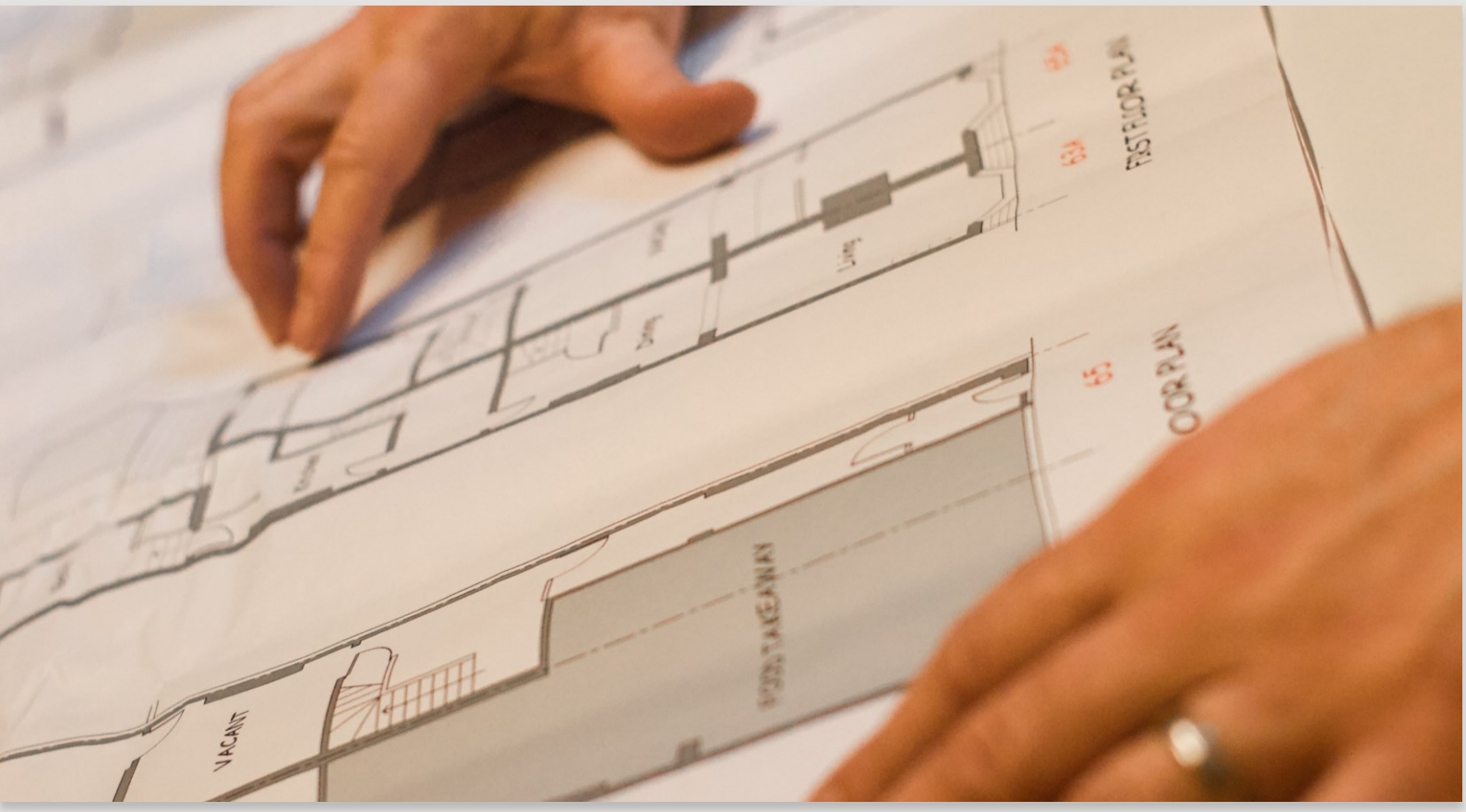
PENINSULAR
ACOUSTICS

Mrs Lisa Roberts

5 Mersey Grove, Clitheroe BB7 2FG

Dog Grooming Noise Assessment



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1. Introduction

Peninsular Acoustics Ltd, has been commissioned by Mrs Lisa Roberts (hereafter referred to as 'the Client') to undertake an Acoustics Assessment for the conversion of garage to a proposed Dog Grooming Salon at 5 Mersey Grove, Clitheroe BB7 2FG (hereafter referred to as 'the Site').

This report is necessarily technical in nature and therefore, to assist the reader, an acoustics glossary is provided in Appendix A.

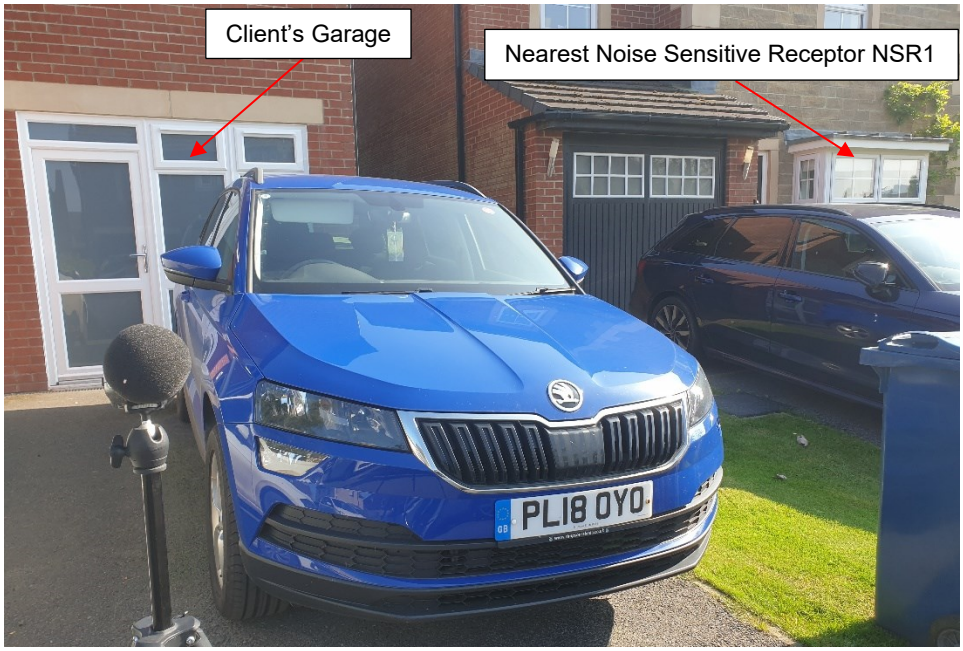
1.1. Site Description

The proposed salon is planned to operate from 17:00 to 19:00 hours, Monday to Friday, and from 10:00 to 15:00 hours on Saturdays and Sundays.

The proposed site, located at 5 Mersey Grove, Clitheroe, is in a residential area. The proposals involve converting the house's garage (as shown in Figure 1.1) into a dog grooming salon.

The nearest noise sensitive receptor is NSR1 (7 Mersey Grove, Clitheroe), as shown in Figure 1.1, is approximately 8 metres away from the window of the proposed dog grooming facility.

Figure 1.1 Site Photograph



1.2. Scope of Work

In order to determine the potential impact, the following scope of works has been undertaken:

- Nearby Noise Sensitive Receptors (NSRs) have been identified using satellite imagery, client information and site observations;
- Baseline environmental sound levels have been established through an attended sound survey;
- Sound levels at the nearest NSR have been predicted using source noise data; and
- An assessment in accordance with the Supplementary Guidance provided by South Holland DC has been undertaken with suitable mitigation measures suggested where required.

1.3. Standards and Noise Assessment Criteria

In the absence of any specific guidance or recommended noise standard relating to dog boarding/ grooming establishments, reliance must be placed upon proven methods of measurement such as the Supplementary Planning Guidance published by South Holland District Council[1].

This guidance was produced following detailed research in the late 1990s and provided a means of assessing the suitability of proposals for dog boarding and breeding premises in the vicinity of noise sensitive premises. While the guidance primarily focuses on how to predict noise from dogs in open/ outdoor runs which is not applicable in the current case wherein dogs will be housed indoors, it defines a criterion for the acceptability of dog barking noise. It states that "the objective shall be that the specific noise level L_{Aeq} does not exceed the background noise level L_{A90}".

[1] Supplementary Planning Guidance: '*Location of Premises for the Boarding and Breeding of Dogs and Other Animals – Noise Issues'* (South Holland District Council, 1999)

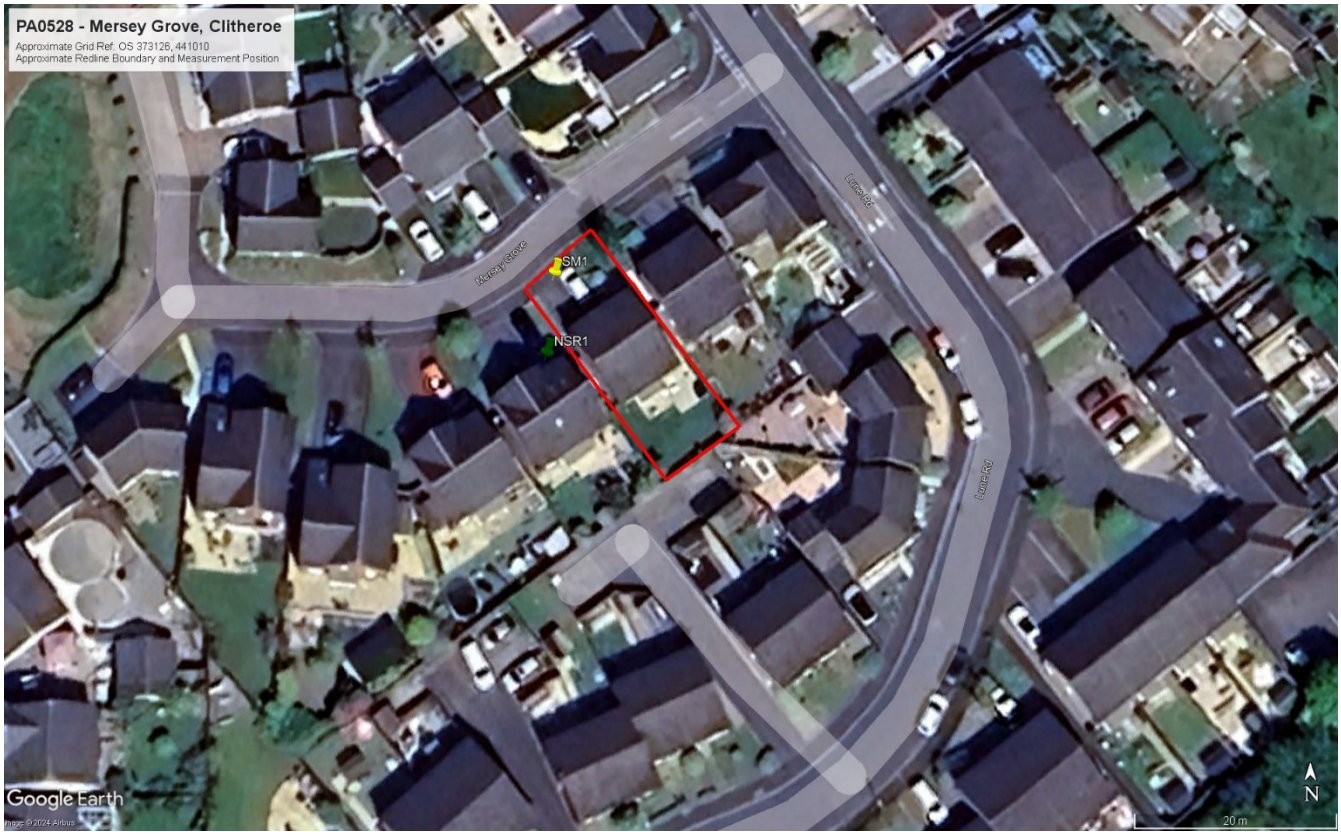
2. Survey Procedure and Equipment

2.1. Methodology

A survey of the existing background sound levels was undertaken at the boundary of the Site at the location CM1 shown in Figure 2.1.

Measurements of consecutive 30-minute L_{Aeq}, L_{Amax}, L_{A10} and L_{A90} sound pressure levels were taken between 14:45 and 15:45 on Friday 30th August 2024. This period is typically regarded as one of the quieter times during daytime hours in a residential area, thus representing a reasonably worst-case scenario.

Figure 2.1 Site Plan



2.2. Equipment

Sound levels were measured using Class 1 SLMs housed in environmental protection apparatus. Each SLM was field calibrated before and after the survey using a Class 1 calibrator, with no significant drift in calibration levels recorded (> ± 0.5dB). The equipment was setup in free-field conditions to capture L_{Aeq}, L_{AFmax}, and L_{eq} at a minimum.

Full details of the noise measurement equipment used are available upon request but have been calibrated to traceable standards within the 12 – 24 months prior to the survey being undertaken.

2.3. Meteorological Conditions

During the survey, weather conditions were monitored which showed steady state wind speeds of less than 5 m/s. Additionally, there was no precipitation during the full length of the survey meaning all results are suitable for assessment purposes.

2.4. Site Survey Notes

The primary sources of daytime background noise at the site include the sounds of children playing, birdsong, and occasional traffic from Lune Road. Additionally, intermittent barking from neighbouring dogs contributes to the overall sound levels.

2.5. Results

According to the data an $L_{A90,\ 30mins}$ Daytime of 30 dB is representative of the lowest most commonly occurring sound pressure level value which is exceeded 90% of the time. Additionally residual levels ranged between 42 and 55 dB $L_{Aeq,30\ mins}$.

3. Assessment

The following factors have been considered for the assessment based on communication with the Client:

- There would only be 1no. dog on Site at a time
- The hours of operation will be as follows:
  - 17:00 −19:00 hours Monday to Friday
  - 10:00 −15:00 hours Saturday and Sunday
- The doors to the garage would be kept closed during proposed activities.

3.1. Dog Barking

Source data for dogs barking were taken from existing library data.

The following dog barking levels was measured 5 metres from the sound source. It should be note that these source levels are not internal reverberant noise levels.

Table 3.1 Dog barking source noise data

	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	dB(A)
Dog Barking	35	42	62	63	54	65

This translates to dog barking levels of 79 dB(A) $L_{Aeq,T}$ @1 metre from the sound source. This translates to an estimated internal reverberant sound pressure level of circa. 81 dB $L_{Aeq,T}$ during barking.

3.2. Determining Specific Sound Level

Given a dog will be groomed indoors, the specific sound level at NSR1 was determined using the calculation method outlined in BS EN 12354−4: 2017[2].

It is assumed that the glazing is the weakest element of the façade and it provides R_w 32 dB (e.g. 4mm glass / 20mm air space / 4mm glass), which represents basic double glazing.

Table 3.2 Specific sound level calculated at NSR

Sound source	Indoor Sound Pressure Level (dB)	Total Sound Reduction from the Building Elements and External propogation	Specific sound level L_{Aeq} (dB)
Dog Barking	81	54	27

Since the residual sound level (42 dB L_{Aeq}) is significantly higher than the predicted specific sound level (27 dB L_{Aeq}), barking sounds are not expected to be prominent at receptor NSR1. However, to

[2] BS EN 12354−4 ' *Building Acoustics – Estimation of acoustic performance of buildings from the performance of elements: Transmission of indoor sound to the outside'* (2017).

ensure a thorough assessment, a +3 dB acoustic character correction will be applied to account for any just-audible impulsive effects.

3.3. Impact Assessment at NSR1

An Impact Assessment at NSR1 is presented in Table 3.3.

Table 3.3 Numerical Impact Assessment at NSr1

Assessment Step	Results Daytime
Specific Sound Level [A]	27 dB $L_{Aeq, T}$
Acoustic Corrections [B]	3 dB
Rating Level [A+B = C]	30 dB $L_{Ar, Tr}$
Background Sound Level [D]	30 dB $L_{A90, 15mins}$
Excess over Background [E = C-D]	0 dB
Initial Estimate of Impact	Indication of Low Impact

3.4. Context

The initial estimate of the sound does not account for all the contextual facts that will be in place once the proposed facility is operational.

The site is proposed to be a dog grooming salon where the dog will be under close supervision, and therefore dog barking is unlikely to occur normally. Additionally, any noise that does occur is likely to be brief and infrequent, further reducing its potential impact on nearby receptors.

Additionally, site notes indicate that the area already experiences occasional barking from dogs in neighbouring gardens, suggesting that the existing noise climate is unlikely to be altered.

3.5. Assessment of the Impact of Dog barking activity

The assessment at NSR1,taking context into consideration, indicates a low impact from dog barking.

Nevertheless, it is recommended that the following good practise measures should be implemented:

- Appointment Scheduling: Appointments should be staggered to ensure only one dog is present at a time, reducing the risk of dogs triggering each other to bark.
- Prompt Handling of Barking: Address barking quickly by using positive reinforcement techniques or redirecting the dog's attention to a calming activity.

4. Conclusions

Peninsular Acoustics has been commissioned by Mrs Lisa Roberts to undertake a noise assessment to assess impact of a proposed dog grooming salon to ensure dog barking activity will not result in an adverse impact upon the amenity of its surrounding.

An environmental sound survey has been undertaken at 5 Mersey Grove, Clitheroe BB7 2FG by Peninsular Acoustics between 14:45 and 15:45 on Friday 30th August 2024 which has determined prevailing background sound levels and provided an understanding of the existing ambient levels on the Site.

According to the data an $L_{A90,\ 30mins}$ Daytime of 30 dB was considered representative of the lowest most commonly occurring sound pressure level value which is exceeded 90% of the time. Additionally residual levels ranged between 42 and 55 dB $L_{Aeq,30\ mins}$.

The following factors were considered for the assessment based on communication with the Client:

- There would only be 1no. dog on Site at a time
- The hours of operation will be as follows:
  - 17:00 −19:00 hours Monday to Friday
  - 10:00 −15:00 hours Saturday and Sunday
- The doors to the garage would be kept closed during proposed activities.

Source levels were taken from existing library data. Dog barking was estimated to have an estimated internal reverberant sound pressure level of 81 dB L_{Aeq}.

Given the dogs are houses indoors, the specific sound level at NSR1 which is approximately 8 metres from the garage façade was determined using the calculation method outlined in BS EN 12354−4: 2000[3] and based on the sound insulation provided by standard double glazing. The specific sound level was determined to be 27dB L_{Aeq} and a +3 dB acoustic character correction was applied to account for just-audible impulsive sound.

An impact assessment in accordance with the Supplementary Planning Guidance published by South Holland District Council determined the dog barking impact to be 'Low'. In addition to this, considering contextual considerations the overall conclusion is that the impact would be Low at the nearest receptor (7 Mersey Grove, Clitheroe).

It is recommended that the following good practice measures are also implemented:

- Appointment Scheduling: Appointments should be staggered to ensure only one dog is present at a time, reducing the risk of dogs triggering each other to bark.
- Prompt Handling of Barking: Address barking quickly by using positive reinforcement techniques or redirecting the dog's attention to a calming activity.

[3] BS EN 12354−4 ' *Building Acoustics – Estimation of acoustic performance of buildings from the performance of elements: Transmission of indoor sound to the outside'*., September 2000.

Appendix A

Technical Terminology

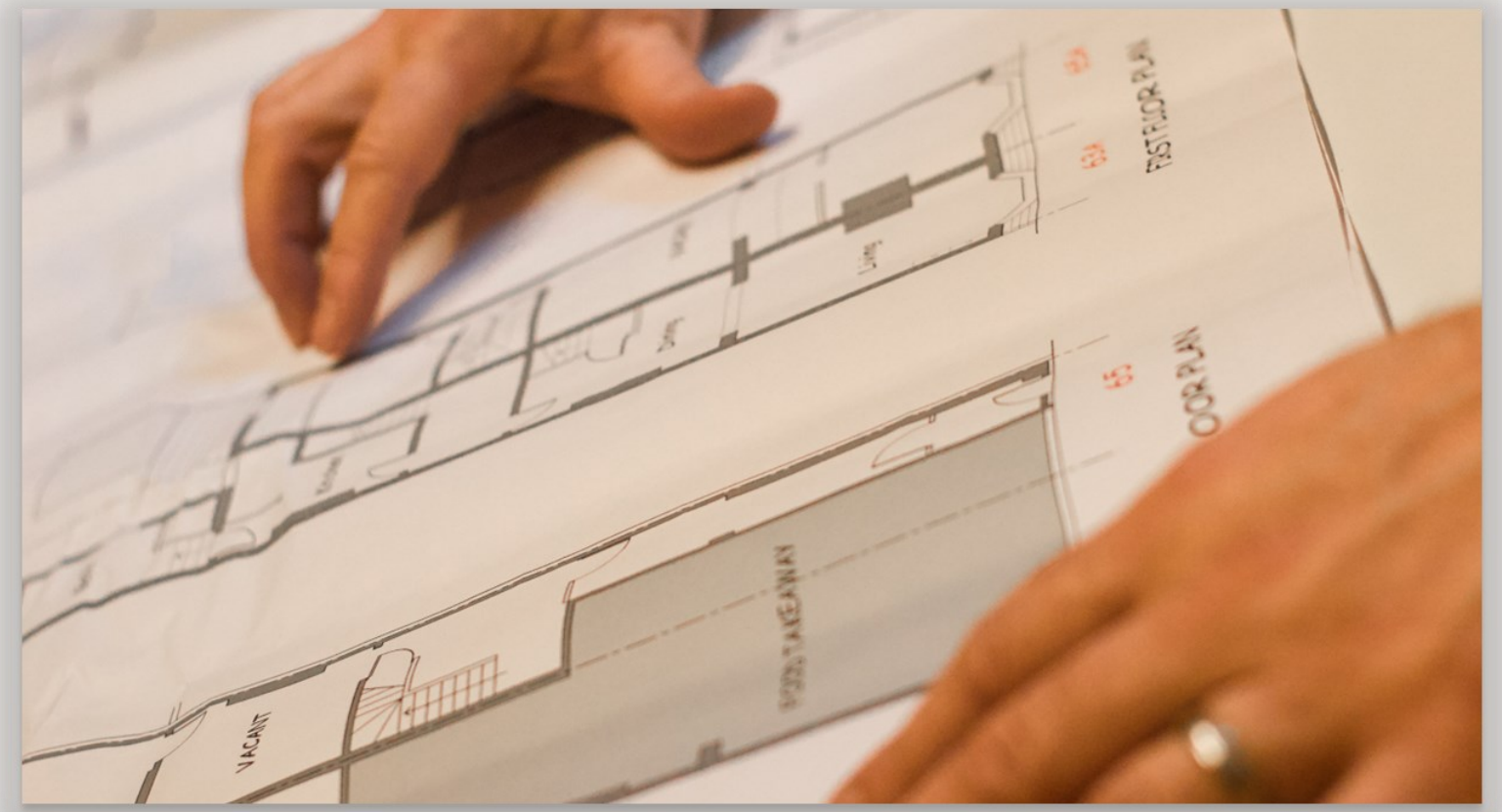
Noise	Typically defined as unwanted, unpleasant or disturbing sound
Frequency (Hz)	The number of oscillations in acoustic pressure per second. It represents the 'tone' of the sound. Often determined in octave bands
Maximum sound pressure level (L_{Fmax})	The maximum or highest sound pressure level measured with a 'fast' time weighting
Equivalent continuous sound pressure level ($L_{eq,T}$)	The average of the total sound energy over a specified time period (T). L_{eq} represents the equivalent sound level that a fluctuating source would have compared to a steady source with the same total sound energy over a specific time period. Commonly used as a descriptor of human perception of sound over time.
'A' weighting	Frequency-dependent weighting based on the response of the human auditory system which has been found to correlate well with the subjective response to sound. Denoted by the use of the letter 'A'. For example, dBA denotes an 'A' weighted sound level in decibels, or L_{Amax} denotes an 'A' weighted maximum sound pressure level.
Internal Ambient Noise Level (IANL)	The noise level within a room or enclosed space. Usually determined as an equivalent continuous sound pressure level over a specific time period ($L_{Aeq,T}$, dB)
$L_{night,outside}$	The incident external A-weighted long-term average sound level as defined in ISO 1996-2: 1987, determined over all the night periods of a year, in which the night is eight hours between 23:00 and 07:00.
Purge ventilation	Ventilation to aid removal of high concentrations of pollutants and water vapour released from occasional activities such as painting and decorating or accidental releases such as smoke from burnt food or spillage of water.
$D_{n,e}$ / $D_{n,e,w}$	The laboratory tested sound insulation of small building elements, normalised to an equivalent absorption area of 10m2.
Façade level	The sound pressure level measured close to a building façade that includes contribution from both the incident sound and the sound reflected from the façade. Normally taken to be 3dB higher than the equivalent free-field level, when located at 1 metre from a façade.
Free-field level	A measured sound pressure level that is independent of any contributions due to reflections from nearby surfaces and is therefore representative of the direct path only.
R / R_w	The laboratory tested airborne sound insulation of a building element
Sound insulation	The capacity of a structure to prevent sound from reaching a receiving location. Sound energy is not necessarily absorbed; impedance mismatch, or reflection back toward the source, is often the principal mechanism

Appendix B

Report Limitations

This report has been prepared for the titled project or named part thereof and should not be used in whole or part and relied upon for any other project without the written authorisation of Peninsular Acoustics Limited. Peninsular Acoustics Limited accept no responsibility or liability for the consequences of this document if it is used for a purpose other than that for which it was commissioned. Persons wishing to use or rely upon this report for other purposes must seek written authority to do so from the owner of this report and/ or Peninsular Acoustics Limited and agree to indemnify Peninsular Acoustics Limited for any and all loss or damage resulting therefrom. Peninsular Acoustics Limited accepts no responsibility or liability for this document to any other party other than the person by whom it was commissioned.

The findings and opinions expressed are relevant to the dates of the site works and design drawings/specifications and should not be relied upon to represent conditions at substantially later dates. Opinions included therein are based on information gathered during the study and from our experience. If additional information becomes available which may affect our comments, conclusions or recommendations Peninsular Acoustics Limited reserve the right to review the information, reassess any new potential concerns and modify our opinions accordingly.



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