

Phase 2 Newton Heath Manchester

Acoustic Assessment Report:
- *Planning Condition 18 (Internal Noise Levels)*

Client:

Casey Group Limited
Rydings Road, Rochdale
OL12 9PS

Date:

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Our Ref:

22042-RP-3-R0



**JAMESON
ACOUSTICS**

Consultants in acoustics,
noise and vibration

Document Control

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1.0 Introduction

Jameson Acoustics Limited has been commissioned by Casy Group Limited to survey and assess internal noise levels within a selection of new dwellings at the recently constructed Phase 2 residential development on land off Oldham Road in Newton Heath. The aim is to assist in the discharge of Planning Condition 18, which states:

No	Wording
18	<p>(a) Prior to the first occupation of each phase of the development a scheme for acoustically insulating the proposed residential accommodation within the relevant phase against noise from Oldham Road, the local traffic network and surrounding commercial uses shall be submitted for approval in writing by the City Council, as Local Planning Authority. The approved noise insulation scheme shall be completed before the first occupation of the relevant phase of the development.</p> <p>Noise survey data must include measurements taken during a rush-hour period and night time to determine the appropriate sound insulation measures necessary. The following noise criteria will be required to be achieved:</p> <p>Bedrooms (night time - 23.00 - 07.00) 30 dB L Aeq (individual noise events shall not exceed 45 dB L Amax,F by more than 15 times)</p> <p>Living Rooms (daytime - 07.00 - 23.00) 35 dB L Aeq Gardens and terraces (daytime) 55 dB L Aeq</p> <p>(b) Prior to the first occupation of each phase of the development, a verification report for the relevant phase will be required to validate that the work undertaken conforms to the recommendations and requirements approved as part of part (a) of this planning condition. The verification report shall include post completion testing to confirm the noise criteria has been met. In instances of non-conformity, these shall be detailed along with mitigation measures required to ensure compliance with the noise criteria.</p> <p>Any mitigation measures shall be implemented in accordance with a timescale to be agreed with the City Council, as Local Planning Authority, and thereafter retained and maintained in situ.</p> <p><i>Reason: To secure a reduction in noise from traffic or other sources in order to protect future residents from noise disturbance pursuant to policies SP1, H1 and DM1 of the Core Strategy (2007) and saved policy DC26 of the Unitary Development Plan for the City of Manchester (1995).</i></p>

2.0 Project Information

The development comprises 28nr residential houses and 6nr apartments (within a single block) as shown on the below Site Layout.

Each property is afforded double glazed windows and either MVHR ventilation (to all apartments and Plots 7 to 15 along Oldham Road) or trickle ventilators (all other Plots) in window frames. These were specified at design stage, by others, to satisfy acceptable internal noise levels following the guidance and initial specifications in our Noise Impact Assessment Report 22042-RP-1-R1 dated 4 August 2023.

External walls are formed from outer facing brick, insulated cavity, internal blockwork and plasterboard lining.



Site Layout

3.0 Planning Application Report

The planning application noise report was prepared by Jameson Acoustics; report ref: Noise Impact Assessment Report 22042-RP-1-R1 dated 4 August 2023. In this report, the following guidance and preliminary specifications were provided:

Windows:

Façade Zone (ref. Figure below table)	Min. Required Sound Reduction $R_w + C_{tr}$ (dB)	Example Configuration
RED	36	10.8 / 16 / 6.4 mm (aco. lam.)
ORANGE	32	8 / 16 / 6.4 mm (lam.)
BLUE	28	6 / 16 / 6 mm



Façade acoustic specification zones (all levels)

Ventilation:

‘MEV with trickle ventilators’ could be a feasible approach for habitable rooms in the **blue** façade zones and, possibly, the **orange** zones too (with reference to the Figure above). However, the trickle ventilators will need to be suitably acoustically rated, which may necessitate the use of trickle ventilators with in-built acoustic attenuators. Such products are available, and prospective suppliers will need to demonstrate their products can achieve the following minimum element sound level difference specifications:

- **Orange** zone : 38 dB $D_{n,e,w} + C_{tr}$
- **Blue** zone : 34 dB $D_{n,e,w} + C_{tr}$

MEV with trickle ventilators is unlikely to be a suitable option for habitable rooms in the **red** zone. It may be possible to find a natural ventilation solution that provides sufficient sound reduction in this zone, but such vents would be specialist high performance acoustic in-wall solutions which are often difficult to incorporate into the façade design.

Instead, for habitable rooms in the **red** zone, a more appropriate solution would be whole-dwelling mechanical ventilation (MVHR) which do not require any acoustically compromising direct natural ventilation openings in the façade.

4.0 Acceptable Internal Noise Levels

On the basis of the above, the following table summarises what we understand to be the agreed acceptable internal noise levels to be achieved within dwellings.

The requirements apply to finished and furnished dwellings with in-wall trickle ventilators open and windows closed.

Location (wrt Figure in Section 3.0)	Acceptable Internal Noise Level	
	Daytime (07:00-23:00)	Night-time (23:00-07:00)
Living Rooms	35 dB $L_{Aeq,16hr}$	-
Bedrooms	35 dB $L_{Aeq,16hr}$	30 dB $L_{Aeq,8hr}$ 45 dB* L_{Amax}

* not to be exceeded by scheduled noise events more than 10-15 times per night

5.0 Internal Noise Level Survey

5.1 Procedure

Automated noise level measurements were taken from 10:00 hours on Friday 20 February 2026 to 08:00 hours on Monday 23 February 2026 within 4nr test habitable rooms as described below.

The positions were selected to establish the typical prevailing daytime and night-time internal ambient and maximum noise levels within habitable rooms across a range of apartments plots across the site. A minimum 10% coverage has been provided (1nr out of 6nr apartments, 3nr out of 28nr house plots).

Position	Description
1	Apartment 03 – First floor dual aspect living room facing Oldham Road. – <i>Red/Orange Façade Zone</i>
2	Plot 12 – First floor bedroom facing Oldham Road. – <i>Red Zone</i>
3	Plot 16 – First floor bedroom with view of Old Church St. – <i>Blue Zone</i>
4	Plot 28 – First floor rear facing bedroom with view of Lidl car park. – <i>Blue Zone</i>

Windows were closed and trickle ventilators were open throughout the survey period. In Apartment 3 and Plot 12, the MVHR unit was set to operate to provide Part F background ventilation rates.



Site Plan showing measurement locations

The microphones were fitted with windshields and mounted in the centre of the rooms, at least 1.4 metres from walls at a height of 1.6-1.7 metres.

The equipment was programme to continuously log all relevant A-weighted broadband (dBA) and linear spectral noise level indices, including L_{eq} , L_{90} , L_{10} and L_{max} , over 5-minute, 15-minute and 1-hour intervals.

5.2 Instrumentation

The instrumentation used for the survey is summarised below. The sound level meters were hand-calibrated at the beginning and end of the survey periods. No significant deviations in calibration level were noted.

Description	Equipment	Serial Nr	Lab Calibration Expiry	Lab Calibration Certificate Nr
Class 1 sound level meter	Svantek 971A (with Type 7152 mic)	124663 (82835)	26 Aug 2026	1509611-1
Class 1 sound level meter	Svantek 971A (with Type 7152 mic)	131642 (85571)	25 July 2027	1512926-2
Class 1 sound level meter	Svantek 971A (with Type 7152 mic)	154301 (94512)	16 Jan 2027	16 Jan 2025
Class 1 sound level meter	Svantek 971A (with Type 7152 mic)	154288 (94517)	16 Jan 2027	16 Jan 2025
Class 1 sound calibrator	Cirrus CR:515	57570	11 Nov 2026	1190855

5.3 Weather Conditions

Due to the nature of the survey, i.e. unmanned, it is not possible to describe the weather conditions throughout the duration of the survey period. However, on install and collection, weather conditions were considered suitable for obtaining representative internal readings, with overcast skies, low wind speeds and dry roads. Based on internet weather reports, conditions generally remain suitable for representative readings, albeit with some periods of light rainfall.

5.4 Results

The results of the surveys have been plotted on Time History Graphs 22042-G1 to G4 enclosed in Appendix B. The graphs present the uncorrected 15-minute A-weighted (dBA) L_{eq} and L_{max} levels at each position throughout the duration of the survey.

The graphs include indicators of periods affected by construction noise or (for Position 1 & 2 on Oldham Road) from passing emergency vehicles with sirens (evident by an atypical sharp rise in noise level and high tonal content in the spectral response). NB: Plot 12 was finished to the point of being sealed off from trades, hence construction activities were not influential on internal noise level readings in this dwelling.

6.0 Internal Noise Level Assessment

The internal noise levels are to be achieved in finished and furnished rooms. The rooms tested were finished but unfurnished, without floor coverings laid. The correction from unfurnished to furnished rooms of this size (typically 4m x 3m x 2.5m) is 2 dB, calculated by a reverberation time correction (a conservative 0.8 seconds unfurnished to the BS 8233 reference time of 0.5 seconds furnished).

With periods of construction noise and/or emergency sirens excluded, and with the reverberation time correction applied, the following tables summarises the measured internal ambient L_{Aeq} and maximum L_{Amax} noise levels in each test room.

Position 1 – Apartment 03

Period Commencement (Day/Night of...) 2026	Ambient Noise Level (dB)		10-15 th Highest Noise Level at Night, dB <i>L</i> _{Amax,5min} (23:00-07:00)
	Daytime <i>L</i> _{Aeq,16hr} (07:00-23:00)	Night-time <i>L</i> _{Aeq,8hr} (23:00-07:00)	
Friday 20 February (15:00-23:00)	32	30	-
Saturday 21 February	33	29	-
Sunday 22 February	31	29	-
Max.	33	30	-
<i>Upper Limit</i>	35	30	-
Compliance/Exceedance	✓	✓	-

Position 2 – Plot 12

Period Commencement (Day/Night of...) 2026	Ambient Noise Level (dB)		10-15 th Highest Noise Level at Night, dB <i>L</i> _{Amax,5min} (23:00-07:00)
	Daytime <i>L</i> _{Aeq,16hr} (07:00-23:00)	Night-time <i>L</i> _{Aeq,8hr} (23:00-07:00)	
Friday 20 February (15:00-23:00)	33	29	44
Saturday 21 February	33	29	43
Sunday 22 February	32	29	43
Max.	33	29	44
<i>Upper Limit</i>	35	30	45
Compliance/Exceedance	✓	✓	✓

Position 3 – Plot 16

Period Commencement (Day/Night of...) 2026	Ambient Noise Level (dB)		10-15 th Highest Noise Level at Night, dB <i>L</i> _{Amax,5min} (23:00-07:00)
	Daytime <i>L</i> _{Aeq,16hr} (07:00-23:00)	Night-time <i>L</i> _{Aeq,8hr} (23:00-07:00)	
Friday 20 February (15:00-23:00)	33	29	45
Saturday 21 February	33	29	43
Sunday 22 February	34	29	44
Max.	34	29	45
<i>Upper Limit</i>	35	30	45
Compliance/Exceedance	✓	✓	✓

Position 4 – Plot 28

Period Commencement (Day/Night of...) 2026	Ambient Noise Level (dB)		10-15 th Highest Noise Level at Night, dB <i>L</i> _{Amax,5min} (23:00-07:00)
	Daytime <i>L</i> _{Aeq,16hr} (07:00-23:00)	Night-time <i>L</i> _{Aeq,8hr} (23:00-07:00)	
Friday 20 February (15:00-23:00)	24	22	39
Saturday 21 February	26	23	37
Sunday 22 February	25	21	37
Max.	26	23	39
<i>Upper Limit</i>	35	30	45
Compliance/Exceedance	✓	✓	✓

The results demonstrate that, in all test rooms, the internal ambient noise levels and internal maximum noise levels at night achieved the upper limits of acceptable internal noise levels (as presented in Section 4.0).

7.0 Conclusion

Jameson Acoustics Limited has been commissioned by Casy Group Limited to survey and assess internal noise levels within a selection of new dwellings at the recently constructed Phase 2 residential development on land off Oldham Road in Newton Heath. The aim is to assist in the discharge Planning Condition 18.

The assessment demonstrates that internal noise levels within the tested dwellings achieved the upper limits of acceptable internal noise levels.

Appendix A – Acoustic Terminology

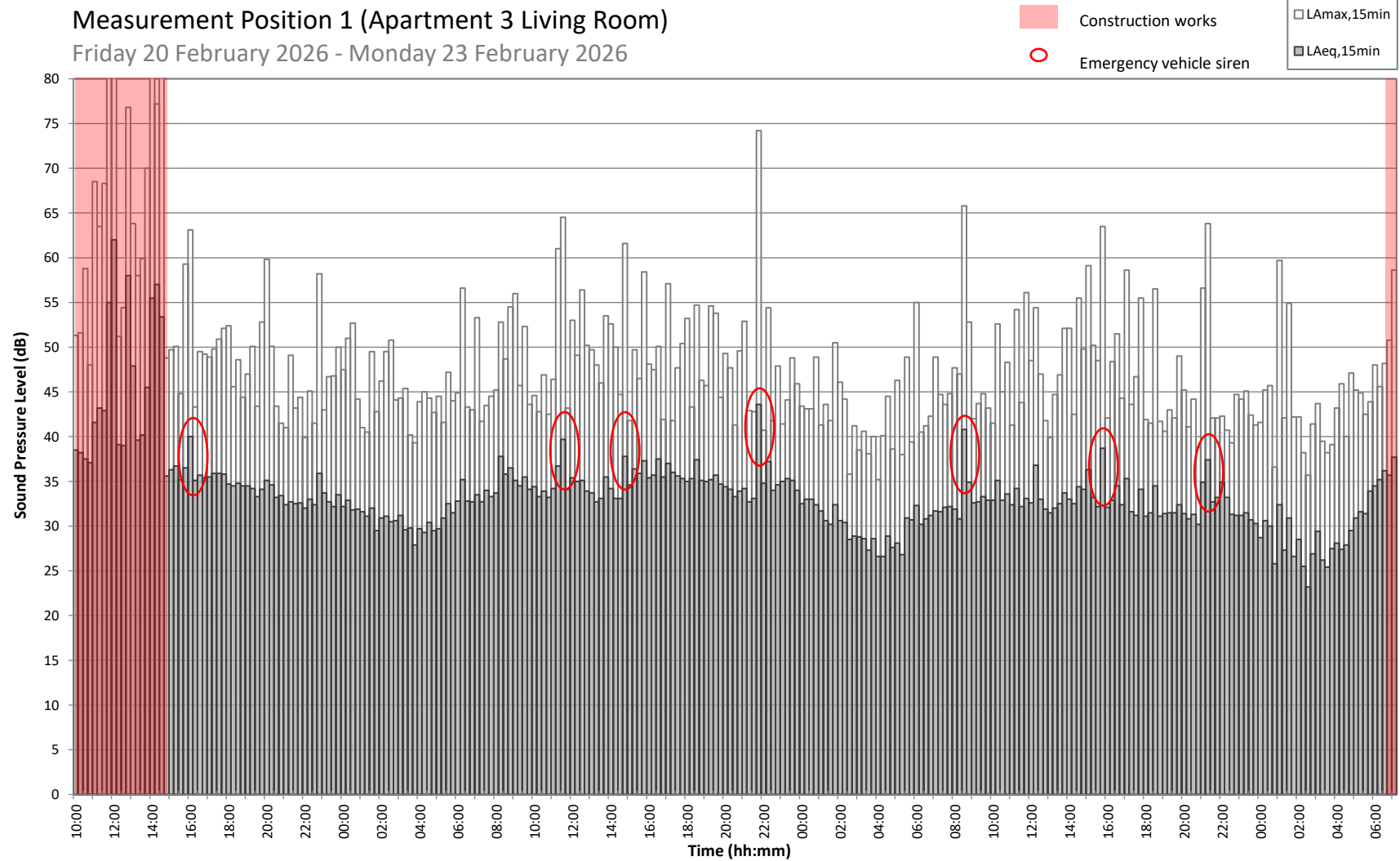
dB	Decibel - Used as a measurement of sound level. Decibels are not an absolute unit of measurement but an expression of ratio between two quantities expressed in logarithmic form.
dB(A)	The human ear is more susceptible to mid-frequency noise than the high and low frequencies. The 'A'-weighting scale approximates this response and allows sound levels to be expressed as an overall single figure value in dBA. The _A subscript is applied to an acoustical parameter to indicate the stated noise level is A-weighted (e.g. $L_{Aeq,T}$ in dB). Noise levels in dBA do not have a linear relationship to each other; for similar noises, a change in noise level of 10dBA represents a doubling or halving of subjective loudness. A change of 3dBA is only just perceptible.
$L_{Aeq,T}$	$L_{Aeq,T}$ is the equivalent continuous sound pressure level. It is an average of the total sound energy measured over a specified time measurement period, T .
$L_{10,T}$	L_{10} is the noise level exceeded for 10% of the measurement period T (i.e. the quietest 10% of the measurement) and has, for many years, been used in the assessment of road traffic noise.
$L_{90,T}$	L_{90} is the noise level exceeded for 90% of the measurement period T (i.e. the quietest 10% of the measurement) and is often used to describe the 'background' noise level.
L_{max}	L_{max} is the maximum sound pressure level recorded over the measurement period, T . L_{max} is often used in assessing scheduled environmental noise 'events' (such as train passbys), particularly at night where such events may cause sleep disturbance.
R_w	The weighted sound reduction index, R_w , is a single figure description of sound reduction as defined in BS EN ISO 717-1. It is single-number quantity which characterizes the airborne sound insulating properties of a material or building element over a range of frequencies. The R_w is calculated from sound insulation measurements taken in an acoustic laboratory. Sound insulation ratings derived from site measurements are invariably lower than the laboratory figures and are referred to as the apparent weighted sound reduction index, R'_w .
$D_{n,e,w}$	The weighted element-normalised level difference, $D_{n,e,w}$, is a single figure description of the sound insulation performance of small building elements, such as a trickle ventilator.
C_{tr}	C_{tr} is correction term applied against the sound insulation single-number values (e.g. R_w) to provide a weighting against low frequency performance. The reference values used within the C_{tr} calculation are based on urban traffic noise.

Appendix B – Time History Graphs

Phase 2 Newton Heath, Manchester

Measurement Position 1 (Apartment 3 Living Room)
Friday 20 February 2026 - Monday 23 February 2026

22042-G1

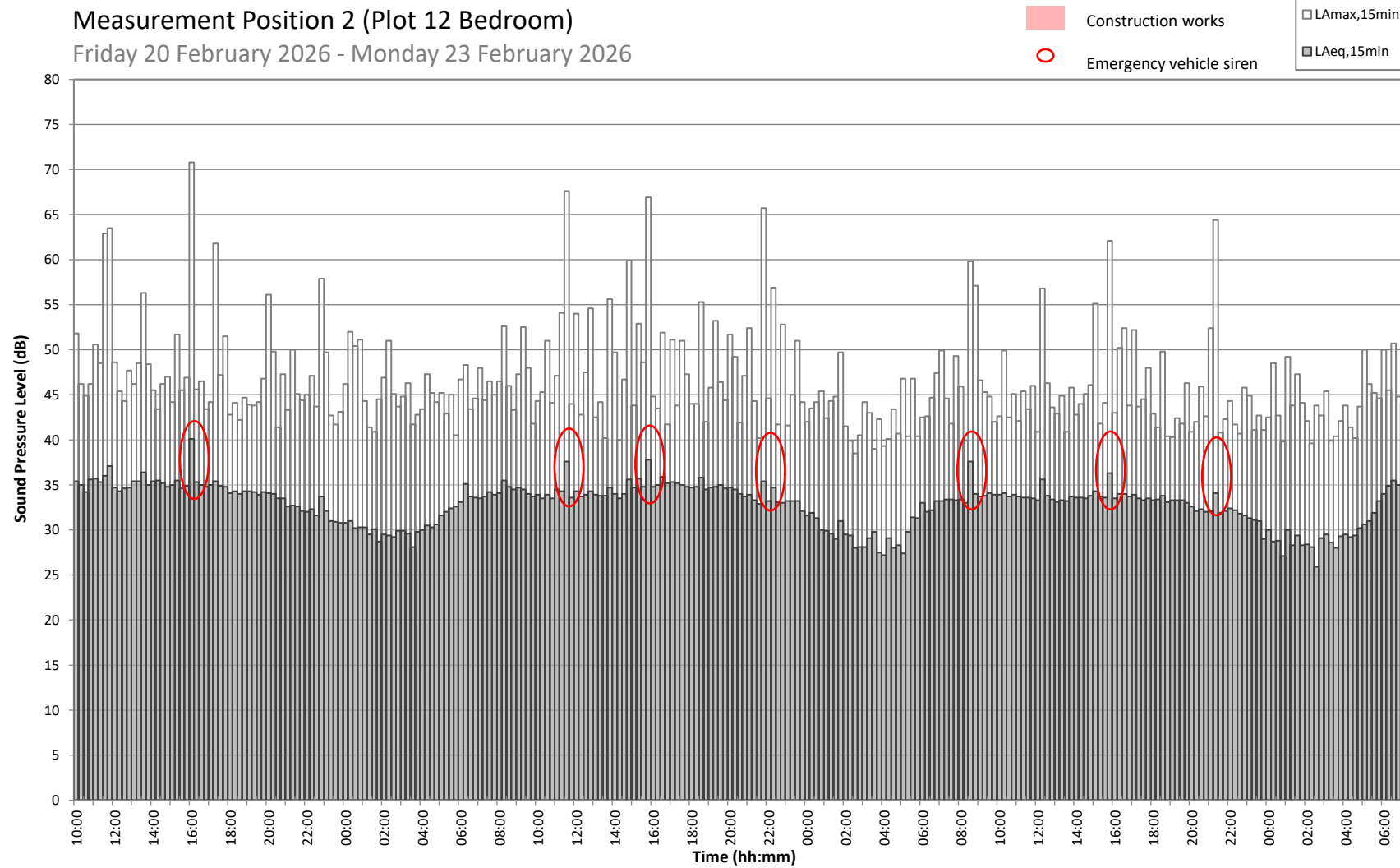


Phase 2 Newton Heath, Manchester

Measurement Position 2 (Plot 12 Bedroom)

Friday 20 February 2026 - Monday 23 February 2026

22042-G2

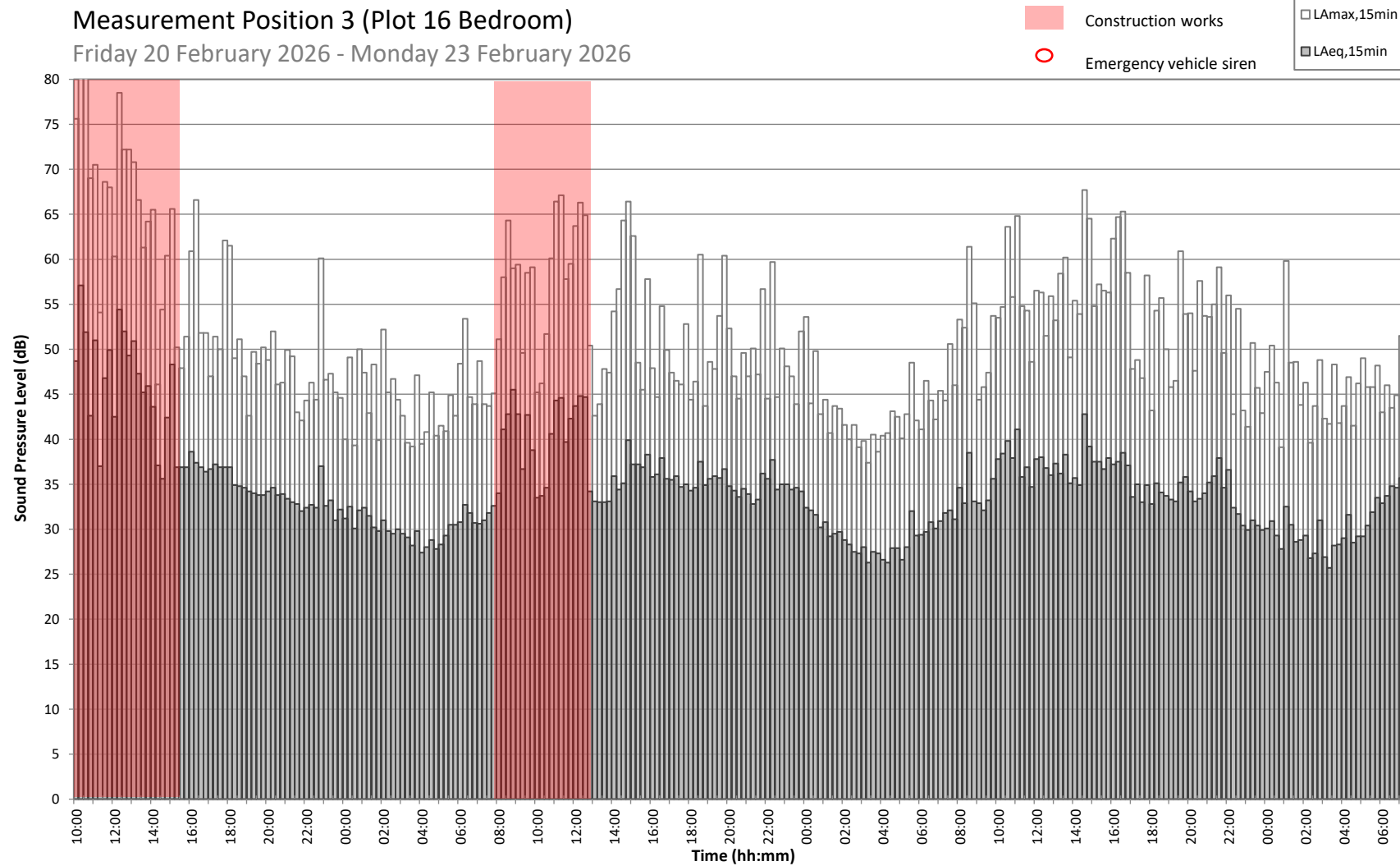


Phase 2 Newton Heath, Manchester

Measurement Position 3 (Plot 16 Bedroom)

Friday 20 February 2026 - Monday 23 February 2026

22042-G3



Phase 2 Newton Heath, Manchester

Measurement Position 4 (Plot 28 Bedroom)

Friday 20 February 2026 - Monday 23 February 2026

22042-G4

