

Written Evidence – P-06-1510 Hafod Landfill Site

Written evidence for Members of the Senedd Committee ahead of the meeting on Monday 22 September regarding *P-06-1510 Direct NRW to revoke the environmental permit and ensure the closure of Enover's, Hafod Landfill Site in Wrexham.*

Background

Environmental Permit

Hafod Landfill Site is regulated by Natural Resources Wales under Environmental Permit EPR-PP3139GB.

The permit includes a condition that requires the operator to prevent odour off site or, where that is not possible, to keep it to a minimum. The operator will describe how it will achieve this in a document called an Odour Management Plan (OMP). The OMP must be kept up to date and each revision is assessed by our officers to ensure it covers all the key areas of operations in relation to odour management. Officers assess compliance with the odour condition by:

- Verifying the presence, type and intensity of odour in the vicinity of a permitted site,
- Identifying whether the site is the likely source of the odour, and if proven, going on site to determine the causes of any odours and whether the operator is taking appropriate measures to control the odour.

Odour investigations

Officers carry out odour investigations (including off-site odour assessments) in accordance with our guidance and by reference to published odour management guidance.

Odour intensity describes the strength of the odour as perceived by an individual officer. We record odour intensity using a scale of 0 to 6, where 0 = no odour, 3 = distinct odour and 6 = extremely strong odour. A permit breach will only be recorded where:

- Odour due to activities on the site at a level likely to cause pollution outside the site boundary is substantiated by an officer, and
- The operator is not taking all appropriate measures to control that odour.

If the operator is taking appropriate measures, then no breach of the permit has occurred, even if there is some odour. We would expect the operator to identify appropriate measures in its Odour Management Plan (OMP), but we may require additional measures if serious odour pollution occurs.

The operator is informed about any odour reports we receive that relate to the site, but we do not release personal data, so they cannot identify individual reporters. The operator is

expected to respond to reports of odour in accordance with its OMP for the site, and to advise us of any resulting changes to operations.

It is our role to assess compliance with the permits and to take appropriate regulatory action if we identify any breaches. We do so by reference to our enforcement and prosecutions policy, and with appropriate regard to the Regulators' Code.

Our regulatory team assess compliance with the permit conditions at Hafod Landfill in several ways including site inspection, audit, off-site odour assessments, and review of reports and monitoring data.

We charge all permit-holders subsistence fees, which cover the cost of these routine regulatory activities. Subsistence fees do not cover provision of a constant officer presence on any permitted site.

A Compliance Assessment Report (CAR) is used to record the findings of our site inspections, audits and monitoring activities, reviews of monitoring and other data/reports. We use our guidance on assessing and scoring environmental permit compliance to score permit breaches in accordance with our Compliance Classification Scheme (CCS). The risk category and score we give a non-compliance reflects the potential impact it could have if it were not addressed promptly and adequately. The only exception is for non-compliances relating to amenity conditions - odour, dust, noise and pests. We categorise the risk and score these according to their actual (rather than potential) impact. There are 4 risk categories of non-compliance. Each risk category is scored. The scores are accumulated during the compliance year. Further information about how we score permit breaches, and how this impacts on the sites annual subsistence fees is set out in our guidance on our charging schemes.

Landfill odours

Landfill operations will always have periodic odours but this should not be a sustained event. There are two main sources of odours at a landfill site:

- The waste as it is deposited can produce an odour like a household dustbin.
- Gases produced by the degradation of the waste over time.

When waste is disposed of at the site it is done in phases (known as cells). Once a cell is full of waste it is capped off (sealed) with an impermeable covering. This prevents rainwater getting into the cell and aids the collection of the landfill gas which is produced when the waste starts to break down.

Landfill gas typically contains methane (approximately 65%) and carbon dioxide (35%) which are not odorous gases. There will typically be a range of other compounds at relatively low concentrations within the landfill gas known as trace gases. These trace gases can contain substances which cause landfill gas to be odorous, such as hydrogen sulphide (H₂S). Hydrogen Sulphide is a trace gas that can cause the 'rotten eggs' smell, it can be smelt at much lower concentrations than the levels that can cause harm. Any gases will

have undergone significant dilution by the time they are smelt within the local proximity, and it is very unlikely to impact human health.

Landfill gas odours can be the result of several factors: some of these may be a result of management failures, others are the result of planned and necessary works such as the installation of new gas extraction infrastructure.

Odours are the result of complex interactions within the site. Whether they can be smelt off-site, and where they will be smelt, is often a result of local weather conditions. If you notice the smell one day but not the next this could be because of a change in temperature, wind speed or direction or a change in atmospheric pressure. For example, gasses will always move toward an area of lower pressure, as a result we are more likely to experience odours when the atmospheric pressure is low or falling. Similarly, on colder or still days the odours are not dispersed as quickly which means we are more likely to experience odours.

NRW have been fortunate to work closely with other UK Environment Agencies to share an odour training pathway, developed to provide training for staff who permit and regulate industrial sites. The pathway has four sequential levels and will take a candidate from a basic knowledge of odour to competent and then onto local expert. The first three levels are online packages and the final stage is a face to face session delivered by the Environment Agency. We are allocated a small number of places for the face to face sessions, so we target our resources based on the need in specific operational areas of Wales and the availability of our staff.

To supplement this training pathway, we also undertake face to face sniff testing. The sessions give regulatory officers an indication of how their sensitivity to odour compares to the general population. It must be stressed that the purpose of these sessions is not to “train” or “calibrate” officers’ noses. Instead, the objective is to raise awareness of the wide range of normal odour sensitivity found across the population and to assess where our officers’ odour sensitivity falls within this range.

Landfill Closure

There are two ways that a landfill can be formally closed under the Environmental Permitting (England and Wales) Regulations 2016 and the Landfill Directive:

1. Operator-initiated closure - When the operator of an operational landfill permanently stops accepting waste, it can start the closure procedure. It must be compliant with the permit and have appropriate infrastructure, operating techniques, and management plans in place to manage the site through the aftercare phase.
2. Regulator-initiated closure - When Natural Resources Wales decides that a site must close and issues a Closure Notice. This will normally be when the management of an operational site is poor and further operation of the site may result in significant, long-term pollution.

A Closure Notice is normally used as a last resort once other enforcement options have been exhausted. Under a Closure Notice, the operator must still comply with its permit conditions and remains responsible for maintaining active pollution control measures.

Regulatory History

All Compliance Assessment undertaken under the Environmental Permit can be viewed on our [Public Register](#).

The graph in Figure 1 below shows the monthly total of odour incident reports reported to Environment Agency Wales / Natural Resources Wales between 2007 and 2025.

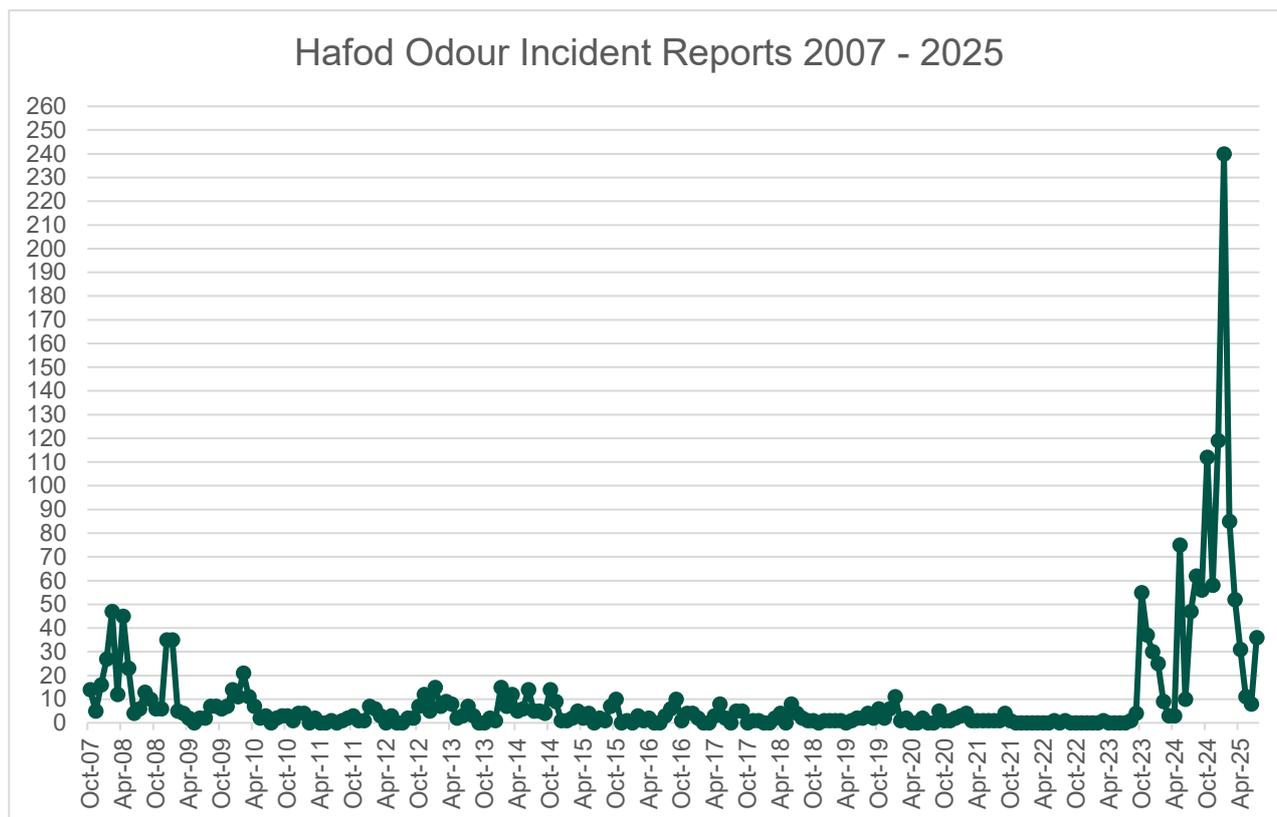


Figure 1: Odour incident report numbers – Hafod Landfill

The graph shows that odour incident reports have varied over time, but report numbers were particularly low between January 2020 and September 2023.

In October 2023, we received a spike in odour incident reports, up from 4 in September 2023 to 55. Our Officers have attended a number of incidents and substantiated an offsite landfill gas odour. Following a site inspection, the operator provided us with an Action Plan to address the odour reports. We then issued a Regulation 36 Notice to the operator on the 21st of December 2023 with a number of actions required to address the odour reports. The deadline for these actions was midday on the 31st of January 2024.

Our officers visited the site on the 31st of January 2024 and were satisfied that all steps of the Notice had been complied with and the operator had implemented appropriate measures to reduce the potential for fugitive gas emissions and odour.

Our officers completed a follow-up audit on the 8th of March 2024, and some localised gas emissions were identified. To address these emissions, the Operator proposed a further

series of remedial measures. Our officers visited the site on the 13th of May to assess progress with the remedial measures. Some transient landfill gas odours were detected but overall, there seemed to be an improvement since the last inspection. We continued to closely monitor the landfill over the summer months.

In November 2024, our specialist Landfill Emissions Reduction Project (LERP) team carried out a landfill gas audit at Hafod Landfill. Following the audit a number of recommendations were given to the operator and actions required in a CAR. The main actions focussed on increased temporary capping, provision of additional gas infrastructure-wells & pin-wells, re-sealing some gas/ leachate wells, areas of existing temporary capping, implement measures to reduce emissions around leachate wells/ towers.

There was an escalation in odour incident reports during December 2024 - January 2025. Our officers have confirmed the presence of offsite odour during this period, and we dedicating significant resources to ensure that the site operator complies with the requirements of the LERP audit CAR.

Odour incident reports peak in January 2025, at 240, and we have seen a decreasing trend in complaints since then, as improvement works have been undertaken at the site. Some of these improvements were already planned but our regulatory work has given focus and strict timescales for completion.

The Environmental Permit is clear of our expectations. Compliance scores have been applied where permit breaches have been identified, and enforcement action is considered in line with our policies.

We continue to undertake unannounced inspections and site audits. Some leachate levels are in breach of the Permit requirements and we are considering further enforcement action.

At present the site operator is still working through several actions which we believe are addressing the issues at the site. In the meantime, we will continue to regulate them closely.

Stakeholder Engagement

We have been keen to keep local residents and other stakeholders informed about our regulatory work.

We attend every Hafod liaison meeting, which serves as an important platform for community representation. These meetings will continue to provide opportunities for residents to engage, receive updates, and share their concerns.

To enhance communication, we have launched a Citizen Space page. This page is regularly updated with information about our regulatory work and the actions being taken by the operator to address community concerns.

Please find the relevant links below:

Cymraeg: <https://ymgynggori.cyfoethnaturiol.cymru/north-east-gogledd-ddwyrain/sut-rydym-yn-rheoleiddio-safle-tirlenwi-hafod-wrec>

English: <https://ymgynggori.cyfoethnaturiol.cymru/north-east-gogledd-ddwyrain/how-we-are-regulating-hafod-landfill-wrexham>

Associated with the CS page is the opportunity for residents to sign up to a regular newsletter.

In March 2025, we met with Deputy First Minister Huw Irranca-Davies AS/MS to discuss our regulatory work. The research briefing produced by Senedd Research for the Petitions Committee here:

[Research brief.pdf](#)

In March 2025, we attended the first Hafod Landfill Stakeholder Group. Following the meeting a joint statement was released. Further information here:

[Hafod landfill site update – March 2025 - Wrexham Council News](#)

In April 2025, we attended the Wrexham County Borough Council Homes and Environment Scrutiny Committee meeting to discuss the odour complaints.

The Homes and Environment Scrutiny Committee agreed several recommendations following a meeting held on 16 October 2024 in respect of odour from Hafod Landfill site. It was agreed that an update report on the issues raised at the meeting be submitted to the scrutiny committee within the next six months. The meeting on the 29 April 2025 was to discuss the update report. Further information here:

[\(Public Pack\)Item 5 Agenda Supplement for Homes and Environment Scrutiny Committee, 29/04/2025 10:30](#)

At the meeting, we provided an update on NRW regulatory actions undertaken at Hafod Landfill over the last 6 months. It is encouraging that there has been a decreasing trend in complaints, following regulatory actions, however it is recognised that odours are still being experienced.

We are to continue with pro-active regulatory work to ensure that further improvements are achieved promptly, including enhanced leachate management.