

## 1 INTRODUCTION

This document provides the noise and vibration management plan prepared in accordance with Environment Agency (EA) Guidance<sup>1</sup> in relation to the shredder and shear located on the Rover Way site that forms part of environmental permit Ref. EPR/TP3639BH.

Sources, such as motor vehicle engines or the movement of vehicles over road surface irregularities, can produce not only displacement of the air molecules which we perceive as noise, but also displacement within the material components of the source or materials in contact with the source. These energy waves can travel through the ground in a similar manner to air pressure waves through the atmosphere and, dependent on the amount of energy being transmitted, be perceived as vibration. Vibration can produce three effects at levels above the threshold of perception it may cause human annoyance; at extreme levels it may cause building damage (e.g. during construction activity) and it may be re-radiated as audible noise.

This noise and vibration management plan outlines the methods by which Celsa will systematically assess and minimise the potential impacts of noise and vibration generated via the shredder and shear located on the Rover Way site. The noise and vibration management plan is a working document which has the specific aim of ensuring:

- noise and vibration is subject to routine review and assessment;
- noise and vibration is controlled at source through the application of good operational practices e.g. effective maintenance, physical controls and management practices; and
- all appropriate measures are taken to prevent or (where that is not reasonably practicable) to reduce noise and vibration emissions so that off-site impacts are reduced to an acceptable level.

The noise and vibration management plan address the impact of noise and the control measures employed to mitigate the risk. These are supported through monitoring procedures to identify both abnormal emissions and to review complaints (should they arise). Roles and responsibilities (including senior management responsibilities) are clearly defined within the noise and vibration management plan.

## 2 SOURCES OF NOISE AND VIBRATION

Sources of noise and vibration (mobile and fixed) have been identified by reviewing all on-site activities. The principal potential sources include both:

- private vehicles and HGVs vehicles approaching and leaving site;

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<sup>1</sup> Environment Agency (2022). Guidance Noise and vibration management: environmental permits, <https://www.gov.uk/government/publications/noise-and-vibration-management-environmental-permits/noise-and-vibration-management-environmental-permits>

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Approved by: Environmental Manager

- unloading of scrap metal at the site into storage areas (either pre-processed or unprocessed)
- processing of scrap (within the shredder and/or shear);
- unloading of processed scrap from shredder/shear;
- loading of vehicles with scrap metal; and
- general site activities.

The shredder and shear will emit continuous noise and/or vibration during operation. The other work activities are sporadic and are based on processing stockpiles of material.

Abnormal sources of noise:

Occasionally the level of noise arising from site operations may exceed standard levels. Potential abnormal sources include:

- Change in wind speed and direction
- Malfunction of equipment

The Site operating hours will be:

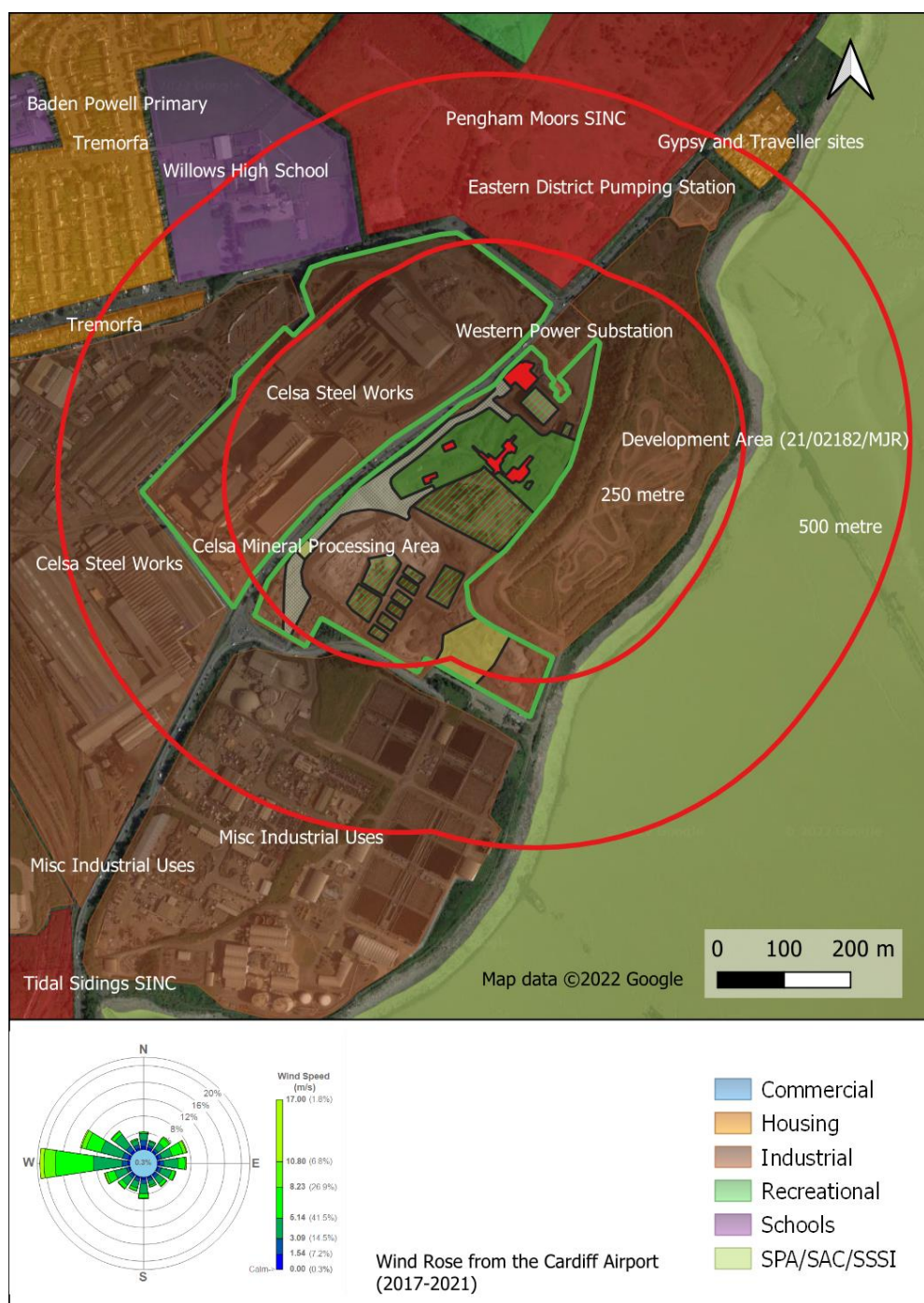
- Monday to Friday 06:00 – 18:00.
- Saturday, Sunday and Bank Holidays – No on-site operations.

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## 3 NOISE AND VIBRATION RECEPTORS

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



**Figure 1** – Location of human receptors surrounding the Site (within 1-km) with overlay of

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*predominant wind direction*

The closest sensitive noise 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, 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 NOISE AND VIBRATION CONTROL MEASURES**

In-line with H3 Guidance the following control measures have been established and shall be maintained at the site:

- The technically competent manager (or designated responsible person) will have responsibility for ensuring that noise emissions from the site are minimised. Regular meetings will be held to discuss current and planned site operations that have the potential to generate noise emissions.
- All plant, equipment and vehicles will be regularly maintained (in-line with manufacturers recommendations) to ensure that no equipment will produce excessive noise. Defective equipment (e.g. bearings, silencers, acoustic enclosures) shall not be used on-site.
- The shredder acoustic enclosures will be installed and maintained in-line with manufacturers recommendations.
- Silencers will be fitted to all machinery (where possible) in-line with manufacturers recommendations. Where site equipment is fitted with noise abatement equipment is shall be used at all times.
- All noise generating equipment shall be switched-off when not in use.
- The site will only operate Monday to Friday 06:00 – 18:00. There will be no Saturday, Sunday and/or Bank Holidays operations.
- Traffic movements will only take place during operational hours.
- A speed limit of 10mph will be in place at the site.
- Procedures for the loading, unloading of vehicles and the shearbox shall be employed to ensure waste is not dropped from an excessive height. All employees involved with materials handling shall be suitably trained.

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- All employees will be responsible for reporting any noise problems immediately to the technically competent manager.
- White noise reversing alarms will be used on mobile plant in-line with our workplace transport safety requirements.
- Site staff will be made aware of surrounding residential receptors and are required to avoid all unnecessary noise. All employees will be trained to operate the equipment and plant to minimise excessive noise emissions.

## 4 MONITORING

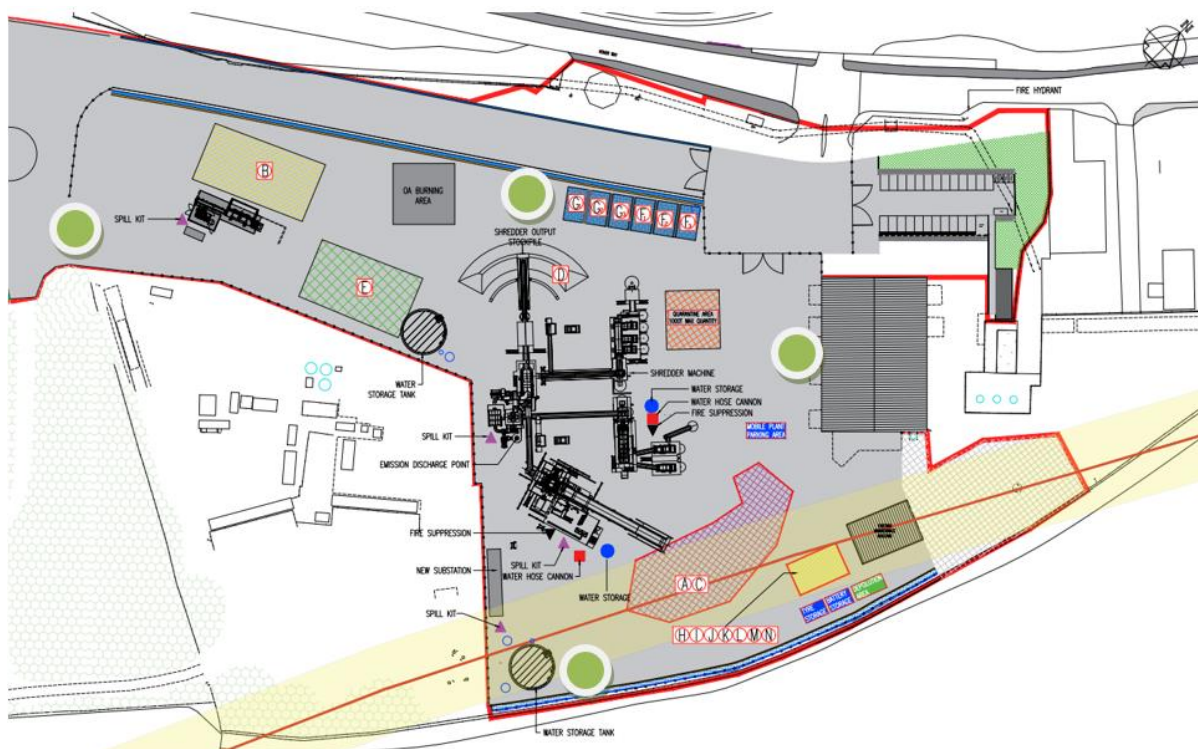
To ensure that the noise and vibration control measures are effective, Celsa will ensure noise and vibration monitoring is in place. The following monitoring activities are regularly undertaken to ensure continuous improvement:

- 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 noise problems immediately to the Site manager (or deputy).

The Site Manager will ensure that regular weekly inspections are made of the site and its perimeter to identify any sources of noise and/or vibration and to establish whether any noise and/or vibration is likely to impact upon receptors. The principal monitoring point is outlined in *Figure 2*. Auditory perception of the individual undertaking the monitoring will be used, and any abnormalities recorded in the site diary. In the event of a perceived significant increase in noise emissions, the plant will cease operating until an investigation into the source has been completed. Changes in wind speed and direction are not considered to have a serious impact due to operations not being conducted during unsociable hours.





**Figure 2 – Noise and vibration monitoring points**

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 noise issue, complaint)
- Weather conditions and air temperature (°C)
- Wind direction and strength (e.g. light, steady, strong, gusting)
- Noise intensity
  - 1 No detectable noise
  - 2 Faint noises (barely detectable)
  - 3 Moderate noise (noise easily detectable)
  - 4 Loud noise (bearable, but offensive noise)
  - 5 Very loud noise
- Noise extent
  - 1 Local and not persistent (only detected during brief periods when wind drops)
  - 2 Not persistent as above, but detected away from site boundary
  - 3 Persistent but localised
  - 4 Persistent and pervasive up to 50m from site boundary

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- 5 Persistent and widespread (noise detected >50m from site boundary)
- Description of noise (hiss, hum, rumble, continuous, intermittent etc.)

## 5 EMERGENCY PLAN

This Section considers the potential for accidents (or incidents) which could result unacceptable short-term noise impacts e.g. elevated noise may occur due to the breakdown of the equipment or abatement equipment. 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 creating the unacceptable noise emissions.

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

If any noise and/or vibration 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. In the event of sustained noise incidences, relevant sensitive receptors will be contacted directly should the noise be considered to impact them.

## 6 REVIEW

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

- weekly records of inspection;
- spot checks on the higher risk sources of noise to check monitoring and maintenance procedures are being carried out in accordance with manufacturers recommendations; 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.

**THIS CONCLUDES THE NOISE AND VIBRATION MANAGEMENT PLAN**