

**Technical  
Note**

**HaskoningDHV UK Ltd.  
Industry & Buildings**

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Our reference: RHDHVTN004  
Classification: Project related

**Subject: Woodsmith Mine Phase 3 Dust Management Plan**

**1 Purpose of Management Plan**

- 1.1.1 This Dust Management Plan (DMP) document forms Appendix 4 of the Construction Environmental Management Plan (CEMP) submitted to discharge planning condition NYMNPA-93 in respect of the Phase 3 Works at Woodsmith Mine. It should be read in conjunction with the Project Management Plan (PMP) and the Construction Vehicle and Plant Management Plan (CVPMP), submitted to discharge planning condition NYMNPA-92.
- 1.1.2 The specific requirements of planning condition NYMNPA-93 relating to dust management, and where in this DMP each requirement is addressed, are detailed in Table 1.

**Table 1: Dust Management Requirements of Planning Condition NYMNPA-93**

<b>Condition NYMNPA-93</b>	<b>Compliance with Condition NYMNPA-93</b>
<i>The CEMP shall include details of...</i>	
The provision of a Dust Management Plan relating to phase 1 of the construction period (earth Works and bund formation) and Polyhalite handling and stockpiling to include dust generation modelling so as to identify sensitive receptors	Phasing names have changed since planning. This document relates to the Phase 3 Works as set out in the CEMP.
Likely dust generation and its disposition [sic] during the construction phases and operation over time and under different weather conditions	Section 2
The avoidance and mitigation measures required to ensure dust deposition levels at the sensitive receptors are maintained at the residual levels identified in the approved EIA, and monitoring arrangements	Section 3 Section 4
The Dust Management Plan must comply with the criteria set out in the 'Dust and Air Emission Mitigation Measures' best practice guidance for control of dust on construction sites from the Institute of Air Quality Management 2012	Section 3
The monitoring arrangements will include dust deposition or dust flux or real-time PM <sub>10</sub> continuous monitoring locations	Section 4
Baseline dust monitoring at least three months before construction commences	Section 4
Daily on-site and off-site inspections at monitoring locations with results recorded in a log to be made available to the MPA on request, and more frequent monitoring during periods of high dust generation	Section 6

## 2 Likely Dust Generation and the Influence of Meteorological Conditions

2.1.1 The following activities to be undertaken during the Phase 3 Works have the potential to cause fugitive emissions of dust:

- Site preparation and earth working activities;
- Handling and storage of construction materials;
- Concrete batching;
- Vehicle movements on site; and
- Vehicle movements off site.

2.1.2 The principal sources of dust generation are likely to be from enabling groundworks, the excavation, cutting and size reduction of materials, the movement of construction related road vehicles (including dust resuspension), and the storage, handling and movement of materials.

2.1.3 The magnitude of fugitive dust emissions and the spatial distribution are dependent on meteorological conditions. Wet weather will inhibit the generation of dust and its ability to be re-suspended; long periods of dry conditions will result in a greater potential for fugitive dust. Wind speed will also affect dust generation, dispersion and deposition, as higher winds can whip exposed stockpiles. The wind direction will affect the areas of dust deposition and the potential impact at sensitive receptors.

## 3 Measures to Manage Dust Emissions

3.1.1 The measures to be employed for site preparation and ground works will include, but may not be limited to, the following:

- Carrying out earthworks during dry and/or windy conditions will be minimised or avoided if reasonably practicable, having regard to programme and contracting arrangements for the relevant works. Where this is unavoidable, and the nature of the activity indicates that dust may potentially affect off-site receptors, appropriate water suppression to control dust will be used;
- Spoil materials extracted from the site will be recycled elsewhere on site, when and where appropriate;
- Where the recycling of excavated materials is not possible, they will be removed away from site as soon as is practicable, minimising the need to stockpile potentially dusty material; and
- Plant will be fitted with appropriate dust control measures, such as enclosed conveyors, rubble chutes and water suppression, where reasonably practicable, to reduce potential dust emissions.

3.1.2 The activities and control measures applied to the handling and storage of materials will include the following:

- Handling large quantities of potentially dusty material will be done in an enclosed or shielded environment where practicable;
- The storing of potentially dusty materials will be done away from site boundaries and/or potentially sensitive receptors where practicable;
- Potentially dusty materials such as sand and other aggregates will be stored in designated areas and not allowed to dry out;
- The number of handling operations of potentially dusty materials will be kept to a minimum, ensuring that any such material is not moved or handled unnecessarily;

- Drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment will be minimised and such equipment will be fitted with fine water sprays wherever appropriate; and,
- As stated in the Soil Management Plan, topsoil stockpiles will not exceed 3 m high and subsoil stockpiles will not exceed 7 m high. Side slopes will be no steeper than 1 in 2.

3.1.3 The activities and control measures applied to **vehicle movements on-site** will include the following:

- Hardstanding surface areas and haul routes will be installed for vehicles entering the site;
- Any hardstanding areas will be regularly cleaned using wet sweeping methods;
- Haul routes within the site and hardstanding will be visually inspected for integrity and condition and any maintenance undertaken as a result will be recorded within the site log book;
- Unsurfaced areas of the site will be regularly dampened down during periods of dry and/or windy conditions if necessary; and,
- Vehicles entering or leaving the site with loose or potentially dusty material will be adequately sheeted.

3.1.4 Activities and control measures applied to **vehicle movements off-site** will include the following (see the CEMP for more details):

- All construction vehicles will access and leave the site at the designated hard-surfaced access points following the initial construction of the site access;
- Wheel washing facilities will be provided at the site's point of egress if there is a potential for the carrying dust and mud off the site. All construction vehicles will pass through the wheel-washing facilities where provided;
- The wheel wash will incorporate a rumble grid to dislodge accumulated mud and dust and will be positioned so that there is an adequate area of hard surfaced road between it and the public highway;
- Public roads and access routes adjacent to the site will be regularly cleaned using wet sweeping methods; and
- Vehicles leaving site with loose or potentially dusty material will be adequately sheeted.

3.1.5 In addition to the phase and activity-specific control measures described above, generic measures will also be implemented throughout the works programme, including:

- The burning of waste materials will be prohibited at the site;
- All dust suppression equipment will be maintained in a good condition and a record made of any maintenance carried out;
- Site fencing, barriers and scaffolding will be cleaned as necessary using wet methods;
- The dry sweeping of large areas will be prohibited;
- Bins and skips will be sheeted or enclosed and only opened during the periods in which they are being filled;
- Equipment will be readily available on site to clean up any spillages as soon as reasonably practicable using wet cleaning methods; and,
- Hoardings will be used, if required, to protect potentially sensitive receptors. The height of hoardings will be managed to suit the dust risk and meteorological conditions at the time of works.

3.1.6 The concrete batching plant will implement the following to minimise emissions of fugitive dust:

- Exhaust air filtration will be employed when cement silos are filled;
- Air displaced when filling the mixer will be drawn off via exhaust filters;
- The stored aggregates that are added will have sufficient moisture content to ensure fugitive dust emissions are minimised;
- Displaced air from the mixer interior will be fed back to the weighing hopper via an enclosed hose; and
- In the event of dust escaping from the closed system, cement dust will be collected inside the plant lining, which will minimise the amount of dust emitted to air.

## 4 Dust Deposition Monitoring

4.1.1 Passive dust deposition gauge monitoring will be undertaken at six locations around the land ownership boundary, as shown in **Figure 1**. These represent the closest sensitive receptor locations to the Phase 3 Works. These locations coincide with the locations of noise monitoring, undertaken to partially discharge planning condition NYMNP-18. The detailed methodology, data collection and reporting will be agreed with the MPA prior to the survey commencement.

4.1.2 Baseline dust monitoring was undertaken for a six month period to inform the Environmental Impact Assessment, and these data will be used to represent the baseline conditions prior to the Phase 3 Works. These data are considered to be representative of the current baseline given the rural location and absence of any development activities since that period.

## 5 Monitoring of Meteorological Conditions

5.1.1 The site supervisor or another designated individual will make reasonable efforts to foresee adverse weather conditions by accessing an appropriate source of weather forecast data. This information will be used to schedule appropriate preventative action at times when there is an increased risk that site operations will give rise to potential off-site impacts. Alternatively, very dusty activities may be postponed, if necessary, until there are more favourable meteorological conditions.

## 6 Visual Monitoring

6.1.1 It will be the responsibility of all site personnel to maintain vigilance for dust emissions during the construction works. Any significant dust emission occurring, with the potential to travel beyond the site boundary, will be reported to the General Foreman or another designated individual, who will be responsible for investigating the cause and taking immediate action to minimise further emissions. If necessary, site operations will be halted until an appropriate remedial action can be implemented.

6.1.2 Daily visual dust inspections, both on-site and off-site, will be undertaken by the General Foreman or another designated individual. If elevated levels are found, the General Foreman or other designated individual will investigate the cause. Immediate remedial action will be taken where necessary.

- 6.1.3 A daily record relating to the management of dust will be maintained at the site. The information record will include:
- Details of the source, date and time of any significant dust emission during site operations, along with an assessment of its likely impact; and
  - Details of remedial action taken and changes made to operational procedures, in order to eliminate or minimise dust emissions.
- 6.1.4 The daily record of dust management will be made available to the MPA on request. During periods of high dust generation, more frequent visual monitoring will be undertaken.

## **7 Complaints Management**

- 7.1.1 The complaints procedure is detailed in the CEMP and PMP. All complaints will be acknowledged within 24 hours of receipt. The complaint will be investigated and the complainant contacted within five working days to be advised of the findings of the investigation and any mitigation required.