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Noise Management Plan

Wren Kitchens, Falkland Way, Barton upon Humber, North Lincolnshire

Wren Kitchens

SHF.550.003.NO.NMP.001

'Experience and expertise working in union'

enzygo.com

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Noise Management Plan

Project:	SHF.550.003.NO.NMP.001
For:	Wren Kitchens
Status:	Draft V1
Date:	July 2023
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1 Site Description

1.1 Project Introduction

1.1.1 Enzygo Limited (Enzygo) has been commissioned by Wren Kitchens to prepare a Noise Management Plan (NMP) as part of the requirements under Condition 9 of the planning consent for their transport yard facility off Victory Way, Barton-upon-Humber.

1.1.2 Details of the onsite management practices, together with the baseline survey data, assessment and conclusions are presented within this plan. Further information on the potential noise impacts arising from the facility are presented in Enzygo report reference SHF.550.003.NO.R.004 dated July 2023.

1.2 Objectives

1.2.1 This NMP serves to document the control measures used at the site to ameliorate noise emissions arising from operational activities. The NMP includes the choice of controls, general site design, and operational practice in line with best practice. The NMP is a working document with the specific aim of ensuring:

- noise impacts are considered as part of routine operations;
- the minimisation of the risk of unplanned 'noisy' events that could result in offsite complaints;
- noise is primarily controlled at source by good operational practices, the correct use and maintenance of plant, and operator training; and,
- all appropriate measures are taken to prevent or, where that is not reasonably practicable, to minimise noise emanating from the facility.

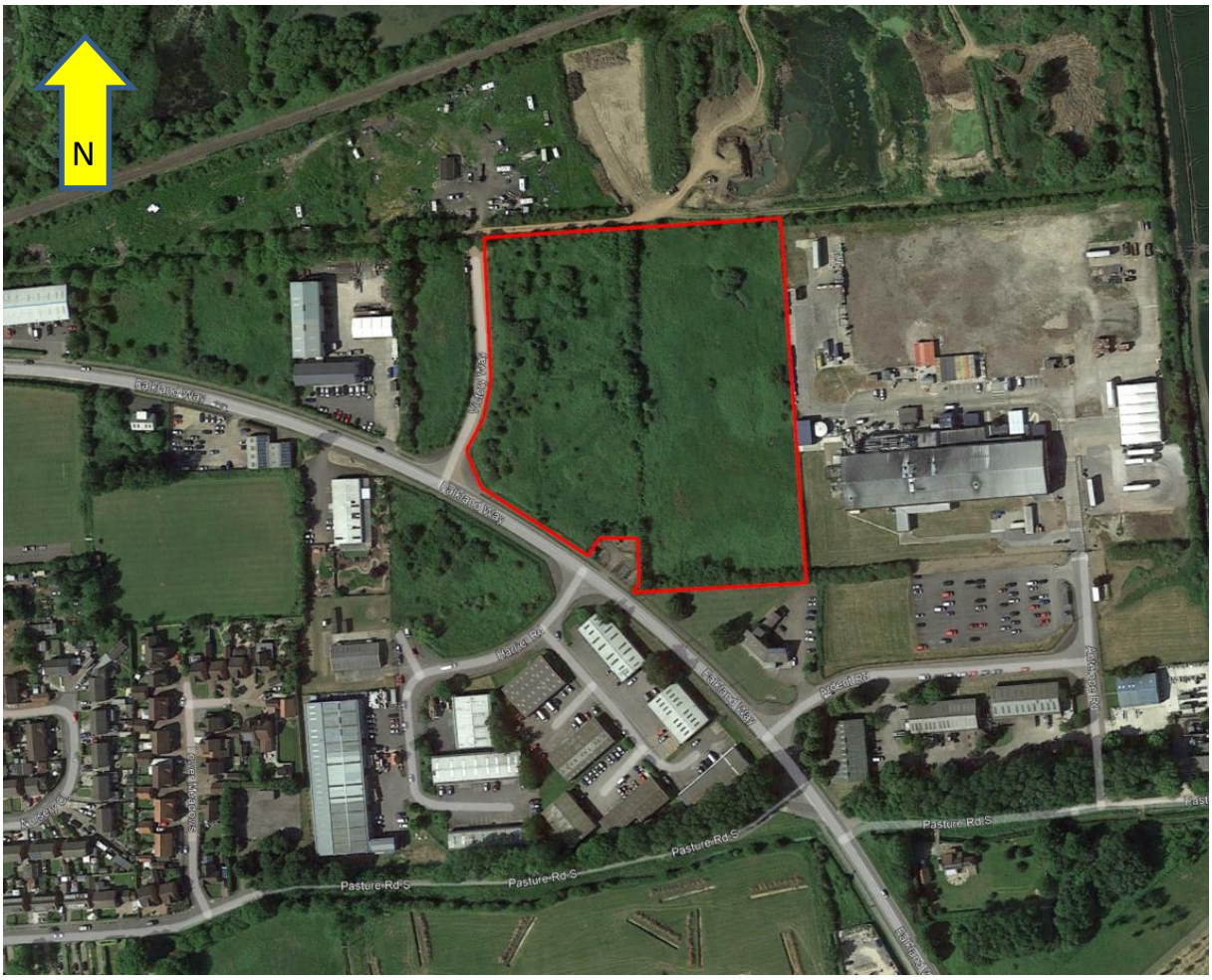
1.3 Site Location

1.3.1 The site is located to the east of Barton-upon-Humber on Victory Way.

1.3.2 To the north of the site is scrubland with a rail line and wetlands beyond. To the east and southeast is the Bakkavor Pizza and Bread Barton factory and associated buildings. To the southwest is Falkland Way, with industrial/commercial buildings, scrubland, and Field View Day Nursery beyond. To the west is Victory Way with scrubland and Grayton industrial premises beyond.

1.3.3 The nearest noise-sensitive receptor is Field View Nursery which is located approximately 50m to the southwest of the site boundary. The closest residential receptor is to the southwest of the site, off Lower Meadow. The receptor locations are identified in Figure 3-1 and documented in Table 3-1.

Figure 1-1: Site Location



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1.4 Scheme Description

1.4.1 The transport yard is a recent addition to the Wren campus, consented in April 2022 under application reference PA/2021/2257. The facility operates as a transport hub for the fleet of wren vehicles, typically 4-axle vehicles and draw-bar trailer type HGVs and some smaller vehicles.

1.4.2 The yard is accessed via barrier-controlled access road off Victory Way and operates a one-way system through the site. Vehicles exit the site via the same access point, joining Victory Way, and on to Falkland way and the wider road network.

1.4.3 Discussions with the operatives on site indicate that the yard operates 24hrs per day between 06:00hrs Monday to 06:00hrs Saturday. That said, vehicles tend to return to the yard around before 01:00hrs, with few movements between 01:00hrs and 05:00hrs. Some of the longer distance journeys may begin around 05:00hrs, though typically vehicle movements start around 08:00hrs.

1.4.4 The site design includes provision for a 4m tall robust acoustic fence around the southern and western aspects of the transport yard. The fence is designed to control noise emissions from the yard and ameliorate any resultant noise impacts at the closest receptor locations.

1.4.5 The site plan and red line boundary are presented on Figure 1-2 below.

Figure 1-2: Site Plan

1.5 Document Status

1.5.1 This NMP is a controlled document, and forms part of the site's Management System.

1.5.2 The specification for the periodic review and update of this NMP will be set out within the Management System and will be undertaken on an annual basis, as a minimum. However, this NMP should be reviewed as required should the following occur:

- Significant changes are made to the plant or operational practices;
- The planning or permitting Authority requests that the NMP is updated, in their role as regulator; or,
- 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.

2 Standards and Guidance

2.1 British Standard 4142:2014+A1:2019 *Methods for rating and assessing industrial and commercial sound.*

2.1.1 BS4142 provides a methodology for rating and assessing sound associated with both industrial and commercial premises. The Standard is based around the premise that the significance of the noise impact can be derived from the numerical subtraction of the background noise level from the measured/calculated rating level of the specific sound under consideration. This comparison will enable the impact of the specific sound to be concluded based upon the premise that typically "the greater this difference, the greater the magnitude of the impact". This difference is then considered as follows:

- A difference of around +10dB or more is likely to be an indication of a significant adverse impact, depending on the context;
- A difference of around +5dB is likely to be an indication of an adverse impact, depending upon context; and,
- The lower the rating level is relative to the measured background sound level, the less likely it is that the specific sound source will have an adverse impact or a significant adverse impact.

2.1.2 BS4142 further states that *"where the rating level does not exceed the background sound level, this is an indication of the specific sound source having a low impact"* again depending upon the specific context of the site. The Standard further qualifies the assessment protocol by outlining conditions to the comparative assessment and stating that *"not all adverse impacts will lead to complaints and not every complaint is proof of an adverse impact",* thus implying that all sites should be assessed on their own merits and specifics.

2.1.3 The Standard quantifies the typical reference periods to be used in the assessment of noise, namely:

Typical Daytime	07:00 – 23:00	1-hr assessment period
Typical Night-time	23:00 – 07:00	15-min assessment period

2.1.4 The Standard outlines methods for defining appropriate *"character corrections"* within the rating levels to account for tonal qualities, impulsive qualities, other sound characteristics and/or intermittency. These are a) the Subjective Method, b) the Objective Methods for tonality and c) the Reference Method. It is noted by the Standard that where multiple features are present the corrections should be added in a linear fashion to the specific level.

2.1.5 The Subjective Method is based on the following corrections:

Table 2-1: BS4142 Subjective Method Rating Corrections

Level of Perceptibility	Tonal Correction	Impulsivity Correction	Correction for "Other sound characteristics"	Intermittency Correction
No Perceptibility	+0 dB	+0 dB	Where neither tonal nor Impulsive but clearly identifiable +3 dB	If intermittency is readily identifiable +3 dB
Just Perceptible	+2 dB	+3 dB		
Clearly Perceptible	+4 dB	+6 dB		
Highly Perceptible	+6 dB	+9 dB		

3 Receptor Locations

3.1 Introduction

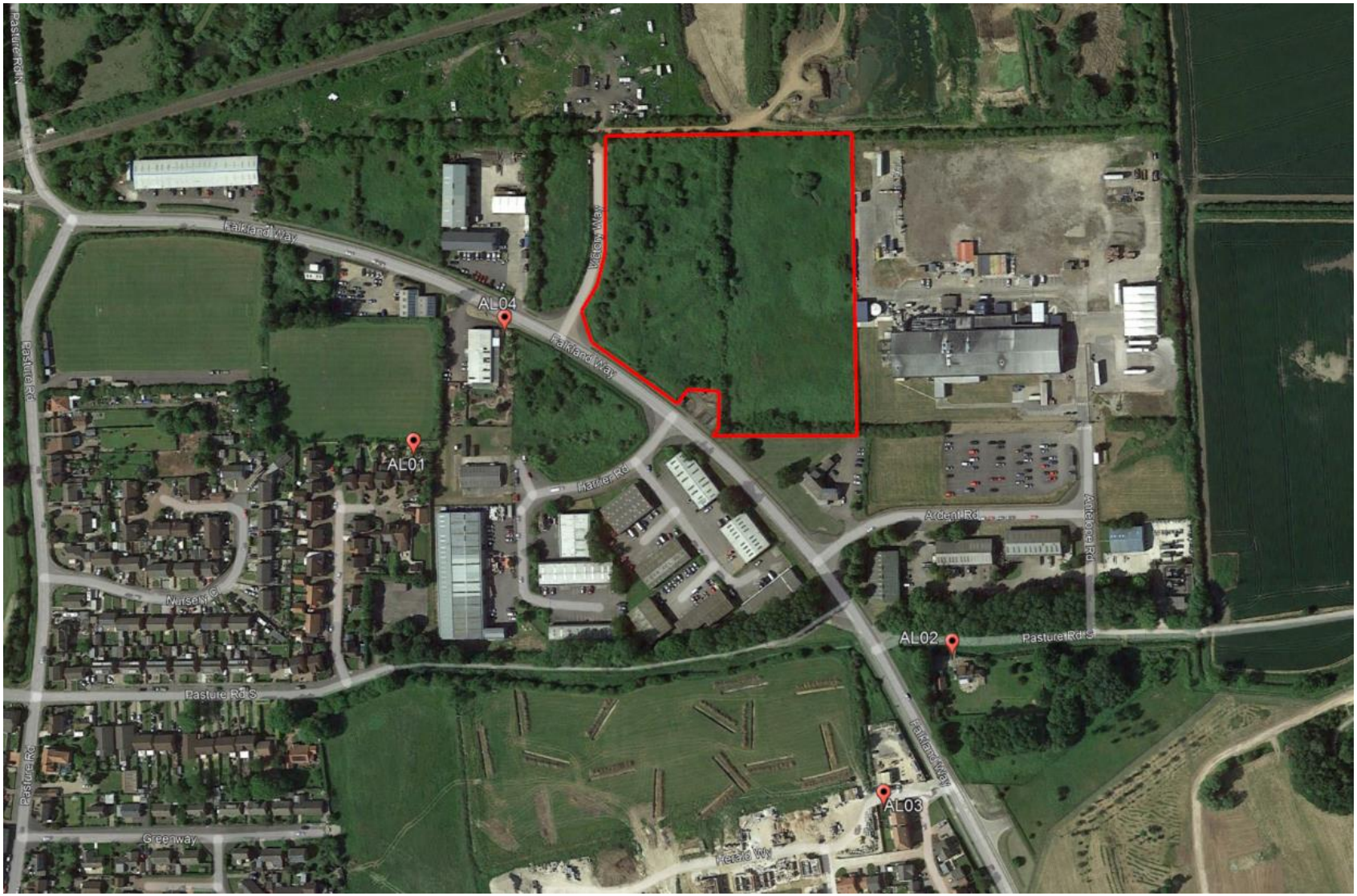
3.1.1 The closest third-party receptors are documented in Table 3-1 below. These include both residential and educational (nursery) receptors.

Table 3-1: Assessment Locations and Predicted Specific Locations

NSR	Description	Distance from Site Boundary, m	Direction Relative to Site	Approximate OS Grid Co-ordinates	
				Easting	Northing
AL01	No.33 Lower Meadows	135	Southwest	503794	422537
AL02	Property on Pasture Road South	156	Southeast	504127	422420
AL03	Properties on Orangeleaf Way	230	South	504082	422331
AL04	Field View Day Nursery	50	West	503844	422613

3.1.2 It is noted that the co-ordinates detailed above approximate the external amenity areas at closest approach to the site. The locations are presented on Figure 3-1 below.

Figure 3-1: Receptor Location Plan



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4 Noise Sources

4.1 Noise Emissions

4.1.1 The operations at the site centre around the movement of heavy goods vehicles and the coupling/uncoupling of trailer units. No loading/unloading of goods takes place within the transport yard.

4.1.2 The noise generating operations located within the transport yard site are relatively removed from the nearest 3rd party properties, being a minimum of 50m from the nearest receptor.

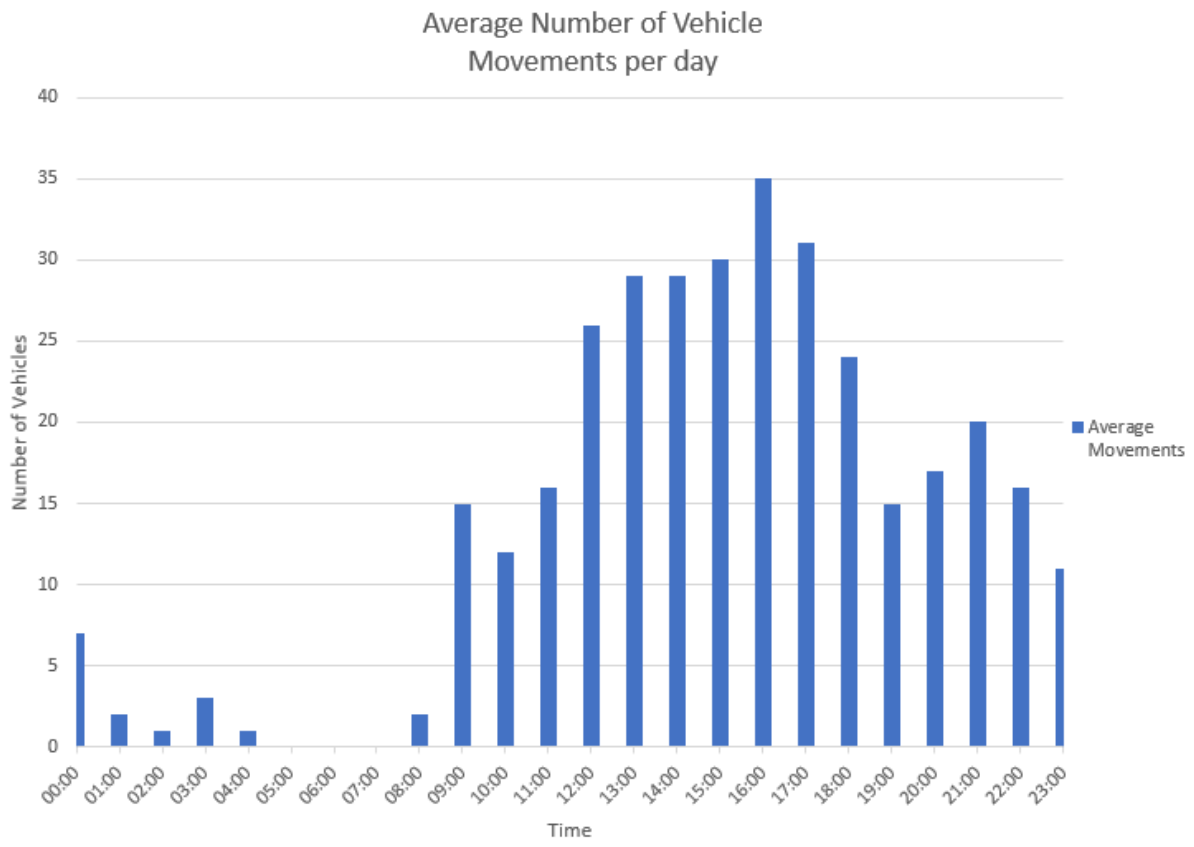
4.1.3 The primary noise sources utilised at the site are detailed below. The information was obtained through direct site measurements of existing operational activities at the site.

4.2 Operating Conditions/Characteristics

4.2.1 The transport yard operates between 06:00hrs Monday and 06:00hrs Saturday, with vehicles accessing the site at any time during the hours.

4.2.2 Peak periods generally occur between midday and 18:00hrs though sporadic movements can occur throughout the night. Figure 4-1 below presents the number of vehicle movements during an average operational 24hr period.

Figure 4-1: Average Vehicle Movements



4.2.3 In addition to noise from vehicle movements, there are ancillary noises associated with the coupling/uncoupling of vehicles and other general activities in the transport yard. A number of these sources are identified in Table 4-1 below.

Table 4-1: Activity Noise Levels

Noise Source	Duration sec	Distance m	$L_{Aeq,T}$ dB	L_{Amax} dB	Measured L_{Aeq}, in Octave Bands, Hz							
					63	125	250	500	1k	2k	4k	8k
Vehicle Idling	60	3.5	74.1	78.6	70.6	75.2	64.8	69.1	68.7	68.2	65.3	58.0
Unloading Box	40	3.5	72.3	91.4	70.1	69.6	61.8	66.0	65.7	67.0	63.7	61.2
Start-up/ move off	34	3.5	72.4	81.9	71.1	72.0	64.6	67.3	66.6	66.5	63.3	57.5
Loading Box	120	3.5	62.6	89.1	59.3	61.5	57.7	58.0	59.9	55.1	52.4	44.9
Reverse Alarm	37	11	64.6	68.5	64.3	63.5	58.3	60.3	57.5	58.8	56.9	48.3
Air Release	38	3.5	65.4	74.7	61.6	63.6	56.8	55.9	56.1	58.0	60.2	58.9
Lowering Trailer Foot	9	3.5	71.4	81.8	59.7	61.4	59.7	58.5	59.5	68.9	60.0	59.2
Coupling Trailer	21	3.5	81.6	99.8	74.2	73.2	72.9	75.2	77.0	75.4	73.2	65.8

4.2.4 The route of vehicles through the transport yard is identified on Figure 1-2 above.

5 BS4142 Impact Assessment

5.1.1 BS4142 states:

"*The significance of sound of an industrial and/or commercial nature depends upon both the margin by which the rating level of the specific sound source exceeds the background sound level and the context in which the sound occurs.*"

5.1.2 A comparative assessment has been undertaken to determine the potential impact of the predicted sound rating levels at each receptor during the day and night. Table 5-1 summarises the results of the assessment. Note no character corrections have been applied in the derivation of the rating noise level.

5.1.3 The assessment reflects a worst-case situation when all noise generating activities are operating at typical capacity for 100% of the assessment period.

Table 5-1: BS4142 Assessment

Location	Period	Typical Background Noise Level dB $L_{A90,T}$	Sound Rating Level dB $L_{Ar,T}$	Difference dB
IMP1 - Properties on Lower Meadows	Daytime	43	36	-7
	Night	40	24	-16
IMP2 - Property on Pasture Road South	Daytime	48	33	-15
	Night	46	20	-26
IMP3 - Properties on Orangeleaf Way	Daytime	45	32	-13
	Night	44	20	-24
IMP4 – Field View Nursery	Daytime	45	44	-1

5.1.4 Table 5-1 above demonstrates that, across all the receptor locations, during both daytime and night-time operations, the rating noise level from operations at the Transport Yard would not exceed the typical background sound levels in the area. This would indicate that the specific sound would have a low impact depending on the context.

6 Noise Control Measures

6.1 Introduction

6.1.1 Best Available Techniques (BAT) has been considered based on cost/benefit, technical characteristics of the site, geographic location, and local environmental factors.

6.1.2 The control measures detailed in this section of the report are documented as two elements: Inherent mitigation including factors in the site design which aid in the control of noise; and management practices which govern operational and behavioural aspects of the site operations.

6.2 Inherent Mitigation Measures

6.2.1 The design of the site is such that it includes several inherent mitigation measures. These include:

- Positioning of the site as far as practical from the nearest noise sensitive receptor locations;
- Siting of a car parking facility to act as a buffer between the transport yard and nearest noise sensitive receptors; and,
- Siting of 4m tall acoustically robust perimeter fence on the western elevation of the transport yard area.

6.2.2 The inherent mitigation measures are considered a fundamental feature of the site and should be monitored and maintained as part of the BAT. Any changes or alterations to the above measures should be recorded in the NMP and the permitting authority notified.

6.3 Management Control Practices

6.3.1 Management activities control behaviours and practices within the site area to reduce the likelihood of noise being generated. These measures include:

- Undertaking coupling/uncoupling activities in the western portion of the yard, immediately adjacent to the acoustic barrier;
- Reversing alarms will be deactivated upon entering the site and will not be reactivated until after a vehicle has left;
- No vehicle will sound their horn while at the site;
- No shouting or raised voices are to be used at the site; and,
- Tug tests are to be performed prior to vehicles moving off.

6.3.2 In addition to the above, any vehicle experiencing mechanical issues or other problems are to inform the site supervisor and take the vehicle to an alternate site for remedial action.

6.3.3 The noise impact assessment, presented in Enzygo report reference SHF.550.003.NO.R.004, dated July 2023, summarised in Table 4-2 above, indicates that operation of the facility would **not** result in any adverse noise impacts at any receptor location. Given this, no additional mitigation measures are required to control noise emissions.

6.4 Onsite Monitoring Procedures

6.4.1 A significant element of the BAT documented below is the regular inspection of the site to prevent degradation of infrastructure over time.

6.4.2 It is advised that the inspections be undertaken at regular intervals (weekly or monthly) and be documented to identify any maintenance issues ahead of equipment failure or issues.

6.4.3 A log of the inspections and routines completed under the sites maintenance schedule should be available within Wren's document management system.

6.5 Best Available Techniques

Table 6-1: Demonstration of BAT

Noise Source	Are Abatement actions taken to prevent or minimise emissions BAT?	Actions Taken to Meet BAT (inc Timescales)	Timescales
Site and surrounding environs	Yes - regular inspection and maintenance	Regularly scheduled inspection and maintenance of the site to pre-empt any degradation over time, i.e., inspection and maintenance of the access road to minimise potholes, etc., which may generate additional noise during vehicle movements.	Weekly/monthly
		Regular scheduled inspection and maintenance of the acoustic fence to pre-empt degradation over time. This should include any regular treatments of wooden elements and inspection of posts the ensure the fence does not become loose at the fixing points.	Ongoing
Vehicle movements	Yes – Vehicles movements	Vehicle movements would only take place during the consented operational hours	Ongoing
Vehicle noise	Yes – maintenance and repair	No repair or maintenance will be undertaken in the transport yard. Any vehicles requiring remedial actions or maintenance shall be removed from the site to a more suitable setting where appropriate actions can be undertaken.	Ongoing

7 Compliance Noise Monitoring

7.1 Off-site Review

7.1.1 A responsible person shall undertake monthly 'noise patrols' at the nearby noise-sensitive receptors reporting any potential noise issues generated by operations at the transport yard and initiating remedial actions where required.

7.1.2 Note: the 'noise patrols' are assumed to be subjective appraisals of noise as perceived at the receptor locations. It is not necessary to make noise measurements during these patrols.

7.2 Frequency of Noise Compliance Monitoring

7.2.1 The noise impact assessment presented for the facility indicates that noise emissions from the site would not result in any adverse impacts at the nearest receptors. Noise from operations in the transport yard may be audible depending on the combination of activity being undertaken and the prevailing noise climate during that period however, the assessments demonstrate that no observed adverse effects would arise.

7.2.2 To that end, it is considered that regular compliance noise monitoring is unnecessary.

7.2.3 Notwithstanding this, noise compliance monitoring shall be undertaken following:

- any verified complaint from a local resident; and,
- any changes to operating equipment and/or mitigation provision.

7.3 Noise Monitoring Locations

7.3.1 When required, noise monitoring should be undertaken at locations approximating the assessment locations detailed in Table 3-1 and Figure 3-1 above. It is likely (pending access permissions), that proxy locations would be used rather than the actual co-ordinates detailed in the table. A degree of professional judgement is necessary to ensure that the proxy locations are suitable and representative of the identified receptors.

7.4 Noise Monitoring Equipment

7.4.1 Noise monitoring shall be undertaken using sound level meters conforming to Type 1 of the latest version of BS EN 61672-1:2003 Electro-acoustics, Sound Level Meters, Specifications.

7.4.2 The sound level meters shall be field calibrated before and after monitoring using an appropriate acoustic calibrator which conforms to the latest version of BS EN 61672-1:2003 Electro-acoustics – Sound Calibrators.

7.4.3 All sound level meters shall be calibrated to a traceable standard within a 24-month period prior to the monitoring. Acoustic calibrators shall be calibrated to a traceable standard within a 12-month period prior to the monitoring.

7.5 Noise Monitoring Survey Methodology

7.5.1 Noise measurements shall be undertaken by a suitably qualified professional, i.e., an individual who has successfully completed the Institute of Acoustics Certificate of Competence in Environmental Noise Measurement as a minimum, at locations representative of the noise-sensitive receptors locations shown in Table 3-1.

7.5.2 Noise measurements shall be undertaken during the proposed operational hours of the sites, i.e., during both the daytime and night-time periods, for a sufficient period to gather representative operational noise data and for at least 30-minutes.

7.5.3 The sound level meter shall be positioned such that the microphone is located 1.5m above the ground in free-field conditions, i.e., at least 3.5m from the nearest vertical reflecting surface, at all monitoring locations.

7.5.4 A note of the prevailing weather conditions shall be made at each monitoring location. The audibility of site activities shall also be noted at each monitoring location during each measurement period. A note of any extraneous noise generating events shall also be made.

7.6 Reporting

7.6.1 On completion of each noise compliance monitoring exercise a report shall be prepared and issued to Wren Kitchens and retained on file.

7.6.2 Depending on the prevailing weather conditions, the report shall be submitted within 15 working days of a written request from Wren Kitchens to undertake the noise compliance monitoring.

7.6.3 The report shall contain, as a minimum:

- The results of the noise compliance monitoring surveys;
- An assessment of the results against the conditioned noise limits;
- Details of the monitoring equipment used, including calibration details;
- Details of the prevailing weather conditions during each measurement period;
- Details of any correction calculations made;
- Details of the audibility of the sites at the noise-sensitive receptor locations; and,
- Details of any extraneous noise sources that may have influenced the noise measurements.

7.6.4 Where additional noise mitigation measures are required, these should be fully implemented, and a further compliance survey commissioned in the manner documented above.

8 Complaints Reporting Procedure

8.1.1 If a complaint is received from a local resident, an investigation shall be instigated within seven working days to identify the cause of the complaint. The Noise Complaint Form detailed in Appendix A will be filled in and appropriate action taken to remedy the problem should the complaint be validated.

8.1.2 A complaint investigation may involve the identification and cessation of the activity or activities considered to be the cause of the complaint and/or the investigation of mitigation measures to reduce the noise emission levels from the activity or activities. For example, this could include revisions to working practices or changes to equipment.

8.1.3 Any deviation from agreed working practices shall be identified immediately and conformance to the working practice reinstated.

8.1.4 If it is not possible to identify the source of the complaint, it may be necessary to undertake a noise survey. If this is needed, a suitably qualified person should be employed to undertake the required survey work. The survey should be undertaken in accordance with the methodology detailed in Section 6 above.

8.1.5 A complaints system shall be maintained by the Site, ensuring that any complaints relating to noise are recorded and investigated as appropriate. Complaints relating to noise will be responded to promptly and the complainant will be kept informed of the outcome of the investigation. The Site's management team are the point of contact in the event of a complaint regarding noise from within the site. Each noise complaint will be logged upon receipt and a record of all complaints will be kept, which will include the remedial/corrective actions taken. This will be via the use of a logbook retained by the Site, which will be made available for examination, and which will follow the format in Appendix A.

Glossary of Terminology

Noise is defined as unwanted sound. The range of audible sound is known to be from 0dB (threshold of hearing) to 140dB (threshold of pain). Examples of typical noise levels relating to 'everyday' occurrences are given in Table G-1 below.

Table G-1: Typical Noise Levels

Source	Sound Pressure Level in dB(A)	Subjective Level
Gun shot	160	Perforation of eardrum
Military Jet take-off	140	Threshold of pain
Jet Aircraft at 100m	120	Very Loud
Rock Concert, front seats	110	Threshold of Sensation
Pneumatic Drill at 5m	100	Very Loud
Heavy goods vehicle from pavement	90	
Traffic at kerb edge	70 – 85	Loud
Vacuum Cleaner, Hair Dryer	70	
Normal conversation at 1m	60	Moderate
Typical Office	50 – 60	
Residential area at night	40	Quiet
Rural area at night, still air	30	
Leaves Rustling	20	
Rubbing together of fingertips	10	
	0	Threshold of hearing

The frequency response of the human ear to noise is usually taken to be around 18Hz (number of oscillations per second) to 18,000Hz. However, the human ear does not respond equally to different frequencies at the same level; it is more sensitive in the mid-frequency range than lower and higher frequencies and, because of this, when undertaking the measurement of noise the low and high frequency components of any given sound are reduced in importance by applying a filtering (weighting) circuit to the noise measuring instrument. The weighting which is widely accepted to correlate best with the subjective nature of human response to noise and is most widely used to quantify this is the A-weighted filter set. This is an internationally accepted standard for noise measurement.

For variable noise sources within an area an increase of 3dB(A) would be the minimum perceptible to the human ear under normal conditions. It is generally accepted that an increase/decrease of 10dB(A) corresponds to a doubling or halving in perceived loudness. The 'loudness' of a noise is a purely subjective parameter, dependant not only upon the sound pressure of the event but also on the dynamics of the listener's ear, the time of the day and the general mood of the person.

With regard to environmental noise levels (in the open air), these are rarely steady but rise and fall according to the activities being undertaken within the surrounding area at any given time. In an attempt to produce a figure that relates this variable nature of noise to human subjective response, a number of statistical noise metrics have been developed. These and other useful terminology and descriptors are presented in Table G-2 below.

Table G-2: Terminology

Term	Definition
Sound	Pressure fluctuations in a fluid medium within the audible range of amplitudes and frequencies which stimulate the organs of hearing.
Noise	Unwanted sound emitted from a source and received by the sensitive receptor.
Decibel (dB)	Unit most often used to describe the sound pressure level. A logarithmic number, it correlates closely to the way in which humans perceive sound. Its wide range of values helps quantify sound pressures from a large variety of magnitudes.
A-Weighting (dB(A))	Human perception of sound is frequency dependant. A-weighting applies a range of corrections at each frequency to provide a 'human-averaged'. Can be frequency band or broadband values.
Frequency (Hz)	The number of cycles per second, for sound this is closely related (and often mistaken for) pitch.
Frequency Spectrum	A more detailed analysis of the frequency components that comprise a sound source.
$L_{A10,T}$	The 10th statistical percentile of a measurement period, i.e. the level that is exceeded for 10% of the measurement duration. Closely correlates with traffic sources, A-weighted.
$L_{A90,T}$	The 90th statistical percentile of a measurement period, i.e. the level that is exceeded for 90% of the measurement duration. Used to describe background sound levels, as this value is affected less by short, transient sound sources, A-weighted.
L_{Amax}	The root mean square (RMS) maximum sound pressure level within a measurement period, A-weighted.
Ambient Sound	The total sound climate of all sources incident at one location, both in the near- and far-field (*The ambient sound comprises the residual sound and the specific sound when present)*.
Ambient Sound Level $L_A = L_{Aeq,T}$	Equivalent continuous A-weighted sound pressure level of the totally encompassing sound in a given situation at a given time, usually from many sources near and far, at the assessment location over a given time interval, T.
Background Sound Level $L_{A90,T}$	A-weighted sound pressure level that is exceeded by the residual sound at the assessment location for 90% of a given time interval, T, measured using time weighting F and quoted to the nearest whole number of decibels.
Equivalent Continuous A-weighted Sound Pressure Level $L_{Aeq,T}$	Value of the A-weighted sound pressure level in decibels of continuous steady sound that, within a specified time interval, $T = t_2 - t_1$, has the same mean-squared sound pressure as a sound that varies with time, and is given by the following equation:

Term	Definition
	$$L_{Aeq,T} = 10lg_{10}\left\{\left(\frac{1}{T}\right)\int_{t1}^{t2}\left[p_A\frac{(t)^2}{{p_0}^2}\right]dt\right\}$$ Where p_0 is the reference sound pressure (20µPA); and $P_A(t)$ is the instantaneous A-weighted sound pressure level at time t.
Measurement Time Interval T_m	Total time over which measurements are taken (*This may consist of the sum of a number of non-contiguous, short-term measurement time intervals)*
Rating level $L_{Ar,Tr}$	Specific sound level plus any adjustment for the characteristic features of the sound, over a period of time, T.
Reference Time Interval, T_r	Specified interval over which the specific sound level is determined (This is 1hr during the day from 07:00 to 23:00 hours and a shorter period of 15-min at night from 23:00 to 07:00 hours).
Residual Sound	Ambient sound remaining at the assessment location when the specific sound source is suppressed to such a degree that it does not contribute to the ambient sound.
Residual sound level $L_r = L_{Aeq,T}$	Equivalent continuous A-weighted sound pressure level of the residual sound in a given situation at the assessment location over a given time interval, T.
Sound Pressure Level	The level of fluctuation in air pressure, caused by airborne sound sources. Measured in Pascals (Pa).
Sound Power Level	The rate at which sound is radiated by a source. This parameter is useful as it describes sound energy before environmental or decay factors. Quantified in dB and notated usually as L_w or SWL.
Specific sound level $L_s = L_{Aeq,Tr}$	Equivalent continuous A-weighted sound pressure level produced by the specific sound source at the assessment location over a given time interval, T.
Specific Sound Source	Sound source being assessed.

Appendix A – Complaint Log Template

Item	Date Recorded:	Ref Number:
Name and address of Caller		
Telephone No.		
Locations of Caller in relation to site (direction and approx. distance).		
Time and date of complaint		
Date, time and duration of offending noise		
Callers description of noise		
Has the caller any other comments on the noise?		
Weather conditions (rain, sun)		
Wind speed and direction		
Any previous complaints relating to this noise?		
Any other relevant information?		
Potential sources that could give rise to complaint		
Operating condition at time of complaint		
Follow up – Date and time Caller contacted		
Action taken		
Amendment required to NMP		
Form completed by:	Signed and date	

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