NOVA ACOUSTICS

Noise Impact Assessment

Site Address: Central Garage, King Street, Acrefair, Wrexham, LL14 3RH

Client Name: Martyn Price

Project Reference: NP-013456



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

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1. Introduction

NOVA Acoustics Ltd has been commissioned to prepare a noise impact assessment for a vehicle workshop and metalwork facility ('the proposed development') at Central Garage, King Street, Acrefair, Wrexham, LL14 3RH ('the site').

The applicant is preparing to submit a planning application to Wrexham County Borough Council for the retrospective change of use of a bus depot to a vehicle repair centre. This technical report has been prepared to accompany the planning application.

A noise survey has been undertaken to establish the prevailing background sound levels at the closest noise-sensitive receptors ('NSRs'). This report details the existing background sound climate and the predicted noise emissions associated with the proposed development. Measures required to mitigate noise impacts have been recommended where necessary and are assessed in accordance with the relevant performance standards, legislation, policy and guidance.

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 regarding the legislation can be found in Appendix B.

1.2 Proposal Brief

The planning application is for the retrospective change of use of the site from a bus depot to a vehicle repairs facility and a welding business (B1/B2 use).

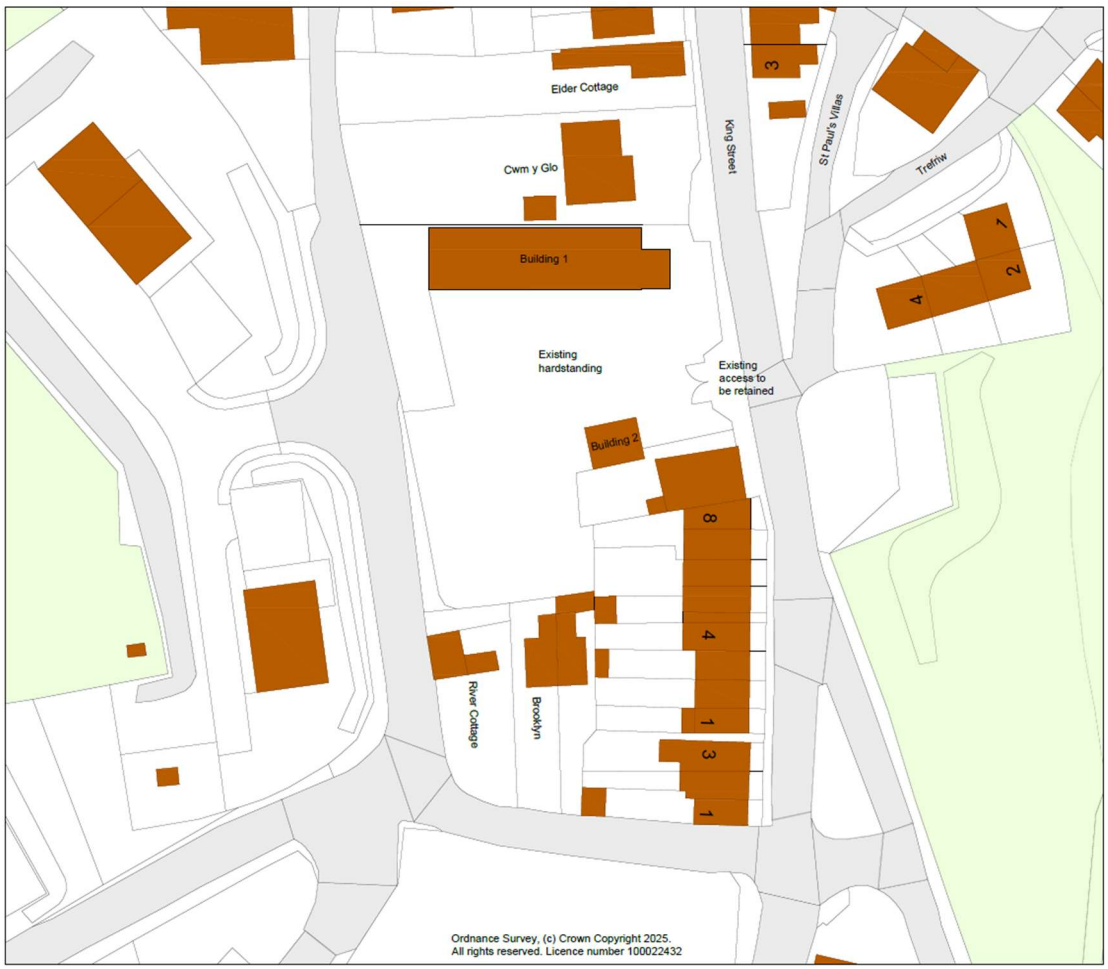
The proposed operational hours as to be submitted with the planning application are:

- Monday to Saturday: 07:00 to 18:00 hours
- Sunday & Bank Holidays: 08:00 to 13:00 hours

The applicant has informed NOVA Acoustics that no external fixed plant is to be installed at the site, and there is no intention to install external plant in the future.

It should be noted that as the site historically operated as a bus depot, which included the maintenance of the operator's vehicles at the site, the facility is not thought to present as an entirely new source of noise in the area.

The location of the facility is shown in the figure overleaf.



Drawing Ref. 81008/GH/003 from Roger Parry & Partners

Figure 1 – Proposed Development Layout

2. Environmental Noise Survey

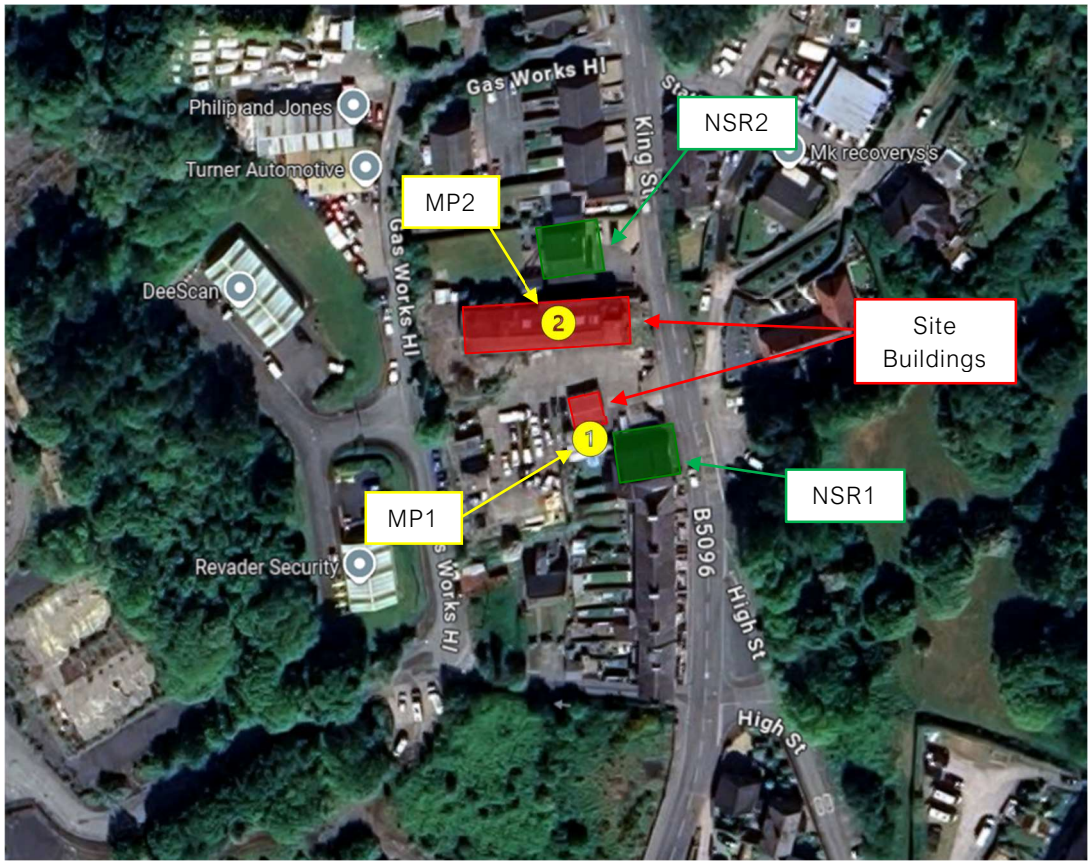
2.1 Measurement Methodology

The measurement dates and particulars are outlined in the following table. Details regarding the equipment used and measurement conditions recorded during the survey can be found in Appendix D.

Location	Survey Dates	Measurement Particulars
MP1	07/11/25 – 11/11/25	Equipment mounted on a telegraph pole approximately 4m above the ground approximately 15m from the rear façade of NSR1.
MP2	07/11/25 – 11/11/25 (Internal)	Equipment mounted on a tripod at a height of approximately 1.5m inside the vehicle repair workshop during the duration of the survey.

Table 1 – Measurement Methodology

The site surroundings and measurement locations are highlighted in the figure below:



Imagery ©2025 Airbus, Map data ©2025

Figure 2 – Measurement Locations and Site Surroundings

2.2 Context & Subjective Impression

The development site is located within a mixed-use area, primarily comprising of residential dwellings and light industrial uses. It was noted during the setting up and collection of noise monitoring equipment that noise generating activity from Turner Automotive was identifiable at the monitoring locations in the form of revving engines.

The closest dwellings to the site are located to the southern and northern boundaries and are highlighted as NSR 1 and NSR2 in Figure 2. The NSRs are located approximately 26m and 6m from the main workshop building respectively. Despite being further away, NSR1 is determined to be the most affected receptor due to being more exposed to potential noise breakout areas of the building and activity within the yard.

The noise profile of the area is deemed to be low in level and is dominated by distant road traffic noise emissions from Llangollen Road to the north. Minimal activity was observed at the surrounding industrial areas during the set up and collection of the noise monitoring equipment.

MP2 was set up internally within the main workshop building for the duration of the survey. It is understood through communications with the site operators that metal work was undertaken during the measurement period on Friday and Sunday morning.

2.3 Environmental Noise Survey Results

Background Sound Level Analysis

The background noise level used for the baseline of the assessment is shown in the following histogram graph. As the facility was operational for the duration of the survey, this has been taken from the period directly after operations (18:00 – 20:00 hours). The complete time history results can be found in Appendix D.

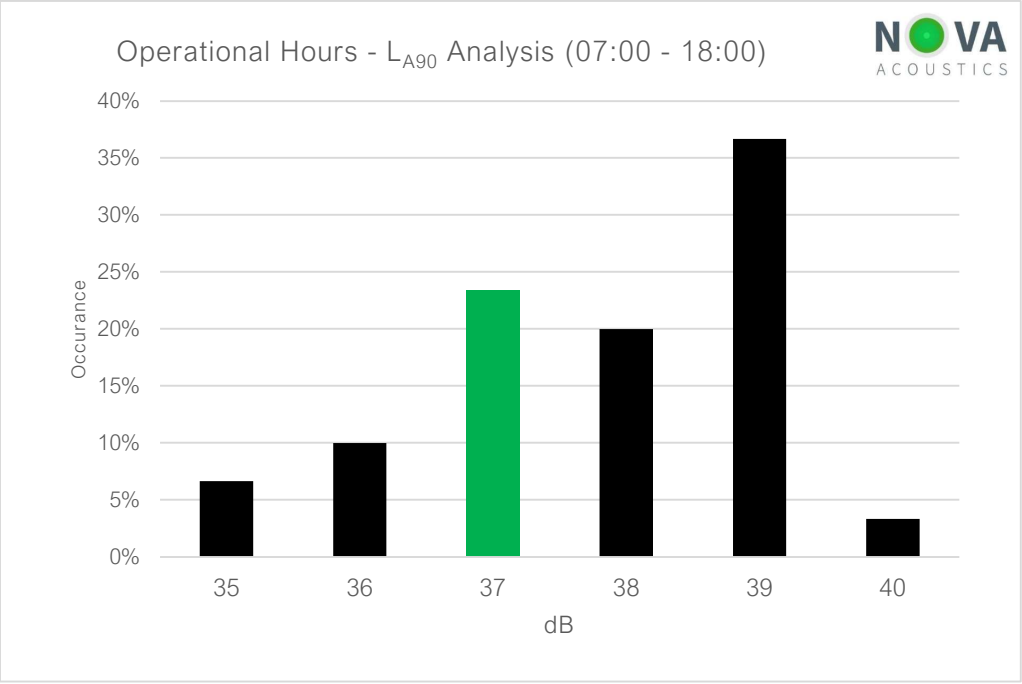


Figure 3 – MP1 After Operational Hours Background Sound Level Analysis

As can be seen, the 'typical' background noise level is deemed to be **37dBA**.

3. BS4142:2014 Noise Impact Assessment

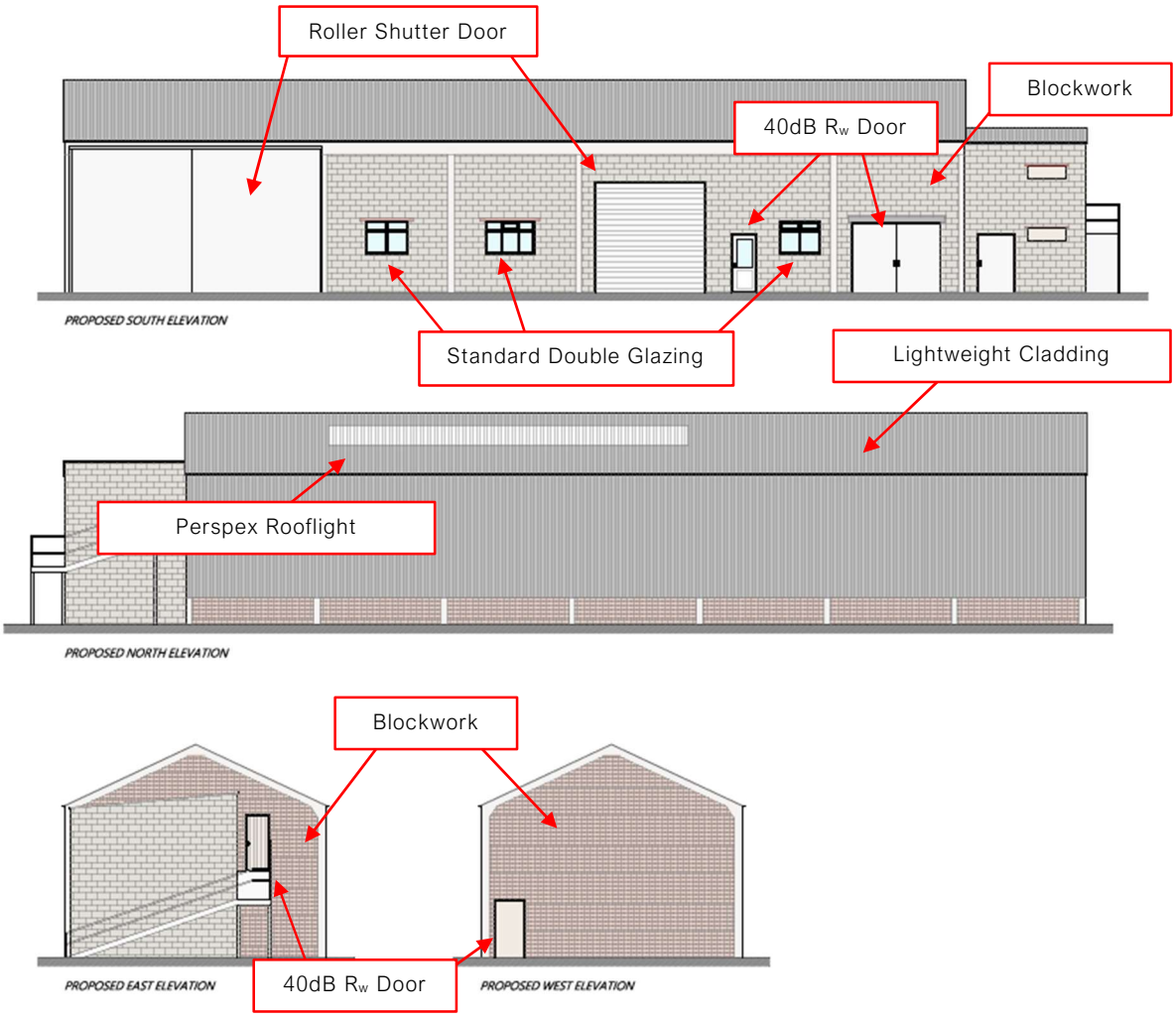
In the following section of the report, the impact of the noise emissions generated by the facility is assessed.

3.1 Proposed Construction Elements

It is expected that the building will be constructed as follows:

- Façades and roof: composite sandwich panelling (Kingspan KS1000 or equivalent)
- Windows: standard double glazing (6mm glass / 16mm air cavity / 4mm glass)
- Roller shutter: 0.6mm corrugated steel
- Entrance / exit doors: standard doors providing a minimum sound reduction of 40dB R_w

The elevation drawings for the proposed building are shown below, alongside the expected construction elements.



Drawing Ref. 81008/GH/111 from Roger Parry & Partners.

Figure 4 – Indicative Industrial Unit Construction

The levels of sound reduction provided by the construction elements are shown in the table below.

Description	1/1 Octave Frequency Band (Hz, SRI, dB)								Rw (dB)
	63	125	250	500	1k	2k	4k	8k	
Roofing (Assumed Kingspan KS1000RW Panelling)	20	18	20	24	20	29	39	47	25
Rooflight (6mm Perspex)	10	13	17	22	27	32	35	35	27
External Walls (100mm Concrete Block)	37	40	38	40	48	55	61	61	46
External Walls (Assumed Kingspan KS1000RW Panelling)	20	18	20	24	20	29	39	47	25
Standard Double Glazing (6mm glass / 16mm air cavity / 4mm glass)	21	21	20	26	38	37	39	39	32
Roller Shutter Door (0.6mm Corrugated Steel)	10	13	15	15	17	21	24	24	18
Entrance / Exit Doors	28	31	30	33	42	50	56	56	40

Table 2 – Sound Reduction of Building Elements

3.2 Internal Noise Levels

The level used to represent the internal noise level within the facility is shown in the table below. This has been taken from the loudest 1-hour period recorded at MP2 (internal measurement position) and was measured between 11:00 and 12:00 hours on Friday 7th November. During this period, NOVA Acoustics has been informed that metal work was being undertaken, which represents a 'worst-case' scenario in terms of onsite noise emissions.

Description	Octave Frequency Band (Hz, L_{eq}, dB)							Overall (dBA)
	63	125	250	500	1k	2k	4k	
Internal Ambient Noise Level of Workshop	51	47	46	49	56	61	62	66

Table 3 – Internal Ambient Noise Level

3.3 Noise Emissions in the Yard Area

It is understood that the external yard area is used for the storage of vehicles and equipment. All noisy work is carried out within the building envelope exclusively, and the only noise source in the yard area is the occasional moving of vehicles and equipment.

3.4 Specific Sound Levels & Noise Modelling Assumptions

The proposed development has been modelled within SoundPlan 9.1 software. The following assumptions and parameters have been used within the noise modelling software:

- To accurately model the land surrounding the proposed development, the topographical data has been obtained from the EA's 'National LIDAR Programme' on the DEFRA Data Services Platform.
- For the purposes of the assessment, the ground between the source and receivers is considered to consist of acoustically 'hard' surfaces.

- Source data from a similar assessment has been used to facilitate noise modelling in accordance with ISO 9613-2, which assumes a 'downwind' model to the NSRs.
- The sound map grid height has been set to 1.5m, however, the noise levels used in the assessment have been taken from the most exposed point of each façade.
- The proposed development has been modelled in accordance with the proposed scheme plan, drawing refs. 81008/GH/110, 81008/GH/111 & 81008/GH/003 by Roger Parry & Partners.
- To form a 'robust' scenario, no on-time corrections have been applied to the noise emissions as they are considered to be continuous over a reference time period of 1-hour.
- The building fabric elements are deemed to be behave as area noise sources. This is calculated in the software assuming: $L_W = L_p$ *at 1m + 10 log (S),* where *'S'* is the surface area of the radiating element in m^2.
- The majority of the building is to be occupied by the workshop, and the small shed roofed extension building is for welfare and administration rooms which are split across two floors. The noise breakout from areas other than the workshop is expected to be negligible.
- A -3dB correction is applied to account for the difference between internal reverberant and external non-reverberant level (diffusivity – C_d).

The sound map showing the specific sound level emissions from the proposed development can be seen in the figure overleaf.

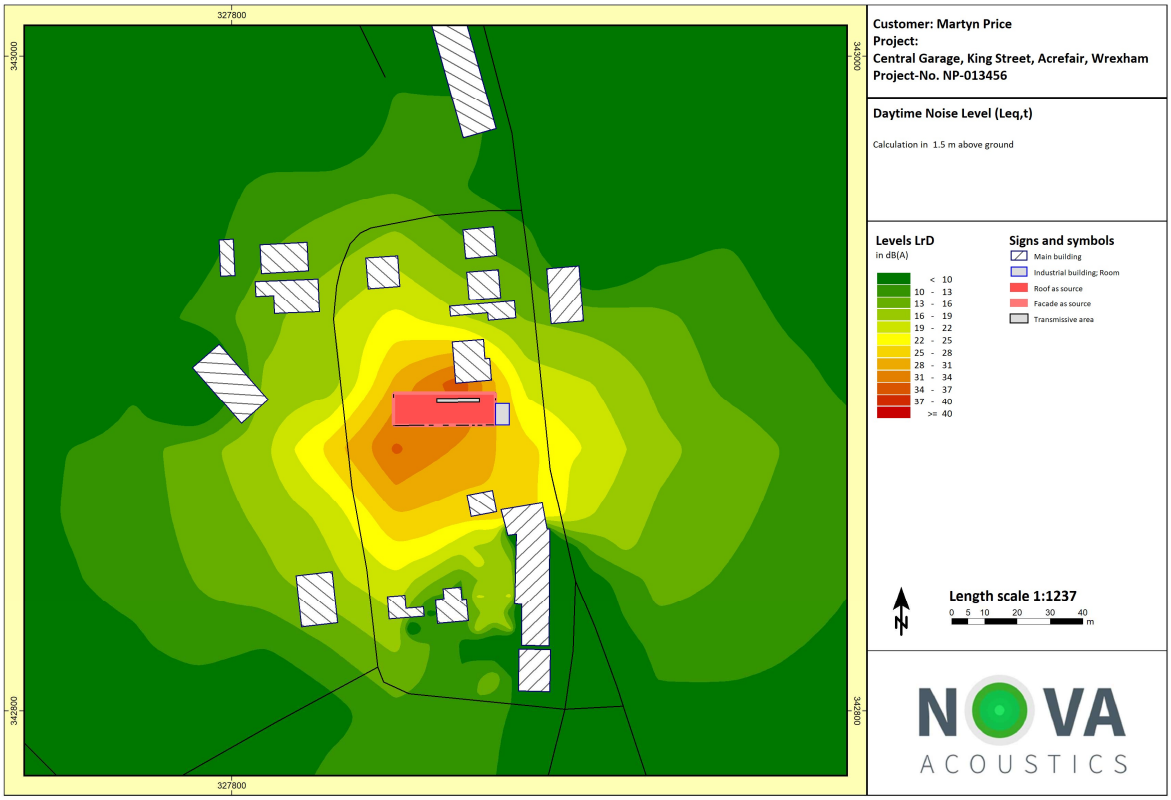


Figure 5 – Specific Sound Level Map – 1.5m Grid Map Height

3.5 BS4142:2014 Noise Impact Assessment

The BS4142:2014 noise impact assessment at the most affected NSRs are presented in the tables overleaf.

Description	1/1 Octave Frequency Band (Hz, dB)								Overall (dBA)
	63	125	250	500	1k	2k	4k	8k	
Specific Sound Level at NSR1	20	13	10	12	19	18	15	6	24
Acoustic Feature Correction	Penalty applied as impulsivity may be perceptible at the NSRs.								+3
Rating Sound Level ($L_{Ar,T}$)	Specific sound level plus rating penalties.								27
Background Sound Level (L_{A90})	Operational hours (07:00 – 18:00) – Figure 3.								37
Exceedance	Exceedance of rating above background.								-10
BS4142:2014 Assessment Outcome	'Low Impact, dependent on context'.								
NPPF & NPSE Outcome	'No Observed Adverse Effect level' ('NOAEL').								
Mitigation measures are not deemed to be necessary.									

Table 4 – BS4142:2014 Noise Impact Assessment – NSR1

Description	1/1 Octave Frequency Band (Hz, dB)								Overall (dBA)
	63	125	250	500	1k	2k	4k	8k	
Specific Sound Level at NSR2	23	17	13	13	24	20	11	0	26
Acoustic Feature Correction	Penalty applied as impulsivity may be perceptible at the NSRs.								+3
Rating Sound Level ($L_{Ar,T}$)	Specific sound level plus rating penalties.								29
Background Sound Level (L_{A90})	Operational hours (07:00 – 18:00) – Figure 3.								37
Exceedance	Exceedance of rating above background.								-8
BS4142:2014 Assessment Outcome	'Low Impact, dependent on context'.								
NPPF & NPSE Outcome	'No Observed Adverse Effect level' ('NOAEL').								
Mitigation measures are not deemed to be necessary.									

Table 5 – BS4142:2014 Noise Impact Assessment – NSR2

4. Conclusion and Action Plan

The development has been assessed against the requirements of BS4142 to predict the potential noise impact at nearby noise-sensitive receptors.

As can be seen in Section 3, the rating noise levels are predicted to be below the background noise levels at the most affected NSRs. This equates to low impact when assessed with BS4142, and 'No Observed Adverse Effect Level' when assessed with the NPPF and NPSE. Given this, it is thought that the facility is acoustically suitable for the area without the requirement for mitigation. However, to ensure continuing low levels of impact, the following best practice guidance should be adhered to:

- All doors and windows should remain fully closed when noisy works are being carried out internally.
- The roller shutter doors should not be opened whilst noisy work is being carried out internally.
- The operational hours should not exceed those defined in Section 1.2.
- Noisy works should be limited to less sensitive hours wherever possible. For example, the movement of equipment and vehicles within the yard should be limited to between 09:00 and 17:00. Noisy works during the early morning period of 07:00 – 09:00 should be avoided.
- If new equipment/machinery is purchased in the future, noise emissions should be minimised and controlled through the selection of quiet units.

It should also be noted that as the site historically operated as a bus depot, which included the maintenance of the operator's vehicles at the site, the facility is not thought to present as an entirely new source of noise in the area. This is expected to further reduce the possibility of adverse impact.

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 $p0$ is the reference sound pressure (20 µPa)
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 1 m in front of the facade
Free-field level	Sound pressure level away from reflecting surfaces
Indoor ambient noise	Noise in a given situation at a given time, usually composed of noise from many sources, inside and outside the building, but excluding noise from activities of the occupants
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
Reverberation time, T	Time that would be required for the sound pressure level to decrease by 60 dB after the sound source has stopped
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 $p0$ is the reference sound pressure (20 µPa)
Weighted sound reduction index, R_w	Single-number quantity which characterizes the airborne sound insulating properties of a material or building element over a range of frequencies

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:

- Avoid significant adverse impacts on health and quality of life;
- Mitigate and minimise adverse impacts on health and quality of life;
- 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 above 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."

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 recognizing the constraints of the site.

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

Overview

BS4142:2014 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 BS4142:2014 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 $L_{Ar,Tr}$ '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 BS4142:2014 describes how the rating sound level should be derived from the specific sound level, by deriving a rating penalty.

BS4142:2014 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 BS4142:2014, 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."

BS4142:2014 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 +2 dB is applicable for a tone which is "just perceptible", +4 dB where a tone is "clearly perceptible", and +6 dB where a tone is "highly perceptible".

b) Impulsivity

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

c) Other Sound Characteristics

BS4142:2014 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 +3 dB can be applied."

d) Intermittency

BS4142:2014 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 +3 dB 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

BS4142:2014 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 negligible impact, depending on the context."

Interpreting the guidance given in BS4142:2014, 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 +10 dB above the background sound level is likely to be an indication of a Significant Observed Adverse Effect Level;
- A rating sound level that is +5 dB 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 negligible impact and would therefore classified as No Observed 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 C – Site and Location Plans

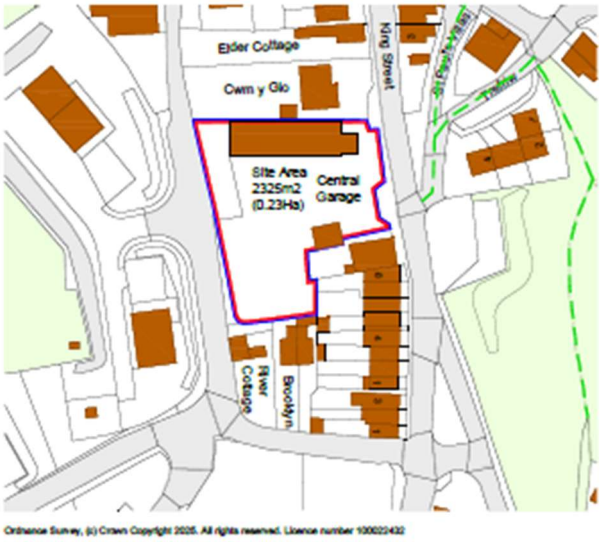


Figure 6 – Site Location Plans

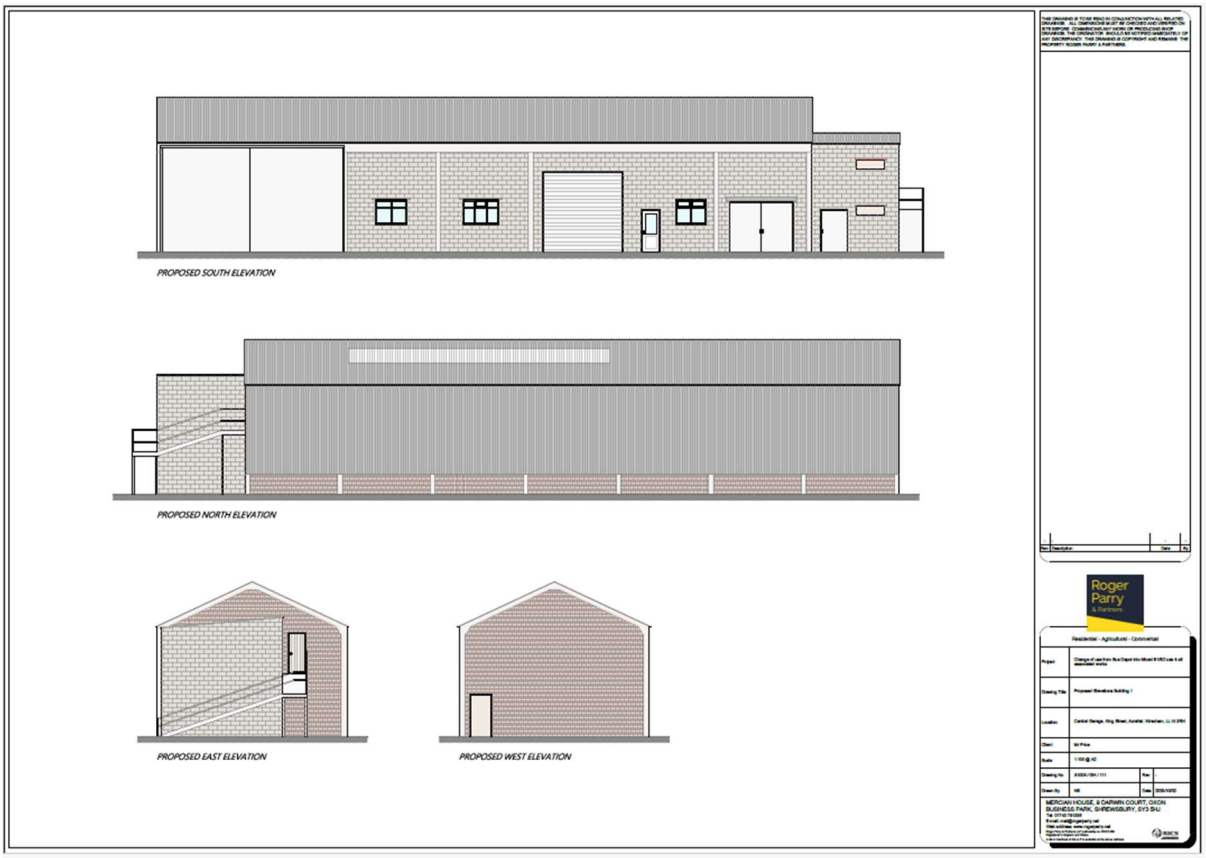


Figure 7 – Site Elevations

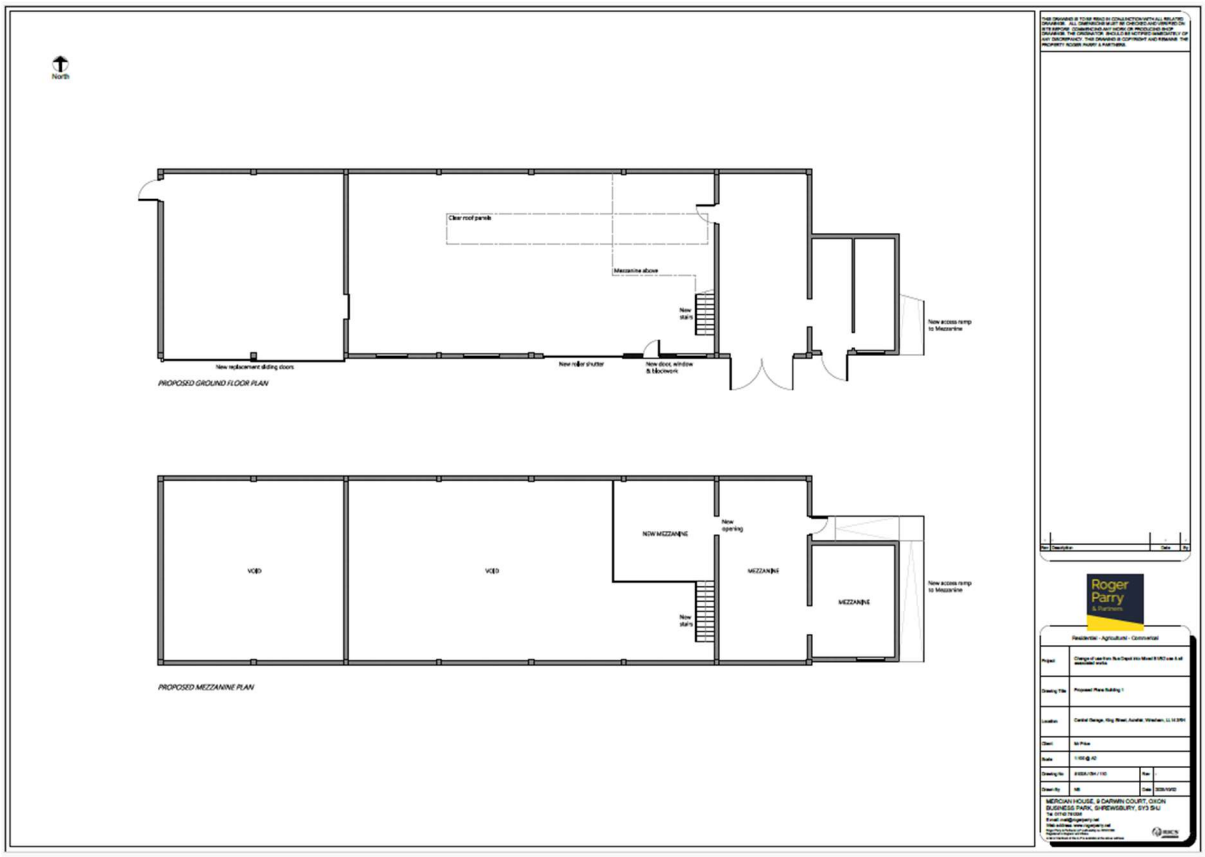


Figure 8 – Development Floorplans

Appendix D – Environmental Survey

D.1 – Time History Noise Data

Periods in which high levels of rainfall occurred (highlighted yellow) have not been used in the assessment.

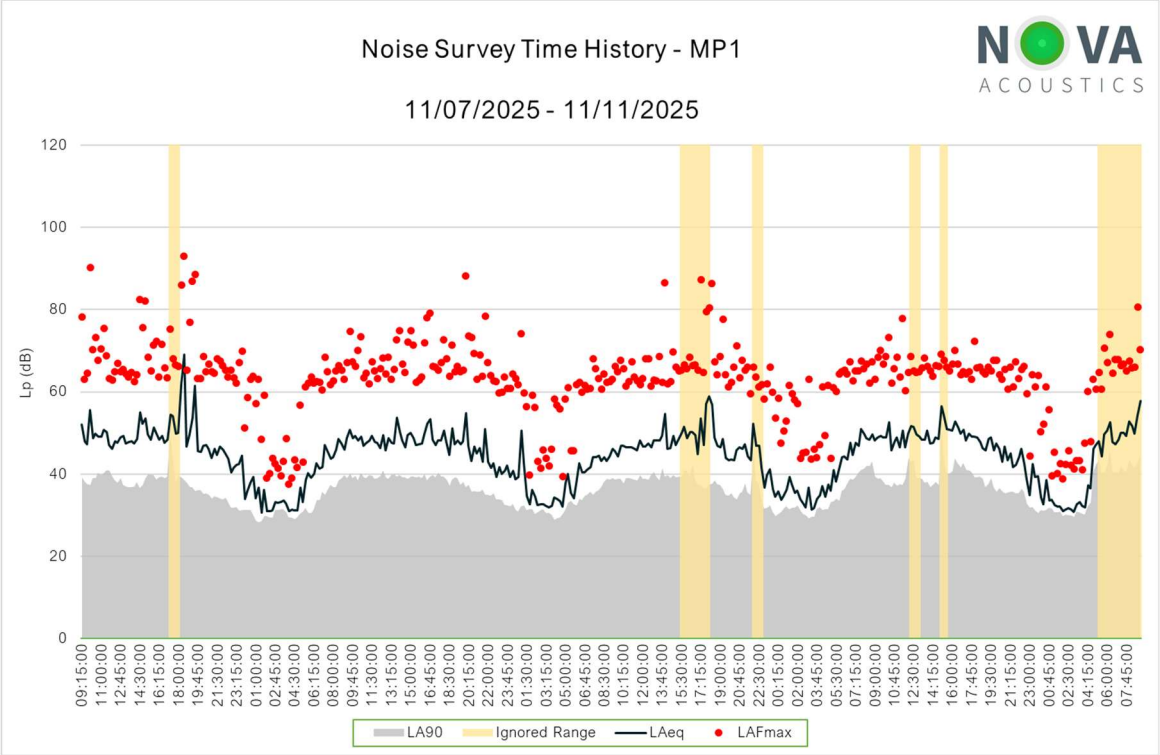


Figure 9 – MP1 Noise Survey Time History (External)

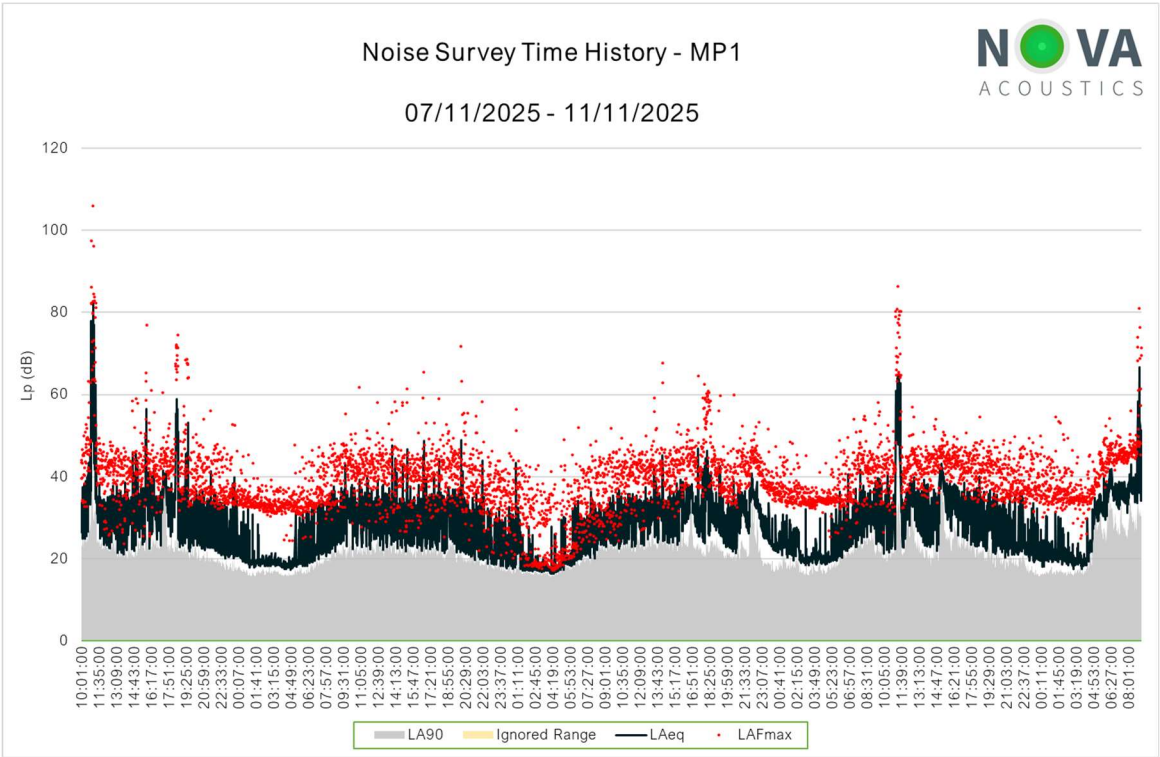


Figure 10 – MP2 Noise Survey Time History (Internal)

D.2 – Surveying Equipment

Piece of Equipment	Serial No.	Calibration Deviation
Svantek 971A Class 1 Sound Level Meter	141425	≤0.1
Cesva CB006 Class 1 Calibrator	901927	
Svantek 971A Class 1 Sound Level Meter	143581	≤0.1
Cesva CB006 Class 1 Calibrator	901927	

Table 6 – Surveying Equipment

All equipment used during the survey was field calibrated at the start and end of the measurement period with a negligible deviation of ≤0.1dB. 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.

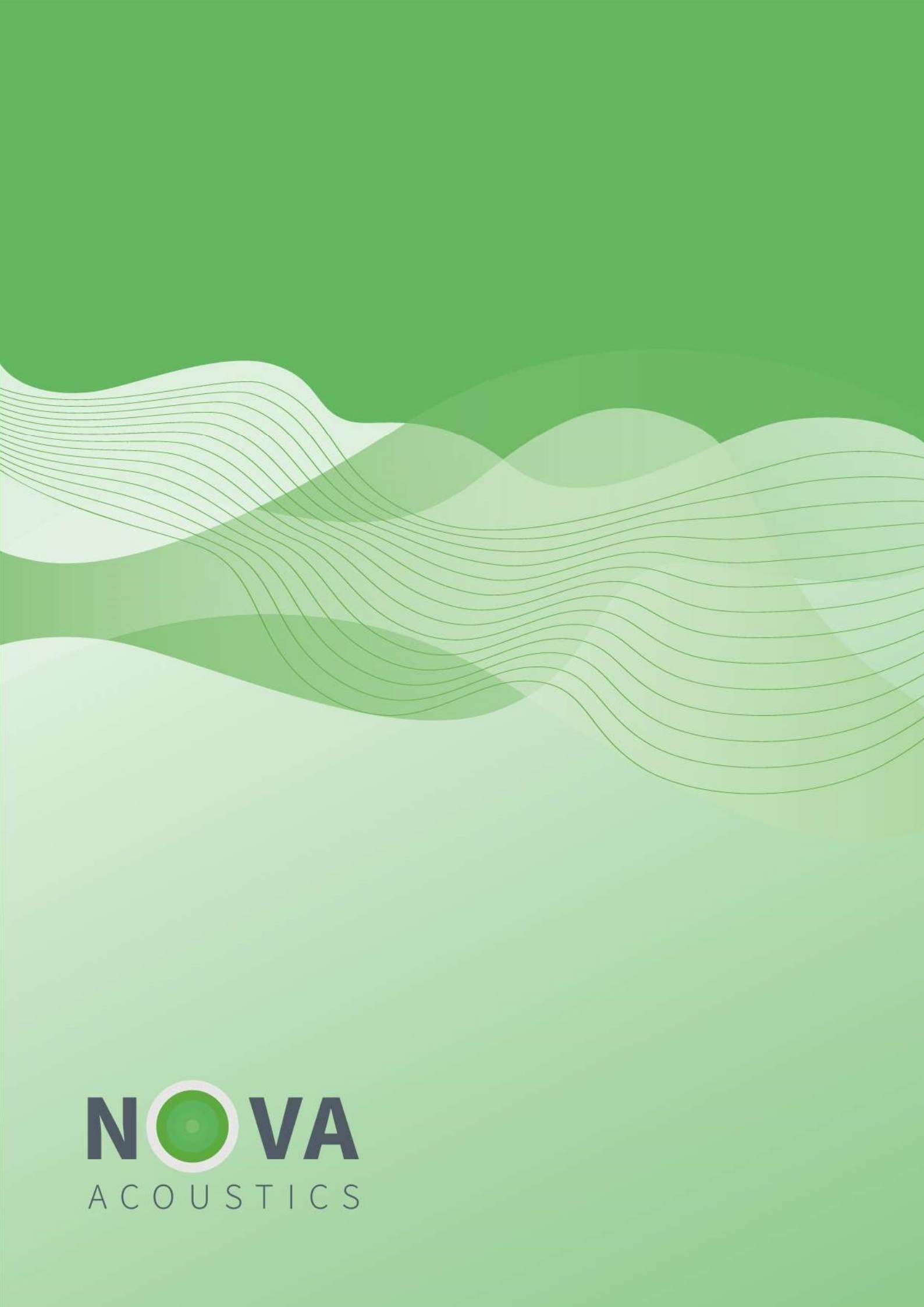
D.3 – Meteorological Conditions

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 – Newbridge (Approx. 1km Southeast of Site)				
Time Period	Air Temp (°C)	Rainfall (mm/h)	Prevailing Wind Direction	Wind Speed (m/s)
07/11/25 – 00:00 – 23:59	9.4 – 13.4	0.0 – 3.0	SSE	0.0 – 0.8
08/11/25 – 00:00 – 23:59	7.6 – 15.6	0.0	SSE	0.0 – 2.3
09/11/25 – 00:00 – 23:59	7.3 – 12.1	0.0 – 4.2	SSE	0.0 – 1.5
10/11/25 – 00:00 – 23:59	5.2 – 11.7	0.0 – 3.0	S	0.0 – 1.0
11/11/25 – 00:00 – 23:59	5.5 – 12.8	0.0 – 22.8[1]	SSE	0.0 – 2.2

[1] *Rainfall occurred outside of the measurement period.*

Table 7 – Weather Conditions


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