# Internal Noise Assessment

| | |
|---|---|
| Site Address: | 1509-1513 Ashton Old Road, Openshaw, Manchester, M11 1NF |
| Project Reference No: | NP-014341 |
| Subject: | Validation Noise Impact Assessment |
| Client: | KMM Homes Ltd |
| Reported By: | R. Whitfield, MSc, MIOA |
| Checked By: | T. Watkin, MSc, MIOA |
| Date: | 30/06/2026 |

## Introduction

NOVA Acoustics Ltd has been commissioned to undertake a post-completion noise survey at the above address. A planning application for the development has been submitted to Manchester City Council, the Local Planning Authority ('LPA'), and conditional approval has subsequently been granted.

The purpose of this assessment is to determine whether the installed sound insulation scheme achieves the internal noise criteria specified within the agreed acoustic report prepared by Y Acoustics (Ref. YA407.P1), with reference to BS8233:2014 and the relevant planning conditions issued by Manchester City Council.

## Internal Noise Level Criteria

### British Standard BS8233:2014

It is stated in BS8233 that the following criteria should be achieved within residential developments:

- Living Rooms and Bedrooms during the daytime (07:00 – 23:00): ≤35 dB $L_{Aeq,16hr}$.
- Bedrooms during the night-time (23:00 – 07:00): ≤30 dB $L_{Aeq,8hr}$ **and** no more than 10 exceedances of 45 dB $L_{AFmax}$.

### Manchester City Council

The application title and relevant planning condition is as follows:

Application Title: *"133433/FO/2022 – Proposed demolition of existing buildings and construction of three dwellinghouses (Use Class C3) including access and landscaping and associated infrastructure."*

*22) 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.*

*Reason – To secure a reduction in noise from traffic or other sources in order to protect future residents from noise disturbance and to reduce the potential for overheating, pursuant to policies SP1 and DM1 of the Core Strategy for the City of Manchester, saved policy DC26 of the Unitary Development Plan and the National Planning Policy Framework.*

## Survey Particulars

- The survey was undertaken in general accordance with the Association of Noise Consultants' publication *"ANC Guidelines: Measurement of Sound Levels in Buildings 2020".*
- Internal noise levels measured within Bedrooms, were positioned at a height of 1.3m above floor level and at least 1.5m from any external wall / window.
- The long-term internal measurements were taken with the windows closed and trickle vents open.
- External noise levels measured at the front and rear of site were positioned at second floor level, approximately 1.5m from the building façade.
- The measurement equipment used was Type 1, as defined in BS EN 61672:2003. The equipment was calibrated at the start and end of the survey using a handheld calibrator compliant with BS EN 60942:2003 (Class 1); negligible deviation was noted. All sound level meters are calibrated every 24 months, and all calibrators are calibrated every 12 months, by a third-party calibration laboratory.

A summary of the equipment used during the survey is outlined overleaf:

| Piece of Equipment | Serial No. | Calibration Deviation (dB) |
|---|---|---|
| Svantek 971A Class 1 Sound Level Meter | 44018 | ≤0.3 |
| Svantek SV33B Class 1 Calibrator | 163803 | |
| Svantek 971A Class 1 Sound Level Meter | 154353 | ≤0.3 |
| Svantek SV33B Class 1 Calibrator | 163803 | |
| Svantek 971A Class 1 Sound Level Meter | 143564 | ≤0.3 |
| Svantek SV33B Class 1 Calibrator | 163803 | |
| Svantek 971A Class 1 Sound Level Meter | 143581 | ≤0.2 |
| Svantek SV33B Class 1 Calibrator | 163803 | |

*Table 1 – Survey Equipment*

- The sound level meters were configured to log $L_{Aeq,T}$, $L_{AFmax}$ and 1/1 octave $L_{Zeq,T}$ sound levels over consecutive 2-minute intervals for the duration of the survey. All measurements were undertaken using a 'fast' time weighting.

- The monitoring was carried out from 08/06/26 to 10/06/26.
- During the visits to site, noise emissions from commercial activity or externally mounted noise-generating plant equipment was not clearly audible at the site.

## Noise Level Assessment

In the following section, the ambient and maximum sound levels measured at the development site are compared with the specified criteria.

As can be seen in the time history graph for MP4 in Appendix A, a noise source routinely turns on and off between 06:00 – 08:00. The specific cause of this is unknown, however it is thought to be a heating cycle that was not audible during the setup of the equipment. To present a robust assessment, these peaks have not been removed from the assessment calculations. Furthermore, noise levels raised significantly between 05:00 – 06:00 on Thursday Morning. Again, the cause of this is unknown, however as this does not appear anywhere else during the measurement period it has been deemed anomalous and has been removed from the calculations.

Time history graphs for the measurement positions can be found in Appendix A and correspond to the following measurement positions.

- Measurement Position 1 (MP1) is an external measurement taken from Bedroom 3 protruding from the front façade at 1.5m.
- Measurement Position 2 (MP2) is an external measurement taken from Bedroom 4 protruding from the rear façade at 1.5m.
- Measurement Position 3 (MP3) is an internal measurement in Bedroom 2 on the front façade
- Measurement Position 4 (MP4) is an internal measurement in Bedroom 1 on the rear façade.

### Internal Ambient Noise Level Analysis

In the following table, the noise levels measured within Bedrooms 1 & 2 are compared with the specified criteria.

| Description | Bedroom 1 (dB) | Bedroom 2 (dB) |
|---|---|---|
| Measured $L_{Aeq,16hour}$ (Day) | 25 | 39 |
| BS8233 Criteria | 35 | 35 |
| **Exceedance above Criteria** | **-10** | **+4** |
| Measured $L_{Aeq,8hour}$ (Night) | 22 | 37 |
| BS8233 Criteria | 30 | 30 |
| **Exceedance above Criteria** | **-8** | **+7** |

*Table 2 – Internal Ambient Noise Level Assessment*

As can be seen in the table above, the $L_{Aeq,T}$ internal noise levels comply with the criteria in Bedroom 1 but have exceeded the criteria in Bedroom 2 at the front façade. As such, further mitigation measures are deemed necessary at the southern (front) façades.

## Maximum Noise Level Analysis

Regarding $L_{AFmax}$ noise events, it is stated in the W.H.O. and ProPG guidance that $L_{AFmax}$ events should not exceed 45 dB more than 10 times per night in order to avoid sleep disturbance.

Shown in the following table are the $L_{AFmax,2min}$ noise levels exceeded fewer than 10 times per night in the bedrooms.

| Location | $L_{AFmax,2min}$ (dB) |
|---|---|
| Bedroom 1 | 38 |
| Bedroom 2 | 55 |

*Table 3 – Maximum Sound Level Summary Results*

As can be seen in the table above, the $L_{AFmax,T}$ noise level is within the criteria for Bedroom 1 but has exceeded the criteria in Bedroom 2 at the front façade. As such, further mitigation measures are necessary to achieve the maximum noise level requirement.

## Recommendations & Mitigation Measures

As discussed in the previous sections, the noise levels within the bedrooms on the front façade have not achieved the required criteria.

According to information provided by the client, the installed glazing and background ventilation specification along the front façade is:

- 4mm KS Glass / 18mm Argon Cavity / 6.8mm Optiphon Glass
- RW Simon Acoustic FV Trickle Vent

Shown in the following table is the performance of the installed specification compared with the recommendations given in the Y Acoustics (Ref. YA407.P1) acoustic report.

| Recommended Specification – South Façades (front) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Description | Octave Frequency Band (Hz, dB) | | | | | | | Overall (dB) |
| | 63 | 125 | 250 | 500 | 1k | 2k | 4k | |
| **Living Room/Kitchen** | | | | | | | | |
| 10mm Glass / 16mm Air Cavity / 6mm Glass (SRI) | 22 | 24 | 24 | 32 | 37 | 37 | 44 | 35 ($R_w$)<br>-3 ($C_{tr}$) |
| Greenwood 2500EA.AC1 ($D_{ne}$) | 30 | 41 | 40 | 47 | 47 | 43 | 47 | 42 ($D_{ne,w}$)<br>-2 ($C_{tr}$) |
| **Bedrooms** | | | | | | | | |
| 6mm Glass / 16mm Argon Cavity / 6.8mm Optiphon Glass (SRI) | 20 | 22 | 27 | 35 | 42 | 41 | 48 | 38 ($R_w$)<br>-5 ($C_{tr}$) |
| Greenwood 2500EA.AC2 ($D_{ne}$) | 30 | 42 | 40 | 46 | 48 | 53 | 57 | 45 ($D_{ne}$)<br>-3 ($C_{tr}$) |
| **Installed Specification – South Façades (front)** | | | | | | | | |
| Description | Octave Frequency Band (Hz, dB) | | | | | | | Overall (dB) |
| | 63 | 125 | 250 | 500 | 1k | 2k | 4k | |
| 4mm Glass / 18mm Argon Cavity / 6.8mm Optiphon Glass (SRI) [1] | 26 | 27 | 27 | 38 | 47 | 52 | 55 | 41 ($R_w$)<br>-6 ($C_{tr}$) |
| RW Simon Acoustic FV 2500 ($D_{ne}$) [2] | 26 | 40 | 35 | 35 | 31 | 33 | 31 | 32 ($D_{ne,w}$) |
| ***Notes:***<br>***[1]*** *1/1 octave frequency spectrum based on modelled performance in INSUL 9 prediction software.*<br>***[2]*** *63Hz and 4kHz Octave band values assumed based on similar models.* | | | | | | | | |

*Table 4 – Comparison of Glazing and Background Ventilation Specifications*

As shown in the table above, the installed façade specification does not fully correspond with the recommendations set out within the original acoustic report. Accordingly, further calculations have been undertaken to determine where additional mitigation measures are required to achieve the relevant internal noise criteria.

The calculations indicate that the primary cause for the criteria exceedances is due to the installed trickle ventilators used for background ventilation purposes. It can be seen that the RW Simon FV trickle vents provide up to 10dB less sound insulation ($D_{ne,w}$ + $C_{tr}$) than the Greenwood 2500EA models that were specified in the Y Acoustics report.

Whilst the installed glazing specification provides approximately 1dB less sound insulation in the bedroom than that recommended in the original report, this difference is considered negligible in practical terms.

Subject to the installation of the correct Greenwoods 2500EA acoustic trickle ventilators, internal noise levels are predicted to fall within approximately ±1dB of the BS8233 design criteria based on the measured external free-field noise levels.

Given the inherent uncertainties associated with acoustic predictions and the marginal nature of any remaining deviation, the resulting internal noise environment is considered acceptable. Detailed noise ingress calculations can be found in Appendix B.

### Internal Mechanical Plant Noise Level Assessment

It is understood that the primary purpose of the mechanical ventilation system is to provide mitigation against overheating, rather than to serve as the principal means of background ventilation.

In accordance with the planning condition imposed by the Local Planning Authority and the recommendations set out within the approved acoustic assessment prepared by Y Acoustics (Ref. YA407.P1), the following internal noise criteria should be achieved within habitable rooms:

- 30dB $L_{Aeq}$ for Bedrooms (NR25)
- 35dB $L_{Aeq}$ for Living Rooms (NR30)

During the site visit, measurements of the MVHR unit in operation were undertaken within Bedroom 1 and 2. The results of the measurements can be seen in the following table. As the plant equipment operates in a steady continuous manner, the $L_{90,T}$ index has been used to characterise the plant emissions; this aids to 'filter' out any road traffic noise ingress peaks.

| Description | 1/1 Octave Frequency Band (Hz, dB) | | | | | | | | Overall (dBA) |
|---|---|---|---|---|---|---|---|---|---|
| | 63 | 125 | 250 | 500 | 1k | 2k | 4k | 8k | |
| MVHR Overheating Bedroom 1 ($L_{90}$) | 30 | 36 | 45 | 43 | 37 | 28 | 22 | 19 | 43 |
| Bedroom Criteria (NR25) | 55 | 44 | 35 | 29 | 25 | 22 | 20 | 18 | 30 |
| **Exceedance** | | | | | | | | | +13 |
| MVHR Overheating Bedroom 2 ($L_{90}$) | 35 | 32 | 33 | 36 | 34 | 28 | 25 | 22 | 38 |
| Bedroom Criteria (NR25) | 55 | 44 | 35 | 29 | 25 | 22 | 20 | 18 | 30 |
| **Exceedance** | | | | | | | | | +8 |

*Table 5 – Overheating Plant Noise Assessment*

As can be seen above, the overheating plant noise levels measured within the bedrooms are above the required criteria. As such, further mitigation measures may be deemed necessary. To clarify the measured results, further calculations have been undertaken.

NOVA Acoustics has been provided with an indicative MVHR duct layout. The specific sound level calculations have been undertaken in accordance with the CIBSE Guide B4 (2016):

- The 1/1 octave band sound power levels calculated via the available manufacturer dataset; KOMFORT EC SB250 (see Appendix C).
- The MVHR internal supply grill is positioned within the ceiling, approximately 1.5m from the listener.
- The MVHR internal grill is approximately 75mm in diameter
- There are 4no. round duct bends of 75-100mm in diameter.
- 3dB has been added to the calculations to account for any uncertainty
- Reverberation time assumes furnished bedrooms (0.3s, tmf)

A summary is shown below, and the calculations can be provided upon request.

| Description | 1/1 Octave Frequency Band (Hz, dB) | | | | | | | | Overall (dBA) |
|---|---|---|---|---|---|---|---|---|---|
| | 63 | 125 | 250 | 500 | 1k | 2k | 4k | 8k | |
| Calculated Specific Sound Level Within Bedroom 1 ($L_{eq}$) | 32 | 47 | 49 | 32 | 30 | 24 | 30 | 25 | 42 |
| Bedroom Criteria (NR25) | 55 | 44 | 35 | 29 | 25 | 22 | 20 | 18 | 30 |
| **Exceedance** | | | | | | | | | +12 |

*Table 6 – MVHR In-Duct Calculations*

As can be seen above, whilst there are discrepancies between the predicted and measured octave frequency band levels, the overall dBA level is equivalent to that measured within bedroom 1. As such, it can be concluded that noise control measures to the MVHR units are required; this supports the subjective impression obtained during the site visits.

It is therefore recommended that an appropriately sized acoustic silencer is installed within the ductwork to attenuate noise before the supply grills. The silencer should be selected to provide sufficient attenuation to achieve compliance with the relevant internal noise criteria whilst maintaining the required airflow performance of the system.

The recommended 1/1 octave frequency band Insertion Loss ('IL') performance is outlined in the table below.

| Description | 1/1 Octave Frequency Band (Hz, IL dB) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 63 | 125 | 250 | 500 | 1k | 2k | 4k | 8k |
| Acoustic Silencer Sound Reduction | 0 | 3 | 14 | 14 | 12 | 6 | 5 | 4 |

*Table 7 – Recommended IL of Acoustic Silencer for MVHR Units*

An example attenuator that can achieve the figures shown above is the CP01-M10-060 silencer manufactured by 'Acoustica'.

These silencers should be installed immediately after the MVHR supply outlet to ensure that each room benefits from the attenuation.

## Conclusion

The development has been assessed against the requirements of Condition 3 imposed on application ref: 16/5329/FUL. The assessments have indicated that the internal ambient and maximum criteria for BS8233:2014 is exceeded within the bedrooms along the front elevations of the development.

Based on further calculations, it is recommended that the correct trickle ventilators are installed as per the Y Acoustics (Ref. YA407.P1) acoustic report. In doing so, the BS8233 internal noise criteria would be achieved in bedrooms and living rooms along the front (southern) elevation, and the condition could be discharged on that basis.

An assessment of the MVHR plant noise associated with mitigating overheating has been undertaken. It has been found that the criteria advised Y Acoustics has been exceeded. Based on our findings, recommended insertion losses have been provided in Table 7, and silencers should be fitted immediately after each MVHR supply outlet (as close as practicable to the MVHR units). In doing so, the recommended internal criterion of 30dB $L_{Aeq,T}$ (NR25) would be achieved, and the condition could be discharged on that basis.

The findings of this report may require written approval form the Local Planning Authority prior to any works commencing.

# Appendix A – Environmental Survey

## *A.1 – Time History Noise Data*

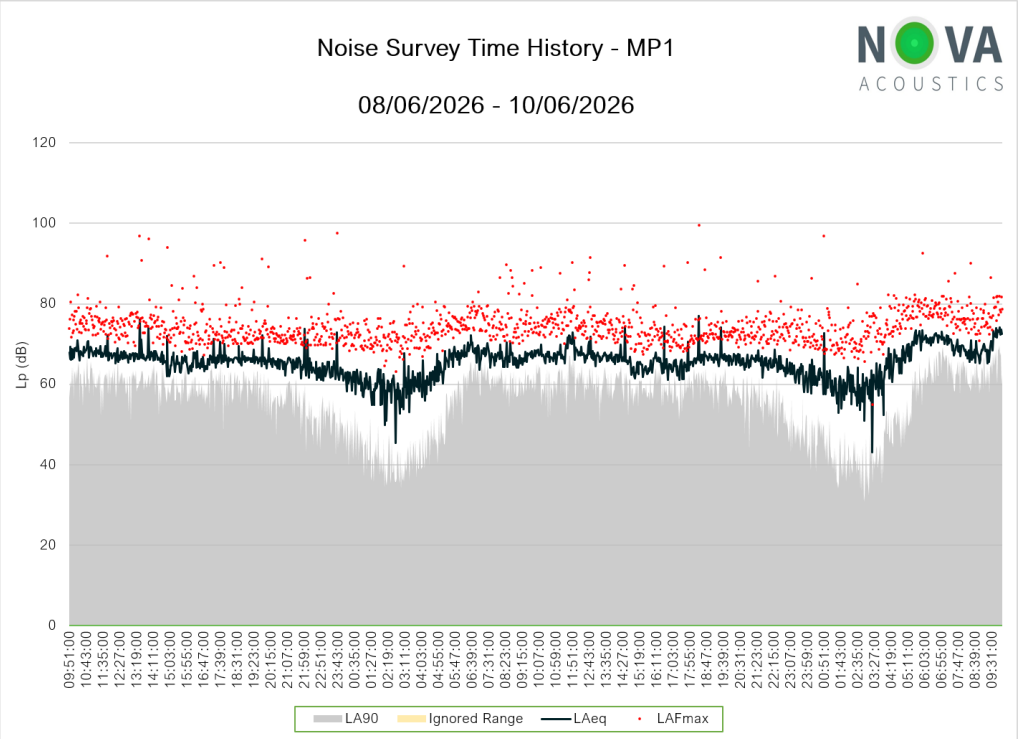



*Figure 1 – MP1 Noise Survey Time History*

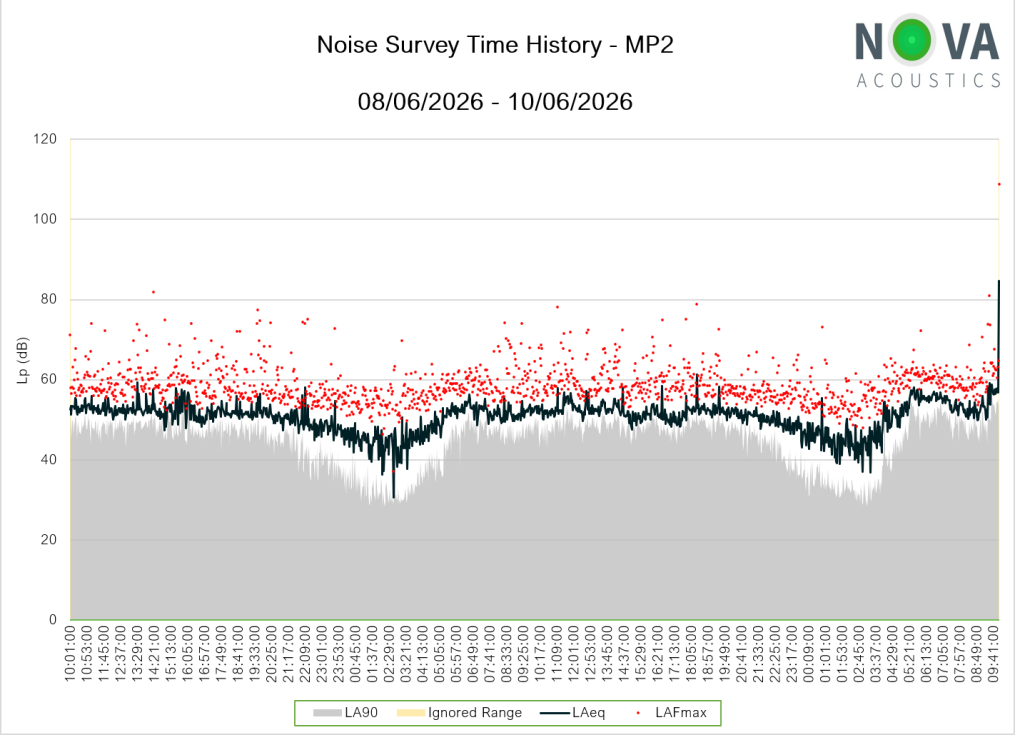



*Figure 2 – MP2 Noise Survey Time History*

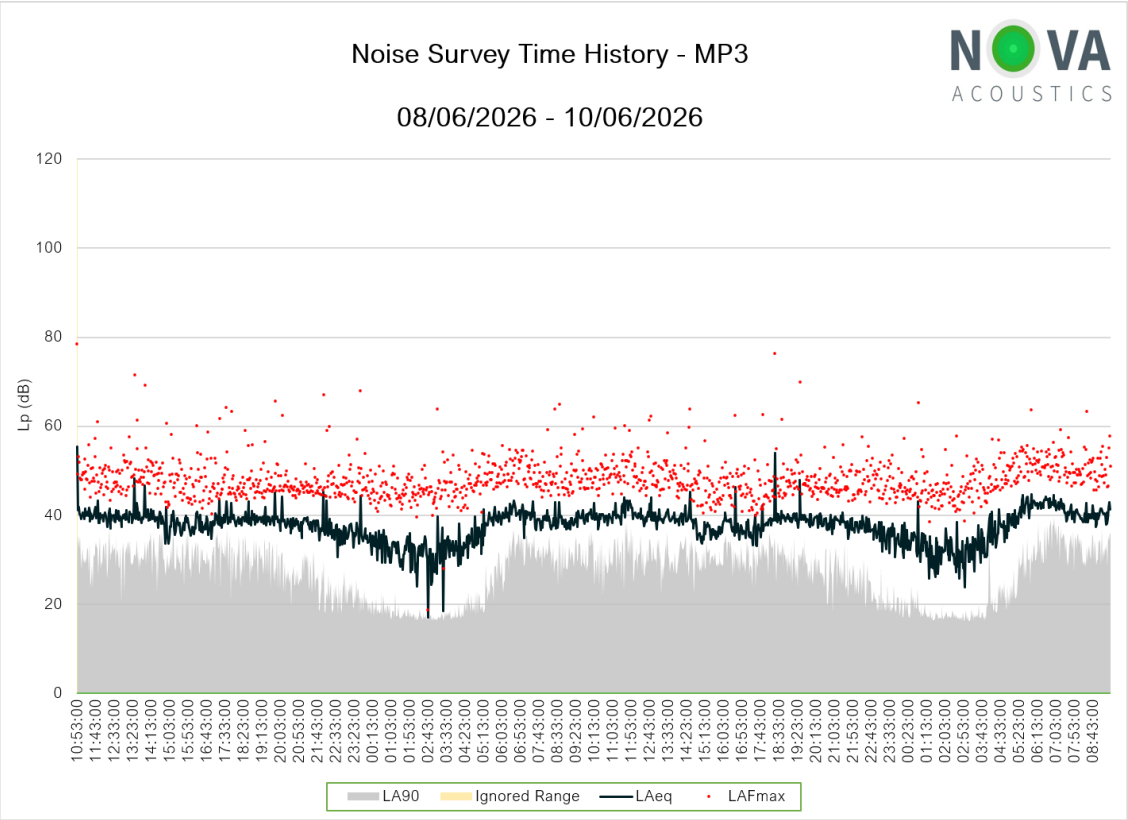



*Figure 3 – MP3 Noise Survey Time History*

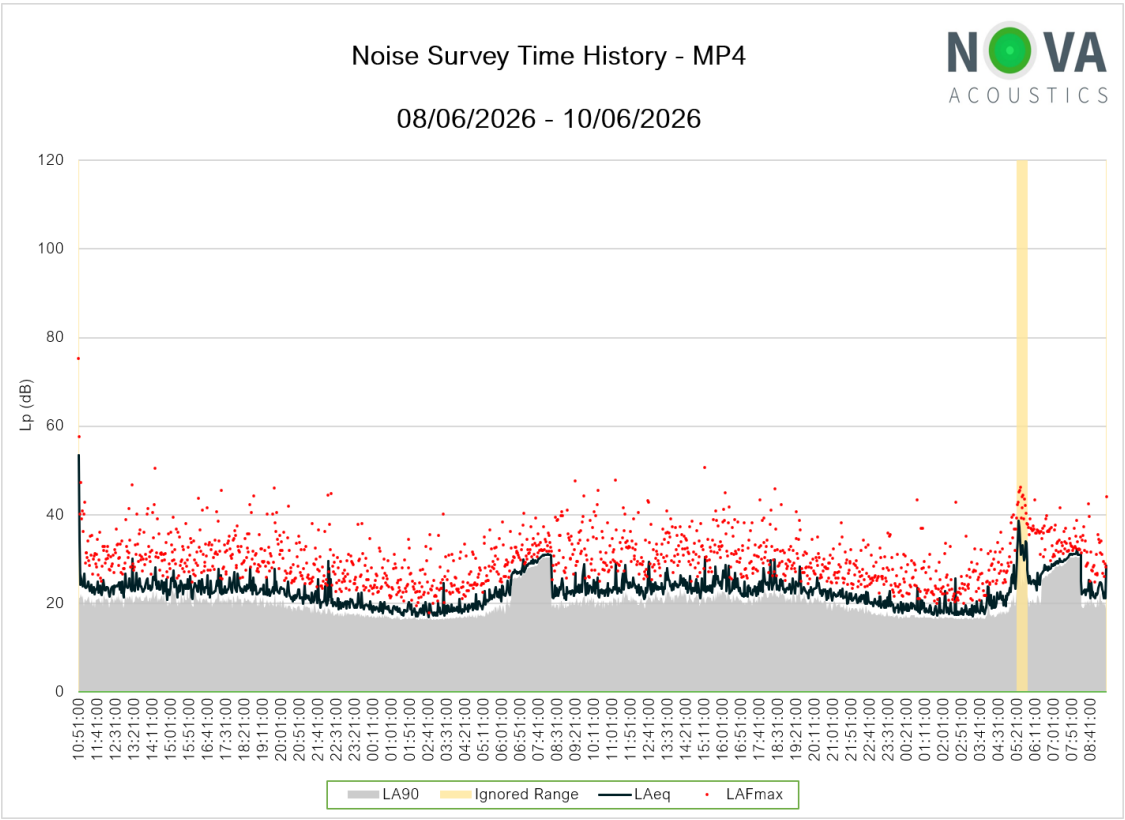



*Figure 4 – MP4 Noise Survey Time History*

## Appendix B – Noise Break-in Calculations

The façade sound reduction and predicted internal noise levels are calculated assuming the following:

- The calculation method for façade sound reduction is in accordance with BS8233:2014 and BS EN 12354-3.
- The reverberation time is typically 0.5 seconds across the relevant frequency range for a furnished living room in the UK. This value is used for living rooms and 0.3 seconds has been used to reflect furnished bedrooms.
- Based on the technical drawings provided to NOVA Acoustics, window areas of 2.4m$^2$ and room volumes of 24m$^3$ are used in the calculations for bedrooms as a worst-case scenario. For living rooms/kitchens, the calculations are based on a window area of 24m$^2$ and room volume of 21.6m$^3$ as a worst-case scenario.
- The acoustic performance of the façade elements is taken from the relevant manufacturers' technical information, or the sound reduction has been predicted using INSUL 10.0.
- For background trickle ventilation a total Equivalent Area of 5000mm$^2$ per habitable room has been used in the calculations, which equates to 2no. trickle vents (2500mm$^2$ each).
- An exceedance of +2dB within any individual octave band is considered negligible in acoustic terms and, therefore, acceptable for the purposes of this assessment.

### Kitchen/Living Room (South Façade) Day Time Leq

| Item / Description | dB(A) | 63 | 125 | 250 | 500 | 1k | 2k | 4k | 8k |
|---|---|---|---|---|---|---|---|---|---|
| Measured Leq,T | 67 | 68 | 63 | 60 | 61 | 64 | 61 | 55 | 50 |
| Glazing Noise Ingress | 24 | 38 | 32 | 29 | 19 | 13 | 5 | -4 | -9 |
| Ventilation Noise Ingress | 29 | 43 | 27 | 26 | 31 | 21 | 15 | 5 | 0 |
| Wall Noise Ingress | 7 | 23 | 13 | 8 | -1 | 1 | -2 | -8 | -13 |
| Roof Noise Ingress | | | | | | | | | |
| Room Absorption Correction | | 0 | 0 | -1 | -1 | -1 | -2 | -3 | -4 |
| **Total Noise Ingress** | **32** | **47** | **36** | **33** | **33** | **23** | **17** | **6** | **-1** |
| NR30 | 35 | 59 | 48 | 39 | 33 | 30 | 26 | 24 | 22 |
| Exceedance of Criteria | -3 | -12 | -12 | -6 | 0 | -7 | -9 | -18 | -23 |

### Bedroom (South Façade) Day Time Leq

| Item / Description | dB(A) | 63 | 125 | 250 | 500 | 1k | 2k | 4k | 8k |
|---|---|---|---|---|---|---|---|---|---|
| Measured Leq,T | 67 | 68 | 63 | 60 | 61 | 64 | 61 | 55 | 50 |
| Glazing Noise Ingress | 24 | 38 | 32 | 29 | 19 | 13 | 5 | -4 | -9 |
| Ventilation Noise Ingress | 29 | 42 | 26 | 25 | 30 | 20 | 14 | 4 | -1 |
| Wall Noise Ingress | 7 | 24 | 14 | 9 | 0 | 2 | -1 | -7 | -12 |
| Roof Noise Ingress | | | | | | | | | |
| Room Absorption Correction | | -2 | -2 | -3 | -3 | -3 | -4 | -5 | -6 |
| **Total Noise Ingress** | **30** | **45** | **34** | **31** | **30** | **21** | **14** | **3** | **-3** |
| NR30 | 35 | 59 | 48 | 39 | 33 | 30 | 26 | 24 | 22 |
| Exceedance of Criteria | -5 | -14 | -14 | -8 | -3 | -9 | -12 | -21 | -25 |

## Bedroom (South Façade) Night Time Leq

| Item / Description | dB(A) | 63 | 125 | 250 | 500 | 1k | 2k | 4k | 8k |
|---|---|---|---|---|---|---|---|---|---|
| Measured Leq,T | 66 | 63 | 58 | 56 | 58 | 62 | 59 | 56 | 51 |
| Glazing Noise Ingress | 20 | 33 | 27 | 25 | 16 | 11 | 3 | -3 | -8 |
| Ventilation Noise Ingress | 26 | 37 | 21 | 21 | 27 | 18 | 12 | 5 | 0 |
| Wall Noise Ingress | 5 | 19 | 9 | 5 | -3 | 0 | -3 | -6 | -11 |
| Roof Noise Ingress | | | | | | | | | |
| Room Absorption Correction | | -2 | -2 | -3 | -3 | -3 | -4 | -5 | -6 |
| **Total Noise Ingress** | **27** | **40** | **29** | **27** | **27** | **19** | **12** | **4** | **-2** |
| NR25 | 30 | 55 | 43 | 35 | 28 | 25 | 21 | 19 | 17 |
| Exceedance of Criteria | -3 | -15 | -14 | -8 | -1 | -6 | -9 | -15 | -19 |

## Bedroom (South Façade) Night Time Max

| Item / Description | dB(A) | 63 | 125 | 250 | 500 | 1k | 2k | 4k | 8k |
|---|---|---|---|---|---|---|---|---|---|
| Measured Lmax | 82 | 79 | 72 | 72 | 76 | 77 | 75 | 74 | 72 |
| Glazing Noise Ingress | 36 | 49 | 41 | 41 | 34 | 26 | 19 | 15 | 13 |
| Ventilation Noise Ingress | 43 | 53 | 35 | 37 | 45 | 33 | 28 | 23 | 21 |
| Wall Noise Ingress | 21 | 35 | 23 | 21 | 15 | 15 | 13 | 12 | 10 |
| Roof Noise Ingress | | | | | | | | | |
| Room Absorption Correction | | -2 | -2 | -3 | -3 | -3 | -4 | -5 | -6 |
| **Total Noise Ingress** | **44** | **56** | **43** | **43** | **45** | **34** | **28** | **22** | **19** |
| NR40 | 45 | 67 | 56 | 49 | 43 | 40 | 37 | 34 | 33 |
| Exceedance of Criteria | -1 | -11 | -13 | -6 | 2 | -6 | -9 | -12 | -14 |

# Appendix C – Manufacturer Datasheets

## KOMFORT EC SB250

Sound power level, A-filter applied.

| Sound power level, A-weighted | General | Octave frequency band [Hz] 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | LpA, 3 m [dBA] | LpA, 1 m [dBA] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| $L_{WA}$ to supply air inlet [dBA] | **52** | 28 | 46 | 50 | 41 | 36 | 33 | 36 | 29 | | |
| $L_{WA}$ to supply air outlet [dBA] | **61** | 33 | 53 | 60 | 48 | 38 | 37 | 43 | 36 | | |
| $L_{WA}$ to exhaust air inlet [dBA] | **52** | 28 | 46 | 50 | 42 | 36 | 33 | 35 | 30 | | |
| $L_{WA}$ to exhaust air outlet [dBA] | **62** | 32 | 51 | 61 | 49 | 37 | 37 | 42 | 33 | | |
| $L_{WA}$ surrounding [dBA] | **45** | 25 | 41 | 42 | 35 | 32 | 28 | 27 | 22 | **24** | **35** |

* Data provided for point 1 of the air flow diagram

## Disclaimer

This document has been prepared for the Client only and solely for the purposes expressly defined herein. NOVA Acoustics Ltd owe no duty of care to any third parties in respect of its content. Therefore, unless expressly agreed by NOVA Acoustics Ltd in signed writing, NOVA Acoustics Ltd hereby exclude all liability to third parties, including liability for negligence, save only for liabilities that cannot be so excluded by operation of applicable law. This report has been solely on the specific design assumptions and criteria stated herein.

All works undertaken by NOVA Acoustics Ltd are carried out in accordance with NOVA Acoustics Ltd.'s terms and conditions found at www.novaacoustics.co.uk.

## Contact Details

NOVA Acoustics Ltd,
Suite 13, Crown House,
94 Armley Road,
Leeds,
LS12 2EJ

[redacted]

www.novaacoustics.co.uk

[redacted]