

Compliance Assessment Report CAR_NRW0052019

Permit being assessed: BB3891CG.

For: Cog Moors Wastewater Treatment Works, **held by:** DWR CYMRU CYFYNGEDIG

At: Green Lane, Dinas Powys, CF64 2TR.

Type of assessment: Other,

Reason: Other.

On: 01/06/2026.

Parts of permit assessed: Schedule 5 Notification.

NRW Lead Officer: Lewis Evans.

Report sent to: Site Manager, Site Manager, on 01/06/2026.

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

Part of permitted activity assessed (compliance criteria)	Assessment result	Permit condition
IR3A(2) - Installations - Emissions and monitoring - Emissions to air	C3 Minor	3.2.1.

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

Total non-compliances recorded	Total non-compliance score
1	4

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?

Criteria	Action needed	Complete by
IR3A(2)	The operator must implement and maintain routine monitoring of critical safeguards, including potable water supply levels and other levels, at suitably defined intervals to ensure their continued effectiveness in mitigating foaming events and preventing potential biogas venting by the 30th June 2026.	30/06/2026

Compliance criteria codes are listed in the 'Important information' section below.

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**Dwr Cymru Welsh Water – Cog Moors Wastewater Treatment works - Schedule 5 Notification**

Permit Number: EPR-BB3891CG

Permit Holder: Dŵr Cymru Cyfyngedig

Schedule 5 Notification

On the 29th of January 2026, Dŵr Cymru Welsh Water (DCWW) notified (via email) Natural Resources Wales (NRW) through a schedule 5 notification of a release of gas from the foam suppression box on digester “C” which occurred on site.

Incident occurring 29th of January 2026

DCWW submitted a schedule 5 notification to NRW detailing the incident that occurred on the 29th of January.

During normal working operations, DCWW systems identified that foam levels had begun to rise within digester C on site. Initial investigations within DCWW suggest that the gas had escaped via the bellmouth at the top of the digester or through the foam box safety system. The site had then reduced and turned off the feed to the digester to prevent more gas being vented out. Additionally, the digester gas line was isolated once the pressures had reduced and it was safe to do so and the gas seal was reinstated once the area was clear.

At the time of the event, the operator has assumed that approximately 1,500m³ of biogas has been vented to atmosphere following this event. The composition of the gas was approximately 60% Methane, 40% Carbon Dioxide. The duration of the venting was approximately 2 hours between 02:00 and 04:00 on the morning of the 29th.

Part B – Additional Information

On 28 January, DCWW reported an operational incident at an advanced digestion site following a series of power outages occurring between approximately 11:30 and 14:15. The loss of power resulted in the shutdown of critical plant systems, including digester mixing and the potable water pumping system. During this period, the absence of mixing within Digester

C led to a rise in foam levels, which subsequently triggered the automatic activation of the foam suppression sprinkler system in accordance with its design. However, the effectiveness of this mitigation measure was significantly reduced due to the concurrent inability to replenish the potable water tank, as the associated pumps were inoperable without power. This caused the tank level to fall, limiting the available water supply for foam suppression and reducing system performance.

Subsequent investigation identified that a leak in the potable water main had further diminished system capacity prior to and during the incident, exacerbating the loss of resilience in the foam suppression system. The incident therefore involved a combination of failures, including loss of power to essential infrastructure, interruption of process control through cessation of digester mixing, and reduced effectiveness of a key mitigation system, resulting in increased risk of foaming and potential loss of containment.

In response, the operator has undertaken corrective and preventative actions. The potable water main leak has been repaired, restoring and increasing available capacity for foam suppression. In addition, the antifoam dosing system has been upgraded to improve resilience, with independent dosing units now installed for each digester to reduce reliance on single systems and improve process control under abnormal conditions. Furthermore, a wider review of emergency procedures has been carried out across all DCWW advanced digestion sites, with particular focus on managing power failure scenarios and associated risks such as foaming and rapid volume expansion events.

Overall, the incident highlights the vulnerability of interconnected systems to power disruption, particularly where mitigation measures rely on powered infrastructure. While automatic controls functioned as designed, their reduced effectiveness during the event demonstrates the importance of ensuring adequate redundancy and independence within critical systems to minimise environmental risk.

Action: The operator must implement and maintain routine monitoring of critical safeguards, including potable water supply levels and other levels, at suitably defined intervals to ensure their continued effectiveness in mitigating foaming events and preventing potential biogas venting.

Non-Compliance

The fugitive emission of biogas is a breach of permit condition 3.2.1 which states:

“Emissions of substances not controlled by emission limits (excluding odour) shall not cause pollution. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved emissions management plan, have been taken to prevent or where that is not practicable, to minimise, those emissions.”

The amount of biogas lost to atmosphere has a significant impact on the environment due to its high GWP and therefore a Category 3 non-compliance has been scored against permit condition 3.2.1. for the exceedance occurring 29th January 2026.

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 required for the permit condition assessed to avoid non-compliance. No non-compliance scored at this time
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(1) – Emissions to water
- IR3A(2) – Emissions to air
- IR3A(3) – Emissions to 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.

Disputing the Content of this Compliance Assessment Report Form

If you disagree with the content of this Compliance Assessment Report form, you should submit your concerns, in writing, to the regulating officer who issued it within **15 working days** of its issue. This will be treated as a **Stage 1 review**.

If you are not satisfied with the outcome of the stage 1 review, you may request a **Stage 2 appeal**. This request must be submitted **within 21 working days** of receiving the response from the stage 1 review.

Further details on our review and appeal process are available at: [Natural Resources Wales / Appeal a regulatory decision from Natural Resources Wales](#)

Concerns Not Related to the Content of this Compliance Assessment Report Form

If your concerns do not relate to the content of the Compliance Assessment Report form, you should first attempt to resolve the issue with the regulating officer or their line manager.

If the issue remains unresolved, please contact our **Customer Contact Team**:

- **Telephone:** 0300 065 3000 (Monday to Friday, 09:00–17:00)
- **Email:** enquiries@naturalresourceswales.gov.uk

They will provide details on how to escalate your concerns through our **Complaints and Commendations procedure**.

If you are dissatisfied with our response, you may contact the **Public Services Ombudsman for Wales**:

- **Telephone:** 0300 790 0203
- **Email:** 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.