

Compliance Assessment Report CAR_NRW0052796

Permit being assessed: BL3986ID.

For: Aberthaw Works, **held by:** Tarmac Cement Limited

At: Aberthaw Works, East Aberthaw, Barry, Vale of Glamorgan, CF62 3ZR.

Type of assessment: Audit,

Reason: Routine.

On: 09/07/2026 between 14:00 and 17:30.

Parts of permit assessed: Management System, emissions, operating techniques.

NRW Lead Officer: Antony Leakey, accompanied by Richard Taylor.

Report sent to: Tarmac Secretaries (UK) Limited, Company Secretary, on 11/09/2026.

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

Part of permitted activity assessed (compliance criteria)	Assessment result	Permit condition
IR2C - Installations - Operations - Operating techniques	C3 Minor	2.3.1(a)
IR1A - Installations - Management - General Management	C3 Minor	1.1.1
IR3B - Installations - Emissions and monitoring - Emissions of substances not controlled by emission limits	C3 Minor	3.2.1
IR3A(2) - Installations - Emissions and monitoring - Emissions to air	C3 Minor	3.1.2
IR3A(1) - Installations - Emissions and monitoring - Emissions to water	Assessed (A)	
IR4B - Installations - Information - Reporting	Assessed (A)	
IR4C - Installations - Information - Notification	Assessed (A)	

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

Total non-compliances recorded	Total non-compliance score
4	16

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
IR2C	Tarmac to consider options for addressing non-compliance/demonstrating compliance with the residence time-temperature requirements set out in IED Article 50(2) for tyres fed at the kiln PHT end. The options evaluation and proposed implementation timescale shall be submitted to NRW for approval.	31/03/2027
IR1A	Tarmac to review the Aberthaw dust management plan and provide an update on intended improvements.	30/09/2026
IR3B	Tarmac to review the Aberthaw dust management plan and provide an update on intended improvements.	30/09/2026
IR3A(2)	Tarmac to confirm steps to be taken to prevent a recurrence.	30/09/2026

Compliance 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

Aberthaw Cement Works

IED Article 50 compliance when firing waste derived fuels in the kiln

Waste derived fuel (WDF) use in cement kilns has been long established as a valid approach to energy recovery from combustible wastes with a suitable calorific value and composition. Kiln temperatures and flue gas residence time easily achieves the basic process and BAT requirements set out in the Industrial Emissions Directive (IED) and Cement and Lime BAT Reference Document when WDF is fired at the kiln firing pipe (hot) end (2 seconds residence time at 850°C as set out in IED Article 50(2)). Extensive WDF trials using Meat and Bone Meal (MBM) were originally carried out on this basis at Aberthaw in 2008, with subsequent WDFs included through variation applications or under the Minerals Products Association Waste Code of Practice.

Tyre WDF firing was originally approved through variation notice EPR/BL3986ID/V007 determined 30 August 2011.

The application for tyre and SRF use, ref ABW/WDF01-11v1.0 dated 4 July 2011, did not describe the combustion conditions for tyres introduced at the kiln hearth in any detail and refers to the original MBM waste-derived fuel application for introducing MBM at the kiln firing pipe (hot end), as opposed to the pre-heater tower end.

The application establishes Waste Incineration Directive (WID – subsequently IED Article 50) compliance requirements:

- Normal kiln operation (not in start-up or shut down)
- Kiln raw meal feed rate >85 tonnes/hour
- Kiln surrogate temperature at pre-heater tower (PHT) stage 4 cyclone >544°C (equivalent to >850°C in the kiln)
- Emission abatement systems operational (SNCR and lime dosing, if raw mill not operating)
- CEMS available and in compliance with ELVs

Permitted tyre substitution and feed rate is 20% thermal substitution, 2 te/hour, 17,000 te/year.

The Report on Permit Variation JP3134SY Condition 2.3.4 – Waste Incineration Directive Requirements, dated 16 December 2009, sets out the basis for the kiln surrogate temperature at pre-heater tower stage 4 cyclone of >544°C.

The report states that the temperature in the kiln is not directly measured but is indicated by a thermocouple at stage 4 of the preheater tower (PHT). Investigation carried out by Lafarge (operator prior to Tarmac) has highlighted that the 850°C minimum requirement is rarely achieved at this point.

The closest reliable thermocouple to allow an indication of the temperature within the kiln is positioned in stage four of the preheater tower. Here the temperature is stated to be typically between 740 and 840°C.

The report concludes that for the kiln back end (PHT end) to be at a temperature of 850°C or above, a minimum temperature of 544°C is needed at the stage 4 thermocouple.

The current WDF operations permit condition 2.3.12 (d) specifies a minimum combustion chamber temperature for waste burning of 850°C, but does not specify where this should be measured.

The 2009 report that identifies the WDF feed limit at 544°C was derived using a range of assumptions with limited sensitivity analysis. The report also identifies that the similar Hope cement works (PHT only, no pre-calciner) has a limit of 810°C at stage 4 of the preheater. This suggests that the Aberthaw derived limit does not allow sufficient head room to take account of uncertainties and variation in operating conditions and would require review for kiln front end firing of WDF if used to determine compliance with the 850°C minimum temperature requirement at the kiln PHT end for WDF fed at the hot (clinker cooler) end.

However, it is also evident that for kiln front end firing of WDF, the minimum residence time

and temperature requirements are likely to be easily met under most operating conditions due to the large kiln volume and very high flame temperature. The residence time head room is 3-4 seconds and temperature head room is likely to be in excess of 150°C at the bottom of the gas riser at normal operating conditions.

Tarmac confirmed during discussion on WDF controls at site on 9 July 2026 that the 544°C WDF feed limit is not used and the only automatic interlock is the raw meal feed rate set at 80 tonnes per hour, which prevents WDF feeds being established until kiln conditions are sufficiently stable.

The raw meal loss in weight feeder is calibrated annually or at every kiln long stop. A back up measure is the feed bucket elevator current draw. Recent calibration records for the raw meal weigh feeder were provided.

Examination of process data history for a typical kiln start up on 4 July 2026 showed that WDF feeds were not established until raw meal feed reached 80 tph. At this feed rate the PHT stage 4 cyclone temperature was in the range 820-840°C, which will guarantee kiln temperatures significantly above 1000°C due to the Process Expert Control System (PXP) which controls key process parameters to maintain clinker quality.

The process parameters include pre-heater carbon monoxide concentration, ID fan output, kiln torque and coal feed rate, which maintain PHT oxygen at 5.2-5.5%, ensuring good combustion conditions throughout the kiln and into the cyclone 4 gas riser.

Process data history for a typical kiln shut down on 4 July 2026 showed that WDF feeds were taken off before kiln raw meal feed dropped below 80 tph. It is noted that the PHT stage 4 cyclone temperature was less than 800°C, presumably reflecting the typical steady state conditions, which will ensure that gas temperatures throughout the kiln will remain well above 850°C. However, the implications for tyre burning flue gases requires review (see below).

Trials are underway with a backend seal oxygen measurement sensor to improve combustion conditions at the critical burnout area for tyres (see below). Current measurements are 3-5% oxygen, although the sampling period needs further optimisation before the monitoring can be used to improve process control.

In the kiln control room on 9 July 2026, the Kiln and Fuels Manager demonstrated use of the process parameter settings target sheet to maintain kiln feed rate and associated PHT oxygen levels for operating with WDF. It was noted that cyclone stage 4 temperature is not used for routine operational control, but is used in conjunction with temperature profiles across the whole PHT to infer that process conditions are within expected ranges.

The Standard Operating Procedure ABKP 0002 "Kiln Start-up From Cold Procedure" sets out the requirements for introduction of WDF. The procedure establishes abatement and kiln feed rate at 80 tph before staged introduction of WDF. Emissions reporting also commences at a kiln feed rate of 80 tph.

Therefore, in general, the kiln operating procedures and control arrangements ensure compliance with the following permit condition:

2.3.12 Waste derived fuels shall not be burned, or shall cease to be burned, if:

- (a) the kiln is in start-up (or as otherwise agreed in writing with Natural Resources Wales); or
- (b) the kiln is in the process of shutting down (or as otherwise agreed in writing with Natural Resources Wales); or
- (c) kiln feed rate is less than 80 tonnes/hr; or
- (d) the combustion chamber temperature is below, or falls below, 850°C when using non-hazardous waste or hazardous waste where the content of halogenated organic substances (as chlorine) does not exceed 1%; or
- (e) the combustion chamber temperature is below, or falls below, 1100°C when using hazardous waste where the content of halogenated organic substances (as chlorine) exceeds 1%; or
- (f) any continuous emission limit value in schedule 3 table S3.1 is exceeded due to disturbances or failures of the abatement systems, other than under "Chapter IV abnormal operating conditions"; or
- (g) monitoring results required to demonstrate compliance with any continuous emission limit value in schedule 3 table S3.1 are unavailable other than under "Chapter IV abnormal operating conditions".

This is because:

- a. Kiln start up is considered complete at a kiln feed rate of 80 tph. WDF feeds are automatically prevented below 80 tph by the fuel feed control system.
- b. Kiln shut down is considered to commence at a kiln feed rate of less than 80 tph. WDF feeds are automatically prevented below 80 tph.
- c. WDF feeds are automatically prevented below 80 tph.
- d. Temperatures throughout the kiln and into the mid-section of the gas riser will be above 850°C at a kiln feed rate of 80 tph by virtue of the associated fuel feed rates necessary to maintain clinker quality.
- e. No hazardous waste with a halogenated organic content greater than 1% is used at Aberthaw.
- f. Daily mean ELV compliance is managed through the control room environmental compliance screen. Procedure EOP Appendix 2-1 sets out that a retrospective ELV exceedance should result in WDF feeds being stopped if the latest 30-minute average result is above the ELV. WDF feeds are restarted when a 30-minute average result is below the ELV.
- g. Kiln shutdown is initiated if duty and backup CEMs failure occurs for longer than the permitted 4-hours. Procedures and operator training have recently been improved following an instance where the 4-hour period was exceeded for a short period.

The above procedures and controls are considered to be mostly sufficient to demonstrate compliance with permit condition 2.1.12 and IED Article 50(2) for WDF fed at the kiln front (hot) end via firing pipes parallel to the pulverised coal firing pipe. It is noted that the procedural criteria for ensuring ongoing compliance with permit sub-condition 2.3.12 (f) are limited and do not require confirmation that the cause of the preceding ELV exceedance/abatement failure has been identified and rectified.

ACTION by 30 November 2026: Tarmac to review Procedure EOP Appendix 2-1 to ensure that WDF feed interruption/resumption robustly confirms that the cause of the preceding or a potential ELV exceedance/abatement failure has been identified and rectified. The reviewed and revised procedure shall be submitted to NRW for approval.

However, in the context of using tyres and potential future wastes as WDF fed at the kiln back end the “combustion chamber” gas path constitutes, at best, the last few metres of kiln length, the gas riser and cyclone 4 gas path, which was established to be around 800-860°C at the cyclone gas outlet according to plant instrumentation.

Therefore the whole of the cyclone 4 gas path cannot be used to determine flue gas residence time above 850°C. Significant flue gas temperature quenching will occur where the stage 3 hot meal duct enters the gas riser approximately half way up, reducing the flue gas temperature from around 1000°C to less than 900°C.

Long term discontinuous process measurement data above the tyre injection point (at same riser level as stage 3 hot meal duct) shows that temperatures are generally above 850°C, averaging around 900°C.

Tarmac has provided plug flow calculations of residence time in a spreadsheet *Aberthaw riser residence times.xlsx*. The calculations conclude that a worst-case flue gas residence time above 850°C of 2.2 seconds is available when burning whole tyres at the kiln back end. While the assumptions used in the calculations seem reasonable, some aspects of the approach are optimistic and suggest that the actual flue gas residence time above 850°C for tyres introduced at the PHT end of the kiln is marginal at best:

- The whole gas riser volume is used, when in reality a suitably conservative approach would be to assume half the riser volume maintains a flue gas temperature above 850°C. Estimated residence time around 0.7 second for full riser volume.
- A riser “down drop” (fall time about 1 second), presumably for tyre drop into the kiln via the riser is included, when this isn’t relevant for the solid tyre starting to burn in the hot flue gas as it falls. In reality any combustion gas arising at this stage will only have residence time above the stage 3 injection point, which will mean minimal residence time above 850°C. This latter aspect has been disregarded for the remainder of the compliance assessment based on the assumption that limited combustion occurs until the tyre comes to rest in the kiln (see thermal image evidence supporting this below).
- Flue gas residence time in the kiln is calculated based upon thermographic imaging of the kiln exterior (see figure) which shows a “hot spot” approximately 3.5 metres from the kiln back (PHT) end which is interpreted as the average tyre initial ignition and main burnout location. This gives a worst-case flue gas residence time in the remaining kiln section of around 0.5 second.

The conservative assessment of these calculations is that the likely flue gas residence time above 850°C is less than 1 second ($0.5 + 0.35 = 0.85$).

This causes an immediate issue for permit condition compliance because, while residence time above 850°C is not explicitly specified in any of the conditions and the original tyre WDF application was not explicit regarding residence time above 850°C for firing at the back end of the kiln, the operating techniques refer to earlier WDF applications for hot end firing where flue gas temperatures and residence times of above 1000°C for 5-6 seconds are expected. This is clearly not the case for tyres introduced at the PHT end of the kiln.

The above assessment shows that there is currently no clear demonstration of compliance with IED Article 50(2) process conditions for the current tyre firing operation, which was stated to be the case in the relevant applications for use of WDF and incorporated into the permit inclusion of “All management and control techniques described in the application” in Table S1.2 of Schedule 1 – Operations.

The current use of tyres is therefore not in compliance with permit condition:

2.3.1 (a) The activities shall, subject to the conditions of this permit, be operated using the techniques and in the manner described in the documentation specified in schedule 1, table S1.2, unless otherwise agreed in writing by Natural Resources Wales.

The potential impact of this non-compliance is considered further below.

Options to address the non-compliance appear to be limited, as set out below:

Deviation from “standard” Article 50(2) process condition can be addressed by reference to IED Article 51(1) which allows different temperature conditions to be specified provided that all other requirements are met and emissions of total organic carbon (TOC) and carbon monoxide (CO) comply with ELVs specified in Part 3 of IED Annex VI.

For Aberthaw these alternative conditions could be specified as 1000°C for 0.5 second, 850°C for 0.85 second, and around 700°C for 2 seconds, the latter temperature being the typical minimum temperature at the gas exit from the stage 3 cyclone where around 2 seconds of flue gas residence time will be achieved for tyres burning near the PHT end of the kiln.

A review of emissions data and associated emission limits in the current permit indicates that TOC and CO ELVs specified in Part 3 of Annex VI will not be met and therefore this option is unlikely to be available.

Consideration was given to the benefit of requiring computational fluid dynamic (CFD) analysis of the kiln flue gases arising from tyre combustion and their passage through the PHT to improve understanding of the likely actual process conditions. However, the complexity required to reliably represent the system may not be viable or improve the current understanding based upon plug flow calculations and plant measurements. Consideration should be given to tracer injection measurements in the future if necessary, but the current assessment using plug flow calculations suggests that demonstration of flue gas residence time above 850°C for 2 seconds is unlikely to be possible for the current tyre-firing configuration.

Section 2 of Part 4 of Annex VI sets out special provisions for cement kilns co-incinerating waste recognising that TOC, SO₂, and CO emissions may not arise from co-incineration of waste and that alternative ELVs may be set for these substances. This is already implemented in the Aberthaw permit and a further review of emissions data suggests that burning tyres at the PHT end of the kiln does not increase TOC or CO emissions, which are usually influenced by kerogen content in the raw meal feed associated with quarried shale and limestone. No other emissions of metals, PAH or dioxin/furans appear to be increased by tyre burning.

It is noted that the original tyre WDF trial report from March 2013 identified an increase in CO emissions over a short timescale apparently associated with tyre burning. However, this appears to have been addressed through improved control of oxygen levels at the PHT and may improve further when backend seal oxygen measurement is reliably implemented.

The Cement and Lime BREF - section 1.2.4.1 recognises that WDF fed at the PHT end of kilns will burn at lower temperatures and fuels with volatile components should only be used at the hot end of the kiln. The extensive rubber cross-linking present in tyres may reduce the release of volatile organic compounds until the burnout zone identified in the kiln. However, this has not been demonstrated and full speciation of TOC emissions has not been undertaken at Aberthaw to establish whether tyre burning increases certain VOC emissions. Previous cement kiln air quality modelling studies have shown that specific VOC emissions are unlikely to exceed air quality standards, therefore the worst-case potential impact is considered to be category 3. It should also be noted that tyre firing at the PHT end of the kiln supports NOx control as the reduced oxygen/increased CO levels in the flue gas associated with tyre burnout promotes NOx reduction.

In conclusion, the requirements of permit condition 2.3.12 are broadly complied with and measures are in place to ensure this. Also, the residence time-temperature requirements set out in IED Article 50(2) are also achieved for WDF fed at the kiln hot end, but not for tyres fed at the kiln PHT end, which is a **category 3 non-compliance with permit condition 2.3.1(a)**.

Emissions associated with the current operating regime appear to be well controlled and protect the environment as well as meeting the current sector BAT requirements. Resolution of the ongoing non-compliance will take some time while the limited options are evaluated, however, given the limited apparent environmental impact, future non-compliance scoring will be suspended pending further options appraisal and implementation.

ACTION by 31 March 2027: Tarmac to consider options for addressing non-compliance/demonstrating compliance with the residence time-temperature requirements set out in IED Article 50(2) for tyres fed at the kiln PHT end. The options evaluation and proposed implementation timescale shall be submitted to NRW for approval.

The following restrictions and recommendations are made for future developments at the cement works:

- Any new WDF proposed for PHT end firing will need a rigorous re-assessment process for IED Article 50(2) compliance.
- The options appraisal required above should include re-evaluation of BAT for whole tyre firing at the PHT end of the kiln, including assessment of any influence on emissions and of flue gas residence time-temperature achieved.
- Tarmac should consider implementing a cyclone stage 4 low temperature alarm to prompt operators to take action to remove WDF feeds if necessary, or an equivalent PHT temperature profile alarm, supported by a suitable operating procedure, or updated in the existing procedures.

Dust incidents February-April 2026

Allegations of dust deposition at Burton Hill and East Aberthaw were received from February and at the end of April. These were not substantiated.

During an NRW inspection at the adjacent PFA landfill on 9 April 2026 fugitive dust emissions associated with clinker stock movements/reprofiling and dusty haul roads were noted. The wind speeds were around the threshold that potentially dust generating activities should be suspended unless suppression is being applied. There was no sign of water bowser or water spray deployment.

Tarmac subsequently confirmed that haul road damping was not undertaken for a period at the quarry due to an issue with availability of a suitably trained tractor driver. NRW understands that this has now been addressed and regular haul road damping is taking place at the quarry and on the works.

Offsite dust deposition was not substantiated so actual impact cannot be confirmed, however, fine dust will contribute to deterioration of local PM₁₀ and PM_{2.5} air quality and the failure to implement management procedures (dust management plan haul road damping) to minimise fugitive emissions, is considered to be a **category 3 non-compliance with permit condition 1.1.1**.

Consideration has been given to review of continuous air quality data (as opposed to monthly average deposition rate data) while it is available at the RWE quarry works and at the CCR Energy demolition works to see up wind/downwind changes in ambient air dust concentrations in the area. An NRW review of limited PM_{2.5} and PM₁₀ does not suggest that there are significant localised issues, but a wider review of the data has not yet been undertaken.

Concerns have been raised regarding the clinker stockpile and fugitive emissions from the surface. NRW has established that as the surface ages and is exposed to rainfall and atmospheric moisture it tends to form a seal. However, as the stockpile is periodically tracked over to deposit fresh material or dries out during periods of dry weather some surface dust formation seems inevitable. Irrigation/wetting may need to be carried out to ensure maintenance of the surface sealing during dry conditions and after tracking over.

Site inspection – 9 July 2026

The following issues were noted during the site walkover to inspect the PHT stage 4 temperature measurement and tyre feed locations:

- The raw mill main door was partially open allowing significant breakout of noise. Elevated noise was not substantiated offsite, but the source may have resulted in offsite noise impact based upon previous events. The raw mill roller shutter door drive and control unit had failed. Tarmac was unable to repair the motor and control unit as it requires specialist knowledge. The door was being opened and closed manually while awaiting the contractor visit. Operatives were instructed that the door is to remain open only for access and is closed when not in use, particularly overnight.
- The raw mill building is being re-clad and the current sound attenuation specification

may need to be improved upon the demonstrate BAT for minimisation of noise breakout. Tarmac will must confirm that the acoustic specification of the building cladding has been considered and justify why improvements have not been made. This may include reference to previous or new acoustic camera surveys. **This will be assessed at a future noise compliance inspection.**

- A fugitive dust release from the raw mill building area was noted, the source was a loose bolt on the raw mill. The mill was taken out of service for maintenance on 10 July and the bolt replaced. No dust release was observed following restart. It is unclear how long the bolt had been loose but proactive detection and reporting did not appear to have occurred. Dust deposition data for the period to 14 July shows a generally high level building through June to greater than 200 mg/m²/day at all monitoring locations reflecting the very dry ambient conditions. Nevertheless, contributions from avoidable fugitive releases will have exacerbated the situation. This aspect will need to be addressed as part of the reviewed dust management plan action below.

While on site at the adjacent PFA landfill on 20 August significant dust arising during the movement of clinker stock into the quarry was witnessed during conditions that were clearly too windy to prevent fugitive emissions, which were occurring almost continuously while operations were underway.

This is not the first instance over an extended period that NRW has witnessed similar events and brought them to Tarmac's attention to make improvements.

The current Tarmac controls require clinker operations to cease for easterly or north easterly wind directions greater than 6 mph and any direction greater than 20 mph. Conditions when the latest emissions were witnessed were westerly to north westerly at 13-16 mph, windspeeds above which fugitive dust emissions would normally be expected. While there were no immediate receptors for nuisance dust downwind on this occasion, the direction was such that fine dust will contribute to increased PM_{2.5} and PM₁₀ ambient air concentrations downwind at residential areas in Rhoose. Agglomeration of fine particles over time and subsequent wet or dry deposition will contribute to nuisance dust further afield. Air quality standards are unlikely to be exceeded at the level of emissions observed but increased background levels are likely.

The absence of receptors or complaints downwind of fugitive dust emissions does not imply absence of pollution and continuing dusty operations without additional dust controls above established threshold windspeeds (11-13 mph) up to 20 mph is not considered to constitute BAT for prevention or minimisation of fugitive dust emissions.

The failure to implement BAT to minimise fugitive fine particle emissions, is considered to be a **category 3 non-compliance with permit condition 3.2.1.**

Tarmac will need to demonstrate that effective improvements have been implemented to prevent or minimise such emissions.

Action: Tarmac to review the Aberthaw dust management plan and provide an update on intended improvements by 30 September 2026.

Continuing stocking of clinker in the quarry to meet annual historic activity level (HAL) set out

in the UK ETS is contributing to ongoing fugitive emissions, process inefficiency and has created a significant legacy stockpile that will take a long time to recycle back into product. NRW operations team has raised the HAL issue with UK ETS colleagues again and has been informed that production to achieve HAL is not necessary. In order to fully understand Tarmac's interpretation of the UK ETS requirements and establish legitimacy of the ongoing stocking of clinker a more detailed investigation is necessary.

ACTION by 30 November 2026: Tarmac to set out in writing the basis for production of clinker without sales or stock demand to meet requirements set out in the UK ETS legislation and associated guidance. The written basis shall be submitted to NRW.

NOx daily ELV exceedance 13-14 July 2026

Tarmac provided a notification on 14 July 2026 in accordance with permit condition 4.3.1(b) that the daily NOx ELV was exceeded in the previous 24-hours due to SNCR abatement problems.

RCA established that SNCR performance was compromised by reduced ammonia solution flow rate caused by blocked injection nozzles. Quality problems with ammonia supplies have been previously identified as a risk to SNCR performance at other cement works and Tarmac should be aware of this.

It is noted that loss of containment from the ammonia feed filters may have occurred due to the failure of O-rings due to excessive back pressure. The quantity is expected to have been small and not of significant impact even if discharged via the site surface water system.
Containment of ammonia solution will need to be inspected at a future visit.

No adverse environmental impact is likely to have occurred, because the 30-minute average emissions profile over the 24-hour period shows no significant short-term hourly emissions levels that might result in exceedance of the 1 hour average NO₂ air quality standard.

Therefore the ELV exceedance is considered to be a **category 3 non-compliance with permit condition 3.1.2.**

Action: Tarmac to confirm steps to be taken to prevent a recurrence by 30 September 2026.

Waste feeds were not stopped after 4-hours of abatement failure because Tarmac contends that full abatement failure had not occurred and tyre firing supports NOx control, but clearly abatement control was compromised sufficiently to result in the daily NOx ELV being exceeded and the emissions profile suggests that compliance would be compromised unless emissions could be maintained below 400 mg/m³ for the remaining 12 hours of the 24 hour period.

As already identified above Procedure EOP Appendix 2-1 does not robustly ensure compliance with permit sub-condition 2.3.12 (f) and the potential non-compliance in this instance will be addressed by the action already set for Tarmac to review the procedure.

Emissions review

Monitoring data for Q1 and Q2 2026 have been reviewed and no breach of permit conditions was identified other than those already addressed in previous sections of this report.

Emissions from the cement mill separator (A3) were consistently high and increasing, but remained below the ELV, during October and November 2025, before improving significantly in December. A cement mill maintenance shutdown was carried out in December 2025 which included filter bag replacement and emissions have been lower since the shutdown.

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
Action only (X)	Action required for the permit condition assessed to avoid non-compliance. No non-compliance scored at this time
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 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.

Disputing the Content of this Compliance Assessment Report Form

If you disagree with the content of this Compliance Assessment Report form, you should submit your concerns, in writing, to the regulating officer who issued it within **15 working days** of its issue. This will be treated as a **Stage 1 review**.

If you are not satisfied with the outcome of the stage 1 review, you may request a **Stage 2 appeal**. This request must be submitted **within 21 working days** of receiving the response from the stage 1 review.

Further details on our review and appeal process are available at: [Natural Resources Wales / Appeal a regulatory decision from Natural Resources Wales](#)

Concerns Not Related to the Content of this Compliance Assessment Report Form

If your concerns do not relate to the content of the Compliance Assessment Report form, you should first attempt to resolve the issue with the regulating officer or their line manager.

If the issue remains unresolved, please contact our **Customer Contact Team**:

- **Telephone:** 0300 065 3000 (Monday to Friday, 09:00–17:00)
- **Email:** enquiries@naturalresourceswales.gov.uk

They will provide details on how to escalate your concerns through our **Complaints and Commendations procedure**.

If you are dissatisfied with our response, you may contact the **Public Services Ombudsman for Wales**:

- **Telephone:** 0300 790 0203
- **Email:** 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.