



Welsh Government Response

P-06-1510 Direct NRW to revoke the environmental permit and ensure the closure of Enover's Hafod Landfill Site in Wrexham

As Deputy First Minister and Cabinet Secretary for Climate Change and Rural Affairs with Ministerial accountability for Circular Economy Policy and Legislation, I very much welcome the Petitions Committee's Report P-06-1510 regarding directing Natural Resources Wales to revoke the environmental permit and ensure the closure of Enover's Hafod Landfill Site in Wrexham.

I thank the Committee for its careful and professional consideration in undertaking this scrutiny as laid out in its comprehensive [report](#), which was published in January 2026.

This sets out the Welsh Government's response to the report's 11 recommendations.

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Y Dirprwy Brif Weinidog ac Ysgrifennydd y Cabinet dros Newid Hinsawdd
a Materion Gwledig

Deputy First Minister and Cabinet Secretary for Climate Change and Rural Affairs

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Responses

Recommendation 1

The Committee recommends that

Enovert and Wrexham County Borough Council should ensure that full calibration of AQMesh Pod monitoring data for accuracy happens as soon as possible, and all monitoring data is published immediately that calibration is completed. Both regulators and residents must be able to assess the outcome of monitoring activity. Ideally information should be provided in real time if the technical capability exists to do so.

Response: Accept in principle.

This recommendation is assigned to Enovert and Wrexham County Borough Council (WCBC) to consider, However, the Welsh Government agrees in principle that AQMesh Pod monitoring data should be calibrated for accuracy and shared with regulators and residents.

Financial Implications – None.

Recommendation 2

The Committee recommends that

NRW should ensure that staff undertaking community 'sniff tests' to help assess odour nuisance have undergone appropriate training, and that training and competence to conduct these tests is kept under regular review.

Response: Accept.

NRW are already delivering this recommendation. All NRW staff who undertake odour investigations at their regulated sites have started to progress or have progressed through the recognised odour pathway training.

Odour sensitivity testing is also a requirement of officers who are investigating odour from their regulated sites.

NRW advise regulatory officers on the likely causes of changes to a 'normal' persons sensitivity to odour, e.g. age, COVID, influenza and recommend re-testing where necessary.

Whilst NRW recognise the recommendation made by the Petitions Committee and have committed to putting systems in place to ensure officers maintain their capability as required.

Financial Implications – None.

Recommendation 3

The Committee recommends that

The Welsh Government should introduce mandatory automated odour monitoring at landfill sites. This is not something currently required by Natural Resources Wales, and the Welsh Government should ensure that regulators are sufficiently funded to facilitate this.

Response: Accept in principle.

NRW confirmed that their odour guidance (How to comply) states that:

'It is not possible to use instruments to measure odour in ambient air directly. However, very occasionally it may be possible to undertake surrogate measurements that are indicative of odours. This may be through direct measurement of chemicals that are themselves odorous, such as hydrogen sulphide.'

BSEN 13725 - Dynamic Dilution Olfactometry is the method for measuring odour, but this is specific to point source emissions where grab samples of source emissions are subsequently diluted to the odour threshold in a laboratory setting. This method is not relevant to ambient odour monitoring.

Consideration will therefore need to be given as to what NRW would test for (e.g. methane, hydrogen sulphide, carbon sulphide, ammonia). There are also considerations around the enforceability of any limits included in Environmental Permits, as it would be challenging to prove definitively that the source of the hydrogen sulphide is coming from a landfill site, as other sources also contribute to background levels.

NRW may also be able to request this testing from the operator if they have substantiated odour and attributed it to the landfill. In the case of Hafod landfill, Enover (the operator) has set up AQMesh monitoring pods and has used the consultants Geotechnology to interpret results. Although it is noted that several of the petitioners questioned the accuracy and validity of the data on the basis that the work was completed on behalf of the operator.

NRW will therefore consider this recommendation further; however, it should be noted that the mechanics around introducing mandatory automated odour monitoring at landfill sites is complex. As NRW will need to consider its remit and the resources needed to manage and interpret results captured, the enforceability of the results as well as the resources required for automated monitoring. They will also need to consider the roles and responsibilities of other organisations, for example, the Local Authority and Public Health Wales, should Welsh Government mandate ambient air monitoring for hydrogen sulphide in Environmental Permits.

The Welsh Government will therefore work with NRW to look at the feasibility of how taking forward this recommendation would work in practice.

Financial Implications – None.

Recommendation 4

The Committee recommends that

The Cabinet Secretary for Housing and Local Government should engage with the Welsh Local Government Association and all local authorities to clarify how local authorities can practically use the powers they have to protect their communities from statutory nuisance, and what criteria Welsh Ministers would use in order to endorse an intervention, in cases such as Hafod landfill.

Response: Accept in Principle.

Responsibility for local environmental quality, including statutory nuisance, comes under the Deputy First Minister and Cabinet Secretary for Climate Change and Rural Affairs rather than the Cabinet Secretary for Housing and Local Government.

The Welsh Government recognises the regulatory roles of both NRW, which enforces compliance with the requirements of environmental permits, and local authorities in respect of statutory nuisance. However, as Local authorities taking enforcement action for statutory nuisances on permitted sites potentially risks double regulation the UK and Welsh Governments have published guidance to clarify the roles of the regulators in these situations: [Interaction between Environmental Permitting and local authorities' statutory nuisance duties](#)

The Welsh Government will engage with NRW, WLGA and local authorities to examine the interface between environmental permitting and statutory nuisance, to further clarify roles and responsibilities in protecting communities from statutory nuisance.

Financial Implications – this work will be accommodated within existing budgets.

Recommendation 5

The Committee recommends that

Natural Resources Wales should consider whether criteria for measuring hydrogen sulphide (H₂S) levels, causing “rotten egg” odour, should be included in environmental permit conditions, and report back to Welsh Ministers on whether more work should be commissioned on the appropriate measurement of H₂S thresholds.

Response: Reject.

The World Health Organisation (WHO) air quality guidelines for Europe states:

‘On the basis of the scientific literature, it is not possible to state a specific concentration of hydrogen sulfide at which odour nuisance starts to appear. Half-hour average concentrations exceeding 7 µg/m³ are likely to produce substantial complaints among persons exposed. A reduction in the concentration of hydrogen sulfide does not guarantee a substantial reduction of the odour nuisance, since hydrogen sulfide in many effluents provides only a small contribution to the odour strength of the total effluent.’

The qualifications in this WHO statement are important. The concentration of hydrogen sulphide is only likely to be relevant where it is the dominant odorous chemical. Otherwise, hydrogen sulphide monitoring on its own may severely underestimate levels of odour pollution. This potential limitation applies to monitoring for any surrogate chemicals which might be measured in ambient air.

There have been concerns raised on the acceptability of the WHO’s guidance on hydrogen sulphide in relation to Walley’s Quarry Landfill in England, with the Environment Agency’s new odour guidance stating:

‘Hydrogen sulphide levels are sometimes used as a surrogate for odour when conducting ambient air quality monitoring, but there are limitations to this approach.’

NRW do, however, monitor hydrogen sulphide at some landfills where there is an identified risk. At Hafod, the sites Odour Management Plan stipulates that they will undertake ad-hoc monitoring as required. Measurements are provided every 6 months from:

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- In waste gas monitoring boreholes or sealed leachate wells or sacrificial gas extraction system in cells or phases which have no active gas extraction system.
 - Gas collection system at all well control valves, manifolds (if applicable) and strategic points on gas system.

NRW's view is that regulatory compliance to mitigate against hydrogen sulphide production at landfills should be focussed on landfill site management, such as waste inputs and types i.e. control of wastes containing gypsum (calcium sulphate), or other wastes that are likely to produce hydrogen sulphide in a landfill environment. These aspects are already within NRW's regulatory control via the Environmental Permit.

Welsh Government has allocated funding to NRW to purchase an Optical Gas Imaging Camera for onsite investigations. Whilst this does not measure hydrogen sulphide, it can consider other odour surrogate chemicals, including methane. This new equipment will further help focus regulatory compliance on the landfills which are giving rise to emissions and can lead to odour issues.

In conclusion, NRW do not consider it necessary to introduce hydrogen sulphide thresholds into Environmental Permits given the limitations to the approach. They are however using the regulatory controls and tools via the landfill permit to control waste acceptance and to require operators to manage their landfills appropriately to reduce the risk of sulphide being produced at the site.

Financial Implications – None.

Recommendation 6

The Committee recommends that

The Welsh Government should seek assurances from Natural Resources Wales that the measures in place at landfill sites in Wales are adequate to ensure they are climate resilient during and beyond their operational lifetimes.

Response: Accept.

NRW have recently issued climate change adaptation questionnaires to landfill operators who are regulated under the Environmental Permitting Regulations. This included Hafod landfill and their response highlighted the potential impact of increased rainfall, which has been reflected in their updated management plans.

The Welsh Government is also working with Local Partnerships on a project to support the wider waste sector to increase its climate resilience, which has included joint work with Local Authorities.

The scope of this work includes:

- review all stages of waste and resource management in Wales, from collections, through processing and treatment to identify the challenges faced by each, across a range of climate change impacts (e.g. heatwaves, flooding, high winds, etc.)
- incorporate the full spectrum of waste facilities within Wales from energy from waste (EfW), anaerobic digestion, landfill, waste transfer station, household waste reuse and recycling centres, local authority depots, waste processing sites, etc., as well as essential infrastructure for full-service provision such as transport links, power and digital services
- research best practice examples of climate change risk and how to plan appropriate mitigation, through adaptation and resilience, to inform a risk assessment framework for sites in Wales
- identify where Wales can work with the other parts of the UK on mitigations to risks and vulnerabilities (e.g. EfW capacity in south west and north west England).

Financial Implications – None.

Recommendation 7

The Committee recommends that

Natural Resources Wales should investigate whether a connection exists between rainfall and hydrogen sulphide (H₂S) production at Hafod landfill site - using the monitoring data, and available weather data, not just complaint numbers. If a connection is found, it must account for this in the regulatory approach.

Response: Accept.

Existing evidence shows that there is a demonstrable link between rainfall at landfills and the production of hydrogen sulphide, with increased rain entering a landfill reacting with the sulphur bearing materials with a landfill.

It is important that the operator undertakes waste acceptance checks and takes steps to ensure that the exposed areas of the landfill are minimised as much as possible. This is done by installing temporary or permanent capping of the waste

mass as soon as possible after waste has deposited, and by minimising the size of the active tipping area as much as possible. These measures are already detailed in regulatory guidance and Industry Codes of Practice.

Recent site audits at Hafod landfill have highlighted areas where additional capping could be installed and the operator has been working on its installation. NRW have also recently received updated Landfill Gas and Leachate Management action plans for Hafod landfill, which include necessary technical measures for minimising water infiltration into the waste mass and for the collection and removal of landfill gas and leachate.

NRW has offered to undertake a specific study at Hafod landfill in response to this recommendation. However, they highlight that it may be of limited additional value as the link between rainfall and elevated hydrogen sulphide production is already well documented. There are also existing regulatory controls via the Environmental Permit and statutory guidance in place to mitigate against this.

Financial Implications – None.

Recommendation 8

The Committee recommends that

Wrexham County Borough Council and the Hafod Stakeholder Group should continue to prioritise interpretation of the monitoring data; assess what improvements may be necessary to the method of collection and independent interpretation and communicate its work on this issue by publishing updates at least quarterly.

Response: Accept in principle.

The Welsh Government notes the recommendation for WCBC. The Welsh Government is aware efforts are being made to communicate the data and support its continuation.

Financial Implications – None.

Recommendation 9

The Committee recommends that

Wrexham County Borough Council should clarify in simple terms, for residents' benefit, the circumstances under which it has intervened in the operation of the

site, and the conditions under which it would intervene in future. It should continue to provide regular online updates and consult resident members of the Hafod Liaison Group on the most appropriate means to communicate information.

Response: Accept in principle.

The Welsh Government notes the recommendation for WCBC and supports the continuation of this communication and engagement in principle.

Financial Implications – None.

Recommendation 10

The Committee recommends that

Wrexham County Borough Council should clarify the criteria for resident participation on the Hafod Liaison Group and ensure that the meeting minutes are cleared with attendees and published punctually by means that are fully accessible for residents.

Response: Accept in principle.

The Welsh Government notes the recommendation for WCBC and supports the continuation of this communication and engagement in principle and agrees there should be clarity.

Financial Implications – None.

Recommendation 11

The Committee recommends that

Wrexham County Borough Council should ensure that residents are directly represented on the Hafod Stakeholder Group. This should be limited to up to three representatives, with substitutions permitted.

Response: Accept in principle.

The Welsh Government notes the recommendation for WCBC and supports the recommendation and regard it as good practice for residents to be represented, with substitutions permitted.

Financial Implications – None.