

Compliance Assessment Report CAR_NRW0050077

Permit being assessed: DP3333TA.

For: Pembroke Power Station , **held by:** RWE Generation UK plc

At: Pembroke Power Station , Pembroke, PEMBROKE, Dyfed, SA71 5SS.

Type of assessment: Site Inspection,

Reason: Routine.

On: 18/11/2025 between 10:20 and 14:30.

Parts of permit assessed: Management, Operations, Emissions and Monitoring, Information .

NRW Lead Officer: Alex Bowder, accompanied by Rhydian Cox.

Report sent to: Regulations Support Engineer, RWE Generation UK plc, on 11/12/2025.

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

Part of permitted activity assessed (compliance criteria)	Assessment result	Permit condition
IR1A - Installations - Management - General Management	Assessed (A)	
IR2A - Installations - Operations - Permitted activities	Assessed (A)	
IR2B - Installations - Operations - The site	Assessed (A)	
IR2C - Installations - Operations - Operating techniques	Assessed (A)	
IR3E - Installations - Emissions and monitoring - Monitoring	Assessed (A)	
IR4A - Installations - Information - Records	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

**CAR reissued to amend technical wording.*

1. Introduction

This Compliance Assessment Report (CAR) summarises the observations and discussions from the site inspection carried out by Natural Resources Wales (NRW) on 18 November 2025 at Pembroke Power Station, West Pennar, Pembroke, SA71 5SS. The inspection related to activities undertaken by RWE Generation UK plc (the operator) under Environmental Permit EPR-DP3333TA.

The visit purpose was to conduct a general inspection of the operator's environmental permit and associated activities. No non-compliance scores were recorded against the operator's permit conditions during this inspection.

Attendees

- Alex Bowder - Senior Regulatory Officer, NRW
- Rhydian Cox - Senior Regulatory Officer, NRW
- Matthew Thomas - Senior Specialist Advisor, Industrial Decarbonisation, NRW
- Regulations Support Engineer, RWE
- Operations Manager, RWE
- Chemistry and Regulations Technician, RWE
- Placement Student, RWE

2. Operator Updates

NRW officers arrived at the site security station at 10:20am, signed in, and were met by the Regulations Support Engineer. Officers were escorted to the site office for a briefing. A meeting agenda had been provided to the operator in advance. Following introductions, discussions and presentations were held before commencing the site tour.

Updates provided by the operator

Staff Changes: Appointment of new Operations Manager.

CEMS Upgrade

Plans to replace Continuous Emissions Monitoring Systems (CEMS), including installation of a new gas chromatograph and associated certification requirements.

Recent and planned outages

- U31A inspection - May 2025
- U21A inspection - June 2025
- U51A inspection - September 2025
- U11 synchroniser condenser tie-in scheduled for December 2025

Technical Projects

- TIL project
- SAP implementation
- Flexible generation capabilities
- JEP update - reporting ASTs/QAL2 IED CEM3

Emission Reporting Software

The operator transitioned from MERS to Envirosoft for emissions reporting, which commenced in April 2025 and was used for the first round of reports submitted to NRW for Q3 2025 requirements.

PRTR Data

- CO₂ Mass - this was confirmed accurate and verified under UK Emissions Trading Scheme requirements using certified metering and gas chromatography.
- SO₂ Mass - calculated using approved emission factors applied to the annual fuel throughput (natural gas and oil).

Commissioning Plan Limits

NRW highlighted that the current plan (dated 2015) requires updating to reflect recent activities. Discussion included:

- Plan limits represent worst-case scenarios; exceeding these would indicate operational faults.
- Mapping through various operational conditions is required.
- Agreed relaxation of air permit limits for essential testing and optimisation.
- No dust or odour issues recorded.
- Noise from steam release via safety valves is minimised through planned daytime operations.

U31 A inspection was conducted in May 2025, U21 A in June 2025, U51 A in September 2025, and U11 scheduled for post Synchronous Condenser tie in (December 2025).

CEMS Annual Surveillance Test (AST) reports

ASTs were completed in October 2025 for U21, U31, U41, and U51. The operator is awaiting the final reports and will share with NRW once received; however, there were no issues observed.

U11 remains offline as part of its integration with the ongoing Syn Comp project. The operator's stack emissions testing contractor plans to carry out testing on Unit 11 in early 2026, following completion of commissioning and the unit's return to service.

Silencer Replacement - Unit 11

Corrosion was identified by the operator on the U11 silencer, which posed risk of further damage. The silencer was removed and replaced on 25 July 2025. A risk assessment confirmed minimal impact on noise limits during temporary removal; this was verified by annual noise survey.

Other Updates

An elevated chromium reading at the WTP earlier in the year was discussed and identified as anomalous.

Climate Change Adaptation

A EPR Regulation 61 Notice was sent to the operator by NRW on 30 June 2025. The operator submitted the following on 18 August 2025:

- RWE EMS Climate Change Risk Assessment (group-wide)
- Pembroke-specific summary report
- Risk assessment matrix

A review of submissions will be conducted by NRW and compliance report issued detailing assessment.

Foam Incidents (September 2025)

The operator's investigation found no abnormal operations at the time of the reported incidents.

Water Abstraction Licence Renewal

A new licence was issued to the operator on 30 September 2025, which will expire on 31 March 2037. The operator is tasked with adapting its marine monitoring programme for SAC species assessment.

The Eels (England and Wales) Regulations 2009 Exemption

An Eels Screen Exemption Notice was granted to the operator in September 2025; potential cost-benefit analysis work is required for additional protection measures going forward.

Waste Storage Area

SAP software implementation has taken place across the site for improved waste management, labelling, and audit trail of materials generated and destined for disposal.

3. Projects Overview

The operator provided updates on projects under the Pembroke Net Zero Centre (PNZC), including timelines for planning, construction, and grid connection:

- Green Hydrogen project – NRW permitting are in the process of determining the application
- Battery Energy Storage Systems - Provision of energy balancing and grid services supporting decarbonisation in South Wales
- Carbon Capture Systems and CO2 projects

4. Site Inspection

The site tour commenced at 13:00. Officers visited the control room, which manages compliance parameter alarms, monitors CCGT operations, and ensures safe, efficient electricity generation. The control room also oversees the new Synchronous Condenser for grid stability.

- Officers did not enter the Water Treatment Plant (WTP).

- Seal Pit - minor repairs were completed in July 2025; the operator is researching foam reduction measures.
- CCGT Unit 51 – this was operational during the visit.
- Water Return Chambers – the secondary chamber was viewed, with a mechanical oil skimmer present. Spoke about how the drainage system captures any residual oil before entering water treatment.

Waste Storage Area

The site maintains a designated area for the segregation, separation, and storage of general waste streams. These are managed through contractor collection services in accordance with site procedures. Recent SAP implementation also supports the waste disposal process.

Chemical Dosing Plant – MCW

The operator outlined its biological growth control strategy, which involves the use of Sodium Hypochlorite (NaOCl) to inhibit the growth of organisms within the system.

5. Closing Summary

The inspection concluded with a meeting in the site office, where officers provided a summary of observations and discussed timescales for any required actions. No permit non-compliances were identified during the visit.

Officers departed the site at 14:30.

Report compiled by:

Alex Bowder and **Rhydian Cox**

Southwest Wales Industry Regulation

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END OF REPORT

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.