

## Compliance Assessment Report CAR\_NRW0044316

**Permit being assessed:** BU2349IL.

**For:** Alyn Works, **held by:** Synthite Limited

**At:** Denbigh Road, Mold, Flintshire, CH7 1BT.

**Type of assessment:** Site Inspection,

**Reason:** Incident Response (Incident number 2405945).

**On:** 01/05/2024 - 14/05/2024 between 11:30 and 12:30.

**Parts of permit assessed:** See Below.

**NRW Lead Officer:** Philip Harper, accompanied by Philip Barrett.

**Report sent to:** Technical Manager, Technical Manager, on 20/05/2024.

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

Part of permitted activity assessed (compliance criteria)	Assessment result	Permit condition
IR1A - Installations - Management - General Management	C2 Significant	1.1.1a
IR3A - Installations - Emissions and monitoring - Emissions to water, air or land	C2 Significant	3.1.1.

Result types are explained in more detail in the 'Important Information' section below.

Total non-compliances recorded	Total non-compliance score
2	62

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
IR1A	See Actions in main text	Already completed
IR3A	See actions in main text	14/06/2024

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) covers visits to site which were undertaken between the 1<sup>st</sup> May and the 14<sup>th</sup> May 2024.

On the 30<sup>th</sup> April 2024, Natural Resources Wales (NRW) received a notification from North Wales Fire and Rescue service. The notification stated that smoke could be seen coming from a building roof that contains grinders and formaldehyde at Synthite and that 4 engines and 2 special foam engines were en route.

NRW officers Phil Harper, Senior Industry & Waste Regulation Officer and Phil Barratt, Senior Environment Officer visited the site at 11:30 am on the 1<sup>st</sup> May 2024.

At the time of the inspection, the site was not operational. Officers observed that bulk paraformaldehyde bags were still alight, the fire service were regularly applying fire suppressant foam when required.

Officers observed that fire water had run from the paraformaldehyde storage area, flowing down the site until collecting at the lower end of the site towards the lagoons. Foam and paraformaldehyde could be seen across the hard standing and in standing fire water.

#### **IR3A Emissions to Water, Air or Land.**

##### Fire Water Outside Site Bund

On the 1<sup>st</sup> May 2024 fire water was observed outside of site containment at the lower site, pooling on unmade ground at the site boundary and on unmade ground adjacent to the lagoon access gate. Visual inspection found that the removable bund gate lacks a surrounding seal, which has allowed surface water to evade site containment and pool on unmade ground.

A sample of the pooled water was removed for analysis. The analysis showed that formaldehyde levels in the runoff were at approximately 60 mg/l. This value is significantly above the Environmental Quality Standard (EQS) limits for surface water and in contact with surface water and has the potential to cause significant environmental damage.

Throughout the site inspections which were undertaken between the 1<sup>st</sup> and the 14<sup>th</sup> May 2024 other potential routes for surface water runoff were identified, in particular cracks within the site containment.

The operator has informed NRW that some gaps have been filled where accessible.

**Action 1:** Inspect the site containment and seal any gaps in the tertiary containment wall by the **14<sup>th</sup> June 2024**. Please note that this is an interim measure and further actions are likely to follow separately to this compliance assessment report.

### Fire Water in Ground Water Monitoring Boreholes

On the 1<sup>st</sup> May, officers observed that monitoring borehole MW-D1 was submerged by fire water, and that groundwater monitoring borehole MW-C1 showed signs that it had also been submerged fire water. Borehole MW-C1 was opened for inspection. A white solid with an appearance consistent with paraformaldehyde could be seen inside the well. The well was unsealed, lacking a plug.

On the 2<sup>nd</sup> May 2024, surface water was purged from borehole MW-C1. The water was grey in appearance, appeared to contain suspended paraformaldehyde and had an odour consistent with fire water. Compliance report CAR\_NRW0043271 provided the following advice with regard to the sites groundwater monitoring boreholes;

1. *Boreholes should be redeveloped (cleaned out and flushed) under the supervision of a Hydrogeologist or other suitable professional, so they provide representative groundwater samples and groundwater elevations.*
2. *Boreholes should be furnished with a waterproof cap or stopper (plug) to prevent ingress of water, sediment, pollution etc.*
3. *Boreholes should have surface completions (i.e. slightly raised) to prevent the pooling of water at the borehole or the borehole acting as a drain.*
4. *Ideally borehole / well box lids / tops should be secured with bolts or 'keys' to prevent easy access or accidental opening of the lid.*
5. *Professionally survey the boreholes to an accuracy of 0.1 m location (NGR) and 0.005 m elevation (to a marked point or points to use for measuring depth of groundwater, usually the top of the borehole casing and ground level).*
6. *Boreholes should be fitted with a new in-situ sample tube (Polyethylene) to suit sampling with either a small 12 volt submersible pump or Waterra inertia valve.*
7. *Conduct 2 to 4 quarterly sampling rounds to define current conditions and write up in the site condition report.*

An action was provided for the operator to provide a timeline for the completion of the above tasks by the 14<sup>th</sup> March 2024. No timeline was submitted to NRW.

The operator was aware that the unplugged groundwater monitoring boreholes presented a risk to groundwater through the ingress of surface pollutants.

No sealing matting was deployed onto accessible boreholes, prior to using water to fight the fire.

Permit condition 3.1.1 states that *"There shall be no point source emissions to water, air, or land except from the sources and emission points listed in schedule 3 tables S3.1, S3.2 and S3.3."*

Based on the levels of formaldehyde present within the fire water there was potential for a significant environmental impact.

The ingress of contaminated fire water into ground water monitoring boreholes has the potential to cause groundwater and water surface water pollution. It has also been demonstrated that the operator had been made aware of the risks by NRW.

**Action 2:** Provide a timeline for the borehole actions numbered 1 to 7 above by the **1<sup>st</sup> June 2024**.

**Action 3:** Purge all accessible ground water boreholes by the **1<sup>st</sup> June 2024**.

The river Alyn was sampled by NRW on a regular basis following the fire. Sample results showed that

formaldehyde levels downstream of the site were significantly higher than EQS levels, indicating that fire water had left the site.

A **category 2 score** has been applied against permit condition 3.1.1 under subheading IR3A Emissions to Water, Air or Land.

### **IR3B Emissions of Substances Not Controlled by Emissions Limits.**

#### Secondary Containment

Visual evidence indicated that fire water had entered the phenol catchment pit. It was also observed that fire water had overflowed the French drain which is positioned at the entrance to the ammonia decanting building. This indicates that secondary containment for other pollutants which would cause a detrimental effect on human health and the environment has been compromised during the incident.

#### Fire Water in Tank Farm Bunds.

During visits which were undertaken between the 1<sup>st</sup> and 14<sup>th</sup> May 2024, fire water was observed within the bunds at the site tank farms. The operator is reminded that by filling the bunds with fire water, it is compromising its emergency containment provision in the event of pipe or tank failure.

The above observations demonstrate a risk of pollution to land and water by substances which are not controlled by the permitted limit.

Further investigation into the observations made regarding the secondary containment and the storage of fire water in tank farm bunds. As a result NRW has decided not to apply a score at this time. **Please note a score may be applied separately to this compliance assessment report.**

**Action 4:** Ensure that all site bunds are empty by the **1<sup>st</sup> June 2024**.

### **IR1A General Management.**

The permit breaches highlighted within this CAR form can be attributed to the failure to operate the site in accordance with a suitable management system for example;

- Failure to seal groundwater monitoring boreholes as recommended.
- Failure to maintain the integrity of site infrastructure, namely the site bund to an acceptable standard to reduce the likelihood of pollution.

The breaches highlighted demonstrate a serious lack of awareness of the requirements of the sites environmental permit. This increases the potential risk of environmental harm being caused by the site.

**A category 2 score has been applied against permit condition 1.1.1a under IR1A- General Management**

#### **Recovery Plan**

Natural Resources Wales can confirm that the paraformaldehyde storage area, which was affected by the fire

has been covered in plastic and sandbags. Prior to the removal of the material, NRW requires that the operator submits a recovery plan which will describe how the material will be removed in a manner which protects the environment. NRW requested an update for the submission of the recovery plan via email on the 9th May 2024, and received a reply which suggested that a recovery plan would be received the following week. NRW has not yet received a recovery plan.

**Action 5:** Submit a recovery plan for the removal of the material by the **24th May 2024**.

**Please note that the events leading up to and during the incident are still under investigation. Further compliance scores may be applied in separate compliance assessment reports.**

**Natural Resources Wales is considering its enforcement options in relation to this incident.**

Kind Regards

**Phil Harper**

**Senior Industry and Waste Regulation Officer NE**

**03000 65 3717/ 07890025506**

**[philip.harper@cyfoethnaturiolcymru.gov.uk](mailto:philip.harper@cyfoethnaturiolcymru.gov.uk)**

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](mailto: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](mailto: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.