

Compliance Assessment Report CAR_NRW0042637

Permit being assessed: FP3232KG.

For: Cardiff East Wastewater Treatment Works CHP Facility, **held by:** Dwr Cymru Cyfyngedig

At: Dwr Cymru Welsh Water, Tide Fields Road, Rover Way, Cardiff, Cardiff, CF24 2RX.

Type of assessment: Report/Data Review,

Reason: Other.

On: 06/06/2023.

Parts of permit assessed: Schedule 5 Notification.

NRW Lead Officer: Lewis Evans.

Report sent to: Scott Webster, AAD Facilities Manager , on 17/10/2023.

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	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	Notify NRW once the electrical contractor has attended site and has changes the discrimination settings.	31/12/2023

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

Dŵr Cymru Welsh Water – Cardiff East Wastewater Treatment Works CHP Facility

Permit Number: EPR/FP3232KG

Schedule 5 Notification of Sludge and biogas loss

On the 6th of June 2023, Dŵr Cymru Welsh Water (DCWW) notified Natural Resources Wales (NRW) through a schedule 5 notification of an incident which occurred on site via email. The notification stated that there was power loss to the digester mixing pumps, which ceased the mixing of digestate in the two digesters and caused a rapid volume expansion of foam from the two digesters on site. Low density sludge had exited the two digesters as well as biogas through the whessoe valve. The sludge had flowed down the outside of the digester and remained in the bunded area. Biogas exited to atmosphere. The site has calculated approximately 4,000 litres of sludge and approximately 5,500m³ of biogas had escaped. This is a fugitive emission of gas with a high global warming potential.



Image showing the sludge 'hugging' the digester following the incident. No digestate has breached the perimeter and was contained within the site boundary.

Following the return of power, the mixing within the digesters had restarted and brought the foam levels down and operation within the digesters back to normal.

The power disruption occurred between 15:19 to 16:35, with the sites log-book stating that biogas had exited the Whessoe valve at 15:48. The site estimates that the release of gas ceased once the power had returned to site.

Following the Part A notification DCWW submitted their Part B once the investigation into the breach had been completed. The Part B contained the following information.

DCWW found that the Incomer #1 VCB (Vacuum Circuit Breaker) was in the "Normal" closed position, as well as the Bus Section. The second Incomer was found to have tripped and was open. It was stated that the plant was being fed via Incomer #1 and the bus section, DCWW checked downstream and the ADTX VCB was also in the "Normal" closed position indicating the system was live at that point.

The Low Voltage Distribution Board (LVDB) which is located in the boiler house was checked. This is the main 3200A incomer ACB which feeds the AAD plant, and this was tripped and in the open position. This was closed at approximately 16:30 and operations proceeded to get the AAD plant back up and running.

DCWW contacted the National Grid who stated to them that there had been a problem on the network system near the plant. Once given the O.K, DCWW proceeded to close Incomer VCB #2.

DCWW then check to ensure both HV incomers and bus section were in the closed position. DCWW have requested a grading / discrimination survey be carried out on the ACB settings as we believe this interruption may have been a nuisance trip and as a result of power blips on the main network.

The following report was submitted as part of the Part B which is the report on the grading/discrimination survey. It was found that there was no grading across all three circuits and there are issues at different points that will lead to no coordination or selectivity, similar issues were found with the EF protection and on the ACB. DCWW will arrange the contractor to attend site and change the discrimination settings to stop nuisance electrical trips in the future.

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.

ACTION: Notify NRW once the electrical contractor has attended site and has changes the discrimination settings.

END.

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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.