Summary proof

0.1. Sandy Brown Ltd has been appointed by Trafford Council to provide an acoustic review of the proposed residential development at the Former B&Q site on Great Stone Road (Trafford Council planning ref: 100400/OUT/20).

0.2. My full name is Matthew Robinson. I hold a Doctor of Philosophy (PhD), a Bachelor of Science (BSc) and I am a Chartered Engineer (CEng). I am a Member of the Institute of Acoustics. Most of my 10-year working career has been focused on noise and vibration control and the acoustic design of buildings.

0.3. I am an Associate at the firm of Sandy Brown. Prior to joining Sandy Brown 8 years ago, I carried out research at the University of Liverpool in the field of speech security. Prior to this I achieved my Doctor of Philosophy (PhD) which was focused on the prediction of structure-borne sound in buildings. I have been responsible for the acoustic design on a wide variety of building types including residential developments, hotels, schools, hospitals and specialist facilities with high acoustic performance standards.

0.4. The proposed development comprises 333 residential apartments, ground floor commercial units and residential amenity spaces. The development site is located immediately south-west of Lancashire County Cricket Club (Old Trafford), bounded by Great Stone Road and the Altrincham spur of the Metrolink tram line. The nearest track of the Metrolink line is approximately 28 m away from the nearest facade of the proposed development.

0.5. In addition to cricket matches, Lancashire County Cricket Club (LCCC) host live music concerts. Historically, live music concerts have been held 1-2 times a year, though the club has a license to hold up to seven concerts a year.

0.6. Acoustic input supporting the planning application has been provided by Holtz Acoustics.

0.7. A planning appeal of the proposed development has been received by Trafford Council, and comments on the acoustic design of the proposed development have been provided by Vanguardia (on behalf of LCCC).

0.8. The proposed internal noise criteria in the Holtz Acoustics documents are based on BS 8233:2014 and have been proposed for environmental noise sources and sporting events. However, no internal noise criteria have been set for noise ingress from music noise from concerts.

0.9. A noise survey during a live music concert has been carried out by Holtz Acoustics. The measurement positions used were either mainly screened from the main loudspeaker arrays and crowd by the LCCC shop building (located between the stands and the development site), or significantly further away from the loudspeaker arrays compared to the worst-case facade location. As such there would be significant uncertainty in using these data as input for an environmental noise model. They should not be used as sole data for assessing facade noise levels at the proposed development.

0.10. The Holtz Acoustics predicted facade noise levels from a live music concert event differ significantly from Vanguardia's predictions based on the same event. I have provided comparisons and technical reasons for the differences. I consider that Vanguardia's assessment approach to be appropriate, and the measured and predicted noise levels shown in Vanguardia's assessment representative of a live music concert at LCCC.

0.11. Vanguardia's concert noise survey data/noise modelling data should be used to inform the facade sound insulation assessment during live music concerts for the proposed development.

0.12. Holtz Acoustics have modelled the music noise levels from a concert at LCCC using their own survey data. However, an assessment of the facade sound insulation performance to achieve suitable internal noise levels in the proposed development has not been carried out.

0.13. Based on the worst-case predicted music noise levels at the proposed facade from Holtz (L_{Aeq} 78 dB) and the facade sound insulation proposed by Holtz the expected internal noise levels would be approximately L_{Aeq} 41 dB. This is an estimate as octave-band music noise levels at the proposed facade are not provided.

0.14. Based on the worst-case predicted music noise levels at the proposed facade from Vanguardia (L_{Aeq} 90 dB) and the facade sound insulation proposed by Holtz the expected internal noise levels would be approximately L_{Aeq} 53 dB. This is an estimate as octave-band music noise levels at the proposed facade are not provided.

0.15. Both these predictions result in internal noise levels in the proposed development that are unacceptable and would likely cause disturbance to occupants.

0.16. It is appropriate that the design of the proposed residential development is carried out so that internal noise level criteria in line with BS 8233: 2014 are achieved at all times, including during all events at LCCC. This to protect future residential amenity while still allowing LCCC to operate as they do currently, in line with the Agent of Change principle. This would not mean noise from events, particularly music concerts, would be inaudible in the apartments. I consider this a reasonable compromise but there would still therefore be potential for complaints during noisy events.

0.17. To achieve the BS 8233: 2014 daytime internal noise criteria, based on the worst-case predicted music noise levels at the proposed facade from Vanguardia (L_{Aeq} 90 dB), the required overall facade sound insulation performance would be approximately R'_w+C_{tr} 48-50 dB. This performance cannot be achieved by standard commercially available double glazing.

0.18. There are other issues which need to be considered which have not yet been addressed in the acoustic design:

- How additional ventilative cooling is provided during periods of summertime overheating while maintaining acceptable internal noise levels
- The potential adverse effect of ground-borne re-radiated noise from the nearby Metrolink tram link.