EXPERT EVIDENCE REPORT

Author:

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Qualifications and experience:

I am Professor of Architecture at The University of Western Australia, where I am a former Dean of the Faculty of Architecture and Head of School, and a Professorial Fellow at the University of Melbourne. I am a Life Fellow of the Australian Institute of Architects and an Honorary Fellow of the New Zealand Institute of Architects. I previously held the positions of Victorian Government Architect (2008-14) and Western Australian Government Architect (2004-8). In these roles I advised the two state governments on a wide range of projects and on issues such as design quality, project procurement, master planning, urban design, sustainability, and development strategies. I maintain a role as a consultant on urban design, architecture, design review and architectural competitions.

Area of expertise for this report:

In my role as Government Architect over a period of eleven years for two Australian states, I participated in major urban design projects and conducted or contributed to urban design workshops. In Victoria, this work included projects like Federation Square East, E-Gate, Southbank Cultural Precinct, Melbourne Metro, Fishermans Bend, Maribyrnong Defence site, East-West Tunnel, Dandenong city centre and campus design for Monash, Melbourne and RMIT Universities. In Western Australia, projects included Elizabeth Quay, Northbridge Link, the Cultural Centre Precinct, Cathedral Square, Fremantle Ports, Kings Square redevelopment, Leighton residential development, and the Murdoch and University of Western Australia

campuses. My office initiated, and I chaired the Victorian Design Review Panel, which reviewed a large number of government and private sector urban design projects. I have chaired or been a member of numerous international and state design competition and award juries. I write about architecture and urban design, a process that compels a considered and rational approach to the evaluation of a broad range of projects. Teaching architecture and urban design requires a developed capacity to critique.

My evaluations of urban design quality are made largely in the form of judgments, informed by scientifically quantifiable evidence when appropriate and available. The judgments are based on knowledge of the field of urban design, on the experience derived from deliberations informing a range of urban design projects, and also on evaluative processes. The Commission for Architecture and the Built Environment (CABE) was, for a period of 12 years, the UK government's advisor on architecture, urban design, and public space. CABE became the 'gold standard' internationally, a point of reference for processes that embedded a design ethos in planning to secure better outcomes for the community. CABE recognised the need for independent advice on proposals for major projects to ensure best possible outcomes. They used design review offered by panels of independent experts, they used enabling services to influence projects at early stages of their development, and they used community engagement, all as the means of testing and informing design proposals. The processes developed by CABE and the evidence of their results provided a proven modus operandi for design evaluation while I was government architect in both Victoria and Western Australia.

Instructions that define the scope of this report:

I received written instructions from Ashurst, on behalf of City of Melbourne, to offer an initial analysis and opinion on urban design aspects of the West Gate Tunnel Project (WGTP) as far as it relates to the City of Melbourne's municipality. I have since received further written instructions from Ashurst to offer a broad evaluative overview of the urban design aspects of the Port, CityLink and city connections component of the WGTP, with a particular focus on the WGTP's connections to the

central city area, namely the Dynon Road off-ramp and the Wurundjeri Way extension, and their implications for the central city area.

Other contributors to this report

There have been no other contributors to this report.

Facts, matters and assumptions

This report has been written after studying the proposal for the WGTP, the Environment Effects Statement (EES) for the WGTP, the EES Map Book, and the City of Melbourne's submission to the IAC endorsed by the Future Melbourne (Transport) Committee. Reference has also been made to other City of Melbourne policy documents related to the aspects listed below. I have also conducted desktop research to help inform aspects of the report.

1.0 Overview of the WGTP

Of the aspects of the WGTP on which I have been asked to comment, the major concerns that I have are the way in which a number of long-term City of Melbourne policies and their ambitions are being threatened, and the way in which urban renewal opportunities to the west and north-west of the central city are being compromised. The relevant City of Melbourne policies are referred to in the next section of this report, 2.0 The Dynon Road Connection.

The state of Victoria, and the Melbourne metropolitan area in particular, has been well-served by the quality of the urban design elements associated with its new roads and freeways. Roads such as the Craigieburn Bypass, the Eastlink Freeway, and the Deer Park By-Pass, are made highly distinctive through the design of their noise barriers, bridges and signage, the design of adjacent planting, the use of public art and, as a result, they become contributors to the public realm. The WGTP has also given attention to the considered design of selected elements and surfaces.

In response to the observation in the EES that '…the visual impacts of major new transport infrastructure cannot be avoided completely, they can be mitigated by high quality urban design', the WGTP proposes:

> Large scale structures have been designed as attractive, iconic features that

> reflect their local settings. Project structures, design motifs, patterns and surfaces would reference Aboriginal cultural elements (such as eel traps, woven baskets and canoe shapes), the maritime heritage associated with the Port of Melbourne and the waterways of the west (including nets, ropes and shipping containers) and regional geographic landmarks (such as the You Yangs and the Surf Coast)[1].

While this approach will result in distinctive elements forming a part of the WGTP, as in the other road projects nominated above and as made evident in the renders included in the WGTP Environment Effects Statement (EES) Map Book, my report does not engage with that detail of design consideration. Instead, larger urban design and planning implications of the WGPT have taken precedence as, in my view, they are of significantly more long-term importance to the city. In addition, I am of the view that it will not be possible to mitigate sufficiently the impact of these larger scale decisions by smaller scale design interventions, no matter their quality.

Although good urban design is now an embedded expectation in the delivery of Victorian road infrastructure, views of what constitutes good urban design continue to evolve with changing knowledge. International assessments of what contributes to making cities sustainable and liveable has created a shift away from the primacy of inner urban vehicle movement and towards repairing the damage and broken connections caused by large freeways cutting through central city areas. A number of leading cities in the world have sufficiently valued the pursuit of quality urban outcomes to undertake the complexity and expense of demolition of existing elevated roads.

The city of Seoul provides vivid examples of this approach with the Cheonggyecheon urban renewal and Skygarden projects. Cheonggyecheon was the site of a four-lane elevated freeway carrying 168,000 cars per day above a polluted river. The freeway was removed and the land beneath was converted into a 10 kilometre-long linear park flanking the cleaned river, creating a new recreation space that has been hugely

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[1] EES, p.21

successful in terms of public use and acting as a catalyst for related urban revitalisation[2].

Photos showing the freeway, its destruction, and the resultant new setting. Image source: https://urbandesignmilitia.wordpress.com/category/uncategorized/

The multiple benefits arising from the Cheonggyecheon elevated freeway removal encouraged the development of a number of other projects and provided several unexpected benefits such as:

- Another elevated freeway in Seoul was removed and replaced with a surface street soon after
- A 16-lane road in Seoul was reduced by half and a massive public plaza built with the additional space
- A major street interchange in front of Seoul's City Hall was replaced with a public plaza
- An urban streams renaissance spread across the country, with citizens everywhere wanting to restore their local rivers and streams

[2] https://en.wikipedia.org/wiki/Cheonggyecheon#Restoration; and https://www.theguardian.com/cities/2016/may/25/story-cities-reclaimed-stream-heart-seoul-cheonggyecheon

- Property values adjacent to the corridor increased by 300 per cent
- Species of fish, birds, and insects have increased in and around the river
- The “urban heat island” effect was diminished in Seoul, with temperatures in the vicinity of the river on average 5.6 degrees F lower than surrounding areas[3].

The Skygarden project converted a 1970s elevated roadway into an aerial garden that purposefully connects places that had previously been fragmented by the road and rail system. It is recognised as

> …part of a bigger set of ideas about taking a big, dense – sometimes ugly – city, one which was created without a great deal of concern for public space and pedestrian movement, and giving it qualities of walkability, neighbourliness, human scale and shared enjoyment of its places.[4]

Successful freeway removals or conversions have also been achieved in a growing number of cities in the United States, a country known for being highly car-dependent. Examples include Portland, where the Harbour Drive Freeway was replaced by the Tom McCall Waterfront Park, in San Francisco where the Embarcadero Freeway was replaced by a tree-lined boulevard, and in Milwaukee where the Park East Freeway was removed to create an area of high-value urban renewal[5].

[3] as cited in http://grist.org/infrastructure/2011-04-04-seoul-korea-tears-down-an-urban-highway-life-goes-on/
[4] https://www.theguardian.com/cities/2017/may/19/seoul-skygarden-south-korea-london-garden-bridge
[5] https://en.wikipedia.org/wiki/Freeway_removal

Left: Portland was the first major US city to tear down an urban freeway. In 1974 Harbour Drive was converted into Tom McCall Waterfront Park. Right: San Francisco's Embarcadero Freeway. Images: https://www.slideshare.net/naparstek/highway-removal-placemaking-public-space

It is useful to compare the determination to remove overhead freeways in these international examples, resulting in higher quality urban outcomes and significant new redevelopment opportunities, with what is being proposed for the WGTP. In particular, I refer to the proposal to use elevated roads for the extension and widening of Wurundjeri Way flanking the northern and eastern edge of E-Gate and cutting through the southern edge of Arden Macaulay, for the connection to Dynon Road through E-Gate, for the Footscray Road elevated structure, and for the crossing over the Maribyrnong River.

The E-Gate site provides the key means of linking Docklands, the city centre, the existing West Melbourne and North Melbourne residential areas, the North Melbourne station, and the urban renewal at Arden Macaulay. This linkage needs to occur at all levels, vehicular, cycle, pedestrian, functional, visual, and experiential, to enable a fully connected urban outcome. The potential of the development that will result from the inter-connected urban renewal areas of E-Gate, Dynon, and Arden Macaulay is substantial.

In a consolidated inter-connected form, this area of E-Gate, Arden Macaulay and West and North Melbourne, close to the city centre and well serviced with public transport, is logically able to allow urban expansion, and provide extensive opportunities for mixed-use development, including a high component of desirable residential units.

In addition, the western edge of E-Gate, which includes the two sides of the Moonee Ponds Creek bank, offers the potential of restoration of the Creek edges and the conversion of this area to green open and recreation space. The City of Melbourne has proposed, for this part of E-Gate, a new Capital City open space 'for future Capital City purposes' which 'may include facilities for festivals and event'[6]. While there is clearly an existing need for open and recreation space for the west of the city, this need can be expected to grow substantially with the development of the renewal areas of E-Gate and Arden-Macaulay. These development areas will generate significant new high-density residential projects resulting in a large influx of people living in the area.

In its current fragmented industrial state, surrounded by the elevated CityLink freeway and its off-ramps, by the major roads of Dynon Road and Footscray Road, and extensive heavy rail lines, this area presents considerable difficulties in achieving the kind of urban outcomes that allow for connected communities with high quality built environments.

In its proposed form, the WGTP entrenches and exacerbates these difficult conditions with more elevated roads and the extension of Wurundjeri Way. Earlier decisions about using elevated freeways that flank city edges, now acknowledged in many parts of the world as destructive of cities, are being continued. The approach adopted by the WGTP appears related to a view that recognises the area as blighted because of earlier road engineering outcomes and current industrial use, and does not engage with how the project design may inhibit change nor with what the potential of change should mean for the project design.

However, as discussed above, a growing number of cities in the world are removing elevated roadways. Decisions to remove elevated roads and freeways are usually motivated by the recognition of the urban blight they create, the need to reconnect fragmented precincts, re-establish neighbourhoods, provide recreational

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[6] *Open Space Strategy: Planning for Future Growth*, City of Melbourne, 2012, p.28

opportunities and/or create new mixed-use communities close to the city and, in this way, contribute to the containment of urban sprawl. Good design ensures that a high level of amenity is provided and able to generate substantial uplift in surrounding property values.

The WGTP proposal is in stark contrast to this approach and makes the potential of urban renewal even more difficult than is currently the case.

The EES acknowledges, under the heading, 'Community':

> There would be high visual impacts from the project's elevated structures…including the bridges over the Maribyrnong River, the elevated road along Footscray Road and the elevated connections across Moonee Ponds Creek[7].

Where it is present, good design is focused on the secondary elements, what could be considered as a form of window-dressing in light of the highly conspicuous primary elements, the overhead road structures:

> The use of high quality urban design, extensive landscaping and vegetation would assist in integrating these structures with the urban environment over time[8].

It is not clear from this EES assertion what it is that would be integrated with over time and it is highly unlikely that any of these secondary elements would enable the massive overhead structures to be integrated successfully in any setting.

Visual and noise pollution and the poor quality environments created under overhead roads will, in my opinion, limit the potential of future urban renewal in the precinct, despite the claim to the contrary in the EES: 'The project would not preclude the development of planned urban renewal sites within or adjacent to this component'[9].

In justifying the visual and other impacts arising from the use of elevated roadways and bridges, the EES observes that:

> The industrial character of the area, the presence of existing elevated structures and the backdrop of port and rail infrastructure would ameliorate

[7] EES, p.53
[8] EES, p.53
[9] EES, p.53

these impacts[10].

This comment appears to validate what is a short-term approach based on the existing circumstances, one that has the potential to compromise future options for change of use in the precinct. International precedents like Nordhavn in Copenhagen, Hudson Yards in New York, Kop Van Zuid in Rotterdam, HafenCity in Hamburg, and EuroMediterranee in Marseilles, demonstrate how dramatic change of use can occur and bring significant urban benefits. These sites, like the areas through which the WGTP is proposed to pass, all close to their city centres and once large working sites comprising heavy port, industrial or rail functions, have been transformed into mixed use precincts – commercial, residential, cultural and recreational. They are significant projects of urban regeneration, delivering substantial economic, social and other benefits.

In acknowledging these precedents and their previous relationship to the port, rail and industrial uses of the areas of west Melbourne discussed above, I recommend that great care be taken to ensure that the development potential of these areas is not further compromised. I am of the view that the Dynon Road connection and the extension and widening of Wurundjeri Way will seriously compromise this potential.

2.0 The Dynon Road connection

Melbourne is a city that has been transformed over the last thirty years from a central business district with little residential occupation and little after-hours activity, into a thriving urban centre with highly activated streets. This transformation has come about, significantly, through the development and refinement of urban design policies by the City of Melbourne that have resulted in a substantially greater use of the city centre as a place that residents and visitors now value highly.

Postcode 3000 was a planning policy from 1992 that encouraged increased residential development in the city centre. Following its early success, the City of Melbourne developed urban design improvement programs that included widening and re-paving its footpaths, planting shade trees, discouraging both street parking and the use of cars in the city centre, creating cycle ways, and promoting the concept of a walkable and more liveable city.

[10] EES, p.53

Other more recent policies and plans of the City of Melbourne are directed towards similar ambitions for a more liveable and workable city. This is evident in, for example, *City North Structure Plan* (2012), *Docklands Community and Place Plan* (2012), *Open Space Strategy* (2012), *Arden Macaulay Structure Plan* (2012), *Access Docklands* (2013), *Community Infrastructure Development Framework* (2014), *Places for People* (2015), and *West Melbourne Structure Plan* (endorsed DRAFT – released for consultation, July 2017).

These policies and their associated urban design strategies have helped promote greater investment in the city centre and broad recognition of it as a highly desirable place in which to live and work. This has been acknowledged in *The Economist*'s listing of the world's most liveable cities, in which Melbourne has topped the list for six years in a row from 2011.

The recurring accolade of the world's most liveable city was most recently announced by *The Age* newspaper on 18 August 2016, but then challenged on 16 February 2017 when a different journalist, writing in *The Sydney Morning Herald*, offered five key challenges threatening Melbourne retaining this accolade. The first of the five challenges was the congestion on roads coming into the central city.

As set out in the City of Melbourne's submission to the Inquiry and Advisory Committee, endorsed by the City's Future Melbourne (Transport) Committee, the City has been committed for a period of 30 years to reducing through traffic in central streets. In North and West Melbourne alone the City advises that it has spent over $20 million to achieve a reduction of between 20-25% in the numbers of vehicles moving through the city[11]. I have no reason to doubt these figures.

In urban design terms this contributes to a less congested, less polluted and a safer environment, one more conducive to street level activation in flanking buildings, and to the encouragement of more mixed use occupation of effected buildings, including residential. It will also enable the trams and buses servicing these areas to operate at a more optimal level, without the constraints on ease of movement and desirability of their use imposed by traffic congestion. These gains from reduction in traffic and ease of use of public transport will assist in creating a more positive setting for investment in urban renewal and general liveability.

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[11] City of Melbourne Submission, p.4

The proposed WGTP Dynon Road connection will add considerably to the traffic in this precinct, removing the City's gains in traffic reduction and its consequent benefits, resulting in a poor urban outcome. The City's submission highlights the fact that the Eddington Report, the East West Link Needs Assessment (EWLNA), proposed that a freeway linking east and west Melbourne should operate as a bypass and not feed exits into the central city12. The bypass option, with the promise of ongoing reduction in traffic, would allow a better urban design outcome in this part of the city. The EWLNA also notes that '…failure to reduce congestion levels over the coming decades will have serious economic, social and environmental repercussions for Melbourne – and for Victoria'13.

There is a clear danger in my view, that when urban planning decisions are made that consider only the movement of traffic, poor urban outcomes result. On the evidence presented in the EES, the proposal to link the WGPT to Dynon Road appears to be one such decision.

A key factor in achieving successful outcomes in the Arden Macaulay redevelopment will be the strength and legibility of accessible connections to the high-density developments to its south, Docklands and a future E-Gate, to West Melbourne, and on to the city centre. The proposed Dynon Road connection will create another barrier to the potential of connection.

To enable the Dynon Road connection, overhead roadways and ramps cut through the western end of E-Gate, resulting in a loss of 1.5 hectares of the 20 hectare site. In a high-density redevelopment area such as this, the loss of 1.5 hectares can mean the forfeiture of many hundreds of residential units that could have been built on the land, reducing the development potential of E-Gate. Alternatively, it could threaten the necessary provision of open space and the proposal from the City of Melbourne to provide a major new open space in proximity to Moonee Ponds Creek[14].

While the loss of the land is substantial, the resultant presence of the additional physical and visual barrier of the overhead bridge and road will be particularly damaging to how this part of the E-Gate development is experienced.

The EES notes that:

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[12] City of Melbourne Submission, p.6
[13] Rod Eddington, *East West Link Needs Assessment*, Melbourne 2008, p.17
[14] *Open Space Strategy: Planning for Future Growth*, City of Melbourne, 2012, p.28

> The long-term development would allow proponents to respond to the West Gate Tunnel Project's infrastructure through the master planning process that would occur after completion of the project[15].

This appears to be, somewhat disingenuously, making a virtue of a newly introduced problem.

The EES also notes that the project will create:

> …opportunities to improve walking and cycling connections between West Melbourne, the E-Gate urban renewal site and Docklands by providing key shared use path connections on the Dynon Road bridge, over the Moonee Ponds Creek (Capital City Trail) and across Footscray Road linking these key precincts and development sites[16].

This claim does not include reference to the quality of experience resulting from these opportunities which, in my view, will be poor and potentially dangerous as a consequence of the adjacent presence of fast moving vehicles. Nor does the claim acknowledge the encroachment of this section of the project into a part of Moonee Ponds Creek that is currently little affected by the surrounding road and rail network. This section of Moonee Ponds Creek is in danger of becoming like parts of the Creek to the immediate north, under the shadow of overhead freeway roads, an unwelcoming and hostile environment, and not conducive to the kind of open space and recreational opportunities needed by the E-Gate and nearby developments to develop into flourishing inner city mixed-use residential communities. The direct access to the natural features of Moonee Ponds Creek is a particularly desirable aspect of the E-Gate development, a positive attribute of its location, and one that allows valuable open space with attractive connections along the Creek to Docklands and Arden Macaulay. However, this location and its qualities will be visually impacted in a negative way by the proposed overhead road and bridge.

3.0 The extension and widening of Wurundjeri Way

This proposed extension and widening of Wurundjeri Way will, like the Dynon Road connection, compromise the potential for connections between Docklands, E-Gate, West Melbourne and the Hoddle Grid, making what is already a difficult urban design problem, even more difficult. Any future consideration of building on or over the rail

[15] WGTP Environment Effects Statement (EES), Summary Report, p.19
[16] EES, p.19

land leading into North Melbourne station will be inhibited by the presence of a new and wider Wurundjeri Way carrying large volumes of traffic.

The EES notes:

> The project corridor contains areas identified for redevelopment, urban renewal or potential future development. While there is uncertainty about these areas, planning for the West Gate Tunnel Project has sought to minimise impacts on them and to keep open options for suitable planning and design responses where these areas would interface with project infrastructure[17].

The extension and widening of Wurundjeri Way is located on the eastern and northern edge of the E-Gate site, parallel to existing rail lines. Despite the claim being made that WGTP has sought to minimise impacts, the scale of this elevated road component of the proposal will impact negatively on the potential for integration with and connections between Docklands, E-Gate, Arden Macaulay and West Melbourne. It will also impact negatively on the development potential of E-Gate and parts of Arden Macaulay because of the undesirability of living and working close to large elevated roads. These impacts result, again, from the potential of noise and pollution, and the presence of a large physical barrier with undesirable spaces below and the casting of extensive shadows. As a consequence, design and construction responses will be needed to help mitigate these problems, adding an impost on development.

And, when combined with the impact of the proposed elevated roadways linking to Dynon Road that run across the western part of the site, it is my opinion that the economic and social success of the E-Gate development will be compromised.

4.0 Summary of Opinion

In terms of the aspects I have been asked to evaluate, the WGTP proposes what I regard as a short-term solution to an evolving set of conditions, the outcome of which will inhibit future options that should deliver better outcomes for the city. The proposal would benefit from a longer-term and more integrated approach to transport in the city, including the role of public transport, and an explicit response to more

[17] EES, p.19

recent practices in traffic management and urban freeways in other parts of the world.

The EES notes that:

> The (WGT) project is committed to creating an important new asset for Melbourne that achieves excellence in sustainable practices and is resilient to anticipated climate hazards[18].

To be sustainable and resilient, in this instance, should mean including consideration of best international practice in future-proofing potential redevelopment sites and acknowledging, from all the available evidence, the way in which the use of cars is changing and will continue to change. It should also mean a recognition of how the use of industrial, rail and port land that is close to a city centre is changing as a result of the growing recognition of the advantages of living in close proximity to the city.

In my opinion, the case for the Dynon Road connection is significantly compromised by the negative effects on the E-Gate site described above, on the congestion it will bring to the point of connection and linked streets in North Melbourne, and on the subsequent additional cars brought into the city centre. On this basis, serious consideration should be given to deletion of this component of the WGTP.

Serious consideration should also be given to converting the Wurundjeri Way extension into a tunnel, thus avoiding the difficulties outlined in 3.0 above. A surface road, designed like a boulevard with extensive planting and well-considered pedestrian crossings could also be considered as a solution to a number of the difficulties outlined – but, this option is unlikely to satisfy a perceived need for rapid traffic movement.

My report is in fundamental agreement with the City of Melbourne submission endorsed by the Future Melbourne (Transport) Committee on 4 July 2017 and submitted to the Inquiry and Advisory Committee. The submission is measured and comprehensive, well-argued, and highly informed in terms of long-standing plans and policies for the city, and current international thinking about planning for traffic in highly urban settings.

[18] EES, p.56

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 Panel.

Geoffrey London

2 August 2017