

Compliance Assessment Report CAR_NRW0040093

Permit being assessed: AP3139FT.

For: Five Fords WWTW Gas to Grid Facility, held by Dwr Cymru Cyfyngedig (Welsh Water)
At: Five Fords WWTW CHP Facility Cefn Road Cefn Road , Marchwiel, Wrexham, LL13 0PA.

Type of assessment carried out: Site Inspection, Reason: Routine.

On 24/06/2022 between 10:15 and 12:30.

Parts of permit assessed: See Below

NRW Lead Officer: Philip Harper, accompanied by Emma Pierce.

Report sent to: Head of Bioresources, Head of Bioresources on 15/07/2022.

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

Part of permitted activity assessed (criteria)	Assessment result	Permit condition
B1 - Infrastructure - Engineering for prevention and control of emissions	Assessed (A)	
C4 - General Management - Storage, handling labelling and Segregation	C3 Minor	2.2.1
F4 - Amenity - Pests/birds and scavengers	Assessed (A)	
E1 - Emissions - Air	C3 Minor	3.1.1
C2 - General Management - Management system and operating procedures	C3 Minor	1.1.1

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

Total number of non-compliances recorded	Total non-compliance score
3	12

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
C4	Submit plan to how compliance will be achieved.	31/08/2022
E1	Continue to monitor digesters; undertake improvements as discussed with officers during site visit.	05/07/2022
C2	Improve Operations	05/07/2022

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.

You are non-compliant with your permit.

At this time, we are issuing you with a warning for the non-compliance recorded above. Warnings may influence future enforcement response for continued or further non-compliance.

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

Natural Resources Wales Officers Phil Harper Senior Industry & Waste Regulation Officer and Emma Pierce, Specialist Advisor, Incident Management visited Five Fords WwTW Gas to Grid Facility, Cefn Road, Wrexham, Clwyd, LL13 0PA at 10:30 am on the 24th June 2022. This was an announced inspection and officers were accompanied by Jonathon Dean, Site Manager.

This CAR form will also discuss the foaming event which occurred on the 14th February 2022.

Observations During Site Inspection

B1 Engineering for Prevention and Control of Emissions

The site has recently undertaken an extensive campaign to install infrastructure for the prevention of pollution at the site, including impermeable concrete floors with sealed drainage. No issues with site engineering were noted.

C4 Storage, Handling Labelling and Segregation

Officers were shown bays which are located adjacent to aeration lanes which form part of the wastewater treatment works. It is understood that sludge cake from satellite sites, including Queensferry AD plant is stored in the bays pending treatment.

The bays are located outside of the permitted boundary for the installation as shown in the site permit.

Permit condition 2.2.1 states that **“The activities shall not extend beyond the site, being the land shown edged in green on the site plan at schedule 7 to this permit.”**

Schedule 1-Operations describes **R13: Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where the waste is produced)** as an activity.

A **category 3** breach has been applied due to the activity occurring beyond the site boundary

Please also note that schedule 1 also states that **“Waste acceptance and pre-treatment will take place within an enclosed building.”** The storage bays are open and cannot be considered an enclosed building.

Action: Submit a detailed plan for how compliance will be achieved at the site by the 31st August 2022.



It was also noted that deposits of waste were present on the road leading to the storage bays (see attached photo). The road is impermeable and sloped towards an area of unmade ground. Staining from sludge cake was evident on the unmade ground. It was noted that no measures had been put in place to prevent waste from washing onto the unmade ground i.e. curbing at road verges or drainage, increasing the risk of water pollution.

The road sits outside the permit boundary, therefore no breach has been identified. However, allowing the waste to become deposited on the road where there is a risk of pollution is an offence under s.34(1)(b) and 34(6) of the Environmental Protection Act 1990. Formal correspondence regarding this issue will be sent separately to this CAR form.

F4 Pests/birds and scavengers

No vermin observed on site.

Foaming Event 14th February 2022

On the 15th of February 2022 Natural Resources Wales received a Part A notification which advised the following:

“At approximately 0100 hrs on 14/02/22 there was a significant surge of sludge from digester 2 at Five Fords AAD facility. This sludge filled the post digestion storage tank (PDST) to 4.7m at 7:40am This level then dropped throughout the day.

The sludge surge from digester 1 will be further investigated to identify the root cause.

The drop below the high-level weir at approximately 1030 hrs. This resulted in the biogas that was being produced in the digester to escape through the outlet weir box

This loss of gas occurred for approximately 8.5 hours until the level within digester 2 was returned to above the level of the high-level weir at 19:02, sealing the sludge outlet weir. “

The report stated that approximately 1200 m³ of biogas was released within the first two hours with a further 2500 m³ released up to 1900 hrs. The composition of the gas was calculated to be 61.1 % Methane, 38.2 % Carbon dioxide and 0.001 % Hydrogen sulphide.

Natural Resources Wales received part B of the notification on the 25th of May 2022. Part B provided the following information.

- Digester 2 was isolated from the gas bag
- Potable water was added to the digester to bring the level to above the high weir point in order the seal the overflow weirs.
- Biogas release mitigation measures included closing roads and all access to digesters and gas plant areas to reduce H&S risk.
- Digester safety controllers assessed the situation and made system checks.
- Antifoam dosing on both digesters was turned off to try to bring up sludge levels.
- Potable water was added to the digester and sludge feed was switched on at 7m³/hr to digester 1 and to digester 2 to bring up the level to above the high weir point in order the seal the overflow weirs.
- Once the level in the digester was above the high weir, waited for pressure relief valves to operate to know that pressure had built back up within the gas space and purged.
- By this point biogas had stopped flowing out of the weir box
- Once the pressure relief valves operated, gas lines and condensate valves were opened to allow flow of gas back into the gas bag
- Operations resumed.

Permit condition 3.1.1 states “There shall be no point source emissions to water, air or land except from the sources and emission points listed in Schedule 3 tables S3.1, S3.2 and S3.3.”

The loss of biogas could have a minor environmental effect. A **category 3 score** has been applied.

Permit condition 1.1.1 states “The operator shall manage and operate the activities in accordance with a written management plan that identifies and minimises risk of pollution.” The loss of biogas had the potential to result in an amenity impact relating to odour to nearby receptors. Whilst it is difficult to ascertain how high the impact from this loss was at the time, the amount lost (3700 m³) had the potential to cause an impact.

A **category 3 score** has been applied.

Kind Regards

Phil Harper

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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.

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.