



**AN APPLICATION FOR A BESPOKE ENVIRONMENTAL
PERMIT FOR AN INERT AND EXCAVATION WASTE
TREATMENT FACILITY TO BE OPERATED BY
TARMAC AT BAYSTON HILL QUARRY, SHARPSTONE
LANE, SHREWSBURY, SY3 0AW**

DUST AND EMISSIONS MANAGEMENT PLAN

Report reference: TAR/BSN/LJB/5759/01/DEMP
June 2024

Baddesley Colliery Offices, Main Road, Baxterley, Atherstone, Warwickshire, CV9 2LE
Tel. (01827) 717891

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This report has been prepared by MJCA with all reasonable skill, care and diligence, and taking account of the Services and the Terms agreed between MJCA and the Client. This report is confidential to the client and MJCA accepts no responsibility whatsoever to third parties to whom this report, or any part thereof, is made known, unless formally agreed by MJCA beforehand. Any such party relies upon the report at their own risk.

1. Introduction

1.1 MJCA is commissioned by Tarmac Trading Limited (Tarmac) to prepare an application for a bespoke Environmental Permit for an inert and excavation waste treatment facility to be operated by Tarmac at Bayston Hill Quarry, Sharpstone Lane, Shrewsbury, SY3 0AW (the site¹). The site is centred approximately at National Grid Reference (NGR) SJ 50136 09540 and covers an area measuring approximately 1.8 hectares. The location of the site and the Environmental Permit boundary are shown on Figure DEMP 1. The waste treatment facility will be located in the north west corner of the wider Baston Hill Quarry which covers an area of approximately 65 hectares. This document comprises a Dust and Emissions Management Plan (DEMP) prepared to support the application for the proposed waste treatment facility. This DEMP is relevant only to the waste treatment facility and is not relevant to the operations at the wider Tarmac site at Bayton Hill Quarry.

1.2 This DEMP has been prepared based on Environment Agency (EA) guidance “Control and monitor emissions for your environmental permit”² with reference to the section of the guidance entitled “What to include in your dust management plan” and with reference to the relevant aspects of EA guidance ‘Non-hazardous and inert waste: appropriate measures for permitted facilities’³ (the Appropriate Measures guidance). Section 1 of the Appropriate Measures guidance explains when appropriate measures apply and how these should be applied on a site specific basis. In Section 1.2 of the Appropriate Measures guidance, it is stated:

“Some measures in this guidance may not be suitable or relevant for your operation. Appropriate measures will depend on the:

- *activities being carried out*
- *size and nature of the activities*
- *location of the facility”*

¹ References in this DEMP to the site refer to the waste treatment facility shown outlined in green on Figure ERA 1.

² <https://www.gov.uk/guidance/control-and-monitor-emissions-for-your-environmental-permit>. Last Updated 24 November 2022.

³ <https://www.gov.uk/guidance/non-hazardous-and-inert-waste-appropriate-measures-for-permitted-facilities>. Last updated 1 August 2023.

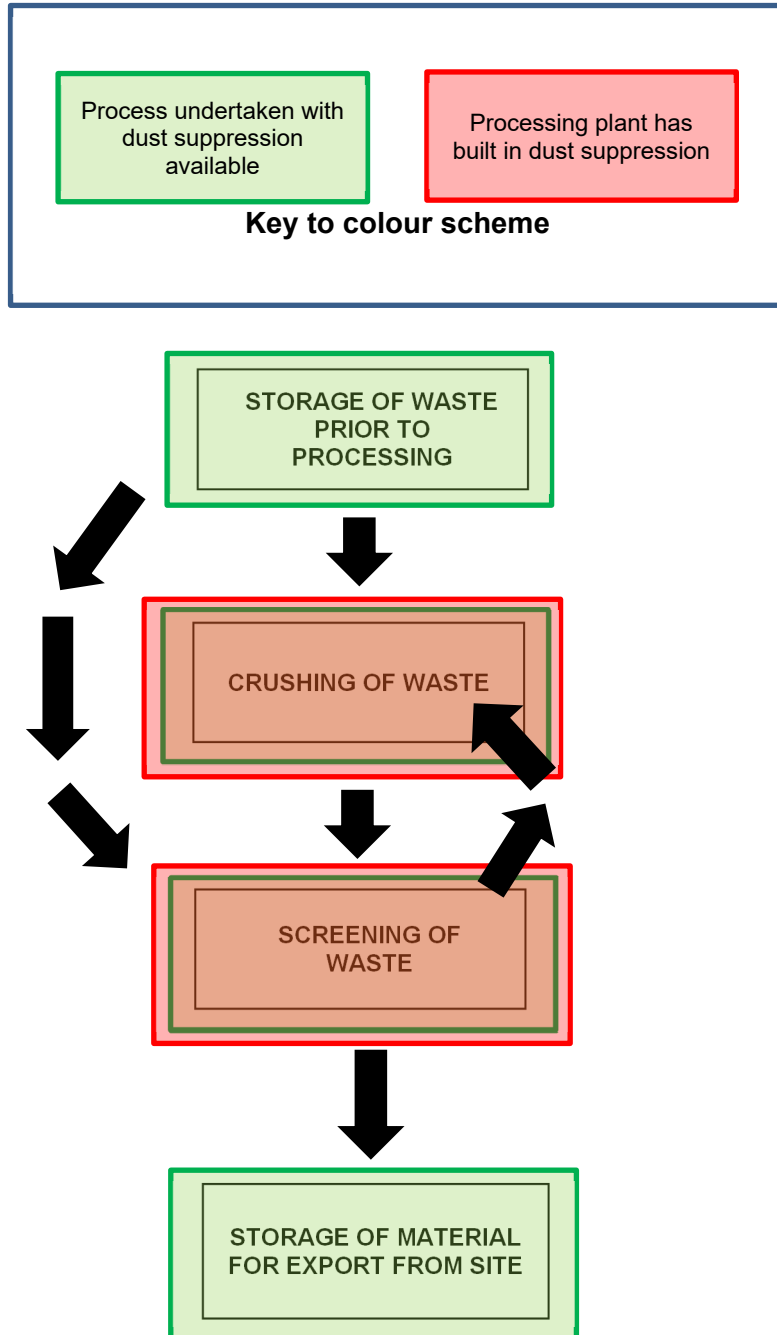
- 1.3** Amongst other issues, it is necessary to consider the size and nature and location of the activities which it is proposed are carried out when assessing the risks from the activities which are a key factor in informing the appropriate measures to effectively control the potential emissions from the site. In particular it is necessary to consider the location of the proposed facility which is within the wider Bayston Hill Quarry site which is an operational quarry operated also by Tarmac including mineral extraction and processing activities. The aerial photograph included on Figure DEMP 1 provides visual context for the site. As shown on Figure DEMP 1, the facility the subject of this permit application is in the northeast corner of the wider Bayston Hill Quarry. There are no residential receptors located within 500m of the downwind boundary of the proposed facility. The site is not located within an AQMA (Air Quality Management Area) declared for particulate matter.
- 1.4** This document presents the management techniques that are used at the site to minimise the potential for particulate matter emissions from the site, the monitoring proposed to confirm the effectiveness of the management techniques and an action plan which will be implemented in the unlikely event that there is a significant emission of particulate matter from the site.
- 1.5** An assessment of the likelihood of particulate matter nuisance associated with the operation of the site is presented in the nuisance and amenity Environmental Risk Assessment (ERA) which is presented at Appendix E to the Environmental Permit application. In the ERA it is concluded that the residual risk in respect of fugitive emissions of particulate matter is 'low'.
- 1.6** The management and monitoring proposals in this document are based on a review of the ERA. The DEMP is reviewed annually as part of the management review. The review includes consideration of the results of particulate matter monitoring and progress with any improvements identified as necessary. A review of the effectiveness of dust monitoring techniques is undertaken and changes made to monitoring techniques as necessary.

2. Site details and description of site operations

2.1 Bayston Hill Quarry is located approximately 3km south of the centre of Shrewsbury to the north east of Bayston Hill as shown on Figure DEMP 1. The proposed waste treatment facility is located within the larger Bayston Hill Quarry and mineral processing area footprint and is centred approximately on National Grid Reference SJ 50136 09540 (the site). The surface of the site is hardstanding comprising crushed gravel. The main access to the site is through Sharpstone Lane, a private tarmac surfaced lane from the A5112 which runs in a generally south west to north east direction from approximately 1.5km east of the permit boundary. The internal quarry haul road which links the public highway to the entrance to the site is hardstanding comprising a crushed gravel surface.

Source

2.2 The layout of the proposed activities is shown in the inset on Figure DEMP 1 and the location of the proposed activities within the wider Bayston Hill Quarry is identified on Figure DEMP 1. A schematic diagram identifying the key activities to be undertaken is presented below. The schematic diagram should be read in conjunction with the site layout plan.



2.3 As shown in the schematic diagram, waste imported to the site is subjected to a limited series of treatment activities comprising crushing and screening, both of which are undertaken with dust suppression available, either built into the treatment plant or via mobile suppression using a water bowser. Each of the steps in the process are described below giving consideration to the potential for the specific activity to generate or release particulate matter. Where specific activities have the potential to generate or release particulate matter, the proposed control measures are described and are summarised in Table DEMP 2 - Source - Pathway - Receptor linkages.

2.4 The proposed waste to be accepted at the site is limited to 17 03 02, bituminous mixtures other than those mentioned in 17 03 01. This waste type comprises returned asphalt and road planings which are generated from the removal of the top layer of bitumen based road surfaces. Dust, loose fibres or significant amounts of particulate matter is not generally associated with this waste type. The incoming waste will be stored in stockpiles on a hardstanding surface prior to processing EA guidance "Control and monitor emissions for your environmental permit" includes a section entitled "Stockpiled waste and open ground" which lists a range of other appropriate measures where waste stockpiles will be located outdoors. The other appropriate measures include:

- *"controlling the moisture content of the material in the stockpile to prevent materials becoming friable*
- *planting grass or trees on open ground to reduce dust (hydro-seeding can rapidly establish vegetation on waste tips, slag heaps or other apparently infertile ground)*
- *using sprays*
- *appropriately positioning windbreaks*
- *making sure stockpiles do not face the direction of the prevailing wind"*

2.5 As shown on the inset to Figure DEMP 1, the wind rose shows that the prevailing wind direction is from the WSW with components from the NNW and east. A mobile water bowser is available to provide dust suppression sprays to control the moisture content of the material in the stockpiles to prevent materials becoming friable, albeit that (unlike soil for example) asphalt and road planings generally do not become friable in dry conditions. Based on the site setting (situated within an operational

quarry, the type of accepted waste being limited to 17 03 02, the site not being located in an AQMA and no residential receptors within 500m downwind of the site) it is considered unnecessary to store material in the site in bays and if bays are installed it is considered unnecessary to limit stockpile heights to 0.5m below the top of the bay. For these same reasons, there are no proposals to install perimeter fencing or perimeter netting at the boundary of the site.

2.6 The first stage of the process will be to crush the waste. Crushing will be undertaken at the site on a campaign basis when a sufficient quantity of material is present for the crushing plant to be deployed. It is likely that the crushing campaigns will be undertaken at the site two or three times per year and the quantity of material crushed during each campaign will be approximately 7,000 to 10,000 tonnes. Crushing of waste is the activity with the greatest risk of generating and releasing particulate matter at the site, however as the waste being accepted at the site will only comprise of bitumen bound planings and asphalt it is considered unlikely that a significant amount of particulate matter will be generated through the crushing process. However, a combination of control measures will be applied to this activity including:

- Limiting the time period during which the crusher is employed at the site (ie crushing on a campaign basis rather than on a routine/daily basis).
- Having regard to the weather conditions when planning crushing campaigns, including avoiding crushing during weather conditions that may preclude the effective management of particulate matter.
- Enclosure of the conveyors associated with the crusher.
- Provision of dust suppression spray bars built into the crusher.
- The use of a water bowser to provide mobile dust suppression, particularly for the output from the crusher

2.7 The output from the crusher will either be deposited in the processed material storage area or will be transferred to the screening plant for particle size separation depending on which grade of material is required. The controls in respect of the screening process will consist of a mobile water bowser readily available to provide dust suppression at the entry and exit points from the screening plant in the unlikely event that there is a potential for release of particulate matter during the process. Additional controls consist of dust suppression spray bars built into the screener and enclosure of the conveyors associated with the screener.

- 2.8** The output material produced from the processed waste will be exported from the permitted site for recovery at a suitably authorised facility (for example a roadstone coating plant).
- 2.9** A mobile water bowser will be available to provide dust suppression for materials stored in the processed material storage area.
- 2.10** In addition to the processing activities described above, the activities with the potential to generate and/or release particulate matter include the movement of particulate matter on vehicle bodies and the resuspension of particulate matter on haul roads and the site surface by vehicles.

Pathway

- 2.11** Particulate matter is dispersed from the source to potential receptors by the wind. The location of sources of particulate matter are within the permit boundary. Based on the prevailing wind direction which is from the WSW with components from the NNW and east, as shown on the wind rose from Midlands Region Upper Severn on Figure DEMP 1, areas to the ENE, SSE and west of the site are down prevailing wind of the site.

Receptors

- 2.12** The site and surrounding area are shown on Figure DEMP 1. The proposed waste treatment facility is located within Bayston Hill Quarry and mineral processing area. There are no residential receptors within 250m of the site. As shown on Figure DEMP 1, a housing estate is located to the north of the site on the opposite side of the A5, just under 500m away from the site. Figure ERA 1 shows buildings located approximately 325m north east of the site boundary to the south of the A5. It is understood that the buildings at this location are unoccupied and are due to be demolished. A Garden Centre is located approximately 500m north of the permit boundary on the opposite side of the A5. Properties associated with the Grade II listed building Betton Alkmere are located approximately 500m south east of the site boundary as shown on Figure DEMP1. There are no residential dwellings within 500m down prevailing wind direction of the permit boundary.
- 2.13** There are several public rights of way within 1km of the site boundary. The closest footpath to the site is Route Code 0443/84/1 Footpath which runs along the southern

boundary of the site and connects with Route Code 0406/51/2 and 0406/29A/1 approximately 500m south of the site. There are other public rights of way within 1km of the site adjacent to the perimeter of the wider Bayston Hill Quarry.

- 2.14** Air Quality Management Areas (AQMAs) are declared by Shropshire Council for nitrogen dioxide according to DEFRA⁴. The nearest AQMA is an area in the centre of Shrewsbury approximately 3km from the site, based on nitrogen dioxide derived from traffic emissions. The site is not located within an AQMA and there are no declared AQMAs in the Shropshire Council area for particulate matter.

⁴ https://uk-air.defra.gov.uk/aqma/local-authorities?la_id=184

3. Particulate matter management techniques

3.1 The control of particulate matter at the site is achieved by a combination of controls on waste delivery and receipt at the site and operational techniques employed at the site. The techniques selected for use at the site are based on well-established techniques to control the emissions of particulate matter across the wider site under the current planning permission. Collectively the techniques amount to good housekeeping. Reference has been made where relevant to the Environment Agency Technical Guidance Document (Monitoring) M17⁵ entitled 'Monitoring of particulate matter in ambient air around waste facilities' (M17) and appropriate measures for control of dust and mud presented in Environment Agency guidance "Control and monitor emissions for your environmental permit". A variety of techniques are used at the site based on site specific circumstances. The techniques are described below and earlier in Section 2.

Responsibility for implementation of this plan

3.2 The site manager shall be responsible for the management of particulate matter and site staff are trained appropriately with support from the Technically Competent Manager (TCM). The training includes refresher training however during the course of routine operation of the site the experience of the site staff, including the site manager, comprises on-the-job training which complements the refresher training. It is the responsibility of the site manager to ensure that the DEMP is being followed and to ensure that appropriate training is given.

Operational controls

3.3 For all anticipated deliveries of waste to the site, transporters are instructed to cover the loads with a sheet or otherwise contain their loads (for example in an enclosed vehicle) during transport to the site to minimise the risk of particulate emissions. Incoming loads remain sheeted or contained until such time as they are inspected and/or discharged. Following completion of the visual waste acceptance checks,

⁵ <https://www.gov.uk/government/publications/m17-monitoring-of-particulate-matter-in-ambient-air-around-waste-facilities>
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drivers delivering waste to the site are instructed to place waste in the reception area of the site.

- 3.4** Waste received at the site is subject to pre-acceptance checks and acceptance screening comprising, where appropriate, visual inspection to confirm that the load is consistent with the waste types permitted for acceptance at the site. In the event that unsuitable materials are delivered to the site, including wastes comprising solely or mainly dusts, powders or loose fibres, the load is rejected.
- 3.5** In order to minimise the deposition of mud that may subsequently dry and generate particulate matter if disturbed, such as when tracked over by vehicles, all vehicles delivering waste to the site use the automated wheel cleaning facilities at the main mineral processing area as necessary before leaving the site. Vehicles will be instructed to use the automated wheel wash facility as they exit the site prior to returning to the local road network; high-pressure hoses will be applied to vehicles that require extra cleaning to ensure vehicles are free of significant debris. The sensors on the wheel wash automatically turn on upon approach by a vehicle. The wheel cleaning facilities are maintained in full working order throughout the life of the site. The site access road and the immediate external public highway (Sharpstones Lane) are swept with a road sweeper.
- 3.6** The movement of site traffic is restricted to defined traffic routes which are maintained. Vehicle speed limits of 15mph are imposed on the site and on the adjacent access route for safety reasons and to reduce the potential for significant particulate matter to be resuspended. Insofar as it is practicable all site vehicle exhausts are upward pointing to prevent the disturbance of particulate matter from the road and site surfaces. The crushing and screening equipment used at the site are maintained in accordance with the manufacturer's recommendations to optimise performance and minimise emissions. A no idling policy is implemented at the site for vehicles and plant.
- 3.7** During dry weather conditions mobile bowsers and dust suppression water spray systems are used to spray water onto the Quarry site traffic routes and the adjacent haul roads and access roads and as described in section 2 above, a water bower will be employed on waste stockpiles and during waste treatment activities to minimise the potential for particulate matter to be generated and become airborne. The use of a water bower is a proven effective dust management technique at

numerous other waste treatment facilities operated by Tarmac and within the wider Bayston Hill Quarry complex. Operations which may have the potential to generate particulate matter will cease if weather conditions and ground conditions preclude effective dust control. This decision will be made at the discretion of the TCM and / or site manager based on the site conditions (dry, damp, wet) giving consideration to the weather conditions (windy, calm, etc) and the type, quantity and particle size of the waste on site. Additional dampening of waste materials and / or stockpiles will be employed during high winds particularly when the prevailing wind direction is towards potentially sensitive receptors in the vicinity of the site.

- 3.8** In the event that particulate matter control measures fail to the extent that effective dust management cannot be provided then waste related operations at the site are suspended until such time as the control measures can be reinstated.
- 3.9** All relevant site personnel including contractors are trained in working practices and mitigation measures to minimise the generation and release of particulate matter.
- 3.10** Drop heights are minimised during the loading, unloading, processing and transferring of waste. Loads will remain sheeted prior to unloading. The mobile water bowser is available and employed to provide dust suppression to minimise the release of particulate matter during the unloading of waste at the site if unacceptable dust or particulate matter emissions occur or have a high likelihood of occurring due to unusually dry and/or windy weather conditions.
- 3.11** Visual monitoring for emissions of particulate matter is undertaken by site personnel. Further details are provided in Section 4 of this document.

Water availability/usage

- 3.12** Surface water is collected in surface water lagoons for re-use within the wider quarry site. The water bowser is filled up using water from the lagoons to ensure that water is available for dust suppression at the waste treatment facility. The dust suppression built into the crushing and screening plant is topped up using the water transported by the water bowser. Given the abundance of water resources available within the wider quarry, the event of a water shortage during long periods of dry weather or drought conditions is extremely unlikely. Should such an exceptional situation occur, all operations with the potential to generate particulate matter (for example crushing

and screening of waste) will temporarily cease until such a time that adequate water supply can be restored.

Action Plan

3.13 A Particulate Matter Management and Monitoring Action Plan is presented in Section 6 of this document. The Particulate Matter Management and Monitoring Action Plan will be implemented in the event that:

- i. there is an unacceptable visual emission of particulate matter from the site,
or
- ii. a complaint is received.

4. Particulate matter monitoring programme

4.1 In TGN M17 it is stated that despite the subjective nature of the visual assessment of dust emissions:

'this simple, cheap and easy to implement assessment approach has the significant advantage of providing instantaneous information on problems (e.g. it may be possible to directly observe the source of the dust emission, such as a particular stockpile) allowing rapid actions to be taken to deal with the problem.'

4.2 During all site operations visual monitoring for emissions of particulate matter is undertaken by suitably trained site personnel. In addition to the continuous visual monitoring a specific routine monitoring schedule is undertaken comprising visual monitoring at 4 specific on-site locations at least once per day while the site is active. The on-site monitoring locations are shown on Figure DEMP 1. This is routinely carried out and the results of the monitoring are recorded on the visual monitoring checklist provided at Appendix A. Visual monitoring by suitably trained site personnel is the most effective method of detecting as quickly as possible emissions of particulate matter throughout the working day thereby facilitating promptly the assessment of such emissions allowing the selection and implementation as quickly as practicable of control measures as necessary. The effectiveness of the measures taken in controlling emissions are assessed during inspections undertaken at the site following implementation of the control measures. Any problem that is observed is reported to the site manager who is responsible for investigating the cause and implementing any necessary remedial action. The results of inspections and remedial measures taken are recorded in the site diary.

4.3 As part of the daily housekeeping practices, an initial and final site inspection is completed at the start and end of each working day to check that the site is in a condition that has a low potential to release dust including dust as a result of operations outside of normal operational hours. Publicly available weather forecasts are consulted by site staff to identify forecasts of extreme weather events or storms which may have the potential to increase the risk of the release of particulate matter from the site outside operational hours and additional control measures such as dampening of site surfacing and stockpiles prior to the end of the working day is implemented as necessary. The findings of the visual assessments are recorded in

the Site Inspection Checklist presented at Appendix B. Any problem that is observed is reported to the site manager who is responsible for investigating the cause and implementing any remedial action as necessary. Incidents and remedial measures taken are recorded in the site diary.

- 4.4** The site manager uses the Meteorological Office⁶ weather forecast or other forecast to predict weather conditions such as prolonged dry spells which may give rise to particulate matter emissions and implements the appropriate precautionary and or management measures. Qualitative assessments of the on-site conditions are undertaken as necessary, and measures are taken to control aerial emissions of particulate matter within the site boundary.
- 4.5** The records of the visual particulate matter monitoring are reviewed periodically to facilitate the review and assessment of operational activities as necessary. The review is carried out in conjunction with a review of meteorological data that are available and the site operations that took place during the monitoring period together with any complaints regarding particulate matter emissions that have been received.
- 4.6** In the event that based on the visual site observations there is an unacceptable particulate matter emission from the site the Particulate Matter Management and Monitoring Action Plan is implemented. The Particulate Matter Management and Monitoring Action Plan is presented in Section 6.
- 4.7** As there are no sensitive receptors located within 500m down wind of the prevailing wind direction at the site and as the site is not located within an AQMA declared for particulate matter it is unnecessary to undertake quantitative dust monitoring at the site.

⁶ <https://www.metoffice.gov.uk/>

5. Engagement with the community

- 5.1 Tarmac are conscious of the potential impact on the environment of its activities and strive to manage and minimise those impacts. Tarmac recognises the importance of community engagement and strives to build a positive working relationship with local residents and businesses across all of its sites. Contact details for the site, including out of hours contact details, shall be displayed on the signage at the site entrance. Tarmac works closely with the local community including through liaison committee meetings with local residents.

Reporting of complaints and management responsibilities

- 5.2 Any complaints about the site operations and/or their impact on the environment made by third parties (including any complaints identified by the Environment Agency or Local Authority) are brought to the attention of the site manager in the first instance who will identify and implement the measures needed to resolve the matter as set out in Section 6 and the complaints procedure in accordance with the accredited ISO14001 management system. They shall then record the complaint and the actions taken to resolve it. A register of complaints is maintained on site in the site diary. Complaints are handled via the Organisation's electronic reporting system. Complaints are escalated to senior management, if necessary, based on the number and type of complaints. The need to escalate complaints is determined by the site manager. Should complaints be escalated the details are recorded in the site diary.
- 5.3 The Particulate Matter Management and Monitoring Action Plan which is implemented in the event that a complaint is received is presented in Section 6 of this document.

6. Particulate Matter Management and Monitoring Action Plan

Context

6.1 The overriding management principle of the site with respect to the control of particulate matter shall be to operate the site in a manner which prevents or minimises the release of dust as set out in the DEMP. If it is considered that the waste received, handled, treated and stored at the site, or the site surfacing itself is in a condition that has the potential to release a significant quantity of dust such that there is a potential for off site dust emissions, additional dust suppression measures will be employed in a manner proportionate to the risk. These actions will be undertaken as part of the routine operation of the site. The action plan in this section of the report sets out the additional actions that will be taken in the event that conditions are identified whereby the routine measures need to be supplemented or improved.

Introduction

6.2 The action plan will be implemented in the event that:-

- i) there is an unacceptable visual emission of particulate matter from the site or
- ii) a complaint is received.

6.3 An unacceptable visual emission of particulate matter from the site comprises a visual observation of dust or particulate matter crossing the site boundary. The initial observation will be made by the site operative who has identified the emission and will be verified by the site manager.

6.4 The timescale for implementation of the action plan will vary depending on the circumstances under which it is implemented. If an unacceptable visual emission is observed by site operatives there will be no delay in implementing the action plan, whereas a complaint may be received by the operator a number of hours or even days after the activity that may have contributed to the complaint has ceased. In the latter case investigation of the complaint will be based on a review of the data and observations recorded at the site corresponding to the time at which the complainant observed the event.

Action plan

6.5 In the event that an unacceptable visual emission of particulate matter from the site is observed by site personnel or in the event of a complaint associated with particulate matter emitted from the site the event will be investigated immediately by the site manager to determine the source as follows:

If it is established that the emissions are attributable to the waste activities being undertaken at the Tarmac site action will be taken to control the emissions including where relevant:

- Establish the cause of the emissions and take immediate action to control the emissions.
- If emissions are attributable to unloading or processing (crushing and screening) of waste, additional dust suppression will be applied to control the particulate matter emission from the activity being undertaken. If necessary, the unloading and processing of waste will temporarily cease.
- Organise additional road sweeping and mobilise the bowser to spray the affected area if necessary.
- Take action to ensure that vehicles are obeying the speed limits.
- Identify whether there are any other activities being undertaken at locations other than the Tarmac waste facility and estimate the extent to which other activities may contribute to the visual emissions observed on the site including circumstances where windblown dust may be transported across and/or over the site from the external sources.
- In the unlikely event that the routine control measures employed at the site are not sufficient to control particulate matter emissions then consideration will be given to further measures to minimise and control emissions.

6.6 Appropriate action will be taken which will include the cessation of the activity. The decision to cease activity is made at the discretion of the TCM and/or site manager based on the circumstances leading to the complaint. In the case of a complaint, the action taken will be communicated to the complainant. The nature of the

complaint, the findings of the investigation and the action taken will be recorded using the complaints procedure which forms part of the accredited ISO14001 management system. In the case of a complaint, the action taken is communicated to the complainant and the Environment Agency continually following the receipt of the complaint. The relevant operational procedures will be reviewed and if improvements are needed they will be implemented. The decision to make improvements to operational procedures is made at the discretion of the TCM and/or site manager based on the circumstances leading to the complaint.

TABLES

Table DEMP 1
Waste types authorised to be accepted at the site

Waste code	Description of waste
17	Construction and demolition wastes
17 03	Bituminous mixtures, coal tar and tarred products
17 03 02	bituminous mixtures other than those mentioned in 17 03 01

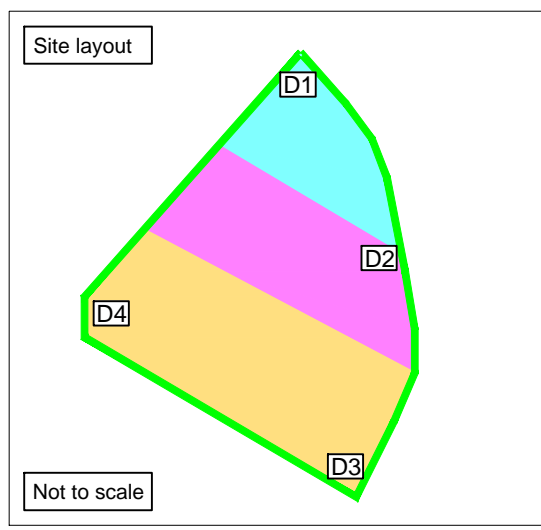
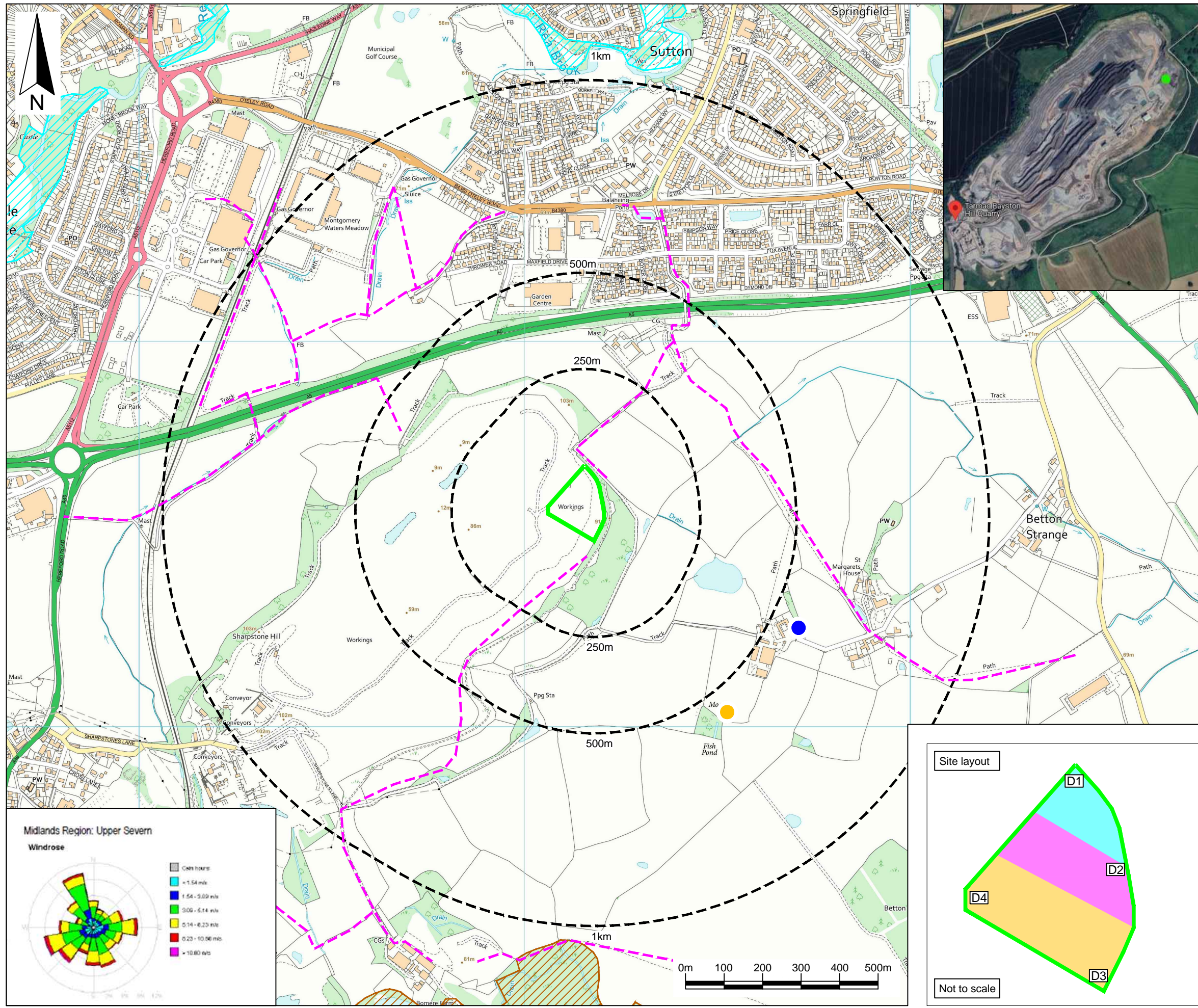
Table DEMP 2

Source - pathway - receptor linkages

Source	Pathway	Techniques employed to minimise the emissions of dust
Vehicles entering and/or leaving the site with mud on their wheels	Tracking out of the site of particulate matter and mud on vehicle wheels which may drop off and deposit on the public highway which may subsequently dry and generate particulate matter if disturbed such as when tracked over by vehicles.	All vehicles delivering waste to the site will use the wheel cleaning facilities in the mineral processing area as necessary before leaving the wider quarry site. The wheel cleaning facilities will be maintained in full working order throughout the life of the site. The site access road will be maintained and swept with a road sweeper as necessary.
The resuspension of particulate matter on roads and site surfacing by vehicles	Atmospheric dispersion	A mechanical road sweeper is employed at the site to clean the site, including the area between the storage and processing areas and the site entrance/exit. The mechanical road sweeper will be complemented as needed by manual sweeping by site personnel using brushes. The hardstanding surface of the site will be dampened down as necessary to reduce the potential for particulate matter to be resuspended by vehicles travelling in this part of the site.
The release of particulate matter and debris from waste loads as they are delivered to the site	Falling off delivery or collection vehicles.	All vehicles using the site will be instructed to sheet or otherwise contain their loads prior to arrival at the site to minimise the risk of particulate emissions. Loads will be sheeted or contained until such time as they are inspected and/or deposited. Outgoing loads will be sheeted.
The release of particulate matter when waste loads are deposited or set down in stockpiles on the site.	Atmospheric dispersion	Drop heights are kept to a minimum and loads that arrive sheeted are kept sheeted immediately prior tipping to minimise the potential for release of dust. Dust suppression is provided at the site by a mobile water bowser which is employed to minimise the release of dust from stockpiled waste at the site. Employment of a water bowser has been an effective dust suppression technique employed at the wider Bayston Hill Quarry site.
The release of particulate matter when treating	Atmospheric dispersion	Crushing is carried out on a campaign basis (i.e., not on a routine daily basis) and taking into consideration the prevailing weather conditions in order to reduce the risk of

Source	Pathway	Techniques employed to minimise the emissions of dust
waste through crushing.		generating and releasing particulate matter. Crushing will be avoided during weather conditions that preclude effective particulate matter management. The crushing processing plant is equipped with enclosed conveyors and built in dust suppression spray bars to minimise the release of particulate matter during the treatment of waste at the site. A mobile water bowser will be employed to provide additional dust suppression.
The release of particulate matter when treating waste through screening.	Atmospheric dispersion	Drop heights will be minimised during the unloading of waste into the screener. The screener is equipped with a built in dust suppression system to minimise the release of particulate matter during the treatment of waste at the site. A mobile water bowser will be employed to provide additional dust suppression.
Particulate emissions from the exhaust of vehicles and plant on site.	Atmospheric dispersion	Vehicles and plant on site will be maintained to optimise performance and minimise vehicle emissions. A no idling policy will be implemented at the site for vehicles and plant.

FIGURES



Key / Notes

- Environmental Permit boundary
- Offset from the Environmental Permit boundary
- Public rights of way
- Approximate location of Site of Special Scientific Interest (SSSI) - Bomere, Shomere and Betton Pools and Midland Meres & Mosses – Phase 1 Ramsar site
- Approximate location of Local Nature Reserve
- Approximate location of Grade II Listed building - Betton Alkmere
- Approximate location of Scheduled Monument - Moated site, fishponds, and ridge and furrow cultivation remains, 260m southwest of Betton Alkmere
- D1 - D4 Visual monitoring locations
- Typical location of input material prior to processing
- Typical location of treatment output material stockpile
- Typical location of mobile processing equipment area (crushing and screening)

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	Status	Drn	App	Chk	Date

Site: BAYSTON HILL QUARRY
 Client: **TARMAC**
 A CRH COMPANY

Title: The site setting

Figure DEMP 1 Scale: 1:10,000@A3

Drawing Ref: TAR/BSN/05-24/24366
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MJCA Baddesley Colliery Offices,
 Main Road, Baxterley, Atherstone
 Warwickshire, CV9 2LE.
 Telephone : 01827 717891
 Technical advisers on environmental issues Fax : 01827 718507

APPENDICES

APPENDIX A
DUST MONITORING CHECKLIST

Dust Monitoring Form

Week commencing:

Day	Name of assessor	Time	Location	Wind direction	Visual observations / Comments	Action taken
Monday			D1			
			D2			
			D3			
			D4			
Tuesday			D1			
			D2			
			D3			
			D4			
Wednesday			D1			
			D2			
			D3			
			D4			
Thursday			D1			
			D2			
			D3			
			D4			
Friday			D1			
			D2			
			D3			
			D4			

Additional comments

Signed off by
 Management:

Use as many of these forms as necessary

APPENDIX B
SITE INSPECTION CHECK SHEET

Site Inspection Check Sheet

Week Commencing: _____

Daily Check	Mon	Tue	Wed	Thu	Fri	Sat	Sun
TCM signed in?							
Waste/materials stored in correct area?							
Outputs – stored in separate marked areas							
Condition of yard – surface integrity, spillages, debris							
Water storage tank – visual check of integrity							
Dust – visual assessment							
Dust – bowser operational							
Noise – assess operations							
Wheel wash - functional							
Mud on road – site entrance checked							
Odour – check for complaints, assess odour							
Litter – check complaints, litter around site							
Security – boundary condition							
Condition of road/site surfaces – cleanliness, surface condition							
<input checked="" type="checkbox"/> if OK or nothing to report							
<input checked="" type="checkbox"/> if not – see facility diary for details							
Weekly Inspections	Comments						
Permit & EMS – available & up to date							
Duty of Care documents – checks current & recorded?							
Mobile & static plant maintenance – checks completed							
Accommodation/welfare facilities – toilets, mess							
Monthly Inspections	Comments						
Warning/information signs – suitability, condition							
Site ID board – condition, still current							
Fire extinguishers / safety equipment							
First Aid boxes – contents & position							
Plant maintenance schedules							

Issue no:	1	Date:	July 2024	
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Site Inspection Check Sheet

Comments:

Checks carried out by: Print Name _____ Signed _____ Date _____

Reviewed by
Manager/Director: Print Name _____ Signed _____ Date _____

Issue no:	1	Date:	July 2024		
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