This advice is in response to request: Following the completion of expert evidence in your area of expertise, provide a brief final report to the IAC no later than five days before closing of the Hearing which complies with the PPV Practice Note – Expert Evidence and sets out:

a. any changes of opinion since your interim report (if any) and the reason for that change in opinion; and

b. your opinion on the latest version of the Proponent’s proposed approval documents (if any) and any other party’s suggested changes to the approval documents.

List of Abbreviations

- DPO: Development Plan Overlay
- EES: Environmental Effects Statement
- EPR: Environmental Performance Requirement
- UDF: Urban Design Framework
- UDS: Urban Design Strategy
- UDAP: Urban Design Advisory Panel
- LVIA: Landscape and Visual Impact Assessment (or Landscape and Visual Report, EES - H)
- WWCHAC: Wurundjeri Woi-wurrung Cultural Heritage Aboriginal Corporation
1  Response to Practice Note Information

(i)  Name of expert.

Stephen Axford.

(ii)  Expert's qualifications and experience.

Associateship in Architecture (WAIT) Bachelor of Psychology (UWA) (Environmental Psychology). I have twenty years experience practising as a registered architect, and twenty years experience practising as a specialist in urban design.

Further details are provided at Appendix 1.

(iii)  The expert's area of expertise to make the report.

I have had extensive experience in major urban design projects including major road projects, in both government and the private sector.

From 1989 through to 2001 I was Manager and then Director of Urban Design for the State Government of Victoria. In this role I assessed a wide range of major projects and was responsible for developing the urban design brief for the City Link project, and providing input into the project implementation on behalf of the Ministry of Planning. I also played similar roles for other major state projects including the Melbourne Casino and the Melbourne Docklands project.

From 2001 to 2007 I was Director of Urban Futures Consulting within the Virtual Reality Centre of RMIT University. In this role I undertook large-scale 3D modelling projects applying emerging VR technologies, including visualisation studies for the Mullen Mullen Tunnel portals and vent stacks. These real time models were later modified to run on laptops and were used in consultation workshops with residents and stakeholders. Later we carried out visualisation studies on signage along the Eastlink project.

In 2007 Urban Futures Consulting became part of Urbis Pty Ltd and I joined Urbis as Director of Urban Design. In this role I provided design advice for major road systems in Dubai and was part of the successful Peninsula Link project team. My role included developing concepts for gateway treatments and art installations.

In 2011 I formed AXOS Urban Pty Ltd, a specialist Urban Design consultancy that has continued to carry out urban design projects mostly in China and the Middle East.

I was appointed as a Sessional Member of the Victorian Civil and Administrative Tribunal (VCAT) in 2016 and as a Sessional Member of Planning Panels Victoria in 2018.

(iv)  Any other significant contributors to the report and where necessary outlining their expertise.

Stephen Axford is the sole author of this report.
(v) All instructions that define the scope of the report (original and supplementary and whether in writing or oral).

I was appointed in May 2019 to prepare an independent peer review of the North East Link Urban Design Strategy April 2019 including the background studies; any relevant aspects of the Environmental Effects Statement.

I was also to review the Expert Evidence relevant to my area of expertise, review the Terms of Reference for the review Panel, and to submit two interim reports and this final report summarising my opinions.

My terms of Engagement are included in Appendix 2

(vi) The identity of the person who carried out any tests or experiments upon which the expert has relied on and the qualifications of that person.

Not applicable

(vii) The facts, matters and all assumptions upon which the report proceeds.

My review is based upon a full reading of the Urban Design Strategy, and references to the Environment Effects Statement Technical Reports, and public briefings and statements by the project team. I have also attended the site inspection carried out with then Panel on Friday 12 July 2019. By arrangement with the Panel, I met with the urban design expert from NELP Mr Kevin Begg at the offices of NELP on Thursday 18 July 2019.

This discussion was confined to the following topics:
- My background and role
- The background to the development of the Urban Design Strategy
- The involvement of the urban design team in the development of the reference design
- The involvement of the Urban Design Advisory Panel
- What resources in terms of modelling or visualisation were available

I attended the IAC Hearings on the following dates:
Friday 26 July: Opening submissions by NELP and Councils
Monday 29 July: Evidence of Mr Andrew Begg, NELP Urban Design
Tuesday 30 July: Evidence of Mr Allan Wyatt, NELP Landscape and Visual Impact
Tuesday 20 August: Evidence of Mr Steven Schutt Landscape and Visual Impact
Wednesday 21 August: Evidence of Mr Craig Czarny, Urban Design
(viii) Reference to those documents and other materials the expert has been instructed to consider or take into account in preparing his or her report, and the literature or other material used in making the report.

EES Chapter 06 Project Development
EES Chapter 07 Urban Design
EES Chapter 08 Project Description
EES Project Map Book
The Urban Design Strategy April 2019
Landscape and Visual Impact Assessment Report
Early Design Schematics September 2018
TN R32 Watsonia Alternative Design

(ix) A summary of the opinion or opinions of the expert.

Having read the relevant evidence, reviewed the EES documentation and proposed amendments, and attended the relevant hearings to assess the delivery of evidence and response to questions, I conclude as follows:

1. The Landscape and Visual Impact Assessment Report although limited in some areas, provides a satisfactory basis for the committee to assess the critical visual impacts.
   a. The reduced Field of View (below 80 degrees) in some instances is not a fatal flaw
   b. I am of the opinion that the three character types are sufficiently fine for considering the broad impacts of the road project; consideration of local impacts are context dependent and in my view would not be significantly assisted by a further level of categorisation.
   c. Some views that lack a photo-montage would be assisted by additional information such as detailed sections to scale; or in locations that the committee may decide are sensitive, an additional photo-montage.
   d. The Report assists to identify where the urban design response will be critical.
   e. It also assists to identify where landscape alone may not be sufficient.

2. The performance based approach adopted for Urban Design is capable of delivering an outcome that meets the project goals

3. Despite the reliance on a performance based approach, I have come to the view that the Reference Design does provide a basis to understand some urban design impacts, such as the likely footprint of the road system; the likely location of sound walls; the likely arrangement of land bridges, and the likely visual impact of above ground infrastructure such as ramps. As such there are some aspects I would recommend be amended prior to approval, including:
a. Refinement of the M80 intersection to reduce road area as far as possible.
b. Location of Land Bridges to align with logical connections of activity, open space and habitat.
c. Refinement of the Watsonia precinct design to adopt the 4 “Watsonia alternative” design.
d. Refinement of the Lower Plenty Road intersection to adopt the alternative design as shown in document 117b.
e. Clarification of the long term master plan for the Manningham Road precinct and rationalisation of the road layout to respond to this rather than the reverse.
f. Refinement of the Bulleen Road / Eastern Freeway intersection to reduce the footprint as far as possible.
g. Identification of opportunities to retain or re-plant trees in the Koonung Creek sector.

4. It is reasonable for urban design details such as architectural decoration, finishes, artworks, creative lighting to remain undefined at this time, with the expectation that the UDS and input from UDAP will deliver a high standard of design outcome.

5. The Urban Design Advisory Panel is an appropriate body to guide the delivery process and the evidence by NELP provides assurance that their involvement will be extensive through the bid process.

6. The incorporation of the Wurundjeri Woi-wurrung Cultural Heritage Aboriginal Corporation (WWCHAC) is a key opportunity to achieve project goals subject to their level of involvement and support. The evidence by NELP provides assurance that their involvement through UDAP will be significant and will be supported.

7. The Urban Design Strategy in conjunction with the UDAP is an appropriate structure to guide design development by the bid teams; however my opinion is the Committee could have more confidence in the UDS with additional detail such as:
   a. A more developed Vision Statement
   b. Cross references to the Reference Design
   c. Cross references of examples to specific locations
   d. Analysis of examples provided to highlight relevant aspects; issues of context

8. Some aspects of detail design could be assisted with further detail or direction:
   a. Ventilation stack at Simpson Barracks
   b. Key Gateways
   c. Sound walls where opportunities for landscape treatment are limited or not possible.
(x) A statement identifying any provisional opinions that are not fully researched for any reason (identifying the reason why such opinions have not been or cannot be fully researched).

I express some concern about the Manningham Road interchange. Within my scope, my opinion is limited to the need to prepare a long-term plan for the use of the land after the road project is complete. I am concerned that the distribution of ramps and portals could lead to an inefficient urban structure that will be difficult to redevelop in any meaningful way. NELP indicated this was a work in progress with the council and stakeholders; in my view it is very difficult to evaluate the reference design in this precinct without this work being complete.

An evaluation of the net benefit should balance the need for the junction to Manningham Road from each direct, taking into account its duplication with Bulleen Road and the relatively short distance involved, compared to the reduced footprint of developable area. This involves consideration of the traffic projections and economic analysis that are outside my scope.

(xi) A statement setting out any questions falling outside the expert’s expertise, and whether the report is incomplete or inaccurate in any respect.

It is my opinion that Urban Design outcomes must inevitably be assessed against an economic analysis that balances costs v community benefit. This is particularly so where an urban design objective may be better achieved by, for example, extending the length of the tunnel. I am in a position to form an opinion about the broader community benefits such a strategy might provide. I am not in a position to judge the economic cost compared to benefit and no detailed economic analysis was provided in the evidence I reviewed.

In my opinion I believe that is a reasonable case to make that the road interchange into Manningham Road has excessive costs in terms of the land uses lost to the long term; or the potential restrictions on future uses, caused by the extent of the interchange.

I query if the on and off ramps could be tightened in their layout to maximise the opportunities to redevelop the land in and around the interchange. The character of Manningham Road is clearly not that of a freeway; in principle I would expect that the transition from freeway to local arterial should mostly occur within the freeway corridor allowing the local road to be accessed via urban road layouts. For example, I think the reference design achieves this quite effectively at Grimshaw Street.

However it is difficult to evaluate the net community benefit at this interchange in the absence of studies that examine how the land could be best used, including the possible return of light industry.

An option would be to make this a priority issue for exploration by the competing bidders.

(xii) Declaration

‘I have made all the inquiries that I believe are desirable and appropriate and no matters of significance which I regard as relevant have to my knowledge been withheld from the IAC.’
Signed:

[Signature]

Stephen Axford

9 September 2019
2 Key issues

(i) Question
Are there any changes of opinion since your interim report (if any) and the reason for that change in opinion?

(ii) Response
No, there are no significant changes to my opinion.
3 Key Issues

(i) Question
What is your opinion on the latest version of the Proponent’s proposed approval documents (if any) and any other party’s suggested changes to the approval documents?

(ii) Response
I am generally supportive of the latest version of the reference design and specifically support the alternative design for Watsonia and the alternative design for the Lower Plenty intersection.

(iii) Question
In document 75 Interim Report dated 24 July 2019 you identified a number of issues which you considered to be the key issues arising from the proposed North East Link Project relevant to your expertise and falling within the scope of the IAC’s Terms of Reference.

(iv) Response
My key concern in my interim report was the performance-based approach to urban design, dependent on an urban design strategy that is very high level and lacking in detail.

My concern was whether the committee would be in a position to understand what the impacts would be if the final design were effectively unknown.

On page 5 of my report I commented:

*I understand the intention in adopting this broad approach is to encourage project teams bidding for the delivery of this project to compete on design excellence and not be limited by a set of conceptual designs.*

While I accept this is a legitimate goal, to be confident that an acceptably high standard of urban design will be achieved the Panel may wish to inform itself about the details of the delivery process. At this point I do not have sufficient information to assess this, however I raise a number of questions that should assist the Panel to reach a level confidence.

The alternative approach that I favour would be for the Urban Design Team with the assistance of the Urban Design Advisory Panel to prepare more detailed studies that illustrate what it would see as an appropriate outcome at least for key locations. This could derive from the reference design, and provide cross-references to the detailed example provided in the Urban Design Strategy.

Having heard the evidence and cross-examination of witnesses 24 (a) 24 (q) 30 (b) and 30 (d) I have come to the view that the reference design does provide a basis to assess the larger urban design impacts such as footprint, distribution of sound walls, nature of possible cuts and land bridges, location of portals and surface infrastructure, impacts upon existing views, possible loss of vegetation and similar.
Although the reference design may well be described as not an ideal urban design outcome, I have come to the view that it provides an acceptable base upon which the performance based delivery approach can act upon and can be expected to improve, even if only at the margins in some locations.

I am confident that the performance based approach will deliver a high quality of design to the finishing elements of the project, including design of the visible infrastructure, incorporation of decoration and artwork, landscape design.

I support incorporating the alternative proposals for Watsonia and Lower Plenty Road, for the reasons I will articulate in following sections.

I remain concerned about the proposed interchange to Manningham Road. I am concerned that the distribution of on and off ramps some of which are just below the surface, may restrict the best use of this land.

I specifically query the logic of an off ramp to Manningham Road from the south or an on ramp from Manningham Road heading south. From an urban structure view these seem redundant given it will duplicate Bulleen Road and is a relatively short connection. In this instance, I agree with the evidence of witness 30(d) that the reference design appears to be “land hungry”.

I also recommend improvements to the UDS that I believe would strengthen its value in directing the project bidders, and assist the UDAP to play an effective role.
4 Topic 1: Landscape and Visual Impact Assessment

4.1 Is the Landscape and Visual report a reliable assessment, and does it provide support for the reference design and Urban Design Strategy?

There was criticism of the Landscape and Visual report by witness 30(d). A key issue for him was the use of less than a full 80 degree field of view (FoV) for many of the views, whereas the stated methodology calls for an 80 degree FoV. In his opinion this made the assessments and the photomontages using this format unreliable.

This witness also found that several locations were difficult to assess with no photomontage. Both witness 30(d) and 30(b) said that the report never the less illustrates that the reference design will result in unacceptable outcomes.

(i) Question

Is the Landscape and Visual Report acceptable with the reduced FoV?

(ii) Response

I agree that a consistent wide field of view would be preferable, because it would allow the viewer to take in more of the context. However I do not agree that it is fatal to the assessment because the viewer also has access to a map for each view that locates site features and the sound walls of the Reference Design, and so can make a judgement about what else is in the context. In nearly all the cases where a narrow field of view is adopted, I found that sufficient of the proposed change is illustrated so that a judgement can be reasonably made.

(iii) Question

Should there be additional photomontages prepared?

(iv) Response

I agree that the lack of photomontages in all locations provides a difficulty in assessing the visual impact.

In most cases this could be overcome by providing a little more detail such as a scale bar to the cross-sections and an indication on the accompanying photomap where the cross section is taken from.

For VP 39 Freeway golf looking east I believe a photo montage showing the reference design in place is important as it may assist the committee to consider options that could lower the ramps, such as extending the tunnel south.

This witness identified VP59 – view from the existing pedestrian bridge looking east, as requiring a wider FoV and a photomontage. It is presently provided with a cross section diagram, which is not located on the plan, and appears to show the complete removal of vegetation. An additional visualisation form this viewpoint could assist the Committee to
assess the acceptability of the total removal of vegetation in several sections within the Koonung Creek Valley.

I agree that a photomontage from this view, using an 80-degree FoV and illustrating the reference design would assist the committee to consider the future conditions for users of the road and if the complete removal of vegetation is justified.

The witness identified a number of locations where the photo-montage may not be in the ideal location, e.g. VP 29, VP 46, VP 48 are not taken from the main pedestrian path. However I am satisfied that there is enough information to be able to judge the visual impact which in these cases, subject to final design, I found to be acceptable.

(v) Question
Please discuss the magnitude, likelihood and significance of adverse and beneficial environmental effects.

(vi) Response
I am of the opinion that the Report assists to identify where the urban design response will be critical. For example, the location of the ventilation infrastructure in VP 17 indicates that it would be preferable for the vertical stack to be located further to the east, away from the low scale residential development to the west of Greensborough Road.

Alternatively or as well, it suggests that particular design attention is required. In my opinion this location calls for a particularly recessive design- for example, a combination of materials, colours and vertical landscape to reduce its apparent visual bulk. I do not feel this is sufficiently addressed in the UDS at present.

There are also a number of visualisations (e.g. VP 8, VP 15, VP 46, VP 51, VP 64) that suggest that narrow planting against a plain wall will not be sufficient to mitigate the visual impact of a wall. VP 9 – A. K. Lines Reserve has a central section of noise wall where there is no space for planting. Witness 30(d) was generally critical of the classification of these locations because of the prominence of the infrastructure.

In these situations I would recommend a combination of landscape and artistic surface treatment; the UDS is in my view deficient in not highlighting the potential for public art and community art (involving local input) to be applied in such situations.

(vii) Question
Please address the adequacy of the proposed environmental management framework, including the proposed environmental performance requirements and environmental management measures contained in the EES, with reference to applicable legislation and policy.
Response

I am of the opinion that subject to a number of proposed enhancements that I will discuss in the following section, the UDS and associated EPR’s provide an adequate response to potential visual impacts of the project.

Question

Please address the adequacy of the impact assessment and whether the proposed environmental performance requirements are capable of being met.

Response

I am of the opinion that the impact assessment is generally adequate for its purpose. However I agree with submissions that some additional photomontages would be desirable. Specifically, VP 39 and VP59.

Question

Please address the question of feasible modifications to the design of the Project within or reasonably proximate to the project boundary that could offer demonstrably overall superior outcomes.

I am of the opinion that there could be additional design direction given for locations where landscape treatment alone will not be sufficient. I have described these previously.

There are several locations in the Koonung Creek Valley corridor where it appears mitigation through landscape will be impossible. For example, VP K Eram Road shows complete loss of vegetation on both sides of the proposed noise wall, which is 2m closer to the houses and 4.5m higher than the existing noise wall. The visualisation suggests a transparent upper portion and this may mitigate lighting and shadow impacts, however it would clearly be preferable if at least a narrow strip for planting such as climbers could be provided.

VP H (Stanton Street) illustrates a possible design solution for an extended pedestrian bridge (apparently this is one location where showing a conceptual design to illustrate the design aspiration was not considered likely to limit creativity and innovation). This shows that the likely new bridge will be closer and higher; in my opinion this will be acceptable subject to design however I note that the design must limit any light spill towards the houses.
5 Topic 2: Urban Design

There was strong criticism of the urban design aspects of the project by witnesses called by the combined Councils, with submissions that the approach adopted (performance based) was inadequate, and that many aspects of the reference design do not provide for an acceptable outcome.

5.1 Performance based approach

A key question has been the adoption of a performance-based approach, with the result that the Reference Design has been described as “technical” with “no urban design input, which is to be achieved in the delivery stage.

(i) Question

Does the Reference Design together with the UDS provide for an acceptable urban design outcome?

(ii) Response

The key issue between the experts appears to be the extent to which the reference design can be relied upon in order to assess the urban design impacts and opportunities of the project. Witness 24(q) called by NELP (and also a member of the NELP design team) said he was of the opinion that the reference design is just a starting point with no, or at least minimal urban design input. His opinion was that urban design input would be delivered by the contractors in response to the Urban Design Strategy (UDS). Key elements of the strategy include requirements to minimise the footprint of the roadway, minimise and replace tree loss, provide effective landscape treatments to mitigate visual impacts, and creative design inputs to bridges, structures, ventilation shafts and sound walls.

He cited examples of other recent major projects that have used a similar approach as evidence that this leads to an optimal outcome. In his view, if the reference design were to include a conceptual design of key elements such as sound walls, treatment of surface infrastructure, etc., it would risk narrowing the potential to obtain creative ands innovative solutions.

NELP also places great weight upon the UDS to guide the final design process, and upon the UDAP to bring highly skilled guidance to the process.

Witness 30(b) on behalf of the combined councils approached the reference design as a “deemed to comply” design, and assessed it against the objectives of the UDS and the relevant EPR’s of the EES. Overall his evidence was that the design falls short, with high visual impacts, disruption to local connectivity and generally being “land hungry”.

He assessed all of the locations where there were visual assessments available. He was particularly concerned with a number of locations:

- The M80 Interchange, with a high loss of trees and excessive road surface.
• The Watsonia Town Centre, which would be further separated from Greensborough by the new roadway within a sharply cut trench.

• The Simpson Barracks precinct and its Ventilation building, because of the location of the 40m ventilation stack close to low scale residential development and the loss of tree cover through roadway in cut and cover shallow tunnel.

• The Lower Plenty Road interchange, because of the loss of tree cover and disruption to the natural environment of Borlase Reserve.

• The Manningham Road Interchange because of concern for the extent of road infrastructure limiting future development. He supported the Council’s submission that the loss of valuable existing industrial uses is a negative outcome because of limited opportunities for such uses close to population centres.

• The Carey Sports field precinct because of the extent of footprint required and visible above ground infrastructure.

• The Eastern Freeway Interchange because of the visible above ground infrastructure.

• The extended width of the road reserve in the Koonung Creek precinct where the Eastern Freeway is to be widened, causing a loss of tree canopy within the road reserve and in many cases requiring sound walls to be moved closer to the surrounding residential areas and raised significantly in height.

While he agreed that the UDS combined with the role of the Urban Design Panel (UDP) was a valid approach his view was that the IAC should view the reference design as if it were deemed to comply as a whole, perhaps minus finishes and artistic treatments. It was his evidence that the reference design should be amended to address the areas where he finds it falls short of the Objectives and EPR’s; and that the UDS is presently too general and high level, and requires more detailed guidance for key areas.

The Proponent submitted that the Reference Design should be approached as a technical proposal less design input. Their view was that the approach relying on a UDS and supported by a UDP has been shown to be successful in many recent major infrastructure projects; so that the IAC should be able top rely upon this process to deliver an acceptable urban design outcome.

(iii) Question

Where your opinion(s) materially differ from the relevant circulated evidence statements, please briefly outline the difference and reasons for it.

(iv) Response

It is my opinion that the reference design cannot be treated as simply a “technical layout” devoid of any relevance to urban design. Indeed if this were so, I would question if the committee could have confidence to make a determination about the impacts of the proposal. Further, if avoiding any specificity were so crucial to achieving creativity, why
would this not also apply to the engineering aspects of the design? And why is some design aspects such as pedestrian bridge’s provided with a conceptual design?

Fortunately I have found that the reference design does incorporate many urban design elements, including sound walls, land bridges, above ground ramps, portals and ventilation infrastructure, and so on. The evidence from witness 24(q) was that the urban designers did have input into the reference design.

While I would prefer a more specific approach, and I do not agree that providing more detailed conceptual designs necessarily restrict creativity and innovation, I accept that the approach adopted is acceptable given the support of the UDAP and backed by the provisions of the UDS.

(v) Question
Please discuss the magnitude, likelihood and significance of adverse and beneficial environmental effects.

(vi) Response
I am of the opinion that in terms of Urban Design, adverse effects will be limited to visual impacts- such as

- Excessive visual bulk; intrusion upon a valued view; lighting spill;
- Loss of landscaping as a buffer particularly to existing housing;
- Loss of trees within the road corridor that presently provide an attractive environment for road users

and

- Interruptions to connectivity.

I am of the opinion that the reference design when enhanced through the UDS and UDAP process is likely to mitigate these impacts to an acceptable level through the use of initiatives such as land bridges, pedestrian bridges, creative and innovative design, and artistic finishes.

I am concerned that the loss of valuable existing uses at the Manningham Road interchange may not be outweighed by the small benefit in travel time to be achieved by this short sector. The extent of this dis-benefit will depend on the long-term master planning of this precinct.

As existing roads such as Greensborough Road and the Easter Freeway are already major dividers of communities and habitat, I am of the view that it is possible that improvements in connectivity can be made at the local level. While all of the urban design impacts may not be able to be fully mitigated, I am of the opinion that the reference design is capable of delivering an acceptable balance through the UDS and UDAP process.
(vii) Question  
Please address the adequacy of the proposed environmental management framework, including the proposed environmental performance requirements and environmental management measures contained in the EES, with reference to applicable legislation and policy.

(viii) Response  
Urban Design relies upon the Urban Design Strategy supported by EPR’s LV 1 to LV 4 and LP 1 to LP4. The UDS is specifically called up in LV 1.

I am of the opinion that the environmental management measures provided by the Urban Design Strategy are generally adequate because of the involvement of the UDAP. However there are several areas where I recommend improvement to enhance the opportunity to achieve the EPR’s.

The Vision section talks about process and definition but de opes not set any ambition for urban design outcome. In my opinion it is vital that an appropriate aspiration is set early in the document. From the body of the document I would expect UDAP to be able to define an objective to add to Victoria’s heritage of well-designed road projects, where through design and decoration, and the effective use of landmarks, drivers will have a sense of the places they travel through and under, and will not have to rely on signage for way-finding.

I believe that the “place specific requirements” would be improved if supported by a context analysis that discusses the opportunities and challenges for each of the maps. In my opinion this would be regarded as best practice for urban design, particularly in a performance based bid process where it is important to provide the design teams with an understanding of the reasons behind proposed connections and features such as sound walls. In my view, an effective analysis of this sort could have identified an improvement such as the “Watsonia Alternative” earlier, and could help bidders to unlock other opportunities.

It remains my position that the detailed maps in the place specific requirements would be improved by including at least the proposed sound walls from the reference design and possibly an accurate footprint of the reference design.

It is my opinion that the examples provided within the chapter 7 of the UDS should be accompanied with at least minimal analysis that identifies what about the example is identified as relevant to NELP and discusses any aspects that are not considered relevant, or are more specific to that examples context.

I also recommend that where possible the examples illustrated should be linked to locations.

I am of the opinion that the examples of ventilation structures provided in section 5, page 88, need to include some examples of “recessive design” to cater for locations such as Simpson Barracks where a prominent design may not be desirable no matter how iconic it may be.

I strongly recommend that the UDS include a separate discussion within Chapter 7 on the potential role of public art. This should consider examples of integrated art and design; curated public art as landmarks and way finding, and community art as a way of involving
local communities and contributing back to enhancing a sense of place and community, particularly for aspects of the project outside the road corridor. That is, the potential for public art contribution should be equally on the small scale and local as well as on the big and regional scale.

Examples of big and regional scale opportunities can already be found in the UDS with bridge treatments, sound walls etc.

Examples of local art and community art contributions could include paving treatments for shared pathways and pedestrian crossings; seats, bollards, planters, signage and lighting fittings on land bridges and other local connectors, interpretive signage in culturally sensitive locations.

I am confident that the UDAP has appropriate skills to manage a creative art component of the project.

In my opinion the EPR’s I have cited provide an adequate to support the UDS; however it is their nature that they are entirely defensive. I recommend an additional “aspirational” EPR to support the UDS that could address, for example:

- *The urban design and landscape design of the project should seek to enhance pedestrian, recreational and habitat connections across the major road systems.*
- *It should provide an enhanced sense of place, culture and community at the local level, and an appreciation by the road user of the rich history and environments through which the road systems move.*

(ix) **Question**

Please address the adequacy of the impact assessment and whether the proposed environmental performance requirements are capable of being met.

(x) **Response**

I am of the opinion that the Landscape and Visual impact assessment is adequate subject to the minor recommendations made previously.

I do not find that the Urban Design Strategy has provided an adequate analysis of the potential impacts and I have recommended that it should be augmented with additional context analysis to identify likely impacts and potential opportunities, and for example, why a particular connection may be desirable and what enhancement this would achieve.

(xi) **Question**

Please address the question of feasible modifications to the design of the Project within or reasonably proximate to the project boundary that could offer demonstrably overall superior outcomes.
I am of the opinion that the alternative design to Watsonia (Technical Note R32) would be an improvement to the reference design for the following reasons:

- It would provide an improved linkage between Greensborough-west and Watsonia as identified in my first interim report.

- As the link would be achieved by a land bridge, it would provide an opportunity for landscaping, casual recreation (e.g. sitting / viewing opportunities) and with an appropriate choice of planting, habitat connection.

- The proposed multi-deck car park would be an opportunity to include active uses at ground level and/or community uses, helping to “bridge” the gap between Watsonia and Greensborough–west.

Witness 30(b) was critical of the vertical slit trench and preferred an extended tunnel or a shallower cut trench. In oral evidence he supported the Watsonia alternative proposal as an improvement, but would prefer an extended tunnel.

While an extended tunnel could be a superior option for Watsonia, I note that NELP stated that this option would be very difficult to achieve because of the grades involved. It was also stated that an additional ventilation stack would be required and a relocated portal with surface junctions, all of which could have negative impacts upon Watsonia. I am satisfied that the narrow trench (i.e. with effectively vertical sides) would provide an acceptable compromise in conjunction with land bridge shown in the alternative layout, in conjunction with the land bridges generally as shown in the reference design.

I am of the opinion that the alternative design for the Lower Plenty Road junction would be an improvement to the reference design for the following reasons:

- It moves more of the road infrastructure away from the Lower Plenty Road intersection where visibility is highest.

- It would allow a greater retention of trees and restoration of the Banyule creek environs.

- Although it moves more of the ramps and road infrastructure into the Simpsons Barracks precinct, the potential for landscape over the cut and cover should mitigate the impacts.

- I am of the opinion that the vertical slit trench is the preferable format as it minimises the crossing width. I am aware that this format has been used successfully internationally (e.g. see Appendix 3, Fig 1- example from Paris) where it provides an effective transition between freeway character roads below and local character roads on the surface.

I am of the opinion that the Manningham Road interchanges needs to be reconsidered with regard to the potential master planning for this area and the possibility of eliminating some ramps so that the footprint of the project can be tightened, for the reasons previously outlined.
I remain of the opinion that the interchange with the M80 could be simplified by reducing the length of the Plenty Road off ramp. As noted in my first interim report, this is because:

- It would allow more trees to be retained within the road reserve.
- It could reduce confusion for drivers.

I am of the opinion that the proposed extended pedestrian bridge in Watsonia North (Macorna Street) should be in the form of a land bridge, as recommended in my first interim report. This is for the following reasons:

- It would provide a better functional link between the open space system in Watsonia North (Binnak Park) and the Plenty Gorge Parklands to the north of the M80.
- It could provide a habitat link between these systems.
- It would provide additional opportunities for replacement tree planting across a section of road reserve where many trees will be lost.
- It could provide an opportunity for local tree replacement within some open areas within Plenty Gorge Park.

It is my opinion that the reference design should include this at least as a desirable option.

It is my opinion that the Bulleen Road option (The “Bulleen Switch”) generally as described in technical note 34 should be adopted in the reference design for the following reasons:

- It would allow Bulleen Road to be lowered, so that most of it would remain at its present grade.
- It could remove the need for a raised Bullen Road bridge, maintaining the present level of connectivity across the freeway.

The Koonung Creek corridor involves widening of the existing Eastern Freeway and the incorporation of bus lanes generally within the existing road reservation. However due to the limited space available this will involve the movement of some sound walls closer to houses and removal of many trees in the road corridor.

Witness 24(q) (urban design) expressed the opinion that this was a section of the project that “kept them up at night” because of the limited opportunities for landscaping. Sections provided in the Landscape ad Visual report (e.g. Fig 9-197 p 270) indicate the road corridor will be effectively all tarmac and potentially a harsh environment.

NELP submitted that the UDS would through encouraging innovation and creative approaches, and with a requirement to minimise the footprint as much as possible, lead to an improved outcome than on the whole would be acceptable. If the road cannot be narrowed in some way, this will presumably depend up the creative design of the sound walls and retaining walls to provide an attractive environment for the road user.

It is my opinion that another way of addressing this would be to introduce some land bridges in this corridor. These could provide points of interest for the road user, with visible trees or
bushes and the possibility of some trailing greenery, and at the same time improve the connectivity across the freeway corridor. Figure 15 page 87 of the Urban Design Strategy provides some indication of how a land bridge could contribute to the character of the road corridor in addition to its positive impacts on the local context. (see Appendix 3, Figure 2)

I have identified the following locations as opportunities for land bridges, either as new features or extensions to existing road bridges. I do not suggest that all would need to be treated in this way, however I think if three of four were achieved, a significant improvement could be made to this corridor.

Suggested locations:

- Doncaster Road (road bridge), Map Sheet 35
- Elgar Park to Heyington Ave (pedestrian bridge) Map sheet 36
- Elgar Road, or Station Street-Taxi Road (road bridges) Map sheet 37
- Eram park – Box Hill North (pedestrian bridge) Map sheet 38
- Middleborough Road- Wetherby Road (road bridge) Map sheet 39
6 Approval Documents

(i) Question
Please list any recommended changes to the approval documents.

(ii) Response

I have recommended the following changes to the approval documents:

1. Incorporation of a Land Bridge at Watsonia-North in lieu of the extended pedestrian bridge
2. Adoption of the Watsonia Alternative
3. Adoption of the Lower Plenty Road modification generally as set out in Technical Note R33
4. Adoption of the “Bulleen Switch” generally as set out in Technical Note R34
5. Incorporation of Land bridges in the Koonung Creek Valley sector where possible.
6. Additions and enhancements to the Landscape and Visual report
7. Additions and enhancements to the Urban Design Strategy
8. An additional EPR to set an aspirational objective to enhance the environment in specific ways.
Appendix 1

EXPERIENCE AND QUALIFICATIONS
STEPHEN AXFORD FRAIA

QUALIFICATIONS AND EXPERIENCE

SUMMARY

Qualifications and Affiliations

Associateship in Architecture, Western Australian Institute of Technology (WAIT), 1974

Registered, Architects Board of Western Australia 1976-1983 (transferred to Architects Registration Board of Victoria)

Bachelor of Psychology, University of Western Australia, 1980

Fellow, Australian Institute of Architects

Foundation Member, Urban Design Forum

Member, Victorian Planning and Environmental Law Association

Former Committee Member, Inner Melbourne Planning Alliance

Board member, the Habitat Trust, Melbourne.

Foundation Member, Australian Urban Systems (AUS)
STEPHEN AXFORD FAIA

Professional Experience

Selected projects with significant heritage components:

**SESSIONAL MEMBER, VCAT**
Planning and Environment List; Urban Design
June 2016-ongoing

Summary:
40 plus cases in the previous 36 months; sitting as a specialist member in architecture and design; The majority have been Major Cases and mostly mid to high density residential or mixed-use developments within established areas. This requires a careful assessment of both context and planning policy. I have had to become familiar with the operation of planning tools such as Structure Plans, Design and Development Overlays, Development Plan Overlays and related strategy plans.

I have also sat on several major sign cases, including the application of electronic signs to buildings and structures, and in one case the use of projections systems across the airspace of unrelated buildings. This raised complex questions of planning policy and law.

Several of the cases involved heritage matters and I am required to assess expert witness evidence from Heritage experts and balance this evidence across the requirements of the planning framework.

This has enhanced my understanding of heritage policy and its application in practical environments.

**DIRECTOR,**
**AXOS Urban Pty Ltd**
2011 – on-going

Managing Director responsible for all professional activities;
Project leader for major urban design projects;
Expert input for urban design, visual impact assessment, Heritage Impact Assessments (HIS); urban context analysis; site analysis; community consultation and engagement.
Key Projects

University of the UAE Al Ain: Library Renewal and Extensions

In 2017-2018 I was engaged to review the planning for a new library at the University of the UAE, and prepare a design brief and concept plan that would form a reference design for subsequent tenders. The UAEU is the leading government university in the Emirate of Abu Dhabi.

To complete this project I put together a team that included Environmental Engineers, Mechanical and Structural Engineers, and a leading Landscape Architect.

The project required a comprehensive assessment of the site and context, and lead to a review of the University Master plan as it affected the library. The project then developed into a first stage that identified short-term works to the existing library to modernise the interior design and introduce missing elements such as meeting rooms, study hubs, cafes, and indoor-outdoor space. The second stage saw the development of a concept design for a major new wing and landscaped garden setting.

This project required the careful assessment of context including engaging with the local culture and the specific goals of the University. As of June 2019 the stage one works are well under way and AXOS is continuing to provide advice to the University as it prepares to commence Stage 2.

Client:
University of the UAEU
Dean of Libraries Ms Janette Wright

103 Beach Street, Port Melbourne: multi-level mixed use development opposite Station Pier, Port Melbourne.

Responsible for concept design, urban design and planning report; obtaining the heritage approval including liaison with Heritage Victoria, preparation of the Heritage Impact Assessment in accordance with the Heritage Act (Victoria); and management of the town planning permit process.

I also managed a cultural impact assessment in association with a qualified archaeologist, to assess potential impacts on indigenous heritage. We were successful in obtaining both heritage and planning permits in 2016.

Client:
Key Infrastructure Pty Ltd
Contact: Bruno Gatsby

Ballarat West Employment Zone:
Planning framework and Urban Design Framework

Project involved the preparation of an overall master plan and Design Guidelines for the development of an industrial estate on the former World War II airfield site, Ballarat. This
site was a significant location for both RAAF and USAF bomber training during the war, with a number of important buildings to be retained and a former runway alignment to be preserved and retained with appropriate landscape and architectural guidelines for new development.

Involved assessment of the sensitive heritage fabric, development of a master plan framework to provide for new access roads, open space and industrial development sites. A key goal was to recognise and preserve the historic structure, and development of design guidelines to guide new development to respond in a creative way to the historic fabric.

The guidelines also proposed public art projects to assist to identify different precinct and assist in way finding.

Client: City of Ballarat and State Government of Victoria via Echelon Planning Pty Ltd.
Contact: Sarah Ancell

Other key projects involving strategic planning and urban design frameworks include:

**Corowa Town Centre Revitalisation project 2016**
Guandong China, Master plan for a new city centre. 2014
Shire of Baw Baw Settlement Strategy 2012

**DIRECTOR, URBIS Pty Ltd**
2005-2007

Project leader, urban design. Responsible for preparation of Urban Context Reports and planning report applications; Urban Design Frameworks; Master planning projects; Urban Design Guidelines

Design team leader, **Dubai Urban Development Framework**, 2007-2008

**OFFICE MANAGER, URBAN DESIGN, URBIS PTY LTD** (Part time- sub contracted from Urban Futures Consulting.

Management of International Urban design team; key input into project reports, design studies and design analysis.

On-site project delivery for projects in Ryadh, Saudi Arabia and various projects in China.

Key contributor to the **Umm Al Quwain Urban Design Framework** project, for which I developed a local heritage policy and framework to recognise the early earth structure buildings, and develop planning controls to provide for the retention of identified heritage assets and the

**DIRECTOR, URBAN FUTURES PTY LTD and the Urban Futures Laboratory, RMIT**
2001-2007
Responsible for overall business development and management; Research and Development in conjunction with RMIT’s Virtual Reality Centre; development of protocols for developing 3D City Models; Liaison with clients and authorities; leading the implementation of 3D digital design in numerous projects with significant heritage impacts, including Eastlink: Tunnel portals and ventilation stacks; Tunnel lighting and freeway signage.
City of Melbourne Bourke Street Mall project; Victoria Markets Height Studies;
City of Manningham Height Studies;
Cities of Parramatta and Blacktown strategic planning studies; City of Dandenong City Centre planning, arts and railway bridge projects;

DIRECTOR,
URBAN DESIGN,
DEPARTMENT OF INFRASTRUCTURE
STATE GOVERNMENT OF VICTORIA
1997-2001

Overall direction of the Urban Design Unit; Responsibility for design assessment and advice to the Minister and Department; Development of Projects and Programs including design guidelines; urban design planning notes; urban design policy; and the development and implementation of the urban design programme “Pride of Place”: a grants programme that funded both urban design studies and frameworks as well as capital works across Victoria, running over four years and across two governments.

Responsible for liaison with Heritage Victoria to coordinate the assessment of all major projects in the State and the development of appropriate urban design policy.

Melbourne Docklands: prepared the first urban design guidelines for the Docklands area and later represented the Department on project assessment panels.

City Link: Developed the Urban Design brief for the first City Link project, introducing the concept of public art to be integrated with the design of sound walls, infrastructure and gateways/landmarks.

Represented the Department for several planning panels and on the Architects Registration Board of Victoria and the Architects’ Disputes Tribunal; Represented the Department on the State Public Arts committee and the Melbourne City Council Public Art committee.

Prepared by Stephen Axford
July 2019
Appendix 2

Terms of Appointment
14 May 2019

Mr Stephen Axford
Via e-mail

Dear Stephen

North East Link Project: Provision of Expert Advice to Inquiry and Advisory Committee

The Inquiry and Advisory Committee (IAC) for the North East Link Project appoints you to advise in the area of Urban Design in accordance with clause 4 of the IAC’s Terms of Reference.

Attached is Planning Panels Victoria’s Practice Note on Expert Evidence. Please read and familiarise yourself with this practice note, even if you have read it many times before. You will need to ensure that you comply with the requirements of the Practice Note at all times, with any necessary adjustments required as a result of any directions issued by the IAC. Any report you issue should make the declaration outlined in the Practice Note.

Scope of Task

There will need to be some flexibility in the task to account for material that comes forward in evidence and the Hearing but the scope is anticipated to be as follows.

1. Review the IAC’s Terms of Reference.
2. Review relevant (to your area of expert advice) parts of the Environment Effects Statement (including EMF and EPRs), Planning Scheme Amendment and Works Approval Application.
3. Provide a brief written statement to the IAC (a template will be provided) by noon on Monday 17 June 2019 which addresses, in dot point form, those matters relevant to your expertise and within the scope of the IAC’s Terms of Reference as follows:
   a. Identification of critical issues; and
   b. Requests for information from the Proponent, including points of clarification arising from your review of the EES material, which are necessary to inform your expert opinion on the key issues that you have identified.

Requests for information should be made in respect of key issues only and should be referable to the IAC’s Terms of Reference.

Your request will be attached to the IAC’s request for information to the Proponent to be tabled at the Directions Hearing on 21 June 2019.

4. Review the expert evidence filed by other parties in so far as it relates to your area of expertise.

5. Provide an interim report to the IAC (a template will be provided) to be tabled at the commencement of the Hearing on Thursday 25 July 2019 which sets out, within your area of expertise:
   a. The matters required by the PPV Practice Note – Expert Evidence including all facts matters and assumptions upon which you have proceeded;
   b. The key issues, including whether the key issues you identified prior to the circulation of evidence have changed, and if so, how;

Privacy Statement

Any personal information about you or a third party in your correspondence will be protected under the provisions of the Privacy and Data Protection Act 2014. It will only be used or disclosed to appropriate Ministerial, Statutory Authority, or departmental staff in regard to the purpose for which it was provided, unless required or authorised by law. Enquiries about access to information about you held by the Department should be directed to the Privacy Coordinator, Department of Environment, Land, Water and Planning, PO Box 560, East Melbourne, Victoria 3002.
Your expert view on the matters raised by paragraph 31 of the Terms of Reference in so far as they relate to the key issues you have identified;

Any areas in which you consider that there is insufficient information, having regard to the current and proposed future stages of the project (eg detailed design); and

Recommended changes to the approval documentation including the EPRs (if any).

6. Review any technical responses provided by the Proponent to the IAC’s requests for information in so far as they fall within your area of expertise, as and when required, and provide a written response, if requested to do so.

7. Provide written responses to any questions that the IAC asks of you during the Hearing.

8. Provide counsel assisting with any questions you have of the expert witnesses called by the parties. Depending upon time availability, this may be done orally or in writing.

9. Attend the Hearing, by agreement with the IAC, and particularly the relevant expert session(s).

10. Review the Proponent’s proposed changes to the approval documents (if any) and any other party’s suggested changes to the approval documents referred to you by the IAC.

11. Following the completion of expert evidence in your area of expertise, provide a brief final report to the IAC no later than five days before closing of the Hearing which complies with the PPV Practice Note – Expert Evidence and sets out:
   a. any changes of opinion since your interim report (if any) and the reason for that change in opinion; and
   b. your opinion on the latest version of the Proponent’s proposed approval documents (if any) and any other party’s suggested changes to the approval documents.

12. Other activities by agreement.

Project Management

13. Day to day liaison will be through the project team in the Planning Panels office on planning.panels@delwp.vic.gov.au or (03) 8392 5120.

14. The IAC’s legal counsel will assist in any Hearing preparation required.

15. If you have any questions about the terms of your engagement, or any questions about the facts and assumptions upon which you are to proceed, this should be done formally and in writing. If possible, please make this request in one email, rather than in multiple emails.

16. All of your written advice to the IAC will be placed in the public domain. All other formal communications with the IAC may be placed in the public domain including this commissioning letter.

17. As per usual for this type of appointment remuneration will be at normal Panel rates.

If you have any queries please contact Amy Selvaraj at Planning Panels Victoria on (03) 8392 5120 or planning.panels@delwp.vic.gov.au. Can you please confirm via e-mail or correspondence your acceptance of this brief and the scope of the task as outlined.

Yours sincerely

Nick Wimbush
Inquiry and Advisory Committee Chair
Appendix 3

Supporting images

Fig 1. Paris, France: Urban road to freeway in slit trench

Discussion:
While this example does not include an interchange, it illustrates how a fast through road can be successfully integrated within an urban environment with a slit trench.
Source: Google Earth Pro.
Fig 2 Example from the Urban Design Strategy: Land bridge contributing greenery to the through road.

Discussion: Although strictly not a land bridge, this configuration of the portal to the Monash Freeway tunnel portal gives an indication of how landscape above a through road can contribute towards enhancing the experience of the road user. This could be further enhanced with the introduction of some trailing greenery over the vertical edges.

Source: Urban Design Strategy, Fig. 15 p 87