



Noise Impact Assessment

Wyvols Court Farm – Unit 13

Wyvols Court Farm Ltd

CRM.5011.002.NO.R.001

Planning
Architecture
Geoenvironmental
Hydrology
Ecology
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Noise Impact Assessment

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1 Introduction

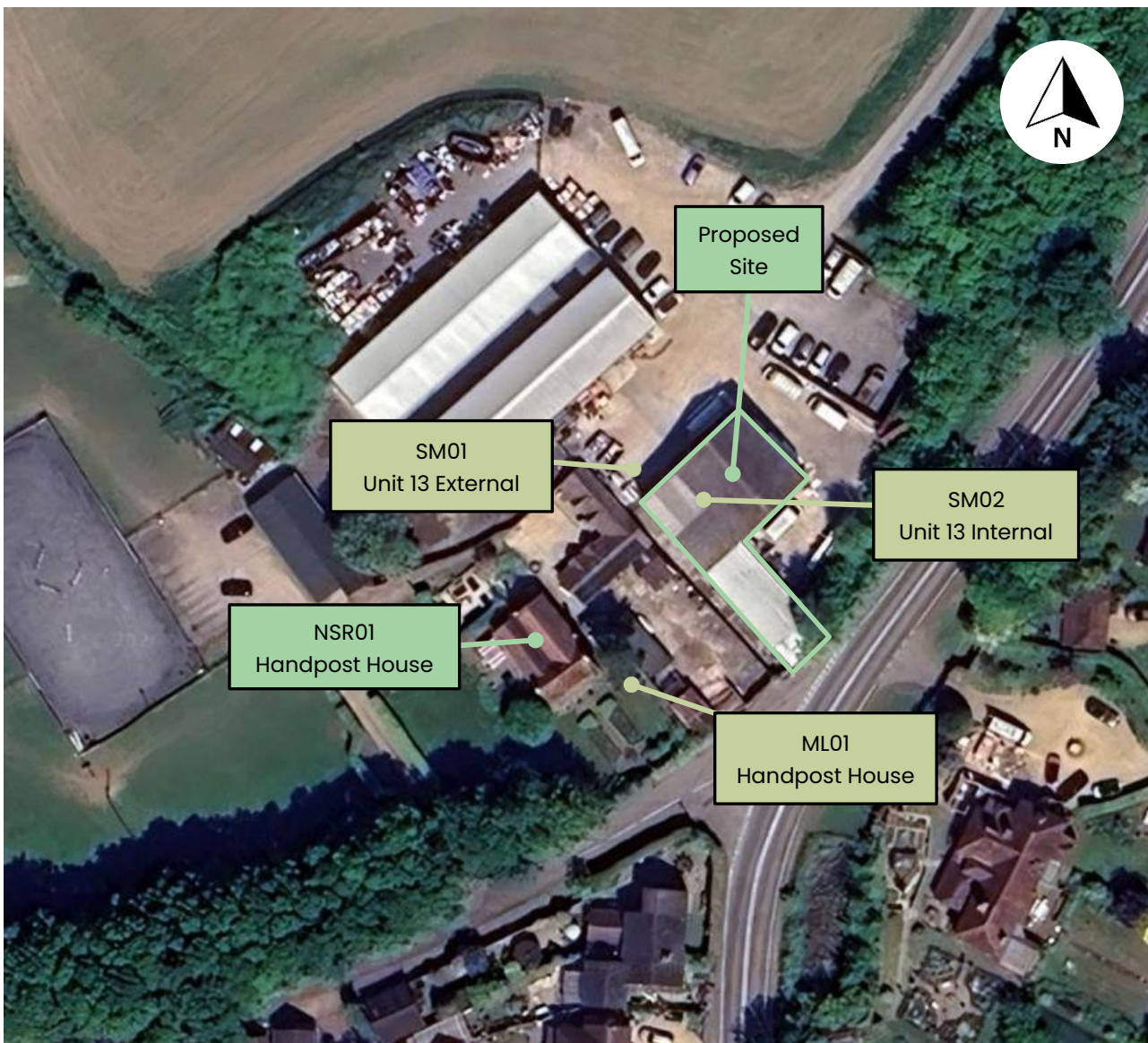
1.1 Project Introduction

- 1.1.1 Enzygo Limited has been commissioned by Wyvols Court Farm Ltd to undertake a noise impact assessment to support a planning application for Class B2 Use – General Industrial for Unit 13 at Wyvols Court Farm, Basingstoke Rd, Swallowfield, Reading, RG7 1PY.
- 1.1.2 The noise assessment has been undertaken to assess the potential impacts, in accordance with the relevant standards and guidance, at the nearest noise-sensitive properties to the site and to provide outline mitigation advice if considered necessary.
- 1.1.3 Details of the assessment methodology employed, together with the results of the surveys, predictions, assessment, and conclusions are presented in this report.

1.2 Site Location

- 1.2.1 The assessed unit is located on land to the west of Basingstoke Road (B3349).
- 1.2.2 The site is located within a rural area. To the north is the Wyvols Court Business Centre. To the east, south and west is a mixture of open/arable land and sparse residential properties (leading to the village of Swallowfield to the east).
- 1.2.3 The site is located within the landholdings of Wyvols Court Farm which extends to approximately 167 acres (67.7 hectares). Wyvols Court Farm is a diversified farm business with three main activities, being commercial real estate operations and agricultural and forestry operations. Wyvols Court Farm currently hosts various commercial units providing approximately 30,000sq ft of employment floor space for light industrial and storage and distribution uses supporting 120 jobs.
- 1.2.4 The nearest noise sensitive receptor (NSR) used in the assessment is Handpost House, Barge Lane, Swallowfield, Reading, RG7 1HZ (NSR01). The receptor is significantly closer to (and subject to more noise from) Unit 13 compared to other sensitive receptors, therefore assessing potential impacts at Handpost House is seen to provide a robust assessment.
- 1.2.5 The site, monitoring locations, and nearest noise-sensitive receptor (Handpost House) to Unit 13 are shown in are shown in Figure 1-1 overleaf.

Figure 1-1: Site Location & Layout Plan



1.3 Current Operations

1.3.1 Unit 13 is currently used for manufacturing uPVC frame systems. Noise generating sources include.

- Delivery of materials (HGV – maximum 1 per day)
- Forklift to unload deliveries (maximum once per day)
- Staff cars (7no. full time staff)
- Staff vans (used to deliver products – 3no. vans/5no. full-time staff)
- Manufacturing machinery contained inside the unit including a frame saw, V cutter, drainage cutter, vent router, handle router, frame welder, corner cleaner, trim saw, Graule saw (named for reference purposed not technical description)
- Air compressor (external)

- 1.3.2 The current consented hours of operation are 08:00 to 18:00 hours Monday to Friday and 08:00 to 13:30 hours on Saturdays (no operations are permitted on Sundays or Bank Holidays)

1.4 Noise Assessment Methodology

- 1.4.1 A noise assessment for the current proposals has been undertaken in accordance with the guidance contained in British Standard 4142:2014+A1:2019 *Method for rating and assessing industrial and commercial sound* (BS4142) with reference made to the internal noise criteria outlined in British Standard 8233:2014 *Guidance on sound insulation and noise reduction for buildings* (BS8233).
- 1.4.2 Noise levels generated by the proposed development have been predicted to the nearest noise-sensitive receptors, using the calculation methodology outlined in ISO9613:2024 *'Acoustics – Attenuation of sound during propagation outdoors – Part 2: Engineering methods of the prediction of sound pressure levels outdoors* (ISO9613) using the proprietary noise modelling software CadnaA.
- 1.4.3 The assessment is based upon the results of a baseline noise survey undertaken at a location representative of the nearest noise sensitive receptor to the site over a representative daytime period.

2 Standards and Guidance

2.1 Planning Practice Guidance: Noise

- 2.1.1 The Planning Practice Guidance: Noise is the Government's online guidance on managing potential noise impacts from new developments.
- 2.1.2 The guidance includes a noise exposure hierarchy table which relates response to noise and example outcomes to effect levels. The hierarchy table also identifies actions required for each effect level.
- 2.1.3 Particularly relevant to this assessment are the No Observed Effect Level and the No Observed Adverse Effect Level (NOAEL) to which the guidance states:

Table 2-1: Noise Hierarchy Table Excerpt

Response	Example of Outcomes	Increasing Effect Level	Action
No Observed Effect Level			
Not present	No effect	No Observed Effect	No specific measures required
No Observed Adverse Effect Level			
Present and not intrusive	Noise can be heard, but does not cause any change in behaviour, attitude, or other physiological response. Can slightly affect the acoustic character of the area but not such that there is a change in the quality of life	No Observed Adverse Effect	No specific measures required

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

- 2.2.1 BS4142 provides a methodology for rating and assessing sound associated with both industrial and commercial premises. The purpose of the Standard is clearly outlined in the opening section where it states that the method is appropriate for the consideration of:
- Sound from industrial and manufacturing processes;
 - Sound from fixed installations which comprise mechanical and electrical plant and equipment;
 - Sound from the loading and unloading of goods and materials at industrial and/or commercial premises; and,
 - Sound from mobile plant and vehicles that is an intrinsic part of the overall sound emanating from premises or processes, such as that from forklift trucks, or that from train or ship movements on or around an industrial and/or commercial site.

2.2.3 The Standard is based around the premise that the significance of the noise impact of an industrial/commercial facility can be derived from the numerical subtraction of the background noise level (not necessarily the lowest background level measured, but the typical background of the receptor) 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 +10 dB or more is likely to be an indication of a significant adverse impact, depending on the context.
- A difference of around +5 dB 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.

2.2.4 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.

2.2.5 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

2.2.6 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.

2.2.7 The Subjective Method is based on the following corrections:

Table 2-2: 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		

2.3 British Standard 8233:2014 Guidance on sound insulation and noise reduction for buildings

2.3.1 BS8233 provides guidance and recommendations for the control of noise from outside sources to maintain an internal acoustic environment appropriate for the intended use. The Standard suggests appropriate criteria and limits for differing situations which are, primarily, intended to guide the design of new or refurbished buildings undergoing a change of use rather than to assess the effect of changes to the external noise climate. However, it is considered that the guidance provides suitable criteria for the assessment of internal noise levels in this instance.

2.3.2 The Standard suggests suitable guidance values for residential dwellings shown in Table 2-3.

Table 2-3: BS8233 Indoor Ambient Noise Levels for Dwellings

Activity	Location	07:00 to 23:00 Hours	23:00 to 07:00 Hours
Resting	Living room	35dB $L_{Aeq,16hr}$	–
Dining	Dining room/area	40dB $L_{Aeq,16hr}$	–
Sleeping (daytime resting)	Bedroom	35dB $L_{Aeq,16hr}$	30dB $L_{Aeq,8hr}$

2.3.3 Whilst it is considered desirable to achieve these internal noise levels with the windows open, it is not stipulated within the Standard which states:

“If relying on closed windows to meet the guide values, there needs to be appropriate alternative ventilation that does not compromise the façade insulation or the resulting noise level.”

2.3.4 The Standard suggests that the level of noise reduction provided by a partially open window would be approximately 15dB.

2.3.5 BS8233 also sets out a design-criteria for external noise in external amenity spaces such as gardens and patios stating:

“it is desirable that the external noise level does not exceed 50 dB $L_{Aeq,T}$ with an upper guideline value of 55 dB $L_{Aeq,T}$ which would be acceptable in noisier environments.”

2.3.6 These guideline design-criteria values are meant for new residential development rather than for assessing new noisy development being introduced into a residential area. However, the guideline values provide good noise limits to attain in this instance.

2.4 ISO9613 Acoustics – Attenuation of sound during propagation outdoors – Part 2: Engineering method for the prediction of sound pressure levels outdoors

- 2.4.1 The noise levels generated by the operation of the proposed development have been predicted using the calculation methodology set out in ISO9613-2. The methodology considers the distance between the sources and the receptors and applies the amount of attenuation due to atmospheric absorption and other site-specific characteristics.
- 2.4.2 The methodology assumes downwind propagation, i.e., a wind direction that assists the propagation of noise from the source to all receptors.

3 Baseline Noise Survey

3.1 Introduction

- 3.1.1 The survey was undertaken between Friday 1st and Tuesday 5th May 2026 at the location shown in Figure 1-1. Baseline noise monitoring was undertaken for a 4-day period at a safe location representative of the background noise climate at the nearest noise sensitive receptor.
- 3.1.2 The monitoring location used for the survey is shown in Figure 1-1 and detailed in Table 3-1 below. The measurement microphone was mounted on a pole with a windshield approximately 1.5m above the ground in free-field conditions.

Table 3-1: Noise Monitoring Locations

Location	Approx. Distance from Site	Reflecting Surfaces between Source & Receptor	Topography of Intervening Ground	Justification for Choice of Measurement Location
ML01	20m	Partial concrete slab coverage	Open ground including screening from existing structures	Nearest safe and accessible location representative of the nearest noise sensitive receptor

3.2 Weather Conditions

- 3.2.1 Weather conditions during set up of the monitoring equipment were noted and are detailed in Table 3-2.

Table 3-2: Weather Conditions

Period	Wind Speed & Direction	Rain	Ground Conditions	Cloud Cover	Temp
01/05/2026	1m/s S	None	Dry	0%	18°C
02/05/2026	3m/s N	None	Dry	30%	21°C
03/05/2026	2m/s N	None	Dry	50%	18°C
04/05/2026	4 m/s S	None	Dry	50%	15°C
05/05/2026	4 m/s S	None	Dry	50%	16°C

3.3 Measuring Equipment

- 3.3.1 The noise monitoring equipment used during the surveys is shown in Table 3-2 and was set to record the $L_{Aeq,T}$, L_{A90} , L_{A10} and L_{Amax} parameters.

3.3.2 The following set-up parameters were used on the sound level meter during all the noise measurements undertaken:

Time Weighting: Fast

Frequency Weighting: "A"

3.3.3 The sound level meters were field calibrated, using the acoustic calibrator, prior to commencement and upon completion of the overall survey. No drifts in calibration were noted.

Table 3-3: Noise Monitoring Equipment

Location	Equip. Make & Model	Class	Calibration Level (dB)	Serial No.	Calibration Date Prior to Survey
ML01	RION NL-52 Sound Level Meter	1	94.0	721020	01/11/2024
	RION NC-75 Calibrator	1	-	35024423	27/04/2026
SM01	RION NL-52 Sound Level Meter	1	94.0	520990	19/08/2024
	RION NC-75 Calibrator	1	-	34724233	08/12/2025
SM02	RION NL-53 Sound Level Meter	1	94.0	351949	06/05/2025
	RION NC-75 Calibrator	1	-	34456696	08/12/2025
Equipment Measurements	RION NL-53 Sound Level Meter	1	94.0	351948	06/05/2025
	RION NC-75 Calibrator	1	-	34356635	08/12/2025

3.3.4 The external calibration documentation for the equipment used is available upon request.

3.4 Survey Details and Results

3.4.1 The results of the baseline surveys are summarised in Table 3-4 below and can be found in full in Appendix A.

Table 3-4: Summary of Baseline Survey Results

Location	Period	Duration hh:mm:ss	Average LAeq,T (dB)	LAfmax (dB)	LA90 (dB)	LA10 (dB)
ML01 Handpost House	Day	64:00:00	50.8	89.0	38.6	52.7
	Assessment Baseline Period (Sunday – Unit 13 Not Operational)	10:00:00 (8am-6pm)	50.3	77.6	39.7	53.6

3.5 Subjective Observations

3.5.1 During installation of the monitoring equipment the prevailing noise climate was dominated by frequent road traffic movements on Basingstoke Road and Barge Lane. Noise from local industrial and agricultural operations were also audible in the background noise climate. Birdsong was also audible.

3.6 Operational Measurements

- 3.6.1 To quantify noise emissions from the operations at Unit 13, Enzygo conducted a series of operational measurements which have been used to construct the noise model.
- 3.6.2 The operational measurements consisted of two extended measurements each over a 3-hour period, SM01 located 2m outside the unit (in-front of the roller shutter opening), and SM02 located internally (in a location representative of the reverberant field exposed to noise from all equipment whilst minimising direct measurement/bias towards any one piece of equipment).
- 3.6.3 Direct measurement of each piece of equipment used in isolation was also conducted.
- 3.6.4 Due to the sporadic use of the equipment within the workshop, the two extended measurements are seen to be most representative quantifier of noise output from Unit 13, as they include noise from all machines in typical operation, with ‘time-on’ parameters correct to a typical manufacturing day.

Table 3-5: Summary of Operational Measurements

Measurement Reference	Description	Duration hh:mm:ss	Distance	Average $L_{Aeq,T}$ (dB)
SM01	Extended Measurement (External)	03:00:00	2m from Roller Shutter	52.2
SM02	Extended Measurement (Internal)	03:00:00	n/a (Internal)	72.3
OP01	Frame Saw	00:04:14	1m	75.1
OP02	V Cutter	00:00:47	1m	80.9
OP03	Drainage Cutter	00:00:47	1m	75.8
OP04	Vent Router	00:01:48	1m	85.8
OP05	Handle Router	00:00:47	1m	81.6
OP06	Frame Welder	00:01:28	1m	72.3
OP07	Corner Cleaner	00:01:55	1m	74.7
OP08	Trim Saw	00:00:52	1m	84.5
OP09	Graule Saw	00:00:53	1m	87.4
OP10	Air Compressor (External)	00:05:00	1m	71.0
OP11	Forklift (Engine Engaged During Lift)	00:00:53	1m	66.1

4 Noise Modelling

4.1 Introduction

- 4.1.1 The noise levels from the proposed equipment have been used to inform a noise modelling assessment, demonstrate noise propagation across the site and provide an indication of likely façade noise levels at the worst affected noise sensitive receptors.
- 4.1.2 A noise model has been constructed using the proprietary noise modelling software package CadnaA utilising Google Earth geo-referenced 1:1 scaled aerial photography, openstreetmap.org mapping data and the latest iteration of the site layout plan.

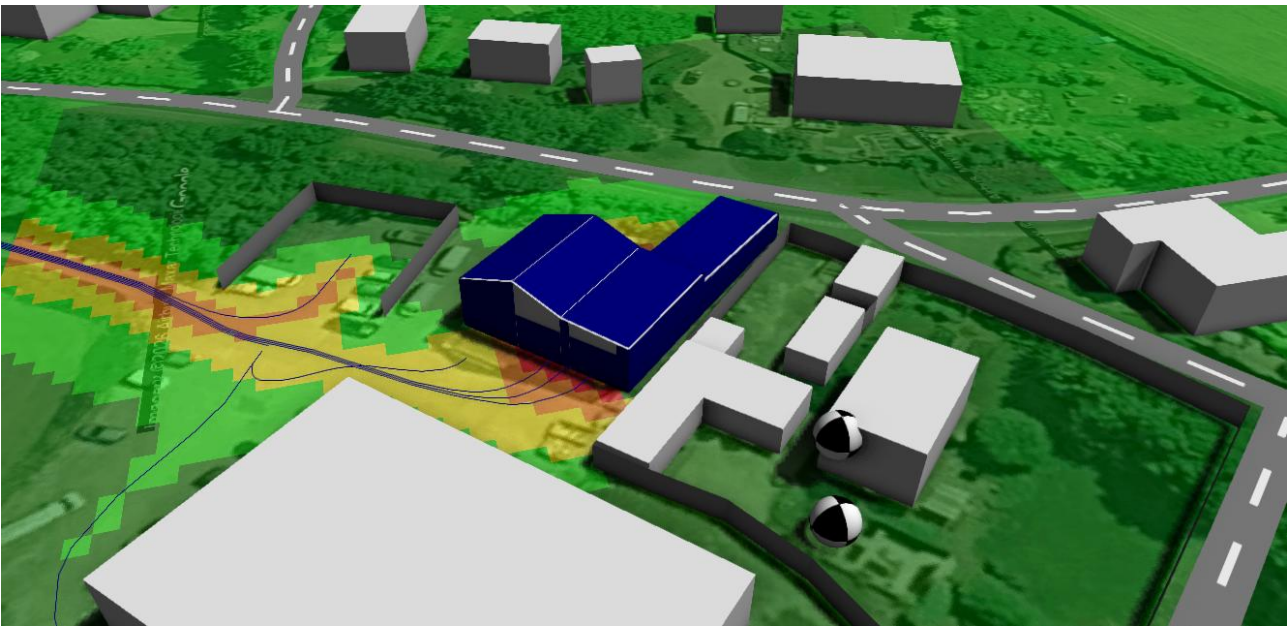
4.2 Foundations of the Noise Model

- 4.2.1 To predict noise levels from the proposed development to the nearest noise-sensitive receptors the following factors were used in the modelling.

Table 4-1: CadnaA Noise Model Parameters

CadnaA Noise Model Parameters	
Calculation Methodology	ISO 9613-2 (2024) Calculation of Road Traffic Noise (CRTN)
Noise Model Configuration	Ground Absorption set to G = 0.5 Order of Reflection = 2
Meteorological Conditions	Temperature 10°C Relative Humidity 70% Wind and temperature gradient assisted sound propagation has been assumed to all receptors.

Figure 4-1: 3D Noise Model



5 Assessment of Impacts

5.1 Introduction

- 5.1.1 Specific sound levels generated by the development proposals have been predicted to the site facing façade or site facing outdoor amenity space of the nearest noise-sensitive receptor identified using the calculation methodology outlined in ISO9613.
- 5.1.2 The resulting predicted specific sound levels have then been assessed in accordance with the guidance contained in BS4142 with reference made to daytime resting conditions in bedrooms in accordance with the guidance contained in BS4142 and BS8233.

5.2 Sources Being Assessed

- 5.2.1 The current operations include the noise sources started in Section 1.3.
- 5.2.2 The noise sources (equipment) contained within the unit (detailed in Table 3-5) are included in the model as combined area sources, propagating from either the open roller shutters or through the unit's façade and roof (See Section 5.3). The magnitude of these combined area sources is calibrated against the extended external measurement at SM01. It is assumed this level is emitted continuously through the entire maximum operational period (08:00–18:00).
- 5.2.3 The external sources included in the assessment are shown in Table 5-1. The noise source data is taken from Enzygo measurements, or standardised data. The figures are shown in either sound power levels or sound pressure levels at a given distance.
- 5.2.4 To ensure a robust assessment, in the absence of measurements of data for the vans and staff cars, these sources have been modelled using standardised HGV data.
- 5.2.5 The time parameters are selected to represent a worst-case scenario, where once-weekly events such as the HGV material delivery and forklift unloading are all assumed to include in a single day (assessed period).

Table 5-1: Noise Source Information

Sound Source	Data Source	Level (dB)	'Time-On' Parameter Information Per Day
HGV Material Delivery	BS5288 D.7 Ref. 121	98 L _w	1no. @ 1min Arrival + 1min Departure
Forklift (HGV Unload)	Enzygo Measurement OP11	66 L _p @ 1m	1no. @ 30min Operation
Vans (Delivery Team)	BS5288 D.7 Ref. 121	98 L _w	3no @ 1min Arrival + 1min Departure
Staff Cars	Department of Transport data for cars based on the average of 6692 models including diesel, petrol and EVs	69.7 L _w	7no @ 1min Arrival + 1min Departure
Air Compressor	Enzygo Measurement OP10	71 L _p @ 1m	On During Assessment Period

5.3 Façade Sound Reduction Performance

- 5.3.1 The known material build-up of the unit has been used to predict the sound reduction performance of the façade. This is used in combination with the internal extended internal measurements to calculate the noise emission from the façade and roof of the unit. The predicted performance has been calculated using INSUL modelling software.
- 5.3.2 The façade of the unit consists of a steel portal frame with fibre-cement side cladding and roofing sheets. In calculating the performance of the façade, the 100mm spray-insulation has been ignored.
- 5.3.3 To ensure a robust assessment, the roller shutters are both assumed to be open for the duration of the operations.

Table 5-2: Façade Sound Reduction Performance

Building Element	Sound Reduction (dB @ Hz)							Overall (dB R _w)
	63	125	250	500	1k	2k	4k	
Fibre-Cement Cladding	15	19	23	28	33	35	31	32

5.4 Predicted Sound Levels

- 5.4.1 Predicted specific sound levels during the day have been made to a height of 1.5m to represent outdoor amenity spaces and to 4.5m for first-floor bedroom windows (daytime resting). The results are shown in Table 5-3.

Table 5-3: Predicted Specific Sound Levels at the Receptors

Receptor Location	Period (hrs)	Receptor Reference	Receptor Height (m)	Predicted Specific Sound Level (dB L _{Aeq,T})
NSR01 Handpost House	08:00 – 18:00 (Maximum Operational Hours)	Outdoor Amenity	1.5	26.2
		Ext. First-Floor Bedroom	4.5	32.7

5.5 Sound Rating Levels

Existing Context

- 5.5.1 The identified nearest noise-sensitive receptor is sited close to transport infrastructure, including Basingstoke Road (B3349). The receptor is also subject to adjacent commercial and agricultural noise that is understood to have been operational as per the current operations for nearing 10-years.

Derived Sound Rating Levels

- 5.5.2 Some of the equipment does contain tonal content, most significantly the routers, which is clearly audible inside the unit. At the receptor, the tonal content is masked by nearby road related noise and is further 'muffled' by the sound reduction from the unit's façade.

Therefore, tonality is only slightly perceivable at the receptor and a 2dB acoustic feature correction is applied.

5.5.3 To account for any potential perceived intermittency at the receptor, a 3dB acoustic feature correction has been applied.

5.5.4 Under normal operating conditions the facility would not generate any impulsive noise or 'other' sound characteristics. Therefore, no corrections for these characteristics have been made for these acoustic features.

5.6 Assessment of the Impacts

5.6.1 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."

5.6.2 A comparative assessment has been undertaken to determine the potential impact of the predicted sound rating levels at the nearest residential receptor on the measured background noise levels.

5.6.3 To ensure a robust assessment, the background noise climate at NSR01 has been determined over the maximum operational period of the unit (08:00 to 18:00 hours) when the unit is not operational. In this instance the background noise level on Sunday, where the noise climate is expected to be at its minimum (resulting in onerous criteria)(see Table 3-4). Table 5-4 summarises the results of the assessment. Measured background levels have been rounded to the nearest whole decibel.

Table 5-4: BS4142 Assessment

Location	Period	Location	Acoustic Feature Correction	Rating Level (dB L _{Aeq,T})	Background Noise Level (dB L _{A90})	Difference (dB)
NSR01 Handpost House	08:00 – 18:00 (Maximum Operational Hours)	Outdoor Amenity	+5	31	40	-9
		Ext. First-Floor Bedroom	(+2 Tonality +3 Intermittency)	38	40	-2

5.6.4 Table 5-4 shows that the predicted rating levels during the operational hours are below the measured background noise levels at all locations indicating that the specific sound level generated by the unit would have a low impact, depending on the context.

5.7 Context

5.7.1 BS4142 states that where the initial estimate of impact needs to be modified due to the context, all pertinent factors should be taken into consideration.

The Absolute Level of Sound

- 5.7.2 The specific sound levels generated by the unit are predicted to be below the existing prevailing average ambient $L_{Aeq,1hr}$ noise levels at the receptor assessed during operational hours.

Sensitivity of the Receptors

- 5.7.3 The nearest receptor identified is residential in nature and as such may be sensitive to noise impact during operation of the unit. However, the receptor is already subject to noise generated by transport infrastructure and other commercial and agricultural infrastructure in the area.

Summary of Context

- 5.7.4 During the operational hours, the predicted rating levels are below the existing background noise levels and considerably below the existing ambient noise levels and therefore would be masked by other environmental sounds in the area.
- 5.7.5 To ensure a robust approach, an assessment of internal noise levels using the guidance contained in BS8233, as suggested by BS4142, has been made, specifically those relating to daytime resting conditions in bedrooms.

5.8 BS8233 Assessment

- 5.8.1 BS8233 states that a window left partially open for ventilation would give a sound reduction of approximately 15dB. An assessment has been made against the guideline values for internal ambient noise levels for daytime resting in bedrooms, i.e. 35dB $L_{Aeq,16hr}$.
- 5.8.2 Table 5-5 details the results of the assessment based on the worst-case predicted noise level outside the bedroom windows of the nearest receptor to the site.

Table 5-5: BS8233 Assessment of Internal Noise Levels – Daytime Resting

Location	Predicted External Noise Level (dB $L_{Aeq,T}$)	Predicted Internal Noise Level (dB $L_{Aeq,T}$)	Guidance Levels (dB $L_{Aeq,8hr}$)	Difference (dB)
NSR01 Handpost House (Ext. First-Floor Bedroom)	38	23	35	-12

- 5.8.3 Table 5-5 shows that predicted internal noise levels, with the windows left partial open for ventilation, would achieve the guidance values for daytime resting in bedrooms at the receptor.
- 5.8.4 Based on the findings of the assessments above, it is considered that mitigation measures to reduce the potential impacts are unnecessary.

6 Conclusion

- 6.1.1 Enzygo Limited has been commissioned by Wyvols Court Farm Ltd to undertake a noise impact assessment to support a planning application for Class B2 Use – General Industrial for Unit 13 at Wyvols Court Farm, Basingstoke Rd, Swallowfield, Reading, RG7 1PY.
- 6.1.2 The noise assessment has been undertaken to assess the potential impacts, in accordance with the relevant standards and guidance, at the nearest noise-sensitive properties to the site and to provide outlined mitigation advice if considered necessary.

6.2 Noise Assessment

- 6.2.1 Sound levels generated by the assessed unit have been predicted using CadnaA and assessments have been made in accordance with the guidance contained in BS4142:2014+A1:2019.
- 6.2.2 The BS4142 assessment shows that the predicted sound rating levels are below the measured background noise levels. This would indicate that the rating sound level would have a **low impact** depending on the context and fall into the NOEL effect level when assessed in accordance with the Planning Policy Guidance for noise.
- 6.2.3 The BS8233 assessment, made in accordance with the guidance outlined in BS4142, has shown that, with the windows left partially open for ventilation, internal noise levels would achieve the guidance value of 35dB $L_{Aeq,16hr}$ for daytime resting in bedrooms and fall into the NOEL effect level when assessed in accordance with the Planning Policy Guidance for noise.
- 6.2.4 Given the above, it has been demonstrated that, there are no reasons on noise grounds why planning consent for the for the assessed unit cannot be granted.

7 Glossary of Terms

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 7-1: 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 regards 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. Attempting to produce a figure that relates this variable nature of noise to human subjective response, various statistical noise metrics have been developed. These and other useful terminology and descriptors are presented in Table G-2 below.

Table 7-2: 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 10 th 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 90 th 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 noise sources incident at one location, both in the near- and far-field (<i>The ambient sound comprises the residual sound and the specific sound when present</i>).
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.

Term	Definition
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: $L_{Aeq,T} = 10 \lg_{10} \left\{ \left(\frac{1}{T} \right) \int_{t_1}^{t_2} \left[p_A \frac{(t)^2}{p_0^2} \right] dt \right\}$ Where p_0 is the reference sound pressure ($20 \mu\text{Pa}$); 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 (<i>This may consist of the sum of several non-contiguous, short-term measurement time intervals</i>)
Rating level $L_{Ar,Tr}$	Specific sound level plus any adjustment for the characteristic features of the sound, over 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.

8 Statement of Uncertainty

This report is based upon a range of measurements, a system of calculations and noise predictions. As such, this report attempts to quantify fluctuations in air pressure and is subject to the effects of meteorology, physical and perceived anomalies, tolerances within the measuring and monitoring equipment and accuracy margins within the noise modelling software. In the interests of repeatability, this report must be considered as being affected by common factors involved in the measurement and calculation of noise propagation.

All measurement values, outcomes and assumptions are subject to a margin of uncertainty. This has been quantified and assessed as follows:

- Rounding errors – systemic tolerance of $\pm 1\text{dB}$;
- Meteorology – allowance of $\pm 1.9\text{dB}$; and
- CadnaA noise propagation modelling software – operational accuracy of $\pm 2.1\text{dB}$

The most influential uncertainty factors for the assessment of noise are deemed to be equipment tolerances, meteorology and software accuracy. A root-sum-square statistical average has been used to provide an overall margin of uncertainty of $\pm 3\text{dB}$.

Appendix A Baseline Survey Data

Table A-1: Baseline Measurements – ML01 Daytime

Date & Time	L _{Aeq} (dB)	L _{AFmax} (dB)	L _{A90} (dB)	L _{A10} (dB)
01/05/2026 10:30	49.8	66.9	39.6	53.5
01/05/2026 10:45	50.5	65.6	38.7	53.9
01/05/2026 11:00	52.6	78.8	39.9	55.7
01/05/2026 11:15	52.6	75.3	42.1	55.6
01/05/2026 11:30	53.4	72.9	41.3	56.9
01/05/2026 11:45	51.9	67.2	40.1	55.5
01/05/2026 12:00	49.8	66.3	40.3	53.5
01/05/2026 12:15	50.8	69.5	42.1	54.3
01/05/2026 12:30	53.9	75.4	42.7	54.9
01/05/2026 12:45	54.0	69.9	44.0	57.0
01/05/2026 13:00	51.7	68.2	43.5	54.0
01/05/2026 13:15	55.0	73.2	47.3	56.7
01/05/2026 13:30	50.9	66.9	44.1	54.2
01/05/2026 13:45	51.7	69.9	42.4	55.4
01/05/2026 14:00	50.2	64.5	43.7	53.8
01/05/2026 14:15	52.1	69.8	44.3	55.0
01/05/2026 14:30	51.2	72.8	43.3	54.0
01/05/2026 14:45	52.1	67.7	45.0	55.5
01/05/2026 15:00	52.5	64.7	45.9	55.8
01/05/2026 15:15	51.3	62.7	44.7	55.0
01/05/2026 15:30	56.1	72.4	46.2	58.9
01/05/2026 15:45	52.9	73.3	45.3	55.3
01/05/2026 16:00	52.9	63.5	46.8	56.3
01/05/2026 16:15	56.8	82.9	47.1	56.1
01/05/2026 16:30	54.0	70.9	48.2	57.0
01/05/2026 16:45	54.4	67.0	48.1	57.5
01/05/2026 17:00	54.4	69.8	47.2	57.4
01/05/2026 17:15	53.8	76.5	46.7	56.1
01/05/2026 17:30	54.0	69.3	46.9	56.9
01/05/2026 17:45	54.6	79.5	45.5	56.5
01/05/2026 18:00	51.7	65.1	45.1	54.8
01/05/2026 18:15	51.6	74.3	43.3	53.8
01/05/2026 18:30	50.8	64.2	44.6	53.7
01/05/2026 18:45	53.3	67.9	44.5	57.3
01/05/2026 19:00	50.5	66.3	44.1	53.8
01/05/2026 19:15	49.2	66.0	44.1	52.3
01/05/2026 19:30	49.6	66.0	41.9	53.5
01/05/2026 19:45	50.1	67.3	43.1	52.8
01/05/2026 20:00	50.8	65.3	44.8	54.3

Date & Time	L _{Aeq} (dB)	L _{AFmax} (dB)	L _{A90} (dB)	L _{A10} (dB)
01/05/2026 20:15	49.1	63.7	43.5	52.4
01/05/2026 20:30	50.2	64.8	42.5	54.0
01/05/2026 20:45	50.2	70.2	40.2	53.1
01/05/2026 21:00	46.1	62.6	37.2	49.3
01/05/2026 21:15	44.4	64.6	38.3	46.4
01/05/2026 21:30	44.7	56.4	38.6	47.6
01/05/2026 21:45	47.3	62.2	38.2	49.5
01/05/2026 22:00	45.5	59.5	37.7	48.1
01/05/2026 22:15	45.0	59.9	37.1	48.8
01/05/2026 22:30	44.3	61.1	36.3	46.3
01/05/2026 22:45	44.9	59.9	35.5	48.9
02/05/2026 07:00	48.8	67.4	36.9	53.0
02/05/2026 07:15	46.3	61.6	36.1	49.8
02/05/2026 07:30	49.9	71.5	36.8	53.5
02/05/2026 07:45	50.9	67.6	38.3	54.6
02/05/2026 08:00	47.6	63.4	37.2	51.6
02/05/2026 08:15	54.3	74.5	37.8	55.0
02/05/2026 08:30	51.8	78.6	37.4	51.4
02/05/2026 08:45	47.7	60.4	37.9	52.0
02/05/2026 09:00	49.3	66.0	39.2	52.7
02/05/2026 09:15	50.0	65.6	40.9	53.8
02/05/2026 09:30	48.4	62.6	38.6	52.7
02/05/2026 09:45	51.8	68.2	38.7	55.2
02/05/2026 10:00	51.6	66.4	41.2	55.0
02/05/2026 10:15	50.8	65.4	38.4	54.4
02/05/2026 10:30	50.3	64.0	39.8	54.0
02/05/2026 10:45	50.0	64.9	38.7	53.7
02/05/2026 11:00	50.5	63.3	40.0	54.2
02/05/2026 11:15	50.0	66.8	39.1	53.5
02/05/2026 11:30	48.7	66.3	36.4	52.5
02/05/2026 11:45	55.5	83.0	37.5	55.2
02/05/2026 12:00	49.5	65.0	37.7	53.8
02/05/2026 12:15	49.8	69.8	37.9	53.3
02/05/2026 12:30	49.2	64.1	38.2	53.1
02/05/2026 12:45	50.8	68.6	38.9	54.0
02/05/2026 13:00	49.1	64.5	38.2	53.0
02/05/2026 13:15	49.8	67.5	39.2	53.5
02/05/2026 13:30	58.7	89.0	35.4	52.5
02/05/2026 13:45	51.2	71.7	38.7	54.4
02/05/2026 14:00	50.1	67.3	38.1	53.4
02/05/2026 14:15	50.1	66.0	40.4	53.6
02/05/2026 14:30	48.5	68.0	37.5	52.8
02/05/2026 14:45	53.6	75.2	39.1	55.2

Date & Time	L _{Aeq} (dB)	L _{AFmax} (dB)	L _{A90} (dB)	L _{A10} (dB)
02/05/2026 15:00	49.6	64.6	37.8	53.9
02/05/2026 15:15	51.3	73.3	38.5	53.8
02/05/2026 15:30	49.7	70.6	37.4	53.3
02/05/2026 15:45	49.5	63.9	41.4	53.2
02/05/2026 16:00	51.4	66.7	43.5	54.9
02/05/2026 16:15	49.3	69.3	40.5	53.0
02/05/2026 16:30	58.7	70.3	48.6	61.3
02/05/2026 16:45	53.4	62.7	49.4	56.3
02/05/2026 17:00	52.9	66.0	46.8	56.4
02/05/2026 17:15	53.6	69.6	44.7	57.4
02/05/2026 17:30	51.3	64.2	40.9	55.3
02/05/2026 17:45	48.5	64.2	37.8	52.8
02/05/2026 18:00	50.1	68.4	38.3	54.0
02/05/2026 18:15	51.3	69.2	39.3	55.3
02/05/2026 18:30	49.5	63.4	39.1	53.9
02/05/2026 18:45	48.2	63.8	37.8	52.3
02/05/2026 19:00	54.2	79.4	37.4	56.6
02/05/2026 19:15	51.2	69.8	40.1	54.3
02/05/2026 19:30	48.2	62.8	36.4	52.8
02/05/2026 19:45	54.8	68.7	36.4	59.4
02/05/2026 20:00	51.0	66.3	35.5	53.9
02/05/2026 20:15	48.1	65.3	36.9	50.4
02/05/2026 20:30	49.1	64.7	36.7	52.1
02/05/2026 20:45	47.6	72.4	37.4	51.3
02/05/2026 21:00	42.8	58.6	36.1	44.5
02/05/2026 21:15	45.2	60.8	37.7	47.9
02/05/2026 21:30	45.4	57.8	38.9	48.0
02/05/2026 21:45	44.1	58.2	35.7	46.9
02/05/2026 22:00	45.4	60.7	36.6	49.0
02/05/2026 22:15	43.2	59.1	35.1	46.4
02/05/2026 22:30	40.7	56.9	34.4	43.1
02/05/2026 22:45	43.3	57.3	34.0	46.5
03/05/2026 07:00	49.0	64.9	38.5	52.2
03/05/2026 07:15	48.7	64.2	38.4	52.4
03/05/2026 07:30	46.5	62.3	36.9	50.0
03/05/2026 07:45	48.4	60.5	39.2	52.5
03/05/2026 08:00	49.1	66.8	37.8	52.6
03/05/2026 08:15	49.2	68.3	40.0	52.9
03/05/2026 08:30	48.8	65.4	37.2	52.3
03/05/2026 08:45	52.9	67.8	40.3	56.3
03/05/2026 09:00	48.3	62.9	38.2	52.4
03/05/2026 09:15	52.3	71.5	41.3	55.3
03/05/2026 09:30	51.6	67.3	41.4	55.2

Date & Time	L _{Aeq} (dB)	L _{AFmax} (dB)	L _{A90} (dB)	L _{A10} (dB)
03/05/2026 09:45	52.1	71.7	39.7	54.5
03/05/2026 10:00	51.1	66.8	40.3	54.6
03/05/2026 10:15	50.9	65.7	36.9	54.7
03/05/2026 10:30	49.7	64.0	39.3	53.4
03/05/2026 10:45	50.1	65.8	39.2	53.9
03/05/2026 11:00	50.0	67.4	39.2	53.7
03/05/2026 11:15	48.3	62.1	38.3	52.6
03/05/2026 11:30	51.0	65.7	41.8	54.6
03/05/2026 11:45	49.9	64.2	39.3	54.0
03/05/2026 12:00	49.6	63.0	38.4	53.6
03/05/2026 12:15	50.5	65.7	40.0	53.9
03/05/2026 12:30	48.1	59.8	37.9	52.3
03/05/2026 12:45	51.5	67.5	39.2	55.0
03/05/2026 13:00	50.1	67.1	39.2	53.8
03/05/2026 13:15	51.6	77.6	39.2	52.6
03/05/2026 13:30	52.2	68.5	38.6	56.1
03/05/2026 13:45	49.5	70.1	37.9	52.7
03/05/2026 14:00	49.3	60.7	41.3	53.4
03/05/2026 14:15	51.8	70.4	41.9	54.5
03/05/2026 14:30	51.1	74.3	40.2	52.4
03/05/2026 14:45	50.4	66.8	41.6	53.8
03/05/2026 15:00	49.5	67.0	38.8	53.3
03/05/2026 15:15	48.1	60.1	39.1	52.0
03/05/2026 15:30	46.3	60.4	37.2	50.5
03/05/2026 15:45	48.9	65.6	39.2	52.8
03/05/2026 16:00	50.6	67.9	42.3	53.9
03/05/2026 16:15	50.0	71.7	42.0	53.1
03/05/2026 16:30	49.2	65.7	41.8	52.4
03/05/2026 16:45	51.8	66.5	41.1	55.7
03/05/2026 17:00	49.0	65.0	39.8	52.5
03/05/2026 17:15	50.5	72.5	40.2	53.3
03/05/2026 17:30	50.1	66.8	40.9	53.7
03/05/2026 17:45	49.3	67.6	39.9	52.4
03/05/2026 18:00	47.3	71.8	37.8	50.1
03/05/2026 18:15	51.4	70.9	38.0	54.9
03/05/2026 18:30	49.5	67.8	37.0	53.1
03/05/2026 18:45	47.8	66.1	38.7	51.4
03/05/2026 19:00	47.8	64.5	38.4	50.8
03/05/2026 19:15	47.9	64.0	37.2	51.0
03/05/2026 19:30	45.9	66.1	38.0	48.7
03/05/2026 19:45	54.7	69.0	40.9	59.2
03/05/2026 20:00	54.2	69.1	40.7	58.4
03/05/2026 20:15	48.8	63.8	39.3	53.2

Date & Time	L _{Aeq} (dB)	L _{AFmax} (dB)	L _{A90} (dB)	L _{A10} (dB)
03/05/2026 20:30	46.7	63.1	38.1	49.9
03/05/2026 20:45	47.8	64.6	36.0	52.2
03/05/2026 21:00	47.2	63.6	39.4	49.5
03/05/2026 21:15	49.2	71.0	40.8	51.5
03/05/2026 21:30	45.6	65.1	38.3	48.6
03/05/2026 21:45	48.9	63.8	40.1	51.8
03/05/2026 22:00	43.1	56.8	36.8	46.5
03/05/2026 22:15	45.5	68.4	36.2	46.1
03/05/2026 22:30	41.3	58.4	34.4	43.6
03/05/2026 22:45	44.6	68.8	35.0	44.1
04/05/2026 07:00	48.7	63.8	35.6	53.1
04/05/2026 07:15	48.4	71.9	32.5	50.8
04/05/2026 07:30	48.8	71.3	35.3	52.7
04/05/2026 07:45	46.8	63.6	33.8	50.9
04/05/2026 08:00	48.6	64.8	33.9	52.6
04/05/2026 08:15	48.3	65.3	35.9	52.1
04/05/2026 08:30	47.7	65.4	33.0	52.0
04/05/2026 08:45	51.3	81.7	37.0	52.9
04/05/2026 09:00	46.4	65.1	31.9	50.2
04/05/2026 09:15	50.5	73.5	34.8	52.3
04/05/2026 09:30	46.5	70.7	33.4	49.1
04/05/2026 09:45	47.2	63.8	33.9	51.3
04/05/2026 10:00	51.2	77.5	34.5	52.9
04/05/2026 10:15	50.5	72.4	36.6	53.2
04/05/2026 10:30	46.5	62.2	36.1	50.7
04/05/2026 10:45	49.9	64.4	38.3	53.8
04/05/2026 11:00	49.7	62.6	36.1	53.6
04/05/2026 11:15	49.7	61.9	36.2	54.4
04/05/2026 11:30	50.4	65.5	37.7	54.4
04/05/2026 11:45	48.5	59.8	34.5	53.1
04/05/2026 12:00	48.8	64.5	35.7	53.0
04/05/2026 12:15	48.9	67.7	36.1	52.6
04/05/2026 12:30	50.2	67.4	33.8	53.9
04/05/2026 12:45	48.3	62.9	35.8	52.6
04/05/2026 13:00	49.1	66.8	36.3	53.3
04/05/2026 13:15	50.5	67.0	35.1	53.3
04/05/2026 13:30	54.5	83.1	35.9	54.0
04/05/2026 13:45	49.5	68.5	36.9	53.0
04/05/2026 14:00	50.1	64.6	38.0	54.0
04/05/2026 14:15	49.9	71.6	34.8	53.5
04/05/2026 14:30	51.5	75.2	36.2	52.5
04/05/2026 14:45	60.4	88.5	37.6	55.5
04/05/2026 15:00	56.4	84.7	38.6	54.1

Date & Time	L _{Aeq} (dB)	L _{AFmax} (dB)	L _{A90} (dB)	L _{A10} (dB)
04/05/2026 15:15	48.2	62.5	36.1	52.3
04/05/2026 15:30	50.1	66.0	36.3	53.4
04/05/2026 15:45	47.3	59.9	35.1	51.3
04/05/2026 16:00	48.3	69.6	34.9	52.6
04/05/2026 16:15	54.5	81.7	39.3	53.9
04/05/2026 16:30	50.0	68.0	38.1	53.1
04/05/2026 16:45	50.0	68.7	38.6	53.6
04/05/2026 17:00	50.5	74.0	36.9	52.4
04/05/2026 17:15	49.7	68.5	36.3	53.2
04/05/2026 17:30	50.4	68.9	38.1	53.5
04/05/2026 17:45	49.7	65.4	35.3	53.8
04/05/2026 18:00	47.6	62.4	35.5	52.2
04/05/2026 18:15	48.0	67.6	34.7	51.9
04/05/2026 18:30	52.3	71.0	35.9	55.3
04/05/2026 18:45	50.3	67.3	34.7	53.6
04/05/2026 19:00	48.5	66.1	33.9	52.4
04/05/2026 19:15	49.2	66.0	35.0	53.3
04/05/2026 19:30	49.1	65.5	33.4	53.4
04/05/2026 19:45	54.9	69.3	34.2	59.5
04/05/2026 20:00	47.7	65.4	30.0	51.8
04/05/2026 20:15	43.8	63.8	29.4	46.4
04/05/2026 20:30	47.6	63.8	28.8	51.7
04/05/2026 20:45	46.5	64.6	31.0	50.1
04/05/2026 21:00	49.3	80.4	33.3	42.6
04/05/2026 21:15	41.9	59.0	26.1	45.6
04/05/2026 21:30	40.0	58.1	26.5	42.2
04/05/2026 21:45	40.9	61.5	28.2	41.7
04/05/2026 22:00	41.1	59.0	26.4	42.1
04/05/2026 22:15	40.6	61.3	25.5	40.2
04/05/2026 22:30	39.2	60.3	23.9	37.2
04/05/2026 22:45	34.5	56.4	23.3	31.3
05/05/2026 07:00	53.1	70.3	43.4	56.1
05/05/2026 07:15	52.8	65.4	43.0	56.3
05/05/2026 07:30	52.3	65.9	42.9	55.8
05/05/2026 07:45	53.7	64.4	43.5	57.2
05/05/2026 08:00	52.4	62.2	42.6	56.1
05/05/2026 08:15	53.3	68.5	43.6	56.5
05/05/2026 08:30	51.2	62.7	42.3	54.9
05/05/2026 08:45	50.7	65.1	42.5	54.3
05/05/2026 09:00	49.9	66.8	41.4	53.6
05/05/2026 09:15	49.0	63.6	39.4	52.7
05/05/2026 09:30	50.2	68.3	39.9	53.5
05/05/2026 09:45	49.5	66.9	37.5	53.1

Date & Time	L _{Aeq} (dB)	L _{AFmax} (dB)	L _{A90} (dB)	L _{A10} (dB)
05/05/2026 10:00	49.9	64.5	37.3	54.1
05/05/2026 10:15	50.4	70.8	38.5	53.7
Summary	50.8	89.0	38.6	52.7

Table A-2: Extended Operational Measurements – SM01

Date & Time	L _{Aeq} (dB)	L _{AFmax} (dB)	L _{A90} (dB)	L _{A10} (dB)
01/05/2026 11:05	53.5	70.1	46.6	55.5
01/05/2026 11:20	58.5	74.7	47.0	60.9
01/05/2026 11:35	53.3	82.4	44.9	53.9
01/05/2026 11:50	52.9	70.4	45.3	55.3
01/05/2026 12:05	52.5	70.0	40.3	53.8
01/05/2026 12:20	46.2	65.3	40.0	47.8
01/05/2026 12:35	47.1	60.0	43.4	49.0
01/05/2026 12:50	50.1	72.0	43.4	52.2
01/05/2026 13:05	50.2	66.6	45.2	52.3
01/05/2026 13:20	49.9	66.9	42.8	51.4
01/05/2026 13:35	50.9	66.1	40.6	54.3
01/05/2026 13:50	49.5	68.5	40.4	50.7
01/05/2026 14:05	45.9	73.7	14.2	17.7
Summary	52.2	82.4	41.1	50.4

Table A-3: Extended Operational Measurements – SM02

Date & Time	L _{Aeq} (dB)	L _{AFmax} (dB)	L _{A90} (dB)	L _{A10} (dB)
01/05/2026 11:10	72.2	92.9	57.4	70.5
01/05/2026 11:25	74.0	90.9	58.0	74.0
01/05/2026 11:40	70.7	92.7	55.0	69.1
01/05/2026 11:55	69.7	92.8	53.5	70.5
01/05/2026 12:10	77.3	97.2	53.2	78.0
01/05/2026 12:25	71.6	91.6	56.8	71.3
01/05/2026 12:40	52.6	62.1	50.1	54.0
01/05/2026 12:55	66.7	92.8	50.5	60.0
01/05/2026 13:10	69.6	92.0	53.8	68.1
01/05/2026 13:25	74.3	91.1	58.6	77.2
01/05/2026 13:40	75.1	92.1	55.3	75.2
01/05/2026 13:55	70.5	93.2	53.7	72.9
01/05/2026 14:10	66.6	82.9	18.2	25.0
Summary	72.3	97.2	51.8	66.6

Appendix B Noise Contour Plots

Figure B-1: Operational Noise Break-Out





Enzygo specialise in a wide range of technical services:

Landscape

Landscape and Visual Impact Assessments
Landscape Masterplanning
Landscape Architecture and Urban Design

Hydrology

Flood Risk Assessments and Modelling
Surface Water and Foul Drainage Strategies
Nutrient Neutrality Assessments

Permitting

Permitting Applications
Regulatory Advice and Guidance
Environmental Management Systems & Plans

Ecology

Ecological Impact Assessment
Protected Species Surveys
Biodiversity Mitigation Design & Implementation

Geoenvironmental

Contaminated Land Assessments
Site Risk Assessment & Monitoring
Geotechnical Assessment and Design

Transport

Transport Assessments and Statements
Traffic Monitoring, Audits and Analysis
Travel Plans and Management Plans

Planning

Planning Applications and Appeals
Feasibility Studies & Development Appraisals
Design & Access Statements

Arboriculture

Arboricultural Impact Assessments
Tree Surveys and Tree Constraints Plans
Tree and Woodland Management Plans

Air Quality

Air Quality Assessments and Monitoring
Dust Assessment and Management Plans
Odour Assessment and Management Plans

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CB4 0DL

CARDIFF

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Malthouse Avenue
Cardiff Gate
Buisness Park
CF23 8RU

CROMHALL

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Cromhall
Gloucesterhire
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CENTRAL BRISTOL

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