



Architectural & Environmental Consultants
Acoustics | Vibration | Air Quality

Noise Assessment

Blackmore Farm, Melksham – Phase 2

Noise Assessment

Project: BLACKMORE FARM, MELKSHAM – PHASE 2

Report reference: RP01-25232-R0

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1. EXECUTIVE SUMMARY

- 1.1 Cass Allen has been instructed by Gleeson Land Ltd to assess noise and vibration affecting Phase 2 of a proposed new development at Blackmore Farm, Melksham.
- 1.2 The assessment was carried out in accordance with relevant local and national planning guidance.
- 1.3 A noise and vibration survey was carried out at the site. Noise levels at the site are dictated by road traffic noise emissions from the A1302.
- 1.4 A qualitative assessment of ground-borne vibration levels was carried out at the site and no perceptible vibration levels were identified. Consequently, vibration levels are considered to be acceptable for the development.
- 1.5 Noise affecting the development has been assessed in accordance with ProPG guidance. The design of the development is considered to be acceptable subject to the adoption of standard thermal double glazing and standard hit & miss trickle ventilators. This can be investigated further at the detailed design stage and may be secured by the imposition of a noise related planning condition by the Local Planning Authority.
- 1.6 Compliance with noise criteria in Building Regulations Part O has also been assessed. Some bedrooms at the north of the site will need to be designed so that windows can remain closed at night without the rooms overheating. This can be assessed further in due course.
- 1.7 In summary, it is our view that the site is suitable for the development in terms of noise and vibration levels and that planning permission may be granted subject to the imposition of suitable planning conditions, if necessary.

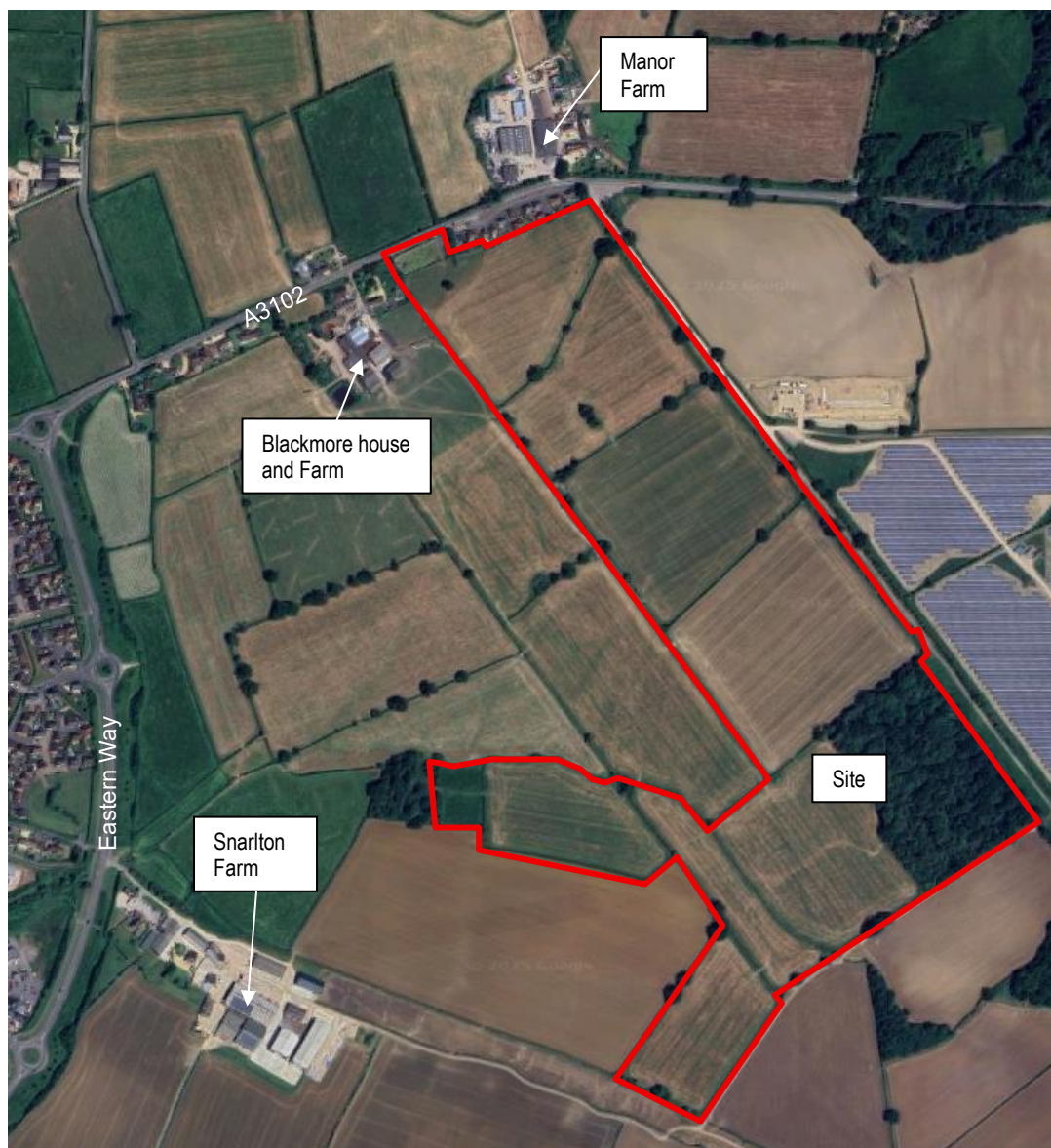
2. INTRODUCTION

- 2.1 Cass Allen has been instructed by Gleeson Land Ltd to assess noise and vibration affecting a proposed new development at Blackmore Farm, Melksham.
- 2.2 A qualitative assessment of ground-borne vibration levels was carried out at the site. No perceptible levels of vibration were identified during the site survey. Consequently, vibration levels are considered to be acceptable for the development and are not considered further in this report.
- 2.3 The assessment has been carried out in accordance with relevant local and national planning guidance.
- 2.4 The aims of the assessment were:
- to establish the suitability of existing noise levels at the site for the proposed development
 - where required, identify appropriate measures to optimise the acoustic design of the development and achieve acceptable noise levels in habitable areas
- 2.5 This report contains technical terminology; a glossary of terms can be found at www.cassallen.co.uk/glossary.

3. PROJECT DESCRIPTION

- 3.1 The site currently contains agricultural land and is bounded to the north by the A3102. Further north of the site is Manor Farm, a small business park containing a vehicle repairs shop, dog groomers, sports club, and lighting company. Southwest of the site is Snarlton Farm, which contains various supply companies, including food machinery, safety equipment, and timber supply.
- 3.2 The site location is shown in Figure 1 below.

Figure 1 Site Location and Surrounding Area (Red Line Approximate)



- 3.3 The proposal is to develop the site into residential properties. An indicative site layout is shown in Appendix 1.

4. PLANNING POLICY

National Policy

- 4.1 Outline guidance for the assessment of noise affecting new developments is given in the National Planning Policy Framework (NPPF) (December 2024). Relevant sections in this case are highlighted below:

187. Planning policies and decisions should contribute to and enhance the natural and local environment by ... preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of ...noise pollution.

198. Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development. In doing so they should:

a) mitigate and reduce to a minimum potential adverse impacts resulting from noise from noise from new development – and avoid noise giving rise to significant adverse impacts on health and the quality of life;

b) identify and protect tranquil areas which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason.

Local Policy

- 4.2 The Wiltshire Core Strategy document (2015) serves as the overarching development plan for Wiltshire until 2026. Core Policy 57 is relevant to this development and states:

Ensuring high quality design and place shaping

... Applications for new development must be accompanied by appropriate information to demonstrate how the proposal will make a positive contribution to the character of Wiltshire through:

... vii. having regard to the compatibility of adjoining buildings and uses, the impact on the amenities of existing occupants, and ensuring that appropriate levels of amenity are achievable within the development itself, including the consideration of... vibration and pollution (e.g. noise)...

- 4.3 To address the requirements of the national and local policies, the noise affecting the habitable areas of the proposed development has been assessed.

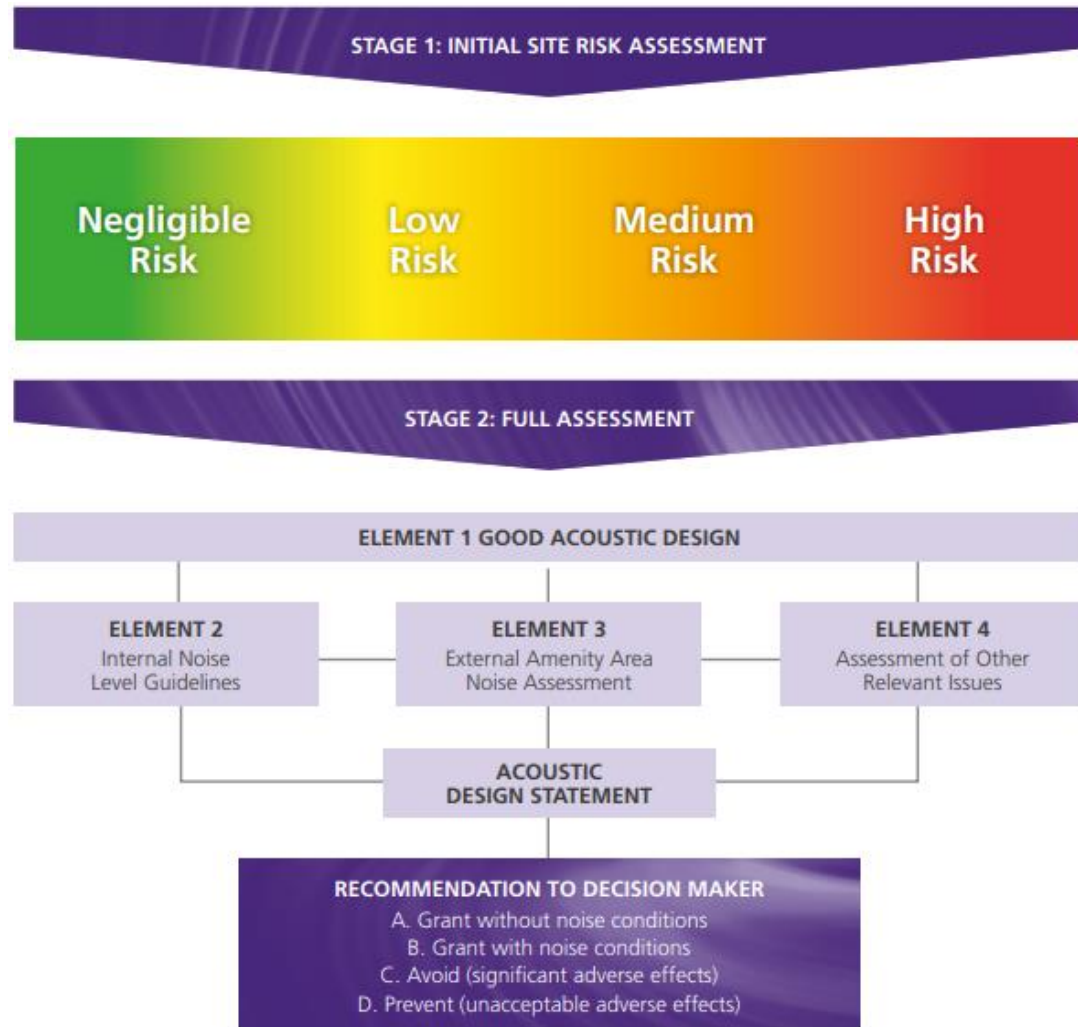
5. NOISE AFFECTING THE DEVELOPMENT

5.1 Specific guidance on the assessment of noise affecting new residential development is given in ProPG: Planning and Noise for New Residential Development, May 2017 (ProPG). The process within the ProPG guidance for the appraisal of noise levels affecting new residential development is considered to be current 'best practice' and has, therefore, been followed for the assessment. The assessment process can be summarised as follows:

- Stage 1 – measure noise levels at the site and carry out an initial noise risk assessment of the proposed development site based on the measured levels.
- Stage 2 – where a higher noise risk is identified, carry out a detailed assessment including the following four considerations:
 - Element 1 – the overall acoustic design and layout of the site
 - Element 2 – internal noise levels in habitable areas
 - Element 3 – noise levels in external amenity areas
 - Element 4 – consideration of other relevant issues
- Based on the results of the Stage 2 assessment, provide a recommendation to the decision maker on whether planning permission can and should be granted.

5.2 The process is shown visually in Figure 2 below.

Figure 2 ProPG Assessment Process



- 5.3 It should be noted that the guidance in ProPG relates primarily to noise from transportation sources, i.e. road traffic, aircraft, rail etc. Any significant noise from other sources (e.g. industrial, commercial or entertainment sources) is outside the scope of the ProPG guidance and, therefore, requires separate consideration. This is discussed further below in relation to noise from Snarlton and Manor Farm.

Stage 1 – Noise survey and initial assessment

- 5.4 A noise survey was carried out at the site from 24 to 28 July 2025 to assess existing noise levels in the area. The full methodology and results of the noise survey are provided in Appendix 2.
- 5.5 Average (LAeq) and maximum (LAm_{ax}) noise levels across the site were generally dictated by road traffic on the A3102.

- 5.6 Background noise levels (LA90) across the site were dictated by constant road traffic noise from the A3102 and other surrounding roads.
- 5.7 Noise was also identified from aircraft movements; however, noise from aircraft was insignificant when compared with noise from road traffic.
- 5.8 No significant noise was observed from the businesses at Manor Farm or Snarltan Farm during the survey period and they are not considered further in this report. Based on our site observations and a review of satellite imagery we don't believe there are any significant noise generating activities that take place at either premises that would preclude the granting of planning permission for the proposed development. If the Council require further reassurance, a suitably worded planning condition can be imposed, and this will be investigated further at the detailed design stage.
- 5.9 Areas of the development at the northern edge of the site will be subject to the highest noise levels. The noise survey results show that noise levels at these positions are as follows:
- Northern edge of the site, approximately 40m from the road:
 - Average noise levels during the daytime - 56 dB LAeq,0700-2300hrs
 - Average noise levels during the night-time - 46 dB LAeq,2300-0700hrs
 - Typical maximum noise levels during the night-time - 63 dB LMax
- 5.10 The measured noise levels can be compared with Figure 3 below to assess the 'noise risk' of the site. Where the noise risk is high, significant acoustic design measures may be required to achieve acceptable noise levels in the development. Where the noise risk is low, acceptable noise levels may be achievable with no specific acoustic design measures.

Figure 3 Noise Risk Assessment (Adaption of Figure 1 from ProPG)



- 5.11 It can be seen from a comparison of the measured noise levels in paragraph 5.9 above with Figure 3 that the site is 'Low' risk in relation to daytime and night-time noise levels. Therefore, ProPG requires that a more detailed 'Stage 2' assessment is carried out.

Stage 2 – Element 1 – Overall acoustic design of the site

- 5.12 The acoustic design of development has been reviewed in relation to the measured noise levels at the site. The layout of the development is considered to represent good acoustic design for the following reasons:

- the layout positions dwellings away from the noise sources. The Indicative Phase 2 Development Areas, as referenced in the layout in Appendix 1, are set back from the A3102 by at least 40m.
- the proposed dwellings at the north of the site are screened from noise generated by the A3102 by an existing housing estate.

Stage 2 – Element 2 - Internal noise levels

5.13 Appropriate design criteria for acceptable noise levels in acoustically sensitive areas of new developments are given in BS8233:2014 '*Guidance on sound insulation and noise reduction for buildings*'.

5.14 Relevant BS8233 design criteria are summarised in Table 1 below.

Table 1 BS8233:2014 Internal Noise Criteria

Activity	Location	07:00 to 23:00	23:00 to 07:00
Resting	Living room	35 dB LAeq,16hour	-
Dining	Dining room/area	40 dB LAeq,16hour	-
Sleeping (daytime resting)	Bedroom	35 dB LAeq,16hour	30 dB LAeq,8hour

5.15 It is also considered appropriate in this case to assess the potential impact of noise emissions from individual vehicle passes on the bedrooms of the development during the night-time. This is in line with guidance given in BS8233:2014 and ProPG, which both point out that regular individual noise events during the night have the potential to cause sleep disturbance.

5.16 Appropriate design criteria for acceptable maximum noise levels in habitable rooms of new residential developments are given in the ProPG guidance, which states that "*In most circumstances in noise-sensitive rooms at night (e.g. bedrooms) good acoustic design can be used so that individual noise events do not normally exceed 45 dB LAmax,F more than 10 times a night.*"

5.17 Full construction details for the development have not been finalised as the project is at an early design stage. It has therefore been assumed that the external walls of the development will be constructed using a standard masonry construction (e.g. 102mm brick, 100mm insulated cavity, 100mm concrete block) or a light-weight construction designed to achieve a similar level of sound insulation (this is technically achievable subject to detailed design).

5.18 The ventilation strategy for the development has not yet been confirmed and therefore it is assumed that background ventilation will be provided via trickle ventilators in the building facade. This is a 'worst case' assumption from an acoustic perspective as trickle ventilators are often an acoustic weak point in the facade.

5.19 Calculations were carried out using facade modelling software in accordance with the methodology given in BS8233:2014 to calculate the sound insulation performance required of the glazing and ventilation to achieve the nominated internal noise criteria in the 'worst-case' habitable rooms of

the development (i.e. the habitable rooms that will be subject to the highest external noise levels). The calculations included a 3 dBA design margin.

- 5.20 If acceptable internal noise levels can be achieved in ‘worst case’ habitable rooms then it follows that acceptable internal noise levels can be achieved in all other habitable rooms of the development using similar glazing and ventilator types.
- 5.21 The calculations were carried out based on the following typical dimensions/details for facade elements:
- glazing – 1.5m² for bedrooms and 2.5m² for living rooms
 - external walls – 8m² for bedrooms and 15m² for living rooms
 - 2 in-frame trickle ventilators in bedrooms and 3 in-frame trickle ventilators in living rooms
- 5.22 The results of the calculations are shown in Appendix 3 and are summarised in Table 2 below.

Table 2 Acoustic Requirements for ‘Worst Case’ Habitable Rooms

‘Worst Case’ Rooms	Glazing Performance Requirements (inc. Frames)	Ventilator Performance Requirements (in Open Position)
Bedrooms and living rooms nearest to the A3102	27 dB Rw+Ctr	31 dB Dne,w + Ctr

Note The requirements given are approximate only and should be confirmed at the detailed design stage when full design details are available.

- 5.23 The required sound insulation performance values in Table 2 could typically be achieved by standard thermal double glazing and standard hit & miss trickle ventilators.
- 5.24 It can be seen from the above that acceptable internal noise levels will be achievable in the development subject to the specification of suitable glazing and ventilation systems at the detailed design stage. It is our view therefore that the proposed development is, in principle, acceptable with regards to the noise levels that will exist within the habitable rooms.
- 5.25 The above ProPG assessment for planning purposes is based on internal noise levels with windows closed (assumed to be “normal” circumstances). However, it is anticipated that residents will open their windows at times for thermal comfort (e.g. to prevent overheating in warmer months). Noise levels in the rooms will increase under these circumstances.
- 5.26 The development will be subject to Part O of the Building Regulations (Approved Document O), which came into effect on 15 June 2022. Section 3.2 of Approved Document O (ADO) states:

In locations where external noise may be an issue (for example, where the local planning authority considered external noise to be an issue at the planning stage), the overheating mitigation strategy should take account of the likelihood that windows will be closed during sleeping hours (11pm to 7am).

Windows are likely to be closed during sleeping hours if noise within bedrooms exceeds the following limits.

a. 40dB LAeq,T, averaged over 8 hours (between 11pm and 7am).

b. 55dB LAFmax, more than 10 times a night (between 11pm and 7am).

- 5.27 The results of the noise survey indicate that areas at the north of the development facing the A3102 may exceed the noise limits provided in ADO when the windows are opened. The overheating assessment is, therefore, not likely to be able to rely solely on open windows. This will need to be confirmed as part of the overheating assessment during the detailed design stage.

Stage 2 – Element 3 – Noise levels in external amenity areas

- 5.28 BS8233 states that it is desirable that noise levels in external amenity areas of residential developments do not exceed 50 dB LAeq and that 55 dB LAeq,T should be regarded as an upper guideline value. However, BS8233 recognises that these guideline values will not always be achievable in city centres or urban areas adjoining main roads or other transport sources. In these cases, BS8233 states that the development should be designed to achieve the lowest practicable noise levels in the amenity spaces.
- 5.29 The noise survey results indicate that noise levels in external amenity areas are predicted to generally achieve the BS8233 recommended levels. The proposed development is therefore also considered to be acceptable based on noise levels in external amenity areas.

Stage 2 – Element 4 – Other relevant issues

- 5.30 In our view the design and acoustic approach outlined above is in line with both local and national noise policy. It is common for residential properties to be situated near to main roads and this is an acceptable scenario provided that the properties are acoustically upgraded where necessary to achieve acceptable noise levels in habitable areas.

Recommendation to decision maker

- 5.31 It is our view that planning permission may be granted in relation to noise affecting habitable areas of the development subject to the imposition of suitable planning conditions, if necessary, to ensure that acceptable noise levels are achieved in the finished development.

6. CONCLUSIONS

- 6.1 Cass Allen has been instructed by Gleeson Land Ltd to assess noise and vibration affecting Phase 2 of a proposed new development at Blackmore Farm, Melksham.
- 6.2 The assessment was carried out in accordance with relevant local and national planning guidance.
- 6.3 A noise and vibration survey was carried out at the site. Noise levels at the site are dictated by road traffic noise emissions from the A1302.
- 6.4 A qualitative assessment of ground-borne vibration levels was carried out at the site and no perceptible vibration levels were identified. Consequently, vibration levels are considered to be acceptable for the development
- 6.5 Noise affecting the development has been assessed in accordance with ProPG guidance. The design of the development is considered to be acceptable subject to the adoption of standard thermal double glazing and standard hit & miss trickle ventilators. This can be investigated further at the detailed design stage and may be secured by the imposition of a noise related planning condition by the Local Planning Authority.
- 6.6 Compliance with noise criteria in Building Regulations Part O has also been assessed. Some bedrooms at the north of the site will need to be designed so that windows can remain closed at night without the rooms overheating. This can be assessed further in due course.
- 6.7 In summary, it is our view that the site is suitable for the development in terms of noise and vibration levels and that planning permission may be granted subject to the imposition of suitable planning conditions, if necessary.

Appendix 1 Indicative Site Layout

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Appendix 2 Survey Results

Survey Summary:

The survey comprised short-term operator attended noise measurements and longer-term unattended noise monitoring at the site. Noise levels at the site were generally dictated by road traffic on surrounding roads and noise from train passes on the adjacent railway. A qualitative vibration assessment was carried out, vibration levels at the site were considered acceptable for the development.

Survey Period:

24/07/2025 to 28/07/2025

Survey Objectives:

- To identify noise sources that contribute to ambient noise levels at the site;
- To measure noise levels around the site over a typical day and night-time period.

Equipment Used:

Type	Manufacturer	Model	Serial Number
Sound level meter ¹ (noise logger)	Rion	NL-32	00903342
Sound level meter ¹ (noise logger)	Rion	NL-32	00903343
Calibrator	Rion	NC-74	34551703
Sound level meter ¹	Rion	NL-52	00965090

Note 1: All sound level meters were calibrated before and after measurement periods and no significant drift in calibration was found to have occurred. The results of the measurements are therefore considered to be representative.

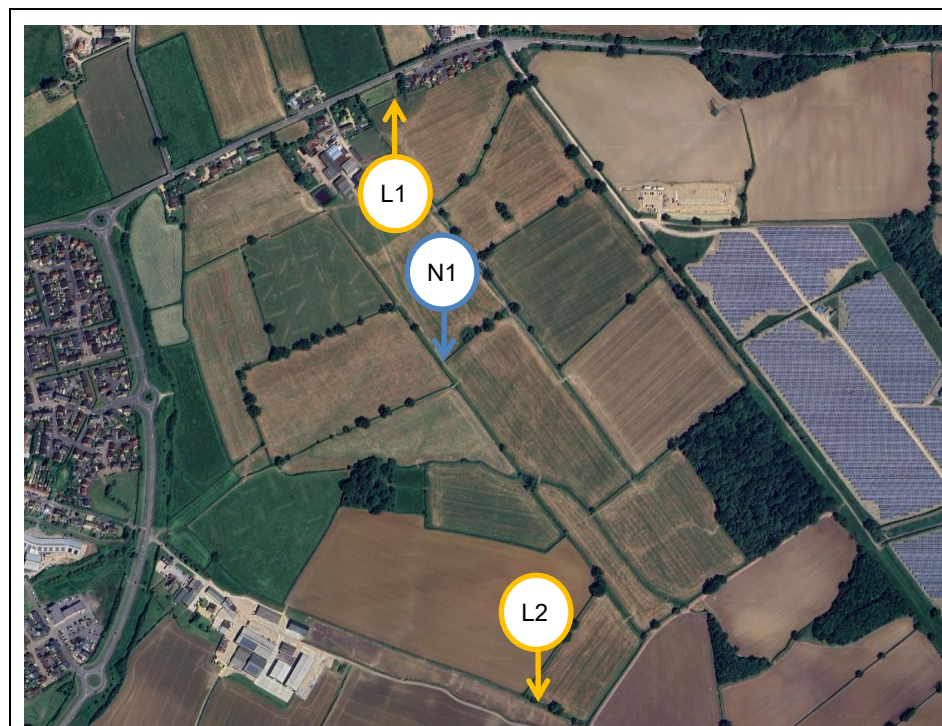
Weather Conditions:

The observed weather conditions were acceptable for acoustic measurement throughout the attended survey periods (low-medium wind speeds and no rain). Weather records for the area confirmed that weather conditions were also generally acceptable for acoustic measurement during the unattended monitoring.

Measurement Positions:

Position (refer plan below)	Description
N1	Attended noise monitoring position. 1.5m above ground. Free-field. Direct line of sight to nearby roads
L1	Unattended noise logging position. 3m above ground level. Free-field. Direct line of sight to A3102
L2	Unattended noise logging position. 3m above ground level. Free-field.

Site Plan showing Measurement Positions:



Attended Noise Monitoring Results:

Date	Position	Time	Meas. Length	LAeq, dB	LAmaz, dB	LA90, dB	Observations
24/07/2025	N1	14:03	5 mins	44	49	42	Noise dictated by road traffic from A3102

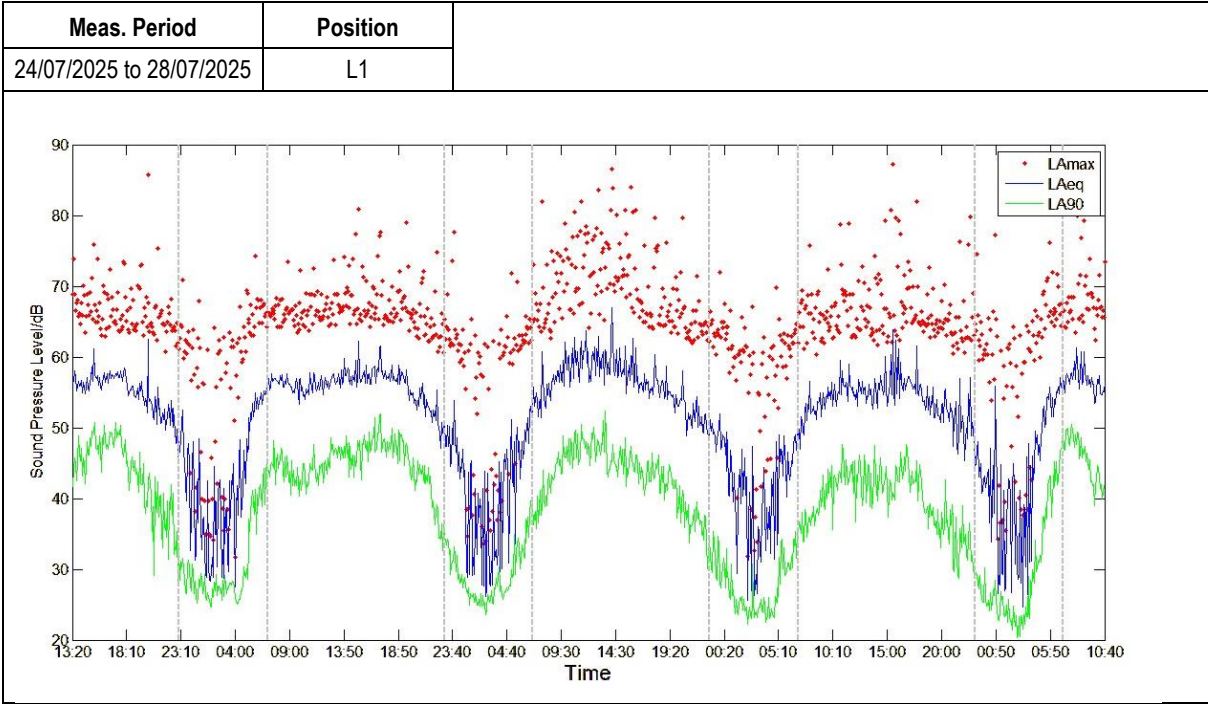
Unattended Noise Monitoring Results:

Meas. Period	Position	Daytime (0700-2300hrs)		Night-time (2300-0700hrs)		
		LAeq,16hr, dB	LA90,1hr dB ¹	LAeq,8hr, dB	LA90,5mins, dB ¹	LAmaz, dB ²
24/07/2025 to 28/07/2025	L1	57	45	47	26	65
	L2	44	33	40	22	49

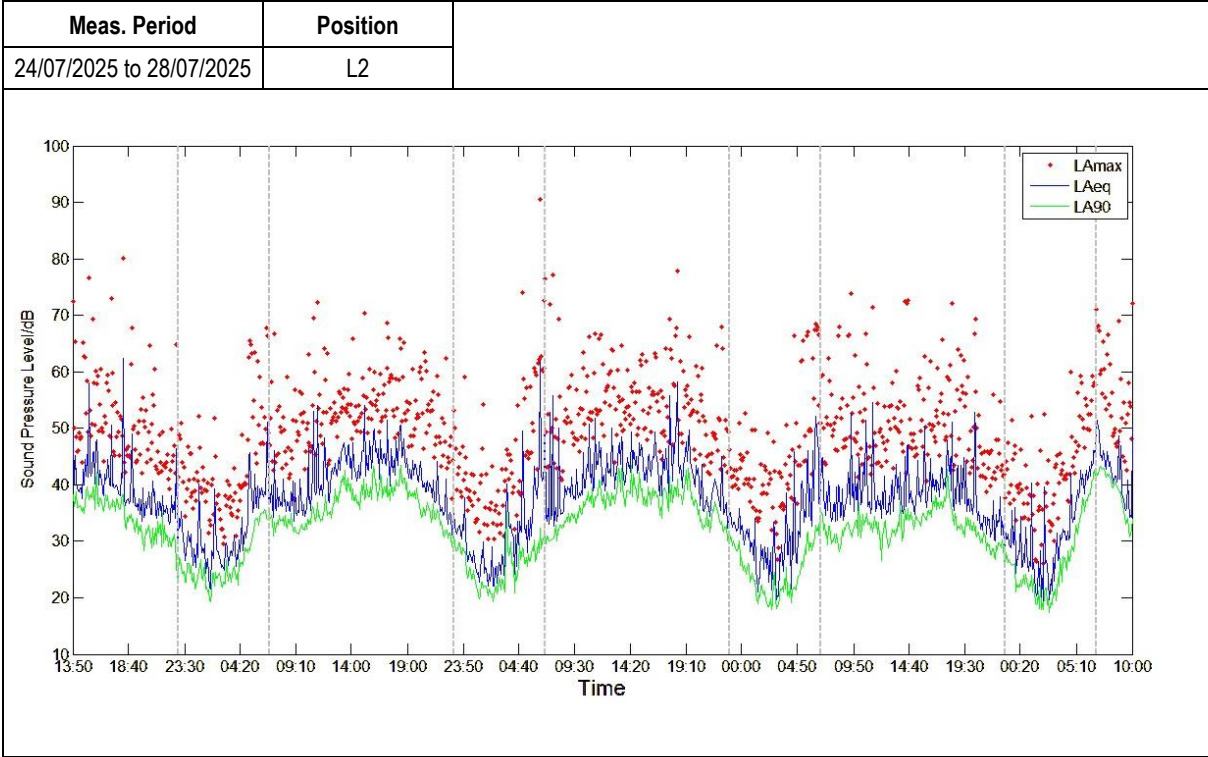
Note 1: Typical lowest measured during the period shown.

Note 2: Highest typical maximum noise level during the night-time (not exceeded more than 10-15 times per night).

Unattended Noise Monitoring Results:



Unattended Noise Monitoring Results:



Appendix 3 Facade Calculations

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PROJECT: Blackmore Farm, Melksham
ROOM: Bedroom
VARIANT: Worst-Case Daytime Average Noise Level (LAeq)
NOTES: Typical assumptions used for ext. wall & glazing dimensions, and no. ventilators.

Room Dimensions [m] $\begin{matrix} W \\ 3.0 \end{matrix}$ X $\begin{matrix} L \\ 4.0 \end{matrix}$ X $\begin{matrix} H \\ 2.4 \end{matrix}$

Room Volume = 28.8 m³
 Partition Area = 9.5 m²
 Ventilation ref area = 10.0 m²
 Free Field SPL K = 3 dB

SELECT Free Field or Façade SPL for model input >>> ☐

NOTES: _____

EXTERNAL SPECTRUM (A weighted)

EXTERNAL SPECTRUM (A weighted)		dBA	63	125	250	500	1000	2000	4000	
Direct input - Free Field SPL (A weighted octave bands) dB ---->		-								No data
Road traffic spectrum (according to BS 8233:1999 section 6)		56.0								
			37.8	41.9	45.4	48.8	52.0	49.2	44.0	Reference spectrum

REVERBERATION TIME

DIRECT INPUT ----->								No data
EQUAL RT for all bands ----->	0.5	0.5	0.5	0.5	0.5	0.5	0.5	Default - RT set to 0.5s

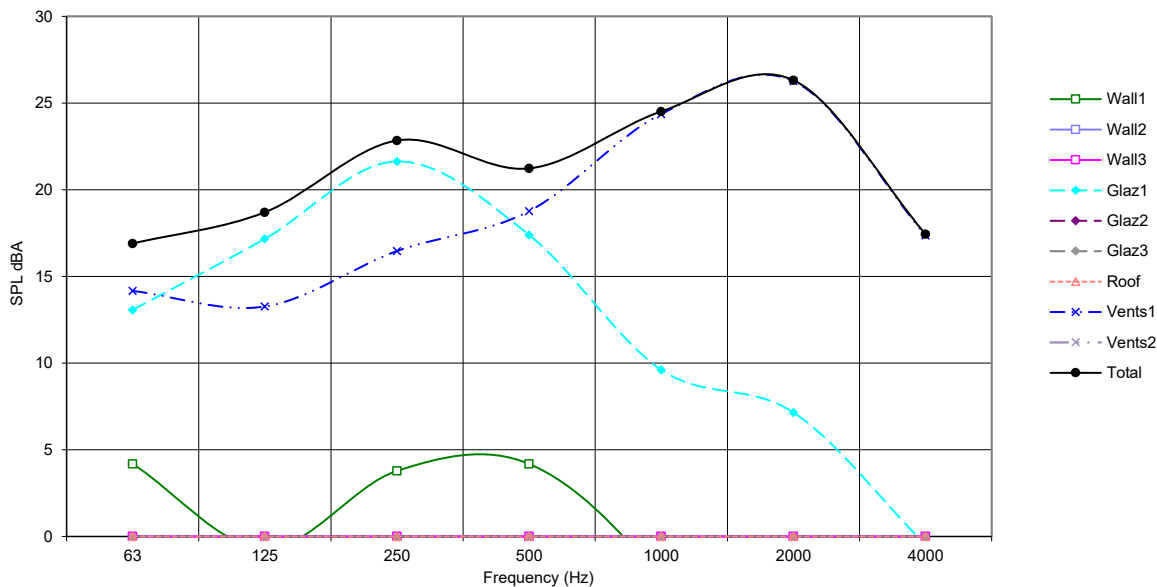
Façade Element	Area [m ²]	SRI dB to BS EN ISO 140-3:1995								Rw	C	Ctr
Wall 1 Typical - 102mm brick/50mm cavity/100mm block	8.0	36	45	44	47	57	67	77	1%	54	0	-4
ATTENUATION												
Wall 2 WALLS		0	0	0	0	0	0	0	0%			
ATTENUATION												
Wall 3 WALLS		0	0	0	0	0	0	0	0%			
ATTENUATION												
Glazing 1 27 dB Rw + Ctr - Standard Thermal Double Glazing	1.5	20	20	19	27	38	37	40	24%	27 (inc Ctr)	-	-
ATTENUATION												
Glazing 2 GLAZING		0	0	0	0	0	0	0	0%			
ATTENUATION												
Glazing 3 GLAZING		0	0	0	0	0	0	0	0%			
ATTENUATION												
Roof ROOF / FLOOR		0	0	0	0	0	0	0	0%			
ATTENUATION												
Resultant composite Façade SRI		27	28	27	34	45	45	48				
Resultant SPL inside room excluding ventilators dB	24.7	14	17	22	18	10	7	0	24%			

Ventilator Type	Num	D _{n,e} dB to BS EN 20140-10:1992								D _{nw}	C	Ctr
Ventilation Hit and miss trickle (4000mm ²) e.g. Tilton Trimvent XS13	2	30	35	35	36	34	29	33	75%	32	0	-1
ATTENUATION												
Ventilation VENTS		0	0	0	0	0	0	0	0%			
ATTENUATION												
Resultant SPL inside room through ventilators dB	29.6	14	13	16	19	24	26	17	76%			

Total SPL inside room

30.8	17	19	23	21	25	26	17
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Element contribution to total internal noise level



PROJECT: Blackmore Farm, Melksham
 ROOM: Bedroom
 VARIANT: Worst-Case Night-time Average Noise Level (LAeq)
 NOTES: Typical assumptions used for ext. wall & glazing dimensions, and no. ventilators.

Room Dimensions [m] $\begin{matrix} W \\ 3.0 \end{matrix}$ X $\begin{matrix} L \\ 4.0 \end{matrix}$ X $\begin{matrix} H \\ 2.4 \end{matrix}$

Room Volume = 28.8 m³
 Partition Area = 9.5 m²
 Ventilation ref area = 10.0 m²
 Free Field SPL K = 3 dB

SELECT Free Field or Façade SPL for model input >>> ☐

NOTES: _____

EXTERNAL SPECTRUM (A weighted)

EXTERNAL SPECTRUM (A weighted)		dBA	63	125	250	500	1000	2000	4000	
Direct input - Free Field SPL (A weighted octave bands) dB ----->		-								No data
Road traffic spectrum (according to BS 8233:1999 section 6)		46.0								
			27.8	31.9	35.4	38.8	42.0	39.2	34.0	Reference spectrum

REVERBERATION TIME

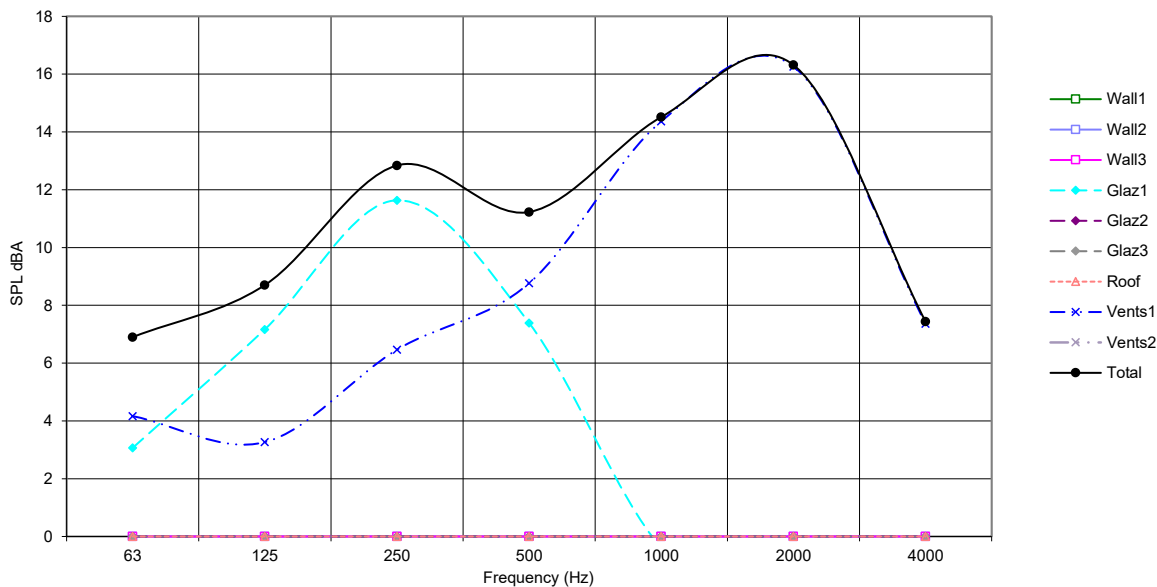
DIRECT INPUT ----->								No data
EQUAL RT for all bands ----->	0.5	0.5	0.5	0.5	0.5	0.5	0.5	Default - RT set to 0.5s

Façade Element	Area [m ²]	SRI dB to BS EN ISO 140-3:1995								Rw	C	Ctr
Wall 1 Typical - 102mm brick/50mm cavity/100mm block	8.0	36	45	44	47	57	67	77	1%	54	0	-4
ATTENUATION												
Wall 2 WALLS		0	0	0	0	0	0	0	0%			
ATTENUATION												
Wall 3 WALLS		0	0	0	0	0	0	0	0%			
ATTENUATION												
Glazing 1 27 dB Rw + Ctr - Standard Thermal Double Glazing	1.5	20	20	19	27	38	37	40	23%	27 (inc Ctr)	-	-
ATTENUATION												
Glazing 2 GLAZING		0	0	0	0	0	0	0	0%			
ATTENUATION												
Glazing 3 GLAZING		0	0	0	0	0	0	0	0%			
ATTENUATION												
Roof ROOF / FLOOR		0	0	0	0	0	0	0	0%			
ATTENUATION												
Resultant composite Façade SRI		27	28	27	34	45	45	48				
Resultant SPL inside room excluding ventilators dB	14.7	4	7	12	8	0	-3	-10	24%			

Ventilator Type	Num	D _{n,e} dB to BS EN 20140-10:1992								D _{nw}	C	Ctr
Ventilation Hit and miss trickle (4000mm ²) e.g. Titon Trimvent XS13	2	30	35	35	36	34	29	33	72%	32	0	-1
ATTENUATION												
Ventilation VENTS		0	0	0	0	0	0	0	0%			
ATTENUATION												
Resultant SPL inside room through ventilators dB	19.6	4	3	6	9	14	16	7	76%			

Total SPL inside room

20.8	7	9	13	11	15	16	7
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Element contribution to total internal noise level

PROJECT: Blackmore Farm, Melksham
ROOM: Bedroom
VARIANT: Worst-Case Night-time Maximum Noise Level (L_{Amax})
NOTES: Typical assumptions used for ext. wall & glazing dimensions, and no. ventilators.

Room Dimensions [m] $\begin{matrix} W \\ 3.0 \end{matrix}$ X $\begin{matrix} L \\ 4.0 \end{matrix}$ X $\begin{matrix} H \\ 2.4 \end{matrix}$

Room Volume = 28.8 m³
Partition Area = 9.5 m²
Ventilation ref area = 10.0 m²
Free Field SPL K = 3 dB

SELECT Free Field or Façade SPL for model input >>> ☐

NOTES: _____

EXTERNAL SPECTRUM (A weighted)

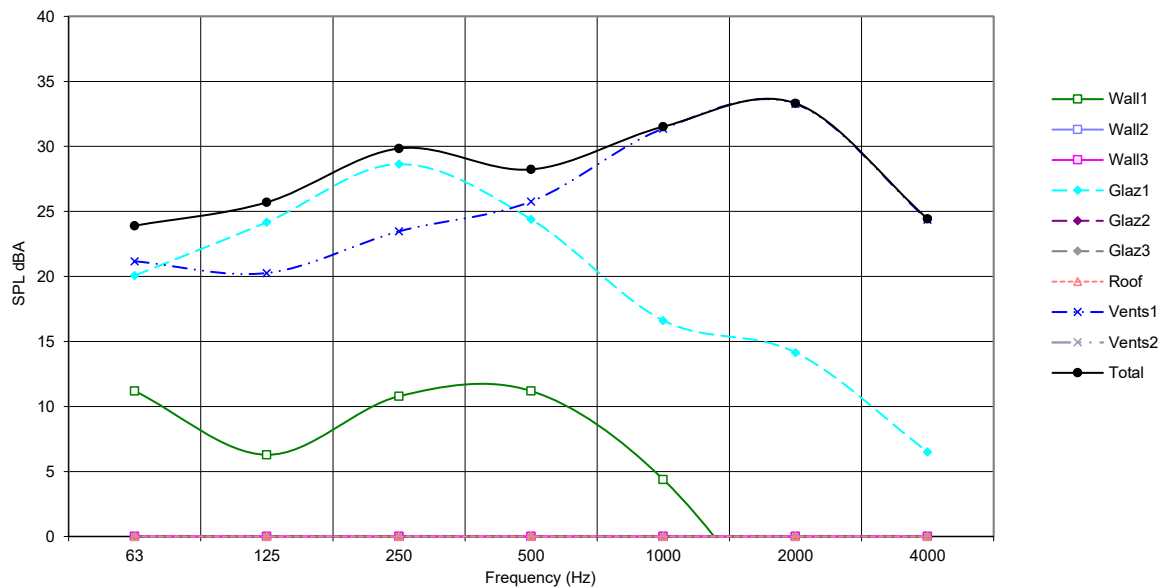
EXTERNAL SPECTRUM (A weighted)								
dBA	63	125	250	500	1000	2000	4000	
Direct input - Free Field SPL (A weighted octave bands) dB ----->	-							No data
Road traffic spectrum (according to BS 8233:1999 section 6)	63.0							
	44.8	48.9	52.4	55.8	59.0	56.2	51.0	Reference spectrum

REVERBERATION TIME

DIRECT INPUT ----->								No data
EQUAL RT for all bands ----->	0.5	0.5	0.5	0.5	0.5	0.5	0.5	Default - RT set to 0.5s

Façade Element	Area [m ²]	SRI dB to BS EN ISO 140-3:1995								Rw	C	Ctr
Wall 1 Typical - 102mm brick/50mm cavity/100mm block	8.0	36	45	44	47	57	67	77	1%	54	0	-4
ATTENUATION												
Wall 2 WALLS		0	0	0	0	0	0	0	0%			
ATTENUATION												
Wall 3 WALLS		0	0	0	0	0	0	0	0%			
ATTENUATION												
Glazing 1 27 dB Rw + Ctr - Standard Thermal Double Glazing	1.5	20	20	19	27	38	37	40	24%	27 (inc Ctr)	-	-
ATTENUATION												
Glazing 2 GLAZING		0	0	0	0	0	0	0	0%			
ATTENUATION												
Glazing 3 GLAZING		0	0	0	0	0	0	0	0%			
ATTENUATION												
Roof ROOF / FLOOR		0	0	0	0	0	0	0	0%			
ATTENUATION												
Resultant composite Façade SRI		27	28	27	34	45	45	48				
Resultant SPL inside room excluding ventilators dB	31.7	21	24	29	25	17	14	7	24%			

Ventilator Type	Num	D _{n,e} dB to BS EN 20140-10:1992								D _{nw}	C	Ctr
Ventilation Hit and miss trickle (4000mm ²) e.g. Titon Trimvent XS13	2	30	35	35	36	34	29	33	75%	32	0	-1
ATTENUATION												
Ventilation VENTS		0	0	0	0	0	0	0	0%			
ATTENUATION												
Resultant SPL inside room through ventilators dB	36.6	21	20	23	26	31	33	24	76%			
Total SPL inside room	37.8	24	26	30	28	32	33	24				

Element contribution to total internal noise level

PROJECT: Blackmore Farm, Melksham
ROOM: Living Room
VARIANT: Worst-Case Average Noise Level (LAeq)
NOTES: Typical assumptions used for ext. wall & glazing dimensions, and no. ventilators.

Room Dimensions [m] $\begin{matrix} W \\ 4.0 \end{matrix}$ X $\begin{matrix} L \\ 5.0 \end{matrix}$ X $\begin{matrix} H \\ 2.4 \end{matrix}$

Room Volume = 48.0 m³
 Partition Area = 17.5 m²
 Ventilation ref area = 10.0 m²
 Free Field SPL K = 3 dB

SELECT Free Field or Façade SPL for model input >>> Free Field

EXTERNAL SPECTRUM (A weighted)

Direct input - Free Field SPL (A weighted octave bands) dB ---->	-							No data
Road traffic spectrum (according to BS 8233:1999 section 6)	56.0							
		37.8	41.9	45.4	48.8	52.0	49.2	44.0
								Reference spectrum

REVERBERATION TIME

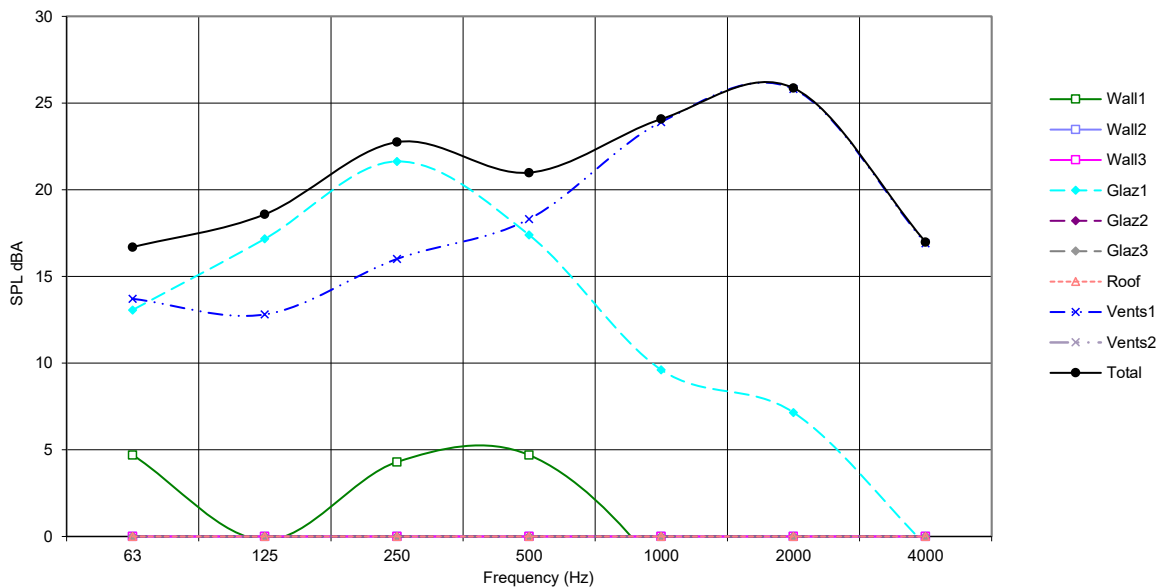
DIRECT INPUT ----->								No data
EQUAL RT for all bands ----->	0.5	0.5	0.5	0.5	0.5	0.5	0.5	Default - RT set to 0.5s

Façade Element	Area [m ²]	SRI dB to BS EN ISO 140-3:1995								Rw	C	Ctr
Wall 1 Typical - 102mm brick/50mm cavity/100mm block	15.0	36	45	44	47	57	67	77	1%	54	0	-4
ATTENUATION												
Wall 2 WALLS		0	0	0	0	0	0	0	0%			
ATTENUATION												
Wall 3 WALLS		0	0	0	0	0	0	0	0%			
ATTENUATION												
Glazing 1 27 dB Rw + Ctr - Standard Thermal Double Glazing	2.5	20	20	19	27	38	37	40	26%	27 (inc Ctr)	-	-
ATTENUATION												
Glazing 2 GLAZING		0	0	0	0	0	0	0	0%			
ATTENUATION												
Glazing 3 GLAZING		0	0	0	0	0	0	0	0%			
ATTENUATION												
Roof ROOF / FLOOR		0	0	0	0	0	0	0	0%			
ATTENUATION												
Resultant composite Façade SRI		28	28	27	35	46	46	48				
Resultant SPL inside room excluding ventilators dB	24.7	14	17	22	18	10	7	0	27%			

Ventilator Type	Num	D _{n,e} dB to BS EN 20140-10:1992								D _{nw}	C	Ctr
Ventilation Hit and miss trickle (4000mm ²) e.g. Titon Trimvent XS13	3	30	35	35	36	34	29	33	73%	32	0	-1
ATTENUATION												
Ventilation VENTS		0	0	0	0	0	0	0	0%			
ATTENUATION												
Resultant SPL inside room through ventilators dB	29.2	14	13	16	18	24	26	17	73%			

Total SPL inside room

30.5	17	19	23	21	24	26	17
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Element contribution to total internal noise level



Architectural & Environmental Consultants

Acoustics | Vibration | Air Quality

This report has been prepared by Cass Allen Associates Ltd in accordance with the CDM regulations with all reasonable skill, care and diligence, and taking account of the resources devoted to it by agreement with the client. Information reported herein is based on the interpretation of data collected and has been accepted in good faith as being accurate and valid at the time of collection. This report is for the exclusive use of the client named above; no warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from Cass Allen Associates Ltd. Cass Allen Associates Ltd disclaims any responsibility to the client and others in respect of any matters outside the agreed scope of work.



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