

Compliance Assessment Report CAR_NRW0046420

Permit being assessed: DP3432SW.

For: Aberthaw Ash Disposal Site EPR/DP3432SW, **held by:** CCR Energy Limited

At: Aberthaw Power Station The Leys , Aberthaw, Vale of Glamorgan, CF62 4ZW.

Type of assessment: Report/Data Review,

Reason: Routine.

On: 31/12/2024 between 09:00 and 17:00.

Parts of permit assessed: Reporting, engineering and emissions.

NRW Lead Officer: Antony Leakey.

Report sent to: CCR Energy Ltd, Head of Operations, on 28/08/2025.

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

Part of permitted activity assessed (compliance criteria)	Assessment result	Permit condition
IR4B - Installations - Information - Reporting	C3 Minor	3.2.4, 4.2.1, 4.2.2
IR2G - Installations - Operations - Landfill engineering (only applicable to landfill)	Assessed (A)	
IR3A(1) - Installations - Emissions and monitoring - Emissions to water	Assessed (A)	

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
IR4B	Improve reporting procedures	31/12/2025

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.

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**Aberthaw Ash Landfill – Site Inspection 2024, Monitoring Reports Review**Site Inspection 2024

A planned inspection was carried out on 12/12/24 to check borehole drilling activity as part of a ground investigation study to characterise the PFA for potential extraction and reuse.

The extracted ash cores were also examined.

The CQA Plan for the works was previously accepted with the following recommendation for permeability and PSD testing to be implemented at CCR Energy's discretion noting that NRW may require this information as part of a future application to permit extraction of ash from the landfill.

A further site meeting was held on 20 March 2025 when WSP confirmed that all boreholes had been grouted and surface restoration reinstated. This requires verification.

Pylon replacement foundations

NRW discussed National Grid replacement pylon foundation design within the landfill boundary with CCR Energy and raised the main concern of creating a pathway for surface pollutants to access deeper groundwater and any potential for impacts on groundwater or surface water during works.

The foundations should be designed and constructed in such a way that prevents preferential ingress of water, i.e. the piling should not act as drains.

Monitoring reports

Six monthly, 2023 and 2024 annual monitoring data (condition 4.2.1) for H2 2023 though to H1 2025 have been reviewed and the following points noted:

The 2023 and 2024 Annual Performance Monitoring Reports shows potential discernibility of arsenic in downgradient boreholes and surface water (Group 5 Spring), although all concentrations are in compliance with the original (pre-reclassification of arsenic) compliance limits. See below on HRA Review for further recommendations regarding hazardous substances.

The 2023 Annual Performance Report was submitted several months late.

Hydrogeological Risk Assessment Review

The HRA Review was submitted by WSP on 7/3/25, 2 months late.

The recommendations in the review are accepted, with the following comments:

- The statement: “The underlying bedrock is classified as Secondary A aquifer (BGS, 2024). However, due to its location beneath the Site and to the proximity of coastal environment, it would not be a credible source of potable groundwater abstraction.” [Section 2.4 Receptor, p.35]...is not supported by NRW's policy on groundwater protection. There has been historic abstraction from local wells near East Aberthaw, and while the water quality may not be suitable for drinking water supply without further treatment, that is not reason to discount the water resource from needing protection in case it's use becomes necessary in the future, whether for potable use or, more likely, irrigation or industrial use.
- More detailed assessment of relevant hazardous substances (arsenic and hexavalent chromium (CrVI) being known PFA marker contaminants) in the context of potential proposals (now at planning scoping stage) for ash extraction and whether removal of the source-term will be beneficial in the long term for groundwater quality or maintenance of the established deposit will provide better overall control of these pollutants over time will be necessary, if an ash extraction permitting application is made.
- CrVI can be difficult to get reliable results for and false positives are not uncommon. One of the issues from the data in the HRA review is that the total Cr is lower than the few higher CrVI values, and given the number of Cr results compared with CrVI results, the CrVI results may be erroneous or at least not representative. A detailed explanation of the Cr and CrVI results is needed. Arsenic is more straightforward, and is more likely to exceed DWS / GW Haz Substance values (see below).
- Both As and CrVI have a 2016 JAGDAG “Concentrations in groundwater below which the danger of deterioration in the quality of the receiving groundwater is avoided”(an annual mean $\mu\text{g/l}$) of $5 \mu\text{g/L}$. Drinking water standards are $10 \mu\text{g/L}$ and $50 \mu\text{g/L}$ (for total Cr, no DWS for CrVI).
- Most of the CrVI values are below the MRV ($30 \mu\text{g/L}$ for leachate and $0.003 \mu\text{g/L}$ for groundwater samples – the latter is likely a typo and in mg/L).

As the HRA review submission was not within the period required by permit condition 3.2.4, this is a minor category 3 non-compliance.

An Aberthaw Ash Recovery Risk Screening Technical Note, dated 12 December 2024 was submitted seeking to address potential groundwater impacts associated with proposals for ash extraction.

The Note is considered to be an insufficiently detailed assessment of the relative merits of source term removal against maintenance of the status quo and does not properly consider the increased infiltration likely during active removal of ash and understates the current protection likely to be provided by the compacted PFA cap and hydroseeded vegetation that has now developed into informal grassland.

ACTION: CCR to ensure that future HRA reviews are undertaken to the required

timescale and that detailed assessment of relevant hazardous substances is undertaken before any proposals for ash extraction are advanced or at the next HRA review.

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.

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.