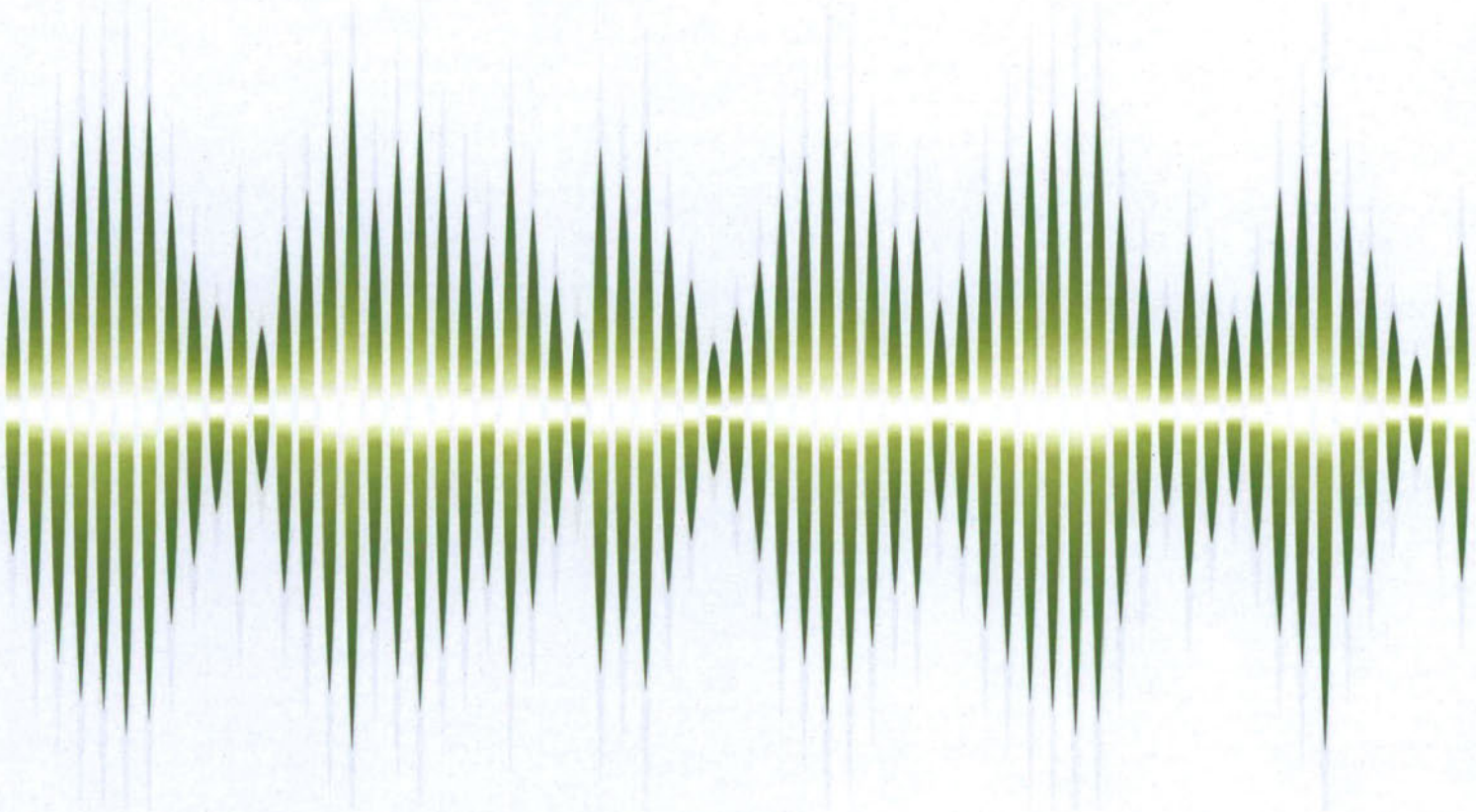
ACOUSTICS

REPORT

FAÇADE NOISE EXPOSURE ASSESSMENT TO SUPPORT OUTLINE PLANNING APPLICATION

SITE ADDRESS

39 HIGH STREEET, WARBOYS, HUNTINGDON,
CAMBRIDGESHIRE PE28 2TA



REFERENCE

HA/AG806/V1

HEALTHY ABODE ACOUSTICS
BUILDING ACOUSTICIANS & ENVIRONMENTAL NOISE CONSULTANTS

Our Ref	HA/AG806/V1
Site Address	39 High Street, Warboys, Huntingdon, Cambridgeshire PE28 2TA
For	Martin England
Date of Report	17 March 2025
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This report has been prepared by Healthy Abode Limited t/a HA Acoustics with all reasonable expertise, care and diligence. The survey and report has been undertaken in accordance with accepted acoustic consultancy principles, it takes account of the services and terms and conditions agreed verbally and in writing between HA Acoustics and our client. Any information provided by third parties and referenced is considered to have undergone suitably thorough third-party checks to ensure accuracy. We can accept no liability for errors with a third-party data. This report is confidential to our client and therefore HA Acoustics accepts no responsibility whatsoever to third parties unless formally agreed in writing by HA Acoustics. Any such party relies upon the report at their own risk.

SUMMARY

- Martin England instructed Healthy Abode Ltd t/a as HA Acoustics to undertake a noise façade assessment for proposed residential premises to be located at 39 High Street, Warboys, Huntingdon, Cambridgeshire PE28 2TA.

- HA Acoustics has undertaken an environmental noise survey and assessment at the site in line with the guidance contained in British Standard (BS) 8233:2014. The environmental noise survey was undertaken in order to determine prevailing ambient, background and maximum noise levels that are representative of the residential premises. An unattended survey was conducted between Thursday 13th February 2025 and Tuesday 18th February 2025 at two fixed secure monitoring positions deemed representative of the worst affected façades of the proposed site. Attended measurements were also undertaken Thursday 13th February 2025 and Saturday 15th February 2025.

- The results of the noise survey are considered reasonable given the location of the measurement positions and the existing noise sources in the local vicinity. The representative time-averaged ambient and night-time maximum noise levels have been calculated at:
    - Position 1: 54dB $L_{Aeq\ daytime}$, 41dB $L_{Aeq\ night\ time}$, and 60dB $L_{Amax,F,NNE}$,
    - Position 2: 49dB $L_{Aeq\ daytime}$, 44dB $L_{Aeq\ night\ time}$, and 66dB $L_{Amax,F,NNE}$

- The assessment has indicated that internal noise levels within the proposed development are predicted to meet the guideline noise criteria contained in BS 8233:2014 provided the identified appropriate minimum specified glazing, ventilation and façade materials are installed to a good manner of workmanship.

- At the time of composing the report the exact specifications of the construction/build of the proposal have not been finalised, nor has the layout of the property. Recommendations provided in respect to sound insulation of the building have been proposed based on achieving the desired internal noise levels in BS 8233:2014.

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1. INTRODUCTION

1.1. It is proposed to introduce new residential premises at 39 High Street, Warboys, Huntingdon, Cambridgeshire PE28 2TA. The existing ambient noise climate could have the potential to affect the premises. This assessment is sought to support the outline planning application.

1.2. The purposes of this report are:

1.2.1. To determine and assess prevailing ambient, background and maximum noise levels affecting the proposal due to nearby noise sources (e.g. air and road traffic);

1.2.2. To present desired internal noise levels to be achieved within the residential premises in accordance with BS 8233:2014, and

1.2.3. To detail appropriate sound insulation requirements for the purposes of mitigating noise caused by prevailing and potential noise sources such that internal noise levels are achieved.

2. SITE DESCRIPTION AND OBSERVATIONS

2.1. 39 High Street, Warboys, Huntingdon, Cambridgeshire PE28 2TA is hereafter referred to as 'the site'. The site is currently privately owned land, which is located to the rear of the existing premises. The proposal is to build one detached residential house.

2.2. The site is located within an urban area and is predominantly surrounded by residential premises. Residential premises are located directly to the north and to the east. Situated directly to the south is Warboys Methodist Church. Located to the west is a pub garden, the pub sits to the southwest and is called the White Hart. Further afield are residential premises in all directions.

2.3. Site plans can be found in appendix A (SP1-SP3).

2.4. The noise survey was unattended; therefore, a subjective assessment of background and ambient noise sources could not be undertaken for the whole monitoring duration. However, during installation and collection of the monitoring equipment, the dominant noise source emanated from road traffic, birdsong and aircraft. These noise sources are considered normal to the site location. No significant abnormal noise source(s) were identifiable.

3. NOISE GUIDANCE AND CRITERIA

3.1. Local Authority

3.2. The proposed site lies within the jurisdiction of the Local Authority, Huntingdonshire District Council. An acoustic report is required to support outline planning consent, the following wording has been provided by the environmental health department:

"National planning guidance and the Institute of Acoustics Professional Practice Guidance on Planning & Noise - New Residential Development (May 2017) advocates full consideration of the acoustic environment from the earliest possible stage of the development control process. This should be informed by an initial noise risk assessment of the proposed development site, before any acoustic design/noise insultation methods are considered.

Furthermore, Paragraph 193 of the NPPF 2023 states planning decisions should ensure that new development can be integrated effectively with existing businesses and community facilities (including pubs) and 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."

It would not be appropriate to leave the noise impact assessment to reserved matters stage, as it needs to be demonstrated at this stage that the relationship between the proposed dwelling and the adjacent pub can be made acceptable. The above guidance and agent of change principle was not published when outline planning permission was approved on the plot in 2002.

I would therefore recommend that the application is withdrawn and resubmitted with the required noise impact assessment. In the absence of a noise impact assessment, my recommendation will unfortunately be for refusal on the following grounds:

Insufficient information has been submitted to demonstrate that the proposed development could be accommodated in a manner which would not result in unacceptable living conditions for future occupiers and would not harm the ongoing viability of the adjacent Grade II listed White Hart public house. Consequently, the proposed development is contrary to Policy LP14 of Huntingdonshire's

Local Plan to 2036 and paragraphs 193 and 203 of the National Planning Policy Framework (December 2023)."

3.3. **National Planning Policy Framework (December 2024)**

3.4. In March 2012, the National Planning Policy Framework (NPPF) came into force and was revised in 2019, 2021, 2023 and 2024. This document replaces a great many planning guidance documents, which previously informed the planning system in England.

3.5. The NPPF (2024) sets out the Government's economic, environmental and social planning policies for England and these policies articulate the Government's vision of sustainable development.

3.6. The Noise Policy Statement for England (NPSE) published 2010 applies to *'all forms of noise, including environmental noise, neighbour noise and neighbourhood noise'.*

3.7. Paragraph 198 of the NPPF (2024) considers noise, stating:

"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 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; and*
- *c) limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation."*

3.8. National Planning Policy is guided by the NPPF. With regard to noise, the terms 'significant adverse impact' and 'other adverse impacts' are defined in the explanatory notes of the 'Noise Policy Statement for England' (NPSE). These state that there are two established concepts from toxicology that are currently being applied to noise impacts, for example, by the World Health Organisation. They are:

- 'NOEL – No Observed Effect Level, this is the level below which no effect can be detected. In simple terms, below this level, there is no detectable effect on health and quality of life due to the noise, and
- LOAEL – Lowest Observed Adverse Effect Level. This is the level above which adverse effects on health and quality of life can be detected.

3.9. Extending these concepts for the purpose of this NPSE leads to the concept of SOAEL - significant observed adverse effect level. This is the level above which significant adverse effects on health and quality of life occur'. However, no specific noise limits for LOAEL and SOAEL have been defined. Therefore, guidance from other acoustic standards must be employed to determine suitable levels within the overall principal of the National Planning Policy Framework; such as BS 8233: 2014.

3.10. **BS8233:2014**

3.11. Local Authorities usually stipulate internal noise criteria for new build residential uses based on British Standard 8233:2014 'Guidance on Sound Insulation and Noise Reduction for Buildings'.

3.12. BS 8233:2014 provides references and guideline values for desirable indoor ambient noise levels for dwellings as shown in Table 3.1 below.

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 3.1 BS 8233:2014 Desirable Internal Ambient Noise Levels for Dwellings

3.13. The table is noted to apply to external noise as it affects the internal acoustic environment from sources without a specific character. The above internal ambient noise levels are therefore considered appropriate within this assessment.

3.14. BS 8233: 2014 states that *'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 an upper guideline value of 55dB L_{Aeq}, which would be acceptable in noisier environments. However, it is also recognized that these guideline values are not achievable in all circumstances...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'.

4. ENVIRONMENTAL NOISE SURVEY METHODOLOGY

4.1. Unattended Noise Survey

4.2. An unattended environmental noise survey was undertaken at two secure single measurement locations (see appendix A). The surveys were undertaken between 15:15 hours on Thursday 13th February 2025 and 13:00 hours on Tuesday 18th February 2025.

4.3. Ambient, background and maximum sound pressure level measurements (L_{Aeq}, L_{A90} and $L_{Amax,F}$ respectively) were measured throughout the noise survey with continuous recorded 1 minute periods. The measurement positions are indicated in **orange** in Appendix A.

4.4. The sound level meter's (SLM) were mounted approximately 1.5 metres above ground level and positioned in 'free-field' conditions to the north and west boundary, close to the public house garden. The positions were chosen to gain representative noise levels from any noise sources as well as for monitoring equipment security reasons.

4.5. The equipment used for the noise survey is summarised in Table 4.1.

Equipment	Description	Quantity	Serial Number
Svantek 977	Class 1 automated logging sound level meter	1	69716
ACO Pacific 7052E	Class 1 ½" microphone	1	70766
Svantek 977	Class 1 automated logging sound level meter	1	46457
ACO Pacific 7052E	Class 1 ½" microphone	1	64237
Larson Davis CAL200	Class 1 Calibrator	1	14432

Table 4.1 Description of Equipment used for Noise Survey

4.6. The noise survey and measurements were conducted, in accordance with BS7445-1:2003 '*Description and measurement of environmental noise. Guide to quantities and procedures*'. Measurements were made generally in accordance with ISO 1996-2:2017 '*Acoustics – Description, measurement and assessment of environmental noise – Part 2: Determination of environmental noise levels*'.

4.7. The noise monitoring equipment used was calibrated before and after the noise survey period. No significant drift was recorded. Equipment calibration certificates can be provided upon request.

4.8. **Attended Noise Survey**

4.9. An attended environmental noise survey was undertaken at one secure single measurement location (see appendix A) between 14:20 and 15:30 hours on Thursday 13th February 2025 and between 18:57 and 21:02 hours on Saturday 15th February 2025.

4.10. Ambient, background and maximum sound pressure level measurements (L_{Aeq}, L_{A90} and $L_{Amax,F}$ respectively) were measured throughout the noise survey with continuous recorded 1 minute periods.

4.11. The sound level meter (SLM) was mounted approximately 1.5 metres above ground level and positioned in free-field conditions towards the west boundary, closest to the public house. The positions were chosen to gain representative noise levels from any noise sources, specifically from the public house. The measurement position is indicated in **red** in Appendix A.

4.12. The equipment used for the noise survey is summarised in Table 4.2.

Equipment	Description	Quantity	Serial Number
NTi XL2	Class 1 automated logging sound level meter	1	A2A-13627-E0
MA220 microphone	Class 1 ½" microphone	1	7072
Svantek 977	Class 1 automated logging sound level meter	1	69701
ACO Pacific 7052E	Class 1 ½" microphone	1	71699
Larson Davis CAL200	Class 1 Calibrator	1	13530

Table 4.2 Description of Equipment used for Noise Survey

4.13. The noise survey and measurements were conducted, in accordance with BS7445-1:2003 *'Description and measurement of environmental noise. Guide to quantities and procedures'*. Measurements were made generally in accordance with ISO 1996-2:2017 *'Acoustics – Description, measurement and assessment of environmental noise – Part 2: Determination of environmental noise levels'*.

4.14. The noise monitoring equipment used was calibrated before and after the noise survey period. No significant drift was recorded. Equipment calibration certificates can be provided upon request.

4.15. **Weather Conditions**

4.16. Weather conditions were noted to be:

4.16.1. during installation – cold (approx. 4° Celsius), dry, with cloudy skies (50-75% cloud cover) and a light wind (<5m/s).

4.16.2. during collection – cold (approx. 6° Celsius), dry, with clear skies (10% cloud cover) and a light wind (<5m/s).

4.16.3. during attended measurement: Thursday 13th February – cold (approx. 4° Celsius), dry, with cloudy skies (50-75% cloud cover) and a light wind (<5m/s).

4.16.4. during attended measurement: Saturday 15th February – warm (approx. 2° Celsius), generally dry with some precipitation, with cloudy skies (100% cloud cover) and a light wind (<5m/s).

4.17. These weather conditions were checked against and confirmed by the use of the Met Office. These conditions were generally maintained throughout the whole survey period and are considered reasonable for undertaking environmental noise measurements.

5. NOISE SURVEY RESULTS

5.1. Unattended Noise Survey Results

5.2. The average-ambient and maximum noise levels at the measurement position during the survey have been based on an analysis of the monitoring data and are summarised in Table 5.1. Time histories of the noise monitoring data is provided in Appendix B (TH1-TH2).

Monitoring Position	Period	Measured External Sound Pressure Level, dB		
		Ambient Level	Typical Background	Maximum Level
Position 1 (Front Façade)	Daytime (07:00 - 23:00)	54 $L_{Aeq,T}$	42 $L_{A90,T}$	
	Night-time (23:00 - 07:00)	41 $L_{Aeq,T}$	30 $L_{A90,T}$	*60 $L_{Amax,F,NNE}$
Position 2 (Rear Façade)	Daytime (07:00 - 23:00)	49 $L_{Aeq,T}$	42 $L_{A90,T}$	
	Night-time (23:00 - 07:00)	44 $L_{Aeq,T}$	28 $L_{A90,T}$	**66 $L_{Amax,F,NNE}$

*11th highest measured noise level **10th highest measured noise level

Table 5.1 Noise Survey Results

5.3. BS 8233: 2014 does not provide specific guidance on nighttime $L_{Amax,F}$ criteria therefore maximum levels are based on World Health Organisation (WHO) 'Guideline for Community Noise' (2009) and WHO 'Environmental Noise Guidelines for the European Region' (2018) guidance and ProPG: 2017 guidance.

5.4. It is stated that for suitable sleeping conditions, 45dB $L_{Amax,F}$ should not be exceeded by more than 10-15 times a night within a bedroom. For robustness, the $L_{Amax,F,NNE}$ noise levels presented above are the not normally exceeded (NNE) 10th and 11th highest measured between 23:00 and 07:00 hours. This $L_{Amax,F,NNE}$ noise level then needs to be reduced to 45dB internally to comply with the night time internal noise level.

5.5. Attended Noise Survey Results

5.6. The average-ambient and maximum noise levels at the attended measurement position during the survey have been based on an analysis of the monitoring data and are summarised in Table 5.2. A time history of the noise monitoring data is provided in Appendix B (TH3-TH4).

Attended Measurement	Measured External Sound Pressure Level, dB	
	Ambient Level $L_{Aeq,T}$	Maximum Level, $L_{Amax,F}$
Thursday 13th February 14:20 - 15:30 hours	45 $L_{Aeq,T}$	70 $L_{AMax,T}$
Saturday 15th February 18:57 - 21:03 hours	44 $L_{Aeq,T}$	67 $L_{AMax,T}$

Table 5.2 Attended Noise Survey Results

5.7. During the attended measurements on Thursday 13th February 2025, the dominant noise source emanated from road traffic, birdsong (including a duck), and aircraft. Some use of the public house car park was noted with approximately 4-5 vehicle movements. Conversation was faintly audible during lulls in other noise sources for a few minutes from patrons heading to their car.

5.8. During the attended measurements on Saturday 15th 2025, the dominant noise source emanated from road traffic and aircraft. Use of the public house car park was noted to be audible with vehicles accessing and leaving the public house carpark.

5.9. These noise sources are considered normal to the site location. No significant abnormal noise source(s) were identifiable.

6. SITE SUITABILITY

6.1. Due to the close proximity of the public house (The White Hart), there is a potential for noise arising from plant/entertainment at these locations to impact the proposed residential premises. Therefore, noise monitoring was undertaken over a weekend period, to include times that these licensed venues are typically busiest (Friday and Saturday nights) and manual measurements were also undertaken.

6.2. During the setup, collection and manual measurements, the dominant noise sources were road traffic and overhead aircraft. No noise from mechanical plant was noted. Vehicles accessing the carpark were audible at different times with the occasional voice heard.

6.3. It is recommended that the premises is designed to limit the number of windows for habitable rooms that look towards the public house, or where they do that dual aspect windows are utilised. This will help to minimise noise ingress from the public house.

6.4. The monitoring data shows that with a good standard acoustic design, as recommended herein, the internal levels as required by WHO:2017 and BS8233: 214 are capable of being met.

6.5. Recommendations have been given within the acoustic report; for acoustic screening, building materials and glazing in relation to the measurement and site to ensure a good quality of acoustic design is included throughout.

6.6. Following a good design, the proposed premises can be constructed to reduce adverse noise impact arising from the nearby commercial activities.

7. BUILDING FACADES SUITABILITY

7.1. Sound reduction performance calculations have been undertaken to determine the internal noise levels and performance of the glazed and non-glazed elements. The specification has been adopted to achieve the night-time level (23:00 – 07:00 hours) for bedrooms, 30dB $L_{Aeq\ 8hour}$ and for the daytime (07:00 – 23:00) for living rooms, 35dB $L_{Aeq\ 16hour.}$ The spectrum of the $L_{Amax,NNE\ suring}$ the night-time period have also been applied to the calculations to confirm the limit of 45 $L_{Amax,F,}$ is not regularly exceeded for single events during the night.

7.2. Suggested window units and building element specifications other than those provided may be suitable but should be reviewed before purchase or installation. The analysis is provided to demonstrate that a design solution is feasible at the site for the purposes of meeting the requirements of the Local Authority.

7.3. **Non-Glazed Elements**

7.4. It is understood that the non-glazed elements of the building will be constructed from brick and block work and internally drylined. This construction would be anticipated to provide a sound reduction performance of at least the figures shown in Table 6.1 when tested in accordance with BS EN ISO, 140-3:1995.

Element	Octave band centre frequency SRI, dB					
	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz
Non-glazed element brick/block cavity wall SRI	41	43	48	50	55	55

Table 6.1 Non-glazed elements assumed sound reduction performance

7.5. The below example of construction provides guidance to a typical wall build which should attenuate external noise such that the internal noise levels are achieved.

- BS 8233 Table E.1A (50-54dB R_W sound insulation) (d) details construction of "Brick laid frogs up, wall nominal 200 mm thickness, weight (including plaster) not less than 380 kg/m^2. Plaster or dry-lined finish both sides. Brickwork joints well filled".

7.6. Given the typical extensive build and construction of external walls in accordance with the Building Regulations it is predicted that this element would provide significant attenuation to achieve the internal noise levels.

7.7. **Roofs**

7.8. Roofs generally have a lower SRI than masonry façade walls but they are required to reduce noise from external sources. Typical construction and sound insulation values of roofs can be gained from BS 8233:2014, for example a traditional pitched roof with tiles on felt with 100mm mineral wool on plasterboard ceiling has an SRI of approximately 43dB R_w.

7.9. Given the typical extensive build and construction of roofs it is predicted that these elements would provide sufficient attenuation to achieve the internal noise levels.

7.10. Where habitable space is being built into the roof and/or Velux or dormers are constructed as part of the design, then it is likely that the roof performance will need to be enhanced. Acoustic calculations should be re-run at detailed design stage to ensure the internal noise levels are met.

7.11. **Window Elements**

7.12. In order to determine the required window elements. The highest measured ambient day and night-time levels have been utilised in the calculations, along with the maximum night-time level from the two monitoring positions.

7.13. Calculations (Appendix C) show that based on the noise monitoring data obtained, façade materials, room sizes and volumes, a minimum of 36dB R_w noise reduction is required for all glazed elements to be installed.

7.13.1. The performance is specified for the whole window unit, including the frame and other design features such as the inclusion of trickle vents. Sole glass performance data would not demonstrate compliance with this specification. Window performance calculations have been based on the measured L_{Aeq} and $L_{Amax,NNE}$ noise levels as recommended by BS 8233: 2014.

7.14. The reference reverberation time of 0.5 second is utilised, as stated in BS8233: 2014 and assumes that the dwelling shall have carpeted, fully furnished, occupied bedroom(s) and living spaces.

7.15. At time of assessment no finalised architectural plans have been produced therefore, the following assumptions have therefore been made:

Bedroom dimensions:

- Dimensions = 3.5m x 3m x 2.4m
- Volume = 25.2m^3
- External façade = 15.6m^2
- Glazing = 6m^2

Living Room dimensions:

- Dimensions = 4m x 3.5m x 2.4m
- Volume = 33.6m^3
- External façade = 18m^2
- Glazing = 8m

7.16. The glazing window requirements are listed below in table 6.2. These specifications and their acoustic data on octave band frequencies are provided in Appendix C.

	Glazing and Ventilation Type – Indicative Only
All Facades	R_w 36 dB Double Glazing System (10mm Glass – 12mm air gap – 4mm Glass)
	Standard Trickle Ventilator (34 $D_{,n,e,w}$)

**based on assumed room sizes*

Table 6.2 Required window specifications.

7.17. **Ventilation**

7.18. In addition to the glazing requirements, internal noise levels should be considered in the context of room ventilation requirements. At the time of writing, full details regarding a ventilation strategy are not available. Table 6.2 above details a suitable standard trickle ventilator, which provides a sound insulation performance of 34dB $D_{n,e,w}$, which would work in combination with the specified window spectral.

7.19. **Detailed Design Stage Notes:**

7.20. The analysis is provided to demonstrate that a design solution is feasible at the site for the purposes of meeting the requirements of the Local Authority local policy and British Standard internal design criteria and therefore to produce a noise impact assessment to be supplied in support of the outline planning application.

7.21. Following planning consent, then it is usual that the architect will produce full building regulation drawings. At which time, structural chartered engineers, thermal engineers, M+E and acoustic engineers will be engaged to input on the detailed design. As part of this detailed design stage, it is strongly recommended that further acoustic analysis of the individual specified components and if necessary further recommendations, specifications be undertaken.

7.21.1. Where, as in this case, habitable space is built into the roof with the roof space being vaulted, then it is likely that the roof performance will need to be enhanced, as it acts as a direct external façade (without loft cavity). Therefore, acoustic calculations should be re-run at detailed design stage to ensure the internal noise levels are met

7.22. Acoustic calculations to determine the glazing and ventilation strategy should also be re-run should the room sizes and percentage of glazing differ from that assumed above.

8. EXTERNAL AMENITY SUITABILITY

8.1. BS 8233:2014 states that *'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 50dB $L_{Aeq,T}$ with an upper guideline value of 55dB $L_{Aeq,T}$ which would be acceptable in noisier environments. However, it is also recognized that these guideline values are not achievable in all circumstances...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'*.

8.2. Noise monitoring data confirms that the external amenity areas achieve BS8233:2014 and WHO (1999) guidance levels, therefore no mitigation levels are required.

8.3. Due to the close proximity of the public house, the White Hart, a barrier may wish to be installed along the separating border. A basic standard barrier will achieve a sound reduction of up to 5dB(A), a good standard barrier design will achieve up to 10dB(A) noise reduction.

9. CONCLUSION

9.1. A new residential development is proposed at 39 High Street, Warboys, Huntingdon, Cambridgeshire PE28 2TA.

9.2. A noise survey and assessment has been undertaken for the proposed development. Existing noise levels at the site have been measured and compared to relevant standards and guidance.

9.3. A minimum of 36dB R_w noise reduction is required for all glazed elements to be installed into the proposed building. Window calculations have been carried out and the requirements identified. Passive vents to provide ventilation are available that meet or exceed the sound reduction required by the window elements and can be constructed into the proposal accordingly.

9.4. With appropriate sound insulation window measures and building construction as exampled within this report the proposed residential premises is more than capable of achieving the guideline internal noise criteria contained in BS 8233:2014.

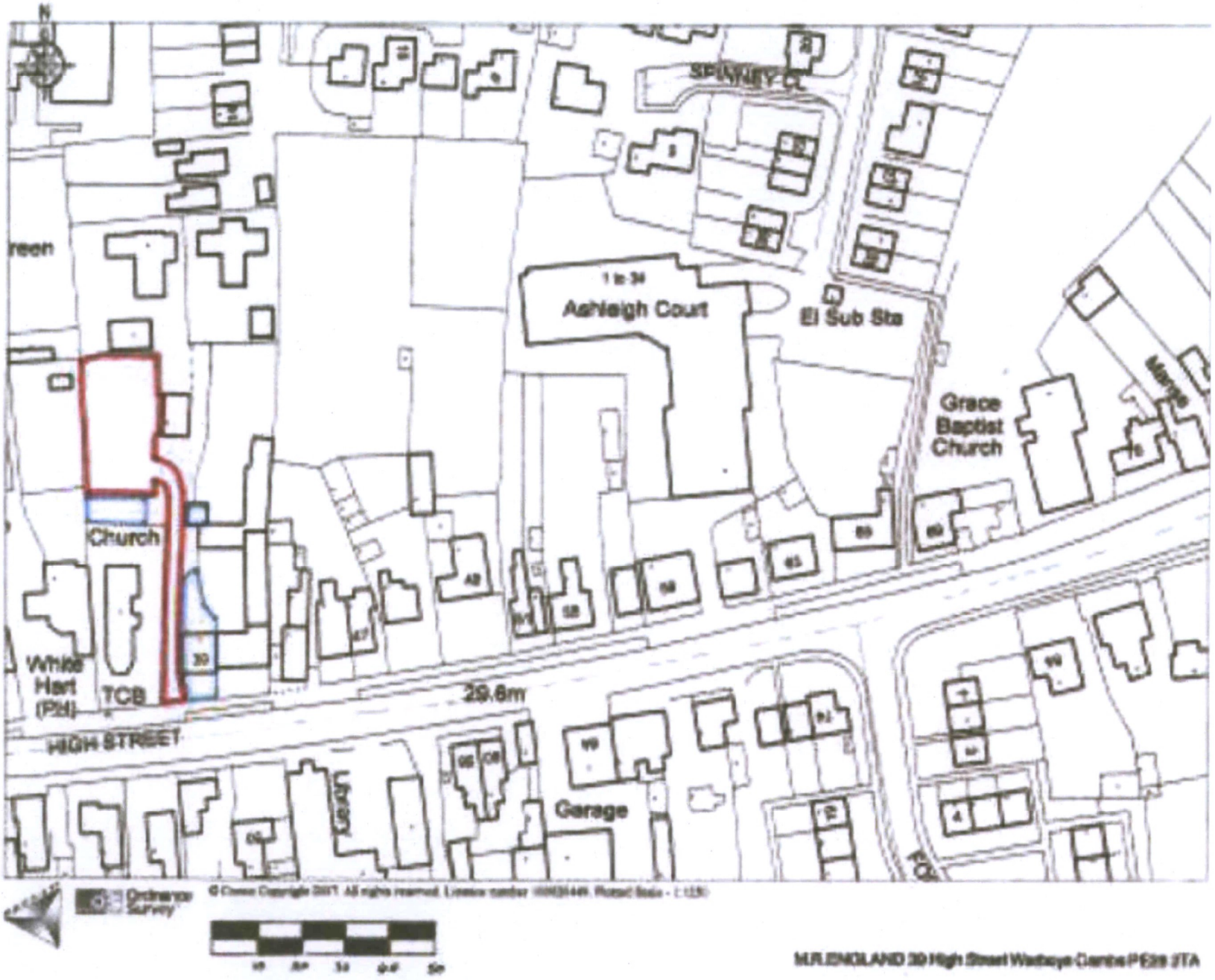
Appendix A – Site Plan (SP1)

Source: Google Earth



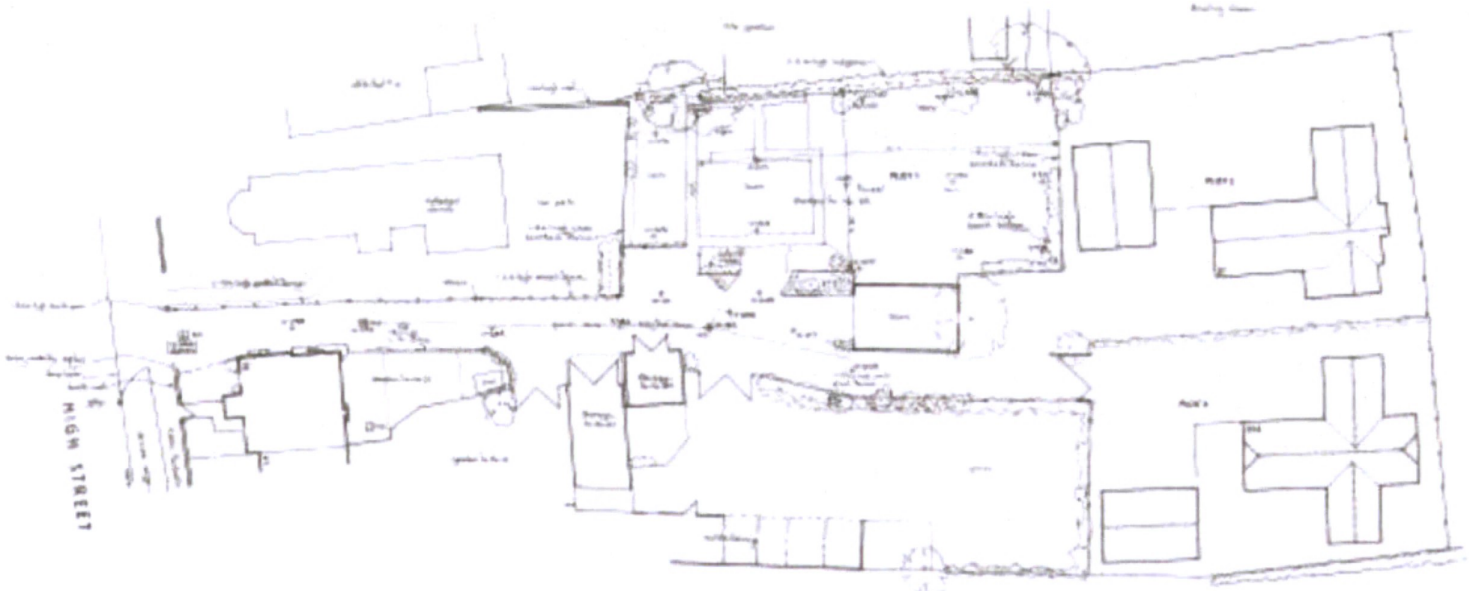
Appendix A – Site Plan (SP2)

Source: Provided by Client



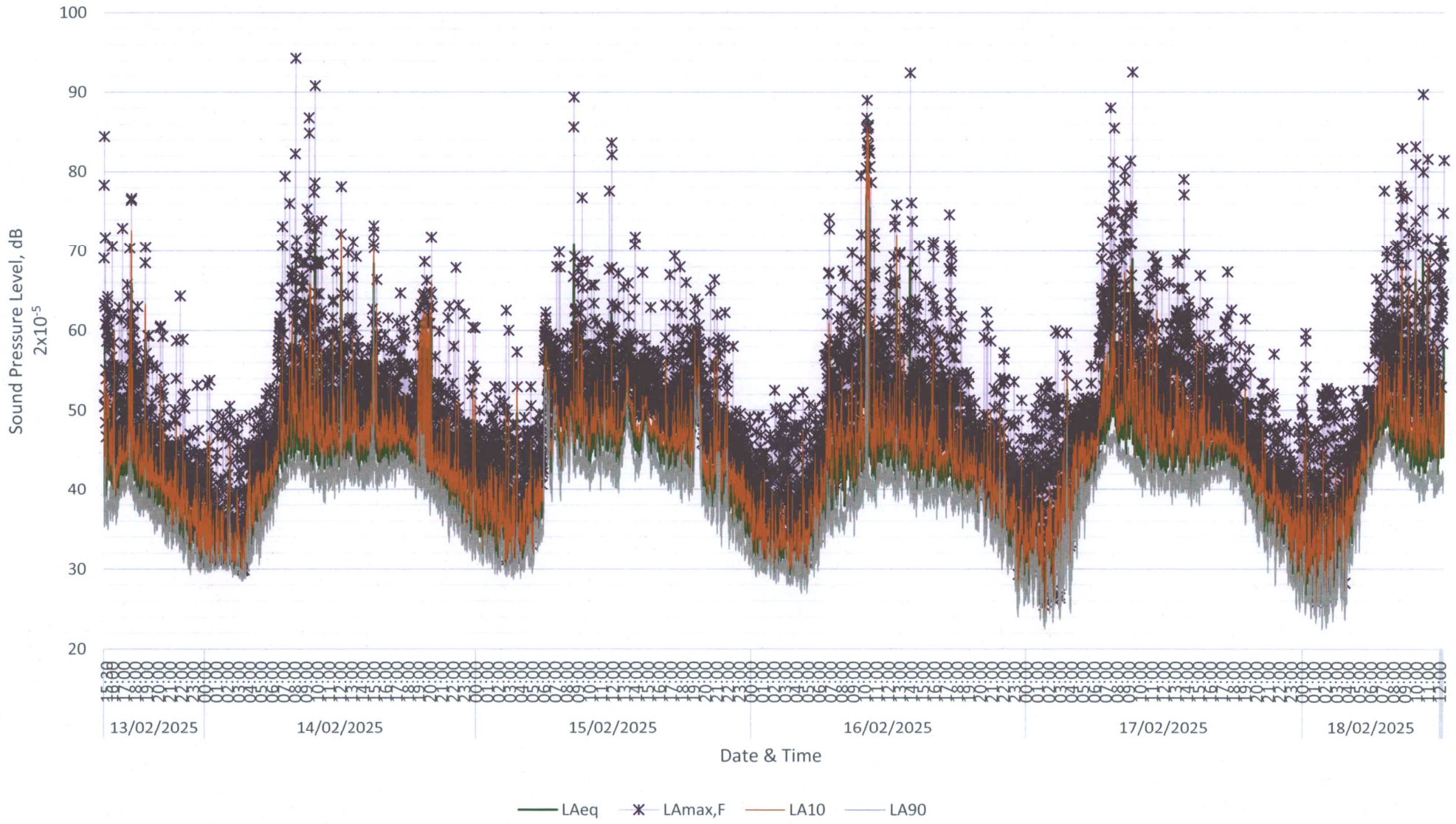
Appendix A – Site Plan (SP3)

Source: Provided by Client



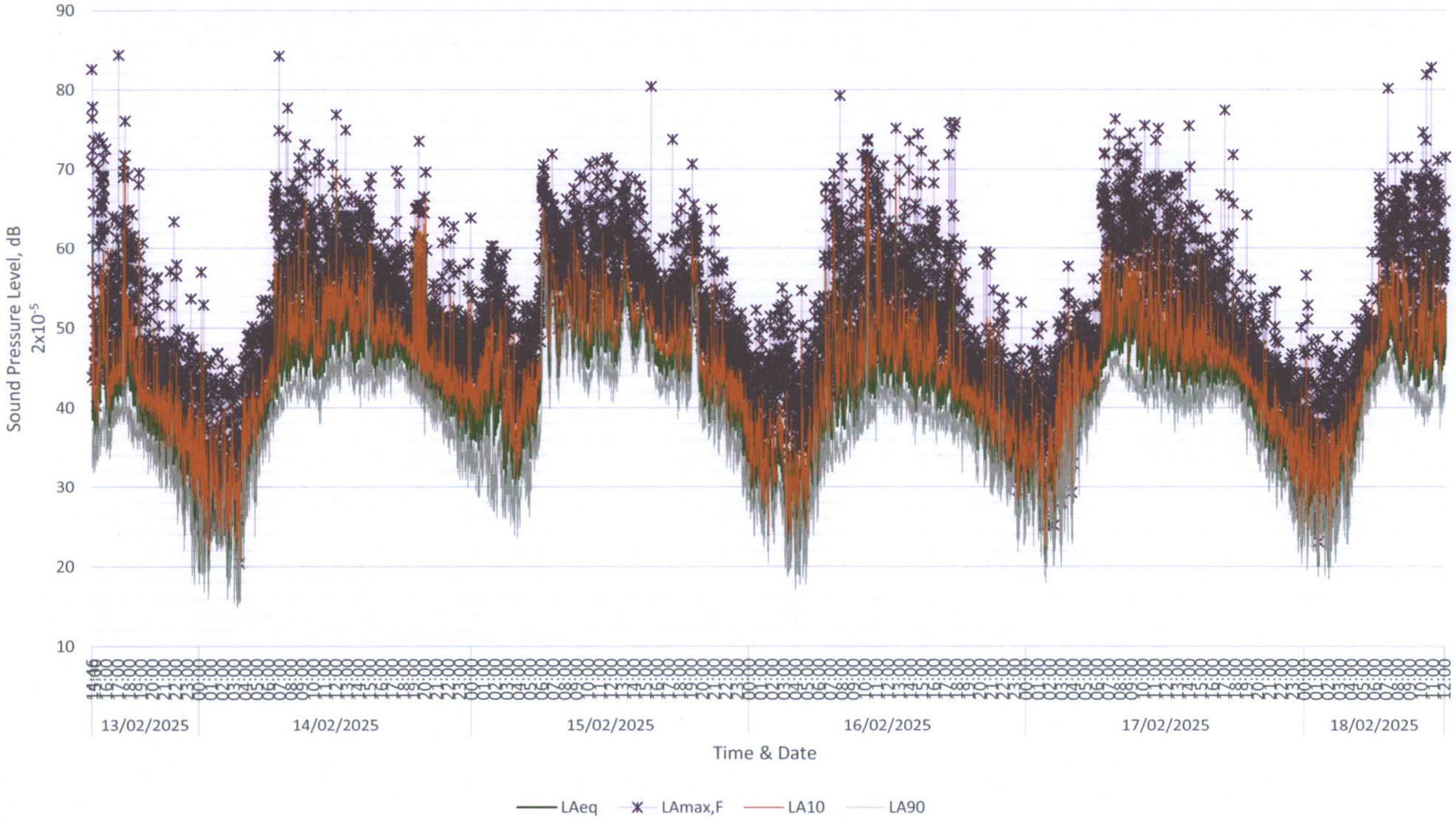
Appendix B - Time History 1 (TH1)

39 High Street, Warboys
Thursday 13 February 2025 - Tuesday 18 February 2025
Position 1



Appendix B - Time History 2 (TH2)

39 High Street, Warboys
Thursday 13 February 2025 - Tuesday 18 February 2025
Position 2



Appendix B - Time History 3 (TH3)

39 High Street, Warboys
Manual Measurement 1
Thursday 13 February 2025

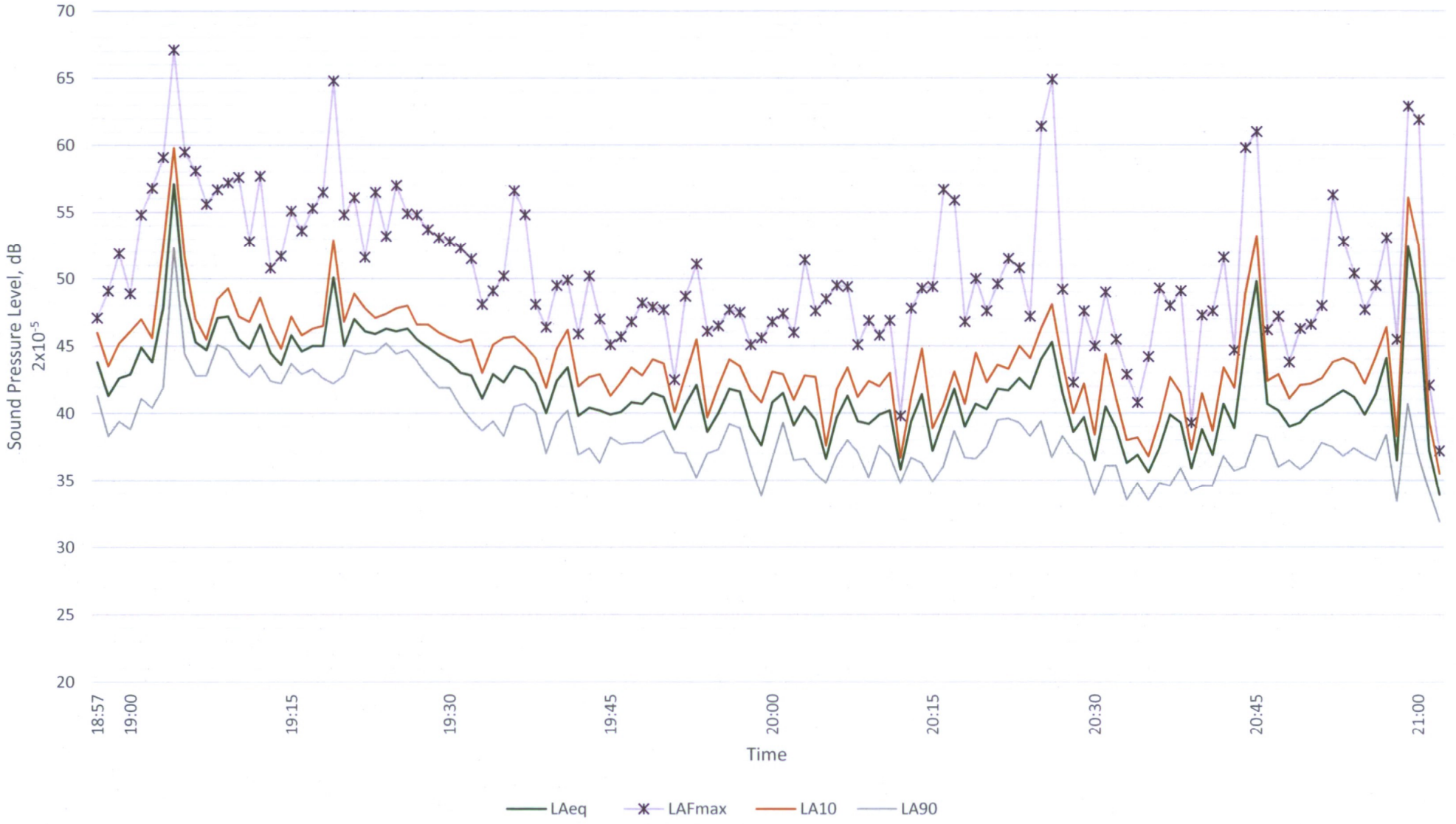
ACOUSTICS



Appendix B - Time History 4 (TH4)

39 High Street, Warboys
Manual Measurement 2
Saturday 15 February 2025

ACOUSTICS



Appendix C1

ACOUSTICS

39 High Street, Warboys
Living Room

BS EN 12354-3 Calculation to determine glazing specification

Habitable room data variables

Type of habitable room	Living Room	**Based on assumed room sizes*
Volume	34	cubic metres
Total area - external façade(s	18	square metres
Total area - window(s)	8	square metres
L(k)	6	
Lmax (K)	6	
Trickle Ventilator(s)	10	
Solid Façade (exc. windows)	10	square metres
Reverberation Time	0.5	seconds

External noise level

	1:1 Octave Bands Centre Frequency (Hz)							
	63	125	250	500	1000	2000	4000	dB(A)
Logged Log average daytime Leq	53	51	51	50	47	46	46	**54**
Logged Log average night-time Leq	45	38	34	35	36	32	39	**44**
Logged Lmax for duration of survey	65	57	53	51	52	52	62	**66**

Sound reduction of building fabric

	1:1 Octave Band Centre Frequency (Hz)							Rw /
	63	125	250	500	1000	2000	4000	Dn,e,W
36 Rw - Pilk 10/12/4mm	23	25	22	33	40	43	44	**36**
Standard Masonry from Template Report	39	41	43	48	50	55	55	
34 Dn,e,w - Titon Trimvent SW - Standard trickle	31	33	34	33	42	29	32	**34**

	1:1 Octave Band Centre Frequency (Hz)						
	63	*125*	*250*	*500*	*1000*	*2000*	*4000*
Reduction from façade	-17.4	-19.4	-17.0	-24.6	-32.4	-23.2	-26.2
Addition for Ctr	5.0	5.0	5.0	5.0	5.0	5.0	5.0

Resultant internal noise level

	1:1 Octave Band Centre Frequency (Hz)							
	63	125	250	500	1000	2000	4000	dB(A)
Daytime internal Leq	41	37	39	31	19	27	25	**35**
Night-time internal Leq	33	23	22	15	9	14	18	**22**
Night-time internal Lmax	47	38	36	27	20	29	36	**39**

Based on BS8233:2014 - Design Criterion:	LAeq Day	35
Based on BS8233:2014 - Design Criterion:	LAeq Night	30
Based on BS8233: 1999 Lmax levels	LAmax	n/a

Appendix C2

ACOUSTICS

39 High Street, Warboys
Bedroom

BS EN 12354-3 Calculation to determine glazing specification

Habitable room data variables

Type of habitable room	Bedroom	**Based on assumed room sizes*
Volume	25	cubic metres
Total area - external façade(s	16	square metres
Total area - window(s)	6	square metres
L(k)	6	
Lmax (K)	6	
Trickle Ventilator(s)	5	
Solid Façade (exc. windows)	10	square metres
Reverberation Time	0.5	seconds

External noise level

	1:1 Octave Bands Centre Frequency (Hz)							
	63	125	250	500	1000	2000	4000	dB(A)
Logged Log average daytime Leq	53	51	51	50	47	46	46	**54**
Logged Log average night-time Leq	45	38	34	35	36	32	39	**44**
Logged Lmax for duration of survey	65	57	53	51	52	52	62	**66**

Sound reduction of building fabric

	1:1 Octave Band Centre Frequency (Hz)							Rw /
	63	125	250	500	1000	2000	4000	Dn,e,W
36 Rw - Pilk 10/12/4mm	23	25	22	33	40	43	44	**36**
Standard Masonry from Template Report	39	41	43	48	50	55	55	
34 Dn,e,w - Titon Trimvent SW - Standard trickle	31	33	34	33	42	29	32	**34**

	1:1 Octave Band Centre Frequency (Hz)							
	63	*125*	*250*	*500*	*1000*	*2000*	*4000*	
Reduction from façade	-17.5	-19.5	-17.0	-25.4	-32.9	-24.8	-27.7	
Addition for Ctr	5.0	5.0	5.0	5.0	5.0	5.0	5.0	

Resultant internal noise level

	1:1 Octave Band Centre Frequency (Hz)							
	63	125	250	500	1000	2000	4000	dB(A)
Daytime internal Leq	40	36	39	30	19	26	24	**34**
Night-time internal Leq	32	23	22	15	8	13	17	**21**
Night-time internal Lmax	47	38	36	26	19	27	34	**37**

Based on BS8233:2014 - Design Criterion:	LAeq Day	35
Based on BS8233:2014 - Design Criterion:	LAeq Night	30
Based on BS8233: 1999 Lmax levels	LAmax	45

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HEALTHY ABODE ACOUSTICS

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