

Compliance Assessment Report CAR_NRW0038746

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: Audit, Reason: Routine.

On 28/06/2021 - 02/07/2021 between 10:00 and 16:45.

Parts of permit assessed: See report

NRW Lead Officer: Lara Cubley, accompanied by Stuart Ross.

Report sent to: David Quick, Plant Manager on 27/09/2021.

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

Part of permitted activity assessed (criteria)	Assessment result	Permit condition
C1 - General Management - Staff competency/training	C2 Significant	1.1.1(b)
C2 - General Management - Management system and operating procedures	C3 Minor	1.1.1(a)
E1 - Emissions - Air	C3 Minor	3.1.2
G4 - Monitoring and Records, Maintenance and Reporting - Reporting and notification to Natural Resources Wales	C3 Minor	4.3
G1 - Monitoring and Records, Maintenance and Reporting - Monitoring of emissions and environment	C3 Minor	3.5.1
G3 - Monitoring and Records, Maintenance and Reporting - Maintenance records	C4 No impact	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
6	47.1

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
C1	Actions 4, 7, and 8.	22/10/2021
C2	Actions 1, 2, 3, 5, 6, 9, 10, 11 and 16	19/11/2021
E1	Actions 12, 13 & 14	19/11/2021
G4	Action 12 & 13	19/11/2021
G1	Action 13	19/11/2021
G3	Action 15	22/10/2021

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.

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

Introduction

NRW visited the site on 28/06/21 & 02/07/21 to conduct an audit specifically focussed on dust emissions and management.

Scope

The 2 day audit involved a review of:

- The Operator's Environmental Management System (EMS), procedures, training and records related to dust risk and controls.
- Implementation of control procedures, in particular, '*PG10 Control of dust not controlled by emission limits*,' and housekeeping/mitigation measures.
- Maintenance of abatement plant and a sample of related records.

NRW involved and spoke to a number of Castle Cement employees throughout the course of the audit to include Site Manager, Environment & Quality Manager, Maintenance Manager, Maintenance Planners, Operations Manager, Assistant Production Manager, Shift Managers and a number of personnel within these departments.

Environmental Management System

Aspects Register

The significant aspects register includes objectives and targets that are obsolete. It is uncertain when the aspects register was last updated. For example, the clinker cooler grate lists objective/target IMS6 as a control. The operator states these are old objectives and targets and not current.

Additionally, fugitive dust emissions were not clearly identified as a significant aspect and there is no direct links to the onsite control measures/procedures. We looked at the clinker cooler grate (EA126) which had listed nuisance as a significant aspect and identified continuous monitoring and filter maintenance.

ACTION 1: Confirm when the significant aspects register was last amended and the usual frequency of review?

ACTION 2: Review and update the significant aspects register to include dust risk, link to control measures/procedures and current objectives/targets by 19/11/21.

Dust Procedure

The Dust management Plan (PG10), Version 08, amended 15/11/19 has reportedly been trained out in 2019, but to shift managers only (no training records). The procedure review log shows that the procedure has generally only been reviewed in response to actions/non-compliance highlighted by NRW.

ACTION 3: The procedure requires routine review (e.g. annually), when significant changes to the process are made or in response to incidents. The next review of procedure shall be carried out by 19/11/21.

Training

A tool box talk was reportedly provided on the importance of closing doors, not on repeat.

ACTION 4: Ensure training on dust management procedures/control measures is provided to all those with responsibilities, the training is recorded, and that refresher training is programmed in. Provide a training needs analysis for those with responsibilities and summary of how you intend to complete this action in writing by 22/10/21 together with record of training completed to date.

Validation/Internal Auditing

There is an internal IMS audit team but the control of dust at an operational level would be out of scope, no evidence of internal auditing of dust control measures.

ACTION 5: Given that dust is considered a significant environmental aspect the Operator should ensure that control measures and procedures are the subject of regular audit. A suitable documented audit procedure and plan covering activities for the prevention and minimisation of dust emissions shall be implemented, Audits shall be carried out a suitable frequency and the person responsible for managing audits and closing out corrective actions identified. A summary of the actions you have taken to meet the requirements of this action shall be submitted to NRW by 19/11/21.

Control of contractors

Risk and Method Statement (RAMS) cover H&S, environment is not included. e.g. control of dust emissions during plant maintenance. Contracted maintenance requires permit to work and is supervised by permit issuer.

ACTION 6: The Operator should consider how environmental impacts of contractors are assessed and controlled and inform NRW in writing by 19/11/21.

Operations**Procedures - PG10 Control of dust not controlled by emission limits**

There is an over reliance on the shift manager's site walk to identify defects with dust control measures at the point of failure.

PG10 states that any remedial actions required following inspection should be addressed immediately, otherwise remedial action should be inputted into the site's maintenance planning system Where issues with dust control measures are identified, there is no clear mechanism for raising a work order and tracking progress to remediate/address the issue.

(not in accordance with PG10), e.g. cleaning of dust spills. It was reported that currently, approximately 50% of issues reported via work order on SAP. There is a work centre code of 51 for cleaning.

PG10 states, 'significant spills of fine powders outside should be addressed immediately' and 'Wherever practicable all doors must be kept closed to prevent dust escaping to atmosphere'. With reference to on site observations detailed below there is clear non-compliance with this procedure.

Housekeeping

There are no planned housekeeping measures (beyond road sweeping and wetting), cleaning is ad hoc and on demand rather than to set frequencies. There is a newly formed team under the Assistant Production Manager. Resources are inadequate in terms of cleaning equipment with no Disab on site (now contracted out) at 2-3 week lead time to get unit on site. Other plant is hired (tractor and bowser) and staff are receiving training. A tractor driven sweeper/vacuum unit is being considered. The road sweeper is contracted out, operates Mon – Fri.

The housekeeping standard on site was poor in many areas apart from most main metalled roads with a re-occurring theme of potentially dusty spilt materials not having been cleaned up promptly following spills. When spills occur in external areas there is a high risk of a release of fugitive dust emissions via windblown material and these should be cleaned up quickly. There is also a risk where areas of spillage have not been cleaned up (i.e. under BF41 and cooler heat exchanger) that it becomes more difficult to spot issues arising due to new or current problems/spillages.

A build-up of fine dust within buildings or enclosed conveyors, increasing the risk of fugitive emissions from the site was also evident. In some areas this prevented doors from being properly closed and sealed adding to the risk and not complying with basic physical control measures.

There were also some areas where cladding/push walls were damaged, and material was escaping physical infrastructure.

On site Observations are as follows:

- Dirty yard areas, particularly in general area of ID fan, bypass system, area under BC01 (not enclosed)
- Large piles of accumulated limestone/PFA dust on the open walkway of BC01
- BC01 to BC03 transfer point – significant accumulation of dust bulging and damaging cladding beneath
- Build up of raw meal on BC01 conveyor walkway at point of magnet
- 'Bypass dust room' receiving bypass dust from conditioning tower – doors poorly fitted with dust evident outside the building.
- Cooler roller shutter door partially open and couldn't be closed due to debris accumulation
- Gypsum intake door (damaged) and partially open when not in use Adjacent personnel door open and incapable of closing due to significant dust accumulation
- Clinker conveyer CV01, significant dust accumulation on conveyer and not fully enclosed. Risk point (cooler over pressurisation or defect on conveyer (e.g. high

vibration) may lead to dust release.

- Significant accumulation of clinker dust under CV01 where it exits the cooler building. Cleaning of this area is not achieved easily as it doesn't appear to be hardstanding.
- Significant deposits of dust under the clinker cooler bag filter hoppers – cause not clear.
- Temporary chute under the kiln inlet (for refractory work) spilling dust, pile of fine dust on the ground
- Significant deposits of dust around BF41 (may be historical)
- Open manhole above underground conveyer (adjacent to clinker dome) – deposits of dust around this area
- Spillage of material from north side of crane bay where concrete meets cladding
- Spillage around bypass ESP dust collection area, fine dust collected into tote bag as temporary measure.

ACTION 7: The Operator is to provide a summary of how he proposes to improve housekeeping at the site in writing to NRW by 22/10/21.

ACTION 8: The Operator shall investigate the root cause of the observations detailed above and develop an associated improvement plan together with timescales to address all observations above by 22/10/21. Actions must include measures to prevent re-occurrence.

ACTION 9: The Operator is to consider the risk from BC01 (not enclosed) with reference to the sector BAT conclusions and potential release of dusty materials. This should consider all operational scenarios such as stoppages and any proposed control measures, i.e. run-out of materials so that dry materials do not pose a risk of emission during start up. A report detailing the BAT assessment shall be provided to NRW in writing by 19/11/21.

ACTION 10: The Operator is to consider the risk from CV01 (not fully enclosed) with reference to the sector BAT conclusions and potential release of dusty materials. This should consider all operational scenarios including, but not limited to, unplanned stoppages, cooler over pressurisation and conveyer vibration. A report detailing the BAT assessment shall be provided to NRW in writing by 19/11/21.

NRW considers that there are weaknesses in parts of the EMS in relation to dust management. There were a number of occasions documented throughout this report where the operator has failed to follow his own management systems (i.e. notifications, dust management plan and maintenance management). Training related to dust management was also very limited and considered inadequate. NRW is of the opinion that these shortcomings are a breach of permit condition 1.1.1(b) and cumulatively have the potential to cause a significant environmental impact. (C1 Staff Competency & Training CCS2).

PG10 Control of dust not controlled by emission limits was of an acceptable standard there were other weaknesses in parts of the EMS related to dust management. These are noted throughout this, report and actions have been assigned to bring about improvements. Weaknesses in the EMS are considered a breach of Permit Condition 1.1.1(a) and have a potential minor environmental impact. (C2 Management Systems CCS3).

Maintenance

General

Doors (with the exception of doors on the crane bay frontage and limestone intake), cladding and roads are not subject to planned preventative maintenance and the wheel wash is in the process of being added to SAP and had been defective.

See observations above under housekeeping and following observations:

- Raw mill reject building cladding badly damaged, door cannot be closed due to damaged frame.
- Clinker dome door closing mechanism broken, door is not sealed.

ACTION 11: The Operator must review dust control mechanism such as doors, cladding and other containment/control measures (i.e. wheel wash) to ensure that they form part of an appropriate planned inspection/maintenance regime to remain effective and that they can be identified for corrective maintenance. This could be by adding to SAP. A summary of the review together with actions and assigned completion dates shall be provided to NRW in writing by 19/11/21.

Filters

As an audit sample, NRW looked at the maintenance of 2 bag filters as described below. It is understood that bag filters on site are subject to an annual maintenance inspection. Some larger units, such as BF41 are subject to a 6 monthly checks.

Bag filter BF41 (clinker dome and conveyer de dusting)

On the 20/10/20, the filter was inspected by Zurich and failed due to blocked duct work and visible dust release from the stack, the filter was subsequently inspected by Filtration Medic Ltd 17/12/20 and the filter re-bagged during the January 2021 shutdown. The timescale for addressing the issue with this filter bag is not deemed acceptable and is not in accordance with the operator's own maintenance management procedures (immediately where emission exceeds limit).

This filter is fitted with a burst bag detector and the point of filter failure should have been clear to the operator and not have required third party intervention.

NRW considers this to constitute a breach of permit condition 3.1.2 (E1 Emissions to Air CCS3) in that visible dust was noted (>10mg/m³ emission limit).

NRW considers this to constitute a breach of permit condition 4.3 (G4 Reporting & Notifications CCS3) in that the operator failed to notify NRW.

ACTION 12: The Operator is to provide a plan on how he proposes to ensure that any visible dust emissions from filters are rectified immediately and reported to NRW by 19/11/21.

ACTION 13: The operator shall review the effectiveness of the burst bag detection system in detecting filter failure (and ELV exceedance) and the associated procedures for expediently bringing emissions back into compliance. A summary of the review findings together with any timebound actions shall be submitted to NRW by 19/11/21.

NRW noted a previous issue of the 18/10/19 where the burst bag detector was alarming. A

notification was raised 24/10/19 required re-commissioning of burst bag detector following a repair. This was completed 28/10/19. It was noted that there is a plan to re-instated blanked banks of filter socks in order to achieve full capacity of this filter.

Failure to monitor this bag filter is a breach of permit (G1, Monitoring of Emissions, permit condition 3.5.1 Table S3.1 emission point A11 continuous measurement by triboelectric probe required CCS 3).

ACTION 14: The Operator should provide detail and update of tasks to be completed in relation to re-instatement of blanked banks of filter socks and timeline to NRW in writing by 19/11/21.

Bag filter 441 BF02 (CV01 de dusting)

This bag filter is on an annual PM during January shut down.
A notification was raised on 25/02/21 of blocked ducting

The Operator reported issues related to resources for filing of maintenance inspection records due to CV-19. A record of the January 2020 inspection was sought as this would have been prior to the CV-19 resource issue but this was also not available.

The Filtration medics inspection report of the 17/12/20 and other records of filter preventative maintenance inspections were not available for inspection. As such we couldn't verify that annual inspection was conducted.

NRW considers this to constitute a breach of permit condition 1.1 (G3 – Maintenance Records CCS3).

ACTION 15: The Operator is to ensure that maintenance records are available for inspection as required by the Permit. The Operator must provide a plan in writing to NRW explaining how he proposes to comply with this requirement with timescales by 22/10/21.

An Excel spreadsheet was in use for tracking inspections/maintenance of bag filters as well as SAP. NRW are not convinced that the annual or 6 monthly PMs and work orders in SAP are adequate. There appear to be a number of issues raised as correctives in between planned maintenance in SAP.

ACTION 16: The Operator shall review the scope and frequency of work orders for the planned maintenance of bag filters. This should be based on risk by reviewing data such as past performance, hours ran, and manufacturers recommendations with a view to fault free operation. A summary of this review shall be provided to NRW in writing by 19/11/21.

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.