Miller Goodall Ltd
Ashworth House
Deakins Business Park
Blackburn Road
Egerton
Bolton
BL7 9RP

27th October 2023

Sean Dorsey,
Cumming Group

BY EMAIL

Re: ECHO ST Planning Conditions 17 & 18

Planning approval has been granted for the project subject to a number of conditions, two of which relate to noise and have been reproduced below.

"17) Prior to any above ground works, a scheme of acoustic insulation for the non residential areas (gym, lounges, cinema room, karaoke room) shall be submitted for approval in writing by the City Council, as Local Planning Authority.

Where entertainment noise is proposed the LAeq (entertainment noise) shall be controlled to 5dB below the LA90 (without entertainment noise) in each octave band at the façade of the nearest noise sensitive location, and internal noise levels at structurally adjoined residential properties in the 63HZ and 125Hz octave frequency bands shall be controlled so as not to exceed (in habitable rooms) 47dB and 41dB (Leq,5min), respectively.

(b) Prior to the first use of those spaces within a relevant phase of the development, a verification report will be required to validate that the work undertaken conforms to the recommendations and requirements approved as part of (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. A verification report and measures shall be agreed until such a time as the development complies with part (a) of

this planning condition. Any mitigation measures shall be implemented in accordance with a timescale to be agreed with the City Council, as Local Planning Authority. Any measures shall thereafter retained and maintained in situ.

Reason – In order to limit the outbreak of noise from the commercial premises pursuant to policies SP1 and DM1 of the Core Strategy (2007) and saved policy DC26 of the Unitary Development Plan for the City of Manchester (1995).

18 (a) Prior to any above ground works, a scheme for acoustically insulating the proposed student accommodation against noise from Granby Row and any other noise sources shall be submitted for approval in writing by the City Council as Local Planning Authority.

There may be other actual or potential sources of noise which require consideration on or near the site, including any local commercial/industrial premises such as Manchester Central and bars/music venues within the Great Northern Complex and surrounding roads.

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

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 when providing adequate ventilation as defined by Approved Document F of the Building Regulations (whole dwelling ventilation):

Bedrooms (night time – 23.00 – 07.00) 30 dB LAeq (individual noise events shall not exceed 45 dB Lamax,F by more than 15 times)

Living Rooms (daytime – 07.00 – 23.00) 35 dB LAeq

Gardens and terraces (daytime) 55 dB LAeq

Higher internal noise levels than those specified above may be allowed when higher rates of ventilation are required in relation to the overheating conditions.

Additionally, where entertainment noise is a factor in the noise climate the sound insulation scheme shall be designed to achieve internal noise levels in the 63Hz

and 125Hz octave centre frequency bands so as not to exceed (in habitable rooms) 47dB and 41dB (Leq,5min), respectively.

The approved noise insulation and ventilation scheme shall be completed before the first occupation of the residential accommodation within phase B/C of this development.

(b)Prior to the first occupation of the residential accommodation within phase B/C, a verification report 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 with windows and purge vent doors closed. In instances of non-conformity, these shall be detailed along with mitigation measures required to ensure compliance with the noise criteria. A verification report and measures shall be agreed until such a time as the development complies with part (a) of this planning condition.

Any mitigation measures shall be implemented in accordance with a timescale to be agreed with the City Council, as Local Planning Authority. Any measures shall thereafter retained and maintained in situ.

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)."

Condition 17:

Sound insulation calculations have been undertaken for the floor partitions between key spaces on the ground floor and residential spaces (habitable rooms only) on the first floor. This has been undertaken on the basis of predicted maximum noise levels in noisier spaces provided by *IQSA Services Ltd* shown below:

Location	Source Noise Levels Leq dB at Octave Band Centre Frequency (Hz) (Reverberant sound pressure level in room)								dB(A)
	63	125	250	500	1k	2k	4k	8k	
Cinema	95	85	85	85	85	80	80	75	89
Gym (Background Music)	49	52	54	54	49	45	44	38	55
Gym (Exercise Class)	67	72	68	84	84	81	72	72	88
Gaming Areas	49	52	54	54	49	45	44	38	55
Karaoke	95	85	85	85	85	80	80	75	89

Calculations have been undertaken based on the proposed construction provided by *Sheppard Robson*, with ceilings as required to achieve the minimum sound insulation performance requirements. Sound insulation data has been predicted using Insul noise modelling software, with corrections made for both software prediction error (-5 dB) and workmanship (- 5 dB) to ensure a worst-case assessment.

Cinema and Karaoke Floors

Based on 210 mm concrete with a density of 2,450 kg/m^3, the Cinema and Karaoke spaces will require ceilings beneath to comprise 2 x 15 mm high-density plasterboard (≥ 12.6 kg/m^2 per board, e.g. British Gypsum 15 mm SoundBloc) suspended on acoustic hangers with a minimum 300 mm void and minimum 100 mm mineral wool (or equivalent, achieving ≥ 12 kg/m^3) laid above the entire ceiling area.

Gym and Gaming Area Floors

Based on 210 mm concrete with a density of 2,450 kg/m^3, the Gym (Background Music & Exercise Class) and Gaming Areas achieve the sound insulation requirements with a 1 x 12.5 mm high-density plasterboard (≥ 10.6 kg/m^2, e.g. British Gypsum 12.5 mm SoundBloc) suspended on a light steel grid with a minimum 300 mm void and minimum 100 mm mineral wool (or equivalent, achieving ≥ 12 kg/m^3).

Other Ground Floor Areas Floors

All other ground floor spaces would be expected to have lower levels of noise than the spaces identified and are not proposed for entertainment use. Therefore, are not considered subject to the requirements of Condition 17.

Summary

With these ceiling constructions in place, noise transfer from the entertainment spaces on the ground floor to the habitable residential spaces on the first floor shall be controlled so as not to exceed 47 dB and 41 dB in the 63 Hz and 125 Hz octave bands respectively, as required by Condition 17. The design is therefore compliant with the requirements of Condition 17.

All other ground floor spaces would be expected to have lower levels of noise than the spaces identified and are not proposed for entertainment use. Therefore, are not considered subject to the requirements of Condition 17.

Condition 18:

A scheme of sound insulation measures necessary to control internal noise levels to those specified within Condition 18 has been laid out within Miller Goodall Ltd report ref: *NA_101531 – RIBA Stage 3 Acoustic Report*. This document is therefore sufficient to discharge section (a) of Condition 18.

We understand the potential for overheating has been addressed separately, and that overheating will be controlled via Mechanical Ventilation with Heat Recovery (MVHR) boost units. This strategy negates the need for opening windows during overheating and maintains the effectiveness of the acoustic insulation scheme.

If you have further queries, please don't hesitate to contact me.

Best Regards,



Michael Rickard MIOA
Associate Director – Miller Goodall

michael@millergoodall.co.uk