

## Compliance Assessment Report CAR\_NRW0042714

**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 carried out:** Site Inspection, Reason: Routine.

On 11/10/2023 between 10:30 and 12:00.

Parts of permit assessed: General Site inspection

**NRW Lead Officer:** Sally Wakeford, accompanied by Yeliz Marshall, Mostyn Wall, Brigid Armstead.

**Report sent to:** Matthew Long, Depot and Infrastructure Manager on 30/10/2023.

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

Part of permitted activity assessed (criteria)	Assessment result	Permit condition
A1 - Specified by permit	Assessed (A)	
B2 - Infrastructure - Closure and decommissioning	C3 Minor	38
C1 - General Management - Staff competency/training	Assessed (A)	

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

Total number of 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
B2	Continue to investigate the root cause of why Pumping Station D leachate collection tank does not receive leachate to its full capacity or suggest alternatives which will provide the same functionality as the original design of the landfill. Then: Propose and undertake remedial works to restore its function or implement alternative measures. Discuss with NRW Officer the time scale required for this work.	03/11/2023

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.

**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**

A site inspection was conducted on 11 October 2023 by Officers Sally Wakeford and Yeliz Marshall (NRW) and were accompanied on site by Matthew Long (Cardiff Council), Andrew Williamson (Cardiff Council), Mostyn Wall (NRW – Landfill Emissions Reduction Project) and Brigid Armstead (NRW).

The weather was wet overnight, and sunny and dry during the inspection.

The purpose of the visit was a handover the site to the new Regulating Officer, Sally Wakeford, and undertake a site walkover familiarisation visit. Mostyn Wall attended as part of the Landfill Emissions Reduction Project Team to understand the gas management on site.

**Action Plan:**

The Operator is currently working towards completion of the agreed action plan which relates to actions required following the Compliance Report issued in March 2021. On 16 October 2023 the Operator provided an update via email of the action plan with progress towards each action to date including subsections to the actions.

It is clear from this updated action plan that a substantial amount of work has been undertaken on the site to date. There are a number of actions still to be completed. These include:

- Installation of additional borehole for perimeter monitoring – scheduled for 23<sup>rd</sup> October please update NRW on the completion;
- Addition of new boreholes to site plan following updated survey;
- Topographic survey 2023 – following one year of leachate extraction – scheduled August 2023;
- Closure Report/Aftercare Plan to be updated to include maintenance regime and site operations;
- Update to HRA and GRA following completion of 6 months monitoring; and
- Submission of variation application following completion of updated HRA and GRA.

An additional action was added on 12 September 2022 on Compliance Assessment Report CAR\_NRW004080:

- Investigate the root cause of why Pumping Station D leachate collection tank does not receive leachate to its full capacity. Propose & undertake remedial works to restore its function to its original design.

Although investigations have been undertaken the cause of the issue at Pumping Station D has yet to be discovered, please see below for further comments.

**Site Walkover and Observations:**

The site walkover began at a gas well and T1 leachate lagoon. The lagoon is fully operational, fully automated and the control system can be viewed from a mobile phone application to ensure it is operating as intended.

The walkover continued in an anticlockwise viewing gas manifolds and gas wells, Pumping Station D, compressor, flare (to be decommissioned), the location of the new boreholes and Pumping Station C. This gave the new officer an overview of the general layout of the site.

**Comments:**

- Gas being produced has increased since the levels of leachate have dropped.
- Flare is non-operational and needs decommissioning.
- Compressor near flare is shut down 1 hour per day for DCWW to undertake their required maintenance.
- Aeration process at Station D shown manually during inspection, however not raising to level required to discharge apart from at times of heavy rainfall.
- Awareness that the cap could require some maintenance as leachate is heavily affected by rainfall.
- Station D tank inspection has been undertaken.
- Station C will be placed on a 12-month cleaning schedule to remove sludge utilising Cardiff Council existing drainage contract.
- Once it reaches discharge level, Station C aerates for 20 minutes automatically prior to discharge to sewer. This can be monitored on the app to ensure it continues to operate as intended.
- On 23<sup>rd</sup> October the 2 new monitoring boreholes are being installed - the final requirement of the Hydrogeological Risk Assessment.

**Station D:**

The issue of pressure at Station D persists – pumping station D is not receiving leachate to its full capacity and only operates during times of heavy rainfall. Although it has been confirmed investigation work has been completed to try to understand the issues, the root cause of the issue has not been identified.

**B2 – Infrastructure – Closure and Decommissioning – CAT 3 Breach - permit condition 38:**

This has been scored as a Category 3 breach of permit against permit condition 38 as the Pumping Station is not operating as originally intended and is malfunctioning. The category has been reduced from that previously scored on past compliance reports, as a large amount of work has been completed to rectify the breaches and the environmental risk has significantly lowered, however it is still ongoing that the Pumping Station is not functioning properly. NRW is aware that the situation with Station D may never be fully identified as to why it is not functioning properly, likely due to damage to the infrastructure during redevelopment of the area, in this instance you should investigate ways in which the functionality of this part of the system can be met in other ways.

***ACTION: Continue to investigate the root cause of why Pumping Station D leachate***

***collection tank does not receive leachate to its full capacity or suggest alternatives which will provide the same functionality as the original design of the landfill. Then:***

***ACTION: Propose and undertake remedial works to restore its function or implement alternative measures. Discuss with NRW Officer the time scale required for this work.***

#### **Landfill Infrastructure/DSEAR Requirements:**

The landfill infrastructure around the site is visible and secured with fencing to ensure it is not lost again.

As highlighted in an email to the Operator on 20/10/2023 under the Directly Applicable Legislation - Dangerous Substances and Explosive Atmospheres Regulations 2002 (DSEAR) where dangerous substances are present, used or produced, compliance with DSEAR requires risk assessment. The risk assessment should identify safety risks arising from the hazardous properties of dangerous substances present or liable to be present by conducting a structured, thorough and referenced assessment which should be used to take practical action to eliminate or reduce the risk.

The risk assessment also identifies locations and places where, there is a potential for an explosive atmosphere. Subsequently, applying area classification which involves;

- the identification of all flammable materials;
- the identification and grading of all (potential) releases of flammable material;
- the assessment of the level of ventilation and/or housekeeping;
- the determination of the resulting types and extents of the zones;
- the allocation of zones enables the correct equipment, practices and procedures to be applied to protect the health and safety of workers concerned with the facility and others such as the general public; and
- applying barriers, segregation, isolation and marking/signing where hazardous areas have been classified and where explosive atmospheres may occur.

Variations in primary gas concentrations occur at different parts of the landfill and through time, as the organic waste slowly reduces, and environmental conditions change. It is for this reason it is important that any DSEAR assessments are reviewed periodically and amended as risk changes.

Landfill specific guidance which illustrates good practice for application in the landfill and landfill gas industry was sent to Matthew Long on 20 October 2023.

It is important to note that a zone radius calculation based on equations in Appendix II of the attached document gives a Zone 2 radius of 2.2m in all directions from the point of release.

***ACTION: Undertake a DSEAR Risk Assessment and provide to Natural Resources Wales, discuss timescale for this to happen with NRW Officer.***

Once this Risk Assessment is completed the actions should be undertaken in a time frame agreed with NRW.

**Pumping Station C:**

Pumping Station C is now fully automated, and the mobile phone app shows the systems filling, aerating and discharging to the DCWW sewer system.

**Previous surface water/leachate discharge to Cardiff Bay:**

It was confirmed that the leachate extraction system was directly connected to the surface water systems draining into Cardiff Bay has been permanently disconnected following work which found the bung to have dislodged. The pipework to the rear of Aldi has been completely flooded with concrete to ensure the leachate cannot escape into Cardiff Bay.

**Summary of Actions to be completed:**

- Installation of additional borehole for perimeter monitoring – scheduled for 23/10/23 – Update NRW on completion;
- Addition of new borehole to site plan following installation – please ensure this is a comprehensive plan showing all relevant infrastructure. An update to the 1999 A3 plan would be ideal;
- 2023 Topographic survey;
- Closure Report/Aftercare Plan to be updated to include maintenance regime and site operations;
- Update to HRA and GRA following completion of 6 months monitoring; and
- Submission of permit variation application following completion of updated HRA and GRA.
- Continue to investigate the root cause of why Pumping Station D leachate collection tank does not receive leachate to its full capacity or suggest alternatives which will provide the same functionality as the original design of the landfill. Then;
- Propose and undertake remedial works to restore its function or implement alternative measures;
- Undertake a DSEAR Risk Assessment and implement findings.

Photographs of site inspection:

Gas well:





T1 Leachate Lagoon



Gas Manifold - DSEAR Requirements need attention





Gas Engine & signage:





Thank you for taking the time to accompany me around the site.

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.**

**You should note that the Natural Resources Body for Wales has been formed by bringing together the Countryside Council for Wales, Forestry Commission Wales and Environment Agency Wales. The Natural Resources Body for Wales has been empowered to exercise Welsh devolved functions since**

**1<sup>st</sup> April 2013 and has, generally, taken over the responsibilities of the Countryside Council for Wales, the Forestry Commissioners and the Environment Agency for Wales.**

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](mailto: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](mailto: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.