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Friday, 7 April 2017

Project number: M17202
Letter reference: M17202LT1

Sallyanne Everett
Clayton Utz
Level 18, 333 Collins Street
Melbourne VIC 3000

Dear Sallyanne,

**Western Distributor
EES Preliminary Technical Peer Review
Surface Noise and Vibration**

I have been instructed to carry out a technical peer review of the Western Distributor Environment Effects Statement on behalf of the Western Distributor Authority by Clayton Utz (refer letter of instruction dated 4th April 2017).

The letter summarises a preliminary technical peer review and summarises my initial thoughts. A more comprehensive and thorough review will be completed with approximate completion date of 11th May 2017. It is anticipated that an updated Impact Assessment Report will be provided which may incorporate additional information to address some of the comments identified below.

Background

The technical peer review of the Impact Assessment Report is to ascertain whether the report:

- (a) *Adequately addresses the relevant requirements of the EES Scoping requirements and the "public works" declaration; and*
- (b) *Is suitable to represent the noise and surface vibration related impacts of the project.*

In my technical peer review I have been asked to:

- (a) *Asses the process, methodology and assessment undertaken in the Impact Assessment Report including any assessment criteria applied or assumptions relied upon;*
- (b) *Identify and additional matters which should be considered in order to address the EES Scoping requirements, "public works" declaration or to otherwise adequately assess the likely impacts of the project;*
- (c) *Assess the adequacy of the relevant Environmental Performance Requirements to manage potential adverse impacts arising from the project, and recommend any modifications you consider appropriate.*

This preliminary review is based on the documents referenced in the letter of instruction.

Discussions with authors of impact assessment

Discussions have been held with Phil West via phone on 6th April 2017 and via phone with Lee Evans on 7th April 2017 to clarify various technical points. This has helped to form my preliminary review comments.

Peer review framework

Resonate Acoustics is a member firm of the Association of Australasian Acoustical Consultants (AAAC). The latest revision of the AAAC “*Guideline for Report Writing, November 2016*” in respect to peer reviews states that:

- All AAAC member firm peer reviews should adhere to the AAAC constitutional objectives.
- All Peer Review reports should identify opinions based one:
 - Advice which is incorrect or inappropriate
 - Advice which requires clarification or additional information
 - Minor points which the peer reviewer’s opinion may not view as the approach they would have taken however do not alter the outcome of the project.
- Use of a similar structure in Peer Review reports (to the three categories above) is recommended.
- Any Peer Review should take into account the nature of the commission which should be stated in the original consultant’s report.
- The Peer Reviewer should attempt to contact the author of the report where permitted by the client and where clarification would address questions the peer reviewer has.

These points have been taken into consideration in carrying out this preliminary review.

Summary of preliminary peer review comments

A summary of preliminary key peer review comments is outlined in Table 1 below.

Table 1 Summary of preliminary findings

Comment / issue	Potential implication for impact assessment	Classification (incorrect / clarification / minor)
Calibrated models are used for operational noise predictions in the assessment. These models are used to predict existing and future (without project) noise levels. In the calibration process, actual levels are typically +/- 2 dB relative to the predicted level. This means that calibrated models may under-predict at some locations by up to 2 dB. We understand that a conservative model has been used for calculating the required noise mitigation.	It is understood that hard limits apply to the allowable traffic noise limits (63 dB(A) L _{10,18hr}). This is not compatible with the calibrated model approach which would necessitate allowance for minor exceedances of the limit as a predicted noise level of 63 dB(A) could be as high as 65 dB(A) in actuality. It is recommended that the probability of noise levels being exceeded be clarified with additional information on prediction accuracy.	Clarification required

Comment / issue	Potential implication for impact assessment	Classification (incorrect / clarification / minor)
<p>Local road noise is expected to have a “0 dB” increase compared to current VicRoads Policy which requires a “2 dB” tolerance.</p>	<p>Achieving even a 2 dB increase on local roads has been very problematic on previous projects such as Eastlink and hence it is recommended that this objective is further explored to ensure there is a common expectation across the community, WDA, appointed contractor and Transurban. It is recommended that this is discussed further to determine the implications of achieving a 0 dB increase and to better define what it means and how it will be confirmed.</p>	<p>Clarification required</p>
<p>Existing road surface acoustic corrections should be clearly defined within the report so that the changes in noise impact are better understood. Statistical individual vehicle noise levels or other road surface metric would be beneficial to establish noise emissions levels from existing roads.</p>	<p>It is not clear what the state of the existing road surface is. This informs the likely change in noise levels on opening.</p>	<p>Clarification required</p>
<p>Engine brake noise can cause significant annoyance. While the project may not be able to control the issue, the potential impact or risks should be identified.</p>	<p>The report should include an assessment of where trucks may use their engine brakes and any possible impact from such noise events. A discussion of consideration of mitigation should be included – e.g. noise wall heights will be set above truck exhaust height and or any limitations of such mitigation.</p>	<p>Clarification required</p>
<p>Inputs to the assessment have not been assessed. It is recommended that the Traffic Volumes, Road Design, Road Surface, etc. be provided to us for our review.</p> <p>Based on our discussions, outputs from the surface noise and vibration impact assessment that have been used in other technical assessments will not be assessed as part of this peer review (eg human health, flora/fauna, etc).</p>	<p>Subject to review of “input documents”.</p>	<p>Clarification required</p>

Comment / issue	Potential implication for impact assessment	Classification (incorrect / clarification / minor)
EPR's are yet to be confirmed. These are critical to the performance targets and hence impact that will be managed through the detailed design and construction phases.	Draft EPR's to be reviewed to assess against letter of instruction.	Clarification required
Theoretical construction impacts are outlined in the impact assessment. It is noted that the actual impacts will be managed via the EPR's as the construction techniques are determined by the successful contractor, who will implement a specific construction methodology. The level of detail provided in the impact assessment could be reduced to simplify the impact assessment and more reliance placed on EPR's. Provided it can be shown that the construction noise impact can be managed to reasonable EPR limits this is considered to be enough for an EES.	Possible simplification of the noise and vibration impact assessment.	Clarification required
We understand updated traffic volumes (due to banning of trucks on local roads) will be provided.	Peer review to be concluded following review of updated information.	Clarification required
Operational noise emitted from the tunnel portals does not seem to have been reported. We understand it has been considered.	This issue should be addressed given there is typically an increase in noise levels around tunnel portals due to build-up of noise within the tunnel.	Clarification required
Variation between requirement for developers of future residential development and contractual requirements.	The impact on future residences (i.e. reverse sensitivity) should be managed via appropriate façade acoustic treatment that aligns with the project-specific criteria and any contractual requirements. This has been an issue for previous privately-operated projects where VicRoads requirements for developers does not align with project specific criteria imposed on the road operator. This may be beyond the EES however is typically an issue for non VicRoads controlled roads.	Minor

Comment / issue	Potential implication for impact assessment	Classification (incorrect / clarification / minor)
We understand that the contractor that will deliver the Western Distributor has various contractual requirements.	We recommend that indicative noise and vibration related requirements be outlined (such as minimum noise wall heights) in the EES so that the most likely noise impact can be assessed based on what is proposed to be delivered.	Clarification required
Year of assessment	We understand that 2031, 2045 and 10 years from opening are all assessment dates considered within the impact assessment or contractual requirements. The ultimate (highest) volumes should be considered in determining any impact.	Minor

Conclusion

I look forward to receipt of an updated impact assessment to enable me to complete my review.

Yours sincerely,



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