

**This form will report compliance with your permit as determined by an NRW officer**

Site	Port Talbot Steel Works EPR/BL7108IM	Permit Ref	BL7108IM		
Operator/Permit holder	Tata Steel UK Limited				
Regime	Installations				
Date of assessment	26/01/2018	Time in	N/A	Out	N/A
Assessment type	Report/Data Review				
Parts of the permit assessed	1 Management; 2 Operations; 3 Emissions and Monitoring; 4 Information				
Lead officer's name	Cowie, Douglas				
Accompanied by					
Recipient's name/position	Claire Grainger/ Lead Environmental Engineer	Date issued	26/01/2018		

### Section 1 – Compliance Assessment Summary

This is based on the requirements of the permit under the Environmental Permitting Regulations or the licence under the Water Resources Act 1991 as amended by the Water Act 2003. A detailed explanation is captured in "Compliance Assessment Report Detail" (Section 2) and any actions you may need to take are given in the "Action(s)" (section 4). This summary details where we believe any non-compliance with the permit has occurred, the relevant condition and how the non-compliance has been categorised using our Compliance Classification Scheme (CCS). CCS Scores can be consolidated or suspended where appropriate, to reflect the impact of some non-compliances more accurately. For more details of our CCS scheme, contact your local office.

Permit conditions and compliance summary	CCS Category	Condition(s) breached
A1 - Specified by permit	A	
C3 - General Management - Materials acceptance	A	
G2 - Monitoring and Records, Maintenance and Reporting - Records of activity, site diary/journal/events	A	
H1 - Resource Efficiency - Efficient use of raw materials	A	

**KEY:** See Section 5 for breach categories, suspended scores will be indicated as such.

**A** = Assessed or assessed in part (no evidence of non-compliance), **X** = Action only, **O** = Ongoing non-compliance, not scored.

<b>Number of breaches recorded</b>	<b>0</b>	<b>Total compliance score</b> (see section 5 for scoring scheme)	<b>0</b>
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**If the Number of breaches recorded is greater than zero, please see Section 3 for our proposed enforcement response**

## Section 2 – Compliance Assessment Report Detail

This section contains a report of our findings and will usually include information on:

- The part(s) of the permit that were assessed (eg. Maintenance, training, combustion plant, etc)
- Where the type of assessment was 'Data Review' details of the report/results triggering the assessment
- Any non-compliances identified
- Any non-compliances with directly applicable legislation
- Details of any multiple non-compliances
- Information on the compliance score accrued inc.
- Details of advice given
- Any other areas of concern
- Any actions requested
- Any examples of good practice
- A reference to photos taken

### Site description

Tata Steel UK Ltd (Tata Steel) operates an integrated iron and steel works at Port Talbot, Neath Port Talbot. The site is permitted as an installation under the Environmental Permitting Regulations (EPR). Tata Steel has several defined industrial processes which are carried out sequentially across the installation to convert raw iron ores and coal to semi-finished (slab) and finished steel products (such as hot rolled, pickled and oiled, cold rolled and annealed steel). The permit also covers coke making and the reception, stockpiling and blending of raw iron making materials. Four other companies – Cambrian Stone, Harsco Metals, Runtech and ICL – are contracted to undertake their own permitted activities at the steelworks on Tata Steel's behalf.

### Purpose of visit/assessment

Tata Steel has been investigating potential recycling options for by-products and waste materials generated by its Strip Products UK business.

NRW previously agreed to a limited trial at Port Talbot steelworks using filter cake sludge from Trostre works to manufacture a ferrous pellet suitable for use as a substitute raw material inside a blast furnace. Details of this trial are confirmed in **CAR\_NRW0026473**.

Tata Steel has confirmed the results of its trial and proposes a repeat trial using the same material but with different processing parameters.

The relevant permit conditions are listed under Sections 1.1, 1.3, 1.4, 2.1, 2.3, 3.1 and 4.1 of Tata's permit.

### Trostre filter cake sludge trial

Our previous report **CAR\_NRW0026473** confirms the scope of Tata Steel's previous trial using Trostre filter cake sludge.

The previous trial proved unsuccessful because the substitute pellets failed their 'tumble test', a measure of pellet strength which shows how easily the pellets break apart when subjected to physical stresses e.g. handling using heavy plant. The tumble test showed that the substitute pellets would break down prior to charging in the blast furnace, resulting in higher levels of smaller particles (fines) in the blast furnace pellet charging system. Increased fines can cause furnace instability and potential disruption to ironmaking operations.

Tata Steel has learned that drying the material prior to the tumble test can negatively affect the performance of pellets subjected to the test. The substitute pellets use a cement-based binder which is detrimentally affected by drying. Tata Steel has tested other pellets without drying them first, which proved to be significantly stronger with better tumble test results.

Following the trial, improvements have been made to the 'balling' system installed by Tata's contractor Darlow-Lloyd at Yard Zero (located within the steelworks stockyards). The improved balling process can consistently produce more uniformly-shaped pellets at a higher output. This

allows longer pellet curing times whilst maintaining the pellet supply required by the blast furnace.

Tata Steel would now like to repeat the Trostre filter cake sludge trial to determine if:

1. the omission of the drying step; and
2. the improved balling process

can produce a substitute pellet which passes the tumble test and is of sufficient strength for blast furnace use.

### **NRW assessment and repeat trial decision**

Natural Resources Wales supports the proposed recycling of this material in principle. The diversion of this waste stream away from landfill may allow it to be moved up the Waste Hierarchy (as outlined in Article 4 of the EC Waste Framework Directive) towards a more sustainable solution which is better aligned with the objectives of the Welsh Government's *Waste Strategy for Wales: Towards Zero Waste*.

*Towards Zero Waste* reinforces the 'proximity principle' outlined in the EC Waste Framework Directive. This requires member states to establish a network of waste recovery and disposal installations designed to enable them to move towards self-sufficiency in waste management. Wastes must be recovered or disposed of in one of the nearest appropriate installations, although allowance is made for geographical flexibility where there is a need for specialised installations for certain waste types.

While we are mindful of the waste objectives and principles outlined above, NRW must first assess this proposal to ensure there are no adverse impacts on the environment, human health or on amenity from the trial activities. The requirements of applicable environmental and waste management legislation must also be considered.

NRW is content for this repeat trial to proceed subject to the following conditions:

1. The trial must be completed by 1 May 2018.
2. A maximum of 500 tonnes of Trostre filter cake may be used in the trial.
3. The Trostre filter cake must be batch tested before processing and the substitute ferrous pellets must be batch tested after processing to confirm their chemical composition. Records of the test results must be retained by Tata Steel and made available for inspection by NRW at any time.
4. NRW will not allow the use of any hazardous materials in this trial.
5. The waste treatment (substitute pellet manufacturing) and storage activities may only take place at Yard Zero at Port Talbot steelworks. Yard Zero is marked on the plan 'Tata\_Port Talbot\_HMS\_Pellets.ppt' supplied by Tata Steel on 18 October 2016.
6. The substitute ferrous pellets may only be used in the Blast Furnace (ironmaking) process at Port Talbot steelworks.
7. The Trostre filter cake will be segregated from other materials and stored securely by Tata Steel on an impermeable surface with sealed drainage until such time as the filter cake is used in the treatment process at Yard Zero.
8. The substitute ferrous pellets will be segregated from other materials and stored securely by Tata Steel on an impermeable surface with sealed drainage until such time as the pellets are used in the construction of the direct charge bed at the stockyards.
9. If, during the trial, any adverse impacts on blast furnace stability are detected which can be attributed to the use of the substitute ferrous pellets and which result in increased environmental emissions e.g. bleeder releases, then the trial must cease immediately.
10. The Duty of Care for waste applies to all transfers/movements of the Trostre filter cake material used to make the substitute ferrous pellets.
11. Any unused Trostre filter cake or substitute ferrous pellets left over at the conclusion of the trial must be recovered or disposed of at an appropriately authorised waste management

facility.

12. On conclusion of the trial, the findings are reported to NRW.

If the boundaries of the trial need to be changed, then further discussions with NRW will be needed to confirm the changes to trial envelope.

Further discussions should be held towards the conclusion of the trial to understand the environmental permitting requirements applying to the pellet manufacturing process going forward and the use of the ferrous pellets in the ironmaking processes at Port Talbot.

[ENDS]

## EPR Compliance Assessment Report

**Report ID:  
CAR\_NRW0032773**

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Operator/Permit holder	Tata Steel UK Limited	Date	26/01/2018

### Section 3 – Enforcement Response

You must take immediate action to rectify any non-compliance and prevent repetition. Non-compliance with your permit conditions constitutes an offence and can result in criminal prosecutions and/or suspension or revocation of a permit. Please read the detailed assessment in Section 2 and the steps you need to take in Section 4 below.

### Section 4 – Action(s)

This section summarises the actions identified during the assessment along with the timescales for when they will need to be completed.

Criteria Ref.	CCS Category	Action required/advised	Due Date
See Section 1 above			

## Section 5 – Compliance notes for the Operator

To ensure you correct actual or potential non-compliance we may

- Advise on corrective actions verbally or in writing
- Require you to take specific actions verbally or in writing
- Issue a notice
- Require you to review your procedures or management system
- Change some of the conditions of your permit
- Decide to undertake a full review of your permit

Any breach of a permit condition is an offence and we may take legal action against you

- We will normally provide advice and guidance to assist you to come back into compliance either after an offence is committed or where we consider that an offence is likely to be committed. This is without prejudice to any other enforcement response that we consider may be required.
- Enforcement action can include the issue of a formal caution, prosecution, the service of a notice and/or suspension or revocation of the permit.

**See our Enforcement and Civil Sanctions guidance for further information**

This report does not relieve the site operator of the responsibility to

- Ensure you comply with the conditions of the permit at all times and prevent pollution of the environment
- Ensure you comply with other legislative provisions which may apply

### Non-compliance scores and categories

CCS category	Description	Score
C1	A non-compliance that could have a major environmental effect	60
C2	A non-compliance which could have a significant environmental effect	31
C3	A non-compliance which could have a minor environmental effect	4
C4	A non-compliance which has no potential environmental effect	0.1

**Operational Risk Appraisal (Opra)** - Compliance assessment findings may affect your Opra score and/or your charges. This score influences the resource we use to assess permit compliance.

## Section 6 – General information

### Data protection notice

The information on this form will be processed by the Natural Resources Wales (NRW) to fulfil its regulatory and monitoring functions and to maintain the relevant public register(s). The NRW may also use and/or disclose it in connection with:

- Offering/providing you with its literature/services relating to environmental matters
- Consulting with the public, public bodies and other organisations (eg. 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 its service
- Freedom of Information Act/Environmental Regulations request

The NRW may pass it on to its agents/representatives to do these things on its behalf. You should ensure that any persons named on this form are informed of the contents of this data protection notice.

### Disclosure of information

The NRW will provide a copy of this report to the public register(s). However, if you consider that any information contained in this report should not be released to the public register(s) on the grounds of commercial confidentiality, you must write to your local area office within fifteen working days of receipt of this form indicating which information it concerns and why it should not be released, giving your reasons in full.

### Customer charter

#### What can I do if I disagree with this compliance assessment report?

If you are unable to resolve the issue with your site officer, you should firstly discuss the matter with officer's line managers using the informal appeals procedure. If you wish to raise your dispute further through our official Complaints and Commendations procedure, phone our general enquiry number 0300 065 3000 (Mon to Fri 08.00 – 18.00) and ask for the Customer Contact team or send an email to [enquiries@naturalresourceswales.gov.uk](mailto:enquiries@naturalresourceswales.gov.uk). If you are still dissatisfied you can make a complaint to the Public Services Ombudsman for Wales. For advice on how to complain to the Ombudsman phone their helpline on 0845 607 0987.

#### Welsh Language

If you would like this form in Welsh please contact your Regulatory Officer.