West Gate Tunnel Project

Report of Roger Wood

1 Introduction

Wood Marsh Pty Ltd prepared the urban design concept for the CPB John Holland tender for the West Gate Tunnel Project

The role that I had in preparing the urban design concept was as the Project Director. As Project Director responsible for developing the urban design for the Project, my approach has been to produce a high quality, interesting and sophisticated urban design solution which responds to the Urban Design Vision and Principles developed as part of the reference project. Other significant contributors to the urban design concept were:

- Armin Voelske – Senior Project Architect, Wood Marsh Pty Ltd
- Various support staff from Wood Marsh Pty Ltd

As outlined in Chapter 6 of the EES, the urban design concept encompasses the following elements:

- M80 Ring Road interchange
- Pedestrian bridge
- Noise barriers
- Southern portal
- Federation Trail
- Tunnels
- Northern portal
- Whitehall Street Reserve
- Maribyrnong River Bridge and under-croft
- Footscray Road elevated structure
- CityLink and city connections.

I have developed the urban design concept as presented in the EES in response to the Urban Design Vision and Principles of the reference design and further elaborated in the presentation provided in Appendix C.

2 Qualifications and experience

Appendix A contains a statement setting out my qualifications and experience, and the other matters raised by Planning Panels Victoria 'Guide to Expert Evidence'.

A copy of my curriculum vitae is provided in Appendix B.

3 Further work since preparation of the Technical Report

None.

4 Written Submissions

4.1 Submissions Received

I have been referred the key urban design issues raised in the public submissions to the EES, draft planning scheme amendment and works approval application, including the issues raised in the following submissions :

16, 17, 18, 19, 21, 34, 71, 74, 103, 106, 123,126, 148, 158, 131, 133, 138, 158, 161, 167, 183, 184, 190, 217, 227, 263, 283, 303, 317, 326, 344, 354, 374, 378, 391, 401, 441, 442, 444, 456, 469.

4.2 Summary of Issues Raised

The submissions have raised the following issues relevant to my area of expertise:

Issues raised:	Submissions
Adequacy of urban design vision and principles	131, 263, 326, 456, 469.
Concern about integration with existing environment	469.
Concerned that the EES is vague and artists impressions do not provide accurate details	126, 469.
Concerns about approach and concept for landscaping	18, 19, 71, 74, 106, 123, 126, 133, 138, 158, 161, 167, 378, 469.
Concerns about design of bridges and elevated structures	16, 17, 19, 21, 34, 103, 148, 158, 184, 217, 227, 283, 303, 326, 344, 354, 374, 391, 401, 441, 442, 444, 469.
Concerns about design of elements such as noise walls	61, 71, 133, 183, 317.
Concerns about design of ventilation structures	158, 190, 442, 469.

4.3 Response to Issues Raised

Set out below are my comments and response to the key issues raised by the written submissions relevant to the area of my expertise.

Issues raised	Submissions	Response
Adequacy of urban design vision and principles		
Adequacy of urban design vision and principles	131, 263, 326 456, 469	I had no involvement in the development of the Urban Design Vision and Principles. These were developed for the project by others. The details of these and the process of development are presented in Chapter 6 of the EES. The Urban Design Concept was developed in response to the urban design vision and principles.
Concerns about integration with existing environment		
Integration with urban form and natural assets at Maribyrnong River and Moonee Ponds Creek	469	The project reference design was developed by taking into account a range of aspects, including traffic, engineering design, land ownership and geotechnical factors. I was not involved in the development of the reference design but oversaw the urban design response to the reference design. EES Chapter 6 provides an overview of urban design solutions that are proposed to integrate proposed infrastructure with the existing urban form and natural assets at Maribyrnong River and Moonee Ponds Creek.
Concerned that the EES is vague and artists impressions do not provide accurate details		
EES is vague and artist impressions do not provide accurate details	467, 469	The urban design concept presented in the EES is representative of the level of detail available at the time it was prepared. With regard to urban design, the level of information provided is considered appropriate for this stage of development. The EES contains a combination of Project Boundary Plans, Horizontal Alignment Plans, Landscape Plans, Vertical Alignment Plans and Indicative Cross Section Plans which combined, provide a clear overview of the project. Chapter 6 and the West Gate Tunnel Project Development and Urban Design Plans provide a conceptual urban design response that will undergo further design development and resolution in the detailed design phase.
Concerns about design bridges and elevated structures		
E-Gate & Wurundjeri and Dynon Rd connections: • Barrier to future connections between Docklands/E-Gate/West Melbourne • Opportunities to bridge over railway infrastructure • Visual impact of elevated road and proximity to residents	16, 19, 21, 103, 148, 184, 227, 303, 326, 444,	Chapter 6 outlines the urban design vision and principles and integration of the design with the surrounding precincts and communities. Key principles include 'urban integration' and 'connectivity and wayfinding'. The design of the elevated roads north of E-Gate would not preclude a future pedestrian and cycling link from the Docklands to the Arden Macaulay urban renewal precinct. The design does not preclude future bridging over the tracks and will not limit future connectivity opportunities.

Issues raised	Submissions	Response
• Adequacy of urban design treatment		
Moonee Ponds Creek crossings: • Bulk/visual impact on open space and waterways, as a result of number and design of crossings • Consistency with open space policies for future open space serving urban renewal areas • Adequacy of urban design treatment	17, 34, 184, 344, 354, 441, 442, 469,	The project reference design was developed by taking into account a range of aspects, including traffic, engineering design, land ownership and geotechnical factors. Nevertheless, the urban design response to the reference design seeks to optimise the urban design outcomes at Moonee Ponds Creek. Chapter 6 indicates that the environmental context and landscape character of the project corridor and surrounding land has also been a key consideration in developing the urban design concept for the project. The urban design applied in that area relates only to barriers, piers and cross heads of the road ramps as well as the design architectural design of the Veloway and associated ramps excluding their alignment.
Maribyrnong crossings: • Extent of impacts on the waterfront • Visual impact and amenity • Design and orientation of bridge crossings • Adequacy of urban design treatment	158,184, 283, 391, 441, 442, 469	The project reference design was developed by taking into account a range of aspects, including traffic, engineering design, land ownership and geotechnical factors. Nevertheless, the urban design response to the reference design seeks to optimise the urban design outcomes at Maribyrnong River crossings. Chapter 6 notes the landscape design for the waterfront from Lyons Street north to Shepherd Bridge seeks to enhance local amenity and contribute to realising Maribyrnong City Council's aspirations for an active public realm along the Maribyrnong River. The urban design concept for the three bridges of the Maribyrnong River crossing comprises a façade system of glass reinforced panels to encase the viaduct structures, featuring an intricate 'eel skin' pattern. This design draws on the defining suite of abstracted cultural references developed for the project and would contribute to local and regional identity as a major threshold point, while maintaining consistency with the overall urban design palette. The main bridge would be off-white with coloured highlights, in contrast to the MacKenzie Road ramps that are intended to be more recessive and would be clad in a charcoal coloured façade system.
Footscray Road elevated structure: • Visual impact and amenity • Design and siting of structures • Impact on urban environment, open space and future built form	184, 227, 283, 303, 374, 469	The reference design proposed an elevated road above the existing Footscray Road. The need for an elevated road is dictated by factors including traffic, engineering design and land ownership. However, the alignment of the elevated structure was sited central to the Footscray Road, further south than the reference design, so as to optimise urban design opportunities. This alignment enabled retention of more trees on the northern and southern medians and enabled additional tree plantings, in keeping with a 'boulevard' design concept for Footscray Road and provides for more flexibility in the future development of

Issues raised	Submissions	Response
		the Melbourne Market site. Additionally, any rain- or sun shadows with this design are cast on the road surfaces below rather than on valuable nature strips. Veloway was designed to be a unique, commuter-focused cycling corridor which would also free-up space at grade to allow for planting of new trees.
Concerns about design of elements such as noise barriers		
Design and location of Noise Barriers	61, 71, 126, 133, 183	As outlined in Chapter 6, noise barriers along the freeway alignment will be enhanced as part of the project. The approximate height and location of these barriers are detailed within the West Gate Tunnel Project Proposed Operation Plans. The scale of the pre-cast pattern and fixing details is designed to incorporate a fine grain pattern. The higher sections of the barriers will contain transparent acrylic panels that seek to reduce overshadowing to private open spaces and complement local and natural features of views. Based on shadow diagrams that we have received from the existing noise walls we have attempted to cast no further shadows on residential properties. Where practical, noise walls will be supplemented by vegetation to soften the visual impact of the noise walls.
Overshadowing	133	
Vandalism of noise barriers	61	The EPRs for the project include implement of the principles of Crime Prevention Through Environmental Design (CPTED). CPTED initiatives will be further developed through the detailed design stage of the project.
Potential impacts of design on driver safety	317	The proposed design incorporates coloured acrylic panels which are commonly used to respond to urban design concerns and are not considered to impact traffic safety.
Concerns about design of ventilation structures		
Size, scale and visual impact of the southern and northern portals and ventilation structures.	158, 190, 442, 469	Ventilation structures are required for the effective operation of the two road tunnels. The design response relocates the siting of the southern ventilation structure further west, away from existing residential areas and sensitive receptors. Whilst this industrial location is earmarked for future residential development, it enables a suitable design response through the provision of an open space buffer between the freeway, southern portal and future residential uses. From an urban design perspective, the design integrates the ventilation structures within the northern and southern portal areas. The northern and southern portal ventilation structures have been designed to form two of the major defining elements of the West Gate Tunnel Project's identity and bookending the tunnel experience for road users. An overview of the design assessment is provided in Section 6.6.4 of Chapter 6.

5 Responses to the IAC's Preliminary Matters and Further Information Request

I have reviewed the IAC's Preliminary Matters and Further Information Request dated 18 July 2017 and a number of questions were identified to be applicable to our area of expertise. These have been responded to and submitted via CPBJH.

Declaration

I have made all the inquiries that I believe are desirable and appropriate and that no matters of significance which I regard as relevant have to my knowledge been withheld from the Inquiry and Advisory Committee.

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Signed

Date: 2 August 2017