

MPF/PR0694/L02

14 November 2025

Lee Hickey
Renaker Build Ltd
1st Floor
NQ Building
47 Bengal Street
Manchester
M4 6BB

Flint Glass Works
64 Jersey Street
Manchester M4 6JW

0161 605 0905 
info@fisheracoustics.co.uk 
www.fisheracoustics.co.uk 

Dear Lee

VITA STUDENT 9B, MANCHESTER

I write with regard to condition 14a of the planning approval (planning reference 141786/FO/2024) for Vita Student 9B, Manchester.

PLANNING CONDITION

Condition 14a of planning approval 141786/FO/2024 states:

- 14) Notwithstanding the details within the Chapter 8 of the Environmental Statement (Noise and Vibration) stamped as received 20-12-25 and the supporting Acoustics, Ventilation & Overheating Report Reference: Z19B-FAC-A180-Rp-XX-003 P02 March 2025 by Fisher Acoustics stamped as received on 07-03-25

(a) Prior to commencement of above ground works a final scheme for acoustically insulating and mechanically ventilating the PBSA accommodation against local road traffic network, any local commercial/industrial premises and any service risers /lift shafts; details of the MVHR system (plan, intake/extract points, silencers, operational noise levels) and details of the performance of the glazing shall be submitted to and approved in writing by the City Council as Local Planning Authority.

The approved noise insulation scheme shall be completed before the occupation of the residential accommodation hereby approved.

The potential for overheating shall also be assessed and the noise insulation scheme shall take this into account.

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:

*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)
Living Rooms (daytime - 07.00 - 23.00) 35 dB L Aeq*

ENVIRONMENTAL NOISE STUDY

An environmental noise report for the proposed development has been issued by Fisher Acoustics Ltd. The report, 'Plot 9B, First Street, Manchester, Environmental Noise Study', report reference Z19B-FAC-A180-Rp-XX-001 P02, dated 11 November 2024 (original report revision P01 issued 4 November 2024), details the results of daytime and night time noise surveys at the site and the subsequent determination of the required acoustic performance of façade elements to allow the achievement of the intrusive noise criteria given in the Noise & Vibration chapter of the Environmental Impact Assessment for the development.

Revision P01 of the environmental noise report was included in the planning application for the development as Appendix 8.1 of the Environmental Impact Assessment.

FAÇADE SOUND INSULATION RECOMMENDATIONS

Windows and curtain wall vision panels to residential studios

The environmental noise report details the recommended sound insulation performance of the windows and curtain wall vision panels to the proposed residential studios to achieve the required internal noise criteria. Table 1 identifies the minimum recommended sound reduction index of the window and vision panel types. The performance values in Table 1 relate to the composite performance of the full window or vision panel assembly including glazing, frames and seals.

Vision Panel/Window type	Sound Reduction Index (dB) @ Octave Band Centre Frequency (Hz)						
	63	125	250	500	1k	2k	4k
Type A (Approximately Rw 41)	28	27	30	38	42	44	53
Type B (Approximately Rw 36)	19	24	25	34	41	41	52

Table 1: Minimum Recommended Sound Reduction Index of vision panels and windows, including frame

Table 1 also forms part of the specification requirements for the project, and has been included in the Tender pack for the curtain wall and window packages for the project.

Vision panels to unitised curtain wall

A unitised curtain wall will form the façade to the residential studios within the 32 storey tower of the building. The vision panels to the curtain wall are to be glazed with the following glazing units:

- Type A - triple glazed unit: 10.8 mm acoustic PVB laminate / 18 mm thermal cavity / 6 mm float/ 18 mm thermal cavity / 12.8 mm acoustic PVB laminate
- Type B - triple glazed unit: 10.8 mm PVB laminate / 18 mm thermal cavity / 6 mm float/ 18 mm thermal cavity / 12.8 mm PVB laminate

Sound insulation testing of the proposed curtain wall within an acoustic test facility has not yet been conducted. Therefore reference has been made to previous laboratory test data for the proposed curtain wall system when glazed with other high performance triple glazed units to estimate the potential sound insulation performance of the proposed curtain wall.

Table 2 identifies the expected performance of the proposed Type A and B vision panel specifications to the unitised curtain wall.

Unit type, glass build-up	Sound Reduction Index (dB) @ Octave Band Centre Frequency (Hz)						
	63	125	250	500	1k	2k	4k
Type A: 10.8A-18-6-18-12.8A	26	27	36	40	45	48	63
Type B: 10.8-18-6-18-12.8	26	27	34	38	41	45	61

Table 2: Potential sound insulation performance of proposed curtain wall vision panels

With reference to Table 1 and Table 2, it can be seen that compliance with the specified performance values is expected.

Windows

The residential studios within the 12-storey element of the building that fronts onto Medlock Street are to be provided with traditional punch windows (Kawneer KWD92 UT+). The windows are to be glazed with the following glazing units:

- Type A - triple glazed unit: 13.5 mm acoustic PVB laminate / 16 mm thermal cavity / 5 mm float / 16 mm thermal cavity / 11.5 mm acoustic PVB laminate

Sound insulation testing of the proposed windows within an acoustic test facility has not yet been conducted. Therefore reference has been made to previous laboratory test data for the proposed window system when fitted with other high performance glazing units to estimate the potential sound insulation performance of the proposed window system when glazed with the proposed triple glazing units.

Table 2 below identifies the calculated performance of the proposed window systems and glazing to be installed within the residential units of the 12-storey block.

Unit type, glass build-up	Specified Sound Reduction Index (dB) @ Octave Band Centre Frequency (Hz)						
	63	125	250	500	1k	2k	4k
Type A: 13.5A-16-5-16-11.5A	28	27	36	44	40	41	50

Table 3: Potential sound insulation performance of proposed windows

With reference to Table 1 and Table 3, it can be seen that compliance with the specified performance values at 63 Hz to 500 Hz (inclusive) is expected, although there are expected shortfalls of up to 3dB in performance at 1 kHz to 4 kHz. However, the 'over-performance' of the windows at some frequencies is such that the overall internal noise levels within studios due to external noise intrusion is fully expected to comply with the requirements of condition 14.

VENTILATION OF RESIDENTIAL STUDIOS

Each residential studio is to be provided with its own mechanical ventilation and heat recovery system (MVHR) to provide continuous supply and extract ventilation to achieve the background ventilation requirements of Approved Document F of the Building Regulations. Therefore, no passive trickle ventilators are required within the façade of the proposed habitable rooms.

The acoustic specification for the development details the internal noise level levels within studios that must be achieved due to the operation of the MVHRs. The internal noise level limits are given in Table 3. The noise levels must be achieved when the MVHRs are operating in 'part F' boost mode. This is the ventilation rate when additional short-term ventilation is required, such as during periods of higher humidity in a room (e.g due to use of a shower). The in-room noise level due to MVHR operation at the long-term 'normal' ventilation rate can be expected to be around 5dB lower than the noise level due to MVHR operation at the 'part F' boost ventilation rate. Therefore compliance with the specification (which is a contractual requirement), will ensure that long-term noise levels from the ventilation system will be at least 5dB(A) lower than the noise limits stated in planning condition 14a.

Room Type	Spatially averaged noise level (Leq)
Studios (MVHRs in part F continuous 'trickle' mode)	NR 25 (approx. 30 dB(A))

Table 4: Maximum allowable internal noise levels due to building services plant

Figure 1 illustrates a typical studio MVHR system design. The layout shows the proposed location of the supply and extract system attenuators.

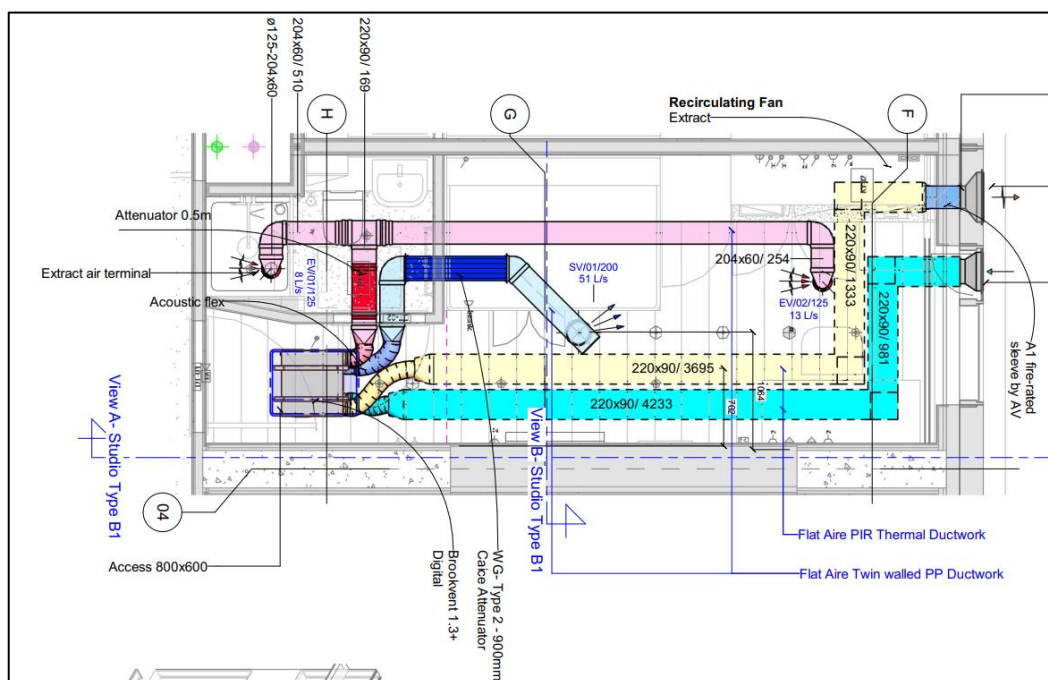


Figure 1: Typical 1-bed studio MVHR layout

Measurements have been conducted within a mock-up studio that included the MVHR equipment and attenuators shown in Figure 1 above. The measurements have confirmed that the noise criterion given in Table 4 above are fully expected to be achieved within the proposed studios.

OVERHEATING

The acoustic consequences of potential overheating within the residential studios are discussed in detail in Fisher Acoustics' report 'Plot 9B, First Street, Manchester, Acoustics, Ventilation & Overheating', report reference Z19B-FAC-A180-RP-XX-003 P02. The report is enclosed with this letter.

SERVICE RISERS

Figures 5 and 6 show the locations of service risers within Vita Student 9B. The risers are separated from studios by a solid concrete wall of thickness 200 mm or 400 mm. The calculated sound reduction index of these walls is at least 60dB Rw.

The smoke extract fans that are to serve the building are located on the roof of the building. The fans are to be provided with a duct-mounted attenuator to reduce fan noise able to enter the smoke shafts.

The smoke fans will only operate during periodic test runs and during emergencies. During test runs, the smoke fans will operate at 40% of the airflow rate of the emergency operation in order to further reduce potential noise from the fans.

As a consequence, noise due to mechanical and electrical services plant is expected to comply with the guidance values published by the Chartered Institution of Building Services Engineers (CIBSE), identified in Table 4 above.

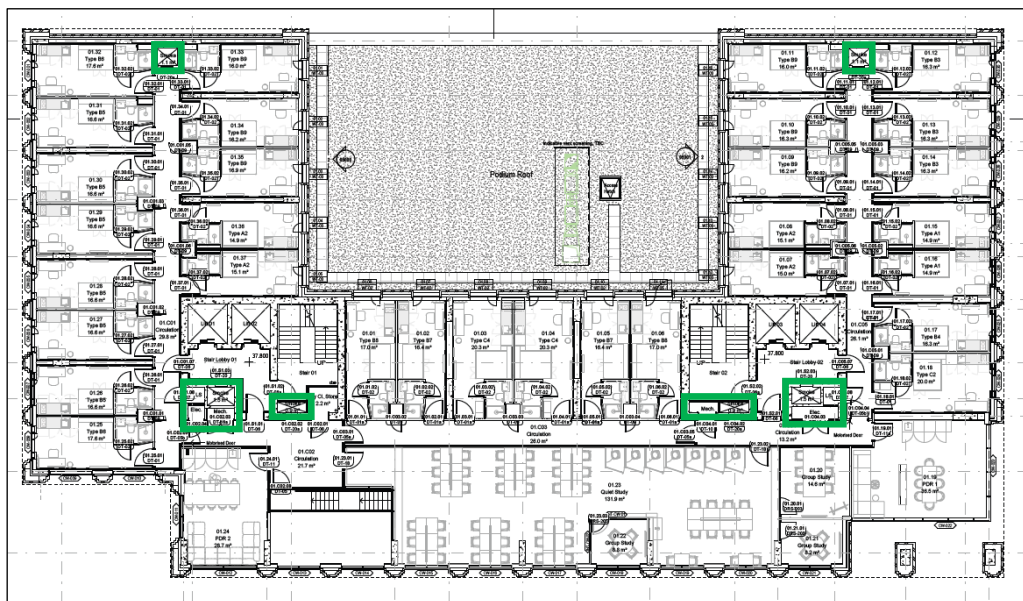


Figure 2: Location of service risers – Levels 1 to 11

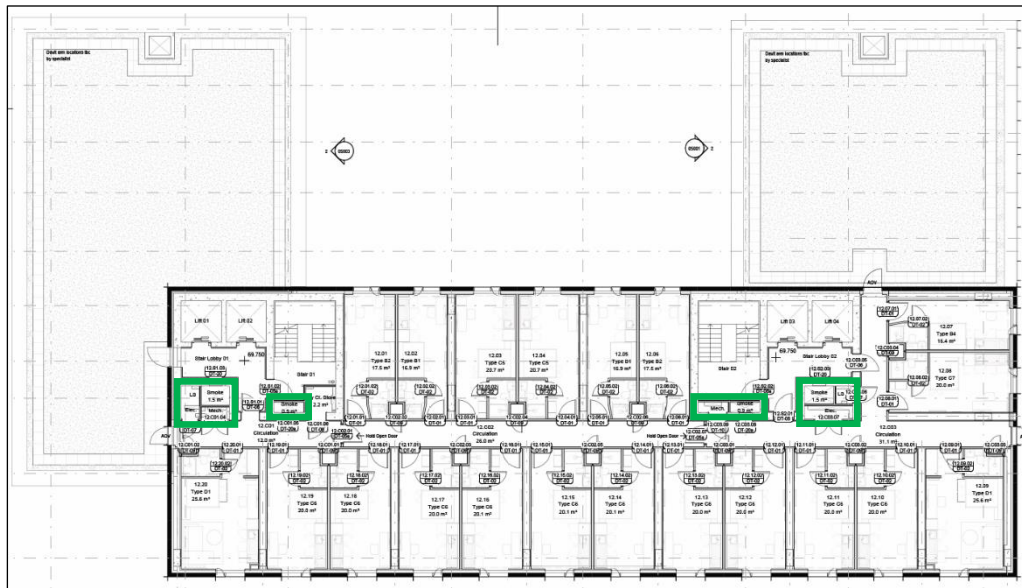


Figure 3: Location of service risers – Levels 12 to 31

LIFT SHAFTS

The lift shafts that serve the building are separated from studios by a solid concrete wall of thickness 400 mm. The sound reduction index of these walls is at least 67dB Rw. In addition, to achieve a further reduction in noise radiated by the lift shaft, the concrete walls are to be drylined in studios with 12.5 mm dense plasterboard (minimum density 830 kg/m³) fixed to 25 mm metal wall liner channels, with 25 mm mineral wool between the metal channels.

Given the above acoustic provisions, the noise level in studios due to lift movements is expected to comply with the recommendations of BS8233: 2014 'Guidance on sound insulation and noise reduction for buildings', which recommends that a noise level of 25 dB L_{Amax} is not exceeded in bedrooms respectively due to lift movements.

If there is any aspect of the above that you would like to discuss then please do not hesitate to contact the undersigned.

Yours sincerely

MATT FISHER CEng, BEng, MIOA
For and on behalf of Fisher Acoustics Limited

Encl: 'Plot 9B, First Street, Manchester, Acoustics, Ventilation & Overheating', report reference Z19B-FAC-A180-RP-XX-003 P02