

Compliance Assessment Report CAR_NRW0051917

Permit being assessed: KP3994FG.

For: Penhesgyn Gors Landfill (area 3), **held by:** Cyngor Sir Ynys Mon

At: Penhesgyn Gor Landfill, Menai Bridge, Ynys Mon, LL59 5RY.

Type of assessment: Site Inspection,

Reason: Other.

On: 27/04/2026 between 10:00 and 13:00.

Parts of permit assessed: 2.8 Landfill Gas Management.

NRW Lead Officer: Anthony Roberts.

Report sent to: Bob Parry, Site Manager, on 19/05/2026.

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

Part of permitted activity assessed (compliance criteria)	Assessment result	Permit condition
W2A - Waste - Operations - Permitted activities	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

PENHESGYN LANDFILL – LANDFILL GAS INFRASTRUCTURE AND GAS GENERATION INSPECTION

Site Inspection – 27 April 2026

A site meeting and inspection was undertaken at 10:00hrs on the above date, following discussions regarding the ingress of oxygen into the landfill gas extraction system. This was thought to be having an effect on the quality of gas delivered to the GUP and the extraction pressure and gas balancing across the site.

In November 2025 the operation of the Electrical generator became impeded by the quality and inconsistency of the landfill gas used to fuel the generator, at this point all gas was managed via the Flare. M.A.N Landfill & Environmental Services was approached by NewEnCo with a aim to improve gas quality and stabilise the gas field

Whilst not breaching permit limits of 5% oxygen at the GUP/Flare compound, the extraction pressures and the oxygen levels were having a profound effect on the ability to utilise the gas from the site and could lead to high oxygen breaches and automatic shutdowns in the future.

To resolve this problem, M.A.N. Landfill & Environmental Services (MAN) has been contracted as an independent Landfill Gas Specialist and service provider by NewEnCo Ltd and the Isle of Anglesey County Council. To provide guidance and expertise relating to improving the Landfill Gas quality, yield and management for electrical generation

The following actions and recommendations are taken directly from the M.A.N report. NRW approves of these outcomes, recommendations, actions and further actions:

Actions completed Analysis of previous gas data followed by ongoing weekly gas well balancing highlighted a few issues which required immediate and further action (See Recommendations – Actions). The immediate action was to understand the flow being used through the flare. The delivery pressure was adjusted under guidance from Landfill Systems (LFS) to reduce the flow, and anemometer flow meters were then purchased and used to monitor the actual gas flow. It was found that the flow was approximately 130m³/h, which is significantly higher than the ~80m³/h used by the generator at its usual kW setting, which is ultimately unsustainable by the gasfield. Following this and under guidance from LFS, an internal valve was adjusted to further reduce the flow. A flow of between 70 to 80m³/h was then achieved, bringing the flare flow back into the range used by generator which has stabilised the gas field. Gas well balancing has continued and with the lower flow is showing signs of recovery. Appendix E shows when the engine was left off and the flare used for extraction (the first red line), the second red line identifies when the flare flow was reduced. You can see that due to the increased flow, the vacuum increases and the CH₄ decreases showing that the gas field is over extracted, conversely you will see the vacuum drop and CH₄ start to

improve after the flare flow was decreased

A dipping survey of selected gas wells across the site was completed and the results graphed to understand the available perf and thus influence of the wells (see Appendix C & D). This highlighted that although there is potentially perched liquid in cells 2 & 3, most well depths are between 10m to 14m below ground level (bgl) Notable though are several wells where the depth is between 3m and 5m bgl which suggests they are damaged/sheared. Evident from the gas readings taken from Area 3, is high O₂ coming from the area between the DW3 and DW2 so an investigation was completed where DW2 and 3 were charged with 40litres of water (in case they were drawing in poor gas through the base perforations due to being dry. All gas wells in this area were closed and monitoring of the DW legs continued, the O₂ was still evident indicating a potential failure of the extraction infrastructure below ground. This O₂ (of between 4% to 5%) is an issue for the generator operation as it could potentially cause expensive damage if run, but this is also affecting the gas quality as the O₂ dilutes the CH₄ value. Recommendations Data Analysis of gas wells data within Cells 1,2 & 3 for the period when leachate recirc was being run from cells 2 & 3 into cell 1 is to be completed, this will allow understanding of if there was any negative impact on gas yields when the recirc was halted. Drill logs are required to understand the actual depth of the wells when installed, this information can then be compared to dipping data to identify any damage, losses of depth or other issues and highlight any requirement for a potential re-drilling programme. Balancing practices of YLEM should be reviewed and guidance given to ensure a maintain a well-balanced and sustainable gas field is maintained. Attention to gas data should drive balancing decisions, with smaller valve changes of between 5% to 10% made at each visit, to find the 'balance' between under and over extraction, with valve positions recorded numerically as 0% (closed), 5%, 10%, 15%, 20%, 25% etc up to 100% (fully open), not 'fully closed', 'partially open' or 'fully open' as it currently being recorded

Actions Expose the gas main from DW2 to DW3 and install monitoring points to identify where the O₂ breach is and rectify. Expose the gas main at key points on area 2, and install 'strategic' monitoring points into gas main for onward monitoring and to identify and future issues A few wells seem to suffer from blocked extraction lines; these lines should be renewed and TEE'd into neighbouring healthy lines. Completed a down well Camera survey (incl DW's) to understand well condition, damage and the amount of plain casing (and so the amount of perf casing) bgl. Attention should be made to the gas wells which when not open record good gas quality, but then 'crash' when opened (i.e. GW4 and 5). The results should be analysed and a report completed. Following the camera survey, a program of gas well re-drilling should be considered to replace damaged wells and maximise landfill gas capture to mitigate migration risk

A permanently installed flow meter should be installed into the incoming flare line so that continuous monitoring and reporting of flow can be completed. Asset ID's should be amended to separate the Flare (negative pressure) from the Generator (positive pressure), and add strategic monitoring points within the gas main/manifolds KOP discharge lines should be connected into the closest gas or leachate well.

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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 required for the permit condition assessed to avoid non-compliance. No non-compliance scored at this time
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(1) – Emissions to water
- W3A(2) – Emissions to air
- W3A(3) – Emissions to 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.

Disputing the Content of this Compliance Assessment Report Form

If you disagree with the content of this Compliance Assessment Report form, you should submit your concerns, in writing, to the regulating officer who issued it within **15 working days** of its issue. This will be treated as a **Stage 1 review**.

If you are not satisfied with the outcome of the stage 1 review, you may request a **Stage 2 appeal**. This request must be submitted **within 21 working days** of receiving the response from the stage 1 review.

Further details on our review and appeal process are available at: [Natural Resources Wales / Appeal a regulatory decision from Natural Resources Wales](#)

Concerns Not Related to the Content of this Compliance Assessment Report Form

If your concerns do not relate to the content of the Compliance Assessment Report form, you should first attempt to resolve the issue with the regulating officer or their line manager.

If the issue remains unresolved, please contact our **Customer Contact Team**:

- **Telephone:** 0300 065 3000 (Monday to Friday, 09:00–17:00)
- **Email:** enquiries@naturalresourceswales.gov.uk

They will provide details on how to escalate your concerns through our **Complaints and Commendations procedure**.

If you are dissatisfied with our response, you may contact the **Public Services Ombudsman for Wales**:

- **Telephone:** 0300 790 0203
- **Email:** 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.