MEMO

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Ref: P26-072-M01v1

Project: Lathbury Road, Manchester - Approved Residential Development

Date: 8 April 2026

To: Patrick Beesley, John Southworth

From: David Thurstan BSc MIOA – Principal Consultant

Subject: **Acoustic Verification Assessment**

1. This memo sets out the details and findings of recent acoustic verification testing carried out at the Lathbury Road development in Manchester.

Planning Condition

2. The following condition relates to a scheme of noise mitigation for the development.

   "12) b) Prior to first occupation of the residential units, a verification report shall 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 also undertake post completion testing to confirm that the internal noise criteria have been 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 internal noise criteria together with a timescale for their implementation."

3. Following contact with the Local Authority it was agreed that the verification assessment be based upon automated noise measurements over a weekday night-time period to verify the internal noise levels in a bedroom most exposed to road traffic noise from Lathbury Road. It was also agreed that attended noise measurements be undertaken in kitchen/living room spaces during evening rush hour periods with the results compared to the automated noise measurement results. The Local Authority also requested consideration of potential noise from the all-weather pitches to the northwest of the site and any noise break in from air source heat pumps that are part of the development.

Noise Criteria

4. The 'Manchester City Council Planning & Noise Technical Guidance 2022' document provides guidance for assessing the potential impact on residential developments and recommends the following noise limits or acoustic design criteria:

   - Bedrooms (night-time - 23.00 - 07.00) 30 dB $L_{Aeq,T}$ (individual noise events should not normally exceed 45 dB $L_{Amax,F}$ by more than 10 times)
   - Living Rooms (daytime - 07.00 - 23.00) 35 dB $L_{Aeq,T}$

5. These acoustic criteria correspond to guidance set out in British Standard 8233: 2014, 'Guidance on sound insulation and noise reduction for buildings' and have been used for the assessment of the verification noise measurements.

Noise Survey

6. An automatic data-logging sound analyser was installed in the bedroom of the closest plot (i.e. Plot 4) to Lathbury Road to measure noise levels in consecutive 5-minute periods between around 16:00 hours on Tuesday 31 March 2026 and around 11:30 the following day. Further supplementary attended noise measurements were carried out in the kitchen of plot 4 during the evening rush hour and in the bedroom of plot 6 which is the closest dwelling to the all-weather pitches.

7. The noise measurements were carried out with an NTi XL2 'Class 1' Sound Level Meter (serial no. A2A-20361-E0) and a Bruel & Kjaer 2250 Class 1 Sound Level Meter (serial no. 3011706). The sound level meters were located at the centre of the room and at a microphone height of approximately 1.4m above floor level. Calibration checks were carried out both before and after the measurements with no variance in levels observed. Audio was also recorded to help identify noise sources contributing to the measured noise levels.

8. The rooms used were empty and unfurnished with no carpets. Ventilation (including for the overheating strategy) is provided by a whole house system which operates automatically on demand. The systems were operating at the time of the noise measurements.

9. Weather conditions during the measurements were dry, cool (9 to 14°C), with clear skies and an occasional westerly breeze (<3m/s). The weather conditions during the noise survey were suitable for the purposes of determining the noise ingress.

10. A summary of the noise levels measured over the daytime and night-time periods is shown in Table 1, with full results shown in the enclosed chart. The development is still very much an active construction site. Therefore, any periods which were found, upon review of the recorded audio, to contain highly noisy construction activities (e.g. during the morning of 1 April 2026) have been excluded from this assessment.

Table 1: Summary of Measured Noise Levels (dB)

Location	Night-time		Daytime
	L_{AFmax}	$L_{Aeq,8hr}$	$L_{Aeq,16hr}$*
Plot 4 – Bedroom (first floor)	19 – 48	21	26

* 16 hour excluding any noisy on-site construction works

11. These are very low levels of noise during the daytime and at night. From review of the audio the noise climate was generally low-level road traffic.

12. The brief noise measurements undertaken in the Living Room/Kitchen of Plot 4 and Bedroom 1 of Plot 6 (22-29 dB $L_{Aeq,T}$) consistent with the automated noise levels carried out in Bedroom 1 of Plot 4 (24-29 dB $L_{Aeq,T}$) over the same periods.

13. The noise survey covered a daytime/evening period including a rush hour period. Nevertheless, the daytime noise levels were well below the internal daytime noise criterion.

14. The all-weather pitches are associated with school, however this area of the school site is being redeveloped. Although the all-weather pitches are to remain, the pitches are being refurbished at the moment and therefore not in use. Potential noise impact from use of the all-weather pitches has therefore been determined by calculation. Considering a source noise level of 55 dB $L_{eq,T}$ at 10 metres from the edge of football pitch in use (measured previously at similar site), the calculated resulting noise level breaking into the closest dwelling would be 22 dB $L_{Aeq,T}$. The potential noise levels are therefore considered to be well below the internal daytime noise criterion.

15. The 10th highest maximum noise level at night was 41 dB L_{AFmax}, which is well within the night-time peak noise criteria.

Assessment of Equipment Noise Emission Levels

16. During the site visit on Tuesday 31 March 2026, measurements of the noise emissions from the ASHP equipment were carried out.

17. The noise measurements were carried out using a Bruel & Kjaer 2250 'Class 1' sound level meter (s/n: 3011706). Calibration checks were carried out both before and after the measurement periods with no variance in levels observed. The noise measurements were taken in 'free-field' conditions.

18. One Vaillant aroTHERM plus 3.5kW has been installed on site so far at plot 4. During the noise survey it is understood the unit was operating at its typical capacity and that all other plots will use the same model.

19. The equipment operates at a very low, steady noise level, therefore the noise measurements were taken as multiple short-term periods in terms of $L_{eq,T}$ at 500mm from the equipment. The resulting noise levels which have been corrected for residual noise and standardised to a distance of 1 metre are presented in Table 2 below:

Table 2: Measured/calculated noise emission levels at 1m

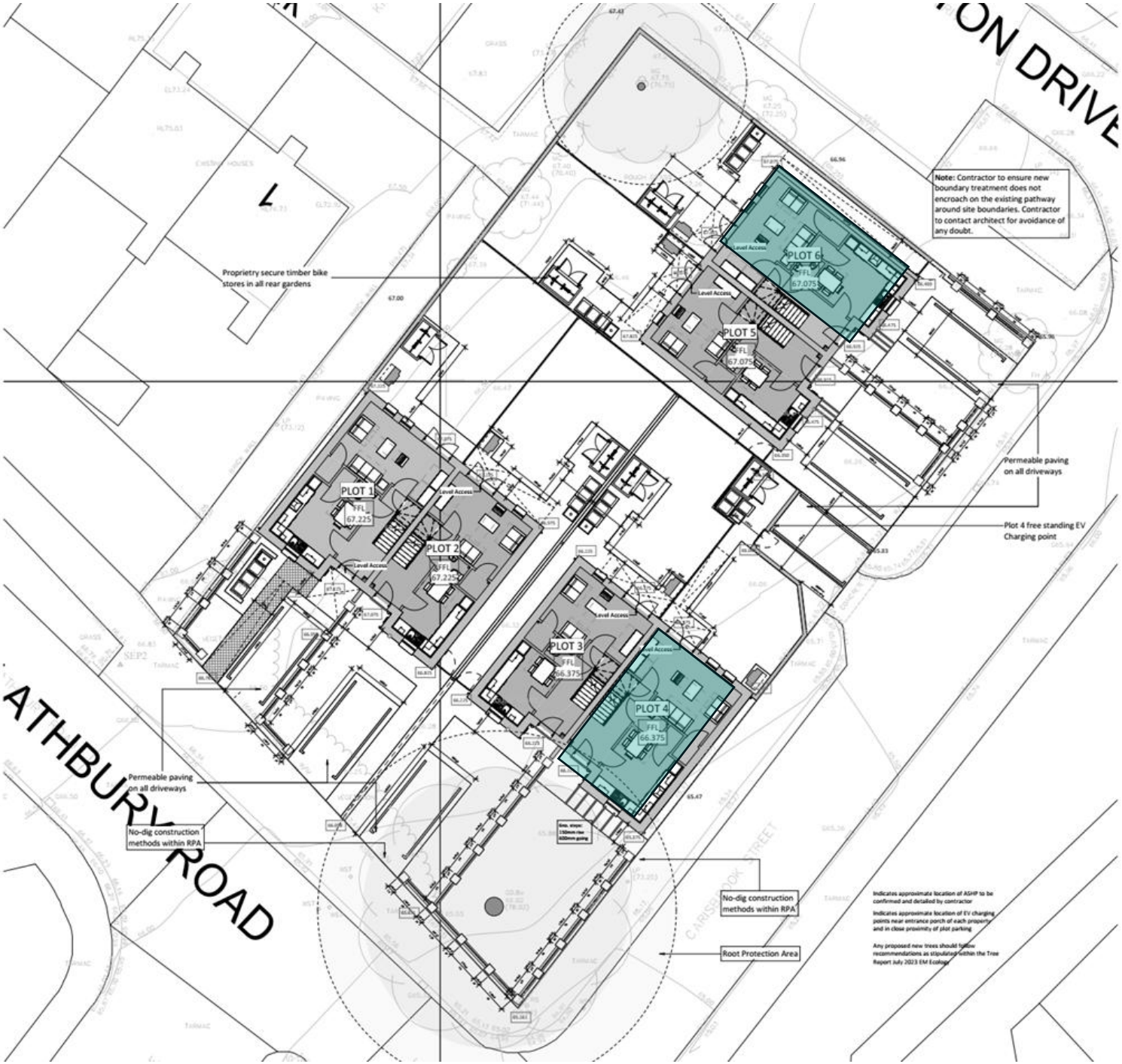
Description	Octave band centre frequency (Hz)							A
	63	125	250	500	1k	2k	4k	
ASHP operating	45	40	36	36	37	28	20	39

20. The measured source noise levels have been used to calculate the noise breaking into the nearest dwelling. The resulting noise level would be <10 dB $L_{Aeq,T}$ which is well below the internal daytime noise criterion.

Conclusion

21. The results of the noise measurements and calculations demonstrate that the installed glazing and ventilation scheme meets the noise criteria required by Condition 12b of the Planning Approval.

22. We therefore conclude that the requirements of the planning conditions have been met and no further works are required.



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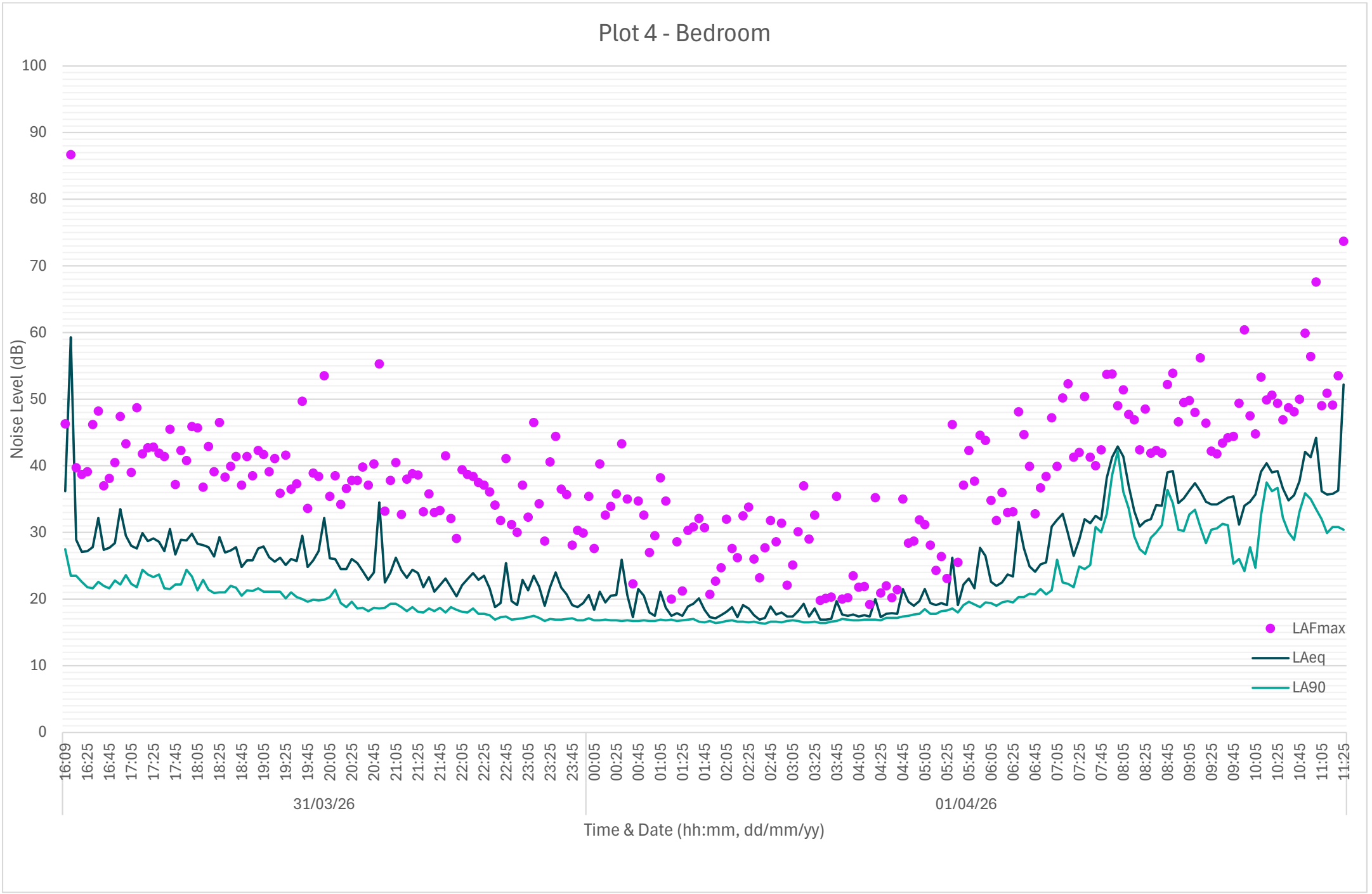
- Plot Position

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Ref: **Figure 1**

Title: Site location & plot positions

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Plot 4 - Bedroom
Noise Level (dB)
100
90
80
70
60
50
40
30
20
10
0
LAFmax
LAeq
LA90
16:09
16:25
16:45
17:05
17:25
17:45
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