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26 July 2023

Mount St 4 Pty Ltd
8-10 New Mclean St
Edgecliff NSW 2027
c/o-
Angus Nguyen
Landmark Group
Angus.n@landmarkgr.com

Re: 8-10 New Mclean Street, Edgecliff Acoustic Review for Planning Proposal
RWDI Project No: 2204066

Dear Angus

Introduction

Woollahra Council last year released the draft Edgecliff Commercial Centre Urban Design Strategy which contemplates the rezoning of land on New South Head Road for higher density. Despite its proximity to transport nodes, land within New McLean Street was excluded for a number of reasons; including fragmented ownership existing strata development. It is understood that Landmark has secured circa 7,3226 m^2 of land within this location, described as 8-10 New Mclean Street, Edgecliff (the Site) which has strategic merit for higher density given its proximity to Edgecliff Centre and Train Station

RWDI has been commissioned to conduct an acoustic review for the Site to be included in the Planning Proposal. This review involves a high-level assessment of potential acoustic issues.

This review has been conducted with reference to the following documents:

- NSW EPA *Noise Policy for Industry* 2017 (*NPfI*)
- Department of Environment & Climate Change *Interim Construction Noise Guideline* 2009 (*ICNG*)
- NSW Department of Planning *Development Near Rail Corridors & Busy Roads – Interim Guideline* 2008 (ISEPP)
- NSW Department of Environment, Climate Change & Water *Road Noise Policy* 2011 (*RNP*)

Site Location and Surrounding Land Use

The Site is located at 8-10 New Mclean Street, Edgecliff NSW. The Site is legally described as SP20548 of Woollahra Municipal Council. The Site is currently zoned R3 – Medium

Density Residential and is located immediately south of the Edgecliff Railway Station. The Site is bounded to the east and west by other residential developments and is in the Paddington Heritage Conservation Area.

The Site was not included in the draft Edgecliff Commercial Centre Planning and Urban Design Strategy, which is currently under review. The strategy proposes to revise building height limits and floor space ratios given its proximity to Edgecliff Train Station, Edgecliff bus interchange, jobs, and services.

RWDI completed a review of public registers and could not identify any significant proposed or recently approved developments which would acoustically impact the site.

The Edgecliff Centre, above the train station was proposed for significantly higher density but was discontinued. This site was also included as part of the Edgecliff corridor strategy as well as lots at the corner of New South Head Rd and New McLean St

Figure 1 presents the location of the site and surrounding land use.

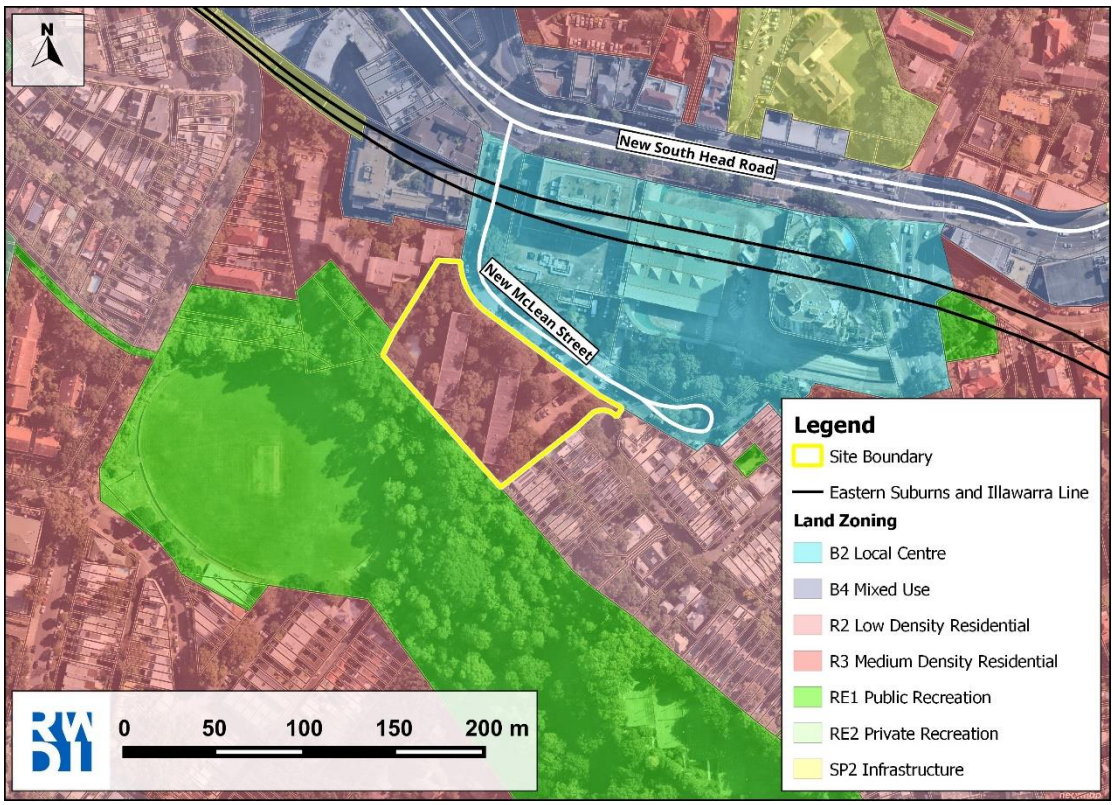

Figure 1:Site Location and Surrounding Land Use

Existing Noise Environment

Attended and unattended noise monitoring was conducted to quantify the existing noise environment surrounding the site, including New South Head Road and Trumper Oval. **Figure 2** presents the locations of noise monitoring.

Noise monitoring was completed in accordance with Australian Standard AS 1055-2018 "*Acoustics - Description and measurement of environmental noise*". All acoustic instrumentation utilised complies with AS IEC 61672.1-2004 *"Electroacoustics - Sound level meters – Specifications".*

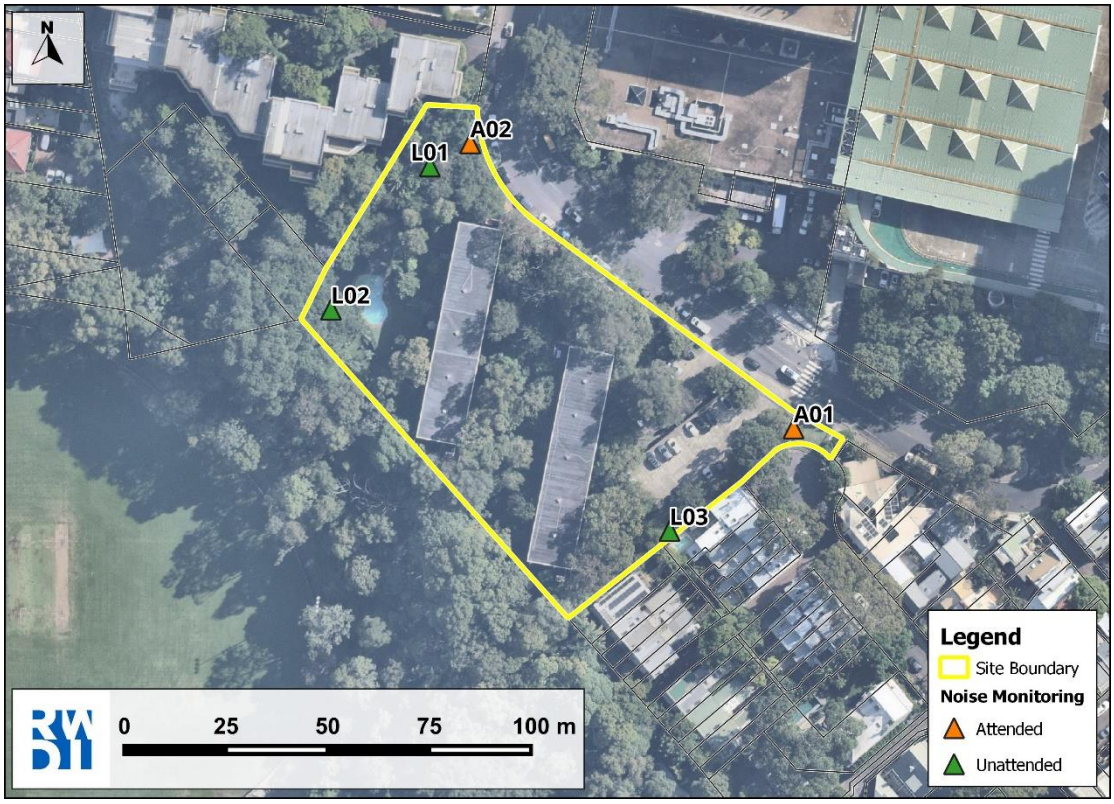

Figure 2: Noise Monitoring Locations

Unattended noise monitoring was conducted at three locations on the Site between 16 March and 30 March 2023 by RWDI. The measured data was processed according to the NPfI requirements. **Table 1** details the measured L_{Aeq} and Rating Background Level (RBL) logged during the daytime, evening, and night periods. RBL data affected by adverse meteorological conditions or extraneous noise was removed from the data prior to processing. Full noise monitoring plots are provided in Appendix A.

Table 1: Unattended Noise Monitoring Results

Location	Measured $L_{Aeq,period}$			Measured RBL		
	Day	Evening	Night	Day	Evening	Night
L01	56	54	48	46	43	36
L02	55	54	45	44	42	37
L03	56	58	50	48	47	46

Attended noise monitoring was conducted at two locations on 16 March 2023 by RWDI. The purpose of the measurements was to determine the road traffic noise levels emanating from New Mclean Street. **Table 2** presents the measured levels.

Table 2: Attended Noise Monitoring Results

Location	Time	L_{Aeq}	L_{A90}	L_{AMax}	Notes
A01	3:15pm	61	54	76	Road traffic noise on New Mclean dominates Leq Background controlled by urban hum and road traffic on New South Head Road Car passby on New Mclean 59-76dBA Train passby not audible
A02	3.30pm	61	55	76	Road traffic noise on New Mclean dominates Leq Background controlled by urban hum and road traffic on New South Head Road Car passby on New Mclean 58-76dBA Train passby not audible

Existing road traffic noise levels on New Mclean Street was estimated based on the measured noise profile of location L01 adjusted for the measured levels at locations A01 and A02. **Table 3** presents the estimated road traffic noise levels for relevant descriptors.

Table 3: Existing Road Traffic Noise Levels, New Mclean Street, 10 m from nearest lane

Descriptor	Day	Night
$L_{Aeq,period}$[1]	61	53
$L_{Aeq,1hour}$	61	50

Assessment of Noise Emissions

Assessment of site generated noise

Assessment of site generated noise (car park movements, mechanical plant, patron noise, commercial noise) would need be to assessed against the *NPfI*, which has two components:

- Controlling **intrusiveness** noise impacts in the short-term for residents; and
- Maintaining noise level **amenity** for particular land uses for residences and other land uses.

Intrusiveness Trigger Level

The intrusiveness trigger level requires that the L_{Aeq} noise level from the source being assessed, when measured over 15 minutes, should not exceed the Rating Background Noise Level (RBL) by more than 5 dBA. The RBL represents the 'background' noise in the area, and is determined from measurement of L_{A90} noise levels, in the absence of noise from the source.

Amenity Trigger Level

The amenity trigger level sets limits on the total noise level from all industrial noise sources affecting a receiver. Different amenity noise levels apply for different types of receivers (e.g. residential, commercial, industrial – or for areas specifically reserved for passive recreation) and different areas (e.g. urban, suburban, rural). The amenity noise level applies to the L_{Aeq}, period during the full day (or evening or night). To ensure that industrial noise levels remain within the recommended amenity noise levels for an area, a project amenity noise level applies for each new source of industrial noise. This is calculated as the recommended amenity noise level for the receiver type minus 5 dBA. Where noise sources are intermittent it is allowable to add 3 dB to convert from a period level to a 15-minute level. This assessment will consider for residential receivers in an urban area.

Project Noise Trigger Level

Table 4 presents the relevant Project Noise Trigger Levels (PNTLs). The PNTLs is the lowest value of intrusiveness or project amenity noise level.

Table 4: Project Noise Trigger Levels

Receiver	Period	Intrusiveness	Project Amenity
Residential (Urban)	Day	**51**	58
	Evening	**48**	48
	Night	**41**	43
Commercial	When in use	-	63
Passive Recreation	When in use	-	48
Active Recreation	When in use	-	53

Sleep Disturbance

The *NPfI* also has provisions for managing sleep impacts at surrounding residences through a maximum noise level event assessment. Where the subject development/premises night-time noise levels at a residential location exceed:

- $L_{Aeq,15min}$ 40 dBA or the prevailing RBL plus 5 dB, whichever is the greater, and/or
- L_{AFmax} 52 dBA or the prevailing RBL plus 15 dB, whichever is the greater,

a detailed maximum noise level event assessment should be undertaken. For this Site, a screening level of L_{AFmax} 52 dBA would be applicable.

Based on the derived project noise trigger levels, no abnormal acoustic constraints may influence any developments on the Site.

Assessment of construction noise

Assessment of construction noise would be assessed in accordance with the *ICNG*. The ICNG employs Noise Management Levels (NMLs) as the main noise objective. For residences, the NMLs should not exceed the RBL by more than 10 dBA.

It should be noted, the NMLs are considered as guidelines and not necessarily numeric noise levels to be complied with. The *ICNG* also prescribes a noise limit of 75 dBA. This limit represents the likelihood of a strong reaction from surrounding receivers. **Table 5** presents the application of the NML.

Table 5: Construction Noise Management Levels – Residential Receivers

Time	NML	How to Apply
Recommended Standard Hours: Mon to Fri: 7am – 6pm Sat: 8am – 1pm Sun/Public Holidays: No Work	Noise Affected RBL+10dB	The noise affected level represents the point above which there may be some community reaction to noise. • Where the predicted or measure L_{AEQ} is greater than the noise affected level, the proponent should apply all feasible and reasonable work practices to meet the noise affected level. • The proponent should also inform all potentially affected residents of the nature of works to be carried out, the expected noise levels and duration, as well as contact details.
	Highly Noise Affected 75 dBA	The highly noise affected level represents the point above which there may be strong community reaction to noise. Where noise is above this level, the relevant authority (consent, determining or regulatory) may require respite periods by restricting the hours the very noisy activities can occur, taking into account: 1. Times identified by community when they are less sensitive to noise (such as before and after school for works near schools, or mid-morning, mid-afternoon for works near residences. 2. If the community is prepared to accept a longer period of construction in

Time	NML	How to Apply
		exchange for restrictions on construction times.

Table 6 presents the applicable NML for residential receivers surrounding the Site. The NML has conservatively been based off the lowest measured RBL (44 dBA at location L02). **Table 6** also presents applicable NMLs for non-residential receivers.

Table 6: Construction NMLs

Land use	NML L_{Aeq} (dBA)
Residential Receivers	54 dBA External
Industrial Premises	75 dBA External
Office, retail outlets	70 dBA External

It is expected that construction methodology would be typical for developments within an urban centre. Noise and vibration generated from construction would be typical of similar developments and can be managed through standard strategies.

Assessment of Noise Impacting the Site

Due to the location of the site and its proximity to New South Head Road and the Eastern Suburbs rail line an assessment in accordance with the (ISEPP) may be warranted. The ISEPP aims to protect residential receivers near railways and busy roads.

The acoustic assessment procedure first involves a screening test to determine if detail assessment is required. The screening test involves:

- Determining distance from rail or road
- Determining whether the development is in “direct line of sight” of rail or road
- Determining if the busy road exceeds 20 000 AADT.
- Determining the type and speed of rail services
- Assessing the separation distance against the graphs below

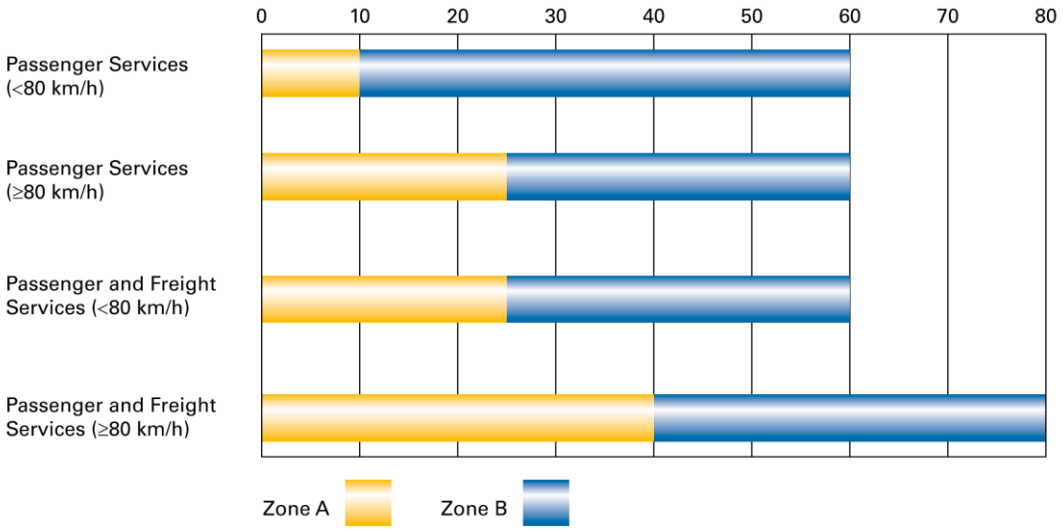

Figure 3: Rail Noise, x-axis is distance from nearest operational track

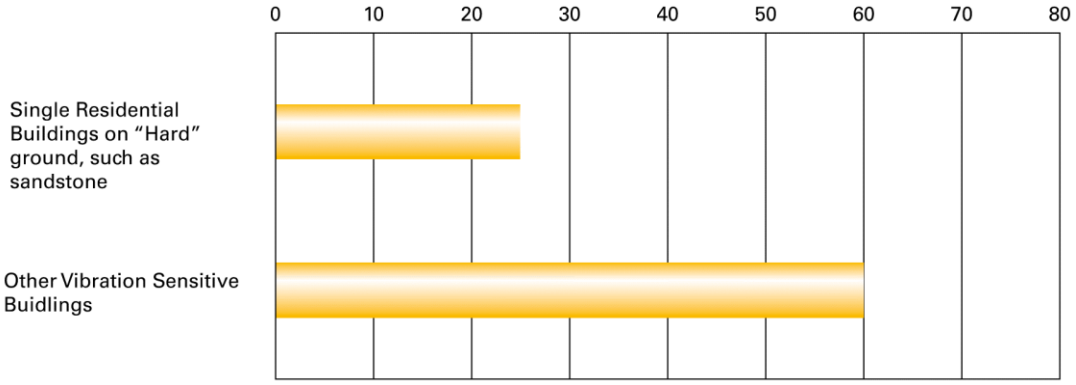

Figure 4: Rail Vibration, x-axis is distance from nearest operational track

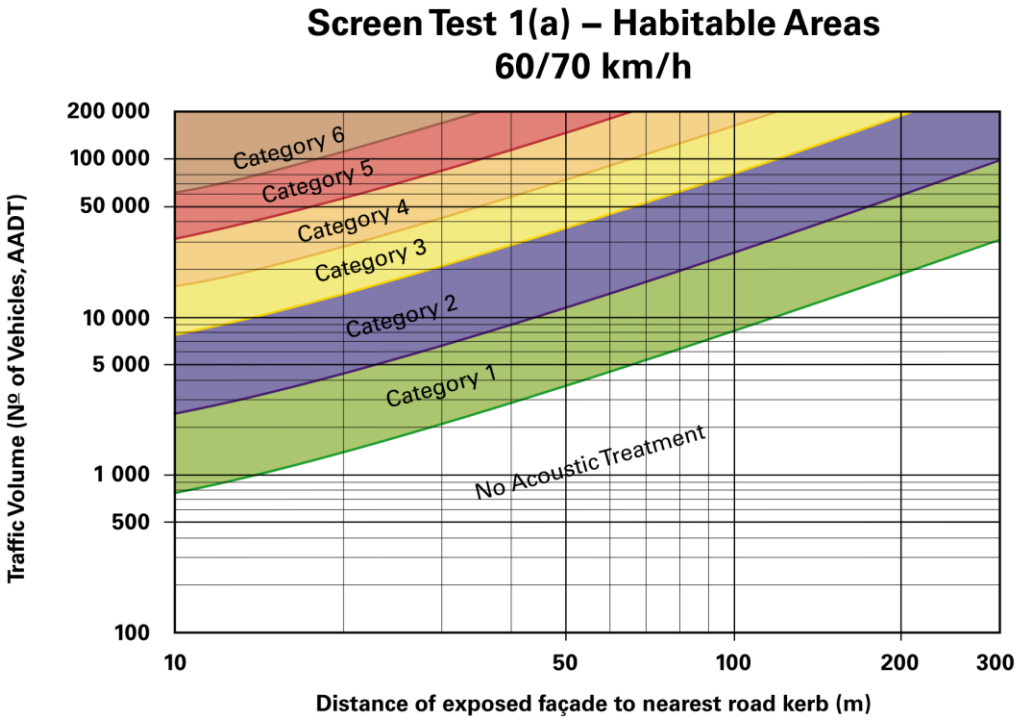

Figure 5: Road Noise

Rail Noise and Vibration

The Eastern Suburbs line only services passenger trains, and due to the proximity of Edgecliff Station, trains are expected to be travelling less than 80 km/h. Based on **Figure 6** below, only a small portion of the Site is within 60 m of the closest operational track. Therefore, there is minimal rail noise and vibration impact on the Site and specific mitigation is not necessary.

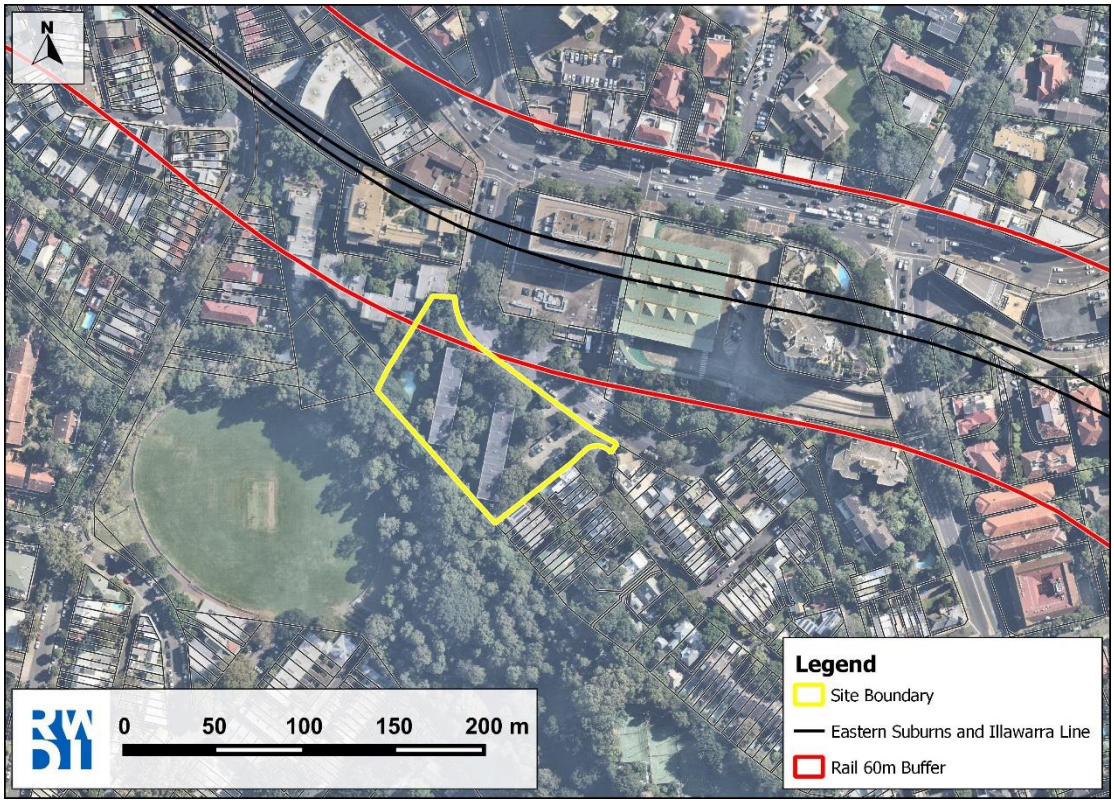

Figure 6: Rail 60 Buffer Distance

Road Noise

New South Head Road recorded 67,572 AADT in 2022 according to the Transport for NSW Traffic Station 10011. New South Head Road is approximately 80-100 m from the Site, however, does not have line of sight to New South Head Road due to intervening buildings. Higher floors of any new developments may have line of sight, but this would be subject to the buildings in the Edgecliff Commercial Centre Planning and Urban Design Strategy. Floors with line of sight to New South Head Road would be considered as Category 3 per the ISEPP. Category 3 requires R_w 32 Windows/sliding doors (e.g. 6.38mm laminated glass with acoustic seals) and R_w 52 frontage facades.

No significant noise impacts are expected from the Edgecliff Bus Interchange based on site observations and separation distances.

Based on the screening assessment above, a detailed assessment in accordance to the ISEPP may not be necessary. Any future developments on the Site should consider the siting requirements above.

Assessment of Additional Road Traffic Noise

Additional road traffic generated by any future developments on the Site would need to be assessed against the RNP. Considering all the variety of development categories within the *RNP*, the relevant criteria are summarised in **Table 7** below.

The large existing traffic volume on New South Head Road means additional traffic generated from any future developments on the Site would result in negligible noise increase. More impact would be expected on New Mclean Street, which would be classified as a local road. As the existing road traffic noise levels exceed the assessment criteria, the 2 dB relative assessment criteria should be considered with assessing impacts.

Table 7: RNP Road Traffic Noise Criteria - Residences

Type of Development	Assessment Criteria	
	Day (7am–10pm)	**Night (10pm–7am)**
Existing residences affected by additional traffic on existing freeways / arterial / sub-arterial roads generated by land use developments	$L_{Aeq,15\ hour}$ 60 (external)	$L_{Aeq,9\ hour}$ 55 (external)
Existing residences affected by additional traffic on existing local roads generated by land use developments	$L_{Aeq,1\ hour}$ 55 (external)	$L_{Aeq,1\ hour}$ 50 (external)

Conclusion

RWDI completed an acoustic review for inclusion in the Planning Proposal for 8-10 New Mclean Street, Edgecliff (the Site). This review involved a high-level assessment of potential acoustic concerns.

This review was conducted with reference to relevant noise guidelines and policies and outlined appropriate assessment methodologies.

Based on the acoustic survey and review of relevant noise guidelines and policies, no significant constraints with respect to acoustics were identified which would exclude the Site from the Edgecliff Commercial Centre Urban Design Strategy. The noise environment surrounding the site is not dissimilar to typical urban environments where high density residential developments have been effectively implemented with low risk to adverse noise impacts.

Regards

Peter Thang
Project Engineer
RWDI