

# West Gate Tunnel Project

## Report of Deiter Lim

### 1 Introduction

I have previously provided expert advice and assisted in the development of the landscape response contained in the Environment Effects Statement (EES) for the West Gate Tunnel Project (Project). This response is contained in the following sections of the EES and the Development and Urban Design Plans dated May 2017:

- Environmental Effects Statement – Chapter 6 Urban Design
- Environmental Effects Statement – Development and Urban Design Plans
- Environmental Effects Statement – Map Book

The role that I had in undertaking the previous work was to provide advice and review the EES in relation to the landscape tender design, of which I was the principal author.

As outlined in Chapter 6 of the EES, the landscape concept has been developed in order to:

- Provide new open space areas (including at Whitehall Street Reserve, Precinct 15, Hyde Street Reserve and Moonee Ponds Creek) that complement existing parkland, improve local amenity and extend the green infrastructure of the west;
- Improve access to parkland and open space through the expansion of the shared use path network;
- Rehabilitate existing open space areas such as the Hyde Street Reserve;
- Provide high quality interfaces between the project and sensitive environments, including residential areas and open spaces; and
- Incorporate water sensitive urban design features along the length of the project corridor, including the new wetland environment in the Whitehall Street Reserve.

### 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 Previous Work

Since undertaking the previous work, I have undertaken further work in relation to the EES specifically:

- Attendance and response to questions at the Planning Panels Victoria Information Session – 16<sup>th</sup> June 2017
- response to the Preliminary Matters and Further Information Request issued by the West Gate Tunnel Project Inquiry and Advisory Committee dated 18 July, Chapter 4 Visual Impacts, Urban Design and Landscape, Section 1 - Landscape, Request Items 28, 29, 30, 32 and 33.
- response to the Preliminary Matters and Further Information Request issued by the West Gate Tunnel Project Inquiry and Advisory Committee dated 18 July, Chapter 4 Visual Impacts, Urban Design and Landscape, Section 4 - Noise Barrier, Request Items 40.

A summary of my response in relation to the Preliminary Matters and Information Requests is set out at section 5 of my report.

## **4 Written Submissions**

### **4.1 Submissions Received**

I have read the public submissions to the EES, draft planning scheme amendment and works approval application relevant to the proposed landscape outcomes for the Project which have been referred to me, including the following:

[18, 19, 34, 71, 74, 106, 123, 138, 143, 158, 160, 161, 167, 177, 184, 190, 200, 203, 215, 217, 282, 284, 285, 256, 289, 299, 300, 312, 314, 326, 343, 346, 378, 401, 407, 434, 441, 442, 444, 469, 495, 499]

### **4.2 Summary of Issues Raised**

The submissions have raised the following key issues relevant to the proposed landscape outcomes for the Project:

- Creation of under-croft areas which are potentially unusable and unsafe
- Replacement trees inadequate in terms of number of trees and/or size of trees to be planted
- Replacement trees won't provide landscape value until many years into the future after the impacts have occurred
- The amount of tree canopy to be provided by the project is inadequate
- Landscaping may not be effective in areas where land was previously contaminated
- The new open space areas are not optimally located
- The new open space near Moonee Ponds Creek is not really accessible and not in an appropriate location
- The landscape treatment along Stony Creek does not align with the Stony Creek Future Directions Plan.
- Final landscaping plans need further thought taking into account site conditions and input from Councils and other land managers

### **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 proposed landscape outcomes for the Project.

- *Creation of under-croft areas which are potentially unusable and unsafe.*

The project creates a series of new pedestrian under-croft spaces that previously haven't existed along the corridor.

The creation of the Kororoit Creek Trail under the project allows for the completion of the Kororoit Creek Shared user Path network with that of the Federation Trail. This creates an integrated network of shared user pathways for local and regional residents to use. The SUP network provides the activation to create a safer under-croft area in this location.

The creation of the under-croft areas below the McKenzie St ramps along the Maribyrnong River allows for the connection of the Federation Trail to the Maribyrnong Waterfront. The activation afforded by the SUP connection offers the opportunity to increase the number and variety of recreation facilities (to be determined with council) in this area to enhance the recreational opportunities along the waterfront for local and regional residents and workers. The separation of the bridge ramps also allows for the penetration of diffused light to the under-croft area. This will allow for the implementation of garden bed areas containing shade tolerant species. The garden beds, proposed feature paving, recreation facilities and the SUP trail will create a more inviting under-croft space that can be used by residents and workers of the waterfront making it a more active and safer space.

The creation of a new undercroft areas for the Dynon Road ramps will still maintain the same pedestrian and cycle access for the Capital City Trail ensuring that the current level of activation is maintained. The plantings along the banks of Moonee Ponds Creek will be carefully selected in conjunction with relevant stakeholders to create a viable riparian habitat.

During the detailed design phase these areas will be directly aligned with the relevant Environmental Performance Requirements (EPR's) as outlined in the Development and Urban Design plans, including EP1, EP5 and EP6.

- *Replacement trees inadequate in terms of number of trees and/or size of trees to be planted.*

The replacement tree numbers are significantly in excess of the tree numbers proposed to be removed. As noted in EES Chapter 6, Section 6.6.5 Landscape and Trees the proposed tree numbers are 17,500 which includes a combination of around 4,000 advanced trees (up to 2.5 metre in height), 13,500 tubestock trees. This is further supplemented by 900,000 understorey species along the corridor. The number of proposed trees (17,500) is approximately 5 times the number of proposed trees removed (3370). This number is also significantly in excess of the brief requirement to replace trees at a ratio of 3 to 1.

The size of trees proposed (4000 at 2.5m high and 13,500 tubestock) is designed to ensure the best adaptation of the tree species to the environmental conditions in which they will be planted. The smaller the installed tree size the faster and easier the plants' adaptation is to the local environmental conditions leading to a greater longevity in the development of the tree canopy in the future.

During the detailed design phase these areas will be directly aligned with the relevant Environmental Performance Requirements (EPR's) as outlined in the Development and Urban Design plans, including EP1, EP2 and EP6.

- *Replacement trees won't provide landscape value until many years into the future after the impacts have occurred.*

The proposed replacement trees will take between 15 – 20 years to create a mature canopy but one that will be larger in extent than the current tree canopy extent. The landscape value in the immediate term will be lessened but the new plantings will increase the longevity of the landscape effect well into the future.

During the detailed design phase these areas will be directly aligned with the relevant Environmental Performance Requirements (EPR's) as outlined in the Development and Urban Design plans, including EP1, EP2 and EP6.

- *The amount of tree canopy to be provided by the project is inadequate.*

The future tree canopy extent will be larger than the existing extent of canopy. The increase tree numbers proposed (5 times the number of trees removed) will ensure a larger tree canopy extent. The development of significant new public open space areas also provides for a greater extent of tree canopy development as the current use of the land being industrial will be transformed into new public open space.

During the detailed design phase these areas will be directly aligned with the relevant Environmental Performance Requirements (EPR's) as outlined in the Development and Urban Design plans, including EP1, EP2 and EP6.

- *Landscaping may not be effective in areas where land was previously contaminated*

The proposed redevelopment of former industrial land into new public open space will require the treatment and rehabilitation of any contaminated soil. As the detailed design has not yet begun and the soil from the existing industrial sites has not been tested for contaminants, it is unclear as to the extent of any contamination. In regard to establishing a viable and thriving landscape in these areas, there are many ways to develop the site for public use. Subject to the extent of contamination there are standard and viable options in rehabilitating the site for public use:

- Remove contaminated soil and replace with clean soil
- Cap contaminated soil with a clay subbase and apply clean soil above.

These rehabilitation options will be developed during the detailed design process to best treat the industrial sites. During this detailed design phase the landscape design will be developed with species selection resolved to select the best species to thrive in the modified ground conditions. Currently the existing industrial sites support some vegetation cover indicating that ground conditions will support a landscape solution. The proposed landscape design solution will be developed in conjunction with the relevant stakeholders.

During the detailed design phase these areas will be directly aligned with the relevant Environmental Performance Requirements (EPR's) as outlined in the Development and Urban Design plans, including CSP2.

- *The new open space areas are not optimally located*

The proposed new open space areas transform current land used for industrial purposes into public open space providing significant new public open space opportunities to both existing and future residents. The proposed open space is directly connected to the proposed extended Federation Trail network allowing access for local and regional residents.

The proposed open space area at the southern edge of the Southern portal structure provides the existing residents of New St, South Kingsville a new public park in which to recreate as well as providing a new parkland for future residents of the proposed Precinct 15 redevelopment.

The proposed open space area on Whitehall St expands the vegetated landscape in the Yarraville area and provides an open space connection from the Yarraville Gardens to the Maribyrnong River. The recreation opportunities at the Whitehall St open space and wetland differ from that of the Yarraville Gardens and Hammer reserve and provide sitting, cycling, running and walking opportunities on the Shared Path system and the boardwalk around the wetland area as well as connection between Yarraville Gardens and the Maribyrnong River waterfront.

The proposed open space at Moonee Ponds Creek directly abuts the creek banks creating an expanded riparian environment in a currently constrained environmental area. This open space will aid in the creation of riparian habitat along the creek creating opportunities for increased biodiversity and faunal habitat. It provides the opportunity for local and regional residents to gain access to the creek environment and for the significance of Moonee Ponds Creek to be interpreted in a parkland setting. The park is directly linked to the Federation Trail via the proposed veloway allowing connection to the Capital City Trail increasing the pedestrian and cycling access.

During the detailed design phase these areas will be directly aligned with the relevant Environmental Performance Requirements (EPR's) as outlined in the Development and Urban Design plans, including EP6, LPP2 and LVP1.

- *The new open space near Moonee Ponds Creek is not really accessible and not in an appropriate location*

The new open space near Moonee Ponds Creek is serviced by 2 of Melbourne's most important bike routes, the Federation Trail and Capital City Trail. The open space is directly accessed via the Federation trail from the proposed veloway and connected across the Moonee Ponds Creek via the new pedestrian/SUP bridge which links directly with the Capital City Trail.

The new open space is also directly accessible from Footscray Road via pedestrian pathways and a safe crossing point via a signalised intersection. This connection coupled with the Federation and Capital City Trail connections provides ease of access for pedestrians and cyclists both locally and regionally to come and use this proposed parkland.

The open space will also form part of a future green network proposed for the E-Gate development offering a different recreational opportunity to that of formal active recreation areas proposed as a requirement of the E-Gate development.

During the detailed design phase these areas will be directly aligned with the relevant Environmental Performance Requirements (EPR's) as outlined in the Development and Urban Design plans, including EP6 and LVP1.

- *The landscape treatment along Stony Creek does not align with the Stony Creek Future Directions Plan.*

The proposed landscape works offer an area of landscape plantings with a broad planting palate that has not been finalised. The proposed landscape also offers a new Shared Path Connection and pedestrian bridge linking the existing trails within Stony Creek Reserve to Hall Road and onto Spotswood station. The proposed project landscape concept will not preclude the full implementation of the Stony Creek Future Directions Plan but will work to integrate the new SUP/Pedestrian bridge connection, locations of trees and placement of mass planted riparian species. The proposed landscape works still need to undergo a detailed design phase and will be developed in consultation with the relevant stakeholders.

During the detailed design phase these areas will be directly aligned with the relevant Environmental Performance Requirements (EPR's) as outlined in the Development and Urban Design plans, including EP1, EP5, EP6, LPP2 and LVP1.

- *Final landscaping plans need further thought taking into account site conditions and input from Councils and other land managers*

The final landscape plans will be developed in consultation with the relevant stakeholders and take into consideration any issues of contaminated land. The final plant selections will respond to the localised environmental conditions abutting the roadway, Crime Prevention through Environmental Design (CPTED) principles and allow for maintenance access determined in conjunction with relevant land managers.

During the detailed design phase these areas will be directly aligned with the relevant Environmental Performance Requirements (EPR's) as outlined in the Development and Urban Design plans, including EP1, EP5, EP6, LPP2 and LVP1.

## **5 Response to the Preliminary Matters and Further Information Request issued by the West Gate Tunnel Project Inquiry and Advisory Committee**

A summary of my response in relation to the Preliminary Matters and Information Requests is set out below,

### **IAC Request No. 28**

The proposed landscape plantings are estimated to have a long term survival rate of:

- Large indigenous native trees 50 - 100 years based on their known mature lifespans
- Large exotic tree species 50 – 100 years based on their known mature lifespans
- Large shrubs native/indigenous 20+years based on their known mature lifespans
- Small shrubs and native grasses 10-15 years based on their known mature lifespans

Within the roadside environment these lifespans have been achieved which is evidenced by the size, maturity and longevity of past plantings along the M1 and other western suburb freeway locations.

### **IAC Request No. 29**

The expected timeframe for the development of a tree canopy of equal (or greater size) is to the order of 15-20 years. This is the same for tubestock or semi-advanced larger trees (45L, 1.5-2m tall).

### **IAC Request No. 30**

The choice of location for tubestock trees is based on the extent of mass plantings of trees in large garden bed areas to screen and create habitat. This is generally where tubestock plantings are proposed as they are protected by the extent of the garden bed.

Where individual trees are proposed such as along major roadways or singularly in open lawn areas then larger semi-advanced trees are proposed. This is because the larger trees are more visible within higher profile and higher trafficked areas as well as for maintenance staff so they do not become lost amidst longer grass and destroyed when areas are slashed or mown.

### **IAC Request No. 32**

The understanding outlined in the last paragraph of section 4(1)(i) of the West Gate Tunnel Project - Preliminary Matters and Further Information Request document is mostly correct but the nominated landscaping width of 2m is incorrect.

- Correct - The existing retained noise barrier (2.5m high) is the current boundary fence along the residential properties. This fence was located on the property line so as to allow for maintenance access into the freeway corridor from Freemans Road. There is currently a secure gate constructed as part of the noise barrier at Freemans Road.
- Incorrect - The proposed noise barrier (8.25m high) sits behind the roadside crash barrier at the bottom of a small embankment, as the freeway area is lower than the adjoining land.
- Incorrect - That along part of the length of the project the mediating landscape is contained in a 2m wide strip is incorrect. The mediating landscape is contained in a variable width strip of land that varies between 4 – 10m in width.
- Correct – The trees to be located in this area are described as "type 6 large native/indigenous tree mix" which are proposed to provide visual screening of the larger proposed noise barrier and to create an equivalent or greater tree canopy extent.

### **IAC Request No. 33**

As noted within the response to point 32 the mediating landscape will allow for maintenance access to remain from Freemans Road. The width of landscape garden bed will be designed to allow for maintenance access but will still provide enough planting area and width for the "type 6 large native/indigenous tree mix" to be installed to provide, over time, a visual screen to the proposed noise barrier as well as create, in time, an equivalent or greater tree canopy.

### **IAC Request No. 40**

Additional Sections were provided at Ferguson St and Le Fevre St as per the request from IAC.

## **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.

A handwritten signature in black ink, consisting of a large, stylized initial 'D' followed by a long, horizontal, wavy line.

.....  
**Signed**

**Date: 01 August 2017**

## Appendix A Matters Raised by PPV Guide to Expert Evidence

- (a) the name and address of the expert;

**Deiter Lim**

**Managing Director  
Tract Consultants Pty Ltd  
195 Lennox Street  
Richmond 3121**

- (b) the expert's qualifications and experience;

- **Master of Landscape Architecture, The University of Melbourne**
- **Advanced Certificate of Horticulture, Burnley College of Horticulture, The University of Melbourne**
- **Bachelor of Planning & Design (Hons), The University of Melbourne**

**I have over 20 years of experience in the field of Landscape Architecture having worked on significant and award winning infrastructure projects. Refer to Appendix B for my full CV**

- (c) a statement identifying the expert's area of expertise to make the report;

**As the landscape and urban design director, Deiter has over 20 years of experience in large scale masterplanning, urban, landscape and infrastructure projects. He has overseen the integrated environmental, landscape and urban design aspects for projects across a diverse field of typologies including green and brownfield residential development, activity centres, public facilities, campuses, transport and infrastructure corridors. Even as Managing Director of the firm, Deiter is directly involved in all major facets of project developments from the day to day running of the job including site analysis, conceptual design, design development, documentation through to contract administration.**

**Prior to joining Tract in 1996, he worked with VicRoads, being involved with the multidisciplinary teams of consultants and engineers on site analysis, masterplanning, design, documentation and administration of landscape works associated with major road and freeway projects such as the award winning Eastern Freeway extension and Eastlink. Deiter has a wealth of experience with a wide range of significant public and private sector strategic clients, bringing a strong philosophy of collaborative integration of design teams, with client and stakeholder communication and consultation within the project management process.**

**Refer to Appendix B for my full CV.**

- (d) a statement identifying all other significant contributors to the report and where necessary outlining their expertise;

**None**

- (e) all instructions that define the scope of the report (original and supplementary and whether in writing or oral);

**I have been instructed in writing (letter dated 28 July 2017) and orally by Clayton Utz who act for the Western Distributor Authority in relation to the West Gate Tunnel Project (Project).**

**In relation to this report I have been instructed by Clayton Utz to:**

- **review the IAC's Preliminary Matters and Further Information Request, and provide a response where relevant.**
- **Review the public submissions referred to me to the extent relevant to my area of expertise.**

- **Prepare an expert report that:**
  - **responds to the public submissions relevant to my area of expertise;**
  - **addresses my previous work and any changes required arising out of the issues raised by the public submissions; and**
  - **any other matter that I consider relevant to my area of expertise.**
- **Prepare a short power point presentation for presenting at the hearing.**
- **Attend the hearing to give evidence in relation to my report.**

(f) the identity of the person who carried out any tests or experiments upon which the expert relied in making this report and the qualifications of that person;

**Not Applicable**

(g) a statement setting out the key assumptions made in preparing the report;

**In preparing this report I have assumed that all documents, reports and submissions relevant to my area of expertise have been allocated to me for review and response.**

(h) a statement setting out any questions falling outside the expert's expertise and also a statement indicating whether the report is incomplete or inaccurate in any respect.

**I confirm that this report is complete and accurate and that in the preparation of this report I have limited my response to my area of expertise only and have not responded to any questions that fall outside my field of expertise including but not limited to areas relating to:**

- **geotechnical engineering, civil engineering, traffic engineering, engineering services, tunnel works, bridge design and engineering, urban design and architectural works.**

## Appendix B CV



## Deiter Lim

Managing Director

Adelaide

Melbourne

Tract

### Education

*Master of Landscape Architecture,  
The University of Melbourne*

*Advanced Certificate of  
Horticulture, Burnley College of  
Horticulture, The University of  
Melbourne*

*Bachelor of Planning & Design  
(Hons), The University of  
Melbourne*



### Experience

As the landscape and urban design director, Deiter has over 20 years of experience in large scale masterplanning, urban, landscape and infrastructure projects. He has overseen the integrated environmental, landscape and urban design aspects for projects across a diverse field of typologies including green and brownfield residential development, activity centres, public facilities, campuses, transport and infrastructure corridors. Even as Managing Director of the firm, Deiter is directly involved in all major facets of project developments from the day to day running of the job including site analysis, conceptual design, design development, documentation through to contract administration.

Prior to joining Tract in 1996, he worked with VicRoads, being involved with the multidisciplinary teams of consultants and engineers on site analysis, masterplanning, design, documentation and administration of landscape works associated with major road and freeway projects such as the award winning Eastern Freeway extension and Eastlink. Deiter has a wealth of experience with a wide range of significant public and private sector strategic clients, bringing a strong philosophy of collaborative integration of design teams, with client and stakeholder communication and consultation within the project management process.

### Key Projects

- Eastlink – Mitcham to Frankston Tollway: 2010 AILA Award; 2009 Architectural & Design Excellence Sth-East Awards
- Deer Park Bypass: 2009 AIA Award
- M80 - WRR Upgrade - Tilburn to Sunshine Ave
- Regional Rail Package B
- Dynon Port Rail Project
- Westall Road Grade Separation
- South Road Superway, Adelaide
- Princes Freeway - Corio Section: 2004 AILA Award
- New Royal Adelaide Hospital - PPP delivery
- City Link - Independent Reviewer Role
- Melbourne University – Asia Centre
- New Quay Precinct for MAB at Docklands: 2005 AILA Award
- Commonwealth Games Village: 2003 & 2004 AILA Award
- Deakin University, Burwood Campus: 1998 AILA Award
- Eastern Freeway Extension: 1998 AILA Award

