



Indoor Ambient Noise Level Verification Report for Approval 131891/FO/2021 Condition 17(b)

**Phase 2, Land on the Corner of Victoria Avenue and
Chain Road, Manchester**

Terra Nova Developments Limited

2a Derwent Avenue, Manchester M21 7QP

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SLR Project No.: 403.066090.00001

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28 March 2025

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Revision Record

Revision	Date	Prepared By	Checked By	Authorised By
01	28 March 2025	S. Skingle	V. Taylor	V. Taylor

Basis of Report

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1.0 Introduction

SLR Consulting Limited (SLR) has been appointed by Terra Nova Developments Limited to assist with the discharge of Condition 17(b) of Manchester City Council (MCC) planning approval 131891/FO/2021 for Phase 2 of the following scheme development:

“Proposal: Erection of 12, two storey dwelling houses (Use Class C3a) together with the erection of a three storey building to form 20 residential apartments (Use Class C3a) with associated car parking, landscaping, boundary treatment and other associated works

Location: Land On The Corner Of Victoria Avenue And Chain Road, Manchester”

Detail of MCC Condition 17(b) subject to review within this report has been highlighted as follows, with the entire Condition (a) and (b) provided below for context:

“17) (a) Notwithstanding the noise report stamped as received by the City Council, as Local Planning Authority, on the 11 October 2021

(a) a scheme for acoustically insulating and ventilating the proposed residential accommodation against noise from the local traffic network shall be submitted for approval in writing by the City Council, as Local Planning Authority.

The approved noise insulation scheme shall be completed before the first occupation of the development.

Noise survey data must include measurements taken during a rush-hour period and night time to determine the appropriate sound insulation measures necessary. The following noise criteria will be required to be achieved:

Bedrooms (night time - 23.00 - 07.00) 30 dB LAeq (individual noise events shall not exceed 45 dB L_{Amax,F} by more than 15 times)

Living Rooms (daytime - 07.00 - 23.00) 35 dB LAeq

Gardens and terraces (daytime) 55 dB LAeq

Where applicable (entertainment/music): Additionally, where entertainment noise is a factor in the noise climate the sound insulation scheme shall be designed to achieve internal noise levels in the 63Hz and 125Hz octave centre frequency bands so as not to exceed (in habitable rooms) 47dB and 41dB, respectively.

(b) Prior to the first occupation of the development, a verification report will be required to validate that the work undertaken conforms to the recommendations and requirements approved as part of part (a) of this planning condition. The verification report shall include post completion testing to confirm the noise criteria has been met. In instances of non-conformity, these shall be detailed along with mitigation measures required to ensure compliance with the noise criteria. A verification report and measures shall be agreed until such a time as the development complies with part (a) of this planning condition.

Any mitigation measures shall be implemented in accordance with a timescale to be agreed with the City Council, as Local Planning Authority, and thereafter retained and maintained in situ.

Reason: To secure a reduction in noise from traffic or other sources in order to protect future residents from noise disturbance pursuant to policies SP1, H1 and DM1 of the Core Strategy (2007) and saved policy DC26 of the Unitary Development Plan for the City of Manchester (1995).”



A review of the Contractor's proposals and compliance with the recommended acoustic and ventilation measures was provided by SLR technical memorandum¹ in September 2023. This was further to detail provided at planning stage² as associated with scheme approval.

This document has followed the verification report for Phase 1 as provided in May 2024³, which provided compliance with criteria of MCC Condition 17(a).

This report has been prepared and checked by suitably qualified persons as defined in Section 4.0. Whilst reasonable effort has been made to ensure that this report is easy to understand, it is technical in nature. To assist the reader, a glossary of terminology has been included in Appendix A.

Phase 2 areas of the residential development subject to verification within this report have been provided within Appendix B and Appendix C.

¹ Chain Road, Manchester (Planning ref: 131891/FO/2021, Condition 17a) Acoustic Technical Memorandum. Project Ref: 403.064791.0001. SLR Consulting Limited, 8th September 2023.

² Chain Road, Manchester. Noise Impact Assessment. Report Ref: 410.12096.0001, Version 1. SLR Consulting Limited, August 2021.

³ Indoor Ambient Noise Level Verification Report for Approval 131891/FO/2021 Condition 17(b). Land on the Corner of Victoria Avenue and Chain Road, Manchester. Revision 01. SLR Consulting Limited, 3rd May 2024.



2.0 Pre-Completion Measurements

This Section has evidenced an indoor ambient noise level (IANL) study undertaken between Tuesday 25th and Wednesday 26th March 2025 in Plots 21 and 23 of Chain Road Phase 2.

The period of surveying incorporated a period of calm and sunny weather conditions that were conducive for sound surveying works. Temperatures ranged from nominally 3 – 13 °C with average and gust wind speeds below 5 m/s and an absence of rainfall, as measured using an external weather station for the duration of the survey, shown in Appendix C.

2.1 Methodology

The method of measurement has followed that previously provided for Phase 1 areas, including ANC measurement guidance⁴ as advocated by MCC noise technical guidance⁵.

A sound level meter was positioned inside front- and rear-facing first-floor bedrooms of two Plots, with pressure level measured for a nominal period outside of main construction hours over consecutive days and including a night. Those areas were defined by Plots adjacent to neighbouring roads, defining different schemes of sound insulation, as:

- Plot 21 / Bedroom 1: to front of Site and Victoria Avenue.
- Plot 23 / Bedroom 2: to rear of Site and Chain Road.

At the time of measurements, Site works had generally reduced and included only minor daytime working, with Phase 1 areas partially occupied. The period from 16:00 has been used during the daytime to avoid significant contribution from morning construction work.

The Plots under test were complete to include all glazing and ventilation elements, but without internal finishes, in an empty and unfurnished state, shown in Appendix C.

Different measurement conditions were considered according to:

- Building ventilation conditions (overnight):
 - Plot 21 / Bedroom 1: windows closed and through wall trickle ventilator open.
 - Plot 23 / Bedroom 2: windows closed and through window trickle ventilator open.
- Overheating ventilation conditions (short term):
 - Plot 21 / Bedroom 1: windows closed and PIV mechanical ventilation on.
 - Plot 23 / Bedroom 2: windows partially open (in locked-open position).

2.1.1 Sound Level Measurement Parameters

To accord with the technical detail of Condition 17(b), the following measurement parameters have been recorded:

- The A-weighted equivalent continuous sound pressure level, dB $L_{Aeq,T}$, over the defined measurement period, T .
- The A-weighted maximum sound pressure level, dB $L_{Amax,T}$, over the defined measurement period ($T = 2$ -minutes), with 'Fast' time-weighting.
- Details include each octave band between the range 125 Hz to 4 kHz.

⁴ Measurement of Sound Levels in buildings. ANC Guidelines, Version 1.0. Association of Noise Consultants, June 2020.

⁵ Manchester City Council Planning and Noise Technical Guidance, October 2022.



2.1.2 Correcting for reverberation time

In following of ANC measurement guidance, a significant problem with the measurement of sound levels in rooms, is that the room provides an acoustic response to any sound within it. The response of the room may change significantly between being in an empty and unfurnished state and being fully furnished. It would be assumed that the specification refers to sound levels when the room is normally furnished, and the level refers to a level standardised to the anticipated or reference reverberation time.

A reasonable anticipated reverberation time for a furnished domestic room of typical proportions would be 0.5 seconds, across the relevant frequency range. A correction would be made to account for the anticipated change in reverberation time.

2.2 Equipment and Measurements

Sound pressure level measurements were carried out using the following equipment listed in Table A, conforming to Class 1 acoustic accuracy for sound level meters and matched calibrators.

The sound level meter was calibrated before the measurements using the handheld acoustic calibrator and further checked upon completion of the survey. No significant drift was observed with calibration offsets of ≤ 0.2 dB. The calibration chain of equipment has been maintained traceably to national standards, no greater than one year for sound calibrators and two years for sound level meters.

Table A: Sound Monitoring Equipment

Location	Description	Manufacturer	Type	Serial Number	Laboratory Calibration Date	Certificate Number
Plot 23 / Bedroom 2	Sound Level Meter	Cirrus	CR:171B	G080284	28/01/2025	231225
	½" Microphone	Cirrus	MK:224	216418A		231225
	Outdoor kit	Cirrus	MK170	1015	12/01/2024	206374
	Calibrator	Cirrus	CR:515	59336	12/02/2025	TCRT25/1132
Plot 21 / Bedroom 1	Sound Level Meter	Cirrus	CR:171B	G303356	08/12/2023	204430
	½" Microphone	Cirrus	MK:224	214834D		204436
	Outdoor kit	Cirrus	MK172	2356		204430
	Calibrator	Cirrus	CR:515	97641	15/11/2024	226999
External	Weather Station	Davis Instruments	Vantage Vue 6250UK	MT21121 3036	N/A	N/A



2.3 Summary Results Corrected for Reverberation Time

As the response of a room may change significantly between an empty and unfurnished state, to being fully furnished, those criteria of Condition 17(a) have been understood for sound within a room that is normally furnished, so have been standardised to the anticipated reverberation time of 0.5 seconds for a bedroom.

Reverberation time measurements were therefore undertaken within both bedrooms in accordance with BS EN ISO 3382-2⁶ using an impulsive source (balloon burst) and conforming to engineering level accuracy, based on results extrapolated from T_{20} data.

The results have provided a spectrum of average reverberation times typically between 0.8 – 1.7 seconds with relevant corrections in the range of 2 – 5 dB, or approximately 4 dB(A) on average. This has been shown within full calculations of Appendix C.

Table B: Measured Sound Levels in Building Ventilation Conditions (Corrected for Reverberation Time)

Measured Date Range	Measured Location	Measured Period	Period Time HH:MM	Average dB $L_{Aeq,T}$		15 th Highest dB $L_{Amax(F)}$ *		Pass / Fail Condition 17 **
				Meas.	Limit	Meas.	Limit	
Tuesday 25/03/2025 – Wednesday 26/03/2025	Plot 21 / Bedroom 1	Day	07:00 – 23:00	25	≤ 35	-	N/A	Pass
		Night	23:00 – 07:00	20	≤ 30	35	≤ 45	Pass
	Plot 23 / Bedroom 2	Day	07:00 – 23:00	28	≤ 35	-	N/A	Pass
		Night	23:00 – 07:00	23	≤ 30	40	≤ 45	Pass
* 2-minute value exceeded 15 times per night in following of technical requirements of Condition 17(a).								
** Measured values accord with limit values in this ventilation state per Condition 17(a).								

Table C: Measured Sound Levels in Overheating Ventilation Conditions (Corrected for Reverberation Time)

Measured Date Range	Measured Location	Measured Period	Measured Detail	Average dB $L_{Aeq,T}$		Pass / Fail Condition 17 *
				Meas.	Limit	
Wednesday 26/03/2025	Plot 21 / Bedroom 1	Part Day	PIV off	28	≤ 50	Pass
			PIV 60 %	31	≤ 50	Pass
			PIV 100 %	50	≤ 50	Pass
	Plot 23 / Bedroom 2	Part Day	Partial open window	44	≤ 50	Pass
* Measured values accord with limit values in this ventilation state per AVO guide and planning stage works.						

⁶ BS EN ISO 3382-2:2008 Acoustics. Measurement of room acoustic parameters. Reverberation time in ordinary rooms. BSI, 2008.



3.0 Discussion – Results and Mitigation

3.1 Plot 21 / Bedroom 1

The measured sound levels within Plot 21 / Bedroom 1 complied with the technical requirements of Condition 17(a) and with a 10 dB degree of tolerance under building ventilation conditions. External noise levels were notably higher in this area of the Site from planning stage noise impact assessment works.

PIV ventilators have also been considered to operate exactly as intended. When off and in building ventilation conditions, they act as high attenuating through-wall trickle ventilation. When on, and accounting for residual sound from traffic, the PIV vent noise would be nominally 29 dB $L_{Aeq,T}$ at 60 % and 50 dB $L_{Aeq,T}$ at 100 % operation. These have followed manufacturers' data⁷ quoted at 29.3 dB $L_{Aeq,T}$ at 60 % and 49.3 dB $L_{Aeq,T}$ at 100 % operation.

In following and to achieve overheating ventilation conditions according with the planning stage works and AVO Guide limits of 50 dB $L_{Aeq,T}$ day and 42 dB $L_{Aeq,T}$ night, PIV operation would remain acceptable at any percentage during the day and up to 80 % at night.

No mitigation measures have been required for this Phase or any similar Plot with this scheme of sound insulation facing Victoria Avenue.

3.2 Plot 23 / Bedroom 2

The measured sound levels within Plot 23 / Bedroom 2 complied with the technical requirements of Condition 17(a) and with a 5 – 7 dB degree of tolerance under building ventilation conditions. External noise levels were notably lower in this area of the Site from planning stage noise impact assessment works.

IANLs with an open window as per the overheating ventilation condition, achieved the acoustic design aim from planning stage works, of 44 dB $L_{Aeq,T}$ day to align with planning stage calculations. This would be acceptably low at night and around 39 dB $L_{Aeq,T}$ based on differences from internal data and furthermore, align with planning stage calculations.

No mitigation measures have been required for this Phase or any similar Plot with this scheme of sound insulation facing Chain Road.

⁷ <https://www.titon.com/uk/wp-content/uploads/sites/10/2023/06/Sonair-3-catalogue-pages.pdf>



4.0 Closure

The assessment has required a suitable level of technical ability and has been undertaken by a Suitably Qualified Person (SQP). An individual with all the following credentials has been considered a SQP for this assessment:

- Has a minimum of three years' verifiable experience (within the last five years) of providing noise impact assessments in planning. Such experience has clearly demonstrated a practical understanding of factors affecting acoustics in relation to the proposed development use and in the built environment in general, including acting in an advisory capacity to provide recommendations and design advice in planning, and;
- Holds a recognised acoustic qualification and membership of an appropriate professional body. The primary professional body for acoustics in the UK is the Institute of Acoustics.

This assessment has been led and managed by a SQP as defined above.

Where some elements of the assessment (e.g. measurements) have been carried out by an acoustician who does not meet the requirements above, this has been undertaken with the direct guidance and supervision of a SQP who has reviewed, agreed and overseen the measurement methodology and any results obtained.

The SQP confirms that the relevant measurements and calculations:

- Represent good industry practice in accordance with available guidance.
- Are appropriate given the development being assessed and scope of works proposed.
- Avoid invalid, biased and exaggerated claims.

The checker and author of this document confirm that they both comply with the definition of a SQP defined in this Section.

Regards,

SLR Consulting Limited

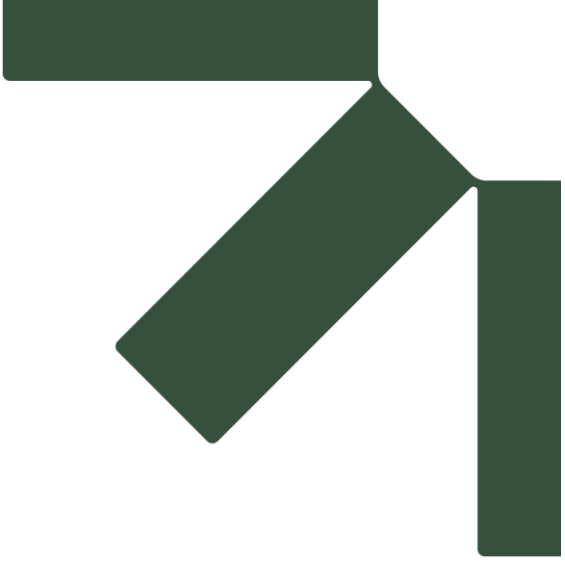


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Appendix A Glossary of Acoustics Terminology

Indoor Ambient Noise Level Verification Report for Approval 131891/FO/2021 Condition 17(b)

Phase 2, Land on the Corner of Victoria Avenue and Chain Road, Manchester

Terra Nova Developments Limited

SLR Project No.: 403.066090.00001

28 March 2025

A.1 Sound Levels

The human ear can detect a very wide range of pressure fluctuations, which are perceived as sound. In order to express these fluctuations in a manageable way, a logarithmic scale called the decibel, or dB scale is used. The decibel scale typically ranges from 0dB (the threshold of hearing) to over 120dB. An indication of the range of sound levels commonly found in the environment is given in the following table.

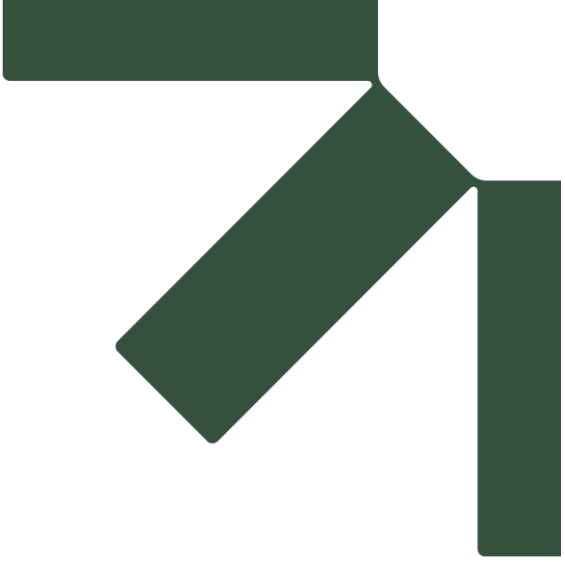
Table A-1: Sound Levels Commonly Found in the Environment

Sound Level	Location
0 dB(A)	Threshold of hearing
20 to 30 dB(A)	Quiet bedroom at night
30 to 40 dB(A)	Living room during the day
40 to 50 dB(A)	Typical office
50 to 60 dB(A)	Inside a car
60 to 70 dB(A)	Typical high street
70 to 90 dB(A)	Inside factory
100 to 110 dB(A)	Burglar alarm at 1m away
110 to 130 dB(A)	Jet aircraft on take off
140 dB(A)	Threshold of Pain

A.2 Acoustic Terminology

dB (decibel)	The scale on which sound pressure level is expressed. It is defined as 20 times the logarithm of the ratio between the root-mean-square pressure of the sound field and a reference pressure (of 20 μ Pa).
dB(A)	A-weighted decibel. This is a measure of the overall level of sound across the audible spectrum with a frequency weighting (i.e. 'A' weighting) to compensate for the varying sensitivity of the human ear to sound at different frequencies.
$L_{Aeq,T}$	$L_{Aeq,T}$ is defined as the notional steady sound level which, over a stated period T , would contain the same amount of acoustical energy as the A-weighted fluctuating sound measured over that period.
$L_{A10,T}$ & $L_{A90,T}$	If a non-steady noise is to be described it is necessary to know both its level and the degree of fluctuation. The Ln indices are used for this purpose, and the term refers to the level exceeded for n% of the time. Hence L_{10} is the level exceeded for 10% of the time and as such can be regarded as the 'average maximum level'. Similarly, L_{90} is the 'average minimum level' and is often used to describe the background noise. It is common practice to use the L_{10} index to describe traffic noise.
$L_{Amax(F)}$	$L_{Amax(F)}$ is the maximum A-weighted sound pressure level recorded over the period stated. L_{Amax} is sometimes used in assessing environmental noise where occasional loud noises occur, which may have little effect on the overall L_{eq} noise level but will still affect the noise environment. Unless described otherwise, it is measured using the 'fast' sound level meter response.





Appendix B Scheme Drawings

Indoor Ambient Noise Level Verification Report for Approval 131891/FO/2021 Condition 17(b)

Phase 2, Land on the Corner of Victoria Avenue and Chain Road, Manchester

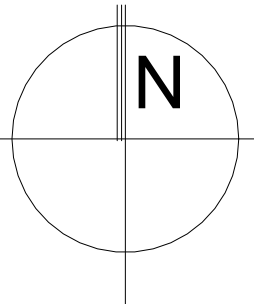
Terra Nova Developments Limited

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28 March 2025



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Project
Chain Road, Blackley

Client
Great Places Housing Group

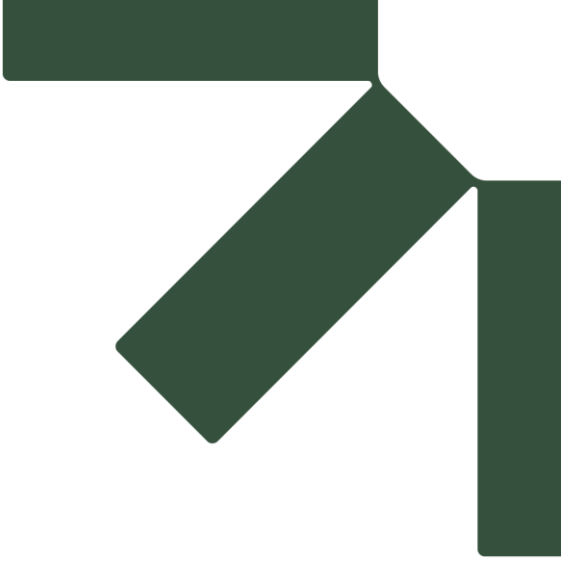
Drawing
Site Phasing Plan

Scale	Sheet Size	Drawn	Checked	Date
1 : 200	@ A1	ACo	SW	12.03.24
Project No.	Originator	Zone	Level	Form
18-002 - BSA -				Discipline
Status	Number	Revision		
	1200			

Planning

Hatherlow House, Hatherlow, Romiley, Stockport, SK6 3DY
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Site Phasing Plan
1 : 200



Appendix C IANL Summary

Indoor Ambient Noise Level Verification Report for Approval 131891/FO/2021 Condition 17(b)

Phase 2, Land on the Corner of Victoria Avenue and Chain Road, Manchester

Terra Nova Developments Limited

SLR Project No.: 403.066090.00001

28 March 2025

Figure C1: Summary Results – Plot 21 / Bedroom 1



Job No.	403.066090	Job Title	Chain Road Phase 2
Date Created	27 Mar 2025	By	SS
Date Revised	27 Mar 2025	Rev	1
Sheet	1		
Date Reviewed	28 Mar 2025	By	VT
Review Type	Gross Error	Review Status	No Comments

Indoor Ambient Noise Level - Plot 21 / Bedroom 1

Rating/Broadband/Input					Octave Band Centre Frequency, Hz									
Item / Description					dB(A)	31.5	63	125	250	500	1k	2k	4k	8k
Building Ventilation		Period Measurements		Period	Data									
25 Mar 2025 16:00:00		25 Mar 2025 23:00:00		Day Av.	dB $L_{Aeq,T}$				32.3	31.9	23.3	22.9	18.0	16.2
25 Mar 2025 23:00:00		26 Mar 2025 07:00:00		Night Av.	dB $L_{Aeq,T}$				24.8	25.5	18.4	18.4	15.3	15.9
25 Mar 2025 23:00:00		26 Mar 2025 07:00:00		15th Max	dB $L_{Amax(F)}$				40.3	43.0	33.8	33.1	26.3	20.4
Overheating Ventilation		Period Measurements												
26 Mar 2025 09:00:00		26 Mar 2025 10:00:00		Res. / Off	dB $L_{Aeq,1h}$				37.3	34.0	27.2	25.1	23.5	21.4
26 Mar 2025 11:02:31		26 Mar 2025 11:11:55		60%	dB $L_{Aeq,4min}$				33.6	35.4	34.4	28.0	24.8	20.0
26 Mar 2025 11:06:36		26 Mar 2025 11:07:36		100%	dB $L_{Aeq,1min}$				44.4	55.8	53.8	48.6	41.7	34.6
ISO 3382-2 Reverberation Time		Room Measurements												
		Position 1							0.9	0.9	1.4	1.5	1.4	1.1
		Position 2							0.8	1.1	1.3	1.7	1.5	1.1
		Position 3							0.8	0.9	1.5	1.5	1.3	1.1
		Position 4							0.9	0.9	1.5	1.5	1.5	1.1
		Position 5						0.8	0.9	1.3	1.7	1.5	1.1	
		Position 6						0.9	1.1	1.3	1.5	1.5	1.1	
		Arithmetic average						0.8	1.0	1.4	1.6	1.4	1.1	
		Decibel correction to 0.5s						-2.2	-3.0	-4.4	-5.0	-4.6	-3.5	
Building Ventilation		Rt Corrected Measurement		Period	Data									
25 Mar 2025 16:00:00		25 Mar 2025 23:00:00		Day Av.	dB $L_{Aeq,T}$			30.1	29.0	18.9	17.9	13.4	12.7	
25 Mar 2025 23:00:00		26 Mar 2025 07:00:00		Night Av.	dB $L_{Aeq,T}$			22.6	22.5	14.0	13.4	10.7	12.4	
25 Mar 2025 23:00:00		26 Mar 2025 07:00:00		15th Max	dB $L_{Amax(F)}$			38.1	40.0	29.4	28.1	21.7	16.9	
Overheating Ventilation		Rt Corrected Measurement												
26 Mar 2025 07:00:00		26 Mar 2025 08:00:00		Res. / Off	dB $L_{Aeq,T}$			35.0	31.1	22.8	20.1	18.9	17.9	
26 Mar 2025 11:02:31		26 Mar 2025 11:11:55		60%	dB $L_{Aeq,T}$			31.4	32.4	29.9	23.0	20.1	16.5	
26 Mar 2025 11:06:36		26 Mar 2025 11:07:36		100%	dB $L_{Aeq,T}$			42.1	52.8	49.4	43.6	37.0	31.1	
Overheating Ventilation		Residual & Rt Corrected Measurement												
26 Mar 2025 11:02:31		26 Mar 2025 11:11:55		60%	dB $L_{Aeq,T}$			30.1	31.1	29.0	21.7	18.8	15.2	
26 Mar 2025 11:06:36		26 Mar 2025 11:07:36		100%	dB $L_{Aeq,T}$			41.2	52.8	49.4	43.6	37.0	31.1	



Figure C2: Site Photographs – Plot 21 / Bedroom 1



Figure C3: Summary Results – Plot 23 / Bedroom 2



Job No.	403.066090' Chain Road Phase 2			
Date Created	By	Date Revised	Rev	Sheet
27 Mar 2025	SS	27 Mar 2025	1	1
Date Reviewed	By	Review Type	Review Status	
28 Mar 2025	VT	Gross Error	No Comments	

Indoor Ambient Noise Level - Plot 23 Bedroom 2

Rating/Broadband/Input					Octave Band Centre Frequency, Hz									
Item / Description					dB(A)	31.5	63	125	250	500	1k	2k	4k	8k
Building Ventilation	Period Measurements	Period	Data											
25 Mar 2025 16:00:00	25 Mar 2025 23:00:00	Day Av.	dB $L_{Aeq,T}$	33.4 (A)				30.1	27.8	26.1	31.5	25.2	16.6	
25 Mar 2025 23:00:00	26 Mar 2025 07:00:00	Night Av.	dB $L_{Aeq,T}$	27.7 (A)				24.7	22.4	21.6	25.0	19.9	15.6	
25 Mar 2025 23:00:00	26 Mar 2025 07:00:00	15th Max	dB $L_{Amax(F)}$	45.1 (A)				35.5	34.8	35.3	43.7	37.1	25.4	
Overheating Ventilation	Period Measurements													
26 Mar 2025 10:52:12	26 Mar 2025 11:45:34	Open Win.	dB $L_{Aeq,T}$	48.5 (A)				43.7	42.4	43.2	45.7	40.9	34.6	
ISO 3382-2 Reverberation Time	Room Measurements													
	Position 1							0.8	1.3	1.7	1.7	1.5	1.1	
	Position 2							0.9	1.3	1.7	1.7	1.5	1.1	
	Position 3							0.9	1.1	1.5	1.7	1.5	1.1	
	Position 4							0.8	1.1	1.5	1.9	1.7	1.1	
	Position 5							0.9	1.1	1.7	1.7	1.5	1.1	
	Position 6							0.8	1.1	1.5	1.7	1.5	1.1	
	Arithmetic average						0.8	1.2	1.6	1.7	1.5	1.1		
	Decibel correction to 0.5s						-2.3	-3.7	-5.0	-5.4	-4.9	-3.5		
Building Ventilation	Rt Corrected Measurement	Period	Data											
25 Mar 2025 16:00:00	25 Mar 2025 23:00:00	Day Av.	dB $L_{Aeq,T}$	28.4 (A)				27.9	24.0	21.1	26.1	20.3	13.0	
25 Mar 2025 23:00:00	26 Mar 2025 07:00:00	Night Av.	dB $L_{Aeq,T}$	22.8 (A)				22.5	18.7	16.6	19.6	15.0	12.0	
25 Mar 2025 23:00:00	26 Mar 2025 07:00:00	15th Max	dB $L_{Amax(F)}$	40.0 (A)				33.2	31.1	30.3	38.3	32.2	21.9	
Overheating Ventilation	Rt Corrected Measurement													
26 Mar 2025 10:52:12	26 Mar 2025 11:45:34	Open Win.	dB $L_{Aeq,T}$	43.5 (A)				41.4	38.7	38.2	40.4	36.0	31.1	



Figure C4: Site Photographs – Plot 23 / Bedroom 2



Figure C5: Measured Weather Conditions





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