

This form will report compliance with your permit as determined by an NRW officer

Site	Bryn Power AD Facility	Permit Ref	AB3092ZE		
Operator/Permit holder	Bryn Power Limited				
Regime	Installations				
Date of assessment	22/10/2019	Time in	10:00	Out	13:15
Assessment type	Audit				
Parts of the permit assessed	1.1, 2.1, 2.3, 4.2.5,				
Lead officer's name	Richards, Gareth (Rivers House)				
Accompanied by					
Recipient's name/position	Jen Price/ Environment Manager	Date issued	06/11/2019		

Section 1 – Compliance Assessment Summary

This is based on the requirements of the permit under the Environmental Permitting Regulations or the licence under the Water Resources Act 1991 as amended by the Water Act 2003. A detailed explanation is captured in "Compliance Assessment Report Detail" (Section 2) and any actions you may need to take are given in the "Action(s)" (section 4). This summary details where we believe any non-compliance with the permit has occurred, the relevant condition and how the non-compliance has been categorised using our Compliance Classification Scheme (CCS). CCS Scores can be consolidated or suspended where appropriate, to reflect the impact of some non-compliances more accurately. For more details of our CCS scheme, contact your local office.

Permit conditions and compliance summary	CCS Category	Condition(s) breached
<p>KEY: See Section 5 for breach categories, suspended scores will be indicated as such. A = Assessed or assessed in part (no evidence of non-compliance), X = Action only, O = Ongoing non-compliance, not scored.</p>		

Number of breaches recorded	0	Total compliance score (see section 5 for scoring scheme)	0
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If the Number of breaches recorded is greater than zero, please see Section 3 for our proposed enforcement response

Section 2 – Compliance Assessment Report Detail

This section contains a report of our findings and will usually include information on:

- The part(s) of the permit that were assessed (eg. Maintenance, training, combustion plant, etc)
- Where the type of assessment was 'Data Review' details of the report/results triggering the assessment
- Any non-compliances identified
- Any non-compliances with directly applicable legislation
- Details of any multiple non-compliances
- Information on the compliance score accrued inc.
- Details of advice given
- Any other areas of concern
- Any actions requested
- Any examples of good practice
- A reference to photos taken

The site audit was arranged as part of NRW's routine audit schedule for EPR Part A(1) listed activities. An agenda was provided prior to the audit, the main subject of interest was the lagoon used for the storage of digestate.

The weather conditions were dry, sunny, with a light breeze. There had been high rainfall during the previous week.

General Update

Bryn Power reported that the AD plant was continuing to perform well. At present there was a small shortfall in food waste so gas production was slightly depressed. However, it was useful to have some spare capacity in preparation for the approaching Christmas period. If this situation continues into the New Year it may be necessary to seek a further Council contract. Current plant issues included; the feed hopper screw has a plastic liner that has deteriorated and needs to be replaced, gas engines are cutting out more frequently than normal which may be due to a gas booster problem - this will be investigated by the plant engineers. Overall there has been a move from teething problems to the early stages of some plant deterioration due to normal wear and tear. However, there is a preventative maintenance programme in place together with good call out arrangements.

Review of Actions from CAR_NRW0035175

Action (1) Complete.

Action (2) A monthly alarm log will be specified in the new contract for plant maintenance that will commence before calendar year end. Ongoing **Action (1)**.

Action (3) Instrumentation on the flare has been replaced and this should be more accurate. Under normal circumstances the flare is only used during the six monthly routine servicing. Gas generation is very responsive to feed rate so it can be controlled in the event of any extended unplanned engine outage. Flare records to be checked as part of next NRW audit. Complete.

Action (4) The seal repair had not been completed on the basis that it was not considered an operational issue. This point was accepted, however, it was recommended that it would be good practise to ensure the gap is sealed for Health and Safety reasons (a gas escape could impact upon tanker drivers working in the area). No odours were noticeable in the immediate vicinity during the site inspection.

Recommendation (1)

Action (5) No observation of tanker loading had been possible. NRW will witness during a subsequent site visit when opportunity arises.

Action (6) Bryn Power had adopted the use of 'ammonia sticks' for checking ammonia levels in the surface water collection sump. This was considered good practise as it provides an instantaneous reading prior to discharge. The exact procedure that has been adopted needs to be detailed in the Site Procedures including the logging of the recorded values in the Site Diary. **Action (2)**.

Action (7) It was confirmed that the identified issue was covered by the O&M contract. Complete.

Action (8) It was confirmed that checks on pressure relief valves are part of routine maintenance checks. It

remained important that Bryn Power ensure the new maintenance contract with Onnytech will cover all relevant items. **Action (3).**

Site inspection

The site inspection was hosted by Jen Price, Environment Manager. The only area of the site visited was the digestate lagoon. However, en route to the lagoon it was observed that the general condition of the site was very tidy. The roller shutter doors for the waste food reception hall were closed, gas engines were operational, all roadways were clean, there were no odours detected. A lot of infrastructure work was in progress (not related to the AD installation), this included the creation of defined storage areas using preformed concrete 'Lego' blocks and the laying of new concrete hard standing. The lagoon appeared to be in a well-maintained condition. There was a reasonable amount of surface water on top. This was not surprising considering the recent rainfall. At a downwind position, there was an occasional odour, however, this was not intense and very transient. It had a slight sulphurous/ farm yard slurry characteristic. This was likely to originate from the five air vent pipes towards the centre of the lagoon that are necessary to ensure there is no pressurisation of the otherwise sealed system.

Based on the observation that there was an approximate 3 – 4m difference in height between the lagoon cover and the top of the lagoon edge there was considerable spare capacity. This would be important for the winter period when digestate spreading would be restricted.

Some of the membrane welds (2mm HDPE) on the lagoon cover were inspected. In all cases these seemed to be in good condition with no visual evidence of any degradation.

There were no digestate removal operations taking place at the time of the inspection. The pipework used for extracting from the lagoon seemed to be in good condition and there was no evidence of any spillage on the ground.

There is a good view across to the AD plant from the lagoon and also other parts of the farm. It was noteworthy that there are already two stacks (one for the on site biomass boiler and one for the farm house heating boiler). The existing exhaust stacks for the two gas engines were also visible. There are plans to increase the height of these to improve emission dispersion, however, even if this was by the expected 6m the final height would be less than other existing stacks and unlikely to be visually obtrusive. Bryn await comment from Planning to find out if the increase can be completed as a Permitted development.

A new pipe had been installed that entered the lagoon from the top. This was to be used for recirculating flow when tankers fill up as it was expected to solve the issue of 'foaming'.

Pictures were taken of the lagoon.

Audit topics

Review of Performance 1 report (20/01/2018 – 19/01/2019)

NRW had raised some queries concerning the reported use of water and in response to this Bryn Power had provided a copy of a water bill for the period 20/1/18 to 19/7/18. This was for a significantly larger quantity of water use than had been reported on Form P1. It was confirmed that the water bill covered water use on the AD facility but also additional use elsewhere on the farm as it was based on the meter reading for the mains supply line to the farm.

The P1 value was taken from a separate Bryn Power meter on the line for the AD plant. The only regular use of water was for cooling the bearings on the food waste macerator. Used water is then fed to the AD plant. Earlier in the year the meter was producing inconsistent readings so it was replaced. The reported usage for 2019 will be based on the average monthly readings since the new meter was installed. This was agreed as acceptable.

Bryn Power confirmed that the P1 value for 'Total waste treated' represented the total food waste input. It did not include the slurry that was mixed with the macerated food waste to produce the feed 'soup'. This had been the basis of the P1 reporting since the installation was first operated. NRW made reference to the following documents;

Environment Agency position statement 029 'Anaerobic digestion of agricultural manure and slurry',

Version 1.0 October 2010.

NRW RD31 'Anaerobic digestion of agricultural manure and slurry', January 2016

These documents make it clear that when agricultural manure or slurry is destined for a treatment process for example composting or AD, it is classified as waste and will be subject to regulatory control. On this basis the report to NRW of 'Total waste treated' on Form P1 should include food waste and slurry i.e. the total input to the AD. In addition, quarterly Waste Returns, as stipulated in Permit Condition 4.2.5 should also include food waste and slurry.

Bryn explained that this interpretation was different from that which they had previously been advised, however, they would resubmit corrected Waste Returns as soon as the relevant data could be compiled.

Action (4): Bryn Power by 31st January 2020.

Lagoon design and process flows

The original design and construction of the lagoon was described. In summary it is clay bunded with a membrane and cover that is fabricated using 2mm HDPE geomembrane, with separate sections welded together. The work was completed by certified contractors and copies of the weld testing documents were examined. During 2018 the lagoon capacity was increased by raising the sides.

The 'best' slurry (undiluted slurry) from the agricultural operations is fed to the AD plant and mixed with the food waste. Other diluted slurry (typically yard washings) is fed direct to the lagoon (gravity fed pipe not part of the installation and no metering) and mixed with digestate. It is intended that the volume of diluted slurry generated will be reduced in the future through adoption of improved management practices and minimising contaminated surface water. It is estimated that there are approximate equal proportions of washings and digestate that enter the lagoon. The viscosity of these two feeds is similar so they are expected to mix well. However, to aid mixing and homogeneity together with the maintenance of aerobic conditions, there is a mixing system that withdraws liquid from the centre of the lagoon and recirculates it around the boundary. This is typically operated for a few hours each week.

The lagoon has been surveyed on two occasions; when first constructed and following the recent enlargement (survey carried out during the previous week). This is carried out in accordance with the SSAFO Regs., and form WQE3 submitted.

Bryn Power are preparing emergency response procedures for minor and major lagoon leakage scenarios.

Action (5) NRW to be provided with copies of the final plans.

Lagoon operation – inputs and outputs

There are detailed records for the volume of digestate that has been fed to the lagoon as such information is retained by the SCADA control system. It was noted that digestate can be removed for spreading before it enters the lagoon i.e. direct from the storage tank, or, fed to the lagoon for storage. **Action (6)**. Bryn to provide details of the following for 2018 and year to date 2019:

- volume of digestate removed direct from the AD plant
- volume of digestate fed to the lagoon
- total volume removed from the lagoon (i.e. volumes removed for spreading)

Information to be provided by 30th November 2019

Data for 2019 (YTD) was provided following the audit, received 22/10/19.

It was stated that spreading during 2019 was greater than 2018 as more land had been acquired by Bryn Group and the weather had been more favourable during the summer (less dry – spreading during dry weather can 'burn' vegetation).

Maintenance of lagoon infrastructure

Routine checking of the lagoon infrastructure consists of daily visual checks that are recorded on the daily check sheet and weekly visual checks of the stream that is closest to the lagoon. The later are not recorded. **Action (7)** Written records of all checks should be documented.

Bryn Power were questioned about the expected lifetime of the lagoon HDPE geomembrane. The specification for the HDPE membrane material should state a lifetime, however, consideration should be given to the impact of UV exposure which would be expected to reduce the lifetime. Exposure to the digestate may also be a relevant factor. Bryn Power were recommended to consider the need for a maintenance/inspection programme that reflects the increased risk of failure with ageing and also identify

an expected operational lifetime for the lagoon structure. Such an approach would minimise the risk of unexpected failure and assist with the necessary planning for a replacement. **Recommendation (2).**

Biofertiliser Certification Scheme

Bryn Power use Organic Farmers and Growers as an approved Certification Body for the Biofertiliser Certification Scheme. Copies of OF&G RD9 Inspection Summary Reports for inspections carried out on 7/2/2017 and 11/12/2018 were provided subsequent to the inspection together with a Compliance Notice for an inspection dated 25/01/2018.

The Compliance Notice identified two minor non-compliances. In both instances evidence of corrective action had been provided by Bryn Power. There was a further action to provide an outstanding validation test result for Whole Digestate.

Action (8) Bryn Power to provide NRW with copies of the Biofertiliser Certification Scheme annual certificates for 2017 and 2018.

AOB

NRW had previously sent a Reg 61 Notice to Bryn Power. An extension to the original deadline for a response had been granted. The information was now due by 30th November 2019.

The formation of a struvite deposit in pipework that carried digestate had previously been identified as a problem. There were plans to check/clean the pipe that was used for discharge of digestate, however, this would be done in sections to minimise disruption to normal operation. The main cause of struvite accumulation was likely to be the use of maize as a feedstock as this was high in Mg. Maize was no longer in use so ongoing build up should not be an issue.

EPR Compliance Assessment Report

**Report ID:
CAR_NRW0035911**

This form will report compliance with your permit as determined by an NRW officer

Site	Bryn Power AD Facility	Permit Ref	AB3092ZE
Operator/Permit holder	Bryn Power Limited	Date	22/10/2019

Section 3 – Enforcement Response

You must take immediate action to rectify any non-compliance and prevent repetition. Non-compliance with your permit conditions constitutes an offence and can result in criminal prosecutions and/or suspension or revocation of a permit. Please read the detailed assessment in Section 2 and the steps you need to take in Section 4 below.

Section 4 – Action(s)

This section summarises the actions identified during the assessment along with the timescales for when they will need to be completed.

Criteria Ref.	CCS Category	Action required/advised	Due Date
See Section 1 above			

Section 5 – Compliance notes for the Operator

To ensure you correct actual or potential non-compliance we may

- Advise on corrective actions verbally or in writing
- Require you to take specific actions verbally or in writing
- Issue a notice
- Require you to review your procedures or management system
- Change some of the conditions of your permit
- Decide to undertake a full review of your permit

Any breach of a permit condition is an offence and we may take legal action against you

- We will normally provide advice and guidance to assist you to come back into compliance either after an offence is committed or where we consider that an offence is likely to be committed. This is without prejudice to any other enforcement response that we consider may be required.
- Enforcement action can include the issue of a formal caution, prosecution, the service of a notice and/or suspension or revocation of the permit.

See our Enforcement and Civil Sanctions guidance for further information

This report does not relieve the site operator of the responsibility to

- Ensure you comply with the conditions of the permit at all times and prevent pollution of the environment
- Ensure you comply with other legislative provisions which may apply

Non-compliance scores and categories

CCS category	Description	Score
C1	A non-compliance that could have a major environmental effect	60
C2	A non-compliance which could have a significant environmental effect	31
C3	A non-compliance which could have a minor environmental effect	4
C4	A non-compliance which has no potential environmental effect	0.1

Operational Risk Appraisal (Opra) - Compliance assessment findings may affect your Opra score and/or your charges. This score influences the resource we use to assess permit compliance.

Section 6 – General information

Data protection notice

The information on this form will be processed by the Natural Resources Wales (NRW) to fulfil its regulatory and monitoring functions and to maintain the relevant public register(s). The NRW may also use and/or disclose it in connection with:

- Offering/providing you with its literature/services relating to environmental matters
- Consulting with the public, public bodies and other organisations (eg. Health and Safety Executive, local authorities) on environmental issues
- Carrying out statistical analysis, research and development on environmental issues
- Providing public register information to enquirers
- Investigating possible breaches of environmental law
- Assessing customer service satisfaction and improving its service
- Freedom of Information Act/Environmental Regulations request

The NRW may pass it on to its agents/representatives to do these things on its behalf. You should ensure that any persons named on this form are informed of the contents of this data protection notice.

Disclosure of information

The NRW will provide a copy of this report to the public register(s). However, if you consider that any information contained in this report should not be released to the public register(s) on the grounds of commercial confidentiality, you must write to your local area office within fifteen working days of receipt of this form indicating which information it concerns and why it should not be released, giving your reasons in full.

Customer charter

What can I do if I disagree with this compliance assessment report?

If you are unable to resolve the issue with your site officer, you should firstly discuss the matter with officer's line managers using the informal appeals procedure. If you wish to raise your dispute further through our official Complaints and Commendations procedure, phone our general enquiry number 0300 065 3000 (Mon to Fri 08.00 – 18.00) and ask for the Customer Contact team or send an email to enquiries@naturalresourceswales.gov.uk. If you are still dissatisfied you can make a complaint to the Public Services Ombudsman for Wales. For advice on how to complain to the Ombudsman phone their helpline on 0845 607 0987.

Welsh Language

If you would like this form in Welsh please contact your Regulatory Officer.