

PROCEDURE

CSP UK H&S/Environmental Systems

Function:	Environmental	Document No:	LT AQMP 2016
Process:	Air Quality	Revision:	5
Category:	Air Quality	Owner:	Tarmac Ltd Port Talbot

Title:	Tarmac Ltd Air Quality Management Plan for Potential Emissions of PM₁₀
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1. Purpose

The purpose of this Air Quality Management Plan is to describe and facilitate the implementation of measures taken by Tarmac Ltd to limit potential emissions of PM₁₀ and fugitive dust.

Links to all AQMP for the TATA site are located in Triangle (Document reference number GLAG – 877EF8)

2. Responsibility

The Tarmac Works Manager is required to ensure that a suitable resource is provided to enable the effective implementation of this Air Quality Management Plan.

The Tarmac Works Manager is responsible for ensuring that appropriate support is provided to Works Areas and Contractors to enable the effective implementation of their Air Quality Management Plans. The Tarmac Works Manager is also responsible for ensuring that compliance with the plans is audited as part of an agreed auditing schedule.

3. Communication

The Tarmac Works Manager is the key points of contact for communication with external bodies (e.g. Natural Resources Wales (NRW), Welsh Government, Neath Port Talbot County Council etc) on Air Quality. Documentation relating to Air Quality should only be provided to external bodies following review and agreement from Tata environmental Engineer's.

Operation areas are required to communicate any incidents that may have an impact on Air Quality to the Tarmac Works Manager. Any actions will be entered on to the SHE system. If deemed appropriate the Tarmac Works manager should notify such issues to NRW. Tata Steel Environment Department will be informed when incidents are reported to external bodies.

4. Abatement of Atmospheric Emissions of PM₁₀ and Fugitive Dust

In order to limit potential emissions of PM₁₀ and fugitive dust from Tarmac Ltd a number of abatement methods are employed. Potential sources of PM₁₀ and fugitive dust emissions at Tarmac Ltd, the abatement methods employed and the frequency of abatement are summarized in Table 1 below.

Table 1: Potential Sources of PM₁₀, abatement employed and the frequency of abatement.

Potential Source of PM ₁₀	Reference	Abatement method(s) employed/ Operational control Procedures in place	Frequency of abatement
Tarmac Ltd			
BOS slag stockpiles	Procedure	Procedure – Control of Vehicles, Control	

	19 20	and Monitoring of Env. Impacts from mobile crushing units and monitor of dust emissions from process crushing. Monitoring – Water Bowser	AM/PM visual. When required
BF slag stockpiles	Procedure 19 20	Procedure – Control of Vehicles, Control and Monitoring of Env. Impacts from mobile crushing units and monitor of dust emissions from process crushing. Monitoring – Water Bowser	AM/PM visual. When required
Granulate stockpiles	Procedure 19 20	Procedure – Control of Vehicles, Control and Monitoring of Env. Impacts from mobile crushing units and monitor of dust emissions from process crushing. Monitoring – Water Bowser	AM/PM visual. When required
Dig and Haul No 4	Procedure 19 20	Procedure – Control of Vehicles, Control and Monitoring of Env. Impacts from mobile crushing units and monitor of dust emissions from process crushing. Monitoring – Water Bowser	AM/PM visual. When required
Dig and Haul No 5	Procedure 19 20	Procedure – Control of Vehicles, Control and Monitoring of Env. Impacts from mobile crushing units and monitor of dust emissions from process crushing. Monitoring – Water Bowser	AM/PM visual. When required
BF slag crushing	Procedure 19 20	Procedure – Control of Vehicles, Control and Monitoring of Env. Impacts from mobile crushing units and monitor of dust emissions from process crushing. Monitoring – Water Bowser	AM/PM visual. When required
BF slag washing	Procedure 19 20	Procedure – Control of Vehicles, Control and Monitoring of Env. Impacts from mobile crushing units and monitor of dust emissions from process crushing. Monitoring – Water Bowser	AM/PM visual. When required
BOS slag crushing	Procedure 19 20	Procedure – Control of Vehicles, Control and Monitoring of Env. Impacts from mobile crushing units and monitor of dust emissions from process crushing. Monitoring – Water Bowser Fog Cannon or Plant dust suppression system	AM/PM visual. When required
Site roads – Haul road to tip from BF 4 & 5 - Haul road to Steel slag Stocks	Procedure 19 20	Procedure – Control of Vehicles, Control and Monitoring of Env. Impacts from mobile crushing units and monitor of dust emissions from process crushing. Monitoring – Water Bowser and roadsweeper Maintenance and grading of int. roads. Grassing of bunds Grading of roads when required by site machines Road sweeper 5hrs/day, 7 days/week.	AM/PM visual. When required
Site roads - entrance/exit	Procedure 19 20	Procedure – Control of Vehicles, Control and Monitoring of Env. Impacts from mobile crushing units and monitor of dust emissions from process crushing. Monitoring – Water Bowser and roadsweeper Maintenance and grading of int. roads. Grassing of bunds Road sweeper 5hrs/day, 7 days/week.	AM/PM visual. When required
Granulation Plant - plant and roads	Procedure 19 20	Monitoring – Water Bowser and roadsweeper Maintenance and grading of int. roads. Daily Environmental log Road sweeper 5hrs/day, 7 days/week.	AM/PM visual. When required

Off Site Road/Coast Road		As an act of goodwill, the Roadsweeper is sent to clean the access road into Hanson Cement.	When required.
Wharf Operations – Delivery, stockpiling, loading of vessels	Procedure 19 20	Monitoring – Water Bowser and roadsweeper Maintenance and grading of int. roads. Daily Environmental log Road sweeper 5hrs/day, 7 days/week.	AM/PM visual. When required
Train Operation – Delivery, stockpiling, loading of vessels	Procedure 19 20	Monitoring – Water Bowser and roadsweeper Maintenance and grading of int. roads. Daily Environmental log Road sweeper 5hrs/day, 7 days/week.	AM/PM visual. When required

5. Monitoring and Responding to Elevated PM₁₀ Concentrations in the Town

In addition to the implementation of abatement methodologies there is a requirement to monitor and respond to elevated PM₁₀ concentrations in Port Talbot. Monitoring and response requirements are outlined below.

5.1 Morning Meetings and Daily Communications (weekdays)

In the first instance Tarmac's Works Manager will review PM₁₀ concentrations in morning meetings as monitored at the Automated Urban Rural Network (AURN) monitor at Margam Fire Station, Port Talbot.

PM₁₀ concentrations in Port Talbot shall be monitored at the following websites:

<http://uk-air.defra.gov.uk/data/>
<http://www.welshairquality.co.uk>
<http://www.npt.gov.uk/default.aspx?page=4455>

For assistance in navigating these websites personnel should contact the Environment Department.

To facilitate compliance with the daily mean PM₁₀ objective, a daily communication will be sent to key site contacts by 09:15 each weekday. The daily communication will state the risk of a potential breach and the response that should be made by key stakeholders. In medium and high-risk scenarios, the Tarmac Works Manager will be required to provide feedback to the Environment Department on the actions that have been taken in response to the risk. The Environment Department will monitor the level of risk throughout the day and will issue an update should the level of risk change.

Examples of the daily communication are provided in Appendix 1. Guidance on assigning the risk of a breach is presented in Appendix 2.

Personnel should contact the Environment Department, to be added or removed from the daily air quality communication.

Tarmac Ltd actions to be undertaken in response to manual monitoring and daily communications as outlined in section 5.3

5.2 Automated Alert and Manual Monitoring (weekends)

In the absence of a daily communication (at weekends and on public holidays), Tarmac shall use the automated alerts (in the form of emails) issued from NPTCBC to key personnel. These automated alerts should be used to support an appropriate response to elevated PM₁₀ concentrations at the AURN monitor in Port Talbot.

Key personnel shall request to receive alerts from the NPTCBC. Upon making this request personnel will receive an alert on occasions when the hourly average PM₁₀ concentration in Port Talbot as measured at Margam - Fire Station exceeds 50µg/m³. An example of an alert that may receive is as follows:

"Alert for Margam - Fire Station (PT2): A PM10 concentration of 55.5 ug m-3 (hourly mean) was recorded at 01 Mar 2010 15:00.

Please note that this data is subject to automatic quality control checks and could change at a later date. If you wish to unsubscribe or change your air quality alerts please email the address above".

Upon receipt of an automated alert personnel shall be vigilant and do all possible to help monitor PM₁₀ concentrations, identify and address potential sources of the elevation and if necessary take action to ensure that daily mean PM₁₀ concentration at the Margam - Fire Station monitor does not exceed 50µg/m³.

As indicated above PM₁₀ concentrations in Port Talbot can also be monitored at the websites listed in section 5.1 above. For assistance in navigating the websites personnel should contact the Environment Department.

5.3 Actions to be taken in response to daily communications, automated alerts and manual monitoring

Daily Communications

As indicated above actions may need to be taken to reduce potential emissions of PM₁₀ dependent on the risk of there being a breach. The level of risk is communicated daily each weekday as low, medium or high.

Actions that will be implemented by the Tarmac Works Manager under each risk scenario are outlined below:

Low Risk: Tarmac Ltd will undertake the usual day to day checks on visual emissions and emissions of particulates as well as usual checks to ensure that abatement systems are operating as designed. Tarmac Ltd will take appropriate action to mitigate abnormal emissions or abatement failure should such issues be identified.

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Medium Risk: Tarmac Ltd will continue to undertake the actions taken on low risk days. Any observations made by operators on amber alert days will be reported to the Tata Steel Environment Dept.

- avoiding the undertaking of non-essential "dusty processes";
- limiting Material Movements;
- ensuring that all abatement equipment is operating as designed (Haul Road Spray systems)
- Deploying the water bowser and Road Sweeper.
- Low emissions – carry on and observe
- Med to low – water bowser etc

High Risk: Tarmac Ltd will continue to undertake the actions taken on medium risk days. However Tarmac Ltd will also review opportunity to reduce or stop plant operation. Where possible, on high risk days, Tarmac Ltd will avoid the undertaking of non-essential "dusty processes" and stop non-essential material movements. Any observations made by operators on red alert days will be reported to the Environment Dept.

- avoiding the undertaking of non-essential "dusty processes";
- limiting Material Movements;
- ensuring that all abatement equipment is operating as designed (Haul Road Spray systems)

- Deploying the water bowser and Road Sweeper.
- Low emissions – carry on and observe
- Med to low – water bowser etc

In addition, the Environment Department, will drive around site and make observations and provide feedback to manufacturing on emissions that need to be mitigated. Key processes and conditions that will need to be observed include:

- Ship unloading
- Material movements
- Slag tipping and digging
- Slag granulation
- Crushing and screening operations
- Road and stockpile emissions
- Appropriate use of abatement systems

If a significant source(s) of particulate emissions is identified during the site visit, the Environment Department in conjunction with the Tarmac Works Manager will review the opportunity to stop or modify plant operation or the specific process e.g. movement of dusty material.

Any decision to modify or stop plant operation should be agreed in writing (e.g. email) between the Environment Manager and the relevant Work Area / Key Contractor Manager.

The Environmental Department will also provide appropriate updates, inline with the daily communication procedures outlined in Section 5.1.

5.4 Automated Alerts and Manual Monitoring:

In the absence of a daily communication (e.g. weekends and public holidays), actions will need to be taken in response to the automated alerts and manual monitoring described in Section 5.2 to reduce potential emissions of PM₁₀ if all of the following criteria are met:

- the rolling average PM₁₀ level for the day at the fire-station AURN exceeds 50µg/m³ at 10.00 hours or for any hour following;
- the weather forecast suggests no rain for the remainder of the day;
- the wind is blowing from the site and towards the town; and
- the elevations can be attributed to a local event.

Actions that will be implemented across the Steelworks when all of the above criteria are met are detailed in Works Area / Key Contractor Air Quality Management Plans and should be aligned to the **high risk** daily communication actions. Works Areas and Key Contractors are also required to provide feedback to the Environment Department on actions taken and observations made during periods when the above criteria are met.

6. Monitoring and Responding to Dust Fallout in the Port Talbot

A daily dust fallout forecast will be sent at the same time as the daily communication (see Section 5) and will state the risk of a potential dust fallout (fugitive dust) event in Port Talbot. Dust fallout is defined as a sustained emission of fugitive dust arising from an operation/process within the boundaries of the steelworks that has the potential to cause an impact by the particulate deposition within the local community or environment.

The level of risk is communicated as low, medium or high. Actions that will be implemented by Works Areas and Key Contractors under each risk scenario are outlined below:

Low Risk:

On low risk days, the Tarmac Works Manager will undertake the usual day to day checks on visual dust emissions as well as the usual checks to ensure that abatement systems are operating as designed. Works Areas and Key Contractors will take appropriate action to mitigate abnormal emissions or abatement failure should such issues be identified.

Medium Risk:

On medium risk days, the Tarmac Works Manager will carry out **additional checks** on visual dust emissions and to ensure that abatement systems are operating as designed.

- avoiding the undertaking of non-essential “dusty processes”
 1. Moving of stock between stockyard’s
 2. Slag Pool digging when pools are at a low level and will not have any effect on Furnace or plant operations
- limiting Material Movements;
- ensuring that all abatement equipment is operating as designed (Haul Road Spray systems)
- Deploying the water bowser.
- Low emissions – carry on and observe
- Med to low – water bowser etc

Tarmac Ltd will take appropriate action to mitigate abnormal emissions or abatement failure should such issues be identified.

High Risk:

On high risk days, the Tarmac Works Manager will continue to undertake the actions taken on medium risk days. Where possible, on high risk days, Works Areas and Key Contractors will avoid the undertaking of non-essential “dusty processes” and stop non-essential material movements.

1. Moving of stock between stockyard’s
2. Slag Pool digging when pools are at a low level and will not have any effect on Furnace or plant operations

In addition, the Environment Department will drive around site and make observations. Key processes and conditions that will need to be observed are the same as those listed under the ‘High Risk’ heading in section 5.3.

If a significant source(s) of dust emissions is identified during the site visit, the Environment Department in conjunction with the Tarmac Works Manager will review the opportunity to stop or modify plant operation or the specific process e.g. the movement of dusty material.

The template and guidance on assigning the risk of a dust fallout event is presented in Appendix 3.

7. Response to a Breach of the Daily Mean Objective

The Environment Department will carry out an investigation in the instance that the daily mean PM₁₀ concentration objective is breached. The investigation will comprise of 4 phases:

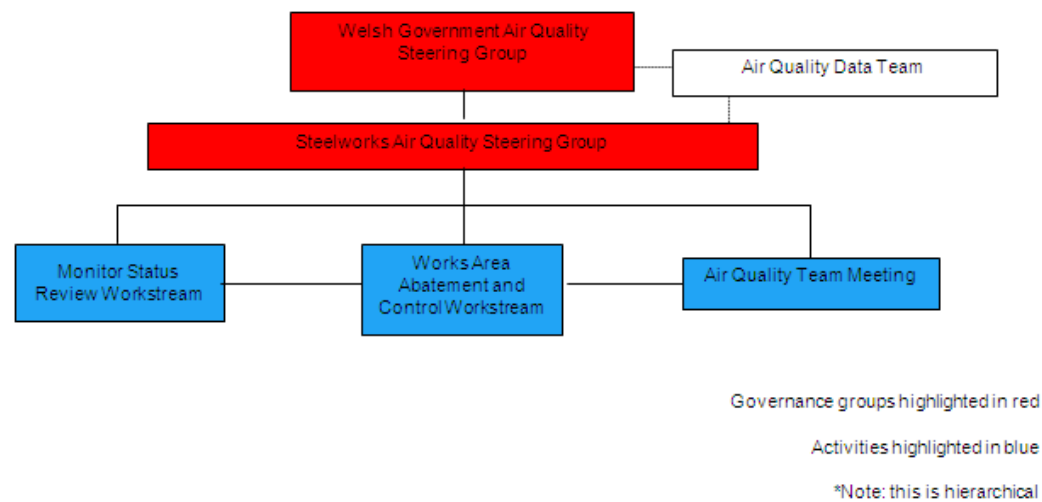
- Phase 1: Establish if the breach is attributable to a localised or regional event
- Phase 2: Identify if the breach can be attributed to on-site sources
- Phase 3: Evaluation of site PM₁₀ data
- Phase 4: By exception, evaluation of site process data based on findings from phase 3

Tarmac Ltd will ensure that suitable resource is provided to respond to requests within 5 working day's for process data and / or investigation meetings in order to ensure that the report is issued within 10 working days of the breach.

8. Air Quality Governance

The air quality governance process is illustrated in Figure 7.

Figure 7: Air Quality Governance Organogram



Further detail on each group and team relevant to Lafarge Tarmac illustrated in Figure 7 is provided below.

8.1 Steelworks Air Quality Steering Group

When: Quarterly

Responsible:

Sponsor – Environment Manager

Core Team – Environment Manager, Environmental Engineer, key representatives from each heavy end works area (Coke Ovens, Harbour & Blending, Burdening, Ironmaking and Steel & Slab), Fire and Environment Managers (Heavy End), Tarmac, Harsco, Darlow Lloyds.

Note: Where core delegates are unable to attend, a suitably briefed deputy should attend instead.

Optional – Process Control, Operational Research, Rolling Mills Fire and Environment Manager.

Activities:

- Review Air Quality performance and activities, as well as overcoming barriers and driving improvements through stakeholder groups.
- Activity groups will take responsibility for influencing works area improvement, increasing pace of improvement and increasing awareness at all levels in the business and its stakeholders.

- Environmental Improvement Engineer to feed meeting information/outcomes to and from Port Talbot Steelworks Steering Groups.
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8.2 Data Retrieval, Analysis, Investigation and Stakeholder Liaison

When: as required

Responsible:

Sponsor – Environment Manager

Lead – Lead Environmental Improvement Engineer

Core Team – Environmental Improvement Engineers

Key Stakeholders and investigation meeting delegates to be called upon as required – Asset Management, Works Area Representatives, Manufacturing Managers, Process Control, Operational Research, Group Environment, Tarmac, Harsco, Darlow Lloyds.

Activities:

- Source identification and significance assessment.
- Air Quality data team liaison.
- Breach investigation.
- Group Environment and Operational Research data analysis and interpretation.

8.3 Strategic Investment and Process Development

When: as required

Responsible:

Sponsor – Environment Manager

Lead – Lead Environmental Improvement Engineer

Core Team – Environmental Improvement Engineers

Key Stakeholders to be called upon as required – Strategy Group, Technical Process Improvement Teams, Asset Management, Works Area Representatives, BMT, Works Managers, Manufacturing Managers, Group Environment, Supplies, Finance, Tarmac, Harsco, Darlow Lloyds.

Activities:

- Benchmarking.
- Development and implementation of the air quality roadmap and associated improvement plans.
- Developing and implementing wise investment into emissions reduction based upon the scientific output from other governance groups or workstreams.
- Implementation of strategic improvements through Works Area Environmental PDCA's.
- Implementation of strategic capital investment schemes.

8.4 Works Area Abatement and Control

When: monthly (audits) and as required

Responsible:

Sponsor – Environment Manager

Lead – Individual Works Areas

Technical Direction – Environmental Improvement Engineers

Core Team – Works Area Core Representatives, Manufacturing Managers, Team Leaders
Key Stakeholders – Works area operators

Activities:

- Ensure PM₁₀ and fugitive dust control and abatement in works areas, raising awareness, identifying opportunities for improvement and feeding these to the strategic investment team.
- Auditing areas against AQMPs.
- Ensuring that PM₁₀ performance and complaints are discussed in Works Area Morning Meetings.

8.5 Tarmac Meetings

Weekly Safety Briefs, Monthly Safety Meeting, ¼ SHE meetings

9. Audit

The Environmental Improvement Team will manage and undertake an annual schedule of Works Areas and Key Contractor Air Quality Management Plan (AQMP) Audits. A link to the audit schedule is located in Triangle (document reference number GLAG – 87TEF8). Tarmac Ltd will ensure that a suitable resource is provided for the undertaking of an AQMP audit.

Figure 8 below shows a timeline for the issuing of audit reports. Any actions (e.g. observations, non-conformances) from the Work's Area audits will be issued on an environment report form on the Environment & Quality NCR lotus notes database to enable monitoring of progress towards completion. Actions from audits of key contractors will be issued by email along with an agreed timeline for completion.

Figure 8: Timeline for issue of audit report and actions

Activity	Timescale
Complete audit at work's area / contractor	in month scheduled
Submit draft audit report to approver	within 10 working days of audit
Approve audit report	within 15 working days of audit
Make required changes and submit to work's area / contractor	within 20 working days of audit
Issue actions on Environment & Quality NCR database (works areas) or via email (contractors)	within 25 working days of audit

10. Annual Review of the Air Quality Management Plans (AQMPs)

AQMPs will be reviewed annually. The review will be used to ensure the continuing suitability and effectiveness of the plan. The plan will be considered effective if compliance with the EU Air Quality Directive is achieved by the Port Talbot Air Quality Management Area and if the number of complaints received is below the set limit as prescribed in Annual Plan.

A more frequent review will be undertaken if changes occur that may affect the suitability and / or effectiveness of the plan.

11. Steelworks AQMP Tasks and Responsibilities

Those responsible for undertaking the Steelworks AQMP are outlined in Table 2.

Table 2: Resources to be used for Air Quality Management Plan Tasks

Task	Responsible
Ensuring that a suitable resource is provided to	Safety, Health & Environment Manager

Task	Responsible
enable the effective implementation of the Steelworks Air Quality Management Plan.	
Providing Resource for the Effective Implementation of the Air Quality Management Plan.	Tarmac Works Manager
Providing appropriate support to Works Areas and Key Contractors to enable the effective implementation of their Air Quality Management Plans.	Environment Manager
Key points of contact at Tarmac Ltd for communication with external bodies (e.g. NRW, Welsh Government, NPTCBC) on Air Quality.	Tarmac Works Manager
Communication of any incidents that may have an impact on Air Quality (e.g. uncontrolled releases of dust, failure of abatement systems) to the Environment Department.	Tarmac Works Manager
Ensuring effective abatement of atmospheric emissions of PM ₁₀ and fugitive dust	Tarmac Works Manager
Monitoring PM ₁₀ concentrations	Tarmac Works Manager
Responding to elevated PM ₁₀ concentrations	Tarmac Works Manager
Daily PM ₁₀ communication response	Tarmac Works Manager
Up keep of the Air Quality Management Plan	Tarmac Works Manager
Review and interpretation of PM ₁₀ Data and Weather Conditions in Morning Meetings.	Tarmac Works Manager
Implementation of response actions to reduce potential emissions of PM ₁₀ and fugitive dust	Tarmac Works Manager
Provision of a suitable resource to undertake a breach investigation.	Tarmac Works Manager
Undertaking breach Investigations	Environmental Engineer
Providing process data to feed into PM ₁₀ breach investigations.	Tarmac Works Manager
Air Quality Governance	See Section 8
Undertaking Quarterly and Annual Site Data analysis and reporting the findings to NRW	Environmental Engineer

Map of Port Talbot Wind Directions

