

**Refer to CBAG Submission Section 1 Introduction for context and related content**

24 October 2019

Director – Transport Assessments  
Planning and Assessment  
Department of Planning, Industry and Environment  
GPO BOX 39 SYDNEY NSW 2001

Dear Sir / Madam

**Re: Coffs Harbour bypass; SSI\_7666 Review of Operational Noise Assessment**

This submission is made on behalf of the Coffs Bypass Action Group (CBAG). It is purely about operational traffic noise as presented in the EIS, in particular about noise in the night period and potential impacts on surrounding residential receivers.

We recognise that the proposed Bypass is an important major infrastructure project that will bring a great deal of benefit to the area surrounding Coffs Harbour as well as the NSW and broader Australian community in general. In this context we support the project.

However, it needs to be acknowledged that there is still a very significant amount of noise that is predicted in the EIS noise section that will be experienced by a large number of residents along the proposed route. Of particular concern is that the RMS has reached the conclusion that it has met all of its responsibilities to many residents who will be left with noise levels that are disturbingly high, (reference Coffs Harbour Bypass Environmental Impact Statement (The EIS) and presented in the Operational Noise Results table in G1 of Appendix G in Volume 4B of the EIS). High enough that they exceed the World Health Organisation (WHO) 2018 guideline for night time noise exposure. The WHO recommendation is to remain below **45 dBA Lnight**.

The following table is sourced from the Operational Noise Results table.

<b>At Residence Unmitigated Above WHO 2018 Guideline of sub 45 dB(A)</b>					
<b>Bypass Area</b>	<b>No Mitigate Total</b>	<b>Façade Total</b>	<b>% Exceed WHO 2018</b>	<b>&gt;= 50 dB(A)</b>	<b>% Exceed 50 dB(A)</b>
Boambee	547	3,030	18%	297	10%
West Coffs	1,409	5,547	25%	361	7%
Korora	5,737	8,380	68%	2,268	27%
<b>Total</b>	<b>7,693</b>	<b>16,957</b>	<b>45%</b>	<b>2,926</b>	<b>17%</b>

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<sup>1</sup> For a more granular view see Appendix D in the attachments where actual noise levels and NCAs are shown

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It shows the raw numbers of façades and the percentage of façades for each noise area that are modelled to exceed the World Health Organisation (WHO) 2018 guideline; after all ‘at source’ remediation has been applied and **for which the proponent (the RMS) has absolved itself of responsibility for any further action**. I.e. the counts select only those façades where the noise level is judged to NOT exceed NCG after including low noise pavement and noise barriers.

The RMS has responsibility under two broad areas of the NSW Road Noise Policy (2011) for noise: (Reference SEARs SSI-7666 Key Issue 2 Noise and Vibration – Amenity, Current Guidelines)

1. A specific set of **average noise targets** that are very heavily dependent on **pre-existing noise levels** compared to final **post-completion measured noise levels**. (Reference: Section 2 of NSW Road Noise Policy)
2. More general responsibility to ensure that proper steps have been taken to protect against the **potential risk of adverse health effects**, the main one being sleep disturbance. (Reference: sub-sections 5.4 and 5.5 of NSW Road Noise Policy)

## Average Noise Targets (Part A) - Summary of Findings

All of the following summarised findings are supported with details within this submission and detailed data shown in an attached set of appendices.

- Finding 1: The EIS is deficient by the omission of any evidence to support the values assigned as Unmitigated Night No Build figure within the Operational Noise Results table. As tables presented in this submission show, at night there are 1.5 thousand façades that are modelled to receive ‘at receiver’ remediation and a further 7.5 thousand façades that are modelled to receive noise levels 45 dBA and above and judged to have no entitlement to ‘at receiver’ remediation. Approximately 17,000 façades have been modelled but there is no evidence of sampling to show that the modelled baseline figures are accurate.
- Finding 2: We have performed a number of Leq(A), night measurements of residences at the façade and our figures are very different from the baseline from the model; even after taking account of bird noise. (G1 of Appendix G in Volume 4B).
  - Examples: 21 Safrano Place, CH and 3 Breakers Way, Korora.
- Finding 3: The EIS is deficient by the omission of any evidence indicating that significant non traffic noise has been filtered out of the model prior to arriving at the baseline noise measure.<sup>2</sup> It is acknowledged that train noise has been filtered out of the model in many Noise Collection Areas (NCA). Many modelled baseline noise values within the Operational Noise Results table at a multitude of different sites appear to indicate that **significant amounts of bird noise in the 5 am until 7 am time period are being measured as traffic noise**. The lower the existing traffic noise, the

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<sup>2</sup> Appendix B5 NSW Road Noise Policy: It is important to note that any model used must be validated with representative in-field measurements so noise predictions reflect the actual situation as closely as possible and any differences between the model output and measured values are known.

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bigger the error this creates in the baseline Leq,night measurements. That is, non-traffic noise is being taken in the noise assessment as traffic noise in the period 5 am - 7 am. This increases incorrectly the LAeq night noise levels.

- Examples: 3 Breakers Way, Korora; 19 Rigoni Crescent, Coffs Harbour (CH); 26 Brennan Court CH; 21 Safrano Place, CH.
- Finding 4: There are issues where modelling of residences with almost identical noise properties today are coming up with completely different results within the Operational Noise Results table (G1 of Appendix G in Volume 4B).
  - Example: 12 Tamara Close, CH versus 15 Safrano Place, CH.
- Finding 5: there is an issue with inconsistency in the determination of road traffic noise on different façades within quiet areas, leading to inconsistencies within the model in the determination of the baseline noise level.
  - Example: 19 Rigoni Crescent, CH compared to 26 Brennan Court, CH. This is part of the same 5 – 7 am bird noise problem mentioned above.

The details for all actual residences referred to above are found in our attachment CBAG Operational Noise Assessment Submission by EIS Chapter, which as the name suggests, is organised by EIS chapter. The section reference within that document is Vol 4B Appendix G Noise and Vibration G1 Operational Noise Results Table.

## Average Noise Targets (Part A) - Recommendations

- We recommend that there should be an independent audit conducted by a suitably qualified, experienced and independent team of experts that reports into NSW Planning, Infrastructure, and Environment to:
  - Assess the current inputs and processes that have led to the output produced by the Operational Noise Results table.
  - Test a wide range of receivers against the predicted baseline noise measurements of the model. That is, measure the actual façades at the residences and ensure that non-traffic noise is factored out.
  - Apply special emphasis to NCA13 in terms of measurements but also with a view of determining whether it is reasonable to apply the strict guidelines of a Transitional Zone to this area.
  - Determine a better approach for factoring in existing traffic noise and excluding non-traffic noise, particularly in the 5 - 7 am time period. It could consider whether a fairer and more transparent measure of night time noise would be obtained if the 5 - 7 am period were excluded from the night time measure.
  - Ensure that the process can factor out infrequent loud **non-traffic** noise events, e.g. the overnight trains, such that it **can be repeated pre and post construction in a fair and consistent manner**. It should be noted that including such loud non-traffic events in both measurements is not an acceptable solution because it distorts the overall average reading in cases where it is well above the ambient noise level.

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- Make recommendations as to the need for additional measurements and/or changes that would improve the operation of the noise model being used.

## Potential Risk of Adverse Health Effects (Part B) – Summary of Findings

Total Façades Above WHO 2018 Guideline of sub 45 dB(A)					
Bypass Area	Façade Total	Mitigated	Unmitigated	Total Exceed WHO 2018	% Exceed WHO 2018
Boambee	3,030	414	547	961	32%
West Coffs	5,547	621	1,409	2,030	37%
Korora	8,380	385	5,737	6,122	73%
<b>Total</b>	<b>16,957</b>	<b>1,420</b>	<b>7,693</b>	<b>9,113</b>	<b>54%</b>

The figures in the table above are again taken from the Operational Noise Results table. The noise level used for analysing the data is the final Predicted Noise Level in 2034 after applying low noise pavement and noise barriers (i.e. the ‘at source’ remediation). It shows that there is a significant number of residences that exceed the latest World Health Organisation Traffic Noise Guidelines (2018). These guidelines were set 9 years after the original guidelines, which are referred to in the NSW Road Noise Policy, and after extensive analysis into the most recent research into the health impacts of road traffic noise. So there is good evidence that the noise levels in this EIS are in dangerous territory, **reinforcing the need to ensure that a thorough, objective noise assessment is performed.**

In sub-sections 5.4 and 5.5 of the NSW Road Noise Policy the RMS has a number of indicators that flag the likely set of circumstances where health impacts may arise (viz. frequent loud noise events, NSW north coast, trucks, night). **In the EIS there is no meaningful assessment of truck noise.** The policy lists a number of possible options, amongst them being WHO Traffic Noise guidelines to lower the Leq,night target. **This also is ignored.** The policy suggests tests around the extent of maximum noise events and elevation above ambient levels. Those who put together the EIS have **chosen to ignore them all** and repeatedly rely on the following statement (also contained in the policy document):

1. “Maximum internal noise levels below 50–55 dB(A) are unlikely to cause awakening reactions” and
2. “One or two noise events per night with maximum internal noise levels of 65–70 dB(A) are not likely to significantly affect health and wellbeing”.

Even if these two key phrases summed up the responsibilities of the RMS in these key areas (which they do not), there are flaws in the argument:

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- The fact that internal noise levels need to go above the stated level to cause an awakening event does not of itself mean there is no problem. People wake multiple times during the night, if the noise level causes people to not be able to get back to sleep then there is a problem.
- The EIS presents no evidence that residences are not experiencing maximum internal noise levels above 50-55 dB(A). It is not sufficient to quote sections of the policy. **An assessment must be produced to support the contention that the policy has been followed.**

## Potential Risk of Adverse Health Effects (Part B) - Recommendations

- It is imperative a quantitative analysis be undertaken to **assess the anticipated overnight maximum noise levels, frequency of occurrence, by hour of night, at various distances and elevations from the noise source**. Again it is suggested that this should be conducted by a suitably qualified, experienced and independent team of experts that reports into NSW Planning, Infrastructure, and Environment.
- It is imperative that there is a **high degree of confidence in the baseline noise level predicted within the noise model** since this will often determine whether the RMS is required to perform further 'at residence' remediation. The **recommendations to address this issue are the same as those already mentioned in our Average Noise Target Part A recommendations above**.
- We are aware that the Department of Planning has it owns in house noise specialist and, given the significance of this project, request that this submission and the accompanying appendices be reviewed for comment and direction prior to referral to the RMS. This will ensure that the issues raised here are adequately addressed to meet the Planning's SEARs.

I trust this information is of assistance. Please contact us if you have any further queries.

Yours faithfully

**Brian Polack**

Chair Environmental Impact Study (EIS) Committee

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