

Compliance Assessment Report CAR_NRW0040629

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: Incident Response (Incident number 2207091).

On 04/10/2022 between 10:00 and 15:50.

Parts of permit assessed: See report

NRW Lead Officer: Lara Cubley, accompanied by Philip Harper.

Report sent to: David Quick, Plant Manager on 03/11/2022.

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

Part of permitted activity assessed (criteria)	Assessment result	Permit condition
G4 - Monitoring and Records, Maintenance and Reporting - Reporting and notification to Natural Resources Wales	C3 Minor	4.3.1
E1 - Emissions - Air	C3 Minor	3.1.1
F3 - Amenity - Dust/fibres/particulates and litter	C3 Minor	3.2.2
C1 - General Management - Staff competency/training	C2 Significant	1.1.1
C2 - General Management - Management system and operating procedures	C3 Minor	1.1.1
E2 - Emissions - Land and groundwater	Action only (X)	
F2 - Amenity - Noise	Action only (X)	
G3 - Monitoring and Records, Maintenance and Reporting - Maintenance records	C3 Minor	4.1

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

Total number of non-compliances recorded	Total non-compliance score
6	51

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
G4	See Action 2	30/11/2022
E1	Action 8	30/11/2022
F3	Actions 1, 2, 3, 4, 5, 7, 8, 9, and 15. See individual timescales for each action.	30/11/2022

Criteria	Action needed	Complete by
C1	See Actions 10 & 15.	30/11/2022
C2	Action 11	31/12/2022
E2	Action 12	31/12/2022
F2	Action 13	30/11/2022
G3	Actions 6 & 14 - see associated timescales	04/11/2022

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

1) Introduction

NRW visited the site on 20/09/22, 28/09/22 and 04/10/22 as announced inspections. NRW also visited the site on the 22/09/22 and the 23/09/22 as unannounced inspections due to further dust reports from residents of the Groves Estate. This CAR describes items inspected related to the unannounced inspections and investigations into the dust reports in section 2 and those because of the planned inspections in section 3.

2) Inspection items related to dust complaints

NRW received a few reports of dust 20/09/22 to 22/09/22 with a large number received on the 23/09/22. A few more dust reports were received up until the 26/09/22. As a result, several inspections were conducted.

On the 22/09/22 and 23/09/22 NRW visited the Penryffordd area and specifically The Groves Estate. Dust was observed on vehicles, which from previous experience, would appear to be clinker. Dust samples were taken by the Operator from a number of vehicles on the Groves Estate and sent for analysis. Previous samples taken in July/August 2022 had concluded clinker dust in varying amounts. Results of dust samples were received on 21/10/22. These conclude that most of the dust was clinker related to the Padeswood Cement Works.

Dust from the site is being deposited and interfering with resident's legitimate use of the environment and may result in damage to property i.e., car paintwork. This pollution, all be it intermittent, has been ongoing for a number of months. Local residents report that the clinker dust is difficult to remove when washing their cars and the abrasive nature is causing scratching of paintwork.

Inspection 20/09/22

During our inspection of 20/09/22 appropriate measure where not being taken to limit fugitive dust emissions because:

- CV02 north side building panels were damaged by a build-up of clinker from the conveying system. The clinker had spilt and escaped the building at ground level. Some of this clinker

was very fine and dusty and would easily become airborne by windy conditions. This spill escaping the building was noted to have been cleaned up during the inspection of the 22/09/22. However, there was still an accumulation of material inside the building. **ACTION 1: Investigate cause of build-up of such material and identify preventative measures. Provide a summary in writing to NRW by 31/12/22.** The building fabric was noted as mended during inspection of 04/10/22.

- The east side of the reject/CV01-CV02 transfer building had a loose panel at height. The environment in the building contains fine airborne clinker dust which is warm and buoyant and could escape the building. This panel was noted as mended during inspection of the 04/10/22.

At the time of the inspection of 20/09/22, no clinker was being conveyed as the Kiln was not in production. The Kiln was reportedly down since midday the previous day due to a shortage of PFA.

Inspection 22/09/22

During the inspection of the 22/09/22 (11:11 – 12:57hrs) clinker dust was being visibly emitted at height from the clinker dome penthouse access door at height. Under the weather conditions during the inspection, it was foreseeable that this release at height could leave site with this dust being deposited on local residential areas. Appropriate measures were not being taken to limit fugitive dust emissions. See comments in relation to Condition 3.2.2.

NRW reviewed the fuels walk inspections and going back to August 2022 the section for the clinker dome external observations stated, 'Dust occasionally wisping out of the top of the door'. However, there were no notifications/records raised in the site's maintenance system to address this clinker dust emission issue.

NRW is of the opinion that the operator has breached permit condition 4.3.1 because NRW were not informed immediately of this emission. (G4 Reporting & Notifications - C3). Part A has since been received 04/10/22. This same emission issue from the clinker dome penthouse door was documented in a compliance assessment report in 2021. This suggests that the operator has failed to address the issue adequately.

Inspection 23/09/22

NRW returned for an inspection on the 23/09/22 (13:22 – 14:50hrs). At the time of the visit there was no feed to the kiln. Kiln feed reportedly stopped at approximately 07:05am due to a screw feed on the raw mill breaking. This was reportedly fixed, and the kiln brought back into production at a feed rate of 125,000 t/hr between 10:10 to 10:22. NRW reviewed 5 minute sections of CCTV footage of the kiln inlet at 2 hourly intervals from 8pm on the 22/09/22. No significant emissions were noted. As the operator informed us of an emission from the inlet seal shortly after start-up we concentrated on this period of CCTV footage. A slight kiln seal emission was noted at 10:12 followed by a 2 to 3 minute significant emission from the kiln inlet seal at 10:21 when the kiln feed was stopped.

NRW is of the opinion that the operator has breached permit condition 4.3.1 because NRW were not informed immediately of this emission. (G4 Reporting & Notifications - C3).

NRW considers this emission from the kiln inlet seal to be a breach of Condition 3.1.1 (E1 – Emissions to Air = CCS3, Unauthorised Emission) with minor potential impact due to a reportedly small release and swift resolution.

See Action 8 below.

The Operator advised that they planned to investigate, clean the kiln inlet tray and start up with fans on increased speed. NRW advised the operator that there was a risk in starting up again before

fully understanding the reason for the release from the kiln inlet and dust complaints. The operator called NRW shortly after leaving site to inform us of their decision not to start the kiln until further investigations have taken place.

Other issues identified during our inspection of 23/09/22 were:

- A build-up of fresh fine dust on the floor below the kiln seal beside the kiln chute. **This should be cleaned up.**
- The dust room doors were closed and the area around the dust room has a general build-up of fine dust. **This should be cleaned up.**
- Around the bottom of BC30 limestone conveyor a build-up of fine material was noted and some dust was becoming airborne. This was pointed out to the operator, and it was agreed this would be cleaned up. **Operator to ensure clean up and investigate cause of build-up of material in this area, plus preventative solution.**
- Work was underway to clean up the area around CV01/cooler, cooler filter and heat exchanger as advised in CAR_NRW0038746 (dust audit 28/06/21 and 02/07/21). **Complete cleaning. This area would benefit from hardstanding.**

ACTION 2: Complete the above cleaning/investigations and provide a summary in writing to NRW by 30/11/22.

The door on the side of the crane bay was open and a disab was being unloaded. No escape of dust was noted. Other doors on the crane bay were all closed at the time of the inspection.

Cement Mill 3 (CM3) Air Slide Blockage

Two Part A notifications were received on 20/09/22 22:30hrs and 22/09/22 02:25hrs related to CM3 fugitive emissions from the building. The mill air slide from the elevator to the separator was reportedly blocked and overwhelmed. This air slide is within the building, but this blockage caused fugitive dust to come from the building. During the inspection of the 22/09/22, NRW entered CM3 building. The Mill was not in production due to work being conducted.

During the inspection of 28/09/22, NRW reviewed the Operator's investigation into dust complaints to date. The Operator's data showed that the first blockage of CM3 air slide on the 20/09/22 involved the mill stopping at approximately 22:15hrs and restarting again at 22:30. The Operator stated this was to allow the blockage to be cleared. For the second blockage of the 22/09/22, the mill was stopped immediately and left off for planned investigation work on the dayshift. The mill was running again at 15:54 on the 22/09/22.

During the inspection of 28/09/22, NRW reviewed maintenance related to CM3 air slide. It is understood that a weekly mechanical preventative maintenance (PM) schedule is in place. A work order 31572110, No 3 Cement Mill Mechanical Maintenance was provided and reviewed. It includes inspection of the air slide for blockages and signs of damage to the cloth. No records of such completed inspections were available for NRW officers to view. NRW have requested such records of inspections (followed up by e-mail of 28/09/22) but these are yet to be received.

ACTION 3: Please confirm availability of requested records and provide them to NRW by 30/11/22.

NRW reviewed corrective maintenance records on SAP; the software system employed by the Operator. A notification record (11648846) raised on 10/07/22 relating to a temporary repair to the air slide cloth was reviewed. This is referred to as, *'a large heavily worn area after the change of direction point. This had fully holed through and currently has a patch put on the cloth to make it capable of running'*. From the notification it appears that it was planned to replace the air slide cloth but this was delayed.

A work order (11501744) to replace the cloth on 02/09/22 with a priority level 4 (within a month) was reviewed by NRW (ref notification 11670285). The Operator reported that the cloth had yet to be replaced.

The Operator confirmed by e-mail on 07/10/22 that in addition to the above a further temporary repair was completed on the 05/09/22 and the cloth was replaced on 29/09/22. This e-mail also confirmed that a hole in the air slide casing (fan end) was identified in a notification raised on 21/09/22; the notification was raised against the wrong work centre and not picked up at daily review; and that repair to the casing was completed at the same time as the cloth replacement.

NRW is of the opinion that a delay in maintenance has led to equipment not functioning properly, causing blockages and ultimately fugitive emissions from CM3 building. Prevention of such emission was wholly possible. Furthermore, putting CM3 back into production without investigations and preventative measures, risked, and in fact did cause further fugitive emissions. See comments in relation to Condition 1.1.1 below.

Cooler heat exchanger

The operator informed us that they think dust reports related to coarser clinker dust may be related to holes in the cooler heat exchanger. They shared some information with NRW to this effect during our inspection of 28/09/22.

Since the kiln stopping and cooling on 23/09/22 a full survey of the 700 tubes had reportedly found approximately 30 small holes. As the system should always be under negative pressure the operator did not consider this to be a problem. However, the Operator is now of the opinion that when the kiln is stopped it is possible that this negative pressure is lost and there are releases of coarse clinker dust.

The differential pressure (dp) across the cooler filter is monitored but the operator reported that they were unable to provide pressure data within the cooler heat exchanger. An order has been placed for a new heat exchanger and it is due to arrive in October 2022. The operator plans to replace this in the January 2023 shutdown and is currently exploring options to improve this new heat exchanger's abrasive wear resistance.

ACTION 4: Replace heat exchanger by January 2023 at the latest.

Repairs to holes are currently being conducted to the heat exchanger in the form of welds, inserts and capping. The operator was questioned as to how they will be able to validate the repairs and ensure that the system is sealed. They have suggested that they will monitor the area which has been the subject of cleaning and propose to concrete the area underneath to aid such monitoring.

ACTION 5: The operator must provide hard standing to this area so that it can be easily cleaned and monitored by 31/01/23.

As part of a further inspection on the 04/10/22, NRW reviewed information pertaining to maintenance of the heat exchanger. The operator has a 6 monthly planned inspection regime for preventative maintenance of the cooler heat exchanger. The last preventative notification record on SAP was required to start on 23/06/21. It was not recorded as closed/having been completed in the maintenance management system. No further planned preventative maintenance inspection work orders had been raised since then in SAP. However, the operator informed us that inspection and camera surveys have taken place in January and June 2022.

The operator reports that further work orders for preventative inspection have not been raised in SAP because the one of the 23/06/21 was not closed. This is a problem NRW have picked up previously.

ACTION 6: The Operator must address this problem in SAP in order to prevent reoccurrence and allow effective management/monitoring of maintenance activities. The Operator must

inform NRW how this problem has been resolved by 31/12/22.

NRW reviewed the corrective maintenance notifications history pertaining to the cooler heat exchanger. A notification for replacement of the heat exchanger had a required start date of the 17/09/2015. The Operator reported the replacement of the heat exchanger occurred in 2016. Prior to this the heat exchanger was reportedly installed in 2005. The following notifications relate to repairs holes or dust since the heat exchanger replacement in 2016:

Notification required start date	Notification number	Work Order number	Description
16/08/2017	10880956	None	Welding of holes on casing
28/10/2019	11228774	None	heat exchanger tubes leaking badly
07/08/2020	11344036	None	heat exchanger clinker cooler dust
10/12/2020	11402389	None	Heat exchanger chute holes
13/04/2021	11453484	None	Hole in heat exchanger ducting to filter
05/06/2021	11475853	None	Inspect and repair pipes in heat exchanger
29/07/2021	11498936	None	duct from HE to cooler filter holed
04/05/2022	11613228	11453668	Duct from cooler to heat exchanger holed
16/07/2022	11651159	11479581	Heat exchanger repairs July 2022
27/09/2022	11681022	11501194	Heat exchanger & cooler filter Sept 2022

Those in black text provided 07/10/22

NRW requested reports to confirm that preventative inspections had been undertaken and see what corrective repairs had been completed. The operator confirmed that surveys of heat exchange tubes are completed by camera with information translated to maps for tracking & repair. A map from June 2022 was briefly viewed on the projector screen but other reports were not available. NRW requested this information be provided together with drawings of the heat exchanger construction and confirmed that it would be requested formally. Further information relating to the Heat exchanger was received on 07/10/22 as follows:

- Seven FL Smidth engineering drawings of the heat exchanger.
- Microsoft Excel Heat Exchange Map 23/01/22 & Heat Exchange Map 16/06/22
- PDF file of SAP records

Of the 10 corrective maintenance notifications raised and noted in the table above only the last 3 appear to have had a work order generated. NRW have reviewed the two work orders and two notifications provided by the Operator (black in the table above).

04/06/2021 Notification number 11475853 – Inspect and repair pipes in heat exchanger notes '*Dust being emitted from heat exchanger and doesn't all appear to be coming from ducts*'. This is given a priority 6 (annual shutdown).

28/07/2021 Notification number – duct from HE to cooler filter holed notes '*Duct from HE to cooler filter holed. Clinker dust being emitted from HE on inspection duct from HE to cooler filter has multiple holes. All holes to be patched and duct to be relined. Clinker spillage needs to be cleaned underneath duct to conduct full inspection of damage.*' This is given a priority 3 (within a week).

On the 28/07/2021 a note is added, '*Clyde in on Monday 2nd to inspect view the view to repair following week.*'

On the 23/08/2021 a note is added, '*completed august shutdown 2021*'.

16/07/2022 Work Order number 11479581- Inspect and repair pipes in heat exchanger. This is given a priority 3 (within a week). No notification was provided but it is assumed that such a notification may have been raised as a result of the last preventative inspection which may have been on the 16/06/22 as per the Heat Exchange Map provided?

27/09/22 Work Order number 11501194 – Heat exchanger & cooler filter Sept 2022. This is given a priority 5 (next shutdown). This is noted as an environmental relevant task and no notification has been provided. The end date of this work order is 25/03/23, it is not clear what it is for and whether it has been completed yet.

The Microsoft Excel Heat Exchange Map 23/01/22 & Heat Exchange Map 16/06/22 have been reviewed. These appear to be colour coded to show pipe inspected and fine, pipe inspected and top sealing, pipe inspected and blanking, and no pipe. A further tab on the spreadsheet appears to show holed pipes. Both the 23/01/22 and 16/06/22 Heat Exchange Maps appear to show the exact same approximately 96 holed and 6 severed pipes on the holed pipes tab. The 23/01/22 map notes 39 blanked pipes in total and 112 sealed at top. From this map it appears that at least one third of the tubes are not inspected. The 16/06/22 map states '*46 need blanking and 8 need inserts, 85/693 total ~12% blanked off*'.

From these maps it is unclear when the inspections and repairs have been conducted.

ACTION 7: Provide NRW with a chronological summary in writing of all maintenance, both corrective and preventative, completed on the heat exchanger related to holes and potential dust releases as far back as and including 2019 by the 30/11/22. Evidence of all such maintenance inspections having been completed shall also be provided, as shall records of notifications raised.

NRW is of the opinion that the operator has breached permit condition 4.3.1 because NRW were not informed immediately of emission from the heat exchanger on a number of occasions. (G4 Reporting & Notifications – C3) consolidated.

NRW is of the opinion that the operator is in breach of Condition 3.2.2 because dust pollution is occurring and the operator is not using appropriate measures, as set out in their management system, to prevent or minimise dust emissions (F3 Amenity/Dust – C3).

NRW is of the opinion that failure to follow management systems (i.e., notifications, dust management plan, maintenance management, incident, non-conformance, corrective and preventative action) is the root cause of several permit breaches documented throughout this report. NRW is of the opinion that these shortcomings are a breach of permit condition 1.1.1. Such breaches have the potential to cause a significant environmental impact. (C1 Staff Competency & Training C2).

Enforcement Notice served requiring improvement plan by 02/11/22.

ACTION 8: The Operator must provide investigation into dust emissions in writing for the following incidents by 30/11/22:

- **Clinker dome penthouse door dust release 22/09/22 (Received/completed 28/10/22)**
- **Kiln Inlet seal release of 23/09/22**
- **Dust complaints (heat exchanger)**
- **CM3 air slide.**

Inspection 04/10/22

During the inspection of the 04/10/22, NRW climbed up to the clinker dome penthouse area to check the condition of the door subject to the emission of clinker noted on the 22/09/22. The door is enclosed by an added porch area. It was noted that this door, which opens inwards, does not remain closed but is held closed by a rope attached to the handle tied to the porch structure.

There is a platform which circles around the entire top of this penthouse. The old door no longer in use was sealed but there was a considerable build-up of old clinker on the platform outside this old access door. This clinker was hard and as such no longer posed a dust risk. The height of this clinker raises the platform considerable relative to the edge protection in this area and the edge protection is not considered adequate and a health and safety risk at such height. The risk of this additional weight on this platform could also pose a health and safety risk. This was pointed out to the Operator.

NRW inspected the south side of the crane bay, towards the west end. This was to check whether the construction and containment issues were like that on the north side previously raised. It was noted that cladding had been pushed out toward the ground level leaving gaps in the building fabric.

ACTION 9: The Operator must repair the building in this area and investigate the cause of damage to put measures in place to prevent recurrence by 31/12/22. Provide a summary in writing to NRW to confirm actions by 31/12/22.

3) Planned Inspection Topics

Complaints Investigations

The Operator had provided some improved investigations into reports of offsite dust received over the last couple of months, where dust sample results have been received. The results show the dust sampled on cars to contain varying amounts of clinker, with some samples being mostly clinker dust from the production process on site. Other non-cementitious minerals used in the site process but equally present in the natural environment were noted in dust sample results.

Advice & Guidance: Further improvements to investigations should be made with immediate effect:

- Providing a summary of weather data over the time of the suspected incident rather than just one point in time.
- Providing a summary of process data and CCTV footage reviewed and interpretation/ findings of reviewing such data.

The Operator confirmed that CCTV footage for the inlet seal is only available for 7 days due to the memory required for the quality of image and 30 days for others.

There were a couple of discrepancy which require addressing (WIRS 2206268 8th – 9th Aug 2022) as follows:

- CM5 noted as running yet maintenance work was noted on one of the filter fans of this mill. This is likely to be a mistake but should be confirmed and an updated investigation submitted.
- Photos not matching location or not present as required by dust sampling procedure.
Failure to follow management systems is considered a breach of Permit Condition 1.1.1 (consolidated).

ACTION 10: Complete and accurate investigations should be provided to NRW without delay

following reports of dust.

Change Management & By-pass vibrator

By-pass Vibrator

This was inspected due to this equipment possibly being the source of noise complaints. It is understood that this equipment was a modification to the newly installed by-pass system to address issues of blockages. This was in operation and extremely loud at 10am on 20/09/22, despite the kiln feed not being on until that afternoon. It has been reported that this equipment is a lot quieter when by-pass dust is not flowing through it.

23/09/22 the by-pass vibrator was operational. The Operator was asked why this was not off as kiln feed was off at the time. The operator stated they are trying to link this with the flow of by-pass dust.

Management of Change Procedure UKSP018 was provided. It is noted that this procedure does not contain noise on the environmental checklist. The change to include vibrator plates did not go through the management of change process.

NRW is of the opinion that this is a breach of Condition 1.1.1 because the Operator has failed to identify and minimise the risk of noise (C2 – Management Systems C3).

ACTION 11: The Operator must review EMS to ensure any changes that may increase environmental risk are captured and managed before 28/02/23. This should include training of employees. The Operator must write to NRW by 31/12/22, to inform them of how they propose this action is delivered by the given deadline.

Further developments and investigation related to noise and the vibrator plate will be detailed in a separate compliance assessment report.

Coal store

The shale and coal previously stored outside the coal store to the front and rear had been removed. That still stored having escaped the sides of the coal store is subject to an 18-month improvement plan to be submitted to NRW.

ACTION 12: Operator to submit this plan to NRW before 31/12/22.

Prevention of SO2 breaches

As a result of a previous action, limestone control documentation for SO2 emissions management as inspected. The Operator demonstrated SO2 analysis results from sampling of limestone together with action limits.

Cemfuel odour report 10/08/22

NRW viewed shift logs/fuels walk around the period of a Cemfuel odour report from a local resident. There appeared to be some issues logged related to Cemfuel sniffer alarm, strainers and split hose with spill behind nitrogen tank. Staff questioned were uncertain as to some of the exact nature of the issues. Further information from Shift Manager (MJ), who logged the spill, is required to provide a full investigation.

The complaint was not fully investigated. No summary or conclusions report were available when checking the Entropy entry, fuel type burned and weather data during the period of the complaint was not provided. Weather data only covered the period following the complaint and not the few days before referred to in the complaint.

The Operator has failed to follow management systems, in that PEnv12 - Complaints Procedure has not been followed. This is considered a breach of Permit Condition 1.1.1 (C1-

staff competency & training) consolidated.

As requested by NRW a full investigation report was provided on 28/10/22.

Kiln screeching noise complaints 03/08/22 04/08/22

The complaint was not fully investigated. No summary and conclusions report was available when checking the Entropy entry. There is mention of this on the fuel walk record of 4/10/22 as follows, 'OK, inlet seal noisy at start of shift, reduced fuels to cool inlet area and applied chain spray to lubricate faces, noises stopped shortly after'.

ACTION 13: Please provide a full investigation report to NRW in writing by 30/11/22. This should include preventative action.

Review of filter maintenance improvements and process for tracking environmental critical PMs (CAR 37490 Action 3 received 24/5/22 & CAR38746 Actions 11 – 16)

A review of progress with environmental critical maintenance and improvements required for preventative maintenance to bag filters was conducted by NRW. NRW found that preventative maintenance intervals for filters across the site remain unchanged following the dust audit conducted in June/July 2021. The Maintenance Manager plans to go to monthly inspections, but this is yet to be implemented.

Filter BF02 maintenance on the SAP system was reviewed. A corrective was raised on 23/09/2022 for blocked ducting. The last annual preventative maintenance conducted in January 2022 found the same issue of blocked ducting, yet maintenance frequencies remain unchanged. Priority 2 (today) is given due to H&S risk from dust in this cooler building burner platform area. The blockage of ducting would lead to an increased level of dust in this area due to lack of extraction and filtering. This too increases the risk of escape of dusty emissions from the building.

For this same filter a corrective was raised for blocked ducting on 25/02/21 during the dust audit conducted in June/July 2021. The Operator's plan to address filter maintenance issues raised in CAR 38746 keep slipping. This plan had an initial data gathering exercise for completion in December 2021, followed by FMEA/ PM optimisation programme. CAR 40097 details follow up against this plan during an inspection of 15/06/22. At this point the Operator informed us that the data gathering would be completed in a couple of months. In following up on this again as part of the inspection on 28/09/22 it became clear that this work is yet to be completed.

Condition 1.1.1 required the activities to be operated in accordance with a written management system that identifies and minimises risks of pollution. The Operator is failing to adequately maintain with the potential for impact on the environment.

This is considered a breach of Permit Condition 1.1.1 (C1 or C2- staff competency & training/management Systems – CCS3) consolidated. As per previous actions this should have been completed. Enforcement response considered.

Review of conveyor bearing maintenance and greasing

Operator uses a computer software package called Machine Sentry for lubrication & vibration schedules. As sample was inspected within this maintenance management system used to record this work. CV01 bearing greasing is scheduled monthly with some months being not recorded as complete in Machine Sentry.

BC30 bearing greasing is scheduled 3 monthly with recent records in Machine Sentry showing completion. However, for both conveyors CV01 & BB30, there is a gap in these preventative maintenance records with Machine Sentry between September/ October 2021 to June/July

2022. The Operator reports that this may be as a result of records being transferred from the old Fusch software system to Machine Sentry. Machine Sentry's use was reported to have commenced in December 2020. The Operator reports that work was probably conducted but they no longer have access to the old Fusch system records. The Operator was advised that maintenance records as required under Permit Condition 4.1 should be maintained and kept on site.

NRW is of the opinion that this is a breach of Condition 4.1 (G3 – Maintenance Records C3). ACTION 14: Ensure all maintenance records going forward are available in accordance with the permit.

Blast Furnace Slag (BFS) Variation

No BFS material was available for inspection relating to the current variation application for addition to clinker in the cooler. NRW advised the Operator of concerns in dust generation from transporting the BFS from enclosed storage and particularly tipping the BFS into the conveyor hopper in the open due to potential for dust generation.

ADVICE & GUIDANCE: The operator is advised to ensure that the risk posed by dust generation from this activity are adequately controlled using proposed methods.

CAR38746 Action 14 (BF41 Filter) follow up

'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.'

A response to this CAR action was received on 22/11/21 as follows:

'As part of `data gathering` exercise by filtration medic an assessment of the Air to cloth ratio will be completed on BF41 to determine if re-instalment of blanked bags is required.

If the assessment determines that reinstalling more bags is required, this will be executed as part of the kiln Shutdown plan – Jan 2022.'

A follow up to ensure the Operator's suggested actions had been completed was conducted as part of the inspection. The Operator was unable to provide an assessment of air to cloth ratio for BF41 during the inspection of 28/09/22. NRW requested this information following the inspection. The Operator briefly showed some data relating to air to cloth ratio during the inspection of 04/10/22 and e-mailed the following over on 07/10/22:

'Bag size 150mm dia x 2250mm long (0.75sq.m/bag)

200 bags = 150 sq.m

400 bags = 300 sq.m

From the issued LEV report the volume flow of the dust collector is 16,560 cu.m/hr

Filtration velocity (air to cloth) 200 bags = 1.84 m/min

400 bags = 0.92 m/min

*Ductwork size - 710mm dia which at 20m/sec velocity flow = **28,000 cu.m/hour design flow***

Based upon the original filter having 400 bags (300 sq.m) the filtration velocity at 28,000 cu.m/hr would be 1.56 m/min, which is correct.'

NRW responded on 07/10/22 asking the Operator to confirm the situation for BF41. Are all 400 bags currently operational or are a certain number still blanked off? If so, how many?

ACTION 15: The Operator should:

- **Provide the LEV report referred to.**

- **Confirm how many bags are currently operational in BF41.**
- **Confirm whether any improvement works have been conducted to BF41 since the dust audit in June 2021.**
- **Confirm the basis of where the 20m/sec comes from to derive the design flow.**

This information must be provided to NRW in writing by 30/11/22.

The Operator reports that there are plans to replace BF41. This de-dusts CV02 and the clinker dome. However, currently capital has not been approved for this. Please keep NRW updated on plans.

CAR Actions due 30 September 2022

As of 04/10/22 there were still 28 CAR form actions outstanding.

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.