

DUST CONTROL SCHEME

1 Introduction

1.1 Condition 5 of the current planning permission states:

The development hereby permitted shall only be carried out in accordance with the following documents approved under planning permission 2007/1365 and consolidated under planning permissions 2011/1248 and 2015/0823, and under planning permission 2016/0068 unless amendments are made pursuant to the other conditions below:

- r) Dust Report for the Site Known as Carlton Colliery, prepared by Cromwell Wood Estate Company Limited and dated March 2006*
- s) Dust Action Plan, November 2008, Revision A - April 2009*

1.2 In addition, there are three other conditions relevant to dust control' These are:

16 All operations on site shall be carried out in complete accordance with the approved Dust Action Plan, November 2008, Revision A - April 2009. When, due to site conditions the prevention of undue dust impact is considered to be impracticable by the WPA, operations shall cease until such time as conditions improve such as to permit a resumption.

17 Any equipment used to monitor dust shall be installed, used and maintained for the duration of the development. Dust monitoring and meteorology records shall be made available to the WPA for inspection on request

18 Measures shall be employed to ensure that dust emissions from the site are controlled and fugitive dust prevented from leaving the site. These measures shall include but not necessarily be limited to the following:

- a) The use of adequate and working water suppression (hoses/sprinklers/water bowsers etc.) which shall be available for use, and utilised at all times when dust generating materials are being handled on site. Any materials likely to cause dust shall be effectively dampened prior to being handled;*
- b) All vehicles transporting waste materials entering and leaving the site shall be securely sheeted;*
- c) The effective maintenance of the access road;*
- d) Any vehicles permanently stationed at the site shall be equipped with upward pointing exhausts; and*
- e) The suspension of the movement of the subsoil materials during adverse dry windy conditions*

1.3 The planning authority has requested a review of the proposed dust control measures in view of the time that has lapsed since the original dust report (2006) and Dust Action

Plan (2009) were written. This Dust Control Scheme has been prepared to provide an up-to-date scheme to replace the 2006/2009 versions.

2 Activities with the potential to give rise to dust emissions

2.1 The primary sources of dust at the Quarry will be:

- the excavation of unsuitable materials from the ground surface;
- the excavation of existing stockpiles of waste materials;
- unloading imported wastes into new stockpiles;
- the processing of excavated and imported materials, stockpiling and loading out operations;
- the movement of mobile plant and lorries around the site which is likely to be the main source of Site dust emissions;
- the placement of fill to approved levels as part of the remediation process.

2.2 The creation and dispersion of dust will be highly dependent on weather conditions. Wind speed can determine the amount of dust raised, while wind direction determines those areas that may be affected. Higher wind speed increases the potential for airborne dust to be generated with the suspension and entrainment of particles in airflow. Precipitation will suppress dust generation.

2.3 The amount of dust generated by each activity depends on the size of particles and, crucially, upon their moisture content.

Excavation Activities

2.4 Excavation of materials from the ground and from stockpiles will take place all year round and will be excavated using a tracked excavator loading one or more dump trucks. The dump trucks will transport the excavated materials to a stockpile adjacent to the processing plant at the south side of the site or to the adjacent stockpiles. The processing area and adjacent stockpile locations have been selected to be as far away as possible from and downwind of the prevailing wind direction from the Shaw Lane houses and the adjacent Bakery.

2.5 From the stockpiles, the materials will be moved by wheeled loading shovel to the processing plant.

2.6 Materials that require washing will be loaded into the wash plant receiving hopper by a wheeled shovel, and once washed it will pass through a crusher and/or screens to be discharged onto different stockpiles depending on material size grading and quality. Materials not requiring washing will be crushed and/or screened to be graded and then stockpiled.

MWP Planning

- 2.7 A wheeled shovel will then load from the stockpiles either onto a dump truck to be moved to the place of deposit, or onto a road vehicle for transport off site.
- 2.8 Water spray bars will be fitted to the crusher and screens in accordance with a permit to be issued by Barnsley Council. The surface of the stockpiles will crust, but when disturbed, there is potential for dust to be released and so the stockpiles would be conditioned with water and coagulation agents as and when necessary. The potential for the generation of nuisance dust would be considered low.

Transportation

- 2.9 The excavated mineral would be transported within the site using dump trucks over relatively short distances. Such "haul" routes would inevitably have a covering of loose material. Dust emissions in such circumstances increase with the transporting vehicle weight and speed. Internal haul roads are therefore considered to have a high potential for dust generation.

Dust Potential Summary

- 2.10 Table 2 following summarises the different activities and their potential for dust generation.

Table 2: Dust Sources

Activity	Emission Magnitude	Location
Excavation	Low to Moderate	Site surface
Processing	Low	Plant Compound
Stockpiling and Handling	Moderate to High	Adjacent to plant compound
Transportation	High	Site surface and haul roads

3 Mitigation Measures

- 3.1 Industry good practice measures are based on guidance issued by the Minerals Industry Research Organisation (MIRO) and Process Guidance notes published by Defra. The later includes PG 3/08 (12) Quarry Processes and PG 3/16 (12) Mobile Crushing and Screening.

Excavation

- 3.2 The excavation environment would be dry and dust generation therefore likely. The use of portable water sprays would be considered if necessary during dry windy conditions or excavation would be suspended in high wind speeds.

Processing Plant

- 3.3 The Environmental Permit controlling the processing plant would require a number of mitigation measures to be applied, including the following:

MWP Planning

- The use of variable height conveyors, wind boards and chutes on conveyors;
- The use of dust spray bars on crusher or dust arrestment if available;
- All conveyors should be fitted with belt scrapers and dust catch plates; and
- All materials should be deposited carefully into screens and crushers by reducing drop heights.

3.4 Material taken through a wash plant would emerge damp from this process before it entered the crusher and screen.

Stockpiling and Handling

3.5 All stockpiles would be located in discrete areas where machines or other vehicles are at least risk of running over the stockpiled materials. All stockpiles containing fines would be conditioned with water where necessary and consideration will be given to the use of portable water sprays. The area around the stockpiles will be maintained in a clean and tidy condition.

Internal Haul Routes

3.6 All vehicle speeds will be restricted but the main mitigation measure would be the use of a water bowser in dry windy conditions.

Site Management

3.7 The Site Manager would be responsible for ensuring compliance with all dust control measures. The Site would be inspected on a daily basis to ensure that dust was not escaping beyond the site boundaries. A daily record would be kept of weather conditions, site inspections, complaints and any corrective action taken.

3.8 Dust suppression will be based on standard industry procedures which are recognised as good practice. Operations within the Site can be separated into a number of primary activities, each of which has the potential to generate environmental dust. Each activity will require individual mitigation measures. The primary dust generating activities are set out below with mitigation measures.

3.9 Excavation

- Where material handling takes place, double handling will be avoided wherever possible and drop heights from machine buckets will be minimised. Spillage from machine buckets will also be minimised by avoiding overloading. The use of portable water sprays/misters will be considered if necessary.
- All relevant heavy plant will be equipped with radiator deflector plates and will have exhausts pointing away from the ground.

3.10 Processing Plant

The Environmental Permit controlling the processing plant would require a number of mitigation measures to be applied, including the following:

- The use of variable height conveyors, wind boards and chutes on conveyors;
- The use of dust spray bars on crushers and screens;
- All conveyors should be fitted with belt scrapers and dust catch plates; and
- All materials should be deposited carefully into screens and crushers by reducing drop heights.

3.11 Stockpiling and Handling

- All stockpiles would be located in discrete areas where machines or other vehicles are at least risk of running over the stockpiled materials.
- All stockpiles containing fines would be conditioned with water where necessary and consideration will be given to the use of portable water sprays.
- The area around the stockpiles will be maintained in a clean and tidy condition.

3.12 Internal Haul Routes

- primary dust suppression will be by means of the watering of haul roads as dictated by usage and weather conditions. A water bowser will be maintained on site for this purpose.
- Frequent maintenance of internal haul roads.
- Minimisation of drop heights from machine buckets and when tipping off from lorries.
- All vehicle speeds will be restricted but the main mitigation measure would be the use of a water bowser in dry windy conditions.

3.13 Site Access Road

- The Site access road is surfaced with along most of its length. The road surface will be maintained in good condition without potholes.
- A vehicle speed restriction will be imposed and all lorries carrying materials away from the Site will be sheeted to avoid spillage.
- The road will be damped down with a water bowser and a mechanical road sweeper used as and when required.

3.14 Adverse Weather Conditions

- In dry windy conditions it can become difficult to maintain effective dust controls and so when local wind speeds exceed 20m per second in dry conditions, all site operations will be suspended that have the potential to give rise to fugitive dust emissions beyond the Site boundaries.

3.15 Site Management

- The Site manager will be responsible for ensuring compliance with all dust control measures. The Site will be inspected on a daily basis during operational periods to ensure that dust is not escaping beyond the site boundaries. A daily record will be kept of weather conditions, site inspections, complaints and any corrective action taken.
- The operator will operate a complaints procedure.
- Local residents and the Bakery will be given the site manager's contact details to use in the event of any dust or other problems.