



Noise Impact Assessment

Site Address: 8 Wood Lane, Norton-Juxta-Twycross, Atherstone, CV9 3QB

Client Name: LonXthree c/o 2012 Partnership Homes Ltd

Project Reference No: NP-013486



Authorisation and Version Control

Revision	Reported By	Checked By
01	T. Sloan, BSc, MIOA	R. Chamberlain, BSc, MIOA

Amendment History

Revision	Date	Summary of Amendments
01	17/11/2025	--

Disclaimer

This document has been prepared for the Client only and solely for the purposes expressly defined herein. NOVA Acoustics Ltd owe no duty of care to any third parties in respect of its content. Therefore, unless expressly agreed by NOVA Acoustics Ltd in signed writing, NOVA Acoustics Ltd hereby exclude all liability to third parties, including liability for negligence, save only for liabilities that cannot be so excluded by operation of applicable law. This report has been solely based on the specific design assumptions and criteria stated herein.

All works undertaken by NOVA Acoustics Ltd are carried out in accordance with NOVA Acoustics Ltd's terms and conditions found at www.novaacoustics.co.uk.

Contact Details

NOVA Acoustics Ltd,
Suite 13, Crown House,
94 Armley Road,
Leeds,
LS12 2EJ

0113 322 7977

www.novaacoustics.co.uk
technical@novaacoustics.co.uk

Delivering sustainable development by promoting good health and well-being through effective management of noise.

Contents

1.	INTRODUCTION	4
1.1	Standards, Legislation, Policy & Guidance	4
1.2	Proposal Brief	5
1.3	Local Planning Authority & Background	5
2.	ENVIRONMENTAL NOISE SURVEY	6
2.1	Measurement Methodology	6
2.2	Context & Subjective Impression.....	7
2.3	Environmental Noise Survey Results.....	7
3.	BS4142 PLANT NOISE LIMIT LEVEL	9
4.	CONCLUSION AND ACTION PLAN	10
	APPENDIX A – ACOUSTIC TERMINOLOGY	11
	APPENDIX B – STANDARDS, LEGISLATION, POLICY, AND GUIDANCE	12
	B.1 – National Planning Policy Framework (2024)	12
	B.2 – Noise Policy Statement for England (2010)	12
	B.3 – BS4142:2014+A1:2019 – ‘Methods for rating and assessing industrial and commercial sound’	14
	APPENDIX C – PROPOSED ELEVATIONS	17
	APPENDIX D – ENVIRONMENTAL SURVEY	18
	D.1 – Time History Noise Data	18
	D.2 – Surveying Equipment	19
	D.3 – Meteorological Conditions	20

List of Figures

<i>Figure 1 – Proposed Development.....</i>	<i>5</i>
<i>Figure 2 – Measurement Locations, Site Surroundings & Additional Features</i>	<i>6</i>
<i>Figure 3 – MP1 Daytime Hours Background Sound Level Analysis.....</i>	<i>7</i>
<i>Figure 4 – MP1 Nighttime Hours Background Sound Level Analysis.....</i>	<i>8</i>
<i>Figure 5 – MP2 Daytime Hours Background Sound Level Analysis.....</i>	<i>8</i>
<i>Figure 6 – MP2 Nighttime Hours Background Sound Level Analysis.....</i>	<i>8</i>
<i>Figure 7 – MP1 Noise Survey Time History.....</i>	<i>18</i>
<i>Figure 8 – MP2 Noise Survey Time History.....</i>	<i>18</i>

List of Tables

<i>Table 1 – Measurement Methodology</i>	<i>6</i>
<i>Table 2 – BS4142 External Plant Noise Limit Levels.....</i>	<i>9</i>
<i>Table 3 – Surveying Equipment.....</i>	<i>19</i>
<i>Table 4 – Weather Conditions.....</i>	<i>20</i>

1. Introduction

NOVA Acoustics Ltd has been commissioned to provide a noise impact assessment for the proposed change of use of two agricultural buildings to two office units ('the proposed development') at 8 Wood Lane, Norton-Juxta-Twycross, Atherstone, CV9 3QB ('the site').

The applicant has submitted planning application No. 25/00871/P3CR ('the Application') to Hinckley & Bosworth Borough Council. This report has been prepared to accompany the planning application submitted to the Local Planning Authority ('LPA').

A noise survey has been undertaken to establish the prevailing background sound levels at the closest Noise Sensitive Receptors ('NSRs'). The report details the existing background sound climate and provides a plant noise limit level for the noise emissions associated with the proposed development.

This noise assessment is necessarily technical in nature; therefore, a glossary of terms is included in Appendix A to assist the reader.

1.1 Standards, Legislation, Policy & Guidance

The following performance standards, legislation, policy and guidance have been considered to ensure good acoustic design in the assessment:

- National Planning Policy Framework (2024).
- Noise Policy Statement for England (2010).
- British Standard BS4142:2014+A1:2019 – 'Methods for rating and assessing industrial and commercial sound'.

Further information on the legislation can be found in Appendix B.

1.2 Proposal Brief

The proposal is for the change of use of two agricultural buildings into offices. This development may include external air conditioning (AC) units or air source heat pumps (ASHPs). Whilst it is understood that fixed plant may be required to service the proposed development, no specifications have been finalised at this stage.

NOVA Acoustics has assumed the following operational hours:

- 09:00 to 17:00 hours Monday to Friday

A nighttime analysis will also be undertaken under the assumption that plant may operate at a reduced level through the night.

The figure below shows the proposed development.



Drawing Ref No. A-E10-001 from 'Marrons'

Figure 1 – Proposed Development

1.3 Local Planning Authority & Background

The following comments were made on behalf of HBBC ES Pollution 2 when consulting on the proposed development:

“With regard to noise is any external plant/equipment proposed (e.g. AC units, ASHPs). The development is close to an industrial site and noise from this use should be considered.”

2. Environmental Noise Survey

2.1 Measurement Methodology

An unattended noise level survey was undertaken at the site to determine the noise climate in the area. Unattended monitoring was undertaken, and all measurements were undertaken under free-field conditions.

The following table outlines the measurement dates and particulars. Weather conditions during the environmental sound survey can be found in Appendix D. In both cases, the sound level meters were fitted with proprietary 130mm wind shields and environmental kits.

Location	Survey Dates	Measurement Particulars
MP1	10 – 12/11/25	Equipment mounted to a telegraph pole 4m above the ground overlooking Wood Lane.
MP2		Equipment mounted to a telegraph pole 4m above the ground overlooking Main Street.

Table 1 – Measurement Methodology

The figure below outlines the site surroundings and measurement locations:



Imagery ©2025, Map data ©2025

Figure 2 – Measurement Locations, Site Surroundings & Additional Features

2.2 Context & Subjective Impression

The proposed development site is located on land with two large agricultural buildings to the south of Wood Lane, central to the village of Norton Juxta Twycross. The immediate surrounding consists of a working farm to the east, and residential dwellings to the north and west. Approximately 620m to the south is the A444, a busy road leading from the M42 towards Twycross, and approximately 3.2km to the northwest is the M42.

The acoustic environment is deemed to be low in level with vehicular passbys being dominant and it was noted on location by the engineer that distant road noise was audible, likely from the M42.

The closest NSR1 is a two-storey dwelling approximately 31m to the southwest, which if fixed plant is installed at the ideal location shall receive full shielding provided by the proposed development itself. The intervening ground is soft and there is a 1.8m tall boundary fence at the NSR property.

NSR2 is a two-storey newbuild residential dwelling approximately 52m to the north, which if fixed plant is installed at the ideal location would also benefit from shielding provided by the 1.8m tall boundary fence at the NSR property.

2.3 Environmental Noise Survey Results

Background Sound Level Analysis

The following section outlines the measured background sound levels that have been used as the baseline for the subsequent BS4142 noise assessment. The figure below shows a histogram graph of the background sound levels measured during the daytime period of 07:00 – 23:00 hours, and nighttime hours of 23:00 – 07:00 throughout the entire measurement period.

Due to a burst of heavy rain which occurred on the 10/11/25, there is a peak of noise which has been omitted from analysis. Additionally, likely due to the ground being very wet, the background noise level remains higher throughout the evening of the 10/11/25, when compared to the evening of the 11/11/25. This is likely increased road tyre roar from the local road network and the M42. As such, to provide the most robust assessment, this period has been omitted from analysis. The time history results can be found in Appendix D.

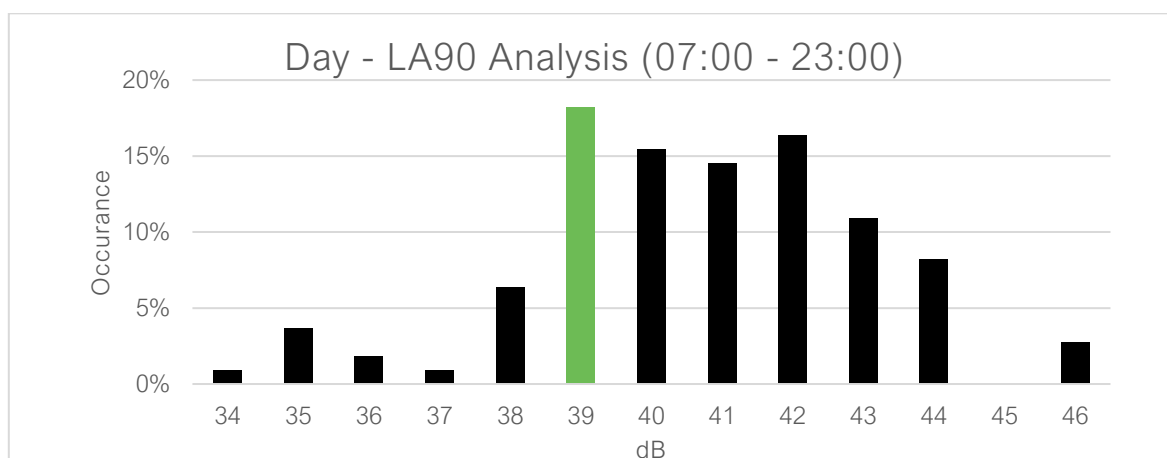


Figure 3 – MP1 Daytime Hours Background Sound Level Analysis

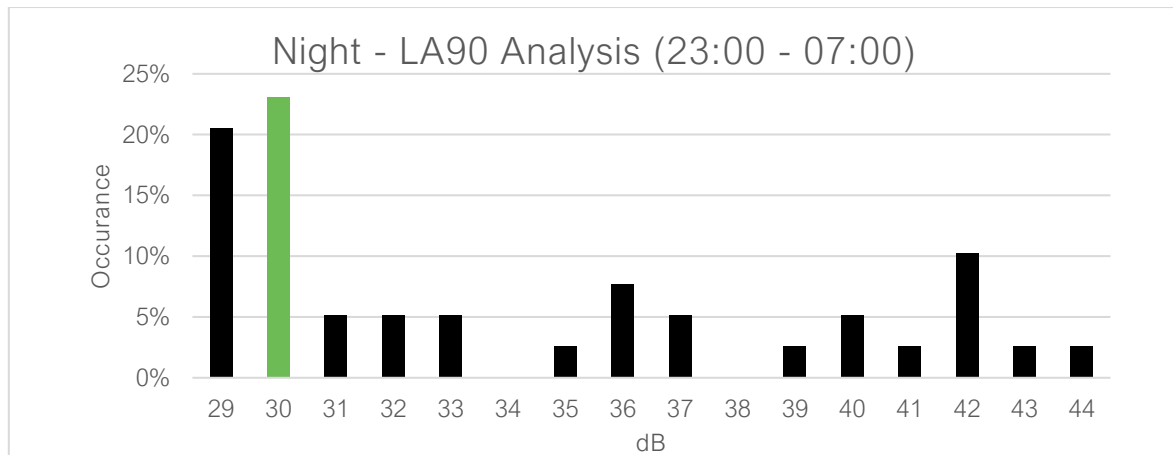


Figure 4 – MP1 Nighttime Hours Background Sound Level Analysis

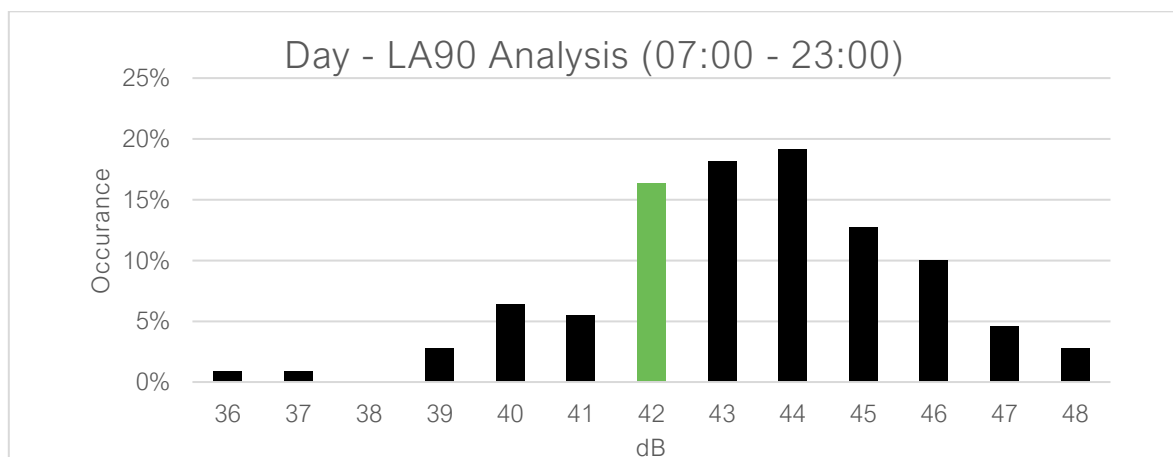


Figure 5 – MP2 Daytime Hours Background Sound Level Analysis

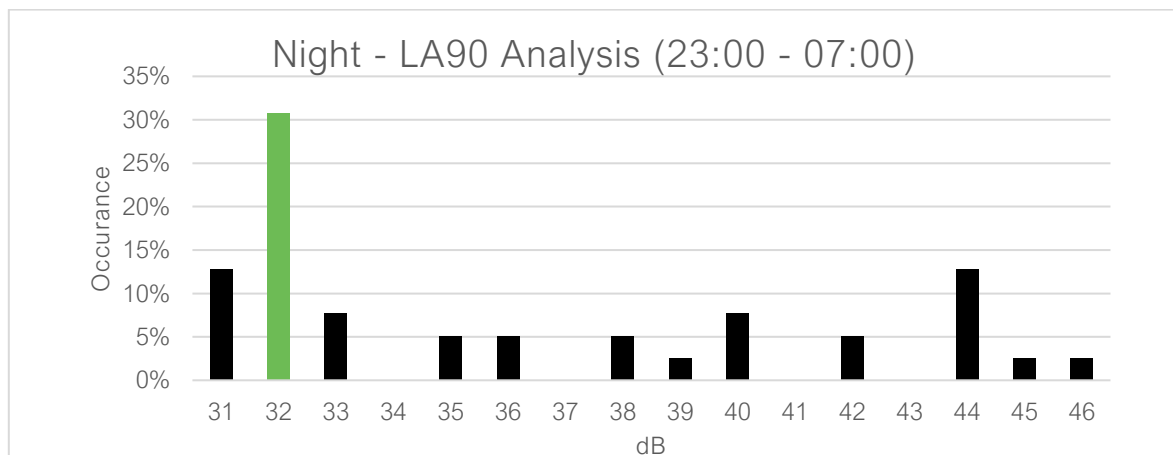


Figure 6 – MP2 Nighttime Hours Background Sound Level Analysis

Looking at background sound levels taken at MP1 as a worst case forming a robust assessment, the 'lowest typical' $LA_{90,15min}$ values which will be used as the baseline for the BS4142 assessments are 39dB and 30dB for the day and nighttime respectively.

3. BS4142 Plant Noise Limit Level

The proposed plant equipment specification has not yet been finalised. Consequently, plant noise limit levels have been defined to ensure that the noise emissions do not exceed the background sound levels at the closest NSRs.

It should be noted however that the night-time background noise measurement of **30dBA** is very low, and under such circumstances, the following is stated in BS4142:

“...the absolute sound levels may be as, or more, relevant than the margin by which the rating sound level exceeds the background sound level; this is particularly true at night.”

Consequently, an absolute criterion is deemed appropriate for the night-time assessment. Outdoor amenity areas are unlikely to be used during the night; therefore, the primary concern comes from achieving suitable internal levels within the bedrooms as to avoid sleep disturbance.

BS8233 prescribes a night-time internal ambient noise level within bedrooms of $\leq 30\text{dB L}_{\text{Aeq},8\text{h}}$. Therefore, it is considered that an external noise limit of **33dBA** outside the nearest bedroom window is reasonable, which would ensure that internal noise levels do not exceed **20dBA** (when considering that a partially open window provides 13dB sound reduction). At this level, noise from any plant is unlikely to be audible against the prevailing noise climate within the rooms themselves and would therefore form a robust criterion. Whilst the BS8233 criterion is based upon anonymous transport sources, it is unlikely that any acoustic features would be perceptible within the NSR bedrooms at this level. Nonetheless, good acoustic design should still be implemented to reduce the likelihood of any tonality, intermittency and any other features not described.

The limit levels are inclusive of any rating penalties that should be applied to account for audible characteristics of the noise which could be deemed to cause increased annoyance, such as intermittency, impulsivity, or tonality. The limit levels have been calculated for the daytime and night-time periods, depending on when the plant will be operational. The calculated plant noise limit levels are shown in the table below.

Description	Daytime Period (dBA)	Night-time Period (dBA)
Background Sound Level	39	-
Cumulative Plant Noise Limit Level at NSR	39	33
BS4142 Assessment Outcome	'Low Impact'	
NPSE & NPPF Assessment Outcome	'No Observed Adverse Effect Level' ('NOAEL')	

Table 2 – BS4142 External Plant Noise Limit Levels

Discussion:

As can be seen in the assessment above, provided the plant limit levels are adhered to all noise emissions from the external plant units do not exceed the existing background sound levels. When assessed in accordance with BS4142 this indicates 'low impact', and when assessed with the NPPF and NPSE this is classed as 'No Observed Adverse Effect Level' (NOAEL).

4. Conclusion and Action Plan

The proposed development has been assessed against the requirements of BS4142 and the LPA's policies and guidance.

The following 'Action Plan' is outlined to ensure the design considerations from this report are duly implemented:

1. Once the plant equipment has been specified further calculations and assessment may be required to ensure the plant noise limit level can be achieved. Please contact NOVA Acoustics for assistance.

The findings of this report will require written approval from the Local Authority prior to work commencing.

Appendix A – Acoustic Terminology

A-weighted sound pressure level, L_{pA}	Quantity of A-weighted sound pressure given by the following formula in decibels (dBA). $L_{pA} = 10 \log_{10} (pA/p_0)^2$. Where: pA is the A-weighted sound pressure in pascals (Pa) and p_0 is the reference sound pressure (20 μ Pa)
Background Sound	Underlying level of sound over a period, T , which might in part be an indication of relative quietness at a given location
Equivalent continuous A-weighted sound pressure level, $L_{Aeq,T}$	Value of the A-weighted sound pressure level in decibels (dB) of a continuous, steady sound that, within a specified time interval, T , has the same mean-squared sound pressure as the sound under consideration that varies with time
Facade level	Sound pressure level 1m in front of the facade
Free-field level	Sound pressure level away from reflecting surfaces
Noise Criteria	Numerical indices used to define design goals in a given space
Noise Rating (NR)	Graphical method for rating a noise by comparing the noise spectrum with a family of noise rating curves
Octave Band	Band of frequencies in which the upper limit of the band is twice the frequency of the lower limit
Percentile Level, $L_{AN,T}$	A-weighted sound pressure level obtained using time-weighting “F”, which is exceeded for $N\%$ of a specified time interval
Rating Level, $L_{Ar,Tr}$	Equivalent continuous A-weighted sound pressure level of the noise, plus any adjustment for the characteristic features of the noise
Sound Pressure, p	root-mean-square value of the variation in air pressure, measured in pascals (Pa) above and below atmospheric pressure, caused by the sound
Sound Pressure Level, L_p	Quantity of sound pressure, in decibels (dB), given by the formula: $L_p = 10 \log_{10} (p/p_0)^2$. Where: p is the root-mean-square sound pressure in pascals (Pa) and p_0 is the reference sound pressure (20 μ Pa)

Appendix B – Standards, Legislation, Policy, and Guidance

This report is to be primarily based on the following standards, legislation, policy and guidance.

B.1 – National Planning Policy Framework (2024)

Government policy on noise is set out in the National Planning Policy Framework (NPPF), published in 2024. This replaced all earlier guidance on noise and places an emphasis on sustainability. In section 15, Conserving and enhancing the natural and local environment, paragraph 187e, it states:

Preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans;

Paragraph 198 states:

Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development. In doing so they should:

- a) Mitigate and reduce to a minimum potential adverse impact resulting from noise from new development – and avoid noise giving rise to significant adverse impacts on health and the quality of life;*
- b) Identify and protect tranquil areas which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason; and*
- c) Limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation.*

B.2 – Noise Policy Statement for England (2010)

Paragraph 198 of the NPPF also refers to advice on adverse effects of noise given in the Noise Policy Statement for England (NPSE). This document sets out a policy vision to:

Promote good health and a good quality of life through the effective management of noise within the context of Government policy on sustainable development.

To achieve this vision the Statement identifies the following three aims:

Through the effective management and control of environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development:

- 1) Avoid significant adverse impacts on health and quality of life.
- 2) Mitigate and minimise adverse impacts on health and quality of life.
- 3) Where possible, contribute to the improvement of health and quality of life.

In achieving these aims the document introduces significance criteria as follows:

SOAEL – Significant Observed Adverse Effect Level

This is the level above which significant adverse effects on health and quality of life occur. It is stated that *“significant adverse effects on health and quality of life should be avoided while also considering the guiding principles of sustainable development”*.

LOAEL – Lowest Observed Adverse Effect Level

This is the level above which adverse effects on health and quality of life can be detected. It is stated that the second aim refers to the situation where impact lies somewhere between LOAEL and SOAEL and requires that: *“all reasonable steps should be taken to mitigate and minimise adverse effects on health and quality of life while also considering the guiding principles of sustainable development. This does not mean that such adverse effects cannot occur.”*

NOEL – No Observed Effect Level

This is the level below which no effect can be detected. In simple terms, below this level, there is no detectable effect on health and quality of life due to the noise. This can be related to the third aim above, which seeks: *“where possible, positively to improve health and quality of life through the pro-active management of noise while also considering the guiding principles of sustainable development, recognising that there will be opportunities for such measures to be taken and that they will deliver potential benefits to society. The protection of quiet places and quiet times as well as the enhancement of the acoustic environment will assist with delivering this aim”*.

This is further expanded using the updated “Noise Exposure Hierarchy Table” which includes an additional level of impact referred to as the ‘No Observed Adverse Effect Level’ (‘NOAEL’). It is stated that at this level: *“noise can be heard, but does not cause any change in behaviour, attitude or other physiological response”*. In addition, noise at this level *“can slightly affect the acoustic character of the area but not such that there is a change in the quality of life”*.

The NPSE recognises that it is not possible to have a single objective noise-based measure that is mandatory and applicable to all sources of noise in all situations and provides no guidance as to how these criteria should be interpreted. It is clear, however, that there is no requirement to achieve noise levels where there are no observable adverse impacts but that reasonable and practicable steps to reduce adverse noise impacts should be taken in the context of sustainable development and ensure a balance between noise sensitive and the need for noise generating developments.

Any scheme of noise mitigation outlined in this report will, therefore, aim to abide by the above principles of the NPPF and NPSE whilst recognising the constraints of the site.

B.3 – BS4142:2014+A1:2019 – ‘Methods for rating and assessing industrial and commercial sound’

Overview

BS4142 sets out a method to assess the likely effect of sound from factories, industrial premises or fixed installations and sources of an industrial nature in commercial premises, on people who might be inside or outside a dwelling or premises used for residential purposes in the vicinity.

The procedure contained in BS4142 for assessing the effect of sound on residential receptors is to compare the measured or predicted sound level from the source in question, the $L_{Aeq,T}$ ‘specific sound level’, immediately outside the dwelling with the $L_{A90,T}$ background sound level.

Where the sound contains a tonality, impulsivity, intermittency and other sound characteristics, then a correction depending on the grade of the aforementioned characteristics of the sound is added to the specific sound level to obtain the $L_{A,r,T}$ ‘rating sound level’. A correction to include the consideration of a level of uncertainty in sound measurements, data and calculations can also be applied when necessary.

Rating Penalty

Section 9 of BS4142 describes how the rating sound level should be derived from the specific sound level, by deriving a rating penalty.

BS4142 states:

“Certain acoustic features can increase the significance of impact over that expected from a basic comparison between the specific sound level and the background sound level. Where such features are present at the assessment location, add a character correction to the specific sound level to obtain the rating level. This can be approached in three ways:

- a) subjective method;*
- b) objective method for tonality;*
- c) reference method.”*

Due to the nature of the development the subjective method has been adopted to derive the rating sound level from the specific sound level. This is discussed in Section 9.2 of BS4142, which states:

“Where appropriate, establish a rating penalty for sound based on a subjective assessment of its characteristics. This would also be appropriate where a new source cannot be measured because it is only proposed at that time, but the characteristics of similar sources can subjectively be assessed. Correct the specific sound level if a tone, impulse or other characteristics occurs, or is expected to be present, for new or modified sound sources.”

BS4142 defines four characteristics that should be considered when deriving a rating penalty, namely; tonality; impulsivity; intermittency; and other sound characteristics, which are defined as:

- a) Tonality*

A rating penalty of +2dB is applicable for a tone which is “just perceptible”, +4dB where a tone is “clearly perceptible”, and +6dB where a tone is “highly perceptible”.

b) Impulsivity

A rating penalty of +3dB is applicable for impulsivity which is “just perceptible”, +6dB where it is “clearly perceptible”, and +9dB where it is “highly perceptible”.

c) Other Sound Characteristics

BS4142 states that where “the specific sound features characteristics that are neither tonal nor impulsive, though otherwise are readily distance against the residual acoustic environment, a penalty of +3dB can be applied.”

d) Intermittency

BS4142 states that when the “specific sound has identifiable on/off conditions, the specific sound level ought to be representative of the time period of length equal to the reference time interval which contains the greatest total amount of on time ... if the intermittency is readily distinctive against the residual acoustic environment, a penalty of +3dB can be applied.”

Background Sound Level

The background sound level is the underlying level of sound over a period, T, and is indicative of the relative quietness at a given location. It does not reflect the occurrence of transient and/or higher sound level events and is generally governed by continuous or semi-continuous sounds.

To ensure the background sound level values used within the assessment are reliable and suitably represent both the particular circumstance and periods of interest, efforts have been made to quantify a ‘typical’ background sound level for a given period. The purpose has not been to simply select the lowest measured value. Diurnal patterns have also been considered as they can have a major influence on background sound levels, for example, the middle of the night can be distinctly different (and potentially of lesser importance) compared to the start or end of the night time period for sleep purposes.

Since the intention is to determine a background sound level in the absence of the specific sound that is under consideration, it is necessary to understand that the background sound level can in some circumstances legitimately include industrial and/or commercial sounds that are present as separate to the specific sound.

Assessment of Impact

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*”. An estimation of the impact of the specific sound can be obtained by the difference of the rating sound level and the background sound level and considering the following:

- “Typically, the greater this difference, the greater the magnitude of the impact.”
- “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 on the context.”

- “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. Where the rating level does not exceed the background sound level, this is an indication of the specific sound source having a low impact, depending on the context.”

Interpreting the guidance given in BS4142, with consideration of the guidance given in the NPSE and NPPG Noise, an estimation of the impact of the rating sound is summarised in the following text:

- A rating sound level that is +10dB above the background sound level is likely to be an indication of a ‘Significant Observed Adverse Effect Level’;
- A rating sound level that is +5dB above the background sound level is likely to be an indication of a ‘Lowest Observed Adverse Effect Level’;
- The lower the rating sound 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. Where the rating sound level does not exceed the background sound level, this is an indication of the specific sound source having a low impact and would therefore classify as ‘No Observed Adverse Effect Level’;
- At levels significantly below the measured background sound level (i.e. greater than 10dB), this is an indication of a ‘No Adverse Effect Level’.

During the daytime, the assessment is carried out over a reference time period of 1-hour. The periods associated with day or night, for the purposes of the Standard, are 07.00 to 23.00 and 23.00 to 07.00, respectively.

Appendix D – Environmental Survey

D.1 – Time History Noise Data

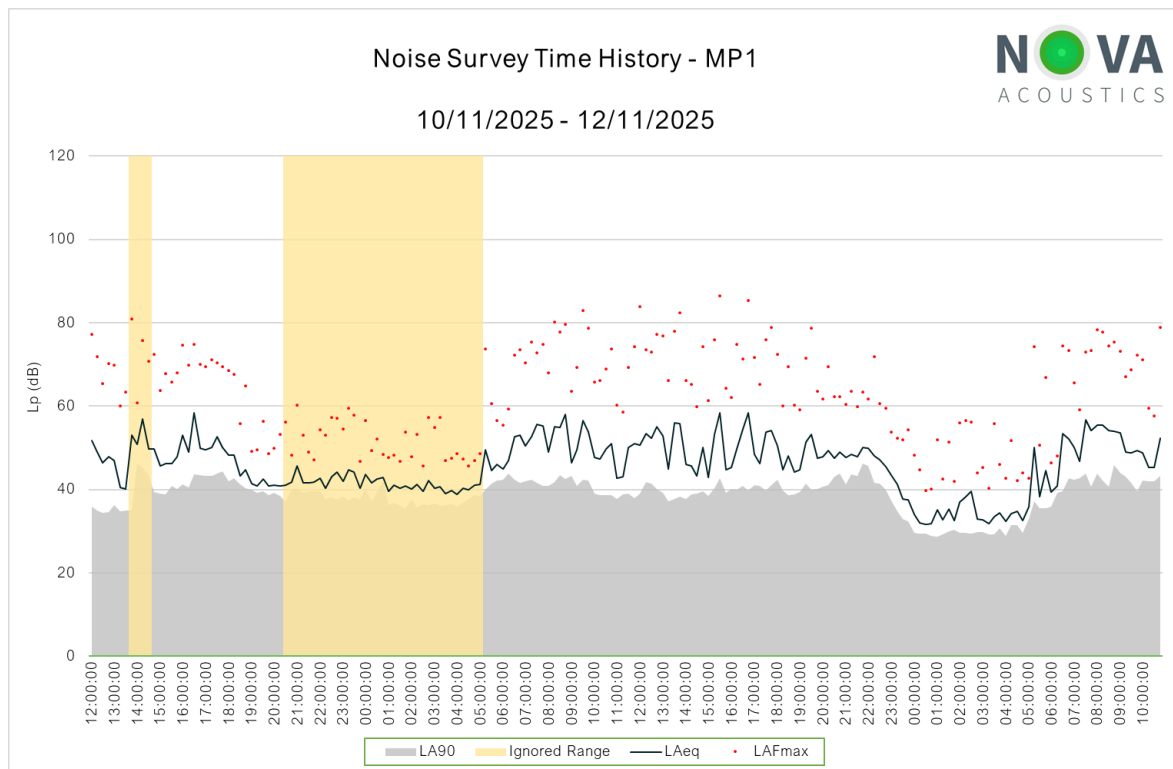


Figure 7 – MP1 Noise Survey Time History

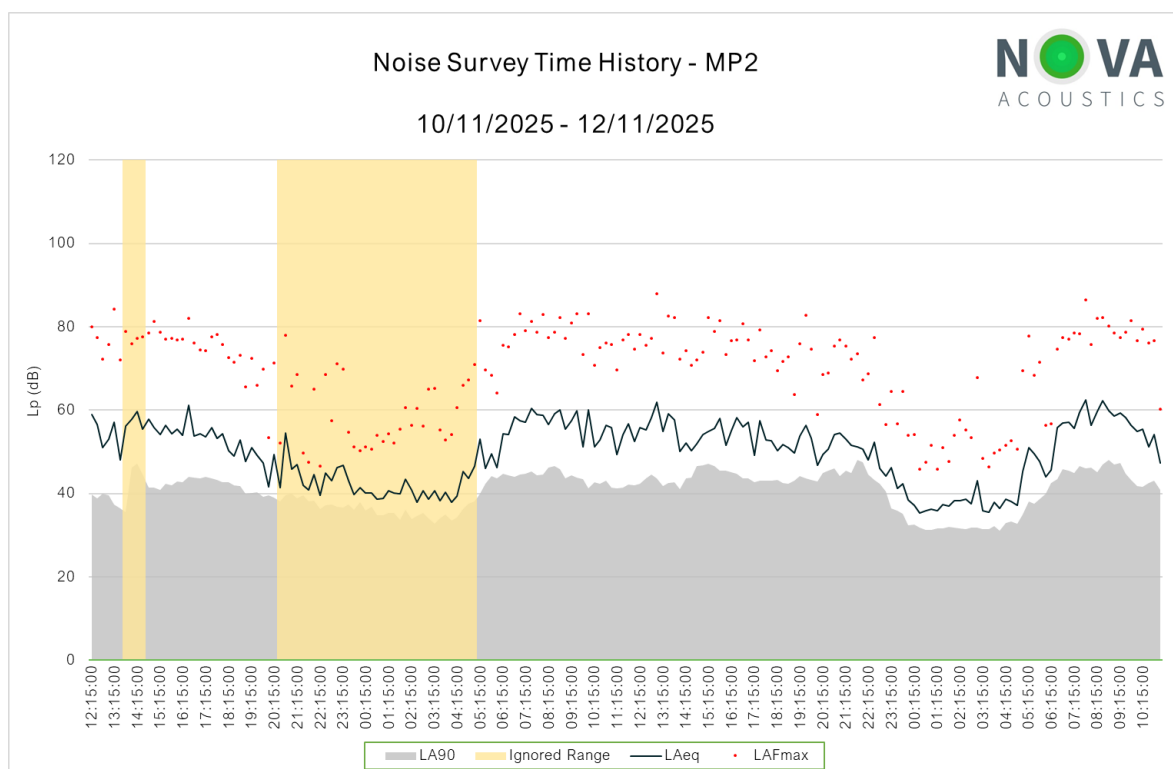


Figure 8 – MP2 Noise Survey Time History

D.2 – Surveying Equipment

Piece of Equipment	Serial No.	Calibration Deviation
Svantek SV971a Class 1 Sound Level Meter	127628	≤0.1
Svantek SV977 Class 1 Sound Level Meter	34826	≤0.1
Svantek SV33B Class 1 Calibrator	116639	--

Table 3 – Surveying Equipment

All equipment used during the survey was field calibrated at the start and end of the measurement period with negligible deviation noted. All sound level meters are calibrated every 24 months and all calibrators are calibrated every 12 months by a third-party calibration laboratory. All microphones were fitted with a protective windshield for the entire measurements period. Calibration certificates can be provided upon request.

D.3 – Meteorological Conditions

As the environmental noise survey was carried out over a long un-manned period no localised records of weather conditions were taken. However, all measurements have been compared with met office weather data of the area, specifically the closest weather station, and the data from the weather station is outlined in the table below. When reviewing the time history of the noise measurements, any scenarios that were considered potentially to be affected by the local weather conditions have been omitted. The analysis of the noise data includes statistical and percentile analysis and review of minimum and maximum values, which aids in the preclusion of any periods of undesirable weather conditions. The weather conditions were deemed suitable for the measurement of environmental noise in accordance with BS7445 Description and Measurement of Environmental Noise. The table below presents the average temperature, wind speed and rainfall range for each 24-hour period during the entire measurement.

Weather Conditions – The Hut, Atherstone (Approx. 9.2km S of Site)				
Time Period	Air Temp (°C)	Rainfall (mm/h)	Prevailing Wind Direction	Wind Speed (m/s)
10/11/2023: 00:00 – 23:59	7.3 – 12.7	0.0 – 18.6	ESE	0.0 – 3.1
11/11/2023: 00:00 – 23:59	6.6 – 14.4	0.0 – 4.8	SE	0.0 – 5.1
12/11/2023: 00:00 – 23:59	11.9 – 14.4	0.0 – 4.8	SE	0.0 – 2.9
Note: The measurements taken during the heavy burst of rain on the 10/11/25 have been omitted from analysis, and the subsequent elevated background noise levels due to wet ground tyre roar from the M42.				

Table 4 – Weather Conditions



NOVA
ACOUSTICS