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MPF/PR0661/L03

21 November 2025

Ben Cullen
Renaker Build Ltd
1st Floor
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47 Bengal Street
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Dear Ben

PORT STREET, MANCHESTER – INTRUSIVE NOISE

I write to confirm the results of the internal noise measurements conducted within the apartments of Port Street, Manchester. The measurements have been conducted to determine the internal noise levels due to external and internal noise sources and to compare the measurement results to the requirements of the planning condition relating to external noise ingress.

INTRUSIVE NOISE CRITERIA - PLANNING CONDITION 16b

Planning condition 16 of the planning approval for Port Street, planning reference 132489/FO/2021, approval date 7 October 2022, states:

- *16) Notwithstanding the recommendations within the Port Street Manchester Environmental Noise Study December 2021 Report Reference: PR0665-REP01A-MPF by Fisher Acoustics, stamped as received on 13-12-21, before the facade is installed details of the following shall be submitted:*

  (a) a scheme for acoustically insulating and mechanically ventilating the residential accommodation against local road traffic network, any local commercial/industrial premises including the specification for 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.

  The approved noise insulation scheme shall be completed before any of the dwelling units are occupied shall be submitted to and approved in writing by the City Council as local planning authority (sic).

  The following noise criteria will be required to be achieved:

  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

  (b) Prior to occupation a post completion report to verify that all of the recommended mitigation measures have been installed and effectively mitigate any potential adverse noise impacts in the residential accommodation (within at least 10% of the apartments) shall be submitted and agreed in writing by the City Council as local planning authority. Prior to occupation any non compliance shall be suitably mitigated in accordance with an agreed scheme.

  Reason - To secure a reduction in noise in order to protect future residents from noise nuisance, pursuant to policies SP1, H1 and DM1 of the Core Strategy.

Condition 16a was discharged on 16 August 2024 (planning reference CDN/24/0481).

The applicable internal noise criteria for the Port Street apartments are reproduced in Table 1.

Room Type	Time of day	
	07:00 to 23:00	**23:00 to 07:00**
Living room	35 dB $L_{Aeq, 16\ hours}$	-
Bedroom	-	30 dB $L_{Aeq, 8\ hours}$ Individual noise events should not normally exceed 45 dB (LAmax) more than 15 fifteen times a night

Table 1: Intrusive noise criteria

MEASUREMENT METHODOLOGY

The measurement methodology, as previously agreed with Manchester City Council to demonstrate compliance with the criteria identified in Table 1 above is as follows:

1) Daytime internal ambient noise levels shall be measured in 10% of apartments, the location of which will be determined by Fisher Acoustics based on exposure to road traffic noise.

2) Night-time noise levels within bedrooms will be interpolated from the daytime noise levels, based on daytime and night-time external noise measurements.

3) The testing on each day is expected to take place between approximately 4.30pm and 8.00pm (i.e. at a time when internal and external construction noise at Port Street has abated but road traffic levels can be assumed to be typical).

4) Install sound level meters in a living room and bedroom of each apartment under test.

5) Measure internal noise levels in each room for approximately 5 minutes with the MVHR (mechanical ventilation and heat recovery) unit switched off. If the average (LAeq) noise level in the room has not stabilised after 5 minutes, the measurement will be continued until a stable LAeq noise level has been established (up to approx. 10 minutes if required).

6) Measure internal noise levels in each room with the MVHR operating in continuous ventilation mode.

7) Measure the reverberation time in each room to allow the measured noise levels to be corrected to allow for the reduction in internal noise level that will occur upon furnishing of the rooms.

8) Analyse the data to determine the 16-hour daytime noise level in the rooms due to external noise intrusion. With reference to the results of external noise survey measurements, determine the expected 8-hour night-time internal noise levels within bedrooms based on the change in external noise levels between the daytime and night time.

9) Advise the noise level in each of the measured rooms due to the operation of the MVHR units.

10) Issue a letter report which tabulates the results of the measurements and compares the measured internal noise levels within each room with the requirements of the planning condition.

The measurements were conducted by Fisher Acoustics Ltd between the following times:

- 1645 hours and 1930 hours on Wednesday 5 November 2025
- 1615 hours and 1920 hours on Monday 10 November 2025
- 1625 hours and 1915 hours on Tuesday 11 November 2025
- 1600 hours and 1930 hours on Monday 17 November 2025
- 1600 hours and 1930 hours on Wednesday 19 November 2025
- 1645 hours and 2000 hours on Thursday 20 November 2025

There was occasional construction activity external to the building during the internal measurements, although as far as possible, measurements avoided construction noise. Traffic flows on the roads adjacent to the site were found to be typical for the duration of the internal noise measurements.

The measurements were undertaken with the windows closed. The tested rooms were unfurnished.

The measurements were conducted in general accordance with 'ANC Guidelines -Noise Measurements in Buildings, Part 2: Noise from External Sources (e.g. traffic noise) within Buildings'.

The measurements were conducted in rooms on various levels of the building with a bias to measuring apartments on the closest elevations of the building to Great Ancoats Street and Port Street, as these are the most dominant noise sources in the area. Level 1 is the lowest level of the building that includes apartments.

MEASUREMENT TOLERANCE

As described in the ANC Guidelines, BS EN 61672-1: 2013 'Electroacoustics. Sound level meters – Specifications' gives the tolerance limits that are applicable to noise level measurements carried out using Class 1 sound level meters. These tolerance limits are given in 1/3 octave bands (ie across the sound spectrum), from which it is possible to determine the influence of the tolerance limits on an overall dB(A) measured noise level.

Using the 1/3 octave band data, the overall measurement tolerance on the measured internal noise levels is +/- 1.2 dB(A). It follows that a measured noise level within 1.2dB(A) of the applicable criterion could be compliant with the criterion.

MEASURED INTERNAL NOISE LEVELS

The reverberation times of the rooms were greater than will be the case when the rooms are fully furnished. Therefore, the measured noise levels have been corrected to allow for the expected reduction in reverberation time following the full furnishing of the rooms.

The measured reverberation times have been corrected to 0.5 seconds for living rooms and 0.45 seconds for bedrooms. In addition, a correction must also be applied to the measured 5-minute daytime internal noise levels in order to determine the expected 16-hour daytime internal noise levels within living rooms. In order to determine the correction, reference has been made to external noise survey data gathered at the same time as the internal noise measurements and to the results of a full 24-hour external noise survey.

The measured daytime noise levels were principally determined by road traffic on Great Ancoats Street and Port Street.

Table 2 shows the measured, RT-corrected average ($L_{Aeq,16h}$) daytime noise levels in living rooms with the MVHR switched off.

Apartment Number	Corrected Average Daytime Noise Level, dB (LAeq,16h)
	Living Room/ Kitchen Limit = 35 dB LAeq,16h (Measurement tolerance 1.2 dB(A))
109	25.2
115	25.3
118	31.6
123	31.6
205	24.8
213	21.2
218	34.6
221	30.4
310	22.9
315	21.1
319	25.8
323	26.4
412	23.3
417	28.9
420	27.2
422	30.5
424	25.1
510	25.0
513	22.2
518	29.9
523	30.9
603	23.5
616	22.4
619	26.9
621	27.3
709	30.3
713	32.3
808	20.6
810	25.1
814	28.1
909	27.7
912	32.4
913	27.3
915	25.2
1003	24.3
1011	22.3
1110	24.5
1112	30.0
1209	23.6
1211	24.7
1403	24.8
1412	27.7
1601	22.8
1610	25.4
1809	24.5
1811	24.6
2006	26.2
2012	27.1

Table 2: Measured, RT-corrected average daytime noise levels in living rooms – external road traffic noise ingress only

It can be seen that compliance with the daytime internal noise criterion for living rooms has been achieved in all of the rooms under test due solely to external noise sources (i.e. with the MVHR switched off).

Table 3 shows the measured, RT-corrected average ($L_{Aeq,16h}$) daytime noise levels in living rooms with the MVHR in each apartment operating continuously. The specific noise level from the MVHR alone is also shown.

Apartment Number	Corrected Average Daytime Noise Level, dB (LAeq,16h)	
	Traffic noise + MVHR noise	MVHR Only, dBA
109	29.0	26.7
115	28.6	25.9
118	33.0	27.6
123	34.3	31.0
205	30.4	29.0
213	31.4	31.0
218	35.0	24.8
221	31.8	26.3
310	24.1	17.7
315	27.8	26.7
319	31.9	30.7
323	28.6	24.6
412	27.1	24.7
417	31.5	28.0
420	29.1	24.8
422	33.0	29.4
424	28.6	26.0
510	28.8	26.5
513	27.9	26.5
518	31.3	25.9
523	31.6	23.8
603	26.4	26.4
616	24.9	21.2
619	29.6	26.3
621	29.2	24.9
709	33.6	30.9
713	32.6	19.7
808	29.5	28.9
810	32.2	31.3
814	29.0	22.1
909	30.4	27.1
912	34.2	29.6
913	27.6	16.1
915	26.0	18.1
1003	30.7	29.6
1011	24.4	20.1
1110	27.1	23.5
1112	32.9	29.7
1209	26.3	23.0
1211	29.2	27.3
1403	29.3	27.4
1412	32.2	30.3
1601	28.7	27.4
1610	30.2	28.5

Apartment Number	Corrected Average Daytime Noise Level, dB (LAeq,16h)	
	Traffic noise + MVHR noise	MVHR Only, dBA
1809	27.0	23.4
1811	28.4	26.1
2006	29.6	26.9
2012	31.6	29.7

Table 3: Measured, RT-corrected average daytime noise levels in living rooms – MVHR On

It can be seen that compliance with the daytime internal noise criterion for living rooms has been achieved in all of the rooms under test due to both external noise sources and operational noise from the apartment MVHRs.

A correction must be applied to the measured daytime noise levels in order to determine the expected night time internal noise levels within bedrooms. In order to determine the correction, reference has been made to external noise survey data gathered at the same time as the internal noise measurements in addition to the results of 24-hour noise survey at the site.

Table 4 shows the interpolated, RT-corrected average ($L_{Aeq,8h}$) night time noise levels in bedrooms with the MVHR switched off.

Apartment Number	Corrected Average Night time Noise Level, dB (LAeq,8h)
	Bedroom Limit = 30 dB LAeq,8h (Measurement tolerance 1.2 dB(A))
109	20.2
115	23.5
118	26.2
123	21.1
205	26.0
213	21.1
218	25.1
221	20.3
310	18.9
315	21.6
319	25.8
323	22.5
412	20.7
417	24.0
420	19.8
422	26.1
424	20.6
510	23.6
513	22.7
518	25.1
523	21.7
603	19.9
616	23.3
619	26.3
621	16.4
709	23.3
713	25.0
808	20.6
810	21.4

Apartment Number	Corrected Average Night time Noise Level, dB (LAeq,8h)
	Bedroom Limit = 30 dB LAeq,8h (Measurement tolerance 1.2 dB(A))
814	22.8
909	19.6
912	21.8
913	26.3
915	23.3
1003	21.1
1011	18.6
1110	19.4
1112	20.8
1209	25.3
1211	22.3
1403	23.0
1412	20.5
1601	23.3
1610	28.5
1809	25.8
1811	27,2
2006	24.9
2012	26.2

Table 4: Measured, RT-corrected average night time noise levels in bedrooms – external road traffic noise ingress only

It can be seen that compliance with the night time internal noise criterion for bedrooms has been achieved in all of the rooms under test due solely to external noise sources (i.e. with the MVHR switched off).

Table 5 shows the interpolated RT-corrected night time average ($L_{Aeq,8h}$) noise level in bedrooms with the MVHR in each apartment operating continuously. The specific noise level from the MVHR alone is also shown.

Apartment Number	Interpolated Average Night Time Noise Level, dB ($L_{Aeq,8h}$)	
	Traffic noise + MVHR noise	MVHR Only, dBA
109	24.0	21.7
115	26.0	22.5
118	30.7	28.8
123	24.3	21.4
205	28.2	24.2
213	24.4	21.7
218	28.0	25.0
221	22.2	17.6
310	26.0	25.1
315	23.2	18.1
319	27.1	19.3
323	25.5	22.5
412	22.9	18.9
417	25.6	20.4
420	23.2	20.6
422	27.1	20.2
424	27.0	25.8

Apartment Number	Interpolated Average Night Time Noise Level, dB ($L_{Aeq,8h}$)	
	Traffic noise + MVHR noise	MVHR Only, dBA
510	27.9	25.8
513	23.8	17.6
518	26.5	20.9
523	26.4	24.6
603	26.2	25.0
616	24.8	19.5
619	27.0	18.4
621	21.9	20.4
709	24.3	17.3
713	28.0	25.0
808	26.3	25.0
810	23.0	17.9
814	29.9	28.9
909	29.1	28.5
912	27.4	26.0
913	28.9	25.4
915	29.5	26.3
1003	28.5	27.6
1011	22.7	20.6
1110	24.2	22.5
1112	27.1	26.0
1209	28.0	24.7
1211	24.7	20.9
1403	26.1	23.2
1412	26.8	25.7
1601	25.1	20.4
1610	30.1	25.0
1809	28.2	24.4
1811	27.7	17.8
2006	28.8	26.5
2012	27.1	19.9

Table 5: Measured, RT-corrected average noise levels in bedrooms

It can be seen that compliance with the night time internal noise criterion for bedrooms has been achieved in all of the rooms under test due to both external noise sources and operational noise from the apartment MVHRs.

Table 6 shows the maximum (L_{Amax}) noise levels in bedrooms measured during the daytime noise measurements.

Apartment Number/ Room	Measured Maximum Daytime Noise Level, dB (L_{Amax}) (Limit = 45 dB L_{Amax})
109	33.4
115	41.2
118	38.5
123	29.4
205	36.1
213	35.2
218	34.0
221	26.4
310	42.8
315	29.0
319	41.5
323	27.6
412	30.3
417	36.1
420	33.6
422	39.1
424	29.2
510	43.0
513	45.5
518	38.6
523	31.6
603	27.7
616	33.0
619	32.6
621	23.3
709	27.0
713	31.6
808	29.9
810	27.0
814	36.4
909	30.9
912	41.6
913	32.7
915	33.8
1003	29.4
1011	31.4
1110	34.6
1112	30.9
1209	28.8
1211	30.2
1403	26.8
1412	34.5
1601	28.1
1610	42.9
1809	31.5
1811	41.2
2006	38.9

Apartment Number/ Room	Measured Maximum Daytime Noise Level, dB (L_{Amax}) (Limit = 45 dB L_{Amax})
2012	41.2

Table 6: Measured, RT-corrected average ($L_{Amax,5mins}$) noise levels in bedrooms

During the daytime measurements within bedrooms there was only one exceedance over the night time internal noise criterion of 45dB LAmax. The exceedance was 0.5 dB and was caused by the siren of an emergency vehicle. The measured noise level was within 1.2dB(A) of the applicable criterion which is also within the measurement tolerance of the instrumentation. The measured noise level could therefore be considered to be compliant with the criterion.

As road traffic during the measurements was considered typical of normal traffic volumes and vehicle types, it is expected that compliance with the night time maximum internal noise criterion would be achieved in the tested bedrooms due to typical external noise events.

CONCLUSION

Compliance with the average daytime internal noise criterion of 35dB $L_{Aeq,16h}$ due to road traffic noise ingress and operational noise from the MVHRs has been achieved in all of the tested living rooms.

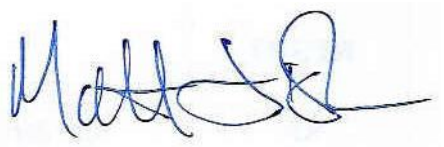
Allowing for measurement tolerance, compliance with the average night time internal noise criterion of 30dB $L_{Aeq,8h}$ due to road traffic noise ingress and operational noise from the MVHRs has been achieved in all of the tested bedrooms.

Allowing for measurement tolerance, compliance with the maximum night time internal noise criterion of 45dB L_{Amax} has been achieved in all of the tested bedrooms during the daytime measurements. It is therefore expected that compliance with the night time maximum internal noise criterion would be achieved in the tested bedrooms due to typical external night time noise events.

The achieved noise levels are therefore considered to be compliant with the requirements of condition 16.

Please do not hesitate to contact the undersigned if you have any queries relating to the above.

Yours sincerely



MATT FISHER BEng(Hons) CEng MIOA
For and on behalf of Fisher Acoustics Limited