



Hinckley Investment LLP

Hammonds Way, Hinckley

Noise Assessment

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Executive Summary

Air & Acoustic Consultants Limited have been commissioned by Hinckley Investment LLP to undertake a noise impact assessment in support of a planning application for a proposed employment development including the construction of a single unit to house industrial / commercial uses at Hammonds Way, Hinckley.

Sound level measurements have been conducted over an 8-day period at the application site to measure the existing background sound levels that represent the existing residential properties nearby.

The assessment has considered the reasonable worst-case in terms of the noise impacts from the general operations including vehicles servicing the application site and is based upon transport data provided by the project transport consultant.

Based upon a reasonable worst-case scenario and taking into consideration the site-specific context, the impacts arising at the identified receptors would be classified as less than LOAEL with no mitigation required.

Additionally, during the night-time period, predicted noise levels at facades, as a result of the maximum noise events, are lower than the 60 dB(A) WHO criterion threshold at all receptor locations and the impacts would be classified as less than the LOAEL.

It can, therefore, be concluded that the proposed development achieves the required noise assessment criteria and is unlikely to conflict with national, regional, and local planning policy referenced in this assessment and the impacts can be classified as less than the LOAEL.

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1 Introduction

1.1 Brief

- 1.1.1 Air & Acoustic Consultants Limited have been commissioned by Hinckley Investment LLP to undertake a noise impact assessment in support of a planning application for the construction of a new employment site with commercial / industrial uses at Hammonds Way, Hinckley.

1.2 Application Site

- 1.2.1 The application site is located on vacant land between Nutts Lane and Hammonds Way formerly used as sports pitch land. The surrounding area comprises an industrial estate to the north, east and southeast and residential dwellings to the west and southwest. The A5 is located further to the south beyond the residential and commercial premises, and the Birmingham to Peterborough railway line is located to the north beyond the commercial premises.
- 1.2.2 The national grid reference for the centre of the site is, SP 41054 92678 (British National Grid Coordinates E: 441054, N: 292678). The site location and surrounding area is illustrated in [Figure 1.1](#).

Figure 1.1: Site Location



1.3 Development Proposals

- 1.3.1 The planning application seeks permission for the following:

“Development of the site to provide an industrial / logistics unit within flexible B2 / B8 Use Class (General Industrial / Storage and Distribution) alongside associated landscaping, yard, parking, access and other supporting infrastructure.”

- 1.3.2 The proposed layout of the site is illustrated in [Figure 1.2](#). Note that this layout assumes B2 uses. A separate layout has been provided for B8 uses whereby a different parking layout is observed.

Figure 1.2: Proposed Site Layout



1.4 Assessment Scope

- 1.4.1 This assessment will consider the potential noise impacts on the surrounding noise sensitive receptors arising from the operation of the proposed employment unit within use class B2 / B8. The likely impacts will be from deliveries and vehicle servicing trips as well as the unloading / loading operations relating to the vehicles. It is thought that internal noise from any future indoor industrial operations would be sufficiently contained within buildings, and the potential break-out would have a negligible contribution to noise rating levels at residential properties. The main focus of the assessment will be the noise contribution from vehicle servicing trips and the unloading / loading of these vehicles.
- 1.4.2 To assist with the understanding of this report a glossary of acoustic terms is provided in [Appendix A](#)

2 Legislation and Policy Context

2.1 Introduction

- 2.1.1 The prediction and assessments of the likely noise impacts associated with the proposed development have been completed using the relevant legislation policy and guidance concerning noise, which are discussed in turn below.

2.2 National Planning Policy Framework (NPPF)¹

- 2.2.1 The NPPF sets out the Government's planning policy for England, to help achieve sustainable development within the planning sector. The planning system has three overarching objectives, one of which (Paragraph 8c) is an environmental objective:

"To protect and enhance our natural, built and historic environment; including making effective use of land, improving biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy".

- 2.2.2 The NPPF addresses noise as a planning issue primarily through the statements in paragraphs 187 and 198. It is also noted that paragraph 200 is linked to noise through the agent of change principle.

- 2.2.3 Paragraph 187 states:

'Planning policies and decisions should contribute to and enhance the natural and local environment by:'

'e) 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.'

- 2.2.4 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 impacts 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 amenity value for this reason;'

- 2.2.5 Paragraph 200 states:

'Planning policies and decisions should ensure that new development can be integrated effectively with existing businesses and community facilities (such as places of worship, pubs,

¹ Ministry of Housing, Communities and Local Government. 2024. *National Planning Policy Framework*.

music venues and sports clubs). Existing businesses and facilities should not have unreasonable restrictions placed on them as a result of development permitted after they were established. Where the operation of an existing business or community facility could have a significant adverse effect on new development (including changes of use) in its vicinity, the applicant (or 'agent of change') should be required to provide suitable mitigation before the development has been completed.'

- 2.2.6 The NPPF refers to the Noise Policy Statement for England (NPSE) for advice on the achievement of these policy aims, and particularly in connection with the explanation of 'adverse impacts'.

2.3 Noise Policy Statement for England (NPSE)²

- 2.3.1 The NPSE is the overarching government policy on noise. It seeks to clarify the underlying principles and aims in past and existing policy documents, legislation, and guidance in relation to all forms of noise including environmental noise, neighbour noise and neighbourhood noise (but not noise in the workplace).
- 2.3.2 It uses the established concepts of No Observed Effect Level (NOEL) and Lowest Observed Adverse Effect Level (LOAEL). The NPSE extends these by introducing Significant Observed Adverse Effect Level (SOAEL), this is the level above which significant adverse effects on health and quality of life occur. However, the explanatory note to the NPSE states that it is not possible to identify a single objective value to define the SOAEL for noise that is applicable to all sources of noise in all situations. It is likely to be different for different noise sources, for different receptors and at different times.
- 2.3.3 The NPSE's vision is 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.

This long-term vision is supported by the following aims:

- *Avoid significant adverse impacts on health and quality of life;*
- *Mitigate and minimise adverse impacts on health and quality of life; and*
- *Where possible, contribute to the improvement of health and quality of life, through the effective management and control of environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development."*

- 2.3.4 The second aim of the NPSE refers to noise impacts that lie somewhere between LOAEL and SOAEL. The NPSE asserts that, while this means that all reasonable steps should be taken to mitigate and minimise adverse effects, this does not mean that such adverse effects cannot occur.

2.4 Planning Practice Guidance (Noise)³

- 2.4.1 The Government has published Planning Practice Guidance on a range of subjects including noise. The guidance forms part of the NPPF and provides advice on how to deliver its policies. The PPG (Noise) reiterates general guidance on noise policy and assessment methods provided in the NPPF, NPSE and

² Department for Environment, Food and Rural Affairs. 2010. *Noise Policy Statement for England*.

³ Department for Levelling Up, Housing and Communities and Ministry of Housing Communities and Local Government. 2019. *Planning Practice Guidance Noise*

British Standards and contains examples of acoustic environments commensurate with various effect levels.

2.4.2 Paragraph 006 of (Reference ID: 30-006-20190722) of the PPG (Noise) explains that:

“The subjective nature of noise means that there is not a simple relationship between noise levels and the impact on those affected. This will depend on how various factors combine in any particular situation.”

2.4.3 Paragraph 004 Reference ID: 30-004-20190722 of the PPG (Noise) describes the different effect levels which are defined and briefly outlined below:

- No Observable Effect Level (NOEL);
- Lowest Observable Adverse Effect Level (LOAEL); and
- Significant Observed Adverse Effect Level (SOAEL).

2.4.4 The PPG (Noise) describes noise that is not noticeable as representing the NOEL. Noise exposures in this range are below the LOAEL and no mitigation is required. The PPG (Noise) suggests that noise exposures above the LOAEL cause small changes in behaviour. Examples of noise exposures above the LOAEL provided in the PPG (Noise) are having to turn up the volume on the television; needing to speak more loudly to be heard; or, where there is no alternative ventilation, closing windows for some of the time because of noise. In line with the NPPF and NPSE, the PPG (Noise) states that consideration needs to be given to mitigating and minimising effects above the LOAEL, but also to taking account of the economic and social benefits being derived from the activity causing the noise. The PPG (Noise) suggests that noise exposures above the SOAEL cause material changes in behaviour. Examples of noise exposures above the SOAEL provided in the PPG (Noise) are, where there is no alternative ventilation, keeping windows closed for most of the time or avoiding certain activities during periods when the noise is present. In line with the NPPF and NPSE, the PPG (Noise) states that effects above the SOAEL should be avoided and that whilst the economic and social benefits derived from the activity causing the noise must be taken into account, such exposures are undesirable.

2.4.5 The non-numeric guidance contained within the PPG (Noise), based upon the starting point in the NPSE, is summarised in [Table 2.1](#) below.

Table 2.1: Summary of Guidance from NPSE and PPG (Noise)

Perception	Examples of Outcomes	Increasing Effect Level	Action
No Observed Adverse Effect Level			
Not noticeable	No Effect	No Observed Effect	No specific measures required
Noticeable and not intrusive	Noise can be heard but does not cause any change in behaviour or attitude. Can slightly affect the acoustic character of the area but not such that there is a perceived change in the quality of life.	No Observed Adverse Effect	No specific measures required

Perception	Examples of Outcomes	Increasing Effect Level	Action
Lowest Observed Adverse Effect Level			
Noticeable and intrusive	Noise can be heard and causes small changes in behaviour and / or attitude, e.g. turning up volume of television; speaking more loudly; where there is no alternative ventilation, having to close windows for some of the time because of the noise. Potential for some reported sleep disturbance. Affects the acoustic character of the area such that there is a perceived change in the quality of life.	Observed Adverse Effect	Mitigate and reduce to a minimum
Significant Observed Adverse Effect Level			
Noticeable and disruptive	The noise causes a material change in behaviour and / or attitude, e.g. avoiding certain activities during periods of intrusion; where there is no alternative ventilation, having to keep windows closed most of the time because of the noise. Potential for sleep disturbance resulting in difficulty in getting to sleep, premature awakening, and difficulty in getting back to sleep. Quality of life diminished due to change in acoustic character of the area.	Significant Observed Adverse Effect	Avoid
Noticeable and very disruptive	Extensive and regular changes in behaviour and / or an inability to mitigate effect of noise leading to psychological stress or physiological effects, e.g. regular sleep deprivation / awakening; loss of appetite, significant, medically definable harm, e.g. auditory and non-auditory.	Unacceptable Adverse Effect	Prevent

- 2.4.6 In line with the NPPF and the NPSE, the guidance confirms that significant adverse effects should be avoided. At the next level down in the hierarchy, where there is an observed adverse effect, the PPG (Noise) confirms that effects should be mitigated and reduced to a minimum, as far as reasonably practicable. No mitigation measures are required for effects that are considered to be below LOAEL.
- 2.4.7 However, along with the NPSE it does not provide any numerical definition of the NOEL, LOAEL and SOAEL.
- 2.4.8 The NPSE also refers to the World Health Organisation, (WHO) when discussing noise impacts. The WHO Guidelines for Community Noise (1999) suggest guideline values for internal noise exposure which takes into consideration the identified health effects and are set, based on the lowest effect levels for the general population. Guideline values for amenity which relate to external noise exposure are set with an upper guideline criterion level of 55 dB(A) $L_{Aeq,16hour}$ and a desirable criterion level of 50 dB(A) $L_{Aeq,16hour}$, representing daytime levels below which most of the adult population will be protected from becoming moderately or seriously annoyed, respectively.

2.5 The Control of Pollution Act⁴

- 2.5.1 The Control of Pollution Act (1974) gives local authorities powers in relation to noise from construction sites, including to serve a notice under Section 60 specifying exactly how works should be carried out.
- 2.5.2 An application for prior consent for the work can be completed under Section 61 of the Act providing a collaborative approach to the construction works.

⁴ UK Public General Acts. 1974. *Control of Pollution Act*.

- 2.5.3 A Section 61 application demonstrates to the local authority a pro-active approach to reducing environmental impacts and outlines what methods are in place to minimise disruption to the neighbourhood, thus reducing the number of potential complaints. By having a Section 61 consent, a local authority may not issue a Section 60 notice if the terms of the Section 61 agreement are not breached. Having a Section 61 consent in place minimises the likelihood of the contractor's work being stopped because a mitigation plan is already in place.

2.6 Local Planning Policy

[Hinckley and Bosworth Consultation Draft Plan Regulation 18 June 2021⁵](#)

- 2.6.1 While the adopted local plan (Local Development Framework Core Strategy 2009) does not contain any policies relating to noise and this specific development, the draft local plan which will replace the expiring, adopted local plan and cover the period 2020 – 2039, contains the following policies related to noise and this type of development:

- 2.6.2 Policy PMD01 - High Quality Design states:

"The Borough Council will require the highest standards of design, architecture, inclusivity and place-making.

Development will be supported where it positively takes into consideration the adopted Hinckley & Bosworth Good Design Guide (SPD), the National Design Guide and National Model Design Code, any Design Guide contained in a made Neighbourhood Plan, and any other relevant national design guidance.

Development will be supported where the following requirements are met:

[...]

b) The amenity and privacy of nearby residents are not adversely affected, including by matters of lighting, air quality, odour, noise, vibration and visual intrusion;

[...]

In exceptional circumstances, where outstanding and innovative architectural design is evident and/or the design incorporates outstanding eco-initiatives to become resilient and truly sustainable, applications will be considered favourably, even where this may result in some conflict with the above criteria. However any conflicts with the above criteria must be addressed in the design statement, and where appropriate, mitigation measures must be considered and implemented."

- 2.6.3 Policy PMD03 - Preventing Pollution states:

"Adverse impacts from pollution will be prevented by ensuring that development proposals demonstrate that:

[...]

d) It would not cause noise or vibrations of a level which would disturb areas that are valued for their tranquillity in terms of recreation or amenity. Development proposals that generate

⁵Hinckley and Bosworth Borough Council - *Hinckley and Bosworth Consultation Draft Plan Regulation 18 - 2021*

significant levels of noise must be accompanied by a scheme to mitigate such effects, having regard to the nature of surrounding uses;"

3 Assessment Approach

3.1 Consultation

- 3.1.1 On the 27th of October 2025 a consultation email was sent to Hinckley and Bosworth Borough Council (HBBC) to gain input into the planned assessment approach. At the time of writing this report, no reply has been received from the council.

3.2 Construction Impacts

[BS 5228-1:2009+A1:2014 Code of Practice for Noise and Vibration Control on Construction and Open Sites - Noise](#)⁶

- 3.2.1 BS 5228-1:2009+A1:2014 provides guidance on the prediction and assessment of noise from construction sites and other open sites where activities generate significant noise levels, such as quarries.
- 3.2.2 Site noise can have disturbing effects on the surrounding neighbourhood. The effects are varied and are complicated further by the nature of the site works, which will be characterised by varied noise sources which will change location throughout the construction works or operations. The duration of site operations is also an important consideration; higher noise levels may be acceptable if it is known that the levels will only occur for a limited period and affected receptors are warned.
- 3.2.3 BS 5228-1:2009+A1:2014 provides significance criteria for assessing the potential noise impacts associated with the construction phase of projects. There are two methods specified; the ABC method and the 5 dB(A) change method.
- 3.2.4 The ABC method involves categorising receptors using the ambient sound levels they experience, using the method and categories outlined in [Table 3.1](#).

Table 3.1: BS 5228-1 ABC Method

Assessment category and threshold value period	Threshold value, in decibels (dB) ($L_{Aeq,T}$)		
	Category A ^A	Category B ^B	Category C ^C
Night-time (23:00-07:00)	45	50	55
Evenings and weekends	55	60	65
Daytime (07:00-19:00) and Saturdays (07:00-13:00)	65	70	75
Notes: 1) A potential significant effect is indicated if the $L_{Aeq,T}$ noise level arising from the site exceeds the threshold level for the category appropriate to the ambient noise level 2) If the ambient noise level exceeds the Category C threshold values given in the table (i.e. the ambient noise level is higher than the above values), a potential significant effect is indicated if the total $L_{Aeq,T}$ noise level for the period increases by more than 3 dB due to site noise. 3) Applied to residential receptors only			
^A Category A: threshold values to use when ambient noise levels (when rounded to the nearest 5 dB) are less than these values. ^B Category B: threshold values to use when ambient noise levels (when rounded to the nearest 5 dB) are the same as category A values.			

⁶ BSI. BS 5228-1:2009+A1:2014 Code of Practice for noise and vibration control on construction and open sites. Part 1: Noise.

Assessment category and threshold value period	Threshold value, in decibels (dB) ($L_{Aeq,T}$)		
	Category A ^A	Category B ^B	Category C ^C
^C Category C: threshold values to use when ambient noise levels (when rounded to the nearest 5 dB) are higher than category A values. ^D 19:00-23:00 weekdays, 12:00-23:00 Saturdays and 07:00-23:00 Sundays			

3.2.5 The 5 dB(A) change method assesses the change in noise levels as a result of the construction works. It states;

"Noise levels generated by site activities are deemed to be potentially significant if the total noise (pre-construction ambient plus site noise) exceeds the pre-construction ambient noise by 5 dB or more, subject to lower cut-off values of 65 dB, 55 dB and 45 dB $L_{Aeq,T}$ from site noise alone, for the daytime, evening and night-time periods, respectively; and a duration of one month or more, unless works of a shorter duration are likely to result in significant effect.

These evaluative criteria are generally applicable to the following resources:

- residential buildings;
- hotels and hostels;
- buildings in religious use;
- buildings in educational use;
- buildings in health and/or community use.

For public open space, the impact might be deemed to cause significant effects if the total noise exceeds the ambient noise ($L_{Aeq,T}$) by 5 dB or more for a period of one month or more. However, the extent of the area impacted relative to the total available area also needs to be taken into account in determining whether the impact causes a significant effect."

3.2.6 The document also contains a calculation method to estimate noise levels from sites. This accounts for fixed or stationary equipment and considers propagation losses from factors including distance, ground absorption and barriers. The noise level predicted at receptors is an equivalent continuous A-weighted sound pressure level $L_{Aeq,T}$ with corrections to account for times when individual pieces of equipment are not in use.

3.3 Operational Impacts

[BS 4142:2014+A1:2019 Methods for Rating and Assessing Industrial and Commercial Sound⁷](#)

3.3.1 BS 4142:2014+A1:2019 is used to rate and assess sound of an industrial and/or commercial nature including:

- 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;

⁷ BSI. BS 4142:2014+A1:2019. Methods for rating and assessing industrial and commercial sound.

- 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.

3.3.2 The purpose of the assessment procedure is to determine the likelihood and significance of any potential impacts that may result from sound of an industrial and/or commercial nature.

3.3.3 BS 4142:2014+A1:2019 defines noise from industrial sources at the assessment location as the specific sound level and this is the term used in this report to refer to noise which occurs currently or is predicted to occur due to commercial or industrial operations.

3.3.4 Certain acoustic features can increase the significance of impacts over those expected from a simple comparison between the specific sound level and the background sound level. BS 4142:2014+A1:2019 includes allowances for a rating penalty to be added if the specific sound level contains tonal, impulsive or intermittent characteristics. There is also an allowance for features that are neither tonal, impulsive or intermittent but are readily distinctive. After any applicable penalties have been added to the specific noise level the result is termed the rating level.

3.3.5 The difference between the rating level and the background sound level provides an initial assessment of the magnitude of the noise impacts for affected noise sensitive receptors. The assessment criteria given by BS 4142:2014+A1:2019 are 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 on the 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. 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.

3.3.6 During the daytime, BS 4142:2014+A1:2019 requires that noise rating levels be assessed over 1-hour periods. However, during the night-time, noise rating levels are required to be assessed over 15-minute periods.

3.3.7 Where the initial estimate of the impact needs to be modified due to context, BS 4142:2014+A1:2019 states that all pertinent factors should be taken into consideration, including:

- The absolute level of sound;
- The character and level of the residual sound compared to the character and level of the specific sound; and
- The sensitivity of the receptor and whether dwellings or other premises used for residential purposes will already incorporate design measures that secure good internal and/or external acoustic conditions.

3.4 Noise Modelling

3.4.1 The potential levels of noise at the existing and proposed noise sensitive receptors, as a result of the proposed development, have been predicted using the environmental noise modelling software CadnaA. Noise modelling methods and inputs that have been used are provided in [Table 3.2](#).

Table 3.2: Noise Modelling Inputs and Details

Noise Modelling Input	Details
Software Version	CadnaA 2025 MR1 Version
Calculation Algorithm	ISO9613
Ground Levels	Defra Lidar Data (2 metre resolution)
Noise Sources	AAC library
Time Periods	Daytime 07:00 – 23:00 & Night-time 23:00 – 07:00
Height of Receptors	Ground Floor Windows 1.5 m First Floor Windows 4.5 m
Site Layout	Site Layout by bhp design
Existing Buildings and Receptor Locations	Digitised from Google Aerial Imagery
Existing Feature Locations and Basemap	Google Aerial Imagery
Ground Absorption	1.0 for soft ground, 0.0 for roads
Project Co-ordinate System	OSGB 36 EPSG:27700

3.5 Assessment Receptors

3.5.1 The receptors have been selected to represent the noise sensitive dwellings most exposed to the potential noise sources, as a result of the development. The selected noise sensitive receptor locations are detailed in [Table 3.3](#) and illustrated in [Figure 3.1](#).

Table 3.3: Noise Sensitive Receptors

Receptor	Height (m)	Receptor Location Description	Façade Facing
R01	1.5 & 4.5	Rosewood Nutt's Lane, LE10 3EG, England, United Kingdom	North
R02	1.5	Green Belt Nutt's Lane, LE10 3EG, England, United Kingdom	East
R03	1.5 & 4.5	Clovelly Nutt's Lane, LE10 3EG, England, United Kingdom	East
R04	1.5 & 4.5	12 Greyhound Croft, LE10 0QS, England, United Kingdom	Southeast
R05	1.5 & 4.5	15 Teal Drive, LE10 0GP, England, United Kingdom	Southwest

Figure 3.1: Assessment Receptor Locations



- 3.5.2 Noise decreases with increasing distance from the source; therefore, any receptor that is located at a greater distance from the proposed development than the identified receptors will experience lower operational noise levels as a result of the development.

3.6 Uncertainty and Limitations

- 3.6.1 Regarding the noise survey measurements, the baseline survey was conducted over an 8-day period to obtain a representative sample of the baseline noise environment. Baseline surveys conducted over a number of days reduce the uncertainty of the resulting measured noise levels.
- 3.6.2 The calibration drift on the meters was very small for all measurements. All equipment was within laboratory calibration in accordance with the relevant standards (calibrators every year and sound level meters every 2 years).
- 3.6.3 Predictions have been made using the sound propagation software CadnaA, which is an industry standard and incorporates the required national standards for sound propagation. The propagation predictions have been made using the ISO 9613 algorithm as implemented by CadnaA. ISO 9613 states a variation of ± 3 dB for sources and receptors with height above ground of between 0 metres and 5 metres for separation distances of up to 1000 metres, which is relevant to this assessment because all sources and receptors are less than 5 metres above the ground. The estimated error is for propagation with no reflections and no screening, the noise model contains buildings which reflect and screen the noise sources so the calculation error could be greater than ± 3 dB.

- 3.6.4 The locations of existing buildings and features have been digitised from aerial imagery, which is georeferenced to the WGS 84 system, so all features are the correct distance from each other and are at a consistent scale.
- 3.6.5 The source noise data has been measured by Air and Acoustic Consultants for equipment and activities at similar types of industrial sites. Operations and equipment at different sites are likely to be different because of general differences in equipment and methods of operation.
- 3.6.6 Penalties applied to the specific levels experienced by the noise sensitive receptors cannot be experienced prior to the site being occupied so penalties must be applied qualitatively based on the experience of the assessor. The penalties may include error in this case because the specific sound may be audible at the residential properties, but the penalties are worst-case to account for this.
- 3.6.7 The topography data used for the surrounding area is Defra Lidar Data with horizontal resolution of 2 metres, as it was observed that there were small topographical features such as bunds and embankments within the surrounding area.
- 3.6.8 In summary, it is considered that whilst there will always be a level of inherent uncertainty in any assessment, where possible, potential sources of uncertainty have been minimised, and it is considered to be a representative and robust assessment of the likely impacts.

4 Baseline Conditions

4.1 Noise Measurements

4.1.1 A long-term unattended baseline noise survey was undertaken between Friday the 17th of October and Friday the 24th of October 2025. The survey consisted of 2 long-term measurement positions at the locations illustrated in [Figure 4.1](#), and detailed below:

- L1 – Northwest corner within the site in a field adjacent to Nutts Lane, long-term unattended; and
- L2 – Southwest corner within the site in a field adjacent to Nutts Lane, long-term unattended.

4.1.2 The sound level meters were placed to capture background sound levels which are representative of the closest noise sensitive receptors to the proposed operations. Measurement location L1 is representative of dwellings located further north away from the A5 Watling Street (R03, R04 & R05), while measurement location L2 is representative of dwellings further south towards the A5 (R01 & R02).

Figure 4.1: Noise Measurement Location



4.1.3 All measurements were taken using a class 1 sound level meter. The microphones' measurement positions were in the acoustic free field and were positioned at a height of 1.5 metres above the ground. The details of the survey equipment used is set out in [Table 4.1](#).

Table 4.1: Noise Measurement Equipment

Equipment Type	Manufacturer	Model	Serial Number	Calibration Due
Sound Level Meter	Larson Davis	Model Lxt1	5818	02/2027*
Pre-Amplifier		PRMLxT1	55726	
Microphone		377BO2	311751	
Sound Level Meter	Larson Davis	Model Lxt1	7375	07/2027*
Pre-Amplifier		PRMLxT1L	77731	
Microphone		377BO2	347791	
Calibrator	Larson Davis	Cal 200	17574	11/2025*
*SLMs are calibrated every 2-years and sound calibrators are calibrated every year.				

- 4.1.4 Calibration checks were performed at the start and end of the survey; no significant drift in calibration was observed. The calibration deviation over the course of the survey is set out in Table 4.2 and the recorded deviations are small enough that the data can be considered reliable.

Table 4.2: Calibration Deviation Recorded in Sound Level Meters During Survey Period

Sound Level Meter Serial Number	Calibration Deviation on Collection (dB)
5818	-0.10
7375	-0.03

4.2 Weather Conditions

- 4.2.1 The weather conditions during the survey were generally influenced by low-speed north-westerly winds. The average temperatures were between 6 °C and 13 °C. Precipitation was recorded on 4 of the survey days and average wind speeds stayed below 5 m/s for the duration of the survey.
- 4.2.2 A summary of the weather data is provided in Table 4.3, which uses data taken from Weather Underground located off the B4666 Coventry Road. The weather station used is called R2d2 (Station ID - IHINCK19).

Table 4.3: Summary of Weather Conditions

Date	Temp (°C)	Wind Speed (m/s)		Wind Direction	Total Precipitation (mm)
		Average	Peak		
17/10/2025	11.4	0.1	1.8	WNW	0.0
18/10/2025	11.4	0.1	1.8	WNW	0.0
19/10/2025	12.5	0.5	2.4	WNW	4.3
20/10/2025	12.3	0.3	2.5	NW	1.5
21/10/2025	12.1	0.4	2.8	NNW	0.0
22/10/2025	9.8	0.0	1.3	WNW	1.8
23/10/2025	8.6	0.8	4.0	NW	3.6
24/10/2025	6.2	0.6	2.6	NW	0.0

4.2.3 Windy or rainy conditions may affect the measured sound levels, increasing them above what is normally created by the existing noise sources. Periods with rainfall rates greater than 0.5 mm/h or periods where wind speeds exceeded 5 m/s have been excluded from the final results. Table 4.4 shows the periods of time excluded from the noise measurements.

Table 4.4: Periods of Time Unsuitable for Noise Measurements

Date and Time Start	Date and Time End	Reason for Removal
19/10/2025 13:45	19/10/2025 14:15	Heavy Rainfall
19/10/2025 14:45	19/10/2025 15:15	Heavy Rainfall
19/10/2025 16:45	19/10/2025 17:15	Heavy Rainfall
19/10/2025 18:00	20/10/2025 00:15	Heavy Rainfall
20/10/2025 15:00	20/10/2025 16:15	Heavy Rainfall
20/10/2025 18:45	20/10/2025 20:15	Heavy Rainfall
22/10/2025 22:00	23/10/2025 00:15	Heavy Rainfall
23/10/2025 00:45	23/10/2025 01:15	Heavy Rainfall
23/10/2025 01:45	23/10/2025 03:15	Heavy Rainfall
23/10/2025 05:30	23/10/2025 06:15	Heavy Rainfall
23/10/2025 07:30	23/10/2025 08:15	Heavy Rainfall
23/10/2025 08:45	23/10/2025 11:15	Heavy Rainfall

4.3 Unattended Noise Survey Results

4.3.1 A summary of the long-term noise levels measured at L1 is presented in Table 4.5. The data is presented as average levels for the daytime and night-time periods calculated from 15-minute sound indices.

Table 4.5: Noise Measurement Results – L1, Unattended Long-Term

Date	Period	Equivalent Continuous Sound Pressure Level (dBA)		
		$L_{eq,T}$	Standard Deviation	Range
17/10/2025	Day 07:00 - 23:00	53.9	3.3	47.5 - 63.5
	Night 23:00 - 07:00	49.3	3.9	41.7 - 57.6
18/10/2025	Day 07:00 - 23:00	52.8	2.3	47.8 - 62.9
	Night 23:00 - 07:00	45.4	2.4	40.4 - 49.1
19/10/2025	Day 07:00 - 23:00*	54.0	2.6	48.4 - 63.4
	Night 23:00 - 07:00*	50.8	4.7	41.9 - 57.3
20/10/2025	Day 07:00 - 23:00*	56.7	3.3	47.0 - 65.6
	Night 23:00 - 07:00	53.2	5.0	42.3 - 60.3
21/10/2025	Day 07:00 - 23:00	56.7	3.5	47.8 - 64.6
	Night 23:00 - 07:00	52.7	3.8	45.3 - 57.5
22/10/2025	Day 07:00 - 23:00*	57.7	4.2	47.6 - 71.0
	Night 23:00 - 07:00*	54.0	4.6	45.0 - 59.0

Date	Period	Equivalent Continuous Sound Pressure Level (dBA)		
		$L_{eq,T}$	Standard Deviation	Range
23/10/2025	Day 07:00 - 23:00*	54.9	2.7	48.4 - 59.9
	Night 23:00 - 07:00	52.4	4.0	44.9 - 58.5
24/10/2025	Day 07:00 - 23:00	58.8	3.6	52.9 - 65.4
	Night 23:00 - 07:00	-	-	-
Overall	Day 07:00 - 23:00	55.9	3.2	47.0 - 71.0
	Night 23:00 - 07:00	51.5	4.1	40.4 - 60.3
*Based on partial data				

4.3.2 A summary of the long-term noise levels measured at L2 is presented in Table 4.6. The data is presented as average levels for the daytime and night-time periods calculated from 15-minute sound indices.

Table 4.6: Noise Measurement Results – L2, Unattended Long-Term

Date	Period	Equivalent Continuous Sound Pressure Level (dBA)		
		$L_{eq,T}$	Standard Deviation	Range
17/10/2025	Day 07:00 - 23:00	55.3	2.4	50.1 - 58.5
	Night 23:00 - 07:00	48.4	2.3	43.0 - 53.1
18/10/2025	Day 07:00 - 23:00	55.7	2.9	48.8 - 66.3
	Night 23:00 - 07:00	46.1	2.6	41.5 - 50.3
19/10/2025	Day 07:00 - 23:00*	54.7	2.5	49.5 - 60.4
	Night 23:00 - 07:00*	50.8	4.6	41.3 - 56.9
20/10/2025	Day 07:00 - 23:00*	56.9	2.2	50.6 - 61.5
	Night 23:00 - 07:00	51.8	3.2	45.0 - 56.5
21/10/2025	Day 07:00 - 23:00	56.8	2.6	49.9 - 66.2
	Night 23:00 - 07:00	51.4	3.3	45.1 - 57.0
22/10/2025	Day 07:00 - 23:00*	56.0	2.2	50.4 - 60.2
	Night 23:00 - 07:00*	54.9	2.5	51.0 - 58.1
23/10/2025	Day 07:00 - 23:00*	57.7	2.3	51.9 - 62.8
	Night 23:00 - 07:00	51.8	2.7	46.2 - 57.2
24/10/2025	Day 07:00 - 23:00	57.9	1.0	56.1 - 59.3
	Night 23:00 - 07:00	-	-	-
Overall	Day 07:00 - 23:00	56.4	2.3	48.8 - 66.3
	Night 23:00 - 07:00	50.9	3.1	41.3 - 58.1
*Based on partial data				

4.3.3 During the site visits to install and collect the measurement equipment it was noted that the dominant noise source affecting measurement location L1 and L2 was road traffic noise from Nutts Lane to the south and west of the site as well as road traffic noise from the A5 Watling Street further south. Railway

noise was also present during the collection of equipment at L1 although it is not anticipated that railway noise would affect the background sound levels due to the sporadic nature of the passes on the Birmingham to Peterborough Line.

- 4.3.4 Time history graphs for the measurement positions are given in [Appendix B](#) and include the L_{Aeq} , L_{A90} and L_{AFmax} for each 15-minute period.

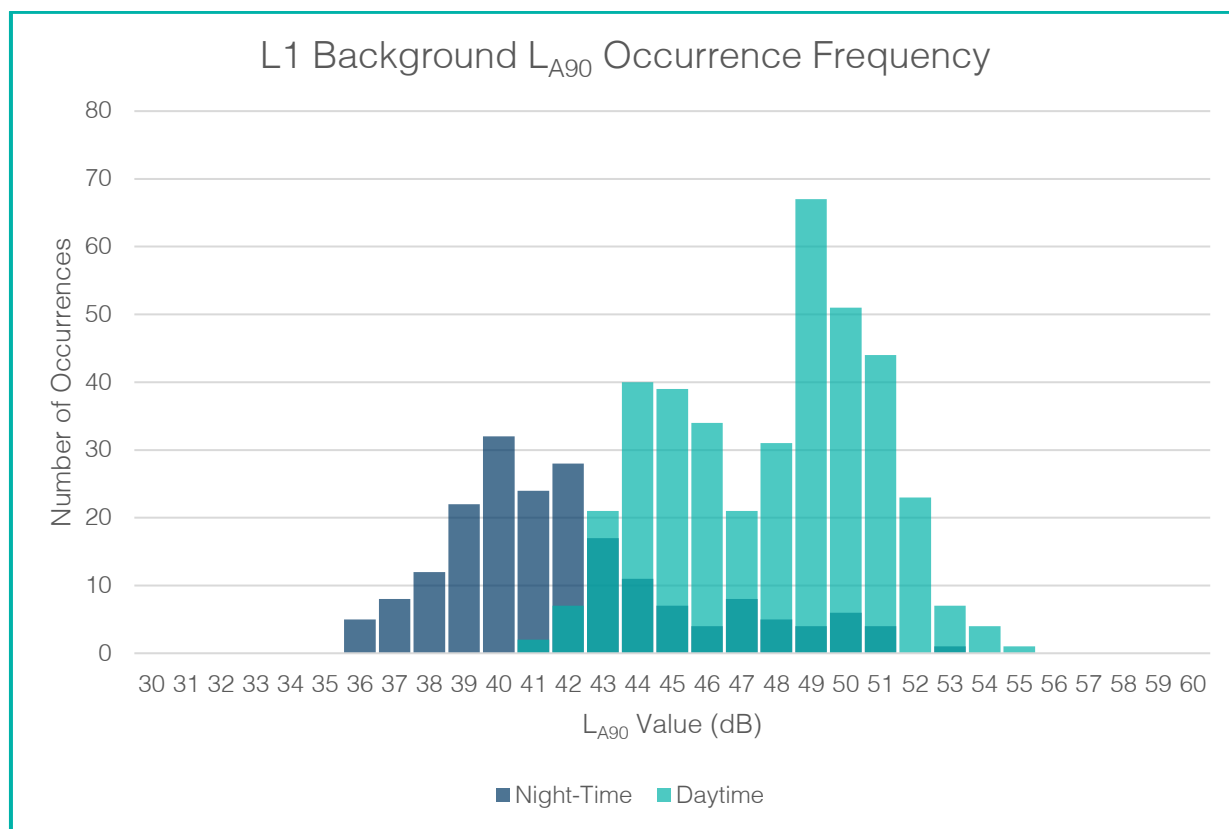
4.4 Background Sound Levels

- 4.4.1 As part of an assessment of industrial or commercial sound and following the guidance of BS 4142:2014+A1:2019, representative background sound levels must be determined. Typically, the modal $L_{A90,15min}$ value from the relevant time period is used.
- 4.4.2 The modal $L_{A90,15min}$ has been identified for the measurement locations during the daytime period 07:00 – 23:00 and night-time period 23:00 – 07:00 using statistical analysis. These levels are considered to be the representative background sound levels for the respective periods and are summarised in [Table 4.7](#).

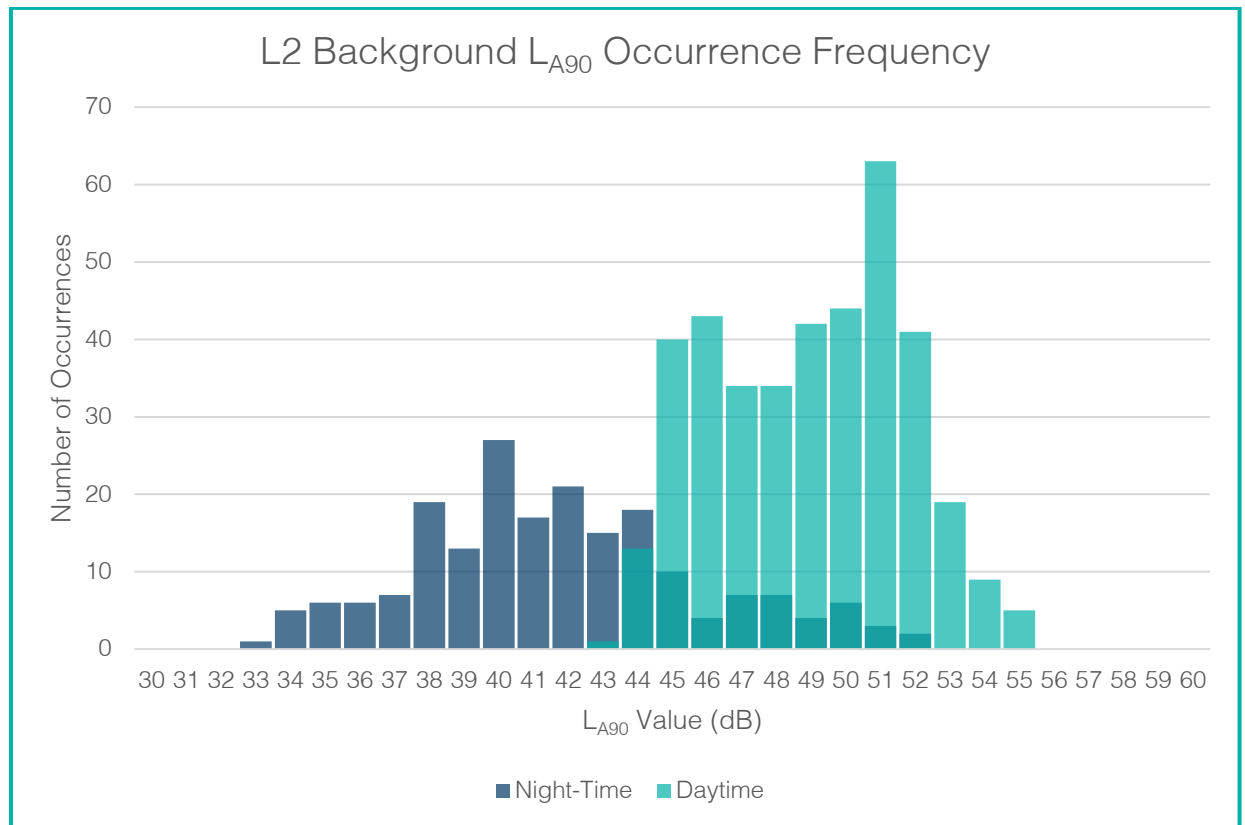
Table 4.7: Background Sound Levels

Measurement Location	Background Sound Levels (dBA)	
	Daytime (07:00-23:00)	Night-Time (23:00-07:00)
L1	44	40
L2	46	40

- 4.4.3 The background sound levels are determined using statistical analysis, which shows how frequently each $L_{A90,15min}$ sound level occurs during each period. This frequency distribution data is presented graphically in [Figure 4.2](#) for the daytime and night-time period at L1.

Figure 4.2: Occurrence Frequency of $L_{A90,15min}$ During Daytime and Night-time Periods at L1

- 4.4.4 For the daytime period, the graph in [Figure 4.2](#) shows there are 2 distinct clusters of data within the distribution centred at 49 dB(A) and 44 dB(A). To ensure a robust assessment, 44 dB(A) has been chosen as the representative background sound level for the daytime period.
- 4.4.5 The night-time period recorded a positively skewed data distribution with the most common $L_{A90,15min}$ sound level being 40 dB(A) which lies towards the quieter end of the distribution. 40 dB(A) has been chosen as the representative background sound level for the night-time period.
- 4.4.6 The frequency distribution data is presented graphically in [Figure 4.3](#) for the daytime and night-time periods at measurement location L2.

Figure 4.3: Occurrence Frequency of $L_{A90,15min}$ During Daytime and Night-time Periods at L2

- 4.4.7 The graph in Figure 4.3 shows that during the daytime, there is a small distribution recorded with 2 distinct clusters centred on 51 dB(A) and 46 dB(A) respectively. To represent a robust assessment, the lower value of 46 dB(A) has been chosen as the representative background sound level for the daytime period.
- 4.4.8 During the night-time period, there is a larger distribution sound levels recorded, with a peak L_{90} value of 40 dB(A) lying towards the quieter end of the data distribution. 40 dB(A) has been chosen as the representative background sound level for the night-time period.

5 Construction Impact Assessment

- 5.1.1 At this stage of the scheme, details regarding the construction traffic movements and the type, number and size of construction equipment are not available. Therefore, it is not possible to predict, with any great degree of accuracy, the possible effects arising from construction activities associated with the proposed development.
- 5.1.2 For the purposes of a generic construction noise assessment, the associated works can be divided into 3 main phases:
- Earthworks;
 - Concreting; and
 - Main build.
- 5.1.3 On weekdays, typical construction working hours are anticipated to be 08:00 – 18:00. On Saturdays, working hours are expected to be between 08:00 and 13:00 hours. Work on Sundays/Bank Holidays will only take place in exceptional circumstances. The construction work will be carried out under the Considerate Constructors Scheme, which, as one of its objectives, aims to reduce adverse noise impacts on nearby residents.
- 5.1.4 During the construction phase, there would be a slight increase in HGV movements on the surrounding highway network. However, this will be a temporary impact and will decrease as the proposed development progresses towards completion.
- 5.1.5 Overall, based on the experience gained from similar sites, and on the existing ambient noise levels at the closest residential receptors, it is anticipated that although the main construction phases may be audible at times, they will result in no more than a minor adverse impact, only during the daytime. It should also be noted that this effect will only be temporary, whilst the construction phase(s) are moving forward.
- 5.1.6 Following the BS 5228-1:2009+A1:2014 ABC classification method, during the daytime working hours mentioned above, the nearby sensitive receptors would be category A with a threshold noise level criteria of 65 dB(A) during the daytime.

6 Operational Impact Assessment

6.1 Operational Commercial Sound

- 6.1.1 As described in [Section 3.2](#), the potential adverse effects of commercial and/or industrial sound experienced at the closest noise sensitive receptors have been assessed using the methodology in BS 4142:2014+A1:2019. The typical background sound levels for the daytime and night-time periods used in the assessment are given [Table 4.7](#).
- 6.1.2 The development layout ([Figure 1.2](#)) shows plans for the construction of a new unit to house operations associated with industrial / commercial use classes B2 / B8. The plans show provision for 10 dock levellers with 2 level access doors located on the eastern façade of the unit. Where dock levellers are specified, it is assumed that unloading / loading operations would occur within the unit and that the associated breakout noise from these internal operations would be negligible at receptors compared to other industrial noise sources present. Where there are level access doors it is assumed that the loading / unloading operations would occur with the use of forklifts in the external service yard.
- 6.1.3 For the purposes of the assessment, the operational times for the units are assumed as 24-hour operations to allow for deliveries and site operations that fall outside of the daytime period specified within BS 4142:2014+A1:2019 (07:00 – 23:00).
- 6.1.4 The primary sources of operational sound likely to be produced by the proposed development have been identified as vehicle movements, including HGVs and light vehicles such as vans, and loading / unloading of these vehicles with forklifts.
- 6.1.5 The source noise levels used for the predictions of industrial noise have been taken from the Air and Acoustic Consultants library of sound measurements. Details of the sources used in the assessment are provided in [Table 6.1](#).

Table 6.1: Sound Sources Used in the Commercial Noise Assessment

Activity	Sound Power Level (dB) at Octave Band Centre Frequencies (Hz)								Overall dB(A)
	63	125	250	500	1 k	2 k	4 k	8 k	
Van reversing	77.4	66.6	65.0	64.6	71.6	66.6	63.9	58.3	74.3
HGV manoeuvre	96.9	93.0	86.3	87.4	88.5	87.7	89.9	75.6	95.4
HGV Movement	65.9	64.2	63.5	66.4	79.6	69.8	63.1	56.6	80.4
Forklift unloading HGV	95.0	87.4	84.2	81.9	81.3	79.6	75.5	77.5	86.8

- 6.1.6 No specifications for the installation of plant or equipment have been provided at this time and so no plant or equipment have been considered within the assessment. The installation of plant or equipment would need to be considered by the occupier, and this can be controlled by way of a planning condition.
- 6.1.7 Each sound source has had corrections added to account for the assessment period and activity duration as well as acoustic feature corrections in line with BS 4142:2014+A1:2019.
- 6.1.8 The on-time corrections for the operations are from typical industrial operations observed by Air and Acoustic Consultants and a number of worst-case assumptions based on the proposed site layout.
- 6.1.9 The on-time corrections are made using the following equation:

$$10 \times \log \left(\frac{d \times 10^{\frac{L}{10}}}{D} \right)$$

- 6.1.10 Where d is the duration of the activity in minutes, L is the sound power level of the activity and D is the assessment duration in minutes, 1 hour during the daytime and 15 minutes during the night-time. The on-time corrected noise sources are provided in [Table 6.2](#).
- 6.1.11 Information concerning the number of HGVs and light vehicles expected to service the development has been provided by the transport consultant on the project. The on-time corrections have been derived from this data by dividing the data by 24 and doubling to account for a possible worst-case hour during the daytime. For the night-time assessment this hourly data has then been divided by 4 to represent a worst-case 15-minute period during the night-time period.
- 6.1.12 The duration of HGV movements has been calculated based upon the length of the line source and the number of movements along the line source in an hour / 15-minute period, assuming a speed limit of 10 mph along the length of the line source included in the noise model.
- 6.1.13 Due to the proportion of dock levellers to level access doors proposed, it is likely that the majority of unloading / loading operations would occur inside, however to account for a worst-case scenario it is assumed that all loading / loading operations would occur at the level access doors during a worst-case hour / 15-minute period and the operations would require a forklift in the service yard area. Therefore, forklifts unloading have been represented in the model as 2 point sources located near the level access doors within the service yard. Based on the traffic data there would be 6 HGV movements (3 HGVs entering the site and then leaving after unloading and loading) during a worst-case hour. It is assumed that a loading and unloading of an HGV would take 20 minutes. Divided between the sources this results in on-time correction of 60 minutes during a worst-case hour and 15 minutes during a worst-case 15-minute period.
- 6.1.14 HGV manoeuvres have been represented in the noise model by 3 point sources spread along the eastern façade of the unit. It has been assumed that a HGV manoeuvre would take 30 seconds to complete and based upon 6 HGV movements during a worst-case hour this would represent a total duration of 3 minutes, which split between the 3 point sources would be 1 minute on-time during a worst-case hour and 30 seconds during a worst-case 15 minutes.
- 6.1.15 Vans reversing has been included in the model as 4 point sources spread throughout the service yard. Based upon the traffic data there would be 63 van movements in a worst-case hour. Based upon the assumption that a van reversing could take up to 30 seconds to complete this would represent a total duration of around 32 minutes, which spread over the 4 point sources would represent 8 minutes during a worst-case hour and 2 minutes during a worst-case 15 minutes.
- 6.1.16 The corrected sound power levels have been summarised below in [Table 6.2](#) for point and line sources representing the noise generating activities of future operations.

Table 6.2: Sound Source On-Time Calculations

Activity / Equipment Name	Source Sound Power Level L_{WA} (dBA)	Duration (min)		Corrected Sound Power Level L_{WA} (dBA)	
		Daytime	Night-Time	Daytime	Night-Time
Van reversing	74.3	8.0	2.0	65.5	65.5

Activity / Equipment Name	Source Sound Power Level L_{WA} (dBA)	Duration (min)		Corrected Sound Power Level L_{WA} (dBA)	
		Daytime	Night-Time	Daytime	Night-Time
HGV manoeuvre	95.4	1.0	0.5	77.6	80.6
HGV Movement	80.4	1.8	0.5	65.2	65.2
Forklift unloading HGV	86.8	60.0	15.0	86.8	86.8

6.1.17 The sound sources and their respective location within the noise propagation model for the operational noise assessment is shown in [Figure 6.1](#).

Figure 6.1: Modelled Sound Source Locations, BS 4142 Commercial Noise Assessment



6.1.18 The predicted specific sound levels at the noise sensitive receptors require a penalty to account for distinctive characteristics in line with the BS 4142:2014+A1:2019 methodology. Penalties account for distinctive characteristics within the sound that may make it more prominent than the existing noise environment. Penalties can be added for tonality, impulsivity, intermittency, or other characteristics not captured in the three defined classes.

6.1.19 The specific noise sources that the assessment considers are HGVs and vans used for deliveries and loading / unloading operations conducted at level access doors with forklifts. Details of all noise character penalties that have been applied to the assessment are set out in [Table 6.3](#).

Table 6.3: Rating Level Penalties

Receptor	Penalty (dB)	Rating Penalty Description
All Receptors	0	Tonality – 0 dB(A), Impulsivity – 0 dB(A), Intermittency – 0 dB(A). Predictions show the identified receptors are likely to be unaffected by the new sources as predictions at facades are below the background sound levels. Therefore, no distinctive characteristics are likely to be audible, and no penalties have been applied.

6.1.20 The penalties applied are specific to the noise source and do not take into account the existing context or the impact of the existing HGVs and loading operations.

6.1.21 The predicted noise rating levels at the noise sensitive receptors are presented in [Table 6.4](#) along with a comparison with the representative background sound levels as defined in BS 4142:2014+A1:2019.

Table 6.4: Predicted Commercial Noise Impacts at Sensitive Receptors

Receptor	Daytime (07:00 – 23:00) (dBA)			Night-Time (23:00 – 07:00) (dBA)		
	Rating Level $L_{Ar, Tr}$	Background Level	Difference	Rating Level $L_{Ar, Tr}$	Background Level	Difference
R01 GF	38	46	-8	39	40	-1
R01 1F	38	46	-8	39	40	-1
R02 GF	31	46	-15	32	40	-8
R03 GF	20	44	-24	21	40	-19
R03 1F	20	44	-25	20	40	-20
R04 GF	17	44	-27	18	40	-22
R04 1F	19	44	-25	19	40	-21
R05 GF	19	44	-25	19	40	-21
R05 1F	22	44	-22	22	40	-18

6.1.22 It can be seen in [Table 6.4](#) that, based upon a reasonable worst-case scenario and from the traffic data supplied, the operational noise during the daytime and night-time periods is predicted to be less than the background sound levels at all noise sensitive receptors identified in this report.

6.1.23 While the predicted noise levels indicate no adverse impacts would be experienced, the wider context of the site must be considered before classifying any level of noise impact. The main factor in considering the context is the existing industrial use of the surrounding area. While the proposed operations have the potential to increase industrial noise levels in the area, the existing receptors are already exposed to industrial noise from sources within the surrounding premises, and so the receptors would likely be less sensitive to the introduction of new noise sources with the same noise character. Furthermore, it was observed during equipment installation and collection that the dominant noise source contributing to ambient noise levels was the A5 Watling Street to the south of the site as well as train passes on the Birmingham to Peterborough Line. The dominant nature of these noise sources would have a masking effect on any new industrial noise sources introduced into the environment.

- 6.1.24 In accordance with national policy and after taking into consideration the site-specific context, the impacts arising at noise sensitive receptors as a result of the proposed development, can be categorised as less than LOAEL with no further mitigation requirements.

6.2 Operational Commercial Maximum Sound Levels

- 6.2.1 The WHO Guidelines state that to avoid night-time sleep disturbance indoor sound pressure levels should not exceed approximately 45 dB(A) L_{Fmax} more than 10 – 15 times per night. It is generally accepted that 60 dB(A) L_{Fmax} at the external façades of living spaces corresponds to the LOAEL. These values assume the sound reduction provided by a partially open window is 15 dB, resulting in an internal noise level of 45 dB(A) L_{Fmax} .
- 6.2.2 All maximum events have been modelled as point sources at worst-case locations, the number of sources is fewer than in the BS 4142:2014+A1:2019 industrial noise assessment because maximum noise events are extremely unlikely to be simultaneous.
- 6.2.3 The source levels used in the assessment, have been taken from the Air and Acoustic Consultants library of sound measurements, details of the sources used in the assessment are provided in [Table 6.5](#).

Table 6.5: Sound Sources Used in the Maximum Noise Assessment

Activity	Sound Power Level (dB) at Octave Band Centre Frequencies (Hz)								Overall dB(A)
	63	125	250	500	1 k	2 k	4 k	8 k	
HGV Movement	84.5	83.9	83.7	87.0	101.2	94.2	87.5	80.6	101.6

- 6.2.4 The sound sources included in the noise propagation model for the maximum operational noise assessment are shown in [Figure 6.2](#).

Figure 6.2: Modelled Sound Source Locations, Maximum Noise Assessment



6.2.5 The predicted levels at the receptors from maximum noise events are provided in [Table 6.6](#) along with a comparison to the WHO maximum sound level criterion.

Table 6.6: Predicted Maximum Commercial Noise Impacts at Sensitive Receptors

Receptor	Night-Time (23:00 – 07:00) (dBA)		
	Predicted Level	Criterion Level	Difference
R01 GF	56.9	60.0	-3.1
R01 1F	56.9	60.0	-3.1
R02 GF	49.1	60.0	-10.9
R03 GF	29.2	60.0	-30.8
R03 1F	28.5	60.0	-31.5
R04 GF	41.1	60.0	-18.9
R04 1F	45.2	60.0	-14.8
R05 GF	29.6	60.0	-30.4
R05 1F	33.1	60.0	-26.9

6.2.6 It can be seen from [Table 6.6](#), that the noise levels as a result of the predicted maximum noise events are significantly lower than the 60 dB(A) WHO criterion at all of the noise sensitive receptor locations.

Predicted night-time maximum noise contours are presented in [Appendix C](#), showing how sound is likely to propagate from the sources to the noise sensitive receptors.

- 6.2.7 In accordance with national policy the impacts would be categorised as less than LOAEL and mitigation measures will not be required.

6.3 Fixed Plant and Equipment

- 6.3.1 This assessment does not include in provision or installation of any plant or equipment associated with the end use of the unit and should an end user require any plant or equipment this could be subject to a separate submission which can be secured by planning condition.

7 Mitigation Measures

7.1 Construction

- 7.1.1 Operators should be properly trained in the use of equipment, made aware of any noise mitigation requirements, and where necessary, be supervised so that reasonable care is taken to minimise their noise impact. BS 5228-1:2009+A1:2014 provides advice on minimising noise from construction activities with the implementation of Best Practicable Means (BPM).
- 7.1.2 The contractor would regularly brief the construction staff so that they are considerate of the surrounding residents and operate construction plant in a manner which controls noise (where practicable). Once the exact construction methods and plant to be employed are confirmed, any required mitigation measures will be identified. Such measures could include:
- Avoidance of the use of horns and excessive revving of engines;
 - Vehicles, generators, concrete pumps, air compressors and other constant noise sources being turned off when not required, or at least throttled back to a minimum;
 - Plant to operate at low speeds, where possible, and incorporate automatic low speed idling;
 - Selection of 'silenced' plant and equipment where practicable;
 - Locating noisy plant and equipment as far away from sensitive receptors as reasonably possible;
 - Reducing impulsive noise generating activities such as slamming doors, noisy brakes, impacts etc;
 - Screening either in the form of localised temporary acoustic fencing where the distances between source and receptor cannot be managed, or on the site boundary; and
 - All plant being properly maintained (greased, blown silencers replaced, saws kept sharpened, teeth set and blades flat, worn bearings replaced, etc.).

7.2 Operational

- 7.2.1 The assessment has demonstrated that worst-case operations at the proposed development would not exceed the BS4142 criteria during the daytime or night-time periods with predicted levels at receptors being classified as less than LOAEL.
- 7.2.2 The predicted maximum night-time noise levels indicate that at all noise sensitive receptors, sound levels as a result of noise events would fall comfortably below the WHO guideline criterion of 60 dB(A) and impacts can also be classified as less than the LOAEL.

8 Summary & Conclusions

8.1 Background

- 8.1.1 Air & Acoustic Consultants Limited have been commissioned by Hinckley Investment LLP to undertake a noise impact assessment in support of an industrial development at Hammonds Way, Hinckley.
- 8.1.2 A long-term attended baseline noise survey was undertaken at the site in October 2025 to characterise the existing noise environment and help assess the potential impacts of the proposed uses on the nearby noise-sensitive receptors.

8.2 Construction Phase

- 8.2.1 The specific details of the construction methodology are not known at this stage; however, the potential construction impacts have been considered, based upon the nature and scale of the proposed development, and appropriate mitigation measures have been given.
- 8.2.2 Assuming the appropriate mitigation measure are employed, the potential construction impacts can be minimised, to the point that any adverse impacts will be temporary in nature and result in NOEL to LOAEL in terms of potential impacts.

8.3 Operational Phase

- 8.3.1 The operational noise levels associated with the proposed development have been assessed using a combination of long-term noise measurement data and modelling predictions using a CadnaA sound propagation model. The measurements, modelling and assessment have been undertaken in line with the relevant British Standards, Guidance documents and Policy.
- 8.3.2 The assessment was based upon a reasonable worst-case scenario and after taking into consideration the site-specific context and in line with the methodology and criteria set out within BS 4142:2014+A1:2019, the impact of the proposed operational development noise at all identified noise sensitive receptors would be classified as less than the LOAEL.
- 8.3.3 Predictions show that noise levels at receptors as a result of night-time maximum noise events would be below the 60 dB(A) threshold set by WHO and would be classified as less than LOAEL.
- 8.3.4 It can therefore be concluded that the proposed development is unlikely to conflict with the national, regional, and local planning policy or guidance referenced in this assessment. The impacts can therefore be classified as less than the LOAEL.

Appendices

APPENDIX A – DEFINITION OF TERMS

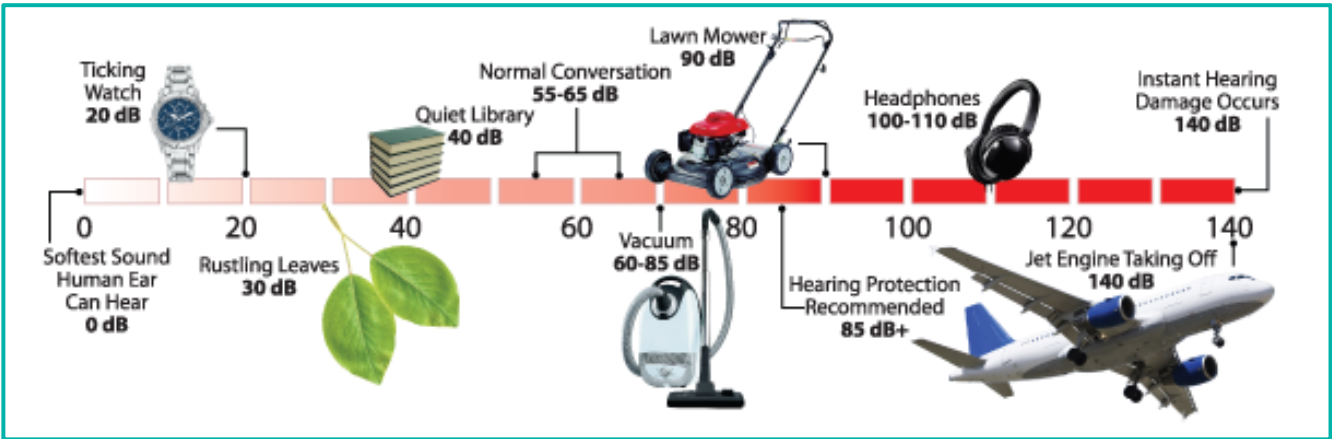
Sound Pressure - Sound, or sound pressure, is a fluctuation in air pressure over static ambient pressure.

Sound Pressure Level - The sound level is the sound pressure relative to a standard reference pressure of 20 μPa (2×10^{-5} Pascals) on a decibel scale.

Decibels dB - Noise is commonly defined as unwanted sound. The range of audible sound is from 0 dB to 140 dB, which is taken to be the threshold of pain. The sound pressure detected by the human ear covers an extremely wide range. The decibel (dB) is used to condense this range into a manageable scale by taking the logarithm of the ratio of the sound pressure and a reference sound pressure.

The decibel scale is logarithmic and therefore when two noise sources are present together, they must be combined logarithmically, therefore, when two sound sources of the same sound pressure level are combined the resultant level is 3 dB(A) higher than the single source. However, in subjective terms, the ear can distinguish a difference in 'loudness' between two simple noise sources when there is a 3 dB(A) difference between them. For simple sources, when two sounds differ by 10 dB(A) one is said to be twice as loud as the other.

Figure A.1: Examples of Typical Noise Levels



Noise Level Indices - Noise levels usually fluctuate over time, so it is often necessary to consider an average or statistical noise level. This can be done in several ways, so several different noise indices have been defined, according to how the averaging or statistics are carried out.

'A-Weighted Decibels dB(A) - The frequency response of the ear is usually taken to be about 18Hz (number of oscillations per second) to 18,000Hz. The ear does not respond equally to different frequencies at the same level. It is more sensitive in the mid-frequency range than at the lower and higher frequencies, and because of this, the low and high-frequency components of a sound are reduced in importance by applying a weighting (filtering) circuit to the noise-measuring instrument. The weighting which is most used, and which correlates best with the subjective response to noise, including that of music, is the dB(A) weighting. This electronic filter matches the variation in the frequency sensitivity of the meter to that of the human ear. This is an internationally accepted standard for noise measurements.

Table A.1: Other Standard Noise Units:

Symbol	Name	Definition
$L_{Aeq,T}$	Equivalent Continuous Sound Level	The A-weighted sound pressure level of a steady sound that has, over a given period, the same energy as the fluctuating sound under investigation. The L_{Aeq} provides a single value to express the average sound energy over the measurement period and is the most widely used indicator for environmental noise.
$L_{Amax,T}$	maximum 'A' weighted noise level	This is the maximum 'A' weighted noise level recorded during the measurement period, (T).
$L_{A90,T}$	the 'A' weighted noise level	This is the 'A' weighted noise level exceeded for 90% of the measurement period (T). This is normally used to describe the background noise.

Symbol	Name	Definition
$L_{A10,T}$	the A-weighted noise level exceeded for 10% of time	This is the 'A' weighted noise level exceeded for just 10 % of the measurement period, (T). This is normally used to describe traffic noise.
$L_{A90,T}$	the A-weighted noise level exceeded for 90% of the time	A noise level index. The noise level exceeded for 90% of the time over the period T. L_{90} , can be considered to be the "average minimum" noise level and is often used to describe the background noise.
L_S	Specific noise level.	The equivalent continuous A-weighted sound pressure level at the assessment position produced by the specific noise source over a given reference time interval.
$L_{Ar,Tr}$	Rating noise level	The specific noise level plus any adjustments for characteristic features of the noise.
$D_{n,c,w}$	Laboratory Insulation Rating	A single-number rating of the laboratory measurement of room-to-room airborne sound insulation of a suspended ceiling with a plenum above it.
$D_{nf,w}$	Weighted normalised flanking level difference	A single-number that quantifies the in-situ airborne sound insulation between rooms, when the transmission only occurs through a specified flanking path.
$D_{nT,w}$	Weighted standardized level difference	Single-number quantity that characterizes the in-situ airborne sound insulation between rooms.
R_w	Weighted sound reduction index.	Single-number quantity which characterizes the airborne sound insulating properties of a material or building element over a range of frequencies in a laboratory.
C_{tr}	Low-Frequency Correction	Correction term applied against the sound insulation single-number values (R_w , D_w and $D_{nT,w}$) to provide a weighting against low-frequency performance.
NOEL	No Observed Effect Level	Noise Policy Statement for England (2010) - The noise 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.
LOAEL	Lowest Observed Adverse Effect Level	Noise Policy Statement for England (2010) - The noise level above which adverse effects on health and quality of life can be detected.
SOAEL	Significant Observed Adverse Effect	Noise Policy Statement for England (2010) - The noise level above which significant adverse effects on health and quality of life occur.

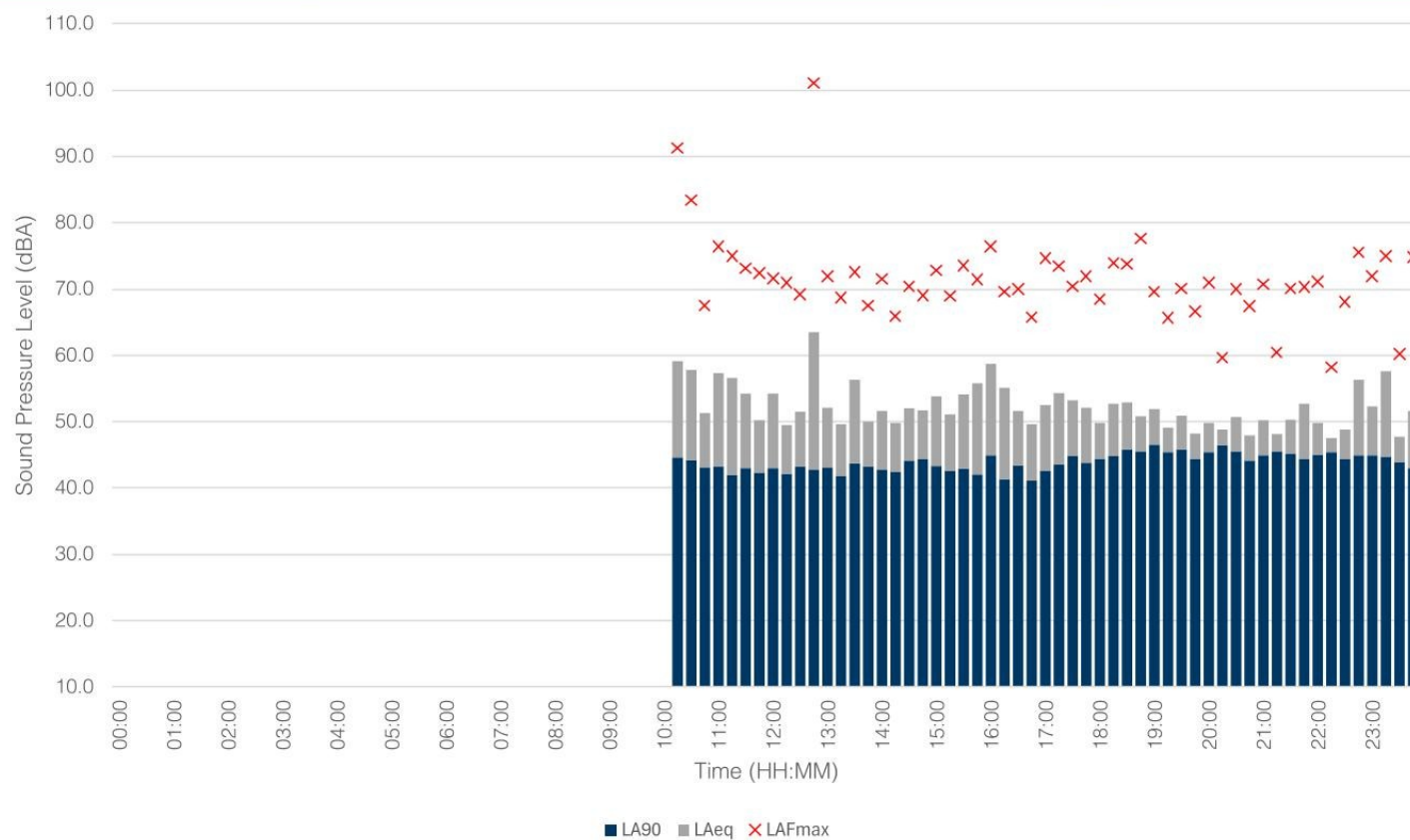
APPENDIX B – NOISE MEASUREMENT TIME HISTORIES

Time History Graph B.1

Project Name: Hammonds Way, Hinckley

Measurement Location: L1

Survey Date: 17/10/2025

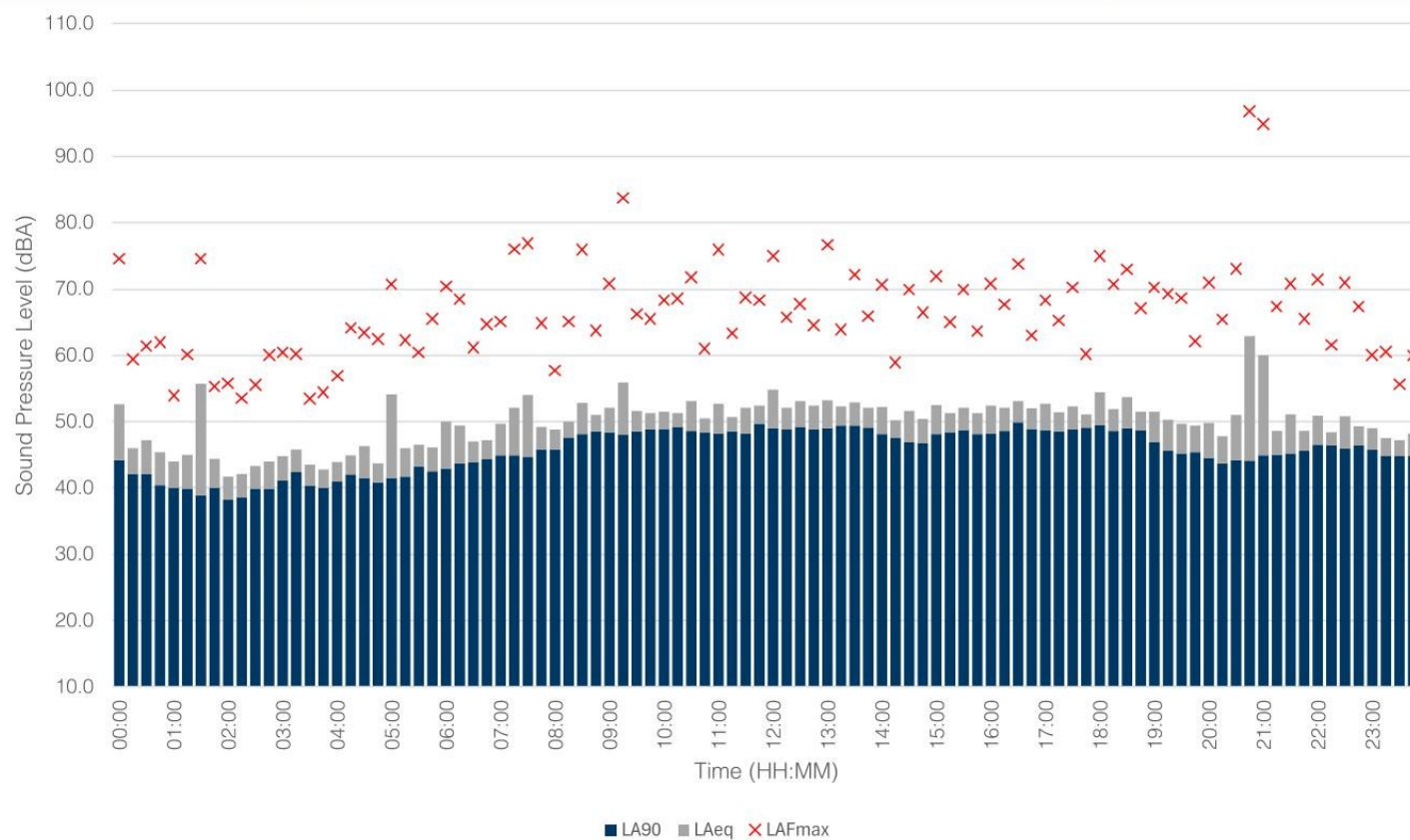


Time History Graph B.2

Project Name: Hammonds Way, Hinckley

Measurement Location: L1

Survey Date: 18/10/2025

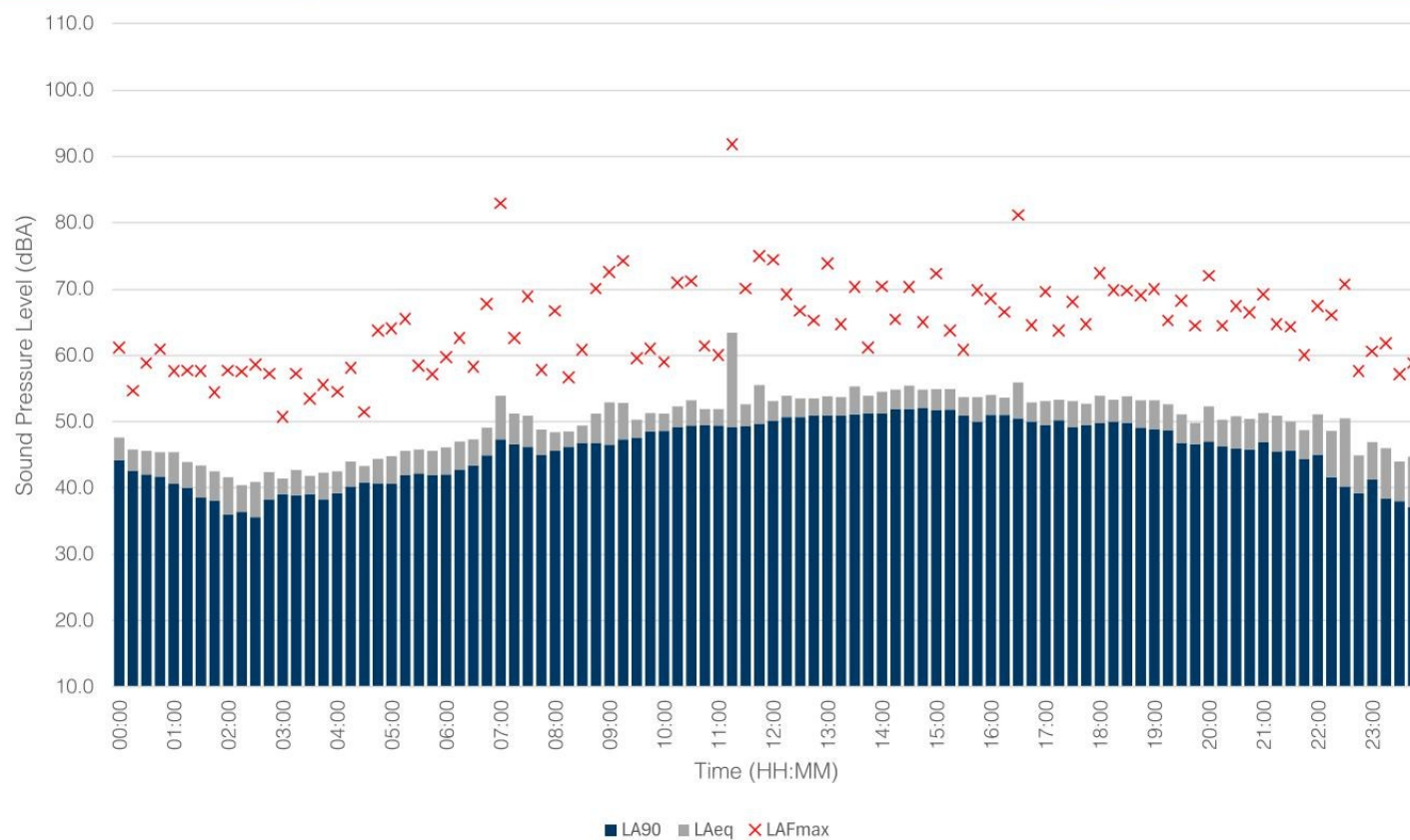


Time History Graph B.3

Project Name: Hammonds Way, Hinckley

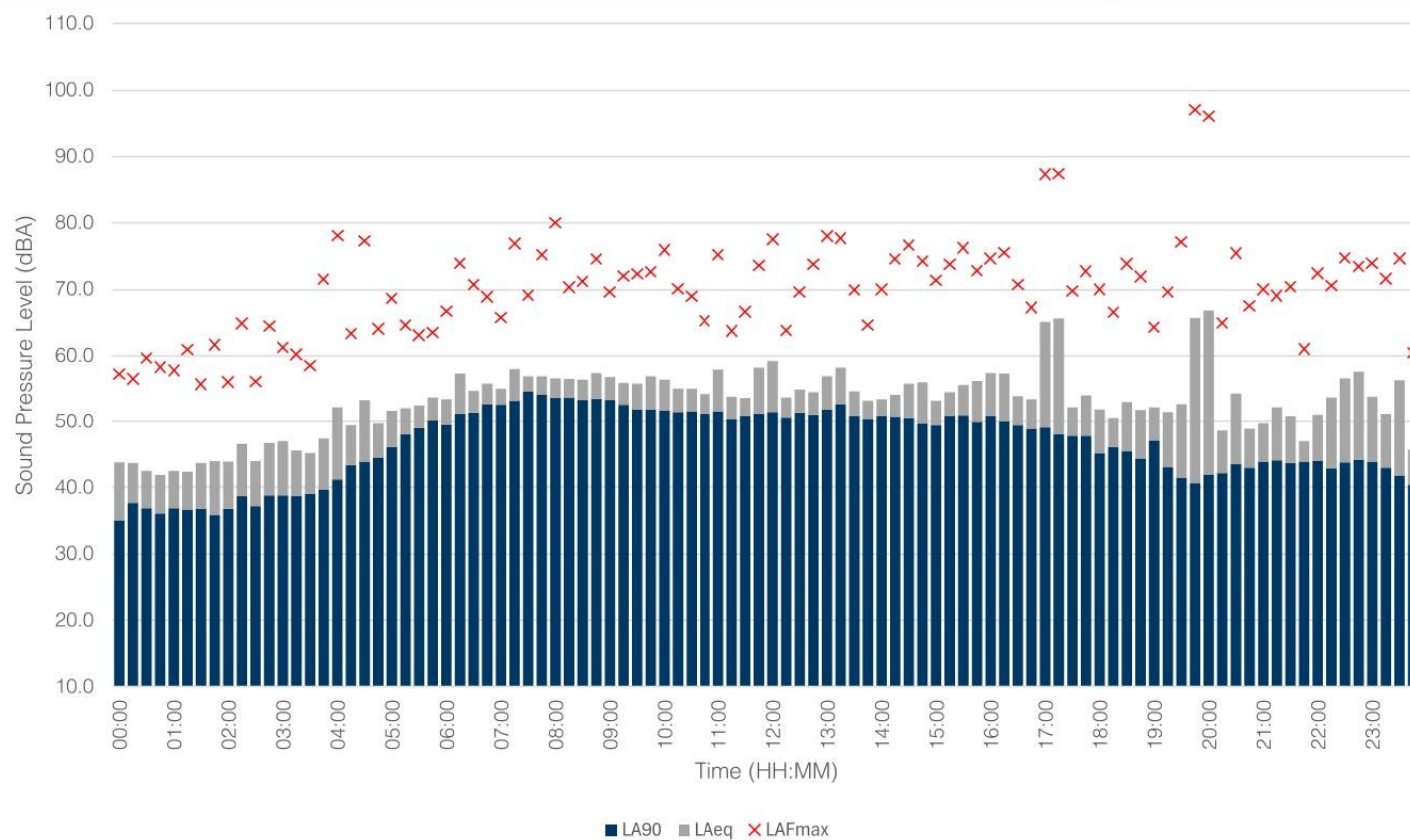
Measurement Location: L1

Survey Date: 19/10/2025



Time History Graph B.4

Project Name: Hammonds Way, Hinckley
Measurement Location: L1
Survey Date: 20/10/2025

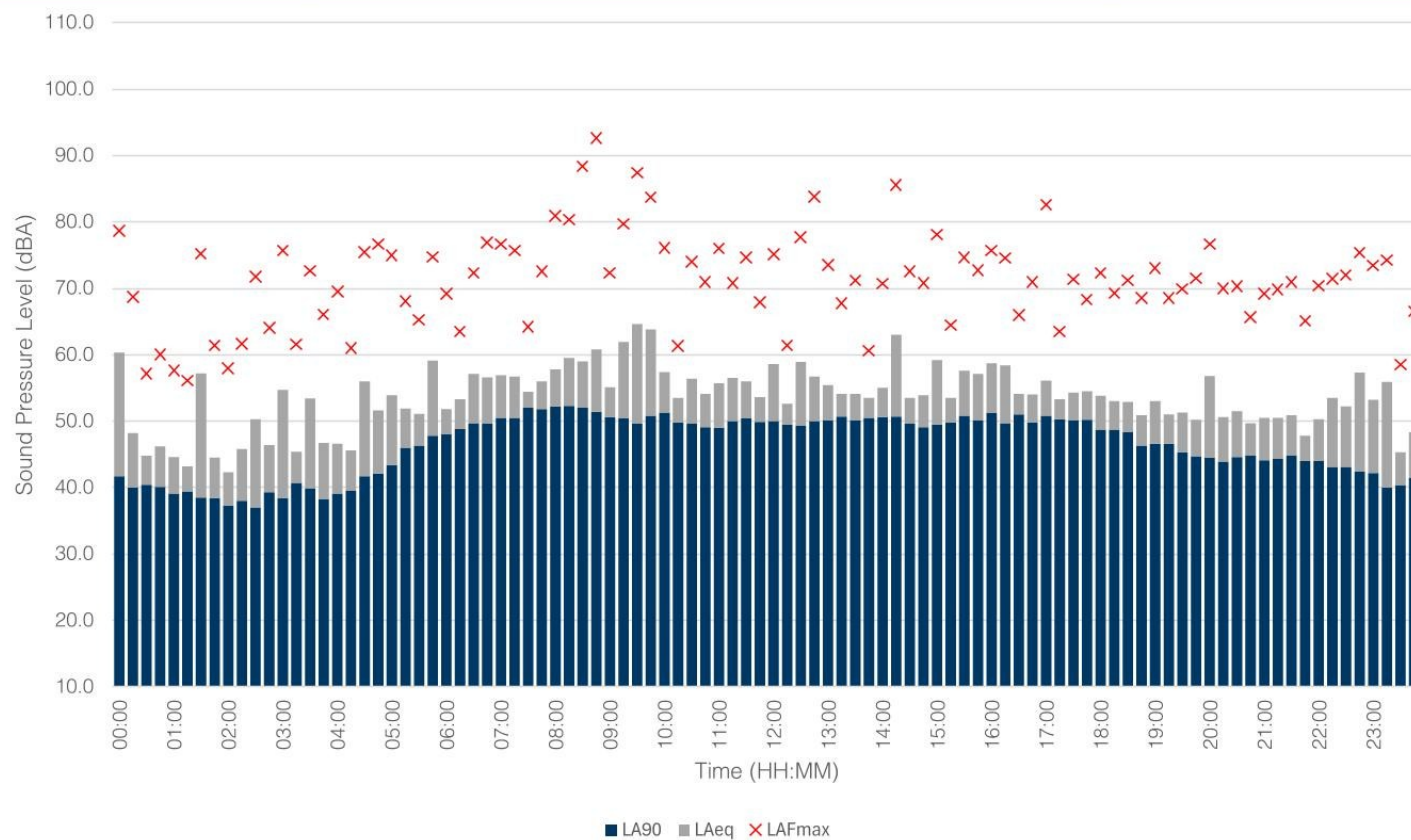


Time History Graph B.5

Project Name: Hammonds Way, Hinckley

Measurement Location: L1

Survey Date: 21/10/2025

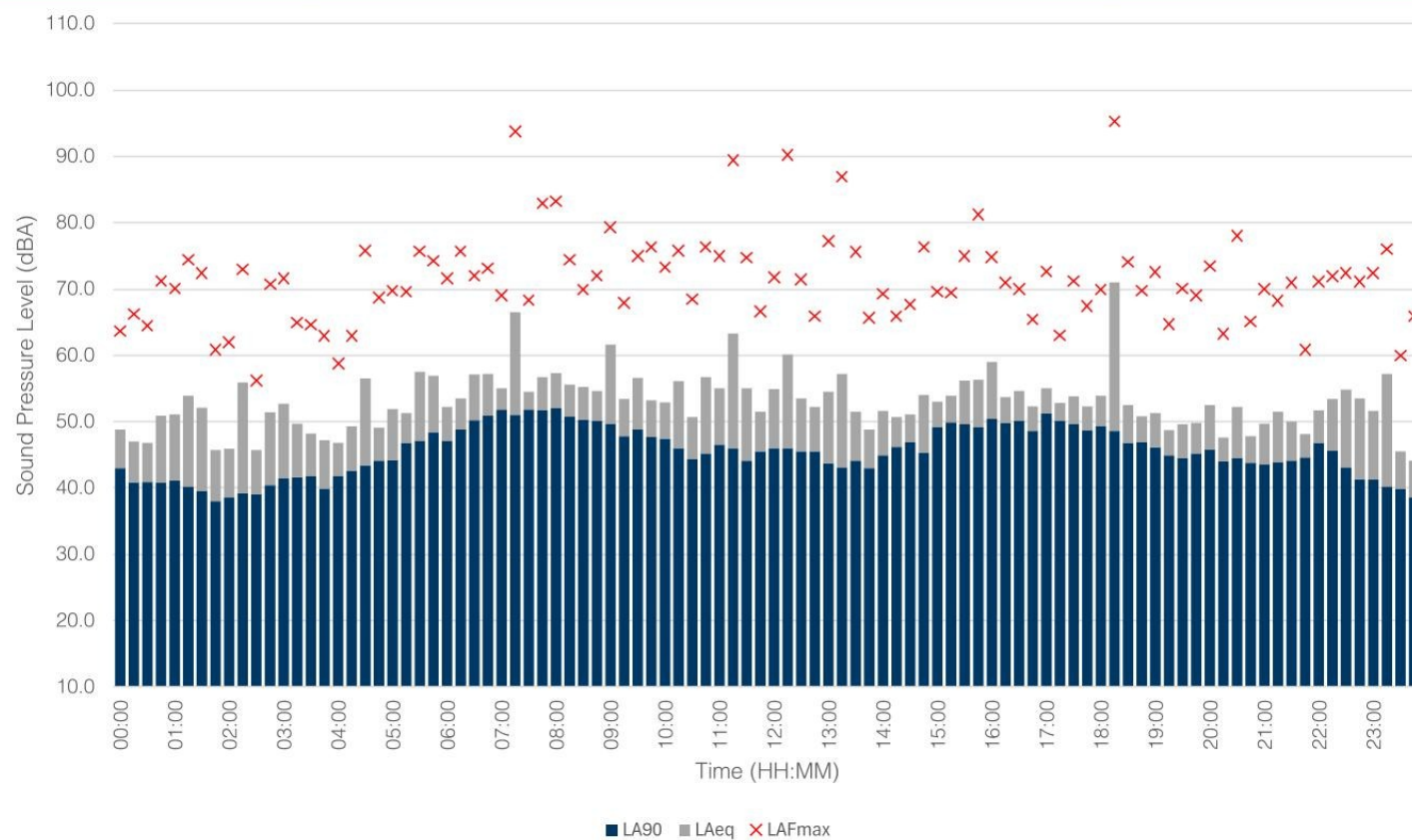


Time History Graph B.6

Project Name: Hammonds Way, Hinckley

Measurement Location: L1

Survey Date: 22/10/2025

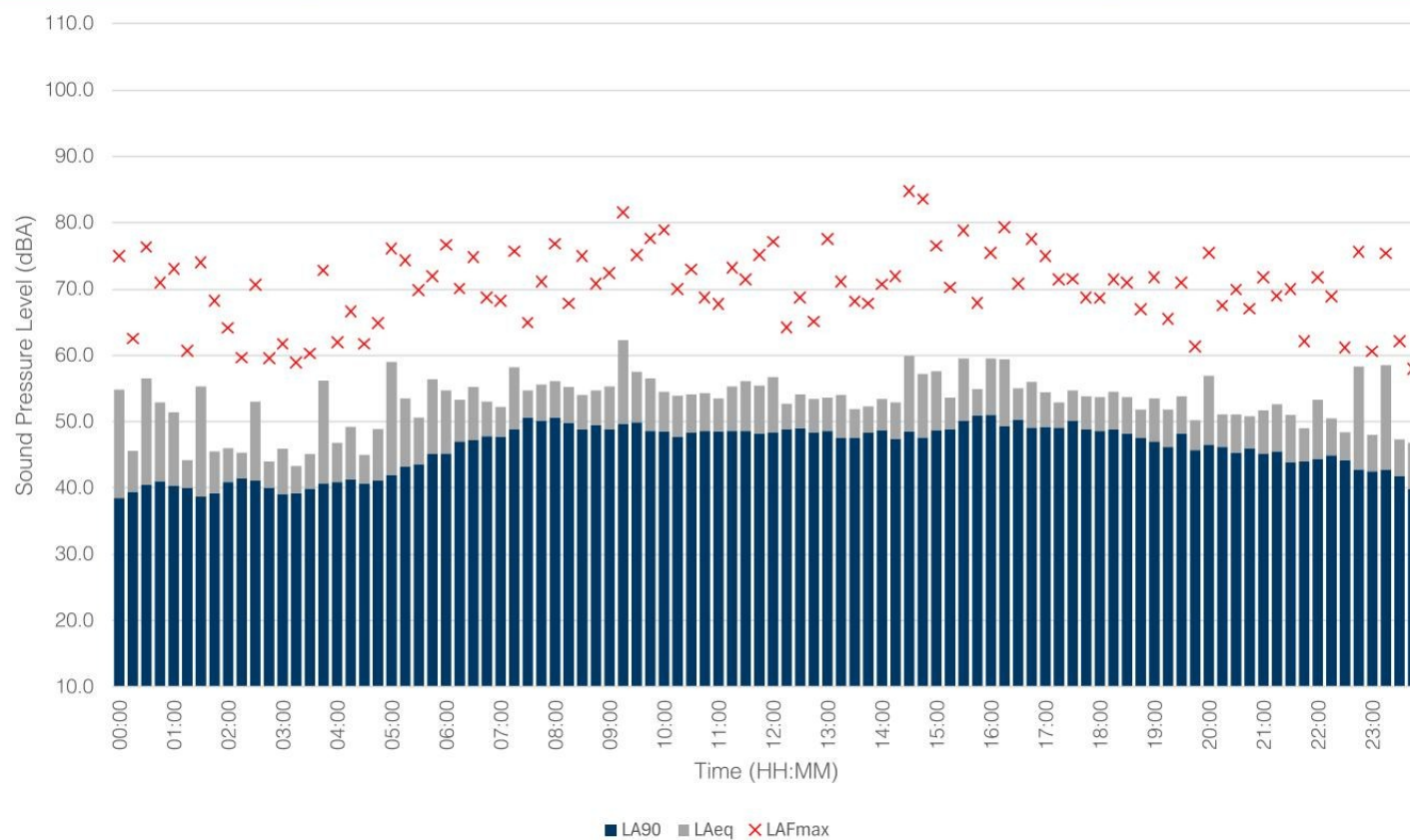


Time History Graph B.7

Project Name: Hammonds Way, Hinckley

Measurement Location: L1

Survey Date: 23/10/2025

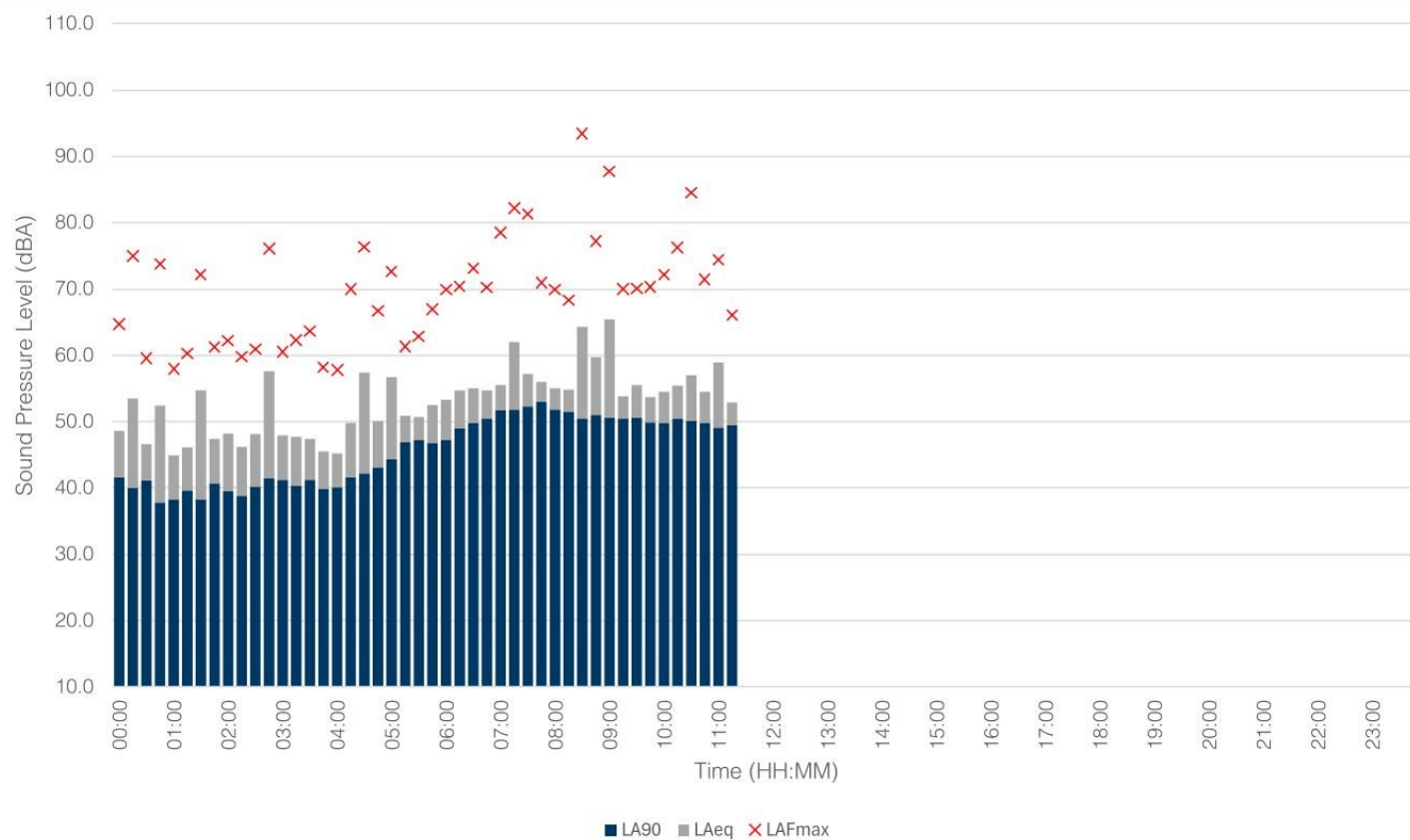


Time History Graph B.8

Project Name: Hammonds Way, Hinckley

Measurement Location: L1

Survey Date: 24/10/2025

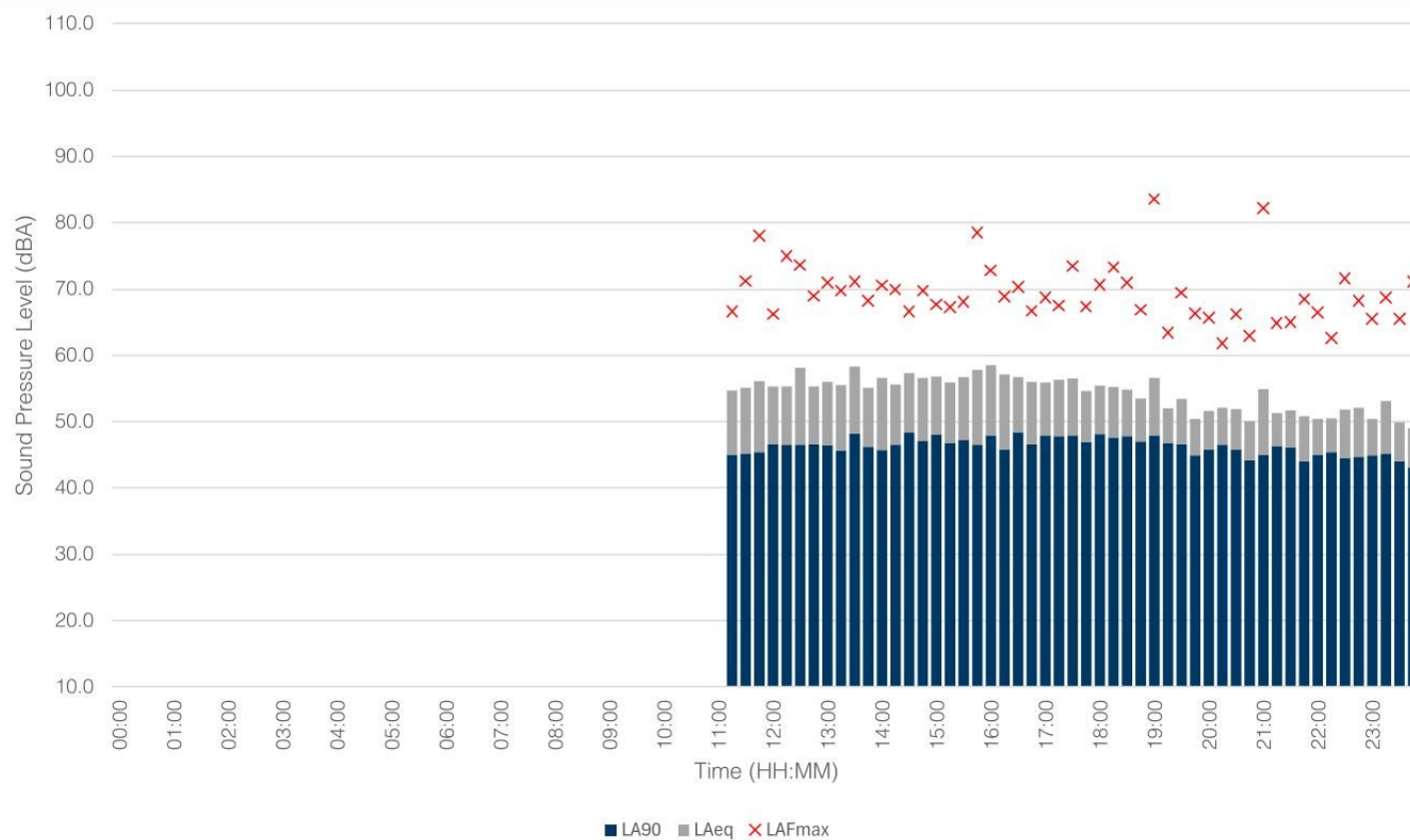


Time History Graph B.9

Project Name: Hammonds Way, Hinckley

Measurement Location: L2

Survey Date: 17/10/2025

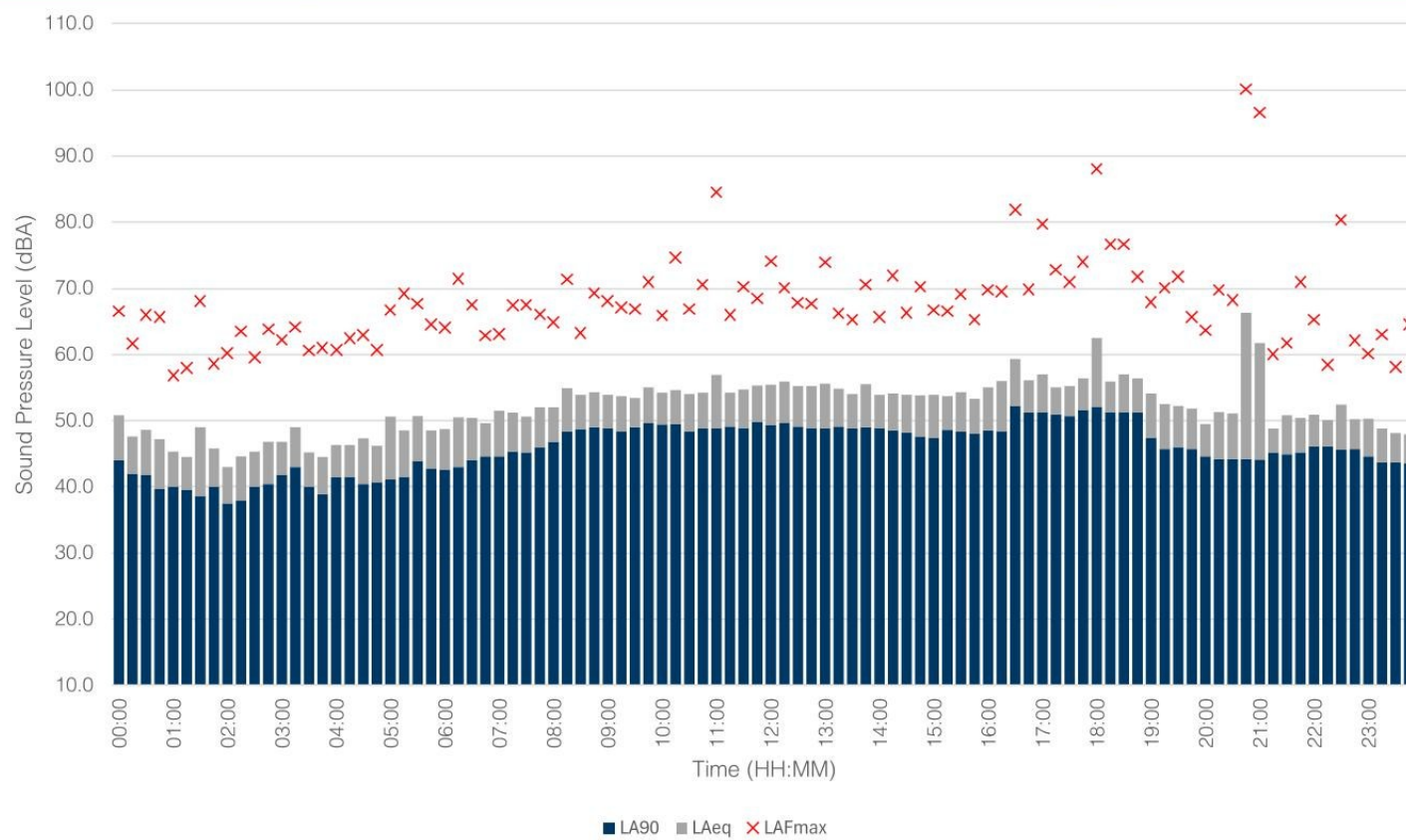


Time History Graph B.10

Project Name: Hammonds Way, Hinckley

Measurement Location: L2

Survey Date: 18/10/2025

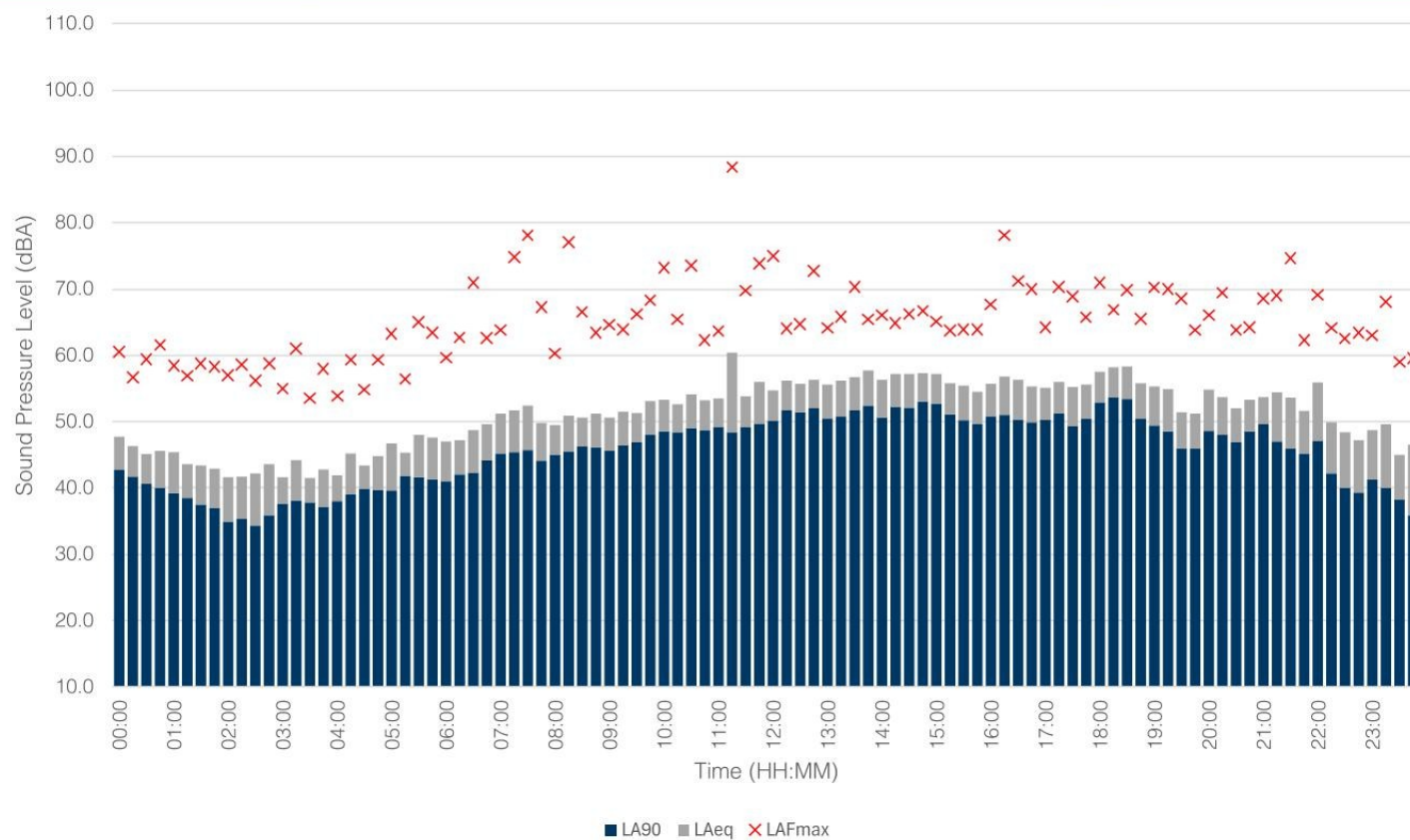


Time History Graph B.11

Project Name: Hammonds Way, Hinckley

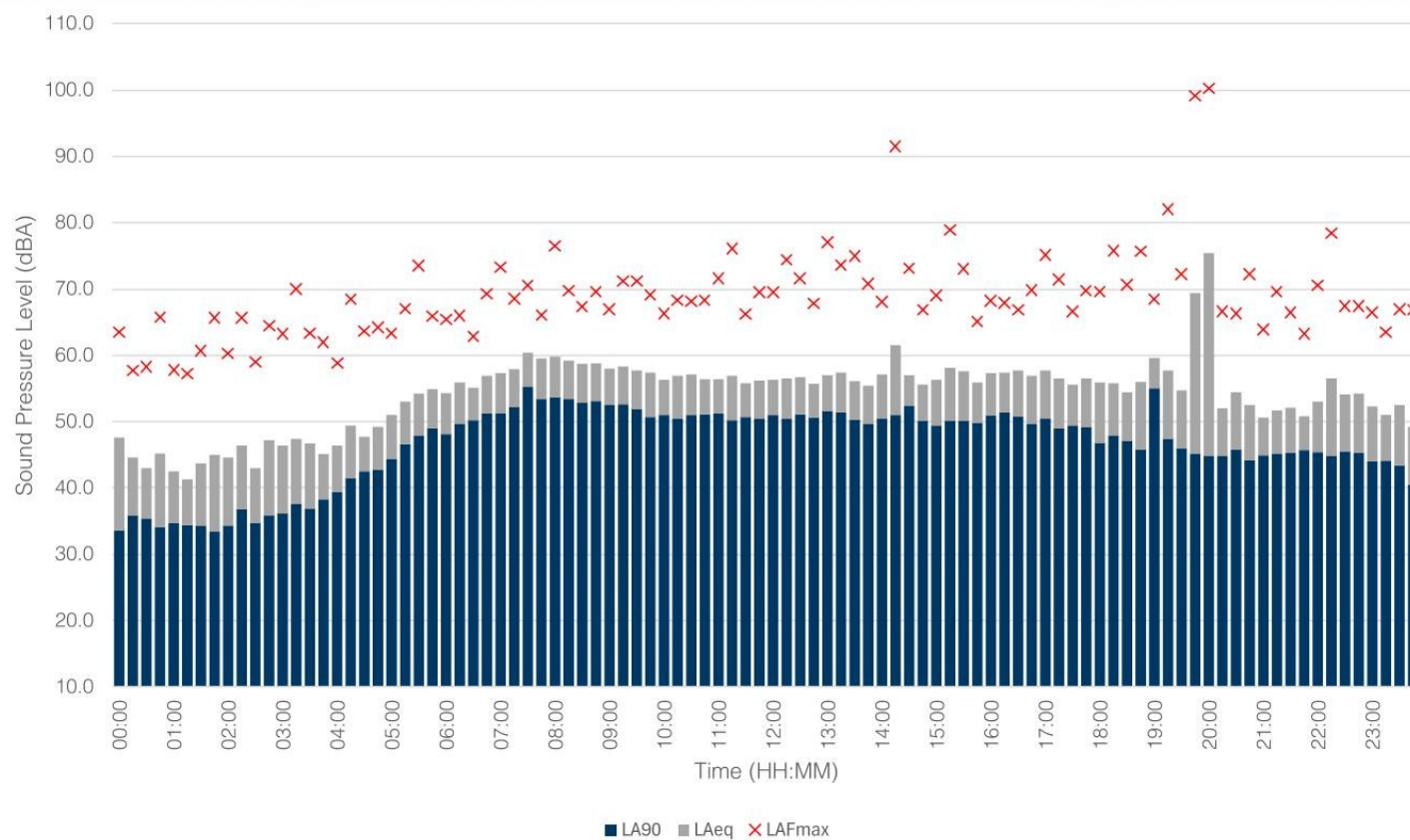
Measurement Location: L2

Survey Date: 19/10/2025



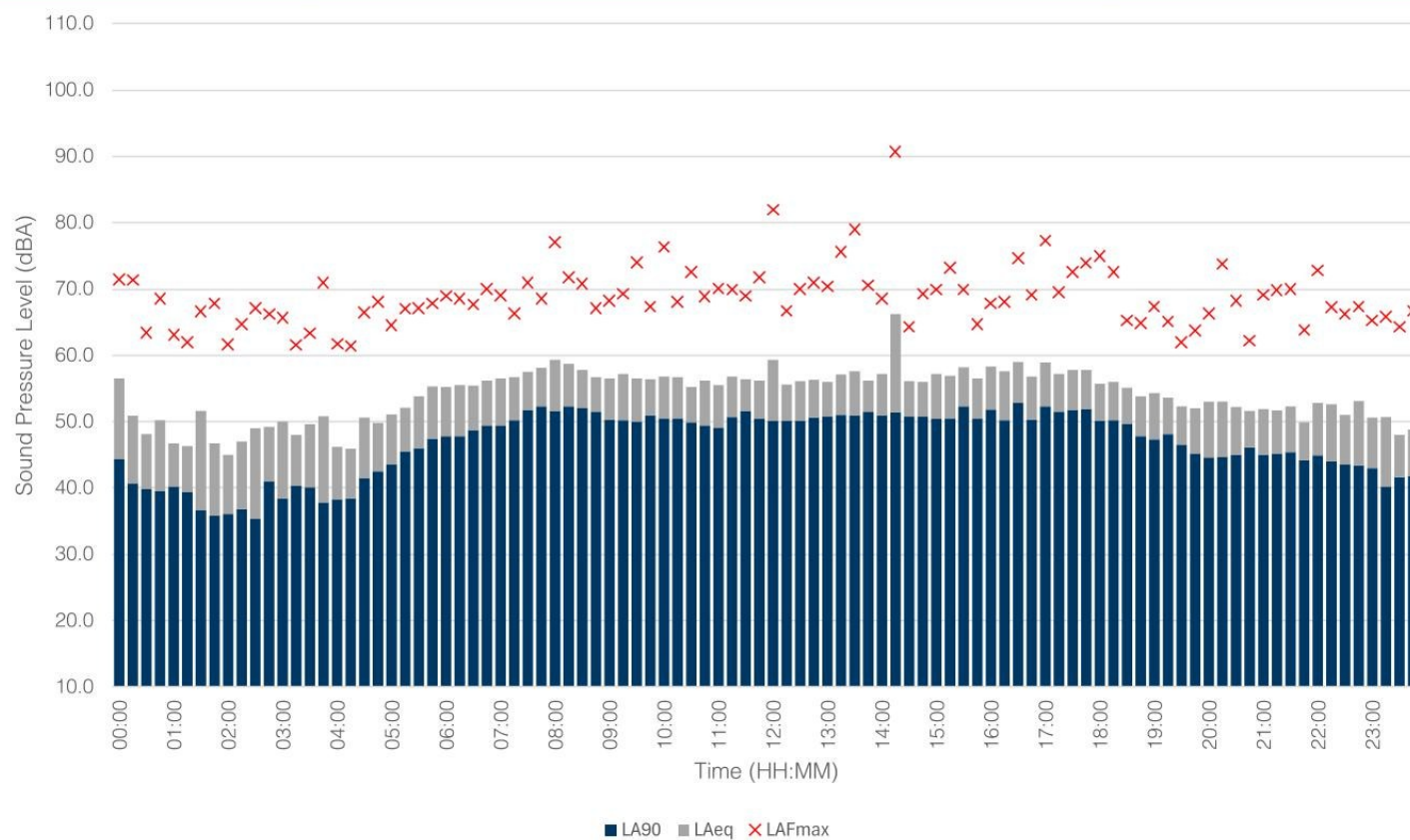
Time History Graph B.12

Project Name: Hammonds Way, Hinckley
 Measurement Location: L2
 Survey Date: 20/10/2025



Time History Graph B.13

Project Name: Hammonds Way, Hinckley
 Measurement Location: L2
 Survey Date: 21/10/2025

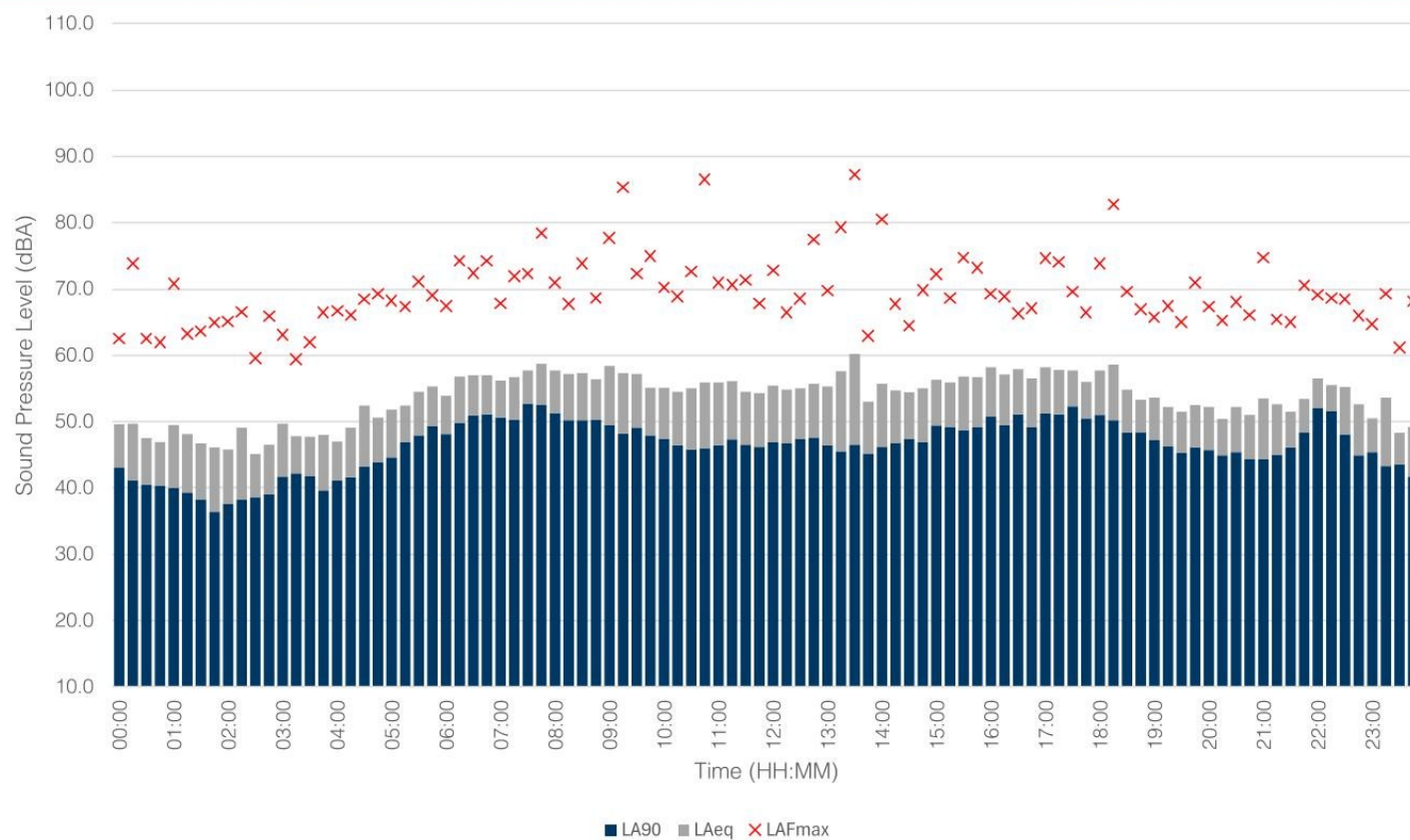


Time History Graph B.14

Project Name: Hammonds Way, Hinckley

Measurement Location: L2

Survey Date: 22/10/2025

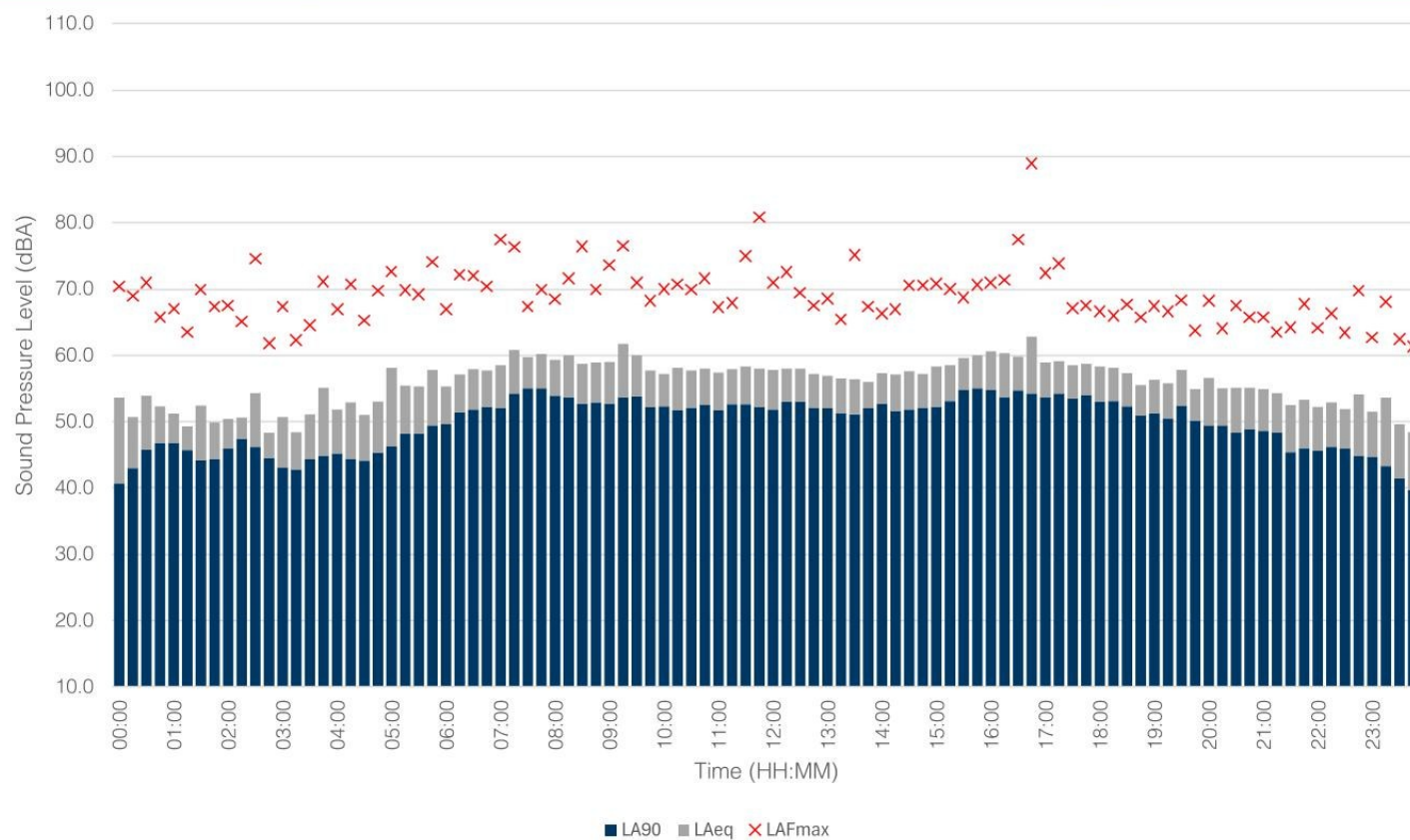


Time History Graph B.15

Project Name: Hammonds Way, Hinckley

Measurement Location: L2

Survey Date: 23/10/2025

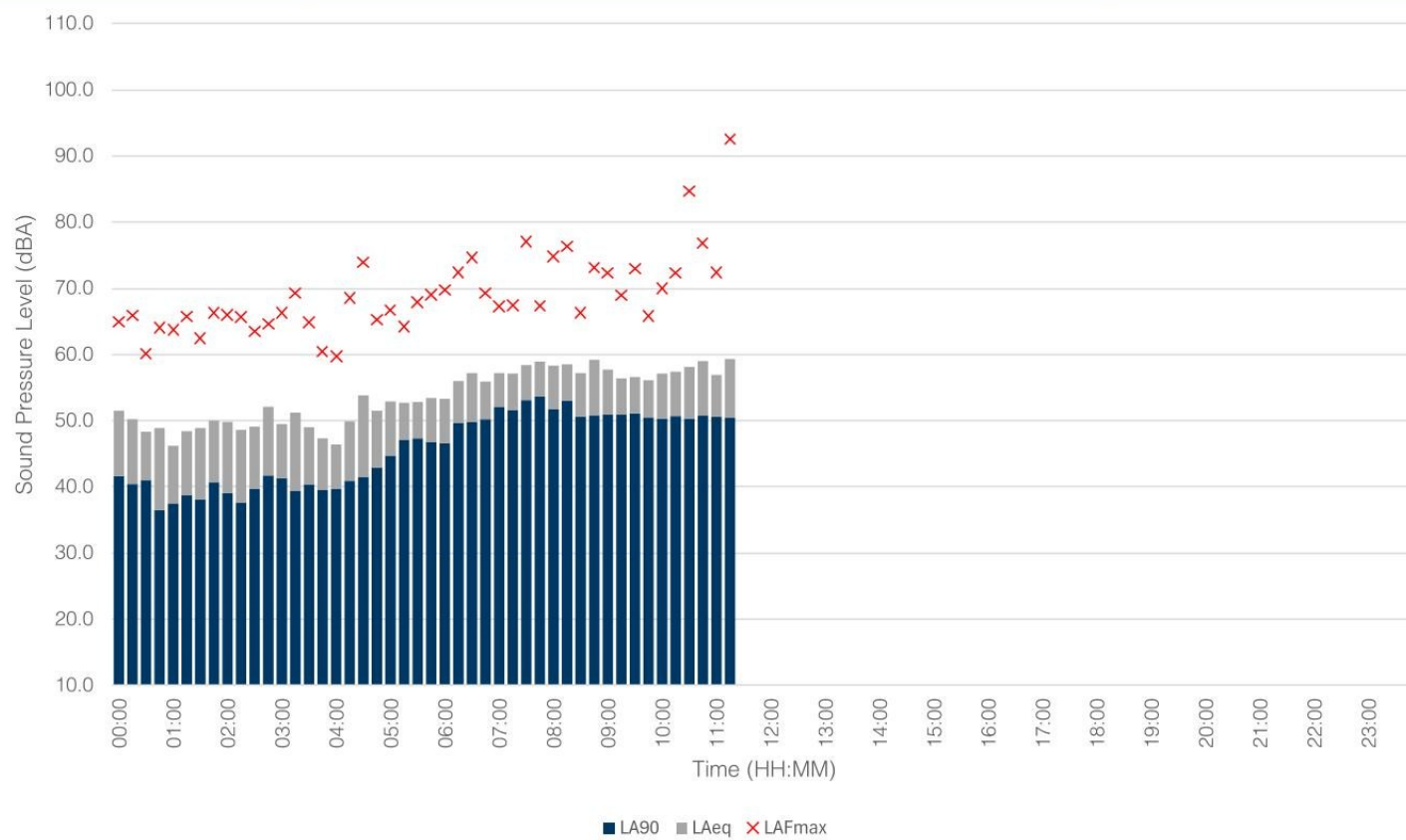


Time History Graph B.16

Project Name: Hammonds Way, Hinckley

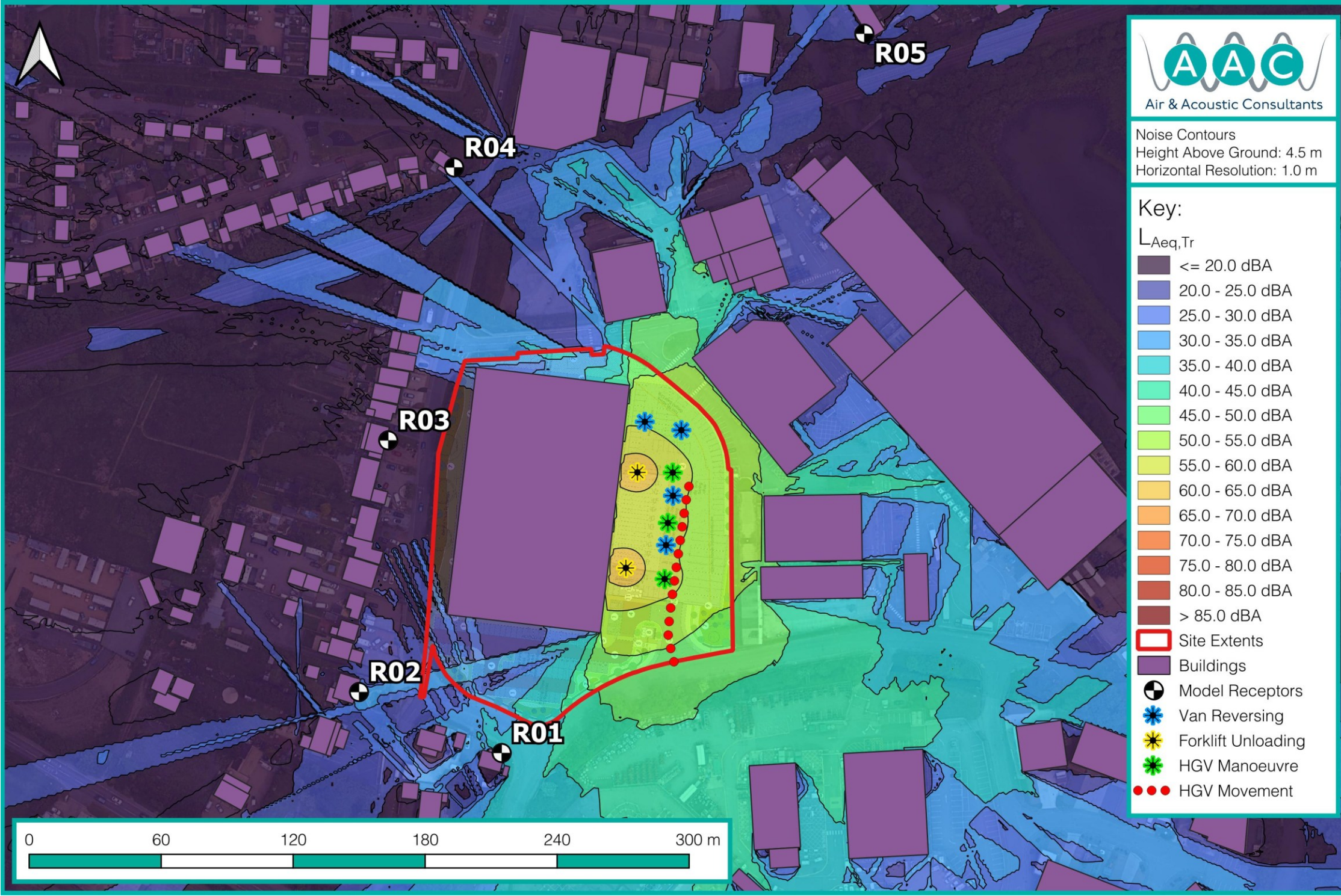
Measurement Location: L2

Survey Date: 24/10/2025

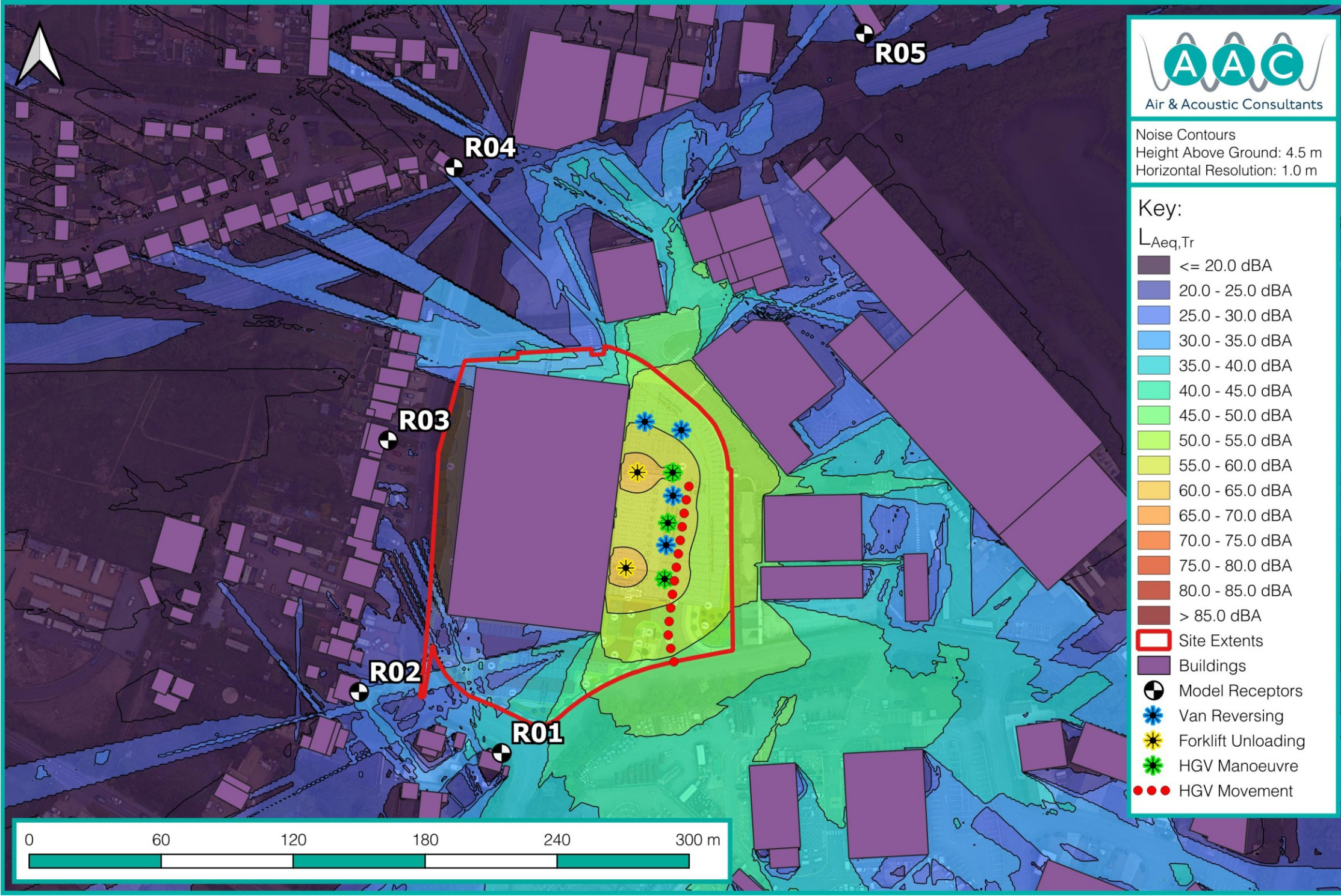


APPENDIX C – NOISE CONTOURS

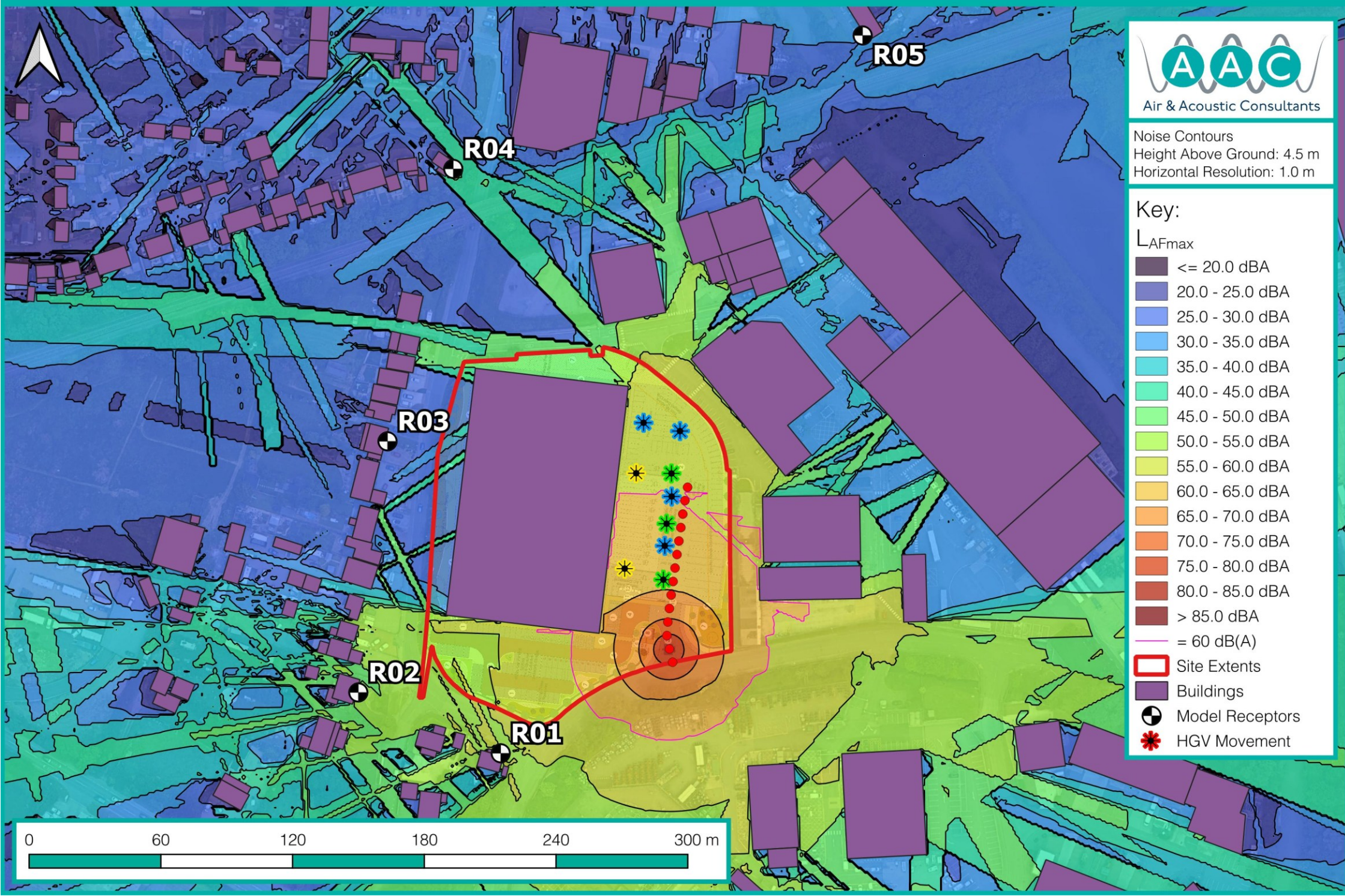
C.1 Daytime Industrial Noise Contours



C.2 Night-time Industrial Noise Contours



C.3 Night-time Maximum Industrial Noise Contours





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