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Attn: Yvan Nimbona

**Central Coast Quarter (Stage 3 Eastern Tower) – 26 Mann Street, Gosford - Proposed Change of Use
- Noise Impact Assessment****1 INTRODUCTION**

It is proposed to modify the approved concept DA for the site. The previous concept approval was for a mixed use tower (Southern Tower) and a hotel tower (Eastern Tower). The modification seeks to change the approved use of the Eastern Tower from a hotel use to commercial office use. The proposal for the Southern (residential) Tower on the site is unaffected. The reference scheme is attached as Appendix 1.

This letter provides our assessment of noise impact in respect of the proposed change of use for the Eastern Tower.

A noise impact assessment was undertaken for the approved concept SSDA (Acoustic Logic Consultancy report ref: 20180179.2/0815A/TT/R1) which is attached as Appendix 2. An assessment report for the site to the north of the subject contains additional information regarding ambient noise levels around the site (Acoustic Logic report reference: 20201083.2/0709A/R3/AS). These have been used in this assessment.

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2 PREVIOUS ASSESSMENT

Noise impacts addressed in the assessment of the approved concept SSDA included:

- Traffic noise intrusion into the development from the Central Coast Highway and Mann Street
- Operational noise emissions, mechanical plant noise
- Construction noise and vibration

Noise impacts were addressed using:

- State Environment Planning Policy SEPP (Infrastructure) 2007 (**ISEPP**)
- Environment Protection Authority (EPA) Noise Policy for Industry (2017) (**NPfI**)
- The EPA Interim Construction Noise Guidelines and the Assessing Vibration: A Technical Guideline.

3 AMBIENT NOISE LEVELS

Ambient noise levels around the site were measured using a combination of attended and unattended monitoring. The results are summarised below, with the monitoring locations noted in Figure 1.

**Table 1 – Long Term Noise Logging Data
(Rating Background Noise Level and Ambient Noise Level)**

Location	Time of Day*		
	Day	Evening	Night
Noise Monitor Location 1	55dB(A) _{Leq(Period)} 51dB(A) _{L90}	55dB(A) _{Leq(Period)} 49dB(A) _{L90}	53dB(A) _{Leq(Period)} 41dB(A) _{L90}
Noise Monitor Location 2	57dB(A) _{Leq(Period)} 54dB(A) _{L90}	55dB(A) _{Leq(Period)} 51dB(A) _{L90}	53dB(A) _{Leq(Period)} 41dB(A) _{L90}
Noise Monitor Location 3	64dB(A) _{Leq(Period)} 55dB(A) _{L90}	61dB(A) _{Leq(Period)} 45dB(A) _{L90}	57dB(A) _{Leq(Period)} 41dB(A) _{L90}
Noise Monitor Location 4	62dB(A) _{Leq(Period)} 51dB(A) _{L90}	59dB(A) _{Leq(Period)} 46dB(A) _{L90}	56dB(A) _{Leq(Period)} 43dB(A) _{L90}

*Note – Time of day is as described within the NSW EPA Noise Policy for Industry (NPI) 2017.



Figure 1: Site Survey and Monitoring Positions

Table 2 – Existing Traffic Noise Levels at Proposed Site – Attended Monitoring

Location	Summary of Existing Traffic Noise Level	
	Day Time	Night Time
5m from Mann Street	58dB(A) $L_{eq(15hr)}$	54dB(A) $L_{eq(9hr)}$ *
3m from Central Coast Highway	68dB(A) $L_{eq(15hr)}$	64dB(A) $L_{eq(9hr)}$ *

*Note - Determined based on the $L_{eq(15hr)}/L_{eq(9hr)}$ difference from the long-term noise logging data gathered at the site.

4 TRAFFIC NOISE INTRUSION

The previous assessment considered traffic noise impacts at the subject building using the following guidelines:

- Gosford City Centre Development Control Plan (2018) (**DCP**)
- NSW Department of Planning and Environment's document – 'State Environmental Planning Policy (Infrastructure) 2007' (**iSEPP**)

For the approved hotel use (i.e. hotel), the DCP did not have any specific requirements in respect of traffic noise intrusion, and this is unchanged by the current proposal.

The Central Coast Highway adjacent to the proposed development has an AADT of more than 20,000. Therefore, a traffic noise intrusion assessment is required in accordance with clause 102 of iSEPP. Clause 102(1) defines the uses that are required to be assessed. The proposed use (i.e. commercial offices) is not one of the uses required to be assessed.

It is concluded that:

- There is no requirement to assess traffic noise instruction for the proposed commercial office use in the DCP or iSEPP.
- The proposed use is less traffic noise sensitive compared to the approved hotel use.
- Relative to the proposed use, traffic noise levels at the proposed building are not high, and building constructions that are typically used for the type of building proposed would provide sufficient attenuation.

5 OPERATIONAL NOISE EMISSIONS

The proposed use for the Eastern Tower would be expected to produce less noise impact than a hotel use for the following reasons:

- Plant generally operates during the day only, and night operation is typically at a much reduced capacity and noise output.
- Hotels can include time entertainment facilities, and food and beverage outlets that typically operate at night.
- Traffic movements occur mostly during the day with an office use and the proposed carparking with direct street access. The proposed change from hotel to commercial office use would decrease the number of night movements.

Notwithstanding that any noise impact is expected to be reduced, noise emissions should comply with criteria (relevant to the surrounding receiver types) established using the NPfI. The primary conclusions of the previous assessment for the site remain applicable to the proposed office use.

6 NOISE ON LOCAL ROADS FROM TRAFFIC GENERATED BY THE DEVELOPMENT

The primary access to carparking would be from Vaughan Avenue. Traffic generation is expected to be concentrated around the morning and afternoon peak periods, with minimal night movements.

Compared to the previous use for the tower, peak movements are expected to marginally increase. However:

- Vaughan Avenue is distant from any other receivers, other than the occupants of the future Southern Tower.
- Any traffic noise impact to the Southern Tower from Vaughan Avenue will be added to noise from the Central Coast Highway, and the cumulative impact would be addressed during the specification of the residential building facade.

It is concluded that the small increase in movements during the morning and afternoon traffic peaks arising from the proposal would not be audible at any receiver outside the proposed development site, and any minor impact to the future Southern residential tower on the site can be addressed during the specification of the façade.

7 CONSTRUCTION NOISE AND VIBRATION

The proposed change of use would not change the conclusions of the previous assessment given the size and construction methodologies for the proposed buildings are similar.

8 CONCLUSION

A noise and vibration impact assessment of the proposed change of use for the Eastern Tower from a hotel use to commercial office use has been assessed . It is concluded that:

- The proposed use has a lower sensitivity to traffic noise. There are no specific statutory or Council DCP requirements to control traffic noise intrusion. Notwithstanding, relative to the proposed use, traffic noise levels at the proposed building are not high, and building constructions used that are typically used for the type of building proposed would provide sufficient attenuation.
- Compared to a hotel use, noise emissions would generally be reduced. Notwithstanding, noise emissions room plant and equipment should be assessed and controlled to comply with criteria (relevant to the surrounding receiver types) established using the NPfl. In this respect, the primary conclusions of the previous assessment for the site remain applicable to the proposed use.
- The small increase in movements during the morning and afternoon traffic peaks arising from the proposal would not be audible at any receiver outside the proposed development site, and any minor impact to the future Southern residential tower on the site can be addressed during the specification of the façade.

It is concluded that any impacts from the proposed development can be adequately mitigated.

Yours faithfully,



Acoustic Logic Pty Ltd
Victor Fattoretto
MAAS