

Compliance Assessment Report CAR_NRW0043817

Permit being assessed: PP3139GB.

For: Hafod Quarry Landfill Site, **held by:** Enovert North Limited

At: Hafod Quarry Landfill Bangor Road, Johnstown, Wrexham, LL14 6ET.

Type of assessment: Site Inspection,

Reason: Routine.

On: 08/03/2024 between 10:30 and 13:30.

Parts of permit assessed: Site inspection .

NRW Lead Officer: Jamie Blythin, accompanied by Stuart Ross.

Report sent to: Ian Craven, Regional Manager, on 27/03/2024.

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

Part of permitted activity assessed (compliance criteria)	Assessment result	Permit condition
IR3C - Emissions and monitoring - Odour	Assessed (A)	
IR1A - Management - General management	Assessed (A)	
IR2K - Operations - Landfill gas management (only applicable to landfill)	Action only (X)	

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?

Criteria	Action needed	Complete by
IR2K	Action 1-Action only- Provide NRW with a realistic estimate of when repairs to engine 3 will be completed.	12/04/2024

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.

We are currently considering taking enforcement action against you for the non-compliance recorded above. We will contact you in due course.

4. Details of our assessment

This Compliance Assessment Report (CAR) follows a site inspection at Hafod Landfill on 08/03/24 to check compliance with the conditions of the R36 Statutory Notice that was served on the operator on 21/12/23.

Officers completed offsite olfactory monitoring at the following locations, immediately after leaving site: New Hall Road, Shellbrook Drive, Vauxhall Industrial Estate, Heol Kenyon, Bangor Road, Tanyclawdd, Worsley Avenue, Gwalia and Brynhyfryd. There were no odours detected offsite at this time.

Inspection findings- Cell 5a

At the time of the inspection, the weather was dry with a slight breeze, generally blowing from a south-easterly direction.

NRW officers used a calibrated Gazomat Inspectra TDL unit to detect methane emissions during the inspection. Before the inspection, a background methane reading of 1.9 ppm was detected at the site office car park.

The Site Manager and Head of Landfill Gas, accompanied NRW officers during the inspection.

Officers visited the gas compound and the operator reported that they had discovered an issue with landfill gas engine 3. There was an issue with the turbo which resulted in localised emissions.

Replacement seals have been fitted but the issue is within the casting of the turbo and due to the age of the unit, a complete replacement is currently being sourced by the operator.

Action 1- Action only- Provide NRW with a realistic estimate of when repairs to engine 3 will be completed.

Other than the issue above, the operator stated that the gas engines were operating as normal with no known issues relating to the landfill gas collection system. Incoming gas pressure was steady (no pulsing) with flow recorded at approximately 965NM3/Hr.

Officers detected a slight landfill gas odour near the engine cooling vents and recorded the following methane values on the engine cooling vents:

Engine 3- 70ppm

Engine 1- 20ppm

Statutory Notice items

Action 1 - *'Complete temporary capping on the northern flank of Cell 5a including installation of linear low density polyethylene (LLDPE) to minimise landfill gas emissions as far as reasonably practicable.'*

It should be noted that the original deadline for this action was 31/01/24 but NRW granted an extension until 08/03/24 to complete works to improve gas control in the vicinity of the lower clay ramp 'bowl' area of Cell 5a - refer to CAR_NRW0043320. This was due to extended periods of heavy rainfall and storm conditions in January 2024 which delayed completion of the works.

Additional clay has been placed and compacted as temporary capping in the vicinity of the lower clay ramp. A gas scavenger line 'scav 3' has also been installed to aid gas collection. Overall, landfill gas odours were significantly reduced in this area compared to the previous site inspection on 31/01/24. However, some localised, transient, odours were detected around scavenger line 3.

Officers detected readings up to 600ppm methane on the capped surface next to scavenger line 3.

As discussed in CAR_NRW0043320, a significant amount of work has been completed on the upper northern flank of Cell 5a including the placement of clay and the installation of an LLDPE membrane. All outstanding welding at discrete features noted in CAR_NRW0043320, has now been completed.

A slight, localised landfill gas odour was detected near the surface water collection channel at the foot of the upper northern flank of Cell 5a. Officers recorded values of up to 200ppm methane on the cell surface in the surface water collection channel.

NRW considers that Action 1 of the Statutory Notice has been completed. However, some localised landfill gas odours and elevated methane levels were detected around the northern flank of Cell 5a during this inspection. To address these, the operator provided NRW with an updated Action Plan on 13/03/24, detailing remedial measures to be taken to reduce fugitive emissions as far as reasonably practicable.

Action 3 - *'Complete temporary capping on the western flank of Cell 5a to minimise landfill gas emissions as far as reasonably practicable.'*

It should be noted that the original deadline for this action was 31/01/24 but NRW granted an extension until 08/03/24 due to extended periods of heavy rainfall and storm conditions in January 2024 which delayed the completion of capping works on the western flank of Cell 5a. Refer to CAR_NRW0043320.

Temporary capping has been completed on the western flank of Cell 5a by the placement of additional clay. NRW considers that Action 3 of the Statutory Notice has been completed. However, some localised landfill gas odours and elevated methane levels were detected in the vicinity of the western flank during this inspection.

Officers recorded values of up to 200ppm methane near the corner of the north-west flank and values of up to 1000ppm methane on the surface of the western flank.

Elevated methane levels were observed at the following wells: MP5a- 0.2% gas , LC4-5% gas and L5-0.4% gas.

As discussed previously, the operator provided NRW with an updated Action Plan on 13/03/24, detailing remedial measures to be taken to reduce fugitive emissions as far as reasonably practicable.

Action 7- *'Carry out a fugitive emissions FID walkover survey encompassing the temporary capped area of Cell 5a. Submit a report of the findings to NRW by 22/03/24. The report shall include details of any remedial measures that have been taken, or are to be taken, to reduce fugitive emissions as far as reasonably practicable.'*

The operator carried out a fugitive emissions FID walkover survey on 06/03/24. The results of this survey were sent to NRW on 08/03/24.

There were some elevated methane levels identified during this walkover but these results show an improvement when compared to the previous FID walkover completed by the operator on 19/02/24.

As mentioned previously, the operator provided NRW with an updated Action Plan on 13/03/24, detailing remedial measures to be taken to reduce fugitive emissions as far as reasonably practicable.

NRW considers that Action 7 of the Statutory Notice has been completed.

NRW considers that all actions (1-8) of the Statutory Notice served on the operator 21/12/23 have now been completed. However, the operator has proposed a number of additional measures to increase landfill gas collection, reduce fugitive emissions and reduce the potential for odours. These measures are outlined below and the effectiveness of these will be assessed as part of routine compliance assessment going forward.

Additional actions

To address landfill gas emissions identified as a result of the FID walkover survey completed by the operator 06/03/24 and localised emissions identified by NRW officers during the inspection on 08/03/24, the operator has proposed the following remedial measures:

1. LC4 new collector line installed direct into the adjacent 180mm gas main – will be completed by 15th March 2024.
2. Temporary capping of the lower northern section of Cell 5a with LLDPE – Target to complete before end of May 2024, as this is dependent on permanently clay capping top of Cell 5a (see below) and reusing this LLDPE.
3. Installation of scavenger line below current surface water drain on northern flank of Cell 5a – To be completed before 31st March 2024.
4. Improve clay cover adjacent to the toe of the northern clay bench and the toe of the western clay bench of Cell 5a – to be completed before 31st March 2024. Weather dependent.

5. Install Horizontal 8 into Cell 5b and connect onto gas extraction system – To be completed before end of April 2024.

In addition to these actions, the operator proposes to complete the following actions:

1. Continue with fortnightly gas monitoring until 31/03/2024 at all gas well control valves, manifolds, etc. serving Cell 5a. On completion of this, monitoring will revert to a monthly frequency.
2. Undertake FID monitoring monthly up until June 2024, to measure the impact of remedial measures and identify any further improvements necessary. After June 2024, FID monitoring will be every 3 months until the end of 2024, when frequency can be reviewed
3. Permanent clay capping of Cell 5a. Approx. 8000m² – Will commence as soon as the weather improves sufficiently. The LLDPE removed from this area will be repurposed as temporary capping for the lower section of the northern flank of Cell 5a.
4. Repair turbo on landfill gas engine 3

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.