| 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<br>Group/Facility manager<br>(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? | 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 | 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 | 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 | 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?<br>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 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* | Water Emissions: Volume Discharged back to environment($m^3$yr) | Water Consumption: Volume used i.e not discharged to environment e.g. released as steam m3/yr | Unaccounted for Water: |
|---|---|---|---|---|---|---|---|
| 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

| | | 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 |

## 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)<br>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<br>European Waste Catalogue EWC codes | Source of waste accepted | Description of waste accepted<br>**Please enter an accurate and detailed description - which applies to relevant EWC code**<br>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 | |

**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.

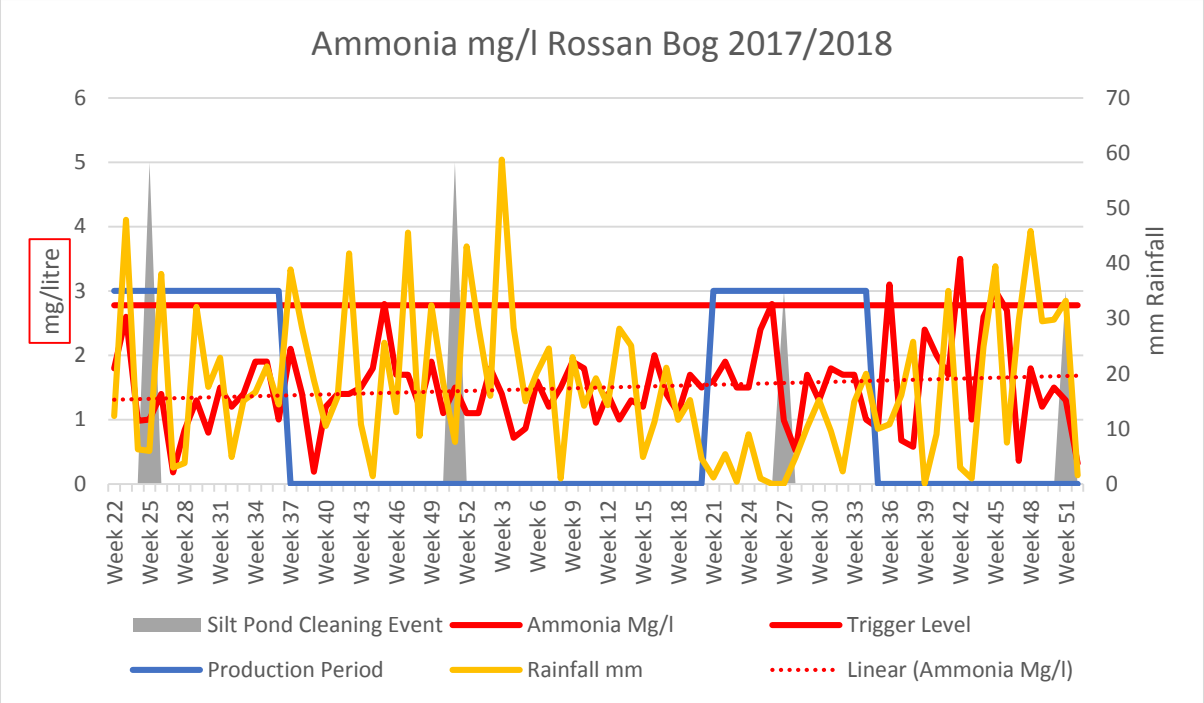
Draft rehabilitation plans for the Derrygreenagh bogs licensed area, including more detailed draft plans for each component bog unit were submitted to the EPA in 2013 and these were reviewed and updated in 2015, and 2017.

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.

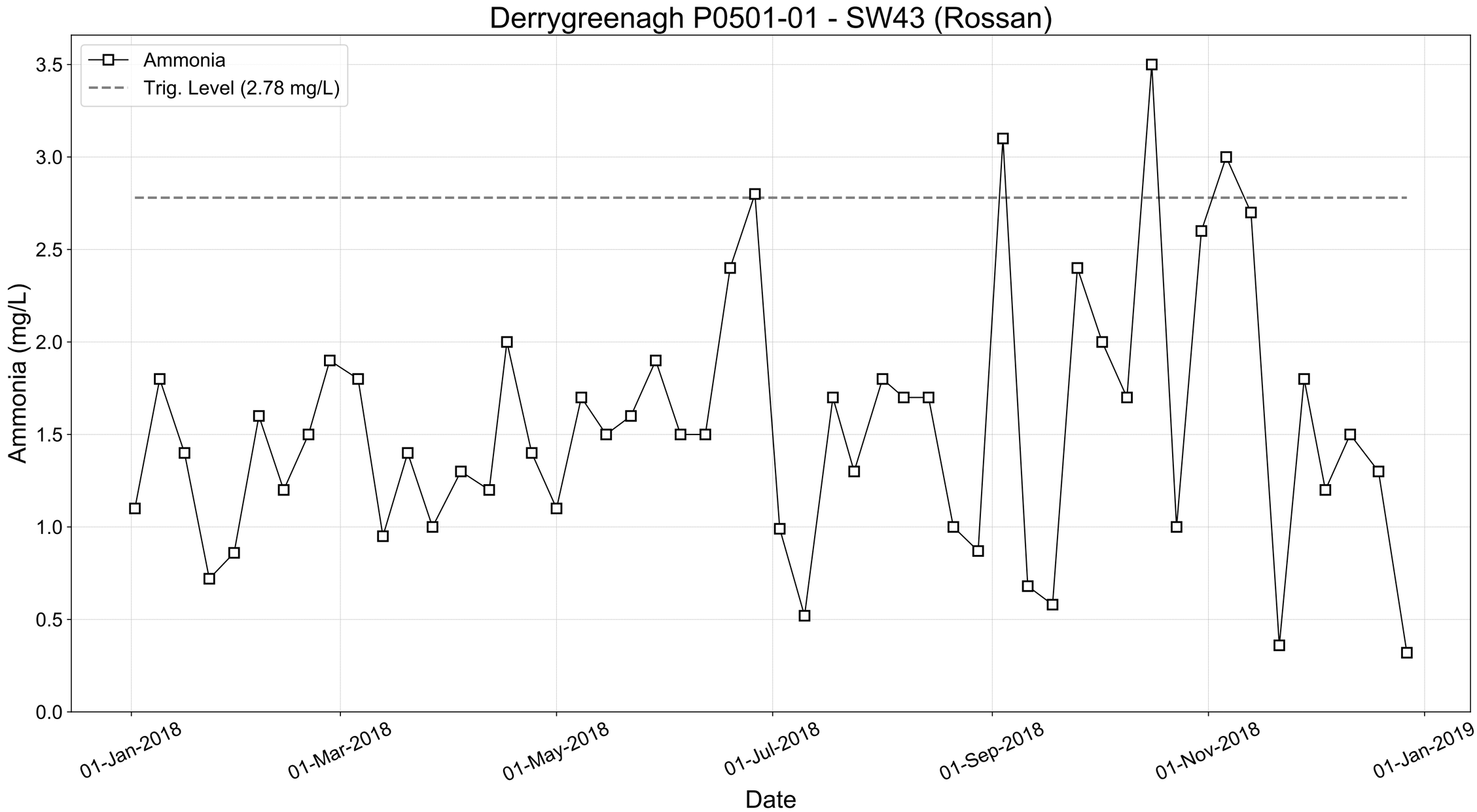
| Bord na Mona Derrygreenagh PO501-01 | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Grab Sampling 2018 | | | | | | | | | | | | |
| X | Y | Bog | SW | Monitoring | Sampled | pH | SS | TS | Ammonia | TP | COD | Colour |
| 262436.96 | 258824.82 | Lisclogher | SW-19 | 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 |

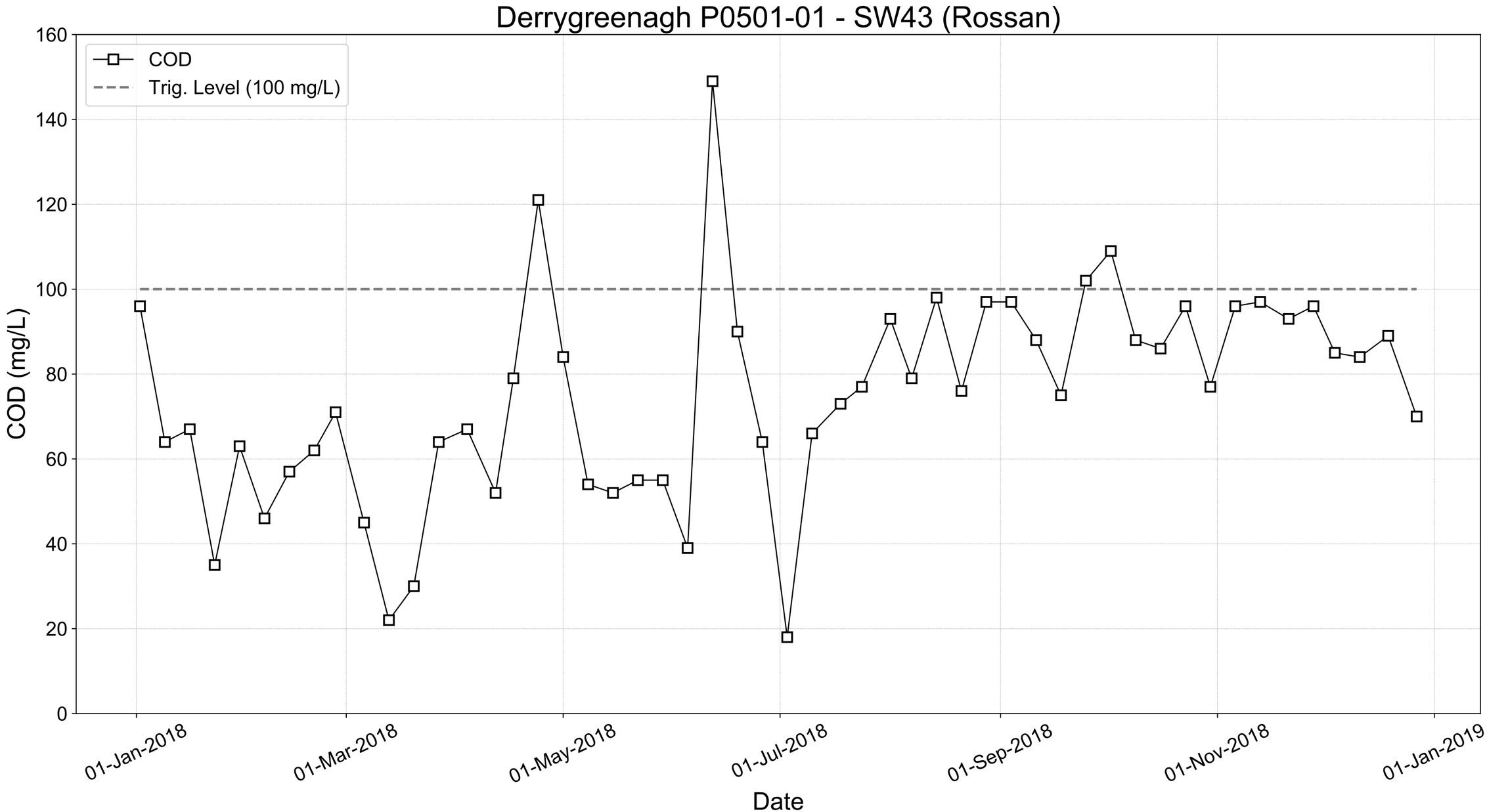


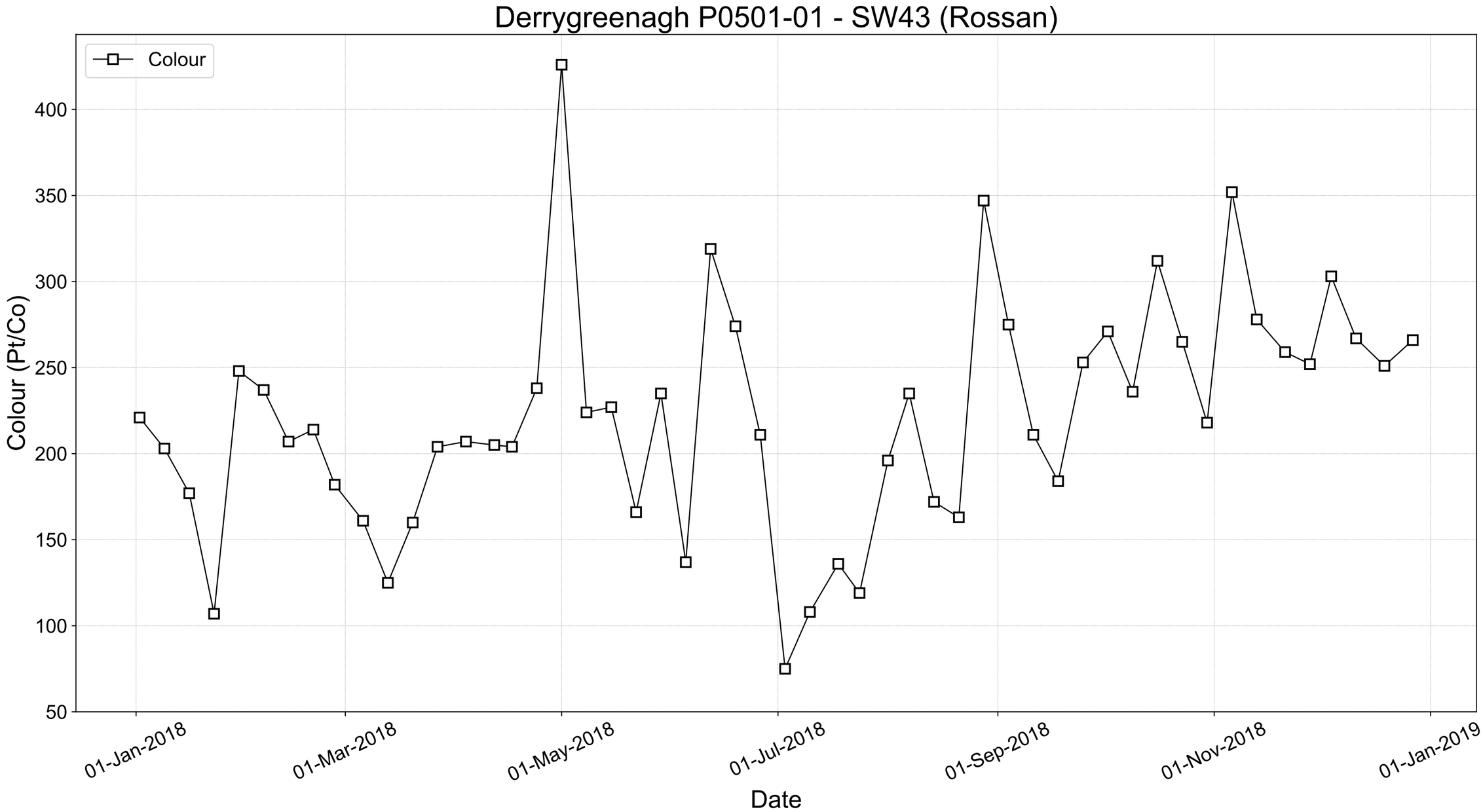

Rossan bog is an active horticultural production bog with the composite sampler located here from May 2017 where it was moved from Toar Bog within the Derrygreenagh IPC Licence. The composite sampler takes a flow proportional composite sample over a 24 hour period. The sampler had 0% downtime during 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.

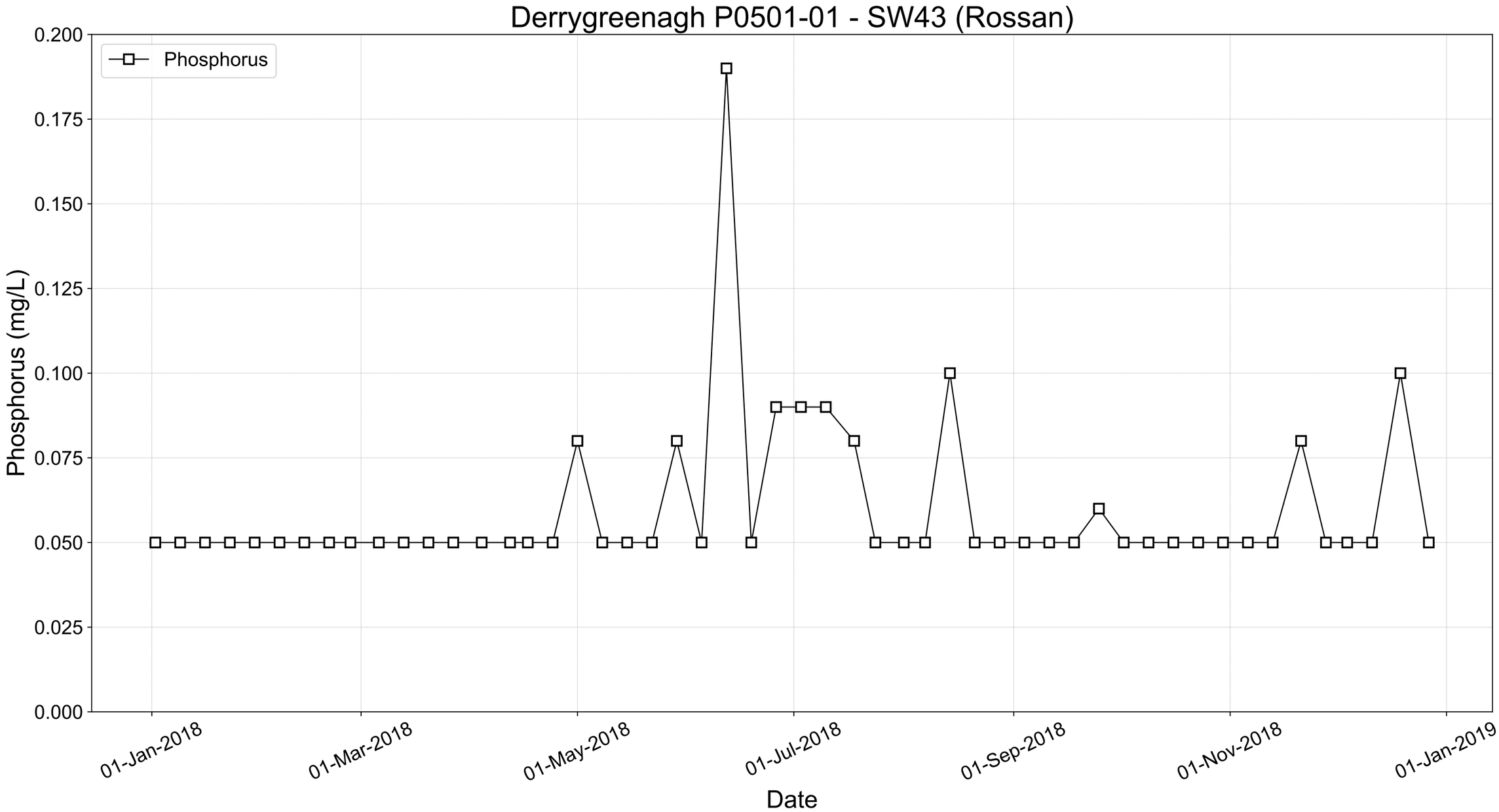
There is no obvious link between the summer production, winter maintenance, or silt pond maintenance events on the concentration of Ammonia discharging from this peatland. The only link expected would be that related to rainfall events and seasonal weather patterns and the subsequent surfacewater runoff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

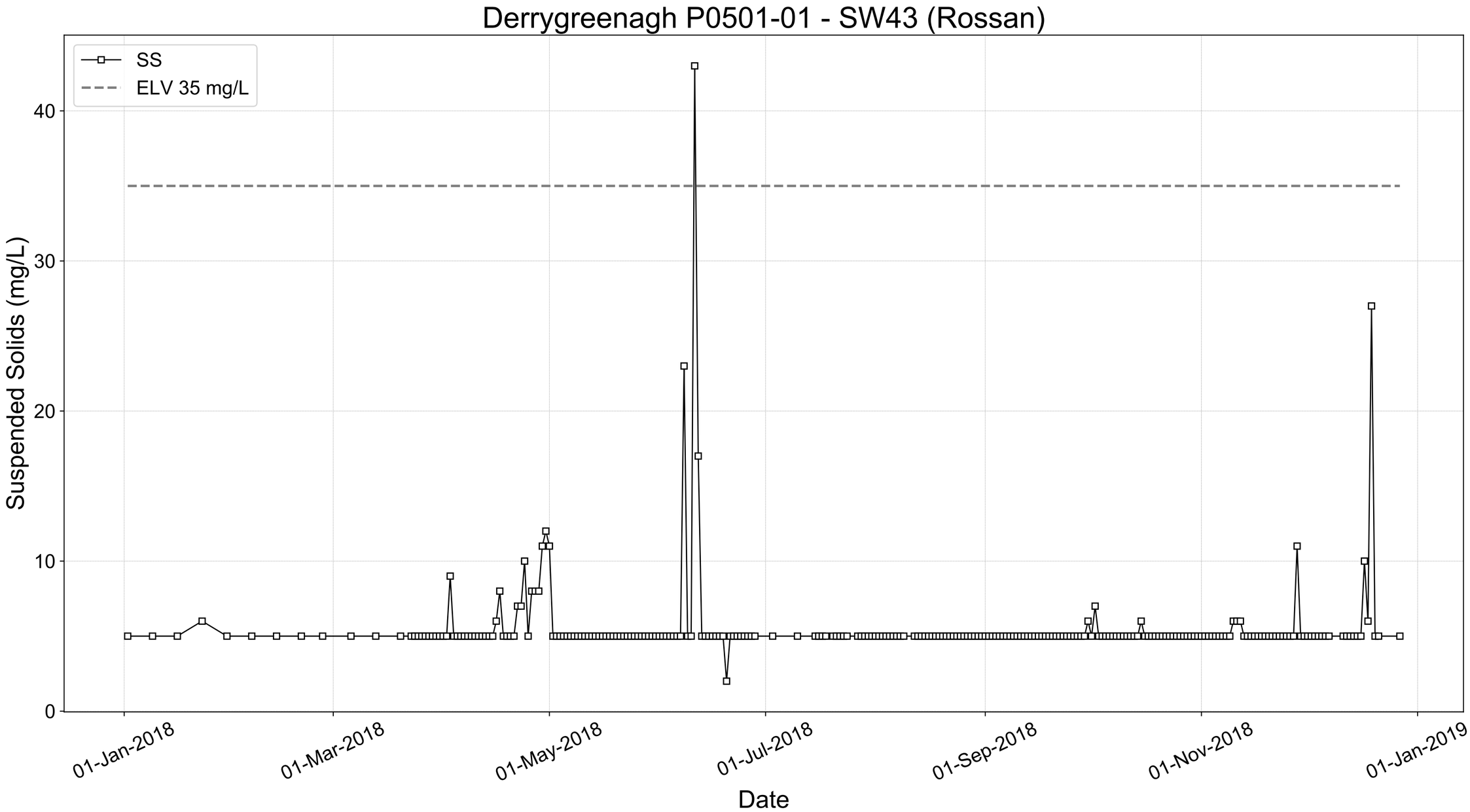
The sampler at this location may be relocated to fill any information gaps on other peatland catchments and to reflect the need to support the information gathering required for the Water Framework Directive's River Basin Management Plan. There is also an EPA lead research project commencing in 2019,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

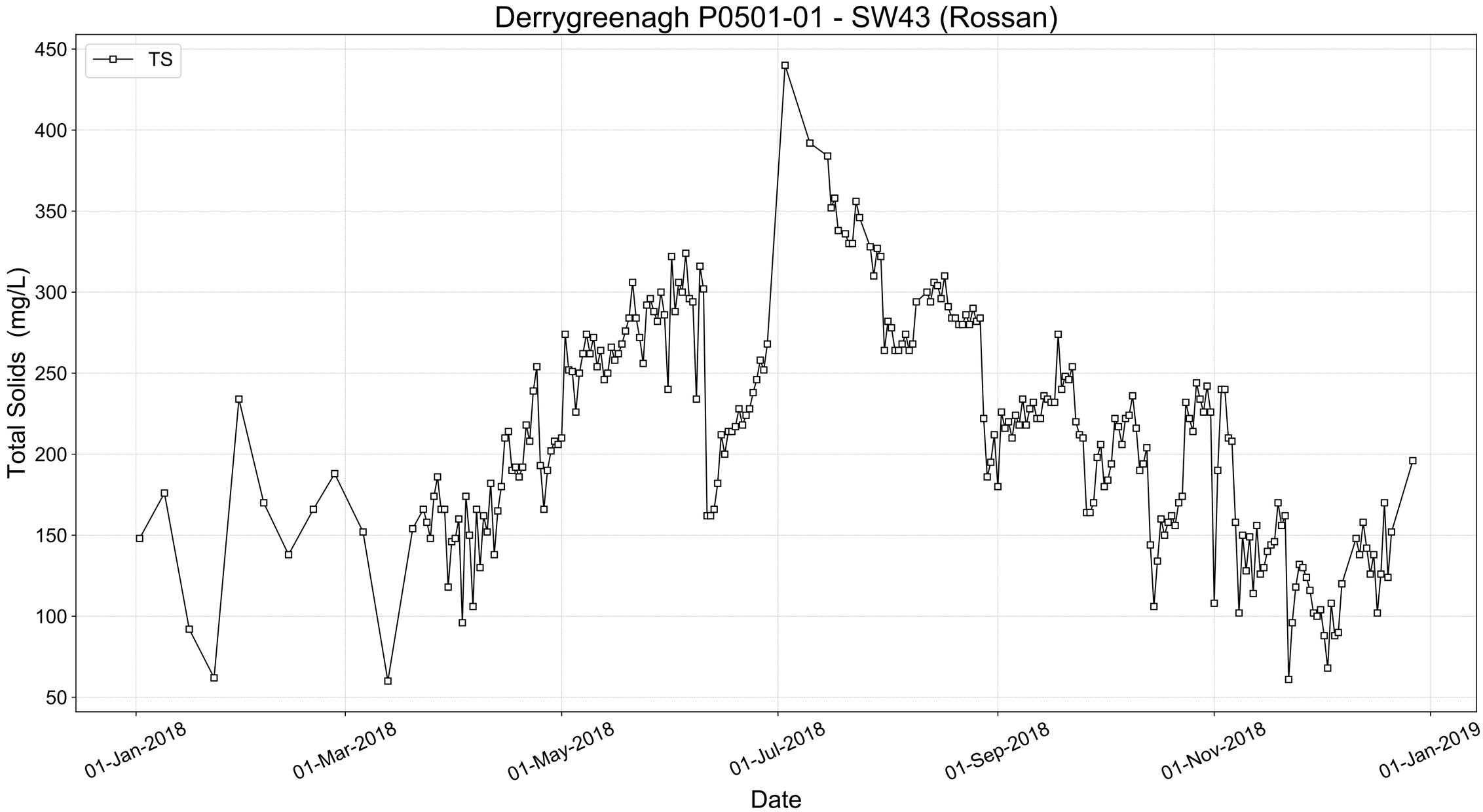

Derrygreenagh P0501-01 - SW43 (Rossan)
Ammonia
Trig. Level (2.78 mg/L)
Ammonia (mg/L)
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
01-Jan-2018
01-Mar-2018
01-May-2018
01-Jul-2018
01-Sep-2018
01-Nov-2018
01-Jan-2019
Date

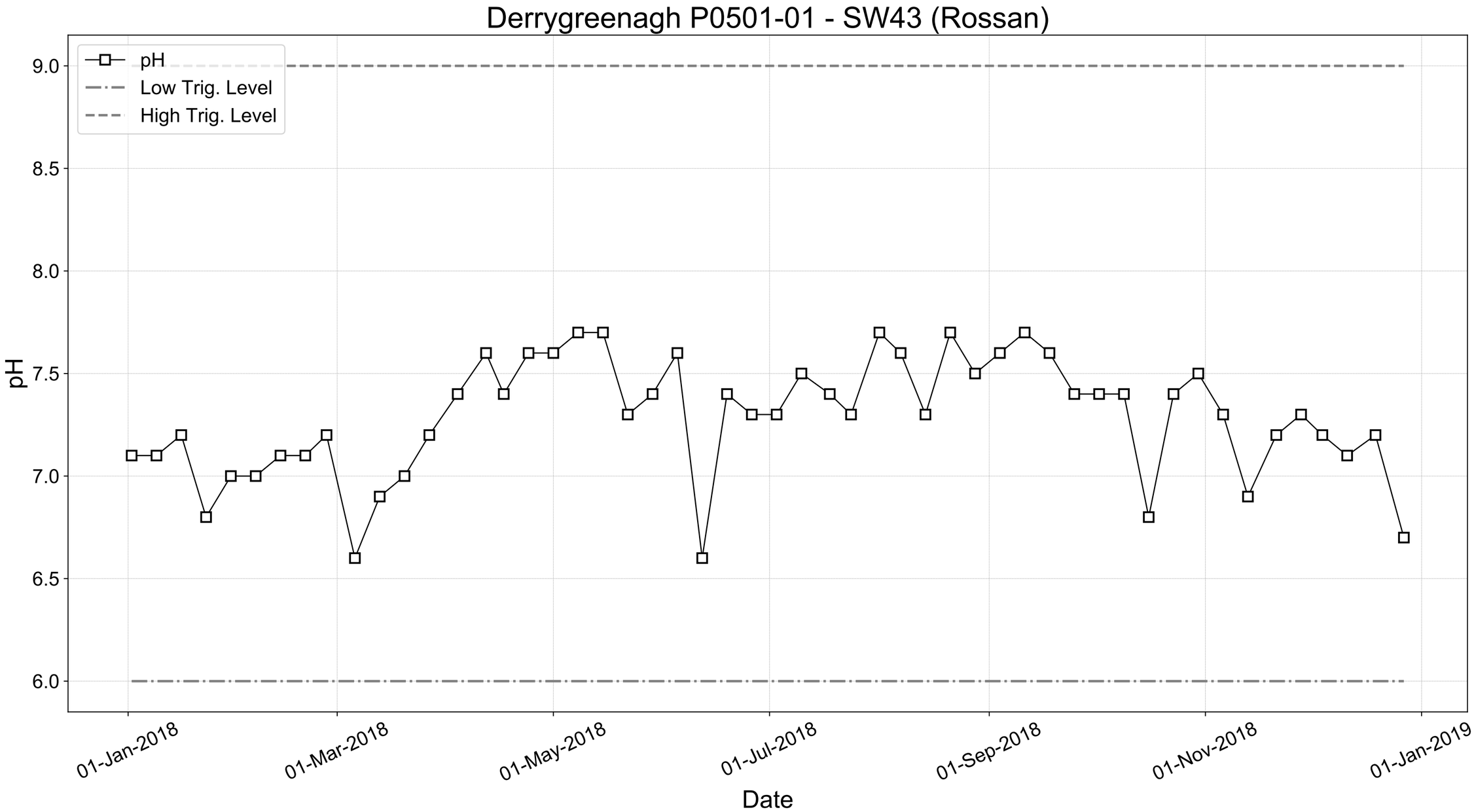

Derrygreenagh P0501-01 - SW43 (Rossan)
COD
Trig. Level (100 mg/L)
COD (mg/L)
0
20
40
60
80
100
120
140
160
01-Jan-2018
01-Mar-2018
01-May-2018
01-Jul-2018
01-Sep-2018
01-Nov-2018
01-Jan-2019
Date


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.