Cromer Indoor Padel Centre

Noise Monitoring Report

Indoor Padel Pty Ltd

41 Swan Street
Gladesville NSW 2111

Prepared by:

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Basis of Report

This report has been prepared by SLR Consulting Australia (SLR) with all reasonable skill, care and diligence, and taking account of the timescale and resources allocated to it by agreement with Indoor Padel Pty Ltd (the Client). Information reported herein is based on the interpretation of data collected, which has been accepted in good faith as being accurate and valid.

This report is for the exclusive use of the Client. No warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from SLR.

SLR disclaims any responsibility to the Client and others in respect of any matters outside the agreed scope of the work.

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1.0 Introduction

SLR Consulting Australia Pty Ltd (SLR) has been engaged by Indoor Padel Pty Ltd (the Client) to evaluate potential noise impacts associated with the proposed extended operating hours and inclusion of a liquor license to serve alcohol to up to 20 additional patrons (the Project) at the Indoor Padel Centre at Unit 2 of 4-8 Inman Road, Cromer NSW (the Project Site).

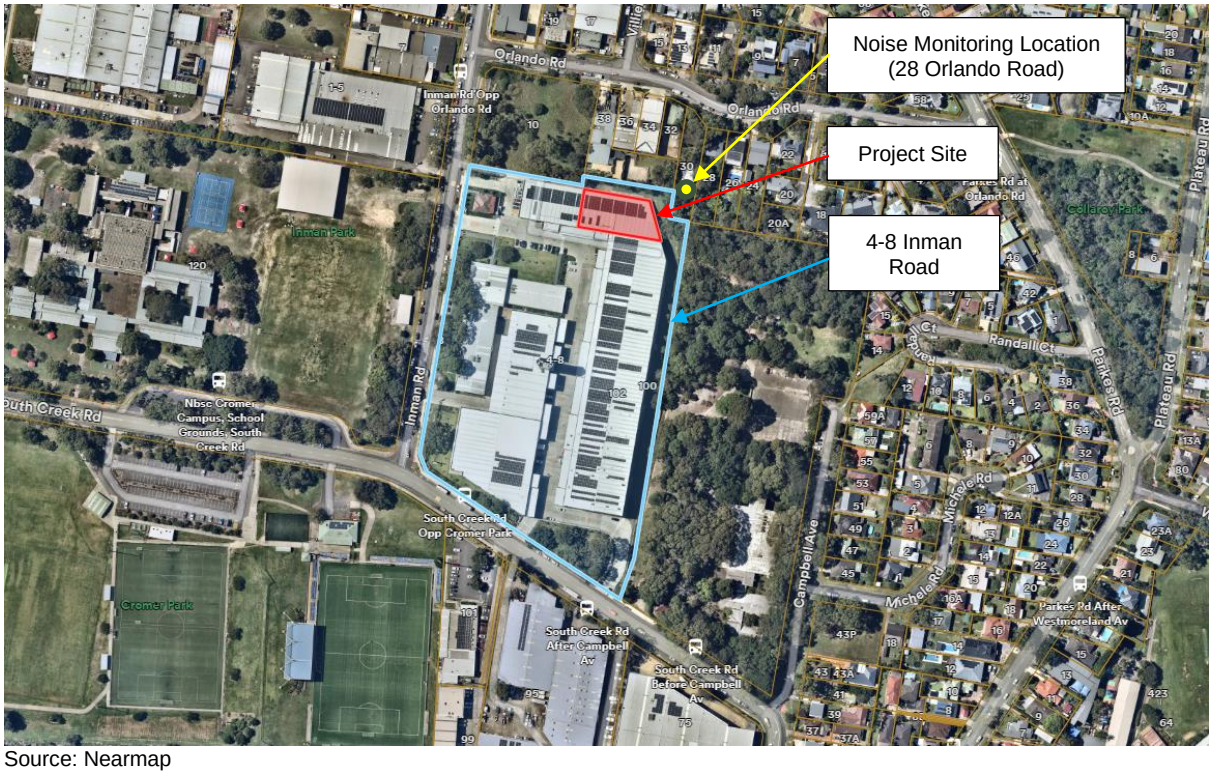
The Project Site is currently approved to operate four (4) padel courts from 7:00 am to 10:00 pm. The proposed extended hours of operation for the Project is 6:00 am to 10:00 pm for operation of the four (4) padel courts, and 10:00 am to 10:00 pm for the service of alcohol to patrons.

This report uses specialist acoustic terminology. An explanation of common terms is provided in **Appendix A.**

1.1 Project Description

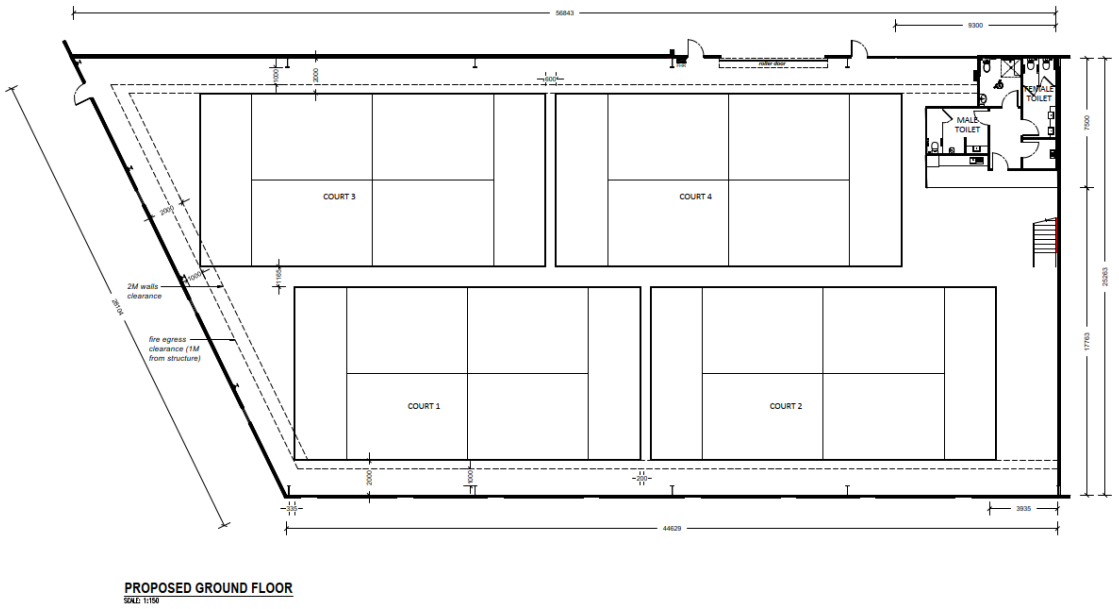
The Project is located at Warehouse Unit 2 of 4-8 Inman Road, Cromer, in the northeast corner of the site. **Figure 1** shows the Project location and nearest residential receivers to the northeast of the site off Orlando Road. The current Project layout is provided in **Figure 2**, with the proposed Project Layout including the location of patrons provided.

Figure 1 Site Location



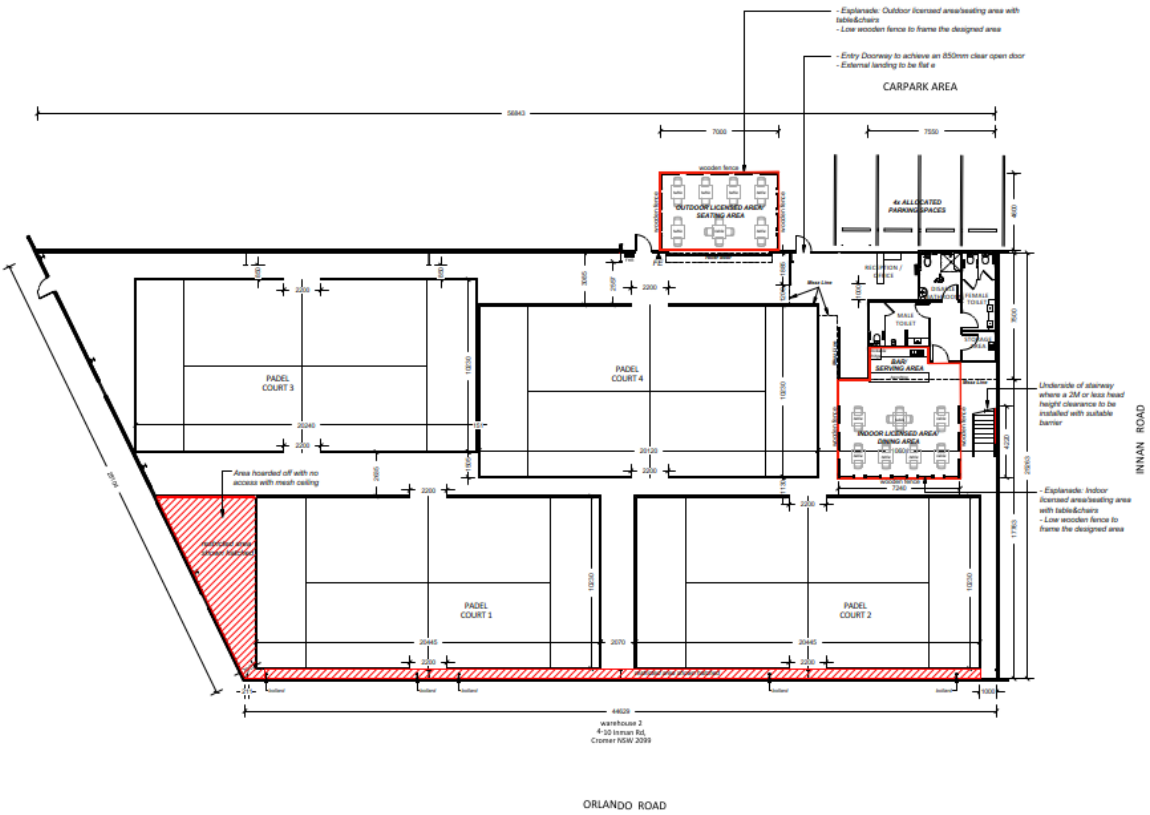
Source: Nearmap

Figure 2 Approved Project Layout



Source: Archispectrum

Figure 3 Proposed Project Layout



Source: Archispectrum

2.0 Impact Assessment Procedure

2.1 Assessment Criteria

The Association of Australian Acoustical Consultants (AAAC) have developed the *Guideline for Acoustic Assessment of Gymnasiums and Exercise Facilities V1.0* (the Guideline) due to the increasing number of gymnasiums and exercise facilities over recent years, resulting in pressure to develop new facilities in a diverse range of urban settings.

The objectives of the Guideline are:

- To protect the reasonable acoustic amenity of nearby residential and other sensitive receivers.
- To provide guidance on appropriate considerations, along with noise objectives and criteria.
- To ensure that a gymnasium or exercise facility does not generate unacceptable noise or vibration emission to adversely impact on residential and other sensitive receivers within close proximity.
- To provide guidance on appropriate noise control and management that can be incorporated into the operation of a gymnasium or exercise facility.

The Guideline provides criteria for 'general' noise such as noise emitted by the regular activity within the exercise facility as well as 'impulsive' type noise from sources such as weights being dropped onto the floor or other similar noise sources. Given that the proposed padel courts are screened and are located away from the external and partition walls of the facility, the Project would not give rise to 'impulsive' type noise sources.

Residential Receivers

The Guideline criteria for 'general' noise emissions to residential receivers is as follows:

a) The $L_{A10(15minute)}$ noise contribution from music, patrons and staff emitted from the gymnasium or exercise facility shall not exceed the background noise level in any octave band frequency (31.5 Hz to 8 kHz inclusive) by more than 5 dB at the boundary, or within at any affected residence between 7am* and 10pm (*8am on Sundays and public holidays).

b) The $L_{A10(15minute)}$ noise contribution from music, patrons and staff emitted from the gymnasium or exercise facility shall not exceed the background noise in any octave band centre frequency (31.5 Hz to 8 kHz inclusive) at the boundary, or within any affected residence between 10pm and 7am* (*8am on Sundays and public holidays).

c) Notwithstanding compliance of the above, noise from music, patrons and staff at the gymnasium or exercise facility shall not be audible in any habitable room in any residential premises between the hours of 10pm and 7am* (*8am on Sundays and public holidays).

Non-Residential Receivers

The Guideline criteria for 'general' noise to non-residential receivers, such as neighbouring tenancies, is that the $L_{Aeq(15minute)}$ noise level from the operation of the Project should not exceed the lower extent of the design sound level range for the use given in Table 1 of Australian Standard AS2107 *Acoustics - Recommended design sound levels and reverberation times for building interiors*.

The relevant internal design sound levels for the types of existing and future occupancies likely to be adjacent to the Project are provided in **Table 1**.

Table 1 Recommended Design Sound Levels (AS2107)

Receiver Type/Type of Occupancy	Design Sound Level Range (L_{Aeq}) dBA
Industrial buildings - Packaging and Delivery, Process control rooms.	<60
Office Building – General Office Areas, breakout rooms, reception areas.	40-45
Sports Buildings – Indoor Sports – With coaching	<45

2.2 Existing Acoustical Environment

Publicly availably noise monitoring data has been used to quantify the existing noise environment. Representative background noise data was sourced from Acoustic Assessment 100 South Creek Road, Cromer, NSW report number 4355R001.MW.191008 dated 20 November 2019 prepared by Acoustic Dynamics. This report conducted noise logging for a period of seven days from Friday 29 June 2018 to Friday 6 July 2018 at the subject site. This location is considered representative of the background noise levels for receivers in the vicinity of the Project. Results of the noise monitoring is provided in **Table 2**.

Table 2 Summary of Measured Noise Levels

Location	Time of Day	Rating Background Noise Level (L_{A90}) (dBA)	Measured $L_{Aeq(period)}$ (dBA)
Nearest Residential Receivers	Day	40	63
	Evening	38	45

Note: Daytime 7.00 am to 6.00 pm; Evening 6.00 pm to 10.00 pm; Night-time 10.00 pm to 7.00 am on Sundays and Public Holidays, Daytime 8.00 am to 6.00 pm; Evening 6.00 pm to 10.00 pm; Night-time 10.00 pm to 8.00 am

The L_{A90} represents the level exceeded for 90% of the interval period and is referred to as the average minimum or background noise level

The LAeq represents the equivalent continuous noise level is defined as the level of noise equivalent to the energy average of noise levels occurring over a measurement period.

Background noise spectra typical of a suburban area has been adopted and normalised to the measured noise levels in **Table 2**, and is provided in **Table 3**. Given the Project is only operational during the 'night-time' from 6:00 am to 7:00 am on a weekday and 6:00 am to 8:00 am on Sundays and Public Holidays the daytime spectra have been adopted for this period due to the steadily rising background noise levels in these early morning shoulder period.

Table 3 Adopted Background L_{A90} Noise Spectra

Representative Period	Overall L_{A10} (dBA)	Octave Band Centre Frequency (Hz) (dBA)								
		31.5	63	125	250	500	1k	2k	4k	8k
Day / Morning Shoulder	40	8	21	30	33	34	34	29	23	27
Evening	38	6	19	28	31	31	32	27	21	25

2.3 Project Specific Noise Criteria

The initial acoustic assessment (herein referred to as the Acoustic Assessment) conducted by SLR (SLR Ref No: *630.V13960.00001-LR01v1.0-20231012.docx*) established $L_{A10(15minute)}$ noise criteria at nearby residential receivers for the day and evening assessment periods. The established noise criteria, along with the adopted morning shoulder noise criteria is provided in **Table 4**.

Table 4 Applicable Noise Criteria at Residential Receivers

Representative Period	Overall L_{A10} (dBA)	Octave Band Centre Frequency (Hz) (dBA)								
		31.5	63	125	250	500	1k	2k	4k	8k
Morning Shoulder	40	8	21	30	33	34	34	29	23	27
Day	45	13	26	35	38	39	39	34	28	32
Evening	43	11	24	33	36	36	37	32	26	30

3.0 Noise Impact Assessment

3.1 Preliminary Mitigation Measures

Preliminary noise predictions indicated that exceedance of the relevant noise criteria during the morning shoulder period would be likely without mitigation measures in place.

In order to reduce predicted noise levels at the nearest receivers between the morning shoulder hours of 6:00 am to 7:00 am on Monday to Saturday and 6:00 am to 8:00 am on Sunday's site operations would be limited to a maximum of two courts. This operational mitigation has been incorporated into the assessment of noise during the morning shoulder period.

3.2 Project Noise Emissions

Noise measurements were conducted at various locations within and external to the Project under typical operational conditions on Saturday 12 April 2025.

The sound power level (SWL) of Patron noise has been calculated using the methodology presented in *Hayne et al. (2006)* where the $\mathrm{SWL} = 11 \times \log(N) + 81$, with N being the number of patrons. Patron noise has been calculated by assessing 10 patrons from the outside table and 10 patrons in internal bar area (as shown in **Figure 3**).

Based on measurements conducted at the Project Site, and calculated patron sound power levels, noise emission levels have been predicted to the nearest residential receiver at 28 Orlando Road. The predicted noise levels are provided in **Table 5**.

Table 5 Predicted Noise Levels

Description	Overall L_{A10} (dBA)	Octave Band Centre Frequency (Hz) (dBA)								
		31.5	63	125	250	500	1k	2k	4k	8k
Criteria										
Morning Shoulder	40	8	21	30	33	34	34	29	23	27
Day	45	13	26	35	38	39	39	34	28	32
Evening	43	11	24	33	36	36	37	32	26	30
Current Operations										
Predicted Noise Level	43	4	15	27	33	38	39	34	26	14
Morning Shoulder Exceedance	3	-	-	-	-	4	5	5	3	-
Daytime Exceedance	-	-	-	-	-	-	-	-	-	-
Evening Exceedance	-	-	-	-	-	2	2	2	-	-
Current Operations (Reduced)										
Predicted Noise Level (Reduced)	40	1	12	24	30	35	36	31	23	11
Morning Shoulder Exceedance	-	-	-	-	-	1	2	2	-	-
Patron Noise										
Predicted Noise Level	26	-	-	-	10	21	22	21	13	-
Daytime Exceedance	-	-	-	-	-	-	-	-	-	-
Evening Exceedance	-	-	-	-	-	-	-	-	-	-
Combined										
Predicted Noise Level (Reduced)	40	1	12	24	30	35	36	31	23	11
Morning Shoulder Exceedance	-	-	-	-	-	1	2	2	-	-
Predicted Noise Level	43	4	15	27	33	38	39	34	27	14
Daytime Exceedance	-	-	-	-	-	-	-	-	-	-
Evening Exceedance	-	-	-	-	-	2	2	2	-	-

As shown in **Table 5** the morning shoulder, daytime, and evening overall $L_{A10(15minute)}$ noise criteria (assuming mitigation measures are in place during the morning shoulder period to limit operation to two courts) can be met.

However where overall noise levels are predicted to be compliant, in some octave bands, noise levels are predicted to exceed the criteria by up to 2 dB. An increase in noise level of up to 2 dB represents a minor impact that is considered barely perceptible to the average person. Given this and that the Project is located in a suburban area where ambient noise is dominated by traffic, industry and other noise sources, these exceedances are considered to be negligible.

4.0 General Acoustic Mitigation and Management

Although not expected to be required to achieve compliance with the relevant noise goals, the following general mitigation and management measures could be implemented at the site with a view to reducing noise levels where reasonable and feasible:

- Implement a plan of management to include a procedure to respond to complaints and implement remedial measures where required.
- Staff monitor the behaviour of patrons/members to ensure appropriate behaviour is observed so that excessive noise is not generated.

5.0 Conclusion

SLR was engaged by Indoor Padel Pty Ltd to conduct a noise impact assessment for the proposed extended operating hours and inclusion of a license to serve alcohol to up to 20 patrons at the Indoor Padel Centre at Unit 2 of 4-8 Inman Road, Cromer NSW

Noise emission criteria have been established in accordance with the Association of Australian Acoustical Consultants *Guideline for Acoustic Assessment of Gymnasiums and Exercise Facilities*.

With mitigation measures discussed in **Section 3.1** in place, compliance with the applicable noise criteria is predicted during the morning shoulder, day, and evening assessment periods with the exception of negligible exceedances of up to 2 dB in some octave bands that are considered to be barely perceptible to the average person.

Notwithstanding, further general acoustic mitigation and management measures have been recommended with a view to reducing noise levels where reasonable and feasible.

Appendix A Glossary of Acoustic Terminology

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Noise Monitoring Report

Indoor Padel Pty Ltd

SLR Project No.: 630.032084.00001

1 May 2025

1. Sound Level or Noise Level

The terms 'sound' and 'noise' are almost interchangeable, except that 'noise' often refers to unwanted sound.

Sound (or noise) consists of minute fluctuations in atmospheric pressure. the human ear responds to changes in sound pressure over a very wide range with the loudest sound pressure to which the human ear can respond being ten million times greater than the softest. the decibel (abbreviated as dB) scale reduces this ratio to a more manageable size by the use of logarithms.

the symbols SPL, L or LP are commonly used to represent Sound Pressure Level. the symbol LA represents A-weighted Sound Pressure Level. the standard reference unit for Sound Pressure Levels expressed in decibels is 2 x 10^{-5} Pa.

2. 'A' Weighted Sound Pressure Level

The overall level of a sound is usually expressed in terms of dBA, which is measured using a sound level meter with an 'A-weighting' filter. This is an electronic filter having a frequency response corresponding approximately to that of human hearing.

People's hearing is most sensitive to sounds at mid frequencies (500 Hz to 4,000 Hz), and less sensitive at lower and higher frequencies. Different sources having the same dBA level generally sound about equally loud.

A change of 1 dB or 2 dB in the level of a sound is difficult for most people to detect, whilst a 3 dB to 5 dB change corresponds to a small but noticeable change in loudness. A 10 dB change corresponds to an approximate doubling or halving in loudness. the table below lists examples of typical noise levels.

Sound Pressure Level (dBA)	Typical Source	Subjective Evaluation
130	Threshold of pain	Intolerable
120	Heavy rock concert	Extremely noisy
110	Grinding on steel	
100	Loud car horn at 3 m	Very noisy
90	Construction site with pneumatic hammering	
80	Kerbside of busy street	Loud
70	Loud radio or television	
60	Department store	Moderate to quiet
50	General Office	
40	Inside private Office	Quiet to very quiet
30	Inside bedroom	
20	Recording studio	Almost silent

Other weightings (eg B, C and D) are less commonly used than A-weighting. Sound Levels measured without any weighting are referred to as 'linear', and the units are expressed as dB(lin) or dB.

3. Sound Power Level

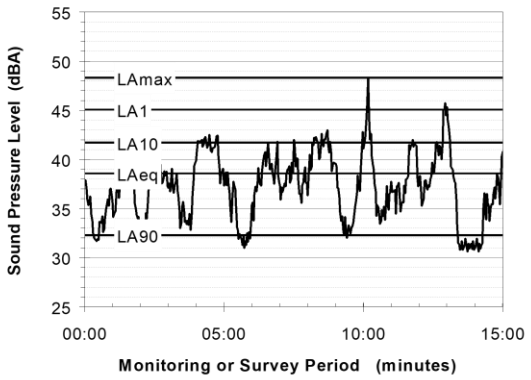
The Sound Power of a source is the rate at which it emits acoustic energy. As with Sound Pressure Levels, Sound Power Levels are expressed in decibel units (dB or dBA), but may be identified by the symbols SWL or LW, or by the reference unit 10^{-12} W.

the relationship between Sound Power and Sound Pressure is similar to the effect of an electric radiator, which is characterised by a power rating but has an effect on the surrounding environment that can be measured in terms of a different parameter, temperature.

4. Statistical Noise Levels

Sounds that vary in level over time, such as road traffic noise and most community noise, are commonly described in terms of the statistical exceedance levels LAN, where LAN is the A-weighted sound pressure level exceeded for N% of a given measurement period. for example, the LA1 is the noise level exceeded for 1% of the time, LA10 the noise exceeded for 10% of the time, and so on.

The following figure presents a hypothetical 15 minute noise survey, illustrating various common statistical indices of interest.



Of particular relevance, are:

L_{A1} The noise level exceeded for 1% of the 15 minute interval.

L_{A10} The noise level exceeded for 10% of the 15 minute interval. This is commonly referred to as the average maximum noise level.

L_{A90} The noise level exceeded for 90% of the sample period. This noise level is described as the average minimum background sound level (in the absence of the source under consideration), or simply the background level.

L_{Aeq} The A-weighted equivalent noise level (basically, the average noise level). It is defined as the steady sound level that contains the same amount of acoustical energy as the corresponding time-varying sound.

5. Frequency Analysis

Frequency analysis is the process used to examine the tones (or frequency components) which make up the overall noise or vibration signal.

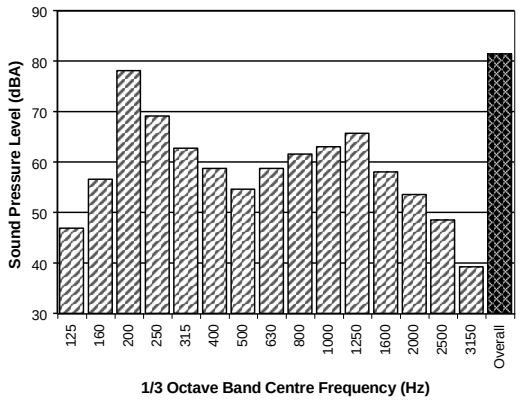
The units for frequency are Hertz (Hz), which represent the number of cycles per second.

Frequency analysis can be in:

- Octave bands (where the centre frequency and width of each band is double the previous band)
- 1/3 octave bands (three bands in each octave band)

Narrow band (where the spectrum is divided into 400 or more bands of equal width)

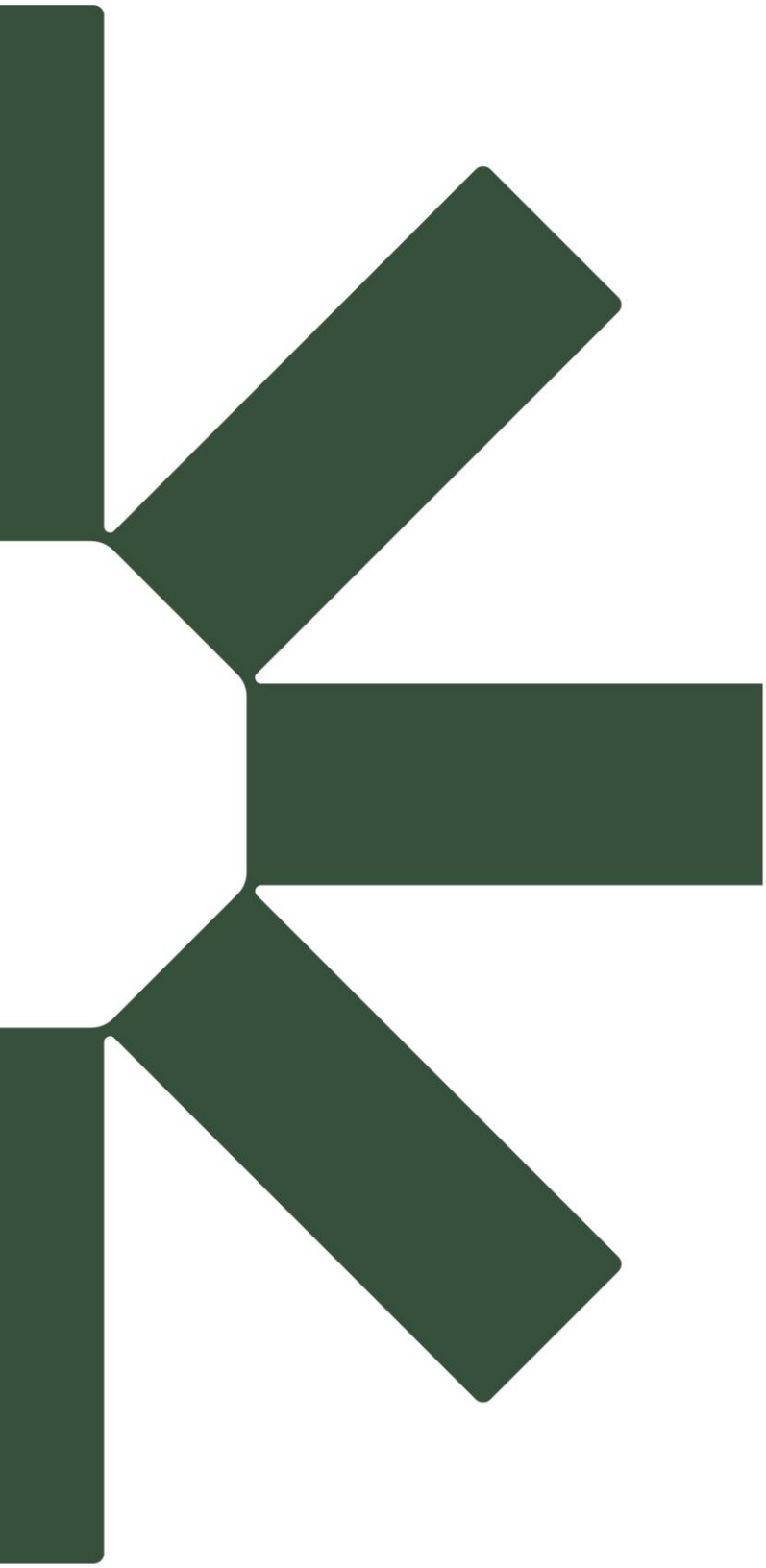
the following figure shows a 1/3 octave band frequency analysis where the noise is dominated by the 200 Hz band. Note that the indicated level of each individual band is less than the overall level, which is the logarithmic sum of the bands.



6. Annoying Noise (Special Audible Characteristics)

A louder noise will generally be more annoying to nearby receivers than a quieter one. However, noise is often also found to be more annoying and result in larger impacts where the following characteristics are apparent:

- **Tonality** - tonal noise contains one or more prominent tones (ie differences in distinct frequency components between adjoining octave or 1/3 octave bands), and is normally regarded as more annoying than 'broad band' noise.
- **Impulsiveness** - an impulsive noise is characterised by one or more short sharp peaks in the time domain, such as occurs during hammering.
- **Intermittency** - intermittent noise varies in level with the change in level being clearly audible. An example would include mechanical plant cycling on and Off.
- **Low Frequency Noise** - low frequency noise contains significant energy in the lower frequency bands, which are typically taken to be in the 10 to 160 Hz region.



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