

23032-L02-SW

Emma Eskdale
House of Esk
6 New Union Street
Manchester M4 6FQ

02/06/2023

Dear Emma,

UNIT 2A COTTON FIELD WHARF, MANCHESTER M4 6BX

1.0 Introduction

- 1.1. Further to our letter dated 27th March 2023 relating to an assessment of commercial noise emissions from the above premises, we understand that Manchester City Council (MCC) has asked for further detail to support the proposed change of use of the existing café within Unit 2A, Cotton Field Wharf, for use as a bar.
- 1.2. dBx Acoustics has spoken to Laura Miller, the relevant EHO at MCC. It has been agreed that a desktop assessment of noise transfer to the residents above will be acceptable, due to the difficulties anticipated in gaining access to carry out sound insulation testing. This letter therefore details the assessment undertaken.

2.0 Scheme Proposals

- 2.1. It is proposed to operate a bar within Unit 2A. The anticipated opening hours are during the daytime period only (i.e. to 23:00h), and there will be no amplified music.
- 2.2. The separating floor construction comprises 250mm concrete. There is no ceiling currently installed within the unit.
- 2.3. We have reviewed the pre-completion acoustic test data and identified the results of testing by dBx Acoustics carried out between the Block C commercial unit and Apartment 10, above. The measured airborne sound insulation performance was 57dB_{DnT,w}.
- 2.4. The test results are appended to this letter for reference.

3.0 Local Authority Criteria

- 3.1. MCC's Planning and Noise Technical Guidance (October 2022) requires that for entertainment venues which are structurally connected to residential developments, *'Music noise levels in the 63Hz and 125Hz octave centre frequency bands (L_{eq}) should be controlled so as not to exceed (in habitable rooms) 47dB and 41dB ($L_{eq,5min}$) respectively'*.
- 3.2. For the purposes of this assessment, it is assumed that this criterion should be applied for the assessment of 'entertainment noise'.
- 3.3. MCC also requires that the ambient noise level within residential bedrooms during the daytime should not exceed 35dB_{LAeq,16hr}.

4.0 Predicted Noise Transfer

- 4.1. Calculation 1, below, presents a prediction of noise transfer between Unit 2A and the bedroom within the apartment above.
- 4.2. The octave band level difference between floors measured on site can be directly subtracted from the anticipated noise levels in the proposed bar to assess the likely level of noise transfer.
- 4.3. A sound pressure level of $75\text{dB}_{\text{Leq,T}}$ within the proposed bar has been used within the calculation. This is based on measurements made within the 'Climat' wine bar at Blackfriars House, Manchester, on a busy Friday evening. It should be noted that these measurements included the effect of amplified music as well as patron voices. Amplified music is not anticipated within the proposed bar in Unit 2a and therefore, again, this can be taken as representing a worst-case assessment for noise transfer.
- 4.4. The calculation undertaken is presented below.

Calculation 1: Bar Noise Transfer to Apartments

Room to Room									
Date:	1-Jun-23								
Job No:	23032								
Project:	Unit 2A Cotton Field Wharf								
Title:	Unit to apartment								
Frequency	63	125	250	500	1K	2K	4K	8K	A
Source room Lp	72	74	71	72	70	67	63	54	75
Floor Level Difference	38	44	47	49	66	71	74	74	
Receive room Lp	34	30	24	23	4	-4	-11	-20	22

- 4.5. It can be seen that the predicted noise level is $34\text{dB}_{\text{Leq,5min}}$ in the 63Hz octave band (13dB lower than the MCC limiting noise level), and $30\text{dB}_{\text{Leq,5min}}$ in the 125Hz octave band (11dB lower than the MCC limiting noise level).
- 4.6. The overall entertainment noise level arising within the apartment is predicted to be $22\text{dB}_{\text{Leq,T}}$ which is 13dB lower than the required ambient noise level within residential properties during the daytime arising from all sources.

5.0 Conclusion

- 5.1. An assessment of potential noise transfer from the proposed bar at Unit 2A Cotton Field Wharf to the structurally adjoined apartments has been undertaken.
- 5.2. The assessment is based on the measured on-site level difference between the unit and apartment above. The assessment uses data measured in a bar with amplified background music, and therefore can be considered a worst-case assessment for the proposed use.
- 5.3. The assessment demonstrates that low frequency noise transfer will be controlled such that the requirements of MCC with regard to entertainment noise are met.

Yours Sincerely,

A handwritten signature in black ink, appearing to read 'Susan Witterick'.

Susan Witterick

Director, dBx Acoustics Ltd

APPENDIX A – MEASURED SOUND INSULATION OF SEPARATING FLOOR

