Opening Remarks on Behalf of NELP

Group 3: Contamination, Ground Water, Surface Water

Relevant evaluation objectives

1 The evaluation objectives directly relevant to Group 3 topics, as set out at section 4.2 of the scoping requirements, are reproduced below:

   To manage excavated spoil and other waste streams generated by the project in accordance with the waste hierarchy and relevant best practice principles.
   To avoid or minimise adverse effects on the interconnected surface water, groundwater and floodplain environments.

EES

2 The following chapters of the EES, and their associated technical reports, are relevant to Group 3 topics:

   (a) EES Chapter 22 – Groundwater;
   (b) EES Chapter 23 – Contamination and Soil;
   (c) EES Chapter 24 – Surface Water.
   (d) Technical Report N – Groundwater;
   (e) Technical Report O – Contamination and Soil; and

EPRs

3 The following EPRs are directly relevant to Group 3 topics:

   (a) CL1 – CL6 in respect of contaminated land;
   (b) SW1 – SW14 in respect of surface water;
   (c) GW1 – GW5 in respect of groundwater.

4 The Version 1 EPRs contain modifications in respect of each group of EPRs. At the time of writing, further revisions are being considered in response to the outcomes of the recent conclave reports.

\footnote{Document 130.}
Witnesses

The following witnesses will give evidence in respect of Group 3 topics:

(a) Mr Middlemis (groundwater), Mr Fuller (surface water), and Dr Nadebaum (contamination) on behalf of NELP;  
(b) Mr Smitt (groundwater), Mr Dunn (surface water), and Mr Bishop (surface water) on behalf of Banyule, Boroondara, and Whitehorse City Councils and Manningham City Council; and  
(c) Mr Carwood (surface water) and Mr Oxnam (contaminated land) on behalf of Carey Baptist Grammar School.

The following joint reports were prepared in response to conclaves completed in respect of Group 3 topics:

(a) A joint report dated 29 July 2019 in respect of groundwater;  
(b) A joint report dated 30 July 2019 in respect of surface water (as corrected by letter dated 1 August 2019).

Other than Carey (which did not circulate its Group 3 evidence in advance of the hearing), no other submitter has called evidence in respect of contaminated land, and as a consequence no conclave was held on this topic.

The IAC received interim reports from Mr Barker in respect of groundwater impacts and in respect of contamination on 24 June 2019.

Technical Notes

To date, the following technical notes concern Group 3 topics:

(a) TN11 – Contamination and Soil;  
(b) TN20 – PFAS; and  
(c) TN21 – Groundwater; and

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2 Documents 24k, 24e, and 24x respectively.  
3 Documents 30a, 30c, and 30e respectively.  
4 Documents 136b and 136d respectively.  
5 Documents 107. The 1 August correction has not yet been allocated a document number.  
6 Document 119.  
7 Documents 77 and 78 respectively.  
8 Document 136b.  
9 Document 45.  
10 Document 54.
(d) TN26 – Groundwater Investigation Data.11

**Issues**

**Contaminated Land**

10 Technical Report O – Contamination and Soil identifies and characterises potential sources of contamination along the alignment. Further investigations documented in the expert witness statement of Dr Nadebaum provide additional information in respect of contamination in and around the Borlase Reserve, Bulleen Oval, the Former Bulleen Drive-in, and the Eastern Freeway/M80 Interchange.

11 The following findings recorded within the interim report prepared by Mr Barker provide confidence in respect of the methodology and conclusions expressed in the EES:12

- There has been, generally, a suitable process of planning, stakeholder engagement and cross referrals to controlling legislation and guidance in addressing the objectives;
- There has been a suitable construction of a Site Conceptual Model across the project area and surrounds, where it recognised that the EES is framed around a set of preliminary and as-available information, where project EPRs will continue to address uncertainties and data-gaps;
- The intrusive investigations (soil, groundwater, soil vapour, landfill ground gas, acid forming materials) placed across the project area to-date have helped to better inform the EES;
- Further, targeted and extensive intrusive investigations of subsurface media (soil, groundwater soil vapour or ground gas) will be required particularly around:
  - All former landfills as identified through the project area (LFG, asbestos and odour exposure risk);
  - Areas of either previous or current underground fuel storage (i.e., petroleum hydrocarbons);
  - Areas related to past or existing dry-cleaning facilities, or those industries dealing with chemical solvents (i.e., vehicle spray painting); and
  - For Bulleen Drive-in site and general Bullen Industrial Precinct (particularly with respect to petroleum hydrocarbons and PAFS);
- The Risk Assessment process as adopted has been generally suitable;
- Studies across the potential of acid-form waste materials with tunnelling spoil has been suitably assessed at this preliminary project stage;

10 Document 55.
11 Document 60.
12 Document 78, pp 6 and 7 of 60.
• The strategy for handling tunnel spoil is suitable and works to EPA key guidance and requirements:
  - It provides for some flexibility for the future project constructor to build in innovation; and
  - It brings in active involvement with EPA’s Major Projects Group.

There is the need linked to this topic, to improve upon the current understanding of industry landfill capacity across the project’s construction cycle, considering the significant number of other parallel Major Projects occurring in Melbourne across the next five to 10 years; and

• The proposed Environmental Management Framework, including the proposed environmental performance requirements and environmental management measures contained in the EES appear to generally well thought-out and are relatively sound. The IAC should consider bolstering the involvement of the ‘Independent Environmental Auditor’ for the project, to one who is a Statutory EPA Appointed Auditor within the State of Victoria.

12 NELP understands that it has now responded in full to the information requests made by Mr Barker.13

13 NELP recognises the considerable challenges of managing spoil (including contaminated spoil) in a Project of this scale. The IAC should be satisfied, however, that the analysis undertaken to date, along with the various measures to be secured pursuant to the EPRs (which include but are not limited to the preparation of a detailed spoil management plan),14 will ensure that the Project responds appropriately to those challenges. Particular responses are proposed in respect of acid sulfate soil, odour management, vapour and ground gas intrusion, hazardous chemicals and fuels, and contamination during operation.15

14 The cumulative effects of simultaneously undertaking multiple major transport projects within the State have been considered. In particular, investigations have been undertaken in respect of landfills situated within and around the metropolitan region, which demonstrate that adequate capacity exists to accommodate fill and prescribed industrial waste associated with not just this project, but also other major transport infrastructure projects that are being constructed or that will commence construction in the short to medium term.16

Groundwater

13 See Appendix A to these submissions.
14 EPR CL1.
15 EPR CL2 – CL5.
16 Appendix C to Dr Nadebaum’s expert witness statement.
The impacts of a project of this type on the hydrogeological conditions of the alignment is a particularly important element in assessing its environmental effects.

The analysis documented in the EES, along with the Project’s impact on groundwater, has been tested during the preliminary phases of this hearing process:

(a) Meetings were held between the author of the Technical Report (Mr Anderson of GHD) and Mr Smitt and Mr Barker in advance of the hearing;

(b) Factual data was released under technical notes in response to requests made by the BBW councils and the IAC;

(c) Mr Barker released an interim statement in respect of groundwater issues on 24 July 2019;

(d) The conclave was conducted between Mr Middlemis and Mr Smitt on 26 July 2019 (and also attended by Mr Barker, Mr Anderson (of GHD), Mr Grewell (of GHD), and Mr Hannan (of EPA)).

These steps have served to substantially limit the issues that are in dispute (at least between the experts). A recorded outcome of the conclave is that ‘[o]verall, [the combination of the EES and further data described above has] allowed informed appraisal of the Reference Project risks to the environment, and the planning for future deployment of monitoring and management strategies linked to EPRs’.

This degree of consensus should provide considerable confidence in respect of the methodology and outcomes recorded within the EES in respect of groundwater and the suitability of the proposed EPRs.

As recorded in the conclave report, there remain two issues in dispute between experts:

(a) The first concerns the need for additional monitoring within those parts of the alignment within unconsolidated sediment (alluvium);

(b) The second concerns North East Link Project having access to data on the construction of the Melbourne Metro Rail Project and other major infrastructure projects.

17 Document 107, p 2 of 5.
The first of these issues is appropriately addressed by EPR GW1. The second is an initiative that is beyond the scope of this Project but which is well facilitated by the formation of the Major Transport Infrastructure Authority on 1 January 2019.¹⁸

Surface Water

Technical Report P models the potential impacts of the Project on each catchment during construction and operation. Specific assessments were undertaken in respect of flooding, water quality, geomorphology and water supply adopting a combination of quantitative and qualitative methods.

The Technical Report was informed by consultation with relevant authorities and was the subject of a peer review completed by Mr Fuller.

The Project will traverse six waterways which vary considerably in size and character:

(a) the Yando Street Main Drain;
(b) the Kempston Street Main Drain;
(c) the Watsonia Station Drain;
(d) the Banyule Creek;
(e) the Yarra River; and
(f) the Koonung Creek.

The impact of the Project on each of these waterways will be the subject of detailed modelling and specific amelioration measures will be formulated as part of the detailed design and construction process. The EES identifies the order of the Project’s impact on each of the waterways. A description of each will be provided in the presentation by Mr Fuller.

Melbourne Water is the drainage authority in respect of the Yando Street Main Drain, the Banyule Creek, the Yarra River and Koonung Creek. The Banyule City Council is the drainage authority in respect of the Kempston Street Main Drain and the Watsonia Station Drain.

The conclave completed between the experts records a high level of consensus concerning the appropriate environmental performance requirements to be applied to

¹⁸ NELP constitutes a project team within MTIA, along with the Level Crossing Removal Project, West Gate Tunnel Project, Major Road Projects Victoria, Rail Projects Victoria.
the Project. NELP is generally supportive of the substantive recommendations made by the experts and these changes will be reflected in the version 2 EPRs. As in the case of previous topics, NELP will consider the recommendations made by experts concerning the applicable governance regime in light of the evidence, and having regard to the operation of the broader environment management framework and the positions of the relevant authorities.

27 Evidence statements filed on behalf of the councils raise queries in respect of the nature and extent of modelling undertaken to inform the EES. In response to these queries, NELP has provided multiple opportunities to those experts to review and interrogate the models utilised for the purposes of the EES (including in meetings conducted prior to the commencement of the hearing and during the conclave). Mr Hay will be available during the course of the hearing to answer any questions of detail that remain concerning the reference project (including modelling undertaken in respect of the reference project).

28 It is important to recognise that the ultimate location and configuration of the flood mitigation measures and WSUD features associated with the Project will necessarily be determined as part of detailed design. To this end, the EES demonstrates the nature and extent of flooding and water quality issues that will need to be addressed during these phases of the Project, and identifies potential means by which this could occur. The EPRs formulated in respect of the Project are robust and will ensure that appropriate measures will be implemented. They recognise the important role that relevant stakeholders and drainage authorities will play as part of the ongoing assessment and design processes. NELP does not accept that design detail of mitigation options is practical, appropriate or necessary at this stage of the assessment.

29 This approach is consistent with:

(a) the *Melbourne Water Standards for Infrastructure Projects in Flood-Prone Areas* (which record the need for ongoing assessment beyond the reference design phase of a project, including in respect of the subsequent preliminary and detailed design phases of a project);\(^\text{19}\) and

(b) the submissions made by Melbourne Water to the IAC, which specifically recognises that 'standards for infrastructure projects in flood prone areas (refer to

\(^{19}\) Appendix B to Technical Report P at p 3 of 5.\)
Appendix A) must be followed’ and that ‘[w]hilst there appears to be a number of flood issues which have not been fully resolved at this stage, these issues have been acknowledged and will be resolved during the detailed design stage of the Project.’

The outstanding issue documented in the expert witness conclave concerns the need for the Project to improve existing flooding issues within the catchments. NELP considers that it is appropriate that the potential for beneficial outcomes be considered as part of the detailed design phases of the Project but resists any requirement that the Project must necessarily address and rectify exiting flooding or water quality issues exist along the alignment.

Other Matters – Ground Movement

It is noted finally that a witness statement has been prepared by Mr Macklin (the principal author of Technical Report M concerning ground movement) and filed with the IAC. Had Mr Macklin been required to attend the hearing he would have logically provided evidence as part of Group 3. NELP relies on Mr Macklin’s statement as a record of its response to submissions on this topic. It otherwise notes that Mr Barker’s interim report prepared in respect of ground movement is broadly supportive of the approach adopted in Technical Report M and concludes that ‘ground movements can be managed by strict adherence to the objectives, care in exceeding those objectives and the implementation of measures (through the EMF and EPRs) to review and audit for compliance in working to objectives’.

Chris Townshend
Barnaby Chessell
Counsel for NELP
Instructed by Clayton Utz
5 August 2019

APPENDIX A
RESPONSE TO OUTSTANDING INFORMATION REQUESTS

Land Contaminated and Spoil Management

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20 Submission 800.
21 Document 76 at page 5 of 47.
The following table documents NELPs response to the information requests identified as outstanding in Mr Barker’s interim report on Land Contamination and Spoil Management (Document 78, page 8).

<table>
<thead>
<tr>
<th>Outstanding Information Request (Table 1)</th>
<th>NELP response</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Bulleen Industrial / Commercial area bore logs</td>
<td>Technical note 11 Attachment C</td>
</tr>
<tr>
<td>2 Bulleen Drive-in provide bore logs</td>
<td>Technical note 11 Attachment C</td>
</tr>
<tr>
<td>3 Summary details of discussions with Yarra Valley Water with respect to potential sewer disposal of waters containing PFAS</td>
<td>Technical note 20, response paragraph 1. Also refer EPR GW4</td>
</tr>
<tr>
<td>4 Summary details of discussions to-date with EPA and Melbourne Water with respect to potential surface water disposal of waters containing PFAS</td>
<td>Technical note 20, response paragraph 1. Also refer EPR GW4</td>
</tr>
<tr>
<td>5 Estimate the amount of putrescible waste</td>
<td>Technical note 11, Attachment A response items 13-14.</td>
</tr>
</tbody>
</table>

**Groundwater**

The following table documents NELPs response to the information requests identified as outstanding in Mr Barker’s interim report on Groundwater (Document 77, pages 8 and 9).

- Provide a summary table of all useful NELP groundwater monitoring bores across the Study Area and set out where well screen settings are in terms of:
  - Well depth
  - Screen length
  - Sand pack length
  - Typical geology in which the well screen is set
  - Typical SWL in terms of both depth and Australian Height Datum (AHD).

Please refer to response 1 of Technical note 21, dated 17 July 2019 for this information

- Provide the bore log and well construct for NEL-BH062A (former Bulleen Drive-in)

Please refer to response 2 of Technical note 21, dated 17 July 2019 for this information
<table>
<thead>
<tr>
<th>Requirement</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provide the bore log and other records for NEL-BH022 (Near Simpson Barracks)</td>
<td>Please refer to response 3 of Technical note 21, dated 17 July 2019 for this information</td>
</tr>
<tr>
<td>Provide the bore log and other records for NEL-BH191 and NEL-BH024 (Watsonia Station Car Park)</td>
<td>Please refer to response 4 of Technical note 21, dated 17 July 2019 for this information</td>
</tr>
<tr>
<td>Provide the bore log and well construction detail for NEL-BH137 (Greenaway Street)</td>
<td>Please refer to response 5 of Technical note 21, dated 17 July 2019 for this information</td>
</tr>
<tr>
<td>Provide the bore log and other records for NEL-BH009 (Manningham Road)</td>
<td>Please refer to response 6 of Technical note 21, dated 17 July 2019 for this information</td>
</tr>
<tr>
<td>Provide the bore logs and other records for NEL-BH061, 061A and 061B. Relates to potential hydraulic connection between siltstone and overlying alluvial beds.</td>
<td>Please refer to response 7 of Technical note 21, dated 17 July 2019 for this information</td>
</tr>
<tr>
<td>Table 6-15 – provide the actual depth to SWL and the matched AHD level for the SWL for each bore location on this table. Would make it much more useful. Its acknowledged that accurate survey may not have been available at the time of the EES write-up (but it should be now).</td>
<td>Please refer to response 8 of Technical note 21, dated 17 July 2019 for this information</td>
</tr>
</tbody>
</table>
- Provide the time-based records of SWL for NEL-BH128/128A and NEL-BH004/004A – Table 6-15 is currently of limited value for the reader to make any independent interpretations (show the raw SWL data plots – logger data once level corrected).
  
  Please refer to response 9 of Technical note 21, dated 17 July 2019 for this information

- Provide the bore logs & well data for NEL-BH078 and NEL-BH080 (Banyule Swamp/Billabong).
  
  Please refer to response 10 of Technical note 21, dated 17 July 2019 for this information

- Provide borelogs & well data for Coffey locations: BH1 and BH2/B2
  
  Please refer to response 11 of Technical note 21, dated 17 July 2019 for this information

- Table 8-2 and text below it on Page 111, tends to suggest that these four construction stages shown in Table 8-2 will be staggered in construction timing – if not, then predicted groundwater inflows will be significantly higher than this (possibly 620+255+330+105+30 = 1,340 m³ per day on maximum inflow estimates across the alignment. Provide further explanation that the peak inflow is only estimated at 620 m³ per day.
  
  Please refer to response 12 of Technical note 21, dated 17 July 2019 for this information

- Explain how the various water treatment groups:
  - Stormwater run-off;
  - Vehicle run-off
  - Groundwater seepage will be collected and separated in the tunnel conceptually.
  
  Please refer to response 13 of Technical note 21, dated 17 July 2019 for this information