

Compliance Assessment Report CAR_NRW0046590

Permit being assessed: BP3795FD.

For: Ferry Road Landfill, **held by:** The City of Cardiff Council

At: Ferry Road, Grangetown, Cardiff, Glamorgan, CF11 0JL.

Type of assessment: Report/Data Review,

Reason: Routine.

On: 12/03/2025.

Parts of permit assessed: HRA Addendum.

NRW Lead Officer: Sally Wakeford.

Report sent to: ML, Depot & Infrastructure Manager, on 12/03/2025.

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

Part of permitted activity assessed (compliance criteria)	Assessment result	Permit condition
W3A(1) - Waste - 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
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

On 07 February 2025 NRW received a Hydrogeological Risk Assessment (HRA) Addendum for Ferry Road Landfill referenced 100103133 | HRAAd | A Dated December 2024.

This HRA Addendum has been reviewed by NRW specialists including our Geoscience Team. The following Compliance Assessment Report contains NRW's comments on this document.

General Comments:

The Addendum is a welcome and useful summary of recent efforts to monitor and control contamination from the landfill. NRW generally agree with the approach and recommendations within the document.

The report concludes that the landfill is likely to have contributed to regional contamination, however data available indicates that there is a general poor quality of the regional groundwater and that the wider area is affected by contamination sources other than the landfill. The monitoring shows the presence of off-site contamination in the upgradient boreholes.

Hydraulic containment at the landfill is not fully active, as leachate is above the approximate elevation of the River Ely and Cardiff Bay, however improvements in the leachate level of the site had provided some degree of hydraulic containment.

Comments on Leachate Control:

The HRA Addendum highlights the need for every effort to be made to improve the long-term control of leachate to minimise the rate at which leachate is leaving the landfill via groundwater. Including:

"Section 5.1 CSM and Risk Assessment

- 1. Failure of the leachate collection system leading to increased piezometric head of the leachate within the landfill.*

Available data is limited to observation wells, but the dips show a decreasing trend in leachate elevation. The most recent average head elevation (5.87mAOD) is below the mound which is expected to form between the old river channels at 6-7mAOD¹. Note that, as the dips reflect a time period of March to August, this may reflect seasonality (e.g. precipitation changes) and not fully indicate efficacy of the leachate management system. However, the Pumping Stations and abstraction wells are noted to be operational (Section 3.2) and the decline in leachate elevation is likely to be partly, if not mostly, reflective of this.

If the leachate head continues to fall, then hydraulic containment may be reinstated (the piezometric level to reinstate this is approximately 4.50mAOD¹), which should reduce the magnitude of mobile contamination dispersing from Ferry Road landfill via groundwater. Although monitoring data from the leachate wells were unreliable (due to errors when collecting the measurements), it is considered that elevation in these wells are similar to the observation wells. On this basis, it is assessed that the pathway is still

operational, although reduced when compared to the previous HRA, and will continue to reduce if leachate head continues to fall.

6.1.3 Dispersion of contamination

Despite limited leachate data, the OW average head elevations indicate that the hydraulic containment at the landfill is not fully active as leachate is above the approximate elevation of the River Ely and Cardiff Bay. However, the contaminant profiles of surface water and groundwater receptors indicate that the Ferry Road landfill is not causing significant contamination. This may be as a result of the reduction of leachate levels, which has led to a degree of hydraulic containment.

Cardiff City Council has confirmed the Pumping Stations are operational and the monitoring data have indicated that the piezometric head of leachate is falling inside the landfill. These actions are ongoing to re-instate this hydraulic containment.

6.2 Recommendations

- Over the next six months, monthly monitoring of the piezometric head in leachate should be completed to assess whether hydraulic containment is continuing to increase, reducing to 6-monthly thereafter;*
- During the monthly monitoring, the landfill should be inspected for surface breakouts;*
- Cardiff City Council have confirmed that the Ferry Road landfill site is subject to a consistent maintenance regime, including maintenance of the leachate system and extraction pumps. It is recommended that this maintenance regime continue, with periodic reviews as to whether maintenance periods are suitable or need to be extended or reduced. Should the any part of the leachate management system be found to be inactive, measures should be implemented to re-instate the system as soon as possible.*

The actions undertaken by Cardiff City Council to reduce the leachate head within the landfill should be continued to develop the hydraulic containment of leachate within the landfill."

The focus on the long term management of the leachate to improve and continue to reduce the rate at which leachate leaves the site is agreed. However, some of the language used within the HRA addendum used to describe the leachate control does not imply deliberate and focused leachate management, for example that highlighted in bold above in Section 5.1.

Report Recommendations:

The report culminates in the following recommendations:

- 1. "Further assessment, for example a Detailed Quantitative Risk Assessment, is not required for this site;*
- Further contamination testing should be completed to confirm that no new issues will arise from the landfill. The monitoring network should be further refined, and monitored at 6-monthly intervals. The monitoring frequency is summarised in Table*

6.1.

- *It is not recommended to continue monitoring at Ferry Court. The pipework leading from the landfill to this outfall has been blocked and it is considered that the pathway from Ferry Road landfill has been severed. Contamination in this outfall is considered to be sourced from material external to the landfill.*
- *Over the next six months, monthly monitoring of the piezometric head in leachate should be completed to assess whether hydraulic containment is continuing to increase, reducing to 6-monthly thereafter;*
- *During the monthly monitoring, the landfill should be inspected for surface breakouts;*
- *Cardiff City Council have confirmed that the Ferry Road landfill site is subject to a consistent maintenance regime, including maintenance of the leachate system and extraction pumps. It is recommended that this maintenance regime continue, with periodic reviews as to whether maintenance periods are suitable or need to be extended or reduced. Should the any part of the leachate management system be found to be inactive, measures should be implemented to re-instate the system as soon as possible.*

The actions undertaken by Cardiff City Council to reduce the leachate head within the landfill should be continued to develop the hydraulic containment of leachate within the landfill.”

NRW agree generally agree in the recommendations made within the report.

Once the further 6 months of data collection has been completed for the piezometric head of leachate, it may be suitable for this to be reduced to 6 monthly monitoring. It is noted that to date the monitoring has now been completed for a full 12 months.

ACTION: Please provide up to date monitoring of monthly leachate level since March.

With the improvements already made on the leachate management, it would be pertinent to consider actions which could be taken to decrease the leachate generation and mounding, which may improve the efficiency of leachate management.

END

Any compliance criteria not highlighted in the above summary should be considered as not assessed.

In this document ‘Natural Resources Wales’ means the Natural Resources Body for Wales established by Article 3 of the Natural Resource Body for Wales (Establishment) Order 2012.

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.