SLR Consulting Australia
10 Kings Road, New Lambton NSW 2305, Australia

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Attention: Catarina Segorbe
Indoor Padel Pty Ltd
41 Swan Street
Gladesville NSW 2111

SLR Project No.: 630.V13960.00002

RE: Cromer – Indoor Padel
Acoustic Assessment

Introduction

SLR Consulting Australia Pty Ltd (SLR) has been engaged by Indoor Padel Pty Ltd to evaluate potential noise impacts associated with the proposed change of use of Unit 2/4-8 Inman Road, Cromer NSW into a recreation facility consisting of four (4) padel courts (the Project). This report has been prepared to address Northern Beaches Council (council) request for the assessment of potential noise mitigation measures in their correspondence dated 21 September 2023 as follows:

> *Padel has the potential to create noise that may impact on occupants of neighbouring units therefore Environmental Health requests that the applicant seeks the advice of an acoustic consult to apply noise reducing measures to the unit (this may include certain noise absorbing material for example).*
>
> *Environmental Health are not requesting a full acoustic report but more so noise mitigating solutions from a consultant. What can be applied to the unit to reduce/absorb the noise to reduce the impact on neighbouring units as well as noise that may emanate to residential receivers?*

This report provides a synopsis of potential noise impacts arising from the padel activities within the Project. Given the scope of the request from Council the assessment of 'operational' noise sources such as the use of the carpark and onsite mechanical plant and equipment has not been considered as part of this assessment.

Project Description

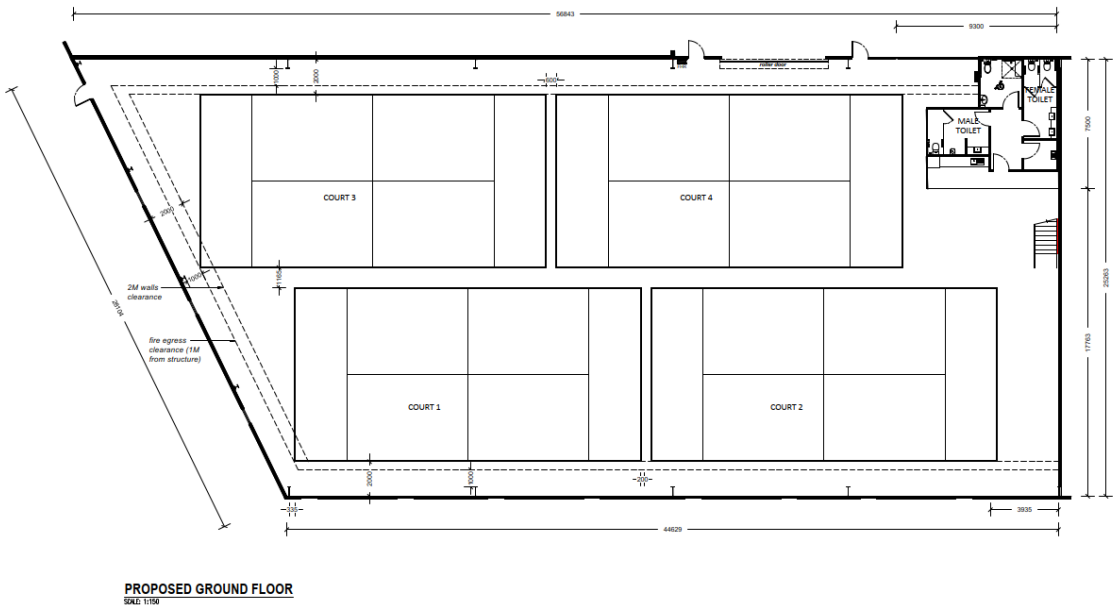
The Project is located at Warehouse Unit 2 of 4-8 Inman Road, Cromer which is currently under construction. The unit is located in the northeast corner of the site. **Figure 1** shows the Project location and nearest residential receivers to the northeast of the site off Orlando Road. The project layout is provided in **Figure 2**.

The proposed operating hours for the Project is 7:00 am to 10:00 pm daily.

Figure 1 Project Locality

Source: Nearmap

Figure 2 Project Layout



Source: Archispectrum

Impact Assessment Procedure

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

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
	Night	35	43

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 7:00 am to 8:00 am on Sundays and Public Holidays the daytime spectra has 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_{A90} dBA	Octave Band Centre Frequency (Hz) dBA								
		31.5	63	125	250	500	1k	2k	4k	8k
Day	40	8	21	30	33	34	34	29	23	27
Evening	38	6	19	28	31	31	32	27	21	25

Project Specific Noise Criteria

Acceptable noise criteria based on the Guideline and existing ambient noise levels for residential receivers is provided in **Table 4**.

Table 4: Applicable Noise Criteria at Residential Receivers

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

Noise Impact Assessment

Predictions to the nearest residential receivers to the north have been conducted based on windows being closed on the northern and eastern façade and four (4) padel courts being in use generating an internal $L_{A10(15minute)}$ sound pressure level of 79 dBA. The results at the nearest residential receiver is shown in **Table 5**.

Table 5: Predicted Noise Levels

Description	Overall dBA L_{A10} dBA	Octave Band Centre Frequency (Hz) dBA								
		31.5	63	125	250	500	1k	2k	4k	8k
Predicted Noise Level	39	-	2	21	26	33	31	27	24	11
Day Criteria	45	13	26	35	38	39	39	34	28	32
Exceedance Day	-	-	-	-	-	-	-	-	-	-
Evening Criteria	43	11	24	33	36	36	37	32	26	30
Exceedance Evening		-	-	-	-	-	-	-	-	-

Noise levels at the nearest residential receiver are predicted to be less than the applicable noise criteria during all operating times.

Based on an internal $L_{Aeq(15minute)}$ sound pressure of 76 dBA from four (4) padel courts being in use and typical lightweight concrete partition construction, internal $L_{Aeq(15minute)}$ noise levels in adjoining tenancies are predicted to be less than 40 dBA. This is predicted to be compliant with the recommended internal noise goals for likely existing and future occupancies adjacent to the Project.

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.
- Include soft material in areas where there is potential for impact noise from wayward balls outside of screened court areas.
- Ensure windows and doors are closed at all times (other than when entering/existing the premises).

- Staff monitor the behaviour of patrons/members to ensure appropriate behaviour is observed so that excessive noise is not generated.

Conclusion

SLR has conducted a noise impact assessment for the proposed indoor padel recreation facility.

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

Compliance with the applicable noise criteria is predicted at all times. Notwithstanding, general acoustic mitigation and management measures have been recommended with a view to reducing noise levels where reasonable and feasible.

I trust the foregoing provides sufficient detail for your current requirements. If you have any questions please do not hesitate to contact me on 02 4908 4500 or mdavenport@slrconsulting.com.

Regards,

SLR Consulting Australia

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