Philip Dunbavin Acoustics Ltd
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Cheshire
WA13 0ER

J003897-9458-DH-01

26th March 2026

Peter Lunness
Torsion Construction
1280 Century Way
Thorpe Park
Leeds
LS15 8ZB

One Victoria, Great Ducie Street – Condition 20 – Commissioning Response

Dear Peter,

It is understood that since our submission of the commissioning report ref: *'J003897-9181-DH-01'* dated 31st October 2025 pre-submission comments have been raised by the EHO in regards to the assessment outcomes. This letter has been produced to address these comments.

Summary of Results

The commissioning tests were carried out between Friday 24th October to Monday 27th October 2025. The measurements were intended to capture a 'worst-case' event which was to be 'Disturbed/Megadeath' held on Friday 24th October. This was agreed with Manchester City Council (MCC) along with the methodology put forward by PDA ref: '*J003897-9019-DH-01'* dated 6th August 2025.

The focus of the commissioning was to assess the internal noise levels, particularly at low frequency in regard to Condition 20 and entertainment noise. We have reproduced the low frequency summary tables from the commissioning report below for reference:

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*'**Table 6**: Short-term measurement results – Disturbed/Megadeath Concert'* – J003897-9181-DH-01

Block	Position	Time	Octave Band Noise Level Hz (dB) $L_{eq,15min}$	
			63	125
A	LT1 (01-02 Bed)	20:42 - 20:57	45	34
	ST2 (01-03 K/L)	19:55 - 20:10	46	36
	LT3 (04-04 Bed)	21:25 - 21:40	51	33
	ST4 (04-04 K/L)	19:59 - 20:14	38	34
	ST5 (04-08 Bed)	20:43 - 20:58	49	40
	ST6 (04-08 - K/L)	21:00 - 21:15	46	35
	LT7 (09-02 Bed)	21:31 - 21:46	49	30
	ST8 (09-02 K/L)	21:48 - 21:05	50	36
	ST9 (13-04 Bed)	22:09 - 22:24	52	40
	ST10 (13-06 Bed)	22:35 - 22:50	45	30
B	ST11 (09 -01 Bed)	21:23 - 21:38	51	34
	ST 12 (09-01 K/L)	21:41 - 21:56	42	34
	LT13 (09-04 Bed)	22:08 - 22:23	46	35

'*Table 7: Long-term measurement results – Marti Pellow Concert'* - J003897-9181-DH-01

Block	Position	Time	Octave Band Noise Level Hz (dB) $L_{eq,15min}$	
			63	125
A	LT1 (01-02 Bed)	21:00 – 22:00	40	35
	LT7 (09-02 Bed)	21:00 – 22:00	47	29
	LT3 (04-04 Bed)	21:00 – 22:00	43	32
B	LT13 (09-04 Bed)	21:00 – 22:00	42	31

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Discussion of Results and Criteria

It is noted that within Condition 20 of the decision notice the following criteria is detailed:

> *'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}), respectively'*

We would highlight that the above criteria is derived from '*Procedure for the assessment of low frequency noise complaints (NANR45) – Revision 1'* by Moorhouse *et al* (2011). It is noted that within Section 4.1 of NANR45 that:

> '*If the noise occurs only during the day then 5dB relaxation may be applied to all third octave bands*.'

Thus, we would consider that the criteria for day-time hours (7am – 11pm) would be 52 dB and 46 dB at the 63Hz and 125Hz octave centre frequency bands, respectively.

Within recent correspondence with the planning team at MCC, the EHO notes that this relaxation has not been previously agreed and that some of the exceedances seem 'excessive'. Whilst we acknowledge that this is a deviation of the criteria within the decision notice, we would suggest that consideration should be given to this relaxation since this is derived from the research publication on which the MCC criteria is founded.

We note that MCC have provided further comment in regard to taking a view on the exceedances if they are occasional peaks or throughout the measurements. However, as the majority of measurements were taken over a short-term basis (15 minutes) to cover multiple rooms, the data shows that noise levels are relatively consistent whilst the concert is occurring and occasional peaks are not distinctive.

On a wider perspective we would highlight that the results under discussion are based upon a 'worst-case' scenario for low frequency which may only occur a few times each year. In contrast, the Marti Pellow concert measured on the following night showed generally lower noise levels for which we would consider is indicative of the variation of events at the AO Arena, whilst highlighting the Disturbed/Megadeath event to be a 'worst-case' scenario.

We would highlight that best practical means were undertaken within the design process where on-site pre-construction measurements were taken during an event on an elevated platform to simulate the height of the development and expected noise levels. This was then implemented into a noise modelling process to predict the noise levels at the facades and in turn guided the design process to achieve suitable internal noise levels.

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It should be borne in mind that no manufacturers lab test data was available for either the external wall build up or the proposed glazing system. It is noted that laboratories are unable to measure sound reduction of elements at 63Hz with any accuracy and we have noted that where these low frequency results are reported there can be significant variation even for construction types that are the same. Therefore the building envelope design was based upon the results of sound insulation prediction software and sighting test reports to the closest match glazing systems. This resulted in a high specification acoustic glazing respective to each façade and increased mass to the internal linings of the external wall.

We would consider that the design process highlighted has mitigated uncertainty as far as practically possible.

Whilst it is acknowledged that the noise assessment during the 'worst-case' event does show some exceedance of the MCC criteria referenced within the condition at 63Hz only, it does also highlight that other typical events will meet the criteria. Furthermore, the assessment confirms that NANR45 guidelines – from which the MCC criteria are derived – are not exceeded during daytime hours. Given the 11:00 PM curfew at the Arena, our findings demonstrate that suitable internal noise levels will be maintained within the One Victoria development.

Yours Sincerely,



David Hible BA(Hons) MIOA
Acoustic Consultant