

## Compliance Assessment Report for: CAR\_NRW0046792 – Amended

<b>Permit number</b>	EPR/BX9471IU	<b>Operator name</b>	Tata Steel UK Limited
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<b>Site name</b>	Trostre Works
<b>Site address</b>	Trostre, Llanelli, Carmarthenshire, SA14 9SD
<b>Type of assessment</b>	Site inspection

<b>Date of assessment</b>	17/02/2025	<b>Time in</b>	11:20	<b>Time out</b>	13:30
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<b>Parts of permit assessed</b>	See section 2 of this report
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<b>NRW Lead officer</b>	Kirsty Thomas	<b>Accompanied by</b>	Benjamin Taylor
<b>Report sent to – Name and position</b>	Engineering Manager – Compliance, Environmental and Process Safety Departments	<b>Date</b>	14/05/2025

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

Part of permitted activity assessed (use action criteria below)	Assessment result	Permit condition
IR3B - Emission and Monitoring - Emissions of substances not controlled by emission limits	C2 Significant	3.2.1
IR4C - Information - Notification	C3 Minor	4.3.1

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

Total non-compliances recorded	Total non-compliance score
2	35

### 2. What action is required?

Compliance Criteria	Action needed	Complete by
IR3B – Emissions of substances not	Ref CAR_NRW0046792.1 - TSUK to provide evidence (verified analysis) to confirm the assumption that chromium	25/04/2025

Compliance Criteria	Action needed	Complete by
controlled by emission limits	discharge to the flume is trivalent chromium.	
	<b>Ref CAR_NRW0046792.2</b> - TSUK to provide details relating to the ground “plastic” liner installed at the ETP. The submission should include: date/s of the liner installation: the specification of the liner; details of how the liner panels were welded, details of the liner protection (e.g. geotextile protection fabrics); the extent of the liner deployment (including a drawing); liner/jointing detail around any penetration through the liner (e.g. clarifier concrete support etc.); any engineering reports or construction quality assurance documents.	25/04/2025
	<b>Ref CAR_NRW0046792.3</b> - TSUK to submit their records of maintenance inspections and integrity checks on the liner system installed at the ETP.	25/04/2025
	<b>Ref CAR_NRW0046792.4</b> - TSUK to provide a plan/drawing showing the extent of the ETP containment layout, including the subterranean concrete base and confirm in line with the CIRIA 736 containment requirements.	25/04/2025
	<b>Ref CAR_NRW0046792.5</b> - TSUK to provide details relating to the subterranean concrete base installed at the ETP. The submission should include: date/s of the concrete base installation and any engineering reports or construction quality assurance documents.	25/04/2025
	<b>Ref CAR_NRW0046792.6</b> - TSUK to submit their records of maintenance inspections and integrity checks on the subterranean concrete base installed at the ETP.	25/04/2025
	<b>Ref CAR_NRW0046792.7</b> - TSUK to repair the crack identified (and any additional cracks/issues identified as part of the annual drone survey work) in the flume with appropriate materials. TSUK to submit evidence of repairs taken place, including details of materials used.	Already complete
	<b>Ref CAR_NRW0046792.8</b> - TSUK/Veolia to provide and submit to NRW the	Already complete

Compliance Criteria	Action needed	Complete by
	inspection records of the effluent flume from the last 6 months.	
	<b>Ref CAR_NRW0046792.9</b> - TSUK to provide the thermal drone survey results for previous surveys carried out in February 2024 and the multiple surveys carried out in February 2025. A summary of findings and improvement plans (if applicable) must also be submitted.	Already complete
	<b>Ref CAR_NRW0046792.10</b> - TSUK to provide NRW with a clean-up plan for the area contaminated by the effluent leak	Already complete
	<b>Ref CAR_NRW0046792.11</b> - TSUK to provide results of recent water and soils samples taken as well as groundwater samples from neighbouring boreholes	Already complete
IR4C - Notifications	<b>Ref CAR_NRW0046792.12</b> - TSUK to ensure that any future notifications (as specified by the EPR permit) are submitted to NRW within the timescales specified by the EPR permit.	Immediate

Action 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 prosecutions 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

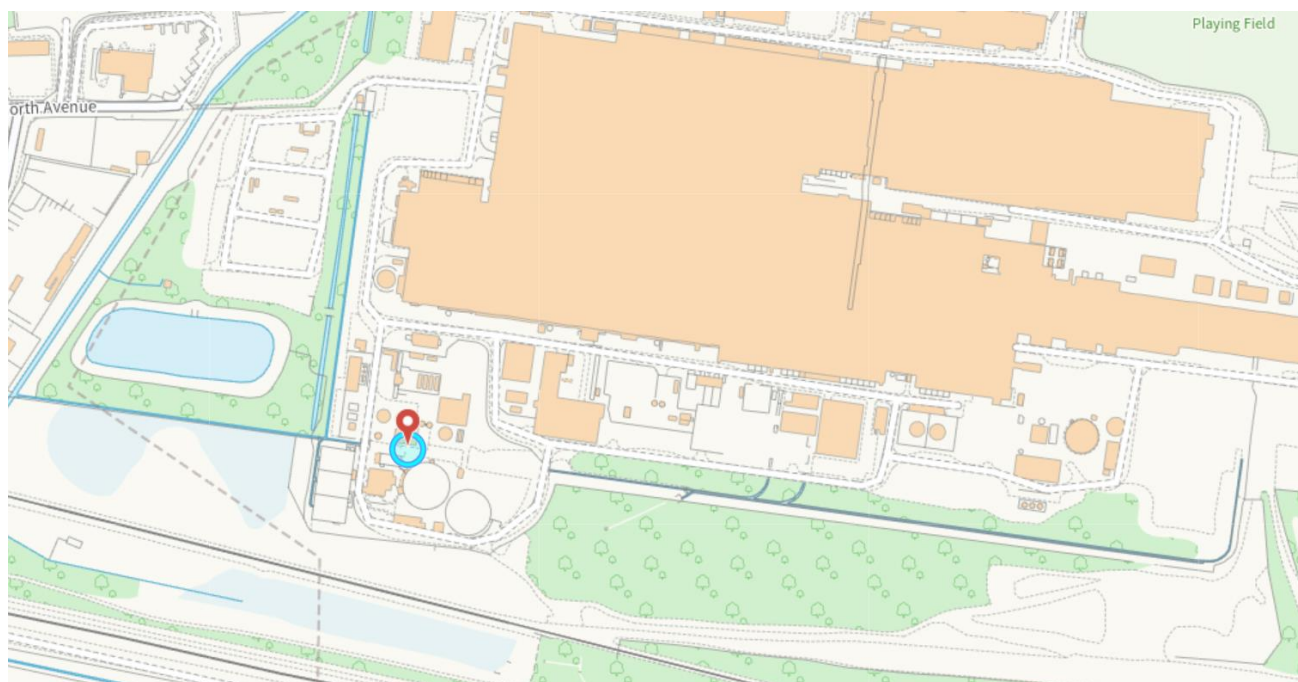
This Compliance Assessment Report (CAR) has been generated to cover the preliminary investigations into the effluent flume leak incident that took place at the Tata Steel Trostre facility located in Llanelli. It also covers Natural Resources Wales's (NRW) subsequent site inspection that occurred on the 17<sup>th</sup> of February 2025.

A follow up site inspection was also conducted on the 19<sup>th</sup> March 2025, however the observation and comments from this inspection will be documented in a separate report.

### **Incident notification and summary**

On the 11<sup>th</sup> February 2025, a Schedule 5 Notification was submitted to NRW from Tata Steel UK Ltd (TSUK). The notification confirmed an incident at the Tata Trostre Effluent Treatment Plant (ETP). Effluent arising at the installation is transported via a flume for treatment at a designated on site ETP, prior to discharge to the Loughor estuary.

TSUK confirmed the incident was a result of a leak from the effluent flume which was detected on the 6<sup>th</sup> February 2025. The leak was located within the ETP area (made ground between the flume and clarifiers), national grid reference SS 52544 99186 as shown in *image 1*. The impacted section of the flume is of concrete and masonry brick construction with an internal fibreglass liner.



*Image 1 – Location of flume leak*

The leak was identified via an annual thermal drone survey carried out by a 3<sup>rd</sup> party specialist which identified an increase in ground temperature emanating from the flume flowing in the direction of the clarifiers; which are located within the southeastern corner of the ETP area. TSUK informed NRW that there was a delay in submitting the Schedule 5 Notification to NRW in order to facilitate a follow-up drone survey in order to confirm the presence of the leak.

Upon further inspection, and following the damming of the flume, TSUK identified the presence of a 16” crack on the fibreglass liner of the flume wall, which allowed for the escape of contaminated liquid to ground within the ETP area. Thermal imaging showed the fluids path flowing towards the clarifiers (*drone survey draft report – s2502 Flume Leak Trostre – February 2025 (002)*, submitted via email on the 27<sup>th</sup> February 2025 by TSUK Engineering Manager).



Image 2 – Crack in flume wall

At the time of the Schedule 5 Notification, TSUK informed NRW that repairs had taken place and water and soils sampling (primarily from the area where effluent had pooled below the clarifier) had been collected<sup>1</sup>.

TSUK at this time are unaware of how long the leak had been taking place and the quantity of effluent released to made ground between the flume and clarifiers is unknown. Prior to the recent thermal drone survey carried out in February 2025, where the leak was first identified, the previous thermal drone survey was conducted on the 12<sup>th</sup> February 2024.

TSUK confirmed the crack was present within the flume which contains effluent from the factory's pickling line and other sources. The effluent at this point had not yet been treated by the ETP. At the same location, incoming effluent from the tank farm (which includes chromium, a product used on site) is discharged to the flume. Chrome is piped directly from the production line to the tank farm, treated and then discharged into the flume.

TSUK identified chrome is present in the leaked effluent and believe this to be trivalent chrome given chrome is not normally present in the flume until after it has been treated in the tank farm<sup>2</sup>. TSUK actively monitor this with chrome analyser points both upstream and downstream of the damage.

**ACTION - TSUK to provide evidence (verified analysis) to confirm the assumption that chromium discharge to the flume is trivalent chromium.**

### **NRW site inspection – 17<sup>th</sup> February 2025 – Site observations**

#### **Introduction**

On the 17<sup>th</sup> February 2025, NRW Officers visited the TSUK Trostre site to inspect the Area of Impact (AOI) following the flume leak.

<sup>1</sup> NRW and not aware of any effluent sample being taken at this point/at point of the leak. An effluent sample should have been taken by TSUK at the point of release to capture the composition of effluent being leaked. It is noted that the effluent composition is constantly changing due to different processes being undertaken at site.

<sup>2</sup> Sample data provided by TSUK does not distinguish the chromium speciation.



NRW Officers arrived on site at 11:20am and were met by TSUK staff - Engineering Managers and Energy/Environment Engineer and proceeded to the AOI situated within the ETP. NRW Officers also met with Veolia staff who manage the ETP operations at Trostre on TSUK's behalf.

TSUK/Veolia talked NRW Officers through the flume leak incident which was identified following the annual drone surveys undertaken of the flume using Infra-Red (IR) Thermography.

### Flume repair work

NRW Officers observed the flume area where the failure had been identified. It was evident that repair work had been completed since the original notification, as shown in *Image 3*. TSUK informed NRW that to ensure the integrity and longevity of remediation works, they have opted to deploy a fibreglass sheet to encompass the area of failure as opposed to a smaller localised repair. TSUK also confirmed that they had allowed sufficient curing time (>24 hours) to ensure the deployed fibreglass repair hardened<sup>3</sup>. Inspection of the failure point from the opposite bank of the flume showed no obvious signs of failure from a visual perspective.



*Image 3 – Flume following remediation works*

The effluent flume was in operation at the time of the visit with effluent flowing towards the lagoon area for treatment.

NRW Officers queried how the structural failure (crack) had not been identified before the annual drone survey detected the issue as there is the risk that the leak could have been taking place over a significant period of time. Veolia confirmed they undertake routine visual inspections but the crack in the flume wall was not identified (nor was pooling effluent observed by Veolia staff underneath the clarifiers), they also assured NRW that it was unlikely that the incident had occurred over an extended period of time.

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<sup>3</sup> Flume repair work supported by Krane Engineering and Veolia Industrial Cleaners.

**ACTION - TSUK/Veolia to provide and submit to NRW the inspection records of the effluent flume from the last 6 months – Already complete.**

**NOTE –** TSUK/Veolia confirmed that monthly visual flume inspections were carried out prior to the flume leak incident and have now (temporarily) converted to having weekly flume visual inspections. NRW would recommend reviewing the flume inspection frequency and maintaining a weekly visual inspection. The use of thermal imaging cameras as part of the visual inspections should also be considered by TSUK.

At the time of the visit, further validation drone surveys were being undertaken of the flume using Infra-Red (IR) Thermography to identify whether the repair works carried out on the flume had resulted in the cessation of the leak. Initial findings at this time identified that there may still potentially be a leak within the area. Veolia personnel were further investigating the suspected second leak and adopted shallow hand digging techniques at the ground between the flume leak and clarifiers. Veolia/TSUK informed NRW Officers that a minor flow believed to be effluent was entering these excavations further supporting the presence of an additional failure of the flume. It was agreed on site that findings of the further investigation work would be shared with NRW<sup>4</sup>.

**ACTION - TSUK to provide the thermal drone survey results for previous surveys carried out in February 2024 and the multiple surveys carried out in February 2025. A summary of findings and improvement plans (if applicable) must also be submitted – Already complete.**

#### Effluent pooling at clarifiers

NRW Officers walked to the southern boundary of the site to inspect the AOI beneath the clarifiers. NRW Officers observed pooling of effluent in the area of the clarifiers. TSUK claimed that a plastic liner (of unknown composition) is in place under the clarifiers overlain by stone chippings. TSUK claim the plastic liner is in place and working effectively in minimising migration of contaminants to groundwater as pooling of water/effluent was evident. At the time of the inspection, TSUK/Veolia were unable to immediately access the records for the liner and they have been tasked to obtain this – see action.

**ACTION - TSUK to provide details relating to the ground “plastic” liner installed at the ETP. The submission should include: date/s of the liner installation; the specification of the liner; details of how the liner panels were welded, details of the liner protection (e.g. geotextile protection fabrics); the extent of the liner deployment (including a drawing); liner/jointing detail around any penetration through the liner (e.g. clarifier concrete support etc.); any engineering reports or construction quality assurance documents.**

**ACTION - TSUK to submit their records of maintenance inspections and integrity checks on the liner system installed at the ETP.**

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<sup>4</sup> NRW were later informed that a second leak had been confirmed by TSUK at NGR SS 52527 99188, identified 17<sup>th</sup> February 2025.



Image 5 and Image 4 – effluent pooling at clarifiers

TSUK informed NRW that there is a subterranean concrete base present beneath some areas of the ETP, however it's full extent and specifications (and subsequently it's containment ability) are currently unconfirmed. It was highlighted to NRW that the significant change in topography (1.7m) and nature of the ground substrate between the flume and the area beneath the clarifiers facilitated the lateral migration of effluent towards the AOI. Furthermore, TSUK explained there are three possible pathways<sup>5</sup> for the leaked effluent to travel from the flume to the AOI underneath the clarifier, this was supported through the brief demonstration of graphs/figures generated by the thermography contractor who is working on behalf of TSUK.

**ACTION - TSUK to provide a plan/drawing showing the extent of the ETP containment layout, including the subterranean concrete base and confirm in line with the CIRIA 736 containment requirements.**

**ACTION - TSUK to provide details relating to the subterranean concrete base installed at the ETP. The submission should include: date/s of the concrete base installation and any engineering reports or construction quality assurance documents.**

**ACTION - TSUK to submit their records of maintenance inspections and integrity checks on the subterranean concrete base installed at the ETP.**

TSUK stated the effluent pooled within the clarifier area and was contained and no effluent had run off to any surface water bodies. NRW Officers observed that effluent appeared to be contained within the ETP area and no evidence of run-off to a drainage ditch to the south of the site boundary was evident. However it should be noted that there are no groundwater monitoring points downgradient of the ETP. NRW informed TSUK that they should determine a suitable remediation methodology as soon as practicable to be carried out by competent contractors using the appropriate equipment.

#### Remediation/clean-up plans

NRW were informed that remediation works will be undertaken by Veolia Industrial Services (VIS) whom have competence in the management of chemicals and will be supported by the onsite treatment facilities. Any waste, including hazardous waste from clean-up

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<sup>5</sup> As illustrated in the thermal drone survey report.



operations must be handled in accordance with waste duty of care and relevant waste/hazardous waste legislation.

Veolia confirmed they will be responsible for the clean-up and removal of contaminated material.

**ACTION - TSUK to provide NRW with a clean-up plan for the area contaminated by the effluent leak<sup>6</sup> – Already complete.**

### Sampling results

TSUK informed NRW that water and soil samples had been collected from the areas where effluent had pooled on the liner surface, under the clarifiers and the ground between the flume and clarifier, along with effluent in the drainage ditch south of the ETP. TSUK have also recently sampled boreholes within the site boundary, although these are all up-gradient of the ETP.

**ACTION - TSUK to provide results of recent water and soils samples taken as well as groundwater samples from neighbouring boreholes<sup>7</sup> – Already complete.**

NRW Officers also walked east along the flume route with no obvious visual or significant leaks identified, however some leaking expansion joints were observed. TSUK were instructed to undertake immediate repairs to the leaking joints. TSUK later confirmed this was completed and NRW confirmed this as their follow up visit on 19<sup>th</sup> March 2025 (CAR\_NRW0046813).

### Tank farm

The tank farm within the ETP area was inspected. Tanks were within a containment bund and no evidence of leaks or spills were present. We were informed that the tank farm is capable of treating chromium and other chemicals/acids. Treated chromium is discharged from the tank farm to the flume prior to entering the lagoon area. The discharge of treated chromium to the flume was in the same area where the crack was present.

### Impact summary

TSUK/Veolia claimed that the ETP area is set up with tertiary containment with most effluent being able to drain to the effluent flume. However the clarifiers are unbunded assets which they claim have been built over a plastic liner of unknown composition beneath the clarifier location. It is also unclear of how long the flume leak had been taking place, with a reliance on visual inspections to identify flume issues and leaks (thermal drone surveys are only carried out annually).

The effluent within the flume contained untreated effluent originating from the Trostre facility and therefore more likely to have a significant impact if released to the environment. The release of effluent from the flume was not controlled and not an authorised emission point.

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<sup>6</sup> Plans are presently under review by NRW. Further information may be required.

<sup>7</sup> TSUK have undertaken annual groundwater monitoring since 2018 following previous investigation and contamination identified. Boreholes previously and currently monitored include BHA, BHB, BHC, BHD, BHE, LBH1, LBH2, LBH4, DMBH, MBH1, BHA1, BHA and BHA3. LBH3 has been lost and replaced with BHC. Inclusion of additional groundwater monitoring wells to be discussed.

The effluent lost from the flume contains pollutants such as metals, including chromium which can have a negative impact on the receiving environment. The flume leak incident is within close proximity to a surface water drainage ditch (south of the ETP) and there are sensitive environmental receptors nearby.

### **Compliance Assessment – preliminary assessment**

**The unauthorised emission of polluting substances from the effluent flume (discovered the 6<sup>th</sup> February and on 17<sup>th</sup> February) is considered a breach of condition 3.2.1 of the permit.**

*“Emissions of substances not controlled by emission limits (excluding odour) shall not cause pollution. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved emissions management plan, have been taken to prevent or where that is not practicable, to minimise, those emissions”.*

**A non-compliance score of C2 has been attributed to this permit contravention (against sub-criteria IR3B).**

**ACTION – TSUK to repair the crack identified (and any additional cracks/issues identified as part of the annual drone survey work) in the flume with appropriate materials. TSUK to submit evidence of repairs taken place, including details of materials used – Already complete.**

### **Schedule 5 Notification timeframes**

The incident was first detected by TSUK on the 6<sup>th</sup> February 2025 but notification to NRW was not provided until 11<sup>th</sup> February 2025. Permit condition 4.3.1(a) required the operator to immediately inform NRW of the event (followed by the submission of Schedule 5 Notification within 24 hours).

**Failure to inform and notify NRW within timeframes specified in the permit represents a contravention of permit condition 4.3.1.**

**This permit breach has been scored a C3 non-compliance score (against *the IR4C – Notifications* heading).**

**ACTION– TSUK to ensure that any future notifications (as specified by the EPR permit) are submitted to NRW within the timescales specified by the EPR permit.**

A follow up site inspection was carried out on the 19<sup>th</sup> March 2025 with further compliance activity work detailed in CAR\_NRW0046813.

### **Root Cause**

Root Cause: we have not assessed the root cause into the releases as these are now subject to the ongoing investigation and will be determined at a later date.

**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 in the aspects assessed.
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 and Landfill 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.

### 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 – 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.