Philip Dunbavin Acoustics Ltd
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J003897-9019-DH-01

6th August 2025

c/o Luke Kenney
Torsion Construction
1280 Century Way
Thorpe Park
Leeds
LS15 8ZB

One Victoria, Great Ducie Street – Condition 20 Verification Methodology

Dear Luke,

It is understood that a verification assessment is required to satisfy Condition 20 part B in regards to internal noise levels. The condition is set out as follows:

> *'20 b) Upon completion of the development and before any of the apartments are first occupied, a verification report will be required to validate that the work undertaken throughout the development conforms to the recommendations and requirements in the approved acoustic consultant's report. The report shall give the results of post-completion testing to confirm that the required internal noise criteria is 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 noise criteria. The report and any necessary measures shall be approved in writing by the City Council as Local Planning Authority and the development shall be implemented in full in accordance with the approved details before the development is first occupied.'*

Furthermore, correspondence from the EHO has recommended the following in relation to discharging the Condition as received via email dated 13th May 2025:

> *'There will need to be a minimum of 10% apartments tested and include apartments which overlook the arena during an event, specifically the upper floor apartments which overlook the roof of the arena. The event will need to represent worst case scenario so during loud music or events / music events which typically requires low frequency noise. Discussion and confirmation of the type of event during testing will be required in the validation report. Apartments which are most exposed to traffic noise from the ring road and Great Ducie Street will also need to be targeted and internal measurements taken with MVHR in operation to ensure compliance is achieve with ventilation system in use.'*

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1.0 METHODOLOGY

As the development includes for 129 no. residential units we would suggest that 13 no. rooms should be tested which will be split across different façade orientations and levels. This will ensure that a range of façade specifications and noise sources are tested such as road traffic, rail traffic and entertainment noise from the AO Arena.

Internal Noise Levels – External Noise Ingress

We would propose the following test schedule. Please note that the schedule includes for long-term measurements to cover week day and weekend periods in addition to short term measurements which will be carried out during an event at the AO Arena. We would point out that the long-term measurements have been selected to cover each façade orientation and noise dominant source. We would consider the chosen locations (indicated in Table 1 and the following Figures) represent the 'worst-case' locations for external noise exposure.

Table 1 – Internal Nosie Measurement Schedule – External Nosie Ingress

Test No.	Façade	Block	Level	Apartment No.	Room Type	Primary Noise Source	Measurement	Duration
1	East	A	1	01-02	Bed	Road/Arena	Long-term	Friday - Monday
2	East	A	1	01-02	Kitchen/Liv	Road/Arena	Short-term	Event - 15 mins
3	South	A	4	04-28	Bed	Rail	Long-term	Friday - Monday
4	South	A	4	04-28	Kitchen/Liv	Rail	Short-term	Event - 15 mins
5	North/West	A	4	04-32	Bed	Road	Short-term	Event - 15 mins
6	West	A	4	04-32	Kitchen/Liv	Road	Short-term	Event - 15 mins
7	East/North	A	9	09-65	Bed	Road/Arena	Long-term	Friday - Monday
8	East	A	9	09-65	Kitchen/Liv	Road/Arena	Short-term	Event - 15 mins
9	East	A	13	13-82	Bed	Arena	Short-term	Event - 15 mins
10	North	A	13	13-84	Bed	Road/Arena	Short-term	Event - 15 mins
11	East	B	9	09-41	Bed	Road/Arena	Short-term	Event - 15 mins
12	East	B	9	09-41	Kitchen/Liv	Road/Arena	Short-term	Event - 15 mins

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13	West	B	9	09-44	Bed	Road	Long-term	Friday - Monday

Please see the following Figures which indicate the location of each test number across the development.

Figure 1 – Internal Nosie Measurement Schedule – Level 1



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Figure 2 – Internal Nosie Measurement Schedule – Level 4



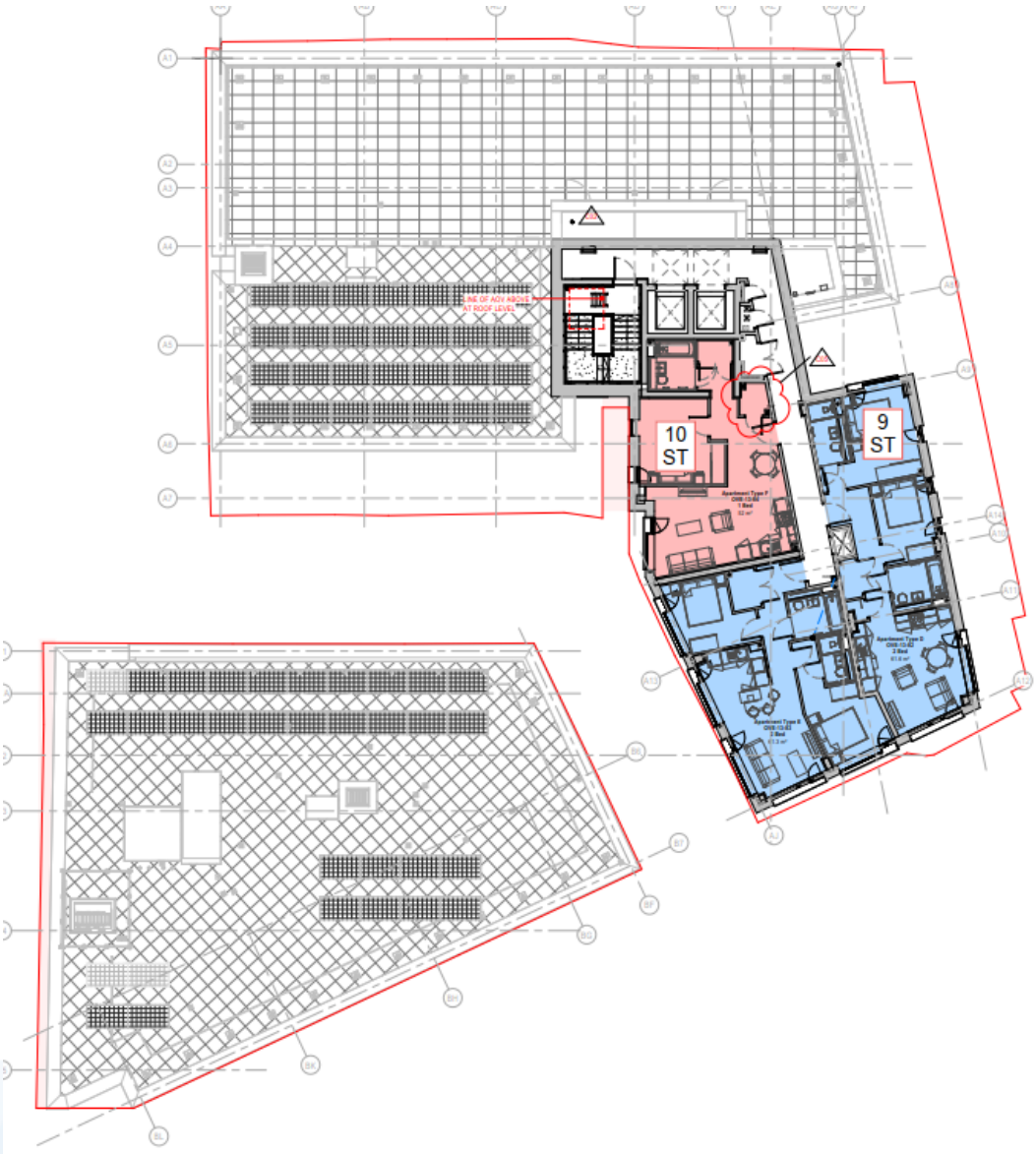
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Figure 3 – Internal Nosie Measurement Schedule – Level 9



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Figure 4 – Internal Nosie Measurement Schedule – Level 13



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Internal Noise – MVHR Systems

We would propose that a sample of 13 no. apartment rooms will be tested to assess the internal noise levels generated by the MVHR systems. This will cover both trickle and boost settings. We would consider that a measurement period of 30 seconds to 1 min in 3 separate positions would be acceptable where the noise from MVHR systems is typically steady in character and unlikely to fluctuate over time. In addition, measurements will be taken across different apartment types where it is understood the MVHR system may vary in duty i.e. 1, 2 and 3 bed plots.

Internal Vibration

We would note that to assess the effect of vibration within the structure we would conduct long-term measurements within a single apartment room on the south façade at first floor level which we would consider worst-case being closest to the Manchester Victoria train line.

The measurement location is indicated in Figure 1.

Yours Sincerely,



David Hible BA(Hons) MIOA
Acoustic Consultant