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Project No: 313223.001

Noise Management Plan

Prepared for:

2ZLF Ltd

West Meadows Industrial Estate
Derby
DE21 6HA

Contents Amendment Record

This report has been issued and amended as follows:

Revision	Description	Date	Signed
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Acknowledgement

This report has been prepared for the sole and exclusive use of 2ZLF Ltd in accordance with the scope of work presented in Mabbett & Associates Ltd (Mabbett) Additional Services Letter Agreement (311233/LA/RS), dated 25 April 2023. This report is based on information and data collected by Mabbett. Should any of the information be incorrect, incomplete or subject to change, Mabbett may wish to revise the report accordingly.

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Section 1.0: Introduction

This Noise Management Plan (NMP) outlines the methods by which the site operator will systematically assess and minimise potential noise impacts from the operation of the 2ZLF Ltd road and gully waste processing site.

The NMP is a working document and forms one component of the overall Environmental Management Plan, ensuring that:

- noise impacts are addressed as part of routine site inspections;
- noise is controlled by effective operational practices, comprising physical and management control measures; and
- all practicable measures are taken to prevent or reduce noise impacts from the site at surrounding noise sensitive receptors.

The NMP also addresses the procedures for the management and resolution of complaints.

Section 2.0: Site Operations and Site Noise Sources

2.1 Site Process

2.2 Operating Hours

The standard Operating Hours for the facility, in accordance with the Planning Permission are as follows:

- Monday to Sunday: 00:00 – 23:59

The site will not undertake operations on Public Holidays.

However, the site is open for deliveries as follows;

- Monday to Sunday: 07:00 – 17:00
- Saturday: By appointment only

Whilst the Planning Permission from the site allows 24/7 operation, it is understood that the processing of waste is only undertaken during the hours of 06:30 and 17:30, Monday to Saturday.

2.3 Surrounding Area and Receptor Location

The 2ZLF site is located off Downing Road, West Meadows Industrial Estate, Derby. The site consists of a large yard area for the storage of waste, a building containing various items of waste processing plant, additional external processing plant and a couple of buildings/office.

To the immediate south of the site is a spur from the Midlands Mainline railway to some Network Rail sidings. Beyond the sidings is a large area of waste land. Beyond the wasteland is Pride Park, which consists of a number of commercial premises, car showrooms, Pride Park Football Stadium and Derby Railway Station.

To the north of the site are a couple of other industrial units on the West Meadows Industrial Park, beyond which is the busy A52. Beyond the A52, to the north-east, is an established residential area, and to the north-west is the Sawley Business Park with residential properties past.

To the east and west of the site are numerous industrial and commercial premises on the West Meadows Industrial Estate.

The location of the noise sensitive receptors relative to the application site are given below and are illustrated in Figure 1.

Table 1.1: Selected Noise Sensitive Receptors

Receptor	Address	Distance from Site Boundary	Direction from Site Boundary
R1	134 Nottingham Road, Chaddesden	410m	NW
R2	1 Highfield Cottages, off Highfield Lane, Chaddesden	490m	NE

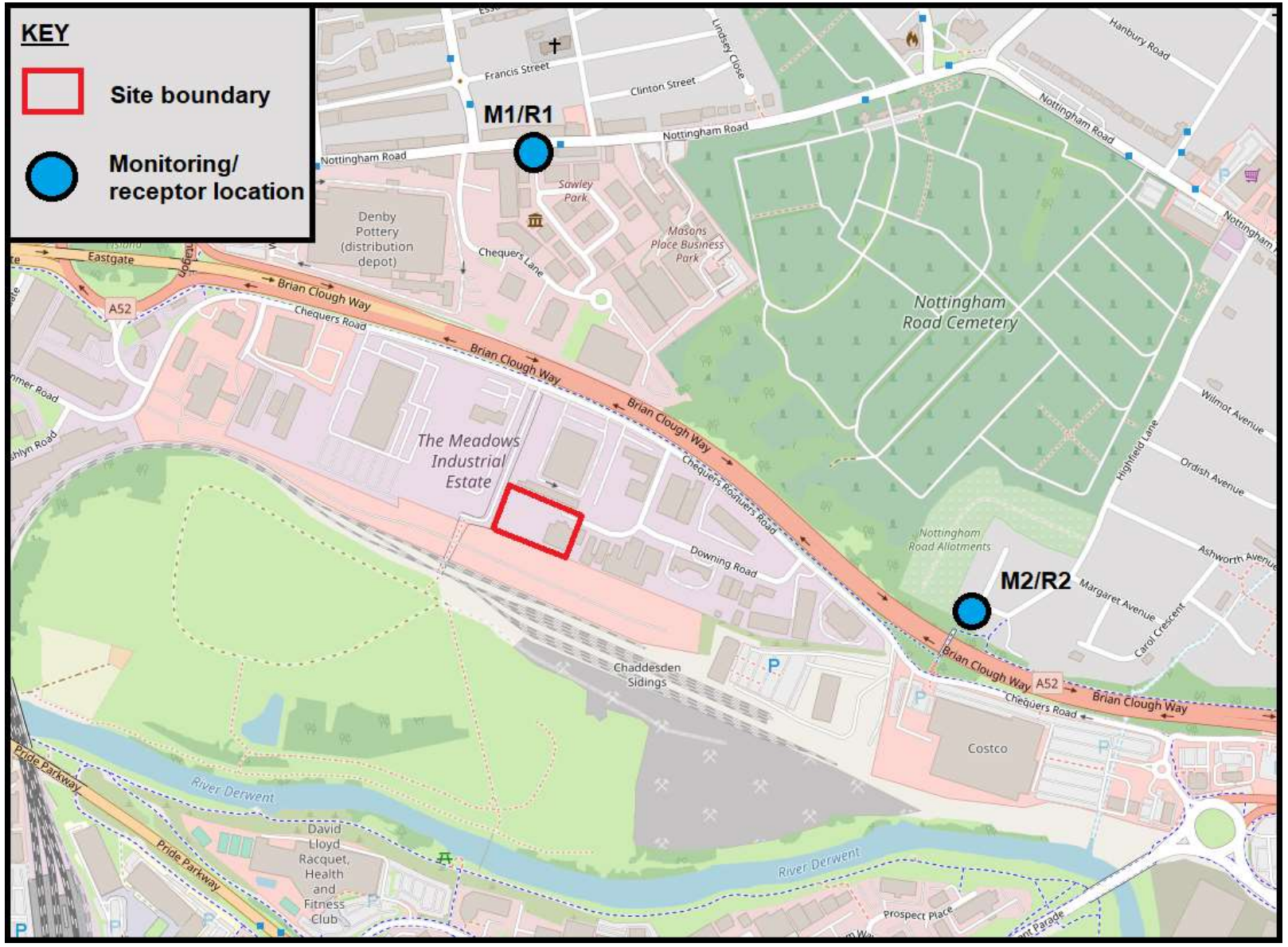

Figure 1: Location of Baseline Sound Monitoring and Receptors

2.4 Sources of Noise

The site consists of designated waste reception and storage areas for the hazardous and non-hazardous waste activities. Amenities for the entire site include a weighbridge for incoming wastes and a quarantine area for non-conforming incoming wastes (which will ensure that quarantined wastes do not contaminate those which have been deemed suitable for treatment) as well as two soil washing plants – one for hazardous wastes and one for non-hazardous wastes.

Wastes contaminated with heavy metals and/or hydrocarbons/oils are brought onto site in enclosed/sheeted vehicles. After initial inspection at the weighbridge, vehicles are directed to the reception area and physically inspected. Once accepted, the loads are loaded into specially provided bays and covered prior to treatment.

Treatment activities consist of the washing of hydrocarbon and heavy metal contaminated wastes.

The material is loaded into a hopper which can process 10 tonnes per hour. From here the waste passes through a screener to remove all oversized components down to 5mm – all oversize which exceeds 25mm is sent off site for disposal. All components between 5 – 25mm are non-hazardous and are either treated in the system or removed from site.

Once the material has been screened it is then 'scrubbed' with water to remove the contaminants from the soil/sands. The soils/sands are then subjected to a density separator which separates fine and coarse sands by weight. Course clean sand is separated out and removed from the system.

The finer sand is then treated by a hydro-cyclone which separates out particles by applying a centripetal force – i.e., the material is suspended via a liquid suspension and the hydro-cyclone spins the waste, separating it from the rest of the medium based on the density of the sand. The sand is then passed through a dewatering screen and removed from the system.

The next step of treatment is to then remove any oil from the system. Once the fines have been removed from the system, an anti-foam polymer is added to suppress the production of foam from the hydro-cyclone. The material is then passed through to the Lamella. The Lamella is a series of plates which are set on an angle and are designed to remove oil from suspension (the oil adheres to the plates). The oil is then recovered and removed off site.

The fines are then dropped out of the system to a sludge tank and are then subject to a centrifuge, which separates out the water from the material – forming a filter cake. The filter cake is then removed from the site as waste material.

The resulting water is recycled back to the water tank where it is either reused in the treatment process, or it is treated before being reintroduced back into the treatment process or is used for washdown water. This ensures that all water which is used in the system is ultimately recycled through the system.

The main noise sources on site are:

- The arrival and departure of waste vehicles – both import and export of material.
- Loading shovel –continuous operation to feed waste processing hoppers.
- Existing processing plant – both internal and external, which include hoppers, conveyors, vibrating screens, centrifuges, various pumps.
- New processing plant – external. This includes a hopper, conveyors and vibrating screen, and associated pumps.

The location of the main noise sources is given in Figure 2.

Observations on site indicate that these noise sources do not significantly influence the noise climate at the site location or surrounding receptors as road traffic on the busy A52 trunk road into Derby city centre is the dominant noise source.

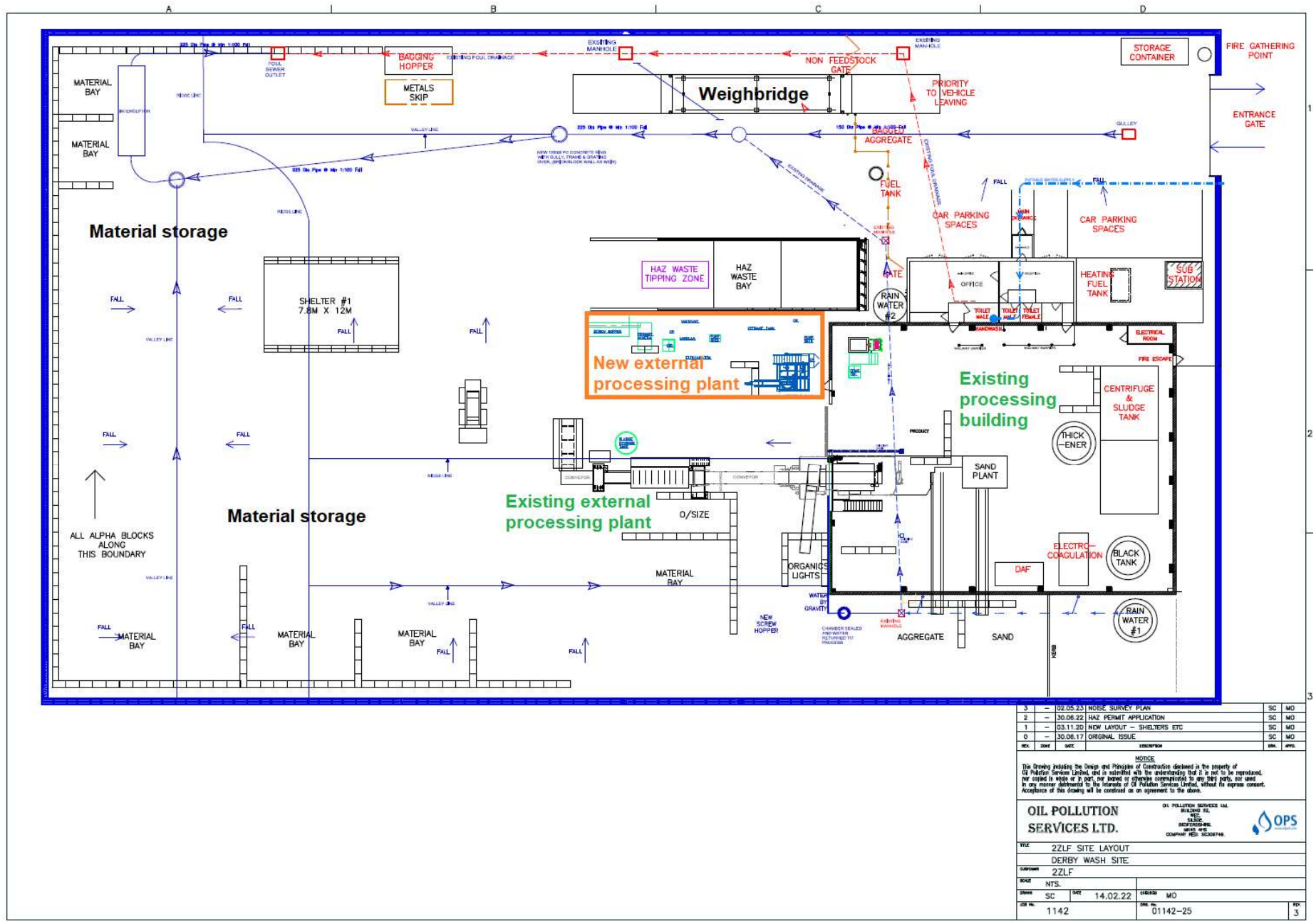

Figure 2: 2ZLF Site Layout

Section 3.0: Noise Impact

3.1 On-site Impact

Personnel working on site and site visitors are the nearest receptors to noise emissions. Site personnel and visitors are not likely to be a concern relating to nuisance but should be considered in regard to health and safety.

All site personnel and visitors should be made aware of any noise issues and understand the site's Environmental Management Systems and this NMP. Personal Protective Equipment (PPE) should be made available where personnel or visitors are likely to be exposed to high levels of noise.

3.2 Off-Site Impact

The site has no history of noise complaints due to normal operations at the 2ZLF site.

In addition, the sound climate at the closest noise sensitive receptors is dominated by road traffic on the A52 trunk road into Derby City Centre and Nottingham Road.

Prior to the application for an Environmental Permit a noise impact assessment has been undertaken. The predicted noise impact is presented in **Error! Reference source not found.**.

Table 3-1: BS 4142 Assessment – All 2ZLF Operations

Receptor	Specific Sound Level $L_{Aeq,Tr}$ dB	Acoustic Feature Correction dB	Rating Level $L_{Ar,Tr}$ dB	Typical Background Level $L_{A90,T}$ dB	Excess of Rating Level over Background dB	BS 4142 Assessment Outcome
Daytime						
R1	30	+3	33	56	-23	No impact
R2	27	+3	30	54	-24	No impact
Night-time						
R1	30	+3	33	41	-8	No impact
R2	27	+3	30	39	-9	No impact

The noise impact assessment considered worst-case parameters such as meteorological conditions and operating times.

The BS 4142 assessment indicates that operations at the 2ZLF site do not give rise to noise impacts upon the closest receptors, both during daytime and night-time periods.

Section 4.0: Noise Control Measures

4.1 Management Measures

The site manager has overall responsibility to ensure noise from the site is kept to a minimum, in particular at the closest noise sensitive properties.

Management noise control measures will include:

- All plant and machinery to be regularly inspected and maintained (in accordance with the planned maintenance programme), to ensure that no item will produce excessive noise.
- If any defective plant item is creating a noise nuisance, then the Site Manager will undertake to have the issue dealt with within the shortest time possible.
- Regular lubrication of moving parts.
- Regular replacement of wearing parts.
- No routine maintenance work outside of daytime hours to be undertaken and provisions for noise control during maintenance.
- Equipment operation by experienced staff.
- Buildings and container doors to be kept closed, where practicable.
- All site staff to be instructed on the importance of noise control and minimising noise emissions from the site during their inductions.
- Horns on vehicles and mobile plant not to be used, unless absolutely necessary.
- Engines not to be “revved”, unless absolutely necessary.
- Vehicle and mobile plant engines to be switched off when stationary, unless impracticable.
- Vehicle speeds within the site to be restricted.

All staff on the site have a responsibility to be aware of the need to ensure noise generated by the site is kept to a minimum, and to report any potential issues or any potential improvements.

4.2 Liaison with Neighbours

Establishing and maintaining good relationships with sensitive receptors is essential to minimising the potential for noise nuisance.

2ZLF Ltd shall ensure:

- That all the neighbours know how to contact the site if they consider noise to be a problem; and
- That any complaints are recorded and that problems, where possible, are dealt with promptly.

Should complaints be made regarding operations at the site, these will be fully investigated following the complaints procedure given in Section 6.0. Where it is identified that noise mitigation measures may be required, these will be explored further.

4.3 Physical Noise Control Measures

As no noise impact is predicted or experienced at the closest noise sensitive receptors, no physical control measures are required.

4.4 Plant Purchasing Policy

When new plant is to be purchased the relative noise emission of the various options should be taken into consideration as a factor in the decision-making process. Incorporation of specific noise suppression equipment should be considered. Noise emissions for individual items of plant are generally provided as a sound power level (SWL or Lw) in dB(A). The lower the sound power level the quieter the plant.

The above applies equally to hiring of plant or the transfer of plant from another company site.

Section 5.0: Compliance Noise Monitoring

5.1 Regular Inspection

The site manager will carry out regular inspections around the site and at the site boundary. The purpose of the inspection is to identify any unacceptable or unexpected sources of noise and to determine if it is audible at the site boundary.

If the inspection identifies any unacceptable or unexpected noise sources which are clearly audible at residential properties, remedial action to reduce noise levels will be taken as soon as reasonably practicable.

Details of inspections which identify anything unusual or result in remedial action being taken shall be recorded in the site logbook.

5.2 Monitoring Requirements

The noise impact assessment based on measured levels has concluded that there is no noise impact to nearby sensitive receptors from the 2ZLF site. Therefore, no routine noise monitoring is planned for the site.

Compliance noise monitoring will be undertaken following substantiated complaints which have not been resolved by other means. Monitoring will focus on the following locations:

- R1 134 Nottingham Road, Chaddesden
- R2 Highfield Cottages, Chaddesden

5.3 Monitoring Regime

At each location the monitoring will be carried out using a suitable Type 1 sound level meter and field calibrator which have been calibrated by the manufacturer or at an accredited laboratory to the relevant standards within the previous 2 years.

Noise measurements shall be carried out by an acoustic consultant or suitably trained member of 2ZLF Ltd staff. Suitably trained is defined as someone who has attended a recognized course in environmental noise measurement and reporting.

Assessment of site noise levels should be undertaken in accordance with BS 4142.

The following measurement procedure shall be adhered to:

- The sound level meter shall be calibration checked prior to the measurement at the first receptor, and calibration checked following the measurement at the last receptor. The calibration levels shall be noted.
- Noise levels shall be logged at relevant receptors consecutively.
- At each location, noise levels shall be logged for a minimum of 15 minutes when the site is operating normally, in order to obtain an estimate of the $L_{Aeq,1hour}$ specified in the PPC guidance.
- Logged parameters shall comprise $L_{Aeq,T}$ L_{A90} and L_{Amax} values.
- At each receptor, a note of the prevailing sound climate shall be made. This will include a brief description of the contribution of noise from other non-site plant sources.
- At each receptor, a note of the prevailing meteorological conditions shall be made. If conditions are unsuitable for noise monitoring, the measurements shall be postponed until the next day that weather conditions are suitable.
- The guidance for the monitoring of noise levels given in BS 4142 and BS 7445 shall be followed.

The Regulatory Authority would also be at liberty to monitor noise levels and/or investigate noise complaints made by members of the public through the course of undertaking their statutory duties.

Where the measured result exceeds the noise limits and activities at the site are the source of the exceedance, remedial action to reduce noise levels will be taken immediately. Further monitoring to

establish that levels have been reduced below the limit will then be carried out. The EA will be informed of the exceedance and the remedial action taken as soon as reasonably practicable.

A permanent record of all noise monitoring undertaken, and any associated remedial action, will be kept on site for a minimum of 3 years and made available for inspection by relevant parties.

Section 6.0: Complaint Management Procedure

Should complaints arise from nearby residents regarding noise from site activities, a log of the complaint will be made, to include the:

- Date and time that the complaint was received by the site;
- Name, address and telephone number of the complainant;
- The time and date when the noise was observed;
- The location where the noise was observed;
- The description of noise. Including, where possible, frequency, duration, intensity and character (e.g low, high pitch). This information may help identify potential noise sources.
- Any other information relating to the complaint.

The Site Manager shall be notified as soon as possible that a complaint has been received, and if required, contact the complainant to obtain further details. The following site information should be recorded:

- Wind speed and direction at the time of complaint;
- Any on-site activities occurring at the time of complaint.

If the complaint relates to an event in the past, then the likely cause of the complaint will be investigated as soon as possible via records of site activities. The complainant will be advised of the results of the investigation and any remedial action taken as a result of the complaint, within 10 working days of the complaint being received.

If the source of the complaint is still ongoing, it will be investigated as soon as reasonably practicable. If initial investigations identify that the site could be the source of the noise complaint, then further investigation will be carried out to understand the scale of the impact. Where complaints cannot be resolved on initial receipt, and further investigations are required, a written response will be made within 10 working days of submission of the complaint if contact details are provided.

2ZLF Ltd may undertake noise monitoring to provide supporting data or provide additional confirmation of the likely noise levels off-site.

If the source of the complaint relates to normal day to day activities, a review will be undertaken to determine if such works are likely to result in noise nuisance in the future. The results will be discussed with the complainant and explained with regard to the measured noise levels and the influence of other noise sources outside the site.

Section 7.0: Records

Records relating to the management and monitoring of noise shall be maintained, to include:

- results of routine inspections;
- results of any noise monitoring undertaken;
- details of any complaints, to include date, time, location of complainant, prevailing weather conditions and outcome of the complaint investigation;
- details of any remedial action taken in response to issues identified by members of staff or via a complaint, and any subsequent change to normal operating procedures; and
- plant maintenance schedule.

All records will be kept for a minimum of 3 years and be available for inspection by relevant parties upon request. The records will be kept in the main site office or Head Office.

Section 8.0: Review / Update

This NMP is a controlled document, and forms part of the Environmental Management System. Records relating to the management and monitoring of noise resulting from the implementation of this NMP will also form part of the Environmental Management System.

The NMP is intended to be a live document which serves as a reference during day-to-day operations, and as such would be reviewed on an annual basis. The NMP will also be reviewed and updated should any of the following occur:

- significant changes are made to the process or operational practices;
- there is a change to the management structure, designation of responsibility or training provision; and
- complaints are received, which on subsequent investigation result in the identification of further control measures or remedial action, in addition to those set out within this NMP.

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