

Dust Management Plan (DMP)

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Revision Log

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001	12/02/2022	Creation of DMP
001.1	14/04/2022	Multiple amendments throughout.
001.2	03/05/2022	Amendments to section 2, 3, 4.2, and 8.3.

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1. Scope

This Dust Management Plan has been prepared to supplement the permit variation for Prichard Remediation Ltd's bespoke EPR/BB3498HA mobile plant permit and form part of the Environmental Management System (EMS). The plan aims to address the potential concerns in respect of particulate emissions (dust) at the Ex-Virginia Park Golf Club.

2. Introduction

This Dust Management Plan (DMP) has been created for Prichard Remediation (PR) Ltd, to help manage and mitigate potential dust emissions which could become present when the mobile plant is deployed at a site by Prichard Remediation Ltd operation. The mobile plant permit allows for the treatment of waste at the place where it is produced or at the place where the waste is to be used using mobile plant consisting of sorting and separation, and treatment plant for blending, mixing, bulking, screening, shredding, particle size reduction and / or particle separation in order to facilitate remedial action. This DMP considers only these activities that may give rise to dust and this in itself will also be dependent on site specific factors which will be addressed prior to each deployment. This DMP will complement the CEMP.

The DMP forms part of the wider environmental management system at Virginia Park, herein known as 'the site' which ensures that the site operations meet the legislative requirements and operates to high environmental standards. The DMP aims to minimise dust emissions and outlines the actions to be taken if staff identify a dust issue, following a complaint by third parties or arising from comments from NRW as a result of site inspection.

3. Site Operations

PR site activities will often include Inert, Non-hazardous and hazardous waste treatment utilising various treatment methodologies including sorting and separation, and treatment plant for blending, mixing, bulking, screening, shredding, particle size reduction and / or particle separation in order to facilitate remedial action. For all waste accepted / treated on to the facility full upstream checks / site investigation are to be carried out before treatment commences. For the mobile plant permit this often includes reference to a site-specific remediation strategy or plan (11637/TD/19/SES).

On commencement of works all wastes will be visually checked by site operatives and onsite geotechnical engineers and have been previously tested to confirm that they meet the description and EWC assigned by the waste producer and agreed with permitting through the deployment. If not, they will not be accepted for reuse / recycling or recovery and will be returned to source or quarantined on site for offsite disposal as required.

The primary site activities which generally have the potential to generate emission issues, with particulates that may generate dust in dry and windy weather, are the unloading, processing / treatment, transfer / movement and loading of waste / soil / construction material.

3.1. Site Location

The site is situated at:
Virginia Park,
Caerphilly,
CF83 3SW.

The site operator is:
Prichard Remediation Ltd Limited,
Earthmovers House, Unit 16,
Llantrisant Business Park,
Llantrisant,
Pontyclun,
CF72 8LF.

4. Emission Sources and Local Receptors

4.1. Dust

Dust is made of fine particles of solid matter. Dust emission is the process by which dust becomes airborne. The most significant cause is wind blow. Once dust is created and becomes airborne air currents disperse it over a wide area. Dust emissions can impact sensitive equipment, machinery, nearby land uses, soils, water systems, fauna and flora and give rise to the potential to cause complaints. The size and density of the dust particles can influence the distance travelled from the source of emission. Typically deposition rates decrease significantly and approximately logarithmically with increasing distance from source.

4.2. Local Receptors

Local receptors have been identified within 1000m of the project boundary and are detailed in the Virginia Park Site Plans, see document reference: SP-001.

The receptors have been categorised as commercial, agricultural or residential. Schools, hospitals and nursing homes will also be identified within 1km of the applicable site and these are also contained within the site plans provided for the deployment.

4.3. Wind Rose

The realised severity of dust emissions for external receptors, without site management / mitigation practices, is dependent on prevailing meteorological conditions as determined by location, macroclimate and site specific micro climate. Wind speed and direction are of particular significance for dispersing dust. The wind rose below indicates that the greatest proportions of winds are from the West to South West but this will be updated for each site of deployment.

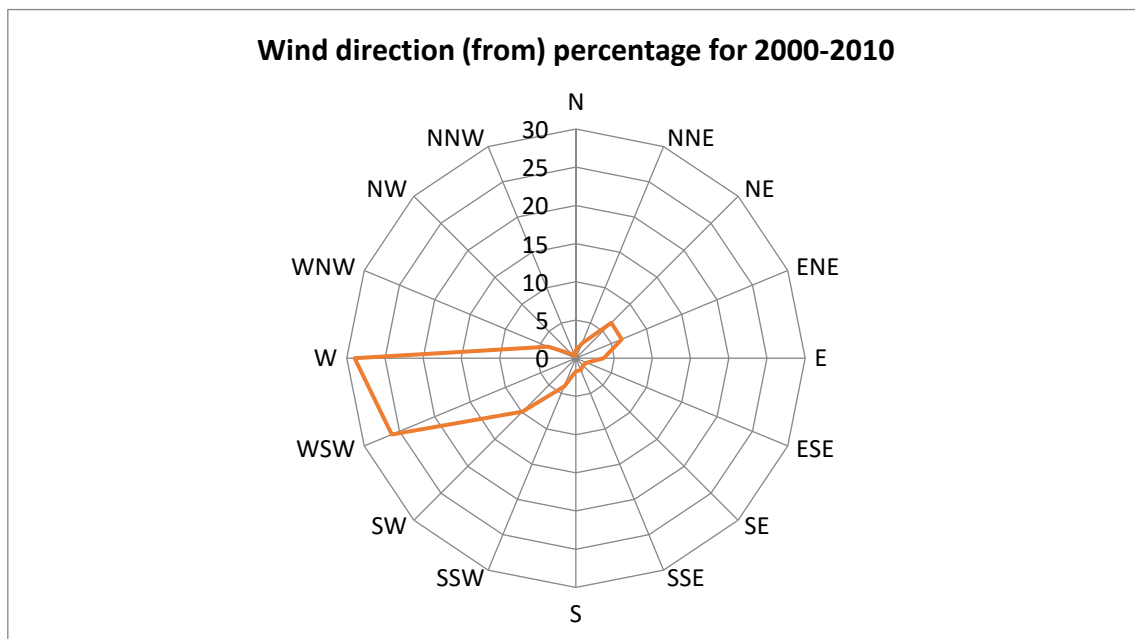


Figure 1 - Chart showing prevailing wind direction

5. Waste Treatment/Rejection

5.1. Treatment Procedures

Materials prior to treatment have been pre-classified and the relevant EWC has been assigned and checked as permissible within the list of wastes appropriate to the scope of the permit and as agreed within the deployment for Virginia Park.

In order to ensure that unsuitable wastes are not accepted into the process; the site management team, in conjunction with the site geotechnical engineers, will ensure that the materials identified are suitable to be treated and by the prescribed treatment methodology. The site management will also determine whether the waste is likely to be contaminated and what nature this contamination takes. This assessment will be formulated by a combination of the site investigation works undertaken to date which form part of the remediation strategy, actual visual inspection of the material and will involve the use of laboratory testing, both chemical and composition. If it is deemed that the wastes are not suitable to be recovered on site as a result of these procedures; they will not be accepted into the treatment process and will be removed from site for disposal or recycling at a suitably licensed facility.

All waste to be utilised within the aforementioned treatment process will be present on site and generally have the following information assigned to them:

- How the waste was derived including any variability within the process.
- The EWC code assigned for the waste.
- Chemical analysis and composition of the waste.
- Contingency plans for non-conforming waste should the need arise.

All wastes that are treated by Prichard Remediation Ltd are both visually and olfactory checked before, during and after treatment on the site of end use (if applicable). They will also often be the subject of additional sampling and testing to ensure that they have been treated to the desired specification for the client and for reuse.

All vehicles that are depositing non-waste materials onto site will be directed to the most appropriate reception area by the foreman for site. When the load is tipped off, the contents are visually checked for non-conformities and to see if the material matches that described and coded on the accompanying transfer note (where applicable).

5.2. Waste Storage Procedures

Waste will be stored on the site waiting for treatment as per the plans within document VPSP_V1.0. The storage of the waste will not exceed those parameters identified within permit / deployment forms. The wastes will often be bulked up in order to gain enough of a tonnage to make the treatment process effective. The waste may need to be bulked up on site as there may only be a small window of opportunity to treat the waste and reuse the products (as applicable) in periods of dry and suitable weather.

The waste will be stored & treated in pre-determined locations that have been appropriately risk assessed to ensure that the environment is protected, in line with the approved risk assessment for each site deployment.

5.3. Records

Batch / material treatment information is to be retained where relevant and used as part of the treatment process and will include all information obtained during pre-acceptance, acceptance, storage, treatment and/or removal off-site.

These records will be kept so that inspection of loads can be simply carried out.

The tracking system should operate as a waste inventory/stock control system and include as a minimum:

- date of production on-site
- Site Investigation analysis results (chemical and visual)
- intended treatment/disposal route
- record accurately the nature and quantity of wastes held on site
- where the waste is physically located in relation to a site plan (See document VPSP_V1.0)

The adoption of such a tracking system will allow for accurate figures with regards current storage and treatment tonnages on site at any one time to be provided.

The treatment methodologies and waste types to be treated under the permit for Prichard Remediation Ltd are detailed within the permit.

5.4. Rejection Procedures

Waste shall only be acceptable for treatment at site if it conforms to the list of permitted wastes, if it conforms to the written description of the waste and if the tonnage limit allows it, all of which are prescribed by the deployment form. Anything that is powder or extremely fine dust will not be accepted for treatment

If, in the unlikely event a waste type is encountered on site that does not comply with the above then the usual site rejection procedures will be enforced:

- The waste will be separated from any other wastes currently on site and will be stored in a dedicated quarantine area.
- The waste will be re-directed from site to another suitably permitted facility (under the control of Prichard Remediation Ltd group if possible).

Unsuitable wastes will be stored within the location as identified within VPSP_V1.0 to avoid any potential cross contamination. However, there may be temporary areas within specific treatment areas that are used as interim holding areas and these may change from time to time as needs arise.

However, at all times cross contamination will be prevented and the risk to the environment and public health managed according to the risk assessment agreed as part of the deployment. Should

anything be encountered, that would require this risk assessment to be updated, NRW will be informed and the risk assessment updated accordingly.

Quarantined material will not be stored on site for longer than necessary, though this may vary depending on the nature of the material encountered. However, it will generally be no more than 5 working days to reduce the risk of any pollution occurring.

5.5. Permitted Wastes

Table 1: Accepted List of Wastes

EWC Code	WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION / INDUSTRIAL WASTE
19 13 01*	solid wastes from soil remediation containing hazardous substances
19 13 02	Solid wastes from soil remediation other than those mentioned in 19 13 01

Please note the should any material on site be encountered that is not listed on the deployment form, NRW will be advised and the plan amended accordingly.

6. Operational Procedures

6.1. Inert / Non-Hazardous / Hazardous Wastes

Aggregate and soils will generally be the materials that have the highest risk of producing dust with the treatment under the mobile plant permit. Material can be required to be screened and or mechanically separated and sorted. The mobile plant will be brought to the material to be treated wherever possible and the material will only be subject to the minimum amount of treatment required to achieve the desired client specification and comply with the requirements of the site specific remediation strategy (if applicable).

The plant will be used to treat material as required to produce fill materials suitable for reuse. The treated materials will generally be stored in separated stockpiles, if they are not able to be reused straightaway. Each finished stockpile / area will be tested against the requirements of remediation strategy and site specification by the onsite geotechnical engineers. Stockpiling of waste materials will be undertaken for the minimum period necessary.

All plant that is to be used on site for treatment of this type of waste material are fitted with water hoses that can be activated, if required, during periods of dry weather. This will act as a dust suppression system should the need be required. In addition to this, the operator has access to their own road sweeper and tractor and bowser that can be used regularly as required. The sweeper is also used to clean the local highways and haul roads.

6.2. Mobile Plant and Equipment

The plant and equipment used at a site is detailed in table 4. All plant is maintained, as a minimum, in accordance with manufacturer's specification.

Table 4: Processing Plant and Equipment

Item	Function
Screeners / Excavators	Processing / treatment
Dumper Trucks	Loading / Unloading / Movement

Table 5: Dust Suppression Equipment and Infrastructure

Item	Function
Tractor and water bowser with rain gun attachment	Unloading of wastes Dampening down road surfaces across site
Direct Water Suppression hose	Dampening down material directly as it is processed.

6.3. Water Supply

A water supply is to be sourced onsite involving a combination of mains and site harvesting of rainwater, utilising lagoons where possible.

7. Dust & Particulate Management

7.1. Dust Controls: Vehicle Movements and Machinery

Dust from the movement of machinery and vehicles on site will be reduced or controlled by:

- The roads and operational open yard areas being swept via road sweeper or dampened as necessary using a water spray / tractor and bowser;
- Roads and operational open yard surfaces will be kept free of accumulated dust/fibres;
- Spillages on roads will be cleared up immediately;
- Vehicle speeds will be reduced to 5 mph or below;
- Idling of vehicles and machinery minimised, as per the company's anti-idling policy;
- Processing plant to be re-orientated as appropriate to site conditions to minimise potential for windblown dust from machinery;
- Plant will be kept clean to avoid a build-up of mud or dust on the machine which may be dropped on roads and, later, cause wind-blown dust; and,
- Prior to leaving site, any vehicles which have materials adhering to external surfaces which may have the potential to wind-blown dust, will make use of the rumble strip to remove loose materials from the vehicles.
- Where material does egress a road sweeper will be deployed.
- All lorries will be required to utilise the load sheeting apparatus before exit from site to prevent escape of materials in transit.
- The driver will be required to assess the cleanliness of the vehicle prior to leaving site. This is to include an assessment of soils around the tyres/undercarriage areas and around the main materials holding vessel to ensure no escape of dust causing residues will be deposited on the highways following exit from site.

7.2. Dust Controls: Movement of Material

In addition to the general measures for vehicle movements the further measures will be operated for the movement of materials pre/post treatment are as follows:

- Application of water during unloading of waste with tanker if required
- Material loaded into vehicles will not be placed higher than the vehicle sides.
- Any spillages during loading will be cleaned up as part of routine housekeeping measures.

7.3. Dust Controls: Storage

In addition to the above, measures to reduce dust emissions from storage is provided for as follows:

- Application of water to stockpiles when conditions have the potential to general windblown dust from stockpiles surfaces

7.4. Dust Control: General

The following general measures will also be operated at the site as part of the DMP:

- Appropriate personal protective equipment will be used to minimise personal risk.
- Toolbox talks on use of dust suppression equipment and general management of dust.
- Operatives required to call water bowser to their location if dust is arising where they are working.
- Waste and product stockpiles will not exceed the optimum for effective site operation and dust management.
- A bowser/road sweeper will be used on all engineered surfaces as applicable.
- A policy of good housekeeping will be adopted such that all ground and relevant mechanical surfaces will be kept free of accumulated dust/fibres.
- Loads identified as potentially problematic (i.e. containing fine, loose materials) will not be accepted at the site or deposited on site.
- Should there be a failure in any site infrastructure, plant or equipment as detailed in this DMP that gives rise to an unacceptable risk of dust emissions off site, then the relevant operations will cease until either appropriate repairs or alternative contingency mitigation measures are undertaken to ensure effective control of dust emissions as determined by the TCM.
- If all dust control measures have been deployed but dust is still deemed problematic, then the relevant site operations causing the dust will cease until climatic conditions have ameliorated or additional controls become available.

8. Monitoring

8.1. Responsibility

Monitoring of dust at the site is the responsibility of the Technically Competent Manager (TCM) and any person(s) authorised by the TCM who have undertaken training in this procedure.

8.2. Visual Inspections

The TCM or site supervisor will undertake visual monitoring inspections of the site boundaries to ensure no dust is escaping from the site. The visual monitoring inspections will take place daily or more frequently if conditions indicate this may be necessary. All observations and any subsequent actions will be recorded in the site diary.

8.3. Routine Monitoring

The TCM will ensure dust management measures are undertaken as appropriate to the site operations and weather conditions. Weather conditions are continuously monitored and recorded in the site diary. Site operations are also continuously monitored and recorded with a comprehensive system of close circuit television cameras across the site. The TCM will review and amend accordingly dust management measures that are being operated at the time. Details of these will also be recorded in the site diary.

Dust, PM10 and asbestos fibres will be monitored using frisbee style dust gauges situated at 8 locations around the site (figure 2), the deposits will be sampled twice monthly and tested for total deposition.

Dust Monitors - ●



Figure 2: Approximate Locations of Dust Monitoring Locations

9. Dust Management Plan Actions

9.1. General

The day to day measures to manage dust will be carried out using the equipment and measures as detailed in sections 7 and 8. Where site monitoring identifies there is an incident with unacceptable dust emissions the following actions will be undertaken:

- Establish source:
 - Are there any unusual characteristics evident in the waste on-site (origin of waste, composition, age, condition, etc)?
 - Are/were waste reception processes occurring as per normal?
 - Is/was the dust suppression system working?
 - Are/were there any unusual activities taking place off-site e.g. neighbouring site operations?
 - Cease relevant operation
 - Recommence relevant operation only when actions have been taken to address dust emissions e.g. additional suppression measures, suitable weather conditions, etc

All incidents will fully investigated and recorded by the TCM including details of any amendments to plant/procedures, mitigation or remedial actions taken to avoid future incidents with details recorded in the site diary.

10. Reporting and Complaints Response

10.1. Community Relations

PR's site management will liaise with any community stakeholders such as organisations as the local council in response to any issues raised by them in respect of emissions.

10.2. Complaints

Any incidents of airborne dust off site or dust complaints will be fully investigated and recorded by the Site Manager including details of any mitigation or remedial actions taken as per the procedures in the management system with the maintenance of the site diary, see Annex A for a copy of the complaint form.

When a dust complaint is received the following actions will be taken by the General Manager or nominated substitute -

Immediate Actions:

- Establish if justified - if wind blowing in direction of property, dust seen leaving site (conditions such as rain or wind blowing in opposite direction would indicate not justified).
- Where justified establish source;
 - Are there any unusual characteristics evident in the waste on-site (origin of waste, composition, age, condition, etc)?
 - Are/were waste reception processes occurring as per normal?
 - Is/was the dust suppression system working?
 - Are/were there any unusual activities taking place off-site e.g. neighbouring site operations?
 - Cease relevant operation
 - Recommence relevant operation only when actions have been taken to address dust emissions e.g. additional suppression measures, suitable weather conditions, etc

When complaints are received a complaint form will be completed. Complaints will be fully investigated and recorded by the Site Manager including details of any amendments to plant/procedures, mitigation or remedial actions taken with details recorded in the site diary. The Site Manager as part of environmental permitting responsibilities will ensure that the NRW is informed of these, ideally as soon as possible practically possible and appropriate. The original complainant will be informed of the outcome of the investigation of the complaint by the Site Manager and any actions taken within 5 working days.

10.3. Review

The Site Manager will review the site diary in relation to dust matters together with any complaints, NRW inspection records, any monitoring results and available weather station information. The results of review shall be used to assess the need for changes to the DMP including amending site procedures and further monitoring work if necessary.

Notwithstanding the above, the DMP will be reviewed annually by the site manager or otherwise in response to a request from a relevant statutory body e.g. NRW, changed circumstances such as the operation of new processing plant or substantiated dust complaints.

10.4. Management

Management of dust at the site is the overall responsibility of the Technically Competent Manager (TCM) who is responsible for the day to day management of the site including the DMP, its implementation and review.

All site operatives will be informed of the contents of this DMP and receive appropriate training. Site operatives will be responsible for implementing measures in the DMP as relevant to their site duties.

Annex List

Annex A: External Complaints Form

Complaints Form	
Date and Time of Event:	Complaint Reference Number:
Name of complainant (if available):	
Contact details of complainant (address and phone number):	
Date and time of incident (if different):	
Detected location of dust emission (NGR if available):	
Weather conditions:	
Wind direction and speed:	
Other comments/observations from complainant:	
Receptor Sensitivity: (Low, medium or high)	
Previous complainant (Y/N):	
Dust Mitigation Report reference number:	
Form completed by (sign and date):	

Dust Rating:	Interpretation Description of Dust Rating
1	No dust (unsubstantiated report)
2	Very slight dust
3	Slight dust
4	Distinct dust
5	High dust