Amendment GC81

Fishermans Bend- Montague

Expert Urban Design Evidence

Mark Sheppard

March 2018

Instructed by

Norton Rose Fulbright, Planning & Property Partners and Russell Kennedy

On behalf of

Various landowners

DAVID LOCK ASSOCIATES

TOWN PLANNING & URBAN DESIGN

Contents

1.0 Introduction

[1] I am a Principal of town planning and urban design consultants David Lock Associates (Australia) Pty Ltd (DLA). I hold qualifications in architecture and urban design. I have over twenty-five years' professional experience and have practised exclusively in the field of urban design since 1993. Further details of my qualifications and experience are outlined in Appendix A of my overarching evidence.

[2] In January 2018, I was instructed by Norton Rose Fulbright, Planning & Property Partners and Russell Kennedy, on behalf of a number of landowners, to provide an independent urban design assessment of Amendment GC81. These landowners and their properties are identified in Appendix B of my overarching evidence.

[3] In addition to the Amendment documentation and background documents provided to the parties, I have had the benefit of reviewing the urban design, planning, open space and transport evidence circulated by the Minister for Planning, and Melbourne and Port Phillip City Councils.

[4] I attended the public briefing on 13 February 2018, and have listened to most of the cross-examination of Ms Hodyl and the presentation of Professor Adams.

[5] My previous professional involvement in the Fishermans Bend area is summarised in Appendix C of my overarching evidence. This includes leading the preparation of a Structure Plan for the South Melbourne Industrial Precinct (the area subsequently renamed Montague).

[6] In addition to the South Melbourne Industrial Precinct (Montague), I have led or been involved in the preparation of strategic plans for numerous urban renewal precincts, including the Sydney Road, Bridge Road and Victoria Street corridors, Highpoint, Forrest Hill, Balaclava, Preston Central, Dandenong Central, South Melbourne Central, St Albans, Darebin High Street and Footscray Central in Melbourne; and the Redfern and Waterloo housing estates, part of Wentworth Point, the Macquarie Park Corridor, St Leonards and the Carter Street Precinct in Sydney.

[7] My evidence addresses matters of urban structure, street networks, density, built form and siting, and building design. It does not address questions relating to affordable housing, reverse amenity impacts, the selection or construction of planning tools, public infrastructure delivery mechanisms, development contributions, transport or car parking.

[8] This statement assesses the urban design issues specific to Montague. It builds on my overarching evidence, which assesses the overall approach taken in developing the proposed planning framework, and the general urban design provisions.

[9] I have organised my assessment of the Amendment's proposals for Montague as follows:

- **Section 2** outlines the Montague precinct's physical and current planning context, including its features that present key opportunities and challenges for urban renewal.
- **Section 3** summarises the key urban design aspects of the Amendment as they relate to the Montague precinct.
- **Section 4** provides my assessment of the urban structure, street network, open space, density, and building height parameters proposed for Montague.
- **Section 5** summarises my detailed recommendations in relation to Montague.

[10] I have assessed the impact of the proposed planning framework on each of my clients' sites at Appendix A. Appendix B summarises the assumptions I have made in applying the proposed planning controls to these sites. This has informed my assessment in Section 4.

[11] I have considered the submissions to the exhibition which relate to my clients' properties, and those with urban design implications identified in submission summaries included in the Minister's Part A submission and other expert witness reports. These have informed my assessment.

[12] I was assisted in the preparation of this report by Susan Mitchell, Amy Ikhayanti, Cynthia Herkrath and Vincent Pham of David Lock Associates.

2.0 Context

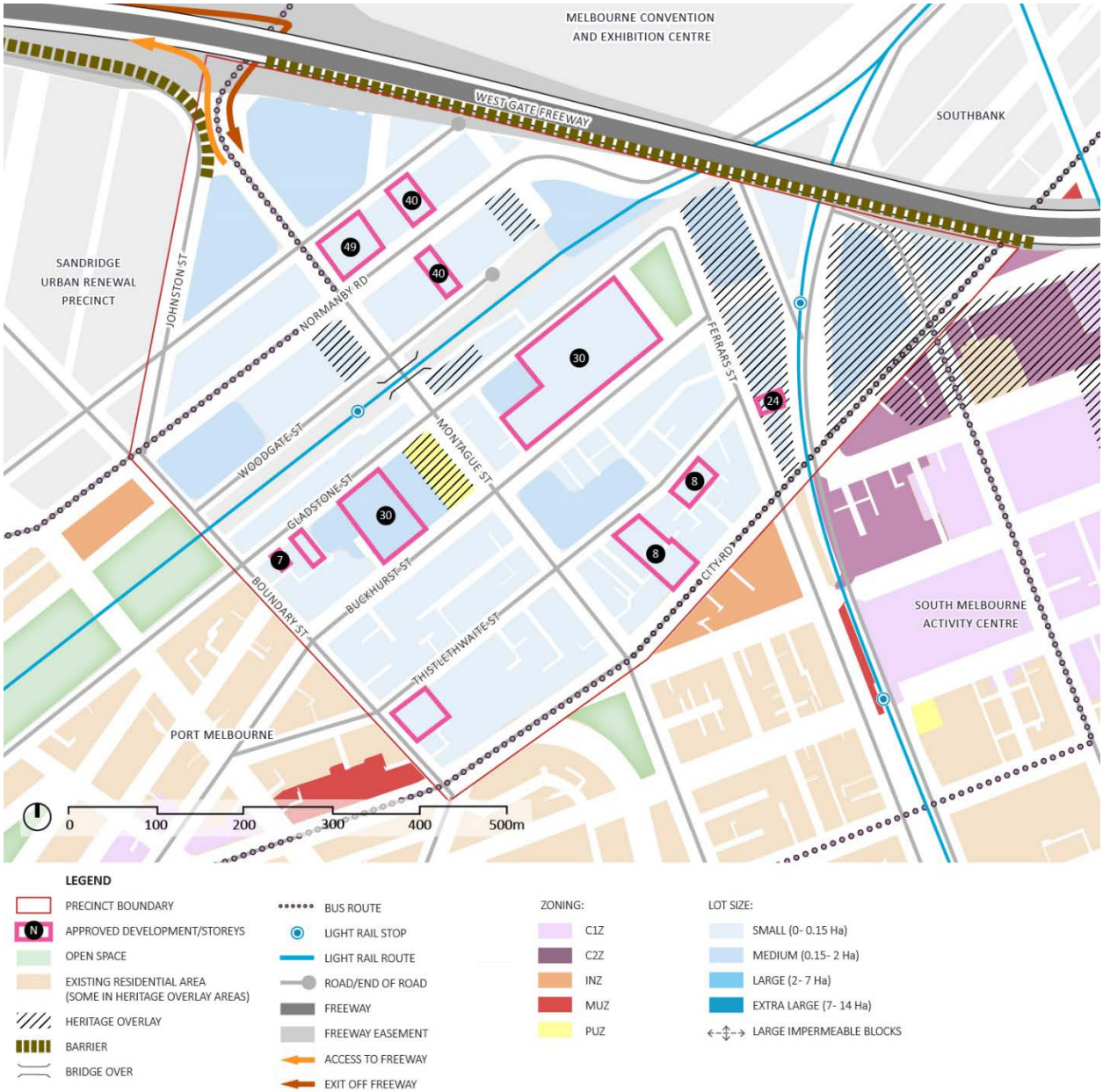
[13] The physical context of Montague is illustrated in the figures below and overleaf.

Oblique aerial photo of the Montague precinct (source: Nearmap)

[14] The features of Montague that support urban renewal include:

- Close to South Wharf, Southbank, Docklands and the CBD (walkable).
- Adjacent to the established Port Melbourne and South Melbourne residential precincts.
- Connected to the Southbank urban renewal area to the northeast.
- Close to the South Melbourne MAC.
- Excellent public transport accessibility via existing tram routes 109 and 96, and Southern Cross station approximately 25 minutes (~2km) walk.
- Access to and from the West Gate Freeway via Montague Street.
- Predominantly moderate and small size lots creating relatively diverse streetscapes.
- Well connected by a grid of streets to the surrounding areas.
- A relatively fine-grain street and laneway network, providing relatively good permeability—particularly east-west.

- Wide roads bound and dissect the precinct - Montague Street, Normanby Road, Buckhurst Street, Johnson Street and City Road (all 30m wide).
- Some publicly-owned land, which can be maintained/ developed for community infrastructure.
- Heritage fabric, which can contribute to a unique identity.



Montague Urban Context

[15] The features of Montague that present challenges for urban renewal include:

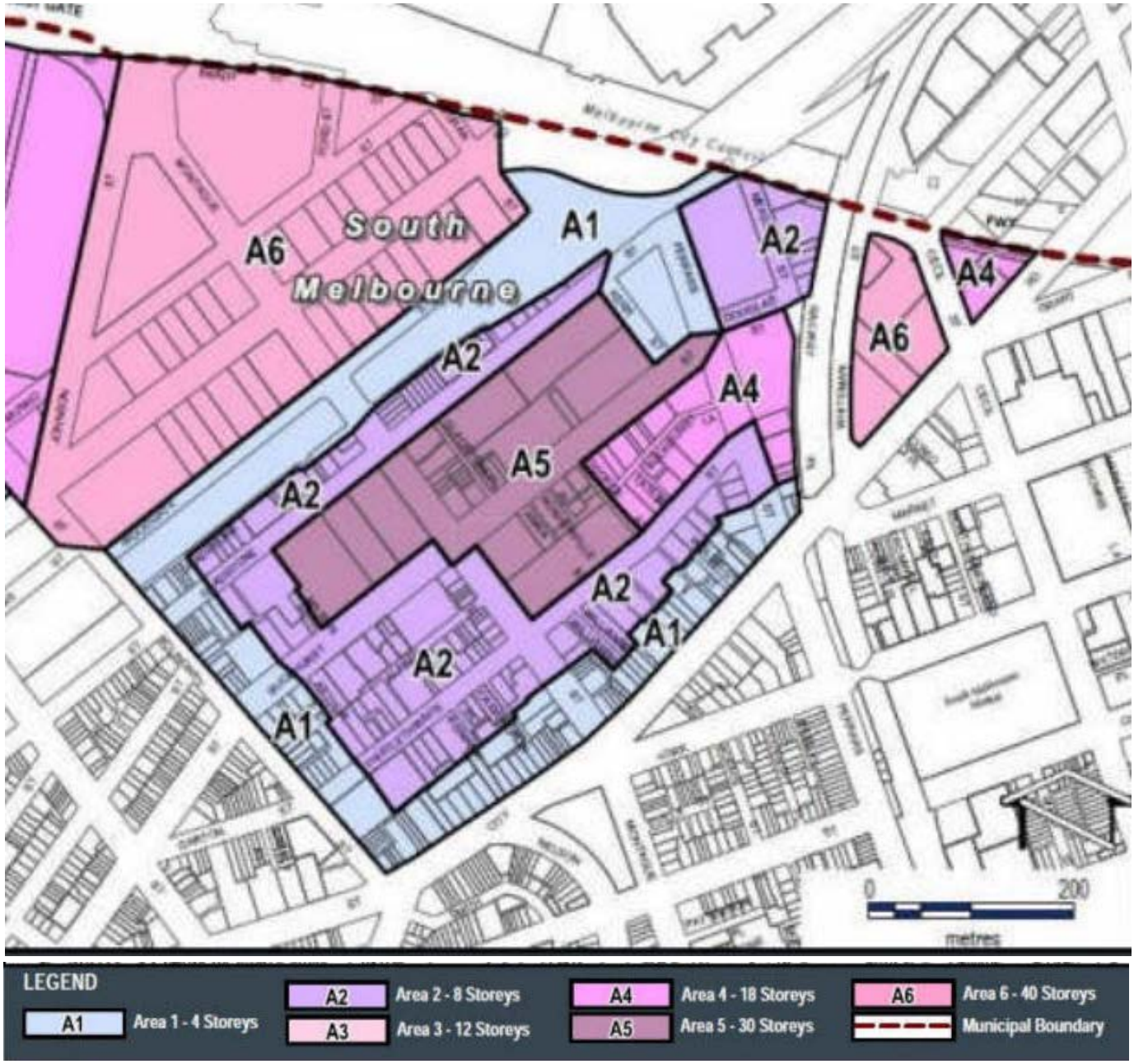
- Northern physical barrier as a consequence of the West Gate Freeway with limited crossings at Montague Street, Normanby Road and City Road (underpasses), and the rear of South Wharf and the Convention Centre.
- Long blocks which are generally impermeable.
- Predominantly moderate and small size lots, which inhibit coordinated development.
- No public open space.

[16] The principal current planning controls from an urban design perspective that apply in Montague are as follows:

MONTAGUE – CURRENT CONTROLS

- Capital City Zone, Schedule 1 (CCZ1)
- Design and Development Overlay, Schedule 30 (DDO30)

BUILT FORM ELEMENT	REQUIREMENT
Building height	Mandatory maximum: A1 - 4 Storeys A2 - 8 Storeys A3 - 12 Storeys A4 - 18 Storeys A5 - 30 Storeys A6 - 40 Storeys
Street wall height	Mandatory maximum 5 storeys or 20m, whichever is lesser
Tower setback	Mandatory minimum 10m to the street edge Mandatory minimum 10m to all other boundaries Setback can be taken from centre of laneway (if applicable)
Tower separation	Mandatory minimum 20m



Current DDO30 Map extract

3.0 Proposed planning framework

Delivering Montague

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

Planning for Montague 2050

	2018	2025	2050
Population projections	280	4450	20,800
Household number projections	155	2450	9,244
Job projections	3240	3400	4000
Open space (hectares)	0ha	1.87ha	6.36ha

Total precinct size (hectares)

Gross: 43ha

Net developable site area: 25ha

Infrastructure delivery – key projects

Sustainability goal reference	Timeframe	
	Short term	
Objective 1.2	1	City Road/Ferrars Street intersection upgrade
Objective 3.1	2	Ferrars Street Primary School and Community Facility
Objective 3.7	3	Montague Park
Objective 1.1	4	Route 96 (Stop 126) & 109 (Stop 125A) tram stop upgrades
Objective 1.2, 1.5	5	Railway Place/Ferrars Street streetscape upgrade
	Medium term	
Objective 1.3	6	Bay Street to City bike connection
Objective 3.7	7	Buckhurst Linear Park
Objective 3.7	8	Johnston Street road closure
Objective 1.2, 1.3, 1.5	9	Buckhurst/Montague Streets intersection upgrade
Objective 3.1	10	Montague Recreation Hub
Objective 3.1	11	Montague Arts and Cultural Hub
	Long term	
Objective 3.7	12	Montague North Park
Objective 3.7	13	Buckhurst Street Park
Objective 1.1	14	Montague Street route 109 (Stop 126) tram stop upgrade

Draft Framework, Page 70

Draft Framework, Figure 19

Maps from the proposed CCZ and DDO

Map 2 from the proposed DDO

[17] The density and built form provisions of the proposed CCZ and DDO schedules in relation to Montague are summarised below:

GROSS AREA 94 HA / NET DEVELOPABLE AREA 58HA

- Capital City Zone, Schedule 1 (CCZ1)
- Design and Development Overlay, Schedule 30 Fishermans Bend Development Urban Renewal Areas (DDO30)
- Fishermans Bend Urban Renewal Area local planning policy

ELEMENT	REQUIREMENT	
	Core	Non-core
FAR	Maximum 6.1:1 for dwelling use Minimum 1.6:1 for non-dwelling use	Maximum 3.0:1 for dwelling use
Building Height	Maximum 23.4m – 80.6m (6-24 storeys) (discretionary)	Maximum 15.4m (mandatory) - 29.4m (8 storeys) (discretionary)
Dwelling density	Maximum 301 d/ha	Maximum 198 d/ha

4.0 Assessment

4.1 Urban structure

[18] The proposed Port Phillip MSS contains the following statement of key elements of the urban structure for the Montague Precinct:

> *Mixed use development with shops and businesses providing active street edges and a high quality public realm throughout. Fine grain built form and laneways and through block links provide permeability and connectivity through street blocks. Heritage buildings are retained and integrated into development. The Route 109 tram line defines two distinctive neighbourhoods, Montague North and Montague South.*
>
> *Within Montague South, Buckhurst Street is the heart of the neighbourhood and the primary focus of commercial and civic amenity. Buckhurst Street is anchored by community hubs and creates a high amenity, linear green spine through the precinct, which accommodates the Bay Street to City bike connection. An Education and Community Hub and open space is located at Ferrars and Buckhurst Street as a primary anchor for the precinct. The network of laneways is enhanced and lower scale of development along City Road and Boundary Street creates a transition to neighbouring parts of South Melbourne and Port Melbourne.*
>
> *Montague North has a high quality civic spine along Normanby Road with active frontages. Normanby Road is transformed into a landscaped, pedestrian friendly boulevard which provides a key cycling connection through the precinct. The new 'Montague North Park' open space located at the intersection of Montague Street and Munro Street is addressed by active frontage development. A Sports and Recreation Hub (or part of cluster) is delivered as part of mixed use development, located within the 'investigation area' north of Normanby Road."*

[19] The proposed MSS contains the following statement of preferred future character for Montague:

> *Montague South is distinguished by its laneways and adaptive reuse of heritage buildings, and fine grain built form character of development. The neighbourhood is established as a diverse and family friendly community. Live/work apartments (SOHO) opportunities are provided. Parks and community hubs, and high amenity streets provide high quality social spaces to gather, relax and connect. The area is characterised by a diverse range of*

> *small-medium sized businesses, co-working spaces, small creative businesses and studios that contribute to the identity of the area.*
>
> *…*
>
> *Montague North is a gateway to Fishermans Bend from the CBD, Southbank and Docklands. It establishes a relationship and transition to the eastern part of Sandridge, as well as Montague South, with excellent walking and cycling links to adjoining precincts. Commercial and some retail and community activities are located within podium and upper levels of mixed use buildings. Businesses are attracted in particular by proximity to nearby commercial and cultural activities, and high quality, high amenity public realm.*

[20] I support this vision.

[21] The eastern end of Woodgate Street, which is currently a dead-end, is proposed to be extended to Doran Street, which links to Normanby Road. A number of new mid-block laneways are also proposed by the draft Framework, providing links through long blocks. However, these are not shown in the proposed CCZ schedule.

[22] I support the introduction of a better-connected and finer-grain movement network to support walking and cycling. I also support the flexibility in relation to the location of new laneways that is provided by the Amendment.

[23] The proposed planning framework provides for two linear local activity centres along Normanby Road and Buckhurst Street, servicing Montague North and South respectively. The Buckhurst Street spine is proposed to contain a linear park along its southern half, accommodating a strategic cycle route linking Port Melbourne and the CBD.

[24] I support the proposal to create activity centres along these streets, given the segregation of Montague North and South by the light rail line, and the inhospitable nature of Montague Street.

[25] I note that Ms Hodyl recommends amending the extent of the Montague core to include most properties in Gladstone Street and all those between Ferrars Street and the light rail line, as shown by the dotted orange line in the figure below:

Ms Hodyl's evidence, Figure 2

[26] I support Ms Hodyl's proposed redefinition of the core on the basis of public transport accessibility. However, I note that the proposed maximum height that applies to the land proposed to be added to the core is only 8 storeys, which does not reflect the maximum density in the core of 6.1:1.

[27] In relation to community facilities, a recreation hub and arts and cultural hub are proposed to be developed in Montague North and South respectively in the medium term, to complement the recently completed primary school and community hub in Ferrars Street.

[28] I support the introduction of community facilities to serve the new community and contribute to local identity. The creation of an arts and cultural hub based around the Montague Street School would be an appropriate use of this historic building.

4.2 Open space

[29] A series of new parks and linear parks are proposed. The total proposed open space area is 3.5ha, which represents 8% of the precinct area.

[30] Ms Thompson proposes amendments that would marginally increase the open space area to 3.8ha, which represents 1.8% of the precinct area and 3.8m^2 per resident. These include:

- A new neighbourhood open space towards the eastern end of the block between Normanby Road and Woodgate Street, west of Montague Street, to ensure residents and workers have easy access to open space.
- A new neighbourhood open space on the south side of Thistlethwaite Street, west of Montague Street, to ensure residents and workers have easy access to open space.
- The replacement of a small open space on Gladstone Street, east of Montague Street, with a space on the south side of Thistlethwaite Street, east of Montague Street, to improve its solar access.
- Introducing an additional laneway connection between the proposed open space on Whiteman Street and Cecil Street, to improve its accessibility.

[31] Ms Thompson's recommendations for new open spaces on Thistlethwaite Street will create a better distribution of neighbourhood parks. However, they will result in somewhat fragmented open space in three of the four 'quadrants' of the Montague precinct (all but the northern quadrant). This is at odds with her recommendations in other precincts. For example, rather than retaining the relatively small open space on the south side of Buckhurst Street, directly across the road from a larger open space, would it not be better to make her proposed park on Thistlethwaite Street larger? And would it not be better to create one larger open space in each of the western and eastern quadrants?

[32] Ms Thompson's recommended additional park in area M3 would also be heavily overshadowed by development immediately to its northwest, which has a preferred maximum height of 20 storeys and a maximum density of 6.1:1.

[33] Ms Thompson's proposed changes may affect the equity of the land acquisition mechanism and the ability of these properties to realise their notional maximum floor area within the proposed building envelope controls. This illustrates that the open space planning may have been focused too much on distributing open space in smaller parcels to enable

its delivery as part of development, rather than identifying the most appropriate open spaces for the future community.

[34] I consider that the open space planning in each precinct should be reviewed as part of the detailed precinct planning, and once the delivery mechanism is confirmed. As noted in my overarching evidence, I consider that the overshadowing controls should be discretionary to provide the flexibility to consider whether any proposed shadowing would have a material effect on the amenity of the open spaces.

Recommended changes to open space in Ms Thompson's evidence, Figure (vi)

4.3 Built form

[35] The Urban Design Strategy defines the preferred building typology in Montague (at page 88) as follows:

> *Tower developments are still supported in Montague North, however the overall heights have been reduced to align with revised density targets and to increase the amount of sunlight reaching the southern side of streets, particularly Normanby Road, to support the creation of a high-quality civic spine. In Montague South, height limits are set to maximise the amenity of the Buckhurst St local centres and to transition overall height limits towards the lower scale precincts of South Melbourne. Generally 8 storey height limit in the non-core areas is proposed, reducing to 4 storeys at the interface.*

Figure 4 Montague perspective view (from north-east): In this illustration all sites are also modelled to the proposed FAR of 6.3 (core area) and 3.6 (non-core area) and in compliance with the built envelope controls (including overshadowing requirements). This demonstrates a variety of potential design responses that are possible within the proposed controls.

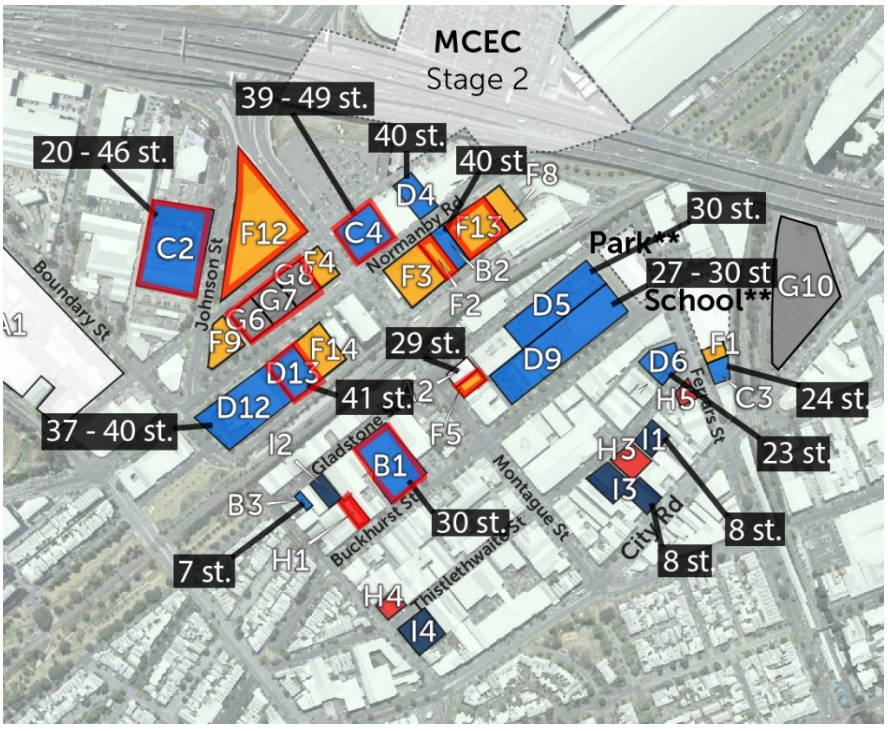
Ms Hodyl's evidence, Addenda 2, Figure 4

[36] Podium-tower format development is proposed in the core area of Montague. This reflects its emerging character (largely in the form of approved development) and that of the surrounding areas (Yarra's Edge and Southbank). It also enables density to be optimised.

[37] The proposed DDO schedule provides for maximum building heights in the Montague core of 12-24 storeys (42.2-80.6m), with small areas with discretionary maximum heights of:

- 23m (6 storeys)—on the north side of Montague North Park
- 29.4m (8 storeys)—othe east side of Ferrars Street
- 29.4m and 35.8m (8 and 10 storeys)—at the southern edge of the core
- 15.4m (4 storeys)—to the northwest and northeast of the proposed park on Thistlethwaite Street

[38] The proposed predominant maximum heights of 12-24 storeys ignores the emerging character, which is defined by an existing 29-storey building and eight approvals for buildings of 27-49 storeys in the core area, as identified below:



Approved heights in Montague (black labels)

[39] The statement of preferred building typology quoted above indicates that "*the overall heights have been reduced to align with revised density targets ...*" This confirms that the heights in the Montague core have not been optimised for their context, but have been reduced to avoid exceeding the population targets. I do not support this approach.

[40] The typology statement also indicates that "*the overall heights have been reduced … to increase the amount of sunlight reaching the southern side of streets, particularly Normanby Road, to support the creation of a high-quality civic spine*." However, sunlight will not reach the southern side of Normanby Road over 20-storey (68m) buildings. Solar access to the southern footpath will result from the gaps between them, as noted at page 58 of the Strategy: "*For Normanby Road and Buckhurst Street, protection should be provided for a significant portion of the footpath throughout the day. To achieve this, taller buildings on the northern sides of these streets should incorporate lower podiums (generally 4 storeys) and towers should be spaced further apart to maximise solar access*."

[41] A sense of openness, or 'sky view', and daylight may also be considered a reason to consider limiting height in Normanby Road, to ensure an inviting activity centre. However, I consider that the 30m wide road reserve and proposed tower separation controls (a minimum of 20m once buildings exceed 68m in height) will avoid an unappealing sense of enclosure or gloominess. To illustrate this point, I note that Bourke Street near its intersection with William Street in the CBD does not feel uninviting despite being lined with buildings of approximately 30-40 storeys in height, due to its 30m road width. I also note that the Melbourne C270 Daylight Modelling report indicates that it is building separation which most influences the level of daylight in the street. This explains why Melbourne CBD's main streets have plenty of daylight, even when they have tall buildings alongside.

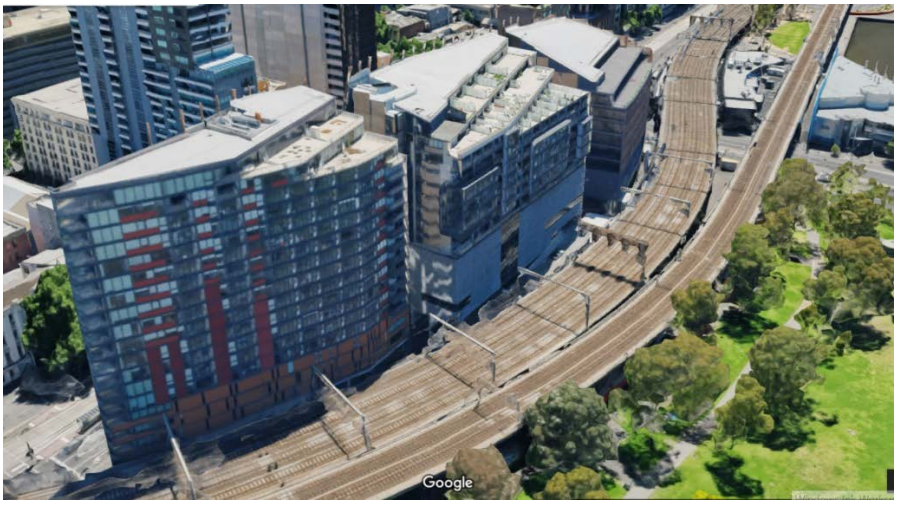
[42] The other reasons given by the Strategy for the proposed building heights are that "*proposed detailed building heights ... are determined by the preferred character and desired mix of building typologies in each precinct, site context (in particular adjacent low rise areas) …"* (page 90). The Montague core does not abut a sensitive low-rise area (except on City Road around Cecil Street, which is subject to a separate built form principle about transitioning down to the low-rise hinterland).

[43] In summary, the proposed maximum building heights in the Montague core are based on either a preferred character which ignores the emerging character, or simply a desire to avoid exceeding the population targets. I do not consider either reason sufficient to justify the proposed maximum heights.

[44] Given the number of approvals in Montague North for buildings of around 40 storeys in height, and the resulting emerging character, I do not consider that there is any justification to reduce the maximum height in this sub-precinct to 20-24 storeys. Similarly, given the number of approvals in the Montague South core for buildings of 30 storeys in height, I do not consider that there is a justification to reduce the maximum height to 20 storeys. Therefore, I recommend that the maximum height in Montague North revert to 40 storeys, and that between Buckhurst Street and Gladstone Street from 134-150 Buckhurst Street to Kerr Street revert to 30 storeys.

[45] I assume that the limiting of building height to 6 storeys north of Montague North Park and 4 storeys north of the Thistlethwaite Street park is to avoid overshadowing of them. However, sunlight to these open spaces is already protected by the overshadowing provisions within the proposed DDO. While I accept that development may need to be limited to something like the proposed maximum heights in order to protect solar access to these spaces, I do not consider it necessary to incorporate two controls to achieve the same end.

[46] I prefer the performance control in Table 1 of the proposed DDO, because it provides the flexibility for alternative design responses, such as a gradual increase in height towards the north (like the Northbank development at 507-575 Flinders Street (see below), whereas the preferred maximum height is somewhat of a blunt instrument for avoiding overshadowing.



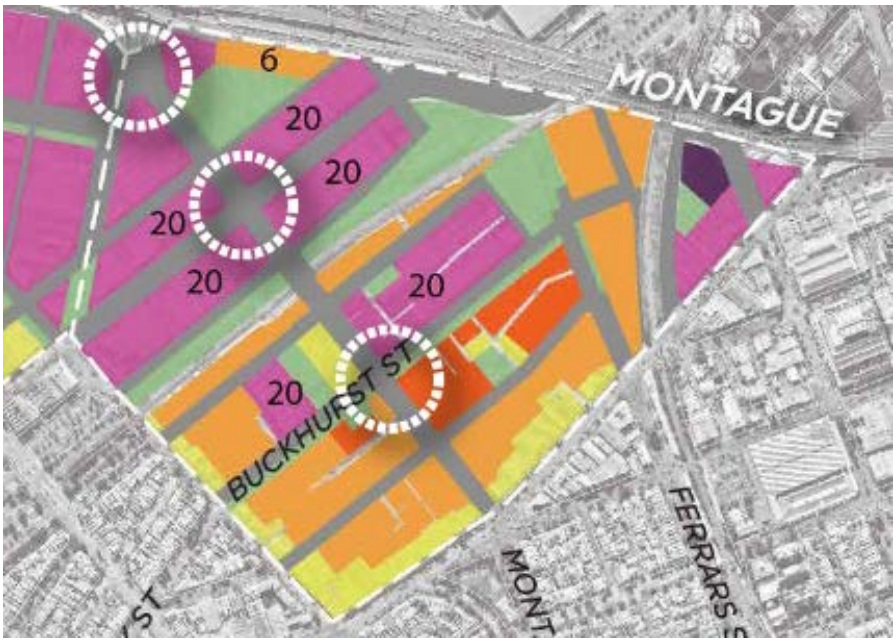
Northbank development in Flinders Street (source: Google Maps)

[47] As noted above, the land that Ms Hodyl now recommends be included in the core only has a preferred maximum height of 8 storeys. I recommend that the maximum heights that apply to the land along Gladstone Street be increased to 67.8m (20 storeys) to match the heights around it. It is difficult to determine the appropriate height for the 'additional' core land east of Ferrars Street without detailed investigation, because of its heritage values and location adjacent to an 8-storey area to the south including the new South Melbourne Primary School.

[48] About half of the core land on the east side of Ferrars Street that is proposed to be limited to 8 storeys in height is occupied by the new South Melbourne Primary School, which is only 6 storeys high. The land to the south effectively forms part of the 'transition zone' which steps down in height towards City Road. It is also affected by the heritage overlay.

[49] I assume the proposed maximum heights of 8 and 10 storeys at the southern edge of the core are to contribute to a transition in height down towards the low-rise hinterland to the south. I accept this concept in principle. However, I question the 'shallow' nature of the transition, as discussed further below.

[50] As noted in my overarching evidence, I also consider that provision should be made for taller forms at key locations to reinforce the urban structure, as shown below.



Potential locations for landmark buildings and civic uses

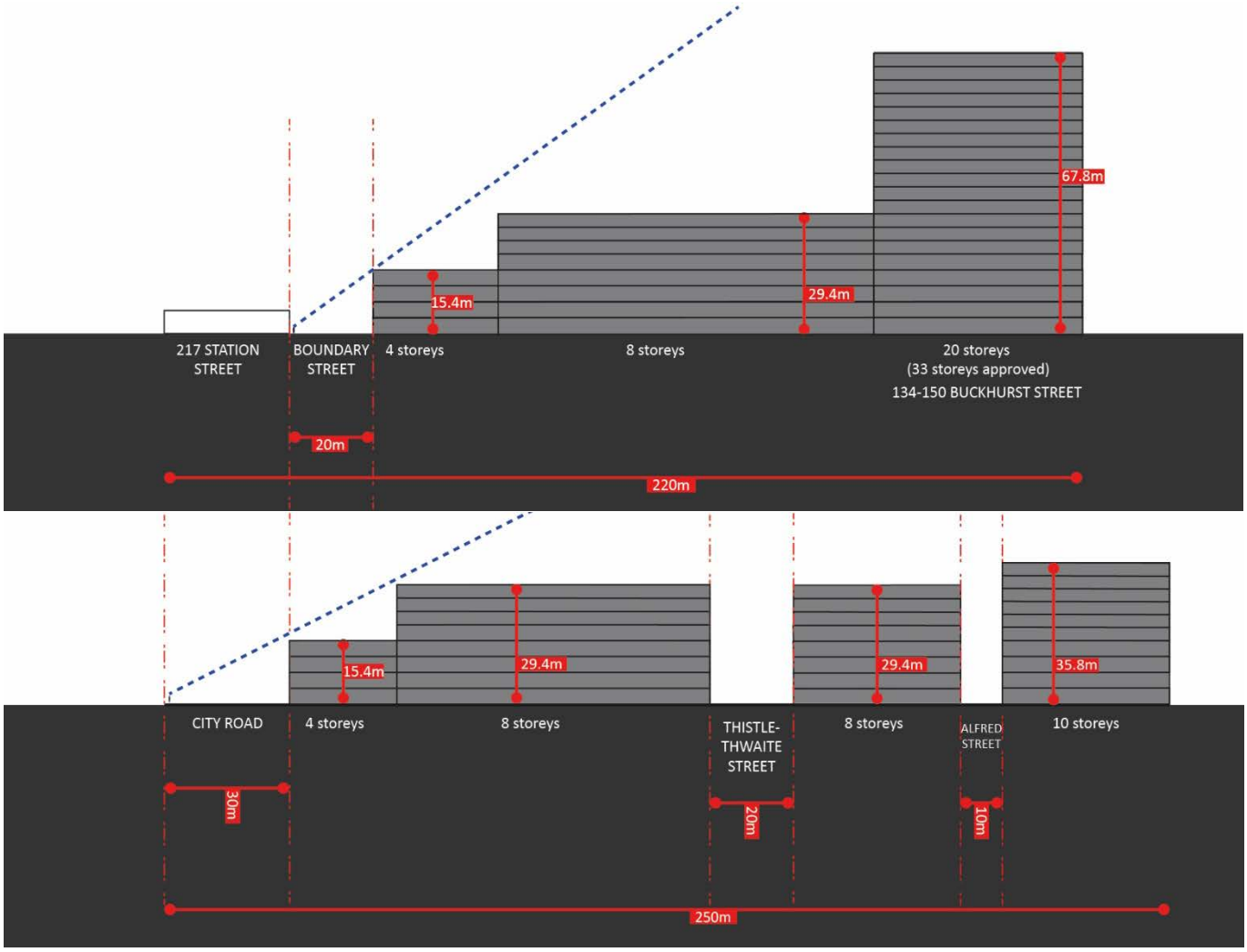
[51] Low-mid rise development is proposed in the non-core area of Montague. I support the proposal for alternative models of higher-density built form in this area to create a character that is distinct from the podium-tower format development in the core. The proposed 8-storey preferred maximum height in the majority of the non-core area reflects the emerging character, defined by a 7-storey approval in Gladstone Street and two 8-storey approvals in Thistlethwaite Street. However, the maximum building height may need to be adjusted to allow the density to be optimised (see section 4.4 below).

[52] The proposed DDO schedule contains a mandatory maximum building height of 4 storeys (15.4m) along the southern edge of Montague, on Boundary Street and City Road. In my overarching evidence, I analyse the southern edge of Montague, and recommend that the mandatory maximum 4-storey building height fronting City Road be replaced with discretionary maximum 4-storey street wall height and a discretionary minimum 10m setback requirement above the street wall (with the 'underlying' maximum height to the west applied beyond that). I note that Mr McPherson has recommended the same change in his evidence, which is on behalf of the City of Port Phillip.

[53] This is illustrated below.

Recommended section through southern edge on Williamstown Road

[54] Further, I question the 'shallow' nature of the height transition between the properties at the southern edge and the taller forms in the core. As shown in the sections below, there is no need for building heights to be stepped in such an abrupt way in order to achieve a clear transition in height.



Cross-sections through proposed maximum building heights in the southern quadrant of Montague, running along Buckhurst Street (top) and from City Road to Buckhurst Street (bottom)

[55] This reinforces the need to review the proposed heights as part of a detailed precinct planning exercise.

4.4 Tower setbacks

[56] My analysis of 203-205 Normanby Road in Appendix A illustrates the impact of the proposed mandatory tower side setbacks, which prevent development from achieving the maximum FAR because built form above the podium is unviable on relatively narrow sites. Notably, in this case and 91-93 Montague Street, the sites abut a building or approved building built to the common boundary with the site, which would facilitate a mirrored response. However, the proposed setback controls do not allow for this outcome.

4.5 Density

[57] The proposed planning framework identifies a core area with a maximum floor area ratio of 6.1:1 (although there is no limit to the extent to which non-dwelling floor area can exceed this ratio) and a minimum non-dwelling floor area of 1.6:1. In the non-core area, the maximum floor area ratio is 3.0:1.

[58] The relatively high maximum FAR of the core area presumably reflects its emerging character and presence of two existing light rail routes. The maximum density is 50% higher than that in the Wirraway core, despite the latter having a potential metro station. I accept the logic of responding to the character that has been created by development approvals, and public transport accessibility. According to my analysis of some individual sites, this density provides for buildings up to 20 storeys high (see Appendix A).

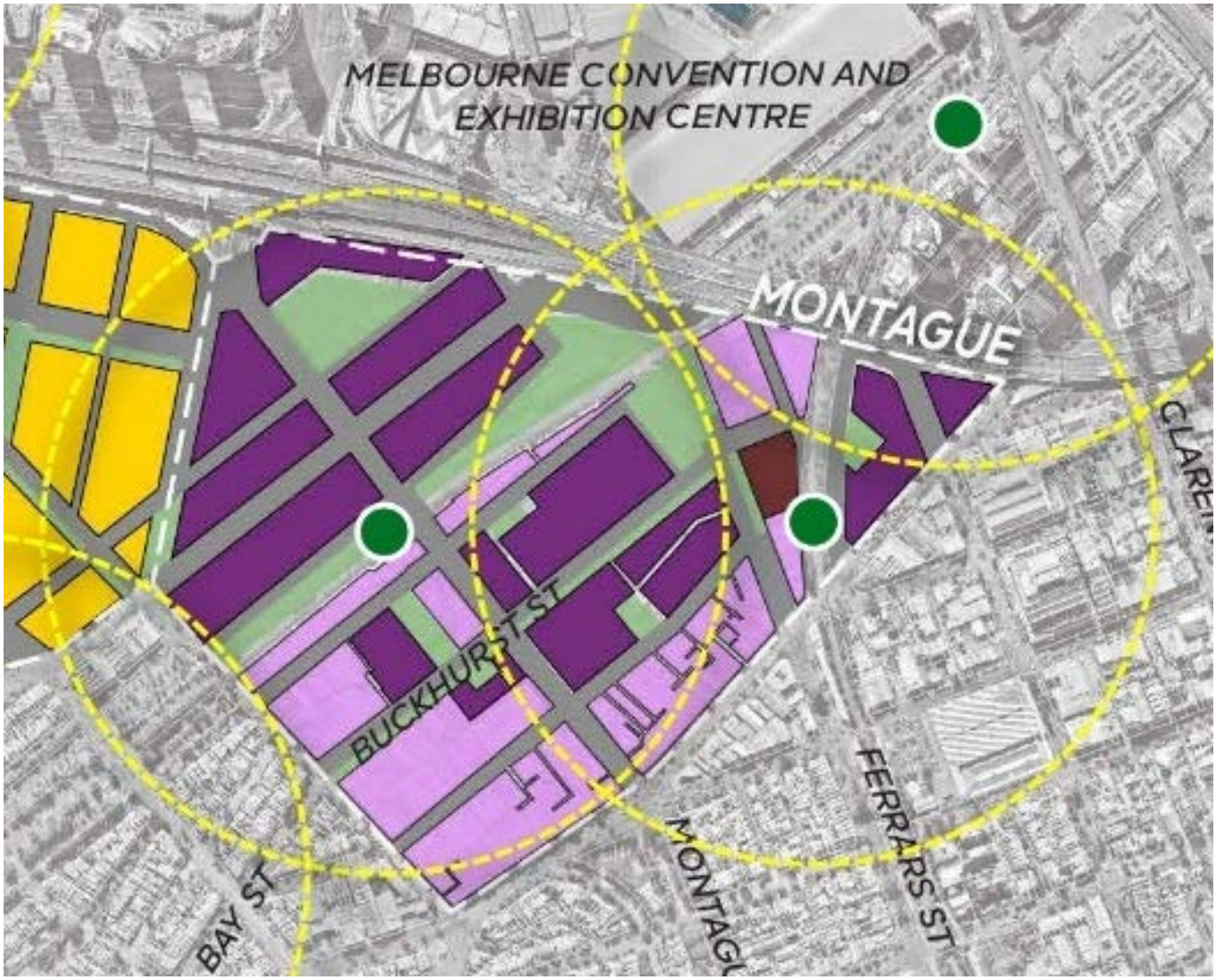
[59] However, the proposed maximum FAR prevents many properties from reaching anywhere near their preferred maximum height (as identified in Appendix A). Further, as noted above, I consider the preferred maximum heights in some areas to be unjustifiably low. This indicates that the proposed maximum FAR unnecessarily limits and unreasonably the development potential of this land.

[60] As noted in my overarching evidence, I consider that any density limits should be determined by detailed built form modelling, rather than the distribution of floor area based on population targets. Therefore, it is premature to determine whether 6.1:1 is the right maximum density until that modelling has been undertaken.

[61] I discuss the proposed density of development in the non-core parts of Wirraway, Sandridge and Montague extensively in my overarching evidence. I note that the Montague core only extends approximately 200m south of the light rail stop. This may be sufficient to accommodate

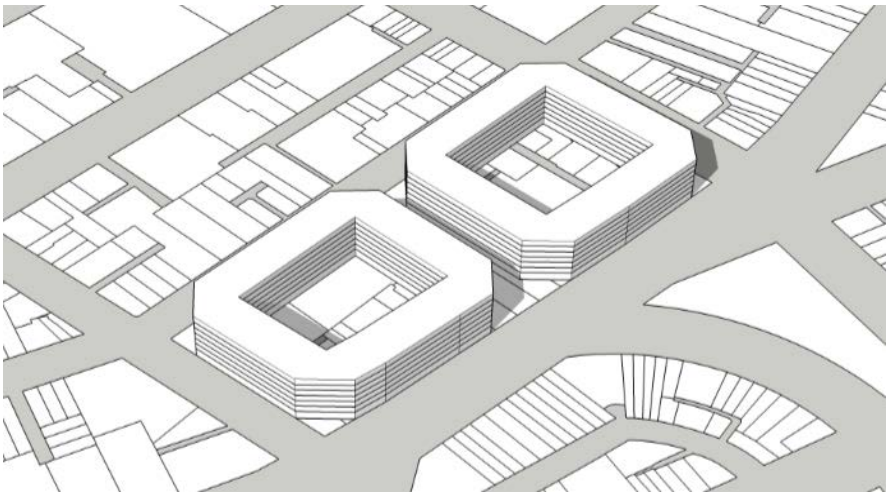
the employment space sought, but there is no reason for the extent of higher residential density to be limited to the same area.

[62] This is exacerbated by the rigid and abrupt nature of the change in density between core and non-core areas. All of Montague is well served by public transport, so it is unclear why the density should drop off so 'sharply' approximately 200m from the light rail stop. As noted in section 4.3 above, the principle of a height transition down towards the low-rise hinterland to the south does not warrant such a sharp reduction in density.



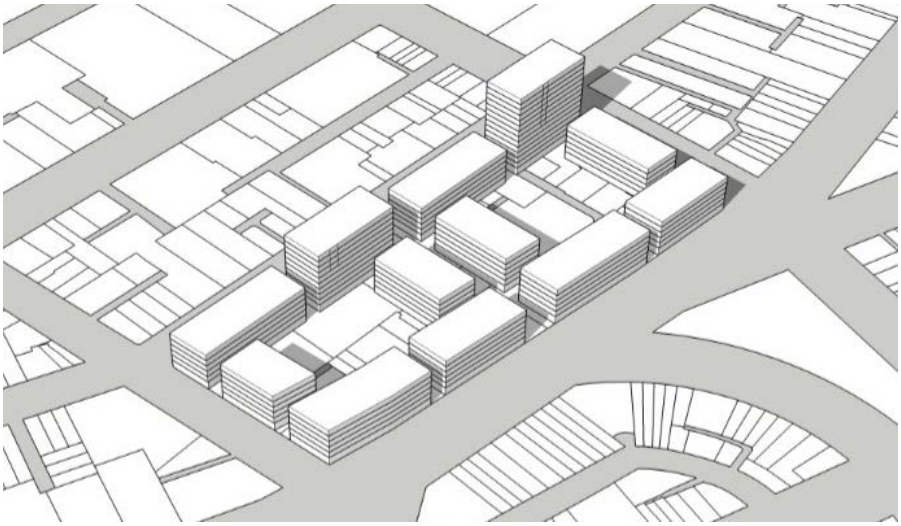
400m (approx. 5 minute) walkable catchments from existing tram stops (stops in green, catchments in yellow)

[63] I have identified alternative models of higher density development to that proposed in the non-core area of Montague which could increase its density to approximately 3.5-3.8:1, while maintaining a distinctive character and providing high quality living environments (see Appendix E of my overarching evidence). Adopting the 'Barcelona' model could deliver a significantly increased density (up to an FAR of approximately 3.8:1—27% more than proposed in the non-core part of Montague) within a height of 7 storeys (see overleaf).



Barcelona built form model applied to the block bounded by Boundary Street, Thistlethwaite Street, Montague Street and City Road

[64] The 'Hybrid' built form model could also deliver a higher density than that proposed (approximately 3.5:1), but it relies on some modest towers on street corners, separated by low-medium rise street wall forms (see below). This model delivers a more diverse built form environment, while maintaining excellent public and private amenity (including generous central open spaces within each block). While agree that an appropriate form of density control may present a useful mechanism for managing the overall form of this type of development to ensure that the heights do not encourage *conventional* podium-tower development. However, the current FAR control is not appropriate.



Hybrid built form model applied to the block bounded by Boundary Street, Thistlethwaite Street, Montague Street and City Road

[65] Increasing the density for the non-core area of Montague from 3.0:1 to 3.6:1 would provide approximately an additional 450 dwellings. This is not to say that 3.6:1 is necessarily the correct figure, but merely to illustrate the potential benefit of higher densities.

[66] In summary, I support the proposal for mid-rise, higher-density built form in the non-core area of Montague. However, I recommend that the proposed maximum density and heights in this area be reviewed to determine the optimum balance between contributing to Melbourne's growth and ensuring high quality environments.

4.6 Detailed design

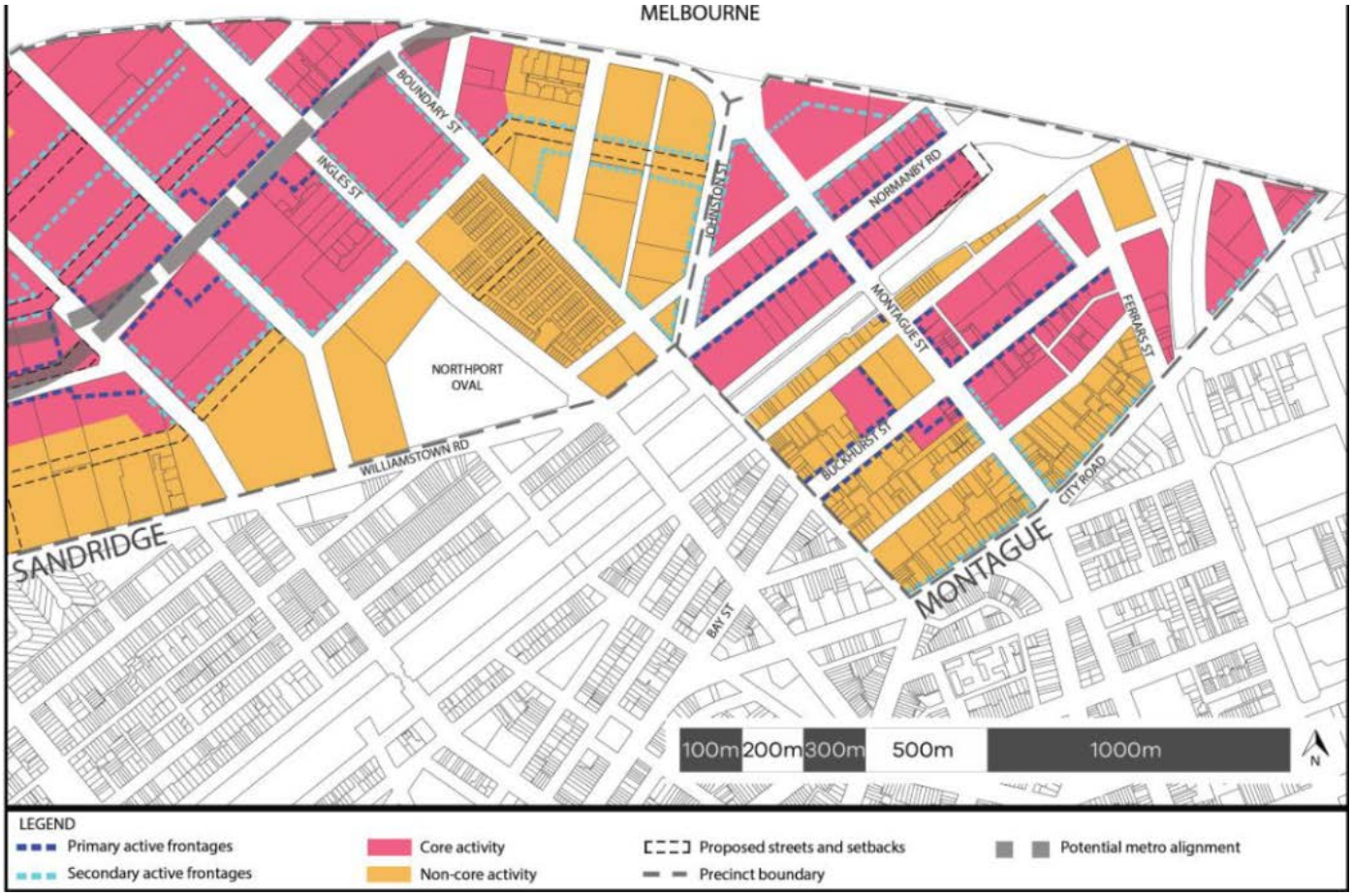
[67] The DDO requires primary active frontages along the part of Montague Street between the two linear activity centres and the light rail stop, as shown overleaf.

[68] Mr McPherson supports a continuous *secondary* active frontage requirement along Montague Street, on the basis that the traffic volumes are an impediment to retail activity. I disagree, given that the section of Montague Street identified for primary active frontage is limited to the sides of properties fronting Normanby Road and two short sections south of the light rail line, which link the activity centres to the light rail stop. It is important that an inviting pedestrian environment is created along this part of Montague Street, and I consider that greater activation is needed to contribute to this.

[69] Mr McPherson also supports the removal of secondary active frontages from Montague North Park (see paragraph 296). I agree with this position, given that it may not be a suitable location for commercial uses.

[70] The DDO requires secondary active frontages in parts of the non-core land along Montague Street and City Road, as shown above.

[71] In general, I agree that non-core land where commercial uses are not required should not be required to have active frontages, as defined in the Amendment. However, I consider that the frontages to Montague Street and City Road ought to have active frontages (at least secondary) to reinforce their 'hard edge' character.



Proposed DDO Map 1

5.0 Conclusion and recommendations

[72] I have provided my opinion about the overall approach underpinning this Amendment, and general built form provisions, in my overarching evidence.

[73] I support the proposed urban structure for Montague, including the linear activity centres, community hubs, Ms Hodyl's recommended redefinition of the core, extension of Woodgate Street and additional laneways. I consider that the open space changes recommended by Ms Thompson warrant consideration as part of the proposed detailed precinct planning, but I don't agree with all the suggested changes.

[74] The proposed predominant maximum heights of 12-24 storeys in the Montague core ignore the emerging character, which is defined by an existing 29-storey building and eight approvals for buildings of 27-49 storeys. I do not consider either a preferred character of lower buildings or a desire to avoid exceeding the population targets as sufficient reason to justify the proposed maximum heights. Therefore, I recommend that the maximum height in Montague North revert to 40 storeys, and that between Buckhurst Street and Gladstone Street from 134-150 Buckhurst Street to Kerr Street revert to 30 storeys.

[75] I also recommend that the proposed preferred maximum heights of 6 storeys north of Montague North Park and 4 storeys north of the Thistlethwaite Street park revert to the general maximum height for the surrounding land, noting that the overshadowing provisions will protect sunlight to the open spaces.

[76] I recommend that the land along Gladstone Street that Ms Hodyl has now proposed to be included in the core be increased in height to match the maximum heights around it.

[77] I support the principle of promoting higher density in the Montague core, to recognise its emerging character and public transport accessibility. However, I consider that the density and maximum height should be determined by detailed built form modelling, rather than the distribution of floor area based on population targets. Therefore, it is premature to determine whether 6.1:1 is the right maximum density until that modelling has been undertaken.

[78] I also support the principle of medium-rise development in the non-core area of Montague, to create a character that is distinct from the podium-tower format development. However, I consider that the proposed densities, and the maximum building heights, may be unnecessarily low. More work needs to be done to determine the appropriate density and built form model which optimises the provision of growth within a mid-rise built form, while ensuring a high quality environment.

[79] In any event, I recommend that the mandatory maximum 4-storey building height along City Road be replaced with discretionary maximum 4-storey street wall height and a discretionary minimum 10m setback requirement above the street wall (with the 'underlying' maximum height to the north applied beyond that).

[80] I support the preparation of precinct plans to resolve matters to do with density, built form and parks. Until these precinct plans have been prepared, I consider that it is premature to commit to maximum heights, densities and park locations.

[81] I agree with Mr McPherson that the secondary active frontages should be removed from within Montague North Park.

[82] In summary, my recommendations for Montague are below:

1. REVERT THE OVERALL BUILDING HEIGHT LIMITS IN THE MONTAGUE CORE TO 40 STOREYS IN MONTAGUE NORTH AND 30 STOREYS IN MONTAGUE SOUTH BETWEEN GLADSTONE STREET AND BUCKHURST STREET, FROM 134-150 BUCKHURST STREET TO KERR STREET.

2. REVERT THE MAXIMUM BUILDING HEIGHTS NORTH OF MONTAGUE PARK NORTH AND THE THISTLETHWAITE STREET PARK TO THE SURROUNDING MAXIMUM BUILDING HEIGHTS.

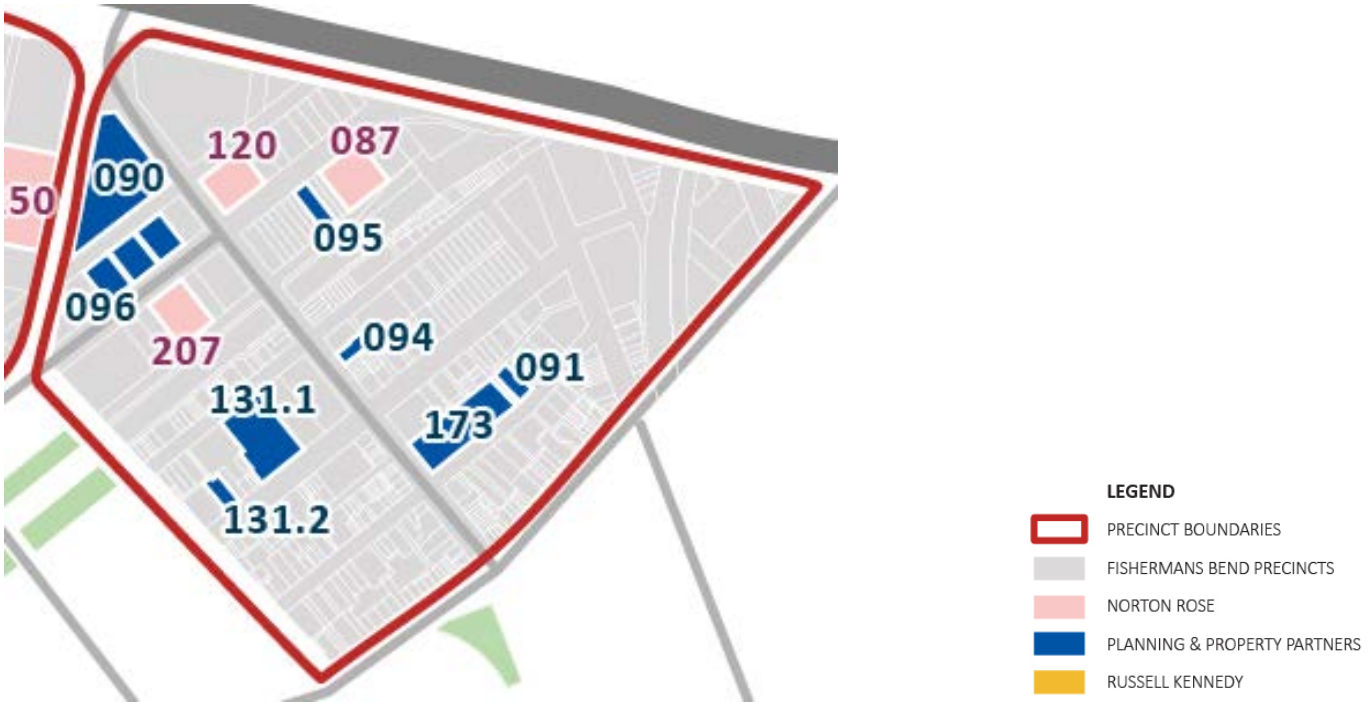
3. INCREASE THE MAXIMUM BUILDING HEIGHT FOR THE GLADSTONE STREET PROPERTIES THAT ARE RECOMMENDED BY MS HODYL TO FORM PART OF THE CORE TO MATCH THE SURROUNDING MAXIMUM HEIGHTS.

4. PREPARE DETAILED PRECINCT PLANS, IN CONJUNCTION WITH LANDOWNERS, TO RESOLVE THE OPTIMUM BUILT FORM MODEL, DENSITY AND OPEN SPACE PATTERN FOR EACH PART OF MONTAGUE.

5. REPLACE THE MANDATORY 4-STOREY HEIGHT LIMIT ON CITY ROAD WITH A DISCRETIONARY MAXIMUM 4-STOREY STREET WALL HEIGHT, AND A DISCRETIONARY MINIMUM 10M SETBACK ABOVE.

6. REMOVE THE SECONDARY ACTIVE FRONTAGE REQUIREMENT FROM WITHIN MONTAGUE PARK NORTH.

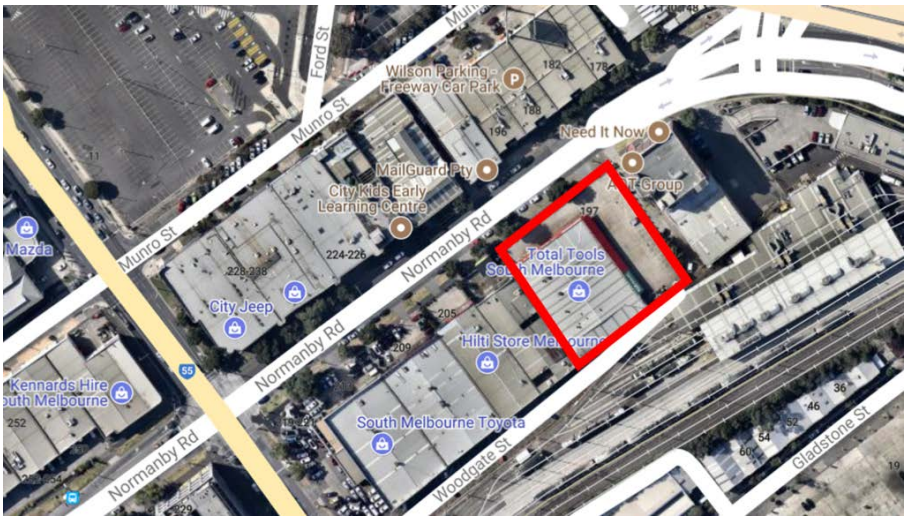
Appendix A: Analysis of Individual Sites



Location of individual sites assessed with submitter number

Submitter 87	187-197 Normanby Road, South Melbourne
Submitter 90	2-28 Montague Street & 80 Munro Street, South Melbourne
Submitter 91	30-38 Thistlethwaite Street, South Melbourne
Submitter 94	91-93 Montague Street, South Melbourne
Submitter 95	203-205 Normanby Road, South Melbourne
Submitter 96.1	248-254 Normanby Road, South Melbourne
Submitter 96.2	256-262 Normanby Road, South Melbourne
Submitter 96.3	264-270 Normanby Road, South Melbourne
Submitter 120	228-232 & 234-238 Normanby Road, Southbank
Submitter 131.1	134-150 Buckhurst Street, South Melbourne
Submitter 131.2	166-168 Buckhurst Street, South Melbourne
Submitter 173	123 Montague Street, South Melbourne
Submitter 207	235-239 & 241-243 Normanby Road, South Melbourne

Submitter 87: 187-197 Normanby Road, South Melbourne



(Source: Nearmap)

Site conditions

Site dimensions: 60m x 60m = 3,585sqm area
Two street interfaces:
North: Normanby Road (30m wide)
South: Woodgate Street (4-12m wide abutting site, 15m at widest point)
Existing conditions: Large commercial warehouse building and associated surface car parking
Irregular street tree plantings along Normanby Road
Existing crossovers: 2 x Normanby Road

Relevant site interfaces

Northeast: 5 storey office building and attached warehouse.
East: Tram depot with associated light rail connections and hard surfaces.
Southwest: Industrial warehouse constructed to the boundary. This property has a permit for a 40 Storey building.

Development proposal

Submitted Planning Permit Application comprising:
- Tower/podium typology development (40 storeys)
- 378 dwellings/ 4,776m2 non-residential floor space/ 308 car spaces
- Creation of new lane/ road along eastern boundary connecting Normanby Road and Woodgate Street

Key AmGC81 built form considerations

SITE AREA (SQM)	3,585
PUBLIC REALM AREA (SQM) POS & ROADS	975 (27%)
DEVELOPABLE SITE AREA (SQM)	2,610
CORE/ NON-CORE	Core
MAXIMUM DWELLING FAR	6.1:1
MAXIMUM DWELLING GFA (SQM)	21,869
MINIMUM NON-DWELLING FAR	1.6:1
MINIMUM NON-DWELLING GFA (SQM)	5,736
TOTAL GFA (SQM)	27,605
PREFERRED MAXIMUM HEIGHT	67.8m (20 storeys)

Other AmGC81 requirements

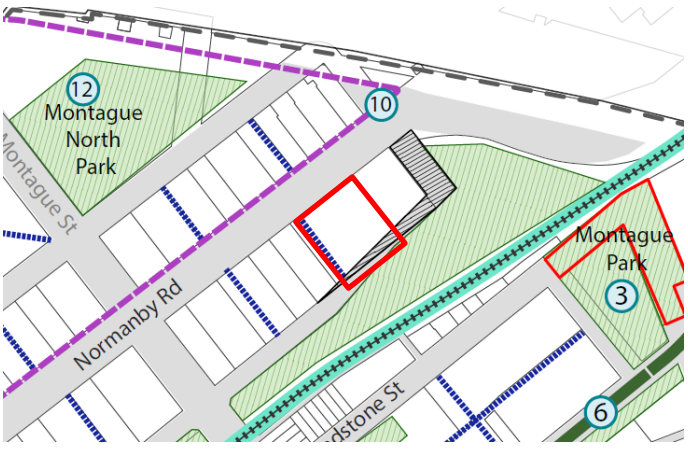
Contribution to new road extending Woodgate Street.

New 6m lane along the western boundary in the draft Framework, but not in the CCZ schedule.

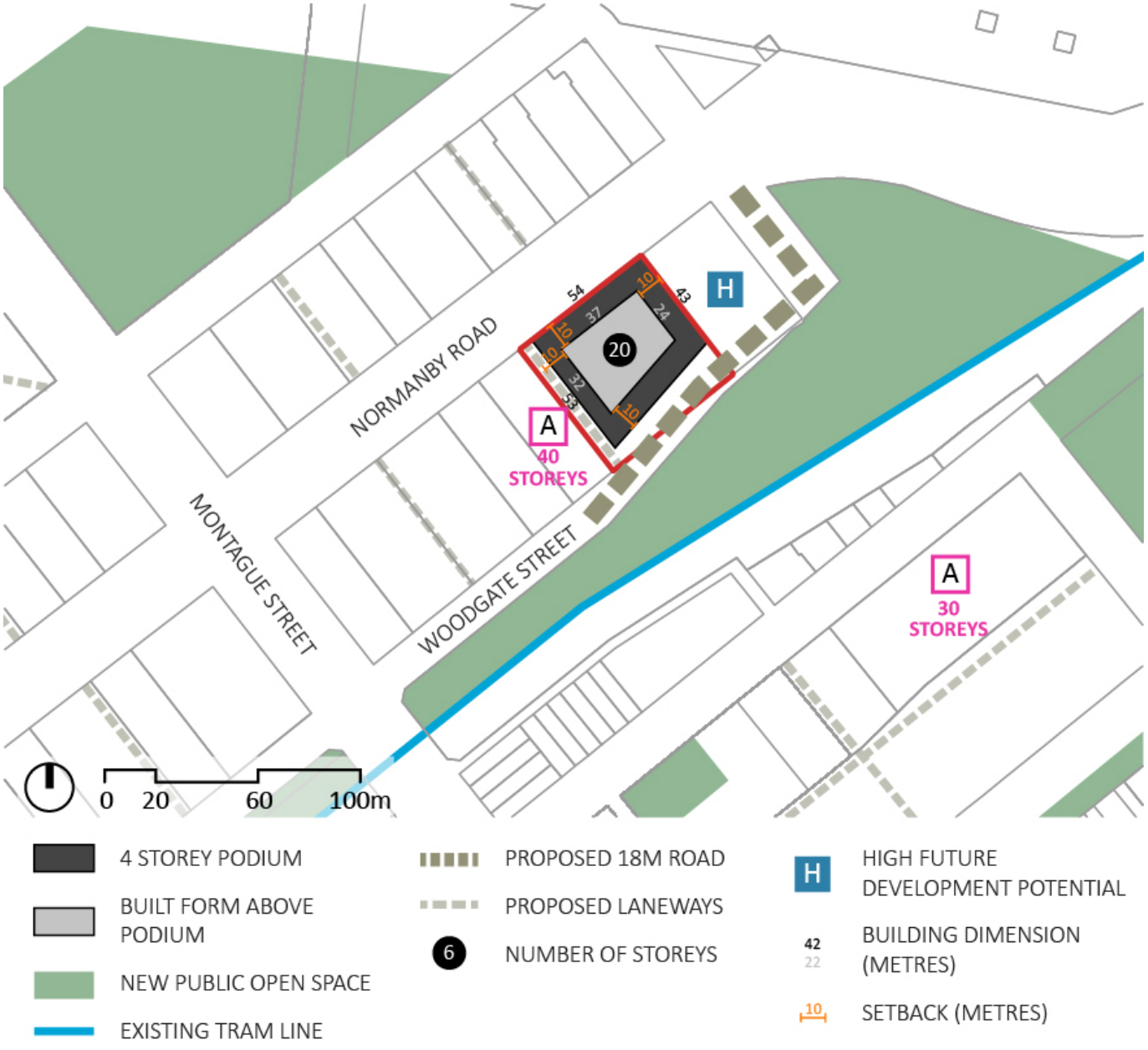
New public open space to the south and east of the site (replacing/ above tram depot) but with no overshadowing requirements.

No crossovers permitted on Normanby Road.

Primary active frontage on Normanby Road.



Development consequences



Discussion

The site can just accommodate the maximum dwelling FAR and minimum non-dwelling FAR within the building envelope controls by adopting a podium and tower form.

The non-dwelling GFA and dwelling car park GFA can be accommodated in a 4 storey podium. The dwelling GFA (minus car parking) can be principally located in a 20-storey tower.

In this context there would be minimal detrimental amenity impact from a taller tower, e.g. 40 storeys as approved on the neighbouring property to the west. The development could then accommodate additional residential or non-dwelling GFA. An additional 20 storeys of residential floor area (1050sqm per floor) would deliver ~21,000sqm additional dwelling GFA. Alternatively, additional height would provide more design flexibility, e.g. a more slender tower.

The likely development under the proposed controls is significantly lower in height and delivers significantly fewer dwellings than the current proposal for the site, which complies with the current interim controls (see table below).

	CURRENT PROPOSAL	AM GC81 POTENTIAL	DIFFERENCE
Dwelling FAR	15.2:1	6.1:1	-9.1:1
Dwelling GFA	54,585	21,869	-32,717
No. dwellings	378	177	- 201
Dwelling density per ha	1,054	495	- 560
Non-dwelling GFA	4,800	5,736	+ 960
Height - storeys	40	20	- 20

Submitter 90: 2-28 Montague Street & 80 Munro Street, South Melbourne

(Source: Nearmap)

Site conditions

Site dimensions: 150m x 178m x 108m = 9,719 sqm area forming an island site
Three street interfaces:
Northeast: Montague Street (30m wide)
South: Munro Street (20m wide)
West: Johnson Street (30m wide)
Existing conditions: Large commercial warehouse building and associated surface car parking with crossovers to Munro and Johnson Streets.
Street tree plantings along Johnson Street, Munro Street and Montague Street.

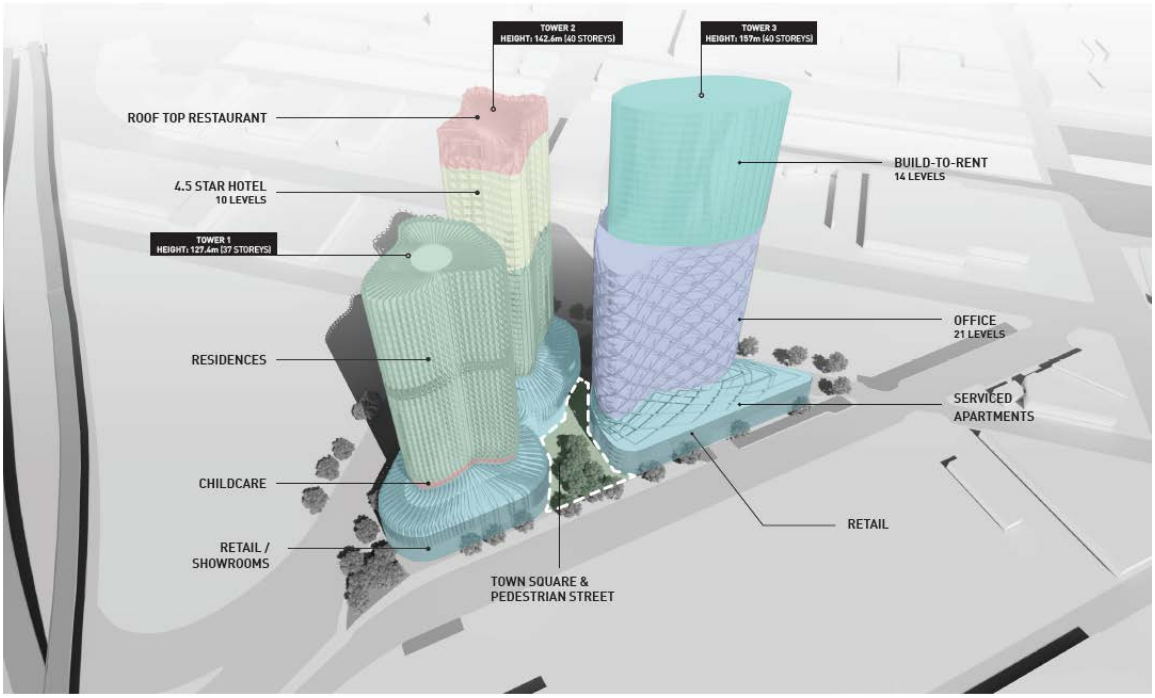
Relevant site interfaces

North: Westgate freeway access roads/ramps.

Development proposal

Submitted Planning Permit Application (PA17000291) comprising 3-tower development of 37 to 40 storeys with mixed-use hotel, 9,000sqm retail space /7,000sqm hotel /26,000sqm office. 566 apartments and 208 serviced apartments and 126 “rent to buy” dwellings.


URBAN CONTEXT REPORT
2-28 MONTAGUE ST & 80 MUNRO ST
SOUTH MELBOURNE
OCTOBER 2017
GURNER™
COX


TOWER 2
HEIGHT: 142.6m (40 STOREYS)
TOWER 3
HEIGHT: 197m (40 STOREYS)
ROOF TOP RESTAURANT
4.5 STAR HOTEL
10 LEVELS
TOWER 1
HEIGHT: 127.4m (37 STOREYS)
RESIDENCES
CHILDCARE
RETAIL / SHOWROOMS
BUILD-TO-RENT
14 LEVELS
OFFICE
21 LEVELS
SERVICED APARTMENTS
RETAIL
TOWN SQUARE & PEDESTRIAN STREET

Key AmGC81 built form considerations

SITE AREA (SQM)	9,719
PUBLIC REALM AREA (SQM) POS & ROADS	578 (6%)
DEVELOPABLE SITE AREA (SQM)	9,141
CORE/ NON-CORE	Core
MAXIMUM DWELLING FAR	6.1:1
MAXIMUM DWELLING GFA (SQM)	59,286
MINIMUM NON-DWELLING FAR	1.6:1
MINIMUM NON-DWELLING GFA (SQM)	15,550
TOTAL GFA (SQM)	74,836
PREFERRED MAXIMUM HEIGHT	80.6m (24 storeys)

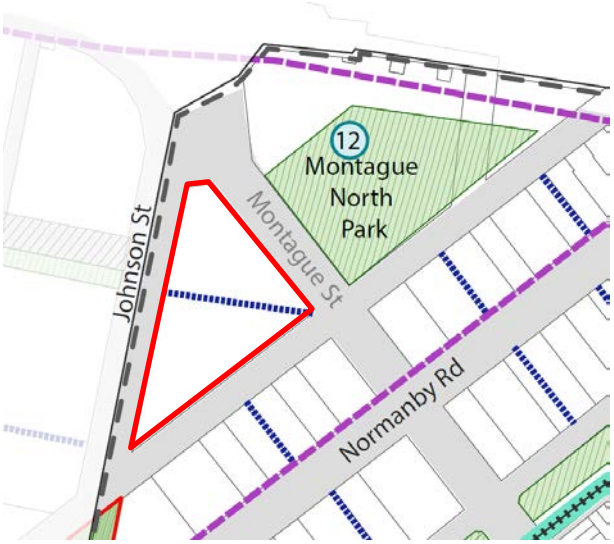
Other AmGC81 requirements

12m wide lane dividing the site in half in the draft Framework, but not in the CCZ schedule.

New park to the northeast which may not be overshadowed at 11am-2pm at the September equinox—not likely to be a significant constraint.

New park to the southwest with no overshadowing protection.

Secondary active frontages on Montague Street and Johnson Street.



Development consequences

Discussion

The site can accommodate the maximum dwelling FAR and minimum non-dwelling FAR within the building envelope controls by adopting a podium and tower form.

The non-dwelling GFA and dwelling car park GFA can been accommodated in two 4 storey podiums. The dwelling GFA (minus car parking) can be principally located in two 11 storey L-shaped towers on top, reaching a total height of 15 storeys. The laneway is assumed to be between the towers.

In this context (particularly given the island nature of the site) there would be minimal detrimental amenity impact from taller towers up to the preferred maximum of 24 storeys, or even up the 37-40 storeys currently proposed for the site. The development could then accommodate additional dwelling or non-dwelling GFA. Alternatively, the same floor area could be accommodated in more slender towers.

The current 40 storey proposal for the site would not overshadow Montague Park on the September Equinox between 9am and 3pm.

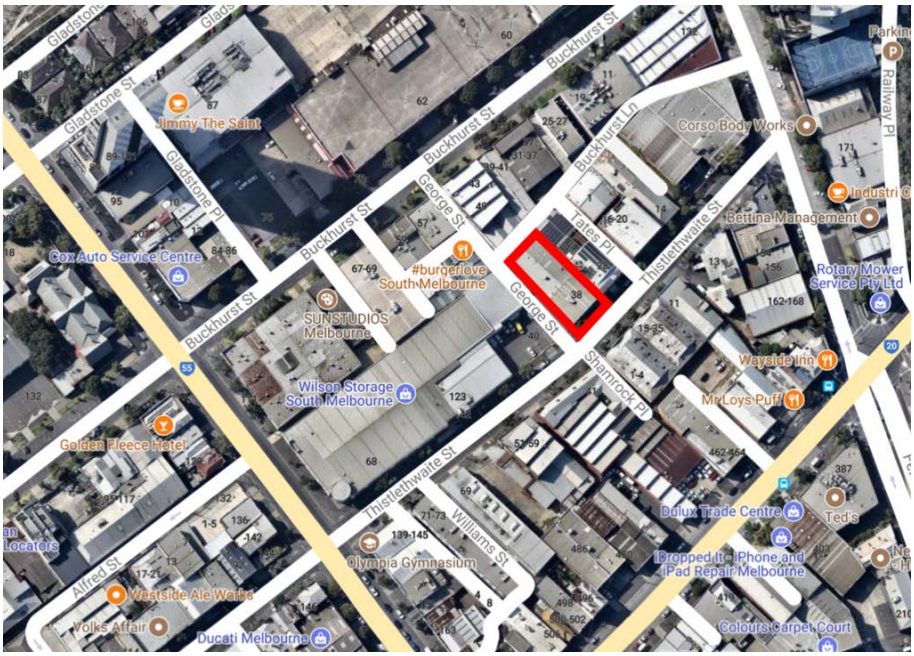
	CAPACITY IN ACCORDANCE WITH DENSITY CONTROLS	CAPACITY IN ACCORDANCE WITH BUILT FORM CONTROLS	DIFFERENCE
Dwelling GFA (sqm)	59,286	90,234	+ 30,948
No. dwellings	481	732	+ 251
Non-dwelling GFA (sqm)	15,550	15,550	-
Total GFA (sqm)	74,836	105,784	+ 30,948

The potential development under the proposed controls is significantly lower and delivers substantially fewer dwellings than the current proposal for the site which complies with the current interim controls (see table below.

	CURRENT PROPOSAL	AM GC81 POTENTIAL	DIFFERENCE
Dwelling FAR	15.7:1	6.1:1	-9.6:1
Dwelling GFA	152,168	59,286	-92,882
Dwellings No.	1,080*	481	- 391
Dwelling density per HA	1,111	495	-403
Non dwelling GFA	38,000	15,550	-6,550
Height- storeys	40	15	-25

*208 serviced apartments.
566 apartments.
180 hotel keys.
126 build to rent.

Submitter 91: 30-38 Thistlethwaite Street, South Melbourne



(Source: Nearmap)

Site conditions

Site dimensions: 22m x 44m = 899m² area
Three street interfaces:
Northwest: Buckhurst Lane (7m wide)
Southwest: George Street (7m wide)
Southeast: Thistlethwaite Street (20m wide)
Existing conditions: Two storey industrial warehouse building
Irregular street tree plantings along Thistlethwaite Street
Existing crossovers: 1 x Thistlethwaite Street, 1 x George Street, 1 x Buckhurst Lane

Relevant site interfaces

Northeast: Two storey industrial warehouse building and associated offices.

Development proposal

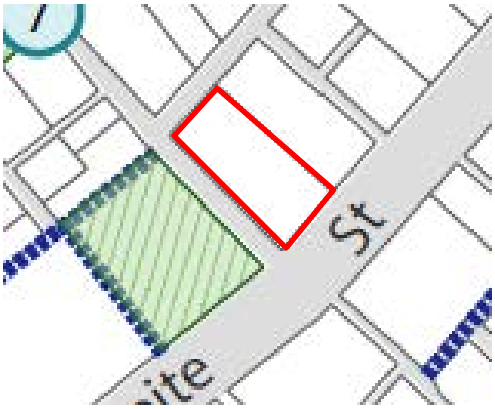
No current planning permit application.

Key AmGC81 built form considerations

SITE AREA (SQM)	899
PUBLIC REALM AREA (SQM) POS & ROADS	(0%)
DEVELOPABLE SITE AREA (SQM)	899
CORE/ NON-CORE	Core
MAXIMUM DWELLING FAR	6.1:1
MAXIMUM DWELLING GFA (SQM)	5,484
MINIMUM NON-DWELLING FAR	1.6:1
MINIMUM NON-DWELLING GFA (SQM)	1,438
TOTAL GFA (SQM)	6,922
PREFERRED MAXIMUM HEIGHT	42.2m (12 Storeys)

Other AmGC81 requirements

Proposed park to the southwest across George Street which may not be overshadowed at 10am -2pm on the September equinox.



Development consequences

Discussion

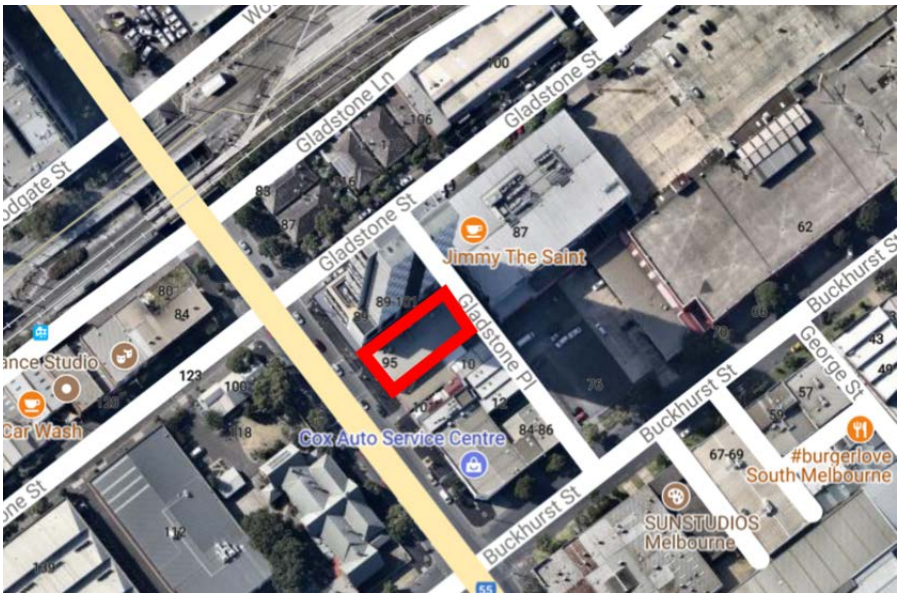
The site cannot accommodate the maximum dwelling FAR within the proposed building envelope controls, principally due to the requirement for built form above the podium to avoiding additional shadowing of the park to the southwest at 10am – 2pm on the September equinox.

The maximum floor area can be accommodated through a 6-storey podium and stepped tower form above to a maximum height of 9 storeys .

The upper levels from both setback requirements and for shadow reasons also result in a very small floor plate, which is unlikely to be viable.

	CAPACITY IN ACCORDANCE WITH DENSITY CONTROLS	CAPACITY IN ACCORDANCE WITH BUILT FORM CONTROLS	DIFFERENCE
Dwelling GFA (sqm)	5,484	4,889	- 595
No. dwellings	44	40	- 5
Non-dwelling GFA (sqm)	1,438	1,438	- xxx
Total GFA (sqm)	6,922	6,327	- 595

Submitter 94: 91-93 Montague Street, South Melbourne



(Source: Nearmap)

Site conditions

Site dimensions: 18m x 38m = 640m² area
Two street interfaces:
West: Montague Street (30m wide)
East (rear): Gladstone Place (7m wide)
Existing conditions: Two storey industrial offices with surface car parking and vehicle access via Gladstone Place

Relevant site interfaces

North: 29-storey mixed use podium and tower with a blank wall on the common boundary to the site
East: Gladstone Place
South: Commercial building and associated surface car parking.

Development proposal

Planning Permit Application (PA1500040) comprising a 30-storey mixed use tower comprising 101 dwellings/ 62 car parks /248sqm leasable floor area.

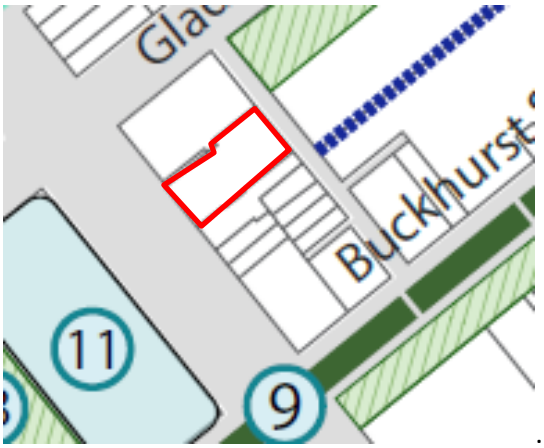
Key AmGC81 built form considerations

SITE AREA (SQM)	5,685
PUBLIC REALM AREA (SQM) POS & ROADS	2,424 (43%)
DEVELOPABLE SITE AREA (SQM)	3,261
CORE/ NON-CORE	Core
MAXIMUM DWELLING FAR	6.1:1
MAXIMUM DWELLING GFA (SQM)	34,679
MINIMUM NON-DWELLING FAR	1.6:1
MINIMUM NON-DWELLING GFA (SQM)	9,096
TOTAL GFA (SQM)	43,775
PREFERRED MAXIMUM HEIGHT	42.2m (12 storeys)

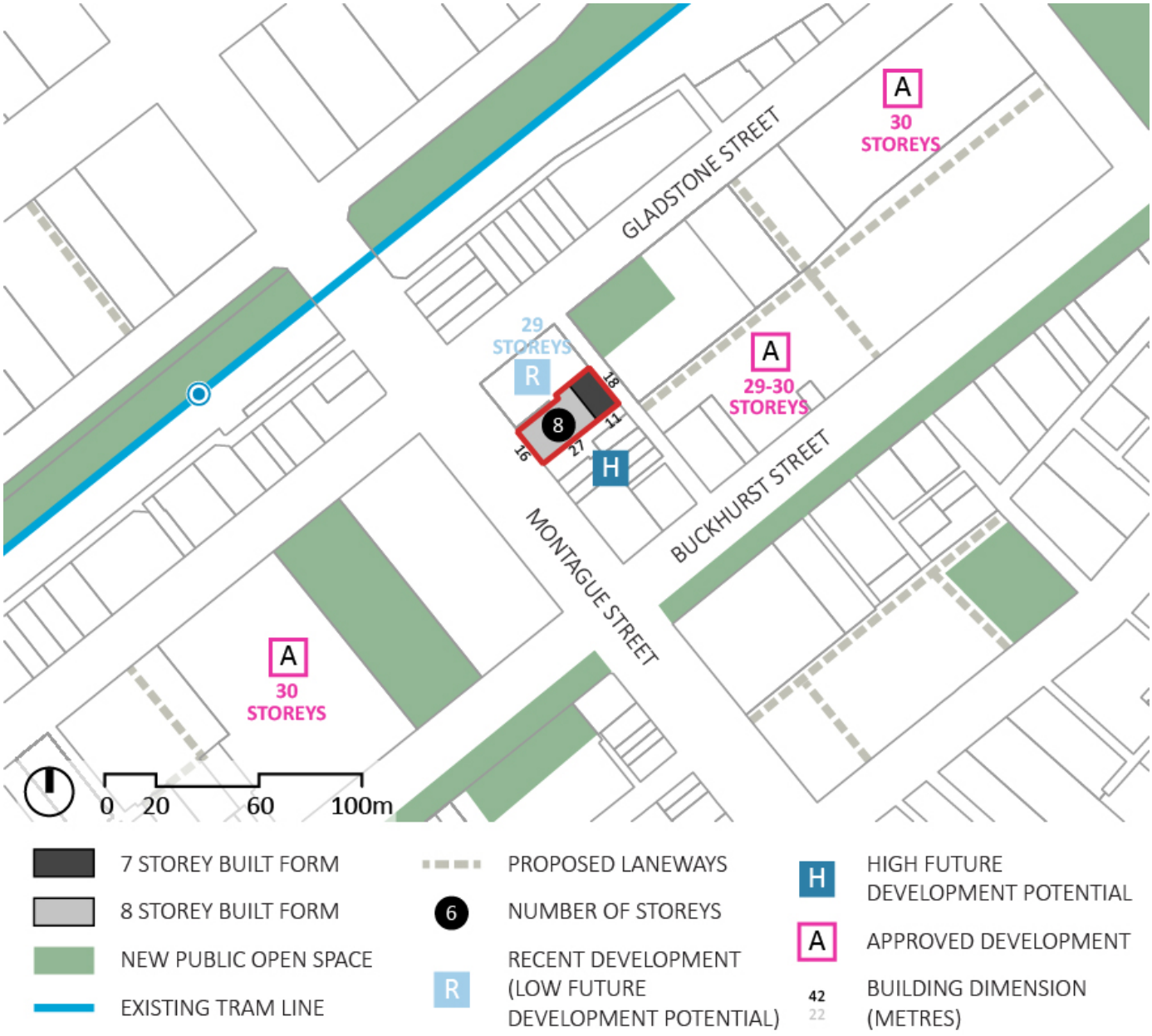
Other AmGC81 requirements

Proposed park to the northeast of the site.

Primary active frontage to Montague Street.



Development consequences



Discussion

The site can accommodate the maximum dwelling FAR and minimum non-dwelling FAR within the building envelope controls in the form of a 7-storey building built to its boundaries with a recessed 8th storey.

The long narrow nature of the site makes development above the podium difficult due to the side setback requirements. Notably, the proposed controls provide no discretion to respond to the 29-storey side blank wall of the northwestern neighbour.

The development is significantly lower and delivers substantially fewer dwellings than the current proposal for the site, which complies with the current interim controls (see table below).

	CURRENT PROPOSAL	AM GC81 POTENTIAL	DIFFERENCE
Dwelling FAR	20.7:1	6.1:1	-14.6:1
Dwelling GFA	13,244	3,904	-9,340
Dwellings No.	101	32	-69
Dwelling density per HA	1,578.1	495	-1,084
Non dwelling GFA	248	1,024	-776
Height- storeys	30	8	-22

Submitter 95: 203-205 Normanby Road, South Melbourne

(Source: Nearmap)

Site conditions

Site dimensions: 20m x 60m = 1,299m² area
Two street interfaces:
North: Normanby Road (30m wide)
South: Woodgate Street (15m wide)
Existing conditions: Industrial warehouse building and associated surface car parking
Irregular street tree planting along Normanby Road
Existing crossovers: 1 x Normanby Road, 1 x Woodgate Street

Relevant site interfaces

East: Industrial warehouse building and associated surface car parking
West: Industrial warehouse buildings and associated surface car parking

Development proposal

Planning Permit Application (2015/035831) for 40 storeys in tower/podium typology comprising 238 dwellings /66 car parks /519sqm leasable floor area.

Key AmGC81 built form considerations

SITE AREA (SQM)	1,299
PUBLIC REALM AREA (SQM) POS & ROADS	12 (1%)
DEVELOPABLE SITE AREA (SQM)	1,287
CORE/ NON-CORE	Core
MAXIMUM DWELLING FAR	6.1:1
MAXIMUM DWELLING GFA (SQM)	7,924
MINIMUM NON-DWELLING FAR	1.6:1
MINIMUM NON-DWELLING GFA (SQM)	2,078
TOTAL GFA (SQM)	10,002
PREFERRED MAXIMUM HEIGHT	67.8m (20 storeys)

Other AmGC81 requirements

Small (12sqm) contribution to new road to the south.

Proposed park to the south of the site.

No crossovers permitted on Normanby Road.

Primary active frontage on Normanby Road.

Development consequences

Discussion

The site cannot accommodate the maximum dwelling FAR and minimum non-dwelling FAR within the building envelope controls, due to the narrow width of the site and the tower side setback requirements.

The development concept illustrated above adopts 5m side tower setbacks. This assumes the development has no habitable room windows or balconies in its side walls. Even then, the tower is only 10m wide.

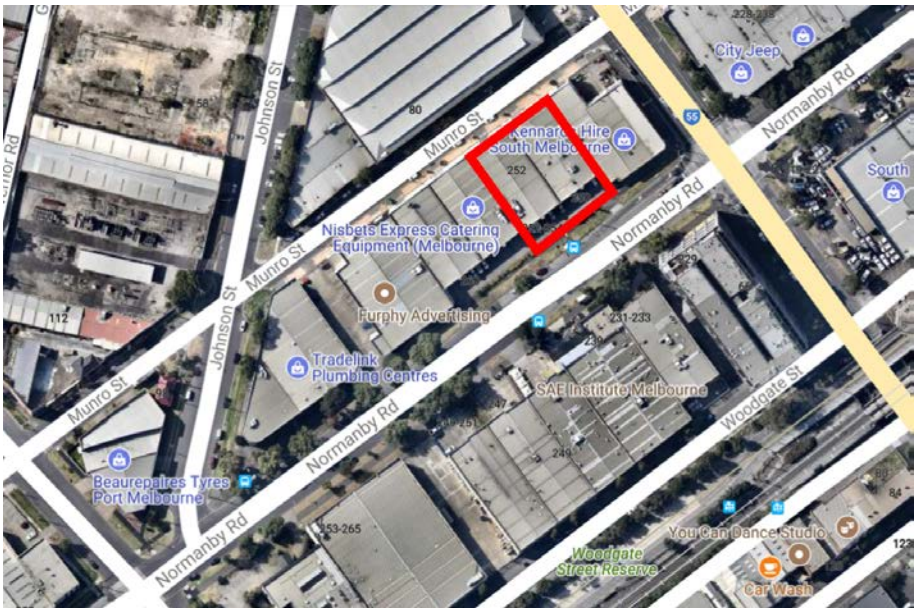
In reality, such a tower is unlikely to be viable, so the proposal is only likely to be able to reach a maximum height of 8 storeys. Notably, despite the neighbouring property to the northeast having a permit to build on the common boundary, the proposed controls do not allow a development of this site to build to the common boundary.

	CAPACITY IN ACCORDANCE WITH DENSITY CONTROLS	CAPACITY IN ACCORDANCE WITH BUILT FORM CONTROLS	DIFFERENCE
Dwelling GFA (sqm)	7,924	2,750	-5,174
No. dwellings	64	22	-42
Non-dwelling GFA (sqm)	2,078	2,078	-
Total GFA (sqm)	10,002	4,828	-5,174

The potential development in accordance with the proposed controls is significantly lower and delivers substantially fewer dwellings than the current proposal for the site, which complies with the current interim controls (see table below).

	CURRENT PROPOSAL	AM GC81 POTENTIAL	DIFFERENCE
Dwelling FAR	23.01:1	6.1:1	-16.9:1
Dwelling GFA	29,884	7,924	-21,690
No. dwellings	238	64	-174
Dwelling density per ha	1,832	495	-1,338
Non-dwelling GFA	519	2,078	+1,559
Height - storeys	40	16	-24

Submitter 96.1: 248-254 Normanby Road, South Melbourne



(Source: Nearmap)

Site conditions

Site dimensions: 40m x 51m = 2,027sqm area
Two street interfaces:
North: Munro Street (20m wide)
South: Normanby Road (30m wide)
Existing conditions: Two lots each with industrial warehouse building and associated surface car parking
Irregular street tree plantings along Normanby Road
Existing crossovers: 1 x Normanby Road, 2 x Munro Street

Relevant site interfaces

East: Industrial warehouse building and associated surface car parking
West: Industrial warehouse buildings and associated surface car parking

Development proposal

Planning Permit Application (2015/035878) for 39 storeys in tower/podium typology comprising 191 dwellings /129 car parks /2,595sqm leasable floor area.

Key AmGC81 built form considerations

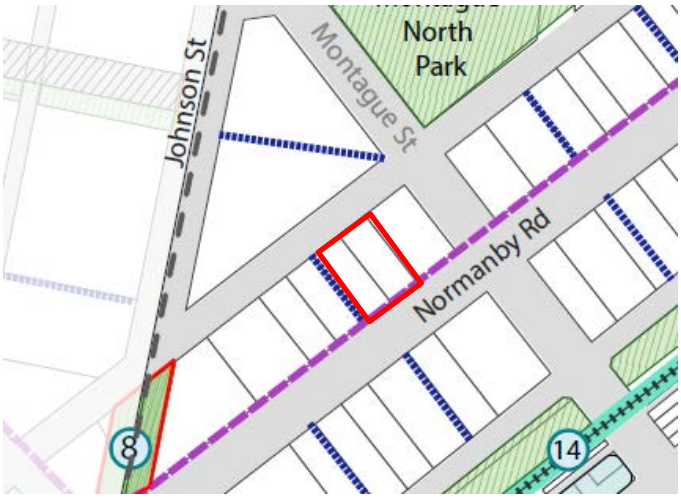
SITE AREA (SQM)	2,027
PUBLIC REALM AREA (SQM) POS & ROADS	63(0%)
DEVELOPABLE SITE AREA (SQM)	2,027
CORE/NON-CORE	Core
MAXIMUM DWELLING FAR	6.1:1
MAXIMUM DWELLING GFA (SQM)	12,365
MINIMUM NON-DWELLING FAR	1.6:1
MINIMUM NON-DWELLING GFA (SQM)	3,243
TOTAL GFA (SQM)	15,608
PREFERRED MAXIMUM HEIGHT	67.8m (20 storeys)

Other AmGC81 requirements

No crossovers permitted on Normanby Road.

Primary active frontage on Normanby Road.

Indicative laneway along the western edge of the site in the draft Framework, but not in the CCZ schedule.



Development consequences

Discussion

The site can just accommodate the maximum dwelling FAR and minimum non-dwelling FAR within the proposed building envelope controls by adopting a podium and tower form.

The non-dwelling GFA and dwelling car park GFA can be accommodated in a 3 storey podium. The dwelling GFA (minus car parking) can be principally located in a 13 storey tower on top, reaching a total height of 16 storeys.

The laneway is assumed to be within the neighbouring site to the west, which is reflected in the indicative concept above with a reduced setback above the podium due to the 10m setback being measured from the centreline of this lane.

The maximum FAR prevents development from reaching the preferred maximum height. There is capacity for an additional 4 levels within the built form controls to reach the preferred maximum height of 20 storeys. This would deliver approximately an additional 21 dwellings, as shown below.

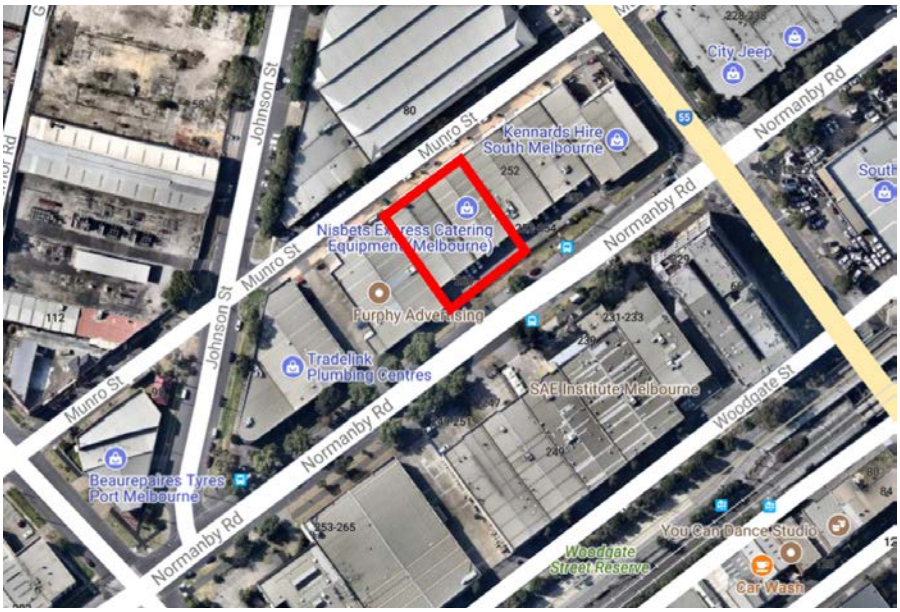
	CAPACITY IN ACCORDANCE WITH DENSITY CONTROLS	CAPACITY IN ACCORDANCE WITH BUILT FORM CONTROLS	DIFFERENCE
Dwelling GFA (sqm)	12,365	14,981	+ 2,616
No. dwellings	100	121	+ 21
Non-dwelling GFA (sqm)	3,243	3,243	-
Total GFA (sqm)	15,608	18,224	+ 2,616

The development is significantly lower and delivers substantially fewer dwellings than the current proposal for the site, which complies with the current interim controls (see table below).

	CURRENT PROPOSAL	AM GC81 POTENTIAL	DIFFERENCE
Dwelling FAR	13.3:1	6.1:1	-7.2:1
Dwelling GFA	26,999	12,365	-14,634
No. dwellings	191	100	-91
Dwelling density per ha	942	495	- 448
Non-dwelling GFA	2,595	3,243	+648
Height - storeys	39	16	- 23

In this context, there would be limited amenity impact from the proposed taller towers. The additional height would provide additional residential GFA or additional non-dwelling GFA.

Submitter 96.2: 256-262 Normanby Road, South Melbourne



(Source: Nearmap)

Site conditions

Site dimensions: 41m x 51m = 2,054m² area
Two street interfaces:
North: Munro Street (20m wide)
South: Normanby Road (30m wide)
Existing conditions: Two lots each with industrial warehouse building and associated surface car parking.
Some street trees on Normanby Road.
Existing crossovers: 1 x Normanby Road, 2 x Munro Street.

Relevant site interfaces

East: Industrial warehouse building and associated surface car parking. Current application for a 39 storey building.
West: Industrial warehouse buildings and associated surface car parking. Current application for a 40 storey building.

Development proposal

Planning Permit Application (2015/035806) for 39 storeys in a tower/podium typology comprising 174 dwellings /120 car parks /2,277sqm leasable floor area.

Key AmGC81 built form considerations

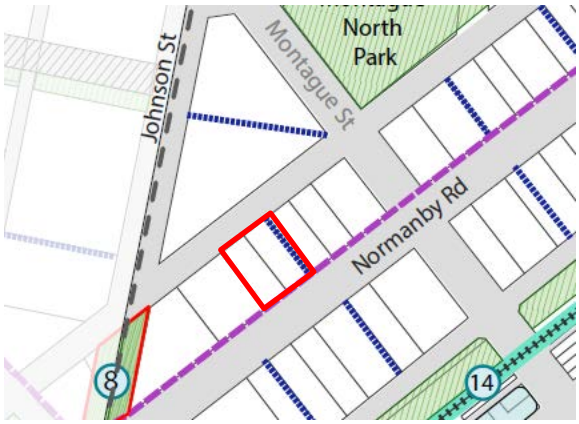
SITE AREA (SQM)	2,054
PUBLIC REALM AREA (SQM) POS & ROADS	304 (15%)
DEVELOPABLE SITE AREA (SQM)	1,750
CORE/ NON-CORE	Core
MAXIMUM DWELLING FAR	6.1:1
MAXIMUM DWELLING GFA (SQM)	12,529
MINIMUM NON-DWELLING FAR	1.6:1
MINIMUM NON-DWELLING GFA (SQM)	3,286
TOTAL GFA (SQM)	15,816
PREFERRED MAXIMUM HEIGHT	67.8m (20 storeys)

Other AmGC81 requirements

Indicative laneway along the eastern edge of the site in the draft Framework, but not in the CCZ schedule.

No crossovers permitted on Normanby Road.

Primary active frontage on Normanby Road.



Development consequences

Discussion

The site can just accommodate the maximum dwelling FAR and minimum non-dwelling FAR within the proposed building envelope controls by adopting a podium and tower form.

The non-dwelling GFA and dwelling car park GFA can be accommodated in a 4-storey podium. The dwelling GFA (minus car parking) can be principally located in a 16-storey tower on top, reaching a total height of 20 storeys.

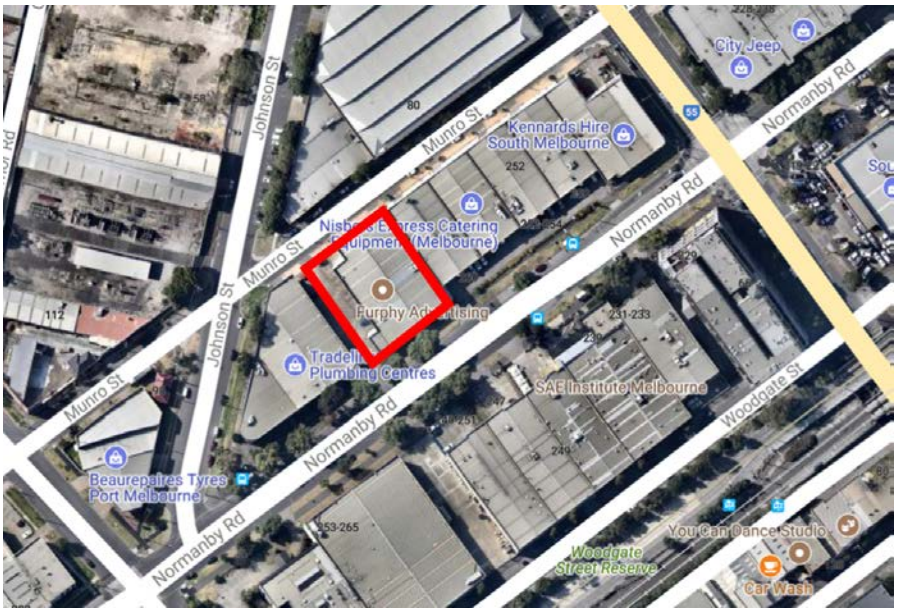
The laneway is assumed to be within the site, which is reflected in the indicative concept above with an increased setback above the podium due to the 10m setback the being measured from the centreline of this lane.

In this context, there would be limited amenity impact from taller towers, such as the 39 storeys currently proposed for the site. The development could then accommodate additional residential GFA or additional non-dwelling GFA.

The development is significantly lower and delivers substantially fewer dwellings than the current proposal for the site, which complies with the current interim controls (see table below).

	CURRENT PROPOSAL	AM GC81 POTENTIAL	DIFFERENCE
Dwelling FAR	12.7:1	6.1:1	6.6:1
Dwelling GFA	26,025	12,529	13,496
No. dwellings	174	102	-72
Dwelling density per ha	847	495	- 4353
Non-dwelling GFA	2,277	3,286	+ 1,009
Height - storeys	39	16	- 23

Submitter 96.3: 264-270 Normanby Road, South Melbourne



(Source: Nearmap)

Site conditions

Site dimensions: 39m x 51m= 2,022sqm area
Two street interfaces:
North: Munro Street (20m wide)
South: Normanby Road (30m wide)
Existing conditions: Two lots each with an industrial warehouse building and associated surface car parking.
Irregular street tree planting along Normanby Road.
Existing crossovers: 1 x Normanby Road, 2 x Munro Street.

Relevant site interfaces

East: Industrial warehouse building and associated car parking hard surfaces. Current application for 39 storey building.
West: Industrial warehouse buildings and associated surface car parking.

Development proposal

Planning Permit Application (2015/035822)
40 Storeys comprising 1 tower and podium, 194 dwellings /152 car parks /2,721sqm leasable floor area

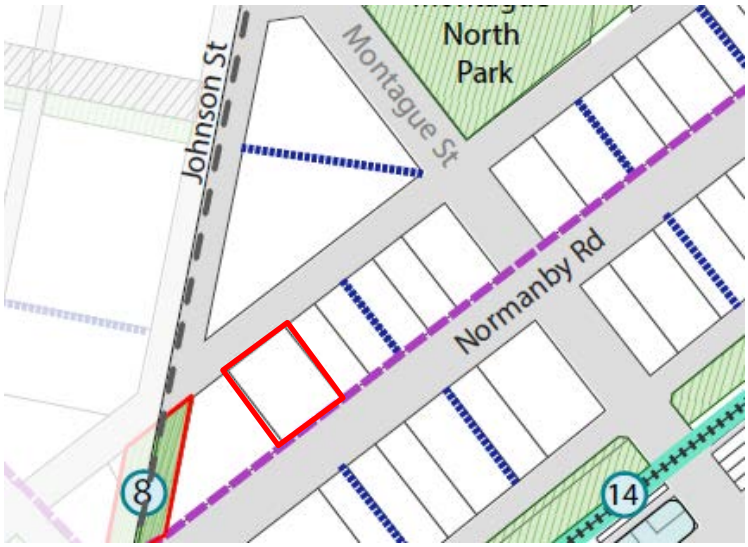
Key AmGC81 built form considerations

SITE AREA (SQM)	2,022
PUBLIC REALM AREA (SQM) POS & ROADS	(0%)
DEVELOPABLE SITE AREA (SQM)	2,022
CORE/ NON-CORE	Core
MAXIMUM DWEELING FAR	6.1:1
MAXIMUM DWELLING GFA (SQM)	12,334
MINIMUM NON-DWELLING FAR	1.6:1
MINIMUM NON-DWELLING GFA (SQM)	3,235
TOTAL GFA (SQM)	15,569
PREFERRED MAXIMUM HEIGHT	67.8m (20 storeys)

Other AmGC81 requirements

No crossovers permitted on Normanby Road.

Primary active frontage on Normanby Road.



Development consequences

Discussion

The site can just accommodate the maximum dwelling FAR and minimum non-dwelling FAR within the proposed building envelope controls by adopting a podium and tower form.

The non-dwelling GFA and dwelling car park GFA can be accommodated in a 3-storey podium. The dwelling GFA (minus car parking) can be principally located in a 15-storey tower on top, reaching a total height of 18 storeys.

The maximum FAR prevents development from reaching the preferred maximum height. There is capacity within the built form controls for an additional 2 levels to reach the preferred maximum height of 20 storeys. This would deliver approximately an additional 20 dwellings, as shown below.

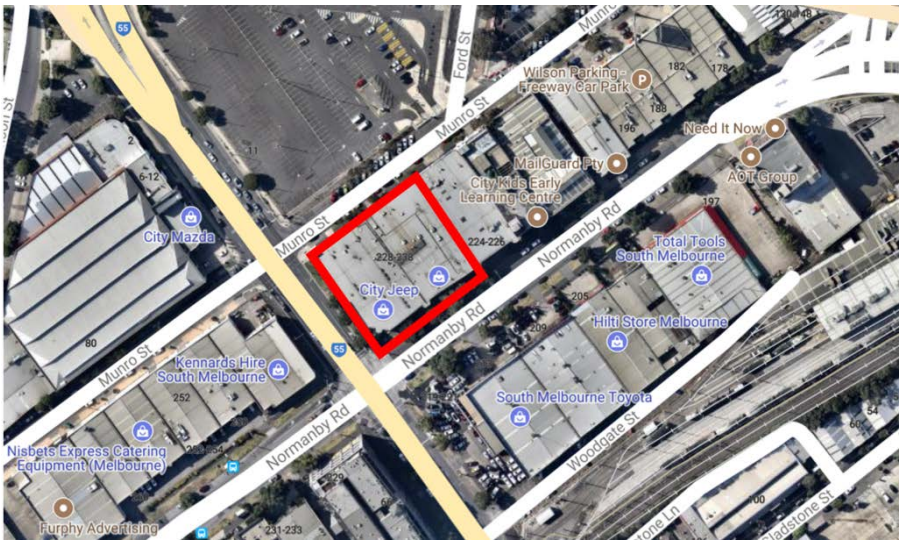
	CAPACITY IN ACCORDANCE WITH DENSITY CONTROLS	CAPACITY IN ACCORDANCE WITH BUILT FORM CONTROLS	DIFFERENCE
Dwelling GFA (sqm)	12,334	13,534	+ 1210
No. dwellings	100	120	+ 20
Non-dwelling GFA (sqm)	3,235	3,235	-
Total GFA (sqm)	15,569	16,779	+ 1210

In this context, there would be limited amenity impact from taller towers, such as the 39 storeys currently proposed for the site. The development could then accommodate additional residential GFA or additional non-dwelling GFA.

The development is significantly lower and delivers substantially fewer dwellings than the current proposal for the site, which complies with the current interim controls (see table below).

	CURRENT PROPOSAL	AM GC81 POTENTIAL	DIFFERENCE
Dwelling FAR	12.5:1	6.1:1	-6.4:1
Dwelling GFA	25,334	12,334	-13,000
No. dwellings	194	100	-94
Dwelling density per ha	959.5	495	-465
Non-dwelling GFA	2,721	3,235	+ 514
Height - storeys	40	18	-22

Submitter 120: 228-238 Normanby Road, South Melbourne



(Source: Nearmap)

Site conditions

Site dimensions: 61m x 50m = 3,064m² area
Three street frontages:
North: Munro Street (20m wide)
Southwest: Montague Street (30m wide)
Southeast: Normanby Road (30m wide)
Existing conditions: 2 storey commercial car warehouse.
Irregular, large street tree plantings along Normanby Road.
Existing crossovers: 2 x Munro Street

Relevant site interfaces

East: 2 storey commercial warehouse building.

Development proposal

Approved Planning Permit (MPA14/0007 – 20 May, 2015) comprising:
- 2 tower/podium typology developments (39-49 storeys)
- 525 dwellings/ 608m2 non-residential floor space/ 243 car spaces
- Vehicle access and pedestrian link between Normanby Road and Munro Street
Extension of time granted on 19 March 2017. Commencement date 20 May 2018, completion date 20 May 2021.

Key AmGC81 built form considerations

SITE AREA (SQM)	3,064
PUBLIC REALM AREA (SQM) POS & ROADS	N/A
DEVELOPABLE SITE AREA (SQM)	3,064
CORE/ NON-CORE	Core
MAXIMUM DWELLING FAR	6.1:1
MAXIMUM DWELLING GFA (SQM)	18,690
MINIMUM NON-DWELLING FAR	1.6:1
MINIMUM NON-DWELLING GFA (SQM)	4,902
TOTAL GFA (SQM)	23,593
PREFERRED MAXIMUM HEIGHT	67.8m (20 storeys)

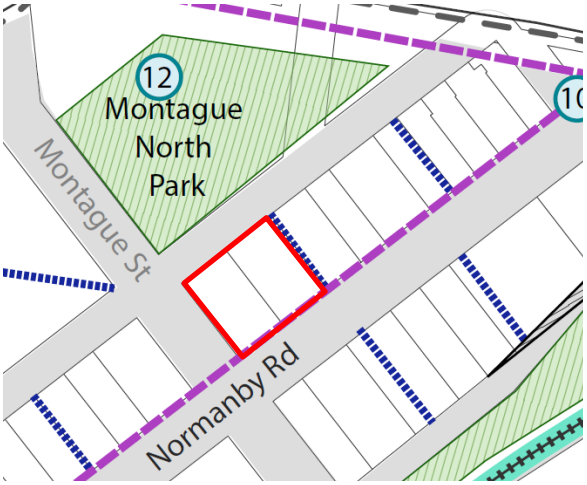
Other AmGC81 requirements

No crossovers permitted on Normanby Road.

Indicative laneway along the eastern edge of the site within the neighbouring property in the draft Framework, but not in the CCZ schedule.

New public open space to the north of the site.

Active frontages: Primary on Normanby Road and Secondary on Montague Street and Munro Street.



Development consequences

Discussion

The site can just accommodate the maximum dwelling FAR and minimum non-dwelling FAR within the proposed built form controls by adopting a podium and tower form.

The non-dwelling GFA and dwelling car park GFA can be accommodated in a 3-storey podium. The dwelling GFA (minus car parking) can be principally located in a 13-storey tower on top, reaching a total height of 16 storeys. The laneway is assumed to be accommodated on the site to the east but could be located on the site.

In this context, there would be limited detrimental amenity impact from a taller tower. The development could then accommodate additional residential GFA or additional non-dwelling GFA.

There is capacity within the built form controls for an additional 4 levels to reach the 20-storey preferred maximum height in this location. An additional 4 storeys of residential development would have the potential to deliver ~4,300sqm of additional dwelling GFA (see table below).

	CAPACITY IN ACCORDANCE WITH DENSITY CONTROLS	CAPACITY IN ACCORDANCE WITH BUILT FORM CONTROLS	DIFFERENCE
Dwelling GFA (sqm)	18,690	22,989	+ 4,299
No. dwellings	152	186	+ 35
Non-dwelling GFA (sqm)	4,902	4,902	-
Total GFA (sqm)	23,593	27,892	+ 4,299

The development is significantly lower and delivers substantially fewer dwellings than the current proposal for the site, which complies with the current interim controls (see table below).

	CURRENT PROPOSAL	AM GC81 POTENTIAL	DIFFERENCE
Dwelling FAR	20:1	6.1:1	-13.9:1
Dwelling GFA	61,344	18,690	-42,654
No. dwellings	525	152	- 373
Dwelling density per ha	1,713.45	495	- 1,219
Non-dwelling GFA	608	4,902	+ 4,294
Height - storeys	49	16	- 33

Submitter 131.1: 134-150 Buckhurst Street, South Melbourne

(Source: Nearmap)

Site conditions

Site dimensions: 59-66m x 89m = 5,447m² area
Three street interfaces:
South: Buckhurst Street (30m wide)
North: Gladstone Street (20m wide)
Milsom Place: extends halfway along the southwest boundary of the site (5m to 10m wide)
Existing conditions: Two storey industrial warehouse buildings and associated surface car parking
Street tree plantings along Buckhurst Street and Gladstone Street
Existing crossovers: 2 x Buckhurst Street, 3 x Gladstone Street

Relevant site interfaces

East: Industrial warehouse and associated surface car parking
West: Industrial warehouse and associated surface car parking

Development proposal

Approved Planning Permit (2013004014) comprising of a 30 Storey development.

Key AmGC81 built form considerations

SITE AREA (SQM)	5,447
PUBLIC REALM AREA (SQM) POS & ROADS	(0%)
DEVELOPABLE SITE AREA (SQM)	5,447
CORE/ NON-CORE	Core
MAXIMUM DWELLING FAR	6.1:1
MAXIMUM DWELLING GFA (SQM)	33,227
MINIMUM NON-DWELLING FAR	1.6:1
MINIMUM NON-DWELLING GFA (SQM)	8,715
TOTAL GFA (SQM)	41,942
PREFERRED MAXIMUM HEIGHT	67.8m (20 storeys)

Other AmGC81 requirements

New park abutting the site to the east, which may not have additional shadow above that cast by a podium at 11am – 2pm on the September equinox.

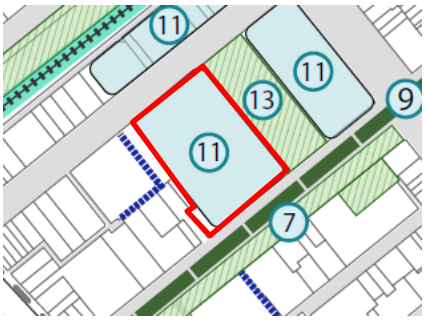
Linear park to the south along Buckhurst Street.

Pocket park to the east, which may not have additional shadow above that cast by a podium at 11am – 2pm on the September equinox.

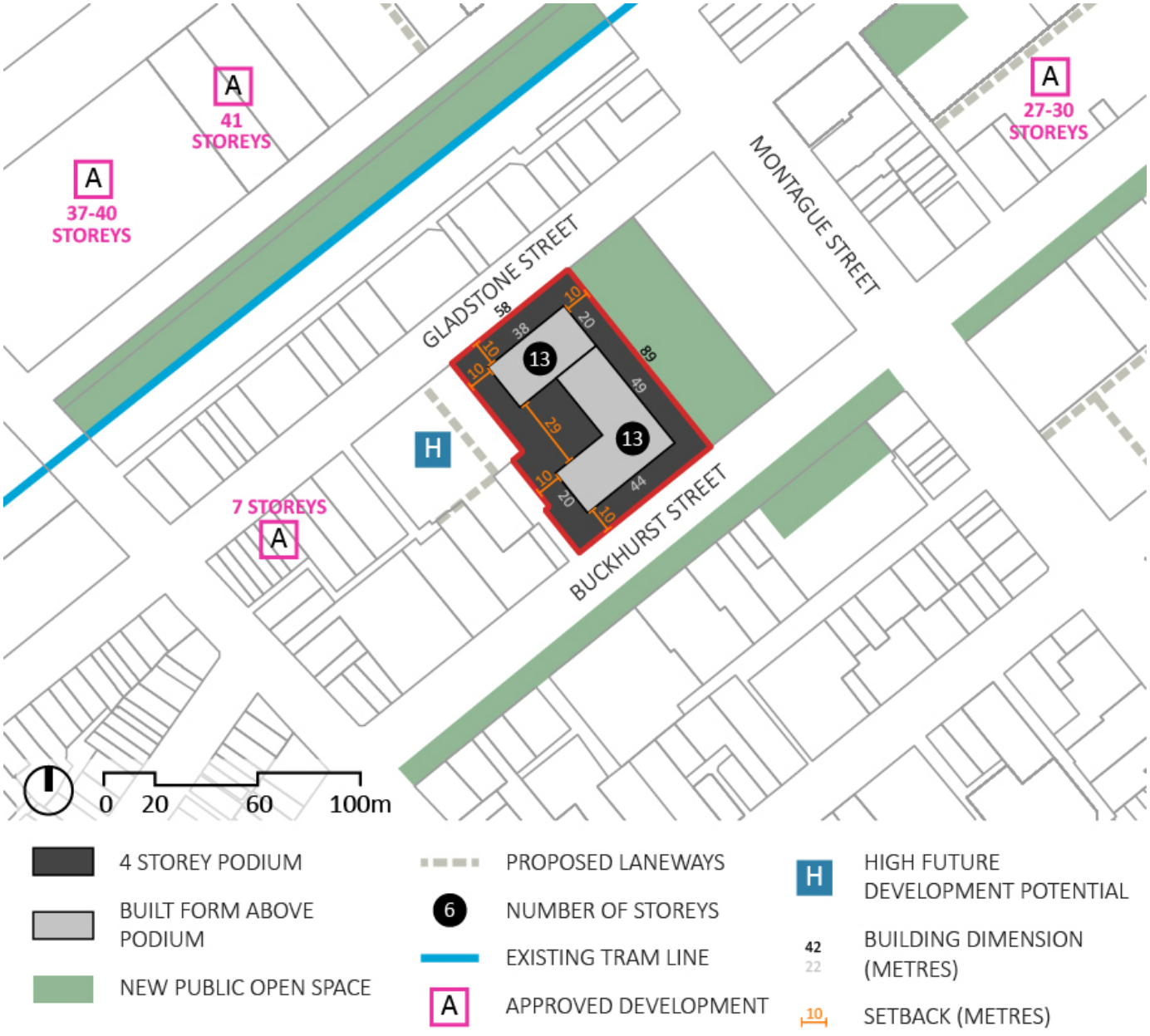
Active frontage: Primary on Buckhurst Street and interface with proposed eastern park.

No crossovers permitted on Buckhurst Street.

Nomination of Montague Arts and Cultural Hub on land at 134-150 Buckhurst Street.



Development consequences



Discussion

The site can accommodate the maximum dwelling FAR and minimum non-dwelling FAR within the proposed built form controls by adopting a podium and tower form.

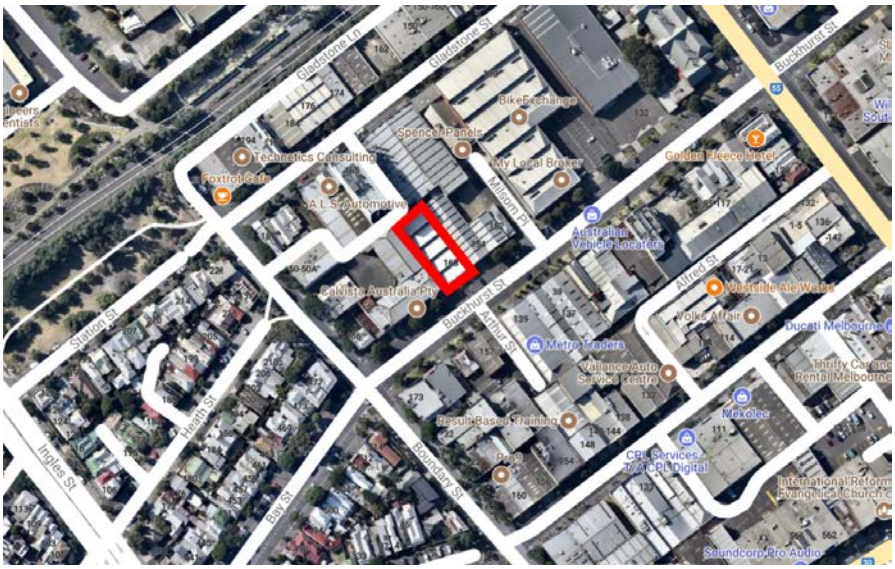
The non-dwelling GFA and dwelling car park GFA can be accommodated in a 4-storey podium. The dwelling GFA (minus car parking) can be principally located in an 9-storey tower, reaching a total height of 13 storeys.

A taller but more slender tower may be possible within the built form controls. However, it would need to consider shadow impacts on the adjacent parks.

There is capacity within the built form controls for an additional 7 levels to reach the 20-storey preferred maximum height in this location. An additional 7 storeys of residential development would have the potential to deliver ~15,500sqm of additional dwelling GFA (see table below).

	CAPACITY IN ACCORDANCE WITH DENSITY CONTROLS	CAPACITY IN ACCORDANCE WITH BUILT FORM CONTROLS	DIFFERENCE
Dwelling GFA (sqm)	33,227	48,704	15,477
No. dwellings	269	395	125
Non-dwelling GFA (sqm)	8,715	8,715	-
Total GFA (sqm)	41,942	57,419	15,477

Submitter 131.2: 166-168 Buckhurst Street, South Melbourne



(Source: Nearmap)

Site conditions

Site dimensions: 17m x 38-41m = 735m² area
Street frontages:
Buckhurst Street to the south
Unnamed laneway to the north
Existing conditions: single storey industrial warehouse building with a crossover from Buckhurst Street.

Relevant site interfaces

North: 2 storey industrial warehouse building and associated offices.
East: Industrial warehouse and associated surface car parking.
West: Two storey industrial warehouse building and associated offices.

Development proposal

Submitted Planning Permit Application (00006/2013)
30 storey proposal
Called in by Minister

Key AmGC81 built form considerations

SITE AREA (SQM)	735
PUBLIC REALM AREA (SQM) POS & ROADS	(0%)
DEVELOPABLE SITE AREA (SQM)	735
CORE/ NON-CORE	Non-Core
MAXIMUM DWELLING FAR	3:1
MAXIMUM DWELLING GFA (SQM)	2,205
MINIMUM NON-DWELLING FAR	N/A
MINIMUM NON-DWELLING GFA (SQM)	N/A
TOTAL GFA (SQM)	2,205
PREFERRED MAXIMUM HEIGHT	29.4m (8 storeys)

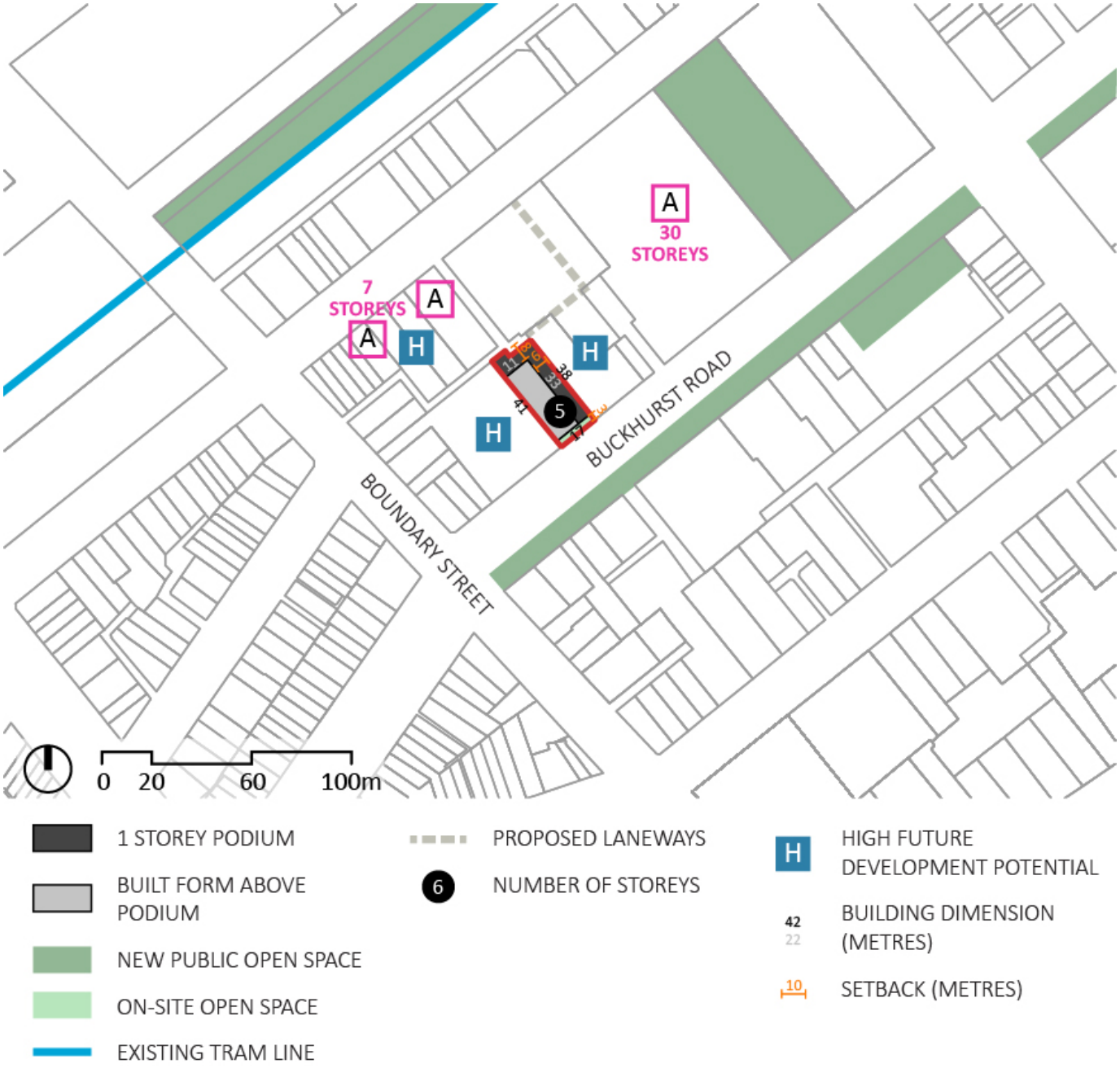
Other AmGC81 requirements

Primary active frontage on Buckhurst Street.

No crossovers permitted on Buckhurst Street.

Proposed linear park on southern side of Buckhurst Street (no shadow protection).

Development consequences



Discussion

The site can accommodate the maximum dwelling FAR within the proposed built form controls by adopting a single storey podium to accommodate car parking, with the dwelling GFA located in 4 upper levels.

The active frontage to Buckhurst Street may necessitate a commercial use at ground level, even though the site is in the non-core area.

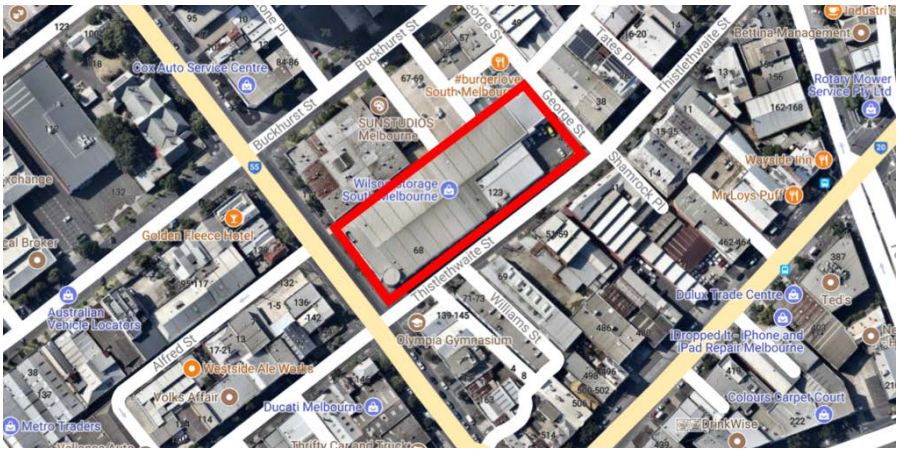
The prohibition on vehicle access from Buckhurst St necessitates vehicle access from the rear, which may be problematic given the narrowness of this lane.

The biggest constraint for this long narrow site is the upper level setbacks, which prevent the building from being built to the boundary above 6 storeys (23m). The 3m (non-habitable) and 6m (habitable) setbacks do not lend themselves to this narrow site.

There is capacity within the built form controls for an additional 3 levels to reach the 8-storey preferred maximum height in this location. However, the setback requirements make this challenging. If the development could have a wall on one boundary up to 8 storeys high, then the additional 3 storeys would have the potential to deliver ~1068 sqm of additional dwelling GFA (see table below).

	CAPACITY IN ACCORDANCE WITH DENSITY CONTROLS	CAPACITY IN ACCORDANCE WITH BUILT FORM CONTROLS	DIFFERENCE
Dwelling GFA (sqm)	2,205	3,273	+ 1,068
No. dwellings	18	27	+ 9
Total GFA (sqm)	2,205	3,273	+ 1,068

Submitter 173: 123 Montague Street, South Melbourne



(Source: Nearmap)

Site conditions

Site dimensions: ~44m x ~130m = 5,685sqm area
Three street frontages:
Southwest: Montague Street (30m wide)
Southeast: Thistlethwaite Street (20m wide)
Northeast: George Street (7m wide)
Existing conditions: 2 storey warehouse storage facility and associated surface car parking with crossovers from Thistlethwaite Street
Street tree plantings along Montague Street and Thistlethwaite Street

Relevant site interfaces

Northeast: Industrial warehouse building and associated offices.
Northwest: industrial warehouse buildings, offices and cafes/restaurants.
Two 8 storey approved developments on the south side of Thistlewaite Street.

Development proposal

No current planning permit application.

Key AmGC81 built form considerations

SITE AREA (SQM)	5,685
PUBLIC REALM AREA (SQM) POS & ROADS	2,424 (43%)
DEVELOPABLE SITE AREA (SQM)	3,261
CORE/NON-CORE	Core
MAXIMUM DWELLING FAR	6.1:1
MAXIMUM DWELLING GFA (SQM)	34,679
MINIMUM NON-DWELLING FAR	1.6:1
MINIMUM NON-DWELLING GFA (SQM)	9,096
TOTAL GFA (SQM)	43,775
PREFERRED MAXIMUM HEIGHT	67.8m (20 storeys)

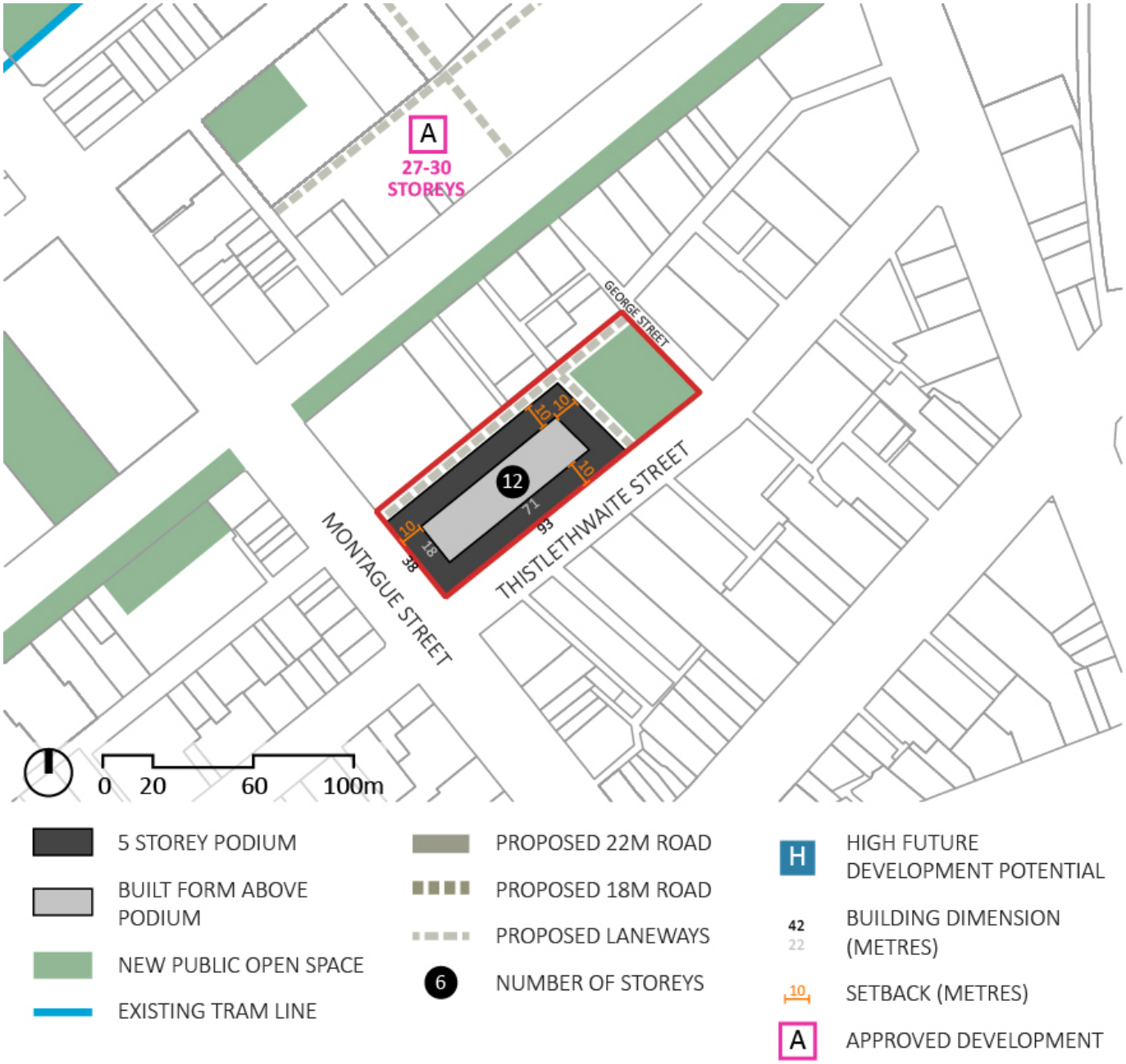
Other AmGC81 requirements

Proposed park within the eastern end of the site (~¼ of the site), which may not have additional shadow above that of podium at 10am -2pm on the September equinox

3 indicative laneways within the site shown in the draft Framework, but not in the CCZ schedule.

Primary active frontage on Montague Street.

Development consequences



Discussion

The site can accommodate the maximum dwelling FAR and minimum non-dwelling FAR within the proposed built form controls by adopting a podium and tower form, despite the provision of the public open space and two lanes. The third lane has not been incorporated in the development concept above, in accordance with Ms Hodyl's evidence. If it is required, the building would need to be higher to accommodate the building separation created by 2 podium-tower developments.

The non-dwelling GFA and dwelling car park GFA can be accommodated in a 5 storey podium. The dwelling GFA (minus car parking) can be principally located in a 7 storey tower above, reaching a total height of 13 storeys.

In this context, there would be limited amenity impact from a taller tower, up to the preferred maximum height of 20 storeys. The additional 7 storeys would have the potential to deliver ~11,440sqm of additional dwelling GFA.

	CAPACITY IN ACCORDANCE WITH DENSITY CONTROLS	CAPACITY IN ACCORDANCE WITH BUILT FORM CONTROLS	DIFFERENCE
Dwelling GFA (sqm)	34,679	23,239	- 11,440
No. dwellings	281	188	- 93
Non-dwelling GFA (sqm)	9,096	9,096	-
Total GFA (sqm)	43,775	32,335	- 11,440

Submitter 207: 235-239 & 241-243 Normanby Road, South Melbourne

(Source: Nearmap)

Site conditions

Site dimensions: 50m x 65m = 3,234m² area
Two street interfaces:
Northwest: Normanby Road (30m wide)
Southeast: Woodgate Street (15m wide)
Existing conditions: Two lots, each comprising industrial warehouse building and associated surface car parking
Street tree plantings along Normanby Road and Woodgate Street
Existing crossovers: 2 x Normanby Road, 2 x Woodgate Street

Relevant site interfaces

North: on the opposite side of the road are a row of industrial warehouse buildings
East: including a 6-storey warehouse storage building.
South: 109 tram line and Woodgate Street Reserve.
West: Industrial warehouse building and surface car parking. The two sites have permits for a 41 and 37-40 storey development.

Development proposal

The site has a current planning application for a 40-storey development.

Key AmGC81 built form considerations

SITE AREA (SQM)	3,585
PUBLIC REALM AREA (SQM) POS & ROADS	975 (27%)
DEVELOPABLE SITE AREA (SQM)	2,610
CORE/NON-CORE	Core
MAXIMUM DWELLING FAR	6.1:1
MAXIMUM DWELLING GFA (SQM)	21,869
MINIMUM NON-DWELLING FAR	1.6:1
MINIMUM NON-DWELLING GFA (SQM)	5,736
TOTAL GFA (SQM)	27,605
PREFERRED MAXIMUM HEIGHT	67.8m (20 storeys)

Other AmGC81 requirements

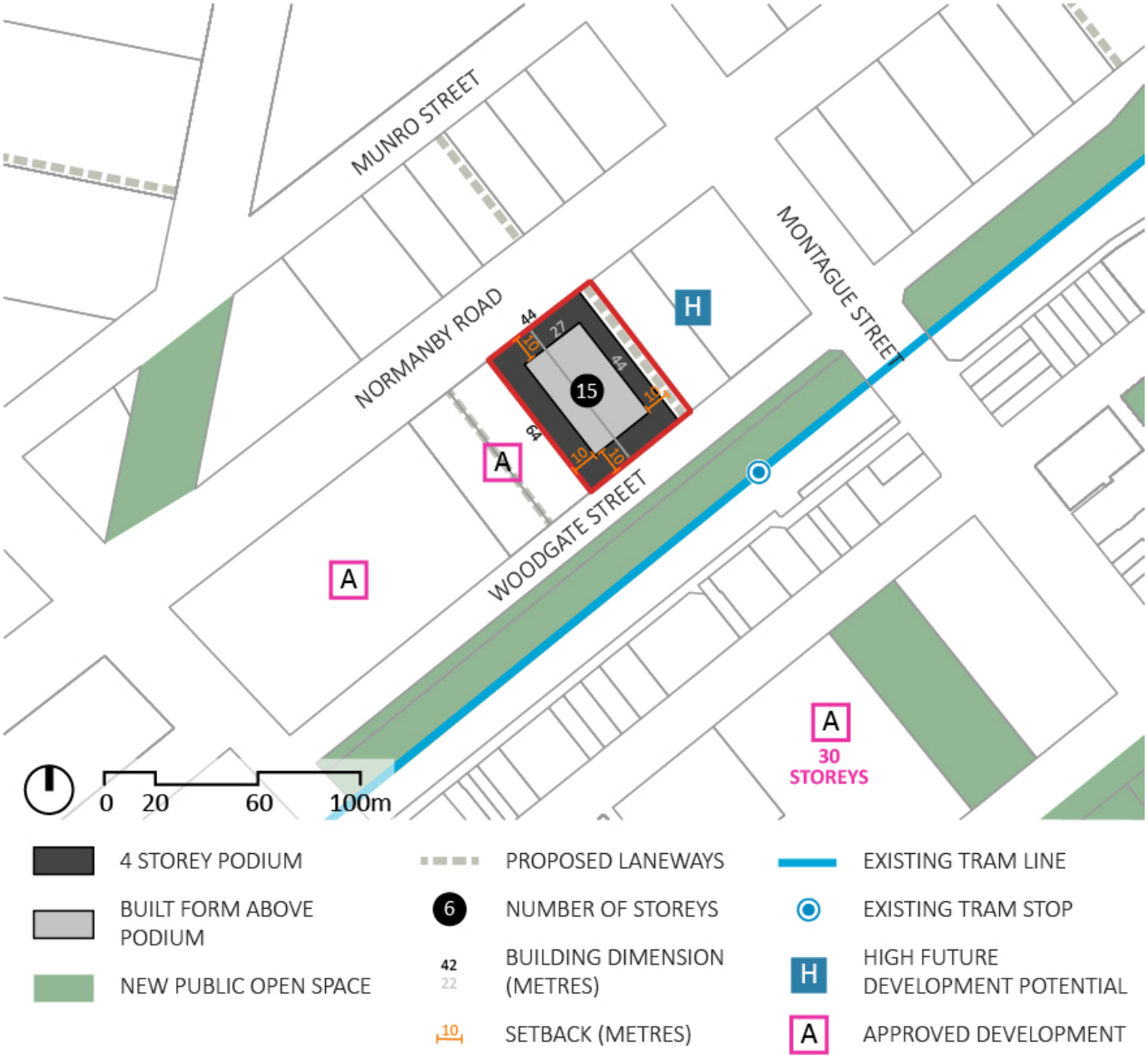
New park proposed to the south of the site (with no overshadowing protection).

Ms Thompson recommended a new park within the southeast corner of the site.

Primary active frontage on Normanby Road.

No crossovers on Normanby Road.

Development consequences



Discussion

The site can just accommodate the maximum dwelling FAR and minimum non-dwelling FAR within the proposed built form controls by adopting a podium and tower form.

The non-dwelling GFA and dwelling car park GFA can be accommodated in a 4-storey podium. The dwelling GFA (minus car parking) can be principally located in an 11-storey tower, resulting in a total height of 15 storeys.

The maximum FAR prevents development from reaching the preferred maximum height. There is capacity within the built form controls for an additional 5 levels to reach the preferred maximum height of 20 storeys. The additional 5 storeys would have the potential to deliver ~5819sqm of additional dwelling GFA. In this context there would be minimal detrimental amenity impact from taller towers.

	CAPACITY IN ACCORDANCE WITH DENSITY CONTROLS	CAPACITY IN ACCORDANCE WITH BUILT FORM CONTROLS	DIFFERENCE
Dwelling GFA (sqm)	19,727	25,547	+ 5,819
No. dwellings	160	207	+ 47
Non-dwelling GFA (sqm)	5,174	5,174	-
Total GFA (sqm)	24,902	30,721	+ 5,819

The development is significantly lower and delivers substantially fewer dwellings than the current proposal for the site, which complies with the current interim controls.

Appendix B: Site Assessment Assumptions

The following assumptions have been made in assessing the development potential of each site (see Appendix A).

Public realm

- New streets and parks: As per proposed CCZ schedules.
- Laneways and minor roads: As per draft Fishermans Bend Framework, with their alignments adjusted to suit the development of the site. All laneways have been modelled at a width of 6m.

Built form—general

- Building height and building setback requirements: As per the Panel versions of the CCZ and DDOs (documents 66), or ResCode for buildings up to 4 storeys high.
- Overshadowing requirements: In accordance with DDO Map 3 Overshadowing requirements and Table 1 Public open space hierarchy and overshadowing requirements, except in Montague, where the following recommendation of Ms Hodyl has been adopted: Revise the current overshadowing controls for neighbourhood parks in the Amendment for Montague from 'no additional overshadowing' to 'no additional overshadowing above the street wall shadow'. This only affects:
    - The new park fronting Thistlethwaite Street
    - Both new parks fronting Gladstone Street
    - The new park fronting Buckhurst Street
- Park interfaces: Buildings setbacks dependent on shadowing requirements as per the DDO, or built to the boundary where no shadow requirement specified.
- Floor to floor height: Ground floor 4m, upper podium floors 3.8m (as per DDO adaptable building requirements), tower levels 3.1m (assumes residential).

Podiums

- Use: All non-dwelling GFA, all car parking (associated with both dwelling and non-dwelling use—i.e. no basement levels assumed) and dwellings to 'sleeve' parking.
- Site coverage: 100% in all core areas; 70% in Wirraway and Sandridge non-core areas except where the gross developable site area is less than 1200sqm.
- Setbacks: 0m in core areas and on all streets in non-core areas requiring an active frontage; 3m elsewhere to accommodate ground floor private open space and/or landscaping.
- Minimum podium height: Determined by calculating non-dwelling and all car parking GFA, divided by podium footprint, + 0.5 then rounded up (to allow for sleeving).
- Street wall height on corner sites: Where two different street wall heights meet at a corner, the street wall height of the primary street has been applied to the secondary street for a maximum length of 30m.

Towers

- Use: dwellings only.
- Floor area: Total GFA less podium GFA.
- Tower width: minimum 15m, maximum 25m (double loaded).
- Tower floorplate area: maximum 900sqm for buildings up to 15 storeys high, 1,250sqm for taller buildings.
- Apartment orientation: The longer side of a tower floorplate is assumed to have habitable room windows, the shorter side is assumed to have non-habitable room windows or secondary habitable room windows.

Floor area calculations

- Total GFA: The sum of maximum dwelling GFA (based on the maximum FAR), and minimum non-dwelling GFA in core areas. Where the total GFA cannot be achieved within the built form controls, the residential GFA is reduced to ensure the minimum non-dwelling GFA is achieved.

Precinct	CORE AREA		TOTAL CORE AREA FAR	Non-core area		TOTAL NON-CORE AREA FAR
	Dwelling FAR	Non dwelling FAR minimum		Dwelling FAR	Non dwelling FAR	
Lorimer	5.4:1	1.7:1	**7:1**	N/A	N/A	**N/A**
Wirraway	4.1:1	1.9:1	**6.0:1**	2.1:1	N/A	**2.1:1**
Sandridge	8.1:1	3.7:1	**11.8:1**	3.3:1	N/A	**3.3:1**
Montague	6.1:1	1.6:1	**7.7:1**	3.0:1	N/A	**3.0:1**

(Based upon the proposed CCZ and local policy requirements.)

Car parking

- Car parking: 1 space per 100sqm of non-dwelling use, and 0.5 spaces per dwelling.
- Car parking GFA: 30sqm per space.

Dwelling calculations

- Gross to net: 75% (i.e. 25% of the GFA floor area allowed for circulation, services, etc.).
- Average apartment sizes:

Precinct	Apartment size ratio
Lorimer	**74**
Wirraway	**81**
Sandridge	**74**
Montague	**77**

(From Urban Design Strategy)

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