



Expert Witness Statement Fishermans Bend Planning Review Panel

Draft Planning Scheme Amendment GC81

Prepared for the Fishermans Bend Taskforce on instruction from Harwood Andrews

Prepared by:

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Table of contents

	Page No.	
A	Details and experience	3
B	Opinion	6
C	Response to Submissions	45
	Attachment 1	59
	Overshadowing Diagrams for specific open spaces in Fishermans Bend, prepared by the Department of Environment, Land, Water and Planning.	

A Details and experience

A1 Name and address

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A2 Qualifications and experience

A2.1 Qualification:

BA Landscape Architecture with Honours

A2.2 Affiliations:

Registered Landscape Architect with the Australian Institute of Landscape Architects

A2.3 Experience:

I worked in a range of landscape architectural practices from 1986 to 1992 prior to establishing Thompson Berrill Landscape Design Pty Ltd (TBLD) with the other Director Glenn Berrill in 1992. As a Director of TBLD, I lead diverse open space planning and landscape design projects for local and state government agencies and for the private sector. These projects include open space strategies and open space assessments for activity centres/high density precincts. Other project experience has included landscape estate-wide landscape masterplanning for new residential communities in the urban growth areas, strategic waterway design and management plans, shared trail designs, coastal management plans and landscape masterplans and for a range of open space reserves including sites of environmental significance.

Of specific relevance to Fishermans Bend, I led the TBLD project team that prepared the *City of Melbourne Open Space Strategy (2012)* and undertook an open space assessment for the Lorimer and Employment Precincts for the Open Space Planning Team at the City of Melbourne in 2017.

A3 Statement identifying the Experts area of expertise

I have worked for more than 15 years specifically in the area of open space planning, leading the TBLD project team in the preparation of open space strategies. I am currently preparing the new Open Space Strategy for the City of Yarra. Other open space strategies I have prepared include the City of Whittesea Open Space Strategy, City of Glen Eira Open Space Strategy, Boroondara Open Space Strategy, Moonee Valley Open Space Strategy, Whitehorse Open Space Strategy and the current 2006 Yarra Open

Space Strategy. Previous to these I prepared open space strategies for the City of Stonnington, Mitchell Shire and the City of Port Phillip. Currently I am preparing open space assessments for major activity centres for the City of Casey and undertaking a refresh for the City of Glen Eira Open Space Strategy.

I have relied on my expertise in relation to open space planning over the past 15 years and more specifically, my experience working with the City of Melbourne. I have used this expertise to review the provision of open space in the *Fishermans Bend Framework The next chapter in Melbourne's growth story Draft for consultation* October 2017, prepared by the Department of Environment, Land, Water and Planning (DELWP).

A4 Other significant contributors to the report

None

A5 Instructions that define the scope of this report

I have been instructed by Harwood Andrews to cover the following scope in this report:

- Addressing the merit of the quantum and distribution of open space proposed throughout Fishermans Bend as identified in the *Fishermans Bend Framework, Draft for Consultation 2017*
- The merit of the various submissions to the extent they address the quantum and distribution of open space.

A6 Other tests or experiments on which this report is based

The Department of Environment, Land, Water and Planning provided assistance to my analysis by modelling specific sites where I was concerned about the potential overshadowing of open space. They used the 3D Modelling Tool Urban Engine, by Urban Circus Pty Ltd.

The overshadowing diagrams produced as part of this work are appended to my Statement as Attachment 1.

A7 The facts, matters and all assumptions upon which this report proceeds

A7.1 The Fishermans Bend Review Panel issued a Preliminary list of Key Issues dated 20 December 2017, and identified the following issues in relation to open space need to be addressed in the hearing including:

38. *Is the size and location of each open space appropriate? What flexibility should there be in their size and location?*
39. *Where the open space covers the whole site, should a PAO be applied?*
40. *How are the costs of acquisition and development apportioned between landowners/developers?*
41. *How will development of the open space (including potential remediation) be funded?*

A7.2 I am able to provide my opinion to assist with the first point number 38. above. My opinion will refer to and rely on my experience particularly the *City of Melbourne Open Space Strategy 2012*.

A8 Reference documents and materials

A8.1 This Statement is based on review of the following key documents:

Department of Environment, Land, Water and Planning, 2017 **Fishermans Bend Framework – The next chapter in Melbourne's growth story Draft for Consultation** October 2017

Planisphere, 2017 **Fishermans Bend Public Space Strategy** April 2017, prepared for the Fishermans Bend Taskforce

Other reference documents referred to during the preparation of my statement include:

City of Melbourne, 2012 **Open Space Strategy Planning for Future Growth**, prepared by Thompson Berrill Landscape Design Pty Ltd in collaboration with Environment & Land Management Pty Ltd, Professor Nigel Tapper

Hodyl & Co, 2017 **Fishermans Bend Urban Design Strategy**, prepared for the Fishermans Bend Taskforce, DELWP, September 2017

Inquiry into Environmental Design and Public Health in Victoria, **Final Report** May 2012

B Opinion

The merit of the quantum and distribution of open space in the draft Fishermans Bend Framework

B1 Introduction

B1.1 Definition of public open space

For the purposes of my Expert Statement, I will be assessing the quantum and distribution of public open space based on the definition of public open space contained in the *Fishermans Bend Public Space Strategy* (Planisphere, 2017):

Publicly owned land that is primarily set aside for passive and active recreation, nature, outdoor enjoyment and public gatherings. Includes parks, publicly owned forecourts, plazas and squares, linear parks, gardens, beach reserves [and] sports fields...

In the draft Fishermans Bend Framework, the term 'Open space' is also used to describe private open space and other parts of the public realm. The draft Fishermans Bend Framework does not contain a definition of public open space.

There are references to public land space and open space in the draft Fishermans Bend Framework including:

Open space

Space open to the sky regardless of its ownership and management arrangements.

Public realm

All public open space, along with other publicly owned land between buildings, including streetscapes.

Public space

Publicly owned open space as well as encumbered space that is easily accessible to all 24/7 as well as privately owned space that is available for the public use at sometimes with or without a fee.

For my statement, I will use the term 'open space' to only mean public open space as defined in B1.1.1 above and refer to other parts of the public realm as public realm, green links or streetscapes. For clarity, I recommend that the definition of public open space is added to the draft Fishermans Bend Framework.

It is in this context that I provide my opinion on the quantity and distribution of the proposed public open space in the draft Fishermans Bend Framework.

B1.2 Importance of public open space to liveability in high density precincts

B1.2.1 Values of open space

Open space is valued at many different levels for its inherent qualities including as habitat for native flora and fauna; for social gatherings with family and friends; as a place to relax and unwind outdoors; playing team sport; exercising; relaxing in the sun or shade; for team building and social events with work colleagues; for exploring and discovering the natural world as a child; for hosting major festivals and events; watching people and activity; catching up informally with neighbours and just enjoying the sense of space. It is also valued for intangible reasons such as just knowing that it is there.

The Inquiry into Environmental Design and Public Health in Victoria (2012) refers to a range of research into the contribution of open space to public health and wellbeing, particularly green open space. This includes research that has established links between access to green open space and reducing stress, boosting immunity, enhancing productivity and promoting healing.

On a broader level, through the consultation that TBLD has undertaken on a range of open space strategies, people across different parts of Melbourne communities place a high value on trees and open space being a place to go to relax and unwind. These are consistently in the top three of survey outcomes across different strategies. Other values in the top three include quiet and peaceful, being outdoors, health and wellbeing, place for children to play and habitat for native fauna.

Planning to provide a network of different types of public open space is extremely important so that the combination of the different types and sizes of spaces can offer a variety of experiences and character to cater to different types of uses, community needs and habitat for native fauna. This includes smaller open spaces that are nearby home or work providing space that can easily be reached to relax and unwind, play or socialise. The larger open spaces that have a range of different activities provide destinations for longer stays and people expect to travel further to reach these. These contain a broad range of facilities that support planned physical activities including team-based sport and informal fitness and activity and also longer outings such as picnics with friends. There are also nature conservation reserves large and small that are valued for their natural character and biodiversity values.

Apart from the amenity benefits, with increased urban densities there is an important role that a network of open space will have in assisting to mitigate urban heat island effect. Dr Nigel Tapper of Monash University provided advice as part of the project team for the City of Melbourne Open Space Strategy in relation to optimising opportunities to mitigate urban heat build up in the future. This included the provision of regularly distributed green open spaces across built up areas that are designed with appropriate green infrastructure to encourage permeable surfaces that hold moisture and allow effective

evapotranspiration to cool the local microclimate. This is particularly important during extended periods of heat. Designing these cooler spaces also has the added benefit of providing the public places for the community to use during hot weather, particularly the vulnerable in our community including the frail and elderly who do not necessarily have access to cooling in their homes.

B1.2.2 Quantity, distribution and quality of open space

From my experience in open space planning and research into the provision of open space in high density precincts, there is no industry accepted standard that guides the optimum quantity of open space in high density precincts. From extensive literature review and experience, the common recommendations in relation to open space provision in high density precincts include:

- Open space is important for both the physical and mental health and wellbeing of the community, especially in high density urban settings where there is less access to private open space compared with standard suburban residential densities.
- Open space needs to be within easy and safe walking distance of everyone including residents and workers. There is general consensus that the preferred distances range from 400 metres down to 200 metres. 200 to 300 metres is noted as being more appropriate for children, people with limited mobility and the elderly than 400 metres.
- The open space network needs to have a range of different sizes and types of open space. The final quantity, location and quality needs to respond to the existing features along with consideration of the proposed future urban form, density, land use and demographics.
- There is no industry accepted standard quantity of open space for high density precincts in urban renewal areas, either as a percentage of the total land area or as an amount relative to population density. Some studies aim to match the quantity of open space in adjoining high density precincts, others aim to increase the amount. All the studies recognise that the final quantity is to be informed by the site opportunities and constraints.

In summary, public open space is a vital part of creating sustainable and valuable high density precincts where people want to live and work. Key considerations in providing a sustainable and valuable public open space network within the context of existing constraints at Fishermans Bend include:

- consideration of the distance people need to travel to safely and easily reach open space
- diversity in the proposed open space network in terms of open space size and character
- achieving an adequate quantity of space relative to the site opportunities and constraints
- achieving a system of quality open spaces within its urban context and form including maximising solar access and visual and physical access to it.

B1.3 Method of assessment

B1.3.1 Based on research and my previous experience in open space planning, I have assessed the quantum and distribution of open space in the draft Fishermans Bend Framework. I have clarified below the basis on which I have assessed and made recommendations for adjustments to the open space network.

- Reviewed the draft Fishermans Bend Framework (October 2017) and the Fishermans Bend Public Space Strategy (April 2017).
- Reviewed the transport framework including the road hierarchy, public transport routes and the on-road and off-road cycle network contained in the draft Fishermans Bend Framework.
- Mapped the existing open space from the Open Space Plan (Figure 17) from the draft Fishermans Bend Framework. This Map is included as Figure (iii) in this Statement.
- Identified the barriers to safe and easy access to open space and define sub-precincts within each precinct based on those barriers.
- Assessed the distribution of open space in study area (excluding the Employment Precinct) to identify whether there are locations where people will be living or working further than 200 metre safe and easy walking distance of open space. Safe and easy walking distance refers to the ability to walk to open space without crossing any major/collector roads, public transport corridors or major underpasses or overpasses that present a physical and mental barrier to being able to easily cross them.
- Reviewed the building heights as an indicator of changes in density across each of the precincts and impacts this may have on overshadowing.
- Visit all the existing and proposed open space in the four precincts, along with the gap areas to assess the open distribution and quantum of open space and identify additional areas to be included in the network where required. This assessment includes consideration of the proposed land use and built form framework, including the urban density based on the proposed building heights. There were some refinements made to the quantum of open space based on the consideration of the concentrations of people and overshadowing.
- Assistance from the Department of Environment, Land, Water and Planning in relation assessing specific sites where overshadowing was identified as a key issue with the 3D Modelling Tool Urban Engine. The results of this assessment are appended to my Statement as Attachment 1.
- Provide suggested adjustments to the proposed draft Fishermans Bend Framework open space network in consultation with the Fishermans Bend Taskforce to better meet the walkability benchmark and improve the quantity of the proposed public open space relative to the proportion of land area and population density.

B2 Overall context

B2.1 Summary of the Fishermans Bend Vision

The Fishermans Bend Vision was released in September 2016 informed by public consultation:

A thriving place that is a leading example for environmental sustainability, liveability, connectivity, diversity and innovation.

The Vision articulates clear aspirations for each precinct by 2050 as follows:

Montague

A diverse and well-connected mixed use precinct celebrating its significant cultural and built heritage, and network of gritty streets and laneways

Lorimer

A vibrant, mixed use precinct close to the Yarra River and connected to Melbourne CBD, Docklands and emerging renewal areas

Sandridge

One of Melbourne's premium office and commercial centres, balanced with diverse housing and retail

Wirraway

A predominantly family friendly inner city neighbourhood close to the Bay and Westgate Park

Employment Precinct

Australia's leading design, engineering and advanced manufacturing precinct.

The Fishermans Bend Precincts are defined and shown in Figure 4 of the Draft Fishermans Bend Framework and included as Figure (i) below:



FIGURE (i) FISHERMANS BEND PRECINCTS, SOURCE: FISHERMANS BEND FRAMEWORK, OCT 2017 PAGE 20

B2.2 Sustainability goals and targets in the draft Fishermans Bend Framework

B2.2.1 Eight Sustainability goals have been developed that drive the overall social, environmental and economic planning for Fishermans Bend and meet the Green Star Communities tool that has been adopted to monitor the successful development of Fishermans Bend.

B2.2.2 Five of these sustainability goals are directly relevant to open space and include:

- *Goal 1 – A connected and liveable community*
- *Goal 3 – An inclusive and healthy community*
- *Goal 4 – A climate adept community*
- *Goal 5 – A water sensitive community*
- *Goal 6 – A biodiverse community*

B2.2.3 The draft *Fishermans Bend Framework* report is structured around these goals and developed targets for 2050 that are measurable and articulate what it means to achieve the goal. Below, I have provided a brief assessment of how the draft open space network meets these goals and targets, and how this may also be improved with suggested adjustments to that network.

B2.2.4 Sustainability Goal 1 – A connected and liveable community

Targets for 2050:

- *A walkability score of 90% is achieved from homes and workplaces.*
- *A focus for community interaction is provided within each precinct*

Objective 1.5

Enable residents and workers to access public spaces and community facilities within an easy walk.

The open space network is generally well distributed and linked via the proposed linear green links along the streetscape and public transport network. There are some locations within the precincts where future residents and workers will either need to travel further than the stated 200 metres to reach open space or cross major roads or rail corridors to reach open space. I have recommended adjustments to the distribution and quantum of open space to address these gaps so that the targets of open space within safe and easy walking distance of all residents and workers for 2050 can be met.

B2.2.5 Sustainability Goal 3 – An inclusive and healthy community

Targets for 2050

- *People can access public open space within 200 metres of their home*
- *People have an opportunity to participate in local organisations and activities*

Objective 3.6

Reconsider existing public open spaces within Fishermans Bend in the context of a changing urban environment.

The target of the people accessing public open space within 200 metres safe and easy walking distance of their home and workplace has been applied to the draft open space network. This principle has been further refined to refer to safe and easy access, as per the definition defined in B1.3.1 and to include workplaces in addition to homes, given the quantum of the forecast employment population. This has considered the existing and the proposed new open space.

The draft Fishermans Bend Framework identifies the need to upgrade the existing open spaces to meet the needs of the changing population and urban densities. The changes will respond to both the needs of the existing and new community and provides an excellent opportunity for connecting these communities as part of the future design of the existing open space.

Objective 3.7

Ensure a distribution of diverse, well designed and safe public open spaces

The proposed open space network includes a variety of different types of open space including larger regional and district spaces, precinct open space and smaller neighbourhood parks. My assessment has identified opportunities to refine the network further to ensure there will be a diversity of facilities in open space to appeal to everyone and allow adaptability and accessibility of the open space network into the future. This means that a broader range of recreation facilities can be provided across the network as some of these facilities need a larger physical area/size. Additionally, my assessment identifies the importance of providing a future Capital City open space that can potentially hold major events and become an iconic space, along with District (sporting) open space in the Employment Precinct, particularly for the community living and working the Lorimer and Montague Precincts. This is due to the lack of physical area to provide these types of open spaces within both these precincts.

I have made some recommendations to combine selected smaller spaces or increase the size of specific open spaces to achieve more diversity in the open space network within the Lorimer, Montague, Sandridge and Wirraway Precincts. The more detailed precinct planning has not been undertaken for the Employment Precinct. I support the provision of approximately 24 hectares of new public open space in the Employment Precinct, and the provision of the quantum and distribution of open space in the remaining precincts relies on new District (sporting) open space and a Capital City open space (event space) being provided in the Employment Precinct.

Based on my experience in open space planning for high density precincts with existing constraints on land use and ownership, it is difficult to achieve an adequate quantum of open space. While the accepted average in greenfield sites in the growth areas is in the

order of 22 to 24 sqm per person, there is a recognition that this cannot be achieved in higher density precincts, even though the need for open space is not reduced, and if anything is increased due to the lack of private open space.

B2.2.6 **Sustainability Goal 4 – A climate adept community**

Targets for 2050

- *The urban heat island effect is reduced so that Fishermans Bend will be no hotter than inner Melbourne.*

Objective 4.1

Reduce the urban heat island effect in Fishermans Bend

Open space can assist to mitigate urban heat island effect in high density precincts. The distributed open space system across the precincts is beneficial to assist with mitigating urban heat. This will be effective if the open space is designed to incorporate moisture absorbing surfaces such as grass, garden beds and permeable paving, combined with large broad spreading canopy trees. This will facilitate evapotranspiration that will effectively cool these spaces during long periods of extended heat. The spaces will also provide a respite for people, particularly the more vulnerable, during the summer where the presence of moisture and shade effectively creates a cooler microclimate.

I have made some minor modifications to specific open space reserves so they incorporate existing large mature canopy trees in the Wirraway Precinct. For further information on this, refer to the Precinct descriptions in Section B4.

B2.2.7 **A water sensitive community**

Targets for 2050

- *Nutrient discharges from stormwater and treated effluent to Port Phillip Bay are reduced.*

Objective 5.2

Establish an integrated water system across Fishermans Bend to provide access to high quality potable and recycled water

There is potential for some areas of open space to be passively irrigated via urban runoff being directed into the open space reserves. The encumbered open space under the transmission lines has the potential to incorporate water quality treatment systems including wetlands that will also improve biodiversity and assist to mitigate urban heat island effect. Utilising the encumbered open space along the transmission easements for this will free up more of the unencumbered open space for passive and active recreational use by the community. The effective use of passive irrigation will provide a sustainable water source for the open space, particularly for establishing large canopy shade trees. I have been advised that more detailed work is currently being prepared regarding integrated and innovative water reuse by the Councils.

B2.2.8 A biodiverse community

Targets for 2050

- *More than 90% of the trees will be in good health by 2050*
- *Greater diversity of plant species and fauna recorded compared to 2017 levels.*

Objective 6.1

Create an open space network that enhances biodiversity and supports local wildlife.

The draft Fishermans Bend Framework recognises the existing biodiversity values of Westgate Park, and the need to incorporate biodiversity links and connectivity via both the streetscapes and the open space network. The new open space network will contribute to the biodiversity values in the following ways:

- Protect existing established trees where feasible and create space for planting new trees to increase the canopy tree cover and species diversity.
- Provide additional natural features in the open space including garden beds, grassed areas and the trees. Future species selection will incorporate indigenous and native species to strengthen biodiversity values and links.
- The streetscapes, green links and linear open space will provide tree canopy connectivity between the open space reserves to support future habitat values.
- Integration and treatment of urban stormwater will increase habitat diversity – particularly into encumbered open space and other parts of the public realm.

B2.3 Challenges to delivering the vision

B2.3.1 The draft Fishermans Bend Framework notes on page 18 that

Under normal practice for major redevelopment projects, comprehensive planning would be undertaken. This would be supported by infrastructure planning and funding, prior to the process of rezoning, rather than a concurrent process of redevelopment and planning catch-up. Fishermans Bend has not followed this path. Under the previous government, Fishermans Bend's rezoning triggered the start of significant development activity in the absence of strategic planning or detailed development controls – a situation the Fishermans Bend Ministerial Advisory Committee noted as unprecedented.

B2.3.2 Some of the key issues for open space that are specific to the Fishermans Bend a result of the above include:

- The high cost of acquiring land suitable for public open space, given the majority of the land is in private ownership and has a capital city zoning.
- A number of planning permits have already been granted for developments without due consideration of the provision of public open space and the impacts that the approved developments will have on future open space.
- Existing public land is not always ideally suited to use as open space so repurposing it for that use can be challenging.

- The ability to develop a robust open space network incorporating quality open spaces that are not encumbered by overshadowing, traffic movement and noise and provide a contrast to the built form.
- The need to retain adequate developable land to achieve the urban densities to accommodate the forecast population of 80,000 residents and 80,000 workers by 2050.

B3 The overall quantum and distribution of open space in Fishermans Bend

B3.1 The proposed public space network

The proposed Public Space is shown in Figure 17 on page 57 of the draft Fishermans Bend Framework. The plan illustrates a linked network of public spaces that includes existing public open space, private school grounds, existing and proposed streetscapes, existing and proposed bridge crossings over the Westgate Freeway and the Yarra River. The plan also identifies encumbered urban spaces under the Westgate Bridge and Bolte Bridge and under the high voltage transmission lines.



FIGURE (ii) PUBLIC SPACE PLAN, SOURCE: FISHERMANS BEND FRAMEWORK, OCT 2017 PAGE 57

The plan notes that approximately 24 hectares of new public open space and green links are proposed in the Employment Precinct, however these are not illustrated on the plan. The plan also contains a note to Melbourne Grammar Sports Fields (existing private open space) in the Wirraway Precinct. The total quantity of new public space in the draft Fishermans Bend Framework for the Montague, Sandridge, Wirraway and Lorimer Precincts is 51.02 hectares which includes linear parks, encumbered land and public open space. The plan notes that an additional approximately 24 hectares of public open space will be provided in the Employment Precinct.

The proposed public open space network includes a variety of types of open space, which are summarised below. I have referenced the open space hierarchy described in the *Fishermans Bend Public Space Strategy* (Planisphere, 2017), page 22 in the descriptions:

Regional open space (15 to 50 hectares)

- Westgate Park in the Employment Precinct is managed by Parks Victoria for its regional visitor use and nature conservation values. The future use of this open space

is currently the subject of further investigation as part of the Employment Precinct and does not form part of this Amendment.

- The Melbourne International Karting Complex in the Employment Precinct is managed by Parks Victoria for its regional visitor use. This open space has restricted access on a fee-paying basis only. The future use of this open space is currently the subject of further investigation by Parks Victoria as part of the Westgate Park Masterplan. Given it is located in the Employment Precinct, it does not form part of this Amendment.

Future changes/additions

- There will be a need for additional Capital City open space in the Employment Precinct, particularly in areas accessible from the potential metro station and future employment hub. The future Capital open space is intended to be an event space with a Capital City role and primarily for passive recreational use and not structured sporting use. Capital City open space does not have a set size associated with it but appeals to and is used by a regional catchment of people.

District open space (5 to 15 hectares)

- JL Murphy Reserve in the Wirraway Precinct is a major sporting reserve that caters primarily to organised sport and recreational uses. In the western end of the reserve, the Port Melbourne Sharks Soccer Club has a fenced secured facility that is not open to the public. The unfenced eastern part of the reserve is used by the Port Melbourne Colts Football Club. This existing open space is planned to be upgraded in the medium term and is proposed to have a future secondary school constructed in the vicinity of the reserve.
- North Port Oval in the Sandridge Precinct is home to the Port Melbourne Football Club that competes in the Victorian Football League, along with the Port Melbourne Cricket Club that competes in the Southern Bayside Competition over summer. Currently the whole reserve is fenced preventing community access to it.
- The additional District open space for the Sandridge Precinct is adjacent to North Port Oval, which is identified as a medium term priority and will form part of a future Education and Community Hub (Primary school).
- The proposed Prohasky North and South open space in the Wirraway Precinct will be a future long term sport and recreation precinct/hub and additional District open space.

Future changes/additions

- The upgrade to the two existing District open spaces will be a priority to cater to the new population in the short term in all precincts, particularly for the Montague Precinct.
- Currently all District level open space is located outside of the Lorimer and Montague Precincts, meaning people living and working in those precincts will need to travel further to access these facilities.
- Additional District open space for sporting use will be required in the Employment Precinct to cater to the forecast population in the Lorimer and Montague Precincts, where it is not feasible to provide larger open space that can accommodate sports fields. The provision and distribution of additional District open space in the Employment Precinct is currently being investigated and does not form part of this plan or Amendment.

Precinct open space (1.2 to 5 hectares)

- Lorimer Central open space is the only proposed precinct open space in the Lorimer Precinct. It is noted as a medium term priority and will be delivered in conjunction with the proposed new tram route. Given this is a medium term option, there is a pop up community hub proposed to the north of the Lorimer Precinct adjacent to the Yarra River on the site of a future open space. This will provide the open space and community facilities in the short term along with access to Point Park.
- Wirraway North open space is identified as a new longer term precinct open space.

Future changes/additions

- Investigating the potential to open up North Port oval to community use at times when the Port Melbourne Football Club and Cricket Club is not utilising the grounds and facilities is a priority, given the future expansion to the reserve is only a medium term priority.

Neighbourhood (0.05 to 1.2 hectares)

- Montague North Park and Montague Park are two new larger Neighbourhood open spaces. Montague Park North is a long term opportunity that forms part of a future Sport and Recreation Hub. Montague Park is currently in construction and is co-located with the Ferrars Street Education and Community Hub, forming a new community hub and focus for this precinct in the short term.
- There are a range of other new Neighbourhood open spaces that are added to all precincts. These provide mainly for the local unstructured and passive recreational open space needs. They will be designed as spaces that people regularly visit near their workplace or home, and also contribute to mitigating urban heat by their regular distribution across the high density precincts.

Future changes/additions

- The distribution and role of these spaces is shown in more detail at the precinct level, and I have made some suggested changes to these to better meet the accessibility and adaptability of these spaces in the future. Refer to Figure (v).

Pocket (0.03 to 0.05 hectare)

- Only one Pocket open space is proposed in the Lorimer Precinct. These small spaces are also referred to as civic or urban plazas, due to their small size and co-location at entries to civic facilities.

Future changes/additions

- Additional Pocket open spaces may be provided in the form of civic and urban plazas as part of the detailed precinct planning phase.

Linear (minimum 12 metres wide)

- The plan illustrates Linear open space along the existing and proposed public transport corridors and the streetscape network. The Public Spaces Strategy (April 2017) identified them as separate from the streetscapes to provide additional greening and open space for passive recreational use. They are separate from the proposed cycle paths and footpaths, which are located in the road reserves. I consider that the limited additional recreational role beyond greening that these reserves provide in this high density precinct with significant overshadowing means that I have not included them as public open space.

- As noted earlier, the majority of these green linear links form an extension of the transport corridors that may have a biodiversity role, but do not provide for a diversity of recreational uses. Irrespective of whether they are designated as public open space, public realm or as transport corridors, the Public Space Plan clearly illustrates that these links will contribute to greening, accessibility and connectivity across the precincts.

Future changes/additions

- In my assessment and quantification of the open future open space network, I have not included the 12 metre wide Linear open space or green links given that I consider that the streetscapes, public realm and transport network should be designed to provide for future greening and a linking function, while the public open space is provided in a series of linked destination spaces.

B3.2 The quantum of open space in Fishermans Bend

B3.2.1 Quantum of open space relative to the geographic area of the precinct

I have undertaken an assessment of the quantum of open space. The basis of this assessment and quantities shown in the Tables B1 and B2 excludes the encumbered open space and the linear open space or green links along the roads that in my opinion form part of the streetscapes and broader public realm, rather than being public open space.

The areas of open space shown in the draft Fishermans Bend Framework Open Space Plan which I have excluded from my calculations are shown in pink and orange on Figure (iv) in my Statement. This includes the linear open space (green links) shown in pink on Figure (iv), and the long term elevated linear open space along the tram route in Montague Precinct shown as orange on Figure (iv). While I have removed these from the public open space network quantity assessment, I consider that urban greening of streetscapes and provision of large broad spreading canopy trees in streetscapes, along with the necessary transport networking including for vehicles, public transport, cyclists and pedestrians is very important. Fishermans Bend, as with other parts of the inner city has wide road reserves that were set aside to establish boulevards and generous transport routes. I consider that these streetscapes make a valuable contribution to the public realm and overall greening of the city. Redefining parts of these road reserves as a narrow open space is unnecessary and would be better managed and integrated as part of the streetscape or as public realm, rather than public open space. Where the plans propose a full road closure to create a stand alone destination open space, then I have included these in the quantification of the public open space network. The reason I do not consider the linear green links as public open space is the limited range of recreational uses and values it provides due to its linear nature. For example, it will not be possible to safely play informal ball games or escape from the built form, traffic noise and movement in these linear spaces.

I have therefore developed a revised total quantum of public open space (as distinct from public spaces) in Fishermans Bend, by excluding the linear spaces shown in Figure (iv).

The revised total of the draft Fishermans Bend Framework public open spaces (including the existing open space) is approximately 105.21 hectares which represents 21.9 per cent of the total area gross area of Fishermans Bend. This compares to the total in the TBLD adjusted plan shown in Figure (v) of 106.28 hectares, or 22.1% of the total land area as open space. The open space is distributed differently across each of the precincts. In Montague, open space will comprise 8.5 per cent of the total precinct, compared with 27.4 per cent in the Employment Precinct. All the open space for structured sport and recreation is located outside of the Montague and Lorimer Precincts and is the reason that the overall proportion of open space in these precincts is lower. People living and working these precincts will need to travel outside the precinct to reach District and Regional open space which I consider is acceptable. The higher proportion of open space to total land area, particularly in Wirraway relates to the location of two District open space reserves in this precinct.

Additional to the 106.28 hectares of public open space are other parts of the public realm including the linear open spaces, the streetscapes, public transport corridors, schools and encumbered public space including the urban space under the Bolte Bridge and Westgate Bridge and along the transmission easements. The road network facilitates access between open space reserves which is similar across other parts of Melbourne and I consider that the streetscapes and associated public realm should continue to provide this function effectively in Fishermans Bend without the need to designate parts of them as public open space.

I have included two tables showing the total quantum of public open space below excluding the linear open spaces. Table B1 is the quantum of public open space shown on Figure (iv) in this Strategy, which is the total public open space only (excluding encumbered and linear open spaces) from the draft Fishermans Bend Framework.

The second table shows the quantum of public open space in the adjusted public open space plan prepared by TBLD and included as Figure (v) in this Statement. Overall there are only minor differences between the total quantity, as the adjustments I have proposed are in relation to the distribution and the sizes of the proposed open space.

Table B1 Quantum of open space in Figure (iv) in this Statement

Note: Figure (iv) excludes encumbered open space and the 12 metre wide linear open spaces along streetscapes in draft Fishermans Bend Framework

PRECINCT NAME	TOTAL QTY OPEN SPACE (ha)	TOTAL PRECINCT AREA (Ha)	% OF OPEN SPACE TO TOTAL PRECINCT AREA
Montague	3.51	44	8.0%
Sandridge	10.95	84	13.0%
Wirraway	23.29	91	25.7%
Lorimer	3.88	29	13.4%
Employment	63.57	232	27.4%
TOTALS	105.21	480	21.9%

Table B2 *Quantum of open space in Figure (v) – the TBLD adjusted Fishermans Bend Framework open space plan.*

PRECINCT NAME	AREA (ha)	TOTAL PRECINCT AREA (Ha)	% OF OPEN SPACE TO TOTAL PRECINCT AREA
Montague	3.76	44	8.5%
Sandridge	11.36	84	13.5%
Wirraway	23.48	91	25.9%
Lorimer	4.11	29	14.2%
Employment	63.57	232	27.4%
TOTALS	106.28	480	22.1%

The main differences between Tables B1 and B2 illustrate that the TBLD adjusted open space plan increases the total quantity of public open space by 1.07 hectares across the 4 precincts that are the subject of this Amendment. The reasons for the new open spaces and the adjusted areas of open space are described in Section B4 of my statement and their locations are shown on the Figure (v) and also in the more detailed precinct diagrams included in Section B4.

Employment Precinct
 The Employment Precinct does not form part of the Amendment. The draft Framework open space plan includes the following description regarding future open space:
 "Approximately 24ha of additional new public open space and green links are proposed for the Employment Precinct".

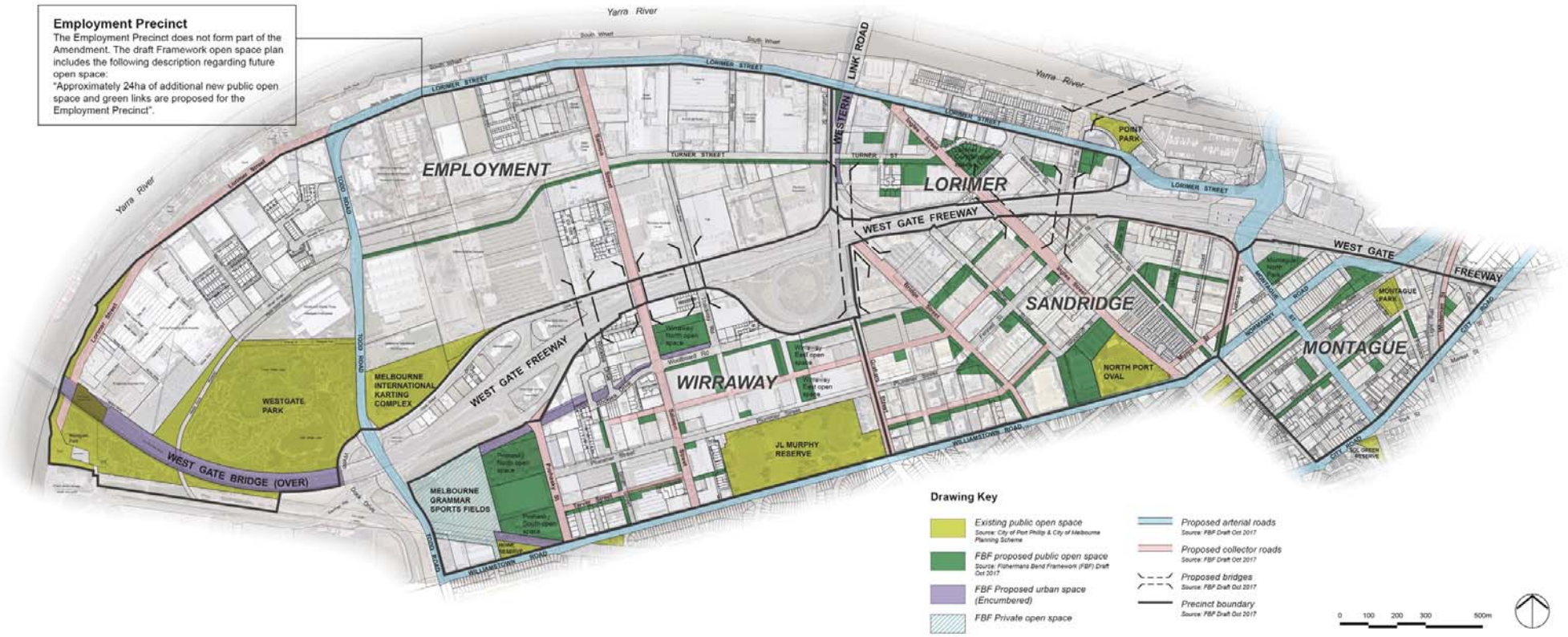


FIGURE (iii) FISHERMANS BEND PUBLIC OPEN SPACE PLAN INCLUDING ROAD HIERARCHY

Employment Precinct

The Employment Precinct does not form part of the Amendment. The draft Framework open space plan includes the following description regarding future open space:
 "Approximately 24ha of additional new public open space and green links are proposed for the Employment Precinct".

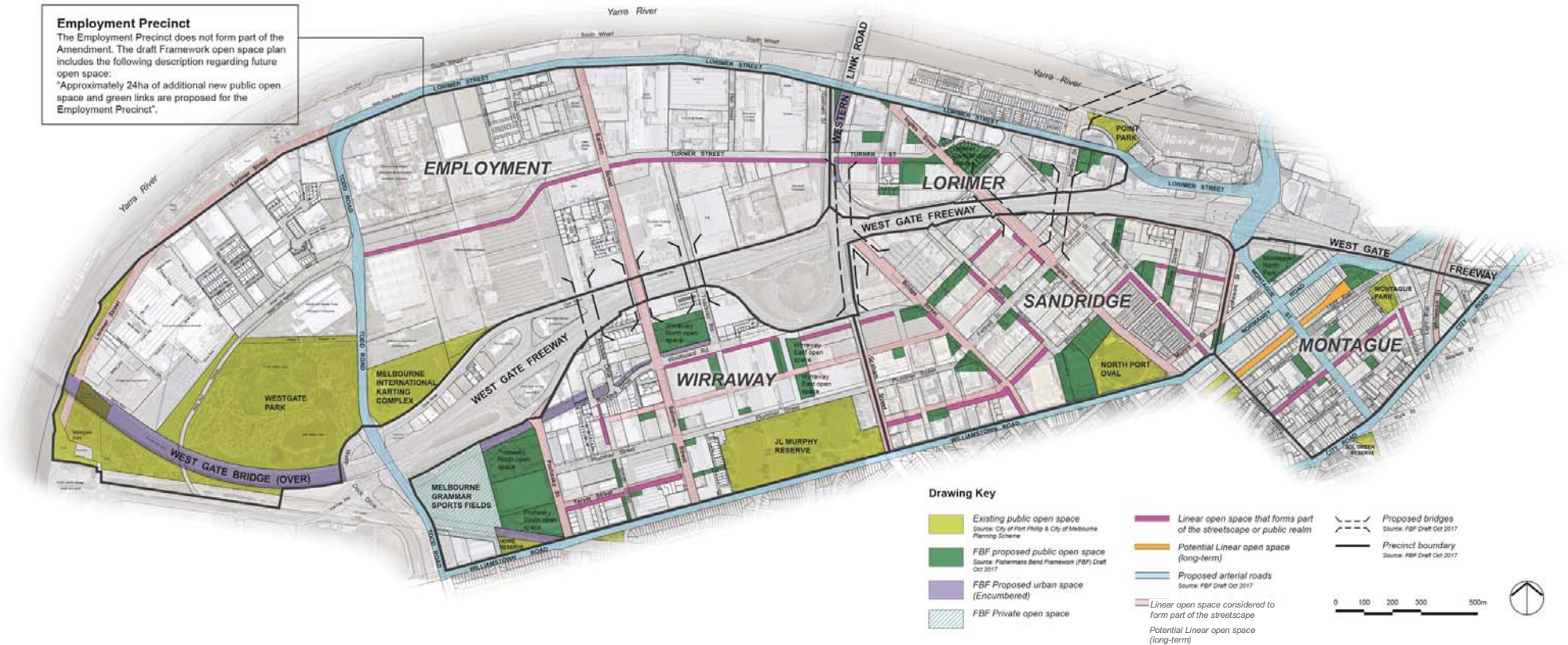


FIGURE (iv) LINEAR OPEN SPACE NOT INCLUDED IN THE TOTAL QUANTITIES SHOWN IIN TABLES B1 AND B3 IN THIS STATEMENT

Employment Precinct

The Employment Precinct does not form part of the Amendment. The draft Framework open space plan includes the following description regarding future open space:
 "Approximately 24ha of additional new public open space and green links are proposed for the Employment Precinct".

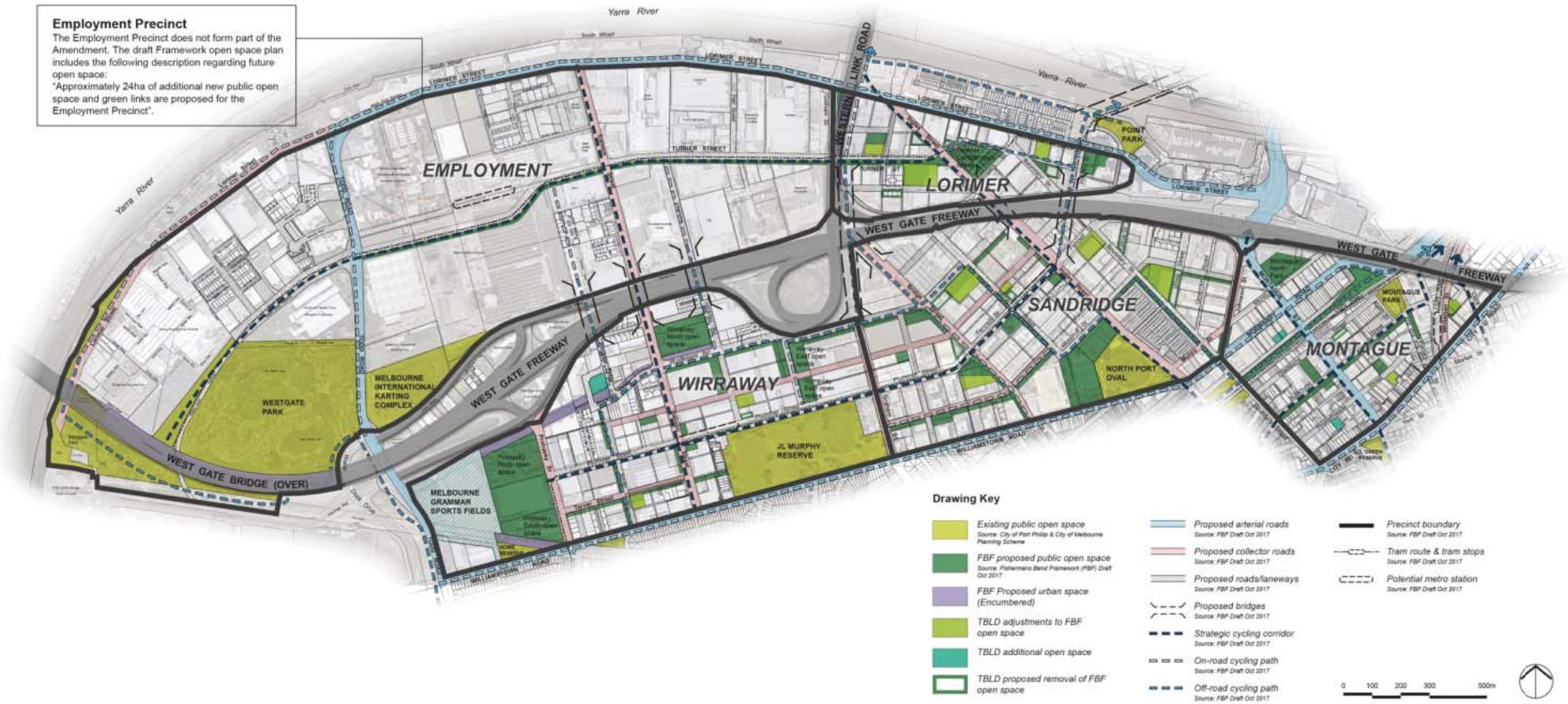


FIGURE (v) FISHERMANS BEND PUBLIC OPEN SPACE PLAN – ADJUSTED LAYOUT

B3.2.2 Quantum of open space relative to population density

The draft Fishermans Bend Framework is planning for a resident population of 80,000 and an employment population 80,000 by 2050.

The amount of open space relative to population density assists to gain an understanding of the intensity of use that the open space is likely to receive and can assist in forward planning for the future design of the open space. Based on the TBLD adjusted open space network illustrated in Figure (v) open space of 106.28 hectares, there is an average of 13.3 square metres of open space per resident. Combining the resident and worker population halves this average to 6.6 square metres per person. Tables B3 and B4 below provide a summary of this quantity by precinct.

Table B3 Quantum of open space relative to population density in Figure (iv) in this Statement

Note: Figure (iv) excludes encumbered open space and the 12 metre wide linear parks along streetscapes in draft Fishermans Bend Framework. This figure therefore differs from the total quantity of space nominated in the draft Fishermans Bend Framework

PRECINCT NAME	TOTAL QTY OPEN SPACE (ha)	TOTAL RESIDENTIAL POPULATION 2050	OPEN SPACE PER RESIDENT (m ²) 2050	TOTAL WORKER POPULATION EST 2050	OPEN SPACE PER RESIDENT & WORKER POP'N (m ²) 2050
Montague	3.51	20,800	1.7	4,000	1.4
Sandridge	10.95	29,600	3.7	26,000	2.0
Wirraway	23.29	17,600	13.2	4,000	10.8
Lorimer	3.88	12,000	3.2	6,000	2.2
Employment	63.57	0	0.0	40,000	15.9
TOTALS	105.21	80,000	13.2	80,000	6.6

Table B4 Quantum of open space relative to population density in Figure (v) – TBLD adjusted open space plan for Fishermans Bend

PRECINCT NAME	AREA (ha)	TOTAL RESIDENTIAL POPULATION 2050	OPEN SPACE PER RESIDENT (m ²) 2050	TOTAL WORKER POPULATION EST 2050	OPEN SPACE PER RESIDENT & WORKER POP'N (m ²) 2050
Montague	3.76	20,800	1.8	4,000	1.6
Sandridge	11.36	29,600	3.8	26,000	2.7
Wirraway	23.48	17,600	13.3	4,000	12.0
Lorimer	4.11	12,000	3.4	6,000	2.7
Employment	63.57	0	0.0	40,000	31.8
TOTALS	106.28	80,000	13.3	80,000	6.6

Based on the best practice research I have undertaken into the provision of open space in high density precincts there is no industry accepted standard. While I acknowledge the Fishermans Bend Public Space Strategy (April 2017) nominates a target of 9 sqm per person, there is no industry accepted evidence base to support a minimum quantity of open space in high density precincts. The more recent World Health Organisation Report

on open space in high density precincts, published in 2016 did not reference the 9 sqm per person, and reinforced instead the importance of accessibility to open space for all including children and the vulnerable. While the analysis has been undertaken regarding the quantum of open space per person, I consider that this needs to be considered as one factor in the analysis of open space in high density precincts. The other factors as previously discussed relate to the accessibility, distribution and quality of the open space.

Tables B3 and B4 are useful to illustrate the impact that changes in density will have on the future availability of open space across the different precincts. This can be used to inform the future design of the open space and also where it is critical that the quality of the open space is protected and is not encumbered by additional overshadowing or other non open space related uses such as flood mitigation or service easements etc

Based on the results of the assessment of the proposed open space system relative to population density, Montague, Sandridge and Lorimer precincts have less than 3 sqm per person. This highlights the importance in these three precincts to protect and carefully manage the open space asset to maximise its contribution to a diversity of community recreational needs along with nature conservation.

B3.3 The distribution of open space in Fishermans Bend

As described in B2.2.5 one of the key targets regarding the open space network in the draft Fishermans Bend Framework is to ensure that people can access public open space within 200 metres of their home. From the research that I have undertaken when I prepared the City of Melbourne Open Space Strategy, access to open space from the workplace is important, particularly in the context that people are working longer hours. Being able to keep fit, exercise and also relax in open space during breaks from work will contribute to a healthier community. I recommend that the key target in draft Fishermans Bend Framework is updated to reference workplaces as well as homes.

The principles that I have applied to my assessment of the open space in the draft Fishermans Bend Framework includes the requirement that people should have safe and easy access to open space without the need to cross major roads or other physical barriers to access including railways/overpasses/underpasses to reach the open space. Major roads and railways form physical and psychological barriers to accessing open space, particularly for those who are more vulnerable including young children, the elderly and people with limited mobility. I recommend that the draft Fishermans Bend Framework is updated to include a reference to safe and easy walking distance/catchments.

I have applied this adjusted target in my assessment of the public open space network in Fishermans Bend to identify whether there is enough public open space (i.e. not only a linear open space or encumbered open space) within a safe and easy 200 metre walk of all homes and workplaces. I have made some suggested adjustments to the proposed open space network to be meet this accessibility principle. The suggested adjustments are to the Neighbourhood open spaces and are described in more detail in the precinct analysis and shown on the diagrams for each of the precincts in Section B4 of my Statement.

In assessing distribution, I raised concerns regarding overshadowing of open space, particularly during winter when people require access to sunlight for their health and wellbeing. To address this, the Department of Environment, Land, Water and Planning modelled the specific sites where overshadowing was a concern using the 3D Modelling Tool Urban Engine, by Urban Circus Pty Ltd. The adjustments made to the open space network were tested in the 3D model and the overshadowing diagrams are appended to my evidence as Attachment 1.

The modelling demonstrated that while some of the Neighbourhood open spaces will experience overshadowing, the majority of them will have up to 2 to 3 hours of direct sunlight between the hours of 10am and 3pm in mid-winter (modelled on 22 June). This has addressed my concerns regarding the useability of the open space network, particularly during the late Autumn/Winter and early Spring.

B3.4 Conclusions regarding the distribution of open space

I consider that providing future residents and workers with open space within a 200 metre safe and easy walking catchment meets best practice for open space provision in high density precincts. As noted earlier, there is no industry accepted standard regarding the optimum quantity of open space. There is a generally accepted industry standard of between 200 and 400 metre walking catchment to local open space. With the adjustments I have recommended, the proposed open space in the draft Fishermans Bend Framework will meet this standard.

I do have concerns that there is no Capital City open space and District open space in the Montague and Lorimer Precincts, however I understand it is not feasible to provide this within the current context of private land ownership, land zoning and the development context.

I am satisfied that this can be overcome with the provision of these types of open spaces in the Employment Precinct in the future, and in locations that are accessible to the Lorimer and Montague Precincts where possible. In terms of the future Capital City open space, I am referring to major event space that contributes to the Capital City role and character of open space in the City of Melbourne. In relation to future District open space, I am referring to the need for active sporting reserves with outdoor playing fields. This is specifically because there are none of these types of open spaces provided in the Lorimer and Montague Precincts.

Additionally, for the Montague and Lorimer precincts I recommend that the draft Fishermans Bend Framework is updated to:

- Seek opportunities to increase the size and minimise the overshadowing to all the open space reserves in Montague Precinct wherever possible during the implementation phase of the project. This is particularly for the new open spaces added to the network in sub-precincts M3 and M5. Sunlight access during winter is an important reason people want to visit and use the open space. I understand there may be potential opportunities to advance this through the Floor Area Uplift process.
- Seek opportunities to open up the Lorimer Central open space to the north adjacent including direct access to the Yarra River and provision of long vistas and views.

The relatively low quantity of open space per person highlights the importance to provide diversity and quality in future open space, and to maximise its use for open space dependent purposes.

B4 Quantum and distribution of open space in each of the precincts

B4.1 Montague

Precinct Vision

A diverse and well-connected mixed use precinct celebrating its significant cultural and built heritage, and network of gritty streets and laneways.

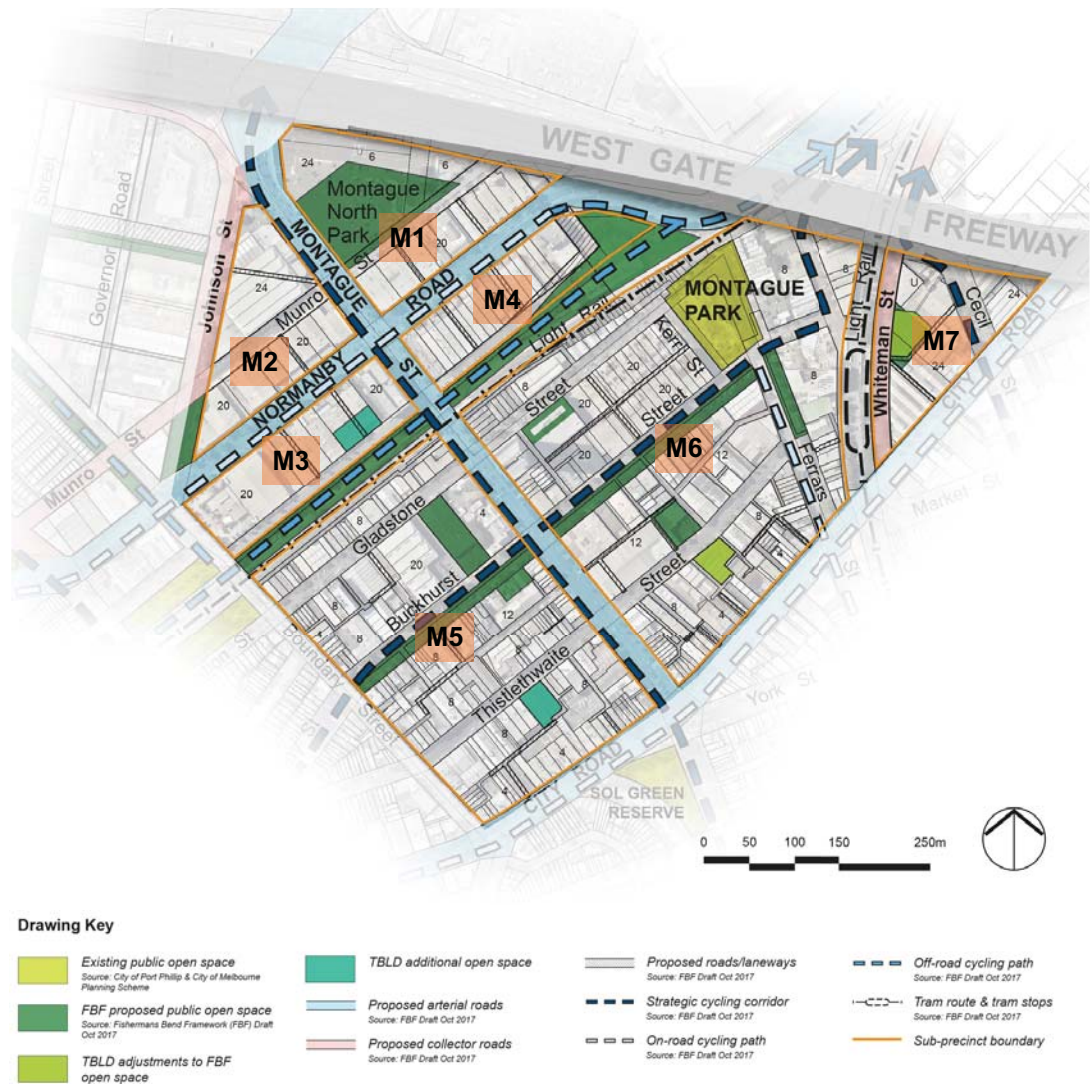


FIGURE (vi) PUBLIC OPEN SPACE PLAN – MONTAGUE PRECINCT

B4.1.1 Summary of the sub-precinct assessment

Montague precinct is defined by the West Gate Freeway to the north and City Road to the south east with a permeable boundary to the south west via the local street network meaning people safely and easily walk to open space in the adjoining areas to the south west.

Below is a summary of the population growth forecasts summarised from the draft Fishermans Bend Framework Report:

- 20,800 residents
- 9,244 households (2.25 persons per household)
- 4,000 jobs
- 5.2:1 ratio of residents to workers

Montague Park is a new open space currently in construction and located opposite the Ferrars Street Education and Community Hub, and the recently constructed City Road station for the Light Rail opposite the new Education and Community Hub. An existing off-road shared trail is located along the elevated light rail corridor that provides cycle and walking connectivity between the Southbank/CBD to the north east and Port Melbourne to the south west. The off-road shared trail is located between tram lines and forms part of the transport corridor rather than an open space. A long term opportunity is shown on the Open Space Plan in the draft Fishermans Bend Framework for a long term opportunity for a future elevated linear open space and reserve at the corner of Normanby Road and the light rail corridor. Given the 20 storey building heights immediately north of the light rail corridor, a future linear open space would be encumbered by significant overshadowing and has not been included in the total quantities for future open space.

Sub-precinct	Description	Conclusions
M1	<ul style="list-style-type: none"> • Defined by Montague Street to the south west, the West Gate Freeway to the north and Normanby Road to the south east. • Predominantly 24 to 20 storey building heights with 6 storeys along the northern boundary of the future Montague North Park. • The built form adjacent to the park is identified as part of a future Sports and Recreation Hub investigation area. • Montague North Park is a proposed Precinct open space. 	<p>The proposed Montague North Park is located on existing public land and will adequately provide for the future local open space needs of this sub-precinct, as everyone will be located within a 200 metre safe and easy walk to open space. The proposed built form to the north will buffer the future open space from freeway noise and movement.</p> <p>Overshadowing modelling for the proposed built form to the north including the 6 and 24 storey building heights demonstrated that there is adequate sunlight access will be retained to the south west portion of the open space between 10am and 2pm on 22 June. Refer to Montague 04 in Attachment 1 for shadow diagrams.</p>
M2	<ul style="list-style-type: none"> • Defined by Johnston Street to the west, Montague Street to the east and Normanby Road to the south. • A combination of 24 and 20 storey buildings and defined by arterial and collector roads. • Johnston St Park road closure is proposed open space in this sub-precinct. 	<p>Given the urban densities proposed, Johnston St Park is likely to become heavily used. Future opportunities to increase the size is recommended through negotiations with the adjoining land holders as sites redevelop.</p> <p>Note, Montague Street is a major arterial and considered a barrier to safe and easy walking distances to open space.</p>

Sub-precinct	Description	Conclusions
M3	<ul style="list-style-type: none"> • Bounded by the Normanby Road to the north, Montague Street to the east, Woodgate Street and the elevated Light Rail Corridor to the south and Boundary Street to the west. • Predominantly 20 storey buildings defined by arterial roads to the north and east and by the light rail to the south. • Adjoining open space along the light rail reserve is accessible via the local street network to the south western portion of this precinct. • Gap area in the north east area of the sub-precinct. 	<p>Propose an additional Neighbourhood open space to the north east area of the sub-precinct to ensure future residents and workers have access to open space within safe and easy walking distance.</p> <p>Montague 03 shadow diagrams in Attachment 1 confirm that only minimal sunlight access to this open space in winter will be achieved with the current proposed building heights between 10am and 11am. Reasonable sunlight access is available in the September 22 overshadowing diagrams between 10am and 2pm.</p> <p>Future implementation of this open space should consider options to maximise sunlight access.</p>
M4	<ul style="list-style-type: none"> • Bounded to the north by Normanby Road, the east by the West Gate Freeway, the south by elevated Light Rail corridor and the west by Montague Street. • Urban form as per sub-precinct M3. • Linear open space to the south is unlikely to be delivered by 2050- and access into this elevated open space may be difficult. • There is a Neighbourhood open space proposed in the north east adjacent to Normanby Road and the West Gate Freeway. 	<p>The proposed Neighbourhood open space will be encumbered in part by traffic noise and movement, and this will be a key design consideration in the future open space.</p> <p>A priority for this sub-precinct will be providing safe and clear pedestrian access to Montague Park in the short to medium term given the future Neighbourhood open space is dependent on the relocation of the tram depot.</p>
M5	<ul style="list-style-type: none"> • Defined by the elevated light rail corridor to the north, Montague Street to the east, City Road to the south and Boundary Street to the west. • Predominantly 8 storey built form, with some 20 storey adjacent to proposed open space on Gladstone Street. • There are two new Neighbourhood open spaces proposed in this sub-precinct as part of the draft Fishermans Bend Framework. • The south west extent of this sub-precinct in between City Road and Thistlethwaite Street is more than 200 metres safe and easy walking distance to any open space. 	<p>Provide an additional Neighbourhood open space in the south west area of this sub-precinct to ensure that future residents and workers are within safe 200 metre walking distance to open space.</p> <p>Montague 02 in Attachment 1 illustrates this proposed Neighbourhood park would receive direct sunlight on 22 June between 11am and 2pm.</p>

Sub-precinct	Description	Conclusions
M6	<ul style="list-style-type: none"> • Bounded to the north west by the elevated Light Rail, to the north by the West Gate Freeway, to the east by City Road and the west by Montague Street. • Predominantly 8 storey buildings south of Thistlethwaite Street, stepping up to 12 and 20 storeys to the north. • Three Neighbourhood open spaces are proposed, including Montague Park which is in construction. • The proposed Neighbourhood open space is located on a site that has redeveloped recently and is unlikely to redevelop in the 2050 timeframe and therefore alternative sites have been investigated for this open space. • The other Neighbourhood open spaces are located on Thistlethwaite Street. The site on Gladstone Street is unlikely to become available in the medium and long term. 	<p>Recommend that the proposed Neighbourhood open space on Gladstone Street is replaced with a new Neighbourhood open space on Thistlethwaite Street, opposite the proposed Neighbourhood open space to the north.</p> <p>The reason for selecting this location is that these two open spaces will be within 200 metres safe and easy walking distance of the north western area of this sub-precinct. With the proposed building heights in the north of this sub-precinct, future open space between Gladstone and Buckhurst Streets will be significantly impacted by overshadowing.</p> <p>The proposed new Neighbourhood open space on the south side of Thistlethwaite Street will receive good sunlight access, and both open spaces will benefit from the other in terms of sunlight, views and sense of space in the sub-precinct.</p> <p>Montage 01 in Attachment 1 illustrates the proposed Neighbourhood open space would receive direct sunlight access between 12 Noon and 3pm on 22 June.</p>
M7	<ul style="list-style-type: none"> • Defined by the elevated Light Rail corridor to the west, the West Gate Freeway to the north and City Road to the south east. • Unlimited and 24 storey height limits, this small sub precinct has physical barriers to access on all sides. • The proposed Neighbourhood open space is required, as without it people living and working in this sub-precinct will not have safe and easy access to open space within 200 metres. 	<p>The minor modifications to the proposed Neighbourhood open space on Whiteman Street recommended include a new laneway access between the proposed Neighbourhood open space and Cecil Street to provide at least pedestrian connectivity through to the open space and the Light Rail stop beyond. Adding the laneway will provide a minimum of two public streets/laneways fronting the open space making it accessible. This open space will be encumbered by overshadowing in mid-winter, however it will still provide a quality public open space in the summer months, provide greening in this high density urban precinct and a meeting place for the local community.</p>

B4.2 Sandridge

Precinct Vision

One of Melbourne's premium office and commercial centres, balanced with diverse housing and retail.



FIGURE (vii) PUBLIC OPEN SPACE PLAN – SANDRIDGE PRECINCT

B4.2.1 Summary of the sub-precinct assessment

Sandridge precinct is defined by the West Gate Freeway to the north, Williamstown Road to the south, Graham Street to the west and Johnson Street to the east.

North Port Oval is an established existing open space in the precinct which is home to the Port Melbourne Football Club that plays in the Victorian Football League. The draft Fishermans Bend Framework proposes to expand this District open space to provide sport and recreation facilities for the new residential and worker community. The future tram and potential metro station central to the Sandridge precinct will be a key driver in attracting both residents and workers to the precinct.

Below is a summary of the population growth forecasts summarised from the draft Fishermans Bend Framework Report by 2050:

- 29,600 residents

- 14,949 households (1.8 persons per household)
- 26,000 jobs
- 1.1:1 ratio of residents to workers

From the 2050 population forecast targets included in the draft Fishermans Bend Framework there will be an almost equal number of employees and residents in this precinct. This compares with a 5:1 resident/worker ratio in Montague Precinct.

Sub-precinct	Description	Conclusions
S1	<ul style="list-style-type: none"> • Bounded to the north east by Bridge Street extension, to the south by a proposed collector road (no name) and the west by Graham Street. • This high density precinct has a combination of 24 storey and unlimited building heights meaning that the proposed Neighbourhood open space will be extremely well used. The building heights step down to 12 storeys north of the proposed open space to reduce overshadowing impacts. • There is a proposed linear park west on the future proposed local street. 	<p>Given the intensity of use in this sub precinct, this Neighbourhood open space will need to be well designed to cater to the forecast levels of use. This open space should not be encumbered by other features such as a drainage function or additional easements to maximise the space available for open space.</p> <p>Sandridge 02 in Attachment 1 illustrates that this Neighbourhood open space will receive direct sunlight access between 10am and 3pm.</p>
S2	<ul style="list-style-type: none"> • Bounded to the north by the West Gate Freeway, the east by Ingles Street, the south by a proposed new collector road (unnamed) and to the south by Bridge Street. • A combination of unlimited, 24 and 20 storey buildings this high density. • The draft Fishermans Bend Framework proposed a linear Neighbourhood open space along with 2 other sections of Linear Parks. 	<p>Given the urban densities and the distance of approximately 800 metres to the North Port Oval District open space, I have recommended that the proposed linear form of park is reconfigured into a larger Neighbourhood open space (8,594 sqm) so that facilities such as multi use courts can be provided in it and allow for a diversity of uses and adaptability in the future. The proposed linear link between Bertie and Ingles Streets is located along a laneway access. I recommend that this should be included into the road reserve and designed as a streetscape with the required pedestrian and vehicle connectivity and large canopy trees.</p> <p>Sandridge 02 in Attachment 1 illustrates that this reconfigured open space will receive direct sunlight on 22 June between 10 and 11am and between 1 and 2pm.</p>

Sub-precinct	Description	Conclusions
S3	<ul style="list-style-type: none"> • Bounded to the north by the West Gate Freeway, the east by Johnston Street and the south west by City Road and Ingles Street. • This large sub-precinct includes unlimited building heights in the north west changing to 24 storeys and scaling down to 8 and 4 towards the North Port Oval open space. • The draft Fishermans Bend Framework proposes 3 road closures including Gittus Street, White Street and Johnston Street, along with part of the former Council Depot site as public open space. • There is an open space gap area in the north west of this sub-precinct where the building heights are unlimited and the residents and worker will be more than 200 metres safe walking distance to any open space. • The Linear open space proposed along Boundary and Woodruff Street road closures means that the form and type open space in this sub-precinct will be similar. 	<p>To increase the diversity of open space in this sub-precinct and address the open space gap area in the north west, I propose to remove the Gittus Street road closure and replaced it with a Neighbourhood open space on the corner of Fennel and Boundary Streets. This open space will be located within the 200 metre safe walking catchment for people living and working in the north west extent of this sub-precinct. This location also offers longer views to the north and east providing a greater sense of space, along with better visibility and accessibility than the Gittus Street road closure.</p> <p>I also propose to expand the proposed Neighbourhood open space on the corner of the former Council Depot land (east of Boundary Street) and extend this south towards White Street. I have removed the White Street road closure as it would no longer be required as open space.</p> <p>Sandridge 01 in Attachment 1 illustrates that relocated Neighbourhood open space on the corner of Fennel and Boundary Streets will receive some direct sunlight on 22 June at 10am and then again between 2pm and 3pm. The September 22 diagrams illustrates that the open space will receive direct sunlight between 11am and 2pm.</p>
S4	<ul style="list-style-type: none"> • Bounded to the north by a proposed new collector road (north of Plummer Street), to the east by Bridge Street, to the south by the extension of Woodruff Street and the west by Graham Street. • 24 storey buildings in the north that scale down to 12 storeys on the north side of Plummer Street and then increase to 24 storeys south of Plummer Street. • 3 small Neighbourhood open spaces are proposed, two of which are located both north and south of Plummer Street at the intersection with Bridge Street, associated with the proposed tram route. 	<p>Given the high densities in the catchment combined with the and lack of any larger Neighbourhood open spaces west of Bridge Street, I have proposed consolidating the two open spaces north and south of Plummer Street to form a larger Neighbourhood open space that is just over 1 hectare in size.</p> <p>The other smaller Neighbourhood open space is retained as proposed in the north west area of this sub-precinct.</p> <p>Sandridge 03 in Attachment 1 illustrates that the open space will receive direct sunlight to at least part of the reserve from 10am to 3pm on June 22.</p>

Sub-precinct	Description	Conclusions
S5	<ul style="list-style-type: none"> • Bounded to the north west by a proposed collector road (north of Fennel Street), to the north east by Ingles Street, to the south east by Woodruff Street and the south west by Bridge Street. • Included in this sub-precinct is the proposed future Metro Station and tram stop. • A combination of unlimited, 30 and 20 storey height limits in the north west of the precinct grading down to 12, 8 and 4 storeys near the North Port Oval and expanded District open space. • The main open space is the existing North Port Oval and the expansion to this to form a District open space on existing government owned land. The District open space is also proposed to extend over Bertie Street south of Woodruff Street. • 3 small Neighbourhood open spaces are located in the vicinity of the future Metro Station and Tram Stop and are noted to be designed to facilitate station entry points in the future. 	<p>No major changes are proposed to the open space provision in this sub-precinct.</p> <p>Only one minor change is proposed to relocate one of the three Neighbourhood open spaces north of Fennel Street so that it functions as a local open space instead of a station entry point, to provide diversity of character and purpose.</p>
S6	<ul style="list-style-type: none"> • Bounded to the north by the future extension of Woodruff Street, to the east by Bridge Street, the south by Williamstown Road and the west by Graham Street. • Predominantly 8 and 4 storey height limits in this small sub-precinct means that the proposed Neighbourhood open space will be suitable for the proposed urban density. 	<p>No changes are proposed to the open space provision in this sub-precinct, as it meets the 200 metre accessibility requirements and there is a larger Neighbourhood open space to the north of this sub-precinct as well in S4.</p>

B4.3 Wirraway

Precinct Vision

A family friendly inner city neighbourhood close to the Bay and Westgate Park

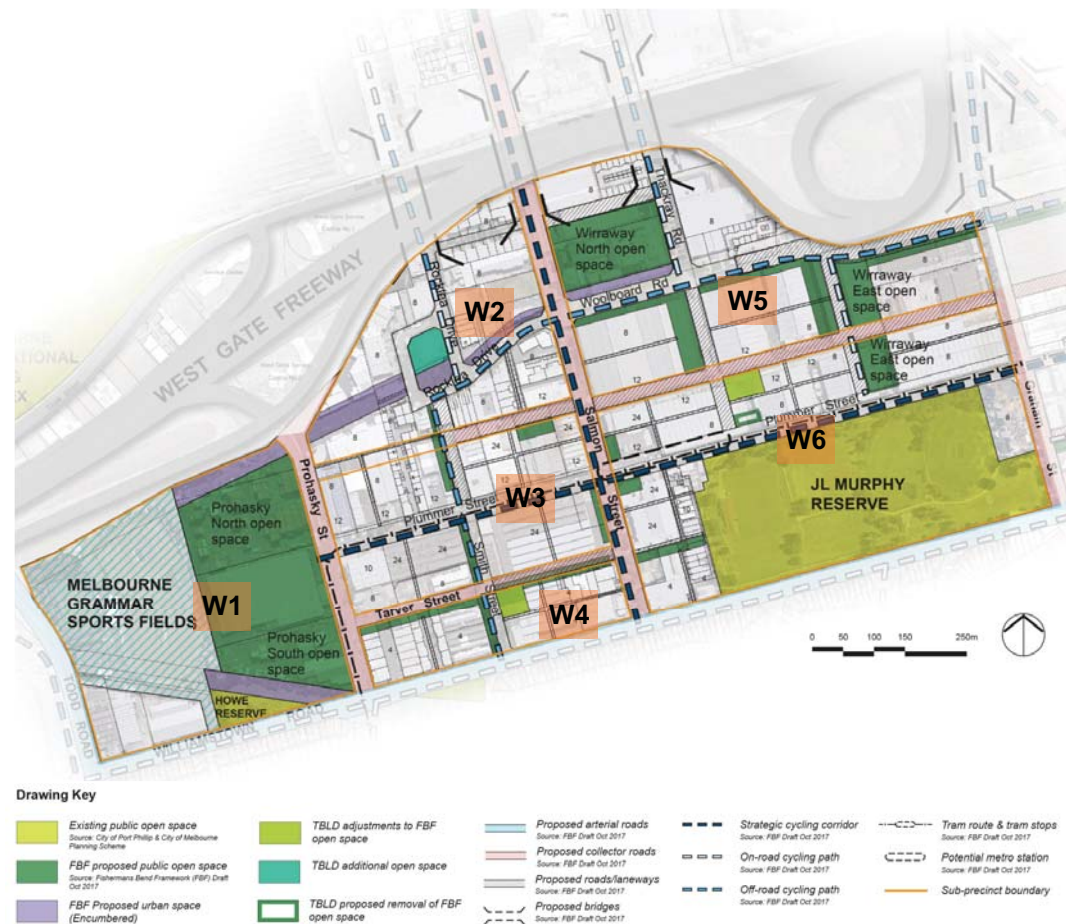


FIGURE (viii) PUBLIC OPEN SPACE PLAN – WIRRAWAY PRECINCT

B4.3.1 Summary of the sub-precinct assessment

Wirraway precinct is defined by the West Gate Freeway to the north, Williamstown Road to the south, Todd Road to the west and Graham Street to the east.

JL Murphy Reserve is a well established community sporting reserve that is already well used by residents of Port Melbourne and Garden City. The draft Fishermans Bend Framework proposes to add the additional District open space (Prohasky North and South open space) in the west and a new Precinct open space (Wirraway North open space) in the north. Additionally, a series of smaller Neighbourhood open spaces are proposed within the precinct. This is proposed as a family friendly precinct that includes an education precinct and comparatively lower densities compared with Montague, Sandridge and Lorimer Precincts. The following is a summary of the population forecasts from the draft Fishermans Bend Framework Report:

- 17,600 residents
- 6,822 households (2.6 persons per household)
- 4,000 jobs

- 4.4:1 ratio of residents to workers

The population profile for this precinct differs from Sandridge with a higher proportion of residents to workers.

Sub-precinct	Description	Conclusions
W1	<ul style="list-style-type: none"> • Bounded by the West Gate Freeway to the north, Todd Road to the west, Prohasky Street to the east and Williamstown Road to the south. • The proposed built form in the south west corner of the precinct is isolated from the remainder of the precinct with proposed heights of 4 storeys. Good pedestrian connectivity between the built form and Howe Reserve will link this area to the future open space network. • Melbourne Grammar Sports Fields are located on private and fenced from public access. • Proposed new District open space on Prohasky Street will cater to the sport and recreational needs of the Fishermans Bend community. 	<p>No changes are proposed to the open space provision in this sub-precinct.</p>
W2	<ul style="list-style-type: none"> • The proposed built form varies in height from 8 to 12 storeys across the majority of this sub-precinct. • No new open space proposed in the draft Fishermans Bend Framework. • This is an open space gap area where there is only encumbered open space (transmission easement) within 200 metre catchment of forecast population. 	<p>Recommend a new Neighbourhood open space is provided central to the sub-precinct with excellent access via the local street network. The open space directly adjoins the encumbered open space along the transmission easement. This will address the open space gap area in the north of west area of Wirraway - both in this sub-precinct and also the western extent of sub-precinct W3.</p> <p>Wirraway 02 in Attachment 1 illustrates there will be direct sunlight access to the open space from 10am to 3pm on 22 June.</p>

Sub-precinct	Description	Conclusions
W3	<ul style="list-style-type: none"> • There is a core of higher 24 storey controls in the vicinity of Plummer Street that is associated with a future activity centre and potential metro station. • One Neighbourhood open space is proposed in the northern extent of this sub-precinct and the western portion of this precinct is in an open space gap area, recognising that the new Prohasky North District open space will be within 200 metres, but will require crossing a Collector Road to reach it. 	<p>The open space gap area in the provision of open space in the western area of this sub-precinct will be addressed by providing the new Neighbourhood open space near Rocklea Drive and accessed via Smith Street which is a local street and identified to include a linear open space.</p> <p>The Neighbourhood open space in the north will need to cater to a high level of use.</p>
W4	<ul style="list-style-type: none"> • Bounded to the north by Tarver Street, the east by Salmon Street, the south by Williamstown Road and the west by Prohasky Street. • Medium density with predominantly 4 storey heights. • The location of the proposed Neighbourhood open space contains some large established trees which have potential to be incorporated in to the new open space. 	<p>Recommend enlarging the proposed Neighbourhood open space to incorporate the existing trees and have space to provide facilities in the shade of the proposed trees.</p>
W5	<ul style="list-style-type: none"> • Bounded to the north by the West Gate Freeway, the south by the proposed collector road (north of Plummer Street), the east by Graham Street and the west by Salmon Street. • Predominantly 8 storey combined with some 12 storey building heights. • The proposed Precinct open space – Wirraway North open space and the new Neighbourhood open space Wirraway East open space will adequately provide for the open space needs in this sub-precinct. • Additionally the approximately 30 metre wide open space on the Thakery Road extension will provide good passive open space in this precinct as well. 	<p>No changes are proposed to the open space provision in this sub-precinct.</p>

Sub-precinct	Description	Conclusions
W6	<ul style="list-style-type: none"> • Bounded by the proposed east west collector road (north of Plummer Street) to the north, Williamstown Road to the south, Graham Street to the east and Salmon Street to the west. • Predominantly 12 and 8 storey limits, with some higher density 24 storey heights in the west of the sub-precinct. • JL Murphy Reserve, along with a proposed linear open space to provide access into the reserve from Salmon Street and three new Neighbourhood open spaces associated with future entry points to the metro station on Plummer Street. 	<p>Recommend relocating and enlarging the proposed Neighbourhood open space on Plummer Street directly opposite JL Murphy Reserve, north to protect and create a new open space around the single large mature tree.</p> <p>Wirraway 01 in Attachment 1 illustrates there will be direct sunlight access to the proposed open space between 10am and 3pm on 22 June.</p>

B4.4 Lorimer

Precinct Vision

A vibrant, mixed use precinct close to the Yarra River and connected to Melbourne CBD, Docklands and emerging renewal areas.



FIGURE (ix) PUBLIC OPEN SPACE PLAN - LORIMER PRECINCT

B4.4.1 Summary of the sub-precinct assessment

Lorimer precinct is defined by Lorimer Street to the north and east, the Bolte Bridge to the west, the West Gate Freeway to the south. There is no existing open space in the Lorimer Precinct with Point Park being the closest adjoining open space on the Yarra River to the north.

As expressed in the Vision for this precinct, a key defining natural feature is its proximity to the Yarra River. Other defining features include some old well established trees in on private land that have the potential to be incorporated into open space in the future. Neighbourhood open space within the precinct. The following is a summary of the population forecasts from the draft Fishermans Bend Framework Report:

- 12,000 residents
- 5,882 households (2.0 persons per household)
- 6,000 jobs
- 2:1 ratio of residents to workers

Sub-precinct	Description	Conclusions
L1	<ul style="list-style-type: none"> • Bounded by Lorimer Street to the north, the West Gate Freeway to the south, the Western Link Road and Bolte Bridge to the west and Ingles Street to the east. • The height limits to the west of Ingles Street and south of Plummer Street are unlimited. To the north of Plummer Street they are 24 storeys. • The draft Fishermans Bend Framework included 4 Neighbourhood open spaces and a Pocket Park in this sub-precinct. • There is also encumbered urban space under the Bolte Bridge, however I have not included this in the total quantities for open space in this assessment. 	<p>Recommend combining and enlarging two Neighbourhood open spaces to increase the opportunity to incorporate a variety of facilities in them. This is due to the open space south of Turner Street being limited in size with substantial overshadowing. I consider that expanding the proposed Turner Street Neighbourhood open space will provide a more flexible and adaptable open space.</p> <p>The proposed expansion of the Neighbourhood open space north of Turner Street will improve the sunlight access to this open space, and create a Neighbourhood open space with good accessibility via the local street network, with a local community focus away from the traffic of Ingles Street.</p> <p>They still meet the 200 metre easy walking catchment requirements.</p> <p>Refer to Lorimer 05 Option 1 in Attachment 1 that models the sunlight access to the expanded open space north of Turner Street. It will have direct sunlight to the part of the reserve between 10am and 2pm on 22 June. Please also refer to Lorimer 04 in Attachment 1 for sunlight access to the enlarged open space south of Turner Street. This will have direct sunlight access to part of the open space between 10am and 2pm on 22 June.</p>
L2	<ul style="list-style-type: none"> • Bounded by Lorimer Street in the north, the West Gate Freeway to the south east and Ingles Street to the west. • A combination of 8, 10, 15 and 14 storey built form heights adjacent to Lorimer Street and unlimited heights towards the south of the precinct. • Lorimer Central open space is the Precinct open space along with 2 other Neighbourhood open spaces. 	<p>Recommend realignment of the Neighbourhood open space between Hartly and Boundary Streets so there is access and views to the north including towards the Yarra River.</p> <p>While I understand that Lorimer Street will remain as a freight route I recommend that the long term opportunity to connect the open space north to Yarra River should be retained, rather than building out the northern extent of this precinct.</p> <p>Refer to Lorimer 02 in Attachment 1 regarding overshadowing diagrams for the realigned open space. This illustrates that the proposed open space will have direct sunlight access to it between 10am and 2pm on June 22.</p> <p>Please note that the Lorimer 01 overshadowing diagrams in Attachment 1</p>

Sub-precinct	Description	Conclusions
		<p>illustrate the Lorimer Central open space. This includes an option I was originally investigating to provide an open space link north to the Yarra River. I determined not to include this due to substantial overshadowing of the space from 12 Noon onwards on June 22.</p>

B5 Summary

As currently proposed, the public open space network occupies less than 10 per cent of the total precinct area in some of the precincts, is less than 9 square metres of open space per person in some of the precincts, and does not meet the aim of open space within 200 metre easy walking distance of all homes and workplaces. However, with the changes I have recommended, I am satisfied that the quantum and distribution of open space will be acceptable, supplemented by the provision of open space in the Employment Precinct.

The best practice research supports the provision of open space within the safe and easy walking distance of the population, with the distances of between 200 metres and 400 metres generally accepted. Therefore, I consider that the target of providing open space within a 200 metre safe and easy walking distance of all residents and workers is consistent with best practice.

The best practice research identifies the need for location specific open space assessments to be undertaken to design an open space network that addresses the opportunities and constraints of the study area. This has been undertaken and with my suggested adjustments to the proposed open space network, I consider that within the current constraints regarding land tenure and cost, the proposed public open space network for Lorimer, Montague, Sandridge and Wirraway Precincts will provide an acceptable open space network. Importantly, this support is based on the assumption that approximately 24 hectares of additional public open space will be provided in the Employment Precinct.

Statement

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.



Joanna Thompson, AILA
Director
Thompson Berrill Landscape Design Pty Ltd

C Response to submissions

No.	Summary of issue	Response to issue
10.1	Submits that a broader range of open space values including its role in providing for diverse informal recreational activities and improving biodiversity values, in addition to organised sport, needs to be recognised and supported by the Framework.	<p>The draft Fishermans Bend Framework does support and refers to informal recreation activities through the document. This includes in the Precinct Visions on page 23, in the Liveable Places description on page 28 in 1.5.2, page 33 creating safe amenity and a variety of recreational uses.</p> <p>Where sports fields are accessible to the public they have an important diverse role and function in the open space network. In addition to organised sport, sports fields can also be valued for the sense of space they provide, the long vistas that are afforded over them, for playing informal games, for dog walking, jogging/running, relaxing in the sun and for a range of intangible values such as the contrast to built form and their green and unbuilt character. I therefore consider that outdoor sports fields, where they area accessible to the public, contribute to the open space network to a greater extent than structured sporting use.</p>
10.3	Submits that space in Westgate Park below the freeway will not provide high quality open space is repurposed.	The space below Westgate Park is noted as encumbered open space on the plans and is not given the same status as the existing public open space such as Westgate Park. The draft Fishermans Bend Framework identifies this space as opportunity to integrate more urban related uses recognising they are encumbered by the overhead freeway and do not have the same access to natural sunlight and rainfall.
10.6	Submits that the Go Kart track should be recognised as public open space.	<p>Agree that this should be identified as existing public open space on the plans and it has been shown as this on the adjusted open space network in my Statement. The Melbourne International Karting Complex land is currently zoned as Public Park and Recreation Zone in the Melbourne Planning Scheme.</p> <p>The future use of this site needs to be considered in relation to the whole of the Employment Precinct and I do not agree that it necessarily forms part of the Westgate Park. It is physically separated from Westgate Park by Todd Road which is a major arterial road. While it is currently the responsibility of Parks Victoria, I recommend that future directions for this land should be integrated with and considered as part of the broader open space and recreational needs of Fishermans Bend as a whole.</p>
17.2	Submits that the park identified for 87 Gladstone St is	From the site assessment work I have seen that the open space proposed for 87 Gladstone Street is

No.	Summary of issue	Response to issue
	compromised and would be an ineffective use of public money.	located on a site with a recently constructed new building. In the circumstance the Fishermans Bend Taskforce requested that I identify an alternative location for this open space in my evidence. Refer to Section B4.1.
21.1	Supports open space concepts and 200m catchments.	As noted in my evidence in Section B1.2.6, I support the concept of the 200 metre walking catchment as a best practice principle to achieve in the open space network in Fishermans Bend. This will allow the community to easily access open space, including young children, the elderly and people with limited mobility. The reason to support the 200 metre safe and easy walking catchment is that it provides open space that is accessible in an environment where it is not feasible to necessarily provide a quantum of open space that meets the commonly accepted principles of open space planning for greenfields residential suburbs of 22 to 24 sqm per person.
21.2	Supports using existing open space for a wider variety of uses.	Noted, and Objective 3.7 with supporting strategies in draft Fishermans Bend Framework reinforces the intention to support the provision of open space that allows for a diversity of facilities and uses that will appeal to people of different age groups, interests, cultural backgrounds and biodiversity improvement.
21.3	Supports the concept of co-locating open space with community infrastructure including features that encourage physical activity.	Noted, and this is consistent with Objective 3.6 and Strategies 3.6.1 and 3.6.5 in the draft Fishermans Bend Framework. In addition to the draft Framework open space plan, I have suggested amendments to a few specific Neighbourhood open spaces to increase the diversity of sizes of open space so that there is an opportunity to include different types of facilities that encourage physical activity, including multi-use courts, open grassed areas, space for outdoor gyms etc.
21.4	Submits that proposed open space is insufficient, particularly in the context of the existing open spaces being at capacity.	As noted in 21.2 above, there is potential to increase the levels of use of the existing open space reserves combined with the provision of a linked and diverse network of open space. The draft Fishermans Bend Framework includes a number of additional Neighbourhood and Precinct open spaces along with the addition of approximately 24 hectares of public open space in the Employment Precinct. This combined with the suggested amendments I have made to the network will achieve an accessible, linked and quality open space network for Fishermans Bend, which meets the key targets and goals outlined in the draft Fishermans Bend Framework.

No.	Summary of issue	Response to issue
21.5	Submits that there is an opportunity to enhance access to the Port Land and increase open space distribution in the Employment Precinct.	Refer to response to 21.4. I have not investigated options for providing additional open space on Port Land. I consider that it is important to focus on providing sufficient public open space that is easily and safely accessible to everyone. If additional open space is added to the network over time on the Port Land this will strengthen the open space system, but I do not consider that it is necessary to do this as part of the core network of open space in Fishermans Bend.
21.8	Suggests that connections between open spaces in and outside of Fishermans Bend are better shown.	The draft Fishermans Bend Framework has considered and illustrated the future pedestrian and cycle links to the areas outside of Fishermans Bend. Figure 7 in the draft Framework includes future proposed bridge crossings over the West Gate Freeway and the Yarra River to the north and Port Phillip Bay and Albert Park Lake via the strategic cycling corridors and existing and proposed off-road cycling links to the south.
27.1	Supports open space approach and canopy cover targets.	Noted. The additional recommended adjustments I have made to the open space plan in the Wirraway Precinct include expanding or relocating open space to retain existing mature trees on public land to secure their health and survival.
27.2	Supports increasing use of existing sports fields by providing public access to Melbourne Grammar land and providing community access to North Port Oval.	Noted. Strategy 3.6.1 in the draft Fishermans Bend Framework identifies the need to redesign and/or expand North Port Oval to multi-functional uses. While gaining community access to the Melbourne Grammar ovals may be useful, this does not secure these sports fields as public open space as they remain in private ownership. I support the principle of negotiating access, however I have not included the Melbourne Grammar Ovals as a key component of the core open space network as Council and the community cannot rely on this area being available for public use in the long-term.
27.3	Submits that there are opportunities to enhance open space via incorporation of the go-kart track and opening up Yarra River frontage on Port Land for public access.	In relation to the Melbourne International Karting Complex, refer to my response to 10.6. In relation to opening up the Yarra River frontage on Port Land, refer to my response to 21.5.
27.4	Submits that more details are required on proposed open space design and functionality.	Refer to my response to 21.3.
64.7	Supports open space targets and submits that these should be delivered in next 5 years.	The delivery of open space will be staged over the 35 year timeframe. The open space is proposed for the ultimate 2050 population, who are not expected to be living and working the precinct in the next 5 years.

No.	Summary of issue	Response to issue
		Therefore I support the staged delivery of open space.
68.6	Submits that 112 Salmon Street should not be designated as public open space.	<p>As noted in my Statement, the future Precinct open space located on this site is well located with excellent access central to the northern part of Wirraway community. As noted in the Vision for this precinct, it is proposed as '<i>A predominantly family friendly inner city neighbourhood close to the Bay and Westgate Park</i>'. The location of this 2 hectare open space will provide a diversity of recreational facilities to meet family demographics. I therefore consider that it is necessary to provide the future Precinct open space in this location to meet the open space needs of the forecast population.</p> <p>It is beyond my scope to comment on how landowners will be financially compensated for land designated as future public open space.</p>
78.3	Submits that open space and all infrastructure should be benchmarked using the Infrastructure Sustainability Rating Tool (ISCA).	My scope is to comment on the quantum and distribution of open space, however I note in the draft Fishermans Bend Framework that the Green Star – Communities has been adopted as a tool to monitor the successful development of Fishermans Bend. The draft Framework notes that the Green Star – Communities is the most comprehensive rating tool for holistic, triple bottom line sustainable community and precinct development.
87.8	Questions the ability to deliver proposed linear open space along the R109 corridor.	Converting the tram route 109 to include a high line style linear open space is a long term goal of the draft Fishermans Bend Framework. In assessing the quantum and distribution of open space for Fishermans Bend I have not included this in the open space quantities given the linear part of this open space will have limited sunlight access due to overshadowing from the 20 storey buildings to the north. I have included the larger area of open space adjacent to Normanby Road (to the east of the subject site). I note that this will also require a major change to transport infrastructure as well, however I have included this component of the open space in the total quantities.
91.6	Submits that the location of open space M11, and its alignment with the 2014 Strategic Framework Plan, is not clear.	I cannot comment on how the location of the open space M11 was determined, however I can confirm that new open space in this location is required to meet the forecast increased population in the Montague Precinct. As noted in my Statement, the principle of providing public open space within 200 metre easy walking distance of open space, combined with a diversity of different sized and types

No.	Summary of issue	Response to issue
		of open space is the reason a new Neighbourhood open space in this sub-precinct is required.
102.2	Opposes the proposed open space adjacent to Unit 5 200 Turner Street.	In my recommended adjustments to the open space plan, I have proposed to relocate the Neighbourhood open space on the southern part of 200 Turner Street to enlarge the Neighbourhood open space east of 200 Turner Street. I have relocated the open space to increase the size and adaptability of the proposed Turner Street open space. I was also concerned that the proposed open space at 200 Turner Street would be overshadowed and have minimal sunlight access in the winter. I consider that the larger sized Neighbourhood open space will provide a more robust and adaptable public open space in the future for this catchment of Lorimer and will provide public open space within 200 metres easy walking distance of future residents and workers in is sub-precinct.
109.8	Submits that Woodruff St open space is compromised and should be removed from the Framework.	A 12m wide Linear open space is shown on the south side of the proposed extensions of Woodruff Street. These are proposed as separate areas of passive open space and additional to the location of the shared trail and the footpaths. Their purpose is to enhance opportunities for biodiversity links between open space reserves and add passive open space to the network. As noted in Sections B3.1 and B3.2 of my Statement, I consider that the future greening and habitat connectivity between open spaces should be incorporated in to the streetscapes or the public realm rather than as a separate linear open space.
130.9	Submits that the location of the Lorimer Central Open Space, and its alignment with the 2014 Strategic Framework Plan, is not clear.	I cannot comment on how the location of the Lorimer Central open space was determined, however I can confirm that a new Precinct open space in the vicinity of this location is required to meet the forecast increased population in the Lorimer Precinct. The reasons that a new Precinct open space is required is to cater to the substantial forecast increase in the resident and worker population in Lorimer. This includes the need to provide a diversity of open spaces within 200 metre safe walking distance of future residents and workers. As a Precinct open space, the Lorimer Central open space will contain a range of facilities that will contribute to the sense of place and community in the Lorimer in the future.
131.12	Submits that the extent of the linear open space to the north of 469-471 Williamstown Road requires explanation.	A 12m wide Linear open space is shown on the south side of the proposed extensions of Woodruff Street. These are proposed as separate areas of passive open space and additional to the location of the shared trail and the footpaths. Their purpose is to

No.	Summary of issue	Response to issue
		<p>enhance opportunities for biodiversity links between open space reserves and add passive open space to the network.</p> <p>As noted in Sections B3.1 and B3.2 of my Statement, I consider that the future greening and habitat connectivity between open spaces should be incorporated in to the streetscapes or the public realm rather than as a separate linear open space.</p>
139.11	Submits that detail on how and where community gardens will be established is required.	Community gardens can be provided on both private and public land and do not rely on public open space for their function and use. Currently there is a successful community garden located on the western end of JL Murphy Reserve between the sports pavilion and the western edge of the reserve. The future provision of community gardens in either public open space or on other public or private land will be determined during the design of these future spaces and will respond to the local community needs during the community engagement process that will be undertaken for future open spaces.
139.23	Submits that privately owned open space be opened up for public use as much as possible, e.g. Melbourne Grammar School ovals.	Refer to my response to 27.2.
143.2	Queries the strategic justification for open space at 400-43 City Rd, which was not identified in the background report.	The reason that public open space is required on this site is so that people living in this sub-precinct, which is defined by major roads and the light rail, have safe and easy access to public open space without needing walk further than 200 metres and without having to cross major roads or the light rail corridor to reach it. As noted in my statement, open space contributes to liveability in a number of ways and is the reason why there is a need to provide some public open space within easy reach of all future residents and workers in Fishermans Bend.
153.34	Submits that proposed public space in Gladstone St should be relocated due to recent redevelopment of the site.	This open space has been relocated further south opposite the proposed open space on Thistlethwaite Street. This has been modelled by DELWP regarding overshadowing which is shown in Attachment 1, Montague 01.
153.35	Submits that the public space network should be amended as per diagram provided to consolidate smaller spaces, identify additional urban plazas and large public spaces and their relationship with	<p>With reference to Attachment 4: Suggested changes to Public Open Space I make the following comments:</p> <ul style="list-style-type: none"> • Transmission line easement – this is encumbered open space and I do not recommend adding more open space to it given the linear link as the road reserve already provides linear connectivity. Instead of this, I

No.	Summary of issue	Response to issue
	transport, and investigate additional street greening.	<p>have identified the need for an additional open space in the norther portion of the Wirraway Precinct.</p> <ul style="list-style-type: none"> • Prohasky Open Space & Melbourne Grammar sports fields – the comment made here is consistent with the Open Space Plan included in draft <i>Fishermans Bend Framework</i>. The plan currently contains a note to it which states 'Partnership opportunity for future public open space'. Strategies 3.5.2 and 3.6.3 make reference to the need for public use of privately owned open space as well. • Sandridge North Park – I have made adjustments to the proposed linear open space in this location. I consider that the linear open space in this location is not as useful as a larger open space. I have resized the linear open space east of Bridge Street to form single open space reserve (8,594 sqm) on the corner of Bertie Street. This size and shape can accommodate a broader range of facilities compared with the linear reserve. I have retained the reserve west of Bridge Street in its current form and this will function as a Neighbourhood park (not a linear park) for the population catchment primarily to the north west of the proposed park. Refer to Sandridge Precinct, Section B4.3 in my Statement. In my opinion this will be a better open space outcome that the one proposed by the City of Port Phillip, as it retains the provision of open space within 200 metre safe walking catchment, and also provides a larger open space away from the Westgate Freeway. • Wirraway Open Space – This open space is required to the provide open space within a 200 metre safe and easy walking catchment of the proposed community. It is also positioned so that it has reasonable solar access given the 8 storey height limits to the north west. If it is relocated south to Plummer Street, it will be impacted by further overshadowing. • Wirraway Station Entries – I agree that the final design and configuration of the two open spaces on the corner of Salmon and Plummer Streets will be refined to complement the future station/tram stop in this location. The proposed open space on the northern side of Plummer Street opposite JL Murphy Reserve is to the north of the current location in order to provide better access and use, with reduced overshadowing of this open

No.	Summary of issue	Response to issue
		<p>space. I have located it so that it can incorporate a large established tree into the public open space and provide a green local open space within 200 metre walking catchment of residents and workers north of the Plummer Street tram route.</p> <ul style="list-style-type: none"> • Woodruff Street Park – relative to the other parts of the Sandridge Precinct, the proposed development in this local catchment is lower level. I have proposed a larger Precinct sized open space at the corner of Plummer and Bridge Street, which will improve the diversity of open space within 300 metres of this community. Therefore in the context of the remaining open space network across Fishermans Bend, I consider that the Woodruff Street Park is an adequate size if the enlarged open space is provided at the corner of Plummer and Bridge Streets. • Plummer/Bridge Street – I have recommended combining the two open spaces on the corner of Plummer and Bridge Streets into a consolidated open space on the south side of Plummer Street. This is so that it is more centrally located to the population in the south west catchment of the Sandridge Precinct. It also moves it further south of the unlimited building heights providing better sunlight access to the open space. • Sandridge Station Entries – I have relocated the proposed public open space on the north east side of the Plummer/Bertie Street intersection further north to provide more diversity in the open space network in this catchment. This provides more variety and accessibility to future residents and workers north east of the proposed open space. While I agree that public open space can be associated with the station entry, it is important that there is diversity in these three Neighbourhood open spaces. Workers and residents in this precinct will also have access to the proposed expanded District open space associated with North Port Oval. I therefore consider that with the relocation of one of the three Neighbourhood open spaces north of Fennel Street there will be adequate open space in this local catchment. During future detailed planning and design there may be opportunities to increase the size and role of a future Civic Plaza.

No.	Summary of issue	Response to issue
		<ul style="list-style-type: none"> • Montague Park North – I consider that this park will be successful if the traffic noise and movement associated with the West Gate Freeway and Montague Street are addressed with built form creating the buffer and active interface to the future open space. I therefore do not support the removal of the proposed built form, however I agree that reduced heights would assist to reduce the overshadowing of this future Precinct open space. Refer to Montague 04 in attachment 1 for overshadowing diagrams prepared by DELWP. These show there will be direct sunlight access to the southern parts of this open space between 11am and 2pm on 22 June. • Gladstone and Buckhurst Street Parks and additional Public Plazas – I agree with the suggestion for additional open space in the southern Montague Precinct and I have proposed an additional Neighbourhood open space in the south west portion of this precinct. Refer to Section B4.2 of my Statement. The additional Public Plazas may be best achieved through negotiations as part of the Floor Area Uplift.
157.6	Submits that the Public Open Space Strategy does not justify why open space adjacent to 277-281 Ingles St has been identified.	The draft Fishermans Bend Framework proposes the linear open space reserves in addition to the road reserve. Their intent is to provide additional greening and passive recreation use including seating. I am of the opinion that these spaces form part of the streetscape as described in Section B3.1 and B3.2 of my Statement.
162.6	Submits that open space located to the south of large buildings adjacent to 874-886 Lorimer St is not consistent with aspirations for good solar access.	While I cannot confirm the reasons for the location of the Lorimer Central open space, the overshadowing diagrams that were prepared for me by DELWP illustrate there will be direct sunlight to the southern parts of this open space between 10am and 3pm on 22 June. Refer to Lorimer 01 in Attachment 1 to my Statement.
167.3	Submits that the role and purpose of Salmon St open space is unjustified, and that clause 4.0 of CCZ Schedule 1 requirements are an unlawful acquisition of land.	The purpose of the Salmon Street linear open space is to provide an additional passive open space of 12 metres wide adjacent to the strategic cycle route that is nominated along Salmon Street. As noted in Sections B3.1 and B3.2 of my Statement, I consider the provision of future open space configured into a larger neighbourhood open space is preferred rather than a 12 metre wide reserve adjacent to the road. However, in this location there will be only limited areas of Neighbourhood open space and therefore I recommend that either this linear open space is

No.	Summary of issue	Response to issue
		<p>retained or reconfigured to provide a Neighbourhood open space nearby.</p> <p>It is not within my scope to respond to the second point regarding acquisition of land for open space.</p>
169.3	<p>Submits that there is insufficient justification for public space located adjacent to 11 Munro St.</p>	<p>A 12m wide Linear open space is shown Boundary Street. These are proposed as separate areas of passive open space and additional to the location of the shared trail and the footpaths. Their purpose is to enhance opportunities for biodiversity links between open space reserves and add passive open space to the network.</p> <p>As noted in Sections B3.1 and B3.2 of my Statement, I consider that the future greening and habitat connectivity between open spaces should be incorporated in to the streetscapes or the public realm rather than as a separate linear open space.</p>
173.9	<p>Submits that the location of the M11 neighbourhood future open space, and its alignment with the 2014 Strategic Framework Plan, is not clear.</p>	<p>Refer to my response to No. 91.6.</p>
176.6	<p>Supports the public and open space network.</p>	<p>Noted. Comments in relation to the open space assisting to mitigate impacts of flood inundation will need to be considered carefully in the context of the open space being provided primarily for recreational use or biodiversity values without being encumbered by periodic inundation. Typically areas for flood mitigation are set aside as drainage reserves.</p>
180.4	<p>Submits that the 200m walking distance to open space exceeds what is recommended and necessary.</p>	<p>Please refer to Section B3.3 of my Opinion regarding why the target of 200 metre easy walking distance is appropriate for open space provision in Fishermans Bend.</p>
182.6	<p>Queries whether open space targets are appropriately calculated.</p>	<p>The draft Fishermans Bend Framework adopts the 200 metre walking distance as a target for the provision of open space. As noted in my statement in Section B, there are no industry wide accepted standards for the provision of open space in high density precincts. I have noted that from my research, the following open space targets in the draft Fishermans Bend Framework are appropriate:</p> <ul style="list-style-type: none"> • Within 200 metre easy walking distance of all future residents and workers. • Provide a diverse network of open space of different sizes to provide a diverse range of spaces to meet different open space needs. • In relation to the provision of open space in the Employment Precinct, refer to Section B3.4 of my Statement.

No.	Summary of issue	Response to issue
184.12	Submits that open space requirements for 212 Turner St inhibit opportunities for further community uplift, and open space should be calculated as part of FAU.	The proposed Neighbourhood open space is identified to be required in this location because it caters to the forecast catchment of residents and workers west of Ingles Street and south of Plummer Street. It will cater to the open space needs of an extremely high density sub-precinct where building heights are unlimited. The open space size is to accommodate a range of different facilities including for unstructured active recreation, informal use and enjoyment and a suitable size and orientation to provide longer vistas to the north towards the proposed Precinct open space.
188.26	Supports open space in the Employment Precinct.	As noted in Section B3.4 of my Statement, I support the provision of approximately 24 hectares of public open space in the Employment Precinct. I note, however that the Employment Precinct does not form part of this Planning Scheme Amendment, and further consideration will be given to open space in the Employment Precinct in the next stages of planning.
188.7	Supports the 50% canopy cover but notes that potential conflicts with biodiversity and water management need resolution.	<p>The open space network provides the opportunity to both protect existing mature canopy trees where feasible and to plant additional large broad spreading canopy trees. Open space provides the opportunity to plant a more diverse range of species than will typically grow in streetscapes, given the conditions are more conducive to trees with more permeable surfaces. The selection of tree species for the future open space will be undertaken during the detailed precinct and masterplan stage of the project.</p> <p>From my experience in in open space planning, the community highly value trees in open space. Due to the scale and intensity of future development in Fishermans Bend, public open space will play a valuable role in achieving the aim of 50% canopy cover along with the protection and planting trees in other parts of the public realm including the streetscapes. They will require adequate space to establish, careful assessment regarding appropriate species selection and access to future sustainable water sources including consideration of passive irrigation. This will form part of the future precinct planning.</p>
195.1	Submits that a masterplan should be developed for North Port Oval and the stadium should be upgraded.	As noted in the Strategy 3.6.1 of the draft Fishermans Bend Framework, there will be a need to redesign and/or expand North Port Oval. The extent and type of future works would be determined during that process.

No.	Summary of issue	Response to issue
195.3	Submits that lighting and security updates to North Port Oval would facilitate further use.	Refer to response to 195.1.
200.5	Submits that location of reserve adjacent to 179-185 Normanby Rd is inappropriate.	Refer to the response to 87.8.
217.10	Submits that the location of public space has altered substantially, and that uplift opportunities for significantly burdened sites should be considered.	<p>I was not involved in the provision of open space in the previous controls. The rationale for why the adjusted open space system is proposed is contained in my Opinion in Section B of my Statement.</p> <p>The proposed Neighbourhood open space on the north of the 365 Plummer Street site is required to provide open space within 200 metre easy walking distance of future residents and workers in this area. The open space is located adjoining the south side of the street to maximise opportunities for sunlight access to it, however I have not specifically reviewed the overshadowing model in the location.</p> <p>Sunlight access to open space is important for both the health and growth of garden beds, grass and trees and also for people to benefit from access to sunlight in relation to their overall health and wellbeing including encouraging them outdoors to exercise and keep fit. Sunlight access is most important for community health and wellbeing during the winter months when people need to spend longer in natural sunlight to receive adequate levels of Vitamin D. This is an important part of creating liveable and attractive neighbourhoods that people want to live and work in. I therefore support the built form controls that protect sunlight access to open space.</p>
222.3	Submits that there is no clear delineation of how large the public open space areas are.	The proposed open space referred to is a linear open space along a new proposed road - an extension to Tarver Street. I have recommended the enlargement of the proposed Neighbourhood open space at the intersection with Smith Street, and I have not relied on the need for a separate linear open space along Tarver Street, however the road reserve width will need to be of a suitable width to accommodate excellent pedestrian connectivity and space large canopy trees in addition to the vehicle traffic. I consider that this would form part of the transport network planning and not a separate open space reserve.
226.1	Submits that existing open space should not be taken into	The existing open space needs to be considered as part of the open space network as a whole, as the

No.	Summary of issue	Response to issue
	account as part of the total open space required, and that fenced off or inaccessible areas should also not be included.	<p>future community will use the whole network. The existing population will benefit from the new open space to be provided and the future community benefit from use of the existing and the new open space. The draft Fishermans Bend Framework proposes improvements to the existing open space reserves in recognition that they will be upgraded to increase their carrying capacity and cater to the open space needs of the forecast population.</p> <p>Strategies 3.6.1, 3.6.2 and 3.6.3 in the draft Fishermans Bend Framework proposes to investigate the potential to increase community access to open space that is currently fenced from community access including North Port Oval (which is currently fenced off), the soccer facility at JL Murphy Reserve (currently fenced) and also to the privately owned fenced Melbourne Grammar Sports Fields. In my assessment, I have not included access to the privately owned sports fields as this land is not public open space. I have included the North Port Oval land area and the soccer facility in JL Murphy Reserve in the open space calculations as these are on public land.</p>
229.2	Supports strategies to create public open space.	Noted, and the submission is consistent with the draft Fishermans Bend Framework intent to improve community access and use of the fenced soccer facility at the western end of JL Murphy Reserve.
232.7	Notes that limited information is provided on open space in the Employment Precinct.	I am satisfied that the draft Fishermans Bend Framework notes that an additional approximately 24 hectares of open space will be provided in the Employment Precinct as per Section B3.4 of my Statement. I note, however that the Employment Precinct does not form part of this Planning Scheme Amendment, and further consideration will be given to open space in the Employment Precinct in the next stages of planning.
238.5	Submits that the size and location of open space adjacent to 351 Plummer St will not provide a well designed area.	Please refer to my response in 217.10 regarding the proposed Neighbourhood open space.
247.16	Submits that negative impacts on existing users are avoided when planning future use of existing open space.	Refer to my response to 226.1.
248.6	Queries how Fishermans Bend Framework will help people to establish community gardens and roof top gardens.	Refer to my response to 139.11.

No.	Summary of issue	Response to issue
250.4	Submits that the proposed road reservation to the north boundary should include greening and shared space.	<p>The proposed public open space on this site forms part of the linear open space links. In this specific location I do not consider that the additional linear open space is required given that the location of the proposed Neighbourhood open space west of White Street.</p> <p>The 12m wide linear open space is proposed as separate areas of passive open space and additional to the location of the shared trail and the footpaths. Their purpose is to enhance opportunities for biodiversity links between open space reserves and add passive open space to the network.</p> <p>As noted in Sections B3.1 and B3.2 of my Statement, I consider that the future greening and habitat connectivity between open spaces should be incorporated in to the streetscapes or other public realm rather than as a separate linear open space.</p>

Attachment 1

Overshadowing Diagrams for specific open spaces in Fishermans Bend

Prepared by

Department of Environment, Land, Water and Planning.

March 2018

Fishermans Bend

Overshadowing diagrams and built form testing – Background

The 3D modelling tool used for the preparation of the overshadowing diagrams is the “Urban Engine” by Urban Circus Pty Ltd. The Urban Engine is a 3D interactive platform, based on highly accurate GIS and other datasets, and gaming techniques that allow it to be used in real-time. It is used by DELWP for a number of functions including strategic planning, assessing planning applications, determining built form envelopes, and building a database of Planning Permits history.

The accuracy of both the 3D modelling tool itself, and the base data within it, is the responsibility of Urban Circus, as outlined in the Digital Melbourne Detailed Model Report. The platform base was updated with a June/July 2015 data capture and supplementary modelling of recently approved (unbuilt) Melbourne City Council permits (for developments of five storeys or more) and Ministerial permits for developments of 25,000+ square metres of gross floor area, up until January 2018. The permits were modelled either manually using the plans, or using architect-provided models to ensure accuracy.

All applications and permits are verified to ensure that the 3D model accurately reflects the plans provided.

The veracity of the 3D modelling tool has been independently assessed by City of Melbourne in comparison to its own 3D modelling software, and to real physical shadowing conditions. It has been agreed that the DELWP 3D modelling tool and the City of Melbourne modelling tool produce almost identical shadows, which replicate real life shadows.

It is the opinion of the author that there are no other tools which are currently available which can undertake shadowing studies and built form testing with the level of accuracy and real-time manipulation as the 3D modelling tool used by the Department.

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 Tribunal.



Signed:

David Sowiński B. Arch.(Hons)
Visualisation Coordinator
Development Approvals and Design

Date: 5 March 2018

Digital Melbourne Detailed Model Report *(prepared by Urban Circus Pty Ltd)*

Methodology Notes

- Shadow area numbers exclude shadows cast within existing shadows, under bridges or on top of buildings
- Shadow length is affected by bridges, where the shadow begins on the surface of the bridge and is cast beyond, stretching or shortening the length

Context Model

- The **base model** is built using a variety of data sources provided by various government agencies and private survey capture
 - A point cloud dataset is available inside the Digital Melbourne model to aid in the validation of model content and accuracy. Aerial Lidar data captured June 2015. The LiDAR data is accurate to +/- .2m at 1 sigma confidence interval
- The **Ground Surface Terrain** is generated from ground classified Aerial Lidar data captured June 2015. The LiDAR data is accurate to +/- .2m at 1 sigma confidence interval **3D Buildings** that form the city building models are derived from the same Aerial Lidar data set captured June 2015 using the building classified points. They are derived through automated process as volumes based on the LiDAR then hand modelled to add further articulation and detail. Accuracy is estimated to be of an accuracy of +/- 0.4m

Fishermans Bend Terrain & Imagery

- Generated from ground classified Aerial Lidar data captured April 2007 (Coastal_C3 dataset supplied by DELWP)
- No spatial data accuracy report / metadata has been supplied with this dataset.
- Visual spot checks between this dataset and the 2015 dataset above indicate similar accuracy

Fishermans Bend Buildings

- 3D Buildings from City of Port Phillip – received as DWG – November 2011.

Montague Terrain including Roads

- Modelled from feature survey generated by SKM from Photogrammetry created in June 2013, which was derived from Stereo Pair Aerial Imagery captured in 2009
- Accuracy +/- 0.25m
- Power poles and medians were also placed based on this photogrammetry
- Vegetation approximately placed via aerial imagery

Montague Buildings

- **LOD A** – 25 Heritage buildings hand modelled from Terrestrial Laser Scan captured by SKM in 2013 and photogrammetry mentioned above
- **Other Buildings** – These buildings are the same as the Fishermans Bend buildings.

Urban Engine Lighting/Shadows

The UE sun position is generated from the Solpos algorithm provided by the National Renewable Energy Laboratory (US)

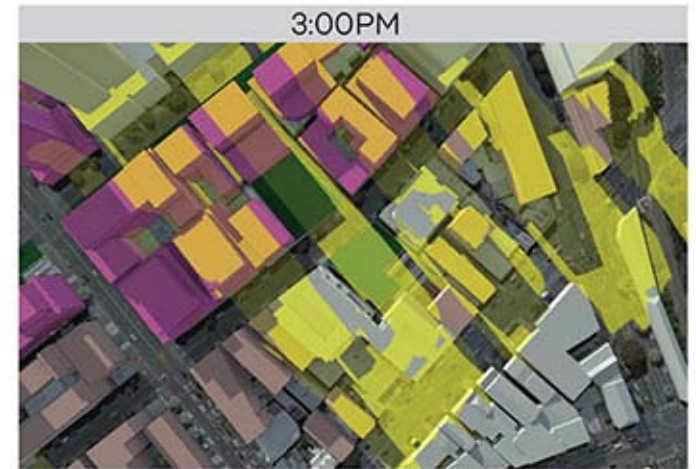
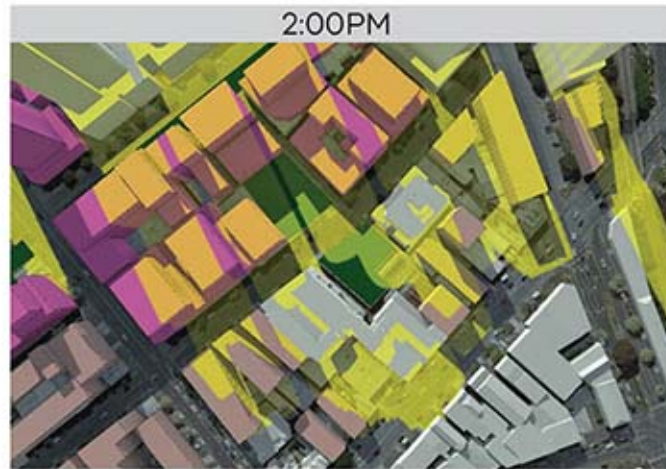
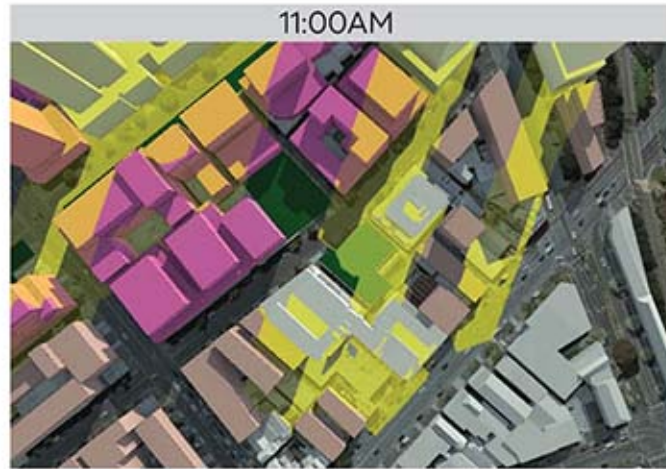
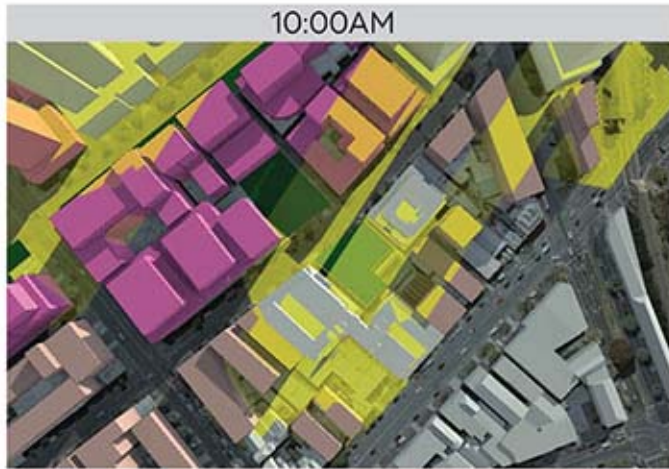
This provides a sun position in the UE in relation to true north



The North in the DELWP platform model utilise Grid North in relation to MGA Zone 55

In order to position the sun correctly in relation to MGA Zone 55, True North is calculated using Redfearn's formula, as provided by GeoScience Australia

This has been compared against Sketchup, which matches almost perfectly with under 10cm tolerance The UE sun position is based on the current year of use.



Montague 01 Open Space - June 22nd Overshadowing



-  Yellow shadows indicate Permit shadows
-  Indicates proposed Public Open Space



Montague 01 Open Space - September 22nd Overshadowing



-  Yellow shadows indicate Permit shadows
-  Indicates proposed Public Open Space



Montague 02 Open Space - June 22nd Overshadowing



 Yellow shadows indicate Permit shadows
 Indicates proposed Public Open Space

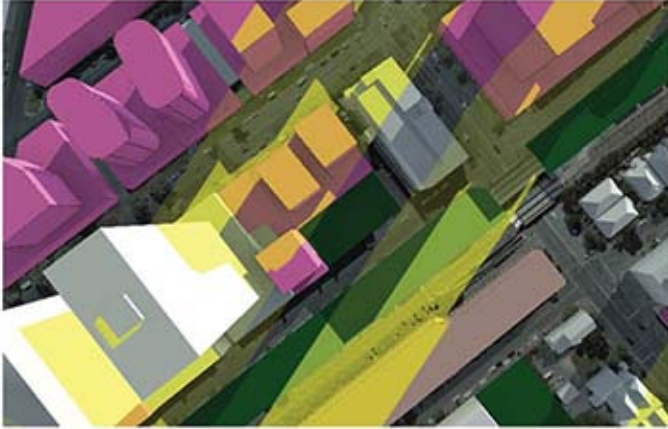
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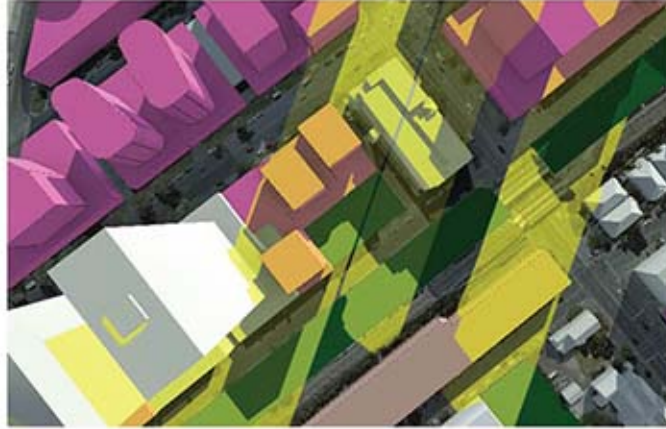
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-  Indicates proposed Public Open Space

Montague 03 Open Space - June 22nd Overshadowing

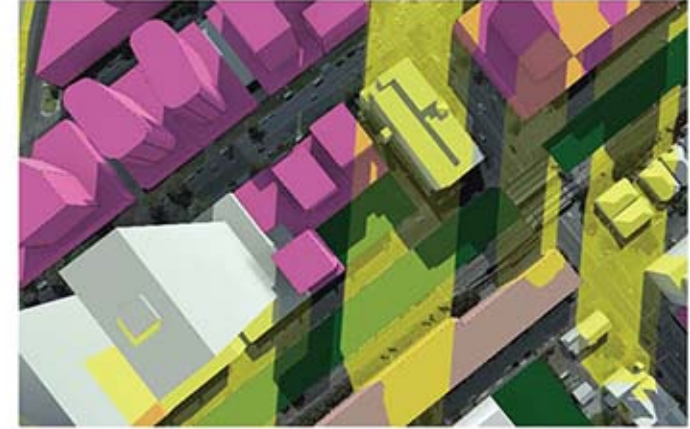
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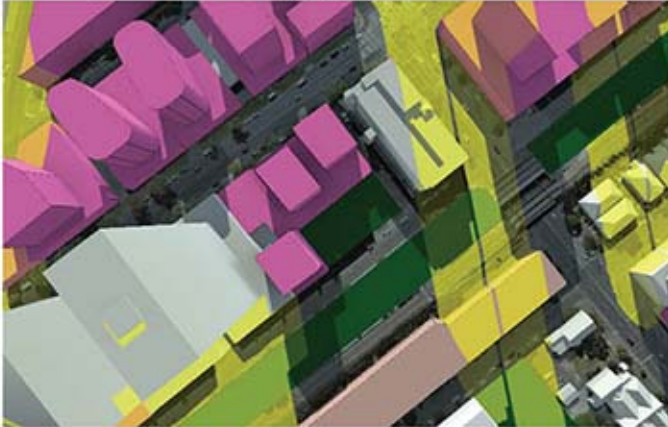
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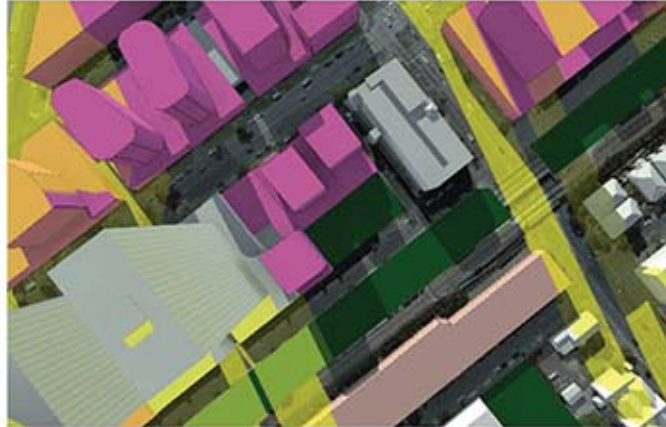
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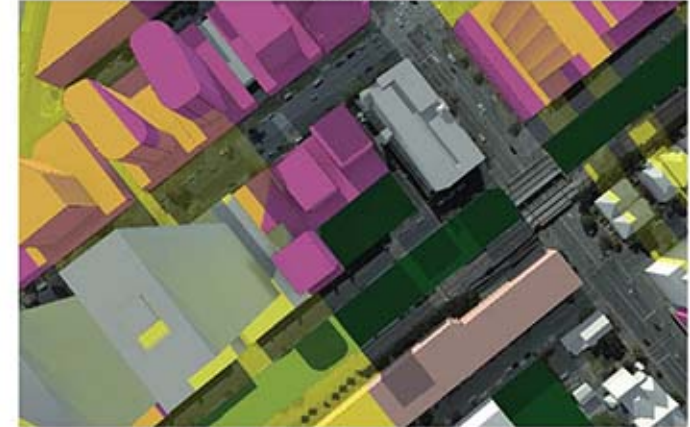
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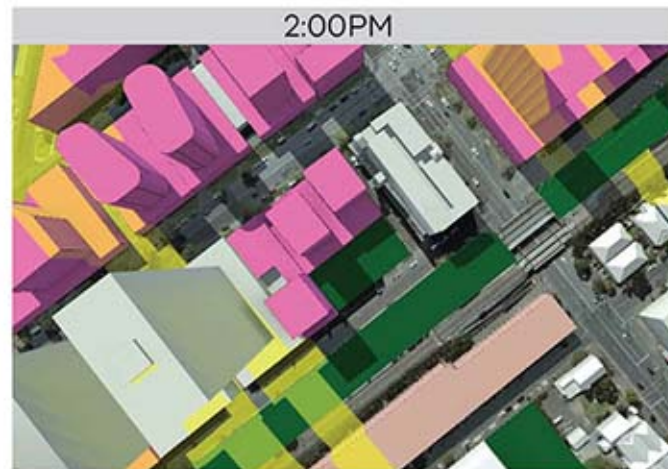
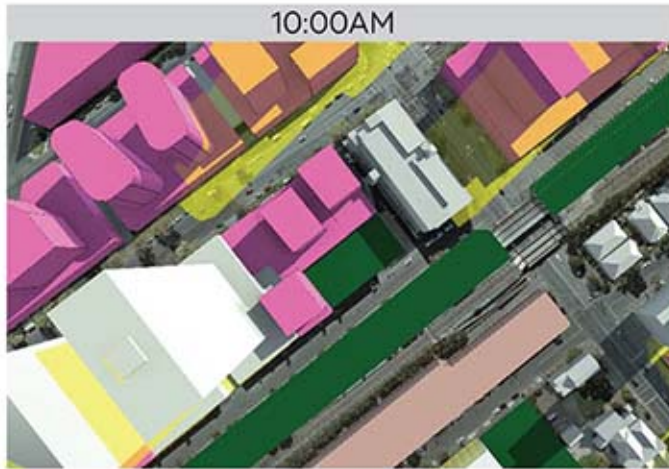




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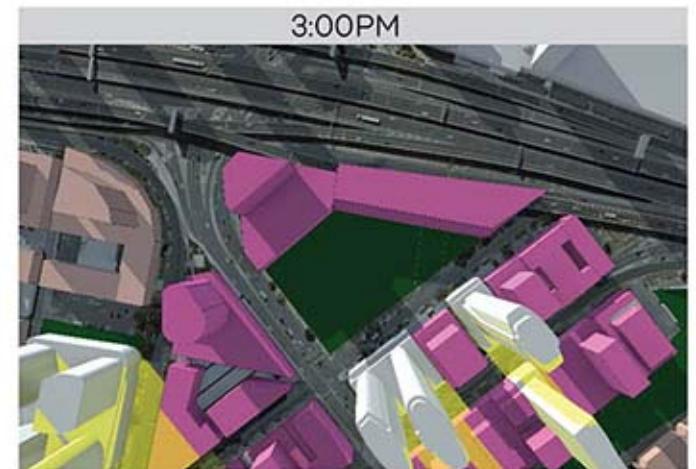
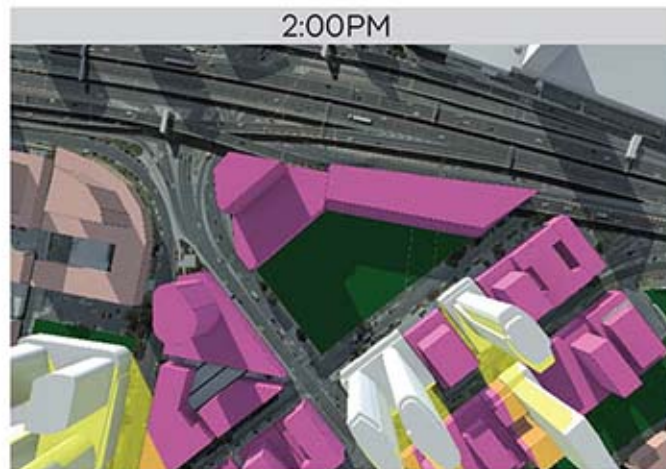
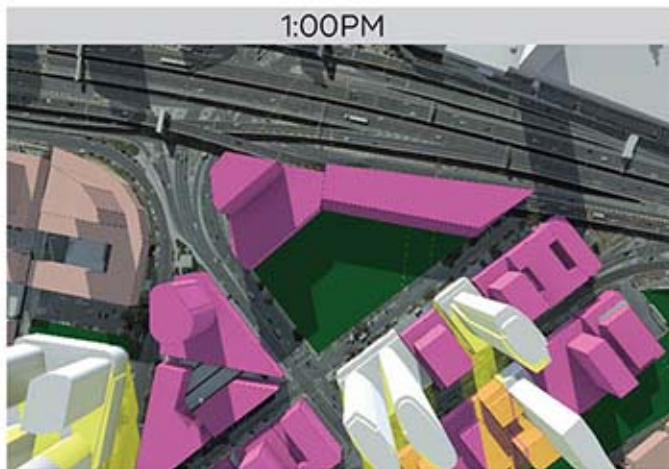
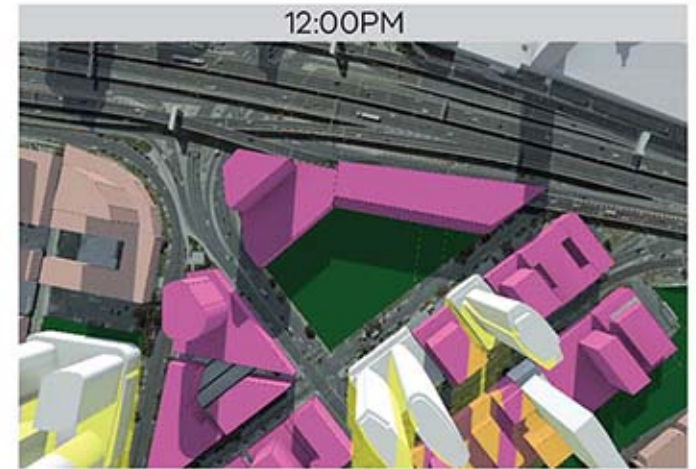
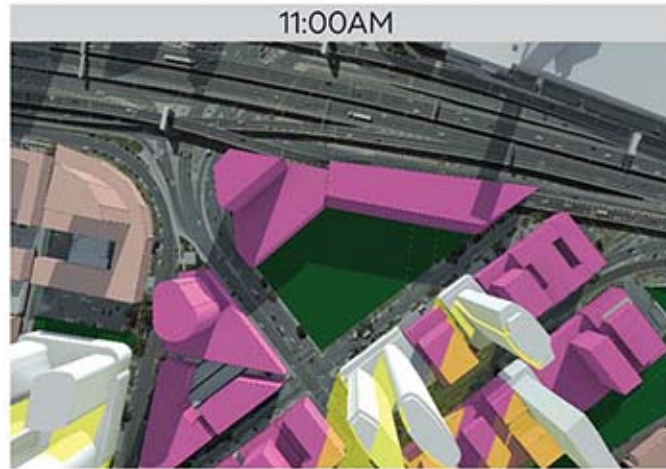
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-  Indicates proposed Public Open Space



Montague 03 Open Space - September 22nd Overshadowing



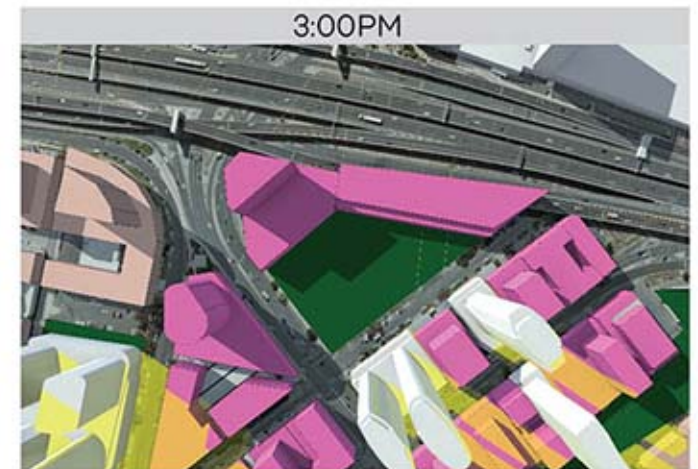
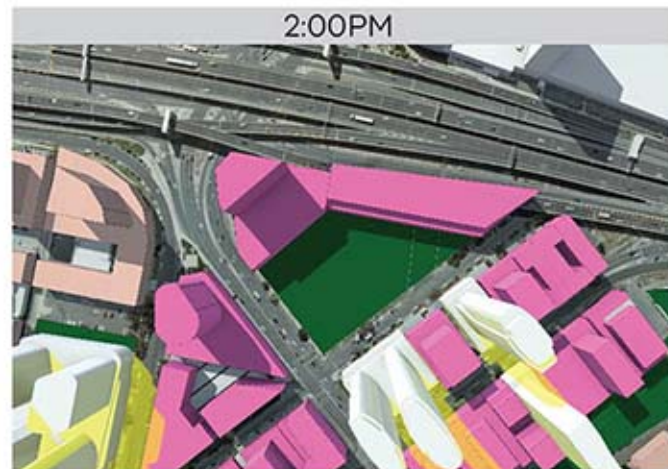
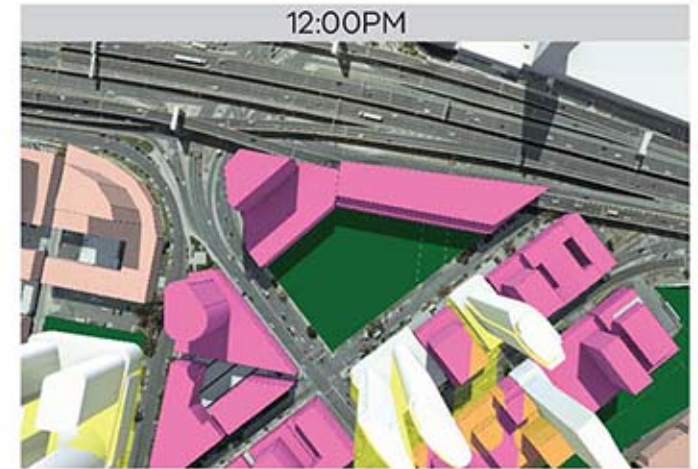
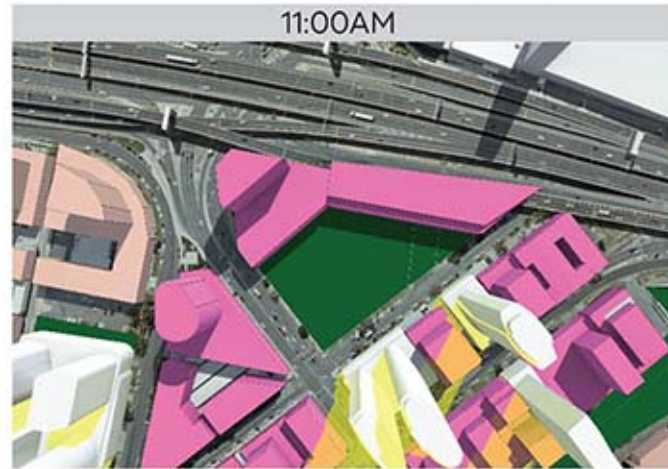
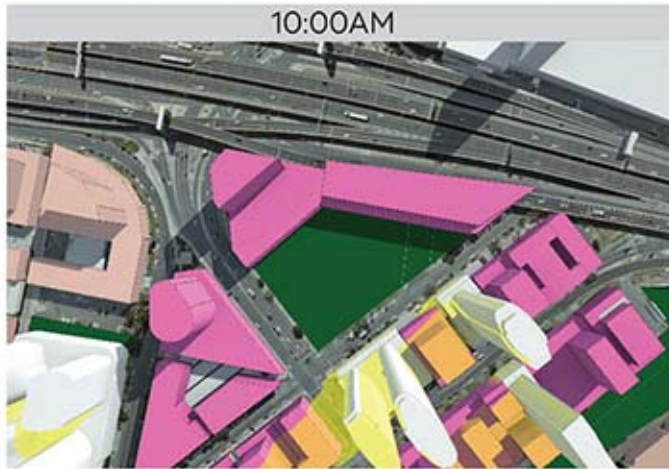
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Montague 04 Open Space - June 22nd Overshadowing



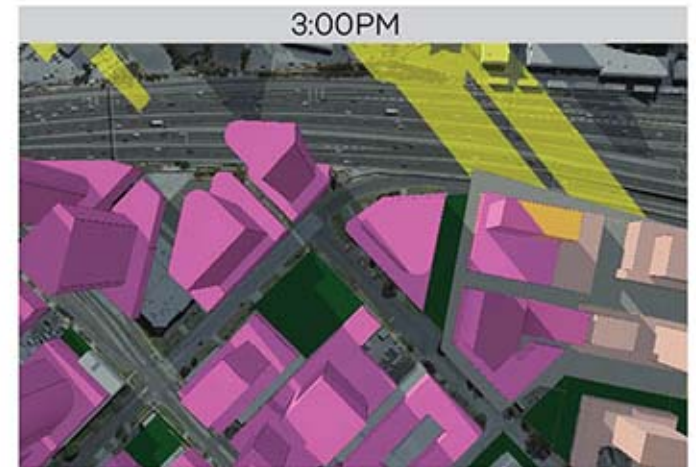
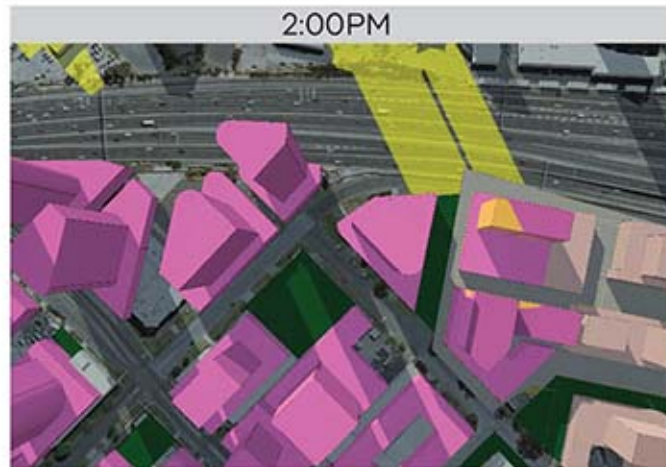
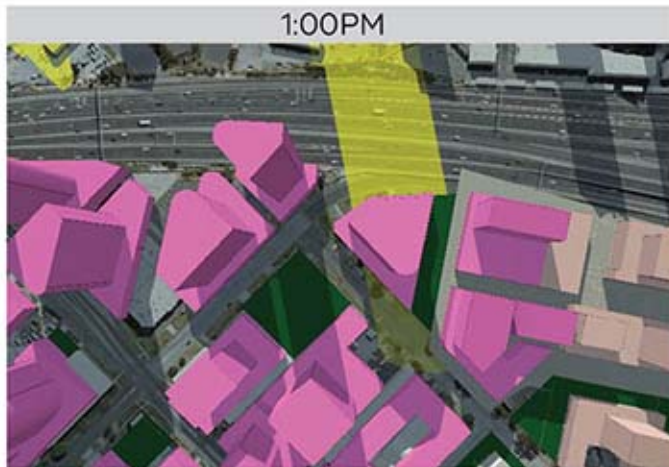
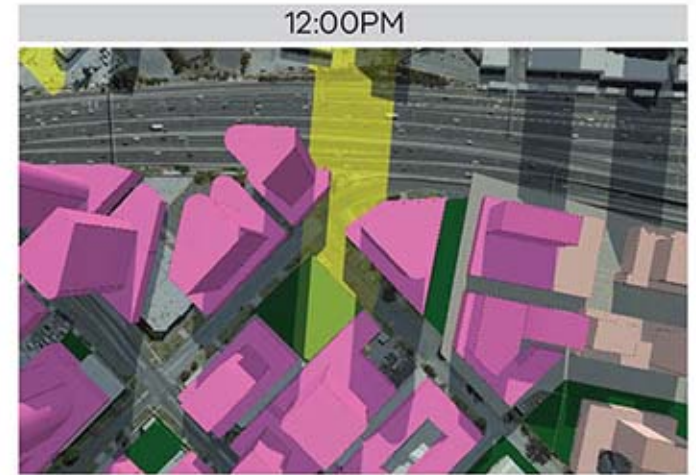
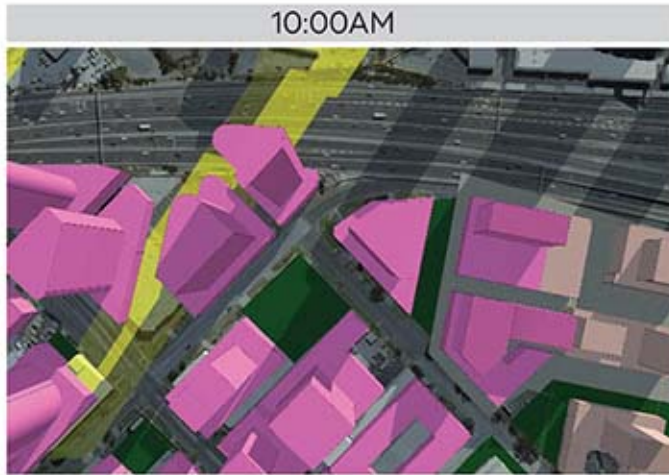
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Montague 04 Open Space - September 22nd Overshadowing



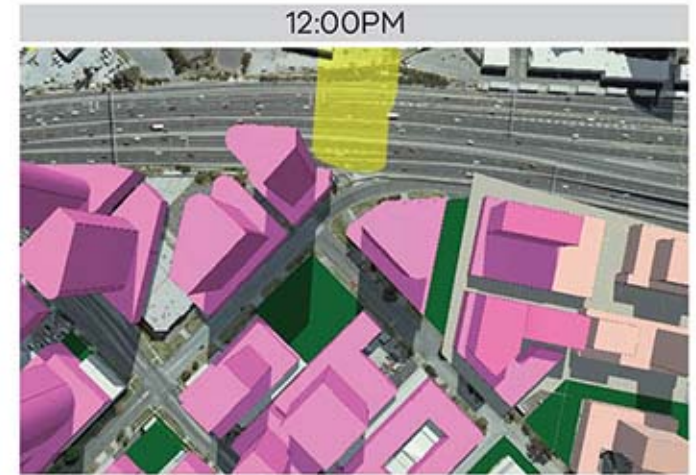
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Sandridge 01 Open Space - June 22nd Overshadowing



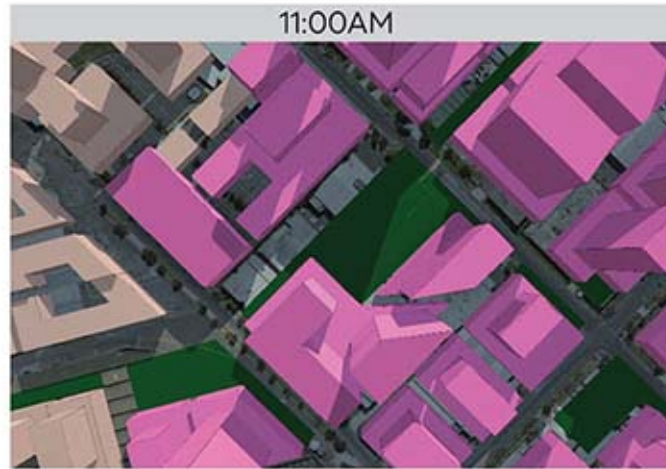
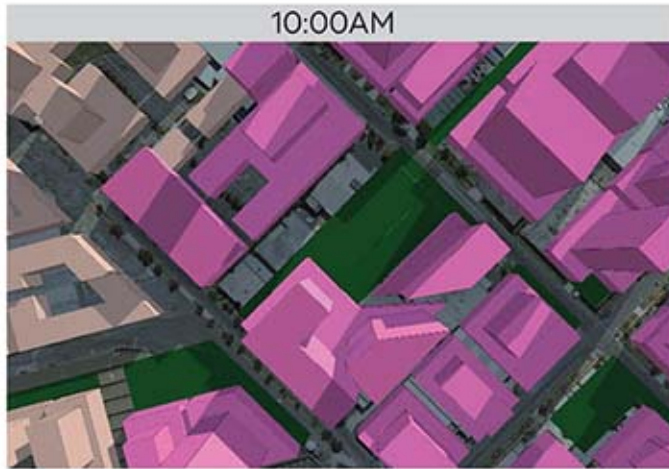
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Sandridge 01 Open Space - September 22nd Overshadowing



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Sandridge 02 Open Space - June 22nd Overshadowing



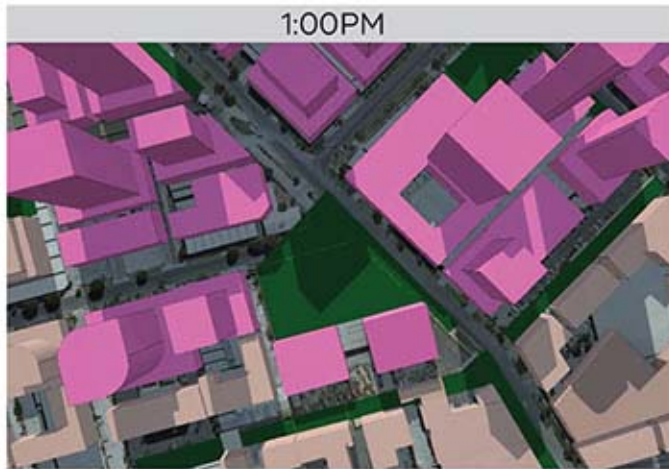
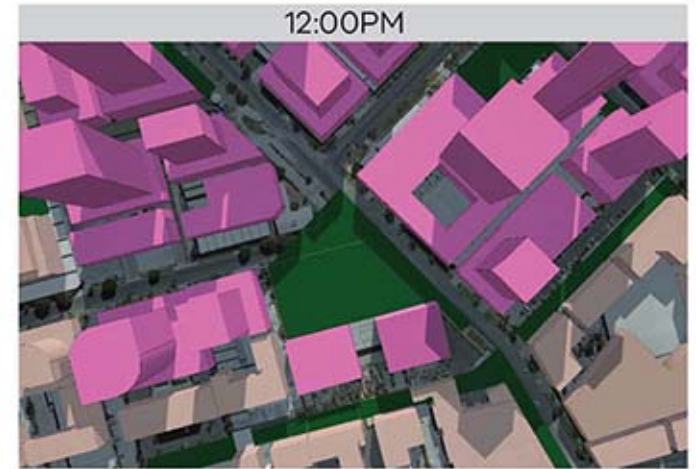
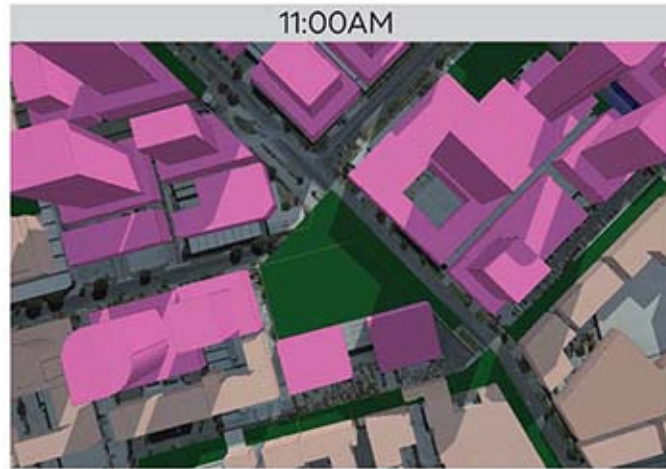
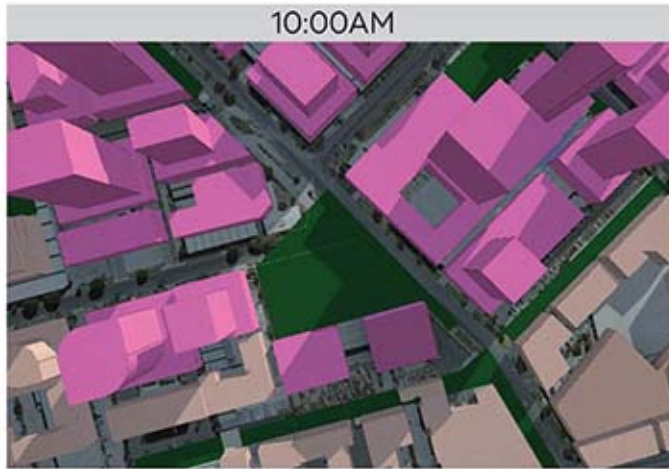
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Sandridge 02 Open Space - September 22nd Overshadowing



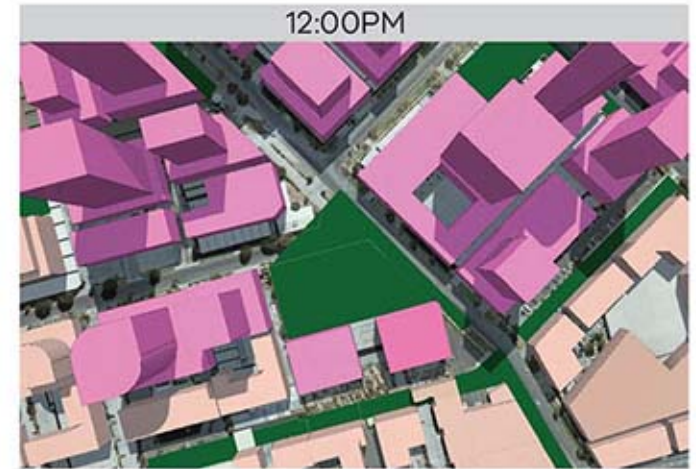
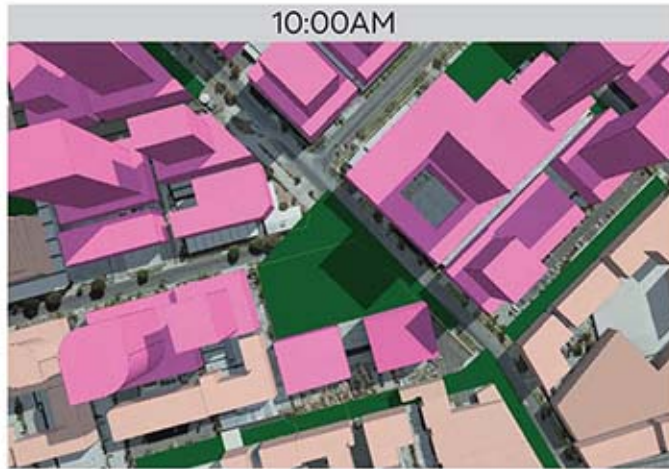
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Sandridge 03 Open Space - June 22nd Overshadowing



-  Yellow shadows indicate Permit shadows
-  Indicates proposed Public Open Space



Sandridge 03 Open Space - September 22nd Overshadowing



-  Yellow shadows indicate Permit shadows
-  Indicates proposed Public Open Space



Wirraway 01 Open Space - June 22nd Overshadowing



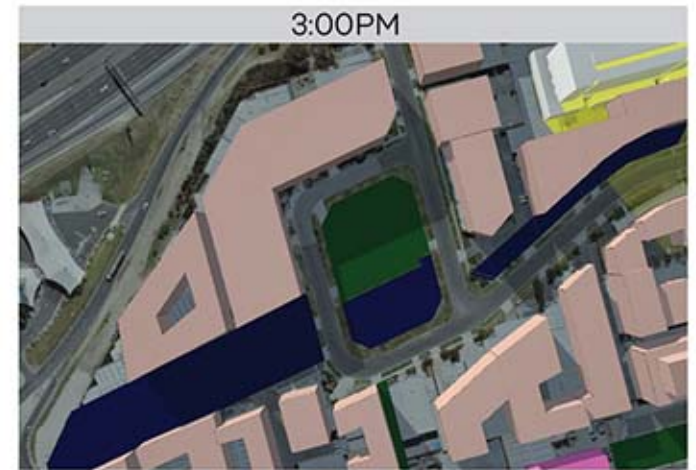
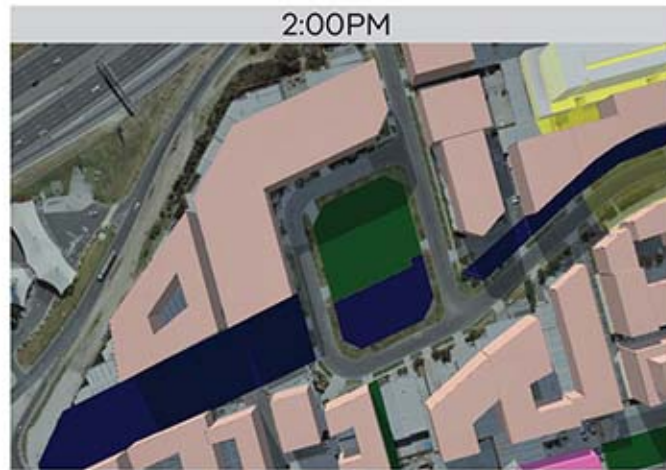
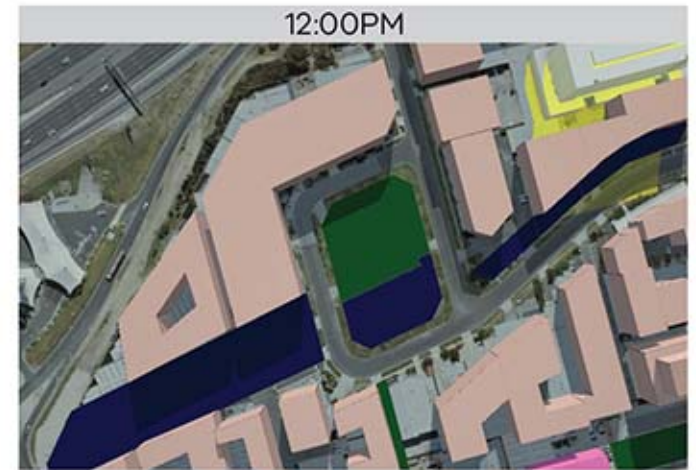
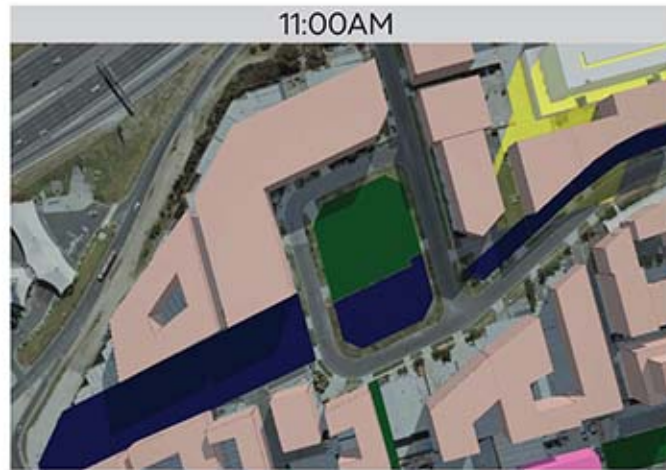
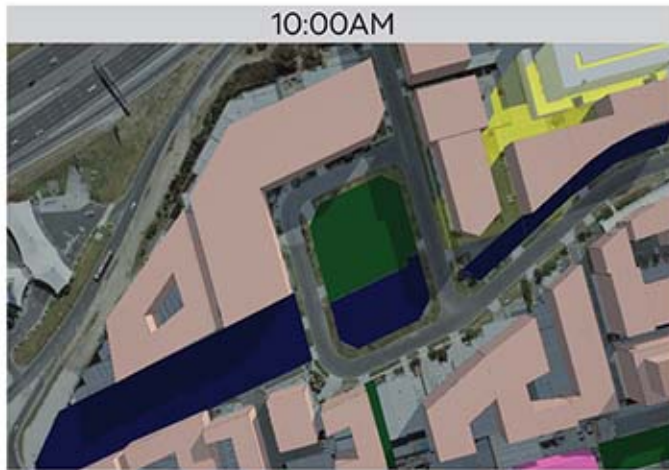
-  Yellow shadows indicate Permit shadows
-  Indicates proposed Public Open Space




Wirraway 01 Open Space - September 22nd Overshadowing



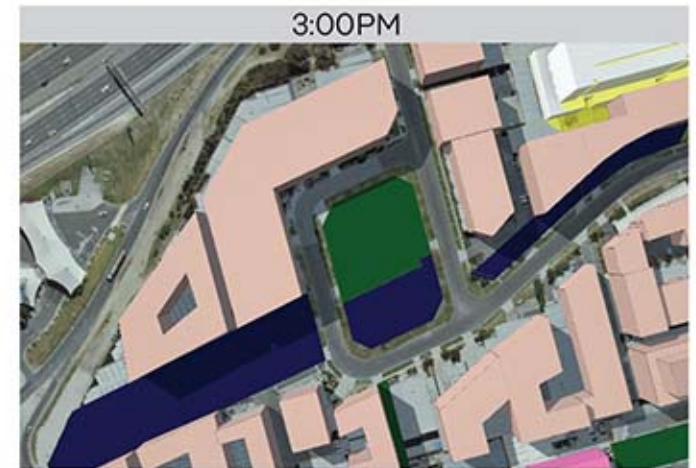
 Yellow shadows indicate Permit shadows
 Indicates proposed Public Open Space




Wirraway 02 Open Space - June 22nd Overshadowing



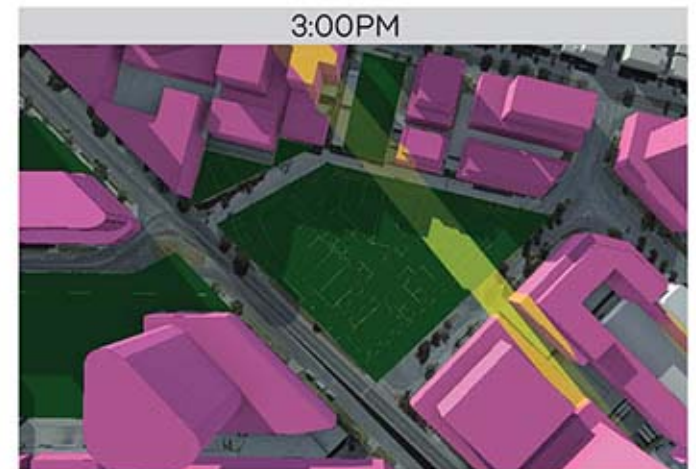
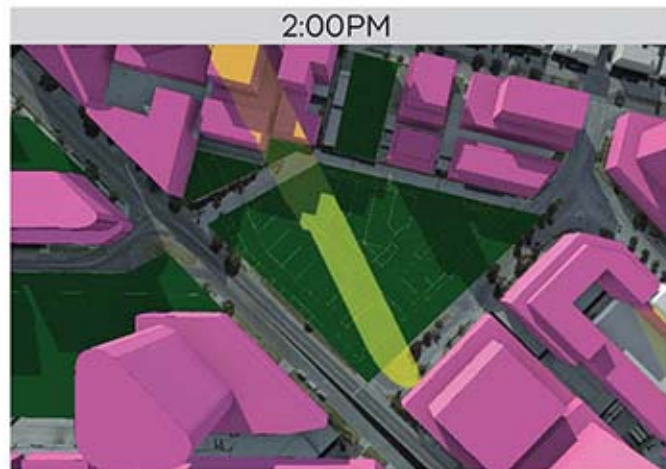
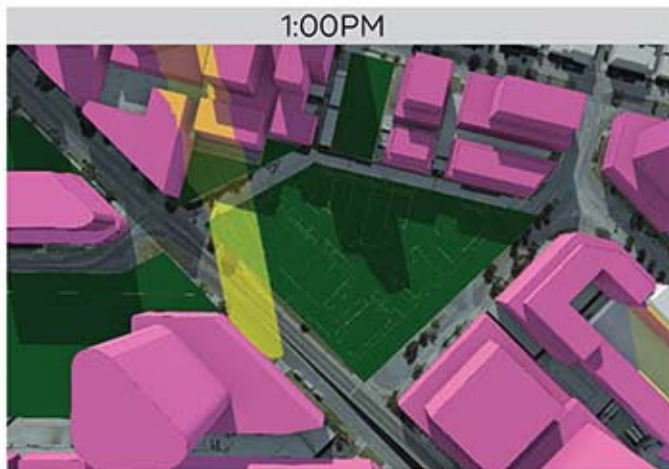
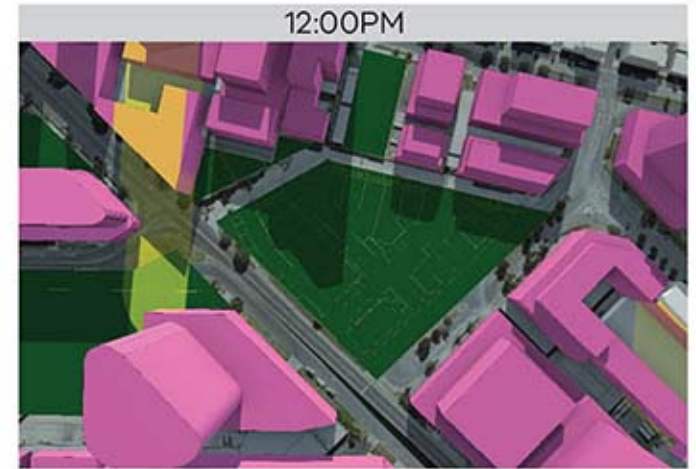
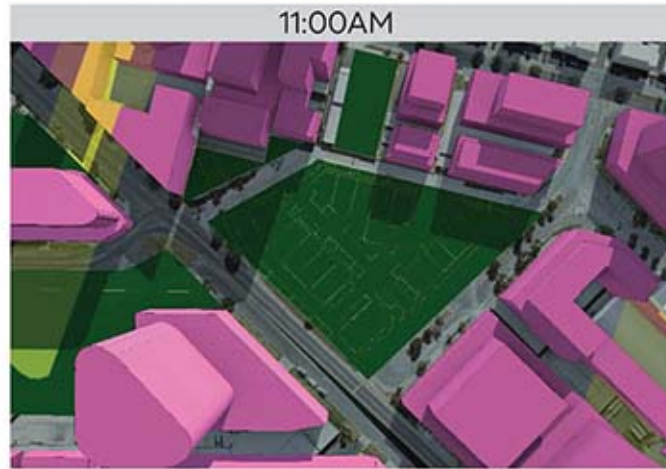
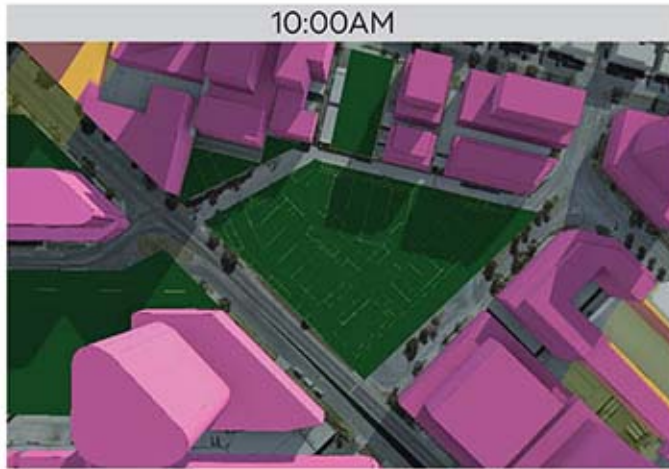
-  Yellow shadows indicate Permit shadows
-  Indicates proposed Public Open Space
-  Indicates proposed Encumbered Open Space



Wirraway 02 Open Space - September 22nd Overshadowing



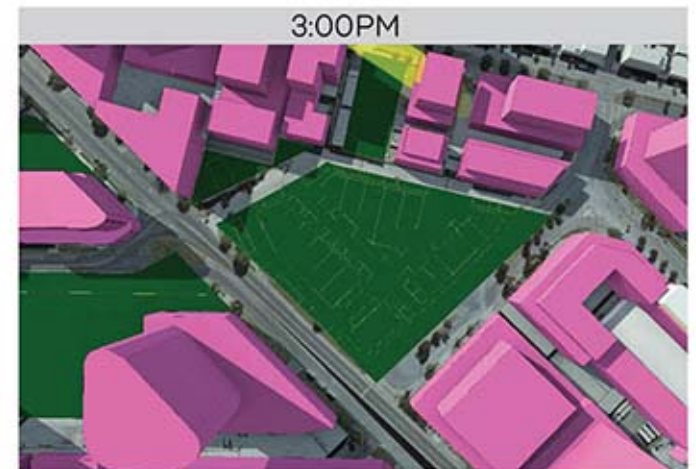
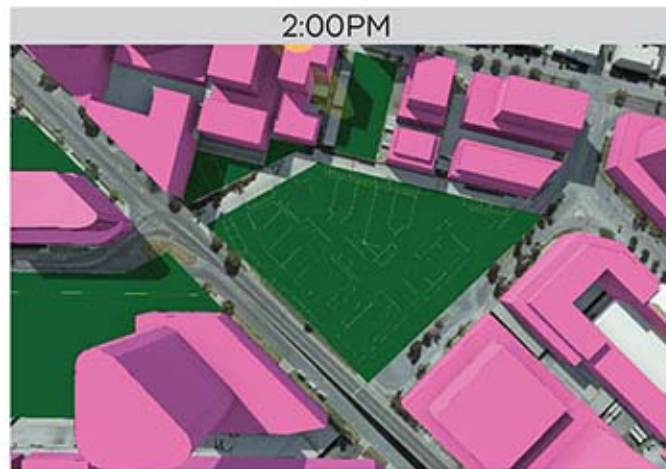
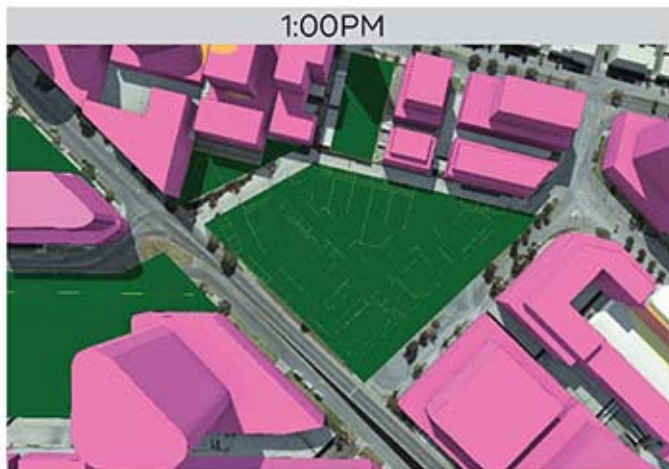
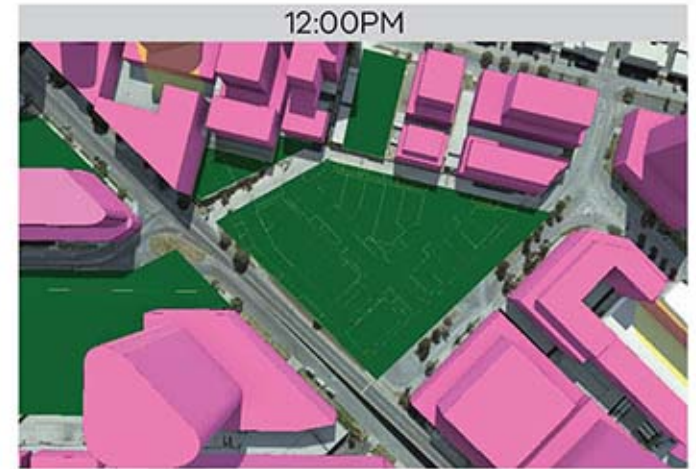
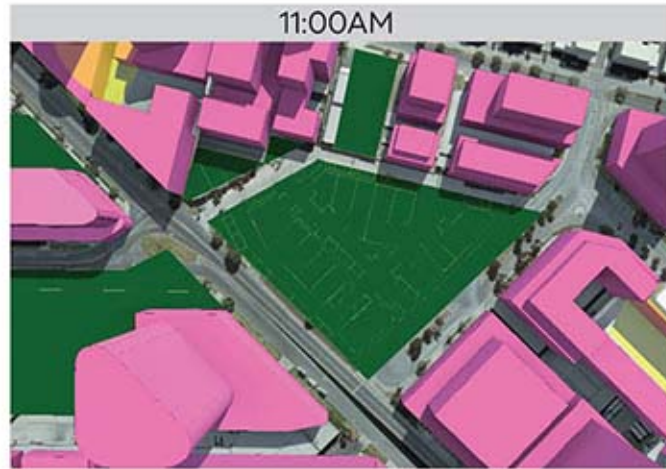
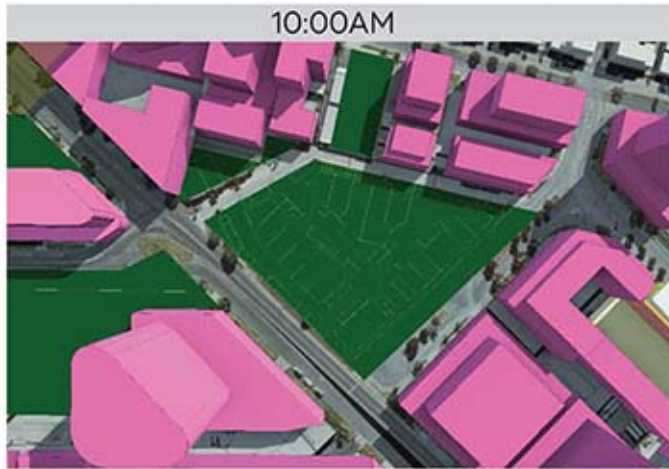
-  Yellow shadows indicate Permit shadows
-  Indicates proposed Public Open Space
-  Indicates proposed Encumbered Open Space



Lorimer 01 Open Space - June 22nd Overshadowing



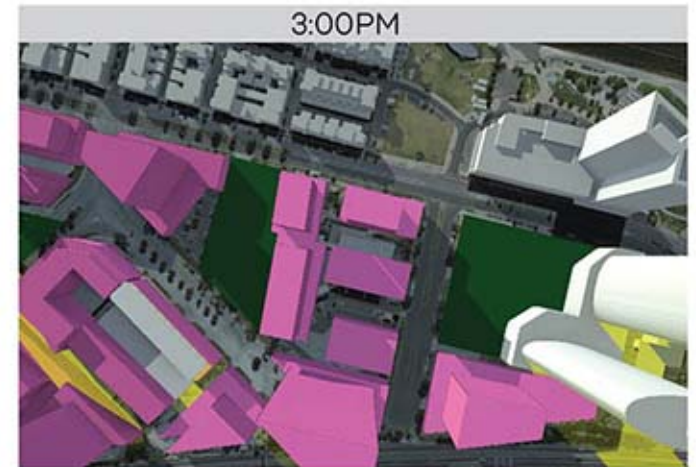
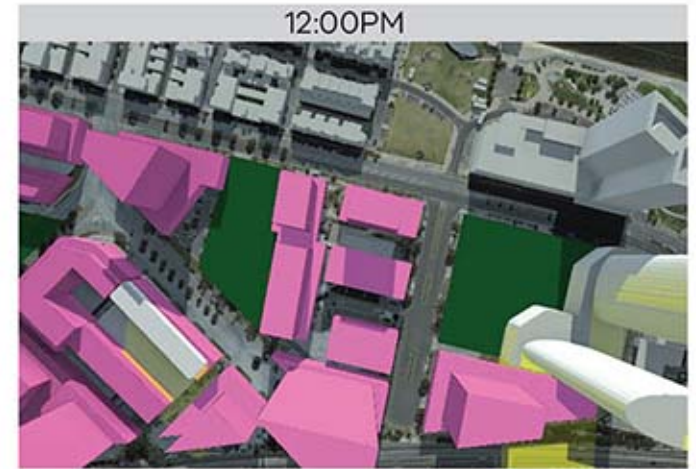
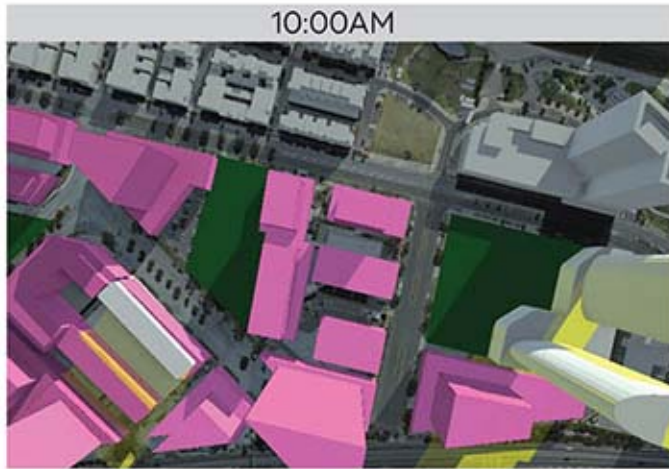
 Yellow shadows indicate Permit shadows
 Indicates proposed Public Open Space



Lorimer 01 Open Space - September 22nd Overshadowing



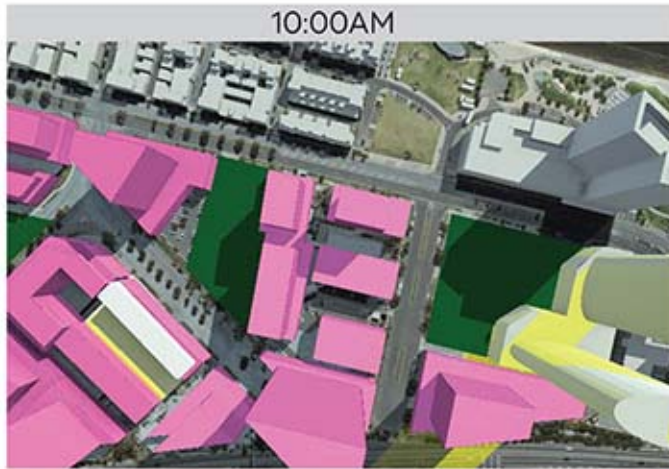
-  Yellow shadows indicate Permit shadows
-  Indicates proposed Public Open Space



Lorimer 02 Open Space - June 22nd Overshadowing



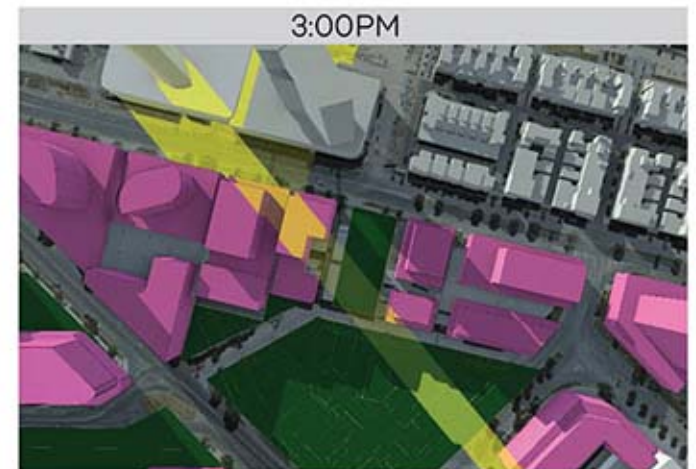
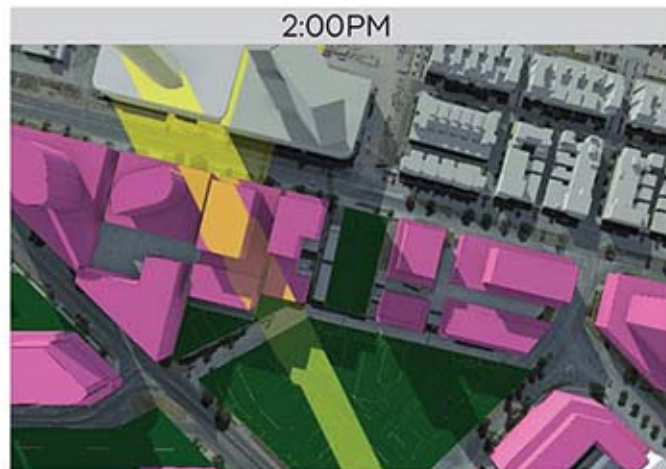
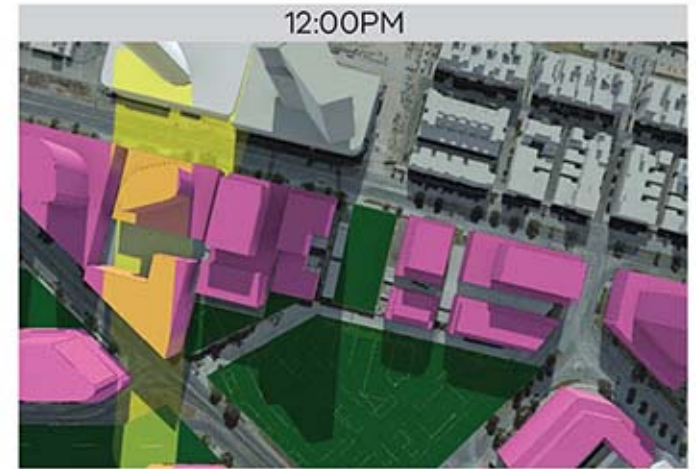
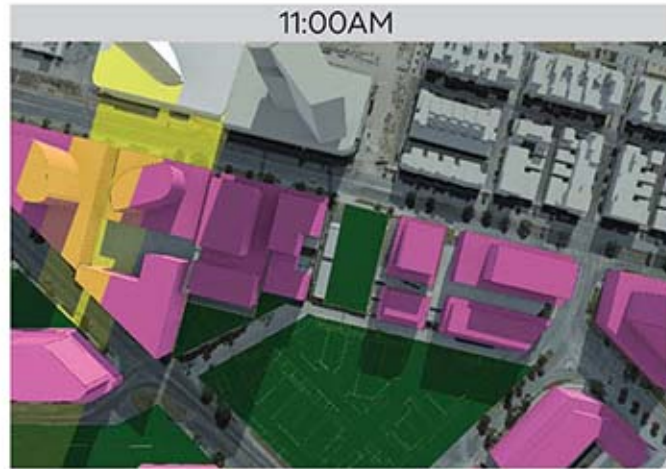
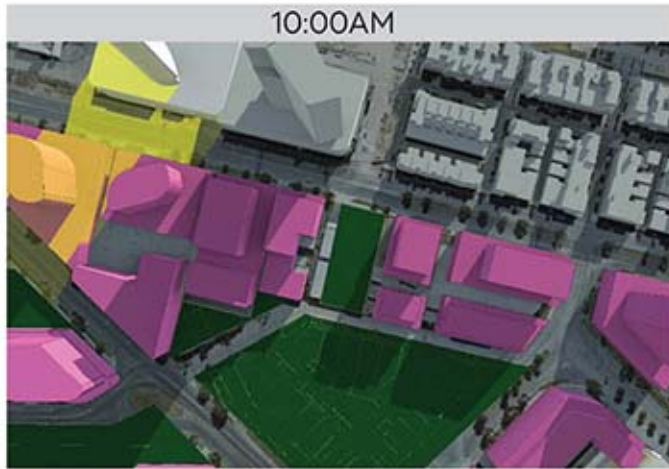
-  Yellow shadows indicate Permit shadows
-  Indicates proposed Public Open Space



Lorimer 02 Open Space - September 22nd Overshadowing



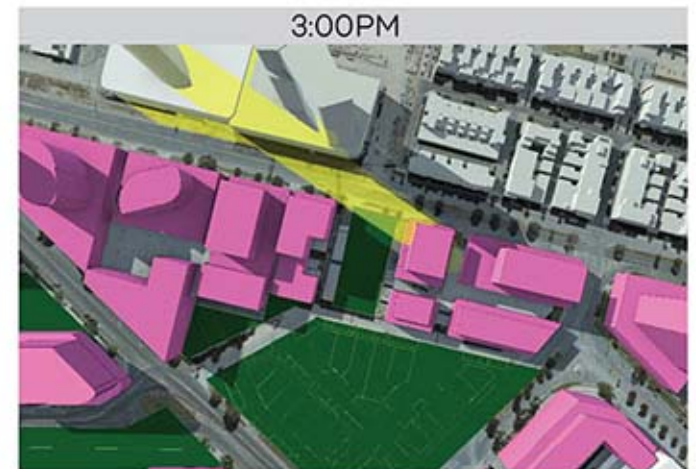
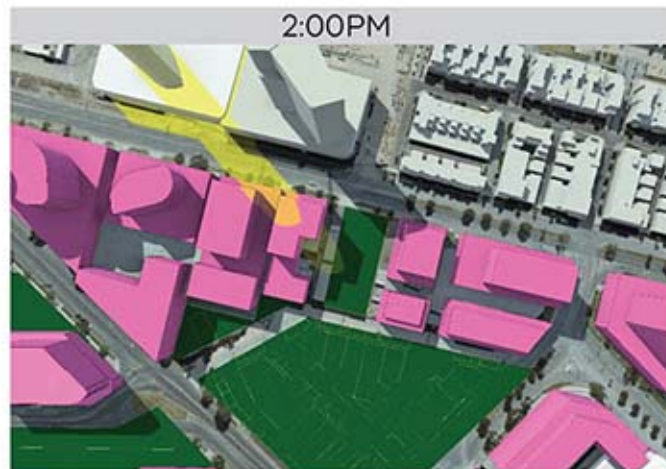
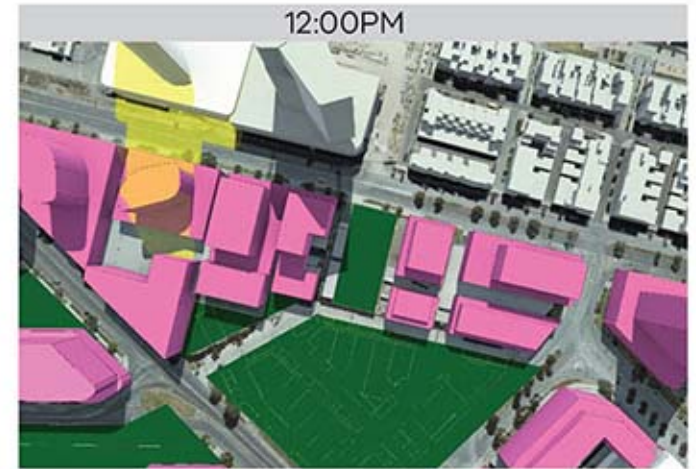
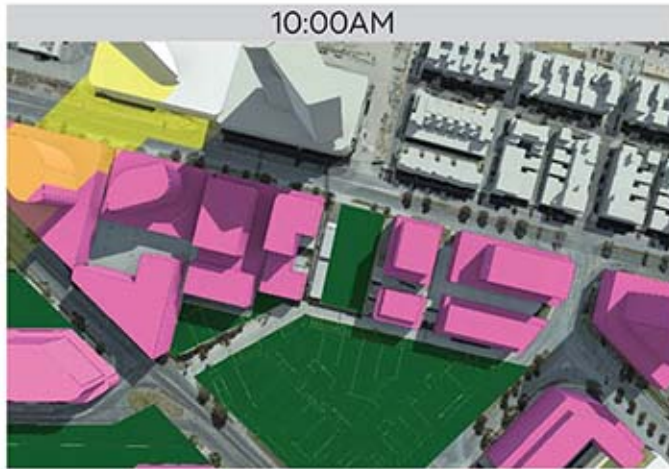
 Yellow shadows indicate Permit shadows
 Indicates proposed Public Open Space



Lorimer 03 Open Space - June 22nd Overshadowing



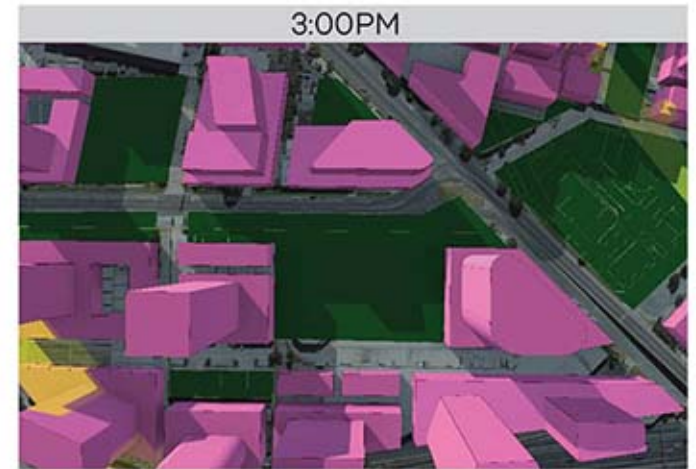
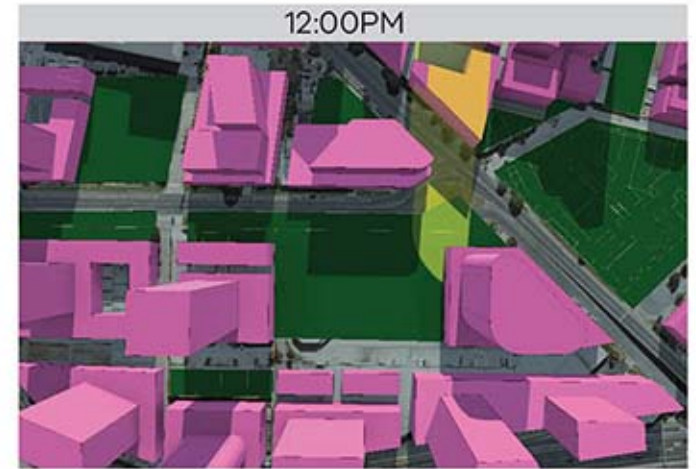
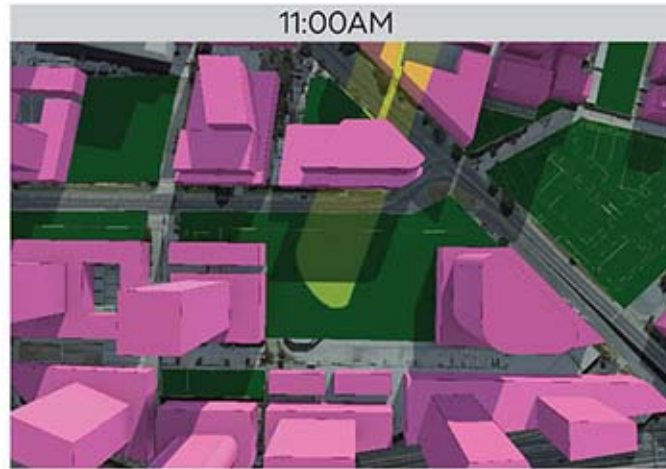
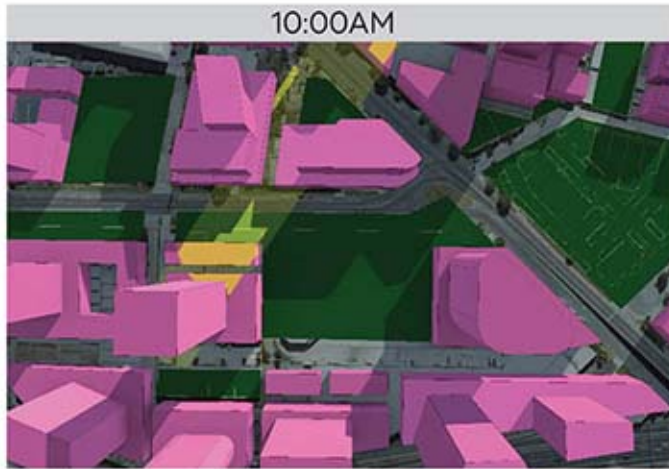
-  Yellow shadows indicate Permit shadows
-  Indicates proposed Public Open Space



Lorimer 03 Open Space - September 22nd Overshadowing



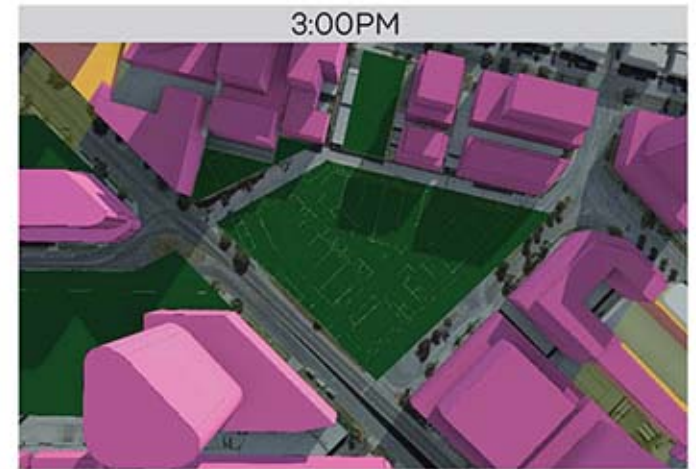
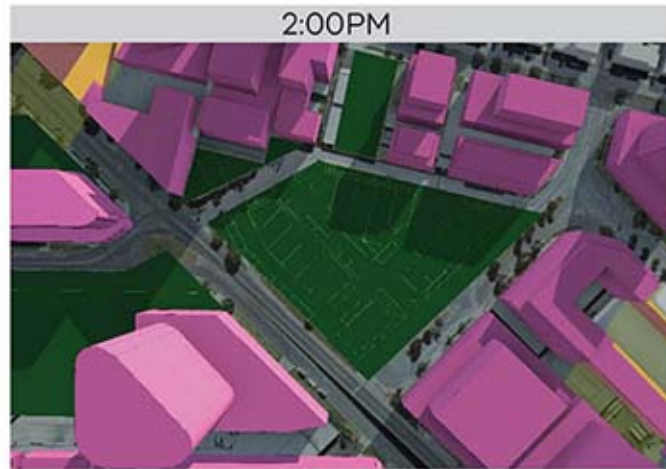
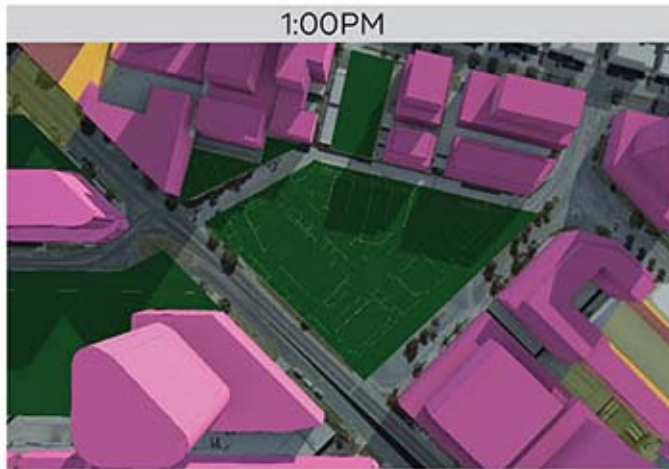
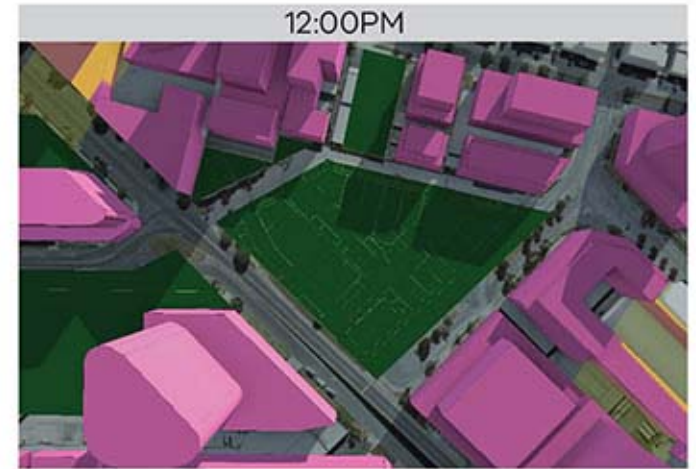
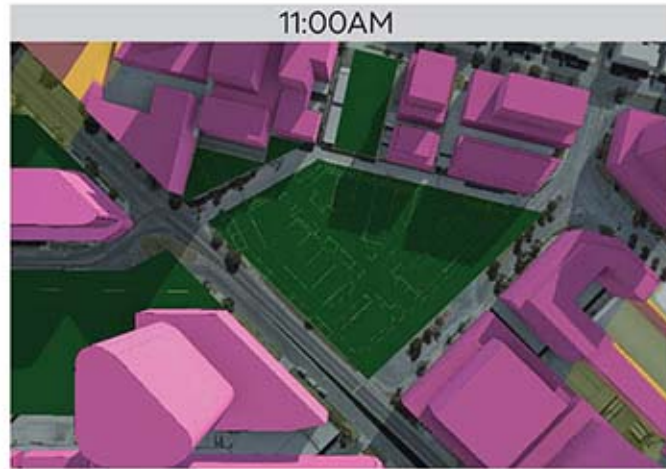
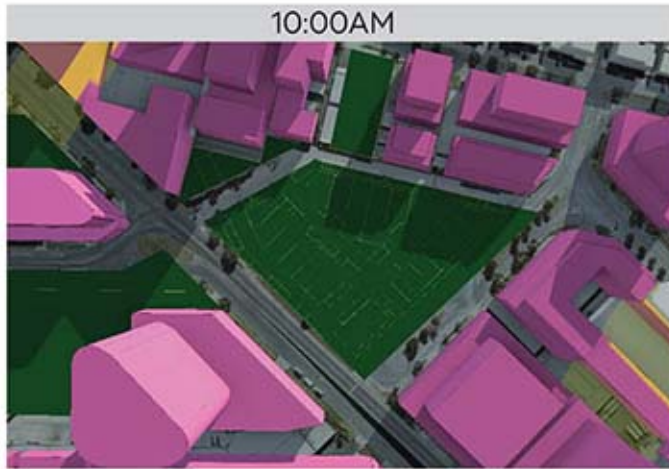
-  Yellow shadows indicate Permit shadows
-  Indicates proposed Public Open Space



Lorimer 04 Open Space - June 22nd Overshadowing



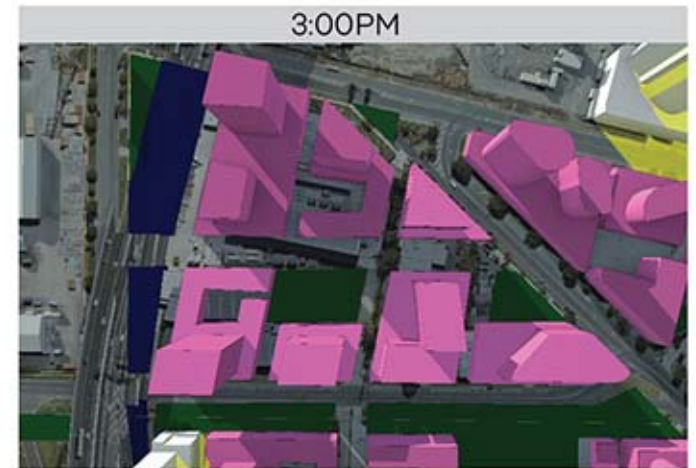
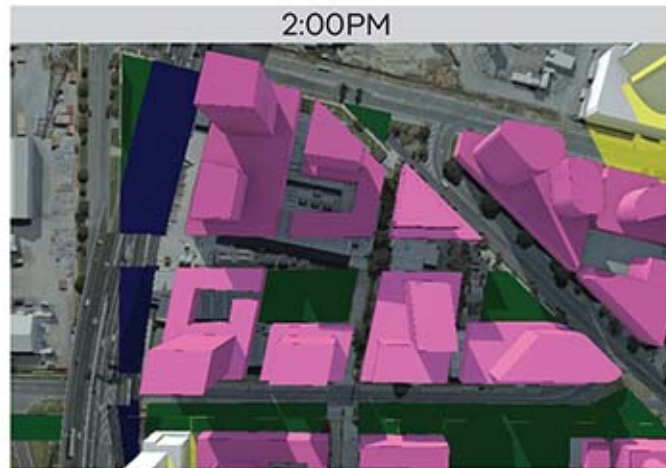
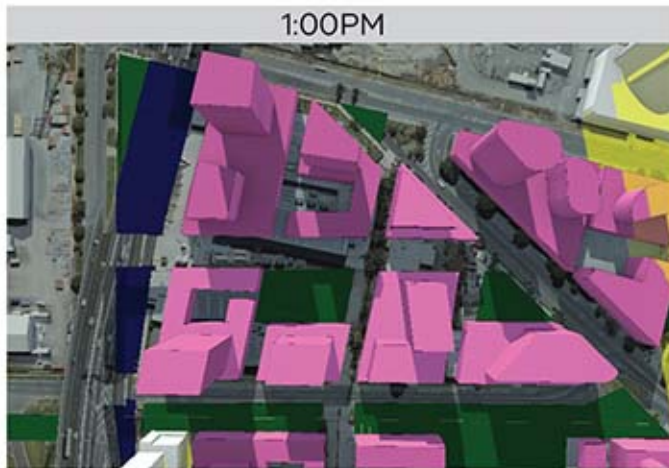
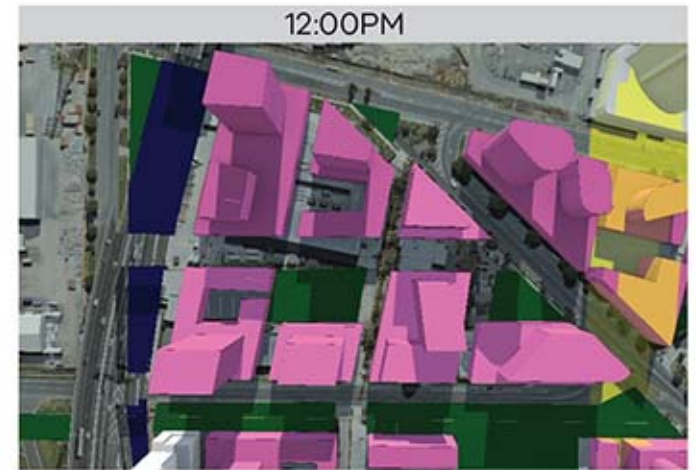
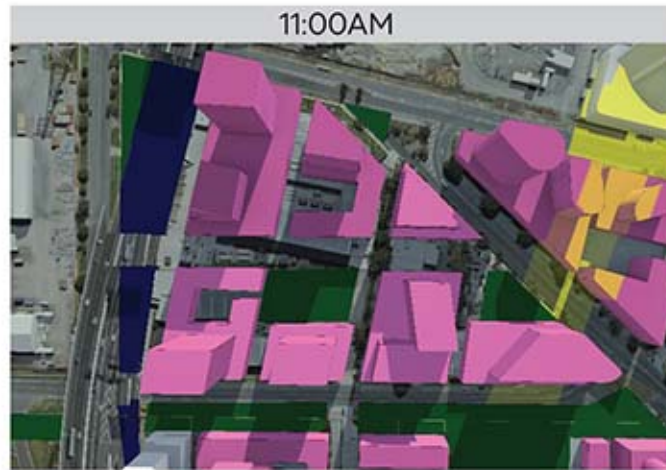
-  Yellow shadows indicate Permit shadows
-  Indicates proposed Public Open Space




Lorimer 04 Open Space - September 22nd Overshadowing



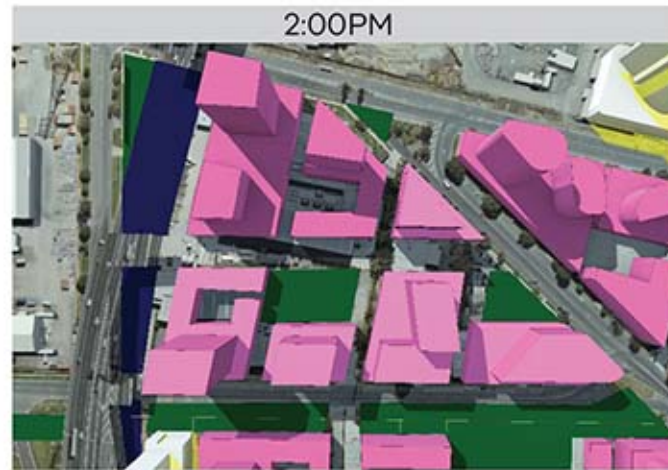
-  Yellow shadows indicate Permit shadows
-  Indicates proposed Public Open Space




Lorimer 05 Open Space Option 2 - June 22nd Overshadowing



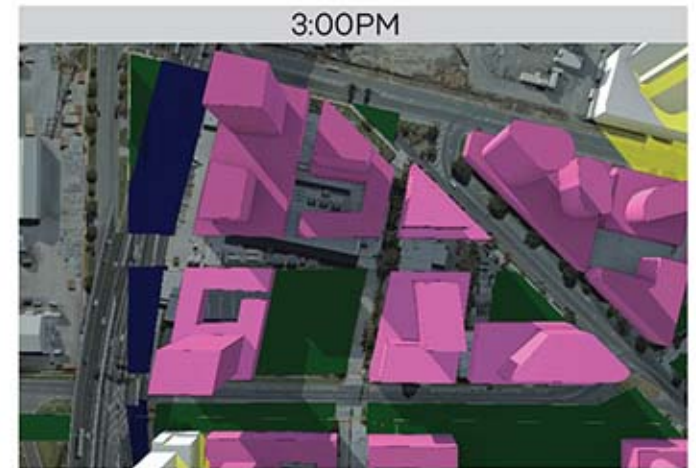
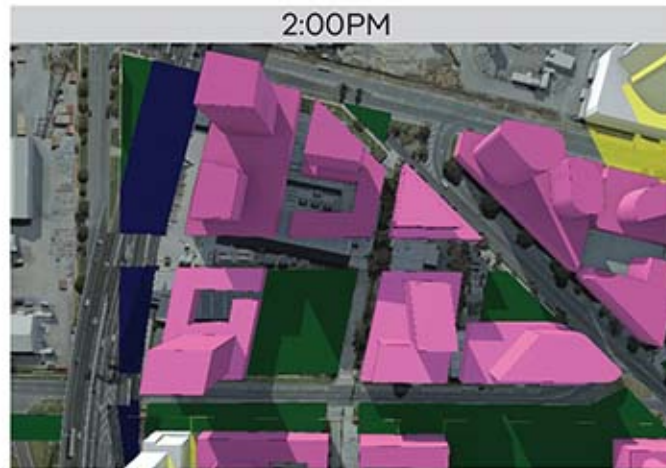
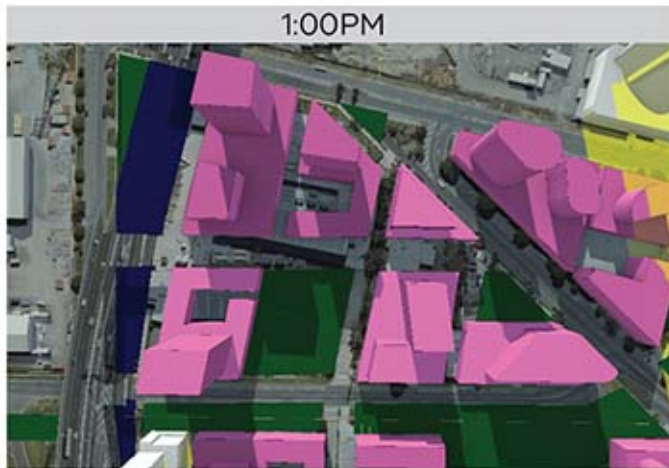
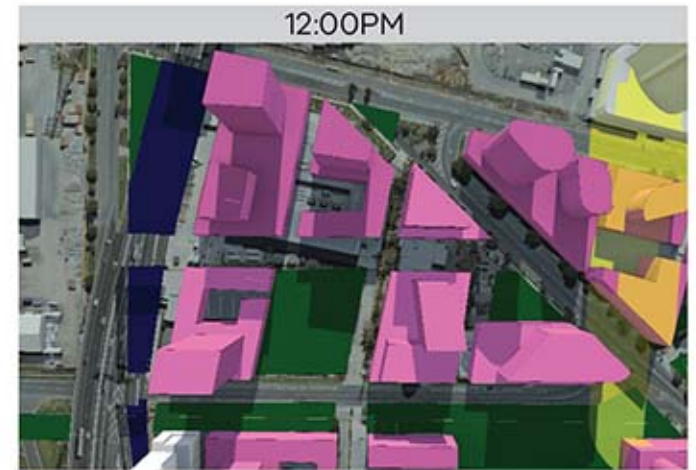
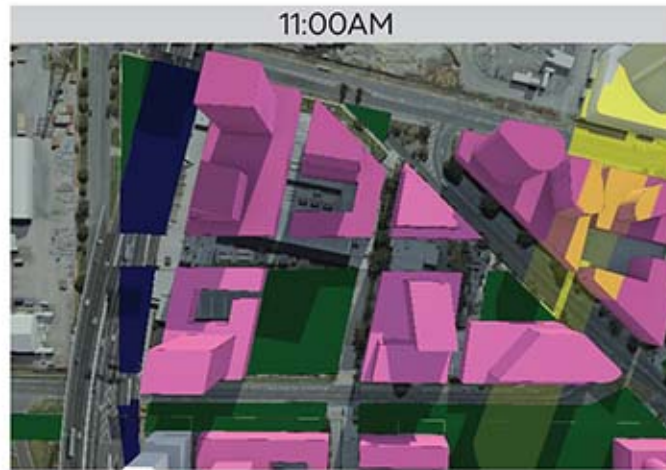
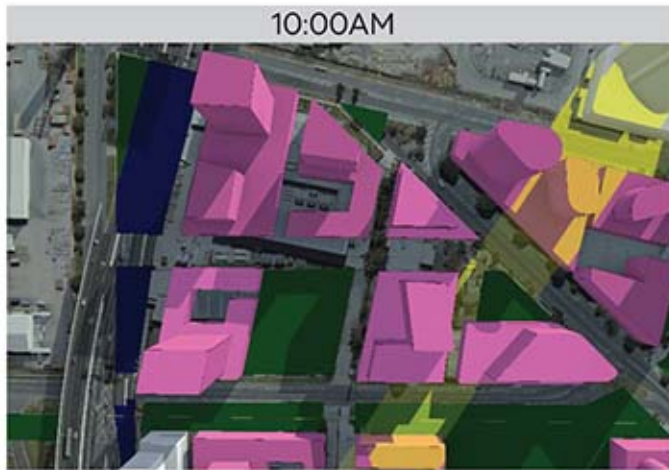
-  Yellow shadows indicate Permit shadows
-  Indicates proposed Public Open Space
-  Indicates proposed Encumbered Open Space




Lorimer 05 Open Space Option 2 - September 22nd Overshadowing



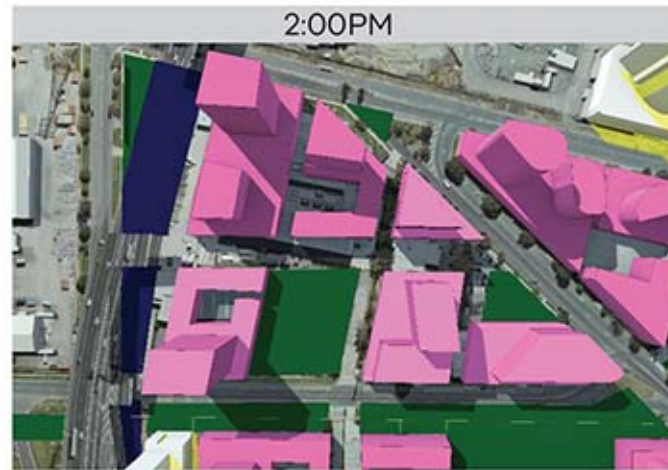
-  Yellow shadows indicate Permit shadows
-  Indicates proposed Public Open Space
-  Indicates proposed Encumbered Open Space




Lorimer 05 Open Space Option 1 - June 22nd Overshadowing



-  Yellow shadows indicate Permit shadows
-  Indicates proposed Public Open Space
-  Indicates proposed Encumbered Open Space

Lorimer 05 Open Space Option 1 - September 22nd Overshadowing



-  Yellow shadows indicate Permit shadows
-  Indicates proposed Public Open Space
-  Indicates proposed Encumbered Open Space