HARWOOD ANDREWS

Our ref: 2KXM:8CLQ 21707942
Contact: Kate Morris
Direct Line: 03 9611 0142
Direct Email: kmorris@ha.legal
Principal: Greg Tobin

Level 5, 707 Collins Street
Melbourne VIC 3008

DX 30970

PO Box 633
Collins St West VIC 8007

T 03 9620 9399
F 03 9620 9288

ABN 98 076 868 034

harwoodandrews.com.au

9 March 2018

Planning Panels Victoria
Email: planning.panels@delwp.vic.gov.au

BCC: parties according to the distribution list

Dear All,

Fishermans Bend Planning Review Panel – Expert evidence
Addenda 2 to expert evidence of Leanne Hodyl (urban design)

As set out in the overview, Addenda 2 has been prepared to illustrate:

- The location of sites referred to Ms Hodyl for response in her Urban Design expert witness statement;
- 3D massing studies for each of those sites;
- 3D massing studies for additional context;
- The locations of all parks and the nominated overshadowing controls on each park (winder/equinox/none) included in the 3D model to demonstrate compliance with the overshadowing controls.

The Addenda does not include any additional recommendations for changes to the draft Framework of the Amendment.

Please note all parties have been blind copied according to the distribution list dated 28 February 2018.

Yours faithfully,

Kate Morris

HARWOOD ANDREWS

Encl.

ADDENDA 2

Amendment GC81 Fishermans Bend Expert Urban Design Evidence: Additional 3d massing studies

Prepared on behalf of DELWP
9 March 2018

cities people love

Hodyl+Co

Overview

1) This addenda has been prepared to illustrate the following:

   - The location of sites that were referred to me for response in my Urban Design Expert Witness Statement
   - 3d massing studies for each of these sites
   - 3d massing studies for additional sites around these submission sites to provide additional context
   - The locations of all parks and the nominated overshadowing controls on each park (winter/ equinox/none) included within the 3d model to demonstrate compliance with the overshadowing controls.

2) The images have been extracted from the 3d model for Fishermans Bend prepared in Urban Circus.

3) This addenda does not include any additional recommendations for changes to the draft Framework or the Amendment.

4) The illustrations are presented in two series:

   - Series One: Demonstration of the FAR only in conjunction with all building envelope controls
   - Series Two: Demonstration of the application of a FAU in conjunction with all building envelope controls

5) Sites with approved permits are generally not shown in the first series in order to demonstrate the application of the proposed controls on these sites where a submission has also been made. Approved development permits are illustrated within the 3d model in the Urban Design Strategy (refer figures 49 to 52).

6) The modelling takes into account when a primary habitable room would be facing each other (as determined by the building depth) and the setbacks have been modelled accordingly.

7) Generally sites have been modelled to each property boundary and no site consolidation has been assumed, except in two circumstances:

   - Business parks
   - Adjacent sites where it is clear that there is common ownership as the one submission has been made for both sites.

Assumptions within the 3d model

8) All sites have been modelled to include the recommendations within my expert witness report, that is:

   - Sandridge core FAR of 7.4:1
   - Montague core FAR of 6.3:1
   - Montague non-core FAR of 3.6:1
   - Street wall height up to 23 metres for street 12 metres or less (not 15.4m as proposed by Amendment)
   - Parks in Montague can be overshadowed by the adjacent street wall height. Any additional storeys must be set back to cause no additional shadow.

9) All other controls have been modelled as per the revised version of the Amendment included in Appendix C of my Expert Witness Evidence Report.

10) All sites have been modelled to demonstrate the maximum yield that is possible on each site according to the nominated FAR. This therefore includes both residential and non-residential uses. The specific land use mix, however, has not been tested within each site and is therefore not visually illustrated within the model. Examples of specific land use mix testing on individual sites is demonstrated in Appendix A of my Expert Witness Evidence Report.

11) The yield in each tested site has an accuracy of - 0.1 to + 0.2 FAR from the nominated FAR. For example, sites tested within the Sandridge core, which has a recommended FAR of 7.4, have been modelled within the range of 7.3 - 7.6 FAR. This was done for efficiency in modelling a large number of sites. This margin of error is considered acceptable to inform the potential development outcomes on each site.

12) Residential towers have been modelled using the following assumptions:

- A maximum building depth for residential towers of 26m in at least one direction (e.g. 26 x 50 metres is acceptable) has been modelled.
- A minimum tower depth of 12 metres and minimum tower floorplate of 600 metres (does not apply for buildings 10 storeys and under).
- A maximum residential tower floorplate of 1,500m^2

13) Commercial towers have been modelled up to 2,000m^2

14) Car parking is assumed to be above ground, however, car park layout and numbers have not been assessed.

Series 1: Modelling of the proposed FAR and building envelope controls on each site

15) The first series of images illustrate the application of the FAR together with the building envelope controls (overall heights, street wall heights, setbacks and building separation and overshadowing controls) on 92 sites as follows:

- Montague - 39 sites
- Lorimer - 16 sites
- Sandridge - 24 sites
- Wirraway - 13 sites

16) This modelling demonstrates that of the 92 sites tested:

- There is only 1 site (118 Bertie Street in Sandridge core precinct) where the potential yield enabled by the FAR could not be delivered on the site due to building envelope constraints. The proposed FAR for this site (according to the recommendation within my Expert Witness Evidence Report) is 7.4:1. The modelling demonstrates that this site can achieve a FAR of 6.7:1.
- There were 6 sites where the discretionary height controls have been exceeded in order to accommodate the full potential yield realised by the FAR. Two of these are in Montague and four in Sandridge. In each of these sites the overshadowing requirements are still met. The additional heights across these 6 sites ranged from 1 to 11 storeys. All other built form controls have been met. As the height controls are discretionary these sites comply with all of the proposed controls.
- All other sites also comply with all of the proposed controls including FAR, building setbacks, buildings separations, street wall heights and overshadowing controls and are modelled within the discretionary height controls.

17) The modelling clearly demonstrates that the following objectives are achieved through the proposed controls:

- Diversity of building typologies that are aligned with the vision in each precinct
- Diversity in housing typologies, including the delivery of family-friendly housing in the Sandridge and Wirraway non-core areas (mid-rise developments with communal open space)
- Good levels of public amenity through compliance with street wall height controls, overshadowing controls and building setbacks/separation
- Good levels of private amenity through compliance with building setbacks/separation controls

Series 2: Additional modelling of the FAU

18) The second series of images from the model illustrate the application of the FAU for a number of blocks within each precinct. These are in addition to those already included in Appendix B of the substantive report.

19) Additional sites to those where submissions have been made have been modelled to provide additional context in testing the controls, in particular, in testing the impact of FAU controls at a block scale.

20) The same assumptions have been applied within the 3d model as noted above. Buildings have been modelled to exceed the discretionary height controls however they still comply with all overshadowing controls. In Lorimer towers have been capped at 60 storeys however some could increase further in height without comprising overshadowing requirements.

21) The modelling of the potential use of the FAU demonstrates that good levels of public and private amenity can still be delivered. The utilisation of the FAU does, however, diminish building diversity and housing diversity and significantly increase population numbers (refer discussion in Section 4.1 of my Urban Design Expert Witness Statement report). This is demonstrated, for example, through the reduction in communal open spaces (as mid-rise buildings are substituted with tower and podium developments).

22) Approval for the application of a FAU on any site should therefore carefully consider the preferred character within each area (as outlined in the Municipal Strategic Statements) and the design objectives in each Design Development Overlay that focus on building diversity (typologies and scale) and housing diversity. These should not be traded off for the provision of a FAU.

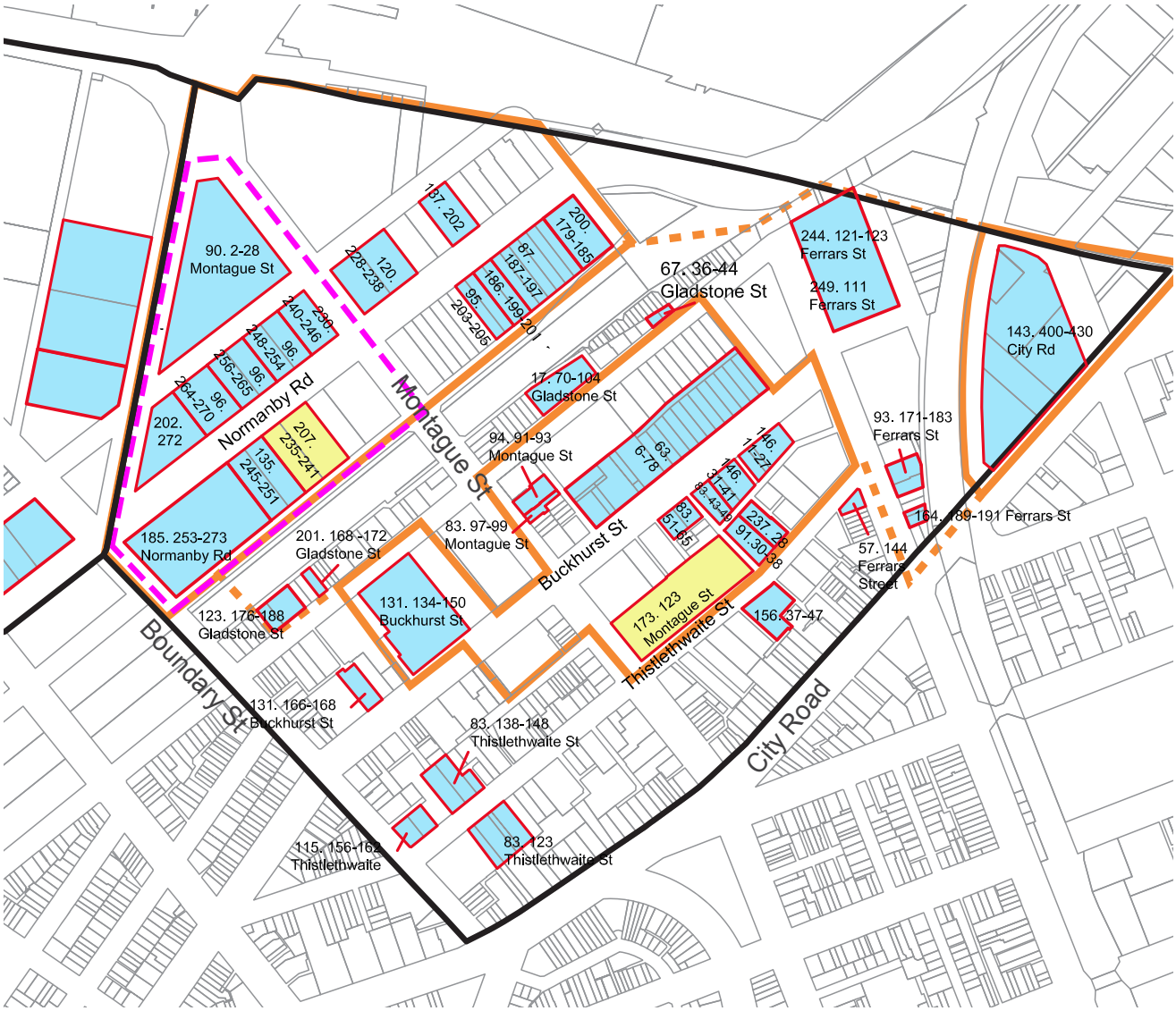


Figure 1 Location of submitters who have commented on built form and density issues (as referred by DELWP) and location of sites tested within Expert Witness Report including this addenda - Montague detailed map

Location of submitters (where site addresses have been nominated) - sites modelled within this addenda

Location of submitters - sites included in individual site testing (see Appendix A of the Urban Design Expert Witness Report) and modelled within this addenda

Blocks modelled with application of FAU tested (see Appendix B of the Urban Design Expert Witness Report)

Existing boundary of core area

Proposed revised boundary of core area

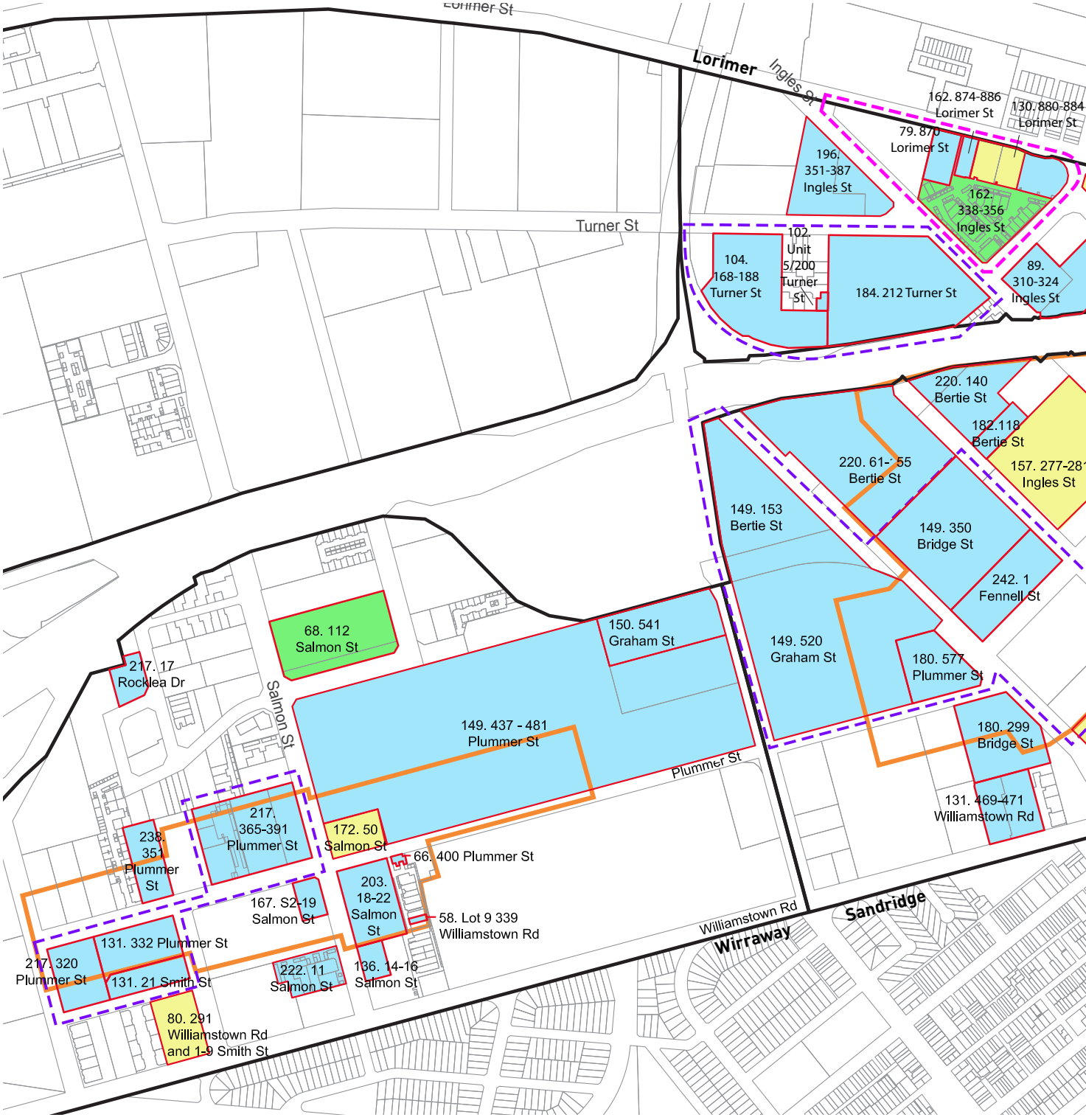
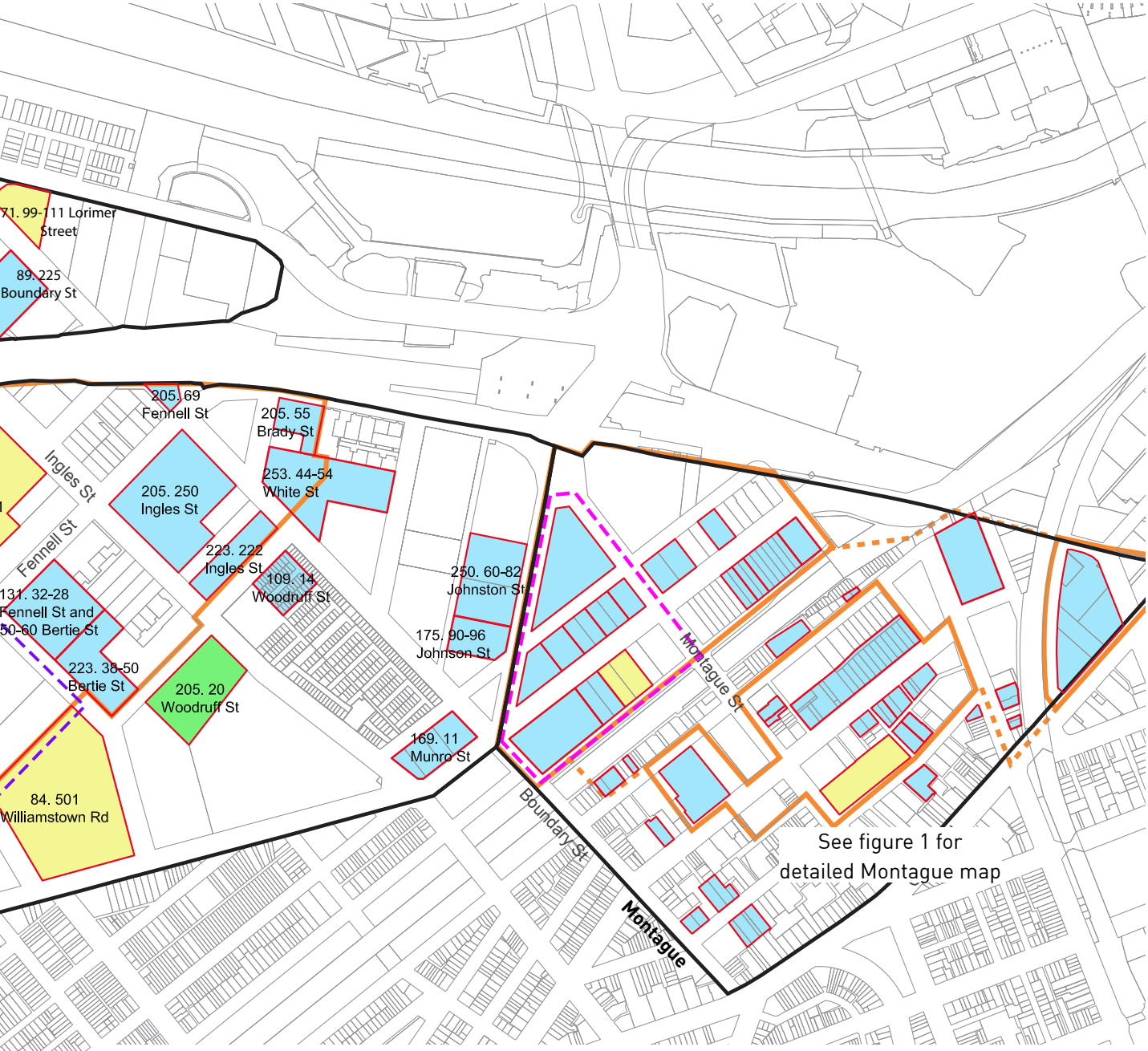


Figure 2 Location of submitters who have commented on built form and density issues (as referred by DELWP) and location of sites tested within Expert Witness Report including this addenda



Location of submitters (where site addresses have been nominated) - sites modelled within this addenda

Location of submitters - sites included in individual site testing (see Appendix A of the Urban Design Expert Witness Report) and modelled within this addenda

Blocks modelled with application of FAU tested (see Appendix B of the Urban Design Expert Witness Report)

Additional blocks modelled with application of FAU tested included within this addenda

Existing boundary of core area

Proposed revised boundary of core area

Series 1: Modelling of the proposed controls on each site

Figure 3 Montague plan view: 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.

Public open space

Winter overshadowing controls

Spring overshadowing controls

No overshadowing controls

Private open space

Building GFA delivered through FAR (Core)

Building GFA delivered through FAR (Non-core)

Building GFA delivered above the discretionary height limit

Heritage buildings

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.

Public open space

Winter overshadowing controls

Spring overshadowing controls

No overshadowing controls

Private open space

Building GFA delivered through FAR (Core)

Building GFA delivered through FAR (Non-core)

Building GFA delivered above the discretionary height limit

Heritage buildings

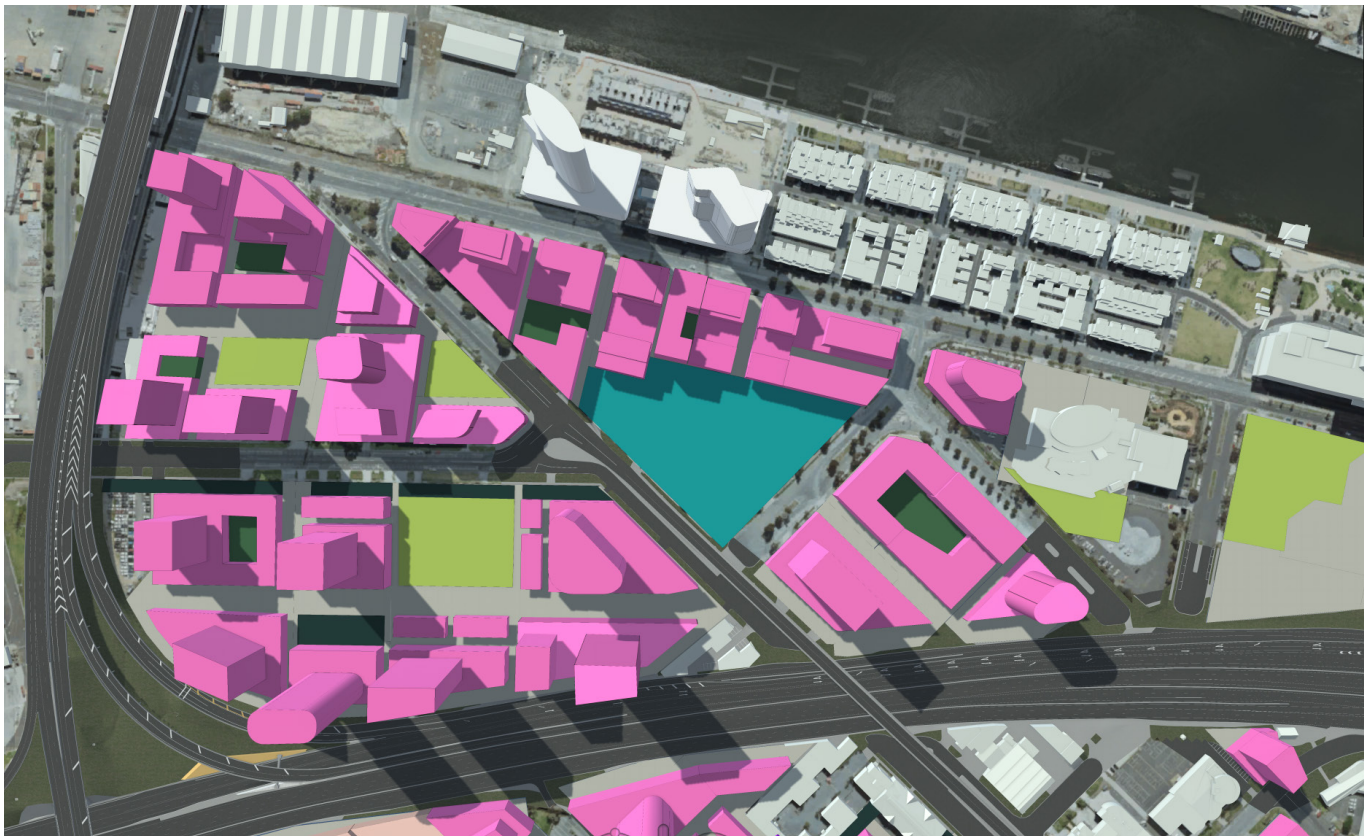


Figure 5 Lorimer plan view: In this illustration all sites are also modelled to the proposed FAR of 5.4 and in compliance with the built envelope controls (including overshadowing requirements). This demonstrates a variety of potential design responses that are possible within the proposed controls.

Public open space

Winter overshadowing controls

Spring overshadowing controls

No overshadowing controls

Private open space

Building GFA delivered through FAR (Core)

Building GFA delivered through FAR (Non-core)

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.

Public open space

Winter overshadowing controls

Spring overshadowing controls

No overshadowing controls

Private open space

Building GFA delivered through FAR (Core)

Building GFA delivered through FAR (Non-core)

Figure 7 Sandridge plan view: In this illustration all sites are also modelled to the proposed FAR of 7.4 (core area) and 3.3 (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, including the delivery of family-friendly housing (mid-rise buildings with communal open space in the non-core area)

Public open space

- Winter overshadowing controls
- Spring overshadowing controls
- No overshadowing controls

Private open space

- Building GFA delivered through FAR (Core)
- Building GFA delivered through FAR (Non-core)
- Building GFA delivered above the discretionary height limit
- Site where the FAR cannot be delivered within the proposed building envelope controls
- Heritage buildings

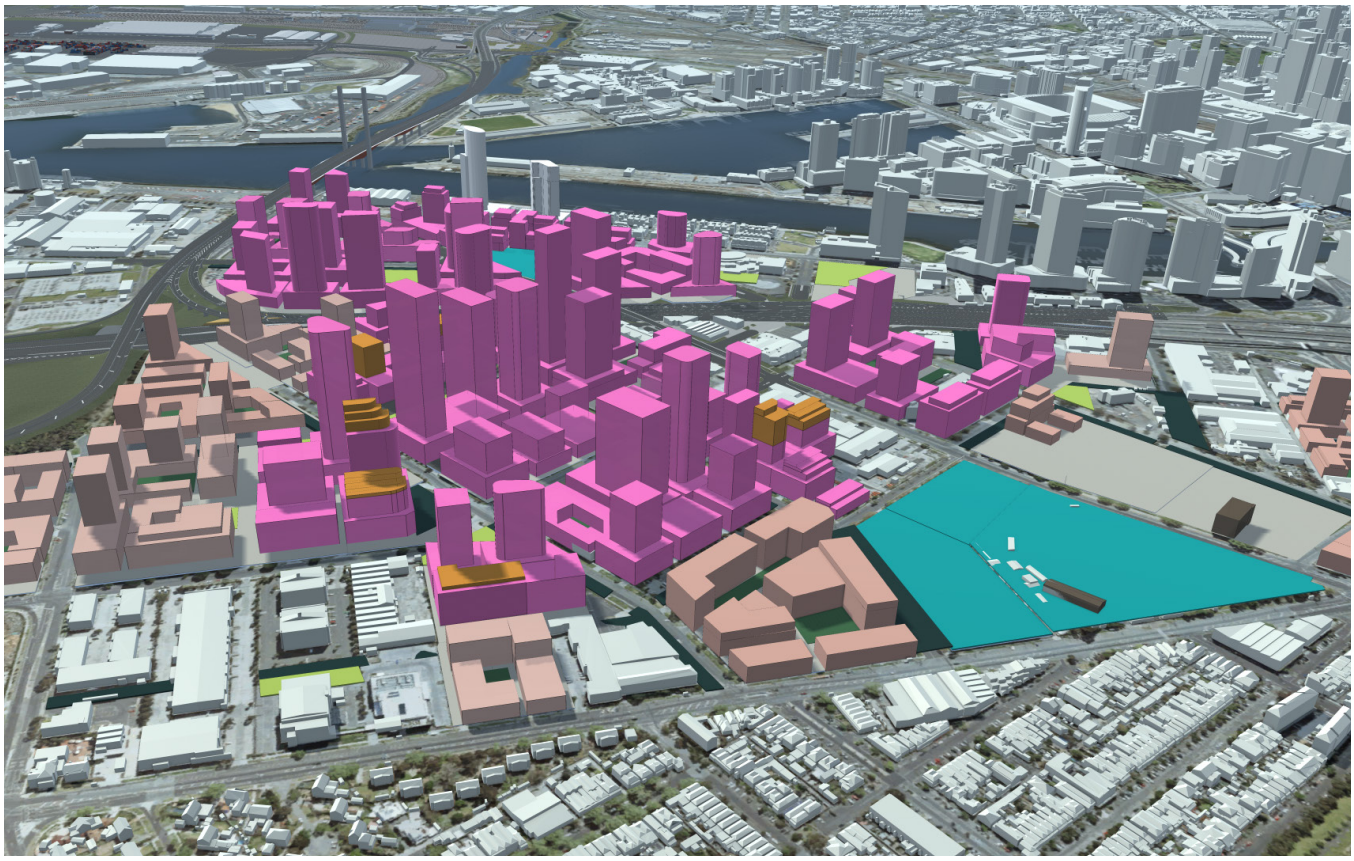


Figure 8 Sandridge perspective view (from the south): In this illustration all sites are also modelled to the proposed FAR of 7.4 (core area) and 3.3 (non-core area) and in compliance with the built envelope controls (including overshadowing requirements). This demonstrates a variety of potential design responses that are possible within the proposed controls, including the delivery of family-friendly housing (mid-rise buildings with communal open space in the non-core area)

Public open space

- Winter overshadowing controls
- Spring overshadowing controls
- No overshadowing controls

Private open space

- Building GFA delivered through FAR (Core)
- Building GFA delivered through FAR (Non-core)
- Building GFA delivered above the discretionary height limit
- Site where the FAR cannot be delivered within the proposed building envelope controls
- Heritage buildings

Figure 9 Sandridge perspective view (from the north): In this illustration all sites are also modelled to the proposed FAR of 7.4 (core area) and 3.3 (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, including the delivery of family-friendly housing (mid-rise buildings with communal open space in the non-core area)

Public open space

- Winter overshadowing controls
- Spring overshadowing controls
- No overshadowing controls

Private open space

- Building GFA delivered through FAR (Core)
- Building GFA delivered through FAR (Non-core)
- Building GFA delivered above the discretionary height limit
- Site where the FAR cannot be delivered within the proposed building envelope controls
- Heritage buildings

Figure 10 Wirraway plan view: In this illustration all sites are also modelled to the proposed FAR of 4.1 (core area) and 2.1 (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, including the delivery of family-friendly housing (mid-rise buildings with communal open space in the non-core area)

Public open space
Winter overshadowing controls
Spring overshadowing controls
No overshadowing controls

Private open space

Building GFA delivered through FAR (Core)
Building GFA delivered through FAR (Non-core)
Heritage buildings

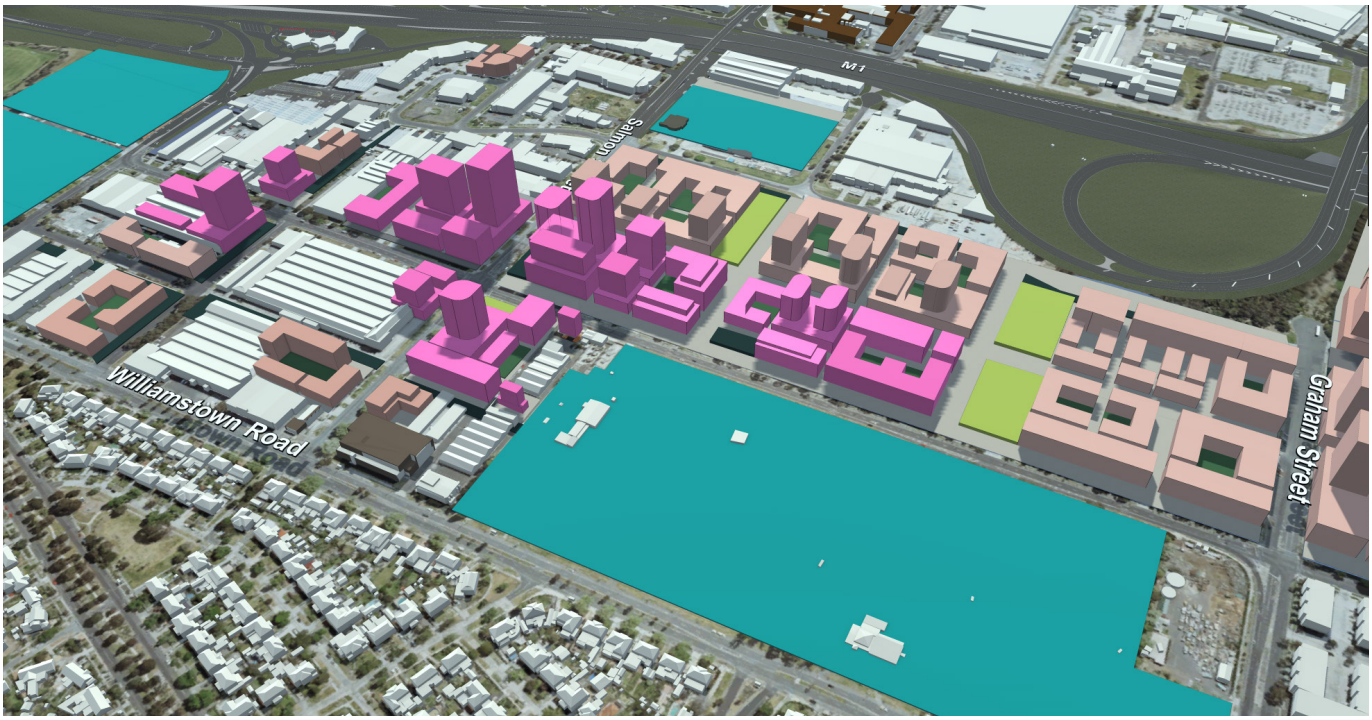


Figure 11 Wirraway perspective view (view from south): In this illustration all sites are also modelled to the proposed FAR of 4.1 (core area) and 2.1 (non-core area) and in compliance with the built envelope controls (including overshadowing requirements). This demonstrates a variety of potential design responses that are possible within the proposed controls, including the delivery of family-friendly housing (mid-rise buildings with communal open space in the non-core area)

Public open space

- Winter overshadowing controls
- Spring overshadowing controls
- No overshadowing controls

Private open space

- Building GFA delivered through FAR (Core)
- Building GFA delivered through FAR (Non-core)
- Heritage buildings

Figure 12 Wirraway perspective view (from south focused on core area): In this illustration all sites are also modelled to the proposed FAR of 4.1 (core area) and 2.1 (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, including the delivery of family-friendly housing (mid-rise buildings with communal open space in the non-core area)

Public open space

Winter overshadowing controls

Spring overshadowing controls

No overshadowing controls

Private open space

Building GFA delivered through FAR (Core)

Building GFA delivered through FAR (Non-core)

Sites with permit approvals

Heritage buildings

Series 2: Modelling of the potential FAU controls on selected sites

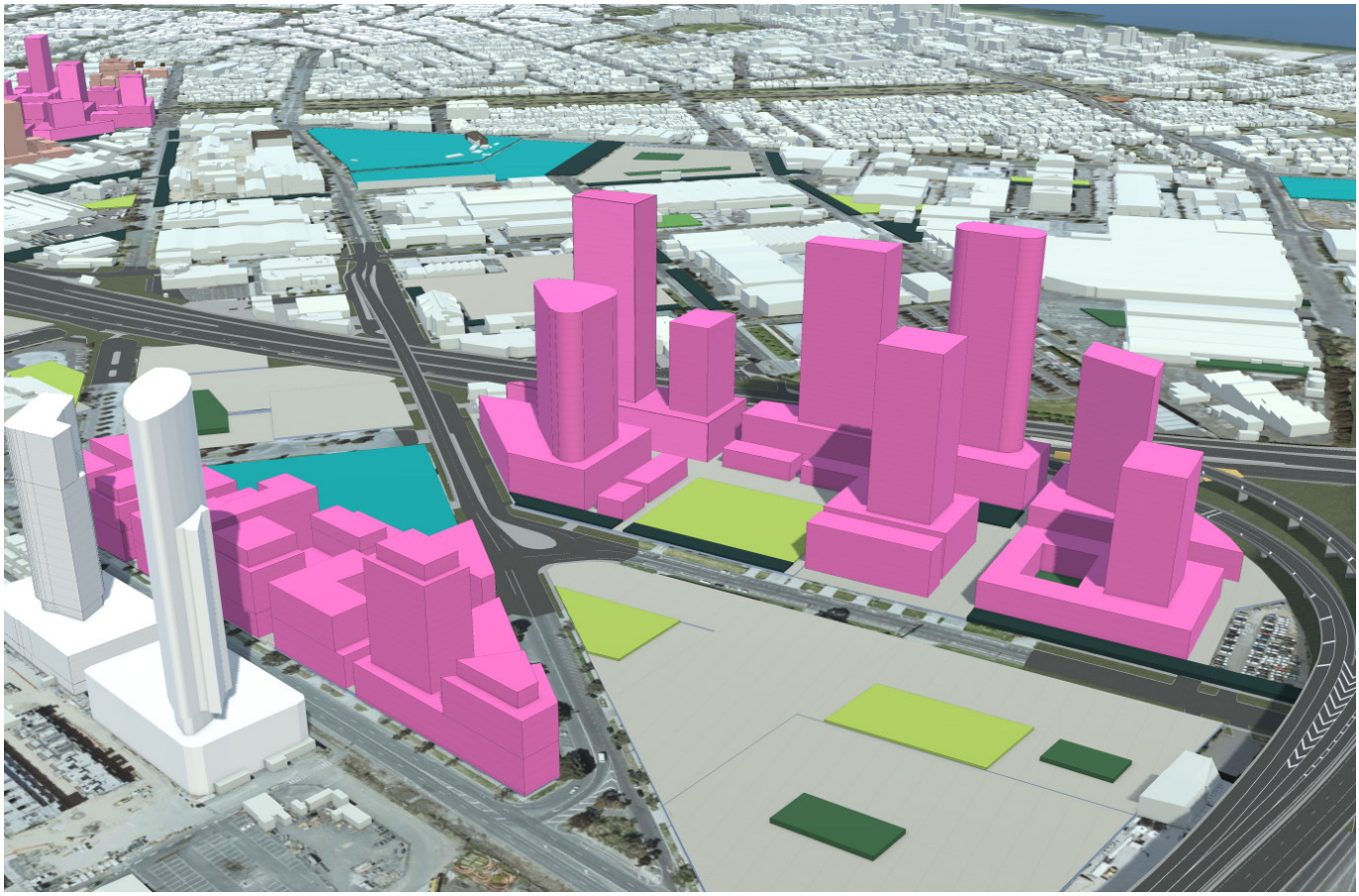


Figure 13 A potential design outcome for two blocks in Lorimer (view from north). In this example all sites are also modelled to the proposed FAR of 5.4 and in compliance with the built envelope controls (including overshadowing requirements for the new park). This demonstrates a variety of potential design responses that are possible within the proposed controls.

Public open space

Winter overshadowing controls

Spring overshadowing controls

No overshadowing controls

Private open space

Building GFA delivered through FAR

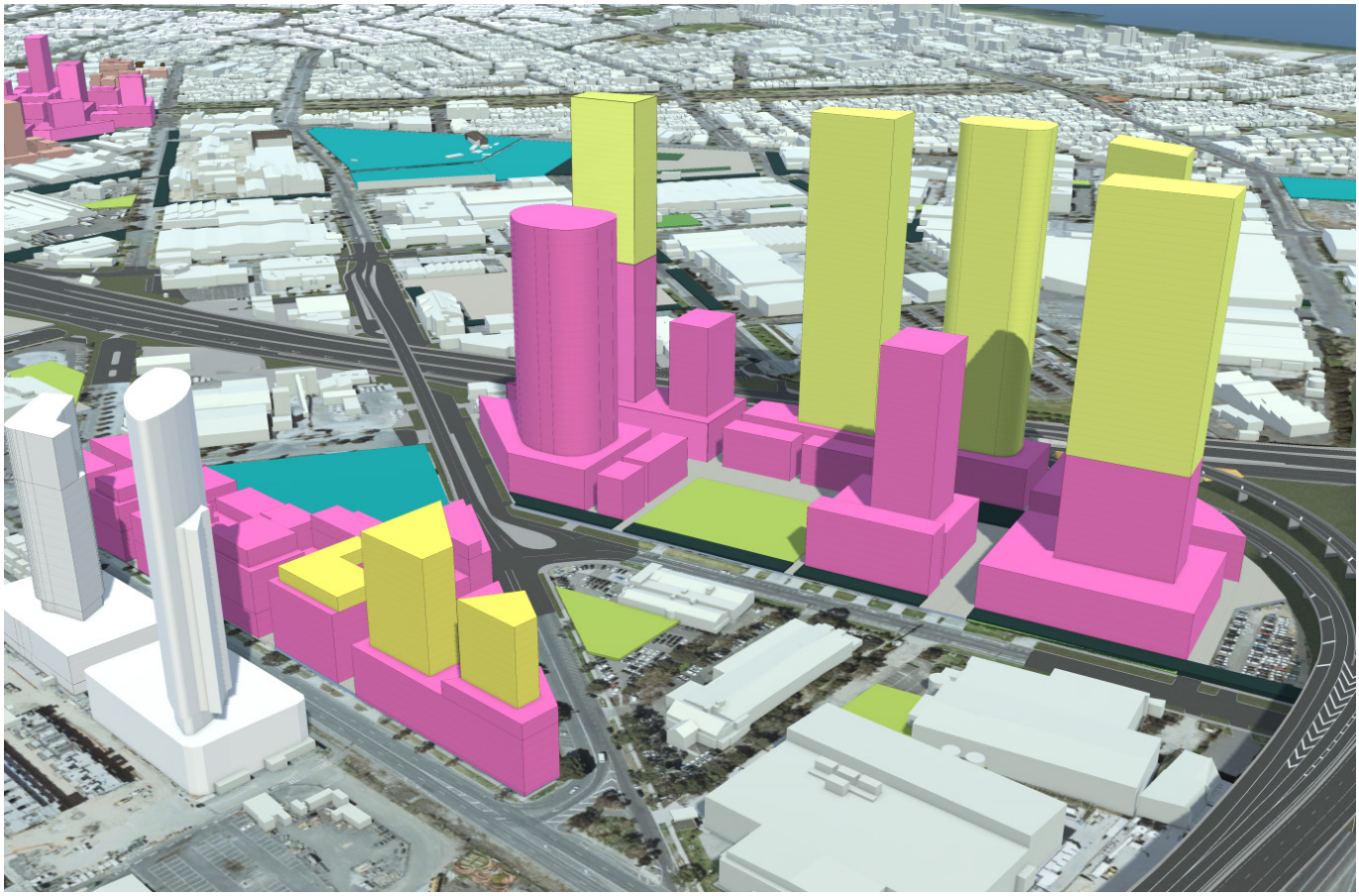


Figure 14 An alternative design outcome for two blocks in Lorimer that takes into account opportunities for potential FAU (view from north-west). In this example all sites are also modelled to the proposed FAR of 5.4. A Potential FAU is modelled in yellow and complies will all overshadowing requirements. Buildings have been shown to a maximum height of 60 storeys. This equates to 1911 apartments of which 212 would be dedicated to affordable housing.

Public open space

Winter overshadowing controls

Spring overshadowing controls

No overshadowing controls

Private open space

Building GFA delivered through FAR

Building GFA delivered through FAU

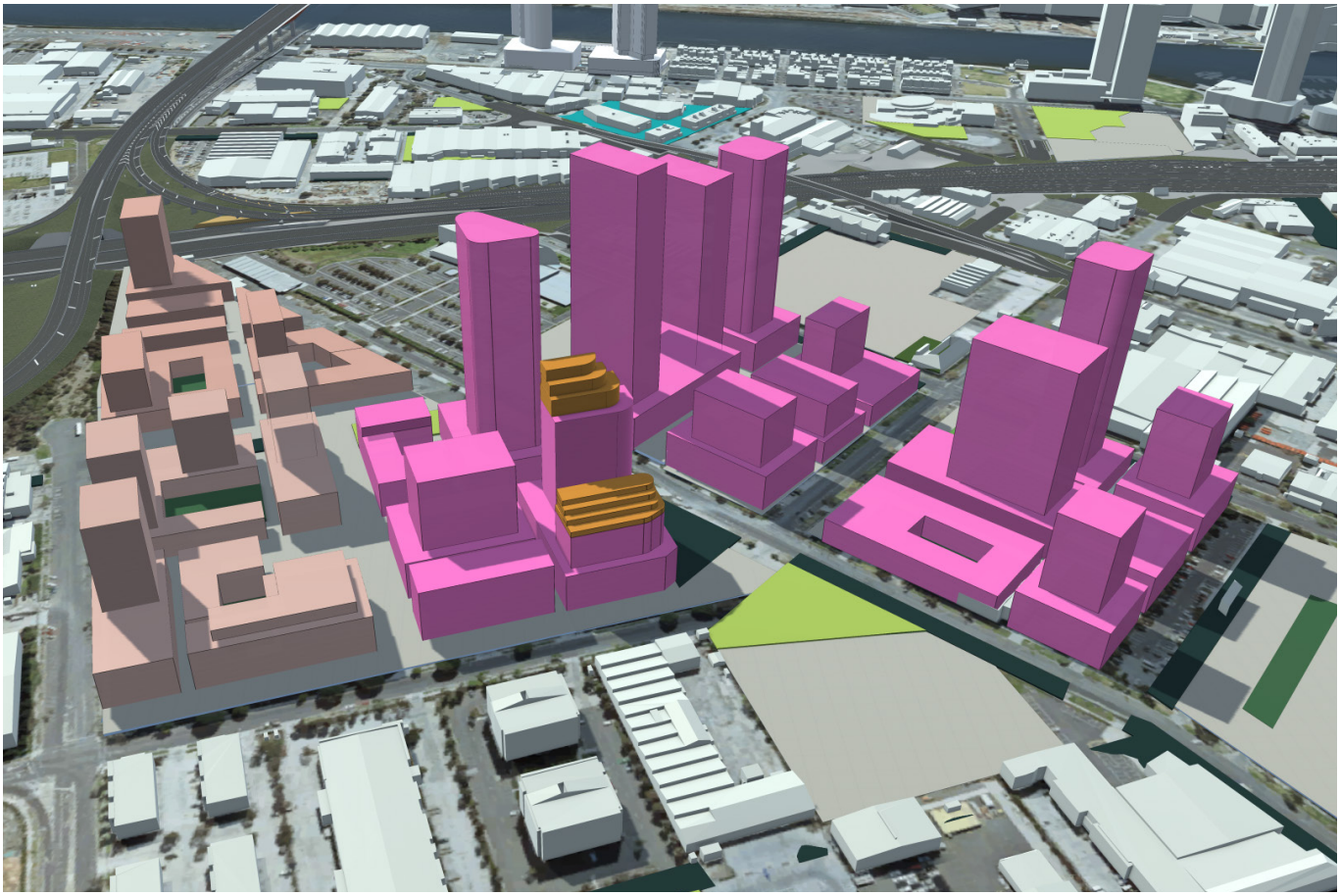


Figure 15 An potential design outcome for four blocks in Sandridge (view from south). In this example all sites are also modelled to the proposed FAR of 7.4 in the core area (taking into account recommendations in this report) and 3.3 in the non-core area and in compliance with the built envelope controls (including overshadowing requirements for the new parks). This demonstrates a variety of potential design responses that are possible within the proposed controls.

Public open space

Winter overshadowing controls

Spring overshadowing controls

No overshadowing controls

Private open space

Building GFA delivered through FAR (Core)

Building GFA delivered through FAR (Non-core)

Building GFA delivered above the discretionary height limit

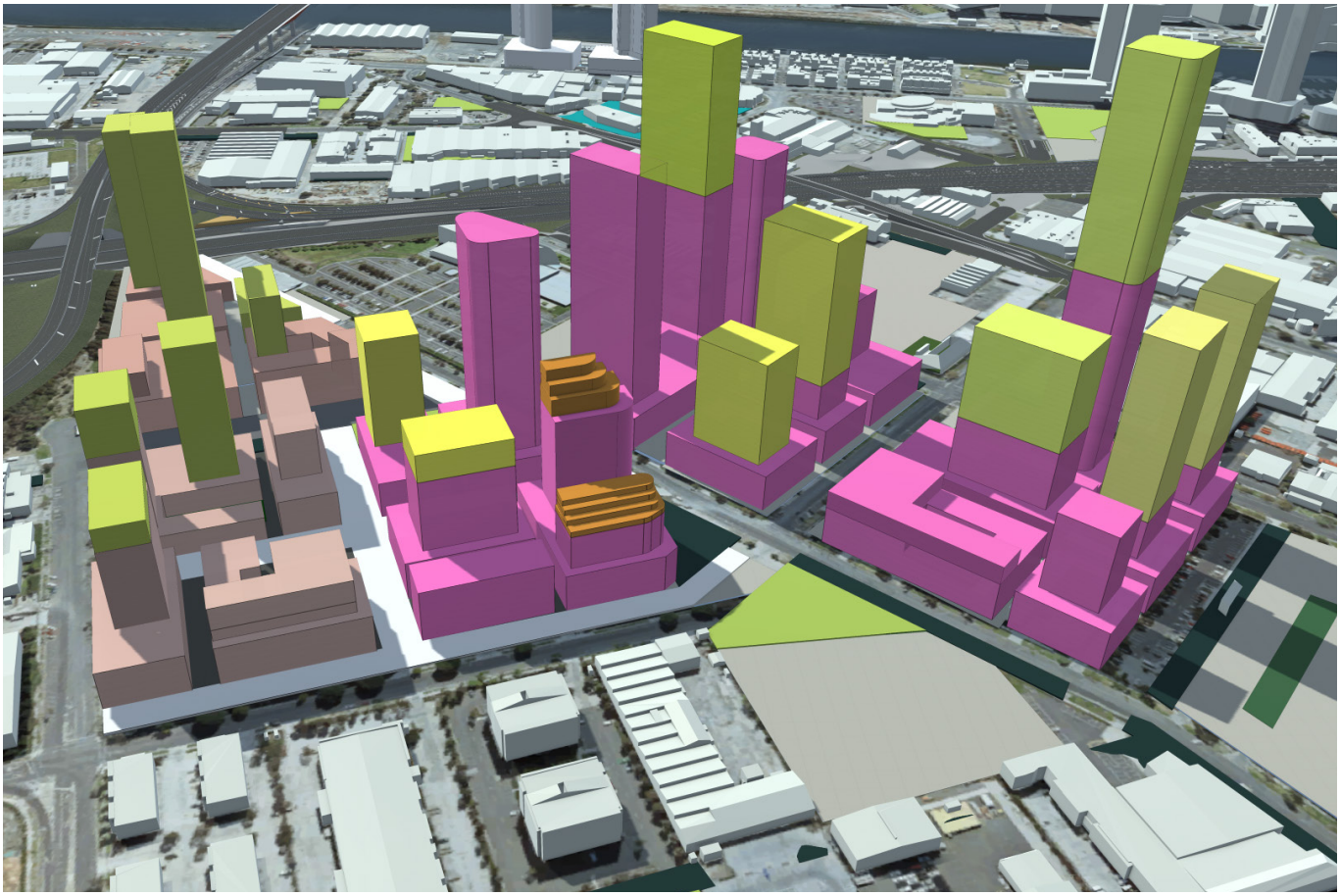


Figure 16 An alternative design outcome for four blocks in Sandridge that takes into account opportunities for potential FAU (alternate view from south). In this example all sites are also modelled to the proposed FAR of 7.4 in the core area (taking into account recommendations in this report) and 3.3 in the non-core area. A Potential FAU is modelled in yellow and complies will all overshadowing requirements. This equates to 3,441 apartments of which 382 would be dedicated to affordable housing.

Public open space

Winter overshadowing controls

Spring overshadowing controls

No overshadowing controls

Private open space

Building GFA delivered through FAR (Core)

Building GFA delivered through FAR (Non-core)

Building GFA delivered above the discretionary height limit

Building GFA delivered through FAU

cities people love

Hodyl+Co

Prepared by Hodyl + Co for DELWP
www.hodylandco.com