



DUST MANAGEMENT PLAN FOR TEMPORARY SOIL STORE SALTBOX DEVELOPMENT SHRIPNEY

DW Langmead



Introduction

This Dust Management Plan (“DMP”) has been prepared on behalf of DW Langmead in discharge of Planning Condition 7 of permission BE/27/20 dated 25th June 2020 for a temporary soil store adjacent the Saltbox development at Shripney. (“The Site”)

The condition reads:

“Within one month of the date of this permission details of the dust suppression measures shall be submitted to the Local Planning Authority for approval in writing. The dust suppression measures will mitigate the impact of the development on the neighbouring residents of Shripney Village and the visitors at the Bersted Brooks Local Nature Reserve (LNR). Thereafter, the approved dust suppression measures shall be implemented and adhered to throughout the 5 year development hereby permitted”

This DMP only considers the operations to be undertaken at the temporary soil store and does not address dust in respect of the Saltbox site itself, which is addressed through the conditions attached to that development.

This DMP provides detailed information on the sources, risks and mitigation measures related to the potential of dust from the deposit of soils proposed to be undertaken at the Site.

Site Location and Sensitive Receptors

The Site comprises 1.53 hectares of arable agricultural land located to the west of the Saltbox Development and south of Shripney, West Sussex.

To the east, accessed via an existing farm gate, is the Saltbox site that has planning permission for employment led development. To the south, running east to west, is the Bersted Brook and field hedging. To the north and west is the remainder of the agricultural field.

The subject site sits immediately to the north of the Bersted Brooks Nature Reserve. While it is about 160 metres directly south of the closest property within the village of Shripney (Firs Acre), this is heavily screened by mature trees and hedging. The remainder

of the village is set well away from the southern edge and is similarly screened by mature trees and hedging. The nature reserve (red), site (green) and village (orange) are shown on Figure 1 below.

Figure A: Site Context



The distance from the Site boundary to the sensitive receptor plays an important role in the potential impact experienced from airborne dust. Concentrations of airborne dust reduce significantly, further away from the source. The proximity of the two receptors to the site requires careful consideration of issues of dust management.

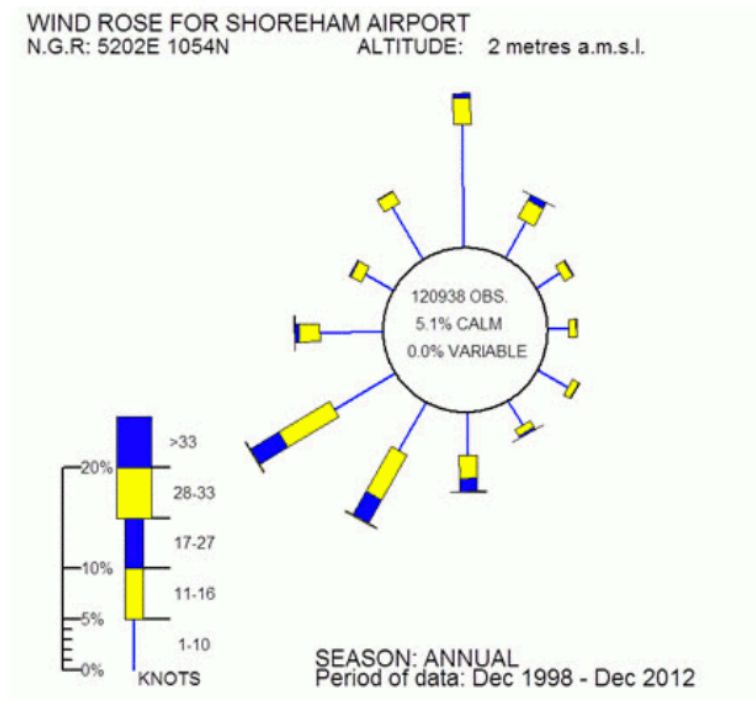
Meteorology

Unlike many other atmospheric pollutants, the generation of dust is particularly dependent upon weather conditions.

The predominant meteorological conditions at any site will be dependent upon many factors, including its location in relation to macroclimatic conditions as well as more site specific, microclimatic conditions. Clearly the most significant meteorological factor is the predominant wind direction and wind speeds, and consequently data has been collected regarding the predominant wind speeds and directions appropriate to the Site.

Wind speed and direction data have been obtained from the nearest recording station, which is Shoreham Airport. The wind rose in Figure B indicates the prevailing winds affecting the site.

Figure B



It can be seen that the most prominent wind direction is from the south west. The risk of dust migration to the Nature Reserve to the south and south east is therefore likely to be relatively low. A southerly wind is uncommon and the risk to the closest residential property is also likely to be relatively low. To the north east of the site, which can be expected to experience the majority of any dust migration, the nearest property is some 360 metres away and is well screened by mature trees and planting.

Operations at the site

The materials to be brought to the site will be managed in accordance with the relevant environmental permits and will comprise only topsoils and subsoils from the adjoining Saltbox development site.

Soil will be delivered onto the Site by Heavy Goods Vehicles. The movement of vehicles visiting the site and moving around within the Site has the potential to cause dust emissions, particularly in dry and windy conditions.

Vehicles entering / exiting the Site will be not normally be sheeted given the short travel distances. Vehicles leaving the Saltbox Site will be visually inspected prior to departure to ensure that excessively dusty loads are not transported.

Movement of vehicles across the adjoining field may potentially cause dust emissions. The Site has portable wheel washing facilities and a mobile bowser with spray facility in place to help reduce the occurrence of significant dust emissions.

Soil will be brought into the site through the entrance on the eastern boundary of the site from the Saltbox site. Vehicles will unload the soils adjacent to the soil storage area. Movement of soils from the site will be undertaken in the reverse of this procedure.

Specific operations to be carried out on Site are listed below with further information regarding the potential for these activities to cause dust emissions:

Soil Handling and Movement

Soils can be considered to be dusty if they are dry. Movement of this type of material therefore has the potential to cause dust emissions.

Loading and off-loading of vehicles and equipment has the potential to cause dust emissions.

Soil Storage

Imported soils may be temporarily stored adjacent to the soil storage pile before being incorporated. Should these stockpiles of soil become dry then they may be a potential source of dust emissions.

Dust emissions from any stockpiles may occur in the event of wind whipping.

Vehicle Movements

The movement of vehicles around, within, to and from the Site has the potential to cause dust emissions, particularly in dry and windy conditions.

Dust could be released directly from dry materials being carried by vehicles.

Dust Management and Mitigation

Responsibility for Implementation of the Dust Management Plan

A Soil Store Site Manager will be identified to manage the temporary soil store on behalf of the landowner.

The Soil Store Site Manager is responsible for the implementation of the Dust Management Plan at the Site for its duration, for ensuring that the mitigation strategies are implemented at the Site and for the receipt and removal of soils and its restoration.

Where the Soil Store Site Manager is unavailable to oversee the implementation of dust suppression measures, a suitably experienced representative will be allocated responsibility.

The DMP will be reviewed when a change in operations is deemed to have a potential effect on increasing dust emissions. The review process will amend any mitigation measures that have been identified as areas for improvement in reducing dust emissions on Site.

Relevant members of staff will have the necessary training to deliver dust suppression measures detailed within this Dust Management Plan. Where new dust suppression measures are to be implemented refresher training will be provided where appropriate to ensure relevant staff remain competent.

Overview of Dust Control

The creation of the stockpile will be progressive, starting at the northern end of the site and working southwards. This will provide a screen for the handling of materials as they arrive at the site from the potential receptors to the north and north west.

Dust control measures are in place to help mitigate dust emissions at the Site, see Table D Mitigation Measures below. These measures will be implemented when appropriate, particularly in periods of dry weather or when dust is identified to be excessive and escaping the Site boundary.

The Site boundary will be inspected regularly to identify any dust emissions leaving the Site.

Stockpile heights on Site will be minimised at all times in order to reduce the distance in which dust and particulates could be blown and dispersed by winds.

Sources and Control of Dust Emissions

Table C details the potential sources of dust on the Site and which mitigation measures are implemented in order to break the source-pathway-receptor routes for dust emissions. Table D provides further information on the mitigation measures used to control dust emissions at the Site.

Table C: Potential Source - Pathway - Receptor Routes

Source	Pathway	Receptor	Type of Impact	Where relationship can be interrupted
Vehicle /Plant movements	Atmospheric dispersion	Surrounding sensitive receptors	Dust emissions	A 10mph speed limit and a 'no-idling' policy will be implemented on Site. Haul roads within the Site will be dampened down during periods of dry weather or when dust is identified to be excessive. The Site will be subject to regular housekeeping.
Tipping and storage of soils	Atmospheric dispersion	Surrounding sensitive receptors	Dust emissions	Potential dust emissions will be reduced by minimising drop heights when moving dusty soils. Soil may be stored stockpiles which will be dampened down in periods of dry weather or when wind whipping is identified to be excessive. Dowsing the stockpiles causes a crust to form that reduces the amount of dust emitted from the Site from wind-whipping of stockpiles. Operations will temporarily cease when winds are deemed to cause excessive movement of dust and soils.
Operation of plant	Atmospheric dispersion	Surrounding sensitive receptors	Visual soiling and dust emissions	Operations will be temporarily ceased in periods of very high winds.

Table D: Mitigation

Mitigation Measure	Description / Effect	Use on Site	Trigger for implementation	How is it implemented?	Further mitigation if required
Preventative Measures					
Site and access track speed limit, 'no idling' policy and minimisation of vehicle movements on Site.	Reducing vehicle movements will reduce dust emissions from the Site. Enforcement of the speed limit and limiting movements will reduce the chance and amount of re-suspension of dust and particulates by vehicle wheels.	We have identified above procedures for a 10mph speed limit, a 'no-idling' policy, and the minimisation of vehicle movements. Vehicle movements will be minimised by ensuring that the double handling of materials is avoided where possible e.g. loads entering the Site may be directed to a location so that the load can be deposited directly into the soil pile. A load may be required to be temporarily stored in a holding stockpile.	No trigger for implementation. These mitigation measures will be carried out at all times.	Issue of this DMS to the haulage contractor. Enforcement by Soil Site Manager or other representatives of the landowner.	If excessive dust emissions that could cause nuisance to local receptors continue, further mitigation measures will be triggered. Water sprays will also be available to dampen surfaces and stockpiles to prevent particulate matter becoming airborne. If excessive dust emissions from vehicle movements continue after these measures, then operations shall cease.
Minimising drop heights	Minimising the height from which the soil is dropped should reduce the likelihood dust could be generated and dispersed by winds.	Handling of material on Site should be minimised at all times.	This measure will be implemented whenever the Site is operational. i.e. Whenever material is being moved.	By plant operators lowering the grabs, shovels, conveyors etc on the equipment being used to move / place potentially dusty materials prior to materials being released. Site to minimise dust. The Site Manager or an appointed representative will monitor site operations to check that drop heights are being	Water sprays will also be available to dampen surfaces and stockpiles to reduce dust generation. If excessive dust emissions continue after these measures, then operations shall cease.

				minimised whilst equipment is in use.	
Good house- keeping	Having a consistent, regular housekeeping regime that is supported by management, will ensure the site is regularly checked and issues remedied to prevent and remove dust and particulate build up.		No trigger for implementation. These mitigation measures will be carried out at alltimes.	Enforcement by Soil Site Manager	If excessive dust emissions that could cause nuisance to local receptors continue, further mitigation measures will be triggered. E.g. water sprays will be used to dampen surfaces and stockpiles to prevent particulate matter becoming airborne.
Vehicle dust control	Prevents the escape of debris, dust and particulates from vehicles.	All vehicles leaving the Saltbox site or departing the soil store will be inspected for dusty loads. Excessively dusty loads will not be accepted onto the Site.	Visual observation of vehicles. Any loads containing dusty loads will be rejected or sheeted.	Where considered necessary, sheeting equipment will be activated and checked to ensure proper coverage of the load before the vehicle is allowed to operate.	If excessive dust emissions continue and sheeting is not possible, then operations shall cease.
Wheel washing	Portable wheel washing facilities	The wheel washing facility is used to remove dust from the wheels of vehicles and is inspected on a regular basis to ensure the facility is in working order.	Wheel washing is undertaken, if necessary, when a vehicle exits the Site.	Site operatives will ensure that wheels washing facilities are used as and when required.	If excessive dust emissions that could cause nuisance to local receptors continue, further mitigation measures will be triggered. E.g. water sprays will be used to dampen surfaces and stockpiles to prevent particulate matter becoming airborne.

Minimisation of stockpile heights on Site	Minimising stockpile heights should reduce the distance over which debris, dust and particulates could be blown and dispersed by winds.	The planning permission defines the maximum height and volume allowed for the stockpiles on Site in order to reduce the potential for excessive dust emissions.	These measures will be implemented whenever the Site is operational.	The Site Manager will keep a record to ensure stockpiles do not exceed the heights specified in the planning permission	If excessive dust emissions that could cause nuisance to local receptors continue, further mitigation measures will be triggered. E.g. use of water sprays to dampen stockpiles / surfaces or ceasing dusty activities.
Water suppression	Use of a tractor and water bower on the site to wet surfaces during dry/windy weather. This measure can remove dust from the air and dampen down dry / dusty materials.	Sprays will be in use at the Site to dampen surfaces and stockpiles of material to prevent particulate matter becoming airborne. The condition and integrity of the water bowser and sprays will be checked regularly.	When excessive dust emissions are observed to be leaving the Site boundary. Visual observation will be carried out by the Soil Site Manager or appointed representative. Findings from the visual observations will be recorded.	Use of water sprays on the Site will be used to minimise dust emissions. Site Management will instruct the relevantly trained operative to use the tractor and bowser on the Site.	If excessive dust emissions that could cause nuisance to local receptors continue, further mitigation measures will be triggered. E.g. cessation of dusty activities.

Other Considerations:

Water availability

To prevent dust generation, site surfacing and stockpiles may be dampened down using water from a mobile water bowser and spray attachment.

In the event of a drought

During exceptionally dry and/or windy conditions, if any operations / site movements cause or are likely to cause visible dust emissions beyond the Site boundary, or if excessive dust emissions are observed within the Site, site operations may be temporarily suspended to avoid further dust emissions. This will be decided by the Soil Store Site Manager.

Monitoring

Visual Dust Monitoring

Dust emissions for the Site will be assessed by visual observation on a weekly basis or when works are being undertaken to deposit or remove soil. Haulage contractors will be asked to report any issues of emission of dust from the Site. Visual dust monitoring will take place anywhere within the site boundary and in the immediate vicinity of the Site.

Emergency contact numbers are available to local businesses/ residences on the Notice Board, should dust be causing a nuisance.

If excessive dust emissions are leaving the Site boundary then the Soil Store Site Manager will establish what is causing the excessive dust emission to be generated and take remedial action. The results of the investigation and what action was taken will be recorded and retained.

The prevailing weather conditions at the Site will be considered and recorded at the start of each day when material arrives or departs the site or when works are undertaken within the site to manage the stockpile, so that the day's work may be planned as appropriate regarding potential dust emissions. Wind direction and weather will be determined by visual observation of the conditions. The conditions will be recorded on the Daily Inspection Checklists. Information recorded will contain an overall

description of the weather conditions including, but not limited to, wind strength (e.g. windy, not windy), wind directions (e.g. towards northern boundary) and rain.

Table D sets out the mitigation measures in place in case of excessive dust emissions on Site.

There will be no dust monitoring equipment located on the Site. Only visual monitoring of dust emissions will take place. Visual monitoring will take place whenever the Site is operational and from anywhere within the Site boundary.

No quantitative dust monitoring will be undertaken on the Site

Reporting and Complaints Response

Engagement with the Community

A Notice Board will be located at the entrance to the Saltbox development and provides the following information:

The operator's name.

An emergency contact name and telephone number for the operator.

No additional notices will be provided at the Site itself as this is not accessible to the public.

The provision of the above information ensures that members of the community can contact the landowner should they be concerned by dust emissions or wish to make a complaint. This also applies to any events that may happen when the Site is unmanned / not operational.

Contact numbers on the Site Notice Board will allow any out-of-hours complaints regarding dust emissions to be made to the operator. The operator will respond accordingly during out-of-hours to complaints.

The Notice Board will remain in situ during the period of construction of the Saltbox development. When this is complete, the Notice, or a replacement, will be relocated to the gate entrance from the Saltbox development into the access field, being the closest point to the Site accessible by third parties.

Reporting of Complaints

Should a complaint regarding dust be received by the Site, the complaint will be recorded by the Soil Site Manager investigated in accordance with the estate Complaints Procedure. The Complaints Form records who made the complaint, what the complaint was about and what has been done to resolve the issue and make sure this does not happen again.

The Soil Store Site Manager must identify what caused the excessive dust emission to be generated. This generation may have been caused by failure of site machinery or dust procedures. If the excessive dust emission has been caused by a procedure not being carried out properly, then relevant staff or contractors will receive repeat training on the dust procedures and site management.

In all cases, and where information is available, all complaints will be acknowledged and investigated. Any complaints received by the Environment Agency relating to dust emissions from the site are dealt with as soon as is reasonably possible upon notification.

On receipt of a complaint the Soil Store Site Manager investigates and establishes the cause. The most effective corrective or preventative action must then be determined to prevent future emissions occurring. Where additional time is required in order to implement the appropriate corrective or preventative action the complainant will be contacted with details on the actions to be implemented and the estimated timescales for completion.

Should numerous complaints be received at the Site regarding the same issue, the cause of the complaint(s) will be investigated in accordance with the Accidents, Incidents & Complaints Procedure of the estate. Operations on the Site will temporarily cease should dust emissions be seen leaving the boundary following the implementation of other mitigation measures or when instruction from the Environment Agency or Council to cease operations has been received.

Management Responsibilities

Site staff are responsible for dust management issues and detecting/reporting dust emissions. All relevant staff on the Site are trained on the dust management plan which includes details regarding mitigation measures and monitoring/recording visual inspections.