

Compliance Assessment Report CAR_NRW0049401

Permit being assessed: AP3990LR.

For: St Modwen Developments Ltd, **held by:** St Modwen Developments Limited

At: Llancoed House, Llandarcy, N P T, SA10 6HJ.

Type of assessment: Report/Data Review,

Reason: Other.

On: 16/09/2025.

Parts of permit assessed: Improvement Conditions.

NRW Lead Officer: Sally Wakeford.

Report sent to: Elise Coalter, Regional Director - Wales, on 16/09/2025.

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

Part of permitted activity assessed (compliance criteria)	Assessment result	Permit condition
W2G - Waste - Operations - Improvement programme	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
W2G	Update Baseline HRA as per requirements 1-4 in next steps section	17/11/2025

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.

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

An email was sent to the Operator by Sally Wakeford of NRW on 18 October 2024, this email detailed the difficulties St Modwen have in providing a substantial Hydrogeological Risk Assessment as required by Improvement Condition IP1 of the permit.

It was stated that due to the dilute and disperse nature of the landfill, it is unlikely that the site will ever be able to fully meet the Groundwater Protection Regulations which essentially require there to be no substance present above EQS at the landfill boundary. This is also a permit requirement within permit condition 3.1.4.

To surrender the permit the Operator will have to prove that the landfill is in a satisfactory state and will not cause pollution to the environment and demonstrate that the pollution control measures are no longer necessary, in effect working towards compliance with these groundwater protection requirements. There is also the added complication of the waste deposit prior to the issuing of the permit.

It was agreed in the email of 18 October 2024 that the production of a baseline HRA to understand what is currently happening at the site would be an appropriate way forward to support the restoration of the landfill and the production of a closure and aftercare plan.

Some additional notes were provided to PJA on 04 March 2025 regarding the concentrations at the boundary and the need to take a deep dive into the data already available, looking at concentrations, stability of the concentrations, and source term evolution. Once this baseline is understood the operator could look to implementing some measure which will reduce the baseline, essentially making the site conditions better, and we can agree a reasonable end point for the operator to achieve, which is improvement enough for NRW and manageable for St Modwen.

On 30 July 2025 NRW received a document from consultants at PJA a document entitled Crymlyn Tip Baseline HRA Draft with appendix, reference 04020-PJA-25-XX-RP-R-0113.

Below are NRW's comments on the Baseline HRA provided.

Pertinent points from the Report:

- A generic risk assessment has been completed where the comparison has been made between concentrations of contaminants from the surface water datasets against Environmental Assessment Levels – which identified a number of exceedances for ammoniacal nitrogen, mercury, chromium, lead, zinc, TPH >C08-C16 and Aromatics >EC08-EC35 and a number of PAH. Exceedances up to 3 orders of magnitude were identified.
- Proposals have been made on a number of intervention measures designed to prevent and limit the release of hazardous substances and non-hazardous pollutants from the site into the Crymlyn Bog including
 - NAPL recover from tip recovery boreholes, interception trenches or sumps, focussing on 2 main 'hotspots' of oil seepages.
 - Vertical cut-off barrier wall to reduce potential for release of residual mobile

NAPL into peripheral trench. With a 2 m gap at the base of the wall to allow natural groundwater flow.

- Re-profiling of the waste mass to minimise longer term stability risks and create a profile that will encourage the dispersal of surface run-off from rainfall into surrounding waterbodies. This will also reduce infiltration into the waste deposits, reducing the potential for leaching and mobilisation of dissolved phase contaminants, thereby limiting the potential for off-site migration
- Restoration layer to be placed across the site at a nominal thickness of 1.1, this could constitute a low permeability cap, or incorporate a drainage layer, which with the reprofiling exercise could reduce infiltration of rainwater into the waste mass.
- They 'envisage that restoration proposals will prevent the release of free phase contamination and limit the release of dissolved phase contamination'
- They also propose further assessment of potential seasonal influences on ammoniacal nitrogen may help refine the restoration proposals

Comments:

- Two main factors need to be addressed by the proposal: the management of free phase contamination (LNAPL) and the management of the dissolved phase contamination (entrained within groundwater).
- The proposed restoration activities do go a long way to satisfy the physical remedial interventions the reduce the migration of contamination across the site boundary. We welcome the **proposal to continue pumping oil from recovery boreholes across the waste tip, interception trenches and sumps**. This on-going recovery process is key to the overall success of risk mitigation.
- The installation of the vertical cut-off barrier wall will have a number of benefits, including enabling continued oil recovery, prevention of LNAPL migrating from the site boundary and maintaining natural groundwater flows. The latter would need further information to ensure that the design of the cut-off wall will not impact groundwater flows to a degree whereby the natural groundwater dynamics are altered, and contamination is diverted elsewhere.
- **NRW agree that a combination of re-profiling of the waste mass to reduce infiltration and the installation of a restoration layer/capping layer** will have a benefit in reducing the potential for leaching and mobilisation of dissolved phase contamination. In order to reduce the risks from dissolved phase contamination, which will still enter the SSSI/SAC within groundwater through the gap in the cut-off wall, we would recommend that infiltration into the waste mass be reduced as far as is reasonably practical and therefore would recommend that the **cap is of a more impermeable nature**. Lateral groundwater flows from off-site would still enter the waste mass, but this approach would considerably reduce the vertical infiltration of rainwater which would likely greatly reduce the contaminant loading into the SSSI from groundwater.
- One main point which has yet to be addressed is the **definition of the success metrics**; what needs to be achieved in order to reach an end-point. This aspect of validation needs strengthening at this upfront stage so all parties are aware of the requirements. This is to ensure we don't have an 'open-ended' remediation strategy and no clearly defined path to closure. As mentioned in the email to PJA on 04 March 2025, we need to agree what is a reasonable end point for the Operator to

achieve. This could, however, be dynamic, and can be amended as the works and monitoring period extend. An example of a success metric could be “*emissions from monitoring points x, y, and z must achieve concentrations at, or below, 50% of the baseline over a sustained period of at least XX months*”. There would need to be more defined baseline conditions, i.e. what conditions at the site are now, in order to be able to document the achievement of such metrics.

- It has been mentioned before but there is still **no mention of PFAS in the report**. We are not sure if this has been included in the monitoring suite to date, but this should be assessed. There are now 17 PFAS substances which are officially classed as hazardous and we should know whether these form part of the overall contaminant source emanating from the site.

Next Steps:

1. Definition of success metrics (dynamic and amendable); In order to define the success metrics, you will need to confirm at this stage what baseline conditions are, both within the tip and within the surface waters for both dissolved phase and free phase NAPL. Some information on the surface water quality (compared against the EQS) has been provided, but the next submissions should clearly outline this.
2. NAPL thickness across the site and volumes recovered in the trench and at what frequency should also be included to keep track of NAPL recovery volumes and rates throughout and beyond the remediation.
3. PFAS monitoring suite confirmation;
4. Consideration of impermeable cap requirements;
5. Updated Baseline HRA with the comments above;
6. Closure and Aftercare Plan, updated in accordance with the baseline HRA and further requirements above. This document can be amended and kept updated with any changes, for example – with changes in success metrics etc.
7. Implementation of those measures agreed already - continued pumping of oil from recovery boreholes across the waste tip, interception trenches and sumps.

ACTION: As the information should be already available, please could you provide an updated Baseline HRA (Point 5 in 'Next Steps') by 17 November 2025, which includes points 1 to 4 in the 'Next Steps' section of this Compliance Assessment.

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.

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 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 – Emissions to water, air or 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.

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.