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May 21, 2021

Mr Connor Pettersson
Code 5 Fitness
1/98 Old Pittwater Road
Brookvale NSW 2100

connor@code5.com.au

Re: 98 Old Pittwater Road – Gym Extended Hours
RWDI Ref. 2104191

Dear Connor

Introduction

Code 5 Fitness operate a gym within an industrial complex at 98 Old Pittwater Road, Brookvale. The location is shown in Figure 1, with the gym outlined in red. The current approved operating hours are;

- Monday to Friday 6.00am to 8.30pm
- Saturday 7.00am to 11.00am

The proposed operating hours are from 5.00am Monday to Friday, with classes commencing at 5.15am and also classes on Sunday morning between 8.00am and 11.00am.

The walls are masonry construction with a Colorbond roof with insulation beneath. There is a roller shutter door facing south, which is partially shielded to the nearest residences to the east, and a single fire egress door on the northern façade shown in Figure 2. The layout of the gym is shown in Figure 3.

The nearest residences are at 59 Old Pittwater Road to the east (single storey) approximately 50m from the roller door and 80 & 82 Old Pittwater Road to the north east (includes two storey) approximately 70m from the fire exit door. Other nearby premises are all light industrial or commercial.

This letter provides our noise assessment and recommendations.



Figure 1: Site Location

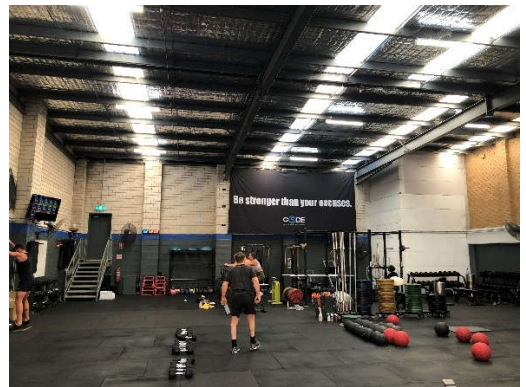


Figure 2: Photographs of roller door and fire exit door

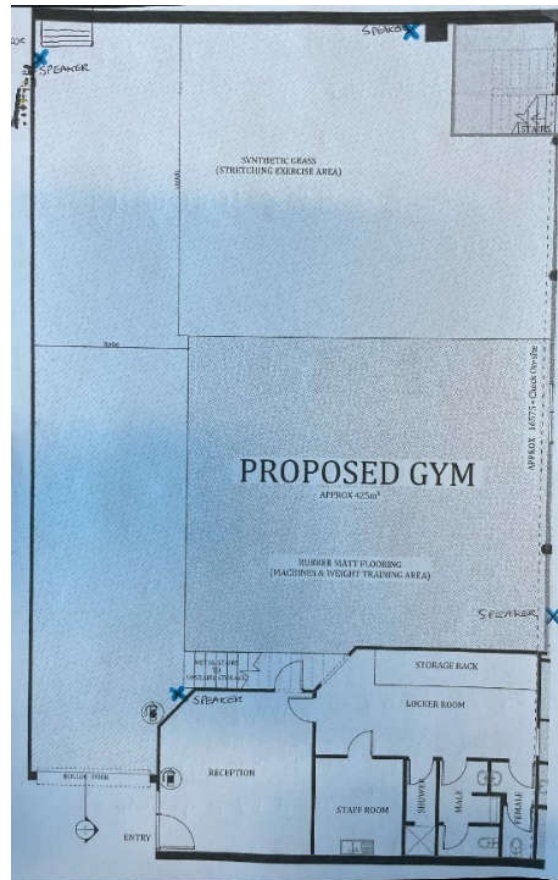


Figure 3: Gym Floor Plan showing Speakers

Background Noise Levels and Suitable Criteria

Background noise levels were measured on Sunday, 16 May 2021 between 7.45am and 8.00am at the western boundary of 59 Old Pittwater Road. An L_{A90} of 41dBA was measured, which was dominated by the hum from electrical cables.

It is considered this background noise level is also representative of the weekday period from 5.00am given the source of background noise.

Guidance is sought from the EPA *Noise Guide for Local Government (NGLG)* in terms of intrusive noise and because the activity occurs in the night time period, also sleep disturbance.

A suitable Noise Trigger Level of background + 5 dB of 46dBA would apply to music noise and a limit of background + 15dB of 56dBA would apply to maximum noise levels from instructor shouts.

Since the music noise is considered to have tonal components, we consider a 5dB modifying factor should be applied to the predicted or measured gym noise levels to compare with these Trigger Levels.



Noise Assessment

We understand the typical gym classes proposed prior to 7.00am are groups of typically up to 20 people with an instructor. They include music and the instructor shouting instructions / motivation. The music noise levels are controlled through an iPad at the discretion of the instructor. There are four floor mounted speakers located close to the four corners of the gym as shown in the floor plan.

Measurements of a typical class at 8.15am on Sunday 16 May 2021, resulted in music noise levels of $L_{Aeq,2min}$ of 81dBA inside the roller door, with maximum levels of the instructor shouting of 90dBA.

At location R1 with the roller door open, the music was audible but not measurable. Similarly, voices from the instructor were also audible but not readily measurable in the ambient environment.

To the north with the rear door closed, music and voices were audible at the site boundary, with noise egress via the door but was not audible at the R2 residential boundary on Old Pittwater Road.

The predicted noise levels based on these operations are as follows. The figure in the brackets includes the 5dB correction for modifying factor in accordance with the *NPfl*.

Location	Intrusive ($L_{Aeq,15min}$ dB)		Sleep Disturbance (L_{Amax} dB)	
	Predicted (with MF)	Trigger Level	Predicted	Screening Limit
R1, 59 Old Pittwater Road	39 (44)	46	48	56
R2, 82 Old Pittwater Road	20 (25)	46	26	56

The predicted noise levels align with our site observations with the roller shutter door open and indicate compliance with the Trigger Levels at both receivers. We note the audibility of music has resulted in complaints.

In addition to noise from within the gym, there will be approximately 15-20 vehicles arriving to the industrial complex prior to the class and parking in the vicinity of the gym, and then leaving when the class finishes at approximately 6.00am.

The parking spots range from typically 45-70m from the residences to the east. At this distance, the predicted $L_{Aeq,15min}$ noise level is 44dBA, which meets the Noise Trigger Level of 46dBA. The maximum levels of car doors closing / engines starting is 56dBA, which meets the sleep disturbance screening limit and is less than the maximum noise from traffic on Old Pittwater Road.

Recommendations

In the absence of a music limiter on the PA system there is the potential for music to be played at a higher volume. In addition, it is prudent to incorporate feasible and reasonable noise mitigation measures to the operations which rely on physical controls rather than management controls.

To achieve the Noise Trigger Levels and manage noise at the residences, the following recommendations are made:

- The roller shutter door is to remain closed prior to 7.00am with ingress and egress via the reception.
- The fire exit door to the north is to remain closed.
- The speaker near the roller door should be located mid-way along the western wall.
- Gym members should be reminded to drive at low speeds on site, turn car stereos down, close car doors quietly and not use raised voices in the car park to talk to other members. Signage to this effect is recommended.

Whilst outside the scope of this report, internal music noise levels should be set to ensure that occupational health and safety requirements are met.

We trust this information is sufficient. Please contact us if you have any further queries.

Yours truly



Neil Gross

Associate Principal
RWDI