Amendment GC81

Fishermans Bend-Lorimer

Expert Urban Design Evidence

Mark Sheppard March 2018

Instructed by Norton Rose Fulbright, Planning & Property Partners and Russell Kennedy

On behalf of Various landowners



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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 Lorimer. 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 Lorimer as follows:
 - Section 2 outlines the Lorimer 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 Lorimer precinct.
 - Section 4 provides my assessment of the urban structure, street network, open space, density, and building height parameters proposed for Lorimer.
 - Section 5 summarises my detailed recommendations in relation to Lorimer.
- ^[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

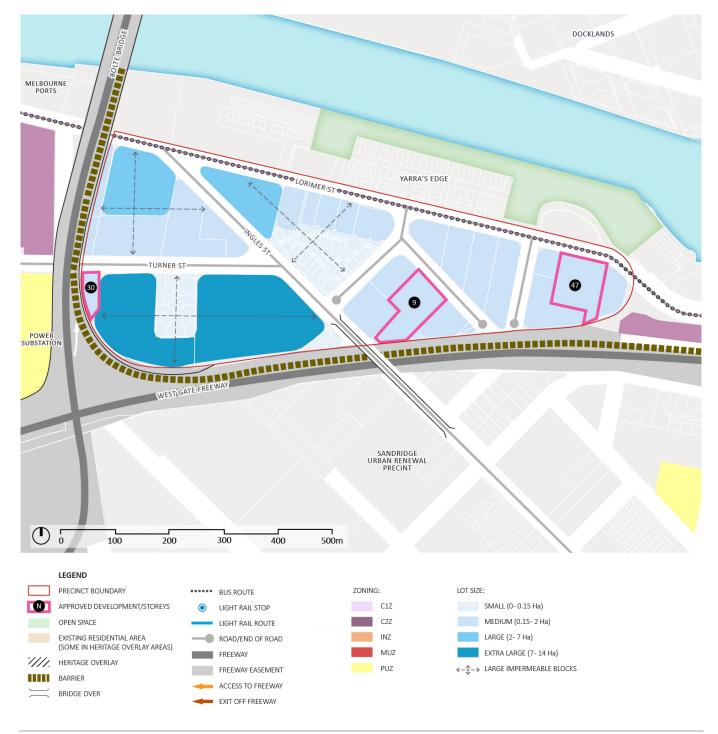
^[13] The physical context of Lorimer is illustrated in the figures below and overleaf.



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

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

- Close to the Yarra River.
- Close to Docklands (walkable) and the CBD west end (walkable).
- Adjacent to the established Yarra's Edge residential precinct (2,500 residents) which is still undergoing renewal.
- Access to and from the West Gate Freeway via Montague Street and Lorimer Street.
- Predominantly large and moderate size lots offering flexibility for a more efficient site layout and on-site amenities.
- 2 road links under City Link which connect to the Employment precinct.
- Wide roads dissect the precinct Lorimer Street (25m to 40m wide), Turner Street (30m), Ingles Street (30m).



Lorimer Urban Context

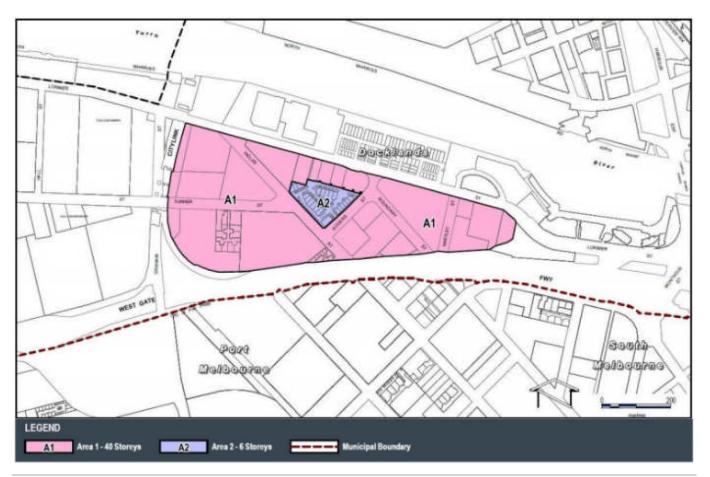
^[15] The features of Lorimer that present challenges for urban renewal include:

- Very limited public transport accessibility—Southern Cross station is currently a 25-30 minutes walk (~2km), although it will only be approximately 20 minutes (1.5km) once the proposed new pedestrian/cycle bridge to Collins Street is constructed.
- Western and southern physical barrier as a consequence of the West Gate Freeway with only one crossing to the south at Ingles Street (overpass) and two to the west (underpass).
- Coarse-grained road network with poor connections to neighbouring areas. Lorimer Street is the only connection to the east.
- The Ingles Street overpass narrows to two lanes.
- Yarra River is a barrier to the north with limited vehicle or pedestrian crossings.
- Large impermeable blocks.
- Generally poor streetscape amenity.
- No public open space.
- ^[16] The current planning controls that apply in Lorimer are as follows:

LORIMER – CURRENT CONTROLS

- Capital City Zone, Schedule 4 (CCZ4)
- Parking Overlay, Schedule 13 (PO13)
- Design and Development Overlay, Schedule 67 (DDO67)
- Development Contributions Overlay, Schedule 1 (DCPO1)

BUILT FORM ELEMENT	REQUIREMENT
Building height	Mandatory maximum:
	A1 - 40 storeys
	A2 – 6 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 DDO67 Map extract

3.0 Proposed planning framework

Delivering Lorimer

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

Planning for Lorimer 2050

	2018	2025	2050
Population projections	280	3440	12,000
Household number projections	0	1900	5882
Job projections	1820	2290	6000
Open space (hectares)	Oha	4.36ha	5.04ha
Total precinct size (hectares)			
Gross: 25ha			
Net developable site area: 25ha			

Draft Framework, Page 72

Infrastructure delivery - key projects

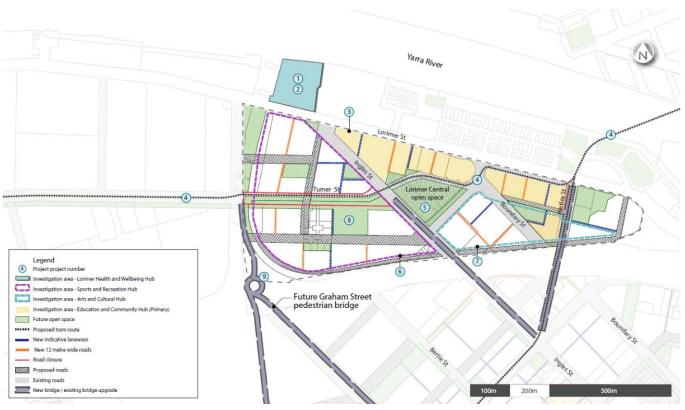
Sustainability goal reference

Objective 31

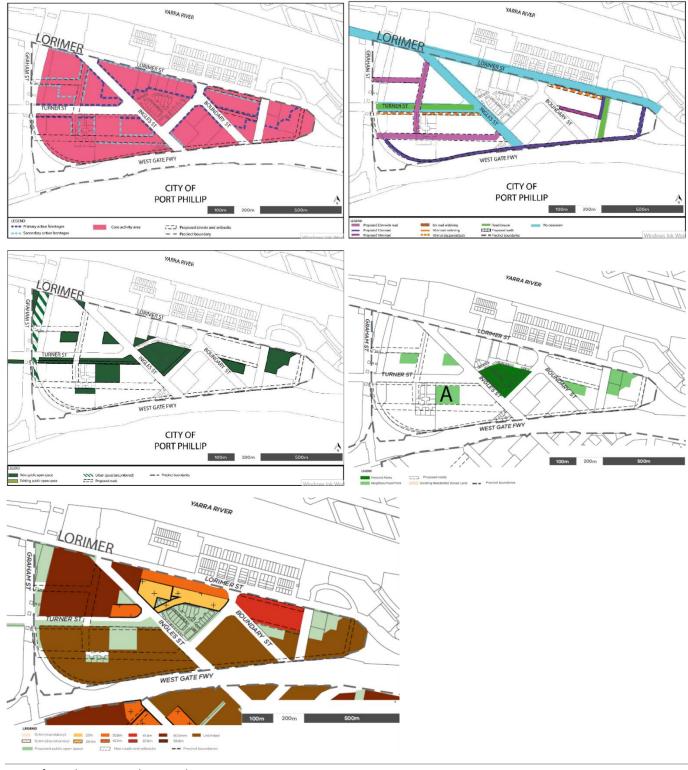
Objective 3.7

Timeframe Medium term

- **Objective** 31 1 Pop up community hub in Bolte West precinct **Objective** 31 2 Lorimer Health and Wellbeing Hub **Objective** 3.1 3 Lorimer Education and Community Hub **Objective** 1.1 4 Northern corridor tram **Objective** 3.7 5 Lorimer Central open space Long term Objective 3.1
 - 6 Lorimer Sport and Recreational Hub
 - 7 Lorimer Art and Cultural Hub
 - 8 Lorimer West open space
- Graham/Bridge Street pedestrian bridge Objective 1.2, 1.3, 1.5 9



Draft Framework, Figure 20



Maps from the proposed CCZ and DDO

^[17] The density and built form provisions of proposed CCZ4 and DDO67 in relation to Lorimer are summarised below:

GROSS AREA 40 HA / NET DEVELOPABLE AREA 25HA

- Capital City Zone, Schedule 4 (CCZ4)
- Design and Development Overlay, Schedule 67 Fishermans Bend Development Urban Renewal Areas (DDO67)
- Fishermans Bend Urban Renewal Area local planning policy

ELEMENT	REQUIREMENT	
FAR	Core Maximum 5.4:1 for dwelling use Minimum 1.7:1 for non-dwelling use	Non-core N/A
Building Height	Varied from preferred maximum of 29.4m (8 storeys) to 80.6m (24 storeys) in northern part of precinct Unlimited in southern part of precinct	N/A
Dwelling density	Maximum 255 d/Ha	N/A

4.0 Assessment

4.1 Urban structure

- ^[18] The proposed planning framework provides for two new tram routes across Lorimer, both connecting to Collins Street in the CBD via a new bridge over the Yarra at Point Park Crescent, with one extending west along Turner Street into the Employment Precinct and the other passing over the West Gate Freeway via a new bridge to Fennell Street in Sandridge.
- ^[19] New streets are proposed to create a more permeable movement network and more development frontages. A new pedestrian and cycle bridge over the West Gate Freeway is also proposed, linking the precinct with Graham Street in Sandridge, while the Ingles Street bridge is proposed to be upgraded.
- ^[20] I support the introduction of tram routes and a finer-grain street network. I also support the introduction of new pedestrian and cycle links to neighbouring areas, which will be essential if the ambition for selfcontainment and a high walking and cycling mode share is to be achieved.
- ^[21] Turner Street is proposed to be closed to traffic to allow for a tramway and linear park. Hartley Street is also proposed to be partially closed to traffic, presumably to enable the construction of the proposed tram bridge over the West Gate Freeway to the Sandridge precinct.
- ^[22] I support the introduction of tram routes, and the concept of the linear park. However, the closure of streets raises numerous issues related not only to vehicular access to properties and the timing of the road closure, but also to 'exposure' for the types of use that are suitable for the primary active frontages sought in these streets. These issues will presumably be considered as part of the formulation of the proposed precinct plans. Until that occurs, I consider that it is premature to commit to the full closure of these streets.
- ^[23] I assume that the purpose of the 10m landscape setback on the south side of Lorimer Street between Rogers Street and Hartley Street is necessary to provide for the tramway. If this is not the case, then I query its requirement.
- ^[24] The proposed Melbourne MSS contains the following strategy for Lorimer:

Encourage a visual and physical connection to the Yarra River through a series of new north-south laneways that will stitch the precinct across Lorimer Street through to the Yarra River.

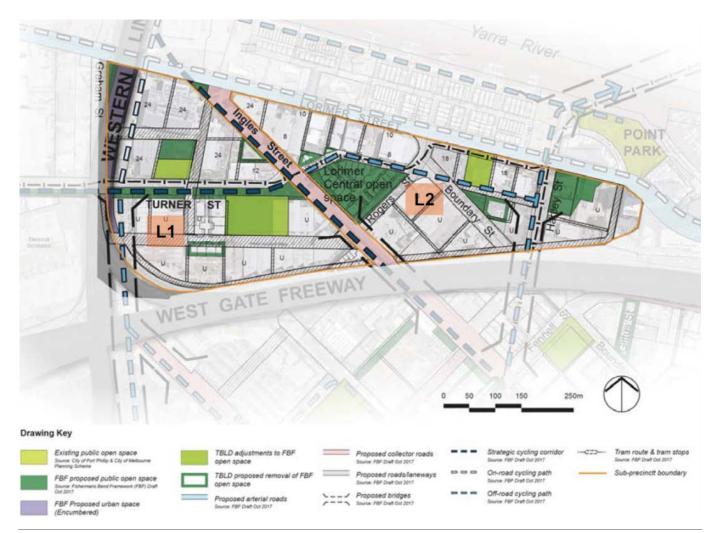
^[25] The Infrastructure delivery diagram for Lorimer in the Draft Framework (Figure 20) indicates a series of north-south streets and laneways. However, these are not shown in Map 2 in the proposed CCZ schedule. Instead, the proposed local policy seeks the provision of laneways no more than 50m apart in core areas such as this.

- ^[26] As noted in my overarching evidence, I support the flexibility for the alignment of laneways to be determined as part of the design of the relevant properties' development. However, I consider that the planning framework should go further in Lorimer and encourage the laneways to be oriented north-south, to realise the strategy in the MSS. This could form an additional dot point in the local policy under **New streets, laneways and pedestrian connections**.
- ^[27] In the short term, a 'pop up' community hub and a health and wellbeing hub are proposed on the north side of Lorimer Street, overlooking the river (items 1 and 2 on Figure 20 of the draft Framework), with an education and community hub somewhere along Lorimer Street (item 3). In the long term, a sport and recreational hub is proposed somewhere in the western half of the precinct, and an art and cultural hub is proposed in the southeastern part of the precinct.
- ^[28] I support the introduction of community facilities to serve the new community and contribute to local identity.

4.2 Open space

- ^[29] A major new park—'Lorimer Central open space'—is proposed at the heart of the precinct, along with a series of medium-sized and smaller parks. A linear park is proposed along the southern side of Turner Street. The total proposed open space area is 3.9ha, which represents 13.4% of the precinct area.
- ^[30] Residents and workers will also have access to the riverside open space within Yarra's Edge.
- ^[31] I consider that the 'Lorimer Central open space' will form a centre for the precinct. However, I note that it is surrounded by development sites, and does not have a direct connection to the river. I consider that thought should be given to reconfiguring this space, to provide a more open aspect to the north, reduce the need to limit the height of new buildings in the precinct to avoid overshadowing the park, and enable a direct connection with the riverside open spaces via Riggers Place and Foundry Way (assuming appropriate pedestrian crossings of Lorimer Street).
- ^[32] Ms Thompson proposes amendments that would increase the open space area to 4.1ha, which represents 14% of the precinct area and 3.4m² per resident. These include:

- Deleting the remnant triangular open spaces alongside the northern edge of the proposed northern tram line at 350 Ingles Street and the back of 876 Lorimer Street
- Deleting the proposed park at 351 Ingles Street (Melbourne City Jaguar/ Volvo)
- Deleting the proposed park at the southern edge of 200 Turner Street
- Deleting the eastern end of the proposed park at 99-111 Lorimer Street (Subaru), and extending the remaining park north to Lorimer Street
- Extending the proposed park at 161 Turner Street south to Turner Street
- Enlarging the proposed park in the northwest corner of 220 Turner Street
- ^[33] In essence, Ms Thompson's proposition is to consolidate the open space into a smaller number of larger neighbourhood parks, to enable them to incorporate a wider variety of facilities, improve their solar access and improve the connection to the river. She notes that the resulting parks will still meet the 200m easy walking catchment requirement.
- ^[34] I agree that the proposed open space pattern is somewhat fragmented, and support Ms Thompson's recommendations. However, I note that placing larger open spaces on fewer properties 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.
- ^[35] 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 (ix)

4.3 Built form

^[36] The Urban Design Strategy defines the preferred building typology in Lorimer (at page 88) as follows:

Tower developments are supported in Lorimer. South of the Lorimer Parkway these have an unlimited height as amenity impacts on the freeway to the south will be minimal. North of the parkway, these are limited in height to align with the revised population targets and to maximise the amenity of the Lorimer Parkway space and the new fine grain network of laneways.

- ^[37] I support podium-tower development in this precinct, as it is consistent with the emerging character (in the form of two approved developments of 30 and 45-47 storeys) and the predominant character of Yarra's Edge to the north and east. It also reflects the somewhat hostile edge condition presented by the West Gate Freeway and the Bolte Bridge.
- ^[38] The proposed DDO schedule provides for buildings of:
 - Unlimited height along the southern edge of the precinct, 'backing onto' the West Gate Freeway
 - 80.6m (24 storeys) in the northwest corner of the precinct
 - 61.4m (18 storeys) fronting Lorimer Street between Boundary Road and Hartley Street (Subaru)
 - 29.4-42.2m (8-12 storeys) north of the Lorimer Central open space and to its west on the corner of Turner and Ingles Streets (part of 351 Ingles Street, Melbourne City Jaguar/ Volvo)
- ^[39] It is unclear why the northwest corner (between Lorimer, Ingles and Turner Streets and Citylink) needs to be limited to 24 storeys in height. This will not prevent the 'parkway' from being overshadowed (nor do I think that it warrants sunlight protection). I consider that the degree to which it feels overwhelmed by development will be governed by the scale of the street wall, and tower separation, rather than the height of the buildings.
- [40] As noted in my overarching evidence, I do not consider that the population targets (which are also cited by the Urban Design Strategy as a reason for limiting height) form a sound basis for limiting the scale of development.



Figure 6 Lorimer perspective view: In this illustration all sites are also modelled to the proposed FAR of 5.4 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 6

^[41] I presume that the reason the land on the corner of Turner and Ingles Streets is proposed to be limited to 12 storeys is to avoid overshadowing the proposed open space to its south. And I assume the same reasoning has led to the preferred maximum heights north of the Lorimer Central open space. However, sunlight to these spaces is already protected by the overshadowing provisions within the proposed DDO. ^[42] While I accept that development will need to be limited to something like the proposed maximum heights in order to protect solar access to those spaces, I do not consider it necessary to incorporate two controls to achieve the same end. 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), and as illustrated in Appendix A for 870 Lorimer Street (submitter 79), 880 & 884 Lorimer Street (submitter 130) and Lorimer Place (submitter 162)), whereas the preferred maximum heights are somewhat of a blunt instrument for avoiding overshadowing.



Northbank development in Flinders Street (source: Google Maps)

- ^[43] It is unclear why development fronting Lorimer Street between Boundary Road and Hartley Street (Subaru) is limited to 18 storeys. It does not appear that this would be sufficiently low to ensure solar access to the proposed open space to its south. In any event, I note that Ms Thompson proposes to reconfigure this park so that it has a northerly aspect.
- ^[44] My analysis of 111 Lorimer Street (submitter 71) indicates that the proposed maximum height for that property is not necessary in order to achieve the open space solar access outcomes.

- ^[45] Therefore, I recommend that the proposed preferred maximum heights in Lorimer be removed. This is not to say that there should be no limit on development scale. However, because there are no specific reasons to constrain height in this precinct (other than solar access to open space, which is dealt with by the overshadowing control), I consider that a density control provides a more appropriate measure to control the scale of development (in conjunction with general policy, such as that found at clause 15, requiring development to respond to its context). This is because it allows the flexibility for lower, broader buildings (which may suit office uses), or taller, slender forms (which may suit residential uses). The visual impact of tall buildings will be offset by the greater separation that would be necessitated by a density limit.
- ^[46] The proposed Melbourne MSS contains the following strategy for Lorimer:

Ensure towers are well spaced to provide for outlook and view through to the river, with setbacks to protect amenity of streets and laneways.

^[47] Applying a density control rather than height limits will best enable development to respond to this aspiration.

4.4 Density

- ^[48] The proposed planning framework defines all of Lorimer as 'core'. This means that the minimum non-dwelling floor area in the proposed local policy (1.7:1) applies to all of its properties. The maximum floor area ratio is 5.4:1 (although there is no limit to the extent to which non-dwelling floor area can exceed this ratio).
- ^[49] This is only ²/₃ of the maximum density for Sandridge, despite Lorimer being within a 5-10 minute walk of Docklands once the pedestrian bridge across the Yarra is constructed. I do not consider that there has been sufficient work to determine whether this is the optimum density for the precinct, which maximises its contribution to housing growth while providing a high-quality environment. (Indeed, it is not evident that this approach has been taken at all, given that the population targets form the primary basis of the density controls.)
- ^[50] It is puzzling that the maximum FAR is uniform across the precinct, despite the preferred maximum heights varying considerably. Presumably this means that development of land where greater height is notionally allowed will not be able to achieve that height unless the buildings have limited floorplates or incorporate significant amounts of non-dwelling floor area. This is illustrated by Figure 6 in Addenda 2 of Ms Hodyl's evidence (reproduced above), which shows the development of 1 Rogers Street and 223 Boundary Street limited to a podium only despite having no height limit.
- ^[51] If the taller heights are considered to deliver acceptable or good amenity, then why is the FAR not adjusted to allow for that to occur?
- ^[52] My analysis of 870 Lorimer Street (submitter 79), 880 & 884 Lorimer Street (submitter 130) and Lorimer Place (submitter 162) demonstrate that these properties cannot achieve the maximum FAR, due to the shadow requirements associated with the park to their south. My analysis of 162-188 Turner Street indicates that the proposed density limit unnecessarily limits the capacity of that site.
- ^[53] This confirms that more work needs to be done to determine the appropriate density in each part of the Amendment land. I note that this is also Mr McPherson's view. Presumably this could occur as part of the formulation of the proposed Precinct Plans.

5.0 Conclusion and recommendations

- ^[54] I have provided my opinion about the overall approach underpinning this Amendment, and general built form provisions, in my overarching evidence.
- ^[55] I support the proposed urban structure for Lorimer, including the tram routes, street network, new pedestrian/ cycle bridges, and community hubs. I support the provision of open space subject to the changes recommended by Ms Thompson and a review of the Lorimer Central open space as discussed above.
- ^[56] However, I recommend that the proposed preferred maximum heights be removed, in lieu of a density control (noting that the overshadowing provisions will protect sunlight to the key open spaces). I consider that more work needs to be done to determine the appropriate density in each part of Lorimer.
- ^[57] I support the preparation of precinct plans to resolve matters to do with road closure, density, built form, open space, and tramway and park interfaces. Until these precinct plans have been prepared, I consider that it is premature to commit to street closures, and maximum heights and densities.
- ^[58] In summary, my recommendations for Lorimer are below:

1. REVIEW THE PROPOSED STREET CLOSURES AS PART OF THE MORE DETAILED PRECINCT PLANNING EXERCISE.

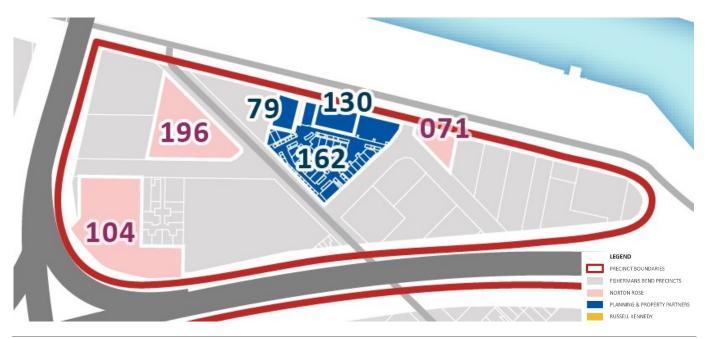
2. AMEND THE PROPOSED OPEN SPACE NETWORK IN ACCORDANCE WITH MS THOMPSON'S RECOMMENDATIONS AND REVIEW THE MERITS OF THE LORIMER CENTRAL OPEN SPACE.

3. INCLUDE A PROVISION WITHIN THE PROPOSED NEW LOCAL PLANNING POLICY ENCOURAGING NEW LANEWAYS TO BE ALIGNED NORTH-SOUTH.

4. REMOVE THE OVERALL BUILDING HEIGHT LIMITS.

5. REVIEW THE MAXIMUM DENSITY IN EACH PART OF THE PRECINCT AS PART OF THE MORE DETAILED PRECINCT PLANNING EXERCISE.

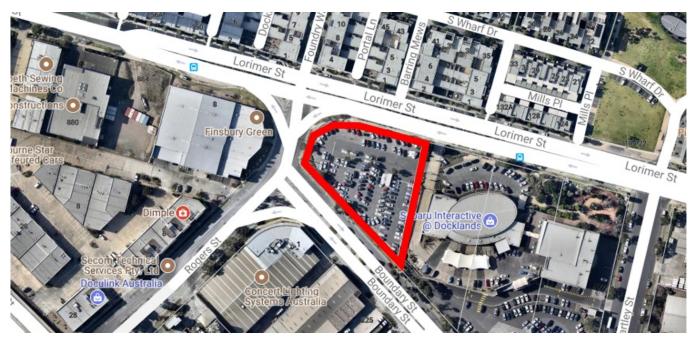
Appendix A: Analysis of Individual Sites



Location of individual sites assessed with submitter number

Submitter 71	111 Lorimer Street, Docklands
Submitter 79	870 Lorimer Street, Port Melbourne
Submitter 104	162-188 Turner Street, Port Melbourne
Submitter 130	880 & 884 Lorimer Street, Port Melbourne
Submitter 162	Lorimer Place Owners Corporation, Port Melbourne
Submitter 196	351-387 Ingles Street, Port Melbourne

Submitter 71: 111 Lorimer Street, Port Melbourne



(Source: Nearmap)

Site conditions	
	Site dimensions: 68m x 72m x 89m x 20m = 4,109sqm area.
	Street interfaces:
	North: Lorimer Street (25m wide)
	South: Boundary Street (30m wide)
	West: Rogers Street (25m at site interface, 30m to the southwest)
	Existing conditions:
	Surface car park with vehicle access from the neighbouring property to the east.
	Irregular street tree plantings along Turner Street, regular street tree plantings along Boundary Street.
Relevant site interfaces	
	Northwest: 826 Lorimer Street, occupied by a large industrial warehouse
	East: 99 Lorimer Street occupied by 3 storey commercial warehouse and offices associated with commercial car-sales.
Development proposal	
	Submitted Planning Permit Application (PA1700285) on 13 September 2017. Comprising: Podium/Tower form (40 storeys) - 396 dwellings/ 3,800 sqm non-residential/ 497 car spaces

Key AmGC81 built form considerations

SITE AREA (SQM)	4,109
PUBLIC REALM AREA (SQM) POS & ROADS	682 (17%)
DEVELOPABLE SITE AREA (SQM)	3,427
CORE/ NON-CORE	Core
MAXIMUM DWELLING FAR	5.4:1
MAXIMUM DWELLING GFA (SQM)	22,189
MINIMUM NON-DWELLING FAR	1.7:1
MINIMUM NON-DWELLING GFA (SQM)	6,985
TOTAL GFA (SQM)	29,174
PREFERRED MAXIMUM HEIGHT	61.4m (18 storeys)

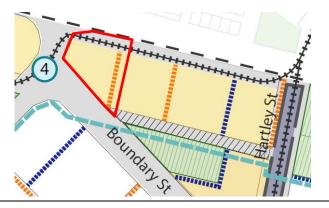
Other AmGC81 requirements

16m setback from the northern boundary to accommodate a road widening and the proposed tram route. New 18m wide road to the south. New lane 12m wide road through the site. For the purposes of the modelling this road was relocated to the eastern neighbouring site along the common boundary.

Active frontages: Primary to the new proposed road and Boundary Street and Secondary to Lorimer Street.

No crossovers on Lorimer Street.

Overshadowing: no additional shadowing of Lorimer Central Park at 11am-2pm on June 21, and of the proposed Neighbourhood Park to the south at 11am-2pm on September 22.



Development consequences



Discussion

The site can accommodate the maximum dwelling FAR and minimum nondwelling FAR within the proposed built form controls by adopting a podium and tower form to a total height of 17 storeys within the developable site area. However, if the proposed 12m wide road is located within the site then the site will not be able to accommodate the maximum FAR.

The non-dwelling GFA and dwelling car park GFA, along with residential sleeving of apartments, can be accommodated in a 3-storey podium. The dwelling GFA (minus car parking) can be principally located in a 12-14 storey tower above the podium, reaching a total height of 17 storeys.

At this height there are no winter overshadowing issues to the Lorimer Central Park. The southern edge of the tower requires additional setbacks at the upper levels to prevent overshadowing of the southern neighbourhood park.

There is limited additional development potential within the proposed built form controls. There may be some additional GFA available from additional podium levels (up to 5 storeys), although floorplate depth may be an issue, and from reduced setbacks above the street wall.

There is capacity for a tower to be taller than the preferred maximum height while still avoiding shadowing of the park to the south during the September equinox, if carefully sited. Even at 40+ storeys, a tower would not cause overshadowing of the Lorimer Central Park during the winter solstice at 11am-2pm.

The development potential is significantly less than the current proposal for the site (40 storeys) which complies with the current interim controls but would shadow the proposed neighbourhood park

	CURRENT PROPOSAL	AM GC81 POTENTIAL	DIFFERENCE
Dwelling FAR	4.8:1	5.4:1	+ 0.6:1
Dwelling GFA (sqm)	67,437	22,189	- 45,248
No. dwellings	396	186	- 210
Dwelling density per ha	964	453	- 511
Non-dwelling GFA (sqm)	3,998	6,985	+ 2,987
Height - storeys	40	17	- 24

I note that Ms Thompson's evidence recommends that part of the southern open space be relocated to sit alongside the eastern boundary of this site. This would have significant consequences for the development of the site and may mean that the maximum FAR cannot be achieved.

Submitter 79: 870 Lorimer Street, Port Melbourne



(Source: Nearmap)

Site conditions

Site dimensions: 43m x 80m = 3,402m² area. One street interface: North to Lorimer Street (24m wide) Existing conditions: Office building and associated surface car park with 1 existing crossover from Lorimer Street Regular street tree plantings along Lorimer Street

Relevant site interfaces

East and south: Lorimer Owner Corp site comprising large lots fronting Lorimer Street and smaller warehouse lots on the southern portion of the site and surface car parking West: 876 Lorimer Street occupied by an industrial warehouse building and associated offices and surface car parking

Development proposal

Submitted Planning Permit Application (13/006575). On hold since October 2016.

Key AmGC81 built form considerations

SITE AREA (SQM)	3,402
PUBLIC REALM AREA (SQM)	
POS & ROADS	(0%)
DEVELOPABLE SITE AREA (SQM)	3,402
CORE/ NON-CORE	Core
MAXIMUM DWELLING FAR	5.4:1
MAXIMUM DWELLING GFA (SQM)	18,371
MINIMUM NON-DWELLING FAR	1.7:1
MINIMUM NON-DWELLING GFA (SQM)	5,783
TOTAL GFA (SQM)	24,154
PREFERRED MAXIMUM HEIGHT	29.4m - 35.8m
	(8 - 10 storeys)

Other AmGC81 requirements

No overshadowing of the proposed Lorimer Central open space to the southeast at 11am -2pm on the Winter solstice. This does not apply to the small triangle open space abutting the rear of the site.

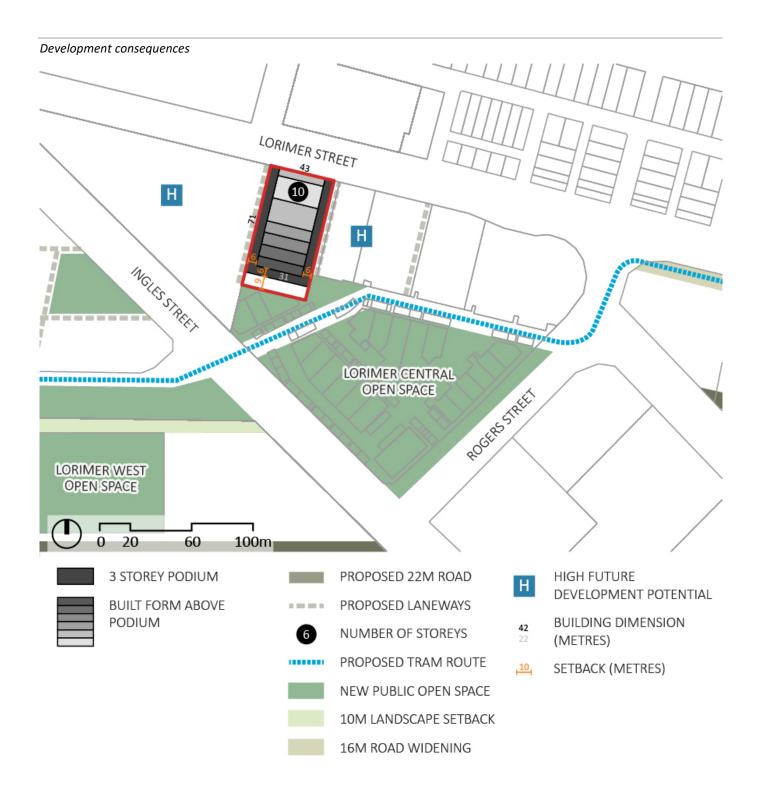
Indicative new 12m wide road along the western boundary and laneway along the eastern boundary in the draft Framework, but not in the proposed CCZ schedule. These have not been located on this site.

Primary active frontage to the proposed precinct park and tramway to the southeast.

Secondary active frontage on Lorimer Street.

No crossovers on Lorimer Street.





Discussion

The site cannot accommodate the maximum dwelling FAR and minimum non-dwelling FAR within the proposed height, setback and overshadowing controls.

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 the storeys above. An 8-storey street wall can be provided on Lorimer Street. However, the upper form would need to step down to the rear in order to avoid overshadowing the park to the south.

The development is significantly less than the capacity implied by the density control.

The 8–10 storey height limits are unnecessary in this location because the shadow requirements will limit building height.

The street wall height and setback requirements also limit the design response for the site, which prevents it from being able to reach the maximum FAR.

The current interim controls include a mandatory 40 storey height limit.

	CAPACITY IN ACCORDANCE WITH DENSITY CONTROLS	CAPACITY IN ACCORDANCE WITH BUILT FORM CONTROLS	DIFFERENCE
Dwelling GFA (sqm)	18,371	11,934	- 6,437
No. dwellings	154	100	- 54
Non-dwelling GFA (sqm)	5,783	5,783	0
Total GFA (sqm)	24,154	17,717	- 6,437

Submitter 104: 162-188 Turner Street, Port Melbourne



(Source: Nearmap)

Site conditions	
	Site dimensions: 230m x 173m x 95m = 20,941m² area (2.09ha) Street interfaces:
	North: Turner Street (30m wide)
	Existing conditions: Industrial warehouse buildings and associated surface car parking with vehicle access from Turner Street
Relevant site interfaces	
	East: 196-202 Turner Street occupied by industrial warehouse buildings, offices and associated surface car parking.
	South: Westgate Freeway, Bolte Bridge off-ramps.
	West: 150 Turner Street comprising surface car parking. This property has a permit for a 30-storey mixed-use building.
Development proposal	
	Submitted Planning Permit application (30 June 2015) comprising: Five towers in tower/podium typology (40 storeys) 1,596 dwellings/ 8,653sqm non-residential/ 1,079 car spaces

Key AmGC81 built form considerations

SITE AREA (SQM)	20,941
PUBLIC REALM AREA (SQM) POS & ROADS	6,697 (32%)
DEVELOPABLE SITE AREA (SQM)	14,244
CORE/ NON-CORE	Core
MAXIMUM DWELLING FAR	5.4:1
MAXIMUM DWELLING GFA (SQM)	113,081
MINIMUM NON-DWELLING FAR	1.7:1
MINIMUM NON-DWELLING GFA (SQM)	35,600
TOTAL GFA (SQM)	148,681
PREFERRED MAXIMUM HEIGHT	Unlimited

Other AmGC81 requirements

Turner Street to form a linear park and new tram corridor along the northern boundary of the site.

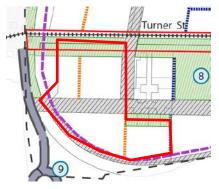
10m landscape strip along Turner Street.

Two new 22m roads and a 12m road.

Three indicative north-south lanes/roads in the draft Framework, but not in the proposed CCZ schedule.

Active frontage requirements: Primary to the northern boundary and Secondary to the proposed new 22m road.

No vehicle crossovers permitted from Turner Street.





Discussion

The site can accommodate the maximum dwelling FAR and minimum nondwelling FAR within the height and setback controls by adopting podiumtower forms.

The non-dwelling GFA and dwelling car park GFA can be accommodated in 4 storey podiums. The dwelling (minus car parking) GFA can be principally located in 20-21 storey towers above the podium, resulting in total heights of 24-25 storeys.

There is enough site area that the dwelling and non-dwelling GFA could be accommodated in separate buildings. A variety of building typologies are possible on the site.

The maximum GFA limits the towers to 25 storeys (although additional height could be developed for non-dwelling use). However, in this context there would be no detrimental amenity impact from taller towers. The development could then accommodate additional dwelling or non-dwelling GFA.

The development is significantly less than the current proposal for the site which complies with the current interim controls.

The proposed unlimited height in this location, and the capacity to accommodate additional GFA within the built form controls, suggests that the proposed density limit unnecessarily limits the capacity of this site.

	CURRENT PROPOSAL	AM GC81 POTENTIAL	DIFFERENCE
Dwelling FAR	10.5:1	5.4:1	- 5.1:1
Dwelling GFA (sqm)	220,240	113,081	- 107,159
No. dwellings	1,596	948	- 648
Dwelling density per Ha	762	453	- 310
Non-dwelling GFA (sqm)	8,653	35,600	+ 26,947
Height (storeys)	40	25	- 15

Submitter 130: 880 & 884 Lorimer Street, Port Melbourne



(Source: Nearmap)

Site dimensions: 74m x 62m = 4,574m² area Street interface: North to Lorimer Street (24m wide) Existing conditions: industrial warehouse and associated surface car parking, with existing crossovers via Lorimer Street. The site also forms parts 23 and 24 of the Lorimer Place Owners Corporation site area (Parts 1-25) – see also Submitter 196.

Relevant site interfaces

Site conditions

East: 8 Rogers Street (part 25) occupied by an industrial warehouse building South: industrial warehouse complex and common internal roads and surface car parking West: 876 Lorimer Street (Part 22) occupied by an industrial warehouse building and associated offices and surface car parking

Development proposal

No planning applications currently lodged for this site.

Key AmGC81 built form considerations

SITE AREA (SQM)	4,547
PUBLIC REALM AREA (SQM)	
POS & ROADS	362 (8%)
DEVELOPABLE SITE AREA (SQM)	4,185
CORE/ NON-CORE	Core
MAXIMUM DWELLING FAR	5.4:1
MAXIMUM DWELLING GFA (SQM)	24,554
MINIMUM NON-DWELLING FAR	1.7:1
MINIMUM NON-DWELLING GFA (SQM)	7,730
TOTAL GFA (SQM)	32,284
PREFERRED MAXIMUM HEIGHT	29.4m - 35.8m
	(8 - 10 storeys)

Other AmGC81 requirements

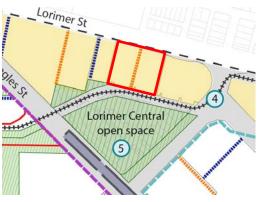
New precinct park and tram corridor immediately south of the site

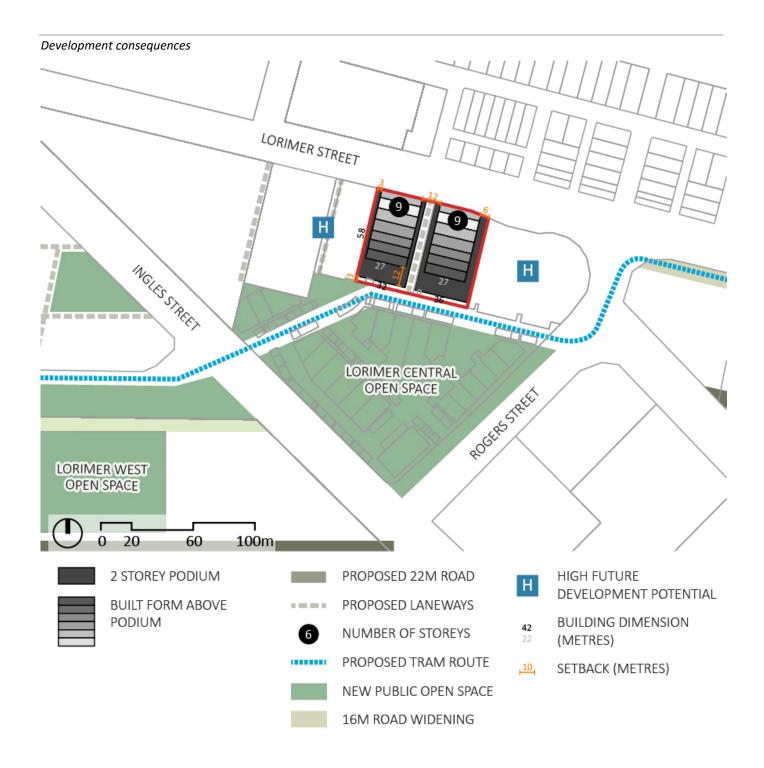
Overshadowing requirements in relation to precinct park to the south, but not the small triangular open spaces to the southwest of the site

Active frontage: Primary to the tramway/ precinct park to the south and secondary to Lorimer Street.

Indicative 12m wide road running through the middle of the site in the draft Framework, but not in the proposed CCZ schedule.

No crossovers on Lorimer Street.





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Discussion

The site cannot accommodate the maximum dwelling FAR and minimum non-dwelling FAR within the proposed height, setback and overshadowing controls.

The non-dwelling GFA and dwelling car park GFA can be accommodated in 2 storey podiums (which is the maximum height possible without overshadowing the park). The dwelling GFA (minus car parking) can be principally located in the storeys above the podium, which need to be stepped down from Lorimer Street in order to avoid overshadowing the park to the south.

The 8 and 10 storey preferred height limits are unnecessary in this location because the shadow requirements would limit height, in this instance to 9 storeys.

The street wall height and tower setback requirements also limit the design response for the site, further restricting its potential to reach the maximum FAR.

The current interim controls include a mandatory 40 storey height limit, significantly higher than the proposed preferred maximum heights.

PARTS 23 & 24	CAPACITY IN ACCORDANCE WITH DENSITY CONTROLS	CAPACITY IN ACCORDANCE WITH BUILT FORM CONTROLS	DIFFERENCE
Dwelling GFA (sqm)	24,554	13,281	- 11,273
No. dwellings	206	111	- 94
Non-dwelling GFA (sqm)	2,396	5,783	+ 3,387
Total GFA (sqm)	32,284	19,715	- 12,569

Submitter 162: Lorimer Place Owners Corporation, Port Melbourne



Site conditions

Site dimensions: 204m x 180m x 150m x 120m = approx. 2.5ha area. Three street interfaces:

North: Lorimer Street (24m wide)

East: Rogers Street (30m wide)

South: Ingles Street (30m wide)

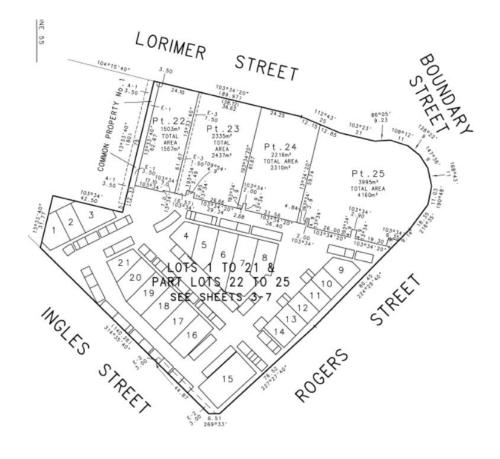
Existing conditions:

Multiple lots occupied by offices and business units, internal roads and associated surface car parking, with access via all street frontages. A 3m wide common easement runs between Parts 1 and 21 alongside the western boundary of Part 22 to link with Lorimer Street

The site is strata titled with 25 lots and 24 different owners—see title plan below.

Parts 23 and 24 have also submitted a separate submission (130) which has also been reviewed in this evidence.

Irregular street tree plantings along Lorimer Street and Ingles Street.



Relevant site interfaces

West: 858 Lorimer Street occupied by industrial warehouse buildings and surface car parking.

Development proposal

No planning applications currently lodged for this site.

Key AmGC81 built form considerations

SITE AREA (SQM)	21,906
PUBLIC REALM AREA (SQM) POS & ROADS	12,836
DEVELOPABLE SITE AREA (SQM) NORTHERN PORTION (PARTS 22-25)	9,070
CORE/ NON-CORE	Core
MAXIMUM DWELLING FAR	5.4:1
MAXIMUM DWELLING GFA (SQM)	48,978
MINIMUM NON-DWELLING FAR	1.7:1
MINIMUM NON-DWELLING GFA (SQM)	15,419
TOTAL GFA (SQM)	64,397
PREFERRED MAXIMUM HEIGHT	29.4m - 35.8m (8-10 storeys)

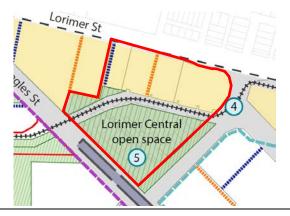
Other AmGC81 requirements

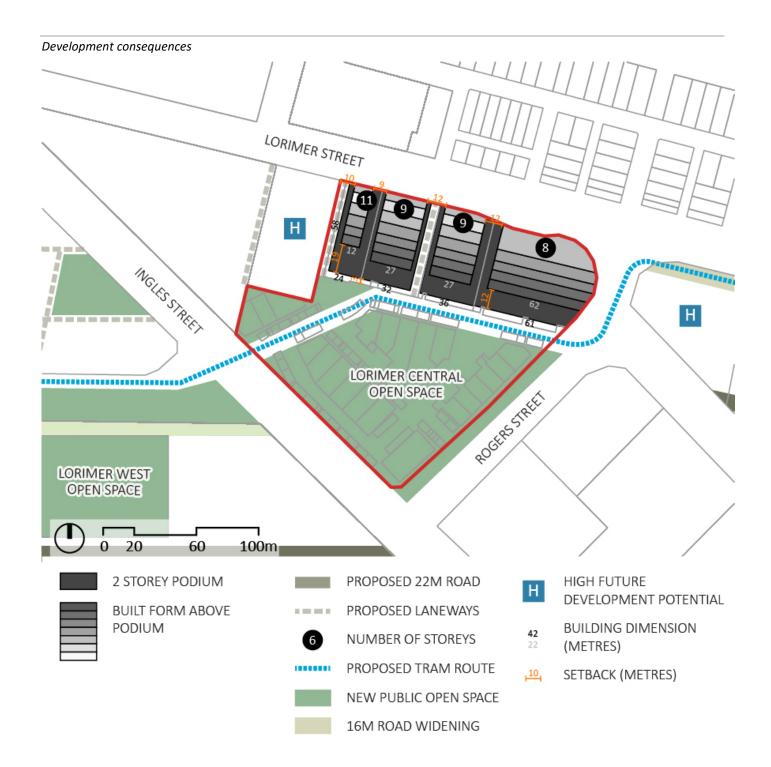
Southern portion (Parts 1-21)

The southern portion of the site is designated for a new tramway and public park – Lorimer Central. This affects lots 1-22. There are no height requirements specified in this area due to its designation as open space.

Northern portion (Parts 22-25)

Lots 23 and 24 are discussed under Submission 130. Lots 22 and 25, which are not affected by the park and tram designation (except in relation to access), are discussed below. Lot 22 has an indicative laneway along its western edge in the draft Framework, but not in the proposed CCZ schedule.





Discussion

The different iterations of the Fishermans Bend Vision and Framework Plans have seen this site go from having potential for 40 storey buildings, to a low-rise core, to the current proposal of a new tram corridor and large open space. These drastic changes have created uncertainty in this area.

Northern portion

The northern parts of the site cannot accommodate the maximum dwelling FAR and minimum non-dwelling FAR within the proposed height, setback and overshadowing controls.

The non-dwelling GFA and dwelling car park GFA can be accommodated in a 2-storey podium (which is the maximum height possible without overshadowing the park.) The dwelling GFA (minus car parking) cannot be accommodated in the towers due to the need to step heights down from the Lorimer Street frontage in order to avoid overshadowing the park to the south.

For the purpose of modelling, the 6m wide lane is incorporated into the 3m wide common easement along the western boundary to link the park with Lorimer Street

For the northern portion of the site, the findings are the same as for submitter 130 (see above), where the preferred height limits are unnecessary because the shadow requirements would limit height, and the maximum dwelling GFA cannot be achieved.

The street wall height and tower setback requirements along with the new lanes and roads also limit the design response for the site, further restricting its potential to reach the maximum FAR.

The current interim controls include a mandatory 40 storey height limit, significantly higher than the proposed preferred maximum heights.

The precinct plans are still being developed, and the detail of how the connections and interfaces to the new open space will work is not clear. This makes planning for the 'rear' interface to the park challenging, particularly as this is also designated as a primary active frontage.

The proposal for a tram corridor immediately south of the properties fronting Lorimer Street means that access to those properties will need to be provided off Lorimer Street, despite the CCZ schedule seeking to avoid this.

PART 22	CAPACITY IN ACCORDANCE WITH DENSITY CONTROLS	CAPACITY IN ACCORDANCE WITH BUILT FORM CONTROLS	DIFFERENCE
Dwelling GFA (sqm)	9,315	2,283	- 7,033
No. dwellings	78	19	- 59
Non-dwelling GFA (sqm)	2,933	2,933	0
Total GFA (sqm)	12,248	5,215	- 7,033

PART 25	CAPACITY IN ACCORDANCE WITH DENSITY CONTROLS	CAPACITY IN ACCORDANCE WITH BUILT FORM CONTROLS	DIFFERENCE
Dwelling GFA (sqm)	20,336	13,040	- 7,297
No. dwellings	170	109	- 61
Non-dwelling GFA (sqm)	6,402	5,783	- 619
Total GFA (sqm)	26,739	19,442	- 7,297

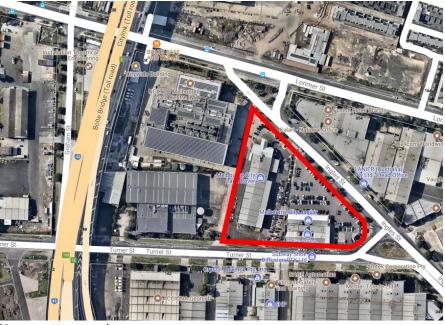
Parts 23 & 24 have been modelled in Submitter 130 analysis which demonstrated comparable results.

Southern portion

The southern portion of this site is proposed to be acquired to form a park (compared with its current development potential of 6 storeys).

Ms Thompson recommends the deletion of the small triangular park south of 870 Lorimer Street. This raises a question about the developability of this land. It would probably need access from Ingles Street, despite the CCZ schedule seeking to avoid this. It could be developed to the preferred maximum height of 29.4m with no setbacks from any boundary, delivering the maximum dwelling FAR and minimum non-dwelling FAR.

Submitter 196: 351-387 Ingles Street, **Port Melbourne**



(Source: Nearmap)

Site conditions	
	Site dimensions: 189m x 155m x 165m = 13,946m² area
	Street interfaces:
	Northeast: Ingles Street (30m wide)
	South: Turner Street (30m wide)
	Existing conditions:
	Two lots occupied by commercial car-sales warehouses and associated surface car parking
	Irregular street tree plantings along Turner Street, regular street tree
	plantings along Ingles Street
	Existing crossovers: 2 x Turner Street and 2 x Ingles Street
Relevant site interfaces	
	Northwest: 826 Lorimer Street, occupied by a large industrial warehouse and associated surface car parking.
	Southwest: 161-189 Turner Street, occupied by a large industrial
	warehouse and associated surface car parking.
Current development proposal	
	Submitted Planning Permit Application (13/006575), on hold since October 2016

Key AmGC81 built form considerations

SITE AREA (SQM)	13,946
PUBLIC REALM AREA (SQM) POS & ROADS	4,514 (32%)
DEVELOPABLE SITE AREA (SQM)	9,432
CORE/ NON-CORE	Core
MAXIMUM DWELLING FAR	5.4:1
MAXIMUM DWELLING GFA (SQM)	75,308
MINIMUM NON-DWELLING FAR	1.7:1
MINIMUM NON-DWELLING GFA (SQM)	23,708
TOTAL GFA (SQM)	99,017
PREFERRED MAXIMUM HEIGHT	42.2m - 80.6m
	(12 - 24 storeys)

Other AmGC81 requirements

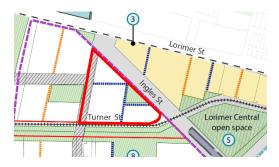
New 22m wide road along the western boundary of the site. Indicative laneways running through the middle of the site in the draft Framework, but not in the proposed CCZ schedule.

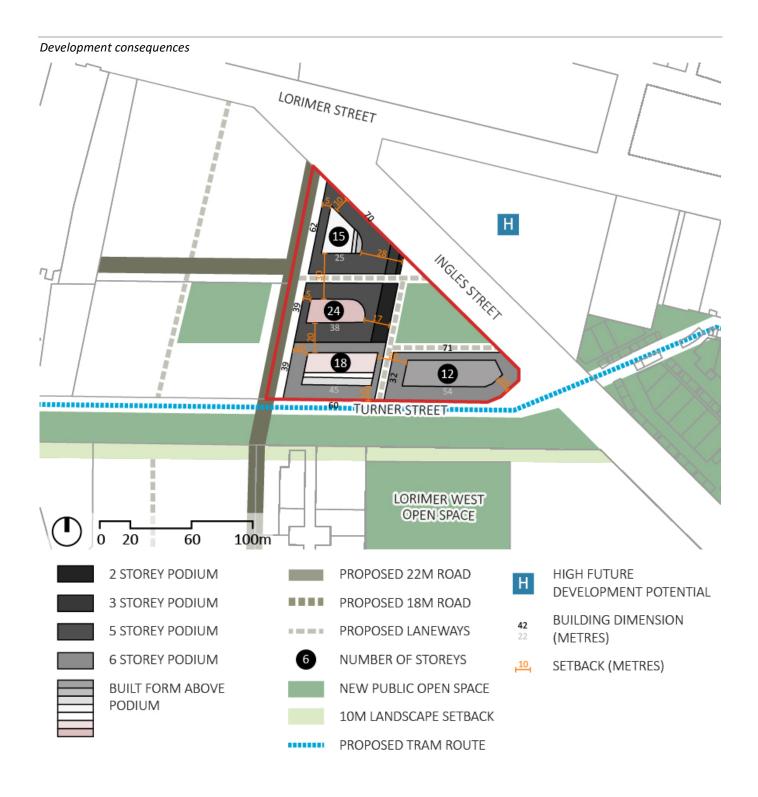
Turner street closed to traffic to form a tram corridor and linear park. No crossovers on Ingles Street and Turner Street.

New park within the site, with overshadowing requirements at 10am to 2pm on September 22.

Surrounding parks with different overshadowing requirements: Neighbourhood Park to the south must not be shadowed at 10:30am-1:30pm, and that to the west at 10am-2pm, both on September 22.

Active frontages: Primary on Turner Street, part of Ingles Street and the proposed new park. Secondary on proposed road to the east.





Discussion

The reduction in developable areas as a result of the provision of new roads, lanes and parks, along with the need to avoid overshadowing surrounding parks, makes it difficult to achieve the maximum dwelling and minimum non-dwelling FAR on the site.

Three of the buildings modelled can only reach a height of 12 to 18 storeys before shadowing the surrounding parks.

The podium and towers will need to be carefully sited and shaped to prevent overshadowing.

However, the central tower could go higher than the preferred maximum 24 storeys without overshadowing the parks at the required periods.

	CAPACITY IN ACCORDANCE WITH DENSITY CONTROLS	CAPACITY IN ACCORDANCE WITH BUILT FORM CONTROLS	DIFFERENCE
Dwelling GFA (sqm)	75,308	60,576	- 14,733
No. dwellings	631	508	- 123
Non-dwelling GFA (sqm)	23,708	23,708	0
Total GFA (sqm)	99,017	84,284	- 14,733

If development incorporates the minimum non-dwelling FAR within the maximum FAR, then the total GFA could be accommodated within the proposed built form 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 12m roads and laneways have been modelled at a width of 6m and relocated where necessary.

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: Om 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/upper forms

- Use: dwellings only, except where the Commercial is not accommodated in the podium.
- 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. In some instances, this was altered in response to the site context and to reach the FAR.
- 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 ARE	A	TOTAL	Non-core area		TOTAL
	Dwelling FAR	Non dwelling FAR minimum	CORE AREA FAR	Dwelling FAR	Non dwelling FAR	NON-CORE AREA 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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