

Compliance Assessment Report CAR_NRW0040557

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 carried out: Site Inspection, Reason: Other.

On 01/09/2022 between 10:00 and 12:00.

Parts of permit assessed: Foaming Incident

NRW Lead Officer: Lewis Evans, accompanied by Dale Padfield.

Report sent to: Scott Webster, AAD Facilities Manager on 24/11/2022.

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

Part of permitted activity assessed (criteria)	Assessment result	Permit condition
A1 - Specified by permit	C3 Minor	1.1.1
E2 - Emissions - Land and groundwater	C3 Minor	3.2.1

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

Total number of non-compliances recorded	Total non-compliance score
2	8

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
A1	Please submit to Natural Resources Wales the maintenance procedures you will implement to reduce the risk of any potential blockages in the pipework that may cause a foaming incident in the future.	25/01/2023
E2	Please submit to Natural Resources Wales the maintenance procedures you will implement to reduce the risk of foaming following this incident.	25/01/2023

Action 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 – Foaming CAR form

On the 30th of August 2022, Dŵr Cymru Welsh Water (DCWW) notified Natural Resources Wales (NRW), via email, that they will be submitting a Schedule 5 Notice relating to a foaming and sludge incident that had passed beyond the site's boundary onto an adjacent coastal path. The subsequent Schedule 5 Notice was submitted to NRW on the 31st of August 2022. This contained further information including a spillage estimate of approximately <100l of sludge derived foam.

In addition to commencing the root cause investigation, DCWW began remediating the foaming situation by utilising antifoam dosing, spraying the limpet (weir) box with water, reducing the feed to the digesters and employing a screen along the boundary fence to help prevent further foam and sludge from escaping from site. DCWW's pollution prevention team attended the site during the morning of 31/08/22 to clean the footpath and surrounding vegetation which had been impacted by the foam release.

As a result of additional foam releases onto the adjacent footpath on the morning of the 1st of September, NRW's regulatory officer for DCWW, Lewis EVANS along with a colleague Dale PADFIELD, attended the site to discuss and investigate the extent of the pollution.

The following pictures were taken on the visit.



Picture 1: Image showing vegetation on the coast path covered in the digestate foam pollution.



Picture 2: Image showing the coast path being affected by the digestate foam coming from DCWW's site. The stretch of the pollution was around 5-10m. It is unknown due to the vegetation density and steep drops on how far the pollution travelled into the vegetation.



Picture 3: Image showing the weir box overflowing. Image also shows the extent of the digestate falling down the side of the digester and on the roads on site.



Picture 4: Image showing the mesh fence DCWW had put up to attempt to stop the foam travelling off site.

On the 2nd of September, DCWW sent an email with further information and an explanation on the foaming event. In their investigations, DCWW found that there was a partial blockage on the outlet of the digester. One thought is that the partial blockage on the outlet caused the weir box at the side of the digester to intermittently fill up with sludge. As there was no mixing taking place in the weir tank, there was natural degassing of the digestate taking place which resulted in a build-up of foam which blew onto the surrounding areas including the site and the adjacent coastal path.



Picture 5: Image received from DCWW on the 13th of Sep showing the clean-up work taken place on the coast path. Vegetation has been cut back, steel fence appears to be cleaned and the coast path has been cleaned.

DCWW do not know what caused the blockage but there is a suggestion that the recent hot weather caused the sludge within the stainless-steel pipework to become baked onto the lining of the pipework. This would decrease the diameter of the stainless-steel outlet pipe from the digester and cause the sludge to overtop into the weir box at the top.

To prevent subsequent events, DCWW are going to install a level sensor in the weir box, which will be set so that if a certain level is reached a visual inspection is required. This will decrease the risk of this type of event occurring in the future, especially as the chances of future summers bringing prolonged hot temperatures. DCWW brought jetters onto site to jet the pipework and the blockage was cleared with a combination of jetting and rodding, this resolved the blockage, but staff were unable to see what the cause of the blockage was. After the jetting, the sludge level in the weir box started to drop, supporting the idea that there was a blockage within the pipework.

As a result of the foaming incident that occurred on the 30th of August to the 1st of September the following scores will be applied.

Permit Condition 1.1.1 - *The operator shall manage and operate the activities:*

- a. *in accordance with a written management system that identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents, non-conformances, closure and those drawn to the attention of the operator as a result of complaints;*

The lack of a maintenance/inspection regime for the digester outlet pipework coupled with lack of level sensors within the weir box meant this incident was only detected after the fact. Therefore, the root cause of this incident is a result of insufficient management control which can be attributed to permit condition 1.1.1. Consequently, a Category 3 noncompliance is being issued against permit condition 1.1.1. **It is an offence under Regulation 38(2) of the Environmental Permitting Regulations (consolidated 2016) to breach a permit condition or emission limit. Non-compliance score CCS3.**

ACTION #1 - Please submit to Natural Resources Wales the maintenance procedures you will implement to reduce the risk of any potential blockages in the pipework that may cause a foaming incident in the future by the 25th of January 2023.

Permit Condition 3.2.1 - *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. –*

Upon review of this incident, it is clear that appropriate measures were not in place to prevent or at the least minimise the risk of digestate foam from escaping the AD plant. Therefore, it has been decided that this incident is in contravention of permit condition 3.2.1 since emissions of foam caused pollution to areas beyond the site boundary. Consequently, a Category 3 noncompliance is being issued against permit condition 3.2.1. **It is an offence under Regulation 38(2) of the Environmental Permitting Regulations (consolidated 2016) to breach a permit condition or emission limit. Non-compliance score CCS3.**

ACTION #2 - Please submit to Natural Resources Wales the maintenance procedures you will implement to reduce the risk of foaming following this incident by the 25th of January 2023.

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.

What are suspended scores?

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 and Waste action criteria (used in section 1 and 2):**A: Permitted activities**

- A1 Specified by permit

B: Infrastructure

- B1 Infrastructure – Engineering for prevention and control of emissions
- B2 Infrastructure – Closure and decommissioning
- B3 Infrastructure – Site drainage engineering (clean and foul)
- B4 Infrastructure – Containment of stored materials
- B5 Infrastructure – Plant and equipment

C: General management

- C1 General management – Staff competency/training
- C2 General management – Management system and operating procedures
- C3 General management – Materials acceptance
- C4 General management – Storage, handling, labelling and segregation

D: Incident management

- D1 Incident management – Site security
- D2 Incident management – Accidents, emergency and incident planning

E: Emissions

- E1 Emissions – Air
- E2 Emissions – Land and groundwater
- E3 Emissions – Surface water
- E4 Emissions – Sewer
- E5 Emissions – Waste

F: Amenity

- F1 Amenity – Odour
- F2 Amenity – Noise
- F3 Amenity – Dust/fibres/particulates and litter
- F4 Amenity – Pests/birds and scavengers
- F5 Amenity – Deposits on road

G: Monitoring and records, maintenance and reporting

- G1 Monitoring and records, maintenance and reporting – Monitoring of emissions and environment
- G2 Monitoring and records, maintenance and reporting – Records of activity, site diary/journal/events
- G3 Monitoring and records, maintenance and reporting – Maintenance records
- G4 Monitoring and records, maintenance and reporting – Reporting and notification to Natural Resources Wales

H: Resources efficiency

- H1 Resource efficiency – Efficient use of raw materials
- H2 Resource efficiency – Energy efficiency

Enforcement response

Any permit condition non-compliance 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 20 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 – 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.