

Project:

12-14 Kentwood Hill, Reading, RG31 6DE

Title:

Acoustic Assessment Report

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Date:

06 January 2026

Client:

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Limitations			
This report has been prepared for the titled project and client in accordance with our agreed scope of work, document reference: PA-01248/SC1, dated 17 April 2025. This report should not be used or relied upon for any other project or purpose without the written authorisation of Pulsar Acoustics Ltd. Pulsar Acoustics Ltd accepts no responsibility or liability for the consequences of this document if it is used for a purpose other than for the project to which it was intended. The findings and opinions included herein are based on measurements and information gathered prior to the date the report was issued. If additional information becomes available which may affect our comments, recommendations or conclusions, then Pulsar Acoustic Ltd should be informed. We then reserve the right to review the information, assess any new potential concerns, and modify our advice accordingly.			



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1.0 - Introduction

The Tilehurst Club was a social club located at 12-14 Kentwood Hill, Tilehurst, Reading, Berkshire, RG31 6DE.

The project is seeking planning permission for a change of use from a social club to a church (place of worship).

Pulsar Acoustics has been commissioned to undertake an environmental noise survey and acoustic assessment of the proposals for planning purposes.

This report presents the results of our survey, recommends relevant industry standard criteria, and provides acoustic assessment, to show that the proposed site would be suitable for church use.

2.0 - Site Description

2.1 - Existing

The site is a detached building on the south side of Kentwood Hill.

To the north of site on the opposite side of Kentwood Hill is open space called Victoria Recreation Ground.

Directly adjacent to the south of site lies a garage block.

To the east is a row of two-storey terraced dwellings, 16 to 22 Kentwood Hill, and their gardens.

The nearest property to the application site is 16 Kentwood Hill.



To the west of site lies a large power grid substation.

Reading through various social media, Facebook, Google reviews etc, it is clear that the 'Tilehurst Club' was a busy social club.

The site once comprised:

- Two downstairs bars.
- One upstairs bar and private function space.
- An extensive rear extension with large function room and stage.
- Storage units and outbuildings.
- Outdoor beer garden.
- Sky sports and TNT shown on up to five screens.
- Disco, karaoke and bingo nights.
- Live music, DJs, rock bands and entertainment.
- Pool tables, darts and quiz nights.

The photo below is the front of the building.





As we can see from the external advertising signs, there was regular entertainment. As you would expect from a venue of this type, a lot of entertainment would have been rather loud, especially when the DJs and live rock band music was involved.





2.2 - Proposed

The applicants are the Berachah International Christian Fellowship who run the Berachah House of Prayer. They have a diverse congregation comprised primarily of Christians, originally from Nepal with a rich history of service in the Reading community. They have been successfully operating in Reading since 2003.

They propose to operate normal congregational gathering for prayer and worship on a Sunday, Tuesday, Thursday and occasional Friday and Saturdays.

Operating hours are most likely to be:

- Sundays 10.00h to 16:00h.
- Tuesdays, Thursdays and Fridays 19:00h - 21:00h.
- Saturdays 15:00h to 17:00h (Every other Saturday).

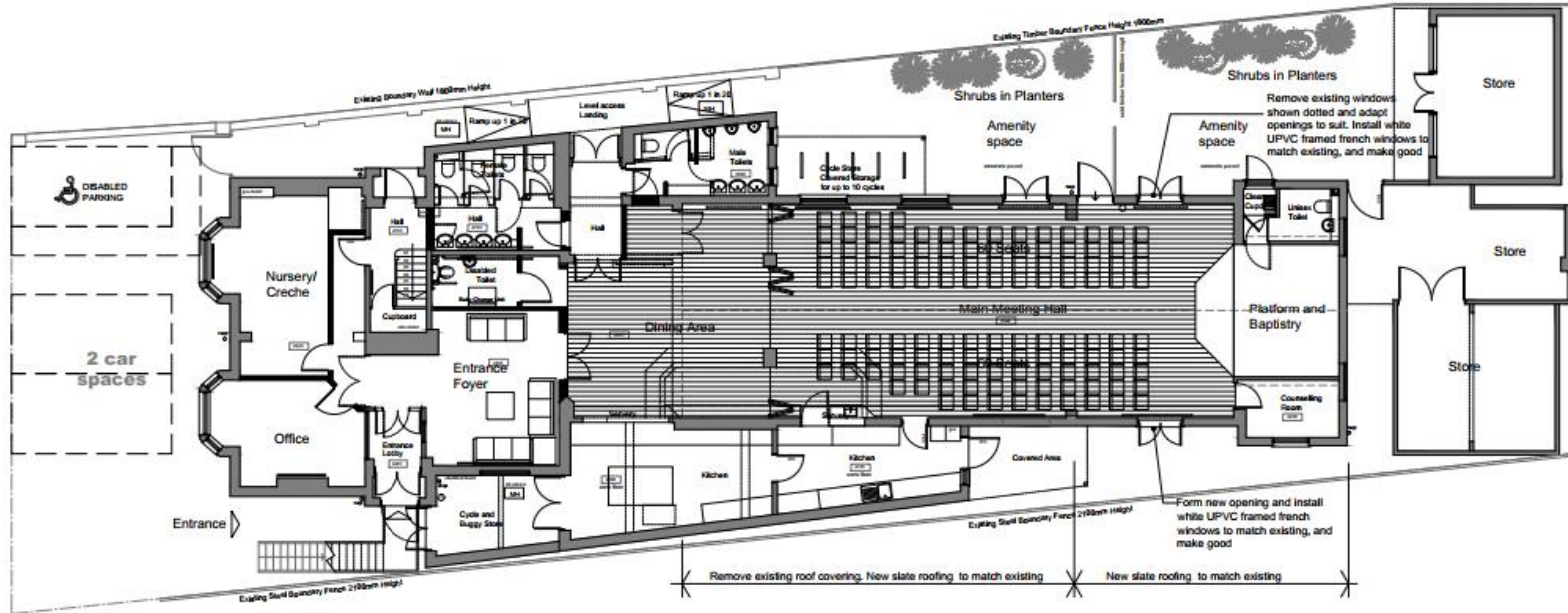
The proposal is for a change of use from a social club to a church (place of worship).

These facilities will support the day-to-day functions of the church, provide necessary amenities for attendees, and enable the space to serve as a welcoming and flexible environment for worship, fellowship, and community activities.

Some activities will involve playing video, recorded and/or live music, and speech via a microphone and sound system, however, it is never anticipated to reach the same loud levels that the Tilehurst Club would have provided during DJ music, discos, parties, and live rock bands.

There are currently no plans to utilise mechanical ventilation and air-conditioning, and as such our assessment does not need to consider plant noise at this time.

The preliminary proposed layout drawings are shown below.

**Ground Floor Plan and Site Plan****IAN HUNT ASSOCIATES**

Oakwood House
14 High Tree Drive Earley
Reading Berkshire RG6 1EU
0118 935 3655
info@ihalt.co.uk

Project
Proposed Change of Use
at: 12-14 Kentwood Hill,
Tilehurst, Reading RG31 6DE

Client
Berachah International Christian Fellowship

Title
Proposed Ground Floor and Site Plan

Revision

Drawn
IRH

Scale
1:100

Date
July 2025

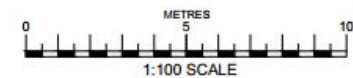
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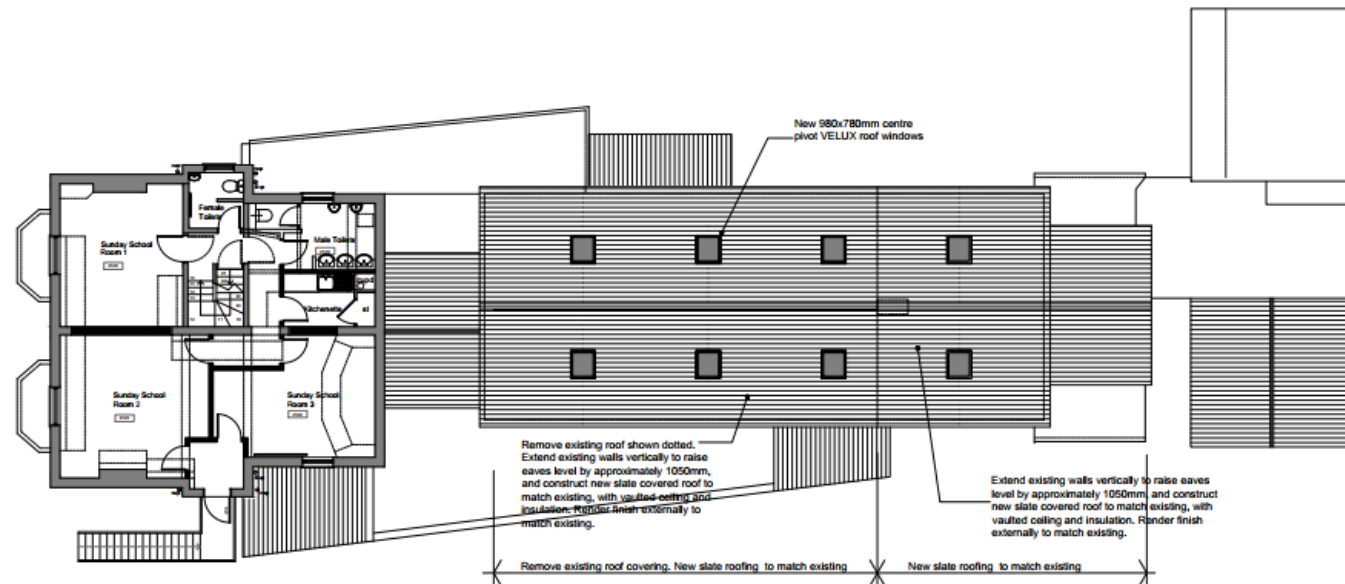
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Project
Proposed Change of Use
at: 12-14 Kentwood Hill,
Tilehurst, Reading RG31 6DE

Client
Berachah International Christian Fellowship

Title
Proposed First Floor Plan

Revision

Drawn
IRH

Scale
1:100

Date
July 2025

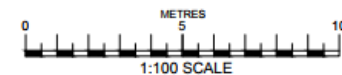
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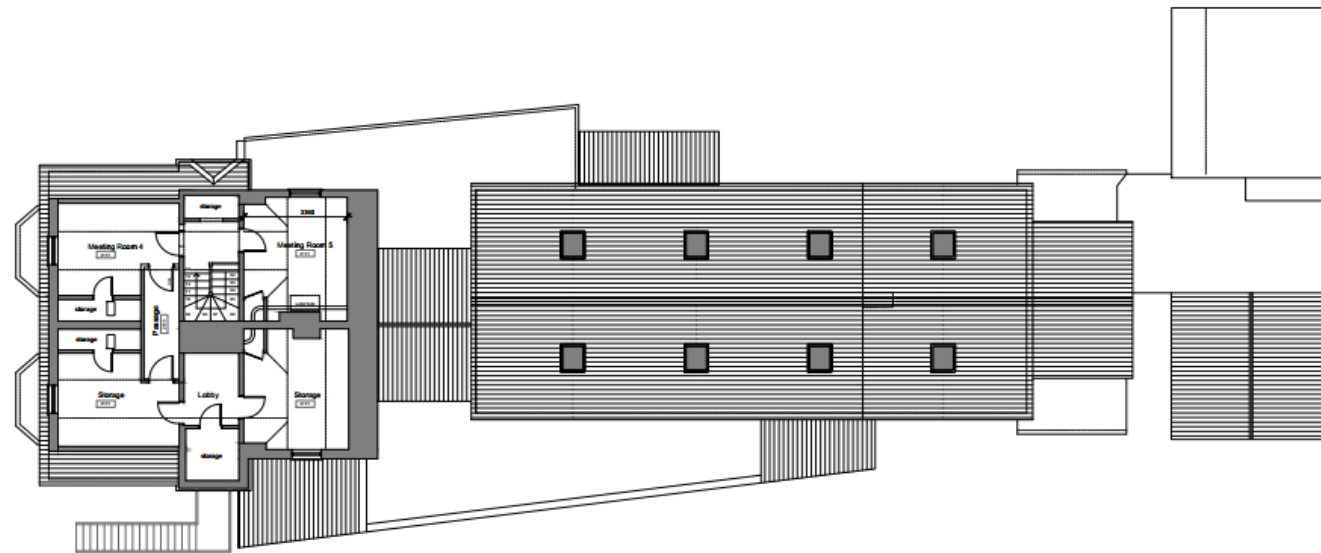
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**Second Floor Plan****IAN HUNT ASSOCIATES**

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Project
Proposed Change of Use
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Tilehurst, Reading RG31 6DE

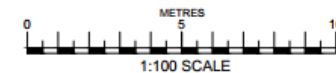
Client
Berachah International Christian Fellowship

Title
Proposed Second Floor Plan
Revision

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3.0 - Industry Standard Guidance & Criteria

3.1 - NPPF

The National Planning Policy Framework (NPPF) December 2024, Section 8 (Promoting healthy and safe communities) seeks to achieve healthy, inclusive and safe places.

Paragraph 98 states to provide the social, recreational and cultural facilities and services the community needs, planning policies and decisions should:

- (a) plan positively for the provision and use of shared spaces, community facilities (such as local shops, meeting places, sports venues, open space, cultural buildings, public houses and places of worship) and other local services to enhance the sustainability of communities and residential environments;
- (b) take into account and support the delivery of local strategies to improve health, social and cultural well-being for all sections of the community;
- (c) guard against the unnecessary loss of valued facilities and services, particularly where this would reduce the community's ability to meet its day-to-day needs;
- (d) ensure that established shops, facilities and services are able to develop and modernise, and are retained for the benefit of the community; and
- (e) ensure an integrated approach to considering the location of housing, economic uses and community facilities and services.

The NPPF also advises various objectives with regards to noise. Some important paragraphs are presented below:

Paragraph 187 advises that planning policies and decisions should contribute to and enhance the natural and local environment by:

e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans;



Paragraph 198 suggests:

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 life⁷²;*
- 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.*

Paragraph 200 seeks to ensure that any new development does not prejudice the legally permitted operations and activities of other existing non-residential uses, stating:

Planning policies and decisions should 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.

National Planning Policy Framework (NPPF) sets out the government’s planning policies for England and how they are expected to be applied to achieve sustainable development.

The NPPF confirms that National Policy Statements form part of the national planning policy framework and should be considered in planning decisions. The NPPF makes reference to Noise Policy Statement for England (NPSE).

The NPPF document does not refer to any other documents or British Standards regarding noise other than the NPSE.



3.2 - Noise Policy Statement for England (NPSE)

The NPSE is the overarching statement of noise policy for England and applies to all forms of noise other than occupational noise, setting out the long-term vision of Government noise policy which is to:

“Promote good health and a good quality of life through the effective management of noise within the context of Government policy on sustainable development.”

That vision is supported by the following NPSE noise policy aims which are reflected in planning policies and decisions in the NPPF:

“Through the effective management and control of environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development:

- *avoid significant adverse impacts on health and quality of life;*
- *mitigate and minimise adverse impacts on health and quality of life; and*
- *where possible, contribute to the improvement of health and quality of life.”*

The Explanatory Note to the NPSE has three concepts for the assessment of noise:

1. NOEL – No Observed Effect Level

This is the level below which no effect can be detected and below which there is no detectable effect on health and quality of life due to noise.

2. LOAEL – Lowest Observable Adverse Effect Level

This is the level above which adverse effects on health and quality of life can be detected.



3. SOAEL – Significant Observed Adverse Effect Level

This is the level above which significant adverse effects on health and quality of life occur.

It must be noted that none of these three levels are defined numerically.

For the SOAEL the NPSE makes it clear that the noise level is likely to vary depending upon the noise source, the receptor and the time of day/day of the week, etc.

Where predicted noise impact lies between LOAEL and SOAEL, 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.

The need for more research to investigate what may represent an SOAEL for noise is acknowledged in the NPSE, and the NPSE asserts that by not stating specific numerical SOAEL levels provides flexibility in the absence.

3.3 - Reading Local Plan

The following Reading Local Plan (2019) wording is relevant to the proposal:

CC2: Sustainable Design and Construction – requires proposals for new development, including the construction of new buildings and the redevelopment and refurbishment of existing building stock, will be acceptable where the design of buildings and site layouts use energy, water, minerals, materials and other natural resources appropriately, efficiently and with care and take account of the effects of climate change.

CC8: Safeguarding Amenity – requires development to not detrimentally affect the living environment of existing residential properties, in terms of privacy and overlooking, sunlight and daylight, visual dominance and overbearing effects, harm to outlook, noise and disturbance.

As well as immediate impacts, other aspects to which this policy applies will include matters such as hours of operation of businesses, and effects of traffic movements, particularly of heavy goods vehicles (HGVs). Proposals which would generate regular movements of HGVs on residential roads will not be acceptable.



EN17: NOISE GENERATING EQUIPMENT

Where noise generating equipment is proposed, the noise source specific level (plant noise level) should be at least 10dBA below the existing background level as measured at the nearest noise sensitive receptor.

4.2.93 Planning Practice Guidance on noise states that no specific measures are required to manage the acoustic environment in situations where noise can be heard as a result of a development, and there is a slight effect on the acoustic character of the area, but there is no effect on the behaviour and attitude of people exposed to the noise.

The guidance also states that:

In cases where existing noise sensitive locations already experience high noise levels, a development that is expected to cause even a small increase in the overall noise level may result in a significant adverse effect occurring.

3.4 - Planning Practice Guidance – Noise

Planning Practice Guidance (PPG) for noise provides additional guidance on the 'National Planning Policy Framework' (NPPF). The guidance advises that when plan-making and decision-taking, the Local Planning Authority should consider the acoustic environment in relation to:

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

In line with the Explanatory Note of the 'Noise Policy Statement for England' (NPSE), the PPG mentions the 'Lowest-Observed-Adverse-Effect Level' (LOAEL) and 'Significant Observed Adverse Effect Level' (SOAEL) in relation to noise impact.

As per the NPSE and NPPF, no objective numerical noise levels are provided for LOAEL or SOAEL, although the PPG acknowledges that:



“...the subjective nature of noise means that there is not a simple relationship between noise levels and the impact on those affected. This will depend on how various factors combine in any particular situation”.

The PPG also provides examples of outcomes that could be expected for a given perception level of noise, plus actions that may be required to bring about a desired outcome.

Examples of these factors include:

- The source and absolute noise level of the source along with the time of day that it occurs;
- Where the noise is non-continuous, the number of noise events and pattern of occurrence;
- The frequency content and acoustic characteristics of the noise;
- The effect of noise on wildlife;
- The impact of noise from certain commercial developments such as night clubs and pubs where activities are often at their peak during the evening and night.

The PPG also provides general advice on the typical options available for mitigating noise. It goes on to suggest that Local Plans may include noise standards applicable to proposed developments within the Local Authority's administrative boundary, although it states that:

“Care should be taken, however, to avoid these being implemented as fixed thresholds as specific circumstances may justify some variation being allowed”.

3.5 - IEMA

It is clear from the above that noise policy aims to avoid a development which will lead to any Adverse Effects, and where any Adverse Effects are predicted, to include mitigation such that either the Adverse Effect is removed or at the very least reduced to a minimum.

As mentioned in each policy document there is no quantitative numerical guidance, and therefore we first make reference to - The Institute for Environmental Management & Assessment (IEMA) 'Guidelines for Environmental Noise Impact Assessment'.



The IEMA document contains suitable assessment methodology for determining the potential noise impact from a relative change to the existing noise climate. This methodology is regularly used by Local Authorities and Acoustic Consultants, to consider the potential impact from a change of use.

A general principle that should be employed is to consider whether a change to the noise source, will likely cause a significant increase over the current sound level, or a change of character compared to the existing use noise climate.

When considering environmental impact, it is typically considered in terms of changes to the existing ambient (dBA $L_{eq,T}$) noise climate as a result of introducing a new noise source or a change to existing noise sources.

Having established the likely change in sound levels, an initial indication of the significance of the change can be determined from Table 7-12 of the IEMA Guidelines as reproduced below.

TABLE 7-12 EFFECT DESCRIPTORS

Very Substantial	Greater than 10 dB L_{Aeq} change in sound level perceived at a receptor of great sensitivity to noise
Substantial	Greater than 5 dB L_{Aeq} change in sound level at a noise-sensitive receptor; or a 5 to 9.9 dB L_{Aeq} change in sound level at a receptor of great sensitivity to noise
Moderate	A 3 to 4.9 dB L_{Aeq} change in sound level at a sensitive or highly sensitive noise receptor; or a greater than 5 dB L_{Aeq} change in sound level at a receptor of some sensitivity
Slight	A 3 to 4.9 dB L_{Aeq} change in sound level at a receptor of some sensitivity
None/Not Significant	Less than 2.9 dB L_{Aeq} change in sound level and/or all receptors are of negligible sensitivity to noise or marginal to the zone of influence of the proposals



Note that by defining the change of loudness to one decimal place is not a reflection of the accuracy of any assessment undertaken, but rather to provide a clear threshold between adjacent effect descriptions.

The guidelines advise that the change in sound level provides an initial estimate of the impact, which should also be considered in context with the existing use of the development, the type of noise source, the nature of the change, and other acoustic factors.

The table below copied from IEMA describes the likely magnitude, the effect on the receptor and significance, if there is a reduction of noise or no discernible effect to the receptor.

MAGNITUDE (Nature of Impact)		DESCRIPTION OF EFFECT (on a specific sensitive receptor)	SIGNIFICANCE (as required within EIA)
Substantial	BENEFICIAL	Receptor perception = Marked change Causes a material change in behaviour and/or attitude, e.g. individuals begin to engage in activities previously avoided due to preceding environmental noise conditions. Quality of life enhanced due to change in character of the area.	More Likely to be Significant (Greater justification needed – based on impact magnitude and receptor sensitivities – to justify a non-significant effect) ↕ (Greater justification needed – based on impact magnitude and receptor sensitivities – to justify a significant effect) Less Likely to be Significant
Moderate		Receptor perception = Noticeable improvement Improved noise climate resulting in small changes in behaviour and/or attitude, e.g. turning down volume of television; speaking more quietly; opening windows. Affects the character of the area such that there is a perceived change in the quality of life.	
Slight		Receptor perception = Just noticeable improvement Noise impact can be heard, but does not result in any change in behaviour or attitude. Can slightly affect the character of the area but not such that there is a perceived change in the quality of life.	
Negligible		N/A = No discernible effect on the receptor	Not Significant



The table below copied from IEMA describes the potential magnitude, the effect on the receptor and the significance, if there is an increase of noise.

MAGNITUDE (Nature of Impact)		DESCRIPTION OF EFFECT (on a specific sensitive receptor)	SIGNIFICANCE (as required within EIA)
Slight	ADVERSE	Receptor perception = Non-intrusive Noise impact can be heard, but does not cause any change in behaviour or attitude, e.g. turning up volume of television; speaking more loudly; closing windows. Can slightly affect the character of the area but not such that there is a perceived change in the quality of life.	Less Likely to be Significant (Greater justification needed – based on impact magnitude and receptor sensitivities – to justify a significant effect)
Moderate		Receptor perception = Intrusive Noise impact can be heard and causes small changes in behaviour and/or attitude, e.g. turning up volume of television; speaking more loudly; closing windows. Potential for non-awakening sleep disturbance ⁸¹ . Affects the character of the area such that there is a perceived change in the quality of life.	
Substantial		Receptor perception = Disruptive Causes a material change in behaviour and/or attitude, e.g. avoiding certain activities during periods of intrusion. Potential for sleep disturbance resulting in difficulty in getting to sleep, premature awakening and difficulty in getting back to sleep. Quality of life diminished due to change in character of the area.	(Greater justification needed – based on impact magnitude and receptor sensitivities – to justify a non-significant effect) More Likely to be Significant
Severe		Receptor perception = Physically Harmful Significant changes in behaviour and/or an inability to mitigate effect of noise leading to psychological stress or physiological effects, e.g. regular sleep deprivation/awakening; loss of appetite, significant, medically definable harm, e.g. auditory and non-auditory.	Significant



Based on the above, any reduction should be deemed beneficial and acceptable, and we would suggest achieving a magnitude of impact of “negligible” or “slight” increase is commonly deemed acceptable.

Where an assessment indicates a “moderate” or greater impact, then this would potentially have an adverse impact to nearby residents, and would only be acceptable if it is reasonably mitigated to a minimum. In all cases a significant adverse effect is not usually deemed acceptable.

This descriptive commentary is comparable to that used with the National Planning Policy Framework (NPPF) and the Noise Policy Statement for England (NPSE) where no numerical criteria is presented.

With a lack of numerical levels in NPSE for NOEL, LOAEL, and SOAEL, it is common to apply the classification levels to the IEMA Table 7-12 values as presented in the table below:

Noise Change dBA	Effect	NPSE Classification
<2.9	None/Not Significant	NOEL
3.0 - 4.9	Slight/Moderate	LOAEL
5.0 - 9.9	Substantial	LOAEL
≥10	Very Substantial	SOAEL

To evaluate the noise impact change, the predicted level of noise is compared to the measured ambient noise level to establish the change in noise that would be expected, and this can be assessed using the significance effect and classification ratings given in the table above.

It is also possible to consider subjective human response to change of sound:

Change in Sound Level (dBA)	Subjective Human Response
±3	Just perceivable
±5	Noticeable
±10	Twice or half as loud

Sounds rarely remain constant in level over a period of time and it is necessary to consider how to quantify the existing noise environment to account for variations. Consequently, it is common to use the single-figure description of $dBA Leq,T$ to describe a complex varying noise climate over a defined time period.



$L_{eq,T}$ = The equivalent continuous A-weighted sound pressure level. This indicator describes the average sound energy, but with a bias towards the noisier events that occur during the measurement period.

L_{eq} is a fundamental measurement parameter designed to represent a varying sound source over a given time as a single number. This is a useful parameter for quantifying the potential for sound to damage or disturb, and is extensively used in acoustic standards and regulations.

3.6 - World Health Organisation (WHO)

As well as considering the IEMA guidance described above, we sometimes refer to WHO guidelines, and BS8233 as presented in Section 3.7 below.

The WHO Guidelines for Community Noise, suggests that for outdoor residential space during daytime (07:00h to 23:00h), few people are highly annoyed at $L_{eq,16h}$ levels below 55dBA, and few are moderately annoyed at $L_{eq,16h}$ levels below 50dBA.

The effects of noise inside dwellings, typically relate to sleep disturbance, annoyance and speech interference.

At night-time, outside sound levels about 1 metre from facades of living spaces should not exceed 45dBA $L_{eq,8h}$ so that people may sleep with bedroom windows open. This value was obtained by assuming that the noise reduction from outside to inside with the window open is 15dB.

To enable casual conversation indoors during daytime (07:00h to 23:00h), the sound level of interfering noise should not exceed 35 dBA $L_{eq,16h}$.

With consideration for the same 15dB outside to inside noise reduction, the outside noise levels should not exceed around 50dBA $L_{eq,16h}$. Which correlates with the suggestion that where it is practical and feasible, the lower outdoor sound level should be considered the maximum desirable sound level for new development.



3.7 - BS8233

British Standard BS8233:2014 - 'Guidance on sound insulation and noise reduction for buildings', provides guidance for the control of noise in buildings.

Section 7.7.2 titled "Internal ambient noise levels for dwellings" recommends, in general for steady external noise sources it is desirable that internal ambient noise levels do not exceed the following guideline values:

Activity	Location	Desirable Internal Ambient Criteria	
		Daytime (07:00 to 23:00h)	Night-time (23:00 to 07:00h)
Resting	Living Rooms	35 dBA Leq,16h	-
Dining	Dining Room/Area	40 dBA Leq,16h	-
Sleeping (Daytime Resting)	Bedroom	35 dBA Leq,16h	30 dBA Leq,8h

Note 7 to Table 4 of BS 8233 states:

"Where development is considered necessary or desirable, despite external noise levels above WHO guidelines, the internal target levels may be relaxed by up to 5dB and reasonable internal conditions still be achieved."

These values would equate as follows:

Activity	Location	Desirable Internal Ambient Criteria	
		Daytime (07:00 to 23:00h)	Night-time (23:00 to 07:00h)
Resting	Living Rooms	40 dBA Leq,16h	-
Dining	Dining Room/Area	45 dBA Leq,16h	-
Sleeping (Daytime Resting)	Bedroom	40 dBA Leq,16h	35 dBA Leq,8h



British Standard BS8233 Section 7.7.3.2 titled 'Design criteria for external noise' recommends:

"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 dBA Leq,T, with an upper guideline value of 55 dBA Leq,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."

By achieving the external noise levels outside a neighbouring property, it is expected that the internal levels described in the Table of Section 7.7.2 and the WHO guidelines would normally be achieved.

3.8 - BS4142

When setting plant noise emission criteria, reference is commonly made to BS4142:2014 *"Methods for rating and assessing industrial and commercial sound"*.

As stated within BS4142, this standard is not intended to be applied to the rating and assessment of sound from:

- a) recreational activities, including all forms of motorsport;
- b) music and other entertainment;
- c) shooting grounds;
- d) construction and demolition;
- e) domestic animals;
- f) people;
- g) public address systems for speech; and
- h) other sources falling within the scopes of other standards or guidance.



When assessing plant noise, BS4142 states that:

“The significance of sound of an industrial and/or commercial nature depends upon both the margin by which the rating level of the specific sound source exceeds the background sound level and the context in which the sound occurs”.

An estimation of the impact of the specific noise can be obtained by the difference of the rating noise level and the background noise level and considering the following:

- Typically, the greater this difference, the greater the magnitude of the impact.
- A difference of around +10dB or more is likely to be an indication of a significant adverse impact, depending on the context.
- A difference of around +5dB is likely to be an indication of an adverse impact, depending on the context.
- The lower the rating level is relative to the measured background sound level, the less likely it is that the specific sound source will have an adverse impact or a significant adverse impact.
- Where the rating level does not exceed the background sound level, this is an indication of the specific sound source having a low [or no] impact, depending on the context.

BS4142 also suggests:

In using the background sound level in the method for rating and assessing industrial and commercial sound it is important to ensure that values are reliable and suitably represent both the particular circumstances and periods of interest. For this purpose, the objective is not simply to ascertain a lowest measured background sound level, but rather to quantify what is typical during particular time periods.

Depending on the context the determination of the ‘rating level’ and the ‘background level’ are both open to interpretation. With reference to the above, it appears reasonable to infer that if the rating level does not exceed the background noise level, then the noise is likely to be deemed acceptable.

The outcome of the assessment is then determined by consideration of both the excess of Rating Level over the Background Sound Level, and consideration of all pertinent contextual factors.



4.0 - Environmental Noise Survey

4.1 - Methodology

Sound level measurements have been undertaken to determine the existing noise climate around site.

Two fixed position sound level meters were set up from approximately 11:30 hours on 23 May 2025 to 11:00 hours on 27 May 2025.

The sound level meters were set to record many acoustic statistical parameters, including dBA Leq,T, L90, and Lmax, in 15-minute intervals, including octave band frequency (Hz) data.

The equipment listed in the table below was used to undertake the survey.

Position	Equipment Description	Manufacturer	Type	Serial No.
1	Sound Level Meter	Casella	CEL-633C	5086881
	Preamplifier	Casella	CEL-495	002151
	Microphone	BSWA	MP201	521277
	Handheld Calibrator	G.R.A.S.	GRAS-42AG	280968
2	Sound Level Meter	Larson Davis	LXT	0003615
	Preamplifier	Larson Davis	PRMLXT1L	027681
	Microphone	Larson Davis	LD2541	7773
	Handheld Calibrator	G.R.A.S.	GRAS-42AG	280968

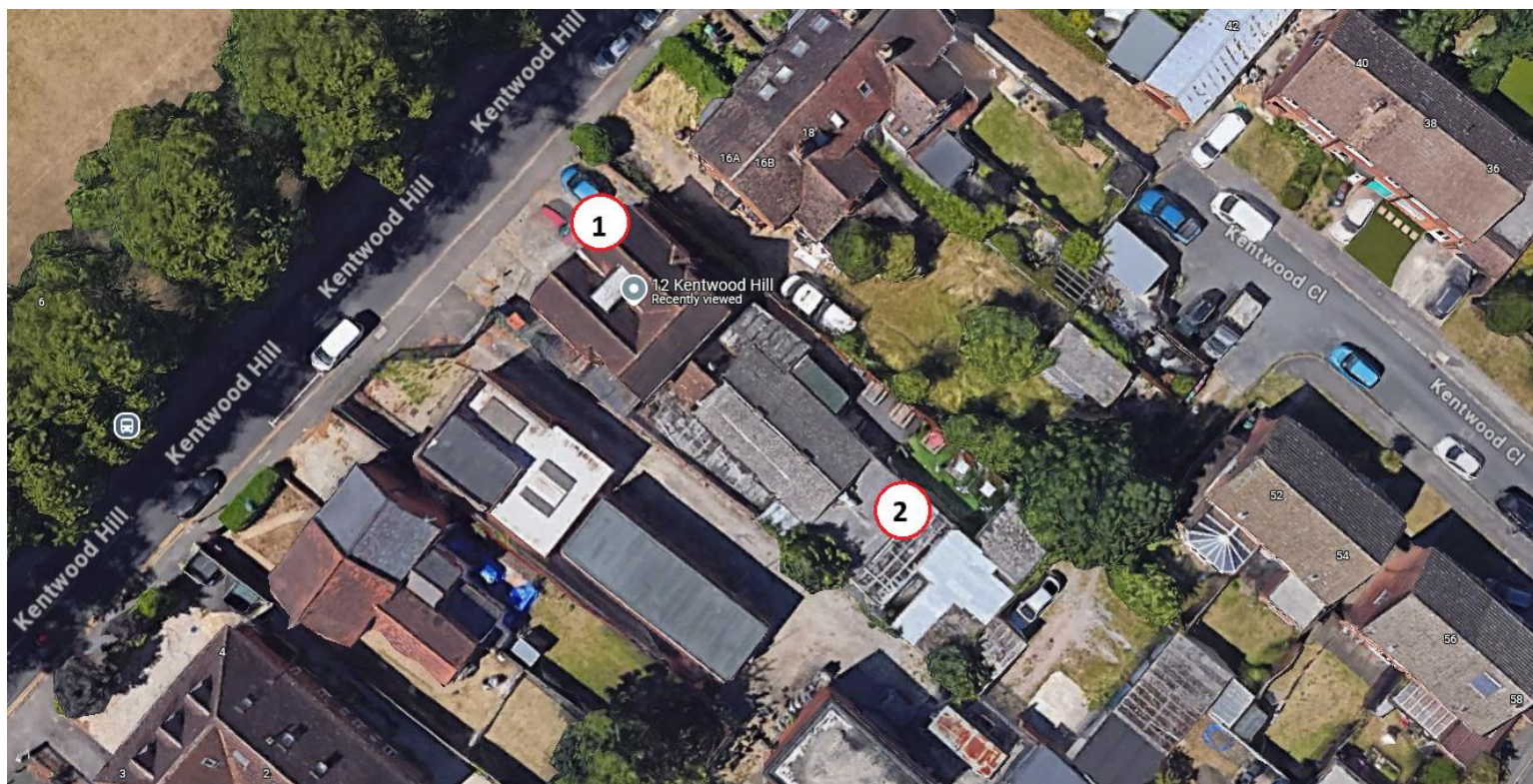
The equipment sensitivity was checked using the handheld calibrators before and after the survey. No significant drift was measured (no more than 0.1dB). The handheld calibrators, sound level meters, pre-amplifiers and microphones, were calibrated to traceable standards within 12 months prior to the survey.

The measurement positions are described in the table below.



Position	Description
1	The data logging sound level meter (SLM) was located inside at first floor level at the front of the property. The microphone was attached to the SLM via extension cable. The microphone was attached to a pole which protruded from a first-floor window. The microphone was approximately 5m above outside ground level.
2	The data logging sound level meter (SLM) was located outside at the rear of the property. The microphone was attached to the SLM via extension cable. The microphone was attached to a tripod, and the tripod was placed on the rear flat roof. The microphone was approximately 4m above outside ground level overlooking the beer garden.

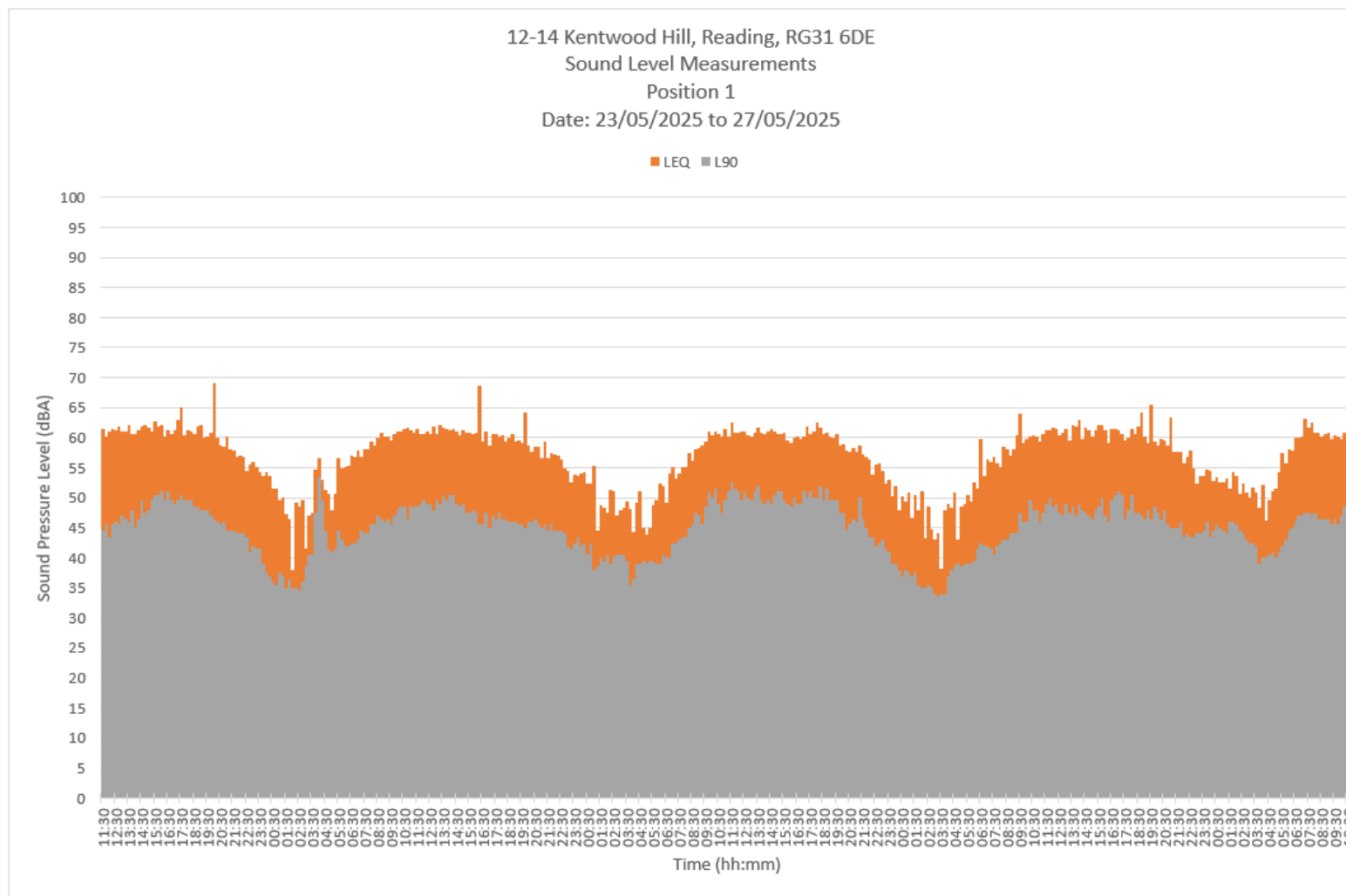
The approximate measurement positions are indicated on the Google Maps image below.

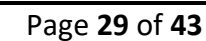




4.2 - Survey Measurement Data

The sound level data measured at each position has been plotted on the time history graphs below.







The survey data has been analysed to determine the daytime and night-time dBA Leq, τ , and the mean, modal and median L90 statistical average noise levels, as presented in the table below for comparison to various guidance.

Position 1					
Date	Time (hh:mm)	dBA Leq, τ	dBA L90 Mean Average	dBA L90 Modal Average	dBA L90 Median Average
23/05/2025 to 24/05/2025	Daytime (11:30 to 23:00 hours)	61	47	46	47
	Night-time (23:00 to 07:00 hours)	53	41	42	41
24/05/2025 to 25/05/2025	Daytime (07:00 to 23:00 hours)	61	47	46	47
	Night-time (23:00 to 07:00 hours)	51	40	40	40
25/05/2025 to 26/05/2025	Daytime (07:00 to 23:00 hours)	60	49	50	50
	Night-time (23:00 to 07:00 hours)	51	38	39	38
26/05/2025 to 27/05/2025	Daytime (07:00 to 23:00 hours)	60	47	48	47
	Night-time (23:00 to 07:00 hours)	54	44	45	44
27/05/2025	Daytime (07:00 to 11:00 hours)	61	48	47	47

Position 2					
Date	Time (hh:mm)	dBA Leq, τ	dBA L90 Mean Average	dBA L90 Modal Average	dBA L90 Median Average
23/05/2025 to 24/05/2025	Daytime (11:30 to 23:00 hours)	47	42	43	42
	Night-time (23:00 to 07:00 hours)	44	37	38	37
24/05/2025 to 25/05/2025	Daytime (07:00 to 23:00 hours)	47	41	41	41
	Night-time (23:00 to 07:00 hours)	42	36	36	36
25/05/2025 to 26/05/2025	Daytime (07:00 to 23:00 hours)	48	42	43	42
	Night-time (23:00 to 07:00 hours)	39	35	36	35
26/05/2025 to 27/05/2025	Daytime (07:00 to 23:00 hours)	47	41	42	41
	Night-time (23:00 to 07:00 hours)	46	39	41	39
27/05/2025	Daytime (07:00 to 11:00 hours)	48	41	40	40



As mentioned in Section 2.2, the church operating hours are anticipated to be:

- Sundays 10:00h to 16:00h.
- Tuesdays, Thursdays and Fridays 19:00h - 21:00h.
- Saturdays 15:00h to 17:00h (Every other Saturday).

We suggest Position 2 data would best represent the existing levels at the rear of the neighbouring house. The existing ambient noise levels were as follows:

- Friday 23rd May, 19:00h to 21:00h = 47dBA Leq,_{2h}.
- Saturday 24th May, 15:00h to 17:00h = 48dBA Leq,_{2h}.
- Sunday 25th May, 10:00h to 16:00h = 49dBA Leq,_{6h}.

5.0 - Sound Insulation Testing

5.1 - Methodology

Sound insulation tests were undertaken to determine how much sound the main hall is able to contain, from its existing use as a club, where DJ music, parties and live rock bands were common, and consider if the building will be able to contain the quieter sound from church use.

Testing was undertaken by playing broad band diffuse 'pink noise' from a PA loud speaker within the source room. The PA loud speaker was placed on a tripod and positioned facing the external wall.

Spatial average measurements of the octave band noise levels were obtained within the source room using a handheld sound level meter. The receive level measurement was then obtained externally at a distance of approximately 1m away from the façade of the building. The background noise levels were also measured.



The receive levels were corrected for background noise and subtracted from the source levels to determine the Sound Level Differences (SLD) over the frequency range 125Hz to 4,000Hz. The level differences for each source position are then arithmetically averaged at each frequency band to determine the Mean Sound Level Difference (MSLD).

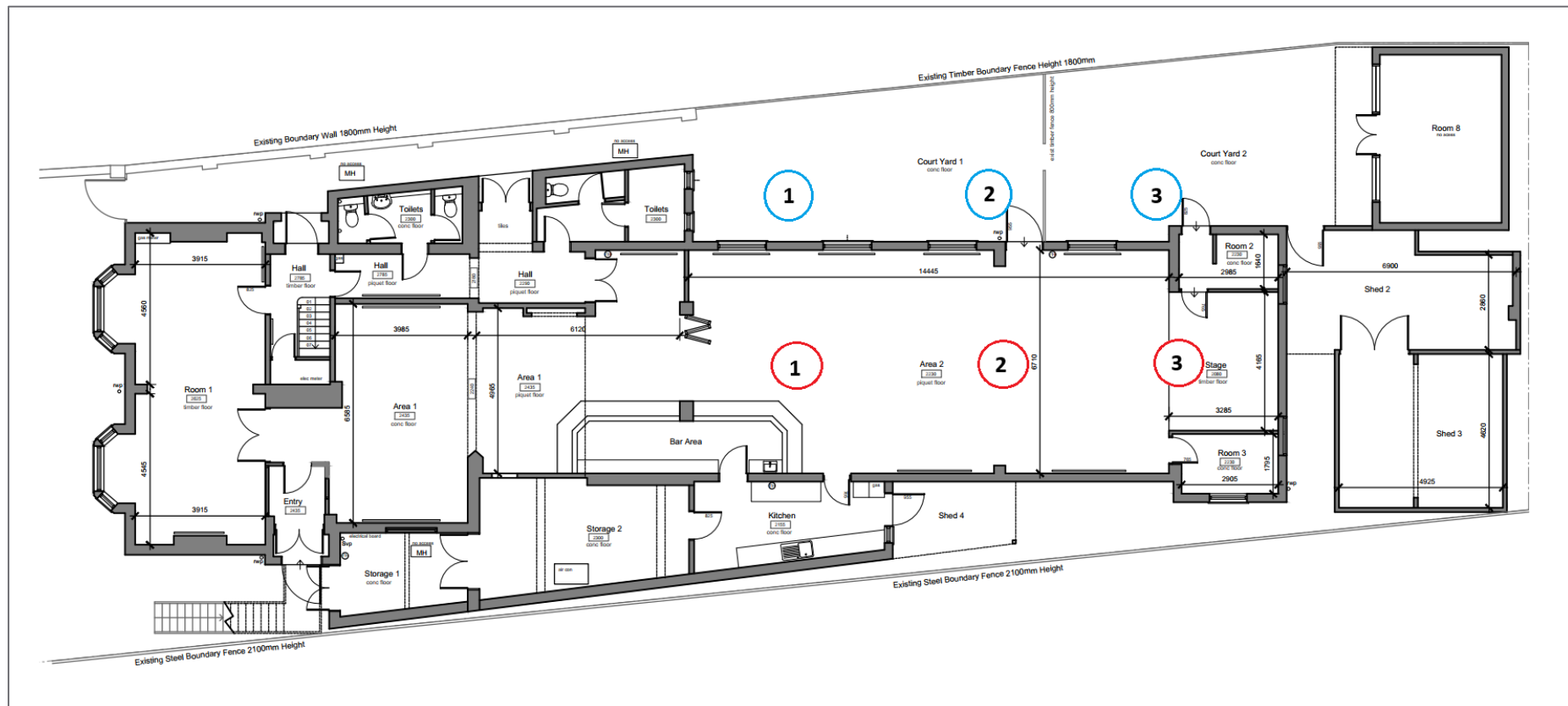
The measurements were undertaken between 11:00 hours to 12:00 hours on Wednesday 17 December 2025.

The equipment was set to log many acoustic parameters including dBA Leq,T with octave band frequency (Hz) levels. The following equipment was used to undertake the survey.

Equipment Description	Manufacturer	Type	Serial No.
Sound Level Meter	Casella	CEL-633C	5086881
Preamplifier	Casella	CEL-495	004728
Microphone	Casella	CEL-250	3611
Handheld Calibrator	Casella	CEL-110/1	095710
Signal Generator	NTI	Minirator MR-Pro	G2P-YVCBF-F2
Loud Speaker	Alto	TX308	n/a

The equipment sensitivity was checked using the handheld calibrator before and after the survey. No significant drift was measured (no more than 0.1dB). The handheld calibrator, sound level meter, pre-amplifier and microphone, was calibrated to traceable standards within 12 months prior to the survey.

The approximate test locations are shown on the site plan below. The PA loudspeaker internal source positions are circled red, and the external receive locations are circled blue.





5.2 - Test Results

Position	Source	Receive	Measurements	Octave Band Frequency (Hz) Sound Pressure Level (dB)						MSLD
				125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	125-4kHz
1	Inside hall towards bar	Outside	Source	98	96	93	91	89	93	34dBA
			Receive	69	68	61	57	51	52	
			Background	50	44	43	42	35	28	
			Corrected Receive	69	68	61	57	51	51	
			SLD	29	28	32	35	38	42	
2	Inside hall central location	Outside	Source	99	97	93	92	88	92	32dBA
			Receive	67	67	62	60	57	55	
			Background	50	44	43	42	35	28	
			Corrected Receive	67	67	61	60	57	55	
			SLD	31	30	31	31	31	37	
3	Inside hall front of stage	Outside	Source	97	97	94	93	89	93	36dBA
			Receive	63	64	59	60	50	52	
			Background	50	44	43	42	35	28	
			Corrected Receive	62	63	59	60	50	52	
			SLD	34	33	35	33	39	41	

The council has previously expressed concern, that testing should be undertaken to determine if there was any acoustic weakness that could be mitigated.

Whilst undertaking the tests, it was noted that the fire escape door adjacent to Position 2, was the dominant acoustic weakness along the façade of the building. This door is old, in poor condition, and has no perimeter seals.

As part of the refurbishment works, we understand the fire escape door will be replaced by a modern fire door. The window reveals, walls and ceilings will be made good, over boarded, sealed and painted. The refurbishment works will improve the overall acoustic performance.

For the purposes of this assessment, we believe it is fair to consider an inside to outside sound level difference average of 34dBA.



6.0 - Assessment

6.1 - Noise Climate Discussion

We suggest most people following common sense alone, would expect noise impact from this type of church to be significantly less than a social club. Let us reiterate the existing noisy uses of the club:

- Two downstairs bars.
- One upstairs bar and private function space.
- An extensive rear extension with large function room and stage.
- Storage units and outbuildings.
- Outdoor beer garden.
- Sky sports and TNT shown on up to five screens.
- Disco, karaoke and bingo nights.
- Live music, DJs, rock bands and entertainment.
- Pool tables, darts and quiz nights.

Fundamentally a social club operates like a pub. There was regular occurrences of inside and outside entertainment noise, with drunk people laughing, singing, parties, loud music, and probably occasional fights. Plus, this noise could occur much later in the evenings, far beyond 21:00 hours which is the latest proposed church hours.

Consider the church is proposing, congregational gathering for prayer, worship, fellowship, and community activities, with significantly reduced operating hours by comparison.

This does not mean the church are allowed 'unrestricted noise', and we acknowledge that some activities could involve playing, recorded or live music, and speech via a microphone and sound system. We would suggest that as long as the church activities are quieter, and with reduced operating hours compared to the club activities, it should be deemed acceptable from an acoustics and planning permission point of view.

Common sense alone may suggest this, however, let us also consider noise impact in terms of NPPF, NPSE, and other industry guidance as discussed in the sections below.



6.2 - Consideration for IEMA Guidance

We suggest Position 2 data would best represent the existing levels at the rear of the neighbouring house. The existing ambient noise levels were as follows:

- Friday 23rd May, 19:00h to 21:00h = 47dBA Leq,_{2h}.
- Saturday 24th May, 15:00h to 17:00h = 48dBA Leq,_{2h}.
- Sunday 25th May, 10:00h to 16:00h = 49dBA Leq,_{6h}.

For there to be No Observed Effect Level (NOEL), an increase of 3dBA should be deemed acceptable. Therefore, equating to a target of around 50dBA to 52dBA outside the neighbours house, predicted at a distance of 1m from the rear windows.

We know the inside to outside sound insulation of the church building is around 34dBA. We must consider a distance loss for approximately 15m is worst case a reduction of 12dBA. The calculation would therefore comprise, 47dBA + 3dBA + 34dBA + 12dBA = 96dBA Leq,_T.

If IEMA guidance is considered suitable numerical criteria, then this could imply a noise level inside the church hall of around 96dBA Leq,_T, would equate to No Observed Effect Level (NOEL).

6.3 - Consideration for WHO and BS8233 Guidance

As described in Sections 3.6 and 3.7, the WHO and BS8233 guidance fundamentally says the same thing. We summarise the guidance to three scenarios:

- 1) Daytime internal noise levels should not exceed 35dBA Leq,_{16h} when measured inside a habitable room. We will consider this the neighbours closest upstairs bedroom window with window open.
- 2) Daytime external noise levels should not exceed 50dBA Leq,_{16h} measured at 1m outside habitable room window. We will consider this the neighbours closest upstairs bedroom window.
- 3) Daytime external amenity noise levels should ideally not exceed 50dBA, with an upper level of 55dBA Leq,_{16h}. It is not defined where these measurements should take place, though experience would suggest it is commonly considered the centre of a garden.



Calculation method and parameters to achieve each scenario are presented below:

- **Scenario 1**

Target internal noise level of 35dBA $Leq,16h$.

Open window correction 15dBA as per WHO guidance.

Distance loss of at least 12dBA for approximately 15m between hall and house.

Time correction of 4dBA to establish daytime 16 hours dBA Leq,T from the longest church period of 6 hours on a Sunday.

Inside to outside sound insulation of church hall is 34dBA.

To achieve Scenario 1 the calculation would comprise, $35dBA + 15dBA + 12dBA + 4dBA + 34dBA = 100dBA Leq,T$.

If WHO or BS8233 guidance is considered suitable numerical criteria, then this could imply a noise level inside the church hall of around 100dBA Leq,T would equate to No Observed Effect Level (NOEL).

- **Scenario 2**

Target internal noise level of 50dBA $Leq,16h$. outside bedroom window.

Distance loss of at least 12dBA for approximately 15m between hall and house.

Time correction of 4dBA to establish daytime 16 hours dBA Leq,T from the longest church period of 6 hours on a Sunday.

Inside to outside sound insulation of church hall is 34dBA.

To achieve Scenario 2 the calculation would comprise, $50dBA + 12dBA + 4dBA + 34dBA = 100dBA Leq,T$.

If WHO or BS8233 guidance is considered suitable numerical criteria, then this could imply a noise level inside the church hall of around 100dBA Leq,T would equate to No Observed Effect Level (NOEL).



- **Scenario 3**

Target external noise level ranges from 50dBA to 55dBA Leq_{16h} in centre of garden.

Distance loss of around 10dBA for approximately 10m between hall and a point mid-garden.

Barrier loss for large separating fence/wall we would pessimistically consider around 5dBA.

Time correction of 4dBA to establish daytime 16 hours dBA Leq_T from the longest church period of 6 hours on a Sunday.

Inside to outside sound insulation of church hall is 34dBA.

To achieve Scenario 3 the calculation would comprise, [range 50dBA to 55dBA] + 10dBA + 5dBA + 4dBA + 34dBA = range of 103dBA to 108dBA Leq_T .

If WHO or BS8233 guidance is considered suitable numerical criteria, then this could imply a noise level inside the church hall of around 103dBA to 108dBA Leq_T would equate to No Observed Effect Level (NOEL).

6.4 - Consideration for BS4142 Guidance

When setting plant noise emission criteria, reference is commonly made to BS4142:2014 *"Methods for rating and assessing industrial and commercial sound"*.

As stated within BS4142, this standard is not intended to be applied to the rating and assessment of sound from:

- a) recreational activities, including all forms of motorsport;
- b) music and other entertainment;
- c) shooting grounds;
- d) construction and demolition;
- e) domestic animals;
- f) people;
- g) public address systems for speech; and
- h) other sources falling within the scopes of other standards or guidance.

If any building services items are installed in the future that we are unaware of, they may need assessing in accordance with BS4142.



7.0 - Discussion

The planning application proposes change of use from a social club to a church.

The social club is vacant, unviable and dilapidated, which over time lacked demand from the local community.

The church provides an opportunity for a local church group to expand and to operate in the local area.

The proposal will bring a currently vacant community use back into use and enable it to positively contribute towards the local community. It will also provide employment opportunities.

It is unlikely to harm the amenity of adjacent residential properties due to its greatly reduced hours of operation compared to club use. Plus, it is considered to be a more neighbourly use in terms of noise generation than the previous social club use, which in particular could generate relatively high day and night-time noise, due to it having a bar, function room and hosting events such as DJ music, discos, rock bands, and sports TV events.

It is also likely to have required regular deliveries, which would have been significantly noise-generating with larger commercial vehicles.

It should also be noted that the applicant is a successful and well supported local faith group previously operating without incident, and generates less noise than the previous use.

For planning purposes, the fundamental test of acceptability for change of use, is to determine if there will be a positive or negative change in the magnitude and/or character of noise, in the context of the relevant Government and Local Authority planning policy documents.

- National Planning Policy Framework (NPPF)
- Noise Policy Statement for England (NPSE)
- Planning Practice Guidance – Noise (PPG-N)
- Reading Local Plan



As discussed in Section 3.0, the above documents essentially describe the need to consider impact in terms of NOEL, LOAEL, and SOAEL categories.

For the purposes of the project we would describe these three categories as follows:

- SOAEL – Significant Observed Adverse Effect Level, i.e. A detrimental difference.

This is the level above which significant adverse effects on health and quality of life occurs. Whereby the new use is likely to be louder with potentially more antisocial opening hours and activities.

It can cause a material change in behaviour and/or attitude to the neighbouring noise sensitive receptors, e.g. avoiding certain activities during periods of intrusion, turning TV volume up, raising voices to communicate, potential for sleep disturbance resulting in difficulty in getting to sleep, premature awakening and difficulty in getting back to sleep. Quality of life diminished due to change in character of the area.

- LOAEL – Lowest Observed Adverse Effect Level.

This is the level above which adverse effects on health and quality of life could be detected. An example here could be the club/pub business simply changes the landlord, owner or operator. They could continue to operate with the same antisocial opening hours and noisy activities, rock bands/DJ music etc, without any specifically defined noise restrictions.

Essentially there would be negligible change compared to existing. The noise impact would be clear at the neighbouring noise sensitive receptors. The new club/pub business could slightly change the noise character of the area but not such that there is a perceived change in the quality of life compared to previous operator.

- NOEL – No Observed Effect Level.

We would suggest this is the level where no significant impact can be detected, there is no detrimental effect on health and quality of life due to the noise.



There is an improved noise climate resulting in some positive changes to the nearest noise sensitive receptors, e.g. using their garden more frequently and later in the evening without disruption, they could leave windows open for ventilation purposes later in the evening, they would no longer be influenced by the behaviour of noisy drunk people, or the loud DJ and rock band music late at night.

There is a benefit in the character of the area such that there is a perceived change in the quality of life. As per church use, this would be deemed a benefit to the local community, where the new use is quieter with significantly less operating hours.

There are no numerical acoustic parameters provided in the above categories. To further our ability to assess the potential impact of the change of use, this report considers the guidance from:

- Institute for Environmental Management & Assessment (IEMA) - 'Guidelines for Environmental Noise Impact Assessment'.
- World Health Organisation (WHO)
- British Standard BS8233 - Guidance on sound insulation and noise reduction for buildings.
- British Standard BS4142 - Methods for rating and assessing industrial and commercial sound.

As described in Section 6.0, our calculations suggest that the internal noise levels due to church activity, is likely to be deemed No Observed Effect Level (NOEL), in the context of the numerical guidance provided by these documents, if it does not exceed a range of around 96dBA to 108dBA Leq,T.

An internal noise level of 96dBA Leq,T is rather loud and we would not expect a church congregation to ever exceed 96dBA Leq,T.

Internal levels of this magnitude would only have been achieved, and probably regularly exceeded, in the social club during loud DJ music and live rock bands, which is its current lawful use.

Noise of this magnitude greatly exceeds Noise at Work Regulations, which puts perspective on how loud this could be considered.

Staff and churchgoers are unlikely to tolerate such high noise levels, and at a magnitude of circa 96dBA complaints inside the venue might be anticipated.



Some evidence that church congregation is unlikely to achieve or exceed 96dBA is found in the following links:

- a) American Speech-Language-Hearing Association - <https://www.asha.org/public/hearing/loud-noise-dangers/>
- b) Noise Health Publication 'Sound Exposure of Choristers' - <https://pmc.ncbi.nlm.nih.gov/articles/PMC7050229/>
- c) Royal National Institute for Deaf People (RNID) - <https://rnid.org.uk/information-and-support/ear-health/protect-your-hearing/how-loud-is-too-loud/>

In particular the - Noise Health Publication 'Sound Exposure of Choristers' - indicates that the noise level are likely to be circa 10dBA lower:

- St Paul's Cathedral - Rehearsals and performances were measured to consider Noise at Work Regulations 2005. The adult choir, organist and choir master were found to be under the daily limits of 85 dBA.
- St Paul's Cathedral - Measurements were taken during the full performance of Bach's St John's the Passion. The performance consisted of a large number of musicians including 26 choristers, an 80-member amateur choir, 18 professionals in the adult choir, and a ten-piece Baroque orchestra which considered of Strings/Woodwind, and a small organ. The measurements were:
 - Warm up = 86dBA Leq,20min.
 - Performance 1 = 84dBA Leq,38min.
 - Performance 2 = 83dBA Leq,77min.

By comparison to the above, it should be noted that the Berachah International Christian Fellowship has a relatively small number of staff, performers and audience.

To get a feel for what they do, it is recommended to watch this performance on their YouTube channel:

- <https://www.youtube.com/watch?v=hMwWyCXDvcl>

They do not operate with a full band, or a drum kit, orchestra etc. and as such are highly unlikely to achieve a significant magnitude of noise.

With all things considered, we believe we have shown that the change of use will be a benefit compared to existing use, it will be acceptable in terms of impact on neighbouring amenity, and comply with Government and Local Authority planning policy. Notwithstanding this, the applicant is willing to accept a suitably worded planning condition.



8.0 - Conclusion

The Tilehurst Club was a social club located at 12-14 Kentwood Hill, Tilehurst, Reading, Berkshire, RG31 6DE.

The project is seeking planning permission for a change of use from a social club to a church (place of worship), with alterations to existing rear extension including, roof extension, fenestration alterations, insertion of Velux rooflights, and provision of replacement slate roof to match existing.

Pulsar Acoustics has been commissioned to undertake an acoustic assessment of the proposals for planning purposes.

Appropriate Government, Local Authority Planning, and industry standard guidance is presented.

Multiple sound level meters were set up to establish the existing noise climate around site, and sound insulation testing of the building has been undertaken to determine how much sound can be contained within.

We have calculated internal noise levels that should not be exceeded to protect the amenity of neighbouring residential dwellings, and note that these levels are comparable to those that would probably have occurred during the existing lawful use.

We have provided evidence that a church congregation is highly unlikely to approach these internal noise levels. Research indicates the church should be significantly lower and thus be deemed acceptable.

With all things considered, we believe we have shown that the change of use will be of benefit compared to existing use, it should be acceptable in terms of impact on neighbouring amenity, would be categorised as NOEL when compared to existing ambient noise levels, and thus comply with Government and Local Authority planning policy.

The project proposals do not present new acoustic challenges, when compared to other similar developments located in towns and villages around the UK, and as such we see no acoustic reasons why permission would be refused.