Opening Remarks on Behalf of NELP

Group 4: Noise and Vibration

Relevant evaluation objectives

1 The evaluation objective relevant to noise and vibration is reproduced below:

To minimise adverse ... noise and vibration effects on the health and amenity of nearby residents, local communities and road users during both construction and operation of the project.

EES

2 The following chapters of the EES, and the associated technical reports, are relevant to noise and vibration:

(a) EES Chapter 11 – Surface Noise and Vibration;
(b) EES Chapter 12 – Tunnel Vibration;
(c) Technical Report C – Surface Noise and Vibration; and

EPRs

3 The following EPRs are relevant to noise and vibration:

(a) NV1 – NV14: Noise and Vibration;
(b) LP4 – Minimise Overshadowing from Noise Walls and Elevated Structures; and
(c) SC2 – Implement a Communications and Community Engagement Plan.

4 The Version 1 EPRs contain modifications to NV1–NV14 in response to the evidence statements of Mr Tardio, Mr Heilig and the submission of the EPA.¹ The EPRs have been revised further in response to the outcomes of the recent expert witness conclave.

Witnesses

5 The following witnesses will give evidence in respect of noise and vibration:

(a) Mr Tardio and Mr Heilig on behalf of NELP;²

(b) Mr Butera on behalf of Banyule, Boroondara, and Whitehorse City Councils;³

¹ Document 130.
² Documents 24f and 24r respectively.
(c) Mr Evans on behalf of Manningham City Council and Marcellin College;  
(d) Mr Delaire on behalf of Carey Baptist Grammar School.  
A joint report was prepared following the completion of the noise and vibration conclave on 25 July 2019.

**Technical Notes**

To date, the following technical note concerns matters related to noise and vibration:

(a) TN25 – Proposed Developments – Noise.

Responses to the queries raised by the IAC in its further information request are contained within the witness statements of Mr Tardio and Mr Heilig.

**Issues**

**Airborne Noise – Construction**

Technical Report C has evaluated the potential noise impacts associated with surface construction works, including (but not limited to) in respect of a number of construction scenarios associated with different components of the Project.

Whilst there are inherent challenges in modelling noise attributable to construction activities, the analysis documented in the EES is appropriately conservative, and provides a measure of the potential extent of airborne noise impacts associated with the construction phase of the Project.

Because there are no legislated quantitative noise and vibration limits for construction in Victoria, construction noise and vibration thresholds have been specified in EPR NV3 which are based upon applicable EPA Guidelines (1254 and 480), and which have been supplemented by reference to guidelines operating within other jurisdictions (including, most relevantly, by the NSW Interim Construction Noise Guideline).

The regime proposed pursuant to the EPRs will ensure that the Construction Noise and Vibration Management Plan will be required to consider and address the following:

(a) threshold noise levels for residential uses;

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3 Document 28e.  
4 Documents 29f and 31b respectively.  
5 This report has not yet been assigned a document number.  
6 Document 120.  
7 Document 59.  
8 At Section 8.
(b) threshold noise levels for non-residential uses (including educational facilities);
(c) sleep disturbance at residences;
(d) a procedure for defining and approving ‘unavoidable works’;
(e) a comprehensive set of work practices;
(f) guidelines for community consultation;
(g) methods of mitigation and amelioration.

13 The regime is robust and is consistent with those implemented in respect of other major infrastructure projects approved in recent times. It contains appropriate safeguards protecting against unacceptable outcomes whilst retaining sufficient flexibility in the implementation of mitigation measures and to allow the efficient completion of construction works.

**Airborne Noise - Operation**

14 Technical Report C contains an assessment of the following matters relevant to airborne noise during operation:

(a) Noise emissions from existing roads;
(b) Existing ambient and background noise;
(c) Noise modelling of ‘Project’ and ‘no-Project’ scenarios in 2036;
(d) Expected noise emissions from fixed infrastructure; and
(e) Potential mitigation measures.

15 With the exception of discrete matters identified by Mr Butera, there appears to be a consensus in expert opinion that the assessment was undertaken competently, and that it provides a reasonable basis upon which to assess the airborne noise impacts of the Project.

16 The design criteria specified in respect of the Project (at EPR NV1) are derived from the VicRoads’ Traffic Noise Reduction Policy (TNRP). It should be recognised, however, that the TNRP has been applied conservatively to the Project (in that all components of the Project are classified as ‘new’, as opposed to ‘upgraded’, roads).

17 Off-reservation treatment is anticipated to be required in respect of a relatively small proportion of the buildings modelled along the alignment. Any such treatments must
be undertaken in accordance with the NSW Road and Maritime Services Guidelines and in consultation with the owner of the relevant building.

18 The provision of improved and additional amelioration measures at various locations along the existing alignment, as well as the redistribution of traffic on the local road network that will be brought about by the Project, are anticipated to improve noise conditions along many parts of the alignment (relative to the no-project case).

19 Consistent with the regimes established in respect of other recently approved largescale road projects, and with the prevailing regulatory environment within Victoria, design criteria have not been specified in respect of traffic noise during the night, or in respect of passive or active public open spaces.

20 Relevantly however:

(a) Technical Report C assessed the likely impact of the Project during the night period pursuant to the WHO Guidelines. That analysis relevantly demonstrated a high level of conformity between:

(i) Modelled levels and the interim target specified in those Guidelines; and

(ii) The modelled levels in the Project and no-Project scenarios.

(b) The provision of noise attenuation in response to the design criteria specified in respect of residential and non-residential buildings will likely result in material improvements in the acoustic environment within many active and passive open spaces along the alignment. Indeed, on the whole, public open spaces along the alignment are generally predicted to be subject to lower levels of noise in the Project scenario relative to the no-Project scenario.

21 It is noted finally that fixed infrastructure noise targets are in accordance with State Environment Protection Policy No. N-1.

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9 In Section 9.8.
Vibration and Regenerated Noise

22 Heilig and Partners prepared Technical Report D to the EES assessing the potential impacts of the Project in respect of vibration and regenerated noise.

23 Particular Project components considered in that assessment include:

(a) the northbound and southbound main tunnels;
(b) the northbound and southbound mined tunnels;
(c) the cut and cover tunnel sections;
(d) the northern trench structure; and
(e) the safety cross passages.

24 NELP relies on Mr Heilig’s witness statement as a record of, and response to, the submissions made in respect of this topic.

25 The EPRs specified in respect of these matters are consistent with those specified in respect of the Melbourne Metro Rail Project and West Gate Tunnel Project.

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7 August 2019