GREYSLOW LIMITED

OAKLEY GARDENS, 188 WILMSLOW ROAD, FALLOWFIELD

NOISE ASSESSMENT FOR PLANNING PURPOSES

09 December 2025

AEC REPORT: P5689/R01/PJK

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CITATION APPROVED HEALTH & SAFETY SYSTEMS

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DOCUMENT STATUS

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1.0 INTRODUCTION AND SITE DESCRIPTION

1.1 Acoustic & Engineering Consultants Limited (AEC) has been instructed by Greyslow Limited to undertake a noise assessment for planning purposes in relation to the proposed residential scheme at Oakley Gardens, 188 Wilmslow Road, Fallowfield.

1.2 This report details the baseline noise levels measured at the development site, presents the assessment criteria and discusses the implications on the building design, to achieve acceptable internal noise levels as required by the Local Authority.

1.3 Acoustic terminology is discussed in brief in Appendix A.

Site Layout

1.4 The site currently contains a former office building and is bound to the east by Wilmslow Road (A6010), to the south by Langley Road and to the west and north by Platts Fields Park. An existing site plan is presented in Figure 4.1 of Section 4.0.

1.5 Wilmslow Road is an arterial road linking Rusholme to the north and Withington to the south.

1.6 Langley Road is a relatively quiet residential street.

1.7 Beyond Platts Field Park to the north is Manchester High School for Girls.

Proposed Scheme

1.8 The proposed scheme consists of, partial demolition and refurbishment of existing buildings and new build development to provide 53 residential dwellings (Use Class C3), along with associated hard and soft landscaping, access and associated works.

1.9 All gardens will have a 1.8m high close boarded fence around the perimeter.

1.10 The proposed site layout is presented in Figure 5.1 of Section 5.0.

2.0 BASIS OF ASSESSMENT

National Planning Policy Framework

2.1 Current national planning policies are set out in the National Planning Policy Framework (NPPF) published by the Department for Communities and Local Government, dated March 2012, and revised most recently in February 2025.

2.2 The planning policies which relate specifically to or are considered relevant to noise, are presented in paragraphs 187, 198 and 200 which are reproduced below:

"187. 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;

198. 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 and amenity value for this reason.

200. 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, 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.

2.3 Further to the above, the Governments '*Planning Practice Guidance'* (PPG) published on 6 March 2014 and most recently updated in September 2023 states:

'Noise needs to be considered when development may create additional noise, or would be sensitive to the prevailing acoustic environment (including any anticipated changes to that environment from activities that are permitted but not yet commenced). When preparing plans, or taking decisions about new development, there may also be opportunities to make improvements to the acoustic environment. Good acoustic design needs to be considered early in the planning process to ensure that the most appropriate and cost-effective solutions are identified from the outset.'

2.4 In addition, the guidance indicates that, whilst noise can override other planning concerns, it is important to look at noise in the context of the wider characteristics of a development proposal, its likely users, and its surroundings, as these can have an important effect as to whether or not noise is likely to pose a concern.

Residential Internal Noise Level Limits

2.5 Manchester City Council (MCC) has outlined their requirements for noise assessments to accompany planning applications in '*Planning & Noise – Technical Guidance'* (2022) (PNTG).

2.6 Section 3.7.1.1 of this document states "*The Council has adopted the following noise limits for residential properties*:

- *Bedroom (night-time – 23.00 – 07.00) 30dBL_{Aeq} (individual noise events should not normally exceed 45dB$L_{Amax,F}$ by more than 15 times);*
- *Living Rooms (daytime – 07.00 – 23.00) 35dBL_{Aeq}.*"

2.7 These levels are based on guidance presented in British Standard 8233:2014 '*Guidance on sound insulation and noise reduction for buildings'* (BS8233) BS8233 and The Association of Noise Consultants (ANC) document Professional Practice Guidance on Planning and Noise '*New Residential Development*' (2017) (ProPG).

Ventilation Provision

Whole Dwelling Ventilation

2.8 The above internal noise level limits need to be met whilst whole dwelling ventilation is being provided. Whole dwelling ventilation is a continuous low-rate ventilation as defined in Approved Document F '*Ventilation*' (2021) of the Building Regulations. It is typically achieved either using trickle ventilators although mechanical sometimes used.

Purge Ventilation

2.9 In relation to purge ventilation, ProPG suggests that as this should only occur occasionally (e.g. to remove odour from painting and decorating or from burnt food), the internal desired noise levels are not generally applicable. Therefore, internal noise levels due to windows being opened for purge ventilation has not been discussed further.

Control of Overheating Strategy

2.10 The requirements for the control of overheating during the night-time period (2300 to 0700h) in bedrooms is presented in Approved Document O of the Building Regulations 2010 '*Requirement 01: Overheating Mitigation Regulations 40B'* (ADO)

2.11 Paragraph 0.3 of ADO states that the "*document applies to new residential buildings only"*. Therefore, for the dwellings formed as part of the conversion of the existing building AEC has deemed it appropriate to consider the guidance presented in the Association of Noise Consultants 'Acoustics, Ventilation and Overheating: Residential Design Guide (2020) (AVO) for night-time internal noise levels.

2.12 ADO states that in locations where external noise may be an issue (e.g. buildings close to busy roads) the overheating mitigation strategy should take account of the likelihood that windows will be closed during sleeping hours (2300 to 0700h). The document then states that windows are likely to be closed during sleeping hours if noise within bedrooms exceeds the following limits:

a. 40dB $L_{Aeq,T}$, averaged over 8 hours (between 11pm and 7am).
b. 55dB L_{AFmax}, more than 10 times a night (between 11pm and 7am).

2.13 Paragraph 1.11 and Table 1.4 of ADO states that the opening in the external façade of a bedroom should have a minimum free area of 4% of the floor area of the room for medium-risk areas such as this site.

2.14 In relation to proposing appropriate internal noise level limits for the control of overheating in residential properties during the daytime, AEC has considered the guidance presented in AVO. It is important to note that AVO is a design guide only and not a statutory document and the Local Authority may have their own requirements.

2.15 Whilst AVO does not specify specific limits in relation to allowable internal noise levels, it does suggest a Level 1 risk assessment should be undertaken, considering the magnitude of external noise levels. Table 3.2 of AVO provides an indicative risk category assessment for different free-field external noise levels and states that above a free-field external noise level of approximately 63dB$L_{Aeq,16h}$, there is '*increasing risk of adverse impact'.* Therefore, this has been chosen as the external daytime noise level limit for which open windows cannot be relied upon for the control of overheating.

2.16 To consider the likely internal noise levels based on the above external noise levels, AVO indicates that a reduction in noise levels of around 13dB can be expected across a window that is partially open for ventilation purposes (approximately 2% or the floor area for a room).

Summary

2.17 Based on the above guidance from ADO and AVO, the free-field external noise level limits for which openable windows cannot be relied upon as an overheating strategy are presented in Table 2.1, below.

2.18 The fraction of the floor area stated by each guidance is also presented to aid in determining the corresponding internal or external noise level.

Table 2.1 – Noise Level Limits Above Which Openable Windows Should Not be Used for the Control of Overheating

Period	Minimum Fraction of Floor Area Required	Resulting External – Internal Level Difference, dB	Noise Level Limit, dB	
			External Free-field	Internal
ADO Requirements				
Night-time Ambient, $L_{Aeq,8h}$	4%	-10	50	40
Night-time Maximum, $L_{Amax,F}$			65	55
AVO Suggested Levels				
Daytime Ambient, $L_{Aeq,16h}$	2%	-13	63	50
Night-time Ambient, $L_{Aeq,8h}$			55	42
Night-time Maximum, $L_{Amax,F}$			78	65

External Noise Level Limits

2.19 For traditional external areas that are used as an amenity space, such as gardens and patios, BS8223 states that it is desirable that ambient noise levels should not exceed 50dB$L_{Aeq,16h}$ during the daytime, with an upper limit of 55dB$L_{Aeq,16h}$.

2.20 Furthermore, PNTG provides a limit for 50dB$L_{Aeq,16h}$ to stop '*moderate annoyance'*, and an upper limit of 55dB$L_{Aeq,16h}$ for '*serious annoyance*'. These noise level limits have been used as the design aim for this assessment.

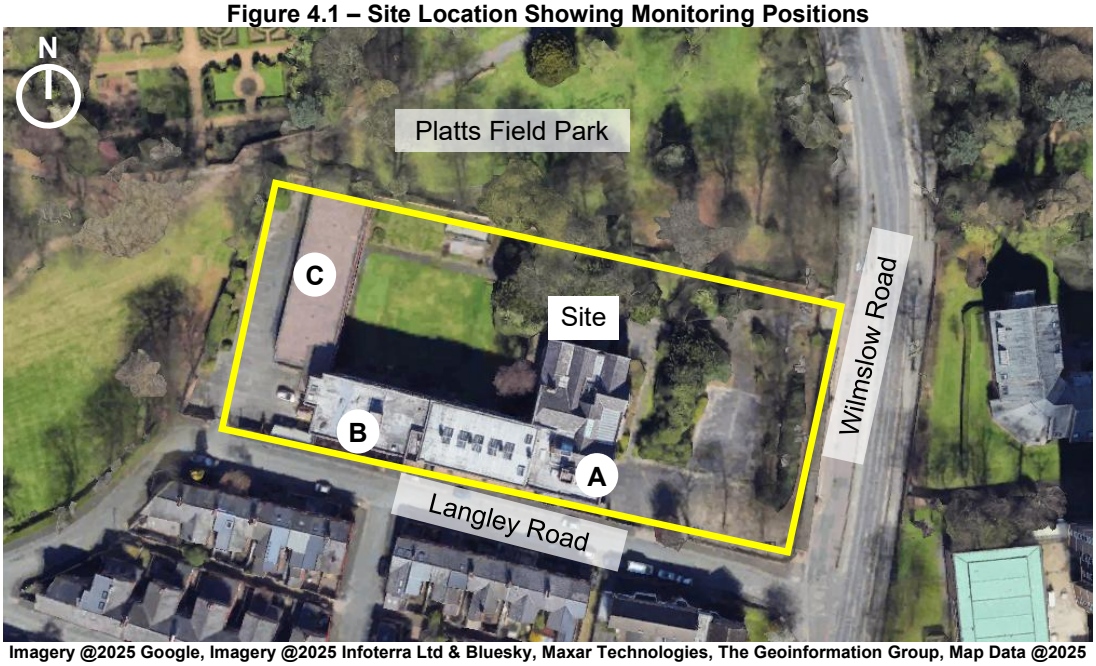
3.0 NOISE CLIMATE

3.1 An extended unattended noise level survey was undertaken by AEC between 1300h on Wednesday 19th and 1200h in Friday 21st November 2025. Measurements were undertaken at 3 locations on the development site, identified as A to C on Figure 4.1.

3.2 Locations A and B were at roof level of the existing two storey building, overlooking Wilmslow Road and Langley Road, respectively. Location C was on the roof of the single storey rear building, overlooking Platts Fields Park.

3.3 All measurements were undertaken under free-field conditions and in general accordance with BS7445-1: 2003 '*Description and measurement of environmental noise. Guide to quantities and procedures*'. A full measurement procedure for the survey is presented in Table B.1 of Appendix B and the measured data is presented in Graphs B.1 to B.3.

Figure 4.1 – Site Location Showing Monitoring Positions



Imagery @2025 Google, Imagery @2025 Infoterra Ltd & Bluesky, Maxar Technologies, The Geoinformation Group, Map Data @2025

3.4 A summary of the daytime ambient and night-time ambient and maximum noise levels is presented in Table 3.1, below for each location. In relation to night-time maximum noise levels, the highest and 10th highest maximum noise levels measured over a 2-minute sampling period are presented in Table 4.1, below.

Table 3.1 – Summary of Measured Free-field Noise Levels

Period	Time, h	Noise Levels, dB					
		Location A (Wilmslow Road)		Location B (Langley Road)		Location C (Platts Field Park)	
		Ambient, L_{Aeq}	Maximum, $L_{Amax,F}$	Ambient, L_{Aeq}	Maximum, $L_{Amax,F}$	Ambient, L_{Aeq}	Maximum, $L_{Amax,F}$
19.11.25	1300-2300	57	-	53	-	51	-
19-20.11.25	2300-0700	51	75 / 63	48	76 / 66	46	69 / 61
20.11.25	0700-2300	56	-	53	-	52	-
20-21.11.25	2300-0700	51	67 / 61	48	75 / 66	-	-
21.011.25	0700-1200	56	-	52	-	-	-

3.5 Following a review of the audio recordings, the main source of noise during both the daytime and night-time periods at all three locations was road traffic, predominantly on Wilmslow Road. However, night-time maximum noise levels at Locations B and C were due to traffic movements on Langley Road.

4.0 ASSESSMENT OF PROPOSED DEVELOPMENT

Determining of External Noise Levels

4.1 Based on the noise levels measured on-site and presented in Table 3.1, distance attenuation, angle of view to the noise source and screening from the buildings and 1.8m high garden fences, the determined noise levels external to the different facades of the development are presented on Figure 4.1 and in Table 4.1, below.

Figure 4.1 – Anticipated Free-field External Noise Levels

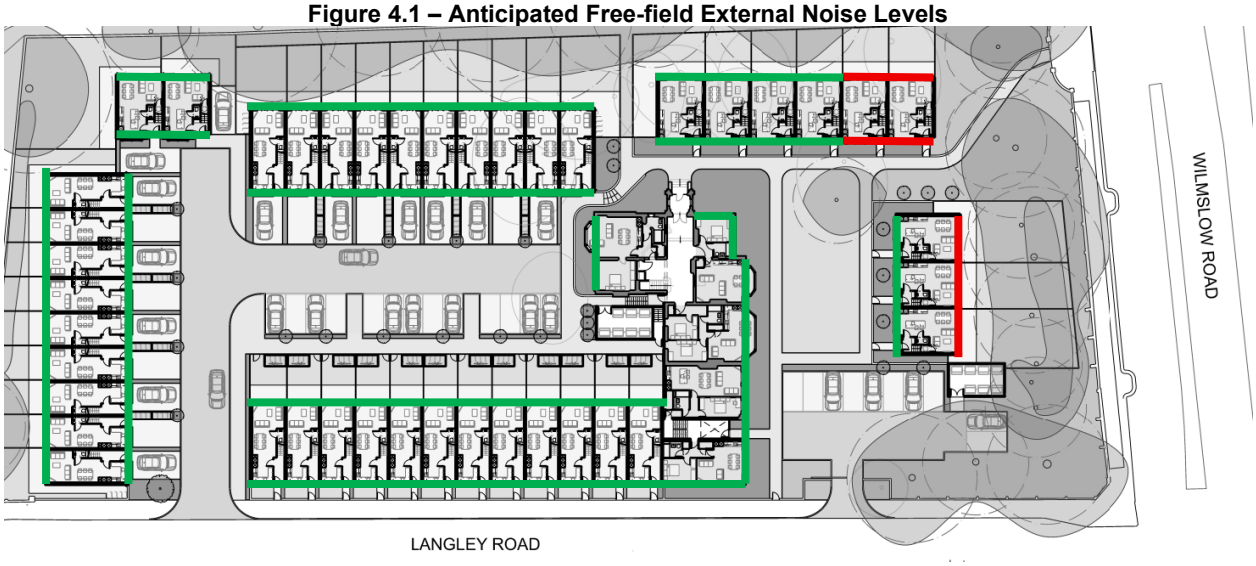


Table 4.1 – Anticipated Free-Field External Noise Levels

Elevation	Daytime Ambient Noise Level, $dBL_{Aeq,16h}$	Night-time Noise Level	
		$dBL_{Aeq,8h}$	$dBL_{Amax,F}$
Red	≤55	≤54	≤70
Green	≤55	≤50	≤60

Glazing and Ventilation Requirements

4.2 The sound insulation requirements of the glazing and ventilators to appropriately control the measured external noise levels to meet the required internal limits have been calculated based on:

- The methodology presented in BS 8233
- Typical bedroom and living room sizes and a glazed area of 40% of the façade
- Room dimensions presented on the provided drawing prepared by Nick Moss Architects
- A single trickle vent per room (in the open position)

4.3 The minimum required glazing and ventilation performance requirements are presented in Table 4.2, below.

Table 4.2 – Glazing and Ventilation Requirements to Achieve Appropriate Internal Noise Levels in Habitable Rooms

Elevation / Colour on Figure 5.1	Sound Insulation Performance			
	Daytime (Living rooms etc.)		Night-time (Bedrooms only)	
	Glazing	Ventilator (open position)	Glazing	Ventilator (open position)
Red	$29dBR_w$ / $25dBR_w + C_{tr}$	$33dBD_{n,e,w}$	$35dBR_w$ / $30dBR_w + C_{tr}$	$38dBD_{n,e,w}$
Green	$29dBR_w$ / $25dBR_w + C_{tr}$	$33dBD_{n,e,w}$	$29dBR_w$ / $25dBR_w + C_{tr}$	$33dBD_{n,e,w}$

4.4 Example glazing build-ups, to achieve the required sound insulation performances presented in Table 4.2, are provided in Table 4.3 below.

4.5 Frames and seals should be selected in order that the above performances are not downgraded.

Table 4.3 – Example Glazing Constructions

Sound Insulation Performance	Example Construction
$35dBR_w$ / $30dBR_w + C_{tr}$	10mm Glass / 12-24mm TC / 4mm Glass
$29dBR_w$ / $25dBR_w + C_{tr}$	4mm Glass / 6-1612-24mm TC / 4mm Glass

4.6 Prior to any glazing being installed, octave band sound insulation performance data of the glazing build-ups and ventilators selected must be verified by AEC or others.

4.7 All background ventilation sound insulation requirements have been based on the use of a single ventilator per room. If more than one unit is required, such as may be required to satisfy Building Control requirements, the performance of each unit might need to be increased.

Purge Ventilation

4.8 Windows can be openable for purge ventilation provided that they are effectively acoustically sealed when closed, as discussed above.

Control of Overheating

4.9 If it is determined by others that there is a need to control overheating within the development, a comparison between the noise levels presented in Table 4.1 and those presented in Table 2.1, indicates that windows can be opened to aid with the control of overheating in all habitable rooms in the development during both the daytime and night-time periods with the exception of the bedrooms on the facades denoted as Red.

4.10 For the windows of the bedrooms on the facades denoted as Red, calculations indicate that the control of overheating can be provided by a partially opened widow that has an equivalent free area of $0.18m^2$.

Non-Glazed Elements

4.11 All non-gazed elements of the external façade should have a sound insulation performance of at least 10dB higher than required for the glazing. Standard masonry walls should achieve a performance that exceeds $45dBR'_w$.

4.12 In terms of the roof, a slate apex roof with a loft cavity and plasterboard ceiling should achieve up to approximately 43dBR'$_w$. Where there is no loft cavity the proposed construction will be reviewed at the construction stage.

External Noise Levels in Gardens

4.13 Based on the measured noise levels and screening provided by the properties, and the 1.8m high close boarded timber garden fences, daytime ambient noise levels within the gardens of the properties would not exceed the upper guideline value of 55dB$L_{Aeq,16h}$ in all of the gardens.

4.14 In the majority of the gardens, ambient noise levels would not exceed 50dB$L_{Aeq,16h}$.Therefore, the requirements would be met.

5.0 SUMMARY & CONCLUSIONS

5.1 Acoustic & Engineering Consultants Limited (AEC) has been instructed by Greyslow Limited to undertake a noise assessment for planning purposes in relation to the proposed residential scheme at Oakley Gardens, 188 Wilmslow Road, Fallowfield.

5.2 The site currently contains a former office building and is bound to the east by Wilmslow Road (A6010), to the south by Langley Road and to the west and north by Platts Fields Park. An existing site plan is presented in Figure 3.1 of Section 3.0.

5.3 A daytime and night-time noise survey was undertaken by AEC in November 2025 and the main noise source in the area was road traffic on the surrounding roads. Full details of the noise level survey are presented in Appendix B.

5.4 The assessment, based on methodology presented in BS8233, Pro-PG and Manchester City Council's own guidance documents PNTG, has demonstrated that for the majority of the site standard double glazing and acoustic trickle ventilators would be required to meet the internal noise level limits. On the noisiest elevations, denoted as Red, enhanced acoustic glazing and acoustic trickle ventilators would be required.

5.5 The assessment also shows that external noise levels in gardens would also not exceed the limits presented in BS8233 and PNTG for amenity spaces.

5.6 Based on this assessment, noise should not be considered a determining factor in relation to any planning permission being sought.

APPENDIX A – Acoustic Terminology in Brief

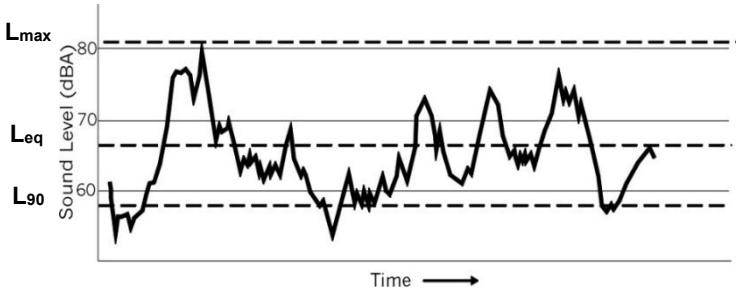
General

Sound is produced by mechanical vibration of a surface, which sets up rapid pressure fluctuations in the surrounding air. The rate at which the pressure fluctuations occur determines the pitch or *frequency* of the sound. The frequency is expressed in Hertz *(Hz)*, that is, cycles per second. The human ear is sensitive to sounds from about 20 Hertz to 20,000 Hertz. Although sound can be of one discreet frequency - a 'pure tone' - most noise is made up of many different frequencies.

The human ear is more sensitive to some frequencies than others, and modern instruments can measure sound in the same subjective way. This is the basis of the A-weighted sound pressure level *dBA,* normally used to assess the effect of noise on people. The dBA weighting emphasizes or reduces the importance of certain frequencies within the audible range

Sound / Noise Units

The figure below shows an example of sound level varying with time. Because of this variation over time the same period of noise can be described by several different levels. The most common of these are described below.



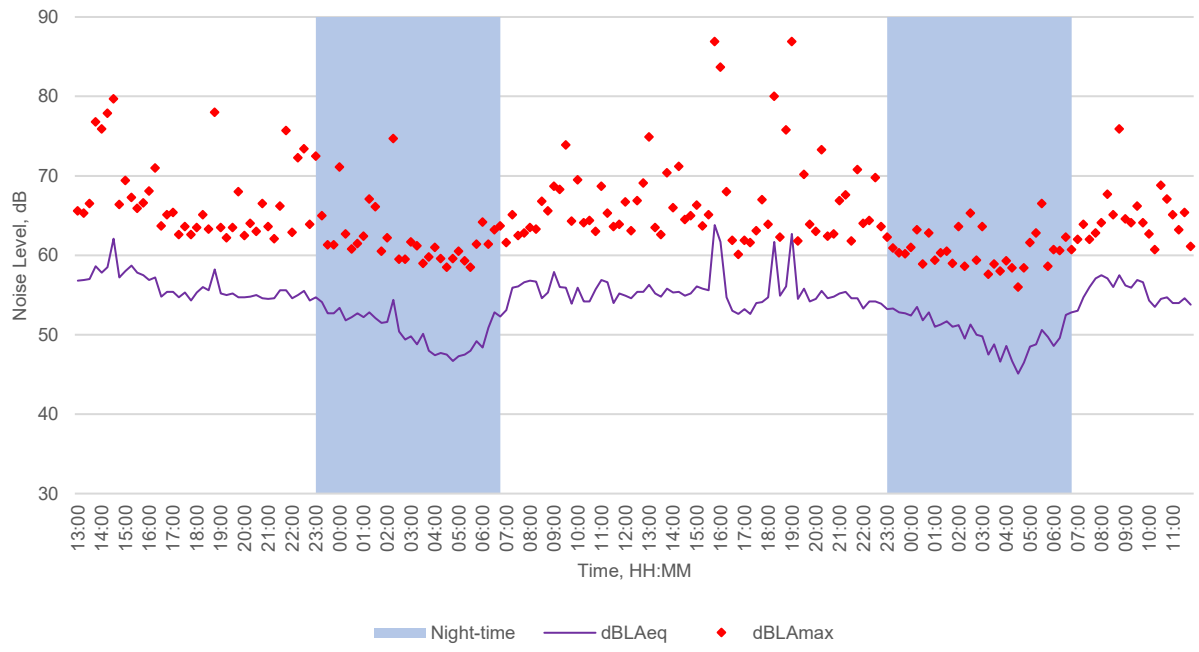
Commonly Used Descriptors for Sound / Noise	
$L_{Amax,F/S}$	The maximum (A-weighted) sound level measured during a given time. 'Fast' or 'Slow' meter response should be cited.
$L_{Aeq,T}$	The equivalent continuous (A-weighted) sound level. It may be thought of as the "average" sound level over a given time, T. It is used for assessing noise from various sources: industrial and commercial premises, construction sites, railways and other intermittent noises. **It can be considered as the "ambient" noise level.**
Free-field Level	This refers to the sound level measured outside, away from reflecting surfaces.
R_w	Single number rating used to describe the laboratory airborne sound insulation properties of a material or building element over a range of frequencies, typically 100-3150Hz.
R'_w	Apparent sound reduction index - Single number rating used to describe the sound reduction index of an on-site construction over a range of frequencies, typically 100-3150Hz.
$D_{n,e,w}$	Element normalised level difference. Single number rating used to describe the sound insulation performance of small elements
C_{tr}	A road traffic spectrum adaptation term which is used to describe the low frequency sound insulation performance of building elements.

APPENDIX B – Noise Survey Details

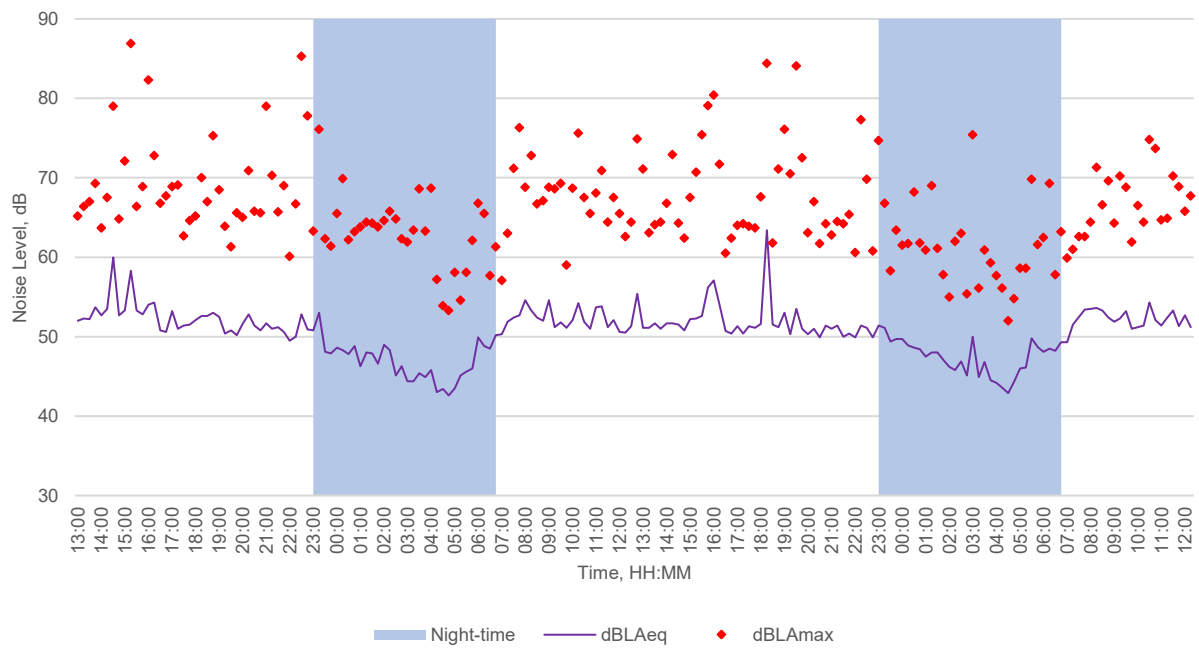
Table B.1 – Environmental Measurement Procedure

Date & Time of Survey:	1300h on Wednesday 19th to 1200h on Friday 21st November 2025.					
Personnel:	Paul Knowles (AEC).					
Equipment Used:	Cirrus CR:171B Real Time Analyser (AEC Kit 3). Cirrus CR:171B Real Time Analyser (AEC Kit 5). NTI Audio XL2 Sound Level Meter & Acoustic Analyzer (AEC Kit 6).					
Calibration:	The sound level analysers, which conform to BS EN 61672-1: 2013 *'Electroacoustics – Sound level meters - Part 1 Specifications'* for Class 1 Type Z meters, was in calibration and check calibrated before and after the measurement periods using a Brüel & Kjær type 4231 (94dB) calibrator. There was no significant drift of calibration. Calibration certificates are available on request.					
Weather Conditions:	**Date**	**Period**	**Wet/Dry**	**Temp °C**	**Wind Speed & Direction**	**Cloud Cover**
	19.11.25	Day	Dry	1-4°C	N and 5m/s	0%
	19-20.11.25	Night	Dry	1°C	N and 3m/s	0%
	20.11.25	Day	Dry	2-4°C	N and 4m/s	0%
	20-21.11.25	Night	Dry	-5--2°C	N and 1m/s	0%
	21.11.25	Day	Dry	2-4°C	N and 1m/s	0%
Measurement Locations:	Measurements were undertaken at three locations around the development site. Identified as A to C on Figure 3.1 and described below. A – On the roof the building overlooking Wilmslow Road. B – On the roof the building overlooking Langley Road. C – On the roof the building overlooking Platts Field Park.					
Measurement Details:	Measurements at Locations A to C were undertaken under free-field conditions. Measurements were undertaken over various periods in terms of L_{eq} and L_{max} and were logged continuously over 1s for post processing and assessment. The measured noise levels for the daytime and night-time periods for the unattended survey is presented on Graphs B.1 to B.3.					
Measured Data:	Full 1/3rd octave/octave band centre frequency data was obtained for all measurements.					

Graph B.1 - Noise Levels Measured at Location A



Graph B.2 - Noise Levels Measured at Location B



Graph B.3 - Noise Levels Measured at Location C

