

Compliance Assessment Report CAR_NRW0046157

Permit being assessed: ZP3032KQ.

For: Afan Combined Heat And Power Facility, **held by:** Dwr Cymru Cyfyngedig

At: Afan Combined Heat And Power Facility, Phoenix Walk, Port Talbot, SA13 1RA.

Type of assessment: Report/Data Review,

Reason: Routine.

On: 31/12/2024.

Parts of permit assessed: 2024 Annual Monitoring Returns.

NRW Lead Officer: Daren Pike.

Report sent to: Ian Hullin, Renewable Generation Energy Analyst, on 05/02/2025.

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

Part of permitted activity assessed (compliance criteria)	Assessment result	Permit condition
W3A(2) - Waste - Emissions and monitoring - Emissions to air	Assessed (A)	
W4B - Waste - 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

Introduction

This Compliance Assessment Report (CAR) has been issued in response to the submission of the 2023 Annual monitoring returns by Dwr Cymru Welsh Water for activities at the Afan CHP facility, Afan Waste Water Treatment works, Harbour Road, Phoenix Walk, Port Talbot Steelworks, Port Talbot, SA13 1RA under permit EPR ZP3032KQ.

Annual Reporting Requirements as detailed in Schedule 3 - Emissions and Monitoring table 3.1

The Annual Report was submitted on 31 January 2025 in compliance with the permit requirements. Point Source Emission to Air Parameters (Air 1 Form) as required by condition 4.2.2 The annual submission included results for all parameters required over this period and are in compliance with the limits set out in the permit.

This CAR was undertaken on 5 February 2025. However, to ensure that the CCS score is attributed to the correct financial year (for billing) the date on CARS has been altered to 31 December 2024.

The Annual Report received from Dwr Cymru Welsh Water reported the following:


Permit Number: EPR/ZP3032KQ Operator: Dwr Cymru Cyfyngedig
 Facility: Afan CHP Facility Form Number: Air1 / 31/01/2025

Reporting of emissions to air for the period from 01/01/2024 to 31/12/2024

Emission Point	Substance / Parameter	Emission Limit Value	Reference Period	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Uncertainty ^[4]
A1	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	500 mg/m ³	Hourly average	464.56 mg/m ³	BS EN 14792	17/12/2024 12:15 – 13:15	2%
A1	Carbon Monoxide	1400 mg/m ³	Hourly average	760.6 mg/m ³	BS EN 15056	17/12/2024 12:15 – 13:15	2%
A1	Sulphur Dioxide	339 mg/m ³	Hourly average	4.53 mg/m ³	BS EN 14791	17/12/2024 12:15 – 13:17	13%
A2	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	500 mg/m ³	Hourly average	229.45 mg/m ³	BS EN 14792	20/12/2024 12:59 – 13:59	2%
A2	Carbon Monoxide	1400 mg/m ³	Hourly average	1051.54 mg/m ³	BS EN 15056	20/12/2024 12:59 – 13:59	2%
A2	Sulphur Dioxide	339 mg/m ³	Hourly average	7.75 mg/m ³	BS EN 14791	20/12/2024 12:59 – 14:01	13%
A3 (Boiler1)	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	170 mg/m ³	Hourly average	150.84 mg/m ³	BS EN 14792	17/12/2024 13:48 – 14:48	2%
A3 (Boiler1)	Carbon Monoxide	75 mg/m ³	Hourly average	17.63 mg/m ³	BS EN 15056	17/12/2024 13:48 – 14:48	2%
A3 (Boiler1)	Sulphur Dioxide	160 mg/m ³	Hourly average	51.35 mg/m ³	BS EN 14791	17/12/2024 13:48 – 14:48	3%
A4 (Boiler 2)	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	170 mg/m ³	Hourly average	125.57 mg/m ³	BS EN 14792	17/12/2024 15:06 – 16:06	2%
A4 (Boiler 2)	Carbon Monoxide	75 mg/m ³	Hourly average	17.47 mg/m ³	BS EN 15056	17/12/2024 15:06 – 16:06	2%
A4 (Boiler 2)	Sulphur Dioxide	160 mg/m ³	Hourly average	63.34 mg/m ³	BS EN 14791	17/12/2024 15:06 – 16:06	3%
A5 (Flare Stack)	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	150 mg/m ³	Hourly average	59.54 mg/m ³	BS EN 14792	18/12/2024 13:55 – 14:55	3%
A5 (Flare Stack)	Carbon Monoxide	50 mg/m ³	Hourly average	1733.20 mg/m ³	BS EN 15056	18/12/2024 13:55 – 14:55	2%

Emission Point	Substance / Parameter	Emission Limit Value	Reference Period	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Uncertainty ^[4]
A5 (Flare Stack)	Sulphur Dioxide	339 mg/m ³	Hourly average	21.57 mg/m ³	BS EN 14791	18/12/2024 12:32 – 13:32	25%

[1] The result given is the maximum value (or the minimum value in the case of a limit that is expressed as a minimum) obtained during the reporting period, expressed in the same terms as the emission limit value. Where the emission limit value is expressed as a range, the result is given as the 'minimum – maximum' measured values.
 [2] Where an internationally recognised standard test method is used the reference number is given. Where another method that has been formally agreed with the Environment Agency is used, then the appropriate identifier is given. In other cases the principal technique is stated, for example gas chromatography.
 [3] For non-continuous measurements the date and time of the sample that produced the result is given. For continuous measurements the percentage of the process operating time covered by the result is given.
 [4] The uncertainty associated with the quoted result at the 95% confidence interval, unless otherwise stated.

Signed:  (Richard Deen – Energy Operations Manager)
 (Authorised to sign as representative of Operator)

Date: 31/01/2025

Permit Number: EPR/ZP3032KQ Operator: Dwr Cymru Cyfyngedig
 Facility: Afan CHP Facility Form Number: Performance1 / 31/01/2025

Parameter	Units
Fuel input to installation (biogas)	5,290,755 m ³
Fuel input to installation (Natural Gas)	12,487 MWh
Total biogas to boilers	0 m ³
Power output - heat	6,328 MWh
Power output - electricity	5,989 MWh
Energy Efficiency	0.002 MWh/m ³
Hours of operation for CHP engines.	CHP 1: 891 h CHP 2: 4,870 h
Water usage	16,974 m ³
Water generated	0
Operational hours of boilers fired on biogas	0 h
Operational hours of waste gas burner	1,603 h > 10% of time > 878 Hours
Biogas burnt by waste gas burner	2,863,315 m ³
Abnormal operation of pressure release valves	No data is available for this parameter.

Operator's comments:
 2024 started with just the 1 CHP operating due to an alternator failure in September of the previous year. We had already ordered a spare and commissioned a repair of the failed alternator however due to supply chain failures for and by our contractors it was May before the alternator was returned to site. The engine it was attached to then seized so had to be given a rebuild service. The engine that was running throughout this period was getting towards its own scheduled rebuild and was starting to fail before being rebuilt. Whilst this was going on sizable investments in the improvement of the biogas valorisation at Afan were being commissioned with a new inlet plant of chiller, booster and carbon media siloxane filter being brought online to coincide with the return to service of both engines in December. This should allow Afan to once again fully utilise all throughput in the CHPs.
 The boilers and CHPs were found to be operating within emission limit values. De-minimis rules did not apply to the flare having operated for more than 10% of the time and as such it was tested, unfortunately exceeding emission limit values as detailed in the schedule 5, part A notification.

Signed Richard Deen (Richard Deen – Energy Operations Manager) Date 31/01/2025
 (Authorised to sign as representative of Operator)

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 Waste compliance criteria (used in section 1 and 2):

1. Management

- W1A – General management
- W1B – Energy Efficiency (MCP/SG facilities only)
- W1C – Avoidance, recovery and disposal of wastes produced by the activities

2. Operations

- W2A – Permitted activities
- W2B – Waste recovery plan
- W2C – Operating techniques
- W2D – The site
- W2E – Waste acceptance
- W2F – Technical requirements
- W2G – Improvement programme
- W2H – Pre-operational conditions

3. Emission and Monitoring

- W3A – Emissions to water, air or land
- W3B – Emissions of substances not controlled by emission limits
- W3C – Odour
- W3D – Noise and vibration
- W3E – Monitoring
- W3F – Pests
- W3G – Fire

4. Information

- W4A – Records
- W4B – Reporting
- W4C – 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.