

Project:

**12-14 Kentwood Hill, Reading, RG31 6DE**

Title:

**Acoustic Assessment Report**

Project Number:

**01248**

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Date:

**29 October 2025**

Client:

**Berachah International Christian Fellowship**

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| Document Control                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                     |          |                                |
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| Limitations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                     |          |                                |
| <p>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.</p> <p>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.</p> |                     |          |                                |



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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), 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 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.



This photo is the front of the building.





As we can see from the external advertising signs, there was plenty of entertainment. We suspect a lot of which was rather 'loud' when 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).

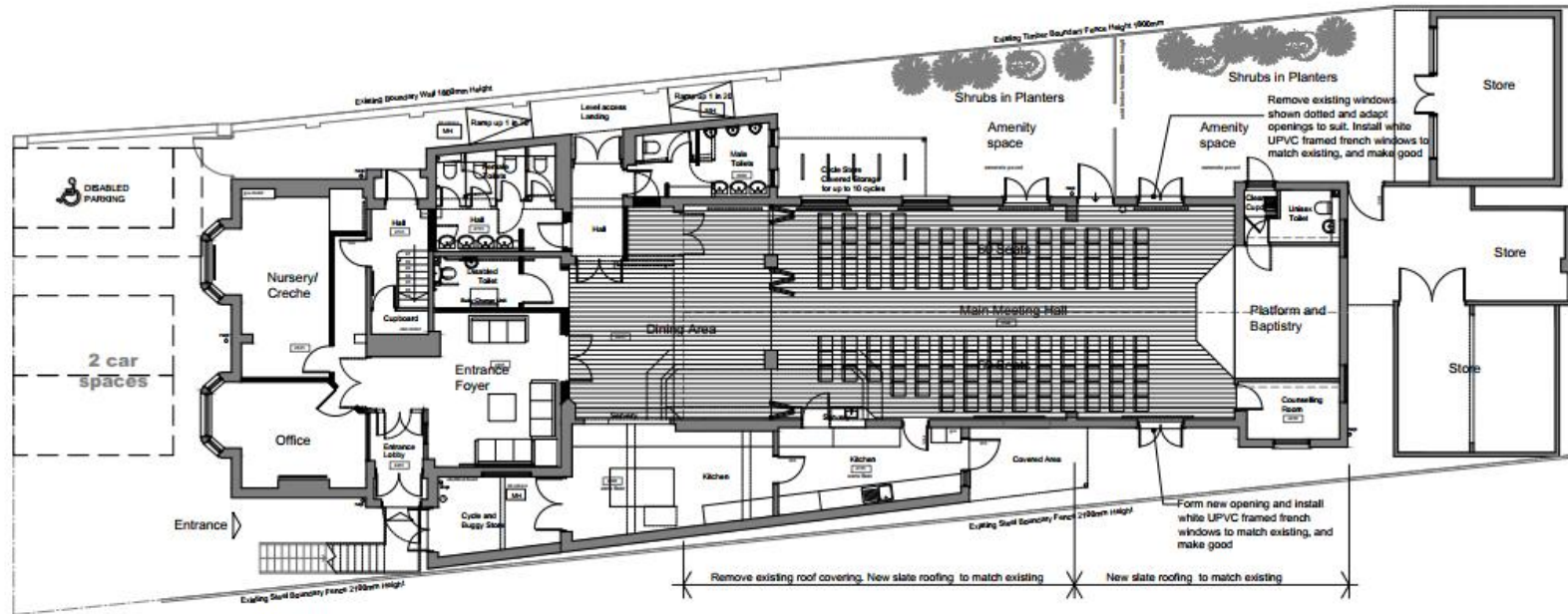
The proposal is for a change of use from a social club to a church (place of worship), alterations to existing rear extension including, roof extension, fenestration alterations, insertion of Velux rooflights, and provision of replacement slate roof to match existing.

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 not anticipated to ever reach the same loud levels that the Tilehurst Club would have provided for DJ music, discos, bingo, 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 this as a potential noise source 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

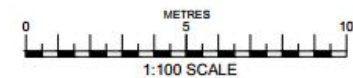
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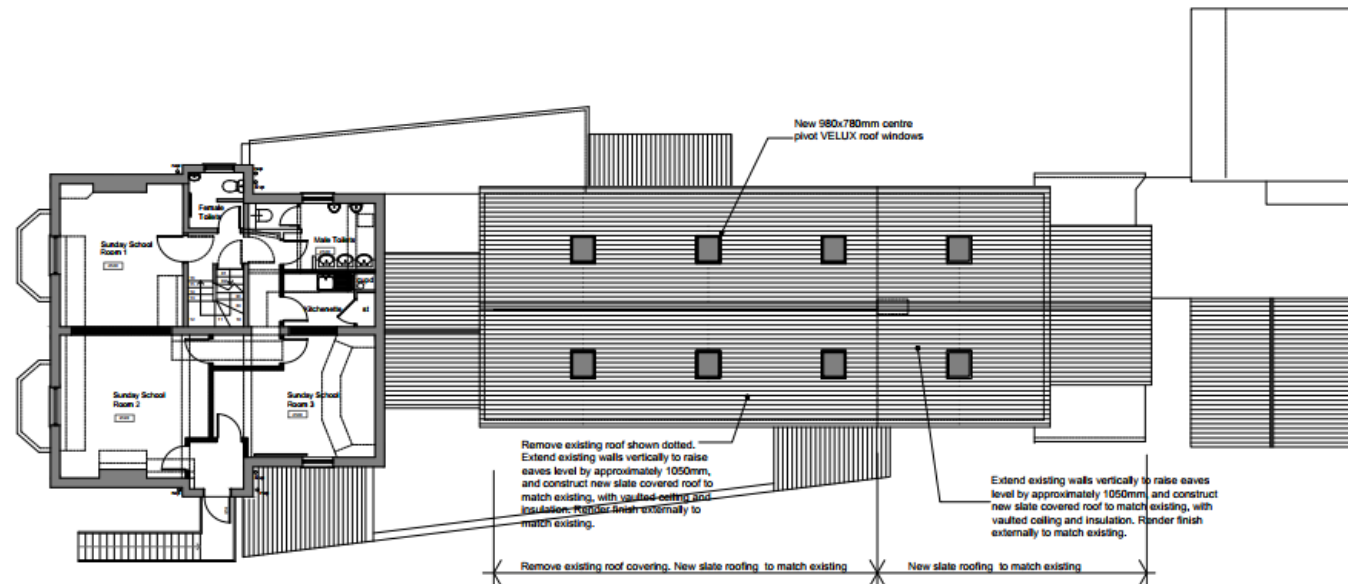
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Rev

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**First Floor Plan****IAN HUNT ASSOCIATES**

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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

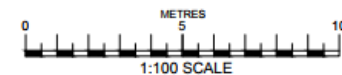
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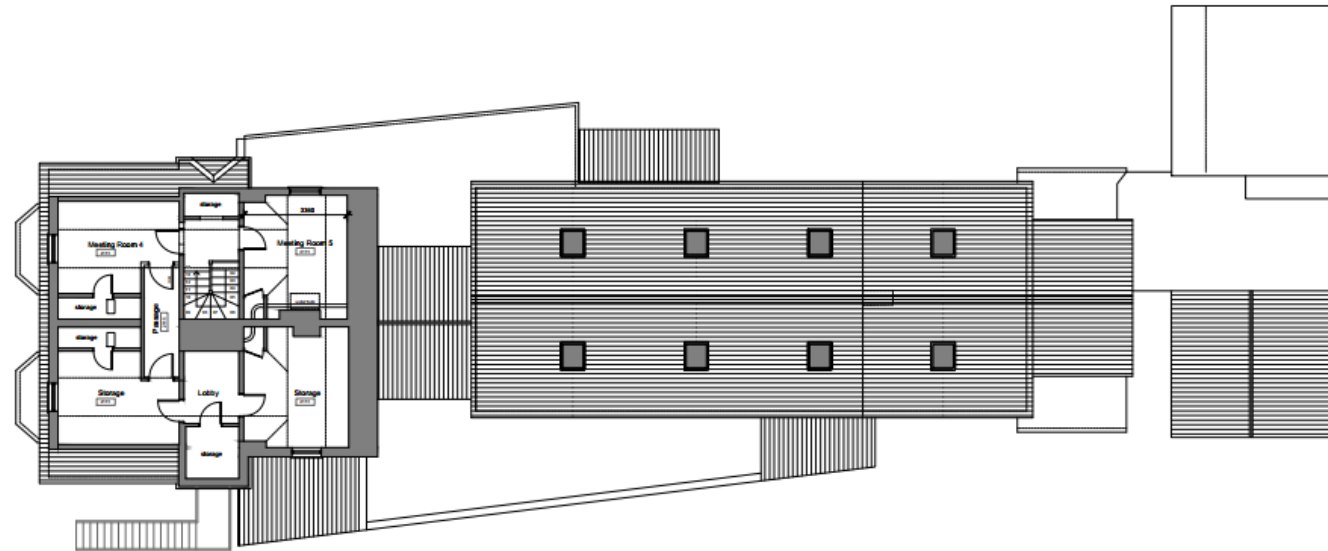
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**Second Floor Plan****IAN HUNT ASSOCIATES**

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

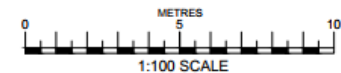
Client  
Berachah International Christian Fellowship

Title  
Proposed Second Floor Plan  
Revision

|                              |                |                   |
|------------------------------|----------------|-------------------|
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| Drawing No<br><b>1605.10</b> |                | Rev               |

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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 life<sup>72</sup>;*
- 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.*

## 3.2 - Reading Local Plan

The following Reading Local Plan (2019) policies are 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.

We understand this relates to building services mechanical plant noise, and in the future if necessary, we will undertake a BS4142 assessment for the mechanical systems noise.

### 3.3 - 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.”*

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 would also be comfortably achieved.



## 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     |

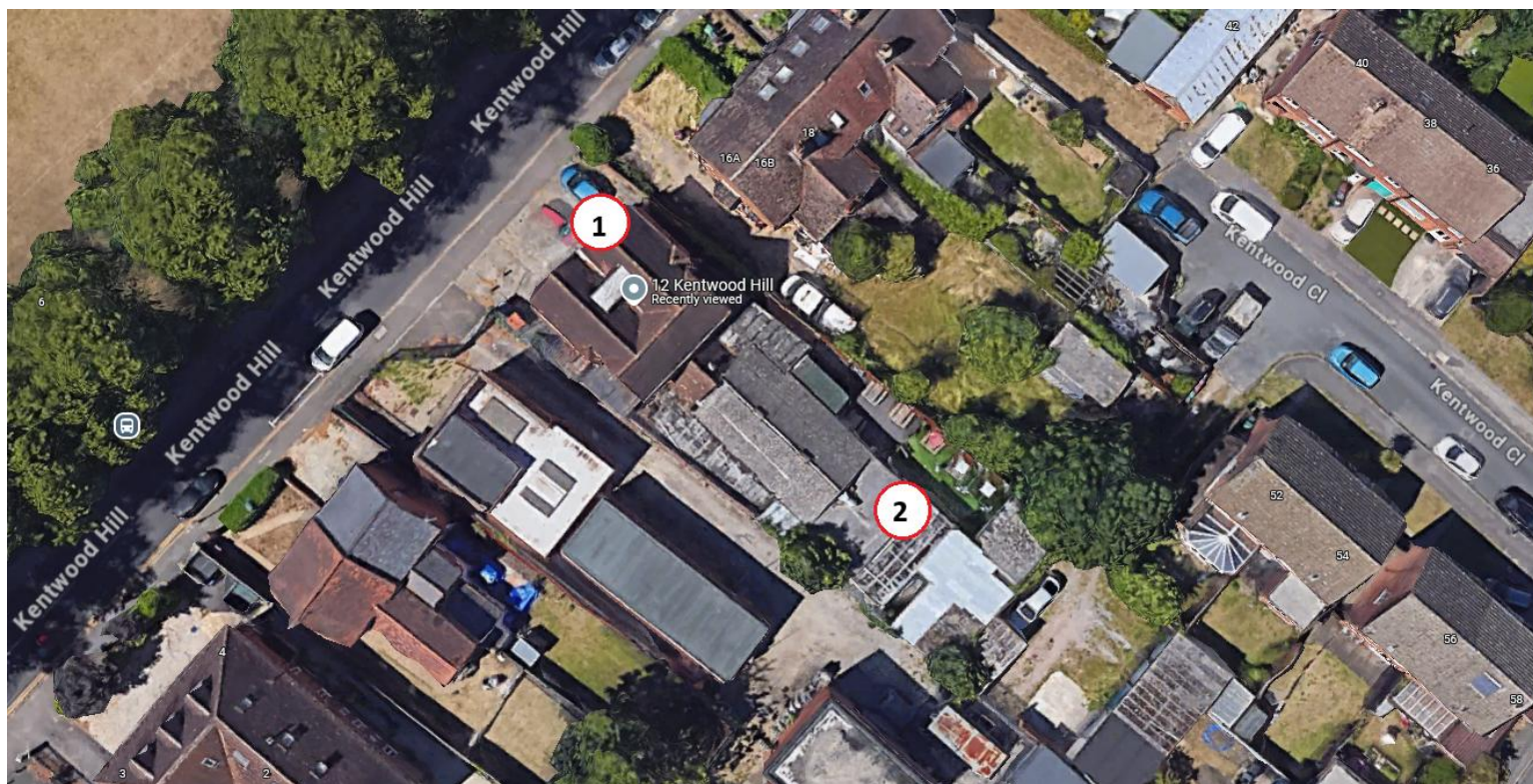
The equipment sensitivity was checked using the handheld calibrators before and after the survey. No significant drift was measured (no more than 0.1dB). The handheld calibrators, sound level meters, pre-amplifiers and microphones, were calibrated to traceable standards within 12 months prior to the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

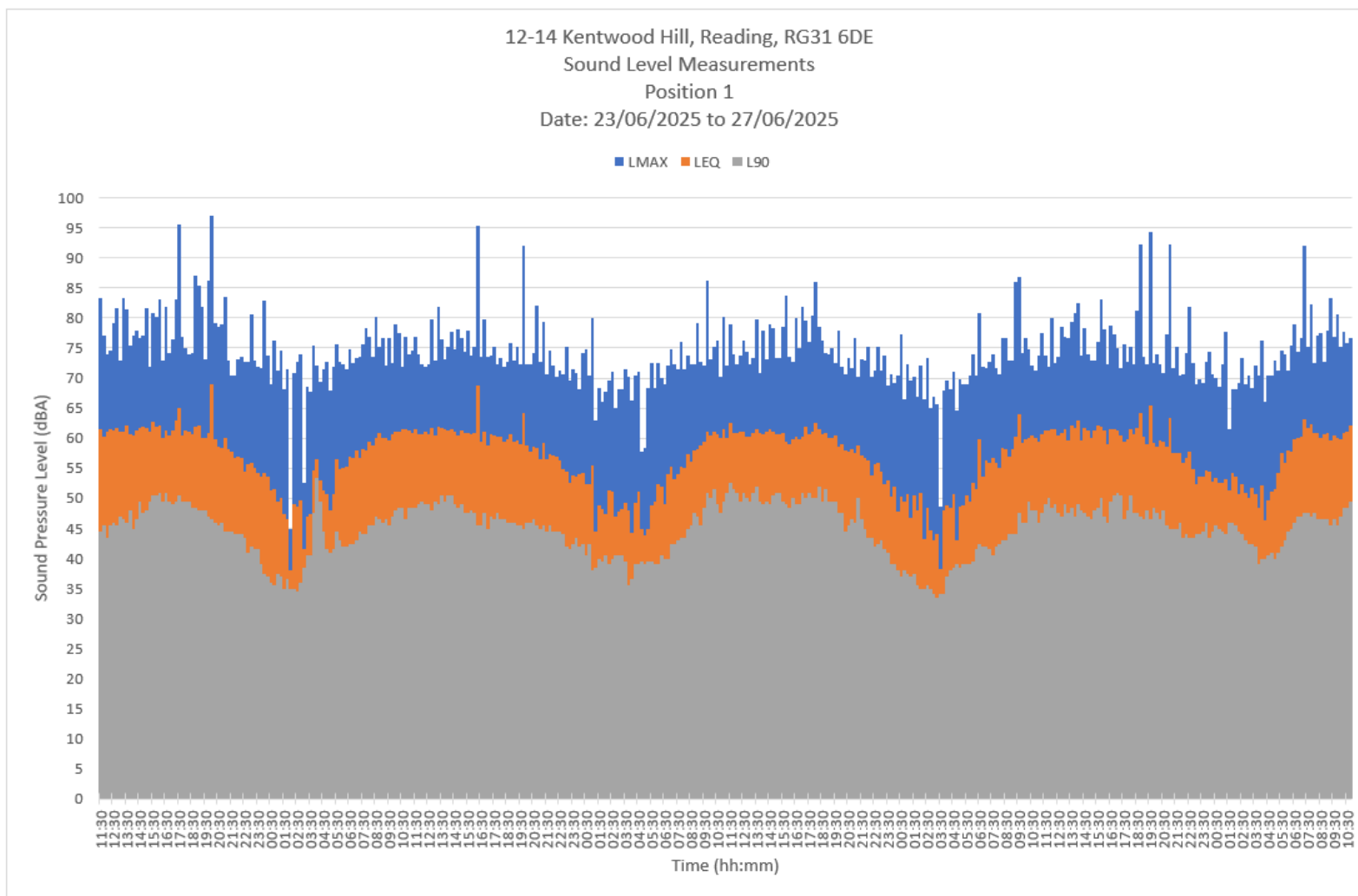
The approximate measurement positions are indicated on the Google Maps image below.

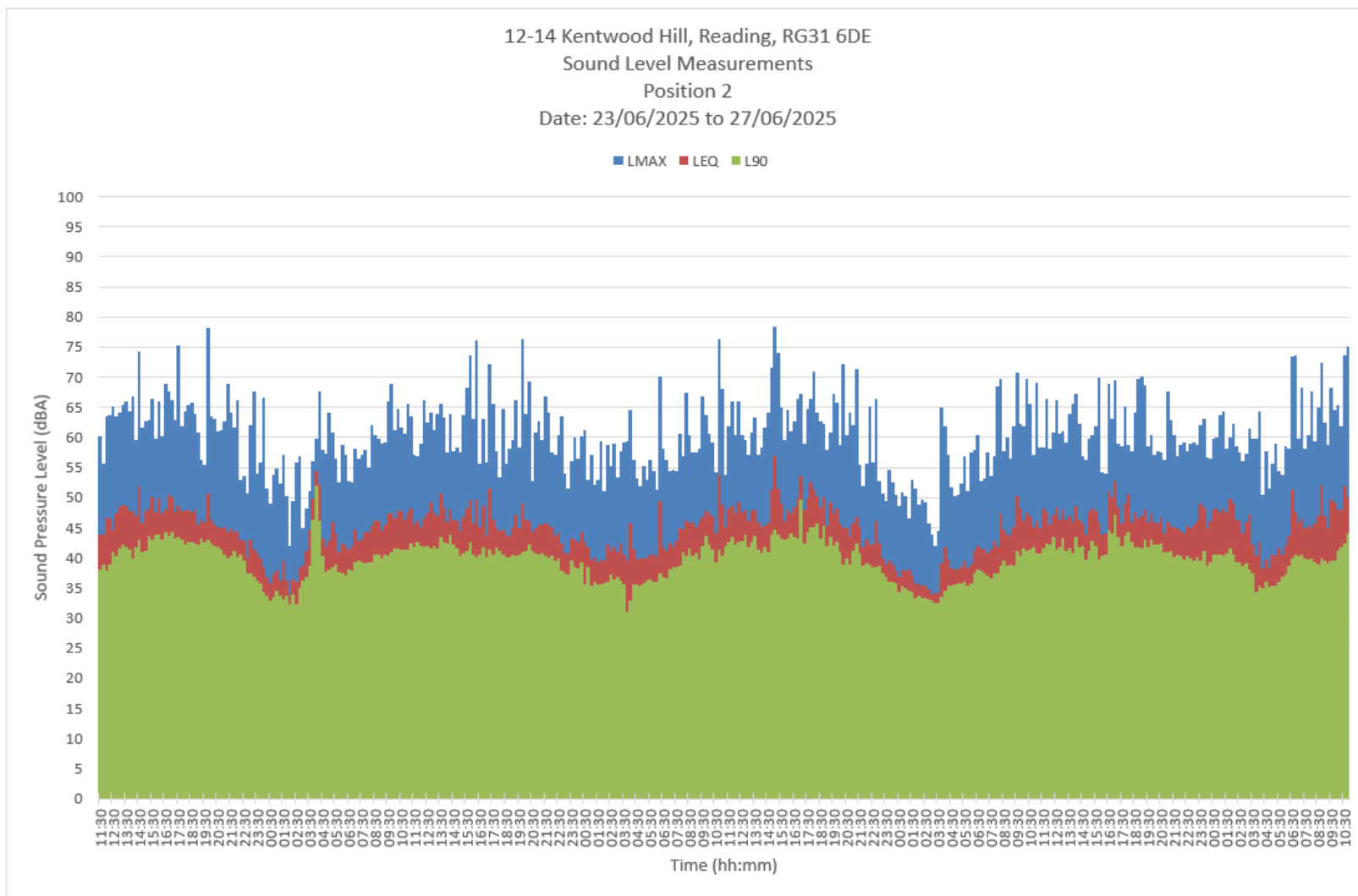




## 4.2 - Survey Measurement Data

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  $Leq,T$ , and the mean, modal and median L90 statistical average background noise levels, as presented in the table below for comparison to industry standard guidance.



| Position 1                                 |                                   |           |                      |                       |                        |
|--------------------------------------------|-----------------------------------|-----------|----------------------|-----------------------|------------------------|
| Date                                       | Time (hh:mm)                      | dBA Leq,T | 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                     |
| Selected daytime (07:00 to 11:00 hours)    |                                   | 61        | 47                   | 46                    | 47                     |
| Selected night-time (23:00 to 07:00 hours) |                                   | 54        | 38                   | 39                    | 38                     |

| Position 2                                 |                                   |           |                      |                       |                        |
|--------------------------------------------|-----------------------------------|-----------|----------------------|-----------------------|------------------------|
| Date                                       | Time (hh:mm)                      | dBA Leq,T | 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                     |
| Selected daytime (07:00 to 11:00 hours)    |                                   | 48        | 41                   | 40                    | 40                     |
| Selected night-time (23:00 to 07:00 hours) |                                   | 46        | 35                   | 36                    | 35                     |



## 5.0 - Assessment

### 5.1 - Noise Climate Discussion

We suggest most people following common sense alone, would expect noise from a 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 is like a pub. There will have been regular loud occurrences of inside and outside entertainment, with drunk people laughing, joking, singing, parties, loud music, generally having fun, and probably occasional instances of fighting. Plus, this noise could occur much later in the evenings.

Contrast that with a church, proposing congregational gathering for prayer, worship, fellowship, and community activities, with significantly reduced opening hours by comparison.

This does not mean the church are therefore allowed 'unrestricted noise', and some activities could involve playing video, recorded and/or live music, and speech via a microphone and sound system. We would suggest that as long as the church activities are quieter than the club activities, it should be deemed acceptable from an acoustics noise and nuisance point of view. Common sense alone may suggest this, however, one quantifiable way could be to consider BS8233 guidance as discussed in the section below.



## 5.2 - Consideration for BS8233 Guidance

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."*

When considering the loudest of possible internal sounds, such as those due to amplified music in the main hall, to achieve a level of around 55dBA Leq,T in the nearest neighbouring garden, our preliminary calculations suggest the internal noise levels in the church should not exceed approximately the following:

- With all windows/doors closed - The room noise should not exceed around 105dBA Leq,T.
- With an open window - Room noise should not exceed around 90dBA Leq,T.

The above estimated levels are based on:

- Formula =  $SPL_{(external)} = SPL_{(internal)} - SRI - 6$ . (Where SRI is the combined sound reduction expected from barrier structures and distance.)
- It is recognised in the industry that a normal brick building with double glazing usually has an outside to inside sound level difference of at least 30dBA. (Historically Planning Policy Guidance PPG24 suggested it was greater than >30dBA.)
- British Standard BS8233 suggests that the sound reduction would be limited to around 15dBA with open window.
- There should be sound reduction due to distance from inside the hall to inside the neighbouring garden of at least -10dBA.
- There is a tall fence that should reduce sound by at least -5dBA.

We could establish exact sound reduction via testing, but would need permission to access the neighbouring residential property.



Internal levels of this magnitude would only have been approached in the social club during loud DJ music and live rock bands. These internal levels greatly exceed Noise at Work Regulations, which puts perspective on how loud these levels could be considered depending on exposure time.

Staff and churchgoers are not expected to tolerate such high levels one would usually observe from a Friday/Saturday night event in a pub or club with loud DJ dance music and/or live rock band. We would suggest these estimated maximum internal room noise levels are not likely to be exceeded by church activity.

### 5.3 - Consideration for Council/Planning Policy

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 should not harm the amenity of adjacent residential properties due to its controlled hours of operation. 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 discos and sports events.

It is also likely to have required several deliveries, which would have been noise-generating.

The proposed place of worship is likely to generate less noise than the previous use.

It should also be noted that the applicant is a successful and well supported local faith group previously operating without incident.



Notwithstanding this, the applicant is willing to accept a suitably worded planning condition(s) to protect the amenity of neighbouring properties.

The proposal is therefore acceptable in terms of impact on neighbouring amenity, and will comply with Local Plan policy CC8, and relevant sections of the NPPF.

## 6.0 - 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 environmental noise survey and acoustic assessment of the proposals for planning purposes.

Multiple sound level meters were set up to establish the existing noise climate around site.

Appropriate industry standard guidance is presented and assessment made based on BS8233 and Council Policy.

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.

We have calculated internal noise levels that should not be exceeded, to protect the amenity of neighbouring residential dwellings, and would suggest that these levels are comparable to those that would have probably occurred due to DJ and/or live music in the club, and it is unlikely that a church would approach these internal noise levels.

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



## APPENDIX A

The following is an explanation for some of the acoustic parameters used in this report to describe the measurements and mitigation.

- **dB** The decibel is used as a measurement of sound pressure level. It is the logarithmic ratio of the noise being assessed to a standard reference level. This approach is advantageous for handling sound levels, where the ratio of the highest to lowest sound which humans could encounter, can be as high as 1,000,000 : 1. The ratio is considered with respect to the quietest and loudest sound we can hear. This is the threshold of hearing at the frequency of 1000Hz, which is taken as  $20\mu\text{Pa}$  ( $2 \times 10^{-5} \text{ Pa}$ ) of pressure for the average person. (A decibel is simply a ratio and is used in many other industries too, but most commonly in acoustic or electrical signal analysis.)
- **dBA** The human ear is more susceptible to mid-frequency noise than to higher and lower frequencies. To take account of this when measuring noise, the 'A' weighting scale is used so that the measured noise corresponds to the overall level of perception by the average human. It is also possible to calculate the 'A' weighted noise level by applying certain corrections to an un-weighted frequency spectrum (Hz). The measured or calculated 'A' weighted noise level is known as the dBA level.
- **$L_{eq,T}$**  The equivalent continuous sound level in decibels, equivalent to the total sound energy measured over a stated period of time and is also known as the time-averaged sound level.
- **dBA  $L_{eq,T}$**  The A-weighted equivalent continuous sound level in decibels measured over a stated period of time 'T', and is sometimes written dB  $L_{Aeq,T}$ .
- **L90** This parameter is the noise level exceeded for 90% of the period T (i.e. the quietest 10% of the measurement) and is often used to describe the background noise level.
- **dBA  $L_{max}$**  The maximum dBA noise level recorded during the measurement interval period.

When discussing sound levels as decibels we use a logarithmic scale, therefore the dBA values do not follow a linear relationship. When discussing similar noises, a change of 10dBA represents a doubling or halving of subjective loudness. A change of 3dBA is just perceptible by a human, but is a doubling/halving of sound energy. (i.e. 50dBA + 50dBA = 53dBA).

If you require a more detailed explanation for any of the acoustic principles or parameters discussed in this report please do not hesitate to ask.