

London Road, St Ippolyts Hitchin, Herts, SG4 7RD

Proposed Residential Development Planning Noise Assessment

Report ref.

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Issued to

Hornbeam Homes Limited

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SECTION	TITLE	PAGE
1.	INTRODUCTION	1
2.	SITE DESCRIPTION AND PROPOSALS.....	1
3.	CRITERIA FOR ACCEPTABILITY.....	1
3.1	PLANNING GUIDELINES	1
3.2	CRITERIA FOR ASSESSMENT	5
4.	SITE NOISE MEASUREMENT SURVEY	7
4.1	MEASUREMENT LOCATIONS.....	7
4.2	SURVEY DETAILS AND INSTRUMENTATION	7
4.3	SURVEY RESULTS	7
5.	ASSESSMENT OF NOISE.....	9
5.1	BS 8233:2014 GUIDANCE ON SOUND INSULATION AND NOISE REDUCTION FOR BUILDINGS	9
5.2	ACOUSTICS AND OVERHEATING	10
5.3	NOISE LEVELS IN OUTDOOR LIVING SPACES.....	11
6.	CONCLUSIONS	11
APPENDIX A:	Site Location Plan	
APPENDIX B:	Proposed Scheme Drawings	
APPENDIX C:	Intrusive Noise Calculations	



1. INTRODUCTION

Hornbeam Homes Limited are seeking planning permission for a residential development at land off London Road in St Ippolyts, Hitchin. The proposed development site is located in a sensitive area. Consequently, a noise assessment is required.

Accordingly, Spectrum Acoustic Consultants has been instructed to carry out a noise assessment for the purpose of establishing the impact on the proposed residential properties. This report provides the information required to inform and satisfy the requirements of the Local Planning Authority, for the purpose of determining the application.

2. SITE DESCRIPTION AND PROPOSALS

The proposed development site is located at land off London Road, Gosmore, St Ippolyts, Hitchin SG4 7RD. The site is currently disused land. London Road bounds the site to the east and has a number of existing houses located along it. Beyond London Road to the east are agricultural fields. Bounding the site to the north is an equestrian centre. To the south of the site are houses on The Crescent. To the west of the site are houses on Mill Road. An existing site location plan is included in Appendix A.

Proposals involve constructing 5 houses at the proposed development site. The houses would consist of a mixture of detached and link-detached properties. Each of the houses would have a small garden to the rear and parking for vehicles at the front. The proposed scheme plans are included in Appendix B.

3. CRITERIA FOR ACCEPTABILITY

3.1 PLANNING GUIDELINES

3.1.1 National Planning Policy Framework, MHCLG, December 2024

The National Planning Policy Framework (NPPF)¹ sets out the Government's planning policies for England and how these should be applied by establishing a framework within which locally prepared plans for development can be produced.

The NPPF requires (187) that *'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 [...].'*

In relation to noise (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:*

¹ National Planning Policy Framework, MHCLG, December 2024



'a) mitigate and reduce to a minimum potential adverse impacts resulting from noise from new development – and avoid noise giving rise to significant adverse impacts on health and the quality of life²;

'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'

Planning policies and decisions should also (200) *'ensure that new development can be integrated effectively with existing businesses and community facilities (such as places of worship, pubs, music venues and sports clubs). Existing businesses and facilities should not have unreasonable restrictions placed on them as a result of development permitted after they were established. Where the operation of an existing business or community facility could have a significant adverse effect on new development (including changes of use) in its vicinity, the applicant (or 'agent of change') should be required to provide suitable mitigation before the development has been completed'.*

Throughout the NPPF reference is made to other policies, such as the Noise Policy Statement for England (NPSE), which should also be applied as appropriate.

3.1.2 Noise Policy Statement for England (NPSE), DEFRA, March 2010

The NPPF refers to the Noise Policy Statement for England (NPSE) which sets out the long term vision of Government noise policy as follows: *Promote good health and a good quality of life through the effective management of noise within the context of Government policy on sustainable development.*

The first aim of the Noise Policy Statement for England

Avoid significant adverse impacts on health and quality of life from environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development.

- 2.23 The first aim of the NPSE states that significant adverse effects on health and quality of life should be avoided while also taking into account the guiding principles of sustainable development (paragraph 1.8).

The second aim of the Noise Policy Statement for England

Mitigate and minimise adverse impacts on health and quality of life from environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development.

- 2.24 The second aim of the NPSE refers to the situation where the impact lies somewhere between the Lowest Observed Adverse Effect Level (LOAEL) and the Significant Observed Adverse Effect Level (SOAEL). It requires that all reasonable steps should be taken to mitigate and minimise adverse effects on health and quality of life while also taking into account the guiding principles of sustainable development (paragraph 1.8). This does not mean that such adverse effects cannot occur.

² See Explanatory Note to the Noise Policy Statement for England, paragraphs 2.23 and 2.24, DEFRA, 15 March 2010.



The third aim of the Noise Policy Statement for England

Where possible, contribute to the improvement of health and quality of life through the effective management and control of environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development.

- 2.25 This aim seeks, where possible, positively to improve health and quality of life through the proactive management of noise while also taking into account the guiding principles of sustainable development (paragraph 1.8), recognising that there will be opportunities for such measures to be taken and that they will deliver potential benefits to society. The protection of quiet places and quiet times as well as the enhancement of the acoustic environment will assist with delivering this aim.

3.1.3 Planning Practice Guidance – Noise (PPG)

The PPG sets out government guidance on the role of noise in the planning process. This provides advice on issues such as when noise is relevant to planning, how to determine noise impact, discussion on the context of noise and how the impact of noise can be mitigated.

Of relevance to this scheme, it advises that *“Noise needs to be considered when ...new developments would be sensitive to the prevailing acoustic environment.”* Whilst it does advise that noise can override other planning concerns, it states that as with the NPSE and the NPPF it does not expect noise to be considered in isolation from other economic, social and environmental dimensions of a proposed development.

It asks an LPA to consider

- *whether or not a significant impact is occurring or likely to occur;*
- *whether or not an adverse effect is occurring or likely to occur;*
- *whether or not a good standard of amenity can be achieved.*

This includes identifying whether the noise exposure is above or below SOAEL or LOAEL.

The PPG talks about “impact” and “effect”. This is an important part of the context discussion, as a noise source may have a significant impact for brief period of time, but because the impact is only brief, the overall “effect” is not significant, as it does not materially affect behaviour.

The PPG summarises examples of the perception of noise, with the outcome and the effect level:

- No observed effect: Noise is not noticeable, and no specific measures are required. This would correlate to NOEL of the NPSE;
- No observed adverse effect: Noise is noticeable and not intrusive, does not cause any change in behaviour or attitude, can affect the acoustic character of an area but not such that there is a perceived change in the quality of life. No specific measures are required;
- Observed adverse effect: Noise causes small changes in behaviour (eg closing windows for some of the time because of the noise), potential for some sleep disturbance, and there is a perceived change in the quality of life. In this case noise should be mitigated and reduced to a minimum as it represents the onset of the LOAEL as defined in the NPSE;



- Significant observed adverse effect: Noise causes a material change in behaviour and attitude (eg avoiding certain activities during periods of intrusion, or having to keep windows closed most of the time because of the noise where there is no alternative ventilation), potential for difficulty getting back to sleep, quality of life diminished. This correlates to a SOAEL as defined by the NPSE and should be avoided.
- Unacceptable adverse effect: Extensive and regular changes in behaviour and/or an inability to mitigate effects, leading to psychological stress and physiological effects (eg regular sleep deprivation, medically definable harm). This, the PPG advises, should be prevented.

It is of note that the examples given in the PPG relate to changes of behaviour, changes to quality of life and changes in the character of an area. In the case of this development, residents would be moving into an existing situation, so behaviours would not change, as no pattern of behaviour is already established.

This is reflected formally in paragraph 007 of the PPG. This paragraph helps the LPA consider the balance between planning and statutory nuisance (Environmental Protection Act 1990). It states that *"When assessing whether a statutory nuisance exists, local authorities will consider a number of relevant factors including the noise level, its duration, how often it occurs, the time of day or night that it occurs and the 'character of the locality'. The factors influencing the 'character of the locality' may include long-established sources of noise in the vicinity, for example church bells, industrial premises, music premises or public houses'."*

As stated in the NPSE, there is no simple relationship between noise levels and the effect of those noise levels. The NPSE lists a number of factors as relevant, and the following are those that apply to this scheme:

- Source and level of noise;
- Number of noise events, how often they occur, and the pattern;
- The spectral content of the noise and its character;
- Whether noise effects can be mitigated by closing windows, allowing for alternative ventilation to be provided;
- The acoustic environment in external amenity spaces where they are an intrinsic part of the overall design;
- The effect on a nearby existing business.

The PPG says that for development, mitigation can be considered in terms of engineering (reducing noise at source, or containing it). This is unlikely to be practicable in a case like this, as the proposed developer would need to rely on the goodwill (unless formal agreements could be reached) with those responsible for the source of the noise. However, layout (orientating site to minimise impact, and including screening), planning conditions, and mitigation to the dwellings themselves are all likely to be feasible.

Such mitigation techniques are therefore recognised by the PPG as normal practice in the case of noise sensitive schemes.

The noise impact can also be offset where residents have access to a quiet facade, a quiet external amenity space for their sole or shared use, or a public amenity space nearby.



3.2 CRITERIA FOR ASSESSMENT

3.2.1 WHO – Environmental Noise Guidelines for the European Region 2018

New guidance from WHO titled Environmental Noise Guidelines for the European Region (ENG) was published in 2018. The document takes a very different approach to guidance set out in the previous WHO Guidelines for Community Noise 1999 (GCN) document by identifying separate thresholds for specific sources, rather than for community noise as a whole. Consequently, much of the earlier guidance set out in GCN is now absent from ENG. While ENG was intended to supersede GCN, it recognises this absence and states that *‘indoor guideline values and any values not covered by the current guidelines (such as industrial noise and shopping areas) should remain valid.’*

3.2.2 WHO – Guidelines for Community Noise, 1999

Guidelines for Community Noise - World Health Organization (GCN) gives guidance on suitable noise levels for sleeping and resting conditions in dwellings. It sets out these values in table 4.1, and lists them as being guideline values for community noise. The document defines community noise (also called environmental noise, residential noise or domestic noise) as noise emitted from all sources, except noise at the industrial workplace. Main sources of community noise include road, rail and air traffic, industries, construction and public work, and the neighbourhood.

WHO recommends internal noise levels of 30dB(A) at night for bedrooms, and 35dB(A) during the day for living-rooms. The guideline levels are based on annual average data.

To avoid sleep disturbance in bedrooms during the night time period, it also recommends that noise levels from single sound events should not regularly exceed L_{Amax} 45dB(A). WHO defines ‘regular’ as not more than 10-15 events per night.

WHO also gives guidance on suitable noise levels for outdoor living areas such as gardens. The WHO guidelines state that *“to protect the majority of people from being seriously annoyed during the daytime, the sound pressure level on balconies, terraces and outdoor living areas should not exceed 55 dB L_{Aeq} for a steady continuous noise. To protect the majority of people from being moderately annoyed during the daytime, the outdoor sound pressure level should not exceed 50 dB L_{Aeq} ”*.

The preface to WHO states that community noise includes road, rail and air traffic, industries, construction and public work, and the neighbourhood. Therefore, although these noise levels are usually used to determine acceptability from steady continuous noise from anonymous sources, such as road traffic or rail movements, they provide helpful guidance when considering noise from commercial sources.

3.2.3 BS 8233:2014 guidance on sound insulation and noise reduction for buildings

BS 8233:2014 *Guidance on sound insulation and noise reduction for buildings* gives guidance on indoor ambient noise levels to be achieved in dwellings for reasonable resting and sleeping conditions. The guidance in BS 8233:2014 is based on guidelines issued by the WHO, Guidelines for Community Noise (1999).

In Section 7.7.1 of BS 8233:2014, it states that it applies to external noise as it affects the internal acoustic environment from sources without a specific character, previously termed “anonymous noise”. However, it then goes on to state that if the noise has a specific character, if it contains features such as a distinguishable, discrete and continuous tone, is irregular enough to attract attention, or has strong low-frequency content, in which case lower noise limits might be appropriate.



The BS 8233:2014 guideline levels are shown in Table 1.

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

Table 1: BS 8233 guideline noise level limits in dwellings for resting and sleeping

BS 8233 advises that *“If relying on closed windows to meet the guide values, there needs to be an appropriate alternative ventilation that does not compromise the facade insulation or the resulting noise level. If applicable, any room should have adequate ventilation (e.g. trickle ventilators should be open) during assessment.”*

It also advises that *“Where development is considered necessary or desirable...the internal target levels may be relaxed by up to 5 dB and reasonable conditions still achieved.”*

The standard also advises that *“Regular individual noise events (for example, scheduled aircraft or passing trains) can cause sleep disturbance. A guideline value may be set in terms of SEL or L_{AFmax} depending on the character and number of events per night. Sporadic noise events could require separate values.”* It does not give guidance on what might constitute a guideline value. However, as the standard does cross reference Guidelines for Community Noise - World Health Organization, 1999 (WHO), it is suggested that the guideline value of L_{AFmax} 45 dB, inside bedrooms, should not be exceeded during the night more than 10-15 times, which reflects the WHO position.

BS 8233:2014 suggests the following guidelines for noise levels in external spaces that are used for amenity space, such as gardens and patios. *“For traditional external areas that are used for amenity space, such as gardens and patios, it is desirable that the external noise level does not exceed 50 dB $L_{Aeq,T}$, with an upper guideline value of 55 dB $L_{Aeq,T}$ which would be acceptable in noisier environments. However, it is also recognized that these guideline values are not achievable in all circumstances where development might be desirable. In higher noise areas, such as city centres or urban areas adjoining the strategic transport network, a compromise between elevated noise levels and other factors, such as the convenience of living in these locations or making efficient use of land resources to ensure development needs can be met, might be warranted. In such a situation, development should be designed to achieve the lowest practicable levels in these external amenity spaces, but should not be prohibited.”*

3.2.4 Approved Document O – Overheating, DCLG, 2021

Section 3 of ADO is intended to ensure the overheating mitigation strategy is usable, with paragraph 3.2 to 3.4 relating to noise.

The key noise requirements are set out in paragraphs 3.2 and 3.3:

3.2 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).

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

- 40dB $L_{Aeq,T}$ averaged over 8 hours (between 11pm and 7am).*
- 55dB L_{AFmax} , more than 10 times a night (between 11pm and 7am).*



4. SITE NOISE MEASUREMENT SURVEY

4.1 MEASUREMENT LOCATIONS

For the purpose of the assessment, unattended noise loggers were used for the recording of continuous noise levels at two locations, representative of the most sensitive areas of the site. The noise measurement locations are detailed as follows:

Position 1 – Eastern aspect of site, representative of Plot 1 closest to London Road.

Position 2 – Western aspect of site, representative of Plot 4.

The measurement locations are illustrated on the existing site location plan, included in Appendix A. The measurements were carried out at 2.5m height above ground.

4.2 SURVEY DETAILS AND INSTRUMENTATION

Measurements of noise were completed over the period Wednesday 28 to Thursday 29 January 2026. Throughout the survey, weather conditions were mild and dry, with low wind speeds.

Noise measurements consisted of contiguous five-minute periods during both the daytime and night-time periods at each of the identified measurement locations.

Noise measurement parameters consisted of equivalent continuous (L_{Aeq}) noise levels and maximum (L_{Amax}) noise levels, as well as statistical noise levels (termed L_n , where n is the percentage of time the level is exceeded during the measurement period). Both overall and octave band measurements were stored for later analysis. This allowed for analysis of any potential tonal characteristics that may be present in the noise.

The following instrumentation was used during the measurement survey:

- Bruel & Kjaer Type 2250 Sound Level Meter s/n 2739650
- Bruel & Kjaer Type 4189 Microphone s/n 2983518
- Bruel & Kjaer Type 4231 Acoustic Calibrator s/n 3030452
- Bruel & Kjaer Type 2250 Sound Level Meter s/n 2726905
- Bruel & Kjaer Type 4189 Microphone s/n 2710995
- Bruel & Kjaer Type 4231 Acoustic Calibrator s/n 2730220

Before and after the survey, the sound level meters were field-calibrated in accordance with the manufacturer's guidelines, and no significant drift was observed. The field calibrators are laboratory calibrated annually and the meters and microphones are laboratory calibrated at 2 yearly intervals, all in accordance with UKAS procedures by a UKAS-accredited laboratory.

4.3 SURVEY RESULTS

During the daytime, ambient noise levels across the site were dominated by road traffic movements on London Road and other distant roads. During the night-time, ambient noise levels reduce significantly across the site.

Charts below show the noise profiles measured at the logger monitoring locations.

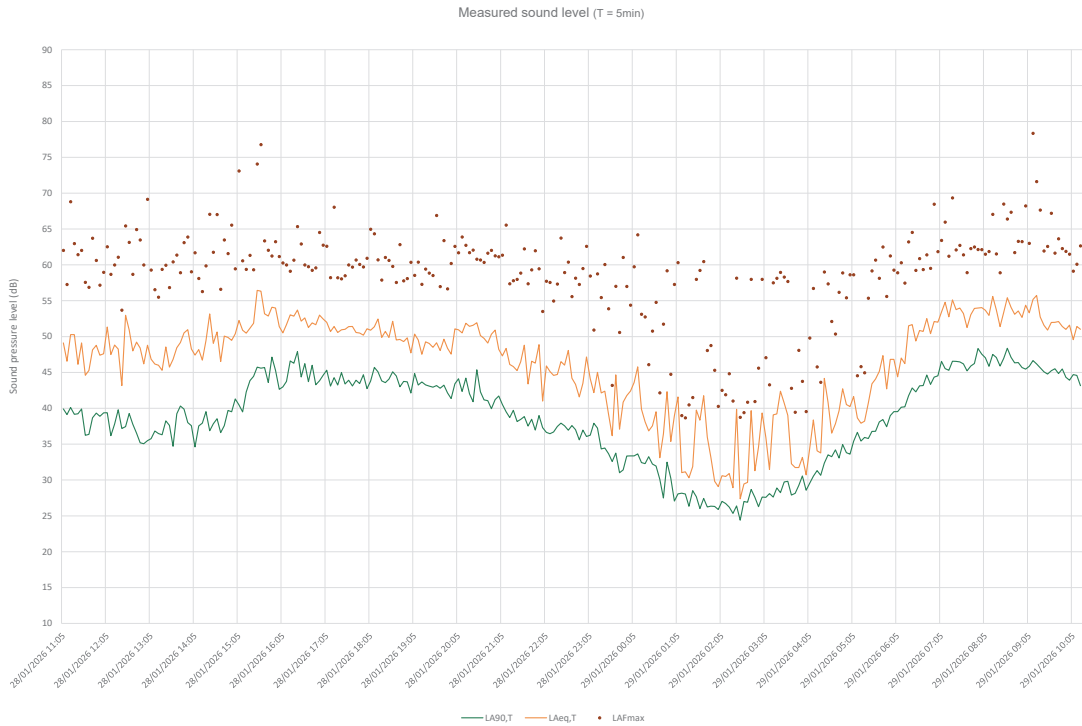


Chart 1: Position 1, Eastern aspect of site, representative of Plot 1 closest to London Road, ambient noise profile - Wednesday 28 to Thursday 29 January 2026.

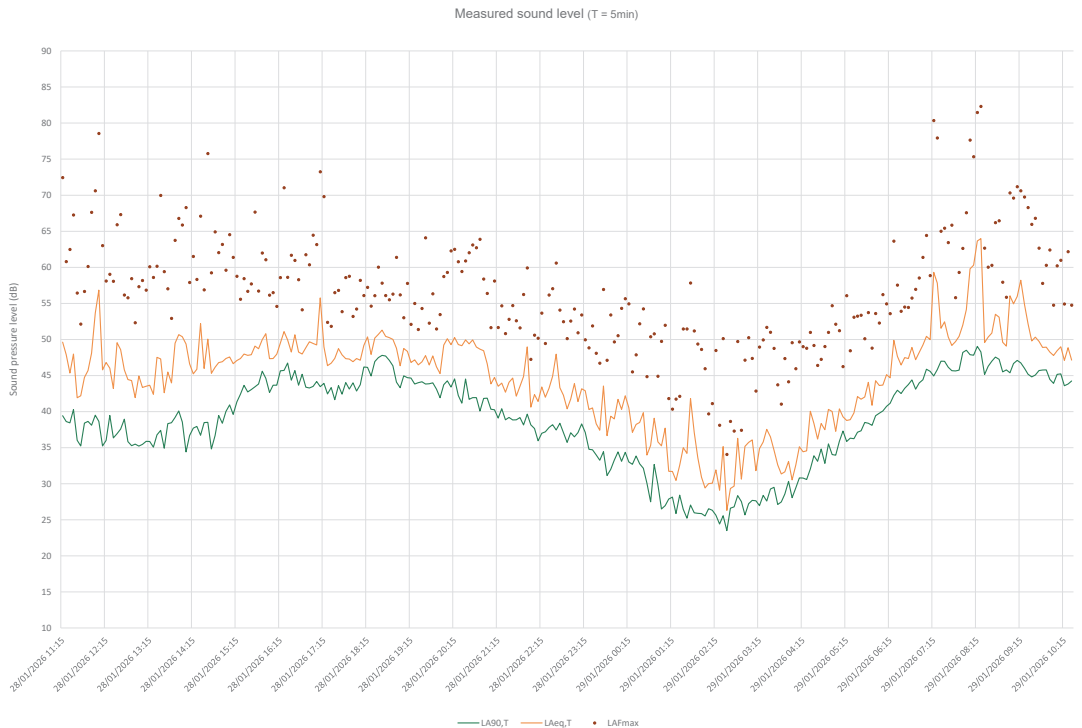


Chart 2: Position 2, Western aspect of site, representative of Plot 4, ambient noise profile - Wednesday 28 to Thursday 29 January 2026.



A summary of the measured noise data over the daytime and night-time periods is included in Table 2 below. The $L_{Aeq,16\text{ hour}}$ and $L_{Aeq,8\text{ hour}}$ levels have been calculated using all of the daytime and night-time noise measurements.

With reference to L_{Amax} levels, World Health Organisation (WHO) guidelines for community noise, define regular as not more than 10-15 events per night. Therefore, the L_{Amax} levels measured during the night time periods have been sorted from highest to lowest. It is then possible to read off the 10-15th highest L_{Amax} levels during each of the night-time periods which are regarded as being typical. The typical L_{Amax} values for each of the night-time periods obtained in this survey are included in Table 2.

Measurement Position	Daytime L_{Aeq} (dB) 0700-2300	Night-time L_{Aeq} (dB) 2300-0700	Night-time typical L_{Amax}^1 (dB)
Position 1 Eastern aspect of site, representative of Plot 1 closest to London Road	51	44	61
Position 2 Western aspect of site, representative of Plot 4	51	41	56

Table 2: Summary of results of ambient noise survey

Notes: 1 The L_{Amax} data is only relevant to the night-time

During the daytime, overall noise levels across the site are $L_{Aeq,16\text{ hour}}$ 51dB. During the night-time, overall noise levels across the site are $L_{Aeq,8\text{ hour}}$ 41-44dB, with maximum levels typically in the range L_{AFmax} 56-61dB.

5. ASSESSMENT OF NOISE

5.1 BS 8233:2014 GUIDANCE ON SOUND INSULATION AND NOISE REDUCTION FOR BUILDINGS

Internal noise levels can be calculated from external noise levels, given the size and construction of the building façade elements including glazing and ventilation, as well as acoustic properties of the receiving room, such as the volume and reverberation time. Usually, it is the glazing and, depending upon the particular strategy, the ventilation apertures that admit most noise into residences. It is then a matter of providing façade elements with adequate acoustic performance to achieve sufficient noise reduction to meet the internal noise target.

The method that has been followed is described in Annex G2.1 of *BS 8233:2014 Guidance on sound insulation and noise reduction for buildings*.

The analysis carried out here assumes typical internal finishes for the type of rooms considered, based on acoustic properties Spectrum have measured in a range of occupied dwellings.



The general construction of the building envelope is as follows:-

- External walls of brick cladding, with an insulated cavity to 2 layers of 12.5mm plasterboard.
- Window glazing having a specification as described below.
- Tile/slate roof with 12.5mm plasterboard ceiling below and absorbing layer within the void.
- Ventilation to meet the requirements of Part F of the Building Regulations.

Sound insulation data for the façade elements have been taken from sources such as standard data provided by BRE and DETR, Spectrum library of measurement data, calculations using Marshall Day's *Insul* software as well as manufacturer's data and the BRE/CIRIA publication 'Sound Control for Homes'.

Based on the internal layout drawings for the proposed dwellings, sample intrusive noise calculations for the most noise-exposed habitable rooms of the development, based on the room and façade dimensions are included in Appendix C. The calculations have been carried out in order to establish the façade glazing and ventilation specification necessary to achieve guideline internal noise levels.

Table 3 below details a sound insulation specification for the proposed dwellings. The numeric sound insulation rating for the glazing and the ventilator openings has been specified in terms of $R_w + C_{tr}$ and $D_{n,e,w} + C_{tr}$ respectively.

Room	Wall type	Window Performance $R_w + C_{tr}$ dB	Vent Performance $D_{n,e,w} + C_{tr}$ dB
Living Room	Brick/block	25	32
Dining/Kitchen	Brick/block	25	32
Bedrooms	Brick/block	25	32

Table 3: Sound insulation specification for the proposed development site

Acoustic performances in habitable rooms can typically be achieved by the following specification.

- Standard double-glazed units (rated $R_w + C_{tr}$ 25dB), typically comprising of 4mm float glass, 12mm cavity, 6mm float glass.
- Standard hit and miss trickle ventilators (rated at $D_{n,e,w} + C_{tr}$ 32dB).

With the above specification in place, internal ambient noise levels would be lower than the limits set out in BS 8233:2014.

5.2 ACOUSTICS AND OVERHEATING

Whether or not an overheating assessment is necessary, or how any potential overheating will be mitigated at this development is for other specialists to determine. However, during the night-time, ambient noise levels are sufficiently low enough to achieve acceptable noise levels with windows open.



5.3 NOISE LEVELS IN OUTDOOR LIVING SPACES

BS 8233:2014 suggests the following guidelines for noise levels in external spaces that are used for amenity space, such as gardens and patios. *“For traditional external areas that are used for amenity space, such as gardens and patios, it is desirable that the external noise level does not exceed 50 dB $L_{Aeq,T}$, with an upper guideline value of 55 dB $L_{Aeq,T}$ which would be acceptable in noisier environments. However, it is also recognized that these guideline values are not achievable in all circumstances where development might be desirable. In higher noise areas, such as city centres or urban areas adjoining the strategic transport network, a compromise between elevated noise levels and other factors, such as the convenience of living in these locations or making efficient use of land resources to ensure development needs can be met, might be warranted. In such a situation, development should be designed to achieve the lowest practicable levels in these external amenity spaces, but should not be prohibited.”*

The site by definition adjoins the transport network. Consequently, the scheme will be designed to achieve the lowest practicable noise levels within the gardens.

Ambient noise levels measured across the site during the daytime are $L_{Aeq,16hour}$ 51dB. However, in order to further protect Plot 1, a close boarded timber fences with a minimum height of 1.8m should be around the boundary of the garden.

6. CONCLUSIONS

Hornbeam Homes Limited have commissioned Spectrum Acoustic Consultants to complete a noise assessment in connection with a proposed residential development at land off London Road in St Ippolyts, Hitchin.

During the daytime, ambient noise levels across the site were dominated by road traffic movements on London Road and other distant roads. During the night-time, ambient noise levels reduce significantly across the site.

A noise mitigation strategy has been developed, by considering the noise insulation and noise control requirements for the proposed dwellings. The mitigation scheme that has been proposed and specified satisfies internal and external noise levels in accordance with the requirements of BS 8233 and WHO Guidelines for Community Noise.

APPENDIX A

Existing Site Location Plan with Measurement Locations



N

Position 1

Position 2

London Rd

The Crescent

Mill Rd

fully booked VA

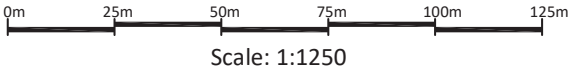
DSG Professional Window Cleaning

B656

Brook



Location Plan @ 1/1250



Notes

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All work is to comply with the relevant Building Regulations and all statutory notices are to be given to the chosen Building Control at the appropriate stages of the project.

CDM
All design and construction is to be in accordance with the Construction, Design and Management Regulations 2015.

DESIGN CRITERIA
All of the contractors' works on site are to comply with and meet the approval of the relevant British Standards and the Local Authority's Design Guides, including Building Control and Planning Departments.

DIMENSIONS
Please note, all dimensions on the drawing are shown in millimeters, unless otherwise stated and should be checked prior to any works on site. It is the responsibility of the client or appointed contractor to notify the designers of any discrepancies of the walls and general layouts.

DO NOT SCALE FOR CONSTRUCTION PURPOSES

MATERIALS
Please note, all the materials specified and the construction details shown, are not to be changed without the full knowledge and prior approval of the agent; as any changes may have a detrimental effect on the designed/required carbon emissions of the structure as designed.



Address: Land At London Road
Gosmore
SG4 7RE

Drawing Size	Scale	Drawn by
A3	1/1250	MS
Job No.	Work Stage	Drawing No.
1171	Survey	01a

Rev.	Description	Date	Drn	Chk

Location Plan
As Existing

M Scott /
Architectural
Design

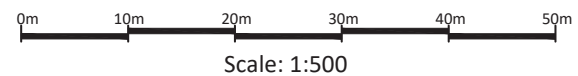
BANCROFT HOUSE
34 BANCROFT
HITCHIN
HERTS SG5 1LA
www.msad.uk
Tel:01462 422440

APPENDIX B

Proposed Scheme



Site Plan @ 1/500



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Notes

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Drawing Size	Scale	Drawn by
A3	1/500	MS
Job No.	Work Stage	Drawing No.
1171	Sketch	03b

Rev.	Description	Date	Drm	Chk

Site Plan
As Proposed

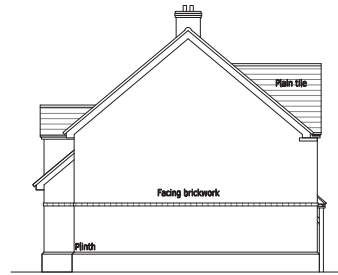
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Design

BANCROFT HOUSE
34 BANCROFT
HITCHIN
HERTS SG5 1LA
www.msad.uk
Tel: 01462 422440

4B8P 214m² + 47m² (garage)



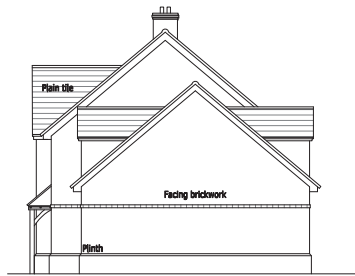
Front Elevation



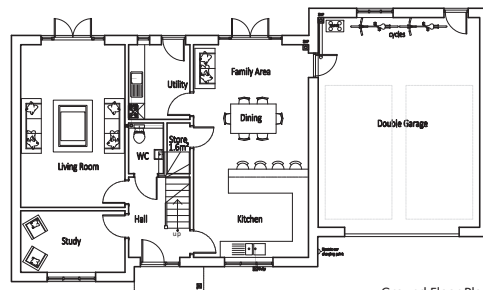
Side Elevation



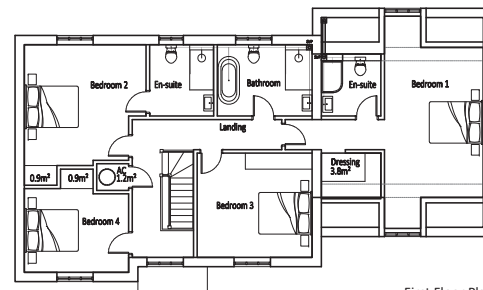
Rear Elevation



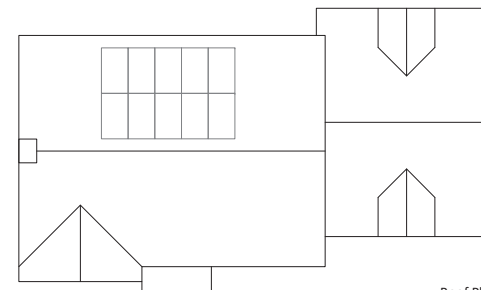
Side Elevation



Ground Floor Plan



First Floor Plan



Roof Plan



Scale: 1:200

MSAD

Notes

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CDM

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DESIGN CRITERIA

All of the contractors' works on site are to comply with and meet the approval of the relevant British Standards and the Local Authority's Design Guides, including Building Control and Planning Departments.

DIMENSIONS

Please note, all dimensions on the drawing are shown in millimeters, unless otherwise stated and should be checked prior to any works on site. It is the responsibility of the client or appointed contractor to notify the designers of any discrepancies of the walls and general layouts.

DO NOT SCALE FOR CONSTRUCTION PURPOSES

MATERIALS

Please note, all the materials specified and the construction details shown, are not to be changed without the full knowledge and prior approval of the agent; as any changes may have a detrimental effect on the designed/required carbon emissions of the structure as designed.



Address: Land At London Road
Gosmore
SG4 7RE

Drawing Size	Scale	Drawn by
A3	1/200	MS
Job No.	Work Stage	Drawing No.
1171	Existing	06a

Rev.	Description	Date	Drn	Chk

House Type 1

**M Scott /
Architectural
Design**

BANCROFT HOUSE
34 BANCROFT
HITCHIN
HERTS SG5 1LA
www.msad.uk
Tel:01462 422440

4B8P
267m² + 43m²
(garage)



Front Elevation
Solar Panels on Plot 5 ONLY



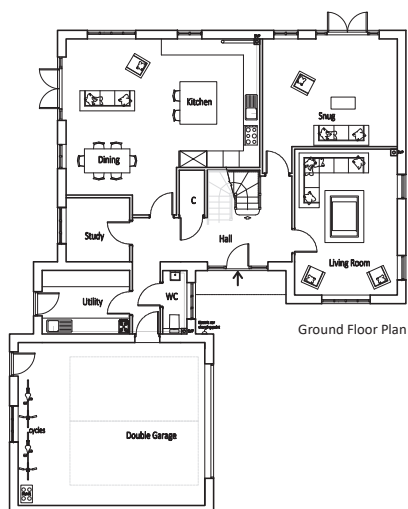
Side Elevation
Solar Panels on Plot 4 only



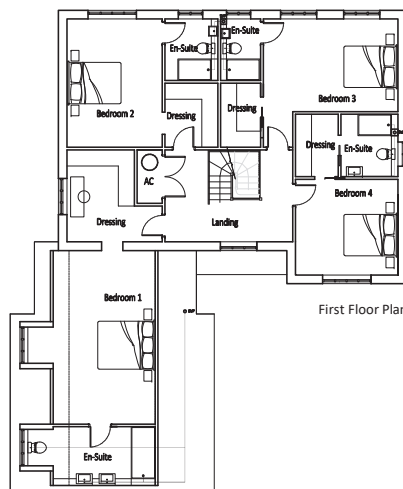
Side Elevation



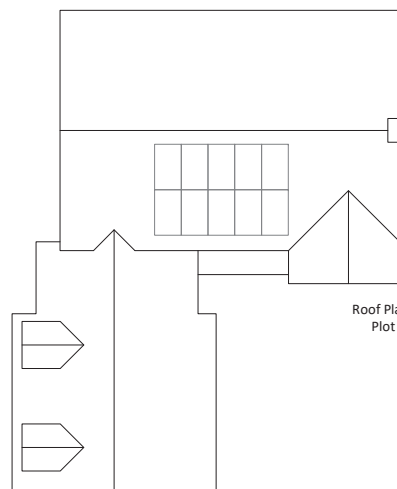
Rear Elevation
Solar Panels on Plot 1 ONLY



Ground Floor Plan



First Floor Plan



Roof Plan
Plot 5

0m 4m 8m 12m 16m 20m

Scale: 1:200

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DO NOT SCALE FOR CONSTRUCTION PURPOSES

MATERIALS

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Address: Land At London Road
Gosmore
SG4 7RE

Drawing Size	Scale	Drawn by
A3	1/200	MS
Job No.	Work Stage	Drawing No.
1171	Existing	04a

Rev.	Description	Date	Drn	Chk

House Type 2

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BANCROFT HOUSE
34 BANCROFT
HITCHIN
HERTS SG5 1LA
www.msad.uk
Tel:01462 422440

Notes

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BUILDING REGULATIONS

All work is to comply with the relevant Building Regulations and all statutory notices are to be given to the chosen Building Control at the appropriate stages of the project.

CDM

All design and construction is to be in accordance with the Construction, Design and Management Regulations 2015.

DESIGN CRITERIA

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DIMENSIONS

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DO NOT SCALE FOR CONSTRUCTION PURPOSES

MATERIALS

Please note, all the materials specified and the construction details shown, are not to be changed without the full knowledge and prior approval of the agent; as any changes may have a detrimental effect on the designed/required carbon emissions of the structure as designed.



Address: Land At London Road
Gosmore
SG4 7RE

Drawing Size	Scale	Drawn by
A3	1/200	MS
Job No.	Work Stage	Drawing No.
1171	Existing	05a

Rev.	Description	Date	Drn	Chk

House Type 3

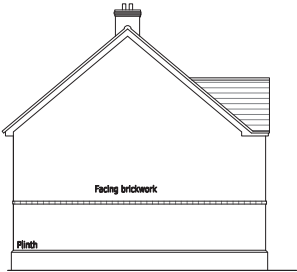
**M Scott /
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BANCROFT HOUSE
34 BANCROFT
HITCHIN
HERTS SG5 1LA
www.msad.uk
Tel:01462 422440

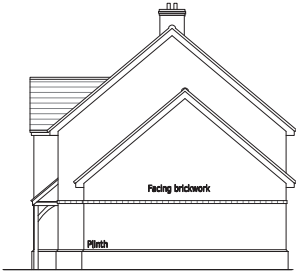
3B6P
158m² + 22m²
(garage)



Front Elevation



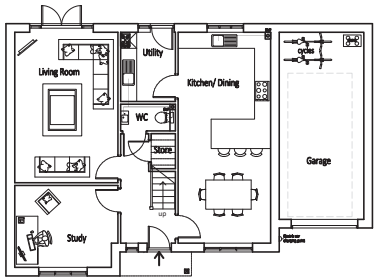
Side Elevation



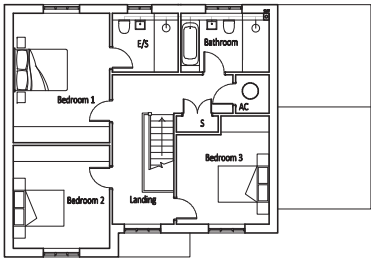
Side Elevation



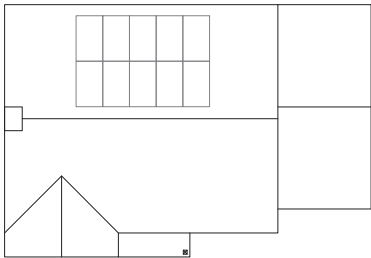
Rear Elevation



Ground Floor Plan



First Floor Plan



Roof Plan



Scale: 1:200

APPENDIX C

Intrusive Noise Calculations

Calculated Indoor Ambient Noise Levels (as per BS 8233:2014 Annex G)



Project:	London Road, St Ippolyts
Project number:	26009
Date:	05/02/2026

Plot:	Plot 1
Room:	LKD

Daytime ($L_{Aeq,16hr}$)				Octave band centre frequency											
	Unit	Value	Description	Term	63	125	250	500	1k	2k	4k	8k		Broadband term	
EXTERNAL NOISE LEVEL															
External noise level			Façade 1	$L_{eq,1}$	57	52	51	49	49	45	42	37		$L_{Aeq,1}$	53 dB
Façade correction factor				C	0	0	0	0	0	0	0	0			
INCIDENT FAÇADE NOISE LEVEL															
Incident noise level			Façade 1	$L_{eq,ff}$	57	52	51	49	49	45	42	37		$L_{Aeq,ff}$	53 dB
ROOM DATA															
Room description and reverberation time	Volume	96	Living Room	RT60	0.6	0.6	0.5	0.5	0.4	0.4	0.4	0.3			s
FAÇADE ELEMENTS (Façade 1)															
Glazing	Area	10	Generic 4/6-16/4	Rw	20	21	17	25	35	37	31	36		Rw / Rw+Ctr	29 / 25 dB
Wall	Area	9	Brick and block external wall	Rw	34	40	44	45	51	56	60	63		Rw / Rw+Ctr	50 / 47 dB
Vent	No. off.	4	Greenwood 4000 SBW (Hit and miss)	Dn,e	32	38	37	34	30	34	37	46		Dn,e,w / Dn,e,w+Ctr	33 / 32 dB
None			--												
RESULTS															
Total calculated indoor noise level				$L_{eq,2}$	37	31	32	23	22	14	11	-		$L_{Aeq,2}$	28 dB

Calculated Indoor Ambient Noise Levels (as per BS 8233:2014 Annex G)



Project:	London Road, St Ippolyts
Project number:	26009
Date:	05/02/2026

Plot:	Plot 1
Room:	Bedroom

Daytime (<i>L</i> _{Aeq,16hr})				Octave band centre frequency											
	Unit	Value	Description	Term	63	125	250	500	1k	2k	4k	8k	Broadband term		
EXTERNAL NOISE LEVEL															
External noise level			Façade 1	<i>L</i> _{eq,1}	57	52	51	49	49	45	42	37	<i>L</i> _{Aeq,1} 53 dB		
Façade correction factor				C	0	0	0	0	0	0	0	0			
INCIDENT FAÇADE NOISE LEVEL															
Incident noise level			Façade 1	<i>L</i> _{eq,ff}	57	52	51	49	49	45	42	37	<i>L</i> _{Aeq,ff} 53 dB		
ROOM DATA															
Room description and reverberation time		Volume	41	Bedroom	RT60	0.4	0.5	0.4	0.4	0.3	0.3	0.3	0.2	s	
FAÇADE ELEMENTS (Façade 1)															
Glazing		Area	1.85	Generic 4/6-16/4	Rw	20	21	17	25	35	37	31	36	Rw / Rw+Ctr 29 / 25 dB	
Wall		Area	11	Brick and block external wall	Rw	34	40	44	45	51	56	60	63	Rw / Rw+Ctr 50 / 47 dB	
Vent		No. off.	2	Greenwood 4000 SBW (Hit and miss)	Dn,e	32	38	37	34	30	34	37	46	Dn,e,w / Dn,e,w+Ctr 33 / 32 dB	
None				---											
RESULTS															
Total calculated indoor noise level					<i>L</i> _{eq,2}	33	27	27	21	22	13	9	-	<i>L</i> _{Aeq,2} 25 dB	

Calculated Indoor Ambient Noise Levels (as per BS 8233:2014 Annex G)



Project:	London Road, St Ippolyts
Project number:	26009
Date:	05/02/2026

Plot:	Plot 1
Room:	Bedroom

Night time (<i>L</i> _{Aeq,8hr})				Octave band centre frequency											
	Unit	Value	Description	Term	63	125	250	500	1k	2k	4k	8k		Broadband term	
EXTERNAL NOISE LEVEL															
External noise level			Façade 1	<i>L</i> _{eq,1}	50	43	40	39	41	34	30	21		<i>L</i> _{Aeq,1}	44 dB
Façade correction factor				C	0	0	0	0	0	0	0	0			
INCIDENT FAÇADE NOISE LEVEL															
Incident noise level			Façade 1	<i>L</i> _{eq,ff}	50	43	40	39	41	34	30	21		<i>L</i> _{Aeq,ff}	44 dB
ROOM DATA															
Room description and reverberation time	Volume	41	Bedroom	RT60	0.4	0.5	0.4	0.4	0.3	0.3	0.3	0.2		s	
FAÇADE ELEMENTS (Façade 1)															
Glazing	Area	1.85	Generic 4/6-16/4	Rw	20	21	17	25	35	37	31	36		Rw / Rw+Ctr	29 / 25 dB
Wall	Area	11	Brick and block external wall	Rw	34	40	44	45	51	56	60	63		Rw / Rw+Ctr	50 / 47 dB
Vent	No. off.	2	Greenwood 4000 SBW (Hit and miss)	Dn,e	32	38	37	34	30	34	37	46		Dn,e,w / Dn,e,w+Ctr	33 / 32 dB
None			--												
RESULTS															
Total calculated indoor noise level				<i>L</i> _{eq,2}	26	18	17	11	14	3	-	-		<i>L</i> _{Aeq,2}	16 dB

Calculated Indoor Ambient Noise Levels (as per BS 8233:2014 Annex G)



Project:	London Road, St Ippolyts
Project number:	26009
Date:	05/02/2026

Plot:	Plot 1
Room:	Bedroom

Night time (<i>L</i> AMax)				Octave band centre frequency											
	Unit	Value	Description	Term	63	125	250	500	1k	2k	4k	8k	Broadband term		
EXTERNAL NOISE LEVEL															
External noise level			Façade 1	<i>L</i> Max,1	67	60	57	56	58	51	47	38	<i>L</i> AMax,1	61 dB	
Façade correction factor				C	0	0	0	0	0	0	0	0			
INCIDENT FAÇADE NOISE LEVEL															
Incident noise level			Façade 1	<i>L</i> Max,ff	67	60	57	56	58	51	47	38	<i>L</i> AMax,ff	61 dB	
ROOM DATA															
Room description and reverberation time		Volume	41	Bedroom	RT60	0.4	0.5	0.4	0.4	0.3	0.3	0.3	0.2	s	
FAÇADE ELEMENTS (Façade 1)															
Glazing		Area	1.85	Generic 4/6-16/4	Rw	20	21	17	25	35	37	31	36	Rw / Rw+Ctr	29 / 25 dB
Wall		Area	11	Brick and block external wall	Rw	34	40	44	45	51	56	60	63	Rw / Rw+Ctr	50 / 47 dB
Vent		No. off.	2	Greenwood 4000 SBW (Hit and miss)	Dn,e	32	38	37	34	30	34	37	46	Dn,e,w / Dn,e,w+Ctr	33 / 32 dB
None				--											
RESULTS															
Total calculated indoor noise level					<i>L</i> Max,2	43	35	34	28	31	20	14	-	<i>L</i> AMax,2	33 dB

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SG18 0JE
UNITED KINGDOM

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 www.spectrumacoustic.com