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Prepared by Hodyl + Co for the City of Melbourne
www.hodyl.co

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1. Introduction

1.1 Personal details

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Hodyl & Co
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Melbourne VIC 3000

Qualifications

- | | |
|------|---|
| 2009 | Masters of Urban Design
University of Melbourne
Dean's Honour Award |
| 2004 | Graduate Diploma of Arts (Social Theory)
University of Melbourne |
| 1997 | Bachelor of Science (Architecture)
University of Newcastle |

Awards and associations

- | | |
|--------|--|
| 2019 - | Senior Industry Fellow, RMIT
Honorary position |
| 2015 - | President's Award for Planning
Planning Institute of Australia - Victoria |
| 2014 - | Churchill Fellowship Award
Churchill Memorial Foundation |
| 2017 - | Member, VPELA |
| 2016 - | Member, Planning Institute of Australia |

Professional Experience

- 1 I have over 20 years' of experience delivering urban design and strategic planning projects working in both the public and private sectors. This includes working on a range of development, planning and public realm design projects in Melbourne, Sydney, Darwin and regional Victoria.
- 2 Since January 2016, I have been the Managing Director of an urban design and strategic planning consultancy, Hodyl & Co.
- 3 A full resume of my experience is provided in Appendix A.

1.2 Instructions

- 4 In preparation for the Panel that was originally scheduled in 2020, I was instructed to:
 - Review the Amendment and relevant exhibition background documents
 - Review relevant submissions
 - Review the Amendment provisions with changes in response to submissions as set out in the officers' report to the Future Melbourne Committee meeting of 4 February 2020
 - State whether I am supportive of the Amendment
 - Prepare a report setting out my expert opinion in relation to how the Amendment achieves its intent for sun access protection in public parks.
- 5 In February 2021, I was also instructed to:
 - Review the updated 2020 modelling prepared by the City of Melbourne and consider whether the updated modelling has any implications for the recommendations and conclusions in the Sunlight Access Report.

1.3 Area of Expertise in this Case

- 6 I am the key author of the 'Sunlight Access to Open Spaces Modelling Analysis Report - February 2018' prepared for the City of Melbourne. This report is the primary document which informs the proposed overshadowing controls included in Amendment C278 and is introduced as a Policy Reference document in Clause 22.02.
- 7 In December 2019, as a supplement to the above report, I was asked to consider what sunlight access controls would be suitable for Flagstaff Gardens (which were not part of the original project scope). My recommendation was for sunlight protection for the full park at the winter solstice between the hours of 12pm and 3pm.
- 8 I have been leading urban design and strategic planning projects focused on high density, mixed-use urban environments in inner Melbourne for the past 10 years. This includes a number of highly complex built form policy projects as follows:
 - Preparation of built form strategies for the City of Melbourne's declared urban renewal areas - Southbank (2011), Arden-Macaulay (2012) and City North (2012) and provision of expert advice at Victorian Planning Panels to support the planning scheme amendments which implemented the recommendations of these strategies - Amendments C171, C190 and C196 respectively.
 - Preparation of the Urban Design Strategy for Fishermans Bend (2017), Australia's largest urban renewal area and provision of expert advice at Victorian Planning Panels to support the GC81 Planning Scheme Amendment.
 - Authorship of the Central City Built Form Review Synthesis Report (2016) on behalf of the Department of Environment, Land, Water and Planning (DELWP) which introduced significant built form policy reform to Melbourne CBD and Southbank. This work informed the preparation of Planning Scheme Amendment C270 and I provided expert evidence at Panel to support the Amendment.
 - Authorship of the Urban Design Analysis – Special Character Areas report which informed the proposed built form controls for the Special Character Areas in Amendment C270 and provision of expert evidence.
 - Provision of expert evidence at Planning Panels Victoria in regards to the implementation of the West Melbourne Structure plan via Planning Scheme Amendment C309.
 - Preparation of a Built Form Framework for the Moonee Ponds Activity Centre, part of the Minister for Planning's Pilot Activity Centre Project on behalf of the City of Moonee Valley.
 - Preparation of built form policy proposals for the Central Geelong Activity Centre on behalf of the City of Greater Geelong.
 - Preparation of a Built Form Framework for Heidelberg Road in Alphington/Fairfield on behalf of the City of Yarra.
- 9 Prior to starting my own consultancy, I led urban design and strategic planning teams at the City of Melbourne from 2011 - 2015.
- 10 I have been assisted in the preparation of this report by Huei-Han Yang, an Urban Designer with Hodyl & Co. The opinions expressed in this report are entirely my own.

1.4 Relationship between my report recommendations and Amendment C278

- 11 Amendment C278 is, to a large degree, aligned with the recommendations contained in my report, 'Sunlight Access to Open Spaces Modelling Report - February 2018 and my subsequent recommendation for Flagstaff Gardens in December 2019. This includes adoption of the following proposed policy positions:
- Revising the time of year that sunlight access to parks is protected from the equinox to the winter solstice.
 - Removal of the current 'tiered' approach to protecting sunlight access. Replacement with a 'flat' approach that acknowledges that often the most important park to a person's home, work or study is the one in close walking distance.
 - Introduction of a sunlight protection policy approach that balances sunlight access with support for development intensification in the urban renewal areas by:
 - » Aligning the extent of allowable shadow with the existing preferred maximum building heights or the existing preferred maximum street wall height (whichever is the lower).
 - Not requiring an overshadowing assessment for buildings or works of a height that are 9 metres or lower.
 - Generally, increasing the period in the day for which sunlight protection is provided from 11am - 2pm to 10am - 3pm.
 - Increasing sunlight protection for parks east of St Kilda Road and the Hoddle Grid to 10am to 2pm, recognising that after this period the shadow from very tall buildings in Southbank

and the CBD will unavoidably overshadow these parks.

- 12 There are three major differences between the Sunlight Access to Open Spaces Modelling Analysis Report and the provisions proposed in the DDO. These are:
- Exclusion of parks within the Docklands.
 - The method of applying the new policy settings. My recommendation was for a municipal wide DDO that applied to all land within the municipality.
 - Application of winter sunlight controls for Flagstaff Gardens from 11am - 3pm. My recommendation was for a sunlight access control that applied at the winter solstice but from 12pm - 3pm.
- 13 I also recommended prioritising the identification for the location of potential new parks that have been identified in the City of Melbourne's Open Space Strategy in order to enable sunlight protection to be applied to these new parks as soon as practical. This does not affect the proposed sunlight protection controls to existing parks or Amendment C278.

1.5 Summary of recommendations

Support for the amendment

- 14 As the Amendment follows the recommendations of my own report closely, I am largely supportive of the proposed overshadowing controls included in Amendment C278. I consider that the Amendment will successfully achieve the intent of providing sunlight protection to Melbourne's parks over the longer term as the city continues to grow and evolve.

Recommended changes to the amendment

- 15 In response to the submissions, I have made the following recommendations for changes to the policy provisions included in Amendment C278.

Recommendation 1

- 16 Update the definition for 'Allowable shadow' and the accompanying figure 1 to more simply explain the two different planning contexts in which it is applied:

- Allowable shadow (in locations where a street wall height control applies) means the shadow that would be cast on the park, between 10am and 3pm, June 21, by the maximum street wall height as nominated in the planning scheme for properties that immediately abut a park.
- Allowable shadow (in locations where a street wall height control does not apply) means the shadow that would be cast on the park, between 10am and 3pm, June 21, by the maximum building height as nominated in the planning scheme of properties that immediately abut a park.

Recommendation 2

- 17 Introduce Park Type 4 and apply to Ron Barassi Snr Park, as per the original report recommendation. Allow partial overshadowing of the park - up to 40 metres when measured from the northern property boundary, between 10am - 3pm on June 21. Update DDO08 to include properties that are affected by this recommendation.

Recommendation 3

- 18 Change the park classification for the Maribyrnong River Bike Trail from Type 1 to Type 2 to acknowledge that it is adjacent to a growth area.

Recommendation 4

- 19 Update Clause 22.02 to provide clarity that the mandatory overshadowing requirement does not apply to new or altered buildings within parks.

Recommendation 5

- 20 Retain Flagstaff Gardens as Park Type 3 West, however reduce the hours that apply for winter sunlight protection from 11am - 3pm to 12pm-3pm. A mandatory control should apply.

Recommendation 6

- 21 Modify the application of the Park Type 2 controls to Fitzroy Gardens to allow a shadow to be cast up to 30 metres into the northern boundary of the park.

Recommendation 7

- 22 Change Weedon Reserve in East Melbourne from a Park Type 1 to a Park Type 2.

1.6 Declaration

- 23 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.



Leanne Hodyl, February 2021

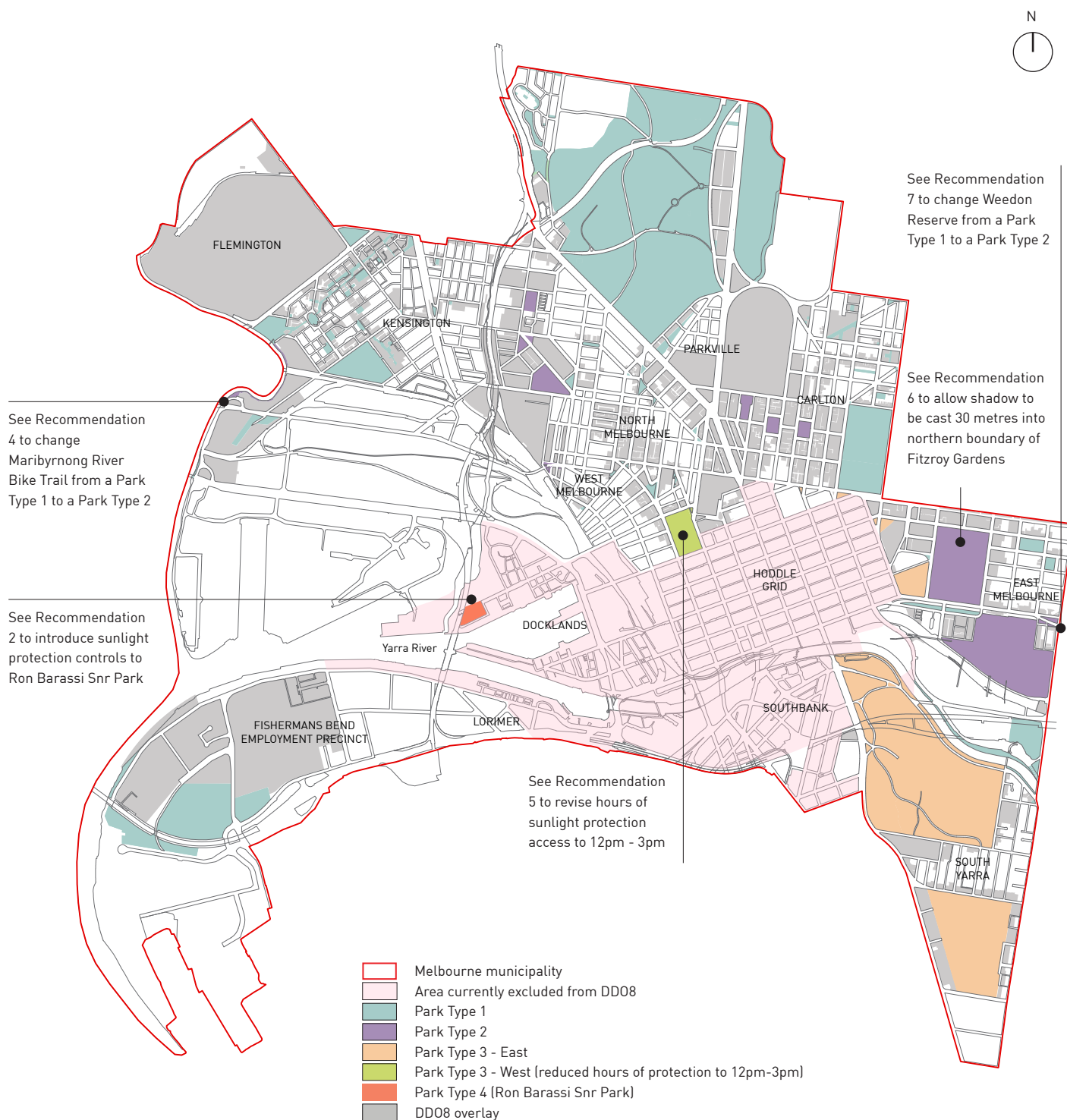


Figure 1. Proposed Park Types categorisations (incorporating Recommendations in this report)

2. The benefits and impacts of the Amendment

2.1 Why is the amendment needed?

Balancing development intensification and amenity

24 Amendment C278 seeks to contribute to the successful planning of Melbourne's future growth. This requires balancing two important objectives:

- Protection and enhancement of Melbourne's liveability in terms of its high levels of amenity (public and private) and character, and
- Support for development intensification to respond to population pressures, increase densities and activation in urban renewal areas and generate greater economic activity.

25 In this sense, it is not dissimilar to other recent amendments in the central areas of Melbourne, including most recently the Central City Built Form Review (Amendment C270) which sought to moderate development scale to achieve high levels of private and public amenity. A key aspect of this amendment was the introduction of new sunlight access controls which were tailored to respond to the specific contexts that occur across the Hoddle Grid and Southbank. Importantly, they targeted the protection of sunlight access to parks when it is most needed and desired in the cooler months of the year.

26 The overshadowing analysis undertaken as part of Amendment C270¹ identified that:

- 'Solar access should be mainly protected for times when the mean maximum outdoor temperature in Melbourne is below 20° C, which is generally between 22 April to 22 September'

- 'Control period times should reflect the broader usage of key public spaces; a wider date period from 22 April to 22 September and an overall time period of between 10.00am and 4.00pm should be tested, with between 12.00pm and 2.00pm considered a 'core' minimum control time period for all key public spaces.'

27 These are principles that are focused on maximising the wellbeing of people who use parks and are directly relevant to all parks within the municipality.

Benefits of the amendment

28 It is a well-established urban design principle that in higher-density neighbourhoods, the quality of the public realm becomes even more critical to the wellbeing and social cohesiveness of residents. As more people move into these high density neighbourhoods, the attractiveness and user-friendliness of Melbourne's parks will become even more important than they are today (refer Figure 2).

29 As outlined in the 'Sunlight Access to Open Spaces Modelling Report - February 2018' the amendment provides the following benefits:

- Securing opportunities for improved health outcomes for Melbourne residents over the longer term by protecting access to winter sunlight across longer periods of the day.
- Securing the ongoing enjoyment of Melbourne's parks over the long term.
- Protection of Melbourne's comparative liveability (and therefore competitiveness) by providing levels of sunlight access that

1 Central City Built Form Review: Overshadowing Technical Report, Prepared by DELWP, April 2016

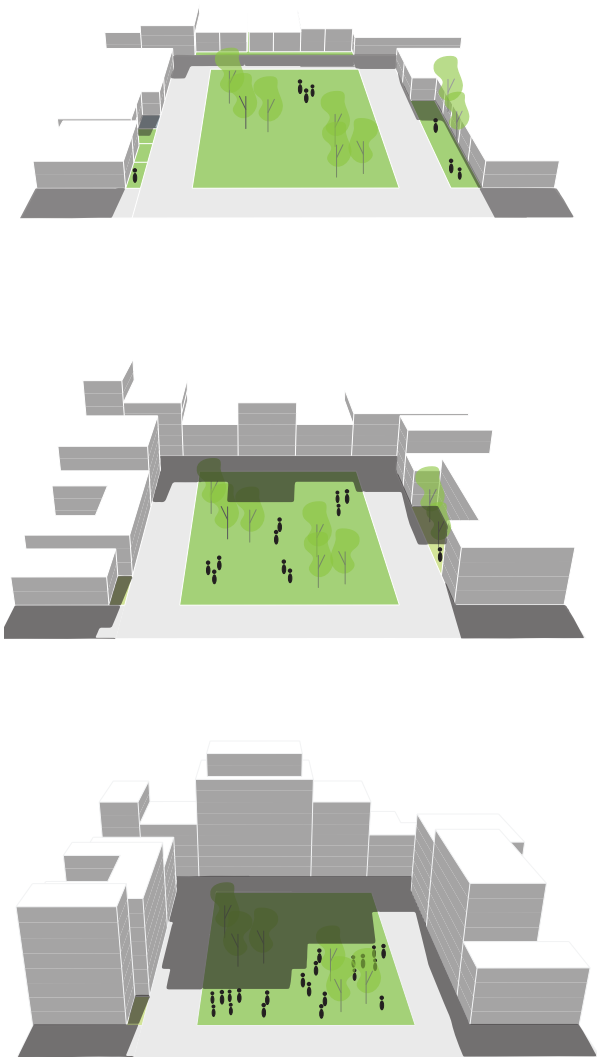


Figure 2. The tension caused by development intensification which can introduce increased overshadowing at the same time as increasing usage of the park.

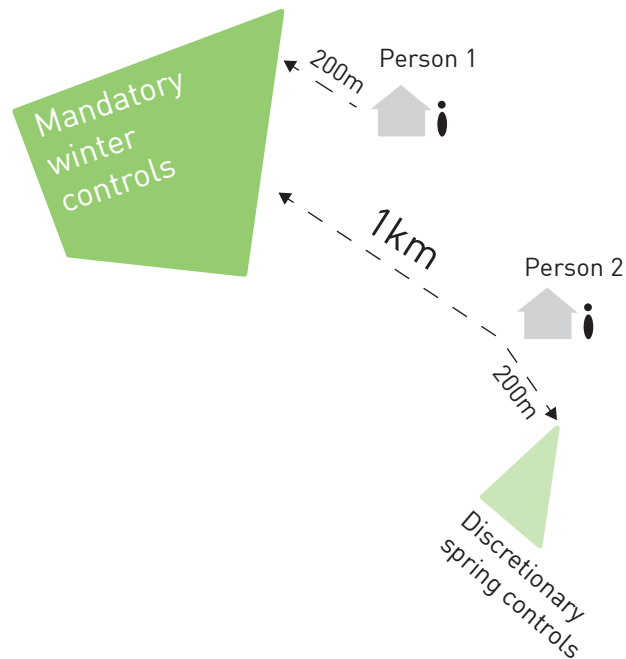


Figure 3. The current policy supports inequity of access to winter sunlight as parks with mandatory sunlight controls are not evenly distributed across the municipality. Some people will live or work within easy walking distance to a sunny park where winter sunlight is available (Person 1), while others will have to travel longer distances to access the same level of amenity (Person 2).

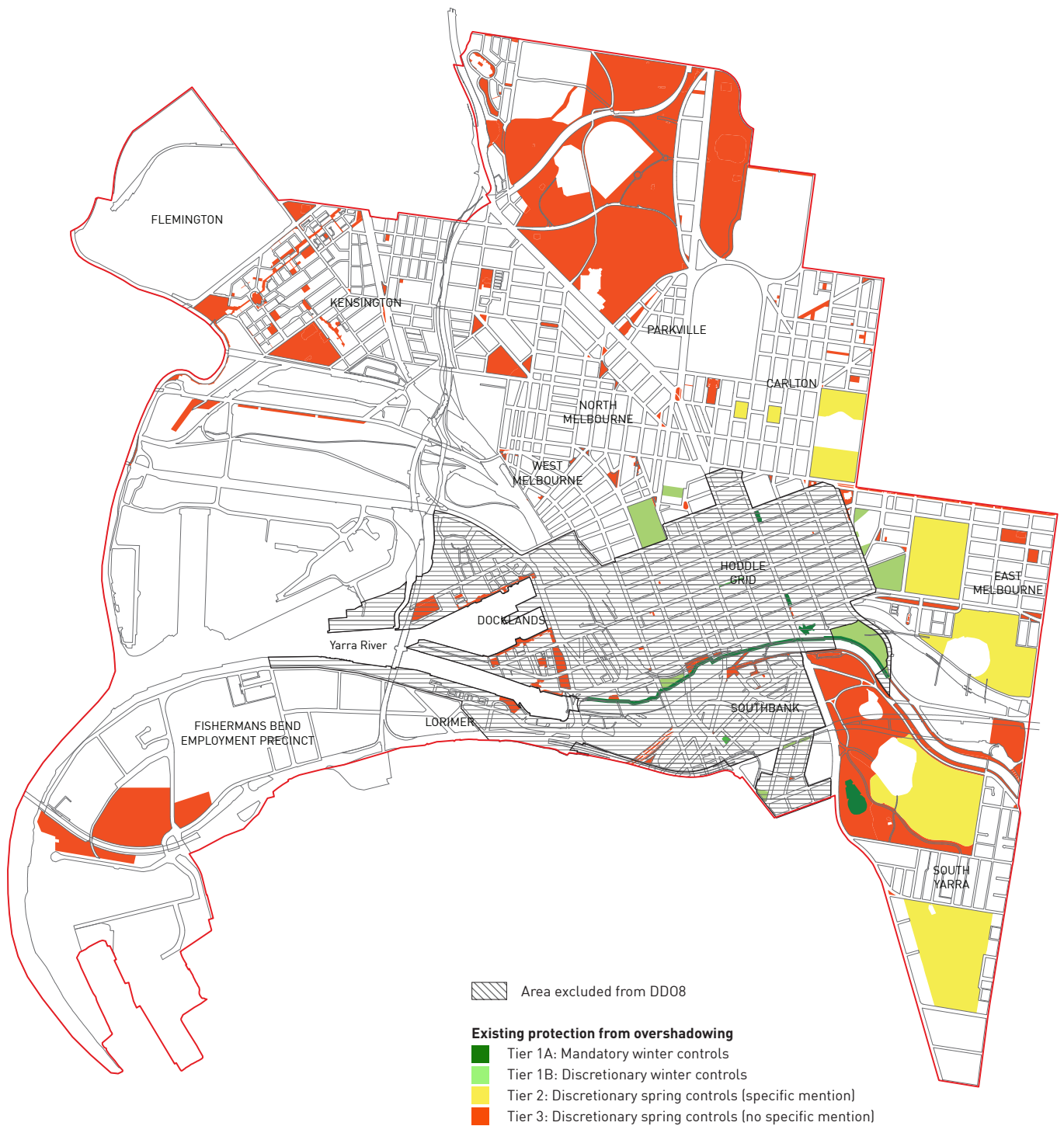


Figure 4. Existing protection from overshadowing within the Melbourne Planning Scheme. This illustrates the 'tiered' approach to considering sunlight access across the City of Melbourne's parks. The majority of parks in the study area have discretionary spring controls.

are commensurate with leading global approaches to delivering liveable high-density urban environments.

- An equitable approach to delivering health and amenity benefits to all Melbourne's residents.

30 There is a trend for development applications to increasingly exceed the preferred maximum building heights which is increasing the extent of the shadow that they cast. This is eroding away these benefits.

31 The 2020 updated modelling demonstrates the loss of sunlight access that has occurred over the past 5 years and which will occur if existing approved developments are built. This demonstrates how sunlight access can be incrementally reduced through individual site redevelopment. This is particularly explicit within two of the identified vulnerable parks, Lincoln Square and Gardiner Reserve where new development has resulted, or will result, in a significantly increased proportion of the park in shadow in winter.

32 The proposed controls also address the current inequitable approach to meeting people's health needs that is embedded in the existing policy (refer Figure 3).

33 The mandatory nature of the controls will ensure that these benefits are protected over the longer term, guaranteed and not whittled away through incremental development that cumulatively overshadows Melbourne's parks.

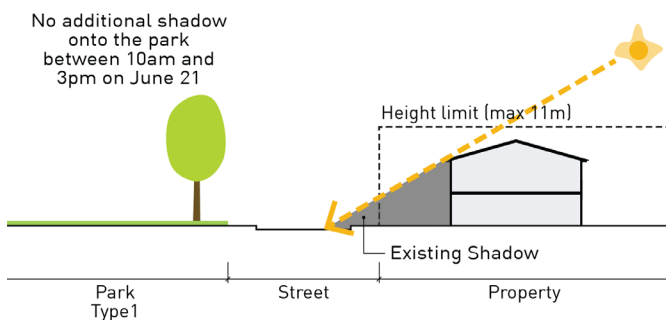


Figure 5. Park Type 1 – Extent of shadow cast by existing building.

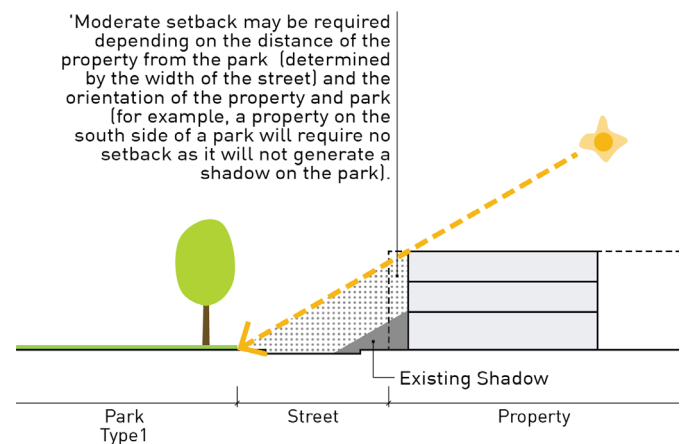


Figure 6. Park Type 1 – No additional shadow can be cast on to the adjacent park in winter. This may have a marginal impact on development yield, requiring a very moderate setback.

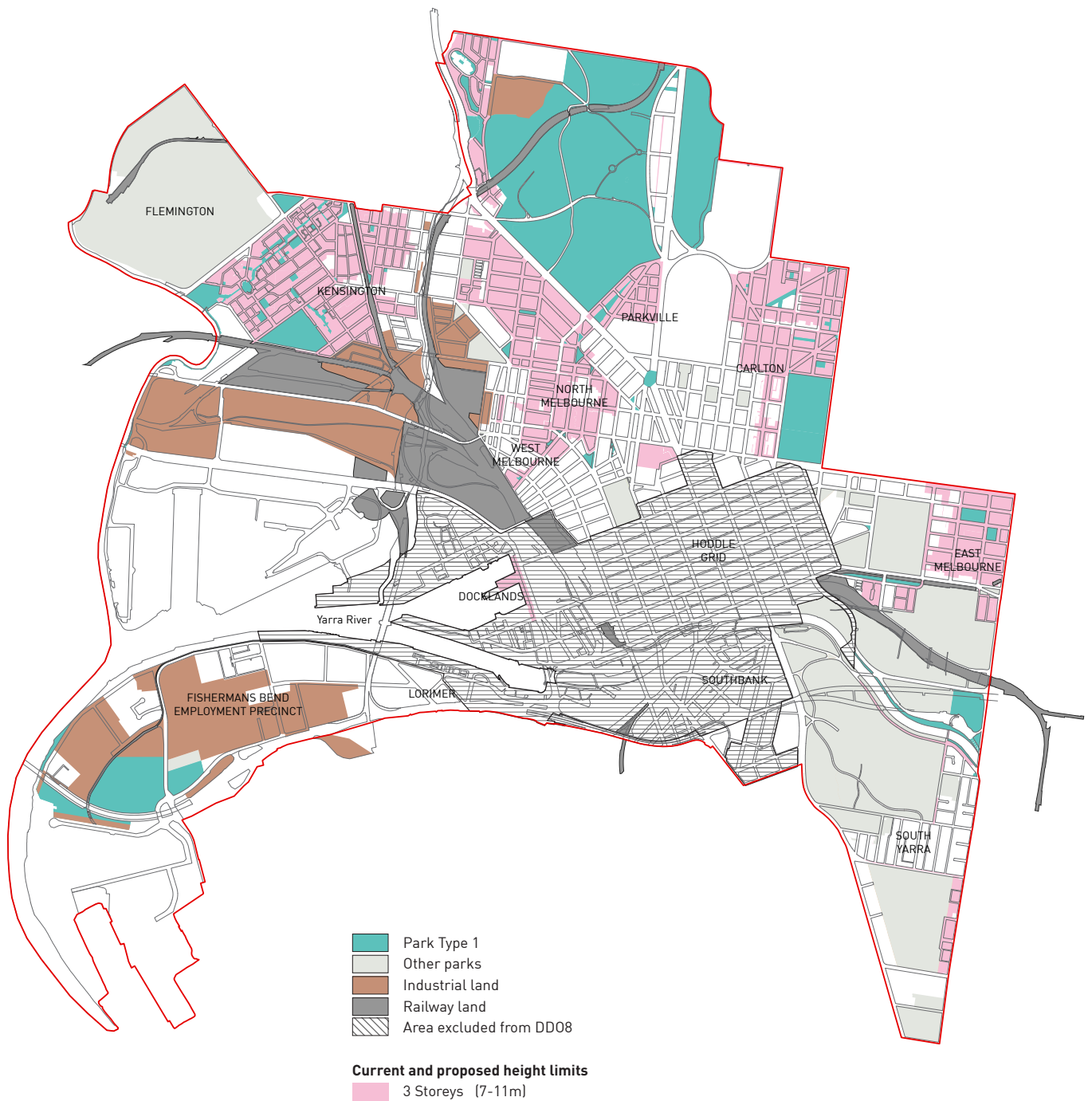


Figure 7. Park Type 1 and land with height limits of 3 storeys or below

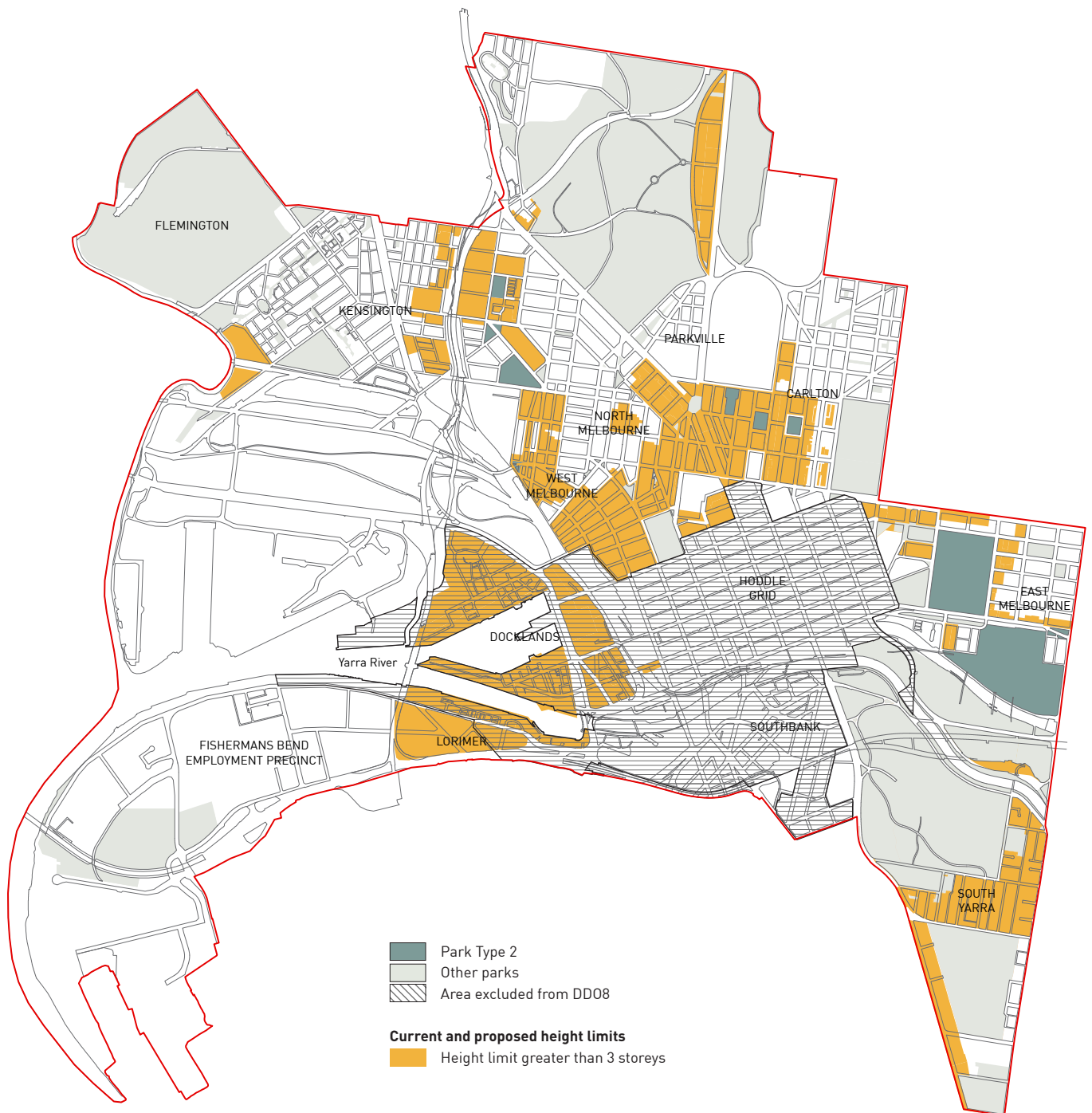


Figure 8. Park Type 2 (as proposed in Amendment) and land with height limits of 4 storeys and over

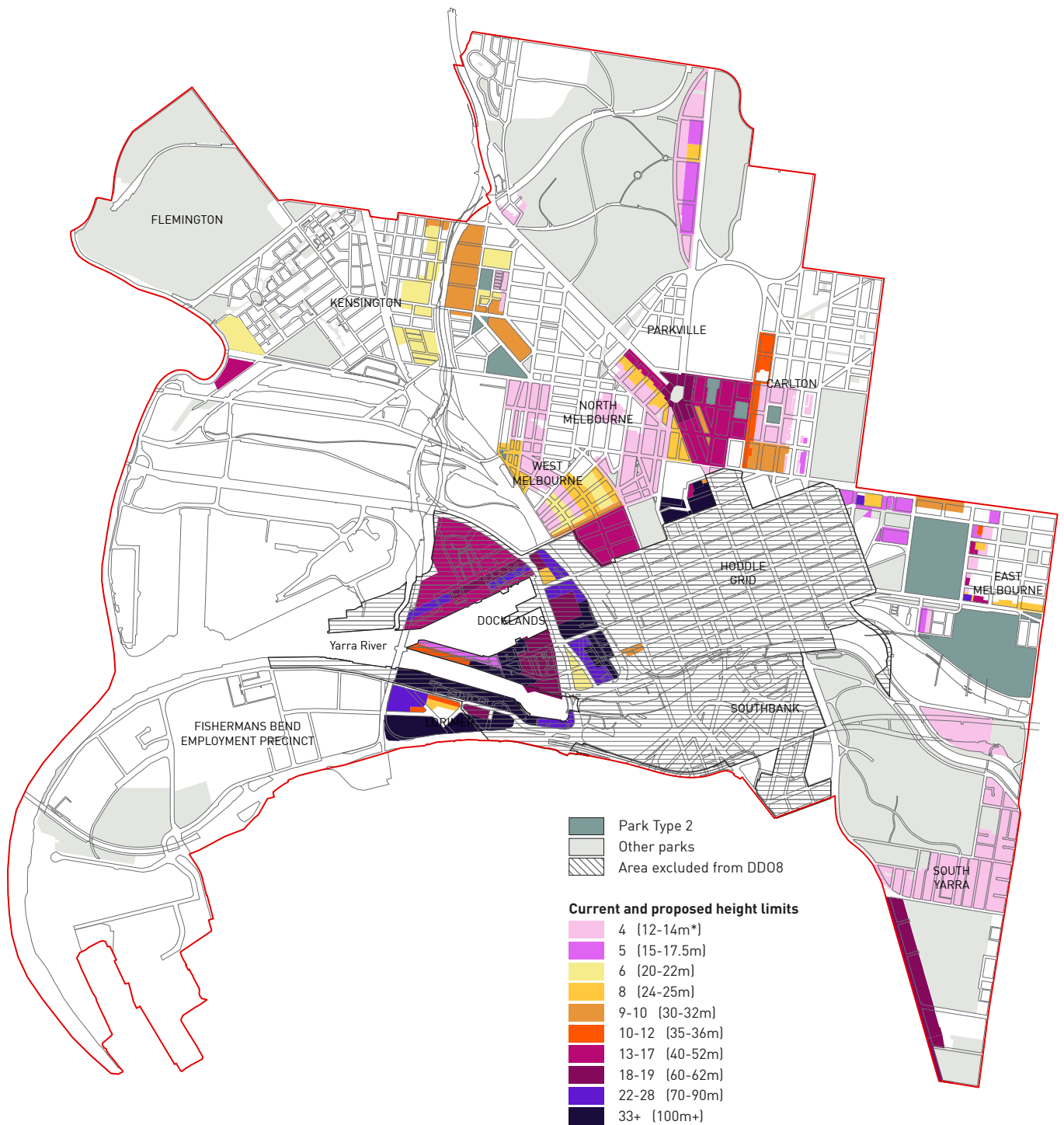


Figure 9. Park Type 2 (as proposed in Amendment) and specific height limits of areas with height controls 4 storeys and over

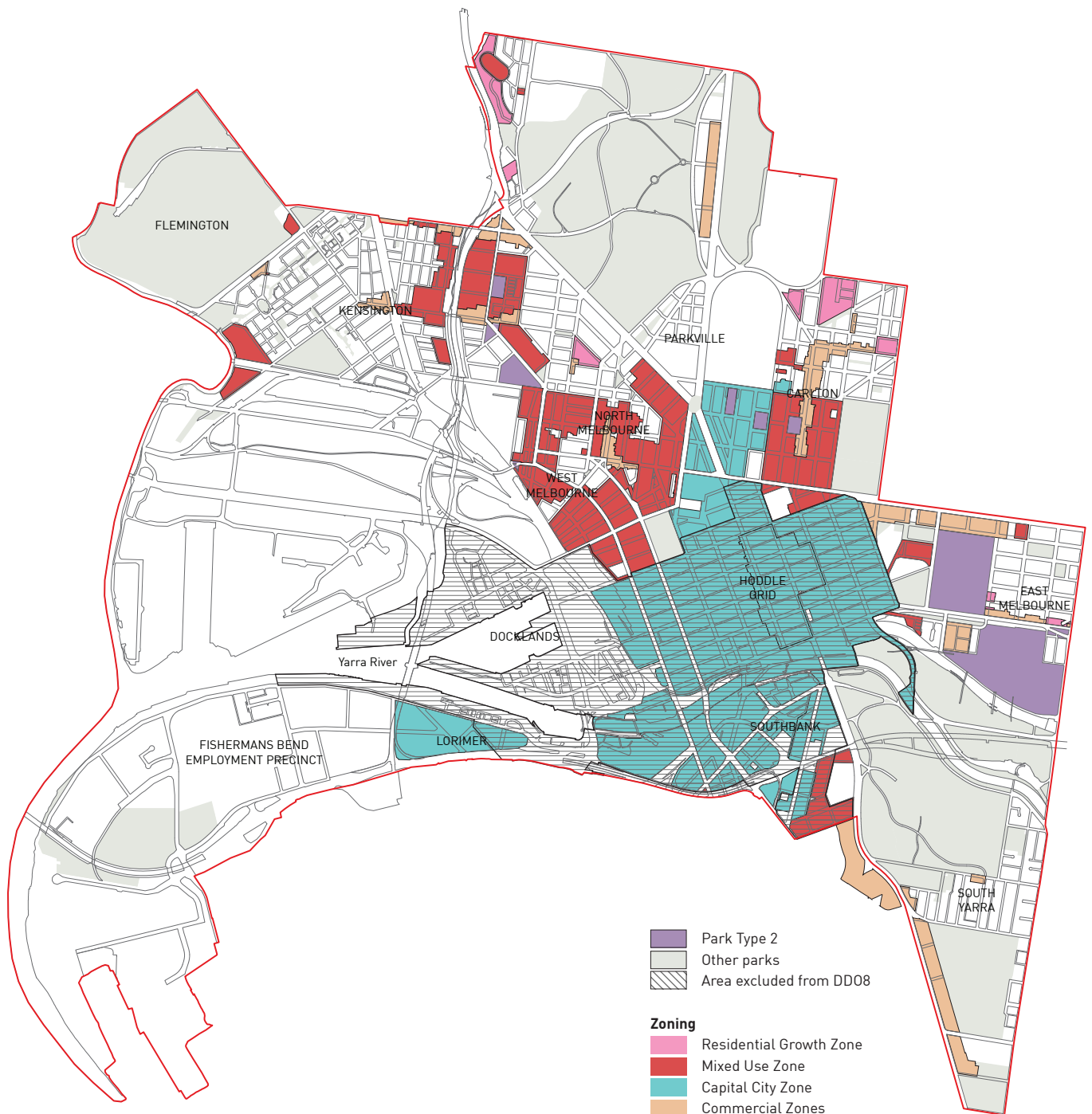


Figure 10. Park Type 2 (as proposed in Amendment) and adjacent land use zoning

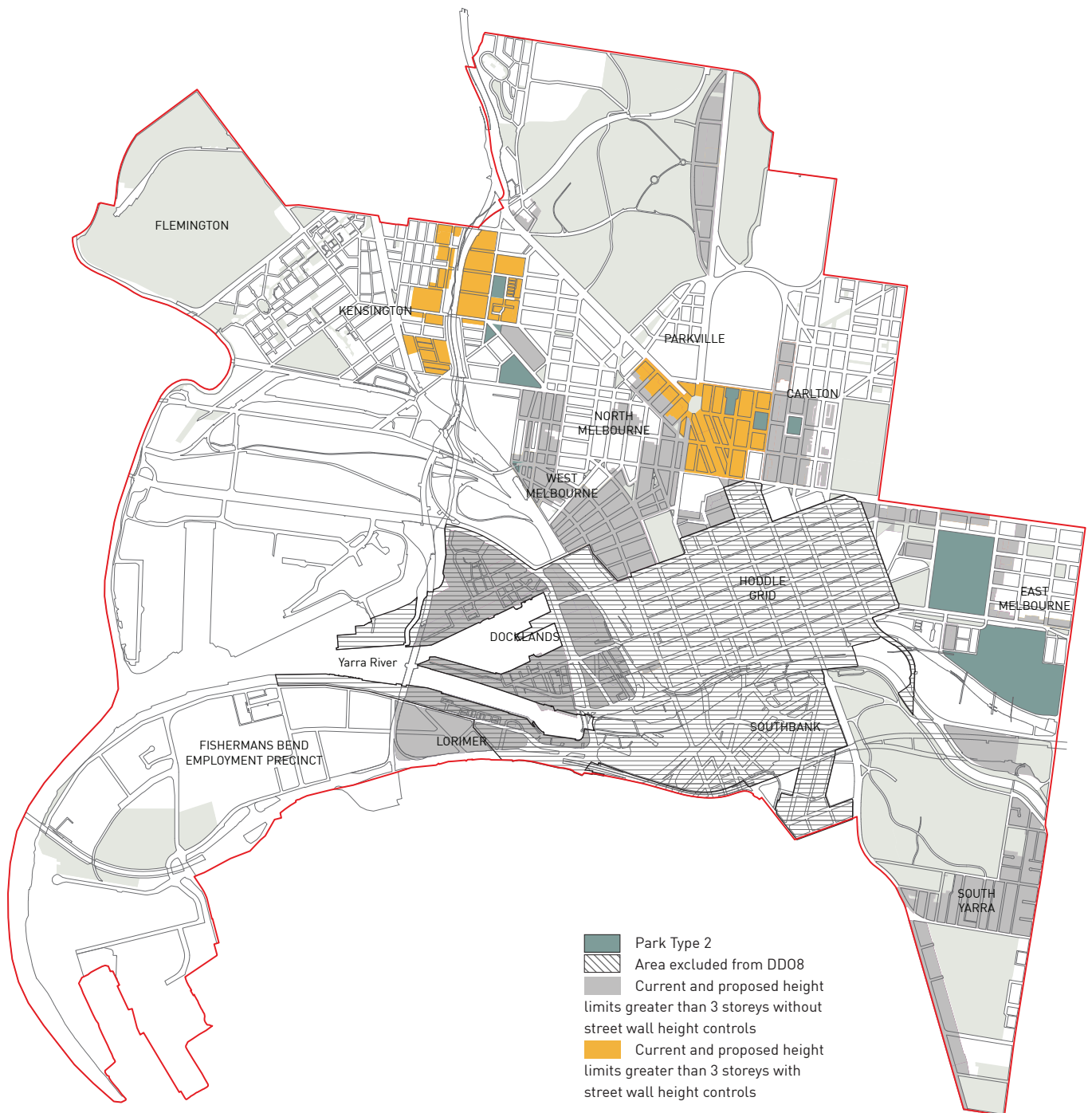


Figure 11. Park Type 2 (as proposed in Amendment) and extent of land with street wall height controls in place

2.2 Impact of the controls on development potential by Park Type

34 The Park Types have been determined by the adjacent development context as follows.

Park Type 1

35 These parks are primarily located adjacent to low-scale residential development areas that have a maximum height limit of 3 storeys or below or which are adjacent to industrial or rail land (refer Figure 7). A winter sunlight access control is proposed between 10am - 3pm. Parks that are adjacent to sites that have a height limit that is higher than 3 storeys but which will not overshadow the park are included in Park Type 1, for example Princes Park.

36 In general, for sites located immediately adjacent to a Park Type 1 there is minimal to no impact to development potential. This is because buildings up to 9 metres in height are not assessed for overshadowing impact. Where a building above 9m in height is supported by the current height controls, the potential impact on development yield will be marginal or none at all (refer to Figure 6).

Park Type 2

37 These parks are primarily located in areas where a greater level of development intensification is supported - areas that have a maximum height limit of 4 storeys or greater. Parks that are located to the immediate east of St Kilda Road and the Hoddle Grid are excluded (refer Park Type 3 below). A winter sunlight access control applies between 10am - 3pm. There are two types of application methods for assessing the controls:

- On sites that have an overall preferred building height but no street wall height, the

shadow that would be cast by this overall building height is considered acceptable. For simplicity of referencing these sites in this document I will refer to these as 'Park Type 2 (No street wall)'.

- On sites that have a street wall height control in place, the shadow that would be cast by the maximum street wall height is considered acceptable. For simplicity of referencing these sites in this document I will refer to these as 'Park Type 2 (Street wall)'.

38 In most cases, the overall building height and street wall height controls are discretionary.

39 For Park Type 2 (No street wall), the introduction of the proposed sunlight protection controls will have no impact on the development potential that is possible within the discretionary building envelope. The proposed controls do, however, limit the potential increase in development yield above the discretionary preferred height control.

40 Sites that have a street wall height control are illustrated in Figure 11. Only those sites immediately adjacent to the park could be affected.

41 Most of these sites, however, are not impacted. For example, some are located to the southern side of an existing park where new development will not cause overshadowing. The parks that are directly affected have been assessed and are limited in number. These are located in North Melbourne and Carlton (refer Figure 16, Figure 17 and Figure 18).

42 The extent of properties where the development potential (as defined by the building envelope) is reduced as a consequence of the introduction of these controls is therefore very limited in

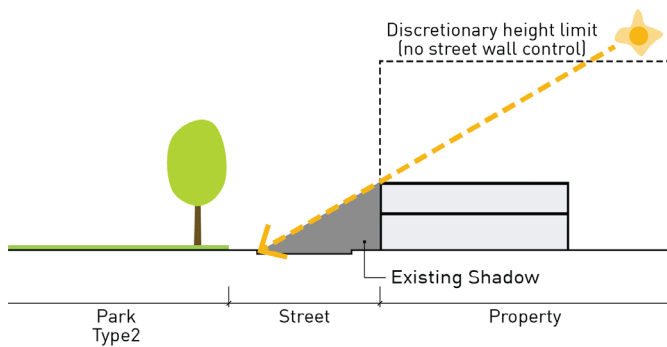


Figure 12. Park Type 2 (No Street Wall) – Example of a shadow cast by an existing building (diagram only - not a specific location). A discretionary height control that is much taller than the existing building height applies.

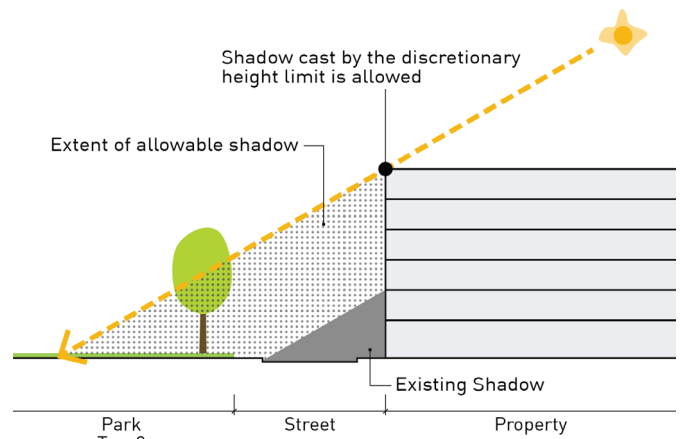


Figure 13. Park Type 2 (No Street Wall) – Example of the allowable shadow cast by the discretionary building height (diagram only - not a specific location). No loss of potential development within the existing building envelope control

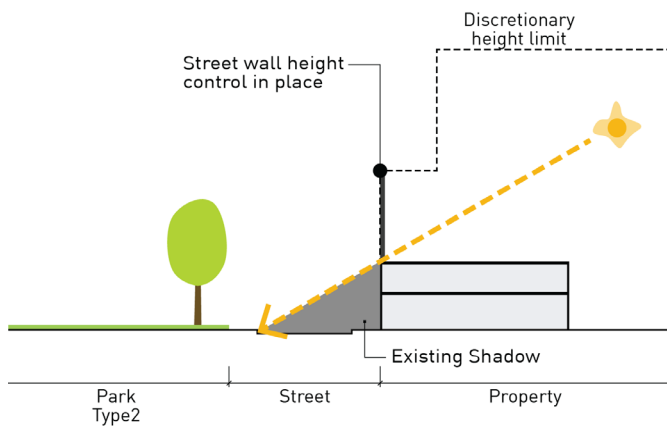


Figure 14. Park Type 2 (Street Wall) – Example of a shadow cast by an existing building (diagram only - not a specific location). A discretionary height control that is much taller than the existing building height applies.

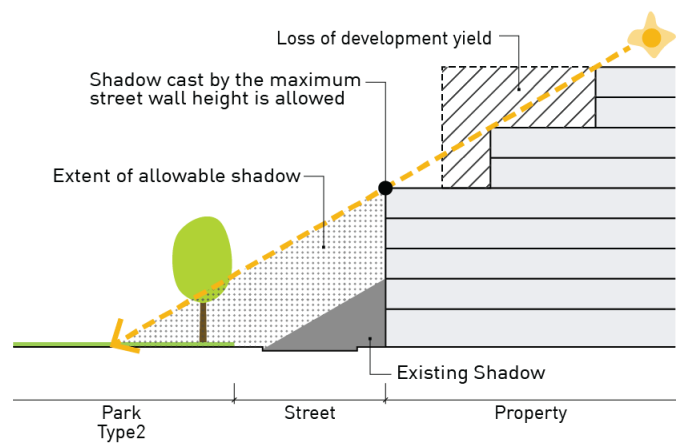


Figure 15. Park Type 2 (Street Wall) – Example of the allowable shadow cast by the discretionary building height (diagram only - not a specific location). There is some loss of potential development yield within the existing building envelope control.

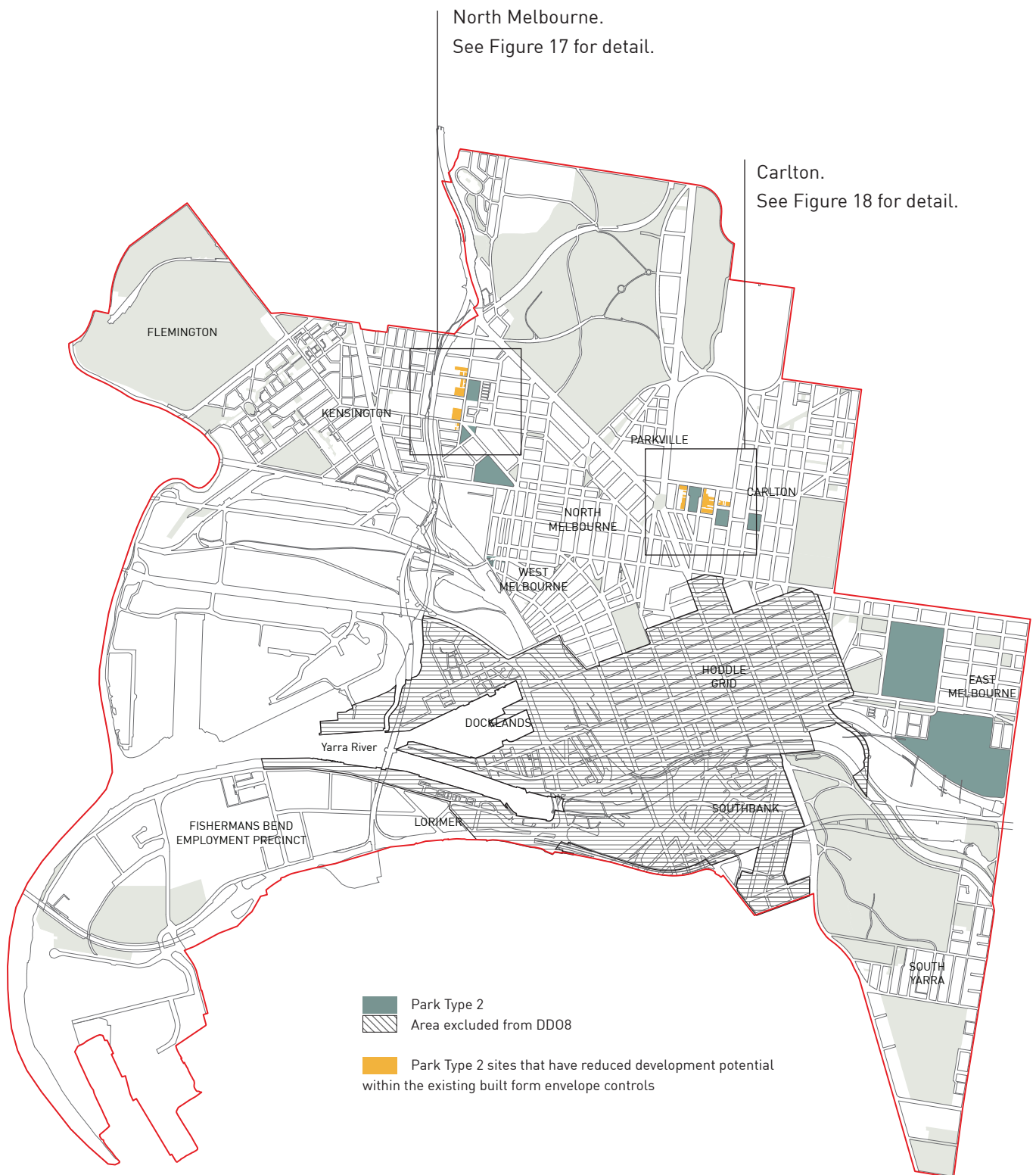


Figure 16. Extent of properties where the existing development potential, as defined by the current preferred built form envelope, is directly impacted by the proposed overshadowing controls. This only occurs in North Melbourne and Carlton.

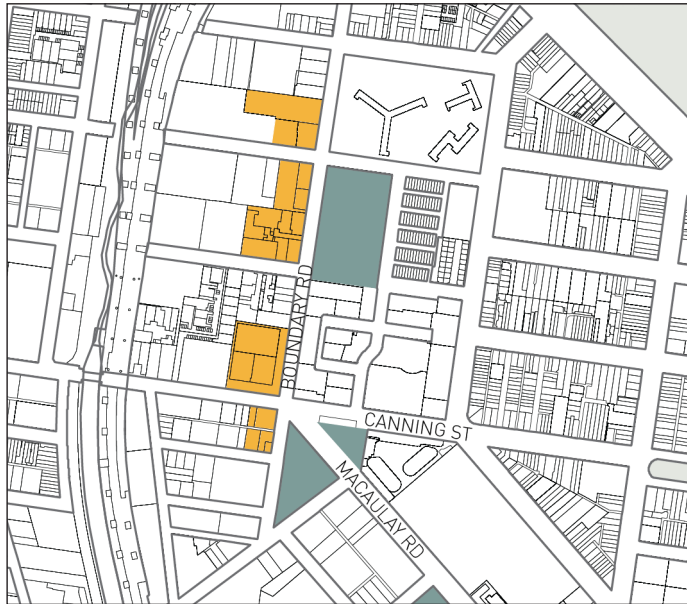


Figure 17. Extent of properties where the existing development potential, as defined by the current preferred built form envelope, is directly impacted by the proposed overshadowing controls (North Melbourne)

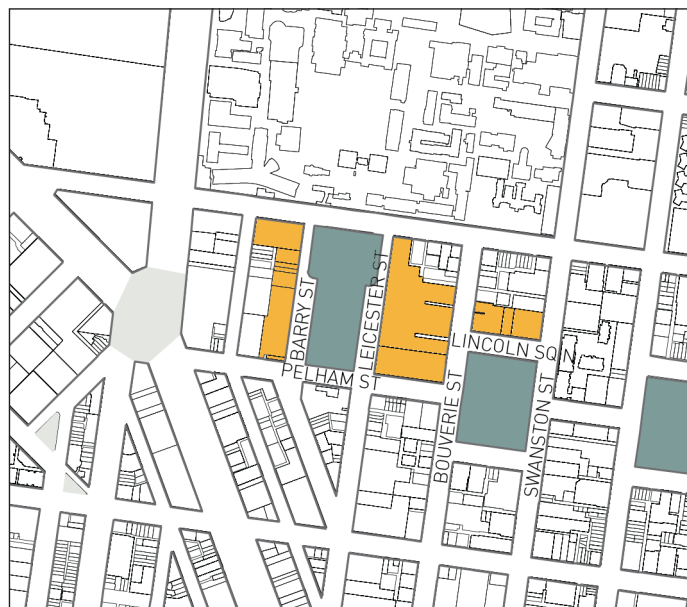
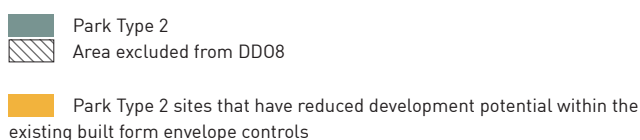


Figure 18. Extent of properties where the existing development potential, as defined by the current preferred built form envelope, is directly impacted by the proposed overshadowing controls (Carlton)



number. The extent of the DD08 area is greater than these affected sites.

43 This means that for properties immediately fronting Park Type 2 the existing discretionary controls effectively act as a mandatory control at the street edge in the following ways:

- Park Type 2 (No Street Wall) - The overall preferred building height effectively becomes a mandatory maximum street wall height. Above the preferred building height, any upper floors will need to be set back to ensure that they do not create any additional overshadowing above what is caused by the height of the building at the street edge (see Figure 12 and Figure 13).
- Park Type 2 (Street Wall) - On sites that have a street wall height control in place, the street wall height effectively acts in a similar way as if the street wall height control was a mandatory requirement. Above this, upper floors will need to be set back to ensure that they do not create any additional shadow above what is caused by the street wall height (see Figure 15).

Park Type 3

44 Park Type 3 East - This category includes parks which are all located to the east of the Hoddle Grid and St Kilda Road where a significant level of development intensification is supported, including areas with no maximum height limits (refer Figure 19). A winter sunlight access control is proposed for a shortened period of 10am - 2pm, not 10am - 3pm.

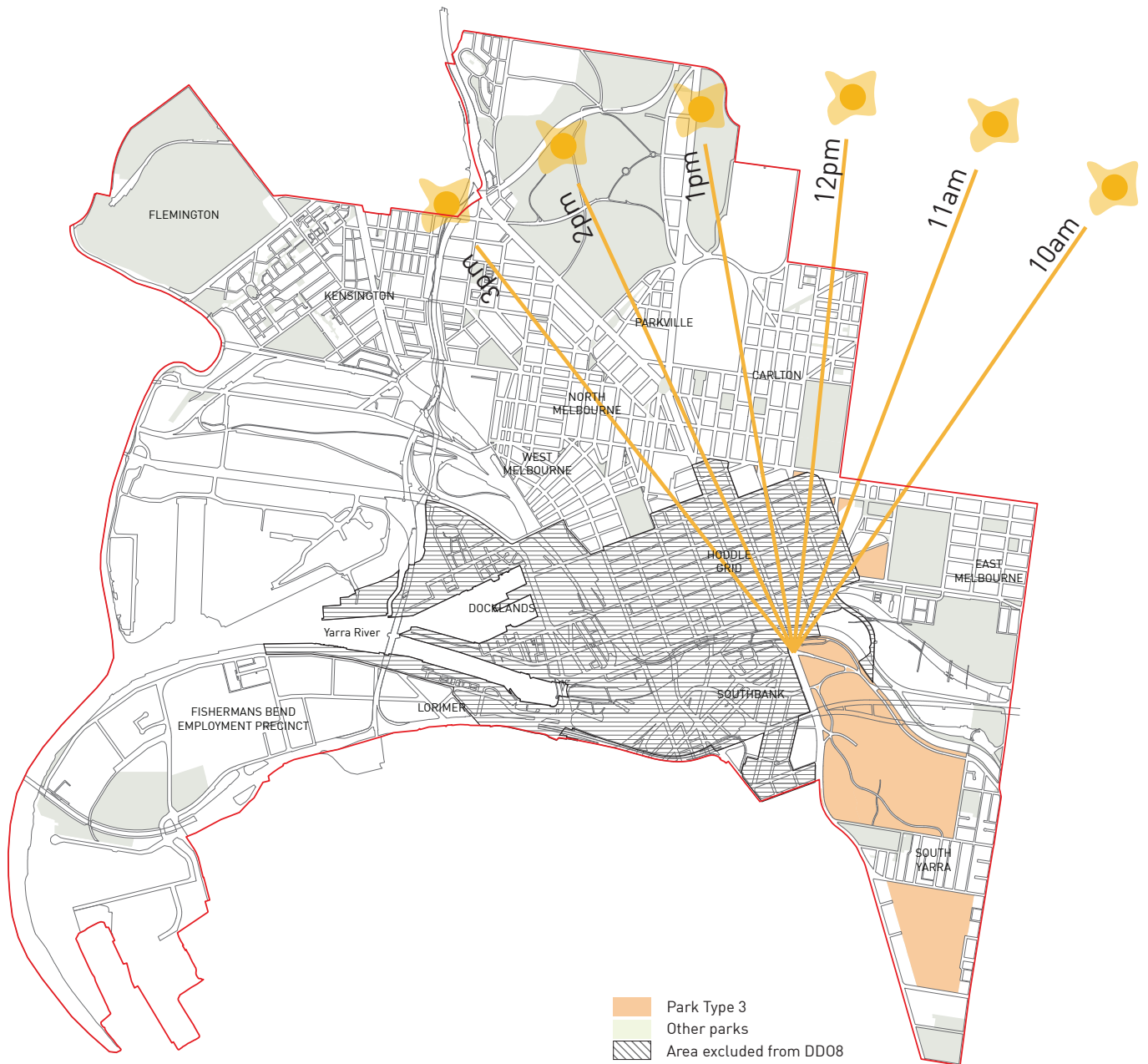


Figure 19. Park Type 3 East with winter solstice sun angles illustrated. The angle of the sun at 2pm closely aligns with the orientation of St Kilda Road and Spring Street.

- 45 Park Type 3 West - This category includes Flagstaff Gardens adjacent to the Hoddle Grid where a significant level of development intensification is supported. A winter sunlight access control is proposed for a shortened period of 11am - 3pm, not 10am - 3pm.

Definition of 'allowable shadow'

- 46 The phrasing of the current definitions could be simplified to improve the understanding of how the controls work and the difference between the two different applications of the controls for Park Type 2.

Recommendation 1

- 47 Update the definition for 'Allowable shadow' and the accompanying figure 1 to more simply explain the two different planning contexts in which it is applied:
- Allowable shadow (in locations where a street wall height control applies) means the shadow that would be cast on the park, between 10am and 3pm, June 21, by the maximum street wall height as nominated in the planning scheme for properties that immediately abut a park.
 - Allowable shadow (in locations where a street wall height control does not apply) means the shadow that would be cast on the park, between 10am and 3pm, June 21, by the maximum building height as nominated in the planning scheme of properties that immediately abut a park.

3. Implementation of report recommendations

3.1 Exclusion of the Docklands

48 My original report classifies many of the parks in the Docklands as 'Lost parks'. These are parks which are significantly overshadowed in winter. The exception to this classification was Ron Barassi Snr Park (classified as 'vulnerable'), the waterfront on the north side of Victoria Harbour and Point Park (both 'naturally protected' due to location and orientation).

49 Ron Barassi Snr Park is the only public park in the New Quay Area of the Docklands with good access to winter sunlight. I consider it important that this is retained to support the wellbeing of people who live and work in this area. I do not therefore support the exclusion of Ron Barassi Snr Park from this Amendment. My original report included a specific recommendation for this park which acknowledged that it is located immediately to the south of a potential development site. An allowance for overshadowing up to 40 metres into the park was proposed to support redevelopment of the site to its northern boundary. This provides an appropriate balance between protecting winter sunlight and supporting redevelopment and ensures that the overwhelming majority of the park is protected from overshadowing.

Recommendation 2

50 Introduce Park Type 4 and apply to Ron Barassi Snr Park, as per the original report recommendation. Allow partial overshadowing of the park - up to 40 metres when measured from the northern property boundary, between 10am - 3pm on June 21. Update DD008 to include properties that are affected by this recommendation.

3.2 Method of applying the DDO

51 My original report recommended the inclusion of a municipal wide DDO to implement the overshadowing controls. This was driven by the intention to provide a simple mechanism without the need for a detailed assessment of potentially affected properties. It would ensure that all sites that may overshadow the park would be incorporated within the overlay.

52 The City of Melbourne has, however, since undertaken comprehensive modelling to consider which sites will be potentially affected and the extent of the overlay has been tailored to respond to this modelling.

53 The method that has been adopted to record impacted sites aligns with the proposed sunlight access control for Park Type 1 and 3. That is, the modelling captures and records all sites that, if developed, could potentially cast a shadow on any part of the park in winter. This is illustrated in Figure 20.

54 This method of assessment therefore doesn't take into account the allowable shadow for Park Type 2. This means that a more significant number of properties have been identified as potentially affected than those that will actually be affected in practice (those that are immediately adjacent to a park - see Figures 16-18). This is further demonstrated in Figure 20 (Park Type 2 - Street Wall) and Figure 21 (Park Type 2 - No Street Wall).

55 The current application of DD08 therefore includes sites that will not be affected in practice by the overshadowing controls. In principle, this would not be considered an efficient and effective

The following diagrams have been prepared to demonstrate the different methods for assessing the impact of the proposed controls. They do not illustrate a particular location in the City of Melbourne. The extent of affected properties are illustrated in Figures 16-18.

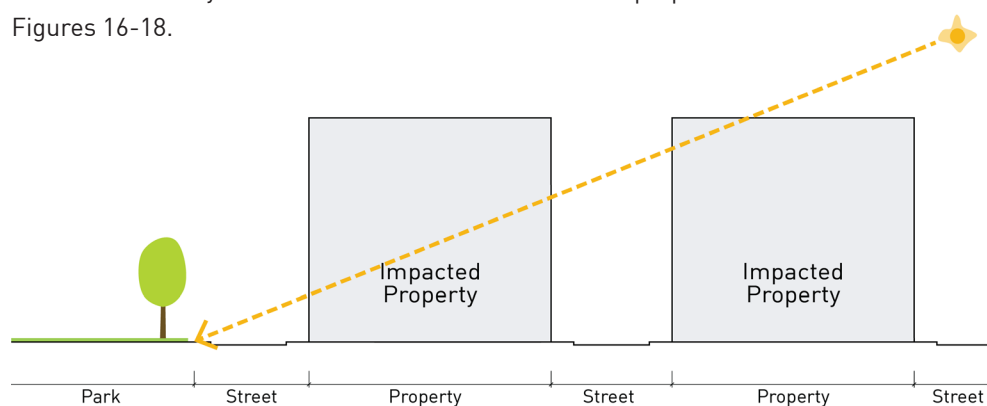


Figure 20. Extent of impact of the controls implied by the method of assessment used to determine extent of DD08.

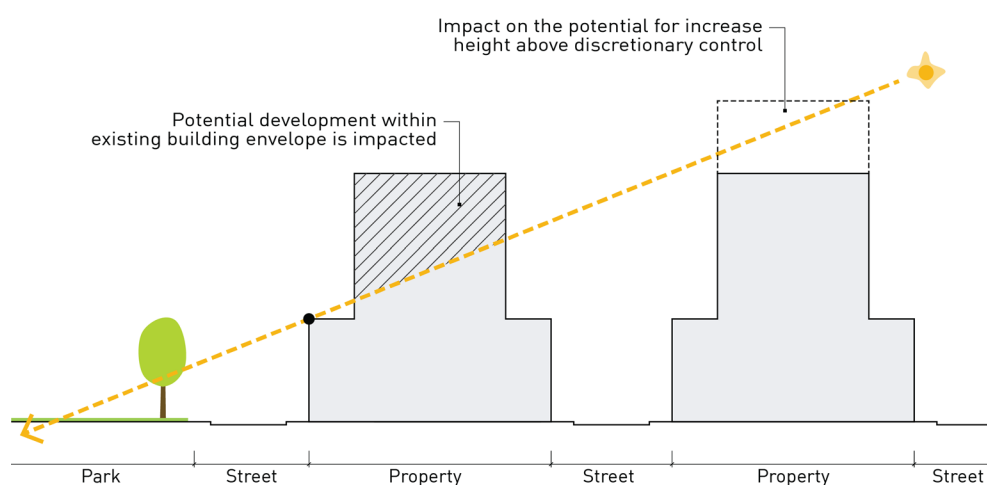


Figure 21. Extent of impact of the controls for Type 2 Parks where a maximum street wall height is in place.

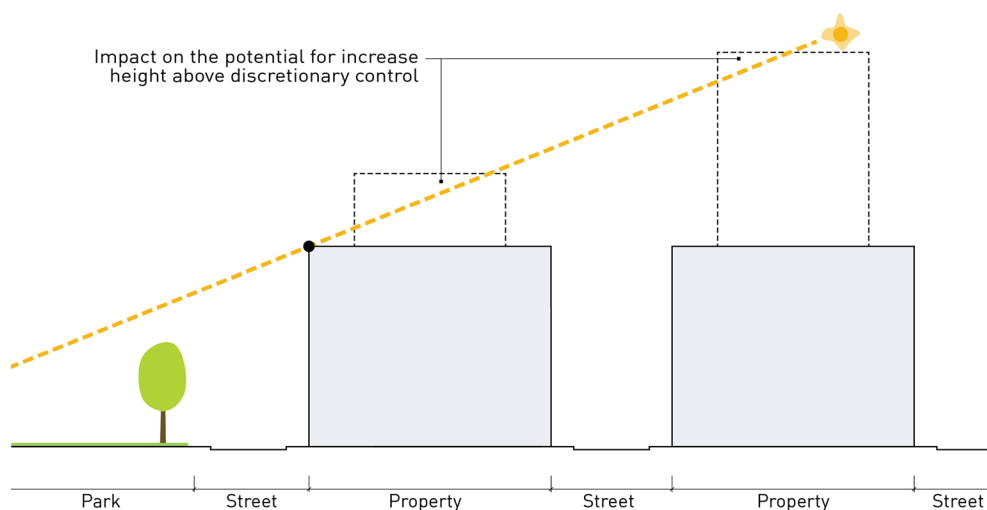


Figure 22. Extent of impact of the controls for Type 2 Parks where a maximum street wall height is not in place.

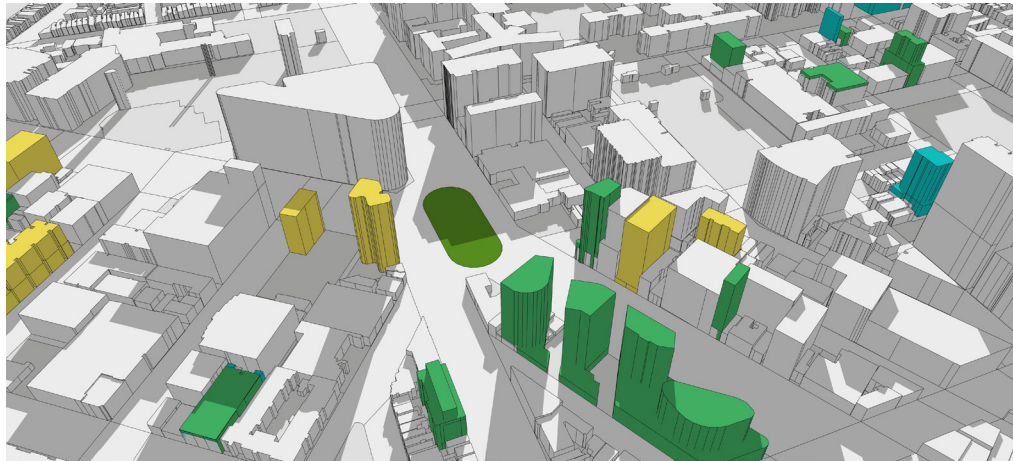
application of a planning control. Options for revising the extent of the DD008 area include:

- Option 1 - Apply the DD08 to the whole municipality as per the original report recommendation. This would require a re-notification of the Amendment to thousands of property owners who would not actually be affected and is therefore not a practical approach.
- Option 2 - Tighten the extent of area to which DD08 applies to better reflect those properties that are directly affected by updating the modelling work undertaken by the City of Melbourne. This would reduce the number of affected properties and more accurately illustrate those sites which are impacted by the overshadowing control. This would be accurate for a point in time, however, if a future, separate amendment considered changes to the overall heights of buildings or street wall heights on sites adjacent to Park Type 2 parks then this modelling would become out of date. This would also be a complex and timely exercise, further delaying the amendment and the required sunlight protection to parks that it introduces for very little gain. This is therefore not a practical option.
- Option 3 - Retain the current approach which captures all parks that could potentially overshadow a park in winter between the hours of 10am and 3pm, acknowledging that this a conservative approach and will incorporate properties that are unlikely to build to a height that will create an unacceptable overshadowing impact. With current digital design tools, the assessment of whether a building overshadows a park is relatively straightforward and inexpensive. This does not therefore create a onerous cost to the applicant or authority responsible for the permit assessment. This is therefore the preferred option.

56 No change to the current extent of the application of DD08 is therefore proposed.

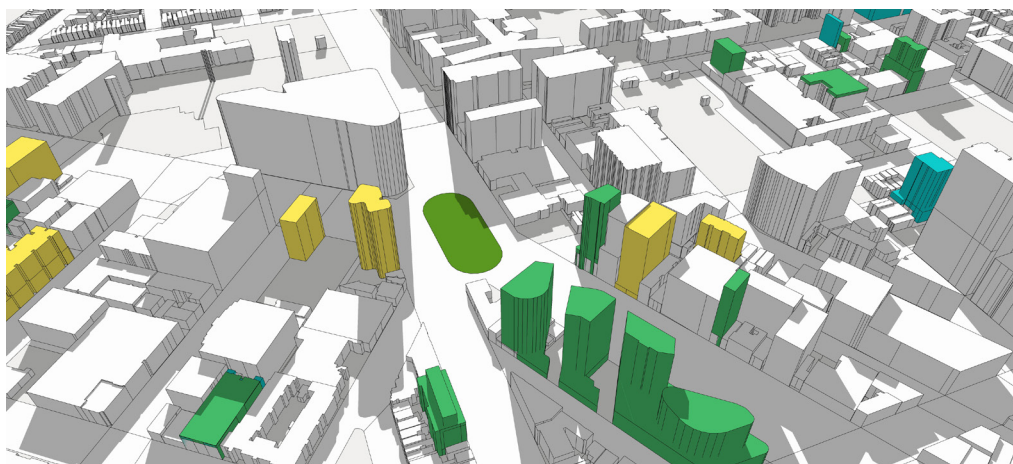
3.3 Haymarket Roundabout

- 57 The Haymarket roundabout is designated as a park in the exhibited amendment documents. It is located within the City North Urban Renewal Area. It was nominated as a Park Type 1 with no additional overshadowing between 10am - 3pm in winter.
- 58 Haymarket roundabout was subsequently excluded from the Amendment at the February 4, 2020 Future Melbourne Committee meeting due to its primary traffic function.
- 59 This location has been highlighted as a potential new urban park within the City North Structure Plan. The Structure Plan includes indicative illustrations for how this area may be redesigned to significantly improve the quality of the public realm and create a useable open space. While I support this proposal, as far as I am aware, it has not progressed further.
- 60 The following figures illustrate the existing current degree of overshadowing of the roundabout space.
- 61 This demonstrates that the overshadowing of the roundabout varies significantly between the 10am - 3pm time period as follows:
- 10am - significantly overshadowed. Redevelopment of the sites between Haymarket Walk and Pelham Street to the same height as the Peter McCallum Cancer Hospital would overshadow the remaining area that is still in sunlight.
 - 11am - mostly in sunlight. This is due to the orientation of the park with sunlight access protected from the Royal Parade alignment. Redevelopment of the sites between Haymarket Walk and Pelham Street to the



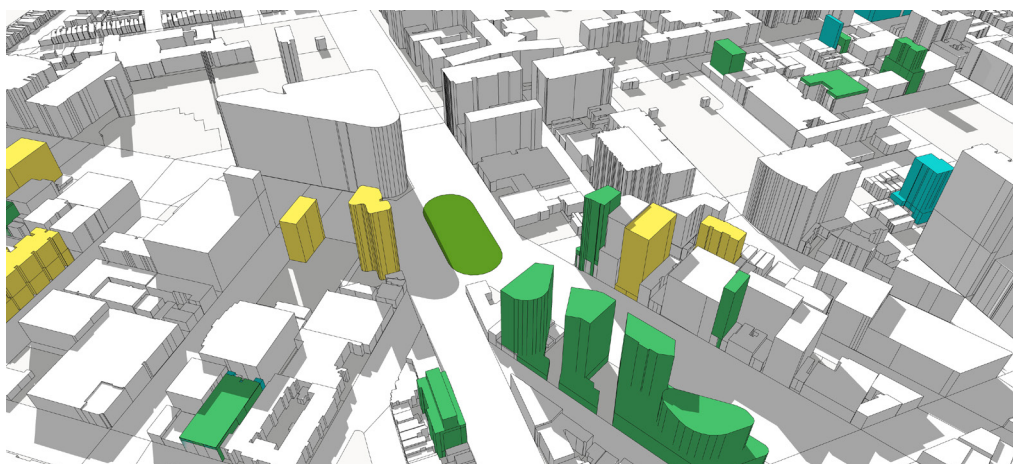
- Existing buildings
- Permit Approved
- Applied for Permit
- Under Construction

Figure 23. 10am



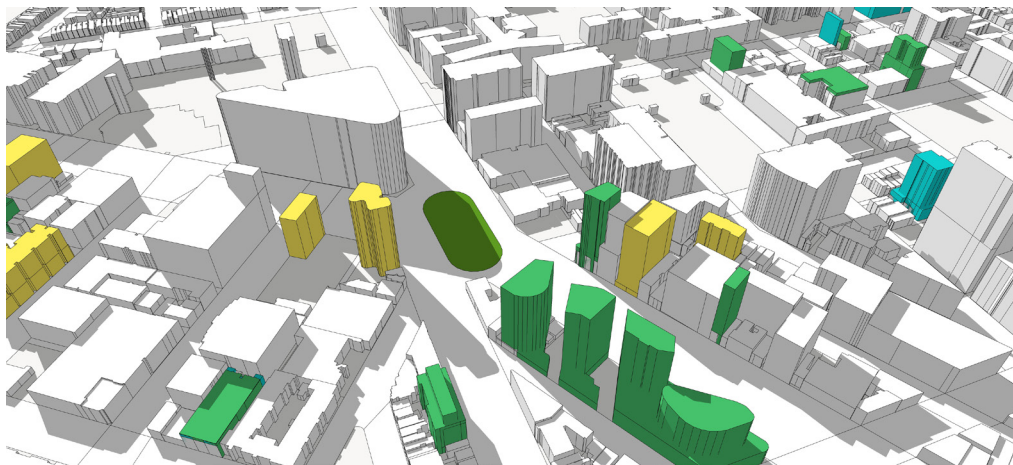
- Existing buildings
- Permit Approved
- Applied for Permit
- Under Construction

Figure 24. 11am



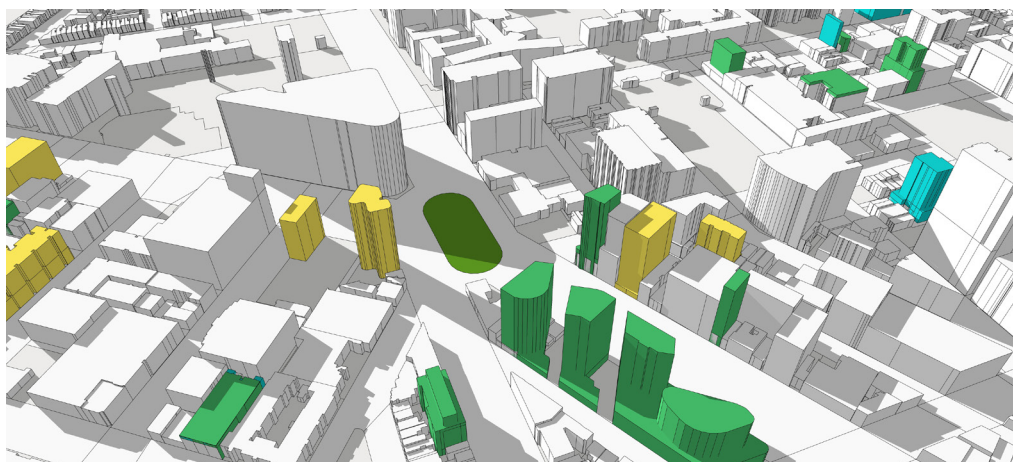
- Existing buildings
- Permit Approved
- Applied for Permit
- Under Construction

Figure 25. 12pm



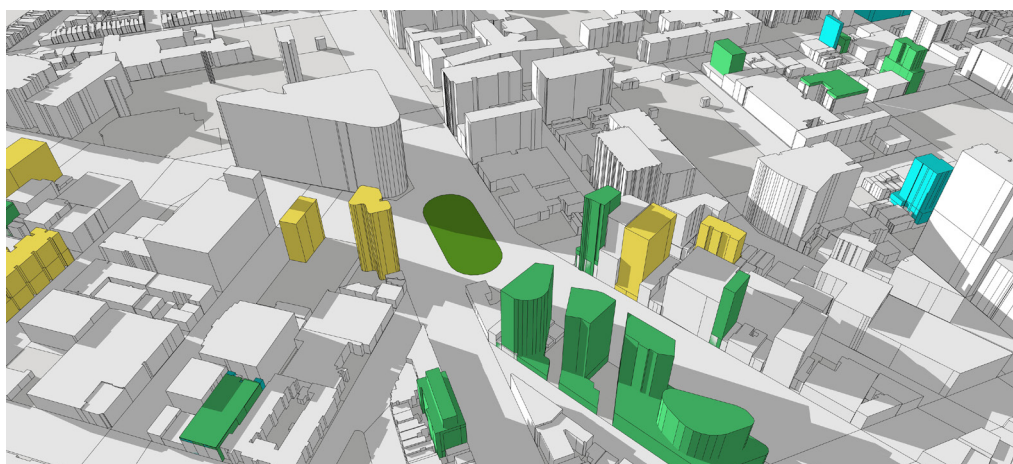
- Existing buildings
- Permit Approved
- Applied for Permit
- Under Construction

Figure 26. 1pm



- Existing buildings
- Permit Approved
- Applied for Permit
- Under Construction

Figure 27. 2pm



- Existing buildings
- Permit Approved
- Applied for Permit
- Under Construction

Figure 28. 3pm

same height as the Peter McCallum Cancer Hospital moderately increase the level of overshadowing.

- 12pm - mostly in sunlight. This is due to the orientation of the park with sunlight access protected from the Royal Parade alignment.
- 1pm - significantly overshadowed by the Peter McCallum Cancer Hospital.
- 2pm - significantly overshadowed by the Peter McCallum Cancer Hospital.
- 3pm - the northern half is significantly overshadowed by the Peter McCallum Cancer Hospital. The southern half is protected from overshadowing due to the orientation of Flemington Road.

62 Inclusion of the exhibited amendment controls would have a significant impact on the potential redevelopment of the sites immediately to the east and does not align with the approach taken elsewhere in urban renewal areas. A more appropriate approach would be the introduction of a Park Type 2 control. As no street wall height applies to the Haymarket Roundabout, a 60m street wall would be allowed. This would completely overshadow the roundabout at 10am and increase overshadowing at 11am. There would therefore be little benefit in introducing such a control.

63 Sunlight to the roundabout at 12pm and 3pm is currently protected by the orientation of Royal Parade and Flemington Road. No further controls are required to retain this existing provision of sunlight.

64 I support the removal of Haymarket as a park from the proposed sunlight protection controls.

3.4 Maribyrnong River Bike Trail

65 My original report recommended that the Maribyrnong River Bike Trail be included as a Park Type 1. The mapping of current building heights for this location (refer Map 4 of the original report) illustrated a 9 metre building height control for the Hobsons Park Precinct which is located to the immediate east of the bike trail. This is incorrect. This land is subject to an Incorporated Plan Overlay (Schedule 2) which includes building heights of 10.5 - 22 metres.

66 Land that abuts the trail south of the railway bridge (fronting Kensington Road) is also incorrectly represented with a 9 metre height control. This area is subject to a Development Plan Overlay (DPO13) which includes a preferred height of 10 storeys which can be increased to 14 storeys.

67 These areas should therefore be classified as growth areas. Park Type 2 should therefore apply to the Maribyrnong Bike Trail. This would allow for overshadowing of the trail by buildings up to the preferred height within the relevant IPO and DPO.

Recommendation 3

68 Revise the park classification for the Maribyrnong River Bike Trail from Type 1 to Type 2.

4. Response to general submissions

4.1 Extent of the study area

69 Submitters have noted a range of concerns with the extent of the application of DD08 and its impacts:

- That the Hoddle Grid, Southbank and Docklands should be included in the amendment area.
- That Flagstaff Gardens is out of scope in the reference report and therefore the surrounding land should be excluded.
- That key development sites and renewal areas which already have sunlight considerations should be excluded, including the:
 - » Arden Macaulay urban renewal area
 - » City North urban renewal area
 - » Queen Victoria Market precinct
 - » 'Melbourne Quarter' Precinct
 - » Commonwealth Games Village precinct
 - » Parkville Biomedical Precinct
- They generally argue that these sites are already affected by other overlays and strategic policy within the Melbourne Planning Scheme and should be excluded. The overlays submitters mentioned are DD012, DD021, DD047, DD061, and DP011.

70 Sunlight protection to parks within the Hoddle Grid and Southbank have already been considered through Amendment C270 (with sunlight access controls implemented through DD010) and do not generally need to be revisited. The exception would be parks that are located at the periphery of the C270 amendment area and which are subject to overshadowing by development outside of the Hoddle Grid. This is the case for Treasury Gardens, Parliament Reserve and the Eight Hour Reserve which are included in DD08. I support the inclusion of

these parks in DD08 for this reason.

71 As noted above, I recommend including Ron Barassi Snr Park into the Amendment, however the remainder of Docklands parks do not require inclusion.

72 Section 2.2 of this report demonstrates that the impact of DD08 on development potential has been carefully considered and managed to align with the strategic intent of supporting growth in urban renewal areas. This is further discussed in response to site specific submissions in Section 5 of this report. The Commonwealth Games Village precinct is a low-scale area and compliance with the proposed sunlight controls will not be onerous as overshadowing impacts will be minimal due to the low heights of buildings.

4.2 Park classification

73 Amendment C278 identifies three Park Type categories which specify the level of overshadowing protection as follows:

Park Type	Description	Sunlight protection
Type 1	Generally parks in low scale areas	Buildings and works must not cast additional shadow onto the park between 10am and 3pm, on June 21 beyond the existing shadow
Type 2	Parks in urban renewal areas where planned growth is balanced with sunlight protection	Buildings and works must not cast additional shadow onto the park between 10am and 3pm on June 21 beyond the existing shadow or allowable shadow (whichever is the greater).
Type 3 East	Domain Parklands, Fawcner Park and along Victoria/Spring Street park interfaces	Buildings and works must not cast additional shadow onto the park between 10am and 2pm, June 21 beyond the existing shadow.
Type 3 West	Flagstaff Gardens	Buildings and works must not cast additional shadow onto the park between 11am and 2pm, June 21 beyond the existing shadow.

74 Submitters have noted the following key concerns with the classification of Park Types:

- Argyle Square should be categorised as Park Type 1 as it is located in a 'low scale area'. The existing preferred maximum building height is 4 storeys as specified in the planning scheme.

75 Argyle Square is classified as a Park Type 2 as the surrounding height controls are discretionary. This continues support for the 4 storey preferred character and protects sunlight to the park in winter. It retains the potential for additional floors to be included (if compliant with the existing DDO). Potential additional floors would need to be set back from the street as required to ensure that they do not cast any additional shadow above the shadow cast by a 4 storey building.

76 One submission requests that the 4 storey discretionary control around Argyle Square should be converted to a mandatory control to protect the park. A mandatory height control is not required as a mandatory sunlight control is a more direct mechanism to control overshadowing.

77 Gardiner Reserve is noted in my original report as a 'Vulnerable Park' (page 55). Development applications have recently been granted for all sites to the east of the park which will cause significant overshadowing from the winter afternoon sun. If these had already been constructed, this park would have been classified as 'lost'. The proposed controls accept that the existing approved developments have been assessed against the current controls. Therefore the application of Park Type 1 aims to ensure that no future redevelopment will further overshadow the park.

78 No changes are therefore recommended to the controls.

4.3 Mandatory controls are too onerous

79 A number of submitters make the argument that the mandatory controls are too onerous, and that some overshadowing of parks is acceptable.

80 The proposed controls already accept that some overshadowing of parks is reasonable. This is why the approach for different Park Types has been adopted. Park Type 2 parks are located in areas where higher levels of development intensification (and building heights) are supported. In these locations the perimeter of the parks will be overshadowed to some degree by adjacent buildings. Park Type 1 parks are located in low-scale areas where the introduction of a winter sunlight control will not have a significant impact on adjacent development.

81 Park Type 3 parks have a shorter winter sunlight protection period of 10am-2pm (East) or 11am-3pm (West). This has been designed to respond to the existing orientation of the park. Park Type 3 East parks are located to the east of St Kilda Road and the east and north of the Hoddle Grid. At 2pm the winter sunlight angle is almost aligned with the orientation of the western boundaries of these parks. After 2pm the sun swings further to the west and shadows will be cast by the existing buildings in the Hoddle Grid and Southbank which is why the time period for overshadowing protection ends at 2pm (see Figure 19). Park Type 3 West is applied to Flagstaff Gardens only. It is located to the west of the Hoddle Grid. Overshadowing is therefore more significant in the morning hours.

82 The current drafting of the controls provides certainty for developers, the community

and decision-makers about what degree of overshadowing is acceptable in all locations. An alternate, more subjective assessment approach will introduce longer, more complex assessment processes.

83 The subjective assessment of overshadowing is also problematic for the following reasons:

- Park designs can change significantly over time. For example, University Square, one of Melbourne's original European parks has recently undergone a significant redesign. Similarly, the Errol St parkland has transformed from being effectively a traffic island to highly useable public space.
- We can't prescribe how people will use parks over the longer term. They are public spaces and the way people use them over time has and will continue to change. The focus should be on creating a resilience in the planning controls that protect park amenity to support changing patterns of behavior and use.
- What is considered 'acceptable' to some is not acceptable to others. It is very difficult to provide specific guidance to guide this decision making considering the wide range of parks that are under consideration.
- Some parks which may seem insignificant can be much-used and loved by the community. This has been demonstrated through many of the submissions from residents which demonstrate how these smaller, locally distributed spaces are used. For example, two submissions comment on the park bounded by King, Miller, Curzon and Hawke Streets:
 - » 'This handkerchief of land was really important to the local community for afternoon and evening picnics...' (Submission 11).

- » 'People aged between cradle and grave use it to rest, read, eat lunch, picnic, play games, socialise & meet up' (Submission 13)

- 84 The availability of more sophisticated and affordable 3d modelling software means that the assessment of overshadowing impacts is now simple and inexpensive.
- 85 No change is therefore recommended to the application of mandatory controls.

4.4 Justification for the trigger for overshadowing exemption

- 86 The trigger for assessing potential impacts of overshadowing is set at 9 metres (generally a 2 storey building) to ensure that parks within low-scale residential areas are not overshadowed. In these areas buildings up to 11 metres (generally a 3 storey building) are supported. Establishing a 9 metre threshold is a practical measure to ensure that low-scale dwellings do not trigger an overshadowing requirement and to ensure that the impacts of any third storey are carefully managed.
- 87 No changes are therefore recommended to the controls.

4.5 Development within parks

- 88 A number of submissions raised the lack of clarity on potential development within parks. The way that the DD08 controls are currently drafted park land is not included within the overlay, only the properties surrounding parks are included, therefore any new building within the park is not required to meet the overshadowing controls.

- 89 Clause 22.02, however, does state that outside of the Hoddle Grid and Southbank 'development must not cast additional shadow on any public park at key times and dates identified in the planning scheme'. This would mean that development within parks would need to comply with this clause.
- 90 The City of Melbourne Open Space Strategy Technical Report recommends that any required upgrades or new community sport and recreation buildings meet best practice design principles and contribute to the use and value of open space. New buildings that are not dependent on co-location with open space are to be discouraged.
- 91 For major sport and event venues, the loss of open parkland is to be minimised. The focus is primarily on reducing the expansion of the building footprint. No specific recommendations in regard to overshadowing of the open space are provided.
- 92 The principles of this document, however, provide some guidance on how any additional overshadowing may be assessed. That is, that any upgrade or new building should firstly be carefully considered to confirm that it is needed, and it should be designed to minimise the impact on the 'use and value of the open space'.
- 93 Considering that any change to built form within a park will lead to a change in the shadow of that building, it is not realistic to set a strict 'no additional' overshadowing requirement.
- 94 The appropriate location to provide further guidance on this issue is within Clause 22.02 as

this is where the assessment of buildings within a park is required. I would recommend providing guidance that is aligned with the principles of the City of Melbourne’s Open Space Technical Report.

- 95 I note that maps in my original report excluded the area of existing building footprints from the park area that should be protected from overshadowing. I consider the way that the parks are represented in the DD08, where the whole park is mapped, as a much simpler and accurate method of communicating the controls.

Recommendation 4

- 96 Update Clause 22.02 to provide clarity that the mandatory requirement does not apply to new or altered buildings within parks.
- 97 To address this I recommend the introduction of the following wording (changes shown in italics):
- ‘Public Parks Outside the Hoddle Grid and Southbank
- Development *outside of a public park* must not cast additional shadow on any public park at key times and dates identified in the planning scheme.
 - *Development within a public park should be designed to minimise any negative impact that an increase in overshadowing may have on the use and value of the open space.*

4.6 Shift from Spring to Winter controls

- 98 A number of submissions consider that the current September equinox controls are sufficient and that a winter sunlight access control is not required.
- 99 Amendment C270 introduced winter sunlight controls into the Hoddle Grid and Southbank recognising that access to sunlight when temperatures are below 20 degrees Celsius is important for people’s comfort and wellbeing. More specific health impacts have been considered in my original report and identify a significant level of Vitamin D deficiency in Melburnians in winter. Access to sunlight is the simplest and most effective method of receiving Vitamin D which is critical to people’s health.
- 100 Protecting sunlight access to parks at the equinox does not address this serious and important concern.
- 101 No changes are therefore recommended to the controls.

5. Response to specific site submissions

102 Responses have been provided to the following site specific submissions. These have been grouped together by suburb.

Carlton

- 701-713 Swanston Street
- 163-175 Bouverie Street, Carlton
- Melbourne Business School:
200 Leicester Street, Carlton
150-154 & 160-170 Pelham Street
168-180 Leicester Street and
183-189 & 195 Bouverie Street

Queen Victoria Market precinct

- Southern Franklin Street site

North Melbourne (Macaulay)

- 23-37 Boundary Road, 222-232 & 234-244 Macaulay Road, North Melbourne (Clayton Reserve)

East Melbourne

- 2, 10 Wellington Parade & 1071-1081 Hoddle Street, East Melbourne (Weedon Reserve)
- 364-366 Albert Street & 370 Albert Street (Fitzroy Gardens)

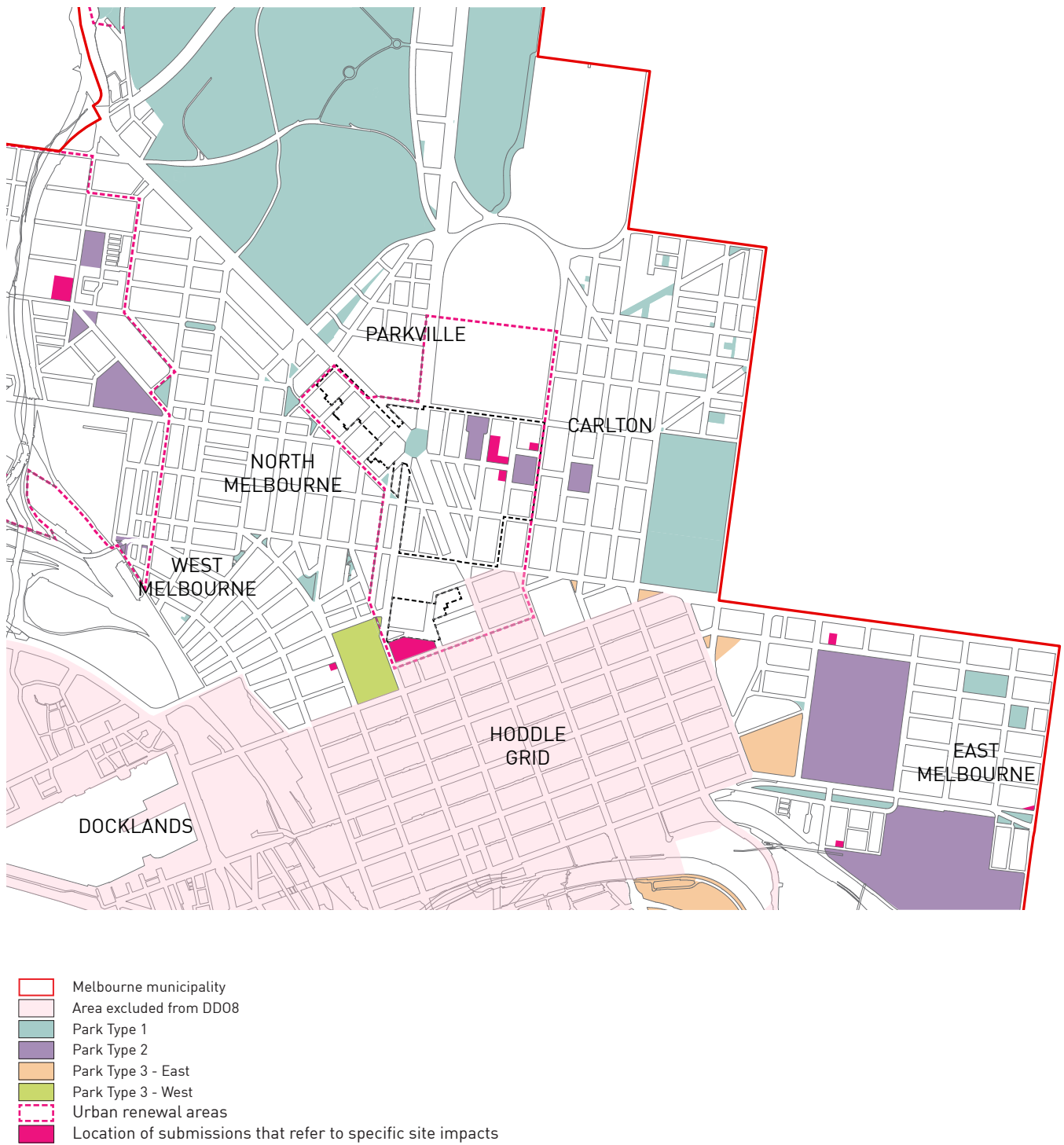


Figure 29. Map of specific sites referred for consideration

5.1 Carlton

701-713 Swanston Street

103 701-713 Swanston Street is located at the corner of Swanston Street and Lincoln Square North and known as 'Rydges on Swanston'. The hotel is four storeys in height, and includes a roof top deck and one level basement carpark. The current planning controls applied to the site are including:

- The Capital City Zone – Schedule 5
- The Design and Development Overlay – Schedule 61 (Area 4.1)
- The Design and Development Overlay – Schedule 70
- The Parking Overlay – Schedule 1.

104 The existing built form controls that apply to this site are:

- Building height: 40 metres preferred maximum
- Street wall height to Lincoln Square North: 24 metres
- Street wall height to Swanston Street: 32 metres
- Setback above street wall: 6 metres
- On corner sites, buildings should “turn the corner” and apply the higher street edge and transition to the lower nominated street edge height. This means that the higher street wall height on Swanston Street will wrap the corner into Lincoln Square North.

105 Submissions 78 and 91 relate to the redevelopment of this site. Key issues raised were the impact of the sunlight control on Lincoln Square on the viability of the new development.

163-175 Bouverie Street, Carlton

106 163-175 Bouverie Street is a rectangular site that is located at the corner of Bouverie Street and Pelham Street. The current planning controls applied to the site include:

- The Capital City Zone – Schedule 5
- The Design and Development Overlay – Schedule 61 (Area 4.1)
- The Parking Overlay – Schedule 1.

107 The existing built form controls that apply are:

- Building height: 40 metres preferred maximum
- Street wall height to Bouverie Street: 24 metres
- Street wall height to Pelham Street: 24 metres
- Setback above street wall: 6 metres

108 Submission 86 relates to the redevelopment of this site. Key issues are:

- The impact of the sunlight control on the Lincoln Square on the viability of the new development
- The potential ‘wedding cake’ built form outcomes.
- The nature of the mandatory controls which have no flexibility for architectural solutions.

Melbourne Business School

109 Melbourne Business School is comprised 200 Leicester Street, 150-154 & 160-170 Pelham Street, 168-180 Leicester Street and 183-189 & 195 Bouverie Street. The current planning controls applied to the site include:

- The Capital City Zone – Schedule 5
- The Design and Development Overlay – Schedule 61 (Area 4.1)
- The Design and Development Overlay – Schedule 66
- The Parking Overlay – Schedule 1.

110 The existing built form controls that apply are:

- Building height: 40 metres preferred maximum
- Street wall height to Bouverie Street, Pelham Street, and Barry Street: 24 metres
- Setback above street wall: 6 metres

111 Submission 74 relates to the redevelopment of this site. Key issues raised were the impact of the sunlight control on Lincoln Square is too restrictive to the new development

112 These sites are demonstrated in Figure 30.

Response

113 This report includes additional testing to consider this issue further.

114 Figure 33 - Figure 40 demonstrate the overshadowing impact of the current building envelope controls.

115 Figure 41 - Figure 48 demonstrate the reduced extent of overshadowing that would be allowed from the proposed controls in DD08. This demonstrates a meaningful reduction in

overshadowing between the hours of 10am - 3pm. The number of sites where the preferred maximum building height is impacted is limited to those shown in Figure 18.

116 The difference in impact at 1pm in winter is demonstrated in Figure 49 and Figure 50. This clearly demonstrates the increased degree of sunlight within the park from the proposed DD08 controls.

117 As outlined in Section 2 above, the proposed controls propose a considered balance between development impact and amenity impacts.

118 The property at 701-713 Swanston Street is impacted with greater upper level setbacks above the street wall than is currently required in the existing building envelope controls. I consider this an acceptable impact that delivers measurable benefit to park users and that an exception to the proposed approach is not warranted in this case.

119 The development potential within the existing preferred building envelope at 163-175 Bouverie Street is not affected by the proposed DD08 controls.

120 The impact to the Melbourne Business School site is minimal and only affects the corner of the bottom 'L' shaped section of the site at the corner of Bouverie and Pelham Streets. This is a large site and additional levels above the discretionary height control would still be possible across other parts of the site.

121 No changes to the proposed controls are therefore recommended.



Figure 30. Map of specific sites located within Carlton



Figure 31. Existing conditions as viewed from Swanston St



Figure 32. Existing conditions as viewed from Bouverie St

Testing of the overshadowing impact of the existing allowable building envelope around Lincoln Square

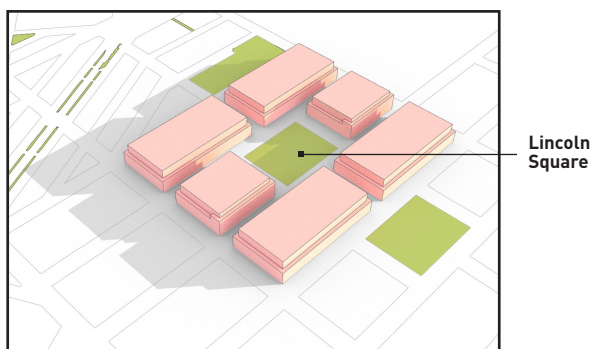


Figure 33. Existing allowable building envelope – 9am winter

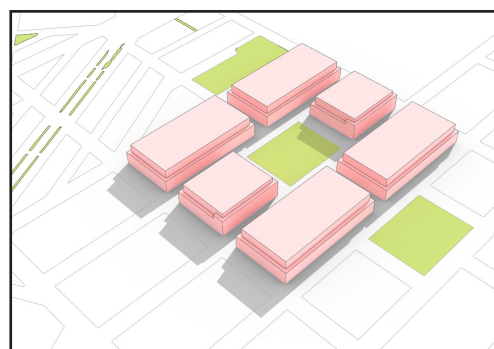


Figure 37. Existing allowable building envelope – 1pm winter

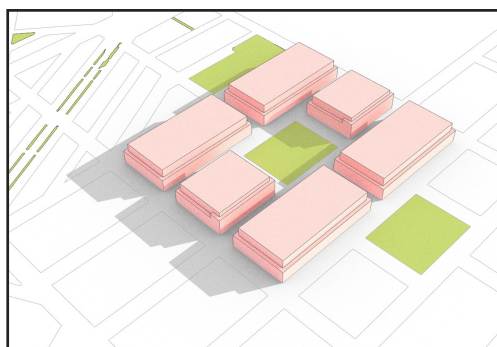


Figure 34. Existing allowable building envelope – 10am winter

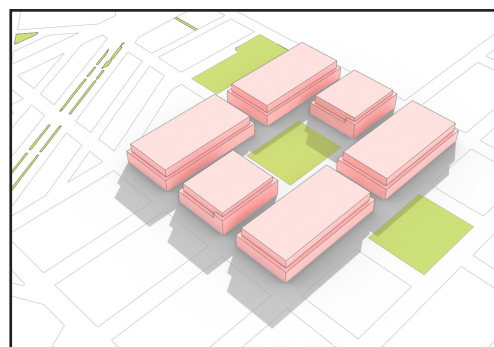


Figure 38. Existing allowable building envelope – 2pm winter

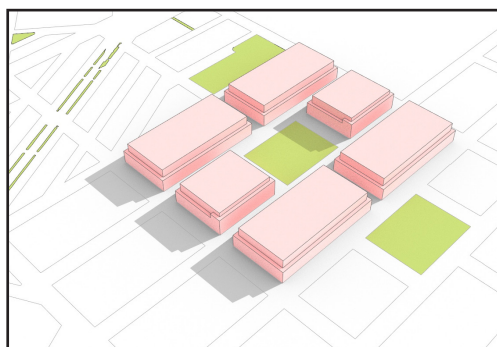


Figure 35. Existing allowable building envelope – 11am winter

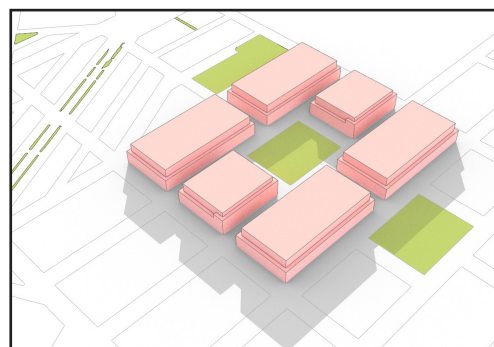


Figure 39. Existing allowable building envelope – 3pm winter

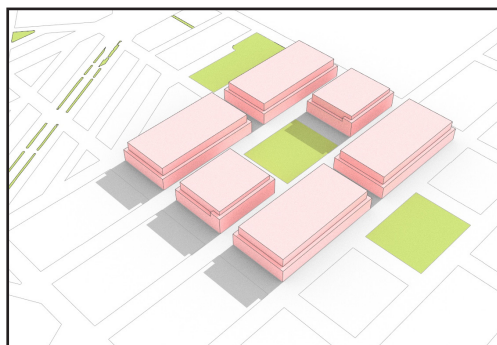


Figure 36. Existing allowable building envelope – 12pm winter

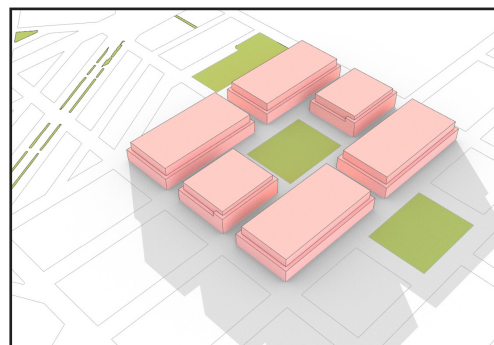


Figure 40. Existing allowable building envelope – 4pm winter

Testing of the overshadowing and impact on development as a result of the proposed sunlight protection controls

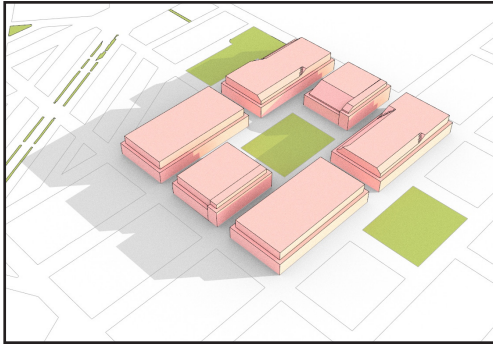


Figure 41. Proposed building envelope – 9am winter

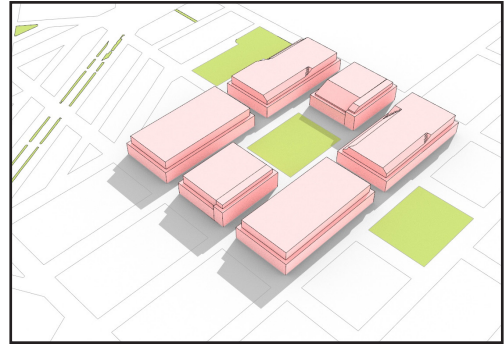


Figure 42. Proposed building envelope – 1pm winter

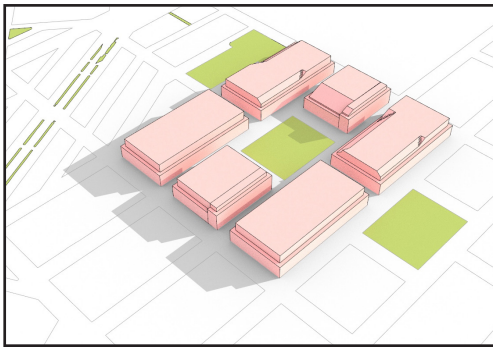


Figure 43. Proposed building envelope – 10am winter

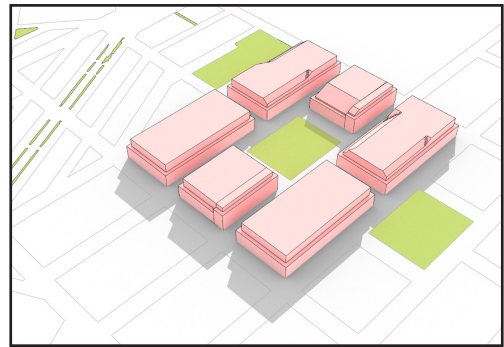


Figure 44. Proposed building envelope – 2pm winter

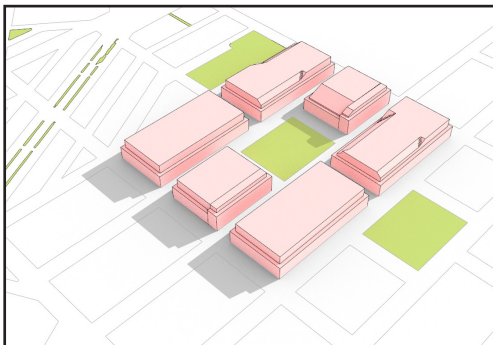


Figure 45. Proposed building envelope – 11am winter

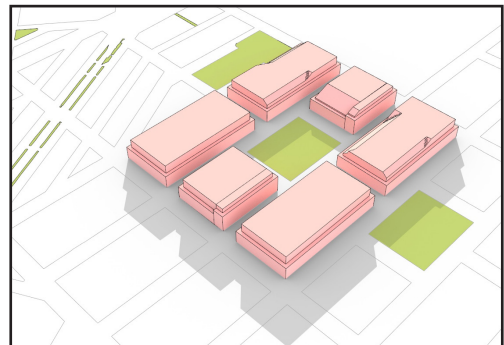


Figure 46. Proposed building envelope – 3pm winter

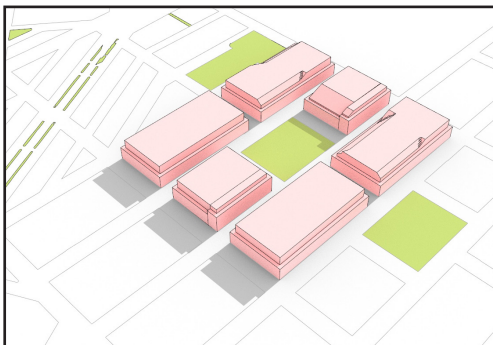


Figure 47. Proposed building envelope – 12pm winter

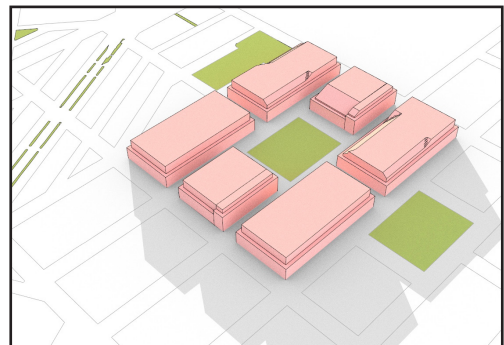
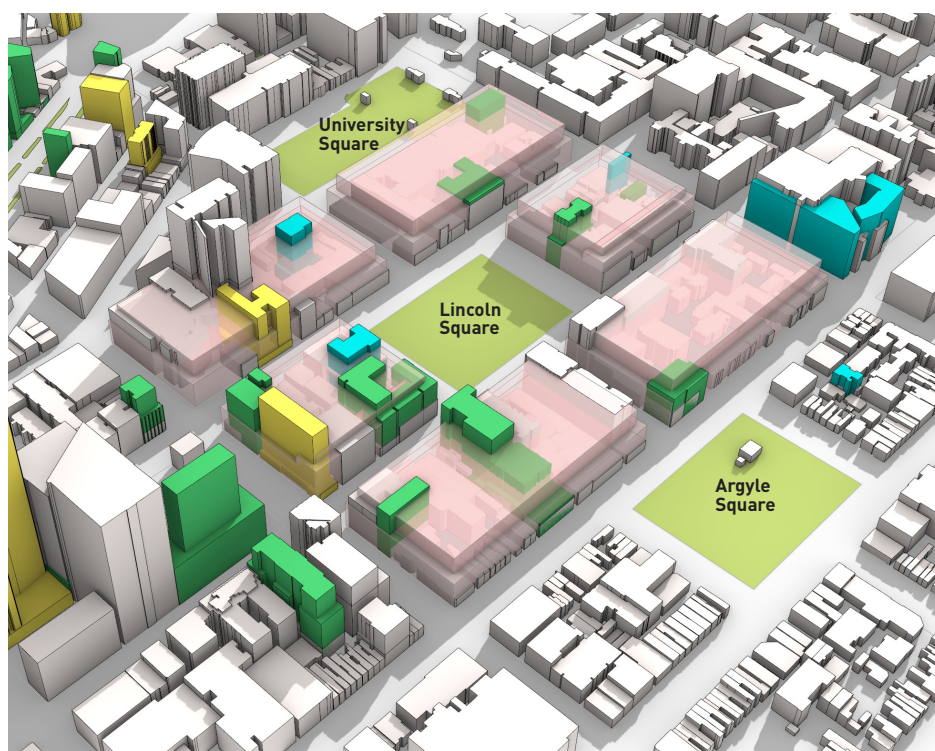


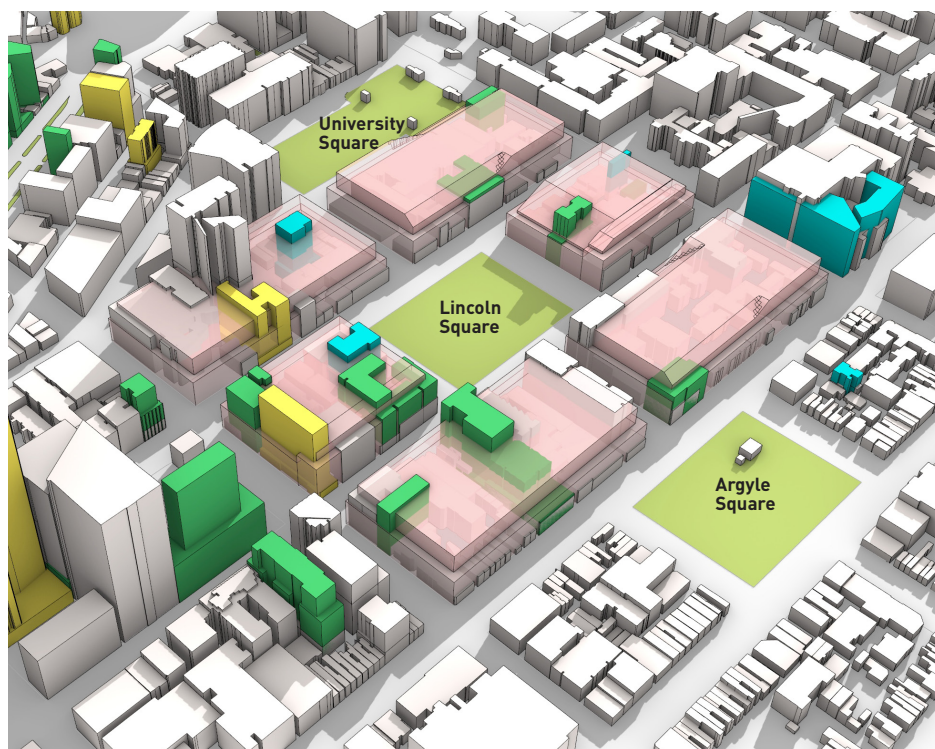
Figure 48. Proposed building envelope – 4pm winter



- Existing buildings
- Permit Approved
- Applied for Permit
- Under Construction
- Existing building envelope

[3D base model source: CoM Development Activity Monitor model, March 2020]

Figure 49. Existing building envelope with existing, approved and under construction buildings – 1pm winter.



- Existing buildings
- Permit Approved
- Applied for Permit
- Under Construction
- Proposed sunlight protection control envelope

[3D base model source: CoM Development Activity Monitor model, March 2020]

Figure 50. Proposed sunlight protection control envelope with existing, approved and under construction buildings – 1pm winter.

5.2 Queen Victoria Market Renewal Precinct

- 122 Queen Victoria Market is Melbourne's iconic Market that is bounded by Queen Street, Franklin Street, Peel Street and Victoria Street. This market occupies two city blocks (approx 7 hectares). Development Plan Overlay – Schedule 11 (DPO11) applies to the southern portion of the Queen Victoria Market precinct, including a requirement for consideration of shadow impacts to Flagstaff Gardens.
- 123 The current planning controls applied to the site are including:
- The Capital City Zone – Schedule 1
 - The Development Plan Overlay – Schedule 11
 - Heritage Overlay – Schedule 7
 - Heritage Overlay – Schedule 496
- 124 Submission 76 relates to the redevelopment of this site. Key issues raised were the impact of the sunlight control on Flagstaff Gardens on the viability of the new development.
- 125 Existing built form controls:
- Discretionary building height: 100 metres with FAR = 12:1
 - Street wall height to William Street: 10-20 metres
 - Setback above street wall: 10 metres
 - Sunlight control: New development should not cast a shadow across the Flagstaff Gardens or the proposed public open space between 11.00 am and 2.00 pm on 21 June
- 126 Flagstaff Gardens is included in the Amendment as a Park Type 3 West.
- 127 Built form testing has been prepared to consider this precinct. This testing demonstrates that the impact on development capacity within the Hoddle Grid to the east is significant before midday if the overshadowing requirements are met. This would create a significant conflict between two established strategic policies – maximise health and wellbeing (through sunlight access) and maximising economic/job growth and investment in the CBD.
- 128 Considering the park's location immediately adjacent to the Hoddle Grid, a similar approach that has been adopted to the east of the grid, where Park Type 3 East applies, would be consistent with the overall intent and application of controls within the Amendment and is recommended.

Recommendation 5

- 129 Retain Flagstaff Gardens as Park Type 3 West, however reduce the hours that apply for winter sunlight protection from 11am - 3pm to 12pm-3pm. A mandatory control should apply.
- 130 This has no impact on the development potential within the existing preferred building envelopes of sites to the north and west of Flagstaff Gardens.

Testing built envelope around Flagstaff Gardens of the proposed controls included in DD08

Development to the north and west is not impacted by winter solar access controls. Development to the immediate east in the Hoddle Grid is impacted at each hour of the day as indicated in each figure as follows:

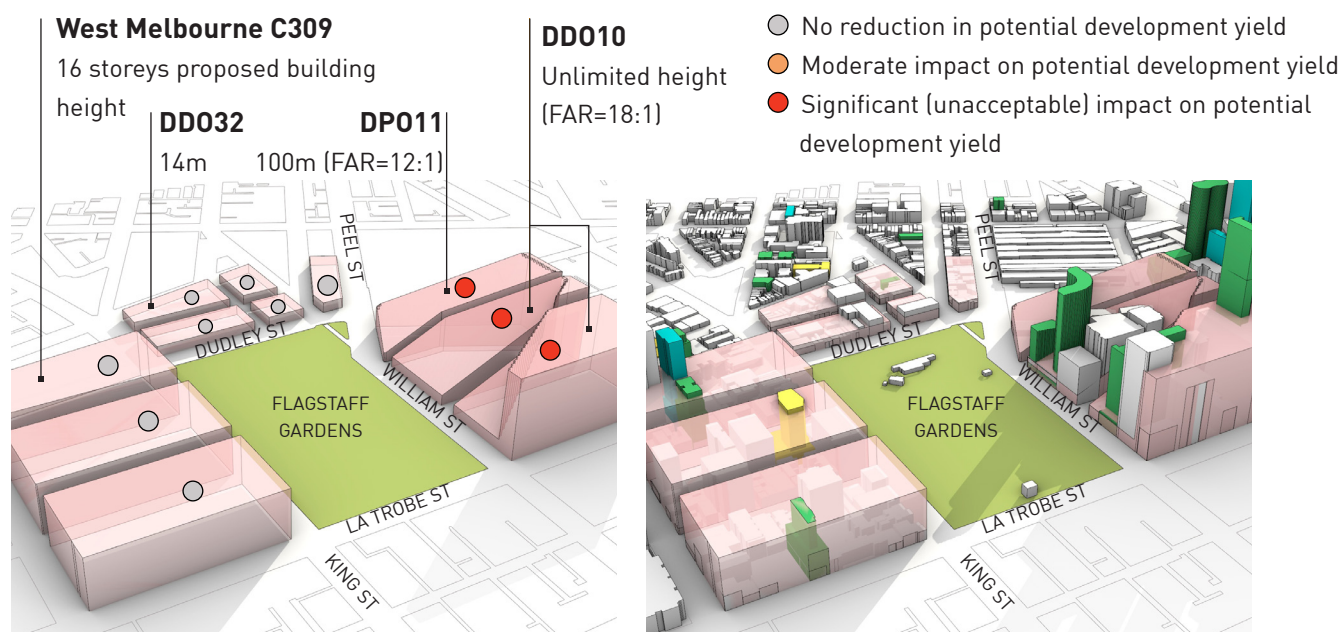


Figure 51. Solar envelope required to protect sunlight access to the whole park at 10am on June 22 (left) and with existing and proposed buildings shown for context (right)

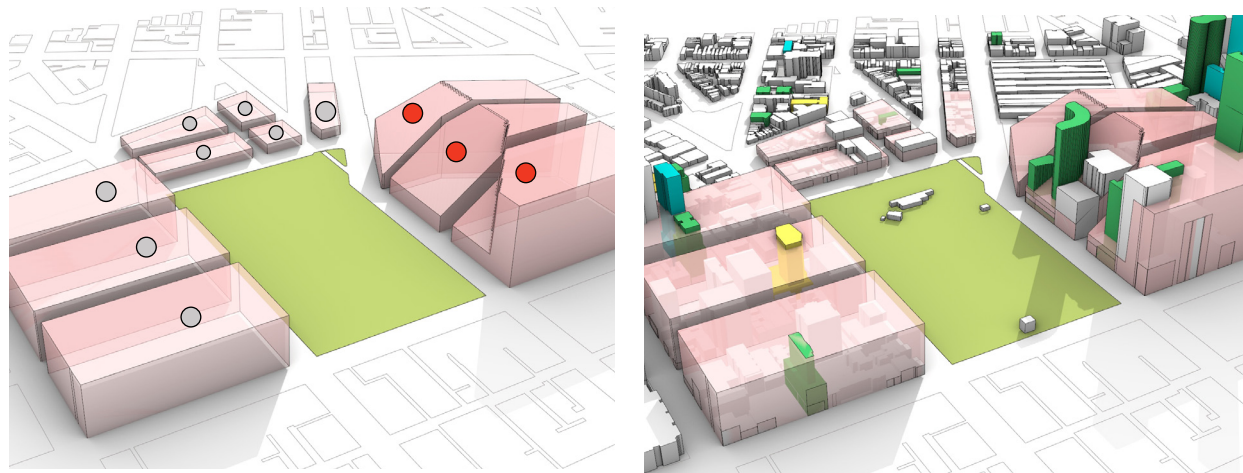


Figure 52. Solar envelope required to protect sunlight access to the whole park at 11am on June 22 (left) and with existing and proposed buildings shown for context (right)

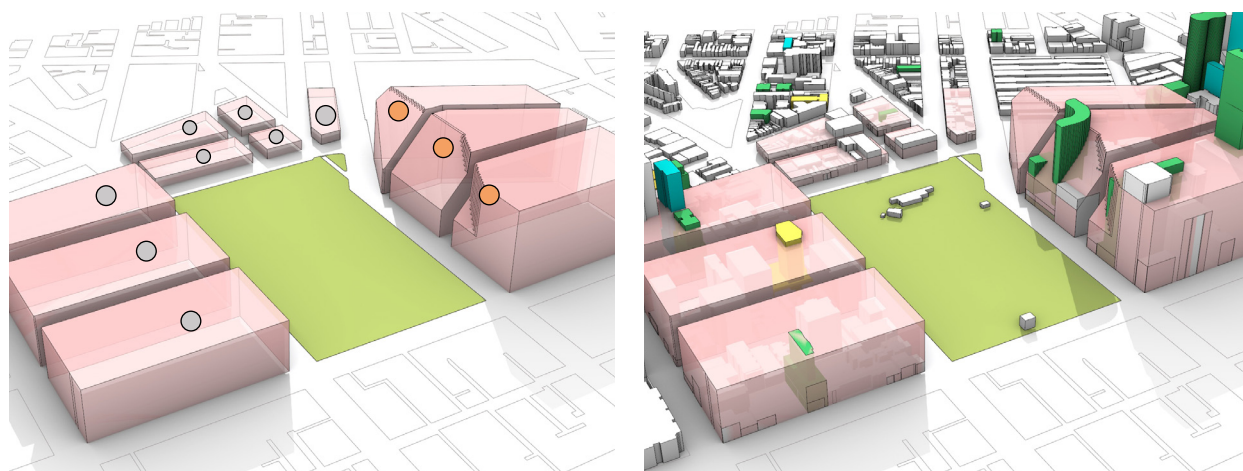


Figure 53. Solar envelope required to protect sunlight access to the whole park at 12pm on June 22 (left) and with existing and proposed buildings shown for context (right)

(Figures 51-56 3D base model source: CoM
Development Activity Monitor model, March 2020)

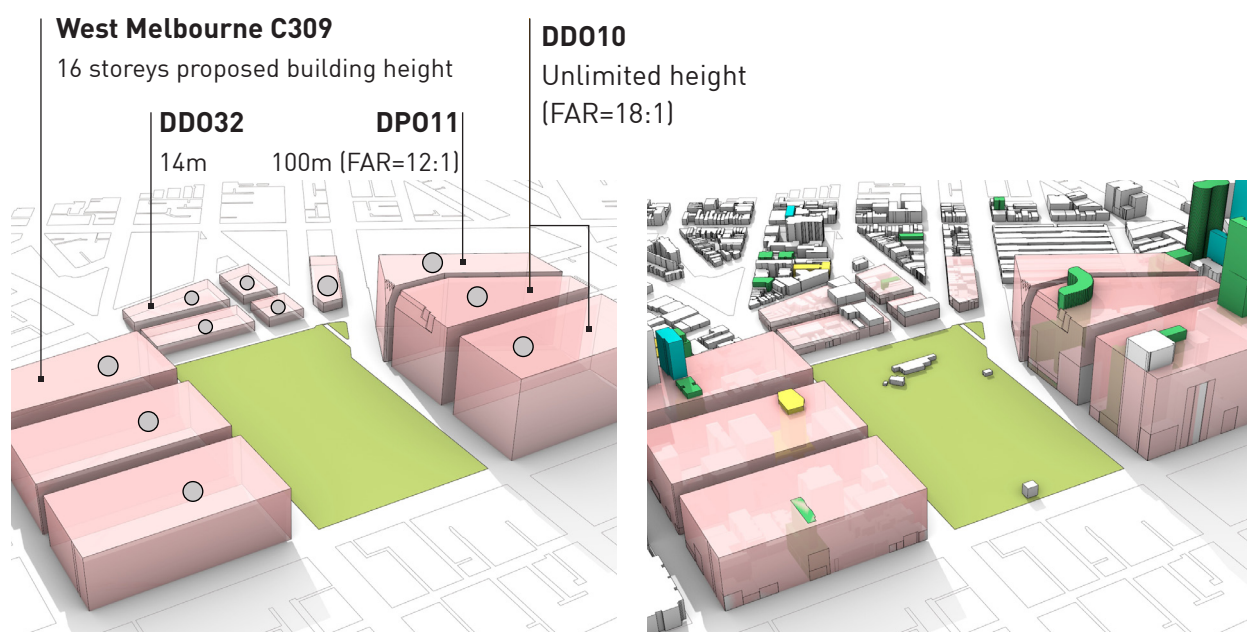


Figure 54. Solar envelope required to protect sunlight access to the whole park at 1pm on June 22 (left) and with existing and proposed buildings shown for context (right)

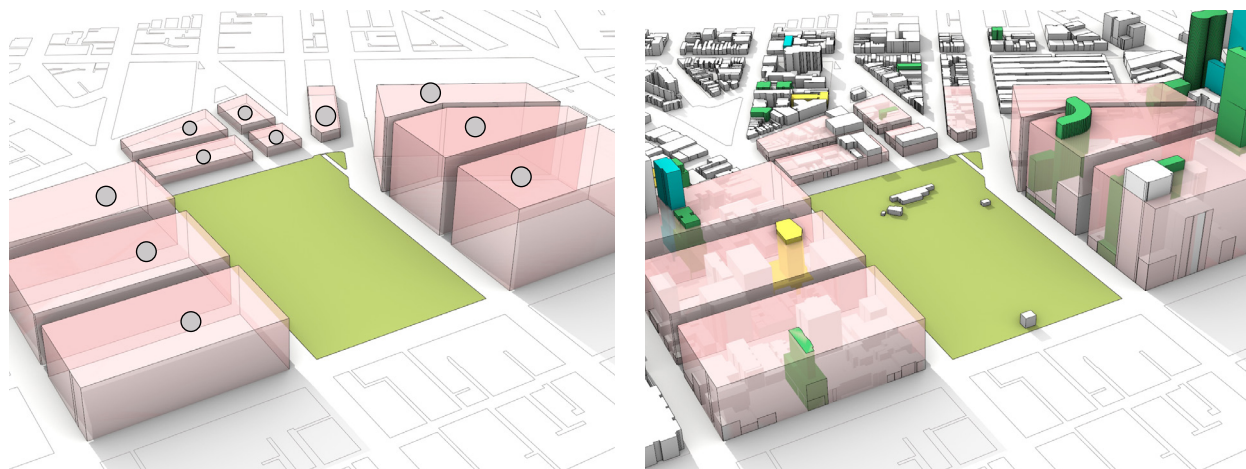


Figure 55. Solar envelope required to protect sunlight access to the whole park at 2pm on June 22 (left) and with existing and proposed buildings shown for context (right)

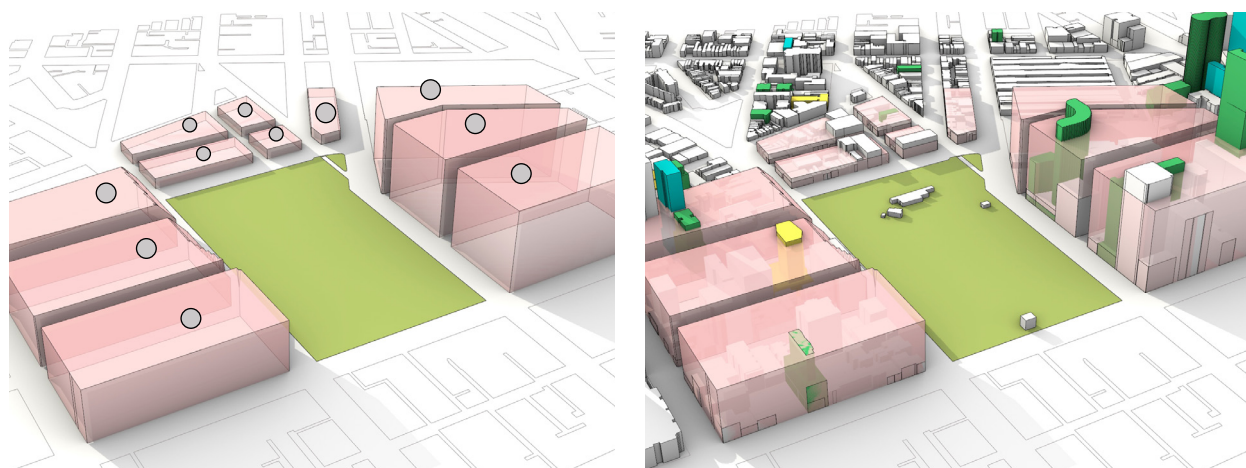


Figure 56. Solar envelope required to protect sunlight access to the whole park at 3pm on June 22 (left) and with existing and proposed buildings shown for context (right)

5.3 Macaulay

23-37 Boundary Road and 222-232 & 234-244 Macaulay Road

131 These two adjacent sites on the corner of Boundary Road and Macaulay Road are within the Macaulay Urban Renewal Area. They are located within the Macaulay Local Centre. The existing building is a two storey warehouse.

132 The relevant planning controls that apply to the site are:

- Commercial 1 Zone (C1Z)
- Design and Development Overlay – Schedules 26 and 63 – Area 8

133 Existing built form controls included in the DDO are:

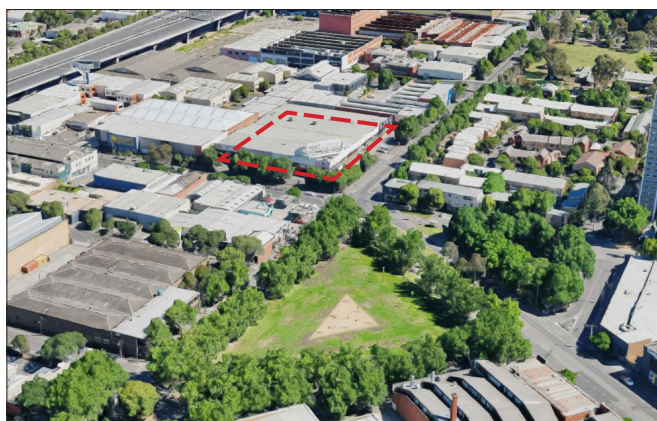
- Discretionary building height: 9 storeys (30 metres)
- Maximum building height: 12 storeys (40 metres)
- Street wall height to 20/30 metre street: Development at the frontage must not exceed a height of 6 storeys
- Setback above street wall: Development should be set back 1 metre for every metre of height above 20 metres

134 Submission 76 relates to the redevelopment of this site. Key issues raised were the impact of the sunlight controls that apply to the Clayton Reserve and Canning/Macaulay Road Reserve on the viability of the renewal project. This report includes additional testing to consider this issue.

135 The testing demonstrates that the potential impact on development yield on this site occurs due to the fall of the shadow of the preferred maximum building envelope controls from 2pm.

136 The site is very large site and the loss of potential yield is minimal (see Figure 68 and Figure 69) and an acceptable outcome.

137 No changes are therefore proposed to the Amendment.



Testing built envelope within Arden-Macaulay Urban Renewal Area

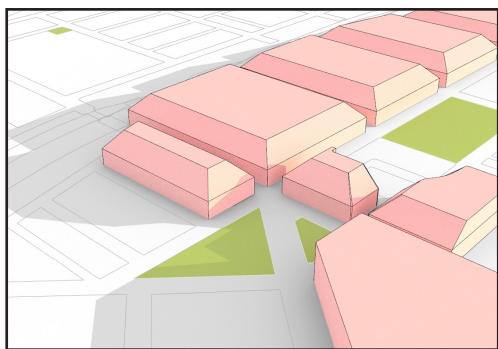


Figure 60. Existing building envelope – 9am winter

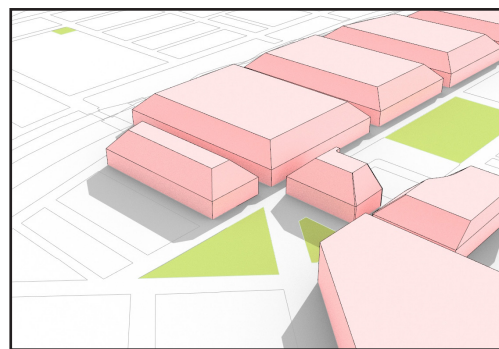


Figure 61. Existing building envelope – 1pm winter

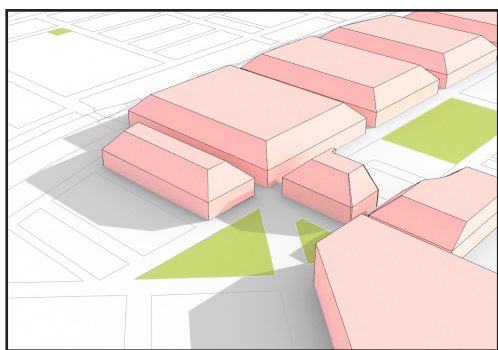


Figure 62. Existing building envelope – 10am winter

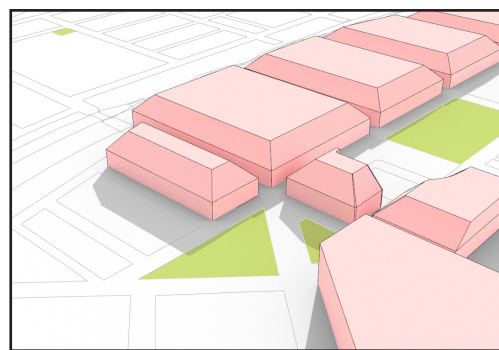


Figure 63. Existing building envelope – 2pm winter

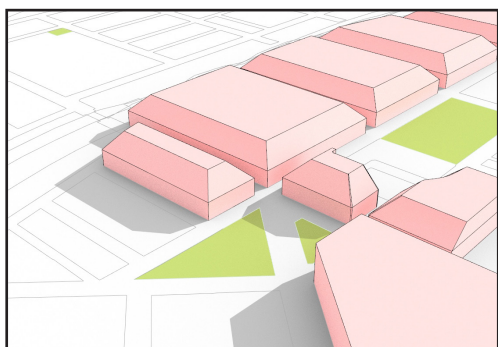


Figure 64. Existing building envelope – 11am winter

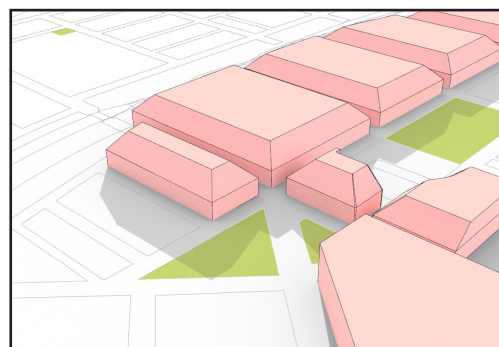


Figure 65. Existing building envelope – 3pm winter

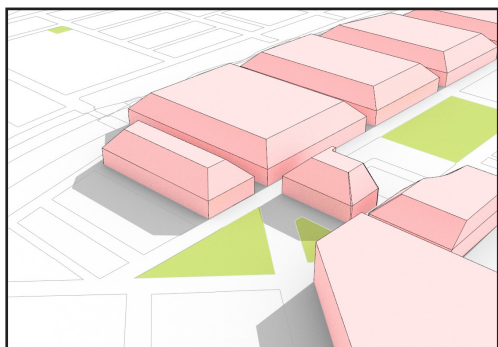


Figure 66. Existing building envelope – 12pm winter

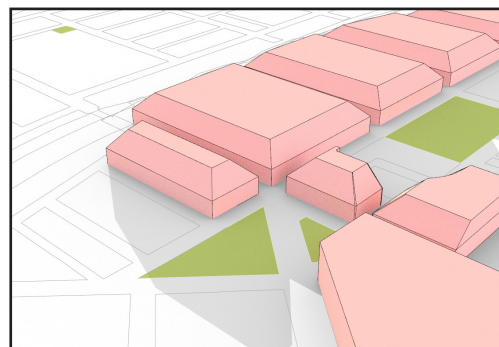


Figure 67. Existing building envelope – 4pm winter

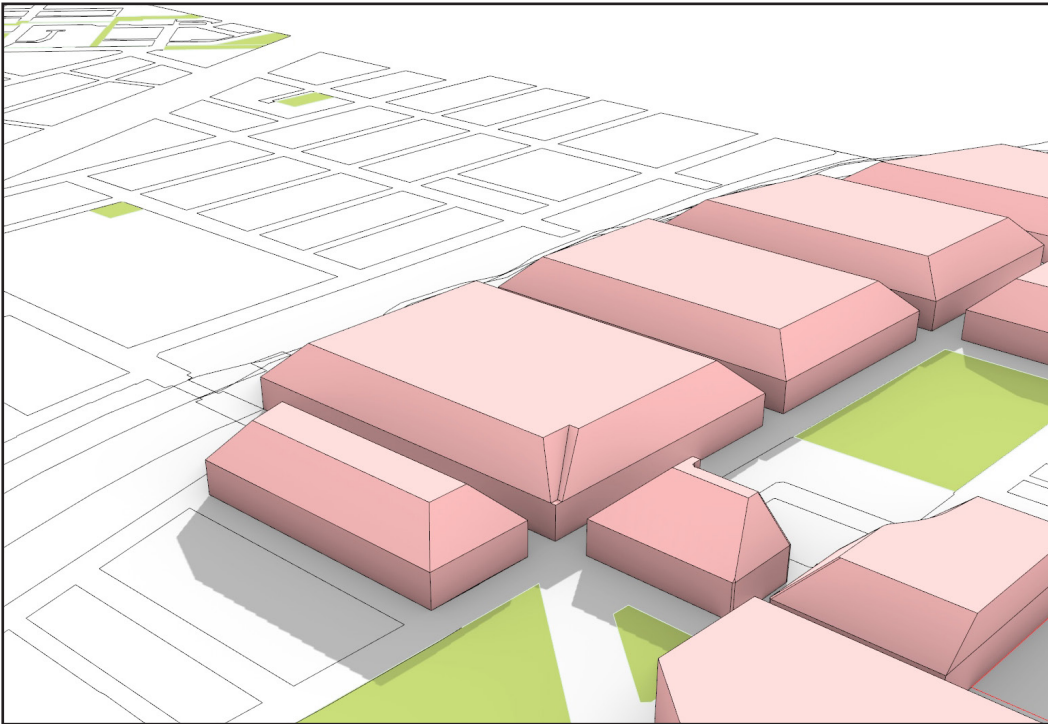


Figure 68. Impact on building envelope to meet overshadowing requirements at 2pm in winter

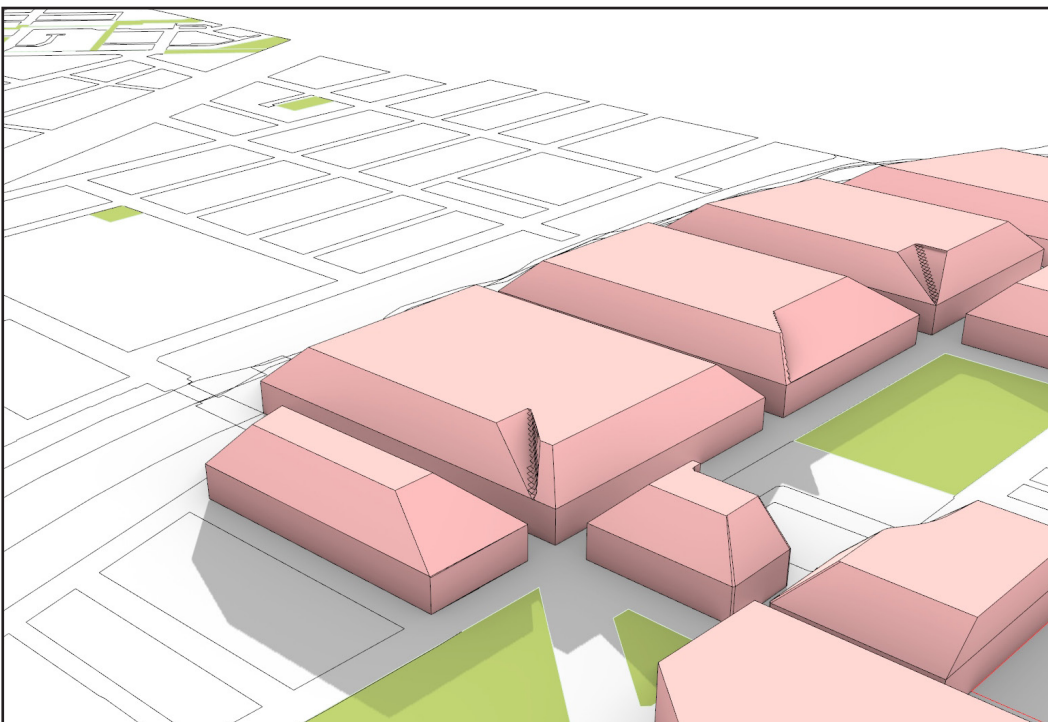


Figure 69. Impact on building envelope to meet overshadowing requirements at 3pm in winter

5.4 East Melbourne

364-366 Albert Street & 370 Albert Street, East Melbourne

- 138 These adjacent properties are to the immediate north of Fitzroy Gardens. The sites are currently subject to a 22 degree angle plane control that is designated in DDO20 (Area 43) as well as a requirement to setback buildings from Albert Street by 8 metres from the street. This angle plane control designates the preferred height limit.
- 139 The overshadowing controls that apply to this site designate sunlight protection at the equinox. The 22 degree angle plane, however, provides winter sunlight access protection.
- 140 The resultant potential building envelope for these sites is illustrated in Figure 70 which results in a building height of 12 metres at the street boundary and 31 metres at the rear of the site. Assuming that any building at the rear will require a minimum floor plate depth of 10 metres this would result in a building height of only 26 metres.
- 141 The application of a winter sunlight access control between 10am and 3pm is actually marginally less onerous than the current solar plane access control (refer Figure 71). This only allows however a negligible amount of additional development - an additional 0.2m in height at the rear of the site.
- 142 The new winter sunlight control would be mandatory, whereas the existing 22 degree angle control is discretionary.
- 143 A permit application has been submitted for this site for a 39 metre high building. This would have a significant overshadowing impact on the park.
- 144 A number of developments on adjacent sites within DDO20 Area 43 protrude above the 22 degree angle controls as illustrated in these figures. These are in the order of 23 metres (for example see location 4 on Figure 71) and up to 34 metres on the corner of Albert Street and Lansdowne Street
- 145 A permit has also been granted for a site to the immediate north which would cast a shadow on June 22 that will exceed the shadow cast by the 22 degree angle plane applied to this site. If this building had already been constructed then the potential scale of building that could be built on 364-370 Albert Street would be determined by the existing shadow cast by this building.
- 146 Fitzroy Gardens is designated as a Park Type 2. This recognises the existing height limits along the eastern and western boundaries of the park. The same logic would apply to the northern boundary, however, the use of the access plane makes this more difficult. A more simple assessment measure is required.
- 147 As with other Park Type 2 parks, some overshadowing of the park at the periphery is considered acceptable. Aligning the extent of overshadowing with the existing context and the potential scale of shadow cast by the approved building to the north would be a logical position to adopt. This would result in support for a shadow cast by a building that is in the order of 24 metres high at the street edge. Above this, the building would be required to setback to ensure that no additional overshadowing occurred. It is worth noting that this street wall height control is aligned with, but not determined by, the street

wall height controls that apply across the other urban renewal areas.

Recommendation 6

- 148 Modify the application of the Park Type 2 controls to Fitzroy Gardens to allow a shadow to be cast up to 30 metres into the northern boundary of the park.

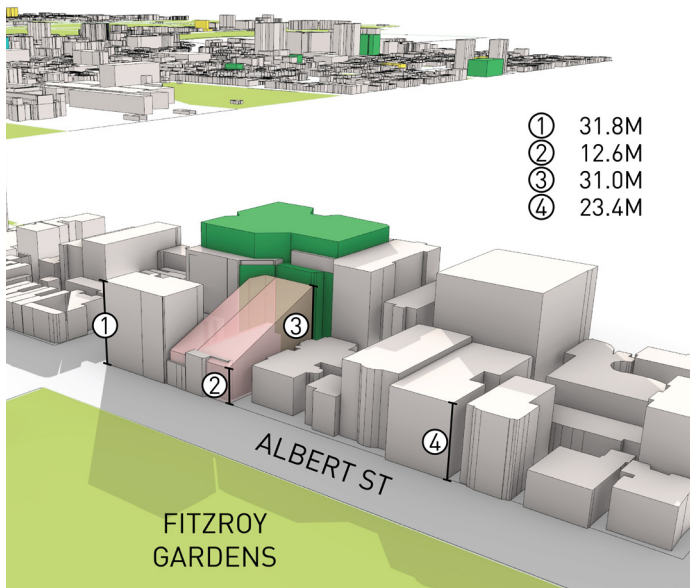


Figure 70. Application of existing sunlight access controls in DD020 which requires that development be setback at angle of 22 degrees (setout point is the northern park boundary along Albert Street) within the Building Height and Setback Table to Schedule 20.

In the same table the overshadowing requirements designate an equinox control. The 22 degree angle, however, provides winter sunlight protection.

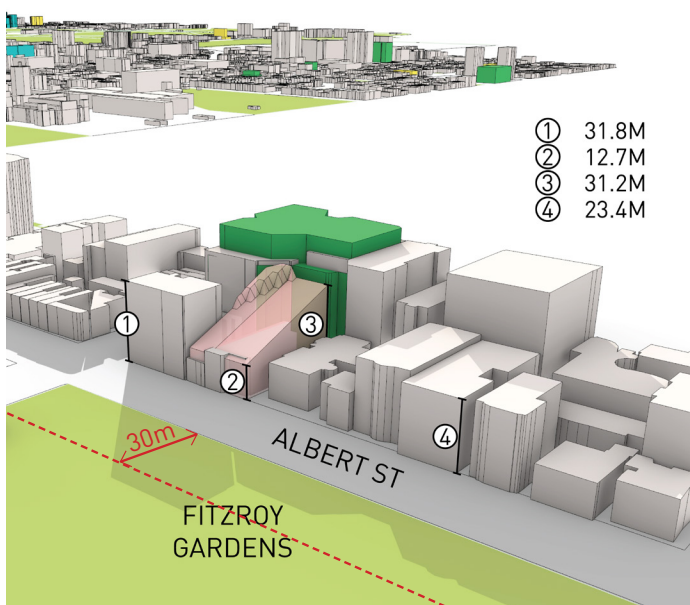


Figure 71. Application of proposed DD08 control. There is only a marginal difference between the two as the lowest winter sunlight angle between the time period of 10am - 3pm is closely aligned with 22 degrees. The DD08 control actually allows an incrementally higher building envelope (0.2m higher at the northern boundary).

2, 10 Wellington Parade and 1071-1081 Hoddle Street

149 These are two adjacent site in a triangle shape located at the corner of Wellington Parade and Hoddle Street. The current planning controls applied to the site are including:

- Commercial 1 Zone (C1Z)
- Residential Growth Zone – Schedule 1
- Design and Development Overlay – Schedule 21 – Area 20 (24 metre preferred maximum building height)

150 The submitter has suggested that Weedon Reserve should be removed from the amendment scope because it is a small island park and surrounded by Road Zone Category 1 roads.

151 Key issues raised were the park is small and less utilised and therefore this park should not be included in the amendment. This amendment as it currently stands would severely limit the development potential to the site. This report includes additional testing to consider this issue.

152 Existing built form controls:

- Discretionary building height: 24 metres
- Street wall height: n/a
- Setback above street wall: n/a

153 Weedon Reserve is designated a Park Type 1 which allows for no additional shadow to the park between 10am and 3pm on June 22. The impact of this control on potential redevelopment is illustrated in Figure 74. This results in a significant reduction in potential yield on this site.

154 A 24 metre discretionary height control applies to this property. This scale of development is aligned with the context for Park Type 2 parks

which would enable a building of 24 metres height to be built. This is the approach taken further west along Wellington Parade opposite Yarra Park.

Recommendation 7

155 Change Weedon Reserve in East Melbourne from a Park Type 1 to a Park Type 2.



Figure 72. Map of specific sites adjacent Weedon Reserve

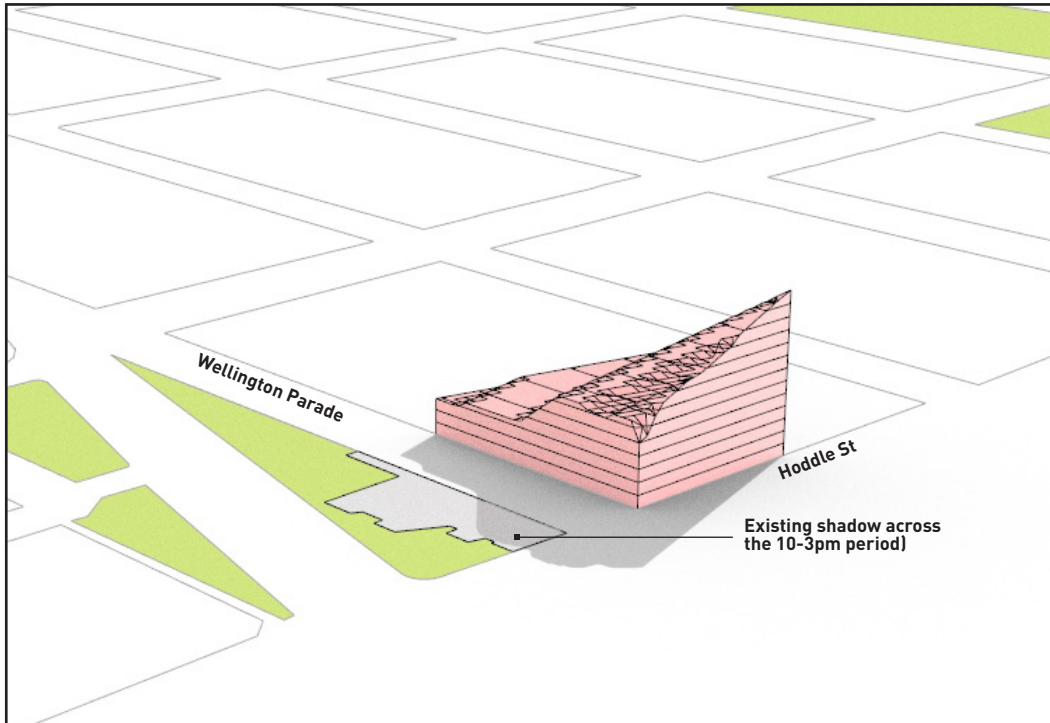


Figure 74. Potential building envelope with application of Park Type 1 controls (Shadow shown for 1pm winter)

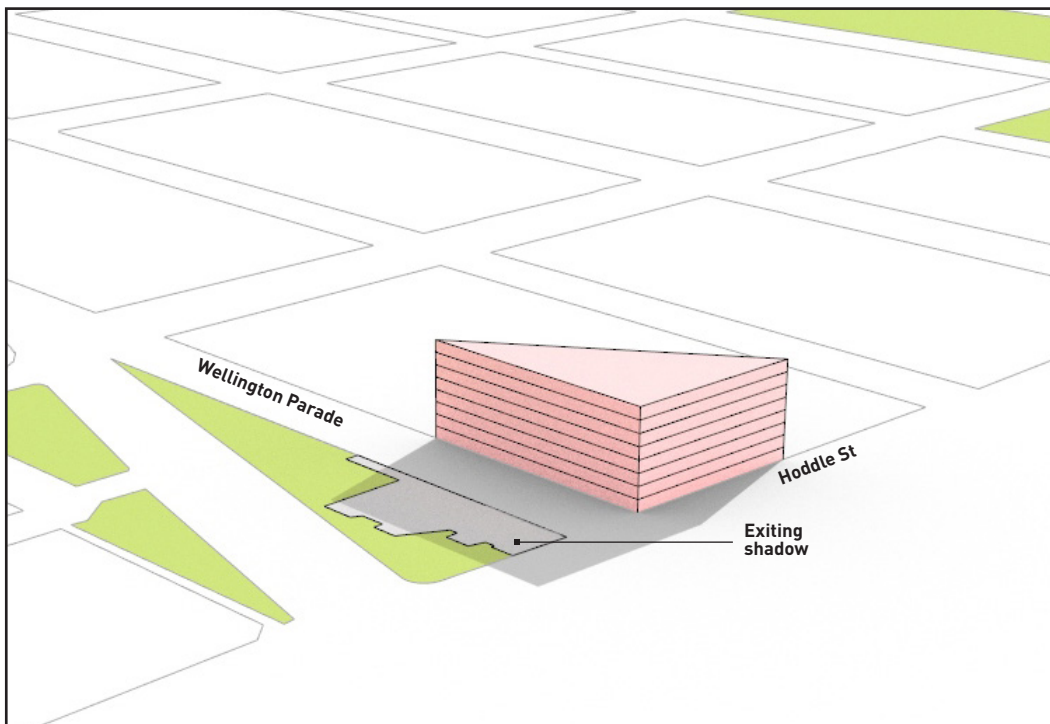


Figure 73. Existing building envelope – 1pm winter

Appendix A

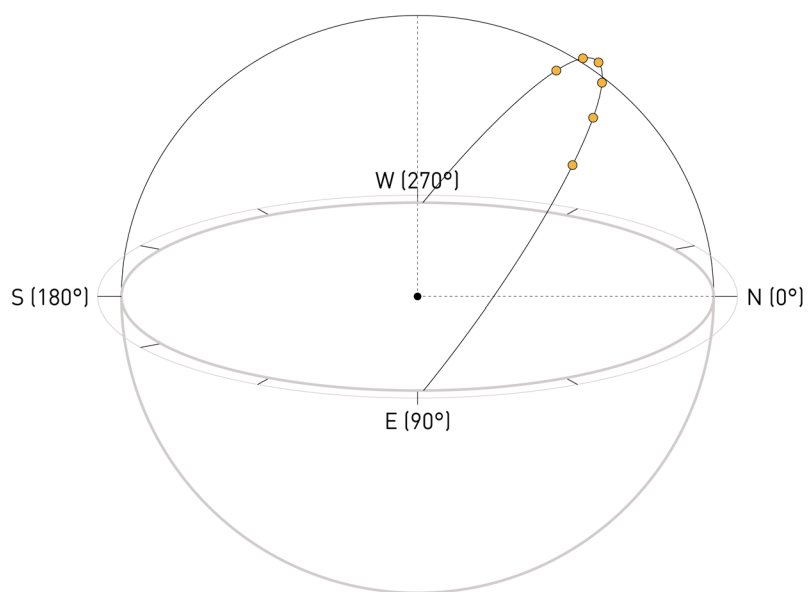


Figure 75. Sun path between 10am and 3pm in spring equinox

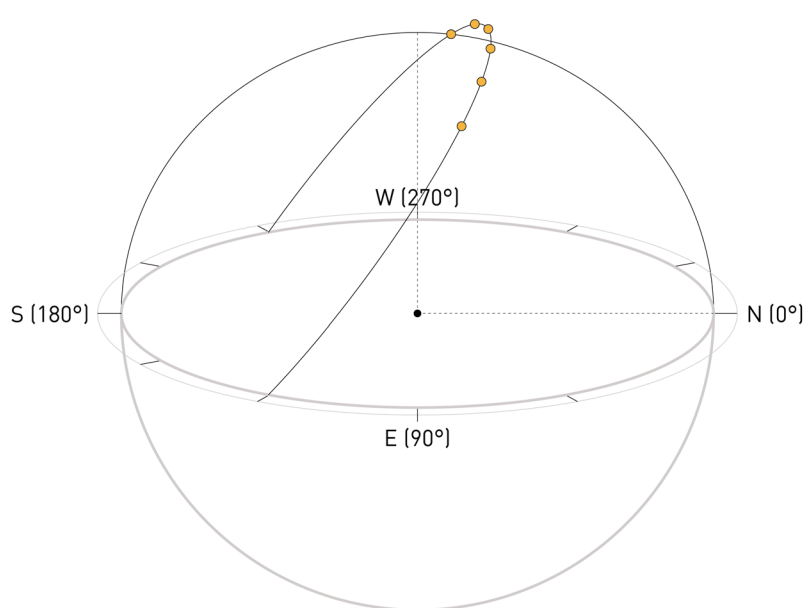


Figure 76. Sun path between 10am and 3pm in summer solstice

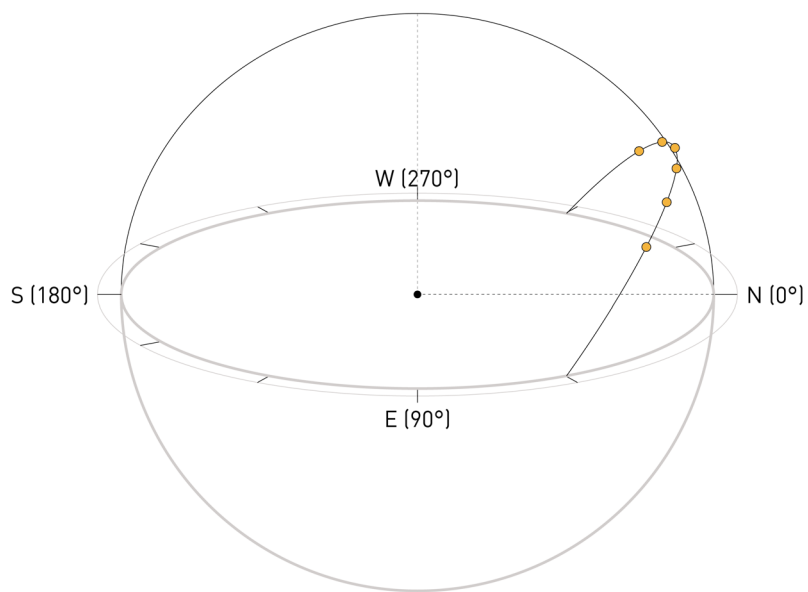


Figure 77. Sun path between 10am and 3pm in winter solstice

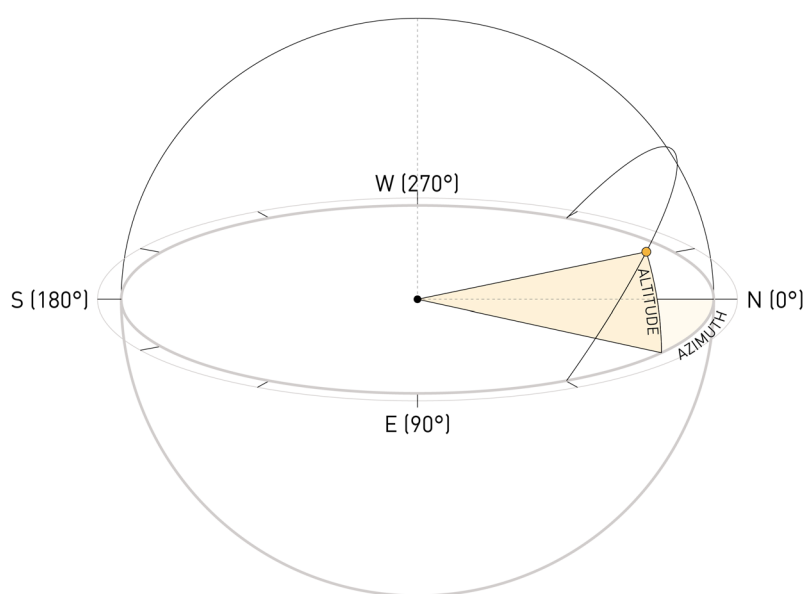


Figure 78. Altitude and azimuth of sun at 10am in winter solstice

Hodyl & Co