

# MANTON QUARRY RESTORATION

**Environmental Permit Variation Application**  
**Emissions (Dust) Management Plan**  
Prepared for: **Brianplant (Humberside) Limited**  
Client Ref: EPR/GB3535RQ/V002

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## CONTENTS

<b>1.0</b>	<b>INTRODUCTION .....</b>	<b>2</b>
1.1	Current Environmental Permit .....	2
1.2	Report Context.....	2
1.3	Scope .....	3
<b>2.0</b>	<b>OVERVIEW &amp; POTENTIAL FOR DUST EMISSIONS .....</b>	<b>4</b>
2.1	Site Description .....	4
2.2	Site Operations Description .....	4
2.3	Site Surroundings.....	4
2.4	Potential Dust Sources .....	5
<b>3.0</b>	<b>POTENTIAL DUST EFFECTS.....</b>	<b>6</b>
3.1	Prevailing Meteorological Conditions .....	6
3.1.1	Local Wind Speed & Direction Data .....	6
3.1.2	Rainfall Data.....	6
3.2	Sources of Dust .....	7
3.2.1	Designed in Dust Control Measures .....	7
3.3	Dust Complaints.....	9
<b>4.0</b>	<b>CONTROL OF DUST EMISSIONS .....</b>	<b>10</b>
4.1	Overview .....	10
4.2	Dust Control Measures .....	10
4.3	Monitoring .....	12
4.3.1	Meteorological Conditions.....	12
4.3.2	Visual Dust Monitoring.....	13
<b>5.0</b>	<b>SITE MANAGEMENT &amp; CONTINGENCY MEASURES .....</b>	<b>14</b>
5.1	Responsibilities .....	14
5.2	Training .....	15
5.3	Incident Reporting .....	15
5.4	Dust Complaint Procedure .....	15
5.5	Liaison with Community and Regulators.....	16
5.6	Record Keeping .....	17
5.7	DMP Update and Review .....	17
<b>6.0</b>	<b>CONTINGENCY ACTION PLAN .....</b>	<b>18</b>

## DOCUMENT REFERENCES

### TABLES

Table 3-1 Designed in Dust Control Measures .....	7
Table 3-2 Sources of Dust .....	9
Table 4-1 General Site Control Measures.....	10
Table 4-2 Activity Specific Preventative Dust Control Measures .....	11
Table 5-1 Dust Management Responsibilities .....	15
Table 6-1 Contingency Plans.....	18

### FIGURES

Figure 3-1 Humberside Meteorological Station, 2015-2019.....	7
Figure 5-1 Dust Management Plan Process .....	14

### APPENDICES

Appendix 01: Example Meteorological Condition Record Sheet
Appendix 02: Example Dust Event Form
Appendix 03: Dust Complaint Form

### DRAWINGS

Drawing 0726-1-8	Site Location Plan
Drawing 001	Environmental Permit Boundary V2
Drawing 002	Cross Sections
Drawing 003	Environmental Site Setting
Drawing 0726-1-13	Restoration Concept

## 1.0 Introduction

SLR Consulting Limited (SLR) has been retained by Brianplant (Humberside) Ltd to prepare an Environmental Permit (EP) variation application. The variation application seeks to add a bespoke deposit for recovery activity to the existing EP to facilitate the use of suitable waste in the restoration of Manton Quarry (the site), located near Manton, North Lincolnshire DN21 4JT under the Environmental Permitting (England and Wales) Regulations 2016.

### 1.1 Current Environmental Permit

Brianplant hold a Tier 2 EP for the 'treatment of waste to produce soil, soil substitutes and aggregate' (based on SR2010 No 12) at Manton Quarry (Ref: EPR/GB3535RQ). The EP boundary covers the entire quarry to ensure ongoing operational flexibility as the quarry is restored. The proposed area to be restored through waste recovery sits within the wider existing recycling EP boundary as illustrated on Drawing 001. Treatment and storage of waste destined for restoration will be processed within the recycling area of the site.

The EP authorises the following activities as described in Annex I and Annex II of the Waste Framework Directive:

- **R13:** Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced);
- **R3:** Recycling/reclamation of organic substances which are not used as solvents;
- **R5:** Recycling/reclamation of other inorganic compounds.

There is no change to the existing recycling activities in any way as a result of the proposed EP variation application. Brianplant will continue to accept up to 75,000 tonnes per annum of waste as listed in Table S2.1 of the existing EP for the purpose of physical treatment to produce topsoil and a range of recycled hardcore. The permitted tonnage for the recycling activity is separate, and in addition to the proposed permitted tonnage for the waste recovery activity.

### 1.2 Report Context

To achieve a restoration profile of between 66m and 68m AOD, with the entire area re-soiled with 2m of soil products, approximately 146,000m<sup>3</sup> of material will be required. This equates to approximately 321,200 tonnes at an assumed density of 2.2t/m<sup>3</sup>.

The site will therefore be subject to a 2m restoration layer across the entire area. This will be subdivided into:

- 1.7m of suitable material; and
- 0.3m of waste topsoil created from recycled soils and stones.

It is recognised that activities on site could lead to the release of fugitive emissions of dust particles and therefore it is a requirement to control activities on site in order to prevent or mitigate potential releases of dust.

The implementation of this plan will be under the control of Site Management.

This plan shall be incorporated into the site procedures and shall be revised as necessary to ensure that it remains appropriate to the activities occurring on site and that any changes in conditions relating to dust management are dealt with as part of those revisions. In particular, the monitoring procedures and compliance actions will be updated as required by the procedures within the Emissions (Dust) Management Plan (DMP).

The DMP has been written with reference to the Environment Agency's (EA) guidance, Control and Monitor Emissions for your Environmental Permit.

## 1.3 Scope

The objective of this document is to specify a range of measures to manage the environmental impacts that could arise during the activities taking place on site, in respect of managing dust emissions. A series of site-specific control measures as described will therefore minimise potential risks to surrounding receptors and the environment.

The components of the DMP are set out within this document as follows:

- Section 2 – Overview and Potential for Dust emissions;
- Section 3 - Potential Dust Effects;
- Section 4 - Dust Control Measures;
- Section 5 - Site Management & Contingency Measures; and
- Section 6 – Contingency Action Plan.

This version (2.0) represents the situation in July 2023 that is based on the proposed activities as detailed in supporting documentation to EP variation application.

There is no change to the existing recycling activities in any way as a result of the proposed EP variation application, and existing dust management measures are considered to be sufficient. For the purposes of this DMP, existing management measures have been integrated with proposed management measures for the new bespoke waste recovery activity.

## 2.0 Overview & Potential for Dust Emissions

### 2.1 Site Description

The site is situated approximately 450m southeast of the village of Manton within a predominantly agricultural area. Kirton in Lindsey is located approximately 3.5km south of the site and Scunthorpe is approximately 9km to the northwest. Access to the site is provided by Manton Lane which runs adjacent to the site's northern boundary. This in turn provides access to the B1398 which lies approximately 30m from the site's eastern boundary.

The site is centred on National Grid Reference SE 93976 02420, with the postcode DN21 4JT. The site location is illustrated on Drawing 0726-1-8. The proposed area to be restored through waste recovery sits within the wider existing recycling EP boundary as illustrated on Drawing 001. The environmental site setting, in relation to the proposed waste recovery activity boundary is illustrated on Drawing 003.

Furthermore, an adequate area of hard surfaced road between the wider EP boundary this DMP relates to, and the site entrance/exit to the quarry will be maintained.

### 2.2 Site Operations Description

The area of the quarry to be restored is approximately 7 hectares in size and, prior to development, consisted of agricultural fields. Cross sections are illustrated on Drawing 002.

It is proposed that approximately 7 hectares of agricultural land will be created through the restoration of the central, eastern and southern areas of the quarry. This will re-integrate the site into the surrounding landscape which consists mostly of agricultural land. The south eastern section of the quarry has already been returned to close to original levels and this area only requires final profiling and re-soiling to complete restoration. The final restoration concept is illustrated on Drawing 0726-1-13.

Condition 1 of the first periodic review of the planning permission (Ref: MIN/2016/556) states that all site works must be completed, and the site must be restored in accordance with the approved restoration concept by 24 February 2042<sup>1</sup>.

The EP boundary for the existing waste processing activity for the treatment of waste to produce soil, soil substitutes and aggregate, covers the entire quarry to ensure ongoing operational flexibility as the quarry is restored. The main processing area is located adjacent to the northern boundary of the waste recovery area. Material is transported to the processing area where it is crushed and screened to produce topsoil and a range of recycled hardcore. The existing facility operates under a Tier 2 bespoke permit, based on SR2010 (Ref: EPR/GB3535RQ). No complaints relating to deposited dust have been received within the past three years in relation to the operation of the existing processing facility. No change is proposed to the existing recycling activities in any way as a result of this EP variation application and operations will continue to be undertaken in line with good practice.

The proposed operating hours of the site are between 7:00 and 18:00 Monday to Friday and 7:00 and 13:00 on Saturdays, with no operations taking place on a Sunday or Bank Holiday.

### 2.3 Site Surroundings

Most of the land surrounding the site is occupied by open/agricultural ground with a few quarries located within the surrounding area including Kirton Quarry to the southeast, approximately 50m from the eastern site boundary.

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<sup>1</sup> Condition 1 of Planning Permission MIN/2016/556.

The closest ecological receptor for consideration is Manton Stone Quarry, a geological Site of Special Scientific Interest (SSSI) in which the site is located. Manton Stone Quarry is considered to be a key exposure of the more northerly development of the Lincolnshire Limestone. Four other SSSIs are located within close proximity. These include Cleatham Quarry which lies approximately 640m south, Cliff Farm Pit which is situated approximately 1170m south, Manton & Twigmoor which is located approximately 1170m north, and Messingham Sand Quarry which lies approximately 2340m northwest.

There are no Air Quality Management Area's (AQMA's) within close proximity to the site.

The closest AQMA to the site is as follows:

- Scunthorpe AQMA is located approximately 12.8km north of the site, and was declared for breaching the 24 hour mean Particulate Matter PM<sub>10</sub> within the North Lincolnshire Council Administrative area. The AQMA encompasses an area incorporating part of the town of Scunthorpe and an area to the east of Scunthorpe including the site of the steelworks.

Kirton Quarry and Landfill, located approximately 50m from the eastern site boundary, is the only active quarry and waste management premises which has the potential to release dust. The closest village of Manton is located approximately 45m north-west of the site. As the prevailing wind is from the south-west, the impact of dust for Kirton Quarry and the village of Manton should be minimal due to their locations.

## 2.4 Potential Dust Sources

Activities on site that have the potential to generate dust and can be divided into the following activities:

- Restoration of the site under the remit of a waste recovery activity;
- Recycling operations including the processing and storage of material; and
- Vehicular movement entering and exiting site for waste operations associated with restoration and recycling activities.

Treatment and storage of material is only undertaken as part of the existing recycling EP operations. No treatment or storage of material is undertaken as part of the proposed waste recovery activity area.



## 3.0 Potential Dust Effects

This section presents a review of the potential risk of dust effects and has been completed in order to inform the selection of appropriate dust control techniques to mitigate against the release of dust emissions.

### 3.1 Prevailing Meteorological Conditions

The most important climatic parameters governing the generation and dispersal of fugitive dust are:

- Wind speed will affect the potential for dust entrainment and the distance it may travel;
- Wind direction determines the broad transport of the emission and the sector of the compass into which the emission is dispersed; and
- Rainfall is an important climatological parameter in the generation of dust; sufficient amounts of rainfall can suppress dust at the source and eliminate the pathway to the receptor. According to Arup (1995)<sup>2</sup> rainfall greater than 0.2mm per day is sufficient to suppress dust emissions.

#### 3.1.1 Local Wind Speed & Direction Data

Wind speed and direction data from the Humberside meteorological station, located 17.4km to the east of the site is considered to be broadly representative of the local site conditions. A windrose for Humberside meteorological station is presented in Figure 3-1.

Figure 3-1 indicates that the prevailing wind direction is from the south-west with winds from other directions being more infrequent. On this basis, the locations in the north-eastern sectors have the highest potential impacts from any dust emissions originating from the site.

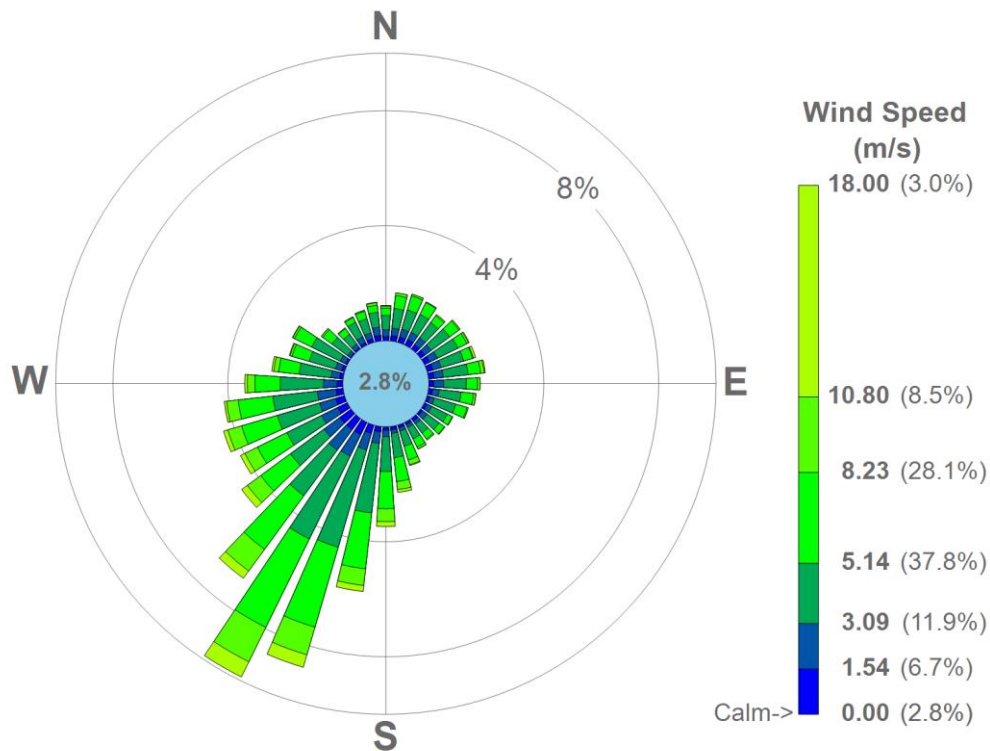
#### 3.1.2 Rainfall Data

Relevant rainfall data applicable to the site has been obtained from the Met Office website<sup>3</sup> of UK mapped climate averages for 1991-2020. The average annual rainfall >01mm/day for the area of the site is 118.10 days per year, comprising 32% of the year. It is therefore considered that on those days the natural suppression afforded by the rain would eliminate all sources of dust across the site.

Rainfall is typically lower in the summer months, combined with higher temperatures to increase the drying time of material. The potential for dust generation and subsequent transfer of airborne dust emissions beyond the site boundary is therefore higher during the summer months.

<sup>2</sup> Arup & Ove Arup Environmental. Environment Effects of Surface Mineral Workings. DoE, October 1995.

<sup>3</sup> <http://www.metoffice.gov.uk/public/weather/climate> accessed January 2022.



**Figure 3-1**  
**Humberside Meteorological Station, 2015-2019**

## 3.2 Sources of Dust

### 3.2.1 Designed in Dust Control Measures

The following measures that are incorporated into the working scheme are considered to afford a degree of reduction in the potential for dust generation. These ‘designed in’ control measures are presented in Table 3-1.

**Table 3-1**  
**Designed in Dust Control Measures**

Activity	Designed in Dust Control Measures
Management Procedures	<p>The Site Supervisor, or their nominee, will exercise day to day control on site at all times. They will have particular responsibility for ensuring full compliance with the conditions attached to the permit. They will assume control either personally or by delegation to suitably trained and responsible staff of: -</p> <ul style="list-style-type: none"> <li>• Vehicle movements;</li> <li>• All loading, tipping and materials handling operations;</li> <li>• Deposit of materials;</li> <li>• Operation of dust suppression measures; and</li> </ul>

Activity	Designed in Dust Control Measures
	<ul style="list-style-type: none"> <li>• Inspection, cleaning and maintenance of all plant and equipment.</li> </ul> <p>All staff will receive necessary training and instruction in their duties relating to the control of all operations and the potential sources of dust emissions. Particular emphasis will be given to dealing with abnormal conditions. Site staff will inform the manager whenever visible dust emissions are observed or appear likely to occur, as a result of any site operation.</p> <p>If at any time dust emissions likely to cause a nuisance beyond the site boundary are detected by the site staff or any complaints relating to dust is received, the incident will be recorded in the Site Diary, and immediate action taken to identify the cause of the problem.</p> <p>If a dust associated problem is related to a specific source of waste then action will immediately be taken to suppress any aerial emissions by damping down or covering the waste with non-dusty materials.</p>
Complaints Procedure	<p>A complaints procedure will be established to ensure that any perceived nuisance being caused to local receptors is dealt with effectively. A register of complaints will be kept on site to record all concerns made either directly to the Site Manager or via the regulatory authorities.</p> <p>Each complaint will be investigated. The Site Supervisor will report the findings and the action taken to the General Manager. The EA will be advised in writing within two weeks of any dust complaint together with the findings of the investigation and any corrective action taken.</p>
Transportation of Materials	<p>Internal haulage restricted to clearly delineated routes, on a prepared surface at a low level where possible.</p> <p>Temporary haul roads will be maintained in good condition and kept free from mud by regular grading, good drainage and use of hardcore as necessary.</p> <p>A water bowser (with tractor) is available on site to suppress dust emissions.</p> <p>All site vehicles will be maintained in accordance with the manufacturer's specification.</p> <p>Site haulage speeds will be controlled to 5 – 10 mph to minimise dust entrainment. Appropriate instruction will be issued to all vehicle drivers.</p> <p>The Site Supervisor will be responsible for checking the situation with regard to dust on a regular basis throughout working hours, and for ensuring that mitigating measures are provided as necessary.</p> <p>There is a wheel wash at the entrance to wider site, but not at the entrance to the waste recovery area. The wheel wash will be utilised when and if required.</p>
Material Handling	<p>Only suitable permitted waste as defined in the environment permit will be accepted.</p> <p>When necessary working areas will be sprayed with water with the use of a tractor and bowser.</p>

Activity	Designed in Dust Control Measures
	In unusually dry / windy conditions site activities will be suspended if it appears likely dust may be carried towards sensitive receptors.

The activities on site that have the greatest potential for dust emissions have been identified as movements on internal haul roads and restoration activities. Table 3-2 outlines the potential sources of dust associated with the proposed operations.

**Table 3-2**  
**Sources of Dust**

Activity	Potential for Dust Generation	Description / Location
Existing recycling and processing facility including material handling and storage	Medium	Material treatment is only undertaken as part of the existing recycling operations. Operations will be temporary and intermittent in nature. Waste will continue to be crushed and screened to produce topsoil and a range of recycled hardcore. Activities will continue to be in line with good practice.
Vehicular movement associated with all waste operations.	Medium	Dust may be created by the movement of the front end loader on the haul road, particularly in dry spells. Particulate emissions from road surfaces are primarily due to re-suspension of loose material present on the road surface as a result of either deposition from the undercarriage of passing vehicles or through the erosion of the surface. Processed material from the existing recycling activity is transported off site which presents the risk of trackout when dust and dirt is transported onto the public road network where it may be deposited and then re-suspended by vehicles using the network.
Restoration activities under the remit of a waste recovery operation.	Medium	Restoration of Manton Quarry by depositing imported suitable waste materials. Activities will be intermittent and temporary in nature. No treatment of material will be carried out as part of the proposed waste recovery activity.

### 3.3 Dust Complaints

To date there have not been any complaints within the past three years relating to activities at the adjacent processing area. Therefore, the dust control measures on site are considered to be sufficient for the restoration activities because no treatment or storage will be undertaken as part of the proposed waste recovery activity.

## 4.0 Control of Dust Emissions

### 4.1 Overview

Brianplant recognises the potential for the site to generate dust emissions and is committed to preparing, operating and restoring the site in accordance with industry best practise. The implementation of industry best practice measures to control and mitigate the generation and transportation of dust can ensure that dust is adequately controlled.

The key method for controlling dust emissions is through good site design, management practices and subsequent good housekeeping, i.e. avoidance of dust generation.

### 4.2 Dust Control Measures

Dust control measures that will be employed at the site as part of routine planning and operations are detailed below in Table 4-1 and Table 4-2.

**Table 4-1**  
**General Site Control Measures**

Activity	Control Measures
Design and location of dust-generating activities	Dust generating activities such as stockpiles, associated with the existing recycling activity will, where possible, be located where maximum protection can be obtained from topography, woodland or other sheltering features. Exposed areas associated with the recycling activity will be situated as far away as possible from sensitive receptors, particularly to the west. Where practicable, they should not be located directly upwind of the sensitive receptors.  No storage or treatment of material will be undertaken as part of the proposed waste recovery activity. Only the final deposit of waste will be undertaken.  Location of deposit cannot be changed.
Equipment and Vehicles	The proposed restoration activities will benefit from existing haul roads within the wider quarry.
Planting	Existing woodland/hedgerows along site boundaries will be retained where possible. Any dead or diseased trees, shrubs will be replaced.
Communication	Good communication will be maintained to prevent anxieties between the operator and the surrounding communities.  Regular, accessible liaison arrangements will be implemented in order to provide information as freely as possible.
Training	Training on dust mitigation will be provided to site personnel. Training will also cover 'emergency preparedness plans' to react quickly in case of any failure of the planned dust mitigation.
Monitoring	See section 4.3.

Activity	Control Measures
Management	All dust and air quality complaints will be recorded. The cause will be identified, and appropriate measures taken. See Section 5.0.

**Table 4-2**  
**Activity Specific Preventative Dust Control Measures**

Activity	Management Actions and Preventative Dust Control Technique	Trigger for Implementation
Restoration activities under the remit of a waste recovery operation	<p>The following measures are considered to be effective in minimising dust emissions during waste deposition process:</p> <ul style="list-style-type: none"> <li>• Inert material will be imported for the restoration works;</li> <li>• Good standards of all plant and equipment will be maintained; and</li> <li>• Drop heights will be minimised when depositing the restoration material.</li> </ul> <p>In the event that visible plumes of dust emissions are crossing the site boundary, material undergoing deposition will be dampened. Operations will cease until dust can be satisfactorily managed.</p>	<p>Control techniques will be implemented during all periods when the site is operational.</p> <p>Visible dust plumes carried towards / across site boundary.</p> <p>Daily monitoring to assist with this decision.</p>
Existing recycling and processing facility including material handling and storage	<p>The following measures are considered to be effective in minimising dust emissions from the existing waste treatment operation:</p> <ul style="list-style-type: none"> <li>• Plant will continue to be used within its design capacity;</li> <li>• Crushing and screening plant will continue to be located away from the site boundary, especially if near residential or other residential receptors;</li> <li>• Good standards of all plant and equipment will continue to be maintained.</li> <li>• Drop heights will be minimised.</li> <li>• Vehicles will not be overloaded.</li> </ul>	<p>Control techniques will continue to be implemented during all periods when the site is operational.</p>

Activity	Management Actions and Preventative Dust Control Technique	Trigger for Implementation
	<ul style="list-style-type: none"> <li>A dust suppression unit (tractor and bowser) will be available to dampen surfaces as required.</li> </ul>	
<p>Vehicular movements associate with waste activities.</p>	<p>All vehicles will adhere to the site speed limit of 5 – 10 mph with speed restriction signs on haul routes.</p> <p>Unsurfaced routes will be fixed, well maintained and compacted to minimise spillages from passing vehicles and erosion of road surface. Necessary repairs to the surface will be instigated as soon as reasonably practicable. All inspections will be recorded in the Site Logbook.</p> <p>A road sweeper will be used on the highway as required.</p> <p>A dust suppression unit (tractor and bowser) is available to dampen haul routes.</p> <p>Adequate water supply will be provided for effective dust mitigation.</p> <p>Abrupt changes in direction will be avoided.</p> <p>Vehicles will be evenly loaded to avoid spillages.</p> <p>An adequate area of hard surfaced road between site activities and site exit will be maintained.</p> <p>Vehicles entering and leaving site will be sheeted to prevent escape of materials during transport.</p> <p>If large debris and dust has accumulated on haul roads/access roads. Material to be damped down first before sweeping. Not to be undertaken during dry, windy conditions as may resuspend the dust.</p>	<p>Control techniques will be implemented during all periods when the site is operational.</p>

The remedial dust control measures outlined above would be undertaken until the dust emissions were contained within the site boundary and significantly reduced. The decision would be at the discretion of the Site Supervisor.

## 4.3 Monitoring

### 4.3.1 Meteorological Conditions

During the preparation, operational and restoration phase weather forecasts will be monitored on a daily basis to predict weather conditions such as prolonged dry, hot spells or significantly strong winds which may generate elevated levels of dust for which additional dust control would need to be planned / prepared. Using this information, the necessary precautionary measures will be planned or employed on site, and if necessary, suspension or relocation of certain activities may be undertaken.

Wind direction and wind speed will be recorded on a daily basis within the Site Logbook or using the example record sheet in Appendix 01. This information is beneficial when dust events / complaints are reviewed retrospectively, and the source of dust is trying to be identified.

### 4.3.2 Visual Dust Monitoring

The site will undertake regular visual monitoring to ensure that dust control techniques in operation are being carried out effectively. The objective of the visual monitoring is to anticipate whether dust is being transported off-site in quantities sufficient to cause a nuisance at off-site receptor locations. Visual monitoring undertaken on a regular basis allows immediate action to be instigated.

Visual monitoring of dust will be undertaken by the Site Manager / experienced site operatives on a minimum of a daily basis. Responsibilities can either be delegated to various site operatives to carry out visual observations of their working areas during normal operations or be delegated to a single operative to perform a daily visual check of key areas.

The areas that require consideration for inclusion within the visual observations are as follows:

- Existing waste processing activities (crushing and screening);
- Material infilling; and
- Front end loader movement on haul roads.

The results of all visual observations, along with any remedial actions implemented will be recorded. Any personnel who undertake visual dust monitoring will have received appropriate training, guidance and instruction on how to carry out the task in line with the requirements of this DMP.



## 5.0 Site Management & Contingency Measures

This section details the responsibilities of management within the DMP, as annotated in Figure 5-1.

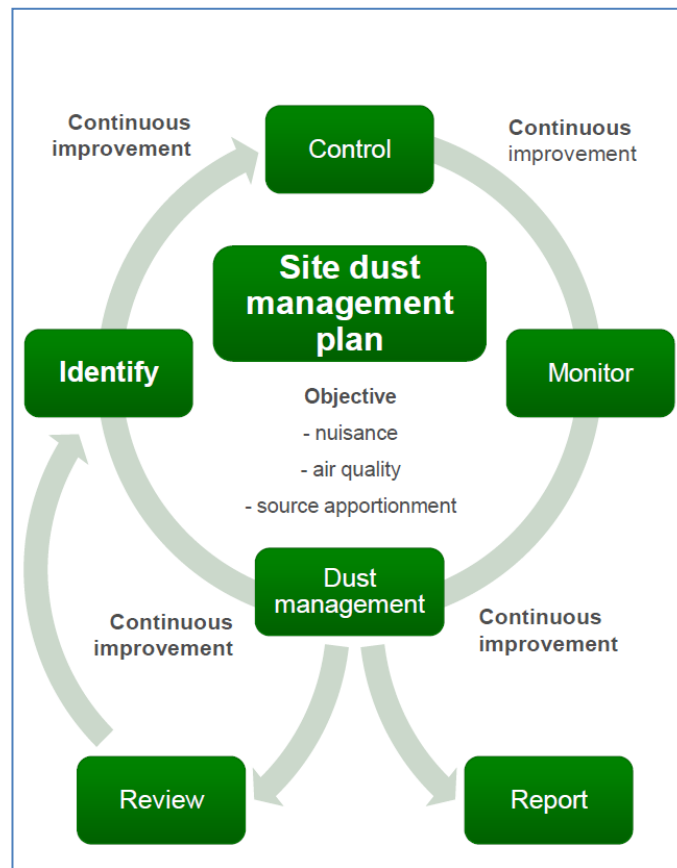


Figure 5-1  
Dust Management Plan Process<sup>4</sup>

### 5.1 Responsibilities

There will be a trained Site Supervisor / manager on site during working hours responsible for dust management and visual observations. The Site Supervisor will be responsible for ensuring effective dust control is achieved by good operational practises, including:

- Identifying and monitoring the intensity of activities with a high potential for dust generation;
- Monitoring weather conditions during periods of such activity;
- Planning and preparing for the implementation of contingency measures;
- Responding to potential and actual dust monitoring issues; and
- Ceasing operations in the event that significant off-site impacts cannot be avoided.

<sup>4</sup> Reproduced from - Report to The Mineral Industry Research Organisation (MIRO), *Good practice guide: control and measurement of nuisance dust and PM<sub>10</sub> from the extractive industries* AEAT/ENV/R3140 Issue 1 (February 2011)

Responsibilities will be allocated to specific personnel to ensure dust generation is avoided or effectively controlled, as presented in Table 5-1.

**Table 5-1  
Dust Management Responsibilities**

Actions	Responsibility
Monitoring weather forecasts and current wind directions on Site	Site Supervisor
Routine visual observation monitoring	Site Supervisor
Coordination of application of water dust suppression	Site Supervisor
Completion of dust event forms	Site Supervisor
Activation of contingency action plans	Site Supervisor
Liaison with public and EA	Site Supervisor
Coordinating reviews and updates of DMP	Site Supervisor

## 5.2 Training

All personnel on site will understand their responsibility to ensure the generation of dust is avoided, minimised and controlled. Each employee shall be made aware of the importance of effective dust control and the most effective measures available to minimise such emissions from the various activities. Such training shall be provided as part of the induction process for all new employees.

Specific training will be provided to:

- Operatives in use of the water suppression techniques; and
- All site personnel on the importance of reporting potential / actual dust emissions or the malfunctioning of dust control to the appropriate person.

Training will also cover ‘emergency preparation plans’ to ensure rapid reactions to any failure of dust control.

## 5.3 Incident Reporting

Incidents of high dust levels will be reported to the Site Manager and recorded in the daily logbook. Any incidents that have created significant dust issues off site shall be reported to the EA as appropriate.

## 5.4 Dust Complaint Procedure

Complaints may be notified by a member of the public either directly to the Site Management or indirectly through the EA. Complaints received directly by the Site Management will be recorded in the Site Logbook and reported to the regulator. The following details shall be recorded:

- Date, time and name of complainant (if provided);
- Nature of complaints;

- Locality of complaint;
- Summary of resulting investigations and actions taken; and
- Date at which the complainant was updated with the outcome / remedial actions undertaken, if required.

The objective of this response to complaints received is to investigate the incident and review the site practises and dust controls in place at the time of the event to allow for additional controls to be put in place, thus preventing a repeat of the incident. If necessary, the complainant(s) and the regulator would be informed of the findings of the investigation and any actions subsequently taken.

Investigations will include, but not be limited to the following:

- Visit by a member of Site Management to location of complainant to verify the issue (if complaint is made after the event this may not be possible);
- A review of site activities in operation at the time of the incident;
- A review of the dust monitoring results for the period of the incident, if applicable;
- For recurring events, the frequency of visual monitoring should be increased to a twice daily basis;
- A review of control measures and dust suppression in place at the time of the incident (i.e. application of water, frequency of water bowser on internal haulage routes, drop heights during deposit);
- A review of the meteorological conditions at the time of the incident (i.e. recorded wind direction and wind speed recorded in the Site Logbook); and
- Reporting of findings (either in Appendix 03 pro-forma or in Site Logbook).

The escalation procedures in the event that subsequent dust complaints are received are as follows:

- Initial Complaint - Initial/first time contact received – complaint investigated, and contingency actions taken by Site Management.
- Complaint level 1 - An Interaction that has not been resolved to the satisfaction of the complainant or where frequent contact has been received from the public via the EA. Complaints investigated by senior management team and remedial actions taken.
- Complaint level 2 - Unresolved Complaint level 1 – this may involve support from Environmental Consultants to review, investigate, determined required actions and respond to the complaint.

## 5.5 Liaison with Community and Regulators

The Site Manager (or nominated representative) shall act as liaison with the EA and local community for issues relating to dust emissions off-site. Maintaining good communications with the local community will help prevent anxieties occurring.

If appropriate key issues will be communicated between both sides, including but not limited to the following:

- Presentation of the monitoring scheme and the latest dust monitoring results;
- Update on the working scheme of the site and when / where future operations will be;
- Summary of the dust controls on site and any updates / improvements undertaken / planned;
- Provision of a contact for the site should any issues arise between the meetings; and
- Observe and alleviate any anxieties or complaints member of the public have experienced.

## 5.6 Record Keeping

The operator will keep records of all dust monitoring, dust contingency actions, investigations and complaints on site for a minimum period of 2 years; these shall be made available to the EA for examination on request.

## 5.7 DMP Update and Review

This DMP is an active, controlled document which forms part of the Site Management documentation. It shall be reviewed on an annual basis, as a minimum by senior Site Management. Given that the document is a point of reference for daily operations, it shall be updated as required should any of the following situations occur:

- Significant changes are made to the vehicles used for transfer and deposit or operational practises;
- The EA specifically requests for the DMP to be updated; or
- Following investigations into dust control, additional measures are adopted that are not contained within the document.

On review of site operations and the effectiveness of the DMP, Senior Management are required to make any changes deemed appropriate to ensure dust emissions are kept to a minimum.

## 6.0 Contingency Action Plan

A contingency action plan has been defined to react to situations whereby visual monitoring of dust indicates that a potential dust source is not being mitigated effectively, appropriate control measures are not in place or that an adverse impact has / may occur.

This includes incidents or accidents which would result in the loss of control of potential dust sources and have the potential to cause an unacceptable impact on the environment. The contingency action plan therefore includes both pro-active and re-active actions to events.

Contingency measures have been identified for the following scenarios, as presented in Table 6-1.

- Observed change in wind direction towards nearby receptors during activities close to site boundary;
- Visual monitoring records visible dust plumes across the site boundary in the direction / proximity to the off-site receptors. Receptors of notable importance include:
  - Kirton Quarry and Landfill (east boundary); and
  - Manton Lane (north boundary).
- Malfunction in water suppression techniques rendering them in-effective;
- Malfunction of road sweeper rendering it in-effective;
- Complaints received from members of the public or neighbouring businesses, verified by visual monitoring on site;
- Malfunction of water collection system, resulting in inadequate water for dust suppression;
- Malfunction of vehicle wheel wash (at the entrance to the wider quarry), rendering it in effective; and
- Prolonged periods of hot weather, resulting in very dry ground and limited supply of water.

**Table 6-1**  
**Contingency Plans**

Event	Change in wind direction (moderate-high winds) towards off-site receptors
Contingency Actions	The frequency of visual monitoring will increase to twice daily which will incorporate walkovers along boundary in question. Additional dust suppression will be implemented on high-risk activities using water sprays, reduction in drop heights or cessation of material handling / transfer. In the event dust is visually observed to be crossing the boundary with additional dust suppression in place, any activities will be relocated or ceased until more effective mitigation is in place.
Comment	The weather forecasts will be monitored. The Site Manager will be informed of actions taken and the event will be recorded in the Site Logbook.
Event	Visual monitoring records dust plumes across site boundary in direction of offsite receptors

	<p>The frequency of visual monitoring will increase to a minimum of twice daily, which will incorporate a walkover along the boundary in question.</p> <p>Wind direction will be determined.</p> <p>The likely dust source will be determined, and additional dust suppression will be implemented e.g. Increased frequency of water suppression on internal haul roads and commence water suppression on material using manual techniques on site.</p> <p>If additional dust suppression is not effective, activity operations will be relocated or ceased until dust can be satisfactorily controlled.</p>
Event	Malfunction of water suppression techniques, rendering them ineffective
Contingency Actions	<p>Repairs will be undertaken using on-site spares if possible, or a technician will be called to repair at earliest opportunity.</p> <p>The frequency of visual monitoring will increase to twice daily, which will incorporate a walkover of the all the boundaries.</p> <p>Manual water techniques will be available on site and at the location of the dust source.</p>
Event	Receipt of a particularly dusty load (material for waste recovery activity)
Contingency Actions	<p>All waste destined for restoration will be transferred from Brianplant’s processing facility.</p> <p>Material will be investigated to ascertain whether they can be received without causing dust emissions. The following will be reviewed:</p> <ul style="list-style-type: none"> <li>- use of additional mitigation, e.g. use of water bowser during unloading for all loads.</li> <li>- use of subsequent cover material once deposited.</li> </ul>
Comment	Details will be recorded in the Site Logbook.
Event	Receipt of a particularly dusty load (material for recycling)
Contingency Actions	<p>Material will be investigated to ascertain whether they can be received without causing dust emissions. The following will be reviewed:</p> <ul style="list-style-type: none"> <li>- use of additional mitigation, e.g. use of water bowser during unloading for all loads.</li> <li>- consideration given to stockpile placement of known dusty wastes to avoid further wind blown emissions.</li> </ul>
Comment	Details will be recorded in the Site Logbook.
Event	Complaints received from members of the public or neighbouring businesses, verified by visual monitoring on site
Contingency Actions	Management will be notified.

	<p>Complaint reporting and investigation procedure will be undertaken and appropriate contingency measures will be undertaken as detailed above.</p> <p>The frequency of visual monitoring will increase to twice daily and will focus on boundary locations in proximity to the location of complainants.</p> <p>If required, correspond with the EA to discuss the requirement of quantitative dust monitoring.</p> <p>Complaint escalation procedure:</p> <p>Initial Complaint - Initial/first time contact received – complaint investigated, and contingency actions taken by Site Management.</p> <p>Complaint level 1 - An Interaction that has not been resolved to the satisfaction of the complainant or where frequent contact has been received from the public via the EA. Complaints investigated by senior management team and remedial actions taken.</p> <p>Complaint level 2 Unresolved Complaint level 1 – this may involve support from Environmental Consultants to review, investigate, determined required actions and respond to the complaint.</p>
Comment	DMP may require updating on basis of results of investigations.
Event	Malfunction of water collection system, resulting in inadequate supply of water for dust suppression
Contingency Actions	<p>The frequency of visual monitoring will increase to twice daily and will focus on boundary locations in proximity to the location of complainants.</p> <p>All other dust control measures will be adhered to (see Table 4-1, Table 4-2).</p> <p>If required, water will be imported and used for the water bowser.</p> <p>In the event dust is visually observed to be crossing the boundary with additional dust suppression in place, any activities will be relocated or ceased until more effective mitigation is in place.</p>
Comment	Details will be recorded in the Site Logbook.
Event	Prolonged periods of hot weather, resulting in very dry ground and limited supply of water
Contingency Actions	<p>Water suppressant techniques to be prioritised for operational activities.</p> <p>Road sweeping to be undertaken if large material accumulating on haul roads, in operational areas and access road. However, be mindful this may resuspend the dust therefore not to be undertaken in windy conditions.</p> <p>If water supply on site has significantly reduced, consider importing water onto site.</p>

	Increase daily monitoring to twice daily and if dust is being released in significant quantities likely to cause impact then cease activities.
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## APPENDIX 01

### Example Meteorological Condition Record Sheet



## APPENDIX 02

### Example Dust Event Form

Visual Monitoring and Dust Event Form	
Name of Author	
Description of Event <sup>(a)</sup>	
Date / Time / Period	
Activities taking place during time / period of event:	
Dust control employed at the time of the event:	
Summary of weather conditions leading up to and during the event:	
Details of Corrective Action:	
Notes:	
(a) E.g. complaint registered (name and address) or visible dust seen crossing site boundary during routine visual monitoring	

## APPENDIX 03

### Dust Complaint Form

Customer Details	
Customer Name	
Address	
Postcode	
Customer Contact Details	
Telephone	
Email	
Date	
Complaint Ref Number	
Complaint Details	
Investigation Details	
Investigation carried out by	
Position	
Date & time investigation carried out	
Weather conditions	
Wind direction and speed	
Investigation findings	
Feedback given to EA and/or local authority	
Date feedback given	
Feedback given to public	
Date feedback given	
Review and Improve	
Improvements needed to prevent a reoccurrence -	

Customer Details	
Proposed date for completion of the improvements -	
Actual date for completion -	
If different insert reason for delay -	
Does the dust management plan need to be updated -	
Date that the dust management plan was updated -	
Closure	
Site Manager review date	
Site Manager signature to confirm no further action required	

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