

Punt Road Public Acquisition Overlay

Expert Witness Statement

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1.0 Professional details

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1.1 Qualifications and Experience

Master of Applied Science (Horticulture), University of Melbourne 1998

Personal experience:

I am an experienced practitioner in public open space design, implementation and management and has practiced in private practice, academia and local government for 25 years.

I joined the City of Melbourne in 2000 to lead the Tree Planning Portfolio and have been Manager, Urban Landscapes since the Branch's inception in 2010. I now manage the Urban Sustainability Branch within the City of Melbourne which was created in 2015 from the merging of the Urban Landscapes and Sustainability Branches. I am recognised professionally at a national level for upholding the City of Melbourne's reputation for its green infrastructure, and as an advocate for sustainable design, development and management of public places.

I have delivered numerous addresses to conferences and seminars at local and international levels, and he has authored, co-authored and contributed to numerous publications.

Experience at Urban Sustainability Branch, City of Melbourne:

Urban Sustainability leads and implements the City of Melbourne's Strategies and projects to improve the sustainability of the built and natural environment in Melbourne for current and future populations. The Branch's current policy research focuses on understanding the health and economic benefits of green infrastructure, biodiversity and ecology in cities, integrated water management, and urban heat island mitigation. Over the past three years, I have with my multi-disciplinary team have delivered a \$30 million climate adaptation program focused on green infrastructure planning in the public realm and numerous open space projects which increase the amount of open space in the municipality. My team and I have also been credited with the development of some of Australia's most progressive environmental policies at a capital city level, which includes the *Urban Forest Strategy*, *Open Space Strategy*, *Urban Forest Guidelines*, *Growing Green Guide*, *Elizabeth Street Integrated Water Cycle Management Plan* and comprehensive input into *Total Watermark*.

This strategic framework collectively forms the basis for: i) implementing programs to increase the quantity and quality of the Urban Forest and Open Spaces within the municipality; ii) working as part of advisory teams with other areas of Council on issues, tasks and special initiatives including traffic management, urban design, community benefits and wellbeing, and sustainability; and iii) providing expert advice to other municipalities in Melbourne, regional areas and interstate on matters affecting tree health and management.

Awards:

Urban Landscapes' progressive approach to adapting the city to future climate change has been awarded the following accolades:

- Best Specific Environmental Initiative for Local Government 2013 by the United Nations
- Association of Australia at the World Environment Day Awards, and the inaugural Climate Change Adaptation Award by the Banksia Foundation at the Banksia Awards.
- Open Space Strategy won the planning award at the 2012 Australian Institute of Landscape Architects Victorian Awards.

- Adaptation and Resilience award at City Climate Leadership Awards 2014.
- The Victoria medal for landscape architecture at the 2015 Australian Institute of Landscape Architects Victorian Awards for the Urban Forest Strategy and Precinct Plans.

1.2 Instructions

I have been asked to address the following questions:

- What policies and principles guide decision making affecting existing open space with the City of Melbourne?
- What value does the open space potentially impacted by changes to Punt Road hold for the City of Melbourne?
- Would the reduction in open space identified in options 2 to 7 have a material impact on the provision of open space within the City of Melbourne and if so how?

This statement addresses the assessment of impacts on two important Open Spaces within Melbourne's public realm; Fawkner Park and the Yarra River corridor. This statement also considers the impact of the alternative options 2-7 which have been proposed to ease traffic congestion should the Public Acquisition Overlay PAO be approved to be removed.

This statement was prepared with contributions from The Team Leader and Senior Open Space Planners in the Open Space Planning Team at the City of Melbourne.

A range of other statements, documents, links and resources have been appraised during preparation of this statement – the majority of which have been identified in the Endnotes.

1.3 Summary of Opinions

The removal of the PAO itself will not materially impact upon Melbourne's Open Space.

Proposed options/concepts 2-7 as outlined in the Options Report (October 2015) as currently described will detrimentally impact Melbourne's Open Space and, if allowed to go ahead, will endorse a negative precedent that further degrades the value of all Open Space in Melbourne.

The loss of open space incrementally through acquisition of open spaces into roads, or a myriad of other infrastructure is inconsistent with contemporary best practice for cities.

2.0 Context

2.1 Strategic Frameworks at the City of Melbourne

The City of Melbourne has developed frameworks for addressing climate change adaptation and increasing urban densification, principally through the implementation of two key documents: the *Open Space Strategy* and the *Urban Forest Strategy*.

These strategies are part of the City of Melbourne's ambition to become one of the world's most sustainable cities, recognising the risks that climate change poses, reducing our impact

and becoming more resilient whilst also managing the opportunities and challenges of urban densification.

3.0 Statement of Evidence

3.1 What policies and principles guide decision making affecting existing open space with the City of Melbourne?

3.1.1 City of Melbourne value of urban ecosystems and biodiversity

Melbourne has been traditionally regarded as Australia's 'garden city', recognised for its world renowned network of parks, gardens and streetscapes. Urban forests and open spaces are a critical element of the city's fabric, liveability and cultural heritage, and contribute to Melbourne being one of the most liveable cities in the world, and most biologically diverse. Biodiversity is a fundamental driver of human health and wellbeing in cities through the direct provision of 'ecosystem services' such as pollution and water filtration, shade and nutrient cycling and urban cooling, and indirectly by providing resilience to a changing urban ecosystem.

Unfortunately, the longevity of this green legacy is now under threat through the changing climate, new diseases and the pressures of increasing urban density to accommodate a growing population. Under these variable conditions, the lifespan and efficiency of trees and other urban vegetation to provide necessary ecosystem services is also threatened.

Addressing this impact on biodiversity requires contemporary perspectives that recognise the importance of protecting and enhancing biodiversity to secure the resilience and sustainability of Melbourne's urban ecosystem.

The population growth and forecast urban development in Melbourne is significant, resulting in greater than two-thirds more people living in the City of Melbourne by 2026 and approximately a third more people working in the municipality.

3.1.2 Open Space Strategy

The City of Melbourne endorsed an Open Space Strategy in 2012. This strategy provides the overarching framework and strategic direction for public open space planning in the City of Melbourne to 2027. It identifies that there is currently a significant deficit in the provision of public open space across the municipality both for the current population, and the projected future population. Melbourne is identified as one of the most liveable cities in the world, and one of the major contributory elements to this liveability is the quality and amount of open space. In a recent household survey undertaken during the research phase of this strategy, many people indicated they live in the municipality because of the open space.

The forecast population growth will mean more people living and working in higher density neighbourhoods. Increasing urban densities will result in more people needing to use open space to maintain their physical and mental health and wellbeing. This will place additional demand on existing open spaces and in some areas create the need to provide additional open space. Population growth is already occurring in areas lacking adequate or any open space. Growth will require improvement to the quantity, diversity, quality and natural features of open space to adequately cater to the increased population.

The Overall Direction of the Open Space Strategy is listed as a number of principles by which decisions are made at the City of Melbourne. These include:

- Maintain and expand a quality open space network
- Provide distributed open space within easy walking distance
- Improve community health and wellbeing

- Additional Capital City open space in urban renewal areas
- Additional Municipal open space in urban renewal areas
- Urban heat island effect mitigation and environmental improvements

The strategy also provides direction on:

- climate change – a decade of drought, water restrictions and extreme weather and the predicted impacts of climate change provide additional challenges in the management of parks and reserves and the role they can play in climate change adaptation
- ensuring open spaces can provide for and adapt to differing needs and uses, providing people with the opportunity to connect with nature.

Planning Scheme Amendment (C209) to introduce a new Open Space Contributions Framework into the scheme was approved in January 2016. This demonstrates the recognition within the planning scheme of the importance of open space provision.

3.1.3 Urban Forest Strategy

In 2011, the City of Melbourne began to strategically address the combined challenges of population growth and climate change through the development of its Urban Forest Strategy. The strategy provides a holistic and multidisciplinary approach to the urban landscape and aims to guide the evolution of the forest and to move beyond ‘traditional’ urban tree management practices, whilst incorporating a resilience-centric response to these challenges. Its objectives are to guide the transition of our landscape to one that is resilient, healthy and diverse, and that meets the needs of the community.

Its intended outcomes are to create resilient landscapes, community health and wellbeing and a liveable, sustainable city. The Strategy’s guiding principles are to: mitigate and adapt to climate change; reduce the urban heat island effect; become a water sensitive city; design for health and wellbeing; design for liveability and cultural identity; create healthier ecosystems; and to position Melbourne as a leader in Urban Forestry. Strategies include; increasing canopy cover in the public realm from 22% to 40% by 2040; and improving urban ecology by protecting and enhancing biodiversity to contribute to a healthy ecosystem.

Community and political support for these types of strategies is of paramount importance, and the consultation program developed for the project fostered an open dialogue with industry experts and stakeholders across the broad scientific, political and public spectrum.

In highly modified urban landscapes it is the sum of all species that plays a crucial role in the provision and conservation of biodiversity and the maintenance of ecosystem services.

Two Open Spaces that are impacted by the options proposed are Fawkner Park and the Yarra River Corridor. Fawkner Park and the Yarra River Corridor are fundamental components of the green infrastructure of Melbourne. The multi-dimensional aspects of these places as open space resources, habitat and essential green infrastructure assets of Melbourne will be made clear throughout this statement.

3.2 What value does the open space potentially impacted by changes to Punt Road hold for the City of Melbourne?

3.2.1 General Values of Open Space

Open space provides an array of social, health, economic and environmental benefits to individuals, the environment and to the community as a whole. In all its forms, open space is essential for enhancing the liveability of an area and improving the quality of life of its residents.

There is a significant body of local and international research and knowledge of the wide ranging benefits of open space. Collated by the Open Space Planning & Design Guide, *PLA Vic Tas, 2013*. The relevant benefits are summarised below.

Social Benefits

The social and health benefits of green open spaces are increasingly being recognised as important drivers in shaping future communities. Open spaces provide affordable outdoor sport, recreation and leisure opportunities for local communities and families to come together for a range of leisure, cultural or celebratory activities, enabling relationships and connections to be strengthened whilst enjoying the benefits of interacting with the natural environment.

Green spaces enhance liveability in urban environments

The importance of public open spaces to improving liveability in the urban environment is widely recognised. As cities are planned to have increased density, so the maintenance, management and distribution of parks and other open spaces is likely to have increased importance for liveability.

An extensive literature review undertaken by Deakin University found that the health benefits of “green nature” cannot be over-stated, particularly for people in urban environments. It found that contact with green nature can reduce crime, foster psychological wellbeing, reduce stress, boost immunity, enhance productivity, and promote healing.

The majority of health problems society will face, now and in the future, are likely to be stress related illnesses, mental health problems and cardiovascular health problems.

There is a growing body of research that indicates that access to green open spaces, be it for experiencing the natural environment, community based activities or structured or unstructured physical activity, enhances physical and mental health, and helps reduce the risk of developing chronic diseases.

Increasingly research shows that that when people have access to quality parks, they exercise more. Physical activity is an important counter to the problem of obesity and it is well documented that physical activity also relieves symptoms of depression and anxiety, improves mood, and enhances psychological well-being.

Beyond the benefits of exercise, a growing body of research shows that close proximity or a view of nature is clearly associated with improved psychological health, and reduced prevalence of depression, anxiety and other mental health problems, particularly amongst children and people with low incomes.

Environmental Benefits

Green open spaces provide both aesthetic and environmental benefits. The trees and vegetation within local parks and gardens and along linear reserves like river corridors provide a break in the urban fabric. The environmental benefits of open spaces and trees are both wide ranging and significant, and include:

- protection of areas of conservation, biodiversity or cultural heritage value

- assisting in mitigating and managing climate change impacts by:
- providing shade and cooling
- contributing to stormwater management
- contributing to urban heat abatement
- reduction of air and noise pollution

Open spaces protect areas of conservation or cultural heritage value

Mature trees are significant assets to our environment and our society, regardless of where they occur or whether they are native or exotic.

Trees and vegetation support native birds and animals, adding biodiversity to developed suburbs where Australian native habitat is often scarce.

Avenues of trees planted along streets act as green corridors in highly developed areas, and help birds and animals to travel through to nearby green spaces or bushlands.

Contribution to Stormwater Management

Green spaces provide a natural water retention and treatment system to manage stormwater. Tree canopies and root systems reduce stormwater flows and nutrient loads that end up in waterways.

Trees and vegetation more effectively and less expensively manage the flow of stormwater runoff than do concrete sewers and drainage ditches.

According to Moore (2009), estimates suggest that trees may hold up to 40% of the rain water that impacts on them and that as little as 40% of water striking trees may enter drains.

Contribution to abatement of Urban Heat Island Effect

Established research and ongoing studies confirm that the addition of trees and vegetation in the built environment provides the greatest benefit in terms of mitigating the urban heat island effect. (Urban Forest Strategy 2012)

Open spaces sequester carbon

During photosynthesis, trees convert carbon dioxide (CO²) and water into sugar and oxygen and store carbon within their biomass as they grow older. Urban trees therefore make an impact in absorbing carbon from the atmosphere. Chicago's urban forest annually sequesters 318,800 tonnes of carbon from the atmosphere, equivalent to the annual greenhouse gas emissions from over 50,000 passenger vehicles. (Ulrich, 1984)

Moore's (2009) study on the value of urban street trees also highlights the importance of trees in reducing the level of carbon sequestered to counter the impact of Australia's reliance on coal powered generators that produce large volumes of greenhouse emissions. Moore (2009) also highlights a New York study in 1994 found that the value of the city's trees in removing pollutants was estimated at US\$10 million per annum.

Open spaces reduce air pollution

Open spaces make an important contribution to the reduction of air pollution, especially carbon dioxide particulate levels. Moore (2009) identifies the economic value of the air pollutants removed by Melbourne's 70,000 trees to be more than \$14 million per annum.¹

Open spaces reduce noise pollution

Open space vegetation has the ability to lower urban noise pollution levels. Trees, shrubs and grass along freeways can deliver a noise reduction of between 2-8db over short distances. In the EU it has been estimated that noise pollution may impose a total cost to the economy of between 0.2 – 2 percent of GDP.²

Environmental Benefits in Dollar Values

The environmental benefits of open spaces, trees and vegetation have for some time now been well recognised and documented.

Growing demand for housing particularly in major cities has led to an increased interest and recognition of the dollar value of the environmental benefits of open spaces. Following is an overview of recent research findings.

Increasing tree cover by 10 percent or planting about 3 trees per building lot – saves annual heating and cooling costs by an estimated \$50-\$90 per dwelling unit because of increased shade.³

Moore (2009) estimates that the cooling effect of 100,000 mature urban trees in a city could save around 3 million kilowatt hours of electricity annually. This represents around 3600 tonnes of saved carbon emissions, in addition to the 300 million litres of water that would have been used to generate that amount of electricity.⁴

Research undertaken by Australian National University estimated the 2008 value of ecosystem services provided by Canberra's 26 million square metres of street tree canopy to be:

¹ Moore GM (2009) Urban trees: worth more than they cost. *Proceedings of the Tenth National Street Tree Symposium*. (Eds D Lawry, J Gardner and S Smith) pp. 7–14. University of Adelaide/Waite Arboretum, Adelaide

[Cited in "Working trees" key to urban resilience? Published in CSIRO Ecosmagazine 2009 accessed at \[http://www.ecomagazine.com/view/journals/ECOS_Print_Fulltext.cfm?f=EC151p34\]\(http://www.ecomagazine.com/view/journals/ECOS_Print_Fulltext.cfm?f=EC151p34\)](http://www.ecomagazine.com/view/journals/ECOS_Print_Fulltext.cfm?f=EC151p34) in March 2012

² Bolund, P. And Hunhammar, S. (1999) "Ecosystem services in urban areas", *Ecological Economics*, vol.29, no.2, pp.293-302

³ Mc Pherson Nowak 1997 cited in. Melbourne City Council, *Urban Forest Strategy 2012-2032: Making a great city greener Consultation Draft November 2011 at <http://www.melbourne.vic.gov.au/Environment/UrbanForest/Pages/About.aspx>* accessed in Feb 2012

⁴ Moore GM (2009) Urban trees: worth more than they cost. *Proceedings of the Tenth National Street Tree Symposium*. (Eds D Lawry, J Gardner and S Smith) pp. 7–14. University of Adelaide/Waite Arboretum, Adelaide

[Cited in CSIRO Ecosmagazine 2009 at \[http://www.ecomagazine.com/view/journals/ECOS_Print_Fulltext.cfm?f=EC151p34\]\(http://www.ecomagazine.com/view/journals/ECOS_Print_Fulltext.cfm?f=EC151p34\)](http://www.ecomagazine.com/view/journals/ECOS_Print_Fulltext.cfm?f=EC151p34) accessed in March 2012

\$23.5 million - \$6 million saved annually in energy and air conditioning costs;

\$12 million in pollution reduction; and

\$5.5 million in storm water mitigation and reduced infrastructure costs.

The Value of Melbourne's Trees

In formulating its Urban Forest Strategy 2012, the Melbourne City Council prepared a scientifically based amenity formula to calculate the value of its trees. The council used this formula and a US based tool called i-tree Eco, to roughly estimate the value of trees within a defined section of the municipality. The initial results show that the 982 trees studied:

- remove 0.5 metric tonnes of air pollution per year at a dollar benefit of \$3,820
- store 838 metric tonnes of carbon at a dollar value of \$19,100
- sequester 24 metric tonnes of carbon each year at a value of \$548 per year
- save \$6,370 in energy costs each year through shading buildings in summer and providing solar access in winter
- avoid carbon emissions by reducing energy use by \$114 per year
- are structurally worth \$10.4 million.

Economic Benefits

Local, regional and state economies benefit significantly from parks. They are a major drawcard for the recreation and tourism industries and significant sources of employment for local communities and of flow-on economic benefits.⁵

Quality Open Spaces attract visitors and generate tourism

Numerous international studies demonstrate that quality parks can boost local economies by attracting visitors and tourist and stimulating economic development opportunities.⁶

Open Spaces attract businesses and create employment

Urban open spaces and associated facilities generate economic activity through local events, community use of the spaces, and ongoing maintenance and management. Crompton (2009) found evidence that larger US employers, particularly high-tech companies, are attracted to cities with plentiful parks and open spaces in order to offer employees a better quality of life. These companies reported that the “calibre of employees that they wished to recruit cared as much about their quality of life as their pay cheque”.

Open spaces increases worker productivity

It is well recognised that many factors, including psychological factors, affect employee's productivity in the workplace. The Medibank Private 2008 study found that the overall average labour productivity loss caused by physical inactivity corresponds to a direct loss of 1.8 working days per worker per year or a cost of around \$458 per employee per year. It

⁵ Parks Forum (2008) The Value of Parks. Produced in partnership with IUCN World Commission on Protected Areas and the People and Parks Foundation. Accessed at <http://www.parksforum.org/cms/pages/Economic-Values-of-Parks.html> in March 2010

⁶ Gies, Erica (2009) Conservation: An Investment That Pays http://www.brooklinegreenspace.org/pdf/EconBenefitsReport_7_2009.pdf accessed at March 2012

was estimated that physical inactivity caused the GDP to be around \$9.3 billion lower than would otherwise be the case.

Properties located near well maintained quality green spaces have a higher market value

Over 30 US studies demonstrate that residential properties located near green spaces have a higher market value than those further away. A meta-analysis of these studies shows that *well-maintained* parks result in a positive impact of 20% on property values abutting or fronting a passive park area. While the impact of the park was somewhat lower moving away from a park, there was still a positive effect on values two to three blocks away.

As demonstrated in the preceding paragraphs parks and vegetation provide a multiplicity of benefits in general terms. Both Fawkner Park and the Yarra River Corridor provide many of these benefits to the local and wider community.

3.2.2 Fawkner Park

Fawkner Park is a key feature that contributes to the character and value of South Yarra. Fawkner Park is categorised as ‘Regional’ open space in the Open Space Strategy 2012. This is defined as *‘valued and visited by a broader catchment of people as well as the local community’*. Generally these are easily accessible to people from adjoining municipalities and have regional recreational importance and use, and/or regional environmental value.

Fawkner Park is valued by the local community. A household survey undertaken as part of the Open Space Strategy in 2010 found that:

- of the Melbourne postcode 3004 residents who responded to the household survey 65% visited Fawkner Park and cited their activities as including walking, recreation, exercising, dog walking, ‘close to home’ and walking through.
- of the South Yarra residents who responded to the household survey, 61% visited Fawkner Park and cited their activities as including exercising, walking, recreation, relaxation, ‘ambience and beauty’ and picnics.

The *Open Space Strategy* states:

“The additional quantity of people living and working in Melbourne 3004 and South Yarra will place increased demands on existing open space. The demands will include increased volumes of people in the open space utilising the facilities in open space, and particularly the forecast change in demographics where the diversity of facilities will need to change to better meet the increase in younger people less than 15 years of age particularly. The increase in workers in the precinct, particularly in Melbourne 3004 will lead to further use and potential overcrowding of some facilities at peak use times particularly during lunch time, before and after work.”

Fawkner Park will continue to experience increased levels of use as the worker and residential population grows in this sub precinct. This will result in increased need to provide additional and more diverse facilities in Fawkner Park to cater to this growth and change.

3.2.3 Yarra River Corridor

The Yarra River is a unique and central natural and cultural feature for Melbourne. It is highly valued for sporting and cultural events, habitat corridor values, and the linear reserve along it is popular for cycling/walking, informal recreation, picnics, events and festivals. These significant parklands will continue to be improved and managed for their Capital City and Regional function catering to international, national and Victorian visitors, as well as the local community.

A survey of cyclists using the Capital City trail/Alexander Avenue south of Swan Street bridge during winter in 2015 found that over a four hour period on a weekday 1,214 cyclist movements were recorded whilst during the same four hour period on a weekend 314 cyclist movements were recorded.

Increased visitation is forecast for the central city and this will place increasing demands on these spaces.

3.3 Would the reduction in open space identified in options 2 to 7 have a material impact on the provision of open space within the City of Melbourne and if so how?

3.3.1 Fawkner Park

Fawkner Park is one of inner Melbourne's most popular and significant parks. First reserved by Governor Latrobe in 1862, the park is 41 hectares in size. The park was established along with Melbourne's major ring of parks including Royal Park, Princes park, Yarra Park and Albert Park.

The park is roughly rectangular in shape, crossed by a series of straight paths lined with avenues of trees, many of which were planted in the mid to late 19th Century. These pathways frame open, spacious lawns used for passive recreation and sport.

The Fawkner Park Master Plan was endorsed by Council in 2006 and is still current. Attachment 1 provides a map and visual representation of the Master Plan.

Ownership, Zoning, Planning and Other Controls

Fawkner Park is Crown land permanently reserved from sale as a site for Fawkner Park pursuant to the provisions of the *Crown Land (Reserves) Act 1978*. The area is also subject to a Restricted Crown Grant for Public Park Purposes granted jointly to the Minister for Planning and the City of Melbourne. Melbourne City Council manages Fawkner Park as a Committee of Management, guided by the Melbourne Parks and Gardens (Joint Trustee Reserves) Regulations (1994).

Fawkner Park is in the Public Park and Recreation Zone (PPRZ), which is set aside for the purposes of public recreation and a Heritage Overlay for South Yarra in the local planning scheme. Fawkner Park has been previously assessed as likely to meet the threshold for listing on the Victorian Heritage Register, should such an application be made.

Fawkner Park uses and activities

Fawkner Park is categorised as a regional open space in the City of Melbourne's Open Space Strategy. It is well used and plays an important role in the provision of active and informal recreational activities. It is forecast that the park will continue to experience increased levels of use to meet worker and residential growth.

Fawkner Park caters for extremely high levels of use every day of the week. It attracts visitors from a wide regional catchment but also serves as a local park for surrounding residential areas. In many cases, open areas in Fawkner Park are used for several different activities at different times.

Recreation

Informal recreation is the largest use of Fawkner Park, with non-structured activities including walking, sitting, reading, picnicking, children's play, keeping fit, dog walking, cycling, and eating lunch.

Although these uses are predominately unstructured and informal, some common characteristics have been identified. These users are often:

- local residents, including from high density residential areas on the west side of park;
- office workers, from St Kilda Road and other areas who use the park at lunchtime or at other times;
- staff, patients and visitors from nearby Alfred Hospital, which has no green space of its own; and
- school children and staff from two nearby schools. The park is used daily as the playground for these schools at recess, lunchtime and after school care, as well as for regular sporting activities.

Sporting activities

Organised sporting activities, comprising competition and training, take place on Corder Oval and on a number of grassed sports grounds set aside for seasonal sports. The grounds are used for different sports during different seasons, and sometimes for different sports in the same seasons. Personal training is another sporting activity taking place in a number of locations in the park. There are two multi-purpose pavilions which support the sporting use. Other facilities include cricket training nets.

The Fawkner Park Tennis Club has six synthetic courts and office and café is located in the community centre building.

Events and commercial activities take place within the park from time to time and are booked depending on availability of areas.

Playgrounds

There is 1 large and 2 small local play spaces in Fawkner Park. The north and east playgrounds have a key role in supporting local schools but are also used by the general

public. The third play space is a toddler play area, located south of the community centre, near the picnic area.

Cycling

Fawkner Park is a key link in Melbourne's bicycle network, with major and minor routes.

Dogs

Dog walking is a popular activity at Fawkner Park. The park provides a large dog off leash area, while the rest of the park is designated as a dog on leash area, except for an area near the two schools which is prohibited to dogs.

Community facilities

Fawkner Park Community Centre is located in the northern part of the park and provides a number of community services including child care, and senior citizens services. The building incorporates the café and booking facility for the nearby tennis courts.

Values and benefits of Fawkner Park

The Fawkner Park Master Plan has an overall vision to enhance the landscape characteristics of Fawkner Park while managing and balancing its wide variety of uses.

Fawkner Park Master Plan vision is that: *'Fawkner Park is a much loved place where a diverse range of recreation and sporting activity is enjoyed in a magnificent setting of significant tree avenues and open, spacious lawns.'* During the consultation for the Fawkner Park Master Plan, all park users valued the landscape character of the park very highly.

The north east section of Fawkner Park

During the Master Plan process it became clear that there was a need for an area to be specifically set aside for passive recreation use, with no organised activity. The area designated was the northern section of Fawkner Park. This decision was made to accommodate the high levels of multi-use in the park by ensuring permanent provision for passive recreation.

In addition to the enjoyment people have in passive recreation (walking, reading, picnics, contemplation, nature appreciation) in the northern part of the park, other regular activity in the north east area includes:

Many people get off the tram at Toorak road and walk through the park to St Kilda Road.

Families attending Christ Church Grammar school enter the park at this point and use the park entrance to the school.

Some children attending South Yarra Primary school also use a number of these paths to walk or cycle to school.

The children at Christ Church Grammar School use a large area of park outside of their school in the park for their playground. This is used before and after school as well as at recess and lunch times.

Public toilet located in north east of park. Council has a policy of placing public toilets on the perimeter of parks. Because of the significant tree avenue along the northern boundary of the park, the steep slope and the number of services underground, this was the only location for the toilet.

Landscape

The significance of the trees in this location is not of the individual tree, but of the mass planting of this species and age. This creates a landscape of dapple shade and touching tree canopies. Within our municipality a mass planting in this arrangement, of this species and age is unique to the north east corner of Fawkner Park. The entirety of the planting needs to be protected and managed as a whole. A tree assessment was undertaken to further investigate the value of these trees. The results are provided below.

Fawkner Park tree assessment

1/02/2016

Eight trees in the north east corner of Fawkner park have been identified in this report. This report includes the monetary value, tree protection zone and structural root zone of all trees identified, please see image below for trees locations



Locations of trees

These trees include one English Elm (*Ulmus procera*) five Himalayan Cedars (*Cedrus deodara*) and two Canary Island Date Palms (*Phoenix canariensis*)

Tree	CoM	Tree	Tree	Structu	Amenity value	Environmen	Total
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Number on map	asset number	Species	protection zone (M)	radial root zone (M)	(\$)	total value (\$)	value
1	1035549	<i>Ulmus procera</i>	10.3	3.2	49,025.46	24,771.86	73,797.32
2	1035534	<i>Cedrus deodara</i>	8.2	3.	40,025.46	15,905.84	55,931.3
3	1035533	<i>Cedrus deodara</i>	5.2	2.5	16,341.82	6,341.23	22,683.05
4	1035525	<i>Cedrus deodara</i>	6.7	2.8	27,716.57	10,777.52	38,494.09
5	1035524	<i>Phoenix canariensis</i>	4.5	*N/A	* see below	* see below	
6	1035526	<i>Cedrus deodara</i>	7.4	2.9	33,974.02	13,216.16	47,190.18
7	1035523	<i>Phoenix canariensis</i>	4.5	*N/A	*see below	*see below	
8	1035521	<i>Cedrus deodara</i>	6.1	2.8	17,241.11	7711.58	24,952.69
							263,048.63

Tree 5 and tree 7 are not valued under the same valuation method as they are palm trees which are easily replaceable. The current industry rate for *Phoenix canariensis* is \$1500.00 per lineal trunk meter for male palms and \$1100.00 per lineal meter for female trees. The difference in price is due to fruit production, as female trees produce fruit they require a higher level of maintenance to clean up the fallen debris.

As no tree was currently in flower or fruit, I was not available to determine the sex of the palm and have used for a figure in between both rates of \$1300.00 per meter as an approximate cost.

Tree 5 had 6m of clear trunk at a rate of \$1300.00 per m is \$7,800.00

Tree 7 had 7m of clear trunk at a rate of \$1300.00 per m is \$9,100.00

This is the price for the palms loaded on a truck not planted. To plant and two years required

maintenance has an approximate cost of \$10,000 per unit

Tree 5 total costs \$17,800.00

Tree 7 total cost \$19,100.00

Total cost of all 8 tree: \$299,948.63

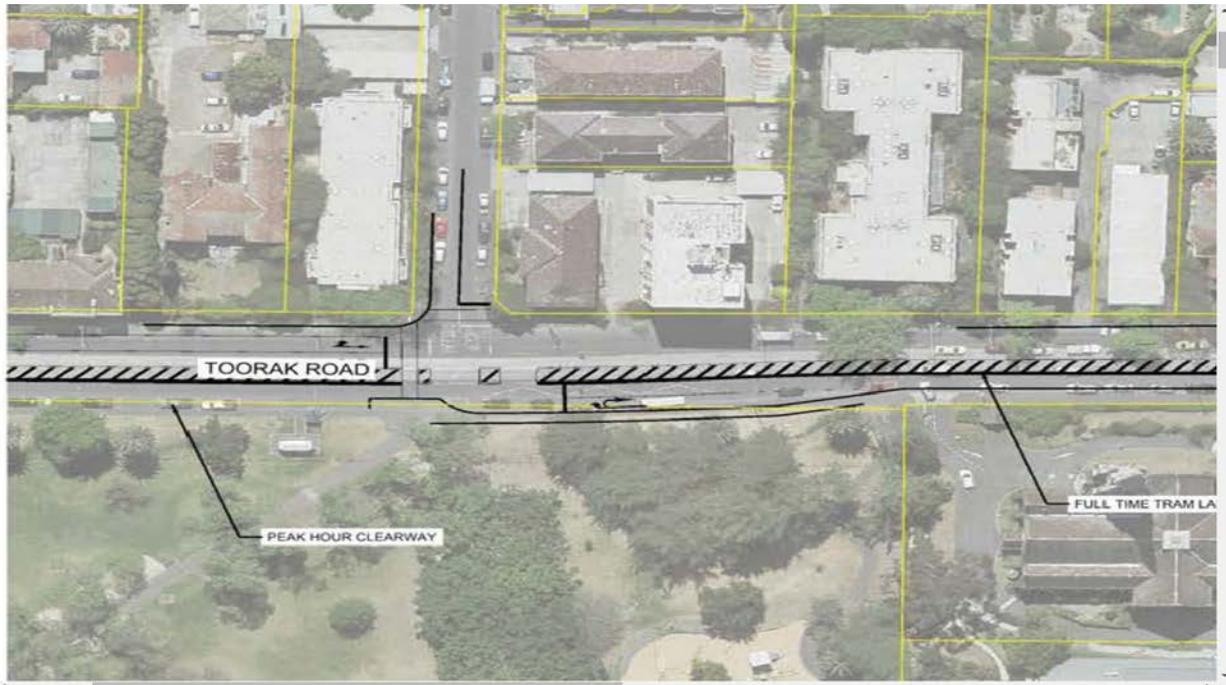
Summary of Impacts to Fawkner Park

Concepts 2 to 7 all impact on Fawkner Park by proposing acquisition of an area of approximately 60 metres long and 4 metres wide. Acquisition of any part of Fawkner Park is of concern to the City of Melbourne. Other infrastructure projects currently in the planning stages may also heavily impact on the park and the cumulative effect of such impacts should be recognised. The realisation of proposed options 2 – 7 will be detrimental to residents, workers and visitors to Fawkner Park and surround and will lead to the following:

- Change of use, from park to road purpose
- Reduction in park area. This is not aligned with the City of Melbourne's Open Space Strategy which has a key direction of maintaining and increasing open space within the municipality.
- Amendment to the alignment of the park boundary. Retaining park alignments is important in Heritage landscapes such as this.
- Impact adjoining open space through increased noise, reduced visual amenity.
- Potential loss of mature trees or impact on tree roots which are planted along the northern boundary of the park and resultant loss of ecosystem services.
- Impact on circulation / pedestrian entries (paths follow desire lines that have been in place from 1850s)
- Potential impact on provision of existing public toilet.
- Loss of biodiversity value.
- Loss of Ecosystem Services.

The Proposal however well intentioned is at the expense of public open space and is therefore inappropriate.

Road Widening into Fawkner Park (Concepts 2 to 7)



3.3.2 Yarra River Corridor

The Yarra River in this location is within a Public Park and Recreation Zone and a Land Subject to Inundation Overlay. It is categorised as a significant open space in the City of Melbourne's Open Space Strategy for its biodiversity and habitat corridor values as well as recreational values. For many years settlement turned its back on the waterways causing degradation of their natural, cultural and biodiversity values. In the 1980s Melbourne changed its view of its rivers and creeks and development has since turned around to face the waterways and harbours and provide open space along them. Waterways are now used for recreational activities including recreational boating, rowing, jogging, cycling and walking, and are recognised for their biodiversity and habitat corridor values. The Yarra River has been strongly impacted in the past by large infrastructure development on its banks including the City Link Freeway on the North bank of the Yarra to proposed options 2 and 3. The Yarra also has significant pre and post settlement cultural value. The Yarra is a tidal river at this point and subject to pluvial, fluvial and tidal flood risk. Natural banks help to reduce the impact of flooding through vegetation. The introduction of hard infrastructure may detrimentally affect water flows and displace flood waters into adjoining locations, whilst also potentially impacting on the hard infrastructure itself.

Two proposed options impact upon the Yarra River Corridor; Morell Bridge Duplication (concept 3) and Alexandra Avenue Widening (concept 2).

Morell Bridge Duplication

This concept is of concern to Council because it proposes to acquire land in the Goschs Paddock and Yarra river precinct. This concept would consume a large amount of high quality public open space and bring more vehicle traffic into a recreational precinct of the highest value to the whole of Metropolitan Melbourne. *The Open Space Strategy specifically mentions this important recreation space by indicating the City of Melbourne should 'Continue to advocate to retain informal public access and use of this open space when not in use for training purposes' in this location.*

The south end of Morell Bridge is in close proximity to the Royal Botanic Gardens (RGB), the Domain Parklands and the rowing racing course on the Yarra River. The Anderson street entrance to the Royal Botanic Gardens is one of 2 major entries. This area experiences high volumes of both pedestrians and large vehicles. The RGB currently receives approximately 1.5 million visitors per year.

The tan track goes past this entrance with extremely high daily usage (between 4500 and 6500 + per day). Due to the high volumes of pedestrians and vehicles the City of Melbourne has already identified this location as requiring further management.

On the north end, it is an interface and entry to the sporting precinct. Its closure to vehicles and repurposing as a pedestrian/bike bridge has been of major benefit to the users in the precinct.

Alexandra Avenue Widening

This concept proposes acquisition of public land between Alexandra Avenue and the Yarra River to facilitate a displaced right turn from Alexandra Avenue into Punt Road. I do not consider the widening of Alexandra Avenue to be appropriate because this concept would lead to a loss of open space along the natural banks of the Yarra River.

The green space of the Yarra River reserve is a significant landscape element and recreational area of the Yarra River corridor. This road treatment would negatively affect the function and amenity of the Capital City Trail, one of the city's primary recreational walking and cycling routes. This area of river bank is also one of the few places where people can get close to the river and engage with it.

It would also seriously degrade the general amenity and environment along the river bank and detrimentally affect the biodiversity role of the Yarra River corridor. This section is the only side of the Yarra that has a green bank, and reducing this would have serious environmental implications.

Summary of Impacts to the Yarra River Corridor

Options 2 and 3 both detrimentally impact separate parts of both the Northern and Southern banks of the Yarra River and surrounding parkland. Acquisition of any part of the Yarra River Corridor including Goschs Paddock is of concern to the City of Melbourne. This is not aligned with the City of Melbourne's Open Space Strategy which has a key direction of maintaining and increasing open space within the municipality. The realisation of proposed options 2 and 3 will be detrimental to residents, workers and visitors to the Yarra River Corridor, Goschs Paddock and surrounds and will lead to the following:

- Loss of parkland and Yarra River North and South Bank.
- Disruption to visitor experience with road traffic.
- Impact on the Capital city trail used by pedestrians and cyclists.
- Increased traffic near to the Anderson Street RGB entry leading to safety concerns.
- Loss of biodiversity value.
- Loss of Ecosystem Services.
- Impact to adjoining open spaces through increased noise and reduced visual amenity.
- Fragmentation of park land.
- Change of use from park to road purpose.
- Impact on natural water flows and increased flood risk.

Alexandra Avenue widening (concepts 3, 5 & 6)



Morell Bridge Duplication Option (concepts 2, 5 & 7)



3.3.3 Loss of street trees on Punt Road

Some of the proposed options will result in the loss of existing street trees on Punt Road and other adjoining cross streets and may limit potential street tree planting along Punt Road if the already narrow footpaths are further narrowed. Existing trees located within the footpath of Punt Road in options tabled such as the 'five lane treatment' would lead to an unacceptable loss of trees and an inability to replant due to lack of space. This would further impact on the amenity and Urban Heat Island effect in the road environs.

4. Conclusion

The removal of the PAO itself will not materially impact upon Melbourne's Open Space. But, the proposed options/concepts 2-7 as outlined in the Options Report (October 2015) as currently described will detrimentally impact Melbourne's Open Space and, if allowed to go ahead, will endorse a negative precedent that further degrades the value of all Open Space in Melbourne. Open Space should not be seen as 'spare' land. It is a deeply valued and essential part of the public realm that provides a multiple benefits in its current form. I would argue that the multiplicity of benefits provided by Open Space by far outweighs the benefits associated with the proposed improved vehicular accessibility.

With increasing urban density, particularly in and around the central city, Melbourne's urban heat island effect will intensify. Future growth in the urban forest, green infrastructure and provision of ecosystem services is fundamental in responding to the range of urban pressures, reducing the cost of grey infrastructure and improving the quality of the urban environment.

Conversely, fragmentation of parklands and natural corridors challenges not only their fundamental qualities but their functional, spatial and ecological integrity. River corridors provide some of the most ecologically diverse places in the world, with interrelated values of scientific, social, aesthetic, historical, environmental and archaeological significance.

The loss of open space incrementally through acquisition of open spaces into roads, or a myriad of other infrastructure is inconsistent with contemporary best practice for cities.

Should these options be considered appropriate the resultant development will be inconsistent with the Victorian government's commitment to tackle climate change and improve biodiversity in our state.

5. 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 Panel.'

End Notes

Urban Forest Strategy – Making a great city greener 2012-2023

<http://www.melbourne.vic.gov.au/sitecollectiondocuments/urban-forest-strategy.pdf>

Open Space Strategy – Planning for future growth

<http://www.melbourne.vic.gov.au/sitecollectiondocuments/open-space-strategy.pdf>

City of Melbourne climate change adaptation strategy

<http://www.melbourne.vic.gov.au/sitecollectiondocuments/climate-change-adaptation-strategy.pdf>

Fawkner Park Master plan 2006

https://www.melbourne.vic.gov.au/SiteCollectionDocuments/masterplan_fawkner.pdf

City of Melbourne Open Space Strategy Technical Report

[http://dsewebapps.dse.vic.gov.au/Shared/ats.nsf/\(attachmentopen\)/3761813BF94FF3F2CA257B18007E6C62/\\$File/Melbourne+C209+Supporting+Document+-+Open+Space+Strategy+Technical+Report+June+2012+Exhibition+Exhibition+Gazetted.pdf](http://dsewebapps.dse.vic.gov.au/Shared/ats.nsf/(attachmentopen)/3761813BF94FF3F2CA257B18007E6C62/$File/Melbourne+C209+Supporting+Document+-+Open+Space+Strategy+Technical+Report+June+2012+Exhibition+Exhibition+Gazetted.pdf)

Open Space Planning & Design Guide, *PLA Vic Tas, 2013.*

<https://www.parksleisure.com.au/documents/item/2091>