

Compliance Assessment Report CAR_NRW0043463

Permit being assessed: AB3790ZB.

For: Barry Energy Production Facility, **held by:** Biomass UK No. 2 Ltd

At: Woodham Rd, Barry, CF63 4JE.

Type of assessment: Report/Data Review,

Reason: Routine.

On: 31/12/2023.

Parts of permit assessed: Annual Report.

NRW Lead Officer: Geraint Harris.

Report sent to: Randall Smith , Technical Director, on 14/02/2024.

1. Summary of our findings (full details in section 4)

Part of permitted activity assessed (compliance criteria)	Assessment result	Permit condition
IR3A - Emissions and monitoring - Emissions to water, air or land	Assessed (A)	
IR1C - Management - Energy Efficiency	Assessed (A)	
IR1D - Management - Efficient use of raw materials	Assessed (A)	
IR1E - Management - Avoidance, recovery and disposal of wastes produced by the activities	Assessed (A)	
IR4B - Information - Reporting	Assessed (A)	

Result types are explained in more detail in the 'Important Information' section below.

Total non-compliances recorded	Total non-compliance score
0	0

How we use the non-compliance score to calculate your annual fee is explained in the 'Important Information' section below.

2. What action is required?

No action required.

3. What will happen next?

Any non-compliance we have identified and recorded on this form is an offence. It can result in criminal prosecution and/or suspension or revocation of your permit.

At this time, we do not intend to take any further action.

This statement does not stop us from taking additional enforcement action if further relevant information comes to light or offences continue.

4. Details of our assessment

Biomass UK

EPR/AB3790ZB

Q4 Air 1 Report:

NRW received the Q4 quarterly Air1 report and the Q4 Residue1 report on the 31st of January 2024. Biomass UK No. 2 Ltd have not operated during this period, therefore there were no monitoring results to review.

Biomass UK haven't had enough consecutive days on which to perform QAL2 and AST testing therefore were unable to complete the Air_2 form.

Waste Returns:

Q4 waste returns have been received with zero entries. Report accepted.

Annual Returns

NRW received Biomass UK No.2 Ltd's Annual Performance Report for 2023 on the 31st of January 2024. The facility has been non-operational during the whole of 2023. As a result, the site did not process any wastes during 2023 and all fuel storage and reception areas have remained empty. Since the plant has been non-operational the report contains nil values for all sections. This report has been accepted with no further actions required.

Energy efficiency, CHP, raw materials and waste reviews - permit conditions 1.2.1(b), 1.2.3, 1.3.1(c) and 1.4.2

Permit Condition 1.2.1(b) States:

The operator shall review and record at least every four years whether there are suitable opportunities to improve the energy efficiency of the activities; and (c) take any further appropriate measures identified by a review.

The plant has been largely non-operational since 2019 and has not formally entered into the 'Normal Operations', it has therefore not been possible for Biomass UK to collate any meaningful long-term energy performance and efficiency data to robustly identify any opportunities to improve the energy efficiency of the activities. However, they have undertaken an internal review of potential energy efficiency and energy saving opportunities, with the following measures identified and implemented:

- The site has carried out a programme of lamp replacements for all external lights (over 100 in total) with LED replacements. The replacement of each luminaire significantly reduced the energy used per unit and led to overall external lighting energy reduction of 90%. The long-term monitoring of the energy use and benefits provided by this scheme of improvements will be reported as part of the quarterly and annual EPR reporting.
- Systematic review of all plant maintenance and shutdown procedures has been carried out and

implemented resulting in a reduction of auxiliary fuel usage from 15,000L to 2,000L. The long-term monitoring of auxiliary fuel use provided by this scheme of improvements will be reported as part of the quarterly and annual EPR reporting.

In addition to the above, Biomass UK has identified and is considering an opportunity to install integrated photovoltaic panels to the roof structure of the Gasification and Boiler House Buildings and the Turbine Hall. The total area of roof space to be occupied by solar equates to approximately 750m² and is estimated to produce approximately 157,338 kWh/annum indicating an overall energy reduction of 6.9%. A decision on whether the installation of Solar Panels will be installed will be made during 2024 and will be subject to planning permission from Vale of Glamorgan County Council.

Biomass UK go on to state that “once the Installation has been fully commissioned and placed into permanent operation, the operator will be able undertake long-term monitoring of key plant items, i.e. combustion fans, boiler, turbine, air cooled condensing systems etc, and identify any opportunities for efficiency improvements.” Any future plans should also consider a wider range of efficiency aspects such as flue gas flow rate and heat loss minimisation, heat recovery aspects including emerging techniques to maximise heat recovery such as heat pumps, mechanical vapour recompression and Organic Rankine Cycle. The report should also quantify improvements achieved to date and benchmark actual performance against appropriate best performance indicators.

Since there is very little operational data available to undertake a more in-depth energy efficiency review, NRW consider permit condition 1.2.1(b) to be satisfied.

Condition 1.3.1(c) states

The operator shall review and record at least every four years whether there are suitable alternative materials that could reduce environmental impact or opportunities to improve the efficiency of raw material and water use; and (d) take any further appropriate measures identified by a review.

A review of the existing raw materials has been carried out by the operator in conjunction with the conclusions of the 2019 sector BREF Note and accompanying BAT conclusions document. The conclusion of the assessment was that the plant currently meets BAT requirements and there are no suitable alternative raw materials that can improve the efficiency of raw material use. The operator goes on to say that “once the plant has been fully commissioned and entered into continuous operation, the operations team will be in a position to understand the long-term trending of key plant items and resource usage. The ability to monitor all dosing rates, resource consumption and plant performance in real time provides the opportunity to fine tune and optimise all resource usage and to maximise the efficiency of the plant. Key areas of interest will be reagent dosing rates and consumption, water treatment and ‘bleed down’ rates and plant reliability [therefore reducing the quantity of operating using auxiliary fuels].” Since there is very little operational data available to undertake a more in-depth review, NRW consider permit condition 1.3.1(c) to be satisfied.

Condition 1.4.2 states

The operator shall review and record at least every four years whether changes to those [waste management] measures should be made and take any further appropriate measures identified by a review.

A review of the existing waste management options has been carried out in conjunction with the conclusions of the 2019 sector BREF Note and accompanying BAT conclusions document. The conclusion of the assessment is that the plant currently meets BAT requirements and that the waste management and disposal options employed by the site have been optimised. All wastes and process by-products are currently recycled. NRW consider permit condition 1.4.2 to be satisfied.

Permit Condition 1.2.3 states

The operator shall review the viability of Combined Heat and Power (CHP) implementation at least every four years, or in response to any of the following factors, whichever comes sooner: (a) new plans for

significant developments within 15 km of the installation; (b) changes to the Local Plan; (c) changes to the UK CHP Development Map or similar; and (d) new financial or fiscal incentives for CHP. The results shall be reported to Natural Resources Wales within two months of each review, including where there has been no change to the original assessment in respect of the above factors.

A review covering all the categories mentioned in condition 1.2.3 above has been provided and reviewed. The operator concludes that until such a time that the installation can be proven to operate both reliably and can provide the necessary third-party assurances regarding the plant performance the Operator will not be able to provide credible or viable heat take off / PPA with any commercial or industrial counterparties. NRW agree with this conclusion and consider permit condition 1.4.2 to be satisfied.

End.

If you have any queries about this report, or to discuss completion of any actions, please contact the NRW Officer named above.

Important information

Legal status of this report

Your permit is issued to you under the Environmental Permitting Regulations. You have a responsibility to comply with the conditions of your permit and prevent pollution/harm of the environment. You must also ensure that you comply with any other relevant legislation that may apply to your site's operations.

This report explains the findings of our assessment and any action you are required to take. We categorise non-compliance using our guidance for assessing non-compliance at regulated sites.

When we find potential non-compliance/s we will normally give you advice on how to maintain compliance.

To correct non-compliance, we may:

- require you to take specific actions
- issue a notice
- review the conditions of your permit.

Any advice and guidance we give will be without prejudice to any other enforcement response that we consider may be required.

Assessment results and non-compliance categories (used in section 1):

Assessment result	Description
Assessed (A)	Assessed or assessed in part, no evidence of non-compliance found
Action only (X)	Action only relating to the activity assessment
Ongoing (O)	Ongoing non-compliance, not scored

Non-compliance category	Description	Score
C1 Major	Potential to have a major, serious, persistent and/or extensive impact or effect on the environment, people and/or property	60
C2 Significant	Potential to have a significant impact or effect on the environment, people and/or property	31
C3 Minor	Potential to have a minor or minimal impact or effect on the environment, people and/or property	4
C4 No environmental impact	Non-compliance at a regulated site that cannot foreseeably have any impact on the environment, people and/or property	0.1

How we use assessment scores

The number and severity of non-compliances recorded in a year will affect your annual subsistence fee the following year. A non-compliance factor is added to your site's Operator

Performance Risk Appraisal (OPRA) score when we calculate your fee to reflect the additional resource we use to assess permit compliance.

If your assessment result in Section 1 is suspended, what does this mean?

In line with our guidance, we may suspend scores for up to six months to allow time for remedial action to be taken. Suspended scores will be re-instated if the action is not completed.

Full list of Industry compliance criteria (used in section 1 and 2):

1. Management

- IR1A – General management
- IR1B – Finance (only applicable to Landfill)
- IR1C – Energy efficiency
- IR1D - Efficient use of raw materials
- IR1E - Avoidance, recovery and disposal of wastes produced by the activities
- IR1F - Multiple operator installations

2. Operations

- IR2A – Permitted activities
- IR2B – The site
- IR2C – Operating techniques
- IR2D – Technical requirements
- IR2E – Improvement programme
- IR2F – Pre-operational conditions
- IR2G – Landfill engineering (only applicable to Landfill)
- IR2H – Waste acceptance (only applicable to Landfill)
- IR2I – Leachate levels (only applicable to Landfill)
- IR2J – Closure and aftercare (only applicable to Landfill)
- IR2K – Landfill gas management (only applicable to Landfill)

3. Emission and Monitoring

- IR3A – Emissions to water, air or land
- IR3B – Emissions of substances not controlled by emission limits
- IR3C – Odour
- IR3D – Noise and vibration
- IR3E – Monitoring
- IR3F – Pests
- IR3G – Air quality management plans
- IR3H – Monitoring for the purposes of the Industrial Emissions Directive (this heading includes Large Combustion Plants)
- IR3I – Fire

4. Information

- IR4A – Records
- IR4B – Reporting
- IR4C – Notification

Enforcement response

Any non-compliance with a permit condition is an offence and we may take legal action against you. Action we take can include prosecution, serving a notice on you and/or

suspension or revocation of your permit. See our Enforcement and Sanctions Guidance for further information.

Data protection notice

You should make sure that anyone named in this report knows that the information it contains will be processed by Natural Resources Wales to fulfil its regulatory and monitoring functions and to maintain the relevant public register(s).

We may also use and/or disclose the report in connection with:

- offering or providing you with our literature or services relating to environmental matters
- consulting with the public, public bodies and other organisations (e.g. 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 our service
- Freedom of Information Act or Environmental Information Regulations requests.

We may also pass it on to our agents or representatives to do these things on our behalf.

Disclosure of information – this report will be available to view on-line

If you think this report contains commercially confidential information that should not be placed on our public register, you must contact your local Natural Resources Wales office within **fifteen working days** of receiving this report, using the contact details in the accompanying email or letter. You must give a full explanation of why it should not be added to our public register, including specifying which information is commercially confidential. We will assess your request and respond to you within twenty working days to let you know if we agree to your request.

What do I do if I disagree with the report or have a complaint?

If you disagree with this compliance assessment report, you should contact the lead officer without delay to discuss your concerns.

If you are unable to resolve the issue with the lead officer or their line manager you should contact our Customer Contact team on 0300 065 3000 (Monday to Friday 08:00 to 18:00), or email enquiries@naturalresourceswales.gov.uk for details of how to raise your dispute further through our Complaints and Commendations procedure.

If you are dissatisfied with our response, you can contact the Public Services Ombudsman for Wales by phone on 0300 7900203 or by email at ask@ombudsman.wales

Welsh Language Standards

We are committed to establishing Natural Resources Wales as a naturally bilingual organisation. We will provide compliance reports in your preferred language.