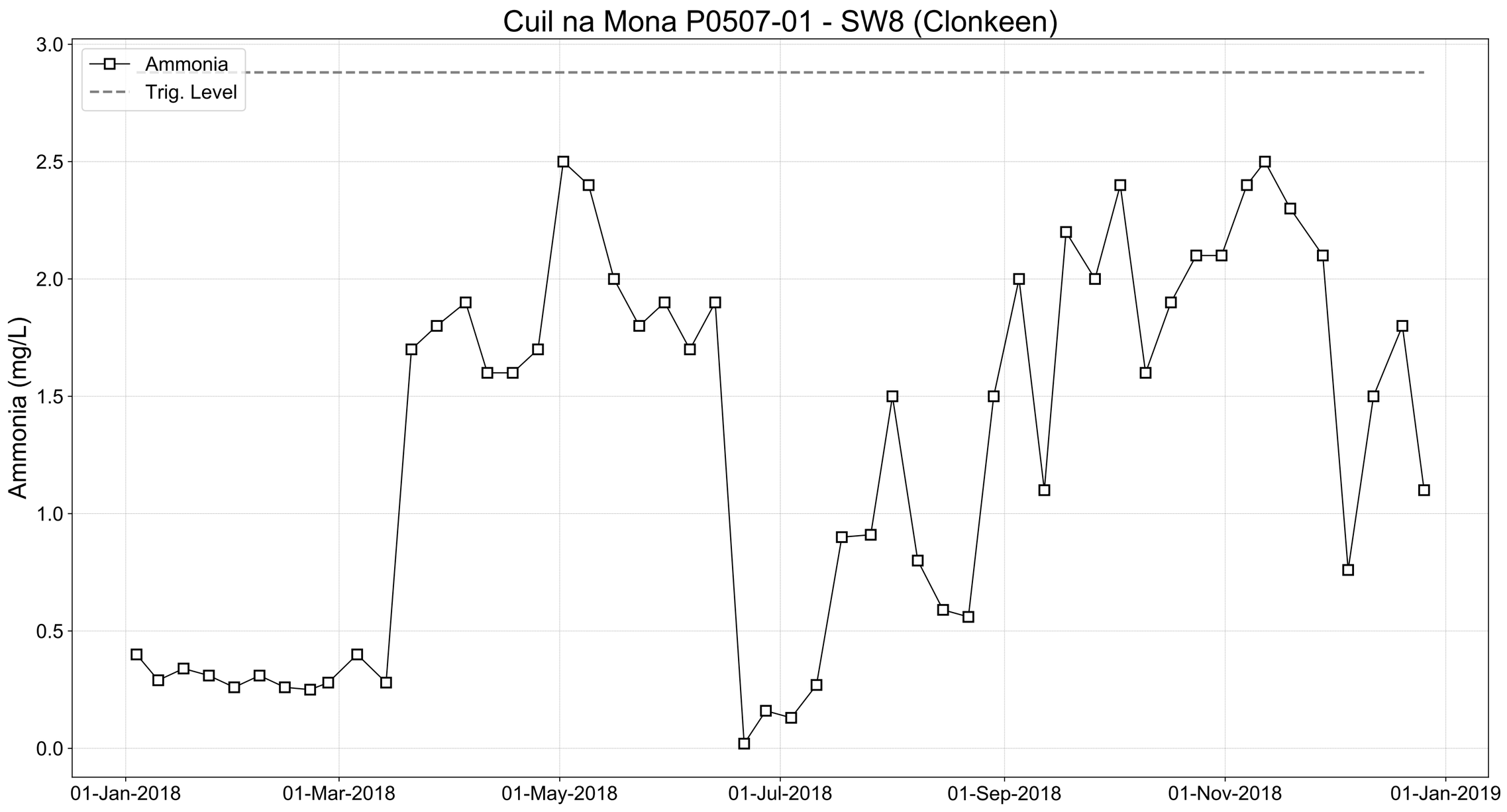
X	Y	Bog	SW	Monitoring	Sampled	pH	SS	TS	Ammonia	TP	COD	Colour
241044.03	196363.06	Coolnamona	SW-6	Q1 18	22/03/2018	7.4	5	172	1.4	0.05	49	210
243248.85	196667.60	Coolnamona	SW-9	Q1 18	22/03/2018	7	5	152	0.44	0.05	82	410
244939.80	195193.19	Coolnacarton	SW-13	Q1 18	22/03/2018	7.6	5	294	1.2	0.05	62	207
243650.14	192140.24	Coolnacarton	SW-14	Q1 18	22/03/2018	7.3	5	114	2.3	0.05	41	160
243409.81	192198.71	Coolnacarton	SW-14A	Q1 18	22/03/2018	7.4	5	176	1.8	0.07	50	177
241454.18	198643.31	Coolnamona	SW-1	Q2 18	07/06/2018	7.6	5	248	1	0.07	137	356
240535.90	197955.63	Coolnamona	SW-2	Q2 18	07/06/2018	7.6	5	262	1.4	0.05	119	287
242328.78	198179.85	Coolnamona	SW-3	Q2 18	07/06/2018	7.3	5	228	1.6	0.06	126	333
241983.51	195773.17	Coolnamona	SW-8	Q2 18	07/06/2018	7	5	152	0.99	0.08	149	474
241454.18	198643.31	Coolnamona	SW-1	Q3 18	06/09/2018	7.5	5	300	2	0.05	69	169
240535.90	197955.63	Coolnamona	SW-2	Q3 18	06/09/2018	7.3	10	264	0.32	0.05	78	95
242328.78	198179.85	Coolnamona	SW-3	Q3 18	06/09/2018	7.6	6	260	0.09	0.06	64	135
241983.51	195773.17	Coolnamona	SW-8	Q3 18	06/09/2018	7.4	78	318	1.7	0.08	78	179
241044.03	196363.06	Coolnamona	SW-6	Q4 18	04/12/2018	6.6	196	0.05	2.2	0.05	96	436
243248.85	196667.60	Coolnamona	SW-9	Q4 18	04/12/2018	5.2	5	216	0.22	0.06	96	386
244939.80	195193.19	Coolnacarton	SW-13	Q4 18	04/12/2018	5.8	178	0.05	0.18	0.05	98	336
243650.14	192140.24	Coolnacarton	SW-14	Q4 18	04/12/2018	5.8	5	130	0.14	0.05	95	644
243409.81	192198.71	Coolnacarton	SW-14A	Q4 18	04/12/2018	5.7	5	134	0.14	0.05	94	642

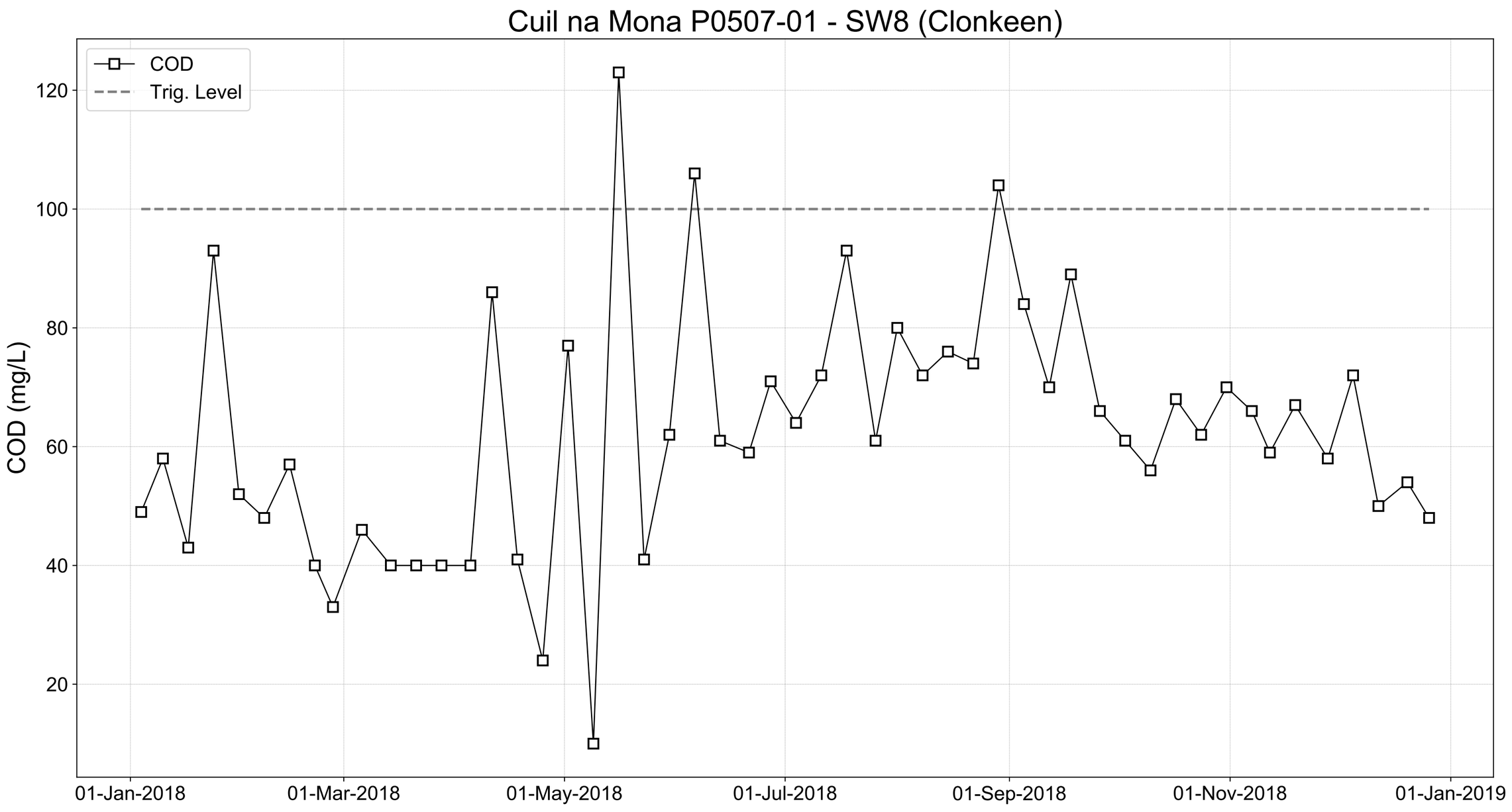


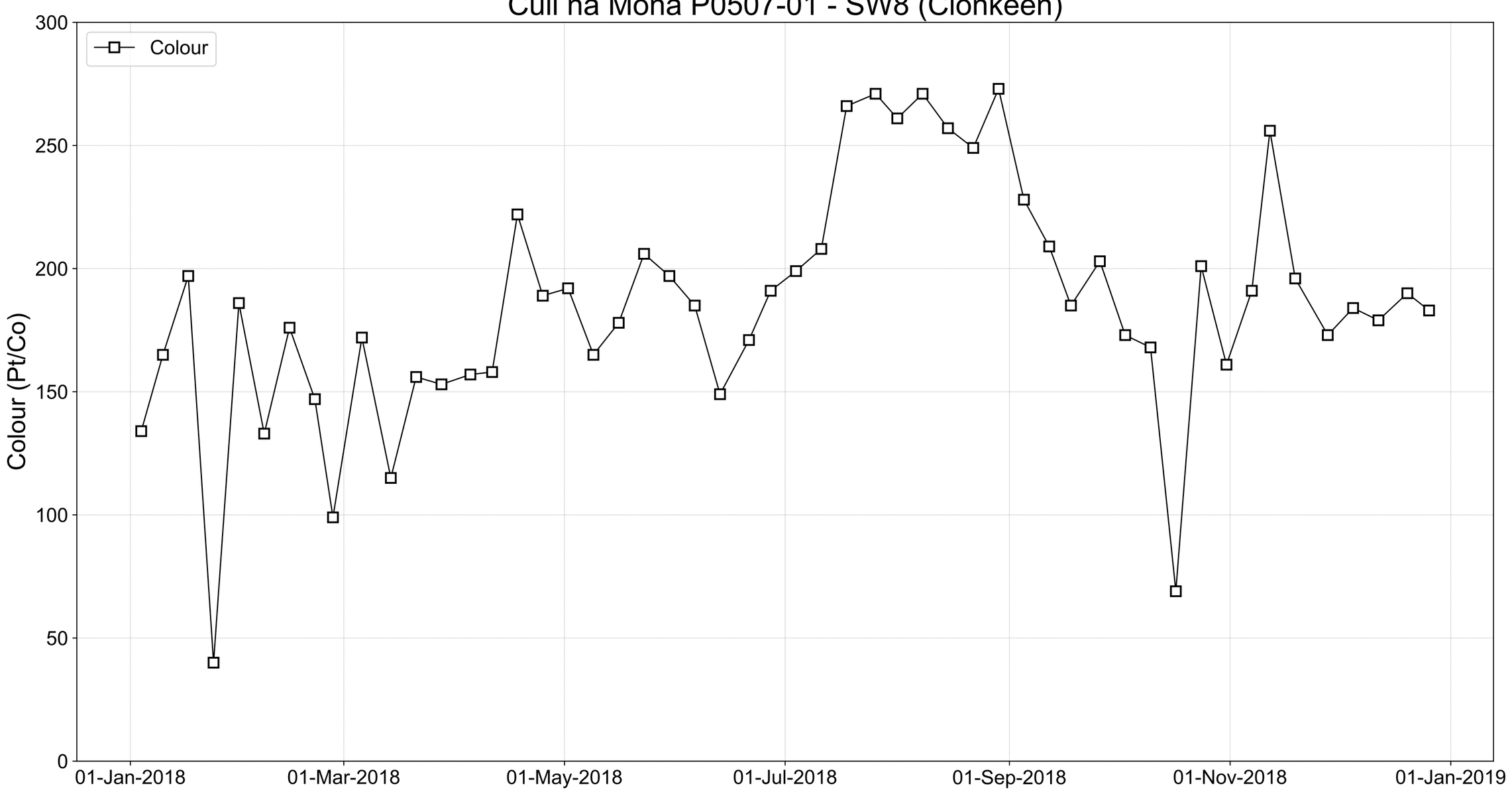
Cuil na Mona bog was not in active production during 2018 with the composite sampler located here from 2015. The composite sampler takes a flow proportional composite sample over a 24 hour period. The sampler had 35% downtime during the period but returned 52 weekly ammonia results during the period of this 2018 AER. The ammonia trigger level of 2.88mg/l, as agreed with the Agency, was not exceeded during the period. Combining the 2015, 16, 17 & 18 results above, shows concentrations continuing to trend downwards and this is in-line with the downwards/level trends submitted to the EPA in 2013 as required by condition 6.14.

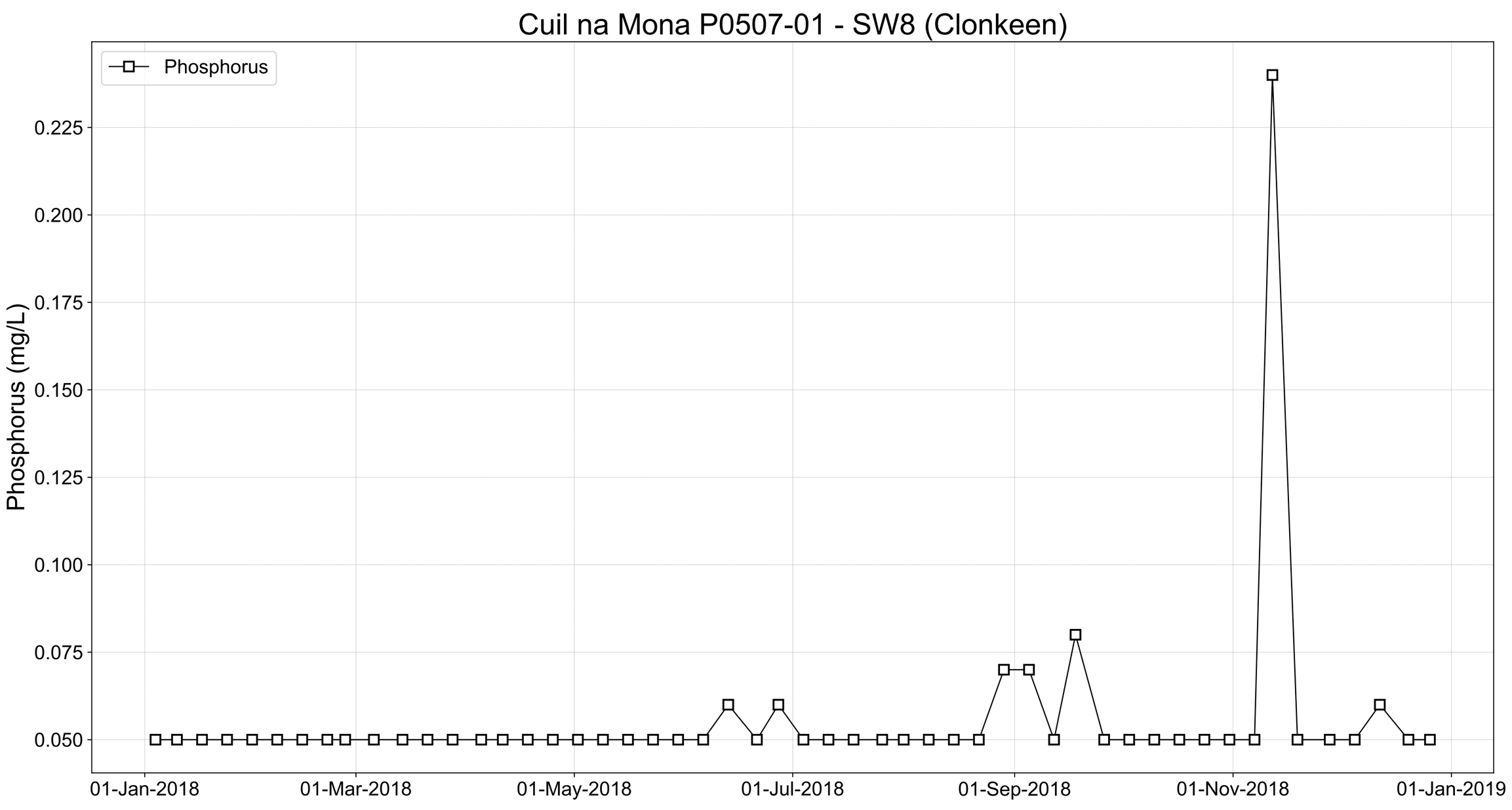
As has been establish previously, there is no obvious link between activities and ammonia concentrations. Comparing monthly rainfall from the nearest met station at Gurteen shows an expected link between rainfall and a lagging peak in ammonia concentrations, however all results were below the trigger level.

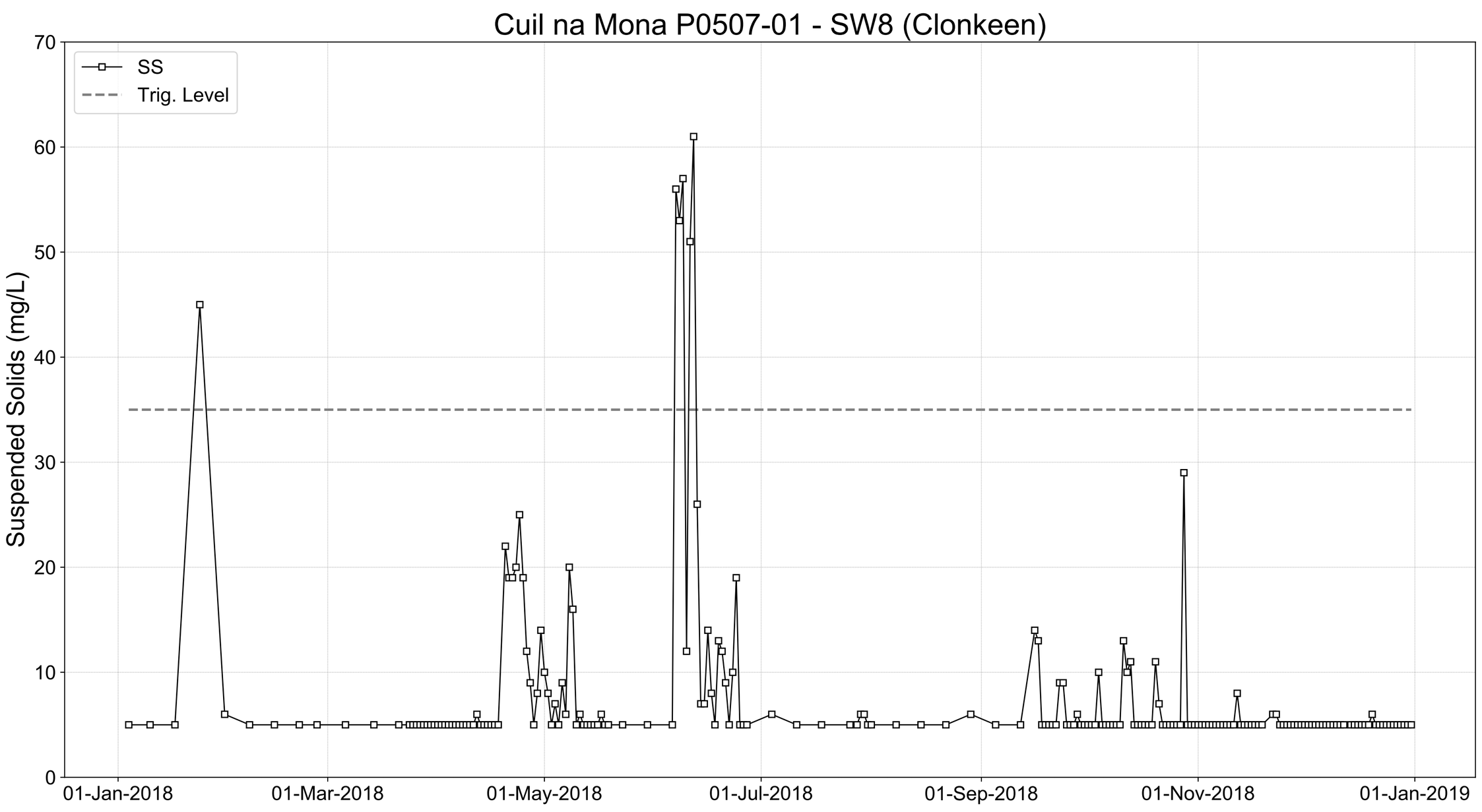
The sampler at this location may be relocated to fill any information gaps on other peatland catchments and to reflect the need to support the information gathering required for the Water Framework Directive's River Basin Management Plan. There is also an EPA lead research project commencing in 2019, 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.


Cuil na Mona P0507-01 - SW8 (Clonkeen)
Ammonia
Trig. Level
Ammonia (mg/L)
3.0
2.5
2.0
1.5
1.0
0.5
0.0
01-Jan-2018
01-Mar-2018
01-May-2018
01-Jul-2018
01-Sep-2018
01-Nov-2018
01-Jan-2019

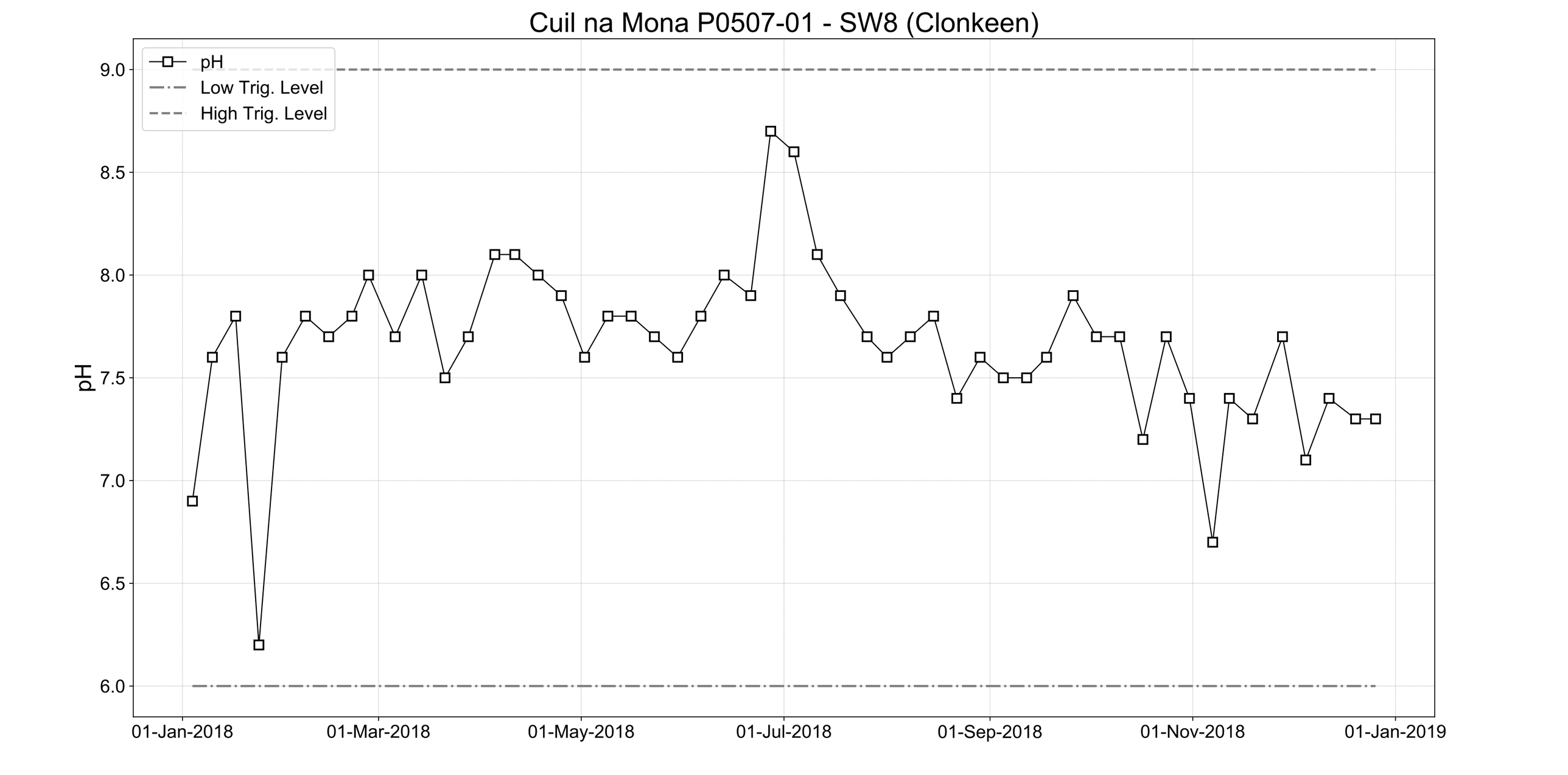

Cuil na Mona P0507-01 - SW8 (Clonkeen)
COD
Trig. Level
COD (mg/L)
120
100
80
60
40
20
01-Jan-2018
01-Mar-2018
01-May-2018
01-Jul-2018
01-Sep-2018
01-Nov-2018
01-Jan-2019


Cuil na Mona P0507-01 - SW8 (Clonkeen)
Colour
Colour (Pt/Co)
300
250
200
150
100
50
0
01-Jan-2018
01-Mar-2018
01-May-2018
01-Jul-2018
01-Sep-2018
01-Nov-2018
01-Jan-2019


Cuil na Mona P0507-01 - SW8 (Clonkeen)
Phosphorus
Phosphorus (mg/L)
0.225
0.200
0.175
0.150
0.125
0.100
0.075
0.050
01-Jan-2018
01-Mar-2018
01-May-2018
01-Jul-2018
01-Sep-2018
01-Nov-2018
01-Jan-2019


Cuil na Mona P0507-01 - SW8 (Clonkeen)
SS
Trig. Level
Suspended Solids (mg/L)
0
10
20
30
40
50
60
70
01-Jan-2018
01-Mar-2018
01-May-2018
01-Jul-2018
01-Sep-2018
01-Nov-2018
01-Jan-2019


Cuil na Mona P0507-01 - SW8 (Clonkeen)
TS
Total Solids (mg/L)
600
500
400
300
200
100
0
01-Jan-2018
01-Mar-2018
01-May-2018
01-Jul-2018
01-Sep-2018
01-Nov-2018
01-Jan-2019


Cuil na Mona P0507-01 - SW8 (Clonkeen)
pH
Low Trig. Level
High Trig. Level
9.0
8.5
8.0
7.5
7.0
6.5
6.0
pH
01-Jan-2018
01-Mar-2018
01-May-2018
01-Jul-2018
01-Sep-2018
01-Nov-2018
01-Jan-2019

Extractive Waste Management Plan Implementation AER Update.

March 2019.

IPC Licence P0507-01.

1.0 Extractive Wastes.

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

- Silt Pond excavations and maintenance
- Bog Timbers

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

2.0 Condition 7.5 Extractive Waste Management

- An extractive waste management plan (EWMP) was submitted to the Agency in September 2012 and was approved.
- The EWMP was reviewed in September 2017. There were no substantial changes to the operation of the plan, associated waste facilities or to the waste deposited.

3.0 Minimisation

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

4.0 Treatment

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

5.0 Recovery

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

6.0 Disposal

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

Annual Environmental Report 2019
Bord na Mona Energy Ltd
(Boora Group of Bogs)
IPC Licence P0500-01

LEABEG, TULLAMORE, CO. OFFALY, IRELAND
TELEPHONE: (05793) 45900. INT: +353-5793-45900. FAX :(05793) 45160. INT: +353-5793-45160

Facility Information Summary	
AER Reporting Year	2019
Licence Register Number	P0500-01
Name of site	Bord na Mona Boora
Site Location	Leabeg, Boora, Tullamore, Co Offaly
NACE Code	0892
Class/Classes of Activity	1.4
National Grid Reference (6E, 6 N)	180050, 319540

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, Briquette factory and lorry outloading facilities. Production achieved was 309319 tonnes which was a 58% reduction on 2018. Dust monitoring was fully compliant for the reporting period. There was one environmental complaint received during 2019 which was a dust nuisance complaint and was resolved and reported to the Agency. There was one exceedance in the ELV for suspended solids from a quarterly grab sample at a silt pond outlet, however on investigation this was found to be due to the pond having been cleaned immediately prior to the sampling event. In relation to silt pond cleaning, 100% of the silt ponds received two cleanings with inspections dictating if a pond required further cleaning. During the reporting period, there were a number of notifications to the Agency including notification of an interim cessation of peat extraction at Boora Bogs, pending regularisation. Decommissioning and Rehabilitation works are described in an attachment.

Declaration:

All the data and information presented in this report has been checked and certified as

Signature	Date
Group/Facility manager (or nominated, suitably qualified and experienced deputy)	01-04-2020

AIR-summary template

Lic No: P0500-01 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 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	No	
3	Was all monitoring carried out in accordance with EPA guidance note AG2 and using the basic air monitoring checklist? Basic air monitoring checklist AGN2	Yes	

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

Emission reference no:	Parameter/ Substance	Frequency of Monitoring	ELV in licence or any revision therof	Licence Compliance criteria	Measured value	Unit of measurement	Compliant with licence limit	Method of analysis	Annual mass load (kg)	Comments - reason for change in % mass load from previous year if applicable
	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:	P0500-01	Year	2019

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:	P0500-01	Year	2019

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-01	Total Particulates	350mg/m2/day	84	Daily average < ELV	mg/m2/day	9968	153	0	0	
DM-02	Total Particulates	350mg/m2/day	84	Daily average < ELV	mg/m2/day	11900	209	0	0	
DM-03	Total Particulates	350mg/m2/day	84	Daily average < ELV	mg/m2/day	10220	231	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:	P0500-01	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	No	

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

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

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

Table A5: Solvent Mass Balance summary

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

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER)	Lic No:	P0500-01	Year	2019

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

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)

				Additional information
3	Was there any result in breach of licence requirements? If yes please provide brief details in the comment section of Table W3 below		Yes	
4	Was all monitoring carried out in accordance with EPA guidance and checklists for Quality of Aqueous Monitoring Data Reported to the EPA? If no please detail what areas require improvement in additional information box	External /Internal Lab Quality checklist / Assessment of results checklist	Yes	Surface water monitoring was carried out on a quarterly basis. The results of which are attached. Monthly COD yard runoff results are also attached. The lack of samples was due to .....

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 therof[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
												APHA / AWWA "Standard Methods"	4500-NH3	NA	One off Grab sample
												APHA / AWWA "Standard Methods"	4500-NH3	NA	One off Grab sample

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: P0500-01 Year 2019

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER) Lic No: P0500-01 Year 2019

Continuous monitoring

			Additional Information
5	Does your site carry out continuous emissions to water/sewer monitoring?	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 233 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-34	Water	Suspended Solids	35	24 hour	Not Listed	mg/L			223	1	Down time primarially due to battery failure.Its not possible to report average continuous emissions as this sampler is located on one of many silt ponds and samplers are moved around periodically to allow for analysis of other silt pond performance.
SW-34	Water	Ammonia (as N)	3.7	Weekly	NA	mg/L					
SW-34	Water	Total phosphorus	NA	Weekly	NA	mg/L					
SW-34	Water	COD	100	Weekly	NA	mg/L					
SW-34	Water	Volumetric flow	NA	24 hour	NA	m3/day					
SW-34	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: P0500-01 Year 2019

Bund testing

dropdown menu click to see options

			Additional information
1	Are you required by your licence to undertake integrity testing on bunds and containment structures ? if yes please fill out table B1 below listing all **new bunds and containment structures** on site, in addition to **all bunds which failed** the integrity test-**all bunding structures which failed including mobile bunds must be listed in the table below, please include all bunds outside the licenced testing period** (mobile bunds and chemstore included)	Yes	
2	Please provide integrity testing frequency period	Other (2 Yearly)	
3	Does the site maintain a register of bunds, underground pipelines (including stormwater and foul), Tanks, sumps and containers? (containers refers to "Chemstore" type units and mobile bunds)	Yes	
4	How many bunds are on site?	9	
5	How many of these bunds have been tested within the required test schedule?	9	2 remaining bunds scheduled to be tested in 2020
6	How many mobile bunds are on site?	27	This includes barrel trays located within workshops
7	Are the mobile bunds included in the bund test schedule?	No	
8	How many of these mobile bunds have been tested within the required test schedule?	NA	
9	How many sumps on site are included in the integrity test schedule?	NA	
10	How many of these sumps are integrity tested within the test schedule? **Please list any sump integrity failures in table B1**	NA	
11	Do all sumps and chambers have high level liquid alarms?	N/A	
12	If yes to Q11 are these failsafe systems included in a maintenance and testing programme?	N/A	
13	Is the Fire Water Retention Pond included in your integrity test programme?	N/A	

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

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

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

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

Pipeline/underground structure testing

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

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

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

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

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

Groundwater/Soil monitoring template

Lic No: P0500-01 Year 2019

			Comments	
1	Are you required to carry out groundwater monitoring as part of your licence requirements?	no		Please provide an interpretation of groundwater monitoring data in the interpretation box below or if you require additional space please include a groundwater/contaminated land monitoring results interpretaion as an additional section in this AER
2	Are you required to carry out soil monitoring as part of your licence requirements?	no		
3	Do you extract groundwater for use on site? If yes please specify use in comment section	no	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. Groundwater monitoring template	SELECT		
5	Is the contamination related to operations at the facility (either current and/or historic)	N/A		
6	Have actions been taken to address contamination issues?If yes please summarise remediation strategies proposed/undertaken for the site	N/A		
7	Please specify the proposed time frame for the remediation strategy	N/A		
8	Is there a licence condition to carry out/update ELRA for the site?	N/A		
9	Has any type of risk assesment been carried out for the site?	N/A		
10	Has a Conceptual Site Model been developed for the site?	N/A		
11	Have potential receptors been identified on and off site?	N/A		
12	Is there evidence that contamination is migrating offsite?	N/A		Please enter interpretation of data here

Table 1: Upgradient Groundwater monitoring results

Date of sampling	Sample location reference	Parameter/ Substance	Methodology	Monitoring frequency	Maximum Concentration++	Average Concentration+	unit	GTV's*	SELECT**	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

Groundwater/Soil monitoring template Lic No: P0500-01 Year 2019

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)

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

Table 3: Soil results

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

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

	Environmental Liabilities template	Lic No:	P0500-01	Year	2019

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

	complete		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:	P0500-01	Year	2019

	Highlighted cells contain dropdown menu click to view		Additional Information
1	Do you maintain an Environmental Mangement System (EMS) for the site. If yes, please detail in additional information	Yes	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	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. Deploy Hydraulic Harrows at dust sensitive areas headland Peat collection.	100	In total 10 Personnel received training in 2019. Training now also includes an energy awareness component. Ten hydraulic harrows were deployed at five production areas including all dust sensitive areas. Headland peat was collected at appicable production areas and returned as part of overall production.	Individual	Improved Environmental Management Practices
Waste reduction/Raw material usage efficiency	Waste Streamlining.It is planned to continue with and where possible improve the current waste management service provided by AES Ltd	100	Quarterly waste reports are returned for records/filing and waste streams are segrated on site to maximise recycling potential.	Section Head	Improved Environmental Management Practices

Environmental Management Programme/Continuous Improvement Programme template				Lic No:	P0500-01	Year	2019
Reduction of emissions to Water	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.	100	All silt ponds were cleaned at least twice as per licence condition .	Individual	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 0 tonnes were sent off site for recycling. However all plastic collected is due for collection in 2020.	Individual	Improved Environmental Management Practices		
Energy Efficiency/Utility conservation	As part of an energy management process, an ongoing review of energy usage is in place.	100	The site achieved the Energy standard ISO50001 during the reporting period.	Section Head	Improved Environmental Management Practices		

Noise monitoring summary report	Lic No:	P0500-01	Year	2019

1	Was noise monitoring a licence requirement for the AER period? If yes please fill in table N1 noise summary below	No
2	Was noise monitoring carried out using the EPA Guidance note, including completion of the "Checklist for noise measurement report" included in the guidance note as table 6? (Noise Guidance note NG4)	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:	P0500-01	Year	2019

			Additional information
1	When did the site carry out the most recent energy efficiency audit? Please list the recommendations in table 3 below	Sep-19	Report on file
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	ISO50001 accreditation attained from Certification Europe
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	

SEAI - Large Industry Energy Network (LIEN)

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)	14335.26	9583.06		
Total Energy Generated (MWHrs)				
Total Renewable Energy Generated (MWHrs)				
Electricity Consumption (MWHrs)	657.287	498.09		
Fossil Fuels Consumption:				
Heavy Fuel Oil (m3)				
Light Fuel Oil (m3)	1346.125	905.478		
Natural gas (m3)				
Coal/Solid fuel (metric tonnes)	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^3yr):	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.

Resource Usage/Energy efficiency summary Lic No: P0500-01 Year 2019

Resource Usage/Energy efficiency summary

Lic No: P0500-01 Year 2019

Table R3 Waste Stream Summary

	Total	Landfill	Incineration	Recycled	Other
Hazardous (Tonnes)	9.44	0	8.96	0.48	0
Non-Hazardous (Tonnes)	957.17	34.97	0	87.92	0

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: P0500-01 Year 2019

Complaints

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	Additional information

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
27/08/2019	Dust		Dust complaint received	installed prior to start of	Complete	06/09/2019	
	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

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

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

Complaints and Incidents summary template

Lic No: P0500-01 Year 2019

Table 2 Incidents summary

Date of occurrence	Incident nature	Location of occurrence	Incident category*please refer to guidance	Receptor	Cause of incident	Other cause(please specify)	Activity in progress at time of incident	Communication	Occurrence	Corrective action<20 words	Preventative action <20 words	Resolution status	Resolution date	Likelihood of reoccurence
30/05/2019	Breach of ELV	Licenced discharge point (type in reference here)	1. Minor	Water	Other (add details)	Grab sample taken	None	EPA ref No.INCI016626	New	None	N/A	Complete	31/05/2019	Low

Total number of incidents current year	1
Total number of incidents previous year	5
% reduction/ increase 0%	80%

Waste Summary Continued Lic No: P0500-01 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
13 02 05*	mineral-based non-chlorinated engine, gear and lubricating oils	Yes	8.96	Enva Ireland Limited - L1745	R01 - Use principally as a fuel or other means to generate energy	R.D. Recycling, Houthalen, Reg No: 51727/1KD	Belgium
17 04 07	mixed metals	No	87.44	AES Ltd WP-OY-08-601-02	R04 - Recycling/reclamation of metals and metal compounds	AES LTD, Cappincur, Tullamore, Co. Offaly - WP-OY-08-601-01	Ireland
20 03 01 B	Municipal mixed residual non-household	No	26.18	AES Ltd WP-OY-08-601-02	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 A	Municipal mixed residual household	No	8.79	AES Ltd WP-OY-08-601-02	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
11 01 13*	degreasing wastes containing hazardous substances	Yes	0.48	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

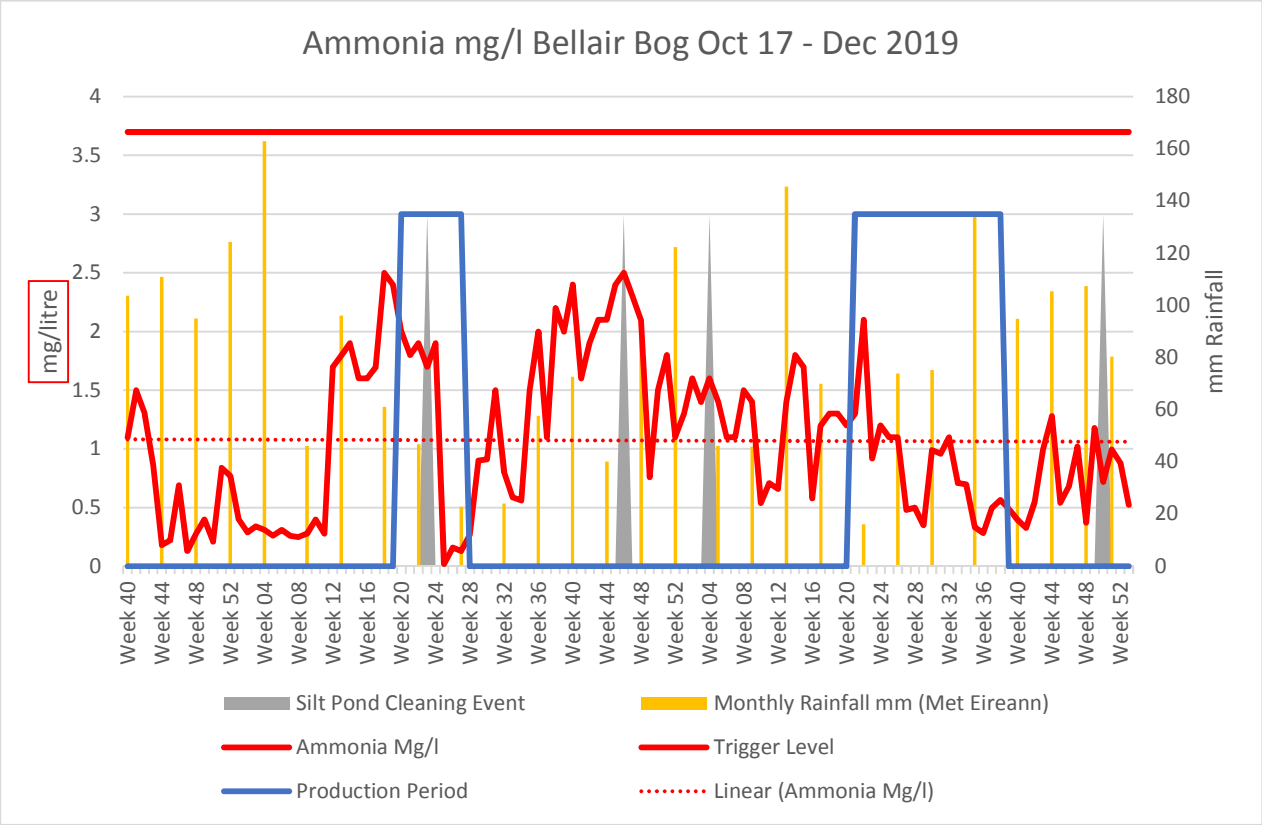
Boora IPC Licence

Decommissioning and Rehabilitation

Bog Rehabilitation Progress Report 2019.

- Some rehabilitation maintenance work was carried at Derries Bog in 2019. This was to re-block an outfall from a wetland and raise water-levels.
- There was ongoing monitoring of peatland rehabilitation carried out in previous years at Derrybrat, Derries, Clonganwy and Drinagh Bogs. Drain-blocking has re-wetted the targeted areas and the sites are developing typical pioneer cutaway habitats.
- The site rehabilitation plans for Clongawny and Drinagh Bogs were updated to take account of a renewable energy development being proposed by Bord na Mona on these cutaway sites (Derryinlough Windfarm).
- 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 in 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 Boora 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 Boora		Siltpond Monitoring Frequency							
			IPPC Licence P0500-01									
X	Y	Bog	SW	Monitoring	Sampled	pH	SS	TS	Ammonia	TP	COD	Colour
220650.17	210315.60	Derrinboy	SW-38	Q1 19	25/04/2019	8	<5	295	0.72	<0.05	41	87
220483.33	210276.48	Derrinboy	SW-39	Q1 19	25/04/2019	7.7	8	262	1.8	0.06	39	106
219663.49	210038.82	Derrinboy	SW-40	Q1 19	25/04/2019	7.4	<5	162	1.6	<0.05	27	129
215361.95	232964.99	Bellair South	SW-33	Q1 19	25/04/2019	7.4	<5	70	1.7	0.05	62	240
214495.84	232937.68	Bellair South	SW-34	Q1 19	25/04/2019	7.7	<5	116	1.2	<0.05	38	184
214987.18	232598.43	Bellair South	SW-34A	Q1 19	25/04/2019	7.6	<5	250	0.02	0.02	107	250
213906.46	231884.67	Bellair South	SW-35	Q1 19	25/04/2019	7.6	32	374	<0.02	0.53	216	374
215477.01	233062.25	Bellair North	SW-37B	Q1 19	25/04/2019	7.7	<5	296	0.28	<0.05	52	243
204681.49	214416.93	Clongawney	SW-1	Q2 19	19/06/2019	7.3	<5	250	0.2	<0.05	130	330
205641.50	213067.71	Clongawney	SW-3	Q2 19	27/06/2019	7.6	<5	336	1.6	0.06	40	75
206319.95	215656.92	Clongawney	SW-4	Q2 19	19/06/2019	7.8	8	256	0.3	<0.05	89	113
207679.57	215615.99	Clongawney	SW-5	Q2 19	19/06/2019	7.8	<5	276	0.33	<0.05	78	115
208818.04	215648.99	Drinagh	SW-7	Q2 19	19/06/2019	7.9	<5	272	0.46	<0.05	80	91
212017.45	214103.39	Drinagh	SW-8	Q2 19	19/06/2019	7.8	<5	264	3.9	<0.05	72	107
224321.91	224780.07	Kilaranny	SW-24	Q2 19	19/06/2019	7.9	5	284	0.06	<0.05	77	140
224248.46	223524.04	Kilaranny	SW-24A	Q2 19	19/06/2019	7.7	<5	272	1.3	<0.05	80	146
217008.23	222986.75	Turraun	SW-15	Q3 19	10/09/2019	7.7	6	437	0.19	<0.05	48	103
219378.47	224050.10	Turraun	SW-16	Q3 19	02/09/2019	7.5	<2	467	0.069	<0.05	45	127
219721.73	224554.04	Pollagh	SW-17	Q3 19	02/09/2019	7.6	4	484	0.646	<0.05	26	95.8
221729.61	226112.15	Pollagh	SW-17A	Q3 19	02/09/2019	8.2	10	476	0.117	<0.05	15	84
220331.44	222549.88	Oughter	SW-18	Q3 19	10/09/2019	7.1	<2	424	0.188	<0.05	36	110
216627.57	234827.38	Bellair North	SW-36	Q3 19	02/09/2019	7.4	<2	218	0.521	<0.05	75	335
219056.10	234057.41	Bellair North	SW-37	Q3 19	02/09/2019	7.4	4	195	0.585	<0.05	76	404
216202.99	234373.11	Bellair North	SW-37A	Q3 19	02/09/2019	6.5	18	138	0.131	<0.05	99	357
217216.92	227527.32	Lemonaghan	SW-19	Q4 19	07/10/2019	7.4	14	260	0.571	<0.05	72	306
217481.75	227345.36	Lemonaghan	SW-19A	Q4 19	07/10/2019	6.5	3	129	1.26	<0.05	67	339
214970.51	226491.33	Lemonaghan	SW-19B	Q4 19	07/10/2019	5.1	10	154	0.094	<0.05	112	483
218645.63	229597.18	Lemonaghan	SW-22	Q4 19	07/10/2019	7.3	5	271	0.373	<0.05	55	243
216900.19	229545.11	Lemonaghan	SW-22A	Q4 19	07/10/2019	6.9	8	283	0.489	<0.05	75	384
216151.75	230069.09	Lemonaghan	SW-22B	Q4 19	07/10/2019	7	4	112	1.52	<0.05	56	273
215947.19	230315.10	Lemonaghan	SW-22C	Q4 19	07/10/2019	4.8	7	89	0.388	<0.05	57	254
215079.20	231196.83	Lemonaghan	SW-22D	Q4 19	07/10/2019	7.2	3	334	0.048	<0.05	47	186



Bellair Bog

Bellair bog is an active production bog with the composite sampler located here from the last week in September 2017 to December 2019. The composite sampler takes a flow proportional composite sample over a 24 hour period. The sampler had x**%** downtime during the period being reported, but suitable weekly grab samples were taken during these downtimes, primarily due to battery fault, flood events, the sampler was being serviced/overhauled or due to technical faults. The ammonia trigger level of 3.7mg/l, as agreed with the Agency, was not exceeded during the period being reported. The above graph show concentrations trending flat, as opposed to the upwards trend as reported in the 2018 AER-month period.

It is not possible to identify any obvious link between the summer production, winter maintenance or silt pond maintenance events on the concentration of ammonia disharging from the peatlands. The only link expected would be that related to rainfall events and seasonal weather patterns and the subsequent surfacewater runoff and associated ammonia concentrations.

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

Extractive Waste Management Plan Implementation AER Update 2019

March 2020.

IPC Licence P0500-01.

1.0 Extractive Wastes.

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

- Silt Pond excavations and maintenance
- Bog Timbers

There has been no change to the type and nature of these 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 of the bogs will be in a decommissioning and rehabilitation phase, which will see the generation of bog timbers from production cease. In addition, and depending on the progress with bog stabilisation and rehabilitation, silt generation will be significantly reducing, which will lead to reduced volumes to be removed from the silt ponds.

3.0 Minimisation

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

4.0 Treatment

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

5.0 Recovery

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

6.0 Disposal

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

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

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Facility Information Summary	
AER Reporting Year	2019
Licence Register Number	P0501-01
Name of site	Bord na Mona Derrygreenagh
Site Location	Derrygreenagh, Rochfortbridge, Co Westmeath
NACE Code	0892
Class/Classes of Activity	1.4
National Grid Reference (6E, 6 N)	249450, 238140
A description of the activities/processes at the site for the reporting year. This should include information such as production increases or decreases on site, any infrastructural changes, environmental performance which was measured during the reporting year **and an overview of compliance with your licence** listing all exceedances of licence limits (where applicable) and what they relate to e.g. air, water, noise.	Activities on site can be divided into two components, firstly the milling, harrowing, ridiging and harvesting of peat into stockpiles and secondly the transportation of that peat via an internal rail network to the Power Station and lorry outloading facilities. Production achieved was approximately 140,237 tonnes which is a 52% reduction on the 2018 figure. Quarterly grab sampling was 100% compliant with regard to the ELV, with the continuous composite sampling returning no non-compliances for suspended solids, with 29% downtime due to battery and maintenence issues but 52 weekly samples were achieved. The number of exceedances in trigger levels noted and reported to the Agency was 11 which was a 50% reduction on 2018, with the majority being exceedances in COD or Ammonia Trigger levels, with one spillage incident where a stolen tractor was driven into a drain with a resultant fuel spillage that required remediation. There was one environmental complaint received during the reporting period, this was dust related and was resolved to the satisfaction of the complainant and reported to the Agency. In relation to silt pond cleaning, 100% of all 58 silt ponds received the required two cleanings, with inspections dictating the cleaning schedules. During the reporting period, there were a number of notifications to the Agency including notification of an interim cessation of peat extraction at Derrygreenagh, pending regularisation. Decommissioning and Rehabilitation works are described in an attachment.

Declaration:

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

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

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

Answer all questions and complete all tables where relevant

			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	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 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

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

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 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-01	Total Particulates	350	140 DAYS	Daily average < ELV	mg/m2/day	4536	83	0	0	Dust monitioring took place on 4 occasions for 28 days each time between April and August
DM-02	Total Particulates	350	140 DAYS	Daily average < ELV	mg/m2/day	8512	178	0	0	
DM-03	Total Particulates	350	140 DAYS	Daily average < ELV	mg/m2/day	10808	166	0	0	
DM-04	Total Particulates	350	140 DAYS	Daily average < ELV	mg/m2/day	12740	261	0	0	
	SELECT				SELECT					

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

Table A3: Abatement system bypass reporting table

Bypass protocol

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

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

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

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

Solvent use and management on site

8 Do you have a total Emission Limit Value of direct and fugitive emissions on site? if yes please fill out tables A4 and A5

SELECT

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

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

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

Table A5: Solvent Mass Balance summary

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

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER) Lic No: P0501-01 Year 2019

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

Table W1 Storm water monitoring

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

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

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

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

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

3	Was there any result in breach of licence requirements? If yes please provide brief details in the comment section of Table W3 below		No	
4	Was all monitoring carried out in accordance with EPA guidance and checklists for Quality of Aqueous Monitoring Data Reported to the EPA? If no please detail what areas require improvement in additional information box	External /Internal Lab Quality checklist / Assessment of results checklist	Yes	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 therof[Note 2]	Licence Compliance criteria	Measured value	Unit of measurement	Compliant with licence	Method of analysis	Procedural reference source	Procedural reference standard number	Annual mass load (kg)	Comments

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

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

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER) Lic No: P0501-01 Year 2019

Continuous monitoring

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

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

6	Did continuous monitoring equipment experience downtime? **If yes please record downtime in table W4 below**	Yes	Total of 108 days over 365 days
7	Do you have a proactive service contract for each piece of continuous monitoring equipment on site?	Yes	
8	Did abatement system bypass occur during the reporting year? **If yes please complete table W5 below**	No	

Table W4: Summary of average emissions -continuous monitoring

Emission reference no:	Emission released to	Parameter/ Substance	ELV or trigger values in licence or any revision thereof	Averaging Period	Compliance Criteria	Units of measurement	Annual Emission for current reporting year (kg)	% change +/- from previous reporting year	Monitoring Equipment downtime (hours)	Number of ELV exceedences in reporting year	Comments
SW43	Water	Suspended Solids	35	24 hour	All results < 1.5 times ELV, plus 8 from ten results must be < ELV	mg/L			2592	0	Down time due to battery failure, and sampler repairs. Agency informed of repairs. Its not possible to report average continuous emissions as this sampler is located on one of 58 silt ponds and samplers are moved around periodically to allow for analysis of other silt pond performance.
SW43	Water	Ammonia (as N)	2.78	Weekly	NA	mg/L					
SW43	Water	Total phosphorus	NA	Weekly	NA	mg/L					
SW43	Water	COD	100	Weekly	NA	mg/L					
SW43	Water	volumetric flow	NA	24 hour	NA	m3/day					
SW43	Water	Total Dissolved Solids	NA	Weekly	NA	mg/L					

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

Table W5: Abatement system bypass reporting table

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

*Measures taken or proposed to reduce or limit bypass frequency

Bund/Pipeline testing template

Lic No: P0501-01 Year 2019

Bund testing

dropdown menu click to see options

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

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

Bund/Containment structure ID	Type	Specify Other type	Product containment	Actual capacity	Capacity required*	Type of integrity test	Other test type	Test date	Integrity reports maintained on site?	Results of test	Integrity test failure explanation <50 words	Corrective action taken	Scheduled date for retest	Results of retest(if in current reporting year)
Derrygreenagh Bund NO:501-37-01	reinforced concrete		Gas Oil	110,592	45000	Hydraulic test		22/07/2019	Yes	Pass	N/A	N/A	N/A	N/A
						Hydraulic test								

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

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

bunding and storage guidelines

Pipeline/underground structure testing

			No underground tanks or pipelines on site
1	Are you required by your licence to undertake integrity testing* on underground structures e.g. pipelines or sumps etc ? if yes please fill out table 2 below listing all underground structures and pipelines on site **which failed the integrity test and all which have not been tested withing the integrity test period as specified**	Yes	
2	Please provide integrity testing frequency period	SELECT	

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

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

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

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

Groundwater/Soil monitoring template	Lic No:	P0501-01	Year	2019

			Comments	
1	Are you required to carry out groundwater monitoring as part of your licence requirements?	no		Please provide an interpretation of groundwater monitoring data in the interpretation box below or if you require additional space please include a groundwater/contaminated land monitoring results interpretaion as an additional section in this AER
2	Are you required to carry out soil monitoring as part of your licence requirements?	no		
3	Do you extract groundwater for use on site? If yes please specify use in comment section	yes	Drinking water well	
4	Do monitoring results show that groundwater generic assessment criteria such as GTVs or IGVs are exceeded or is there an upward trend in results for a substance? If yes, please complete the Groundwater Monitoring Guideline Groundwater monitoring template	no		
5	Is the contamination related to operations at the facility (either current and/or historic)	no		
6	Have actions been taken to address contamination issues?If yes please summarise remediation strategies proposed/undertaken for the site	N/A		
7	Please specify the proposed time frame for the remediation strategy	N/A		
8	Is there a licence condition to carry out/update ELRA for the site?	N/A		
9	Has any type of risk assesment been carried out for the site?	N/A		
10	Has a Conceptual Site Model been developed for the site?	N/A		
11	Have potential receptors been identified on and off site?	N/A		
12	Is there evidence that contamination is migrating offsite?	N/A		

Please enter interpretation of data here

Table 1: Upgradient Groundwater monitoring results

Date of sampling	Sample location reference	Parameter/ Substance	Methodology	Monitoring frequency	Maximum Concentration++	Average Concentration+	unit	GTV's*	SELECT**	
							SELECT			SELECT
							SELECT			SELECT

.+ where average indicates arithmetic mean

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

Table 2: Downgradient Groundwater monitoring results

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

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

Groundwater monitoring template

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

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

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

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: P0501-01 Year 2019

Table 3: Soil results

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

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

Environmental Liabilities template	Lic No:	P0501-01	Year 2017	2019

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

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

Environmental Management Programme/Continuous Improvement Programme template

Lic No: P0501-01 Year 2019

Highlighted cells contain dropdown menu click to view

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

Environmental Management Programme (EMP) report

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

Environmental Management Programme/Continuous Improvement Programme template				Lic No:	P0501-01	Year	2019
Waste reduction/Raw material usage efficiency	Waste streamlining is a project we are particularly interested in continuing and hope to reduce wastes further in the future and be more efficient in dealing with all aspects of waste management	80	Installed a waste management system. Monthly waste reports are returned for records/filing and waste streams are segrated on site to maximise recycling potential.	Section Head	Improved Environmental Management Practices		
Waste reduction/Raw material usage efficiency	Continue with the recycling of polyethylene. The sourcing of more recycling contractors will be ongoing.	100	In total 89.85 tonnes of polyethlene were sent off site for recycling. Procurement also exploring the possibility of securing further recyclers.	Individual	Improved Environmental Management Practices		
Energy Management	As part of an Energy Awareness campaign all aspects of energy consumption will be communicated to personnel with the intention of reducing consumption through awareness	80	The monthly consumption of energy is 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. Continue with the collection of headland peat.	50	Personnel are trained every two years in Environmental matters. Headland peat was collected at all locations and included as part of overall peat returns.	Individual	Improved Environmental Management Practices		

Noise monitoring summary report	Lic No:	P0501-01	Year	2019

1	Was noise monitoring a licence requirement for the AER period? If yes please fill in table N1 noise summary below	No
2	Was noise monitoring carried out using the EPA Guidance note, including completion of the "Checklist for noise measurement report" included in the guidance note as table 6? (Noise Guidance note NG4)	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: P0501-01 Year 2019

			Additional information
1	When did the site carry out the most recent energy efficiency audit? Please list the recommendations in table 3 below	Aug-19	Report on file
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	SEAI - Large Industry Energy Network (LIEN)
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	Not a Licence requirement

Table R1 Energy usage on site

Energy Use	Previous year	Current year	Production +/- % compared to previous reporting year**	Energy Consumption +/- % vs overall site production*
Total Energy Used (MWHrs)	5858	4191.88	-52	-28
Total Energy Generated (MWHrs)				
Total Renewable Energy Generated (MWHrs)				
Electricity Consumption (MWHrs)	226	191.88	-52.00%	-15
Fossil Fuels Consumption:				
Heavy Fuel Oil (m3)				
Light Fuel Oil (m3)	1692	400	-52.00%	-76.00%
Natural gas (m3)				
Coal/Solid fuel (metric tonnes)				
Peat (metric tonnes)				
Renewable Biomass				
Renewable energy generated on site				

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

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

Table R2 Water usage on site

					Water Emissions	Water Consumption	
Water use	Water extracted Previous year m3/yr.	Water extracted Current year m3/yr.	Production +/- % compared to previous reporting year**	Energy Consumption +/- % vs overall site production*	Volume Discharged back to environment(m^3yr):	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:	P0501-01	Year	2019

Table R3 Waste Stream Summary

	Total	Landfill	Incineration	Recycled	Other
Hazardous (Tonnes)	13.38			13.38	
Non-Hazardous (Tonnes)	331.59	45.88	0	122.35	163.36

Resource Usage/Energy efficiency summary Lic No: P0501-01 Year 2019

Table R4: Energy Audit finding recommendations

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

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

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

Complaints and Incidents summary template

Lic No: P0501-01 Year 2019

Complaints		
		Additional information
Have you received any environmental complaints in the current reporting year? If yes please complete summary details of complaints received on site in table 1 below	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
22/06/2019	Dust		Complaint about dust blowing onto house and property	Complainants property visited and damage assessed. Production suspended and amended. Employees reminded of their environmental training.	Complete	22/06/2019	Reported to Agency Ref:LR042924

Total complaints open at start of reporting year	0
Total new complaints received during reporting year	1
Total complaints closed during reporting year	1
Balance of complaints end of reporting year	0

Incidents		
		Additional information
Have any incidents occurred on site in the current reporting year? Please list all incidents for current reporting year in Table 2 below	Yes	All reported to the Agency

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

Table 2 Incidents summary

Date of occurrence	Incident nature	Location of occurrence	Incident category*please refer to guidance	Receptor	Cause of incident	Other cause(please specify)	Activity in progress at time of incident	Communication	Occurrence	Corrective action<20 words	Preventative action <20 words	Resolution status	Resolution date	Likelihood of reoccurence
30/04/2019	Trigger level reached	Rossan Bog SW-43	1. Minor	Water	Not related to site activities	Unknown	Normal activities	EPA INCI016437	New	No corrective action available, naturally ocurring	None available	Complete	08/05/2019	Medium
25/06/2019	Trigger level reached	Rossan Bog SW-43	1. Minor	Water	Not related to site activities	Unknown	Normal activities	EPA INCI016838	New	No corrective action available, naturally ocurring	None available	Complete	18/07/2019	Medium
23/07/2019	Trigger level reached	Rossan Bog SW-43	1. Minor	Water	Not related to site activities	Unknown	Normal activities	EPA INCI016886	Recurring	No corrective action available, naturally ocurring	None available	Complete	26/07/2019	Medium

Complaints and Incidents summary template

Lic No: P0501-01 Year 2019

02/07/2019	Trigger level reached	Rossan Bog SW-43	1. Minor	Water	Not related to site activities	Unknown	Normal activities	EPA INCI016958	Recurring	No corrective action available, naturally ocurring	None available	Complete	08/08/2019	Medium
11/08/2019	Other(please specify)	Ballybeg Bog	1. Minor	Water	Not related to site activities	Unknown	Normal activities	EPA INCI017000	New	No corrective action available, naturally ocurring	None available	Complete	12/08/2019	Medium
10/09/2019	Trigger level reached	Carranstown Bog SW-31	1. Minor	Water	Not related to site activities	Unknown	Normal activities	EPA INCI017219	New	No corrective action available, naturally ocurring	None available	Complete	16/09/2019	Medium
23/09/2019	Trigger level reached	Rossan Bog SW-43	1. Minor	Water	Not related to site activities	Unknown	Normal activities	EPA INCI017379	Recurring	No corrective action available, naturally ocurring	None available	Complete	27/09/2019	Medium
06/08/2019	Trigger level reached	Rossan Bog SW-43	1. Minor	Water	Not related to site activities	Unknown	Normal activities	EPA INCI017394	Recurring	No corrective action available, naturally ocurring	None available	Complete	11/10/2019	Medium
13/08/2019	Trigger level reached	Rossan Bog SW-43	1. Minor	Water	Not related to site activities	Unknown	Normal activities	EPA INCI017396	Recurring	No corrective action available, naturally ocurring	None available	Complete	11/10/2019	Medium
30/07/2019	Trigger level reached	Rossan Bog SW-43	1. Minor	Water	Not related to site activities	Unknown	Normal activities	EPA INCI017435	Recurring	No corrective action available, naturally ocurring	None available	Complete	16/10/2019	Medium
11/11/2019	Trigger level reached	Rossan Bog SW-43	1. Minor	Water	Not related to site activities	Unknown	Normal activities	EPA INCI017600	Recurring	No corrective action available, naturally ocurring	None available	Complete	14/11/2019	Medium
Total number of incidents current year	11													
Total number of incidents previous year	22													
% reduction/ increase	50%													

Waste Summary Continued	Lic No:	P0501-01	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	Location of Treatment - Country
02 01 04	waste plastics (except packaging)	No	89.85	ADN Materials Ltd.WFP-MN-12-0001-04	R05 - Recycling/reclamation of other inorganic materials	ADN Materials Ltd., Lossetts, Carrickmacross, Co. Monaghan - WFP-MN-12-0001-04	Ireland
08 01 11*	waste paint and varnish containing organic solvents or other hazardous substances	Yes	0	Enva Ireland Limited (Portlaoise) - W0184	R02 - Solvent reclamation/regeneration	Recyfuel Ltd., Enghis - BE0459.735.458	Belgium
11 01 13*	degreasing wastes containing hazardous substances	Yes	0.06	Safety Kleen Ireland Ltd - W0099	R11 - Use of waste obtained from any of the operations numbered R 1 to R 10	Solvent Recovery Management, PP33345F, Wheeland Rd., Knottingly, West Yorks	UK
13 02 05*	mineral-based non-chlorinated engine, gear and lubricating oils	Yes	5.77	Enva Ireland Limited (Portlaoise) - W0184	R01 - Use principally as a fuel or other means to generate energy	Enva Ireland Limited, Clonminam Industrial Estate, Portlaoise - W0184	Ireland
13 05 03*	interceptor sludges	Yes	3.58	Enva Ireland Limited (Portlaoise) - W0184	R01 - Use principally as a fuel or other means to generate energy	Enva Ireland Limited, Clonminam Industrial Estate, Portlaoise - W0184	Ireland
15 01 03	wooden packaging	No	1.16	AES Ltd WP-OY-08-601-01	R01 - Use principally as a fuel or other means to generate energy	AES LTD, Cappincur, Tullamore, Co. Offaly - WP-OY-08-601-01	Ireland
15 02 02*	absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by hazardous substances	Yes	0.21	Enva Ireland Limited (Portlaoise) - W0184	R01 - Use principally as a fuel or other means to generate energy	Lindenschmidt, Kreutzal - Reg No: E97095037	Germany
16 01 07*	oil filters	Yes	0.6	Enva Ireland Limited (Portlaoise) - W0184	R04 - Recycling/reclamation of metals and metal compounds	R.D. Recycling, Houthalen, Reg No: 51727/1KD	Belgium
16 06 01*	lead batteries	Yes	2.83	Enva Ireland Limited (Portlaoise) - W0184	R04 - Recycling/reclamation of metals and metal compounds	Campine Recycling, Beerse - MLAV/05173/GVDA	Belgium
17 04 07	mixed metals	No	31.34	AES Ltd WP-OY-08-601-01	R04 - Recycling/reclamation of metals and metal compounds	AES LTD, Cappincur, Tullamore, Co. Offaly - WP-OY-08-601-01	Ireland
20 03 01 A	Municipal mixed residual household	No	3.88	AES Ltd WP-OY-08-601-01	D05 - Specially engineered landfill (e.g. placement into lined discrete cells which are capped and isolated from one another and the environment, etc.)	AES LTD, Cappincur, Tullamore, Co. Offaly - WP-OY-08-601-01	Ireland
20 03 01 B	Municipal mixed residual non-household	No	42	AES Ltd WP-OY-08-601-01	D05 - Specially engineered landfill (e.g. placement into lined discrete cells which are capped and isolated from one another and the environment, etc.)	AES LTD, Cappincur, Tullamore, Co. Offaly - WP-OY-08-601-01	Ireland
17 05 03*	soil and stones containing hazardous substances	Yes	0	Enva Ireland Limited (Portlaoise) - W0184	D10 - Incineration on land	Enva Ireland Limited, Clonminam Industrial Estate, Portlaoise - W0184	Ireland

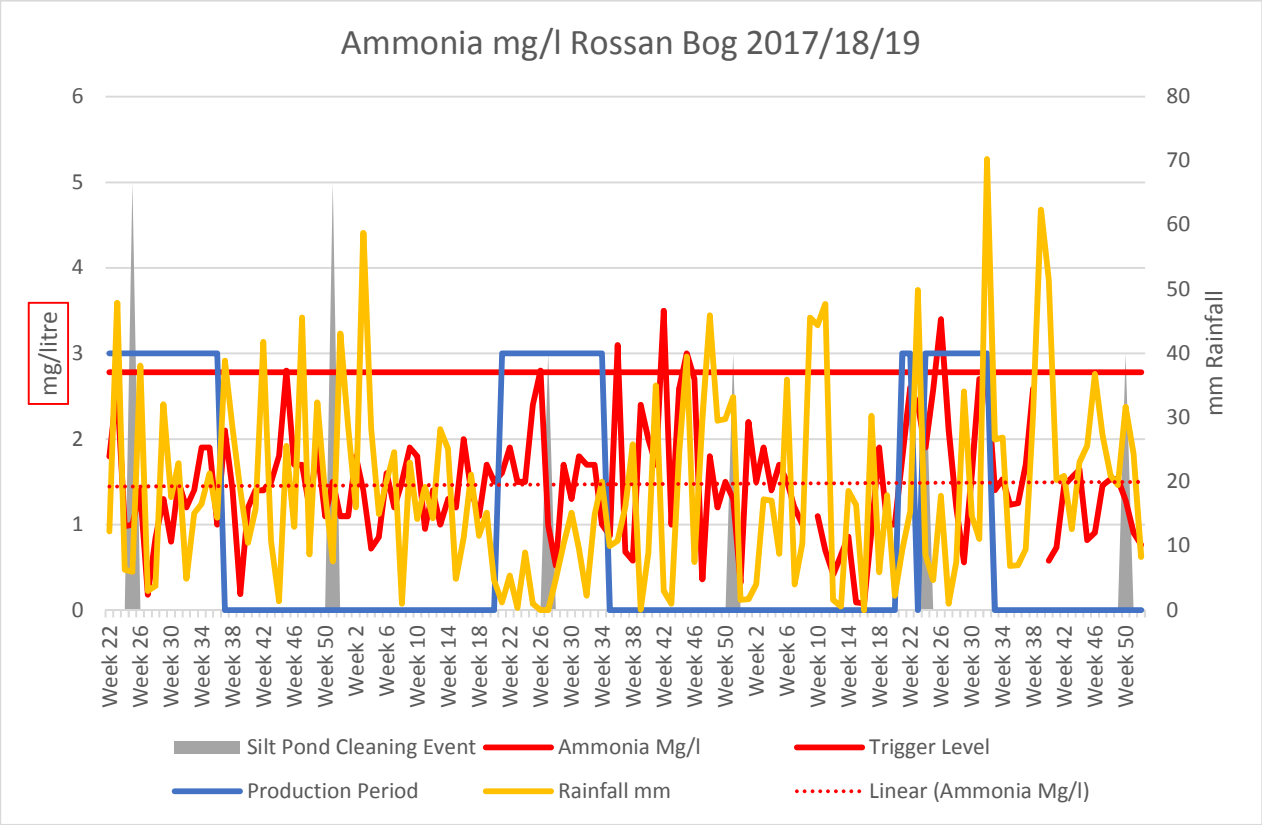
Derrygreenagh IPC Licence

Decommissioning and Rehabilitation

Bog Rehabilitation Progress Report 2019.

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

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



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

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

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

Extractive Waste Management Plan Implementation AER Update 2019.

March 2020.

IPC Licence P0501-01.

1.0 Extractive Wastes.

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

- Silt Pond excavations and maintenance
- Bog Timbers

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

2.0 Condition 7.5 Extractive Waste Management

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

3.0 Minimisation

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

4.0 Treatment

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

5.0 Recovery

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

6.0 Disposal

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

Annual Environmental Report 2019
Bord na Mona Energy Ltd
(Blackwater Group of Bogs)
IPC Licence P0502-01

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Facility Information Summary	
AER Reporting Year	2019
Licence Register Number	P0502-01
Name of site	Bord na Mona Blackwater
Site Location	Blackwater, Shannonbridge, Athlone, Co Westmeath
NACE Code	0892
Class/Classes of Activity	1.4
National Grid Reference (6E, 6 N)	200125, 225050

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 at the 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 internal rail network to the electricity generating station and lorry outloading facilities. Production achieved was 499453 tonnes which was a reduction of 53% over 2018. There were no environmental complaints received during the period. There were 3 incidents, all related to water, with 2 exceedances in suspended solids ELV and one in the COD trigger level, and in all cases the subsequent days sampling results determined that these locations were compliant. In relation to silt ponds 100% of ponds received the initial first cleaning with 85% of these ponds receiving the subsequent cleaning with inspections dictating if a pond received further cleaning. 15% of the silt ponds, all located in the Derryfadda Bogs, did not receive a second cleaning, however these bogs were not in production in 2019, and the quarterly grab sampling schedule, which included some of these outlets, where all compliant with the suspended solids ELV for that period and are now scheduled for decommissioning and rehabilitation. During the reporting period, there were a number of notifications to the Agency including notification of an interim cessation of peat extraction at the Blackwater Bogs, pending regularisation and an updated draft Rehabilitation plan. 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

Signature	Date
Group/Facility manager (or nominated, suitably qualified and experienced deputy)	01-04-2020

AIR-summary template	Lic No:	P0502-01	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 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	No	
3	Was all monitoring carried out in accordance with EPA guidance note AG2 and using the basic air monitoring checklist? Basic air monitoring checklist AGN2	Yes	

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

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

ask M.Mulhall

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

AIR-summary template	Lic No:	P0502-01	Year	2019

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 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-01	Total Particulates	350mg/m2/day	84	Daily average < ELV	mg/m2/day	7644	134	0	0	
DM-02	Total Particulates	350mg/m2/day	84	Daily average < ELV	mg/m2/day	14532	254	0	0	
DM-03	Total Particulates	350mg/m2/day	84	Daily average < ELV	mg/m2/day	6608	91	0	0	
DM-04	Total Particulates	350mg/m2/day	84	Daily average < ELV	mg/m2/day	4732	74	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:	P0502-01	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

No

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

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

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

Table A5: Solvent Mass Balance summary

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

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER) Lic No: P0502-01 Year 2019

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

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)

				Additional information
3	Was there any result in breach of licence requirements? If yes please provide brief details in the comment section of Table W3 below		Yes	
4	Was all monitoring carried out in accordance with EPA guidance and checklists for Quality of Aqueous Monitoring Data Reported to the EPA? If no please detail what areas require improvement in additional information box	External /Internal Lab Quality checklist / Assessment of results checklist	Yes	Surface water monitoring was carried out on a quarterly basis. The results of which are attached. Monthly COD yard runoff results are also 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 therof[Note 2]	Licence Compliance criteria	Measured value	Unit of measurement	Compliant with licence	Method of analysis	Procedural reference source	Procedural reference standard number	Annual mass load (kg)	Comments

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

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

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER) Lic No: P0502-01 Year 2019

Continuous monitoring

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

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

6	Did continuous monitoring equipment experience downtime? **If yes please record downtime in table W4 below**	Yes	Total of 169 days over 365 days.
7	Do you have a proactive service contract for each piece of continuous monitoring equipment on site?	Yes	Annula calibration service and troubleshooting 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-50	Water	Suspended Solids	35	24 hour	Not Listed	mg/L			185	2	Down time primarially due to battery failure.Its not possible to report average continuous emissions as this sampler is located on one of many silt ponds and samplers are moved around periodically to allow for analysis of other silt pond performance.
SW-50	Water	Ammonia (as N)	4.26	Weekly	NA	mg/L					
SW-50	Water	Total phosphorus	NA	Weekly	NA	mg/L					
SW-50	Water	COD	100	Weekly	NA	mg/L					
SW-50	Water	Volumetric flow	NA	24 hour	NA	m3/day					
SW-50	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: P0502-01 Year 2019

Bund testing

dropdown menu click to see options

			Additional information
1	Are you required by your licence to undertake integrity testing on bunds and containment structures ? if yes please fill out table B1 below listing all **new bunds and containment structures** on site, in addition to **all bunds which failed** the integrity test-**all bunding structures which failed including mobile bunds must be listed in the table below, please include all bunds outside the licenced testing period** (mobile bunds and chemstore included)	Yes	
2	Please provide integrity testing frequency period	Other (2 Yearly)	
3	Does the site maintain a register of bunds, underground pipelines (including stormwater and foul), Tanks, sumps and containers? (containers refers to "Chemstore" type units and mobile bunds)	Yes	
4	How many bunds are on site?	9	
5	How many of these bunds have been tested within the required test schedule?	9	9 bunds scheduled to be tested in 2020
6	How many mobile bunds are on site?	45	This includes barrel trays located within workshops
7	Are the mobile bunds included in the bund test schedule?	No	
8	How many of these mobile bunds have been tested within the required test schedule?	0	
9	How many sumps on site are included in the integrity test schedule?	0	
10	How many of these sumps are integrity tested within the test schedule? **Please list any sump integrity failures in table B1**	0	
11	Do all sumps and chambers have high level liquid alarms?	N/A	
12	If yes to Q11 are these failsafe systems included in a maintenance and testing programme?	N/A	
13	Is the Fire Water Retention Pond included in your integrity test programme?	N/A	

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

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

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

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

Pipeline/underground structure testing

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

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

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

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

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

Groundwater/Soil monitoring template	Lic No:	P0502-01	Year	2019

			Comments	
1	Are you required to carry out groundwater monitoring as part of your licence requirements?	no		Please provide an interpretation of groundwater monitoring data in the interpretation box below or if you require additional space please include a groundwater/contaminated land monitoring results interpretaion as an additional section in this AER
2	Are you required to carry out soil monitoring as part of your licence requirements?	no		
3	Do you extract groundwater for use on site? If yes please specify use in comment section	no	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. Groundwater monitoring template	SELECT		
5	Is the contamination related to operations at the facility (either current and/or historic)	N/A		
6	Have actions been taken to address contamination issues?If yes please summarise remediation strategies proposed/undertaken for the site	N/A		
7	Please specify the proposed time frame for the remediation strategy	N/A		
8	Is there a licence condition to carry out/update ELRA for the site?	N/A		
9	Has any type of risk assesment been carried out for the site?	N/A		
10	Has a Conceptual Site Model been developed for the site?	N/A		
11	Have potential receptors been identified on and off site?	N/A		
12	Is there evidence that contamination is migrating offsite?	N/A		Please enter interpretation of data here

Table 1: Upgradient Groundwater monitoring results

Date of sampling	Sample location reference	Parameter/ Substance	Methodology	Monitoring frequency	Maximum Concentration++	Average Concentration+	unit	GTV's*	SELECT**	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

Groundwater/Soil monitoring template Lic No: P0502-01 Year 2019

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)

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

Table 3: Soil results

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

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

Environmental Liabilities template	Lic No:	P0502-01	Year	2019

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: P0502-01 Year 2019

Highlighted cells contain dropdown menu click to view

			Additional Information
1	Do you maintain an Environmental Mangement System (EMS) for the site. If yes, please detail in additional information	Yes	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	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 .Employees get environmental training at a minium of every two years and updates are carried out from time to time in addition to that .	100	In total 46 Personnel received training in 2019. Ten Hydraulic Harrows were deployed at six locations including the four sensitive areas. Headland peat was collected at appicable production areas and returned as part of overall production.	Individual	Improved Environmental Management Practices
Waste reduction/Raw material usage efficiency	Waste Streamlining.It is planned to continue with and where possible improve the current waste management service provided by AES Ltd	100	Quarterly waste reports are returned for records/filing and waste streams are segrated on site to maximise recycling potential.	Section Head	Improved Environmental Management Practices
Reduction of emissions to Water	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.	85	Silt pond cleaning and upgrade was on target with one machines designated full time at silt control.	Individual	Improved Environmental Management Practices

Environmental Management Programme/Continuous Improvement Programme template				Lic No:	P0502-01	Year	2019
Materials Handling/Storage/Bunding	Increased bund capacity will be provided where required. Bund integrity testing will be carried out where required.	100	There were no additional bund requirements.	Individual	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 184.76 tonnes were sent off site for recycling.	Individual	Improved Environmental Management Practices		
Groundwater protection	It is proposed to upgrade existing septic tank systems where required.	100	Septic tanks are continually being assessed and upgrade works scheduled where required.	Section Head	Improved Environmental Management Practices		

Noise monitoring summary report	Lic No:	P0502-01	Year	2019

1	Was noise monitoring a licence requirement for the AER period? If yes please fill in table N1 noise summary below	No
2	Was noise monitoring carried out using the EPA Guidance note, including completion of the "Checklist for noise measurement report" included in the guidance note as table 6? (Noise Guidance note NG4)	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:	P0502-01	Year	2019

			Additional information
1	When did the site carry out the most recent energy efficiency audit? Please list the recommendations in table 3 below		
2	Is the site a member of any accredited programmes for reducing energy usage/water conservation such as the SEAI programme linked to the right? If yes please list them in additional information	SEAI - Large Industry Energy Network (LIEN)	
3	Where Fuel Oil is used in boilers on site is the sulphur content compliant with licence conditions? Please state percentage in additional information	No	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)	21439.87	15471.48		
Total Energy Generated (MWHrs)				
Total Renewable Energy Generated (MWHrs)				
Electricity Consumption (MWHrs)	1425	1533.977		
Fossil Fuels Consumption:				
Heavy Fuel Oil (m3)				
Light Fuel Oil (m3)	1969.774	1389.119		
Natural gas (m3)				
Coal/Solid fuel (metric tonnes)	8	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^3yr):	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: P0502-01 Year 2019

Table R3 Waste Stream Summary

	Total	Landfill	Incineration	Recycled	Other
Hazardous (Tonnes)	16.57	0	14	2.57	
Non-Hazardous (Tonnes)	892.77	132.28	7.96	86.7	

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: P0502-01 Year 2019

Complaints

		Additional information
Have you received any environmental complaints in the current reporting year? If yes please complete summary details of complaints received on site in table 1 below	No	

Table 1 Complaints summary

Date	Category	Other type (please specify)	Brief description of complaint (Free txt <20 words)	Corrective action< 20 words	Resolution status	Resolution date	Further information

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

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 reoccurence
10/12/2019	Breach of ELV	Licenced discharge point (ty	1. Minor	Water	Adverse weather		None	EPA ref No. INCI017817	New	None	N/A	Complete	11/12/2019	Low
20/11/2019	Breach of ELV	Licenced discharge point (ty	1. Minor	Water	Adverse weather		None	EPA ref No. INCI017672	New	None	N/A	Complete	21/11/2019	Low
14/10/2019	Breach of ELV	Licenced discharge point (ty	1. Minor	Water	Not related to site activities		None	EPA ref No. INIC017450	New	None	N/A	Complete	15/10/2019	Low

Total number of incidents current year	3
Total number of incidents previous year	4
% reduction	25.00%

Waste Summary Continued Lic No: P0502-01 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
20 03 01 B	Municipal mixed residual non-household	No	22.28	AES Ltd WP-OY-08-601-02	D01 - Deposit into or on to land (e.g. landfill, etc.)	AES LTD, Cappincur, Tullamore, Co. Offaly - WP-OY-08-601-01	Ireland
20 03 01 A	Municipal mixed residual household	No	110	AES Ltd WP-OY-08-601-01	D01 - Deposit into or on to land (e.g. landfill, etc.)	AES LTD, Cappincur, Tullamore, Co. Offaly - WP-OY-08-601-01	Ireland
17 04 07	mixed metals	No	86.7	AES Ltd WP-OY-08-601-00	R04 - Recycling/reclamation of metals and metal compounds	AES LTD, Cappincur, Tullamore, Co. Offaly - WP-OY-08-601-01	Ireland
15 01 03	wooden packaging	No	7.96	AES Ltd WP-OY-08-601-01	R01 - Use principally as a fuel or other means to generate energy	AES LTD, Cappincur, Tullamore, Co. Offaly - WP-OY-08-601-01	Ireland
13 02 05*	mineral-based non-chlorinated engine, gear and lubricating oils	Yes	14	Enva Ireland Limited - L1745	R01 - Use principally as a fuel or other means to generate energy	R.D. Recycling, Houthalen, Reg No: 51727/1KD	Belgium
16 01 07*	oil filters	Yes	1.73	Enva Ireland Limited - L1745	R04 - Recycling/reclamation of metals and metal compounds	R.D. Recycling, Houthalen, Reg No: 51727/1KD	Belgium
11 01 13*	degreasing wastes containing hazardous substances	Yes	0.84	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
02 01 04	waste plastics (except packaging)	No	184.76	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)	ADN Materials Ltd., Lossetts, Carrickmacross, Co. Monaghan - WFP-MN-12-0001-04	Ireland

Blackwater IPC Licence

Decommissioning and Rehabilitation

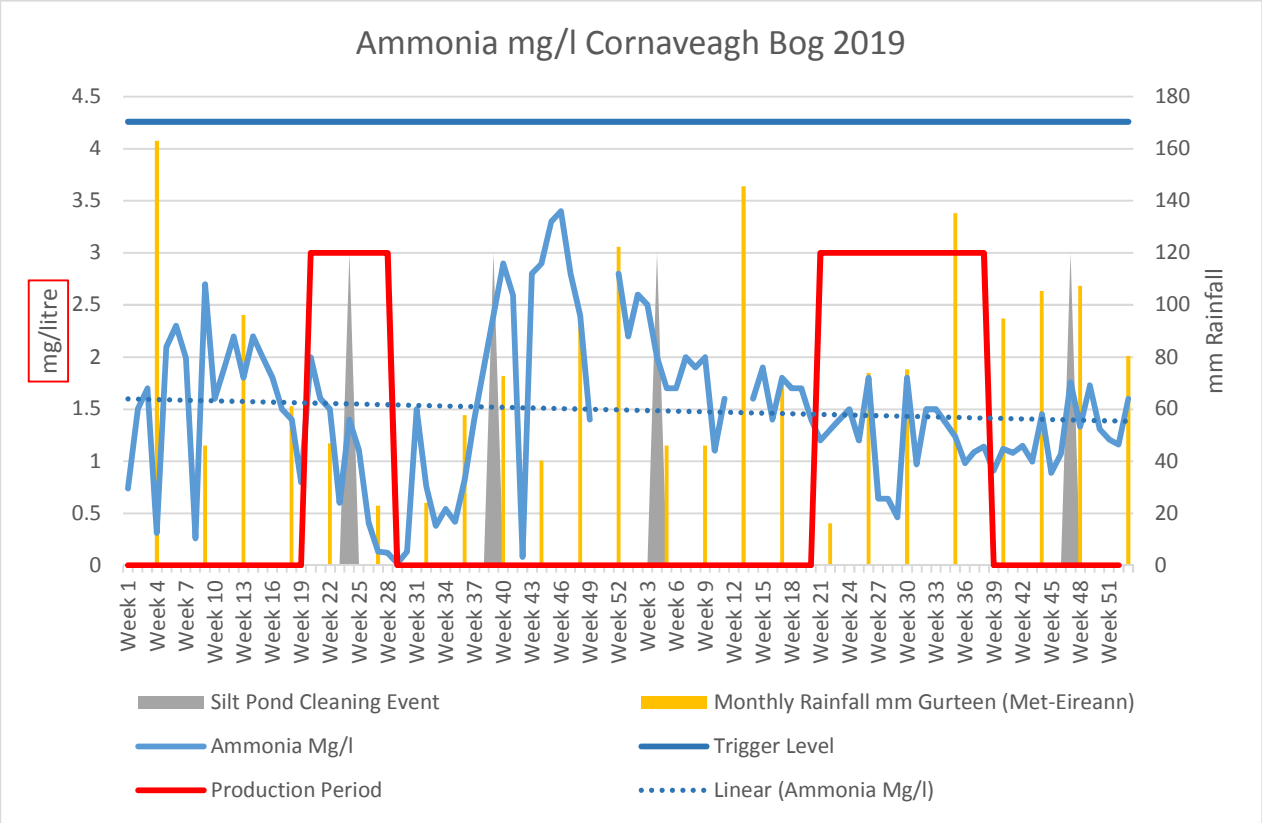
Bog Rehabilitation Progress Report 2019.

- There was ongoing monitoring of peatland rehabilitation carried out in previous years at Bunahinly and Kilmacshane Bog. Ongoing rehabilitation trials (cutaway re-wetting and *Sphagnum* inoculation) are continually being monitoring. Sphagnum inoculation at Bunihinly bog has not been effective so far (2 years after inoculation).
- Peatland rehabilitation carried out in Attymon Bog. This site had been revegetating naturally and had been used for sod-turf cutting. Drain-blocking carried out to re-wet peat and encourage the development of wet peatland habitats and encourage natural colonisation of bare peat areas. It is currently a mosaic of bare peat and pioneer peatland habitats. 191 ha targeted. 75% complete. Japanese Knotweed (Invasive species) management is ongoing at Attymon. A small area was sprayed with herbicide in 2017 and 2018. This is continued to be monitored and has been quite effective.
- Peatland rehabilitation carried out in Cloonkeen Bog. This site had been revegetating naturally and had been used for sod-turf cutting. Drain-blocking carried out to re-wet peat and encourage the development of wet peatland habitats and encourage natural colonisation of bare peat areas. It is currently a mosaic of bare peat and pioneer peatland habitats. 142 ha targeted. 75% complete.
- The Newown-Lough Gore Bog site rehabilitation plan was finalised and submitted to the EPA. Bog restoration has been completed in Lough Gore Bog (130 ha). This site forms part of the Bord na Mona Raised Bog Restoration Programme. This bog was drained but never fully developed. Peat dams have been inserted by an excavator to re-wet the peat, improve the condition of the overall bog and encourage the development of *Sphagnum*-rich active raised bog habitat. This bog is currently being considered for SAC/NHA designation by the NPWS as part of the National Raised Bog Special Area of Conservation Management Plan and the National Review of Raised Bog NHAs.
- Bog restoration ongoing in Newtown Bog (184 ha). This is 40% complete. This site forms part of the Bord na Mona Raised Bog Restoration Programme. This bog was drained but never fully developed. Peat dams have been inserted by an excavator to re-wet the peat, improve the condition of the overall bog and encourage the development of Sphagnum-rich active raised bog habitat. This bog is currently being considered for SAC/NHA designation by the NPWS as part of the National Raised Bog Special Area of Conservation Management Plan and the National Review of Raised Bog NHAs.

- A Greenhouse Gas Monitoring programme to investigate carbon fluxes on restored bog at Moyarwood finished in 2018 ((a continuation of the NEROS (EPA-funded project)). This research has shown that 8 years after bog restoration, Moyarwood bog (part of Derrydoo-Woodlough) has switched to a sink for CO2 and is a net GHG sink.
  http://www.epa.ie/pubs/reports/research/biodiversity/Research_Report_236.pdf
  https://www.sciencedirect.com/science/article/abs/pii/S0925857418300521?via%3Dihub
- Ballydangan Bog has been managed for conservation since 2009. The site is leased to a local community group. Many stakeholders are involved in this project which entails managing the site for the conservation of ground nesting birds, specifically Curlew and Red Grouse.
- This year has seen significant changes in Bord na Móna. Bord na Móna's Brown to Green Strategy delivers on national and EU decarbonisation policies. This has driven a significant reduction in peat-milling volumes and operational footprint in Summer 2019 which in turn enables progression of de-commissioning and rehabilitation plans. It is planned to close West Offaly Power and Lough Ree Power Stations by the end of 2020. Both stations were peat-fired and supplied by Bord na Móna. At a result, the industrial peat production bogs in the Blackwater Bog Group that supplied these power stations will begin a programme of rehabilitation and decommissioning. It is expected that this programme will start in 2020. The Blackwater bog group rehabilitation plans are currently being reviewed, updated and finalised as part of this process.
- As part of company re-structure in 2019, a dedicated operational unit has now been set up to plan, progress and report on de-commissioning and rehabilitation.
- Planning for rehabilitation with walk-over surveys to update rehabilitation plans was carried out at Castlegar, Gowla, Boughill and Derryfadda Bog in 2019.
- Bord na Móna are also supporting other GHG research projects (EPA-funded SMARTBOG). Garryduff has been selected as a research site for this project and it is planned to measure GHG fluxes, water quality and water flow from this site over the next few years.
- Bord na Mona is also supporting other research projects into various ecosystem services of peatlands such as WaterPeat (EPA) and SWAMP (EPA). These research projects are studying various ecosystem services of peatlands such as GHG fluxes, carbon storage and creating future carbon sinks, improving water quality and regulating water flows. Garryduff has been selected as a project site for the WaterPeat and SWAMP projects.
- 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 in 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 Blackwater 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 Blackwater	Siltpond Monitoring Frequency & Results										
IPPC Licence P0502-01											
X	Y	Bog	SW	Monitoring	pH	SS	TS	Ammonia	TP	COD	Colour
202333.29	229631.85	Blackwater Bog	SW-74	Q1 19	7.7	<5	384	0.56	<0.05	48	94
202300.90	227130.53	Blackwater Bog	SW-75	Q1 19	7.8	<5	414	0.2	<0.05	36	68
202291.65	226866.28	Blackwater Bog	SW-76	Q1 19	7.7	<5	266	0.03	0.05	70	202
202336.42	226119.40	Blackwater Bog	SW-80	Q1 19	7.8	<5	416	0.09	<0.05	36	72
181512.95	248204.34	Boughill	SW-130	Q1 19	7.1	<5	186	1.3	0.31	94	280
180902.52	249292.48	Boughill	SW-131	Q1 19	6.5	24	188	0.38	0.09	92	163
180550.26	249355.85	Boughill	SW-132	Q1 19	6.6	<5	210	0.16	<0.05	76	191
180070.42	250026.88	Boughill	SW-133	Q1 19	5.7	<5	98	0.38	0.05	77	185
179026.64	249928.15	Boughill	SW-134	Q1 19	6	<5	98	0.23	0.06	62	212
178971.22	249578.22	Boughill	SW-135	Q1 19	7.3	6	232	0.05	<0.05	60	136
179232.81	249514.39	Boughill	SW-136	Q1 19	6.3	<5	134	0.53	<0.05	62	234
179707.29	248776.74	Boughill	SW-137	Q1 19	7	<5	112	0.38	<0.05	64	201
179163.83	248580.13	Boughill	SW-138	Q1 19	7.1	<5	134	0.43	0.05	72	200
196834.50	231514.48	Clooniff	SW-58	Q1 19	6.5	12	222	<0.02	0.11	138	264
204193.18	233292.08	Bloomhill	SW-45	Q2 19	7.4	<5	184	0.12	<0.05	70	193
209103.76	233133.72	Bloomhill	SW-46	Q2 19	8.1	<5	160	0.02	<0.05	22	44
206357.24	236321.59	Kilgarvin	SW-88	Q2 19	7.1	17	150	1.3	<0.05	80	240
207140.85	235210.03	Kilgarvin	SW-89	Q2 19	7.4	<5	196	3.4	<0.05	80	200
207016.78	235121.11	Kilgarvin	SW-89A	Q2 19	7.5	12	180	2.5	<0.05	62	146
208033.11	235779.32	Kilgarvin	SW-90	Q2 19	7.2	<5	119	1	<0.05	85	262
206651.86	235235.78	Kilgarvin	SW-91	Q2 19	7.7	<5	242	2.2	<0.05	59	132
206721.04	238609.93	Bunahinly	SW-92	Q2 19	6.6	<5	116	0.42	<0.05	126	248
206662.99	238274.82	Bunahinly	SW-93	Q2 19	6.2	<5	88	0.17	<0.05	108	269
205547.19	238164.83	Bunahinly	SW-94	Q2 19	7.1	<5	128	0.71	<0.05	129	236
206521.02	236852.02	Kilgarvin	SW-95	Q2 19	7.4	<5	130	0.15	<0.05	52	187
206966.18	236771.02	Kilgarvin	SW-96	Q2 19	7.4	6	192	0.09	<0.05	102	196
206284.38	240035.71	Bunahinly	SW-97	Q2 19	7	<5	134	0.1	<0.05	117	272
196289.52	229517.21	Clooniff	SW-54	Q2 19	6.2	<5	150	<0.02	0.06	57	353
178464.41	246488.91	Gowla	SW-125	Q3 19	6.6	10	206	0.17	0.11	87	424
179332.06	244537.90	Gowla	SW-127	Q3 19	6.7	5	142	0.21	0.08	99	372
179271.28	244726.80	Gowla	SW-128	Q3 19	6.7	6	178	0.23	0.06	95	354
180966.12	244030.48	Derryfadda Bog	SW-107	Q3 19	7	<5	171	1.3	0.06	82	337
180631.06	243928.81	Killaderry	SW-108	Q3 19	7	26	258	0.28	<0.05	89	349
181456.84	243133.74	Killaderry	SW-109	Q3 19	6.6	5	162	1.4	<0.05	96	319
182202.14	242638.34	Killaderry	SW-110	Q3 19	7	<5	186	0.27	0.06	91	406
182686.37	241713.45	Killaderry	SW-111	Q3 19	6.5	8	165	0.098	<0.05	89	387
182715.77	241407.91	Killaderry	SW-112	Q3 19	6.5	7	101	0.717	<0.05	77	315
182704.22	240840.26	Killaderry	SW-113	Q3 19	6.8	5	289	0.572	<0.05	98	672
182203.20	241175.49	Killaderry	SW-114	Q3 19	6.8	5	133	0.86	<0.05	78	296
181563.73	241235.50	Killaderry	SW-115	Q3 19	6.7	<2	126	0.741	<0.05	64	267
182457.16	240577.59	Castlegar	SW-117	Q3 19	7	7	184	0.91	0.07	99	415
182399.93	239909.95	Castlegar	SW-118	Q3 19	4.5	<5	212	1.7	0.08	96	401
182093.30	245946.00	Derryfadda Bog	SW-99	Q4 19	6.7	7	91	0.285	<0.05	45	229
182388.81	245823.47	Derryfadda Bog	SW-100	Q4 19	7.4	<2	343	0.009	<0.05	68	285
182316.10	245297.50	Derryfadda Bog	SW-101	Q4 19	6.4	<2	74	0.247	<0.05	47	218
182139.73	245264.91	Derryfadda Bog	SW-102	Q4 19	6.5	3	246	0.128	<0.05	98	397
183228.01	244324.76	Derryfadda Bog	SW-103	Q4 19	6.6	2	109	0.281	<0.05	42	225
183590.31	240198.77	Castlegar	SW-119	Q4 19	6.2	<2	93	0.479	<0.05	57	291
184106.45	239849.36	Castlegar	SW-120	Q4 19	5	<2	106	0.079	<0.05	81	398
184125.26	239565.89	Castlegar	SW-121	Q4 19	4.2	<2	103	0.025	<0.05	88	453
184137.69	239522.07	Castlegar	SW-122	Q4 19	5.3	<5	239	0.027	<0.05	96	376
184479.03	239013.00	Castlegar	SW-123	Q4 19	6.9	3	109	0.18	<0.05	46	209
183794.87	237417.33	Castlegar	SW-124	Q4 19	6.5	5	115	0.202	<0.05	67	309
202648.98	224016.88	Blackwater Bog	SW-78	Q4 19	6.5	7	128	0.432	<0.05	79	497
202934.41	224449.28	Blackwater Bog	SW-79	Q4 19	7	4	198	2.36	<0.05	66	327
203526.10	225073.81	Blackwater Bog	SW-83	Q4 19	6	4	148	1.09	<0.05	106	594



Cornaveagh Bog

Cornaveagh Bog is an active production bog with the composite sampler located here during 2018 and 2019. The composite sampler takes a flow proportional composite sample over a 24 hour period. The sampler had 2% overall downtime during the period mainly because it is located on the silt pond outlet from Cornaveagh Bog which can have negative flow during winter flooding events, resulting in zero discharge during these events and limited safe access for a weekly grab sample. In addition, during periods, a grab sample would have been taken, where the sampler failed to take a composite sample, this enabled the licence requirement for a weekly ammonia sample and the associated requirement in the AER to trend the results. The ammonia trigger level of 4.26mg/l, as agreed with the Agency, was not exceeded during the period. There is an emerging reducing trend in Ammonia concentrations from the bog and this associated outlet, which mirrors the trend in other bogs where trending analysis has shown similar slight down ware trend of

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

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

Extractive Waste Management Plan Implementation AER Update 2019

March 2020.

IPC Licence P0502-01.

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 of the bogs will be in a decommissioning and rehabilitation phase, which will see the generation of bog timbers from production having ceased. In addition, and depending on the progress with bog stabilisation and rehabilitation, silt generation will be significantly reducing, which will lead to reduced volumes to be removed from the silt ponds.
- West Offaly Power will be ceasing operation at the end of 2020, so beyond this there will be no further generation of power station screenings.

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 West Offaly 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 2019
Bord na Mona Biomass Ltd
(Allen Group of Bogs)
IPC Licence P0503-01

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Facility Information Summary	
AER Reporting Year	2019
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, ridiging 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 Timhoe workshop, that was resolved, and the other related to dust from Ballykean bog and which was also resolved to the satisfaction ofthe 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 Timahoe 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 Brennan	31/03/2020
Signature Group/Facility manager (or nominated, suitably qualified and experienced deputy)	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 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	No	
3	Was all monitoring carried out in accordance with EPA guidance note AG2 and using the basic air monitoring checklist? Basic air monitoring checklist AGN2	Yes	

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

Emission reference no:	Parameter/ Substance	Frequency of Monitoring	ELV in licence or any revision therof	Licence Compliance criteria	Measured value	Unit of measurement	Compliant with licence limit	Method of analysis	Annual mass load (kg)	Comments -reason for change in % mass load from previous year if applicable
	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?	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 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	14420	303	0	0	Dust monitioring 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 therof	Compliance
					SELECT
					SELECT

Table A5: Solvent Mass Balance summary

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

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER) Lic No: P0503-01 Year 2019

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

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

			Additional Information
5	Does your site carry out continuous emissions to water/sewer monitoring?	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 primarially 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?	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 2019

Bund testing — dropdown menu click to see options

			Additional information
1	Are you required by your licence to undertake integrity testing on bunds and containment structures ? if yes please fill out table B1 below listing all **new bunds and containment structures** on site, in addition to **all bunds which failed** the integrity test-**all bunding structures which failed including mobile bunds must be listed in the table below, please include all bunds outside the licenced testing period** (mobile bunds and chemstore included)	Yes	
2	Please provide integrity testing frequency period	Other (2 Yearly)	
3	Does the site maintain a register of bunds, underground pipelines (including stormwater and foul), Tanks, sumps and containers? (containers refers to "Chemstore" type units and mobile bunds)	Yes	
4	How many bunds are on site?	3	
5	How many of these bunds have been tested within the required test schedule?	3	One bund was tested and passed in 2019. Two bunds were tested and passed in 2018.
6	How many mobile bunds are on site?	90	
7	Are the mobile bunds included in the bund test schedule?	No	Visually inspected
8	How many of these mobile bunds have been tested within the required test schedule?	0	
9	How many sumps on site are included in the integrity test schedule?	0	
10	How many of these sumps are integrity tested within the test schedule?	0	
	Please list any sump integrity failures in table B1		
11	Do all sumps and chambers have high level liquid alarms?	SELECT	
12	If yes to Q11 are these failsafe systems included in a maintenance and testing programme?	SELECT	
13	Is the Fire Water Retention Pond included in your integrity test programme?	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 2019		NA	NA	NA

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

			Commentary
15	Has integrity testing been carried out in accordance with licence requirements and are all structures tested in line with BS8007/EPA Guidance?	Yes	bunding and storage guidelines
16	Are channels/transfer systems to remote containment systems tested?	No	
17	Are channels/transfer systems compliant in both integrity and available volume?	No	

Pipeline/underground structure testing

1	Are you required by your licence to undertake integrity testing* on underground structures e.g. pipelines or sumps etc ? if yes please fill out table 2 below listing all underground structures and pipelines on site **which failed the integrity test and all which have not been tested withing the integrity test period as specified**	Yes	No underground pipe lines that require testing
2	Please provide integrity testing frequency period	Other (Every 3 Years)	

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

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

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

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

Groundwater/Soil monitoring template	Lic No:	P0503-01	Year	2019

			Comments	
1	Are you required to carry out groundwater monitoring as part of your licence requirements?	no		Please provide an interpretation of groundwater monitoring data in the interpretation box below or if you require additional space please include a groundwater/contaminated land monitoring results interpretaion as an additional section in this AER
2	Are you required to carry out soil monitoring as part of your licence requirements?	no		
3	Do you extract groundwater for use on site? If yes please specify use in comment section	yes	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. Groundwater monitoring template	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

Table 1: Upgradient Groundwater monitoring results

Date of sampling	Sample location reference	Parameter/ Substance	Methodology	Monitoring frequency	Maximum Concentration++	Average Concentration+	unit	GTV's*	SELECT**	
							SELECT			SELECT
							SELECT			SELECT

.+ where average indicates arithmetic mean

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

Table 2: Downgradient Groundwater monitoring results

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

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

Groundwater monitoring template

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

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

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)	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 2019

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

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

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 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 segrated 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 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.		

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? 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 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	2019

			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	

SEAI - Large Industry Energy Network (LIEN)

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^3yr):	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					

Complaints and Incidents summary template

Lic No: P0503-01 Year 2019

Complaints

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	Additional information

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
05/02/2019	Air		Complaint about dust blowing into the property from Ballykeane Bog	Personnel working in the area informed and made aware of their environmental training. Headland moved further down the bog.	Complete	11/02/2019	Reported to Agency Ref: LR040433
21/06/2019	Air		Complaint about smoke blowing into the property from a fire at Timahoe Workshop	Fire Services called, fire extinguished.	Complete	21/06/2019	Reported to Agency Ref:LR042923
	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

Incidents

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

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

Table 2 Incidents summary

Date of occurrence	Incident nature	Location of occurrence	Incident category*please refer to guidance	Receptor	Cause of incident	Other cause(please specify)	Activity in progress at time of incident	Communication	Occurrence	Corrective action<20 words	Preventative action <20 words	Resolution status	Resolution date	Likelihood of reoccurence
07/02/2019	Trigger level reached	Ballydermot SWE-1	1. Minor	Water	Other (add details)	Unknown	Normal activities	EPA INCI016052	New	Outfall checked.	None possible	Complete	25/02/2019	Low
15/02/2019	Trigger level reached	Lullybeg Bog SW-56	1. Minor	Water	Unknown	Unknown	Normal activities	EPA INCI016053	New	Outfall checked.	None possible	Complete	25/02/2019	Medium
04/04/2019	Trigger level reached	Ballydermot SWE-1	1. Minor	Water	Unknown	Unknown	Normal activities	EPA INCI016481	New	Outfall checked.	None possible	Complete	17/05/2019	Medium
17/06/2019	Fire	Timahoe Workshop Shed	2. Limited	Air	Not related to site activities	Not related to site activities	Normal activities	EPA INCI016656	New	Fire Service called	Area patrolled	Complete	17/06/2019	Low
20/06/2019	Trigger level reached	Ballykilleen Bog SW-35A	1. Minor	Water	Unknown	Unknown	Normal activities	EPA INCI016660	New	Outfall checked.	None possible	Complete	19/06/2019	Medium
04/07/2019	Fire	Timahoe Workshop Yard	1. Minor	Air	Not related to site activities	Not related to site activities	Normal activities	EPA INCI016761	New	Fire Service called	Area patrolled	Complete	04/07/2019	Low
01/08/2019	Fire	Timahoe Workshop Shed	1. Minor	Air	Not related to site activities	Not related to site activities	Normal activities	EPA INCI016926	Recurring	Fire Service called	Area patrolled	Complete	02/08/2019	Low

Total number of incidents current year	7
Total number of incidents previous year	14
% reduction/ increase	-50.00%

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

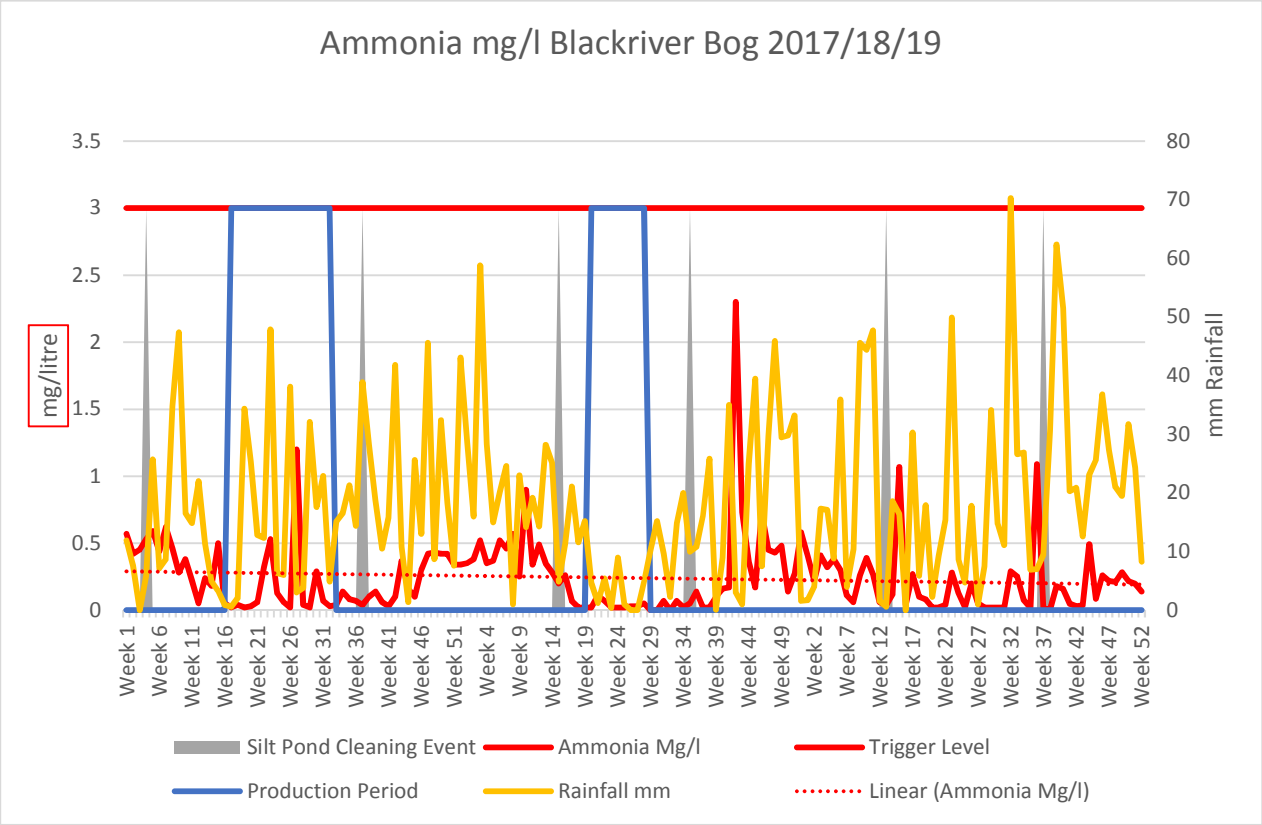
Bog Rehabilitation Progress Report 2019.

- 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 in 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	Ballykilleen	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 2019
Bord na Mona Energy Ltd
(Mountdillon Group of Bogs)
IPC Licence P0504-01

LEABEG, TULLAMORE, CO. OFFALY, IRELAND
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Facility Information Summary	
AER Reporting Year	2019
Licence Register Number	P0504-01
Name of site	Bord na Mona Mountdillon
Site Location	Mountdillon, Lanesboro, Co Longford
NACE Code	0892
Class/Classes of Activity	1.4
National Grid Reference (6E, 6 N)	E204720. N268880

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 354376 tonnes which was a 58% reduction on 2018. Production has ceased in 85% of the Mountdillon bogs and these are now entering the decommissioning and rehabilitation phase. There were 3 environmental complaints received during the reporting period, all related to dust nuisance and all reported to the Agency through ALDER, and 5 incidents of exceedance in trigger levels for Ammonia and COD at various emission points as partof the quarterly sampling requirements, all in in-active bogs. The number of exceedances in 2019 was the same as 2018. In relation to silt pond cleaning, 100% of ponds received the required two cleanings with some ponds receiving three. Decommissioning and Rehabilitation works are described in an attachment. During the reporting period, there were a number of notifications to the Agency, including notification of a proposed Windfarm at Derryadd Bog, a revised rehabilitation plan for Mostrim Bog and notification of an interim cessation of peat extraction at Mountdillon, pending regularisation.

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 Brennan	31/03/2020
Signature Group/Facility manager (or nominated, suitably qualified and experienced deputy)	Date

AIR-summary template	Lic No:	P0504-01	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 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	No	
3	Was all monitoring carried out in accordance with EPA guidance note AG2 and using the basic air monitoring checklist? (Basic air monitoring checklist / AGN2)	Yes	

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

Emission reference no:	Parameter/ Substance	Frequency of Monitoring	ELV in licence or any revision therof	Licence Compliance criteria	Measured value	Unit of measurement	Compliant with licence limit	Method of analysis	Annual mass load (kg)	Comments -reason for change in % mass load from previous year if applicable
	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:	P0504-01	Year	2019

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 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-01	Total Particulates	350mg/m2/day	84	Daily average < ELV	mg/m2/day	5880	178	0	0	Dust monitoring took place on 3 occasions for 28 days each time between May and Aug
DM-02	Total Particulates	350mg/m2/day	84	Daily average < ELV	mg/m2/day	4256	122	0	0	
DM-05	Total Particulates	350mg/m2/day	84	Daily average < ELV	mg/m2/day	5152	134	0	0	
DM-06	Total Particulates	350mg/m2/day	84	Daily average < ELV	mg/m2/day	6272	140	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:	P0504-01	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

No	

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

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

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

Table A5: Solvent Mass Balance summary

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

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER) Lic No: P0504-01 Year 2019

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

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)

				Additional information
3	Was there any result in breach of licence requirements? If yes please provide brief details in the comment section of Table W3 below		NO	
4	Was all monitoring carried out in accordance with EPA guidance and checklists for Quality of Aqueous Monitoring Data Reported to the EPA? If no please detail what areas require improvement in additional information box	External /Internal Lab Quality checklist / Assessment of results checklist	Yes	Surface water monitoring was carried out on a quarterly basis. The results of which are attached. Monthly COD yard runoff results are also attached.

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

Emission reference no:	Emission released to	Parameter/ SubstanceNote 1	Type of sample	Frequency of monitoring	Averaging period	ELV or trigger values in licence or any revision thereof[Note 2]	Licence Compliance criteria	Measured value	Unit of measurement	Compliant with licence	Method of analysis	Procedural reference source	Procedural reference standard number	Annual mass load (kg)	Comments

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

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

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER) Lic No: P0504-01 Year 2019

Continuous monitoring

			Additional Information
5	Does your site carry out continuous emissions to water/sewer monitoring?	Yes	
	If yes please summarise your continuous monitoring data below in Table W4 and compare it to its relevant Emission Limit Value (ELV)		
6	Did continuous monitoring equipment experience downtime? **If yes please record downtime in table W4 below**	Yes	172 days in 365. See note below
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
SW77A	Water	Suspended Solids	35	24 hour	Not lifted	mg/L			4128	0	Down time is usually due to no flow and battery failure issues. However during the reporting year the sampler gave considerable problems due to both software and mechanical breakdowns. Currently a review of all samplers is under way. Its not possible to report average continuous emissions as this sampler is located on one of 151 silt ponds and samplers are moved around periodically to allow for analysis
SW77A	Water	Ammonia (as N)	1.42	Weekly		mg/L					
SW77A	Water	Total phosphorus	NA	Weekly	NA	mg/L					
SW77A	Water	COD	100	Weekly	NA	mg/L					
SW77A	Water	volumetric flow	NA	24 hour	NA	m3/day					
SW77A	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: P0504-01 Year 2019

Bund testing — dropdown menu click to see options

			Additional information
1	Are you required by your licence to undertake integrity testing on bunds and containment structures ? if yes please fill out table B1 below listing all **new bunds and containment structures** on site, in addition to **all bunds which failed** the integrity test-**all bunding structures which failed including mobile bunds must be listed in the table below, please include all bunds outside the licenced testing period** (mobile bunds and chemstore included)	Yes	
2	Please provide integrity testing frequency period	Other (2 Yearly)	
3	Does the site maintain a register of bunds, underground pipelines (including stormwater and foul), Tanks, sumps and containers? (containers refers to "Chemstore" type units and mobile bunds)	Yes	
4	How many bunds are on site?	3	
5	How many of these bunds have been tested within the required test schedule?	3	All Bunds were tested in 2019
6	How many mobile bunds are on site?	7	
7	Are the mobile bunds included in the bund test schedule?	No	
8	How many of these mobile bunds have been tested within the required test schedule?	0	
9	How many sumps on site are included in the integrity test schedule?	0	
10	How many of these sumps are integrity tested within the test schedule?	0	
	Please list any sump integrity failures in table B1		
11	Do all sumps and chambers have high level liquid alarms?	N/A	
12	If yes to Q11 are these failsafe systems included in a maintenance and testing programme?	N/A	
13	Is the Fire Water Retention Pond included in your integrity test programme?	N/A	

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

Bund/Containment structure ID	Type	Specify Other type	Product containment	Actual capacity	Capacity required*	Type of integrity test	Other test type	Test date	Integrity reports maintained on site?	Results of test	Integrity test failure explanation <50 words	Corrective action taken	Scheduled date for retest	Results of retest(if in current reporting year)
504-05-01	Reinforced Concrete		Gas Oil	224608	45000	Hydraulic Test		20/09/2019	Yes	Pass	N/A	N/A	N/A	N/A
504-05-06	Reinforced Concrete		Gas Oil	36720	25000	Hydraulic Test		18/10/2019	Yes	Pass	N/A	N/A	N/A	N/A
504-05-05	Reinforced Concrete		Gas Oil	104580	23000	Hydraulic Test		09/10/2019	Yes	Pass	N/A	N/A	N/A	N/A

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

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

Pipeline/underground structure testing

1	Are you required by your licence to undertake integrity testing* on underground structures e.g. pipelines or sumps etc ? if yes please fill out table 2 below listing all underground structures and pipelines on site **which failed the integrity test and all which have not been tested withing the integrity test period as specified**	Yes	Petrol tank Tested 04 April 2018 and Passed
2	Please provide integrity testing frequency period	Other (2 Yearly)	
	*please note integrity testing means water tightness testing for process and foul pipelines (as required under your licence)		

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

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

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

Groundwater/Soil monitoring template	Lic No:	P0504-01	Year	2019

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

Table 1: Upgradient Groundwater monitoring results

Date of sampling	Sample location reference	Parameter/ Substance	Methodology	Monitoring frequency	Maximum Concentration++	Average Concentration+	unit	GTV's*	SELECT**	
							SELECT			SELECT
							SELECT			SELECT

.+ where average indicates arithmetic mean

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

Table 2: Downgradient Groundwater monitoring results

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

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

Groundwater monitoring template

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

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

Groundwater/Soil monitoring template	Lic No:	P0504-01	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)	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: P0504-01 Year 2019

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:	P0504-01	Year	2019

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: P0504-01 Year 2019

Highlighted cells contain dropdown menu click to view

			Additional Information
1	Do you maintain an Environmental Mangement System (EMS) for the site. If yes, please detail in additional information	Yes	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	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.	90	In total 79 Personnel received training in 2019. 7 hydraulic harrows were deployed during the 2019 production season.	Individual	Improved Environmental Management Practices
Waste reduction/Raw material usage efficiency	Waste Streamlining.It is planned to continue with and where possible improve the current waste management service provided by AES Ltd	100	Installed a waste management system. Quarterly waste reports are returned for records/filing and waste streams are segrated on site to maximise recycling potential.	Section Head	Improved Environmental Management Practices
Reduction of emissions to Water	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.	90	In total 79 Personnel received training in 2019.	Individual	Improved Environmental Management Practices

Environmental Management Programme/Continuous Improvement Programme template				Lic No:	P0504-01	Year	2019
Materials Handling/Storage/Bunding	Increased bund capacity will be provided where required. Bund integrity testing will be carried out where required.	80	There were no additional bund requirements. Bund integrity testing was carried out in 2019	Individual	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 262.62 tonnes of polythene were sent off site for recycling. Procurement also exploring the possibility of securing further recyclers.	Individual	Improved Environmental Management Practices		
Energy Efficiency/Utility conservation	Continue with the implementation process of the Energy Standard 50001.	100	The site successfully managed the energy standard 50001. Energy management is ongoing at the site	Section Head	Improved Environmental Management Practices		
Groundwater protection	It is proposed to upgrade existing septic tank systems where required.	90	Septic tanks are continually being assessed and upgrade works scheduled where required.	Section Head	Improved Environmental Management Practices		

Noise monitoring summary report	Lic No:	P0504-01	Year	2019

1	Was noise monitoring a licence requirement for the AER period? If yes please fill in table N1 noise summary below	No
2	Was noise monitoring carried out using the EPA Guidance note, including completion of the "Checklist for noise measurement report" included in the guidance note as table 6? (Noise Guidance note NG4)	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:	P0504-01	Year	2019

			Additional information
1	When did the site carry out the most recent energy efficiency audit? Please list the recommendations in table 3 below	Sep-19	
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 secured accrediation 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	No	Not a Licence requirement

SEAI - Large Industry Energy Network (LIEN)

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)	15225	7295	-58%	-52.00%
Total Energy Generated (MWHrs)				
Total Renewable Energy Generated (MWHrs)				
Electricity Consumption (MWHrs)	1639.399	195.114	-58	-88
Fossil Fuels Consumption:				
Heavy Fuel Oil (m3)				
Light Fuel Oil (m3)	1337.08	710.56	-58	-46.00%
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^3yr):	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: P0504-01 Year 2019

Table R3 Waste Stream Summary

	Total	Landfill	Incineration	Recycled	Other
Hazardous (Tonnes)	5.22			5.22	
Non-Hazardous (Tonnes)	4497.11	0.52		265.83	4230.76

Resource Usage/Energy efficiency summary Lic No: P0504-01 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					

Complaints and Incidents summary template Lic No: P0504-01 Year 2019

Complaints		
		Additional information
Have you received any environmental complaints in the current reporting year? If yes please complete summary details of complaints received on site in table 1 below	Yes	3 complaints in total all reported to the Agency

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
11/04/2019	Air		Dust affecting house	Both parties have agreed a resoulution	Complete	12/04/2019	Reported on Alder on 09/05/2019 Ref. No. LR041926
14/04/2019	Air		Moss and Algae growth on house	BNM did not accept Liability	Complete	15/04/2019	Reported on Alder on 09/05/2019 Ref. No. LR041925
14/04/2019	Air		Dust affecting house	Both parties have agreed a resoulution	Complete	30/06/2019	Reported on Alder on 04/07/2019 Ref. No. LR042889

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

Date of occurrence	Incident nature	Location of occurrence	Incident category*please refer to guidance	Receptor	Cause of incident	Other cause(please specify)	Activity in progress at time of incident	Communication	Occurrence	Corrective action<20 words	Preventative action <20 words	Resolution status	Resolution date	Likelihood of reoccurence
13/05/2019	Trigger level reached	SW28A Cloonaddra Bog	1. Minor	Water	Not related to site activities		No activity	EPA Ref. No. INC1016473	New	There was no activity upstream of this point that would lead to exceedance in trigger level, therefore no corrective actions are possible	NA	Complete	15/05/2019	Low
20/05/2019	Trigger level reached	SW76 Lough Bannow	1. Minor	Water	Not related to site activities		No activity	EPA Ref No. INCl016541	New	There was no activity upstream of this point that would lead to exceedance in trigger level, therefore no corrective actions are possible	NA	Complete	23/05/2019	Low
17/04/2019	Trigger level reached	SW 77A Corlea	1. Minor	Water	Not related to site activities		No activity	EPA RefNo. Incl016472	New	There was no activity upstream of this point that would lead to exceedance in trigger level, therefore no corrective actions are possible	NA	Complete	18/04/2019	Low
30/07/2019	Trigger level reached	SW 105 Whites Bog Cuilna gCun	1. Minor	Water	Not related to site activities		No activity	EPA Ref No. INCl017211	New	There was no activity upstream of this point that would lead to exceedance in trigger level, therefore no corrective actions are possible	NA	Complete	02/08/2019	Low

Complaints and Incidents summary template														
						Lic No:	P0504-01		Year	2019				
02/07/2019	Trigger level reached	SW 77A Corlea	1. Minor	Water	Not related to site activities		No activity	EPA Ref No. INCI016980	New	There was no activity upstream of this point that would lead to exceedance in trigger level, therefore no corrective actions are	NA		08/07/2019	Low

Total number of incidents current year	5
Total number of incidents previous year	5
% reduction/ increase 45%	

Waste Summary Continued				Lic No: P0504-01			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	262.62	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)	ADN Materials Ltd., Lossetts, Carrickmacross, Co. Monaghan - WFP-MN-12-0001-04	Ireland
13 02 05*	mineral-based non-chlorinated engine, gear and lubricating oils	Yes	3.2	Enva Ireland Limited (Portlaoise) - W0184	R01 - Use principally as a fuel or other means to generate energy	Enva Ireland Limited, Clonminam Industrial Estate, Portlaoise - W0184	Ireland
15 01 01	paper and cardboard packaging	No	5.52	Mulleady's Limited (Drumlish) - W0169	R03 - Recycling/reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes)	Mulleady's Limited, Cloonagh Drumlish, Co. Longford - W0169	Ireland
15 01 03	wooden packaging	No	1.66	AES Ltd WP-OY-08-601-01	R01 - Use principally as a fuel or other means to generate energy	AES LTD, Cappincur, Tullamore, Co. Offaly - WP-OY-08-601-01	Ireland
15 02 02*	absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by hazardous substances	Yes	0.07	Enva Ireland Limited - L1745	R01 - Use principally as a fuel or other means to generate energy	Lindenschmidt, Kreutzal - Reg No: E97095037	Germany
16 01 07*	oil filters	Yes	1.68	Enva Ireland Limited (Portlaoise) - W0184	R04 - Recycling/reclamation of metals and metal compounds	R.D. Recycling, Houthalen, Reg No: 51727/1KD	Belgium
16 06 01*	lead batteries	Yes	0	Enva Ireland Limited (Portlaoise) - W0184	R04 - Recycling/reclamation of metals and metal compounds	Campine Recycling, Beerse - MLAV/05173/GVDA	Belgium
11 01 13*	degreasing wastes containing hazardous substances	Yes	0.27	Safety Kleen Ireland Ltd - W0099	R02 - Solvent reclamation/regeneration	Solvent Recovery Management, PP33345F, Wheeland Rd., Knottingly, West Yorks	UK
13 05 03*	interceptor sludges	Yes	0	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	0.03	AES Ltd WP-OY-08-601-01	R04 - Recycling/reclamation of metals and metal compounds	AES LTD, Cappincur, Tullamore, Co. Offaly - WP-OY-08-601-01	Ireland
20 03 01 A	Municipal mixed residual household	No	0.5	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
20 03 01 B	Municipal mixed residual non-household	No	19.38	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 01 21*	Household waste fluorescent lamps and other mercury containing waste	Yes	0	KMK Metals Recycling Ltd. - L2952	R04 - Recycling/reclamation of metals and metal compounds	KMK Metals Recycling Ltd, Cappincur Industrial Estate, Daingean Rd, Cappincur, Tullamore, Co. Offaly - L2952	Ireland

Mountdillon IPC Licence

Decommissioning and Rehabilitation

Bog Rehabilitation Progress Report 2019.

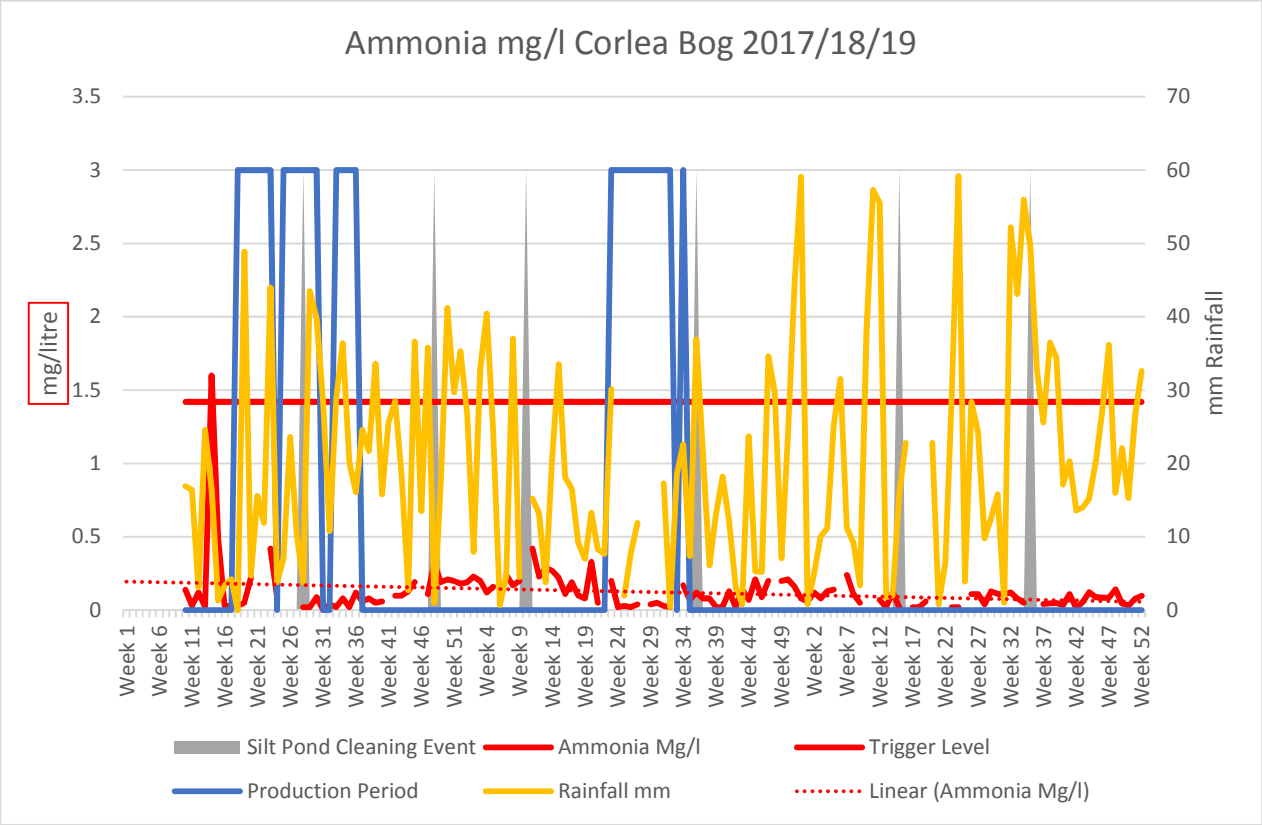
- Peatland rehabilitation was carried out in Corlea Bog. A small area (25 ha) was targeted in 2019 for drain-blocking. This site had been revegetating naturally and was re-wetted in 2018. Drain-blocking carried out to re-wet peat and encourage the development of wet peatland habitats and encourage natural colonisation of bare peat areas. It is currently a mosaic of bare peat and pioneer wetland habitats. Longford County Council are currently developing a cycling and walking track at Corlea.
- Bog restoration has been completed in Clonwhelan Bog (225 ha). This site forms part of the Bord na Mona Raised Bog Restoration Programme. This bog was drained but never fully developed. Peat dams have been inserted by an excavator to re-wet the peat, improve the condition of the overall bog and encourage the development of Sphagnum-rich active raised bog habitat. This bog is currently being considered for SAC/NHA designation by the NPWS as part of the National Raised Bog Special Area of Conservation Management Plan and the National Review of Raised Bog NHAs.
- Bog restoration is ongoing in Mostrim Bog (50 of 370 ha completed). Two excavators are currently operating at Mostrim Bog and carrying out bog restoration actions. This site forms part of the Bord na Mona Raised Bog Restoration Programme. This bog was drained but never fully developed. Peat dams have been inserted by an excavator to re-wet the peat, improve the condition of the overall bog and encourage the development of *Sphagnum*-rich active raised bog habitat.
- Longford County Council are currently developing a cycling and walking track at Knappogue.
- The Edera Bog site rehabilitation plan was circulated to stakeholders and finalised in 2019. A rehabilitation trial was carried out at Edera Bog in 2019. Edera is a production bog with relatively deep residual peat in part. Its current status is bare peat. Drain-blocking was carried out to re-wet peat and encourage the development of wet peatland habitats and encourage natural colonisation of bare peat areas. I
- Planning for rehabilitation with walk-over surveys to update rehabilitation plans was carried out at Knappoggue Bog in 2019. There is ongoing natural colonisation and re-wetting at this bog.
- This year has seen significant changes in Bord na Móna. Bord na Móna's Brown to Green Strategy delivers on national and EU decarbonisation policies. This has driven a significant reduction in peat-milling volumes and operational footprint in Summer 2019 which in turn enables progression of de-commissioning and rehabilitation plans. It is planned to close West Offaly Power and Lough Ree

Power Stations by the end of 2020. Both stations were peat-fired and supplied by Bord na Móna. At a result, the industrial peat production bogs in Mountdillion that supplied these power stations will begin a programme of rehabilitation and decommissioning. It is expected that this programme will start in 2020. The Mountdillion bog group rehabilitation plans are currently being reviewed, updated and finalised as part of this process.

- The site rehabilitation plans for Derryadd, Derryarogue and Lough Bannow Bogs were updated to take account of a renewable energy development being proposed by Bord na Mona on these cutaway sites (Derryadd Windfarm).
- 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 in 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 Mountdillon 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 Mountdillon		Siltpond Monitoring Frequency & Results							
			IPPC Licence P0504-01									
X	Y	Bog	SW	Monitoring	Sampled	pH	SS	TS	Ammonia	TP	COD	Colour
210349.35	273925.60	Clooneeny	SW-60	Q1 19	06/02/2019	7	5	130	0.63	0.05	46	166
210544.96	273475.13	Clooneeny	SW-61	Q1 19	06/02/2019	7	5	124	0.98	0.05	75	224
210395.34	272549.20	Clooneeny	SW-62	Q1 19	06/02/2019	7.6	5	114	0.52	0.05	46	98
210626.21	272173.61	Clooneeny	SW-63	Q1 19	06/02/2019	7.6	5	120	0.22	0.05	60	129
209739.62	271940.65	Clooneeny	SW-65	Q1 19	06/02/2019	7.5	5	122	0.44	0.05	55	137
209556.46	272203.00	Clooneeny	SW-66	Q1 19	06/02/2019	7.2	5	116	0.16	0.05	71	295
204806.31	268664.26	Derryadd	SW-68	Q1 19	20/03/2019	7.3	5	225	0.08	0.05	90	266
207219.29	268277.37	Derryadd	SW-70	Q1 19	20/03/2019	6.3	5	128	0.58	0.05	56	134
207139.24	268700.31	Derryadd	SW-71	Q1 19	20/03/2019	7.5	5	252	0.26	0.05	41	189
207066.22	270009.38	Killashee	SW-71A	Q1 19	20/03/2019	7.3	5	186	0.02	0.06	74	182
206957.05	270175.39	Killashee	SW-71B	Q1 19	20/03/2019	7.6	5	248	0.14	0.05	76	191
206552.83	271606.89	Killashee	SW-71C	Q1 19	20/03/2019	7.3	5	210	0.46	0.05	51	144
195895.85	269701.45	Clonadra	SW-28	Q2 19	13/05/2019	7.3	5	244	0.33	0.05	82	306
196464.25	269128.74	Clonadra	SW-28A	Q2 19	13/05/2019	7.6	5	274	2.2	0.05	39	101
197386.00	269672.35	Clonadra	SW-29	Q2 19	13/05/2019	6.7	11	144	0.02	0.06	93	256
197431.16	269547.71	Clonadra	SW-30	Q2 19	13/05/2019	7.5	5	283	0.04	0.05	66	189
195960.31	269910.87	Clonadra	SW-34	Q2 19	No flow or back up.							
205704.47	264985.60	Derryadd	SW-73	Q2 19	No flow or back up.							
206483.50	264717.84	Loughbannow	SW-74	Q2 19	20/05/2019	6.7	16	276	0.02	0.12	97	262
208383.69	266053.14	Loughbannow	SW-75	Q2 19	20/05/2019	6.8	5	184	0.25	0.05	25	95
209436.50	266841.89	Loughbannow	SW-76	Q2 19	20/05/2019	7.7	5	302	1.5	0.05	20	73
203032.90	265358.57	Derryshannoge	SW-79	Q2 19	20/05/2019	8.3	5	298	0.02	0.05	47	108
204109.47	264468.02	Derryshannoge	SW-80	Q2 19	20/05/2019	7.9	5	472	0.09	0.05	24	49
204202.83	265197.44	Derryshannoge	SW-83	Q2 19	20/05/2019	7.9	5	414	0.19	0.05	33	85
204246.77	265266.02	Derryshannoge	SW-84	Q2 19	No flow or back up.							
239153.00	272761.06	Milkernagh	SW-100	Q3 19	30/07/2019	7.7	5	264	0.03	0.13	60	150
238999.58	271185.82	Coolnagun Bog	SW-101	Q3 19	30/07/2019	6.7	5	178	0.09	0.1	91	298
238932.15	270926.89	Coolnagun Bog	SW-102	Q3 19	30/07/2019	8.0	5	449	0.02	0.1	22	38
237624.43	269656.41	Coolnagun Bog	SW-103	Q3 19	30/07/2019	7.6	5	320	0.03	0.07	34	54
236100.91	269178.31	Coolnagun Bog	SW-104	Q3 19	30/07/2019	6.7	5	368	0.8	0.1	94	327
238622.3	269573.1	Whites Bog	SW-105	Q3 19	30/07/2019	7.7	5	472	2.8	0.13	31	53
238547.6	269228.9	Whites Bog	SW-106	Q3 19	30/07/2019	7.8	5	424	0.04	0.15	50	89
		Whites Bog	SW-107	Q3 19	30/07/2019	8.1	5	470	0.14	0.08	45	74
		Whites Bog	SW-108	Q3 19	30/07/2019	8.0	5	476	0.12	0.11	62	126
		Whites Bog	SW-109	Q3 19	30/09/2019	7.7	2	341	0.782	0.05	71	305
		Cuilcraff	SW-110	Q3 19	30/07/2019	7.8	5	458	0.13	0.08	52	128
		Cuilcraff	SW-111	Q3 19	30/09/2019	7.8	2	393	0.046	0.05	72	259
		Cuilcraff	SW-112	Q3 19	30/09/2019	7.4	2	249	0.054	0.05	90	426
209520.92	261717.87	Loughbannow	SW-77	Q4 19	No flow or back up.							
210699.18	261574.22	Corlea	SW-77A	Q4 19	13/11/2019	7.6	2	374	0.046	0.05	47	156
207855.20	263302.19	Loughbannow	SW-78	Q4 19	07/11/2019	7.5	12	283	1.36	0.05	40	260
205488.20	261055.08	Derrycolumb	SW-88	Q4 19	07/11/2019	7.6	9	260	1.7	0.05	45	249
206320.96	260736.89	Derrycolumb	SW-88A	Q4 19	07/11/2019	7.7	12	185	0.163	0.05	43	310
206675.47	260347.41	Derrycolumb	SW-89	Q4 19	07/11/2019	7	5	85	0.409	0.05	37	216

209457.03	259759.30	Derrycolumb	SW-90	Q4 19	07/11/2019	7.9	7	264	0.255	0.05	53	257
207371.13	259735.70	Derrycolumb	SW-91	Q4 19	07/11/2019	7.8	7	309	0.107	0.05	65	251
208445.3	261154.8	Derrycolumb	SW91-A	Q4 19	07/11/2019	7.3	6	213	0.094	0.05	82	396
208008.49	259636.58	Derrycolumb	SW-92	Q4 19	13/11/2019	7.8	3	360	0.107	0.05	72	232
206651.08	262095.91	Derrycolumb	SW-93	Q4 19	13/11/2019	7.4	2	233	0.112	0.05	85	339
206995.27	262194.95	Derrycolumb	SW-93A	Q4 19	13/11/2019	7.40	2	257	0.315	0.05	51	128



Corlea bog is an in-active production bog with the composite sampler located in this bog in March 2017 and it remains at this location for the reporting period 2019. This bog cease production in 2017 and did not resume in 2018 or 19. Since production ceased the bog has been in a decommissioning and rehabilitation phase with rewetting occurring in 2018 and 2019. The composite sampler takes a flow proportional composite sample over a 24-hour period but had 44% downtime during the period due to periods when there was no summer discharge, water was backed up in the Winter/Spring seasons from river fluvial flooding or for technical issues. During most of these technical events, grab samples were taken. The ammonia trigger level of 1.42mg/l, as agreed with the Agency, was not exceeded during the reporting period. Overall the results are maintaining a slight downward trend as rehabilitation continues and this is in-line with the downwards trends submitted to the EPA in 2013 as required by condition 6.14. It has been established that the most relevant influencing variable on Ammonia is rainfall and activities, so due to lower rainfall levels in 2019 and rewetting of sections of the bog as required under condition 10, ammonia levels are reducing

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, or maybe retained to track levels as rehabilitation and rewetting continues to result in stabilization of the bog. There is also an EPA lead research project commencing in 2019, called the SWAMP project, whose aims are to appraise and understand the nutrient impact from peatlands, to evaluate treatment technologies and to propose predictive tools for watershed management.

Extractive Waste Management Plan Implementation AER Update 2019

March 2020.

IPC Licence P0504-01.

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 of the bogs will be in a decommissioning and rehabilitation phase, which will see the generation of bog timbers from production cease. In addition, and depending on the progress with bog stabilisation and rehabilitation, silt generation will be significantly reducing, which will lead to reduced volumes to be removed from the silt ponds.
- Lough Ree Power will be ceasing operation at the end of 2020, so beyond this there will be no further generation of power station screenings.

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 Lough Ree 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 2019
Bord na Mona Energy Ltd
(Kilberry Group of Bogs)
IPC Licence P0506-01

LEABEG, TULLAMORE, CO. OFFALY, IRELAND
TELEPHONE: (05793) 45900. INT: +353-5793-45900. FAX :(05793) 45160. INT: +353-5793-45160

Facility Information Summary	
AER Reporting Year	2019
Licence Register Number	P0506-01
Name of site	Bord na Mona Kilberry
Site Location	Bord na Mona, Leabeg, Tullamore, Co Offaly
NACE Code	0892
Class/Classes of Activity	1.4
National Grid Reference (6E, 6 N)	180050, 319540

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, ridiging and harvesting of peat into stockpiles and secondly the transportation of that peat via an internal rail network to the lorry outloading facilities for transportation to a Moss Peat Factory or direct to the Docks. Production achieved was approximately 98440 tonnes which was a 53% reduction on 2018. Dust monitoring was fully compliant during the reporting period. Trigger levels were reached 18 times for COD during the quarterly grab sampling, which was a 40% reduction on 2018. These exceedances were all investigated for any activity or incident that could have caused the higher than normal COD results, but were reported as attributed to natural background chemicals in peat. The composite sampling regime was 100% compliant in relation to Suspended Solids ELV's. There were no Ammonia trigger levels breached during the reporting period. There were no environmental complaints received during the reporting period. In relation to silt pond cleaning, 100 % of the 35 silt ponds received the required two cleanings, with some individual ponds receiving more, inspections dictating the cleaning schedules. Decommissioning and Rehabilitation works are described in an attachment. During the reporting period, there were a number of notifications to the Agency, including notification of an interim cessation of peat extraction at Kilberry, pending regularisation.

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

AIR-summary template

Lic No: P0506-01 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 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		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

AIR-summary template	Lic No:	P0506-01	Year	2019

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 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-01 Gilltown	Total Particulates	350	336 DAYS	Daily average < ELV	mg/m2/day	30940	231	0	0	

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:	P0506-01	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

No

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

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

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

Table A5: Solvent Mass Balance summary

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

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER) Lic No: P0506-01 Year 2019

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

					Additional information
3	Was there any result in breach of licence requirements? If yes please provide brief details in the comment section of Table W3 below			No	
4	Was all monitoring carried out in accordance with EPA guidance and checklists for Quality of Aqueous Monitoring Data Reported to the EPA? If no please detail what areas require improvement in additional information box	External /Internal Lab Quality checklist	Assessment of results checklist	Yes	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: P0506-01 Year 2019

Continuous monitoring

			Additional Information
5	Does your site carry out continuous emissions to water/sewer monitoring?	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	Yes. Total of 19 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-4	Water	Suspended Solids	35	24 hour	Not Listed	mg/L			456	0	Down time primarially due to battery failure. Its not possible to report average continuous emissions as this sampler is located on one of 35 silt ponds and samplers are moved around periodically to allow for analysis of other silt pond performance.
SW-4	Water	Ammonia (as N)	4.53	Weekly	NA	mg/L					
SW-4	Water	Total phosphorus	NA	Weekly	NA	mg/L					
SW-4	Water	COD	100	Weekly	NA	mg/L					
SW-4	Water	Volumetric flow	NA	24 hour	NA	m3/day					
SW-4	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: P0506-01 Year 2019

Bund testing

dropdown menu click to see options

			Additional information
1	Are you required by your licence to undertake integrity testing on bunds and containment structures ? if yes please fill out table B1 below listing all **new bunds and containment structures** on site, in addition to **all bunds which failed** the integrity test-**all bunding structures which failed including mobile bunds must be listed in the table below, please include all bunds outside the licenced testing period** (mobile bunds and chemstore included)	Yes	
2	Please provide integrity testing frequency period	Other (2 Yearly)	
3	Does the site maintain a register of bunds, underground pipelines (including stormwater and foul), Tanks, sumps and containers? (containers refers to "Chemstore" type units and mobile bunds)	Yes	
4	How many bunds are on site?	0	
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?	0	
9	How many sumps on site are included in the integrity test schedule?	0	
10	How many of these sumps are integrity tested within the test schedule?	0	
	Please list any sump integrity failures in table B1		
11	Do all sumps and chambers have high level liquid alarms?	SELECT	
12	If yes to Q11 are these failsafe systems included in a maintenance and testing programme?	SELECT	
13	Is the Fire Water Retention Pond included in your integrity test programme?	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)

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

			Commentary
15	Has integrity testing been carried out in accordance with licence requirements and are all structures tested in line with BS8007/EPA Guidance? bunding and storage guidelines	Yes	
16	Are channels/transfer systems to remote containment systems tested?	No	
17	Are channels/transfer systems compliant in both integrity and available volume?	No	

Pipeline/underground structure testing

			No underground pipe lines that require testing
1	Are you required by your licence to undertake integrity testing* on underground structures e.g. pipelines or sumps etc ? if yes please fill out table 2 below listing all underground structures and pipelines on site **which failed the integrity test and all which have not been tested withing the integrity test period as specified**	Yes	
2	Please provide integrity testing frequency period	Other (Every 3 Years)	

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

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

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

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

Groundwater/Soil monitoring template	Lic No:	P0506-01	Year	2019

			Comments	
1	Are you required to carry out groundwater monitoring as part of your licence requirements?	no		Please provide an interpretation of groundwater monitoring data in the interpretation box below or if you require additional space please include a groundwater/contaminated land monitoring results interpretaion as an additional section in this AER
2	Are you required to carry out soil monitoring as part of your licence requirements?	no		
3	Do you extract groundwater for use on site? If yes please specify use in comment section	no		
4	Do monitoring results show that groundwater generic assessment criteria such as GTVs or IGVs are exceeded or is there an upward trend in results for a substance? If yes, please complete the Groundwater Monitoring Guideline Template Report (link in cell G8) and submit separately through ALDER as a licensee return AND answer questions 5-12 below. Groundwater monitoring template	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

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

Groundwater/Soil monitoring template Lic No: P0506-01 Year 2019

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)

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

Groundwater/Soil monitoring template	Lic No:	P0506-01	Year	2019

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:	P0506-01	Year	2019

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: P0506-01 Year 2019

Highlighted cells contain dropdown menu click to view

			Additional Information
1	Do you maintain an Environmental Mangement System (EMS) for the site. If yes, please detail in additional information	Yes	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	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. Deploy Hydraulic Harrows at dust sensitive areas in addition to headland Peat Collection. Continue with the collection of headland peat, particularly at dust	100	In total 0 personnel received training in 2019 as training takes place every three years. Hydraulic harrows continue to be depolyed at dust sensitive areas. Headland peat was collected during the production season.	Section Head	Reduced emissions

Environmental Management Programme/Continuous Improvement Programme template				Lic No:	P0506-01	Year	2019
Waste reduction/Raw material usage efficiency	Waste Streamlining.It is planned to continue with and where possible improve the current waste management service provided by AES Ltd	100	Quarterly waste reports are returned for records/filing and waste streams are segrated on site to maximise recycling potential.	Individual	Improved Environmental Management Practices		
Reduction of emissions to Water	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.	100	In total 0 personnel received training in 2019 as training takes place every three years. Training covers SOP's in relation to silt control and general IPC license awareness.	Section Head	Reduced emissions		
Materials Handling/Storage/Bunding	Increased bund capacity will be provided where required.	0	No additional bund capacity was required during 2019	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	11.04 tonnes of polyethylene was recycled in 2019.	Individual	Reduced emissions		
Sphagnum Project	A small scale trial is commenced in 2012. Its purpose is to trial grow sphagnum moss on a small area of cutaway in Kilberry bog.	100	This project has not progressed	Individual	Improved Environmental Management Practices		

Noise monitoring summary report	Lic No:	P0506-01	Year	2019

1	Was noise monitoring a licence requirement for the AER period? If yes please fill in table N1 noise summary below	No
2	Was noise monitoring carried out using the EPA Guidance note, including completion of the "Checklist for noise measurement report" included in the guidance note as table 6? (Noise Guidance note NG4)	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: P0506-01 Year 2019

			Additional information
1	When did the site carry out the most recent energy efficiency audit? Please list the recommendations in table 3 below	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	SEAI - Large Industry Energy Network (LIEN)
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)	2575.86	1425	-53.00%	-19.00%
Total Energy Generated (MWHrs)				
Total Renewable Energy Generated (MWHrs)				
Electricity Consumption (MWHrs)	158.445	95.255	-53	-39.00%
Fossil Fuels Consumption:				
Heavy Fuel Oil (m3)				
Light Fuel Oil (m3)	237.911	133.602	-53.00%	-43.80%
Natural gas (m3)				
Coal/Solid fuel (metric tonnes)				
Peat (metric tonnes)				
Renewable Biomass				
Renewable energy generated on site				

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

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

Table R2 Water usage on site

					Water Emissions	**Water Consumption**	
Water use	Water extracted Previous year m3/yr.	Water extracted Current year m3/yr.	Production +/- % compared to previous reporting year**	Energy Consumption +/- % vs overall site production*	Volume Discharged back to environment(m^3yr):	Volume used i.e not discharged to environment e.g. released as steam m3/yr	Unaccounted for Water:
Groundwater							
Surface water							
Public supply							
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: P0506-01 Year 2019

	Total	Landfill	Incineration	Recycled	Other
Hazardous (Tonnes)	18.14	0	0.07	17.88	0
Non-Hazardous (Tonnes)	272.83	8.2375	0	264.598	0

Resource Usage/Energy efficiency summary Lic No: P0506-01 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					

Complaints and Incidents summary template

Lic No: P0506-01 Year 2019

Complaints

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	Additional information

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		

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

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

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

Table 2 Incidents summary

Date of occurrence	Incident nature	Location of occurrence	Incident category*please refer to guidance	Receptor	Cause of incident	Other cause(please specify)	Activity in progress at time of incident	Communication	Occurrence	Corrective action<20 words	Preventative action <20 words	Resolution status	Resolution date	Likelihood of reoccurence
13/03/2019	Trigger level reached	Ummerus SW-4	1. Minor	Water	Unknown	Unknown	Normal activities	EPA INCI016173	Recurring	Outfall checked.	None possible	Complete	14/03/2019	Low
09/04/2019	Trigger level reached	Prosperous SW-17	1. Minor	Water	Unknown	Unknown	Normal activities	EPA INCI016301	New	Outfall checked.	None possible	Complete	09/04/2019	Low
01/05/2019	Trigger level reached	Ummerus SW-4	1. Minor	Water	Unknown	Unknown	Normal activities	EPA INCI016431	Recurring	Outfall checked.	None possible	Complete	02/05/2019	Low
05/06/2019	Trigger level reached	Ummerus SW-4	1. Minor	Water	Unknown	Unknown	Normal activities	EPA INCI016614	Recurring	Outfall checked.	None possible	Complete	05/06/2019	Low
11/07/2019	Trigger level reached	Ummerus SW-6A	1. Minor	Water	Unknown	Unknown	Normal activities	EPA INCI016849	New	Outfall checked.	None possible	Complete	11/07/2019	Low
24/07/2019	Trigger level reached	Gilltown SW-9	1. Minor	Water	Unknown	Unknown	Normal activities	EPA INCI016913	New	Outfall checked.	None possible	Complete	24/07/2019	Low
24/07/2019	Trigger level reached	Gilltown SW-11	1. Minor	Water	Unknown	Unknown	Normal activities	EPA INCI016914	New	Outfall checked.	None possible	Complete	24/07/2019	Low
24/07/2019	Trigger level reached	Ummerus SW-4	1. Minor	Water	Unknown	Unknown	Normal activities	EPA INCI016915	Recurring	Outfall checked.	None possible	Complete	24/07/2019	High
23/05/2019	Trigger level reached	Allen SW-13	1. Minor	Water	Unknown	Unknown	Normal activities	EPA INCI017656	New	Outfall checked.	None possible	Complete	26/11/2019	Medium
23/05/2019	Trigger level reached	Allen SW-14	1. Minor	Water	Unknown	Unknown	Normal activities	EPA INCI017657	New	Outfall checked.	None possible	Complete	26/11/2019	Medium
20/06/2019	Trigger level reached	Ummerus SW-4	1. Minor	Water	Unknown	Unknown	Normal activities	EPA INCI017658	Recurring	Outfall checked.	None possible	Complete	26/11/2019	Medium
15/08/2019	Trigger level reached	Ummerus SW-4	1. Minor	Water	Unknown	Unknown	Normal activities	EPA INCI017659	Recurring	Outfall checked.	None possible	Complete	26/11/2019	Medium
11/11/2019	Trigger level reached	Kilberry SW-1	1. Minor	Water	Unknown	Unknown	Normal activities	EPA INCI017697	New	Outfall checked.	None possible	Complete	03/12/2019	Medium
11/11/2019	Trigger level reached	Kilberry SW-2	1. Minor	Water	Unknown	Unknown	Normal activities	EPA INCI017698	New	Outfall checked.	None possible	Complete	03/12/2019	Medium
11/11/2019	Trigger level reached	Kilberry SW-3	1. Minor	Water	Unknown	Unknown	Normal activities	EPA INCI017699	New	Outfall checked.	None possible	Complete	03/12/2019	Medium
11/11/2019	Trigger level reached	Kilberry SW-3A	1. Minor	Water	Unknown	Unknown	Normal activities	EPA INCI017701	New	Outfall checked.	None possible	Complete	03/12/2019	Medium
11/11/2019	Trigger level reached	Kilberry SW-3C	1. Minor	Water	Unknown	Unknown	Normal activities	EPA INCI017702	New	Outfall checked.	None possible	Complete	03/12/2019	Medium
28/11/2019	Trigger level reached	Ummerus SWE-1	1. Minor	Water	Unknown	Unknown	Normal activities	EPA INCI017714	New	Outfall checked.	None possible	Complete	05/12/2019	Low

Total number of incidents current year	18
Total number of incidents previous year	25
% reduction/ increase	-40.00%

Waste Summary Continued Lic No: P0506-01 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	11.04	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	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	3.33	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	0.15	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	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	0.21	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	14.26	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	0	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	0.8375	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	0.558	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	7.4	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	0.19	Enva Ireland Limited (Portlaoise) - W0184	R02 - Solvent reclamation/regeneration	Enva Ireland Limited, Clonminam Industrial Estate, Portlaoise - W0184	Ireland

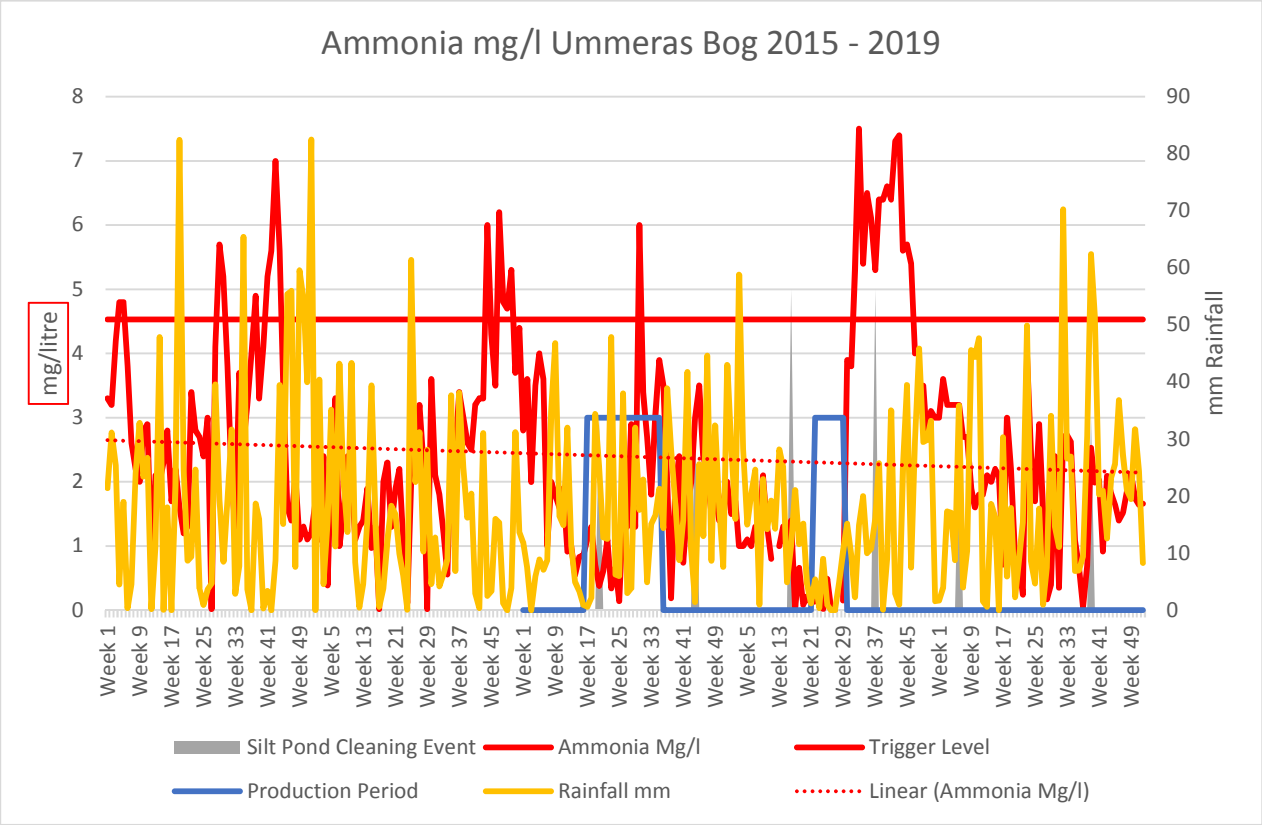
Kilberry IPC Licence

Decommissioning and Rehabilitation

Bog Rehabilitation Progress Report 2019.

- Ongoing rehabilitation trials (cutaway re-wetting and *Sphagnum* inoculation) are being monitoring at Kilberry Bog. Rehabilitation (field-drain blocking) was carried out in part of the cutaway in Kilberry (52 ha) during 2019. The current status of this area is bare peat. Drain-blocking was carried out to re-wet and encourage natural colonisation of bare peat areas with peatland vegetation.
- Planning for rehabilitation with walk-over surveys to update rehabilitation plans was carried out at Ummeras Bog in 2019. There is ongoing natural colonisation at this bog.
- Bord na Móna are also supporting other GHG research projects (EPA-funded SMARTBOG). Ummeras Bog has been selected as a research site for this project and it is planned to measure GHG fluxes, water quality and water flow from this site over the next few years.
- 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 in 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 Kilberry 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 Kilberry		Siltpond Monitoring Frequency & Results							
			IPPC Licence P0506-01									
X	Y	Bog	SW	Monitoring	Sampled	pH	SS	TS	Ammonia	TP	COD	Colour
283610.02	228467.98	Prosperous	SW-15	Q1 19	09/04/2019	7	5	120	1.8	0.05	92	274
283497.47	230604.25	Prosperous	SW-16	Q1 19	09/04/2019	7	14	130	1.7	0.06	85	285
284083.62	229490.13	Prosperous	SW-17	Q1 19	09/04/2019	6.3	24	180	0.07	0.23	235	620
282032.94	221405.51	Allen	SW-13	Q2 19	23/05/2019	7.8	5	158	0.63	0.1	111	459
279374.51	221128.33	Allen	SW-14	Q2 19	23/05/2019	7.8	5	178	0.63	0.07	118	461
279522.44	220979.75	Allen	SW-14A	Q2 19	23/05/2019	6.8	5	168	1.6	0.06	93	386
263559.73	214906.67	Ummeras	SW-5	Q3 19	11/07/2019	7.1	5	204	0.02	0.11	77	489
262581.53	214669.12	Ummeras	SW-6	Q3 19	11/07/2019	7	6	222	0.02	0.07	77	485
262280.17	215578.65	Ummeras	SW-6A	Q3 19	11/07/2019	7.5	5	230	1.2	0.23	135	253
262597.34	216781.70	Ummeras	SW-4	Q3 19	11/07/2019	7.7	5	300	0.54	0.09	96	169
279548.84	233696.75	Gilltown	SW-7	Q3 19	24/07/2019	7.4	5	202	1.5	0.08	77	199
280775.39	233404.44	Gilltown	SW-9	Q3 19	24/07/2019	6.4	5	139	1.5	0.09	121	331
279677.46	231646.85	Gilltown	SW-11	Q3 19	24/07/2019	6.5	7	156	2.8	0.09	124	375
266654.80	199892.88	Kilberry	SW-1	Q4 19	11/11/2019	6.3	3	135	1.62	0.1	105	493
267239.42	201958.36	Kilberry	SW-2	Q4 19	11/11/2019	6.1	2	166	0.707	0.05	117	490
267200.77	201949.29	Kilberry	SW-3	Q4 19	11/11/2019	6.2	2	205	0.64	0.05	120	492
268870.08	199128.68	Kilberry	SW-3A	Q4 19	11/11/2019	5.8	2	127	0.721	0.05	101	528
270082.33	199354.32	Kilberry	SW-3B	Q4 19	11/11/2019	7.2	2	204	1.45	0.05	67	338
270684.25	201649.88	Kilberry	SW3-C	Q4 19	11/11/2019	5.5	2	149	0.766	0.05	108	435



Ummeras bog is an active production bog with the composite sampler located here from 2015 to 2019, but no production took place at this bog during the 2019 season. This bog has officially cease production and it will now be programmed for decommissioning and rehabilitation. The composite sampler takes a flow proportional composite sample over a 24 hour period. The sampler had 5% downtime during the period but returned 52 weekly ammonia results during the period of this 2019 AER, which were composite and grab samples to cover the 5% sampler downtime. The ammonia trigger level of 4.53mg/l, as agreed with the Agency, was not exceed during this reporting period, having had exceedances in the previous year 2018 all of which were reported to the EPA. It is assumed that this is down to the lack of peat extraction activities in the reporting period.

Overall the results in the previous 4 yrs has started to show a continuing downward trend and this is broadly in-line with typical trends submitted to the EPA in 2013 as required by condition 6.14. It has been established that the most relevant influencing variable on Ammonia is rainfall and the trend analysis above indicates linkage between high rainfall events, ammonia concentrations and activities.

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

Extractive Waste Management Plan Implementation AER Update 2019

March 2020.

IPC Licence P0506-01.

1.0 Extractive Wastes.

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

- Silt Pond excavations and maintenance
- Bog Timbers

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

2.0 Condition 7.5 Extractive Waste Management

- An extractive waste management plan (EWMP) was submitted to the Agency in September 2012 and was approved.
- The EWMP was reviewed in September 2017. There were no substantial changes to the operation of the plan, associated waste facilities or to the waste deposited. The EWMP will be reviewed again in September 2022.

3.0 Minimisation

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

4.0 Treatment

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

5.0 Recovery

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

6.0 Disposal

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

Annual Environmental Report 2019
Bord na Mona Energy Ltd
(CuilnaMona Group of Bogs)
IPC Licence P0507-01

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Facility Information Summary	
AER Reporting Year	2019
Licence Register Number	P0507-01
Name of site	Bord na Mona Cuil na Mona
Site Location	Boora, Leabeg, Tullamore, Co Offaly
NACE Code	0892
Class/Classes of Activity	1.4
National Grid Reference (6E, 6 N)	180050, 319540

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, ridiging and harvesting of peat into stockpiles and secondly the transportation of that peat via an internal rail network to the lorry outloading facilities for transportation to a Moss Peat Factory or direct to the Docks. There was no peat production achieved in 2019 for any bogs in the Cuil na Mona bogs. The quarterly grab sampling was 100% compliant with the Suspended Solids ELV, with 21 trigger level exceedances relating to COD reached. These exceedances were all investigated for any activity or incident that could have caused the higher than normal COD results, but were reported as attributed to natural background chemicals in peat. The composite sampling regime was 100% compliant in relation to Suspended Solids ELV's and Ammonia trigger levels with 9 of the 21 COD trigger levels exceedances, all reported to the EPA. There were no environmental complaints received during the reporting period. In relation to silt pond cleaning, 100% of the 22 silt ponds received two cleanings, with inspections dictating the cleaning schedules. Rehabilitation works are described in an attachment. During the period there were various returns made to the EPA including notification of an interim cessation of peat extraction at Kilberry, pending regularisation.

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

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Answer all questions and complete all tables where relevant

			Additional information
1	Does your site have licensed air emissions? If yes please complete table A1 and A2 below for the current reporting year and answer further questions. If **you do not have** licenced emissions and **do not complete a solvent management plan** (table A4 and A5) you do not need to complete the tables	No	There are no dust sensetive locations or dust monitoring locations within the licence area

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	NA	
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	NA	

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? 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)	SELECT	
5	Did continuous monitoring equipment experience downtime? If yes please record downtime in table A2 below	SELECT	
6	Do you have a proactive service agreement for each piece of continuous monitoring equipment?	SELECT	
7	Did your site experience any abatement system bypasses? If yes please detail them in table A3 below	SELECT	

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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
	SELECT			SELECT	SELECT					
	SELECT				SELECT					

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

Table A3: Abatement system bypass reporting table Bypass protocol

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

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

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

Solvent use and management on site

8	Do you have a total Emission Limit Value of direct and fugitive emissions on site? if yes please fill out tables A4 and A5	SELECT	

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

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

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

Table A5: Solvent Mass Balance summary

	(I) Inputs (kg)	(O) Outputs (kg)

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Solvent	(I) Inputs (kg)	Organic solvent emission in waste gases(kg)	Solvents lost in water (kg)	Collected waste solvent (kg)	Fugitive Organic Solvent (kg)	Solvent released in other ways e.g. by-passes (kg)	Solvents destroyed onsite through physical reaction e.g. incineration(kg)	Total emission of Solvent to air (kg)
							Total	

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER) Lic No: P0507-01 Year 2019

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

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)

				Additional information
3	Was there any result in breach of licence requirements? If yes please provide brief details in the comment section of Table W3 below		SELECT	
4	Was all monitoring carried out in accordance with EPA guidance and checklists for Quality of Aqueous Monitoring Data Reported to the EPA? If no please detail what areas require improvement in additional information box	External /Internal Lab Quality checklist / Assessment of results checklist	Yes	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 therof[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: P0507-01 Year 2019

Continuous monitoring

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

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

6	Did continuous monitoring equipment experience downtime? **If yes please record downtime in table W4 below**	Yes	The composite sampler was down a total of 61 days in 2019.
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-8	Water	Suspended Solids	35	24 hour	Not Listed	mg/L			1464	0	The composite sampler was down a total of 61 days in 2019 mainly due to battery failure. Its not possible to report average continuous emissions as this sampler is located on one of 22 silt ponds and samplers are moved around periodically to allow for analysis of other silt pond performance.
SW-8	Water	Ammonia (as N)	2.88	Weekly	NA	mg/L					
SW-8	Water	Total phosphorus	NA	Weekly	NA	mg/L					
SW-8	Water	COD	100	Weekly	NA	mg/L					
SW-8	Water	Volumetric flow	NA	24 hour	NA	m3/day					
SW-8	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: P0507-01 Year 2019

Bund testing

dropdown menu click to see options

			Additional information
1	Are you required by your licence to undertake integrity testing on bunds and containment structures ? if yes please fill out table B1 below listing all **new bunds and containment structures** on site, in addition to **all bunds which failed** the integrity test-**all bunding structures which failed including mobile bunds must be listed in the table below, please include all bunds outside the licenced testing period** (mobile bunds and chemstore included)	Yes	No fixed Bunds on site.
2	Please provide integrity testing frequency period	Other (2 Yearly)	
3	Does the site maintain a register of bunds, underground pipelines (including stormwater and foul), Tanks, sumps and containers? (containers refers to "Chemstore" type units and mobile bunds)	Yes	There are no fixed bunds in the Cuil na Mona licence and therefore integrity testing is not an issue. .
4	How many bunds are on site?	0	
5	How many of these bunds have been tested within the required test schedule?	0	N/A
6	How many mobile bunds are on site?	5	This includes barrel trays located within workshops
7	Are the mobile bunds included in the bund test schedule?	No	
8	How many of these mobile bunds have been tested within the required test schedule?	0	
9	How many sumps on site are included in the integrity test schedule?	0	
10	How many of these sumps are integrity tested within the test schedule? **Please list any sump integrity failures in table B1**	0	
11	Do all sumps and chambers have high level liquid alarms?	SELECT	
12	If yes to Q11 are these failsafe systems included in a maintenance and testing programme?	SELECT	
13	Is the Fire Water Retention Pond included in your integrity test programme?	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)
	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

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

Pipeline/underground structure testing

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

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

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

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

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

Groundwater/Soil monitoring template	Lic No:	P0507-01	Year	2019

			Comments	
1	Are you required to carry out groundwater monitoring as part of your licence requirements?	No		Please provide an interpretation of groundwater monitoring data in the interpretation box below or if you require additional space please include a groundwater/contaminated land monitoring results interpretaion as an additional section in this AER
2	Are you required to carry out soil monitoring as part of your licence	No		
3	Do you extract groundwater for use off 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 Groundwater monitoring template	SELECT		
5	Is the contamination related to operations at the facility (either current and/or historic)	SELECT		
6	Have actions been taken to address contamination issues?If yes please summarise remediation strategies proposed/undertaken	SELECT		
7	Please specify the proposed time frame for the remediation	SELECT		
8	Is there a licence condition to carry out/update ELRA for the site?	SELECT		
9	Has any type of risk assesment been carried out for the site?	SELECT		
10	Has a Conceptual Site Model been developed for the site?	SELECT		
11	Have potential receptors been identified on and off site?	SELECT		
12	Is there evidence that contamination is migrating offsite?	SELECT		Please enter interpretation of data here

Groundwater/Soil monitoring template	Lic No:	P0507-01	Year	2019

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 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 e on the Management of Contaminated Land and Groundwater at EPA Licensed Sites (EP

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

Groundwater/Soil monitoring template	Lic No:	P0507-01	Year	2019

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:	P0507-01	Year	2019

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:	P0507-01	Year	2019

	Highlighted cells contain dropdown menu click to view		Additional Information
1	Do you maintain an Environmental Mangement System (EMS) for the site. If yes, please detail in additional information	Yes	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	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.	70	0 person received training in 2019 as there was no production, with limited activities in general. Training takes place every three years.	Section Head	Improved Environmental Management Practices
Waste reduction/Raw material usage efficiency	Waste Streamlining.It is planned to continue with and where possible improve the current waste management service provided by AES Ltd	100	Quarterly waste reports are returned for records/filing and waste streams are segrated on site to maximise recycling potential. As activities limited there was no waste produced in 2019.	Section Head	Improved Environmental Management Practices

Environmental Management Programme/Continuous Improvement Programme template				Lic No:	P0507-01	Year	2019
Reduction of emissions to Water	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.	100	0 person received training in 2019 as there was no production, with limited activities in general. Training takes place every three years.	Section Head	Improved Environmental Management Practices		
Materials Handling/Storage/Bunding	Increased bund capacity will be provided where required.	0	No additional bund capacity was required during 2019	Individual	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	No polyethyelene was sent off site in 2019.	Individual	Improved Environmental Management Practices		

Noise monitoring summary report	Lic No:	P0507-01	Year	2019

1	Was noise monitoring a licence requirement for the AER period? If yes please fill in table N1 noise summary below	No
2	Was noise monitoring carried out using the EPA Guidance note, including completion of the "Checklist for noise measurement report" included in the guidance note as table 6? (Noise Guidance note NG4)	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: P0507-01 Year 2019

			Additional information
1	When did the site carry out the most recent energy efficiency audit? Please list the recommendations in table 3 below	Sep-18	
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 accrediation 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	

SEAI - Large Industry Energy Network (LIEN)

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)	414	0	-100	-100.00%
Total Energy Generated (MWHrs)				
Total Renewable Energy Generated (MWHrs)				
Electricity Consumption (MWHrs)	711	0	-100	-100
Fossil Fuels Consumption:				
Heavy Fuel Oil (m3)				
Light Fuel Oil (m3)	40	0	-100	-100.00%
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^3yr):	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:	P0507-01	Year	2019

Resource Usage/Energy efficiency summary	Lic No:	P0507-01	Year	2019

Table R3 Waste Stream Summary

	Total	Landfill	Incineration	Recycled	Other
Hazardous (Tonnes)	0	0	0	0	0
Non-Hazardous (Tonnes)	0	0	0	0	0

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:	P0507-01	Year	2019

Complaints

		Additional information
Have you received any environmental complaints in the current reporting year? If yes please complete summary details of complaints received on site in table 1 below	No	There were no complaints of an environmental nature

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		
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						

Complaints and Incidents summary template	Lic No:	P0507-01	Year	2019

Complaints and Incidents summary template	Lic No:	P0507-01	Year	2019

Incidents		
		Additional information
Have any incidents occurred on site in the current reporting year? Please list all incidents for current reporting year in Table 2 below	Yes	All reportable incidents related to trigger levels for COD
*For information on how to report and what constitutes an incident	What is an incident	

Table 2 Incidents summary

Date of occurrence	Incident nature	Location of occurrence	Incident category*please refer to guidance	Receptor	Cause of incident	Other cause(please specify)	Activity in progress at time of incident	Communication	Occurrence	Corrective action<20 words	Preventative action <20 words	Resolution status	Resolution date	Likelihood of reoccurence
21/02/2019	Trigger level reached	SW8 Cuil na Mona	1. Minor	Water	Other (add details)	Naturally Occuring	Normal activities	INCI016067	New	Inspected Outfall	Monitor results	Complete	21/02/2019	Low
13/03/2019	Trigger level reached	SW8 Cuil na Mona	1. Minor	Water	Other (add details)	Naturally Occuring	Normal activities	INCI016175	Recurring	Inspected Outfall	Monitor results	Complete	14/03/2019	Low
02/05/2019	Trigger level reached	SW8 Cuil na Mona	1. Minor	Water	Other (add details)	Naturally Occuring	Normal activities	INCI016432	Recurring	Inspected Outfall	Monitor results	Complete	02/05/2019	Low
05/06/2019	Trigger level reached	SW8 Cuil na Mona	1. Minor	Water	Other (add details)	Naturally Occuring	Normal activities	INCI016615	Recurring	Inspected Outfall	Monitor results	Complete	05/06/2019	Low
13/06/2019	Trigger level reached	SW8 Cuil na Mona	1. Minor	Water	Other (add details)	Naturally Occuring	Normal activities	INCI016717	Recurring	Inspected Outfall	Monitor results	Complete	13/06/2019	Low
22/08/2019	Trigger level reached	SW8 Cuil na Mona	1. Minor	Water	Other (add details)	Naturally Occuring	Normal activities	INCI017555	Recurring	Inspected Outfall	Monitor results	Complete	08/11/2019	Medium
27/08/2019	Trigger level reached	SW8 Cuil na Mona	1. Minor	Water	Other (add details)	Naturally Occuring	Normal activities	INCI017572	Recurring	Inspected Outfall	Monitor results	Complete	08/11/2019	Medium
24/09/2019	Trigger level reached	SW8 Cuil na Mona	1. Minor	Water	Other (add details)	Naturally Occuring	Normal activities	INCI017573	Recurring	Inspected Outfall	Monitor results	Complete	08/11/2019	Medium
05/11/2019	Trigger level reached	SW6 Cuil na Mona	1. Minor	Water	Other (add details)	Naturally Occuring	Normal activities	INCI017574	New	Inspected Outfall	Monitor results	Complete	08/11/2019	Medium
05/11/2019	Trigger level reached	SW9 Cuil na Mona	1. Minor	Water	Other (add details)	Naturally Occuring	Normal activities	INCI017575	New	Inspected Outfall	Monitor results	Complete	08/11/2019	Medium
05/11/2019	Trigger level reached	SW19 Cuil na Carton	1. Minor	Water	Other (add details)	Naturally Occuring	Normal activities	INCI017576	New	Inspected Outfall	Monitor results	Complete	08/11/2019	Medium
05/11/2019	Trigger level reached	SW14A Cuil na Carton	1. Minor	Water	Other (add details)	Naturally Occuring	Normal activities	INCI017577	New	Inspected Outfall	Monitor results	Complete	08/11/2019	Medium
20/06/2019	Trigger level reached	SW8 Cuil na Mona	1. Minor	Water	Other (add details)	Naturally Occuring	Normal activities	INCI017660	Recurring	Inspected Outfall	Monitor results	Complete	26/11/2019	Medium
15/08/2019	Trigger level reached	SW8 Cuil na Mona	1. Minor	Water	Other (add details)	Naturally Occuring	Normal activities	INCI017661	Recurring	Inspected Outfall	Monitor results	Complete	26/11/2019	Medium

Complaints and Incidents summary template						Lic No:	P0507-01		Year	2019					
08/10/2019	Trigger level reached	SW8 Cuil na Mona	1. Minor	Water	Other (add details)	Naturally Occuring	Normal activities	INCI017662	Recurring	Inspected Outfall	Monitor results	Complete	26/11/2019	Medium
29/10/2019	Trigger level reached	SW8 Cuil na Mona	1. Minor	Water	Other (add details)	Naturally Occuring	Normal activities	INCI017663	Recurring	Inspected Outfall	Monitor results	Complete	26/11/2019	Medium
05/11/2019	Trigger level reached	SW6 Cuil na Mona	1. Minor	Water	Other (add details)	Naturally Occuring	Normal activities	INCI017693	New	Inspected Outfall	Monitor results	Complete	02/12/2019	Medium
05/11/2019	Trigger level reached	SW-9 Cuil na Carton	1. Minor	Water	Other (add details)	Naturally Occuring	Normal activities	INCI017694	New	Inspected Outfall	Monitor results	Complete	03/12/2019	Medium
05/11/2019	Trigger level reached	SW-9 Cuil na Carton	1. Minor	Water	Other (add details)	Naturally Occuring	Normal activities	INCI017695	New	Inspected Outfall	Monitor results	Complete	03/12/2019	Medium
05/11/2019	Trigger level reached	SW-12 Cuil na Carton	1. Minor	Water	Other (add details)	Naturally Occuring	Normal activities	INCI017695	New	Inspected Outfall	Monitor results	Complete	03/12/2019	Medium
05/11/2019	Trigger level reached	SW-14A Cuil na Carton	1. Minor	Water	Other (add details)	Naturally Occuring	Normal activities	INCI017695	New	Inspected Outfall	Monitor results	Complete	03/12/2019	Medium

Total number of incidents current year	21
Total number of incidents previous year	6
% reduction/ increase	70%

Waste Summary Continued Lic No: P0507-01 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

*Note: No waste tekn off site in 2019 due to No activity.

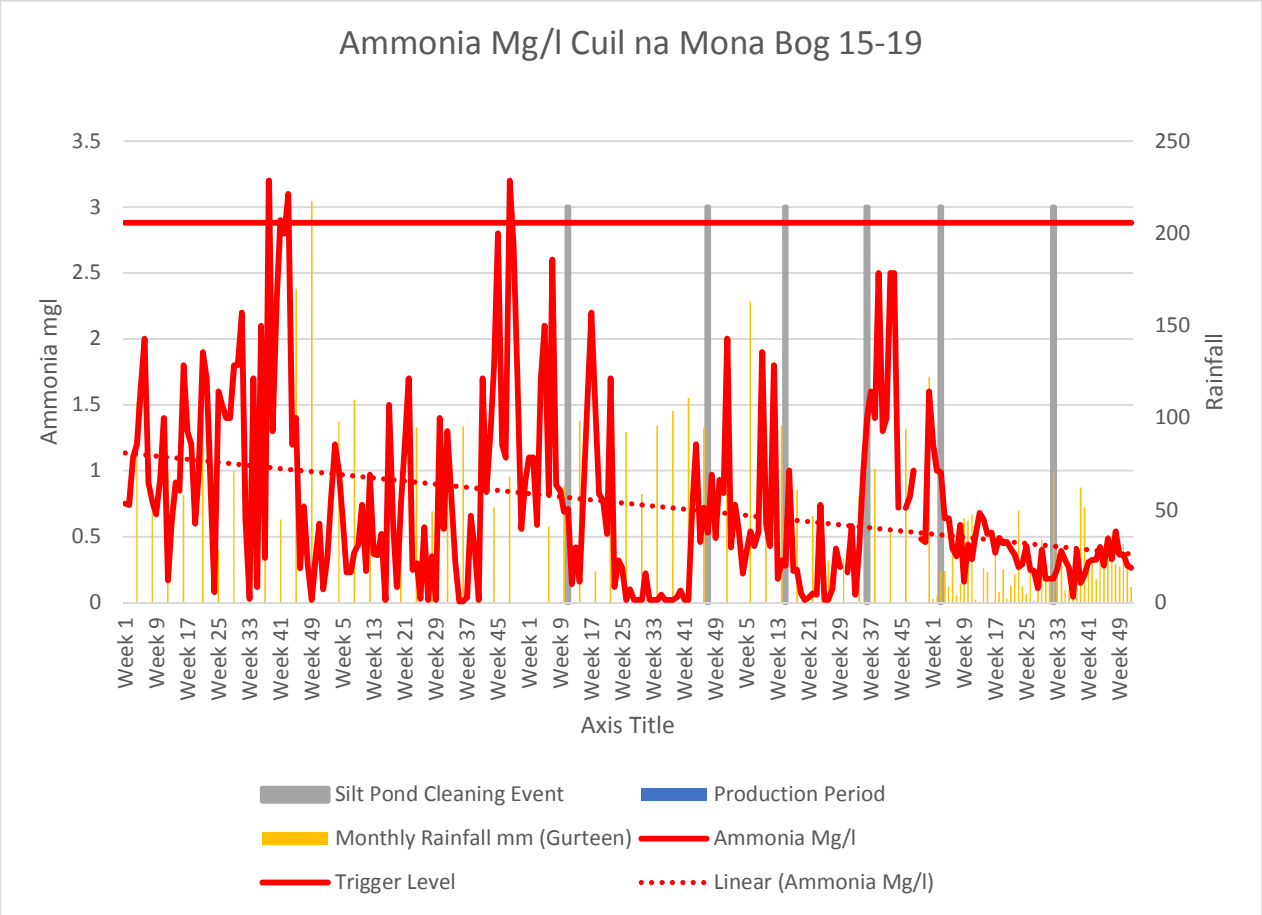
Coolnamona IPC Licence

Decommissioning and Rehabilitation

Bog Rehabilitation Progress Report 2019.

- No peatland rehabilitation actions were carried out in the Coolnamona licence area in 2019.
- There was ongoing monitoring of peatland rehabilitation carried out in previous years at Cashel Bog. Drain-blocking has re-wetted the targeted area and is developing typical pioneer cutaway habitats.
- 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 in 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 Coolnamona 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 Cuil na Mona									
		Quarterly Grab Results IPC Licence P0507-01 2019										
X	**Y**	**Bog**	**SW**	**Monitoring**	**Sampled**	**pH**	**SS**	**TS**	**Ammonia**	**TP**	**COD**	**Colour**
245488.4	191084.9	Cashel	SW-16	Q1 19	09/04/2019	6.8	5	254	0.54	0.05	89	393
246065.5	191080.9	Cashel	SW-17	Q1 19	09/04/2019	7.4	5	276	0.08	0.05	31	54
241983.5	195773.2	Coolnamona	SW-8	Q1 19	09/04/2019	7.1	5	172	0.65	0.09	71	309
244939.8	195193.2	Coolnacarton	SW-13	Q2 19	23/05/2019	7.9	5	324	0.79	0.05	84	122
246075	192615.1	Cashel	SW-18	Q2 19	23/05/2019	7.3	5	180	0.3	0.05	93	288
241454.2	198643.3	Coolnamona	SW-1	Q3 19	11/07/2019	7.3	6	330	1.4	0.1	71	132
240535.9	197955.6	Coolnamona	SW-2	Q3 19	11/07/2019	7.2	7	264	2.7	0.09	65	133
242328.8	198179.9	Coolnamona	SW-3	Q3 19	11/07/2019	7.3	5	292	2.7	0.08	79	130
241044	196363.1	Coolnamona	SW-6	Q4 19	05/11/2019	6.8	2	213	0.575	0.05	104	670
243248.9	196667.6	Coolnamona	SW-9	Q4 19	05/11/2019	6.5	2	318	0.076	0.05	198	970
242800.6	192359.5	Coolnacarton	SW-12	Q4 19	05/11/2019	5.2	2	200	0.034	0.05	171	880
243650.1	192140.2	Coolnacarton	SW-14	Q4 19	05/11/2019	6.7	2	130	1.19	0.05	71	389
243409.8	192198.7	Coolnacarton	SW-14A	Q4 19	05/11/2019	4.8	2	186	0.118	0.05	134	776



The composite sampler has been located at this bog since 2015. This bog has not been in production for several years and will be entering the decommissioning and rehabilitation phase. The composite sampler takes a flow proportional composite sample over a 24hour period. The sampler had 16% downtime during the period but returned 52 weekly ammonia results during the period of this 2019 AER, by ensuring grab samples were taken when the sampler was down. The ammonia trigger level of 2.88mg/l, as agreed with the Agency, was not exceeded during the period. Combining the 2015 to 2019 results above demonstrates concentrations continuing to trend downwards and this is in-line with the downwards/level trends submitted to the EPA in 2013 as required by condition 6.14.

As has been establish previously, there is no obvious link between activities and ammonia concentrations. Comparing monthly rainfall from the nearest met station at Gurteen shows an expected link between rainfall and a lagging peak in ammonia concentrations, however all results were below the trigger level.

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

Extractive Waste Management Plan Implementation AER Update 2019

March 2020.

IPC Licence P0507-01.

1.0 Extractive Wastes.

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

- Silt Pond excavations and maintenance
- Bog Timbers

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

2.0 Condition 7.5 Extractive Waste Management

- An extractive waste management plan (EWMP) was submitted to the Agency in September 2012 and was approved.
- The EWMP was reviewed in September 2017. There were no substantial changes to the operation of the plan, associated waste facilities or to the waste deposited. The EWMP will be reviewed again in September 2022.

3.0 Minimisation

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

4.0 Treatment

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

5.0 Recovery

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

6.0 Disposal

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

Siltpond Cleaning Programme 2019
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		
Mount Lucas(2)	2	2		
Esker (9)	9	9		
Ballycon (1)	1	1		
Cloncreen (10)	10	10		
Garrymore (4)	4	4		
Derrylea (2)	2	2		
Ballydermot (13)	13	13		
Blackriver (10)	10	10		
Lullymore (15)	12	12		
Ballykilleen(1)	1	1