

Compliance Assessment Report CAR_NRW0050992

Permit being assessed: BL7108IM.

For: Port Talbot Steel Works , **held by:** Tata Steel UK Limited

At: Tata Steel Strip Products UK , PORT TALBOT, PORT
TALBOT, WEST GLAMORGAN, SA13 2NG.

Type of assessment: Report/Data Review,

Reason: Routine.

On: 31/03/2026.

Parts of permit assessed: EAF Dust Trial.

NRW Lead Officer: Kirsty Thomas, accompanied by Rhodri Morgan, Benjamin Taylor.

Report sent to: Tata Steel UK Limited, Head of Environment, HSE Systems & Governance, on 31/03/2026.

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

| Part of permitted activity assessed (compliance criteria) | Assessment result | Permit condition |
|---|-------------------|------------------|
| IR2A - Installations - 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

This Compliance Assessment Report (CAR) has been produced in response to Tata Steel UK Limited's (TSUK) proposed research, development and testing activity involving an Electric Arc Furnace Dust (EAFD) demonstration plant trial at the Port Talbot site.

TSUK submitted a request to undertake the trial as detailed in the Bluecap Resources Ltd documents '*EAFD Demonstration Plant - Submitted To Natural Resources Wales - March 2026*' and '*Appendix A1*'.

4.1 Summary of trial

Bluecap Resources Ltd (Bluecap) intends to build and operate a demonstration plant at TSUK's Port Talbot site where one tonne per day of EAFD will be processed. The demonstration plant is required to obtain process data required for the design of a full scale plant and to demonstrate the validity of Bluecap's process to TSUK's management team and other EAF steel producers.

EAFD contains significant quantities of zinc together with iron oxides and minor concentrations of lead, cadmium, chromium and other metals (typically, EAFD collected in off-gas cleaning systems from iron and steelmaking is classified as a hazardous "solid waste from gas treatment containing hazardous substances" - EWC 10 02 07*). Bluecap is developing a novel hydrometallurgical process with the intention that the hazardous metals will be recovered into saleable products (process not commercially available elsewhere).

The proposed hydrometallurgical treatment involves leaching zinc (and other metals) into an aqueous solution, purifying that solution, and recovering zinc as metal or a high-value compound.

The demonstration plant has been designed for the nameplate capacity of 1tpd of EAFD feed. The plant will consist of four main sections, namely:

- Feeding system for introduction of EAFD feed into the process;
- Washing Circuit for the removal of salts from the EAFD feed into a dry salt product;
- A hydrometallurgical process for the extraction of zinc into solution prior to being crystallised to form a zinc sulphate product; and
- Removal of iron (in the form of gypsum) to a filtered cake and separately the removal of lead and cadmium to a filter cake. Residual material from the hydrometallurgical leaching stage will also be filtered. For all filtering operations, the filter cakes will be water washed with wash solutions being return to the process circuit.

Full details on the process design, equipment specifications and plant location/layout are provided in the submitted documentation - **NOTE - layout of the plant is to be finalised upon completion of assembly. TSUK must provide the finalised plant layout to NRW prior to the commencement of trial activities.**

The key objectives of the trial is as follows:

- **Performance:** To demonstrate metallurgical performance to external stakeholders;
- **Iron Removal:** To generate sufficient material for marketability studies;
- **Lead and Cadmium Removal:** To generate sufficient material for marketability studies;
- **Secondary leach residue stabilisation:** The demonstration plant will generate sufficient secondary leach residue so that studies can be undertaken to look at options for disposal. Testing will include stabilisation tests to establish the merit of generating an engineered leach residues to reduce metal leachability below hazardous-waste thresholds; and
- **Downstream Processing of Zinc Solutions:** The demonstration plant will verify metallurgical performance and quantify environmental benefits relative to the following potential processing routes:
 - Option A: Via electrowinning, produce high-purity zinc cathode; and
 - Option B: Crystallisation to produce a marketable zinc sulphate product

In summary, Bluecap's hydrometallurgical process is claimed to achieve zinc recoveries comparable to Waelz-type processes, offer potential reductions in thermal energy use and high-temperature off-gas emissions, and provide more flexible options for co-recovery or stabilisation of iron and minor metals.

4.2 NRW's position

The demonstration plant and associated research, development and testing activities:

- Will be located fully within the permitted installation footprint (Raw Materials Building) already covered by Permit BL7108IM.
- Will involve the treatment of material specified in the submission.
- Are time-limited, non-commercial, and intended solely for the purpose of gathering process and environmental performance data to inform future permitting.
- Include detailed environmental controls, risk management measures, and monitoring arrangements that ensure no increase in emissions, no change to permitted emission points, and no new environmental pathway beyond those already regulated under BL7108IM (e.g. full containment within the building, zero liquid discharge, no atmospheric emissions, sealed residues, bunding, spill containment, etc., as described in the submitted documentation).

NRW agrees the proposed trial is assessed as exempt from EPR, as it meets the description and requirements of Schedule 1 Part 1, 3 (c) of the Environmental Permitting Regulations in that the trial is for the development of a new additional process to recover hazardous metals within wastes to be produced by the proposed EAF for the site.

The trial is approved on the basis of the below conditions.

4.3 Conditions Under Which the Trial May Proceed

NRW confirms that the research, development and testing activities may proceed under Permit BL7108IM provided that Bluecap and TSUK implement the following requirements in full:

4.3.1 Operational Controls

- The treatment of waste is carried out in accordance with the control measures submitted in documentation provided to NRW on 03/03/2026. In particular:
- All handling of EAFD must remain within the building and under the dust-management controls described (sealed bags, dust curtains, hopper extraction, wet processing from the wash stage onward).
- All reagent storage and use (acid, lime, NaSH, zinc powder - and all other potentially polluting substances/material) must be managed under bunded containment, controlled pumping, and spill protection measures.
- All process waters and filtrates must remain within the closed-loop system, with no discharge to sewer, surface water, or ground.
- All residues (gypsum cake, secondary leach residue, cadmium/lead cake, salt crystals) must remain damp, double-bagged, labelled, and stored on impermeable surfaces inside the permitted installation.

4.3.2 Monitoring and Record Keeping

- Daily operational logs including: input tonnages, reagent use, water and energy usage, and performance of environmental controls.
- Records of all sampling and analysis of process materials and residues.
- Documentation of any spills >50 litres and confirmation of recovery/neutralisation actions.
- Dust observation records and corrective actions.
- Submission of a summary report (including relevant test data and results) at the end of the initial 2-month campaign, and a final report within 30 days of completing all trial activities.

4.3.3 Duration and Throughput

- Expected throughput: 60 tonnes of EAFD over an initial 2-month continuous operation period.
- Maximum permitted under this allowance: 120 tonnes over a total period not exceeding 6 months.
- Any intention to extend beyond 2 months must be notified to NRW in advance, accompanied by monitoring and performance data.
- All outputs from the trial must be consigned as waste to an appropriate facility that is able to accept and handle the waste.

4.4. Circumstances That Would Require Re-assessment or Variation

This allowance remains valid only while:

- All activities remain within the current installation boundary and do not introduce new emission points or pathways.
- No environmental impacts occur that fall outside those assessed in the application documentation.
- No commercial-scale production, third-party waste acceptance, or permanent plant installation occurs.
- Total EAFD processed does not exceed 120 tonnes.

- NRW maintains reasonable access for inspection during the trial.

If any of the above change, NRW may require a permit variation or separate regulatory approval.

You must notify NRW prior to the commencement of the trial activity and cessation of the trial.

In the event that the trial gives rise to pollution or a negative environmental impact, the trial must be immediately stopped and NRW notified. NRW reserve the right to cease the trial if operating techniques are not followed or following any adverse environmental impacts.

4.5 Conclusion

NRW confirms that the EAFD demonstration trials may proceed under the existing Installation Permit BL7108IM and do not require a permit variation, subject to adherence to the operational, environmental and monitoring controls set out above.

This confirmation is provided solely for the purposes of conducting the described, time-limited research, development and testing activities. Any future permanent installation or commercial-scale operation would require full permitting under EPR.

END

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 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(1) – Emissions to water
- IR3A(2) – Emissions to air
- IR3A(3) – Emissions to 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.

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.