

Compliance Assessment Report CAR_NRW0040761

Permit being assessed: BL1096IB.

For: Padeswood Cement Works , held by Castle Cement Limited

At: PADESWOOD WORKS , PADESWOOD, MOLD, MOLD, CLWYD, CH7 4HB.

Type of assessment carried out: Report/Data Review, Reason: Routine.

On 31/10/2022.

Parts of permit assessed: See Below

NRW Lead Officer: Philip Harper.

Report sent to: David Quick, Plant Manager on 09/12/2022.

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

Part of permitted activity assessed (criteria)	Assessment result	Permit condition
G1 - Monitoring and Records, Maintenance and Reporting - Monitoring of emissions and environment	Action only (X)	
G4 - Monitoring and Records, Maintenance and Reporting - Reporting and notification to Natural Resources Wales	Assessed (A)	
E1 - Emissions - Air	C3 Minor	3.1.1.

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

Total number of non-compliances recorded	Total non-compliance score
1	4

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
G1	See Actions 1 - 6 in main text	31/12/2022
E1	Continue to monitor dust emissions at kiln seal.	Already completed

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 prosecution and/or suspension or revocation of your permit.

You are non-compliant with your permit.

At this time, we are issuing you with a warning for the non-compliance recorded above. Warnings may influence future enforcement response for continued or further non-compliance.

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

Review of emissions monitoring for period 1st July to 30th September 2022 (Q3).

Emissions to Water

Water emissions data for the period July – September 2022 were received on the 27th October 2022 as required by permit condition 4.2.3. No issues have been identified.

Emissions to Air

Continuous Monitoring (A3, A4, A5, A8, A9, A15)

Air monitoring data for the period July to September 2022 were received on the 27th October 2022 as required by permit condition 4.2.3. While no breaches were identified some elevated values were noted within the data:

Emission Point- A8

TOC on the 9th September 2022, data shows that the limit for total organic carbon was approached with a value of 45 mg/Nm³.

Actions:

1. Provide comment as to why these higher values have been observed by the **31st December 2022**.
2. In future reports please note clearly on return data if plant has not been operated, for example cement mill 1.

ARM and WDF Reporting.

ARM/WDF usage reports received as required for the period of July – September 2022. Waste types have been reviewed against the environmental permit. No issues have been noted.

Summary of Schedule 5 Notifications Received During Quarter 3 (July to September 2022)

Schedule 5 Notification- Cement Mill 3 Air Slide Blockage 20th and 22nd September 2022

A part A notification was received on 21/09/22 relating to fugitive dust emissions from cement mill 3 on the 20th of September. A further part A notification was received on the 22/09/22 for a repeat incident on the 22nd September.

These notifications have been discussed and a noncompliance has been applied within compliance assessment report CAR_NRW0040629.

A part B notification was received by Natural Resources Wales on the 28th November 2022. The investigation summary is provided below:

“The root cause of this incident is the airslide cloth not being changed when due. Details below showing the sequence of events leading up to the incident:

10th July 22 – notification raised to replace cloth. No comment of a hole, only there is a patch present as a repair. Put into plan 28th July. Replanned 18th Aug, dropped for TA damper work. Replanned for 1st Sept and carried out on 1st sept. Comment for 1st Sept work: Re siliconed patch planning to drop airslide and put new cloth on notification raised for next down day. Notification raised for this on 2nd Sept. Cloth replacement planned for 15th Sept and dropped as CM3 down day was postponed.

Incident occurred on 20th Sept.”

Replanned for 29th Sept. and cloth replaced.”

The report also states that the airslide cloth has already been replaced.

Actions:

3. Review PM to ensure cloth change occurs at the correct frequency by the **31/12/2022**
4. Investigate why the maintenance wasn't executed on time by the **31/12/2022**
5. Review alarm limits of the elevator amps as an early warning to the operator by the **31/12/2022**

Schedule 5 Notification 22nd September- Clinker Dome Door

On the 4th October 2022, Natural Resources Wales received a schedule 5 notification informing that there was an issue with the clinker dome door on 22nd September 2022.

A part B notification was received on the 28th October 2022.

This notification has been discussed and a noncompliance has been applied within compliance assessment report CAR_NRW0040629.

Schedule 5 Notification - Dust Complaints 23rd September 2022

Between the 20 and 26th September 2022 multiple complaints of dust were received by Natural Resources Wales. This notification has been discussed and a noncompliance has been applied within compliance assessment report CAR_NRW0040629.

A part B notification was received on the 28th October 2022. The investigation summary is provided below

“The September 2022 dust complaints from Penyffordd potentially could have been prevented had an RCA into earlier complaints been conducted. In addition, the failure to report the build up of dust around the heat exchanger meant that the problem with the equipment wasn’t highlighted.

Inspections of the heat exchanger in 2021 showed that tubes were holed/damaged. These were repaired, and the frequency of inspection remained unchanged. This is the second heat exchanger that has been installed at the cooler since kiln 4 started. The first was original with kiln 4 build and the current is the replacement which was installed in 2016. A new heat exchanger is scheduled for installation in 2023 and the PM of the heat exchanger is listed in preventive actions for review as lifespan can only be used as a guide.

Previously there was no formal reporting procedure for cleaning requests. We have now implemented a cleaning request reporting procedure using SAP work centre 51 – Cleaning and Vacuumation requests. UKSP016 is now to be used for environmental incidents, including complaints. The use of this form will prompt an RCA investigation to identify the source of the dust and prevent reoccurrence of such events.

Kiln trends (attached with this investigation) show the kiln hood pressure close to zero or positive on 23rd September when the kiln stopped. This alone is not sufficient to release dust however is actioned to see if a repeat can be prevented. Complaints started on 20th September.”

The part B notification also gives the following actions to complete. Please note, the due date for action 4 has been modified by Natural Resources Wales.

1.	Provide environmental awareness training to site personnel	Plant Manager	01/04/23	
2.	WorkCentre on SAP for cleaning requests	Production Team	Done	
3.	Site environmental walks are reviewed daily. There will be a check to see if notifications have been raised on the back of any findings.	Sustainability Analyst	Done	
4.	Ensure all staff involved dealing with complaints are aware of UKSP016 and how/when to use it. These staff should receive the appropriate RCA training as outlined in the procedure.	Q&E Manager/ Sustainability Analyst	Training plan by 31/01/2022	
5.	Review the robustness (frequency and detail) of heat exchanger PM.	Planning/Maintenance	30/11/2022	
6.	Investigate the cause of the kiln hood showing a positive pressure.	Production Manager	31/12/2022	
7.	Improved technique for inspection of wear of the tubes	Engineering	In progress	

Actions:

- 6. Progress corrective actions without delay.

Other Notable Investigations

Kiln Inlet Seal Leak and Noise 22nd September 2022

During an inspection on the 23rd September 2022, CCTV footage from the 22nd September 2022 showed kiln seal emissions on the 22nd September 2022. Initial observations are discussed within compliance assessment report CAR_NRW0040629, which required an investigation report by the 30/11/2022. An investigational report was received on the 28/11/2022.

The report links the leak with four noise complaints which were received between the 3rd and 4th of August 2022. These related to a high-pitched screeching noise, which was found to be coming from the kiln inlet seal.

The report provides the following summary of the investigation:

“On the 23/09/2022 the kiln was stopped to investigate a dust emission from the kiln inlet seal area. The kiln was cooled for entry. Upon investigation the kiln inlet pre-cast refractory was observed to be damaged. The expected lifetime of such refractory is 18 to 24 months. The damaged refractory was installed in November 2021 making the lifetime of this only 10 months. The refractory appeared to have been subjected to mechanical damage due to the nature of the failure, cracking through its securing bolts with the remaining refractory integrity of good condition. An investigation into how mechanical stress/impact may have occurred was conducted. There was evidence, internally, of abrasion/wear marks on the static kiln inlet refractory, suggesting something had been scraping against it whilst the kiln was rotating, the area of the abrasion could only be associated with the kiln inlet pre-cast refractory. The kiln position was measured, and it became obvious that the kiln was too close to the Pre-heater tower, resulting in the two refractory components touching causing wear and mechanical damage. The weakest part of the refractory was the rotating precast blocks and so failure occurred. The kiln refractory components were replaced whilst the kiln was shut down. The kiln was moved back into its correct position and new kiln position monitoring instrumentation installed. The new instrumentation measures the kiln position. The instrument has been linked into the kiln thrust device and now automatically maintains the kiln in the desired position. A high limit alarm has been programmed to trigger should the kiln move to a position that is outside of normal parameters, should the kiln continue to move an interlock has been installed to stop the kiln to prevent damage occurring.”

The notification states that preventative actions have already been complete as below.

No	Description	By Who	By When
1	A high limit alarm has been programmed to trigger should the kiln move into a position that is outside of normal parameters. If the kiln continues to move then an interlock has been installed to cause a kiln stop, and therefore prevent damage to the inlet seal occurring	Engineering	Done

2	A sensor has been installed on the outside of the kiln, which monitors its movements. The sensor will automatically activate the thruster when it detects the kiln has moved out of position. The kiln will return to its desired position ensuring this incident does not re-occur.	Engineering	Done
<p>The report discusses an unauthorised emission from the kiln seal on the 22nd of September.</p> <p>A category 3 score has been applied against permit condition 3.1.1 “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, S3.3, and, S3.4.” (E1 Emissions to air).</p> <p>Kind Regards</p> <p>Phil Harper Industry and Waste Regulation Officer NW 03000 65 3717/ 07890025506 philip.harper@cyfoethnaturiolcymru.gov.uk</p>			

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.

What are suspended scores?

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 Waste action criteria (used in section 1 and 2):

A: Permitted activities

- A1 Specified by permit

B: Infrastructure

- B1 Infrastructure – Engineering for prevention and control of emissions
- B2 Infrastructure – Closure and decommissioning
- B3 Infrastructure – Site drainage engineering (clean and foul)
- B4 Infrastructure – Containment of stored materials
- B5 Infrastructure – Plant and equipment

C: General management

- C1 General management – Staff competency/training
- C2 General management – Management system and operating procedures
- C3 General management – Materials acceptance
- C4 General management – Storage, handling, labelling and segregation

D: Incident management

- D1 Incident management – Site security
- D2 Incident management – Accidents, emergency and incident planning

E: Emissions

- E1 Emissions – Air
- E2 Emissions – Land and groundwater
- E3 Emissions – Surface water
- E4 Emissions – Sewer
- E5 Emissions – Waste

F: Amenity

- F1 Amenity – Odour
- F2 Amenity – Noise
- F3 Amenity – Dust/fibres/particulates and litter
- F4 Amenity – Pests/birds and scavengers
- F5 Amenity – Deposits on road

G: Monitoring and records, maintenance and reporting

- G1 Monitoring and records, maintenance and reporting – Monitoring of emissions and environment
- G2 Monitoring and records, maintenance and reporting – Records of activity, site diary/journal/events
- G3 Monitoring and records, maintenance and reporting – Maintenance records
- G4 Monitoring and records, maintenance and reporting – Reporting and notification to Natural Resources Wales

H: Resources efficiency

- H1 Resource efficiency – Efficient use of raw materials
- H2 Resource efficiency – Energy efficiency

Enforcement response

Any permit condition non-compliance 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 20 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 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.