Deansgate South, Manchester

Planning condition 18b - Noise Insulation Scheme

8512.8A

3rd June 2026

Revision A

ANC ACOUSTICS & NOISE CONSULTANTS

Institute of Acoustics sponsoring organisation

Deansgate South, Manchester

Planning Condition 18b – Noise Insulation Scheme

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2 Summary

2.1 Noise levels have been measured in sample bedrooms to determine compliance with Planning Condition 18.

2.2 Long-term measurements have been undertaken in 4 no. sample bedrooms covering night-time periods to establish external noise ingress through the building façade. Additional short-term measurements have also been undertaken for the ventilation system.

2.3 The results of the noise measurements show compliance with the planning condition requirements.

3 Introduction

3.1 This report includes the results of pre-completion measurements to address Planning Condition 18.

3.2 **Planning Condition 18**

3.3 The Appeal Decision Notice (reference no. *APP/B4215/W/21/3287525*) includes the following condition

3.4 *18. a. Notwithstanding the details shown in the approved drawings and documents, before the development commences a scheme for acoustically insulating the proposed student accommodation against noise from Bridgewater Viaduct, Deansgate, and the nearby tram and railway lines shall be submitted to and approved in writing by the local planning authority.*

The potential for overheating shall also be assessed and the noise insulation scheme shall take this into account. The approved noise insulation and ventilation scheme shall be completed before any of the units are occupied.

Noise survey data shall include measurements taken during a rush-hour period and night time to determine the appropriate sound insulation measures necessary. The following noise criteria shall be required to be achieved:

Bedrooms (night time 23:00 to 07:00) - 30 dB L_{Aeq} (individual noise events shall not exceed 45 dB L_{AmaxF} by more than 15 times);

Living rooms (daytime 07:00 to 23:00) - 35 dB L_{Aeq}

Gardens and terraces (daytime) - 55 dB L_{Aeq}.

b. Prior to first occupation of the student accommodation units, a verification report to validate that the work undertaken throughout the development conforms to the recommendations and requirements in the approved acoustic consultant's report shall be submitted to and approved in writing by the local planning authority. The report shall include post completion testing to confirm that the internal noise criteria have been met. Any instances of non-conformity with the recommendations in the report shall be detailed along with any measures required to ensure compliance with the internal noise criteria. Those measures shall be implemented in full before any of the units are first occupied.

3.5 Report reference 8512.2A has been issued for the discharge of the pre-commencement condition 18a.

3.6 The indoor ambient noise limits (IANLs) proposed in Planning Condition 18 is a cumulative noise limit including external noise ingress and noise from ventilation services (MVHR).

3.7 Measurements of external noise ingress have therefore been taken within sample rooms to determine compliance with the above criteria.

3.8 Long-term measurements have been undertaken in 4 no. sample bedrooms covering daytime and night-time periods. Additional short-term measurements have also been undertaken for noise from MVHR system. As the rooms are provided with an alternative method of ventilation, measurements were carried out with windows closed.

4 Measurement Details

4.1 Details of the equipment used for the measurements are included in Table 1.

Equipment	Model	Serial no.
Sound level meter	NTi XL2	A2A-20287-E0
Calibrator	Larson Davis CAL 200	A2A-20287-E0
Sound level meter	NTi XL3	A3A-01135-F0
Calibrator	Larson Davis CAL 200	22086
Sound level meter	NTi XL3	A3A-01140-F0
Calibrator	Larson Davis CAL 200	21846
Sound level meter	NTi XL2	A2A-11062-E0
Calibrator	Larson Davis CAL 200	13403
Sound level meter	NTi XL2	A2A-14205-E0
Calibrator	Larson Davis CAL 200	15308

Table 1: Equipment used for the measurements

4.2 **Long-term measurements – External noise ingress**

4.3 Noise levels were measured from Wednesday 20th May to Thursday 21st May 2026 for Rooms 01.01a, 1.09c, and 1.12, and from Monday 1st June to Tuesday 2nd June 2026 for Room 1.06 during the night-time periods (23:00-07:00).

4.4 The measurements were taken in first floor bedrooms, which are the first level with habitable rooms and the likely worst case noise levels from the local road traffic noise.

4.5 The measurement locations are presented in Appendix A and the results are summarised in Table 2.

4.6 Due to on-going construction activities noise measurements were not undertaken during the day-time period (07:00-23:00).

4.7 The microphone was mounted on a tripod at a height of approximately 1.5 m at a position as close to the bed head as reasonably practical.

4.8 The below measurements were undertaken with MVHR system turned 'off' to establish external noise ingress through the building façade.

Room	Period	Date & Time	Measured internal noise level dB, $L_{Aeq,T}$	Maximum noise level dB $L_{Amax,F}$ dB
01.01a En-suite	Night	Start: 20/05/2026 – 23:00 Finish: 20/05/2026 – 07:00	26	41[1]
1.06 One bed		Start: 01/06/2026 – 23:00 Finish: 02/06/2026 – 07:00	24	38[1]
1.09c Studio		Start: 20/05/2026 – 23:00 Finish: 20/05/2026 – 07:00	19	30[1]
1.12 En-suite		Start: 20/05/2026 – 23:00 Finish: 20/05/2026 – 07:00	24	36[1]
[1]15th highest $L_{Amax,F}$ value from continuously logged 2-minute measurements.				

Table 2: Long-term night-time measurement results

4.9 **Daytime Noise Levels**

4.10 Due to on-going construction activities noise measurements were not undertaken during the day-time period (07:00-23:00).

4.11 Daytime noise levels have therefore determined reference to the night-time noise levels measured during commissioning (Table 2), and the daytime and night-time external noise survey undertaken at the planning stage (Report reference 8512.2A).

4.12 The planning stage noise survey indicates that the daytime external noise levels were typically 8 - 9 dB $L_{Aeq,T}$ higher than the corresponding night-time external noise levels.

4.13 On this basis, a correction of 9 dB has been applied to the measured night-time internal noise levels presented on Table 2 to derive daytime internal noise levels. The resulting daytime internal noise levels are presented on Table 3 below.

Room	Period	Time	Predicted internal noise level dB, $L_{Aeq,T}$
01.01a En-suite	Day	07:00– 23:00	35
1.06 One bed			33
1.09c Studio			28
1.12 En-suite			33

Table 3 : Predicted daytime internal noise levels

4.14 **Short-term measurements - MVHR**

4.15 The measurement results for MVHR are summarised in Table 4. The background, $L_{A90,}$ measured levels have been used to account for any intermittent noise sources during the measurements.

4.16 All results are the highest L_{A90} of 3 x 30 sec measurements, at locations distributed around the room.

4.17 Measurements were taken on 20th May (between 16:30 and 17:30 hours).

Room	Measured MVHR noise level dB, $L_{A90,T}$
01.01a En-suite	28
1.06 One bed	28
1.09c Studio	27
1.12 En-suite	26

Table 4: Short-term measurement results - MVHR

4.18 **Cumulative Noise Levels**

4.19 The indoor ambient noise limits (IANLs) proposed in Planning Condition 18 is a cumulative noise limit including external noise ingress and noise from ventilation services (MVHR).

4.20 On this basis Table 5 below presents summary of the indoor ambient noise levels and maximum noise levels in rooms measured.

Room	Period	Measured internal noise level dB, $L_{Aeq,T}$	Maximum noise level dB $L_{Amax,F}$ dB	Compliance to Planning Condition 18
01.01a En-suite	Day (07:00–23:00)	36 [1]	-	See Note 1 below
	Night (23:00–07:00)	30	41[2]	Yes
1.06 One bed	Day (07:00–23:00)	34	-	Yes
	Night (23:00–07:00)	30	38[2]	
1.09c Studio	Day (07:00–23:00)	31	-	Yes
	Night (23:00–07:00)	28	30[2]	
1.12 En-suite	Day (07:00–23:00)	34	-	Yes
	Night (23:00–07:00)	28	36[2]	

Note 1 – *The IANL value is expected to be 35 dB $L_{Aeq,T}$ once the room is fully furnished and will comply with Condition 18.*
Note 2 – *15th highest $L_{Amax,F}$ value from continuously logged 2-minute measurements.*

Table 5 : Cumulative IANL noise levels

4.21 **Discussion**

4.22 It can be seen from the results presented in Table 5 that the measured levels comply with the planning condition requirements.

4.23 The only potential exception is Room 01.01a during the daytime period, which exceeded the criterion by 1 dB. However, this room is expected to comply with the daytime requirements once it is fully furnished.

5 Conclusion

5.1 Internal noise measurements have been carried out within sample bedrooms.

5.2 It is considered that the results of the measurements demonstrate compliance with the requirements of Planning Condition 18.

Appendix A Measurement Locations



Figure 1 : Measurement Locations