

Prepared by: Environmental Advisor

Approved by: Environmental Manager

1 INTRODUCTION

This document provides the dust management plan prepared in accordance with Natural Resources Wales (NRW) Guidance in relation to the shredder and shear process located on the Rover Way site that forms part of environmental permit Ref. EPR/TP3639BH.

The plan identifies potential sources of dust emissions and the associated potential impacts, and the measures to reduce dust and particulate emissions. The aim is:

- to develop a robust dust management strategy;
- minimise dust generation and emissions from the site; and
- ensure off-site impacts (nearby receptors) are minimised.

2 SOURCES OF DUST

Dust emissions occur at several points in the storage cycle, such as material loading onto the pile, disturbances by strong wind currents, and loadout from the pile. The movement of trucks and loading equipment in the storage pile area is also a source of dust. Total dust emissions from storage piles result from several distinct source activities within the storage cycle:

- loading of materials onto storage piles (batch or continuous drop operations);
- equipment traffic in storage area;
- wind erosion of pile surfaces and ground areas around piles;
- processing of materials (use of shredder and/or shear); and
- loadout of materials for shipment or for return to the process stream (batch or continuous drop operations).

Either adding scrap metal to a storage pile or removing it usually involves dropping the material onto a receiving surface. Truck dumping on the pile or loading out from the pile to a truck with a front-end loader are examples of batch drop operations. Adding material to the pile by a conveyor stacker is an example of a continuous drop operation.

There are two principal sources of fugitive dust associated with the materials handling activities, namely particulate emissions from the scrap metal handling and storage piles, which consists of loader and truck traffic around the storage piles and fugitive dust associated with the transfer of aggregate by buckets or conveyors

The Site operating hours will be:

- Monday to Friday 06:00 – 18:00.
- Saturday, Sunday and Bank Holidays – No on-site operations.

There are some activities external to the site boundary and company operations. Located in figure 1. Below, these include miscellaneous businesses on Tremorfa Industrial Estate sites located on

	<h1>Shredder and Shear Dust Management Plan</h1>		Procedure	ECP 69
			Page	2 of 9
			Revision	2
			Date	Dec 2023
Prepared by: Environmental Advisor		Approved by: Environmental Manager		
<p>directly south of the permit area and the Tidal Sidings SINC and Ocean Park South SINC. The dust emissions from these operations are not deemed to have a significant impact on the surrounding area of operations. There are additional dust emissions that are expected as a result of CELSA’s other operations under the same environmental permit covering the main Meltshop installation and operation. These are closely monitored and controlled in line with the requirements under the permit.</p>				

Prepared by: Environmental Advisor

Approved by: Environmental Manager

3 SITE SETTING AND RECEPTORS

The principal receptors as well as the prevailing wind direction are outlined in *Figure 1*.

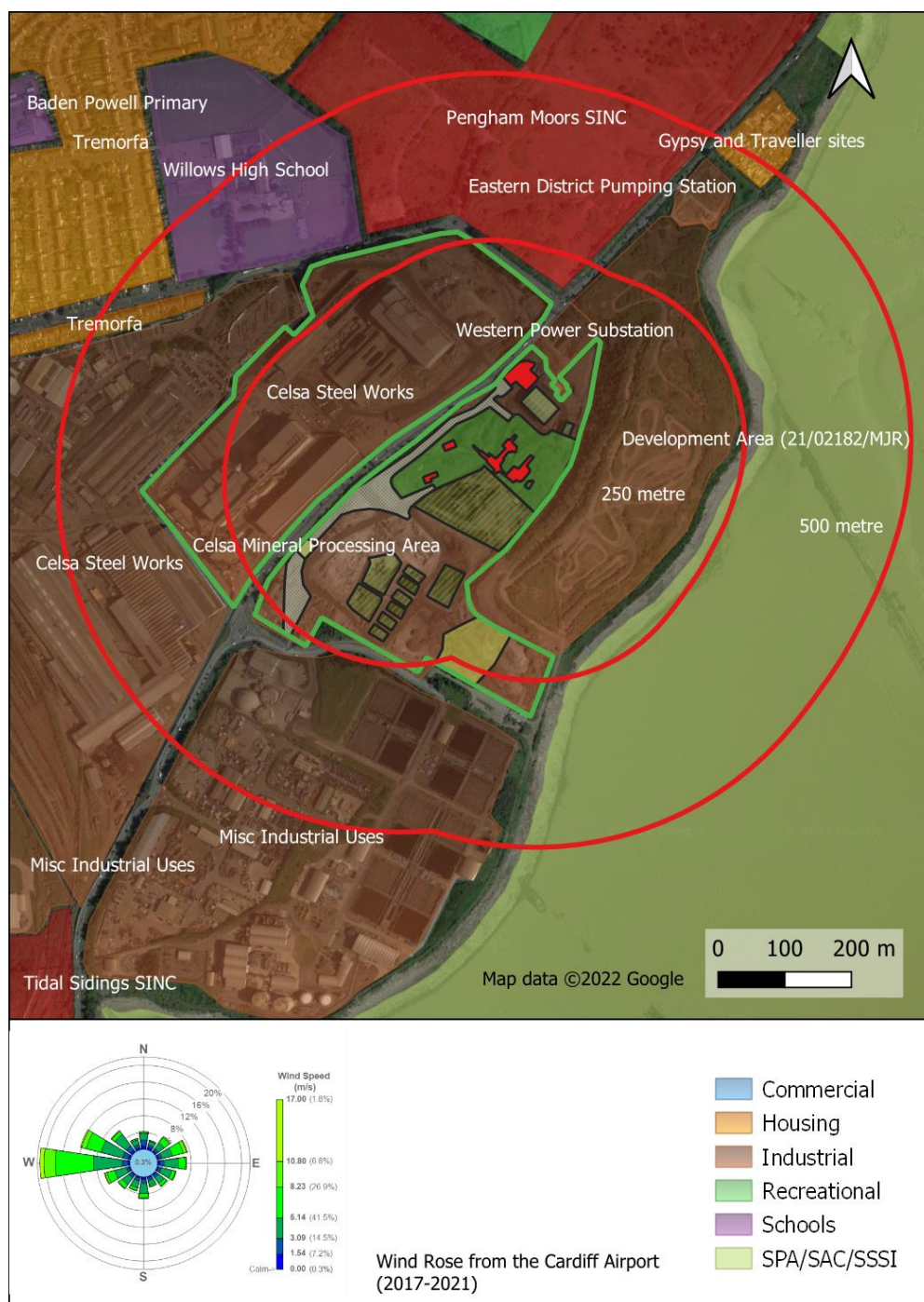


Figure 1 – Location of receptors surrounding the Site (500 metres) with overlay of predominant wind direction

Prepared by: Environmental Advisor

Approved by: Environmental Manager

The closest sensitive receptors are the Travellers' site 370 metres north northeast (beyond the Western Power Distribution 33 kV/132 kV substation) located immediately adjacent to a Eastern District Pumping Station compound, Pengam Green residential area 550 metres north (across open land adjacent to Tesco store), Willow High School 340 metres north of the Site the main Celsa steel making operations and the Tremorfa residential area 430 metres north northeast (beyond the main Celsa site).

4 DUST CONTROL MEASURES

This section outlines the control measures that will be undertaken on-site to mitigate dust emissions from the identified sources. Corrective actions will be undertaken to prevent or minimise dust emissions are in line with current guidance¹.

Site layout, housekeeping and operations

The following measures shall be established and maintained to ensure dust emissions are minimised:

- the location of the storage piles of scrap metal are located away from the identified principal receptors;
- good housekeeping practices have been established and maintained to ensure the site is clear of dust, mud, litter and other debris; and
- road sweepers to remove dust, mud, litter and other debris are utilised as required during dry periods.
- Use of bowsters for damping down large areas of the site. Wet suppression shall be used in preference to large area dry sweeping.
- Adequate water is available on-site for dust suppression purposes, which includes a permit held for groundwater abstraction from a borehole located on-site.

Scrap Metal Processing

The following measures shall be established and maintained to ensure dust emissions are minimised:

- the shredding plant and trommel are located within a partially enclosed structure to reduce dust emissions.
- conveyors within the shredder plant are covered where a risk of uncontrolled emission exists (e.g. dirt lines) with discharge points fitted with rubber skirts. These shall be always maintained.
- the shredder plant incorporates a computer controlled, automated water injection system to minimise dust emissions. The use of a computer controlled automatic dosing system

¹ <https://www.gov.uk/guidance/control-and-monitor-emissions-for-your-environmental-permit#dust-mud-and-litter>

Prepared by: Environmental Advisor

Approved by: Environmental Manager

- ensures that water is applied according to the shredder load.
- the cyclone and bag filter plant are installed within the shredder plant to capture any residual dust emissions.
- cleaned air is discharged to atmosphere via a stack (Ref. A11). Periodically the bag filter is cleaned by reverse jet pulse. The bag filter incorporates a continuous monitoring system that measures pressure differential and alarms in the event that the filter efficiency decreases at all, to ensure that particulate emissions to atmosphere are maintained at $\leq 5\text{mg/Nm}^3$ at all times.
- all captured particulates (from the cyclone and bag filter) are removed from the Site for off-site permitted disposal.

Vehicle movement

The following measures shall be established and maintained to ensure dust emissions are minimised during vehicle movements:

- the external areas comprise an engineered concrete surface. Vehicles will not be required to drive over any unpaved areas;
- all areas, vehicles and plant machinery are subjected to regular housekeeping and removal of loose particles;
- idling of vehicles for extended periods of time will be minimised;
- use of enclosed vehicles, skips or containers (wherever possible), unless they're empty;
- on-site speed limits (10 mph) and reducing vehicle movements
- plant will be switched off when not in use. Delivery and collection vehicles will be required to switch engines off while unloading and loading (where possible). Idling on site shall be minimised;
- minimising the number of access points to your site from public roads (i.e. there is only one access point from Rover Way and one from Tide Fields Road);
- hard surfacing of all the main vehicle movement and waste processing;
- regularly cleaning and dampening of roadways will be undertaken during dry periods;
- hosing of vehicles to remove dirt, dust and particulates (if required); and
- reduce track-out as much as possible.
- Use of mains or battery powered equipment over diesel or petrol generators where practicable.
- All primary containment surfaces and main access routes will be subject to inspection and maintenance. Should damage be identified, the TCM will raise this as a non-conformity in their weekly report.

Dust suppression and monitoring

The following measures shall be established and maintained to suppress dust emissions:

Prepared by: Environmental Advisor

Approved by: Environmental Manager

- use of water-filled bowzers at appropriate locations and times to ensure dust lift-off is minimised.
- A compliant SUDs drainage system with treatment has been designed to prevent site runoff of water or mud.

Stockpiled wastes

The following measures shall be established and maintained to suppress dust emissions from stockpiled wastes:

- dampening down of material during dry periods or where load is identified during the inspection process as potentially dusty.
- all plant is inspected prior to and after use for dust and debris build-up.
- plant and equipment is regularly cleaned down after use to prevent the accumulation of dust and loose material.
- all plant used on Site is maintained and serviced in accordance with manufacturers' guidelines and service agreements.
- stockpiles will be stored in engineered bays with side walls and push walls. The use of bays helps to prevent fugitive emissions from waste and product stockpiles by reducing exposure to winds etc.
- High dust potential residual materials removed from incoming wastes will be removed from site as soon as possible in order to minimise potential for stockpile dust lift-off.
- stockpile heights shall be minimised in-line with the requirements of the FPMP, including maintaining a minimum 1m freeboard clearance between the top of the scrap pile and the top of the storage bay wall.
- drop heights shall be minimised where materials are added to/removed from stockpiles.
- Combustion of waste materials will not be permitted on site

The burning of waste materials is not permitted on-site.

4 MONITORING

To ensure that the dust control measures are effective, Celsa will ensure visual dust monitoring is in place. The following monitoring activities are regularly undertaken to ensure continuous improvement:

- site inspections by the site manager;
- site audits conducted by the company's management; and
- site audits and inspections by Natural Resources Wales.

All Site personnel will be responsible for reporting any dust problems immediately to the Site manager (or deputy).

Prepared by: Environmental Advisor

Approved by: Environmental Manager

The Site Manager will ensure that daily inspections are made of the site and its perimeter to identify any sources of significant dust and to establish whether any dust is likely to impact upon receptors. Assessment is undertaken visually, and the observations logged in the site diary. The inspection shall also consider and visually assess the internal haul routes and processing areas for damage.

When activities with a high potential to produce dust are being carried out and/or there are prolonged dry and/or windy conditions the frequency of inspection shall be increased. In the event of significant dust levels which have the potential to cause nuisance or complaint, then site operations will cease immediately to allow for an investigation to be conducted. The Environmental Department must be contacted in this event and informed of the outcome of the investigation. All unplanned, visually significant emissions are recorded and investigated. If a dust complaint is received, the Environmental Department will carry out an investigation by analysing all relevant data. This includes the two Turnkey Optical Particulate Analysis System (TOPAS) monitors situated at either end of the permit site. Data is used from these monitors to help determine the source of the dust emission where possible.

The principal monitoring points are outlined in *Figure 2*.

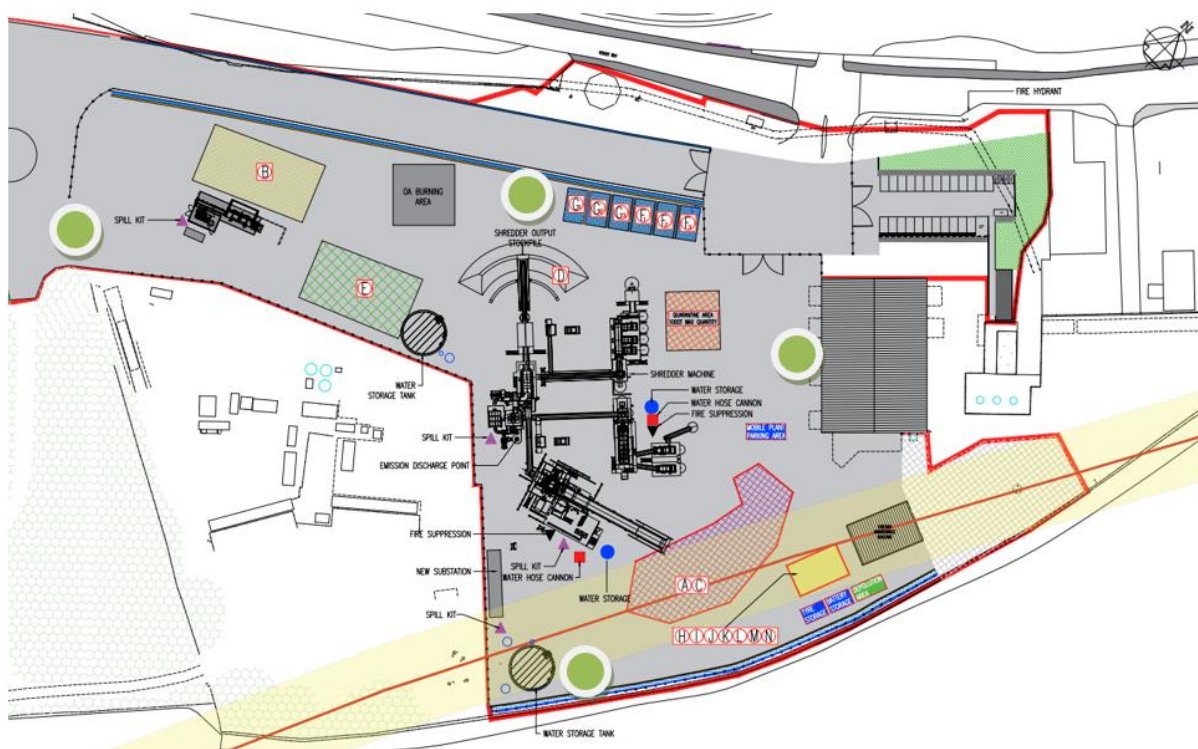


Figure 2 – Dust monitoring points

Prepared by: Environmental Advisor

Approved by: Environmental Manager

The information that shall be recorded within the site diary includes:

- Name of surveyor
- Date
- Time of survey (start/finish)
- Operations being undertaken
- Reason for survey (Routine, possible dust issue, complaint)
- Weather conditions and air temperature (°C)
- Wind direction and strength (e.g. light, steady, strong, gusting)
- Dust observations/description

5 EMERGENCY PLAN

This Section considers the potential for accidents (or incidents) which could result unacceptable short-term dust impacts. If the situation is an emergency, then mitigation measures will be immediately implemented, and the technically competent manager will consider:

- limiting the hours of operation; or
- immediately suspending the site operations.

These measures will be considered on a case by case basis.

The spillage of dry (potentially dusty) materials should be cleaned up and suitably contained as soon as is reasonably practicable.

If any dust complaints are received the Complaints Procedure as set out in EMS procedure CP/B033 (EHS Communication - Internal and External) would be followed and the incident investigated and if found to be real, appropriate mitigation measures would be adopted. The incident would be formally reported to Natural Resources Wales. A complaints log is available for disclosure to NRW and, where required, Cardiff City Council.

6 REVIEW

Dust control measures will be reviewed through internal audits. The audits will review:

- weekly records of inspection;
- spot checks on the higher risk sources of dust; and
- checks to ensure that any corrective or preventive actions have been resolved in an efficient and timely manner.

External audits of the site operations (and associated management systems) will be carried out (by a third party) to achieve and maintain ISO14001 certification.

Shredder and Shear Dust Management Plan

Procedure	ECP 69
Page	9 of 9
Revision	2
Date	Dec 2023

Prepared by: Environmental Advisor

Approved by: Environmental Manager

7 DOCUMENTATION

Table 1: Relevant documentation to the Shredder and Shear operations

ECP 67	Shredder and Shear Environmental Management Plan
ECP 68	Shredder and Shear Fire Prevention and Mitigation Plan
ECP 70	Shredder and Shear Noise and Vibration Management Plan
CP/B033	EHS Communication – Internal and External
CP/B032	Emergency Plan

THIS CONCLUDES THE DUST MANAGEMENT PLAN