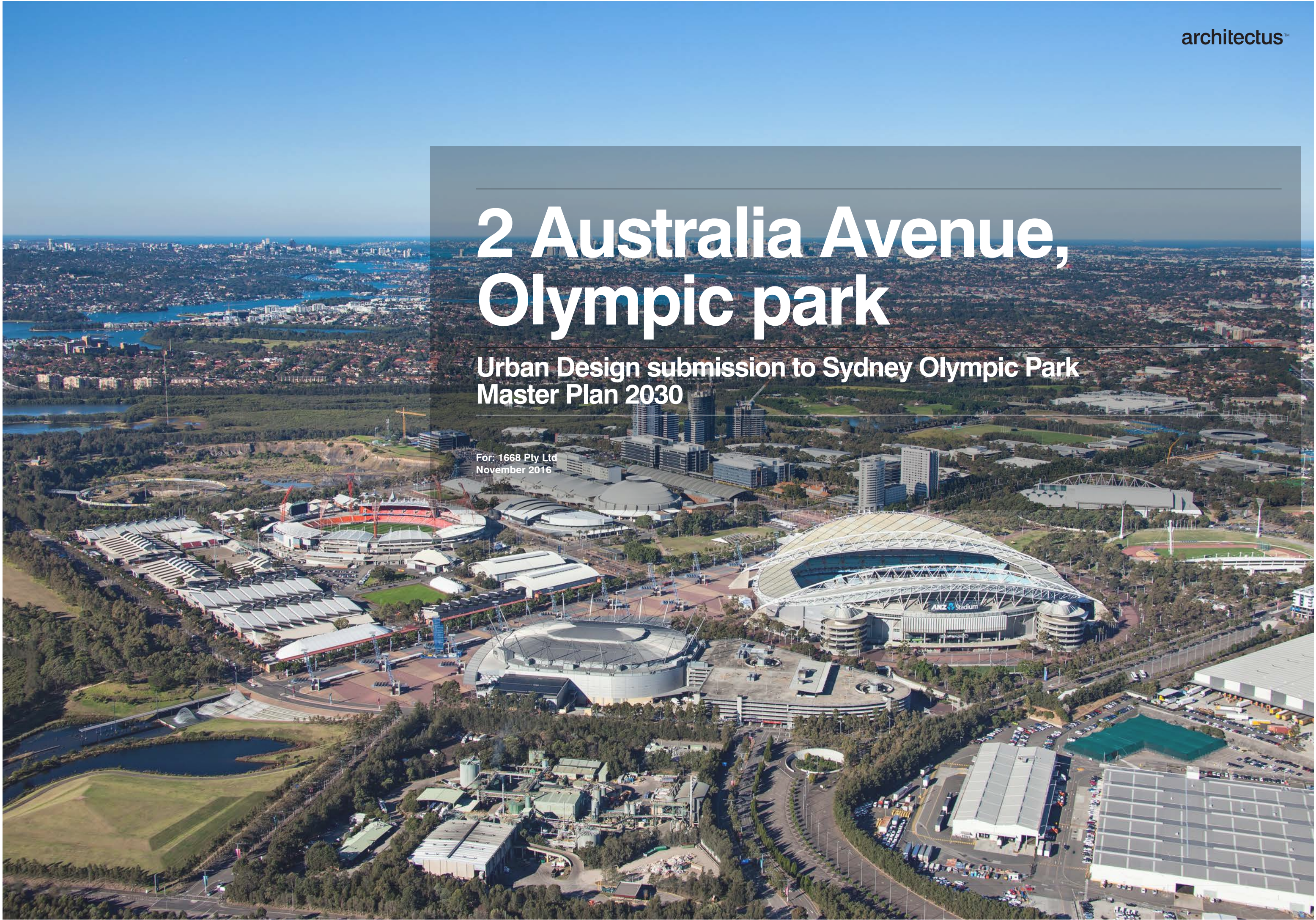


# 2 Australia Avenue, Olympic park

Urban Design submission to Sydney Olympic Park  
Master Plan 2030

For: 1668 Pty Ltd  
November 2016







# Context



# 1.1 Introduction and site context

## Introduction

Architectus has been engaged by the landowner of 2 Australia Avenue, (the subject site) to provide a submission on the Sydney Olympic Park (SOP) Master Plan 2030 (2016 Review).

The subject site is strategically located within 100m from the Olympic Park Train Station, on Australia Avenue and Herb Elliott Avenue. Our review of the SOP Master Plan 2030 identifies an opportunity to review the proposed land use and built form strategy for the subject site.

We believe a review is required to ensure development potential is maximised within close proximity to the train station, there is increased capacity for mixed use development in areas not subject to noise impacts, and the proposed land use structure aligns with land ownership.

This submission presents our analysis and recommendations for proposed changes to the SOP Master Plan 2030.

## Subject Site

The subject site is located in the Central Precinct of Sydney Olympic Park, which is defined in the Master plan 2030 as the area bound by Sydney showground in the north, Australia Avenue in the east, Olympic Boulevard in the west and Sarah Durack Avenue in the south.

The subject site includes existing open space at 2 Australia Avenue and the adjoining sites to the west at 2-4 Herb Elliot Avenue.

Key surrounding development includes:

- ① 9 Australia Ave, ground level retail and a 24 storey residential upper.
- ② 11 Australia Ave, development comprise 2 separate buildings, a 24 storey tower and a 30 storey tower. A 2 level podium link the two towers together providing for additional retail and commercial space, a gymnasium and communal facilities.
- ③ The site is located directly south of a 8 storey commercial building.
- ④ The site is within 100m of Olympic Park station.

Legend

Central Precinct

The site

200m walking catchment







1 9 Australia Avenue, Sydney Olympic Park (24 storey residential)



3 8 storey commercial Commonwealth Bank of Australia



5 View looking east, Herb Elliot Avenue



2 11 Australia Avenue, Sydney Olympic Park (24 & 30 storey residential)



4 Sydney Olympic Park station



6 View looking west, Herb Elliot Avenue



## 1.2 SOP Master plan 2030 - Central precinct



### Illustrative Master Plan from Sydney Olympic Park Master plan 2030 (2016 Review):

The SOP Master Plan 2030 shows commercial development in the northern and western part of the Central precinct and a residential is shown to the south. The Central precinct is proposed as a high density mixed use hub within the Town Centre, providing a range of commercial, retail and residential uses.

The Sydney Olympic Park (SOPA) Master plan 2030 (2016 Review) illustrates planning proposal for the Central Precinct as follows:

*The Central Precinct is bounded by Dawn Fraser Avenue, Olympic Boulevard, Sarah Durack Avenue and Australia Avenue. The area is currently known as the Australia Centre, a business park characterised by low density industrial and commercial uses.*

*The precinct will transform into a vibrant, high density mixed use Town Centre with a strong commercial office and retail area to the north and a residential character along Figtree Drive.*

*New tree lined streets will transform the precinct into a lively and walkable area. At the heart of the precinct, a new public urban park is prominently located to provide informal recreation and to create a strong identity for the precinct.*

*Streets are characterised by 8 storey built edges (2m setback above 6 storeys) with defined corner buildings. Most of the streets will have retail frontages providing a highly activated area at street level and around the park. A zone of slender towers, between 30-45 storeys will be setback above 8 (2m setback above 6 storeys) storey podiums along Olympic Boulevard and Australia Avenue.*

North

Scale  
0 75m 150m



# 1.3 SOP Master Plan 2030 - Proposed Land Uses

The SOP Master Plan 2030 aims to encourage mixed use development, promote after-hours activity and create a consolidated commercial core to promote new jobs close to the train station.

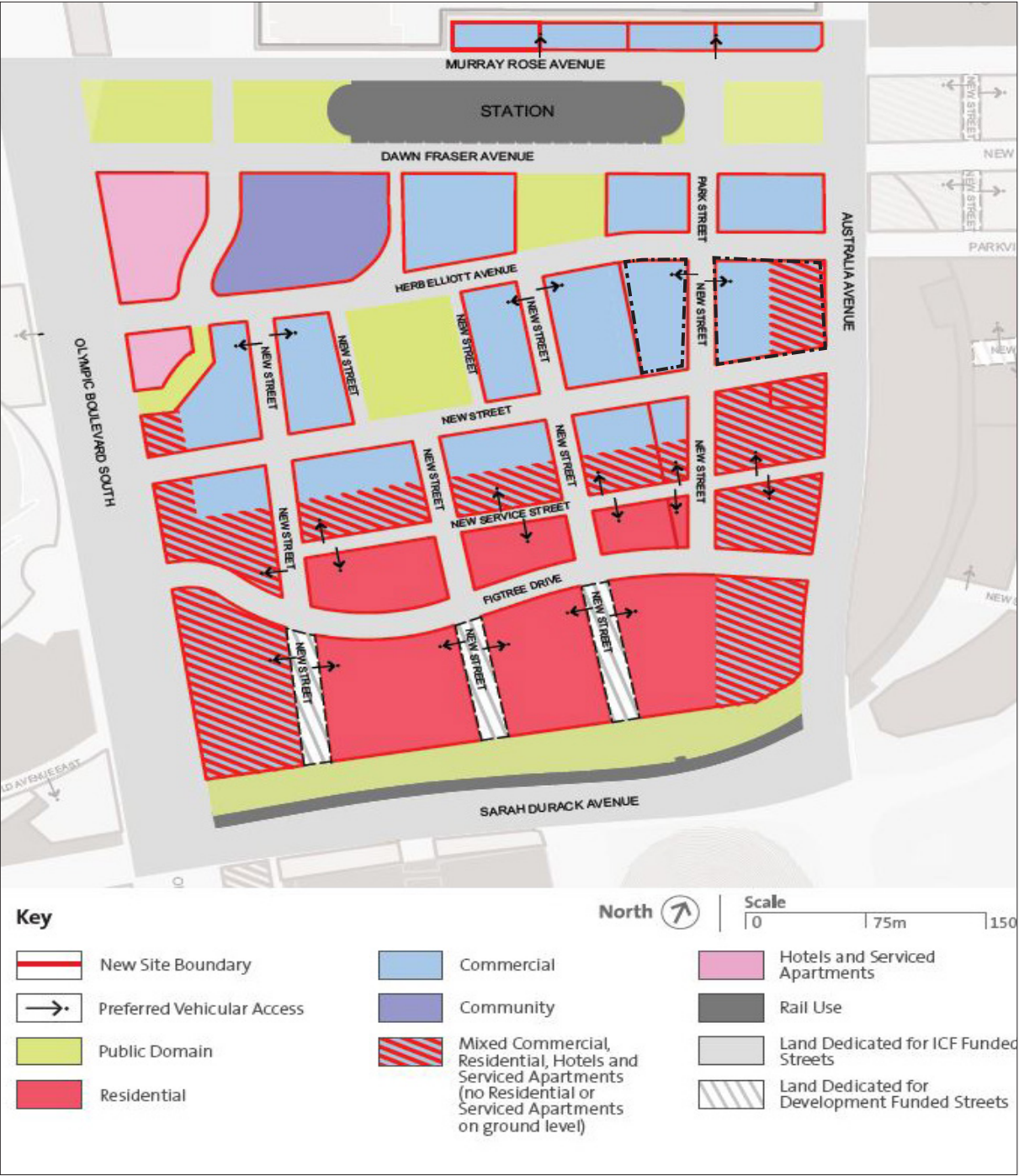
The majority of the subject site is shown as commercial on the Land Use Plan, with an area of mixed use identified on Australia Avenue. We understand the proposed commercial land use aims to consolidate the commercial core and provide opportunities for continued employment growth in Sydney Olympic Park.

To support this aim we have identified opportunity for a substantial stand-alone office building on the western portion of the subject site (4 Herb Elliot Avenue). This will facilitate commercial redevelopment within the commercial core and will provide a clear edge to the commercial core and transition to mixed use development to the east.

On the eastern portion of the subject site, the proposed land uses are split between commercial and mixed use. This approach is not supported as the boundary between the land uses does not align with land ownership and will not provide adequate flexibility to deliver a vibrant, integrated mixed use development on the entirety of the site.

We note that the subject site is zoned B4 Mixed Use, which allows a range of uses, including residential; however, the proposed Land Uses Plan must be revised, to extend the mixed use area to the entire block on the corner of Australia Avenue and Herb Elliott Avenue.

This is consistent with the proposed land use structure to the south of the subject site and will increase the potential for an active mixed use development within 100m of the train station, consistent with the aims of the SOP Master Plan 2030.



The proposed Land Use Plan shows the site as commercial and mixed use.



# 1.4 SOPA Master plan 2030 - Proposed built form

The SOPMaster Plan 2030 identifies significant increases to building heights and density in the Central precinct.

The proposed building heights in the SOP Master Plan align the tallest towers along north-south streets. On Australia Avenue heights up to 30 storeys are proposed and heights of 45 storeys are proposed on Olympic Boulevard to reinforce the significance of these streets.

The subject site is identified within a ‘tower zone’ with heights up to 30 storeys that will deliver a corridor of tall buildings along Australia Avenue.

We support the sites inclusion in the ‘tower zone’ and more broadly the increased heights in the SOP Master Plan. However, we believe there is an opportunity to increase the building heights in this strategic location to maximise development potential within 100m of the train station.

To support this view, we have undertaken detailed site testing that demonstrates the capacity of the site to support increased building heights that will enhance the Town Centre’s distinctive skyline and create a vibrant, high density mixed use precinct within 100m of the train station. Our analysis demonstrates potential for building heights ranging from 40 to 70 storeys on the subject site.

Consistent with the proposed increase in building heights, we have undertaken a review of the proposed floor space ratios to determine the most appropriate built form outcome for the subject site. We believe that the subject site has the capacity to support FSR’s ranging 8:1 to 12:1 across the site.

Given the subject site’s strategic location within 100m of the train station, adjacent to the commercial core and being one of the few sites not significantly impacted by noise constraints, there is a clear rationale to consider increased density in this location.

A summary of the site testing options and analysis is provided in Section 1.7 of this report.

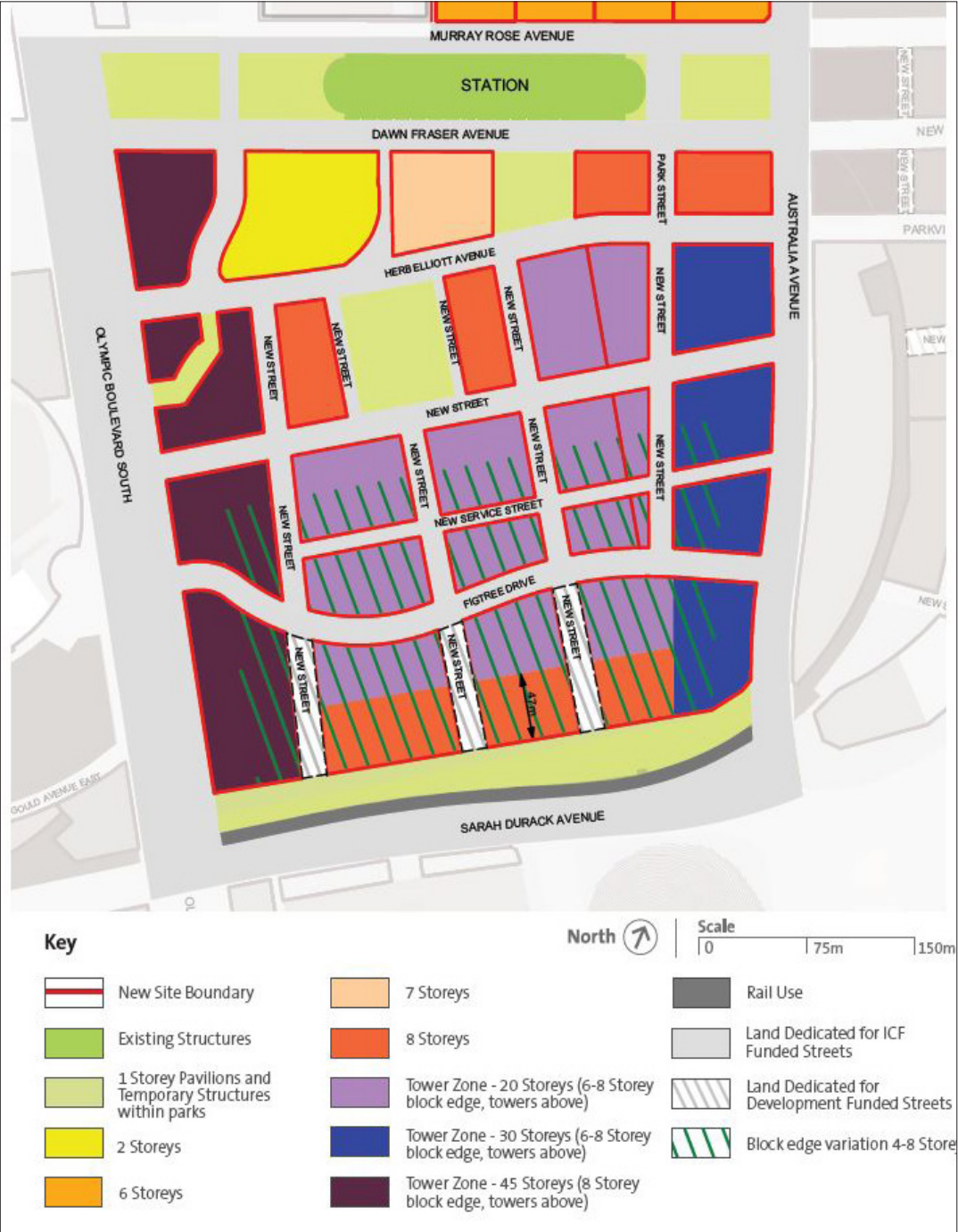
Central Precinct Height of Buildings Map



The proposed building height is currently 74m in the western part of the site, and 102m for the rest of the site.



Central Precinct Building Heights Plan



The site is within a tower zone of up to 30 storeys.

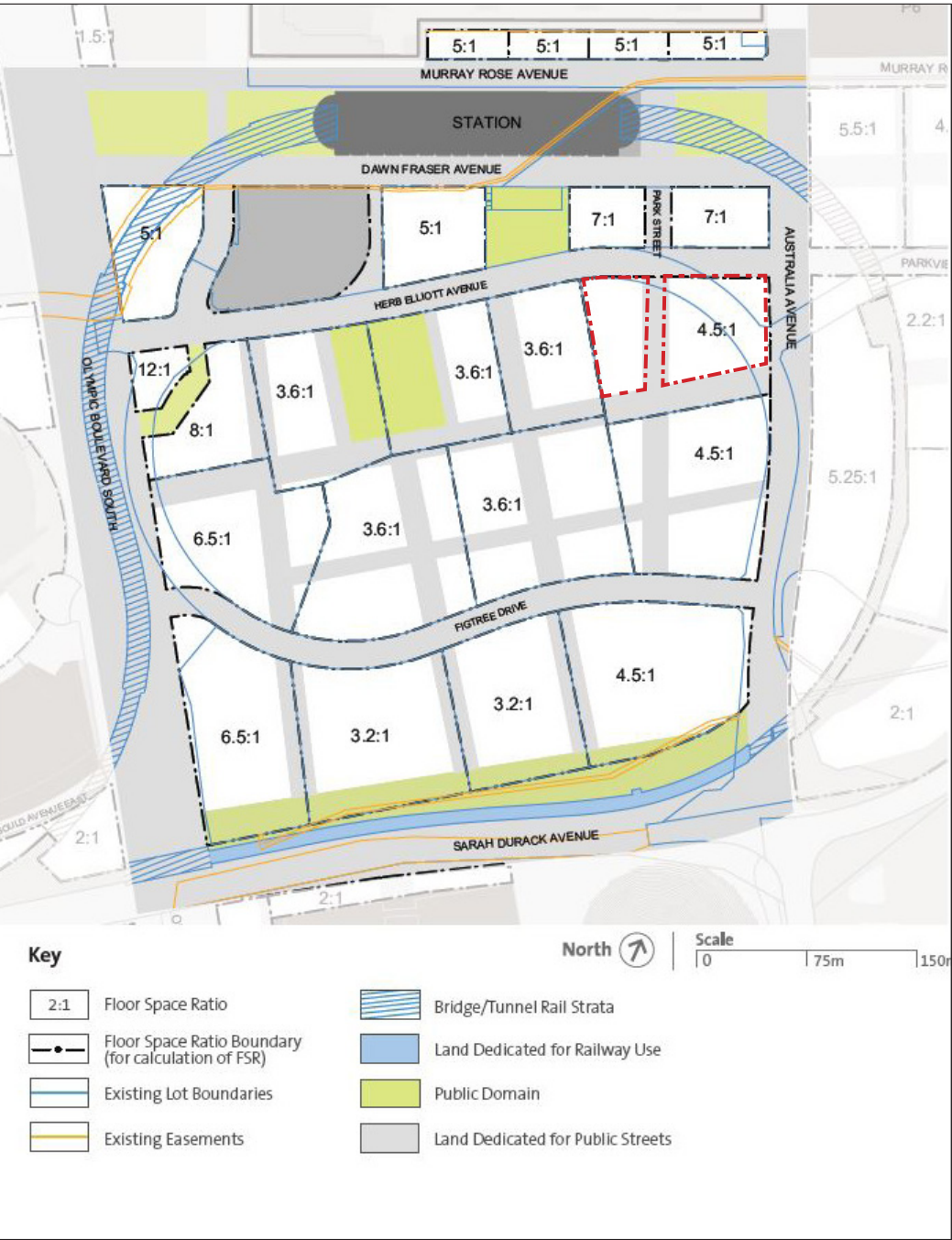
Central Precinct Floor Space Ratio Map



The proposed FSR is 4.5:1.



Central Precinct Site Floor Space Ratios Plan



The Floor Space Ratio for the site is 4.5:1 including land dedicated for public streets.

Central Precinct Building Zones and Setbacks Plan



Australia Avenue has a 3m setback.

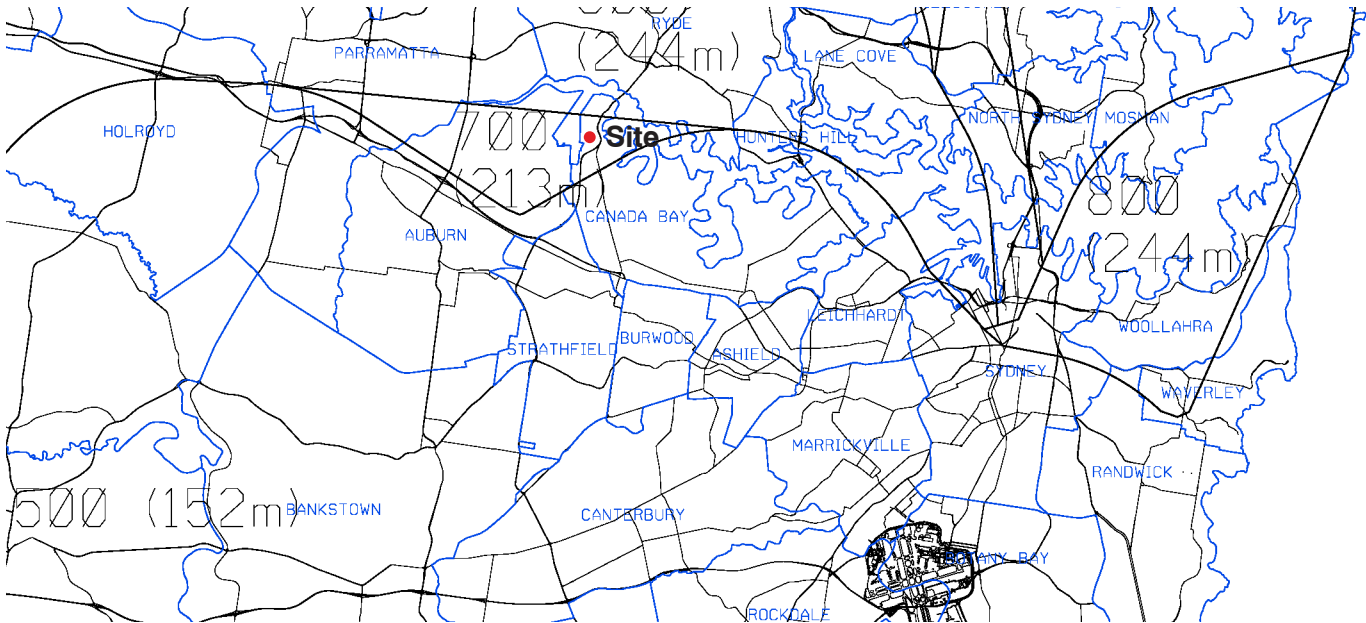


# 1.5 Aviation height limits

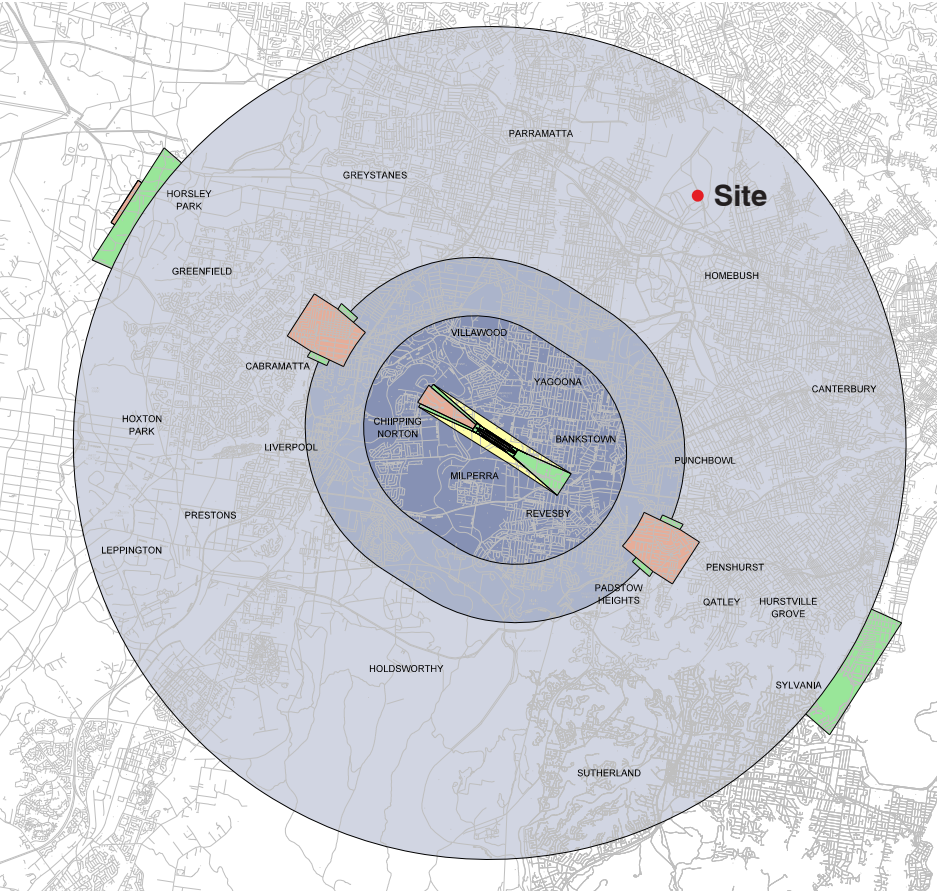
The site is located in the outer horizontal surface of the Bankstown Airport and is outside of the PANS - OPS.

The site is outside of the Sydney Airport PANS - OPS.

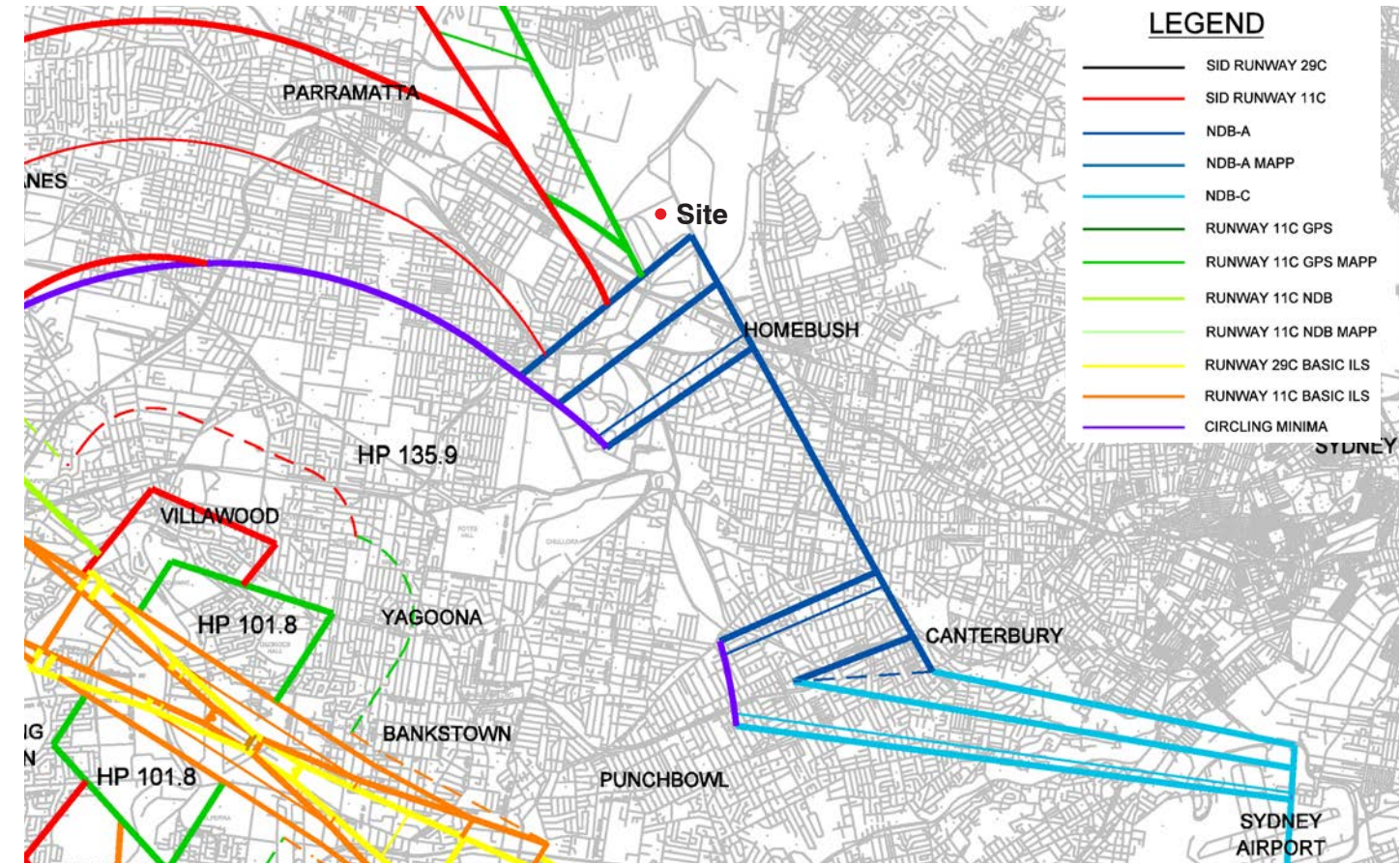
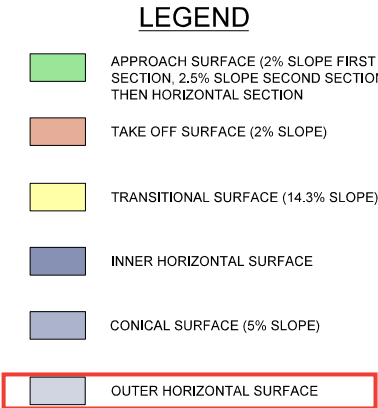
The site is within the 213(AHD) height limit for the RTCC.



RTCC - Sydney Airport (extract)



OLS - Bankstown Airport (extract)



PANS-OPS - Bankstown Airport (extract)



## 1.6 Noise

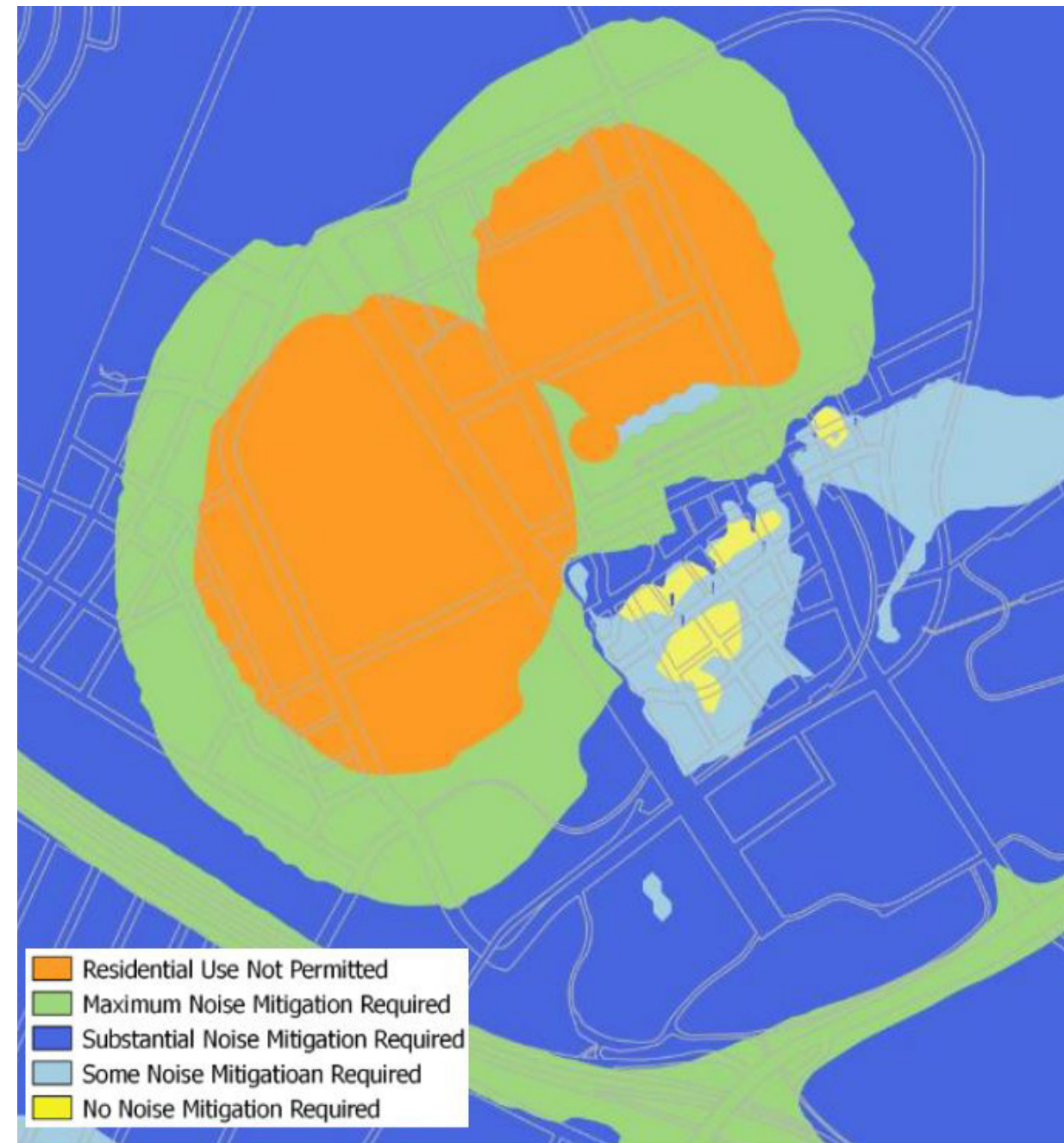
The acoustic assessment for the SOP Master Plan 2030, identified large areas of Sydney Olympic Park that are impacted by noise and where residential development is unsuitable.

The acoustic modelling identified large areas of the Central Precinct with significant noise constraints where the maximum noise mitigation would be required.

The subject site is one of the few sites within close proximity to the train station that is not affected by significant noise constraints. The subject site, is relatively unencumbered by noise impacts and is identified as requiring none, or limited noise mitigation works for future development on the majority of the site.

Given the significant noise constraints in parts of Sydney Olympic Park, opportunities for mixed use residential development should be maximised in areas not subject to noise impacts.

This approach would provide clear justification to extend the proposed mixed use area to incorporate the entire block on the corner of Herb Elliott Avenue and Australia Avenue. This would increase the potential for residential development in an area that has been shown to be suitable for residential development.



Acoustic suitability modelling for residential development over 50m.







Proposal



# 1.7 Summary of options

Summary of options:

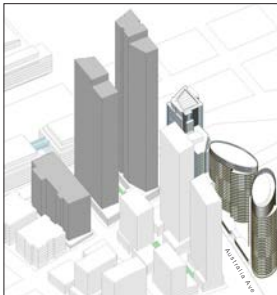
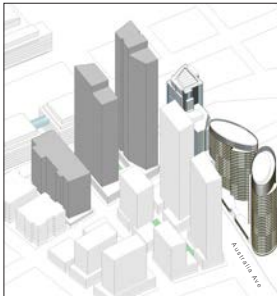
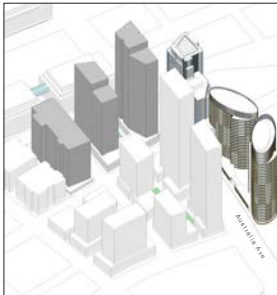
3 options have been tested for the site:

Option 1: FSR 12.0:1

Option 2: FSR 10.0:1

Option 3: FSR 8.0:1

Note that the site boundary for FSR calculations includes surrounding new roads.

Site area 12,286		Storeys	GFA (sqm)	FSR
Option 1- Built form 12.0:1		3-70 storeys	149,473	12.0:1
Option 2- Built form 10.0:1		3-55 storeys	124,977	10.0:1
Option 3- Built form 8.0:1		3-40 storeys	99,625	8.0:1



Gross site area	12,286 m²		
Net site area	8,138 m²	Area 1	3188 m²
		Area 2	4950 m²
Permissable Net area		SOPA	2690 (33.5%)
		1668 pty ltd	5448 (66.5%)

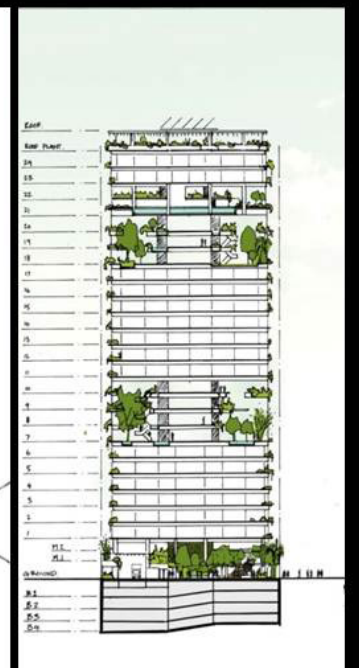
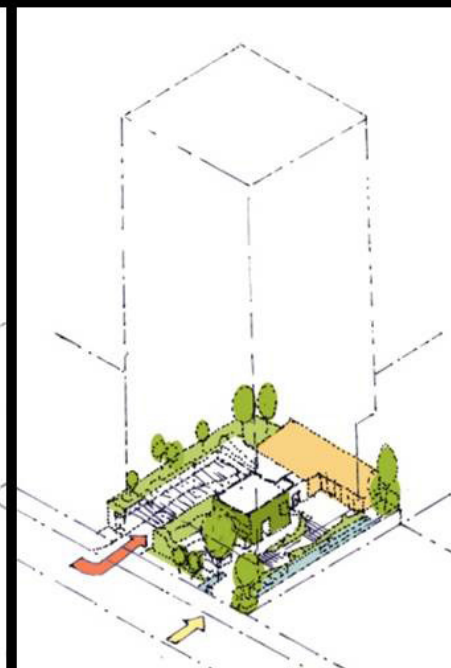
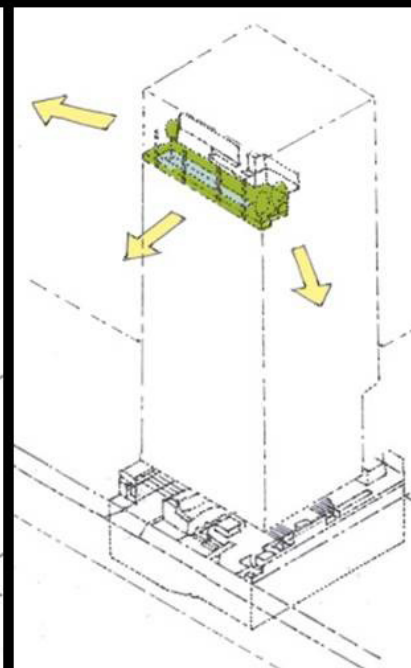
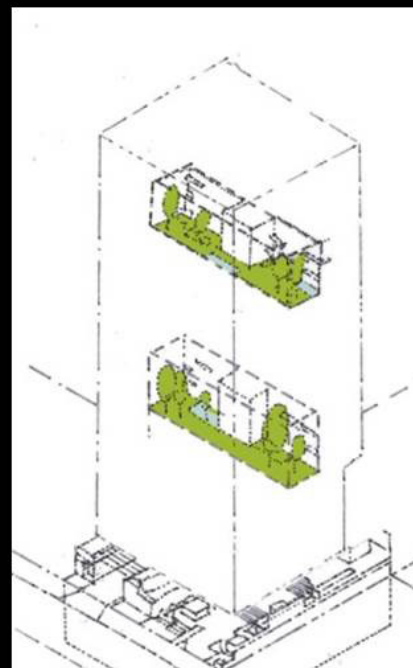


## Case study for green residential towers

Case Study: Our Brisbane office has been researching higher density development in a sub-tropical climate –where landscape and public open spaces play a greater role in the amenity of the buildings and spaces for people. We think that some of this research could be applied to our site in Sydney Olympic Park.

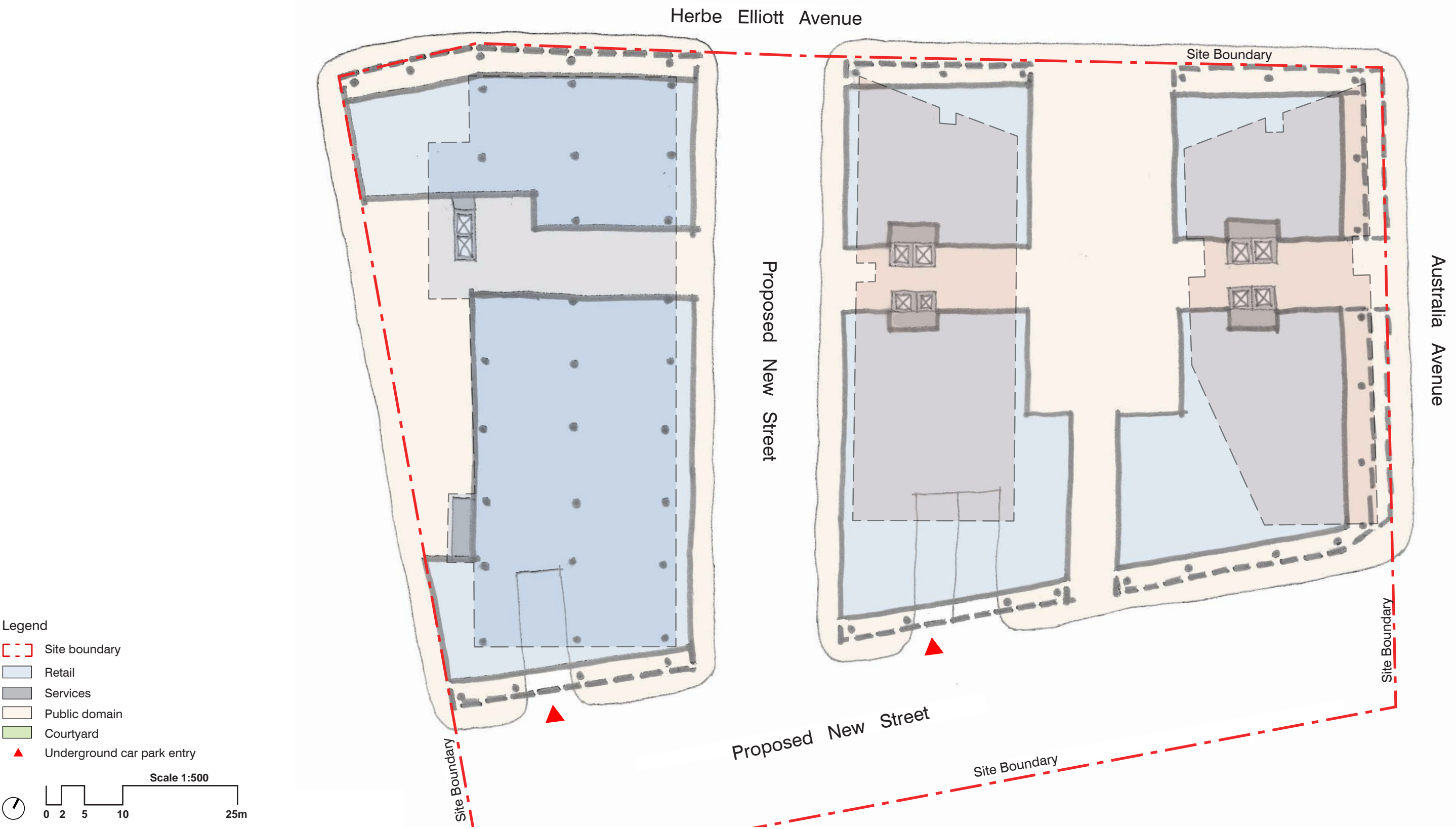
Porous urban centres with active ground planes and soft infrastructure to support the “third space” - spaces that support the primary residential and commercial building fabric of the city.

The ground plane can become a more friendly place for people with interstitial spaces that are well landscaped and podium tops that are landscaped with green roofs encouraged.





# Indicative ground floor plan including SOPA land



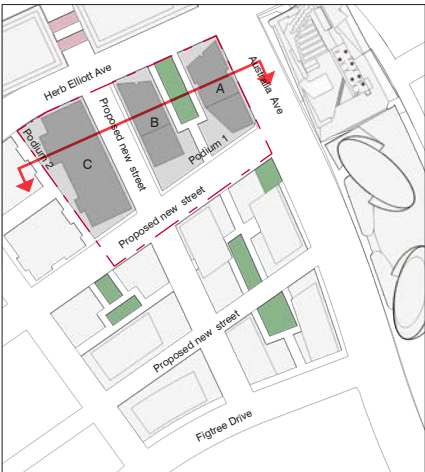


# Typical tower floor plan

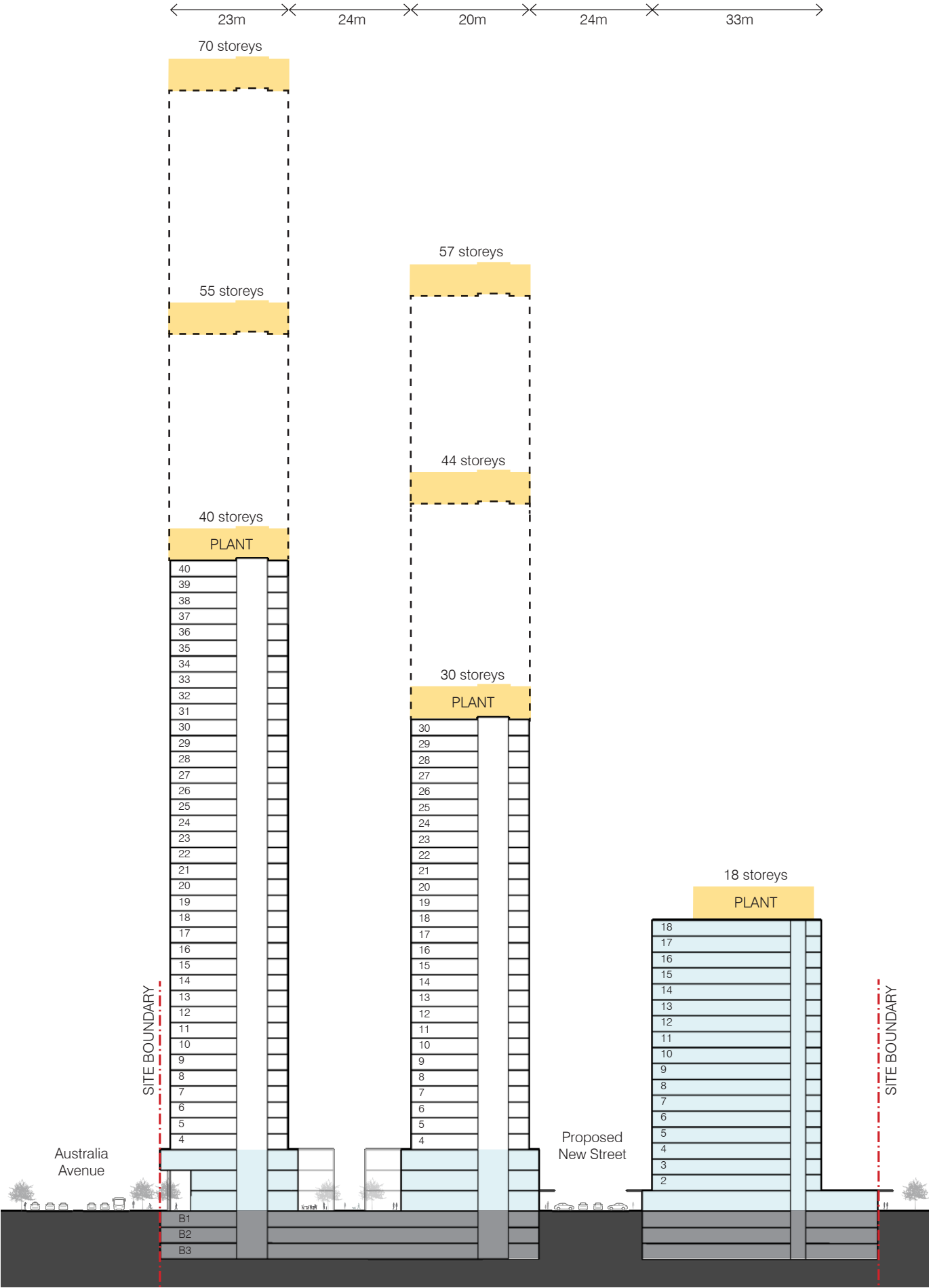




# Indicative section

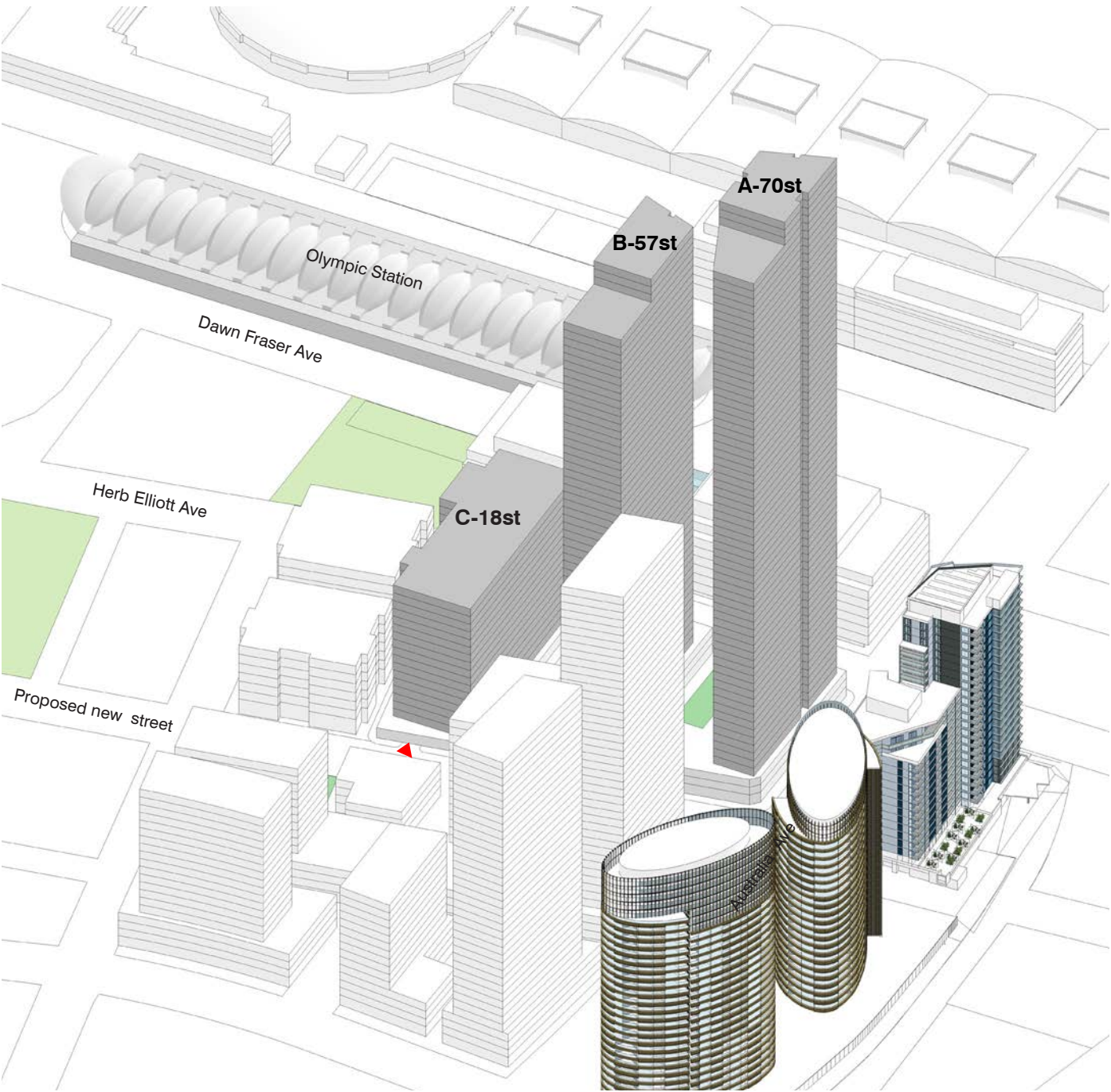


- Legend**
- Retail/commercial
  - Residential
  - Background existing buildings
  - Site boundary





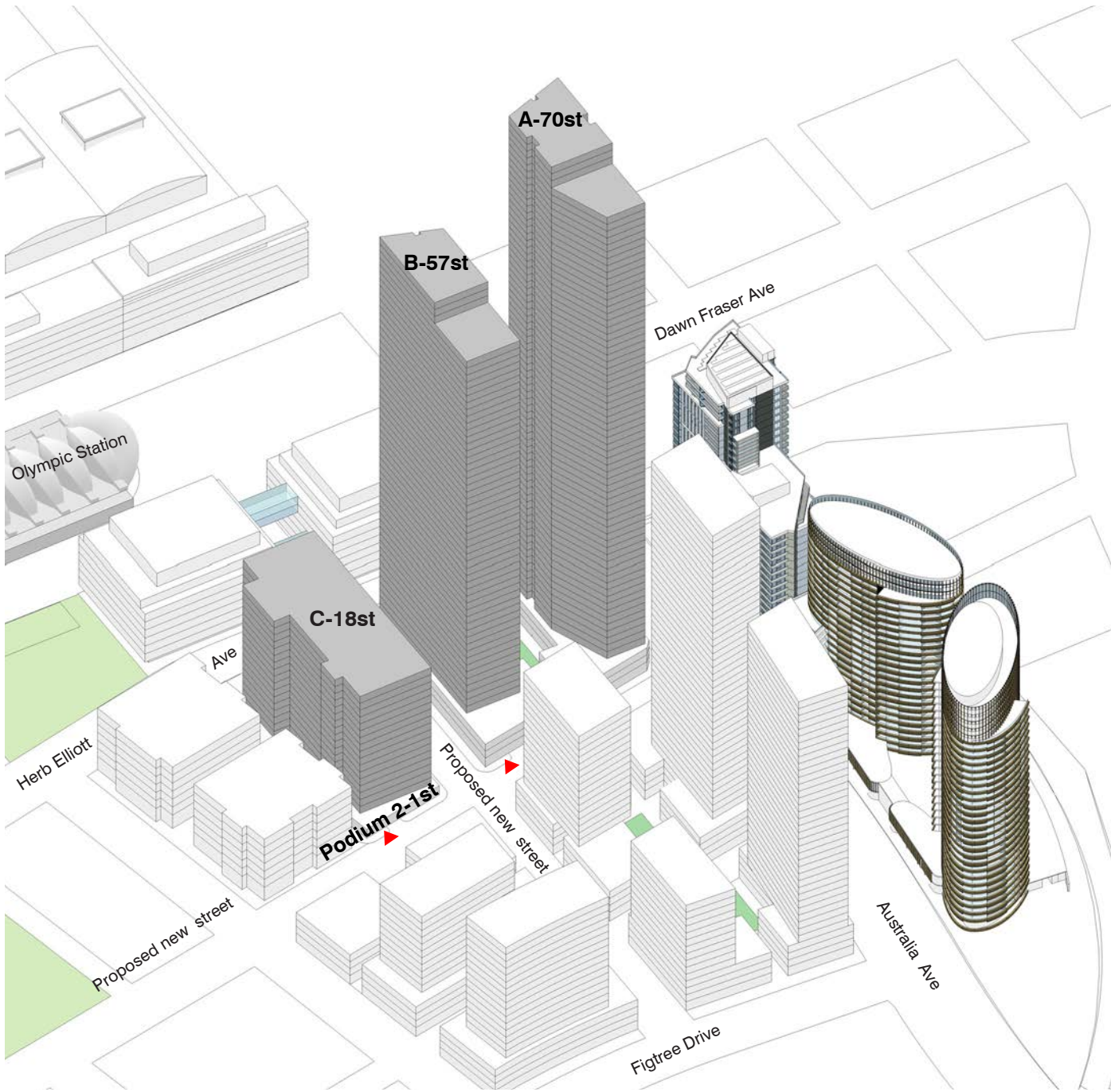
# Option 1 - Built form 12.0:1



South East View

Legend

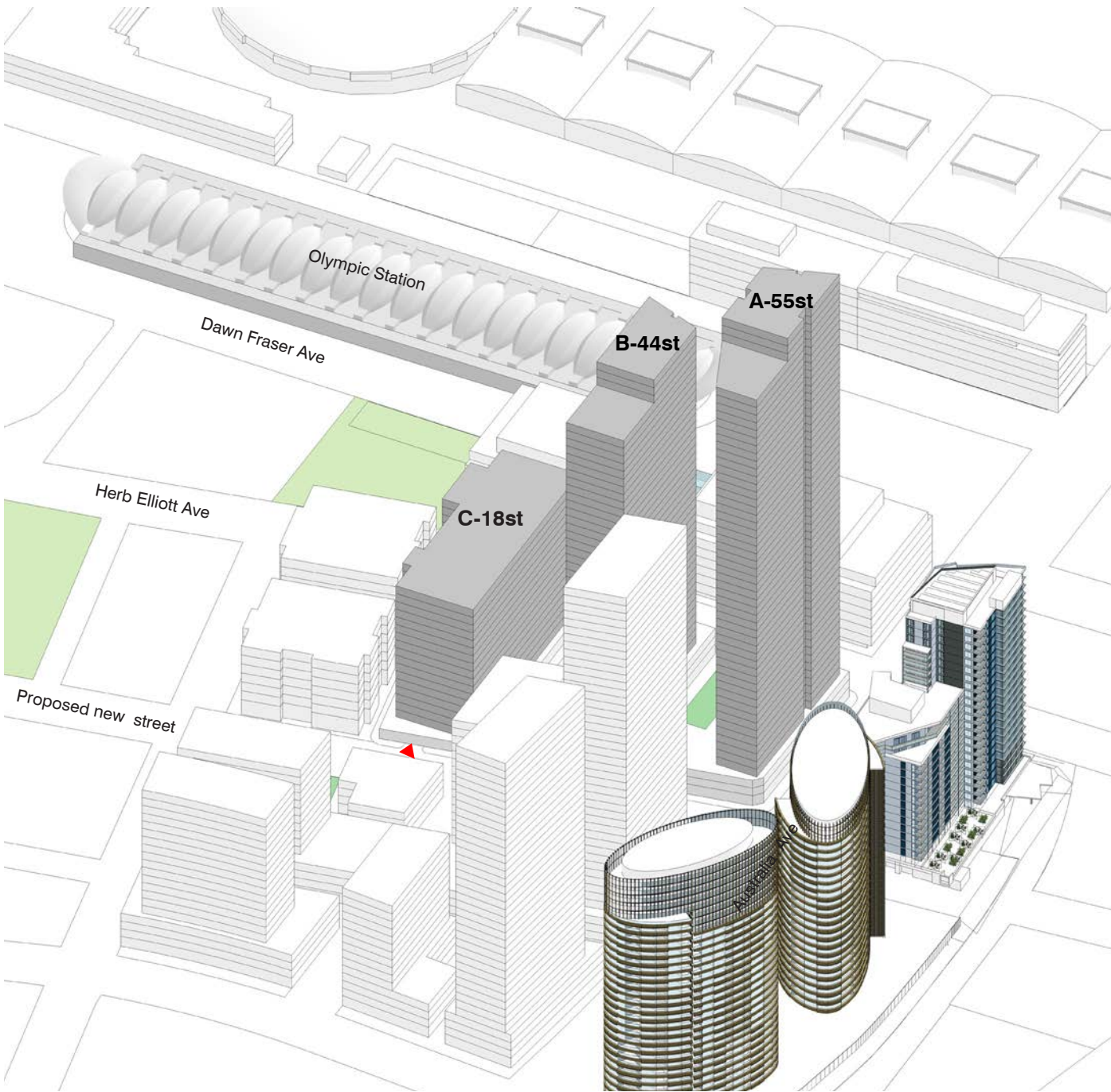
▲ Underground car park entry



South West View



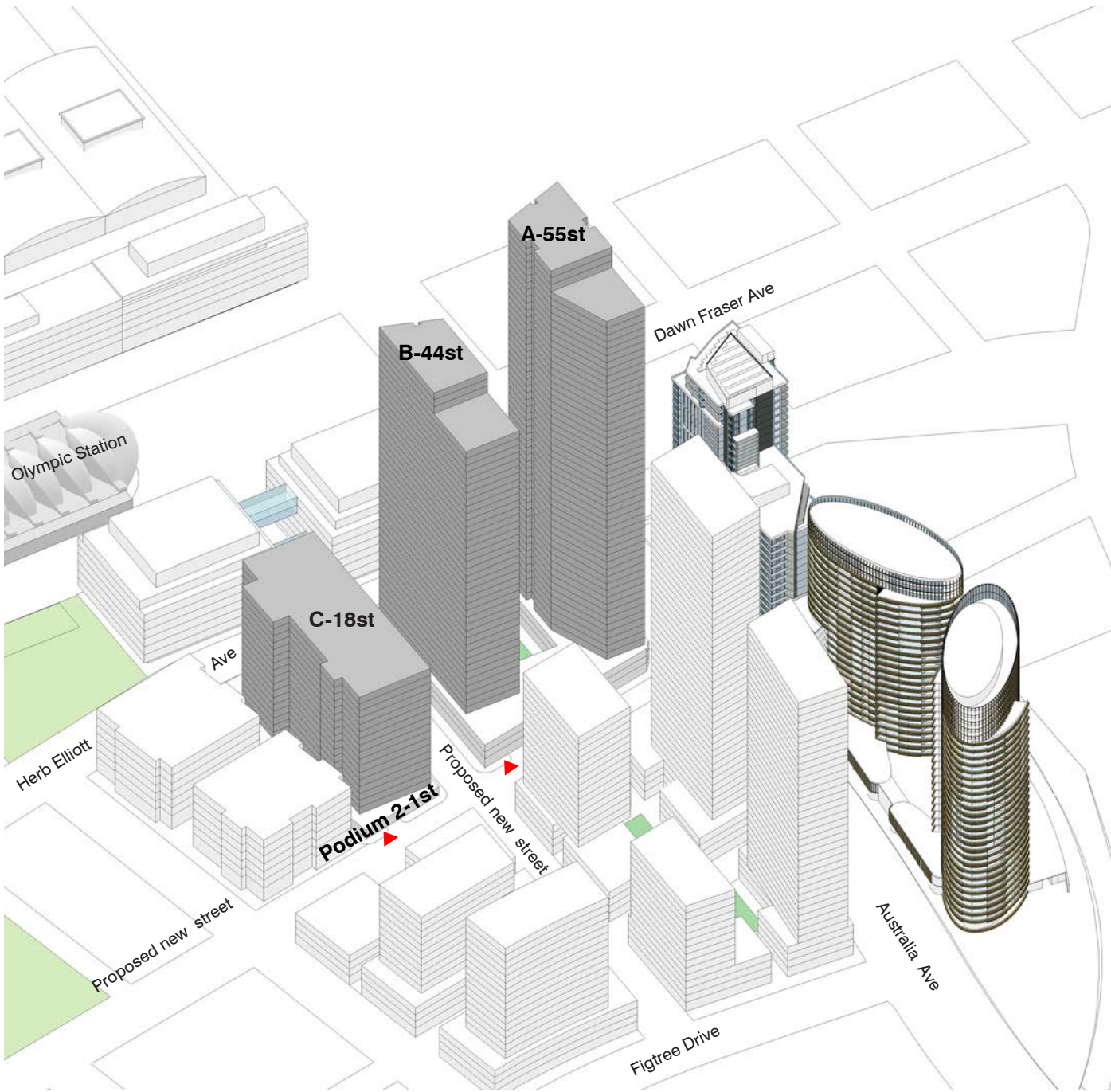
# Option 2 - Built form 10.0:1



South East View

Legend

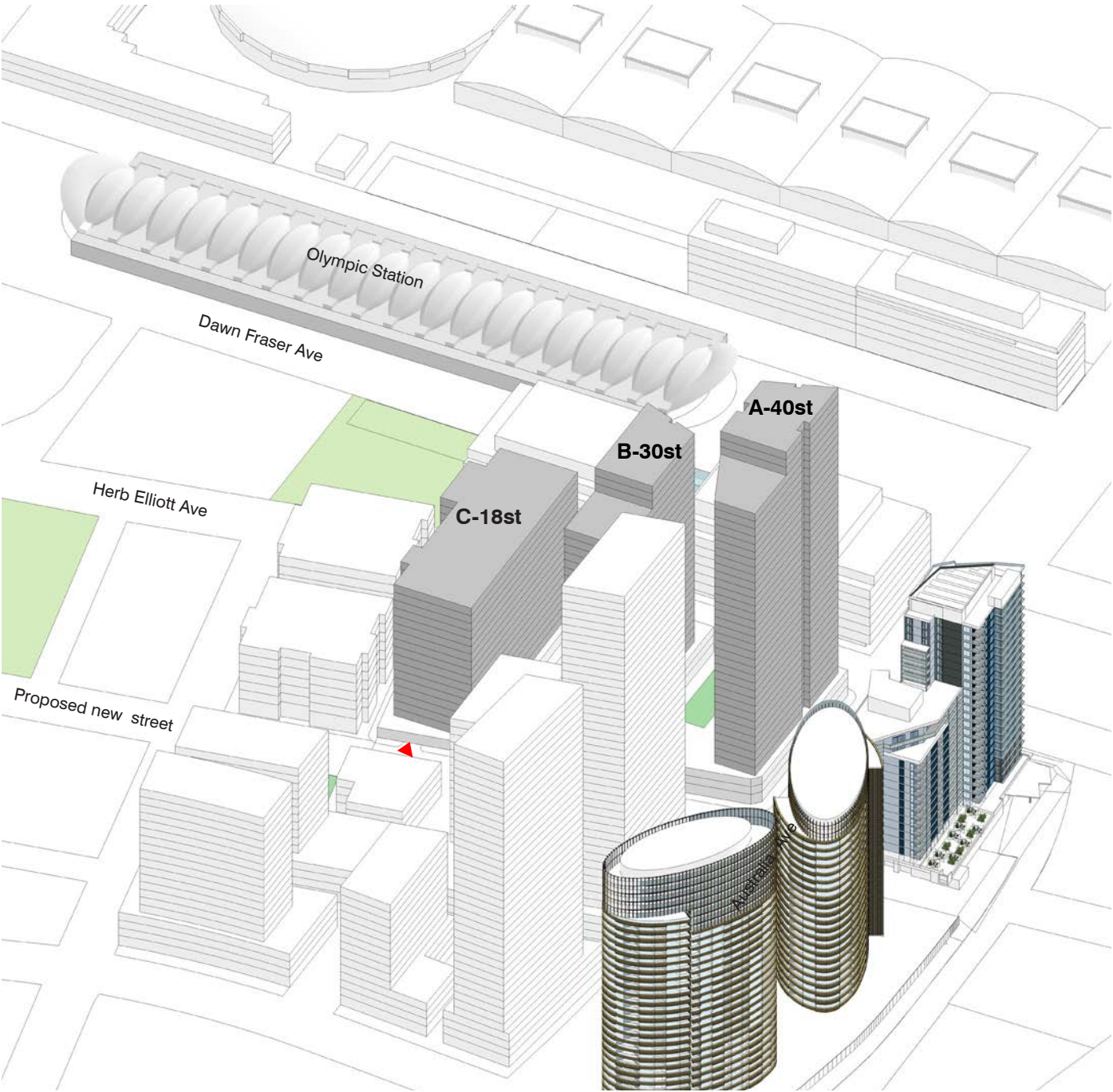
▲ Underground car park entry



South West View

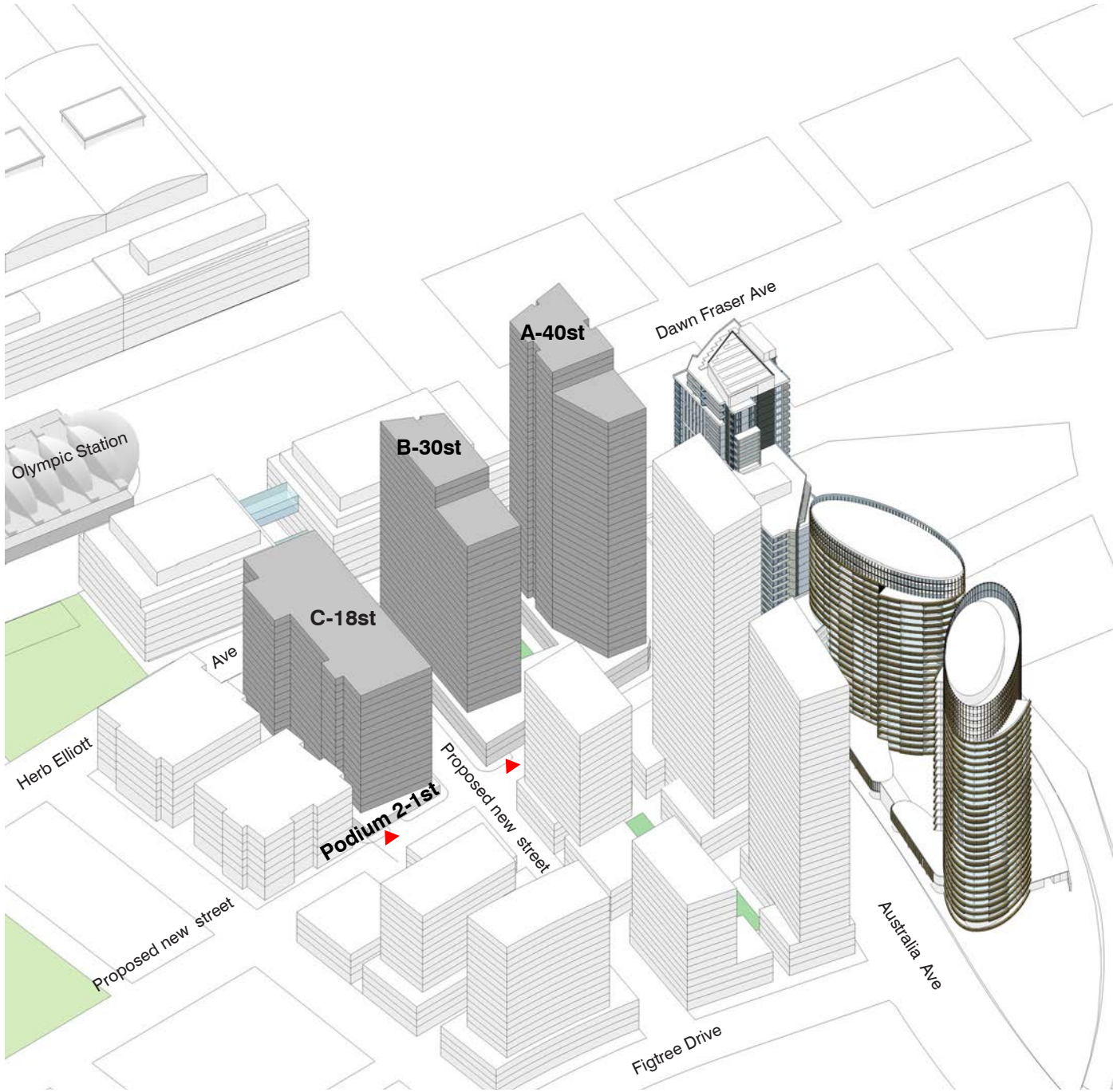


# Option 3 - Built form 8.0:1



South East View

Legend  
▲ Underground car park entry



South West View



# Option 1 - Indicative areas 12.0:1



Key Plan NTS

Legend  
[Red dashed line] Site boundary

## 12.0:1

Indicative Schedule of Areas						
Building A, B, C						
Block ID	Use	Level	Storeys	BEA (M2)	Efficiency	GFA(m2)
Podium 1	Retail	Ground Floor	1	3,923	0.80	3,138
A	Residential	Level 1-2	2	3,923	0.80	6,277
		Level 3-67	64	1,114	0.80	57,037
		Level 68-70	3	715	0.80	1,716
B	Residential	Level 3-54	51	1,070	0.80	43,656
		Level 55-57	3	650	0.80	1,560
Podium 2	Retail	Ground Floor	1	3,175	0.90	2,857
C	Commercial	Level 1-16	17	2,172	0.90	33,232
Total GFA						149,473
Site Area						12,286
FSR						12.0

Indicative Schedule of Apartments				
SITE 1 (Includes Blocks A-C)				
Block ID	Building	1B (55m2)	2B (70m2)	3B (90m2)
A		104	570	127
B		49	437	97
Unit Mix %		10	70	20
Sub Total		152	1007	224
Total		1383		

Indicative Parking Schedule							
SITE 1 (Includes Blocks A-C)							
Block ID	Building	1B	2B	3B	Service	Visitor	Retail/Com
Podium 1	Retail						235
A	Residential	41	399	152	15	85	
B	Residential	19	306	116	11	63	
Sub Total		61	705	269	26	148	235
Total					1443		
Podium 2	Retail						71
C	Commercial						332
Sub Total		0	0	0	0	0	71
Total					71		
Combined Total					1515		

Carpark basement area required (35m2 per parking space) 53,013  
Indicative basement levels required assuming no podium parking 4

Indicative Parking Requirements	
Type	Parking
1B	0.4 space per unit
2B	0.7 space per unit
3B	1.2 space per unit
Res. Service	1.0 space per 40 units
Visitor	1.0 space per 5 unit
Retail	1.0 space per 40m2 GFA
Commercial	1.0 space per 100m2 GFA
Rates obtained from RMS guide to traffic generating development Development site located within 800m of Penrith Railway Station RMS Guide used in lieu of Penrith DCP 2014 (for residential rates only) Retail, commercial rates obtained from Penrith DCP 2014	
Assumptions	
1 parking space /	35 m2



# Option 2 - Indicative areas 10.0:1



Key Plan NTS

Legend  
[Dashed red line] Site boundary

## 10.0:1

Indicative Schedule of Areas						
Building A, B, C						
Block ID	Use	Level	Storeys	BEA (M2)	Efficiency	GFA(m2)
Podium 1	Retail	Ground Floor	1	3,923	0.80	3,138
A	Retail Residential	Level 1-2	2	3,923	0.80	6,277
		Level 3-52	49	1,114	0.80	43,669
		Level 53-55	3	715	0.80	1,716
B	Residential	Level 3-41	38	1,070	0.80	32,528
		Level 42-44	3	650	0.80	1,560
Podium 2	Retail	Ground Floor	1	3,175	0.90	2,857
C	Commercial	Level 1-16	17	2,172	0.90	33,232
Total GFA						124,977
Site Area						12,286
FSR						10.0

Indicative Schedule of Apartments				
SITE 1 (Includes Blocks A-C)				
Block ID	Building	1B (55m2)	2B (70m2)	3B (90m2)
A		79	437	97
B		36	325	72
Unit Mix %		10	70	20
Sub Total		116	762	169
Total		1047		

Indicative Parking Schedule							
SITE 1 (Includes Blocks A-C)							
Block ID	Building	1B	2B	3B	Service	Visitor	Retail/Com
Podium 1	Retail						235
A	Residential	32	306	116	11	65	
B	Residential	14	228	87	8	47	
Sub Total		46	533	203	20	112	235
Total							1150
Podium 2	Retail						71
C	Commercial						332
Sub Total		0	0	0	0	0	71
Total							71
Combined Total							1221

Carpark basement area required (35m2 per parking space)

Indicative basement levels required assuming no podium parking

42,735

3

Indicative Parking Requirements		
Type	Parking	
1B	0.4 space per unit	
2B	0.7 space per unit	
3B	1.2 space per unit	
Res. Service	1.0 space per 40 units	
Visitor	1.0 space per 5 unit	
Retail	1.0 space per 40m2 GFA	
Commercial	1.0 space per 100m2 GFA	
Rates obtained from RMS guide to traffic generating development		
Development site located within 800m of Penrith Railway Station		
RMS Guide used in lieu of Penrith DCP 2014 (for residential rates only)		
Retail, commercial rates obtained from Penrith DCP 2014		
Assumptions		
1 parking space /	35 m2	



# Option 3 - Indicative areas 8.0:1



Key Plan NTS

Legend  
[Red dashed line] Site boundary

## 8.0:1

Indicative Schedule of Areas						
Building A, B, C						
Block ID	Use	Level	Storeys	BEA (M2)	Efficiency	GFA(m2)
Podium 1	Retail	Ground Floor	1	3,923	0.80	3,138
A	Residential	Level 1-2	2	3,923	0.80	6,277
		Level 3-37	34	1,114	0.80	30,301
		Level 38-40	3	715	0.80	1,716
B	Residential	Level 3-27	24	1,070	0.80	20,544
		Level 28-30	3	650	0.80	1,560
Podium 2	Retail	Ground Floor	1	3,175	0.90	2,857
C	Commercial	Level 1-16	17	2,172	0.90	33,232
Total GFA						99,625
Site Area						12,286
FSR						8.0

Indicative Schedule of Apartments				
SITE 1 (Includes Blocks A-C)				
Block ID	Building	1B (55m2)	2B (70m2)	3B (90m2)
A		55	303	67
B		23	205	46
Unit Mix %		10	70	20
Sub Total		78	508	113
Total		699		

Indicative Parking Schedule							
SITE 1 (Includes Blocks A-C)							
Block ID	Building	1B	2B	3B	Service	Visitor	Retail/Com
Podium 1	Retail						235
A	Residential	22	212	81	8	45	
B	Residential	9	144	55	5	30	
Sub Total		31	356	136	13	75	235
Total							846
Podium 2	Retail						71
C	Commercial						332
Sub Total		0	0	0	0	0	71
Total							71
Combined Total							917

Carpark basement area required (35m2 per parking space) 32,102  
Indicative basement levels required assuming no podium parking 3

Indicative Parking Requirements	
Type	Parking
1B	0.4 space per unit
2B	0.7 space per unit
3B	1.2 space per unit
Res. Service	1.0 space per 40 units
Visitor	1.0 space per 5 unit
Retail	1.0 space per 40m2 GFA
Commercial	1.0 space per 100m2 GFA
Rates obtained from RMS guide to traffic generating development Development site located within 800m of Penrith Railway Station RMS Guide used in lieu of Penrith DCP 2014 (for residential rates only) Retail, commercial rates obtained from Penrith DCP 2014	
Assumptions	
1 parking space /	35 m2







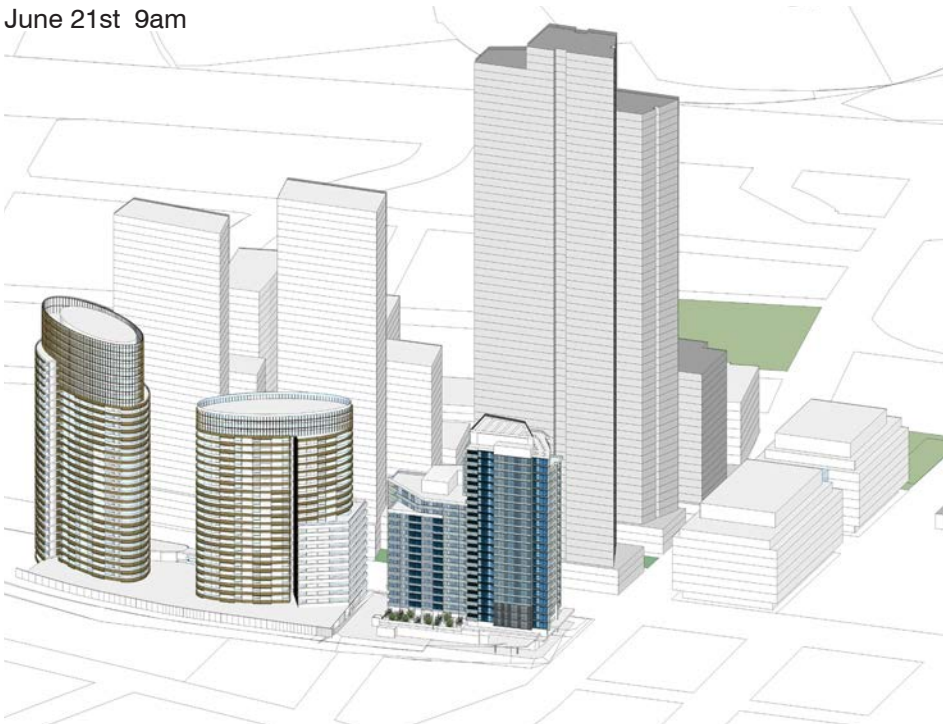




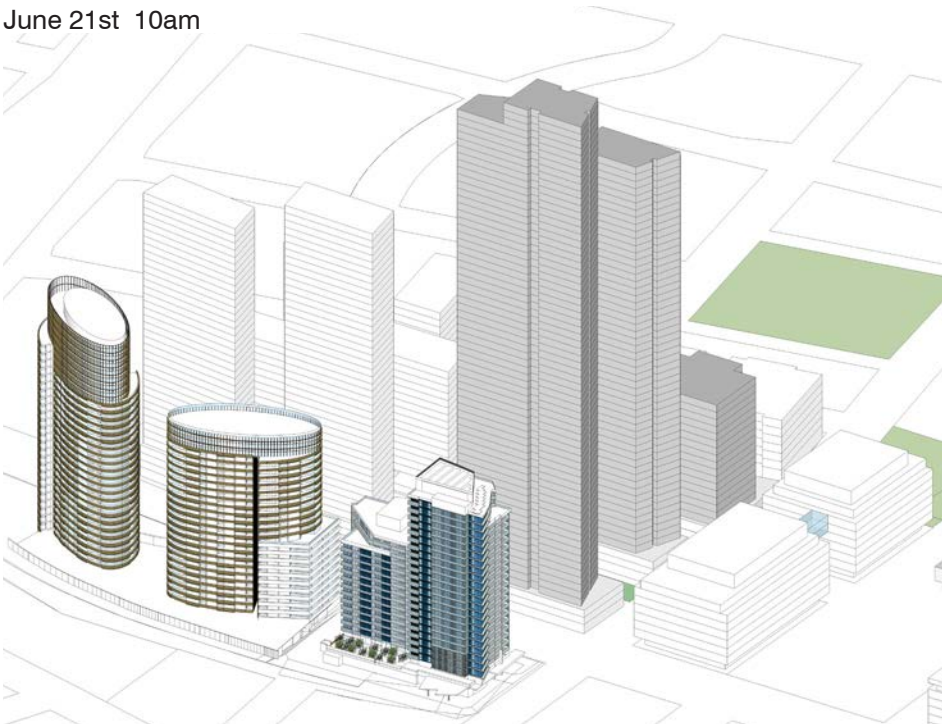
Assessment

# Option 1 - views from the sun 12.0:1

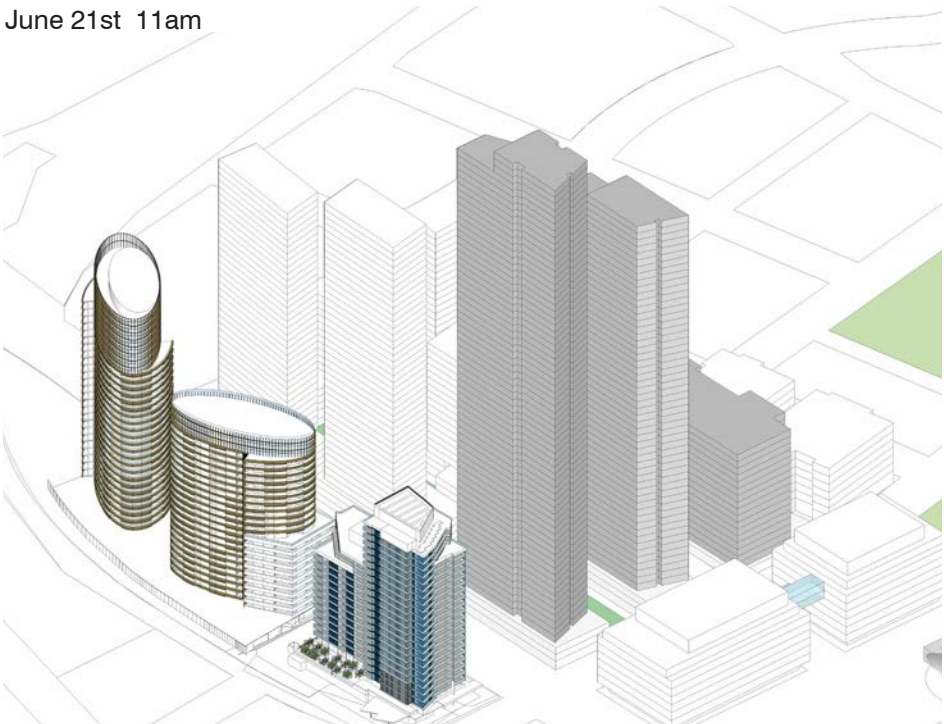
June 21st 9am



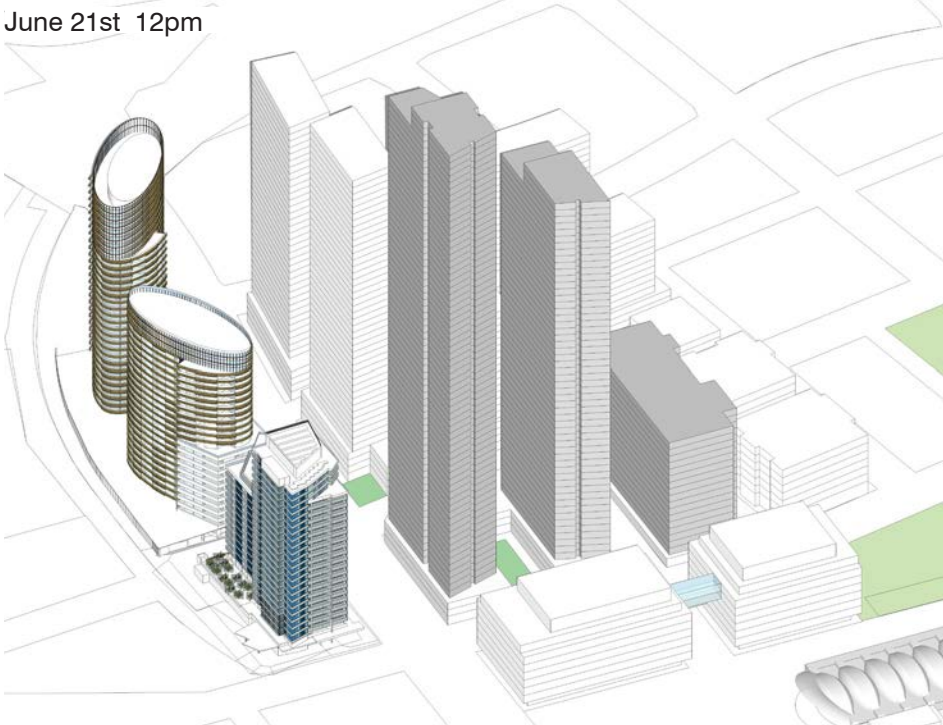
June 21st 10am



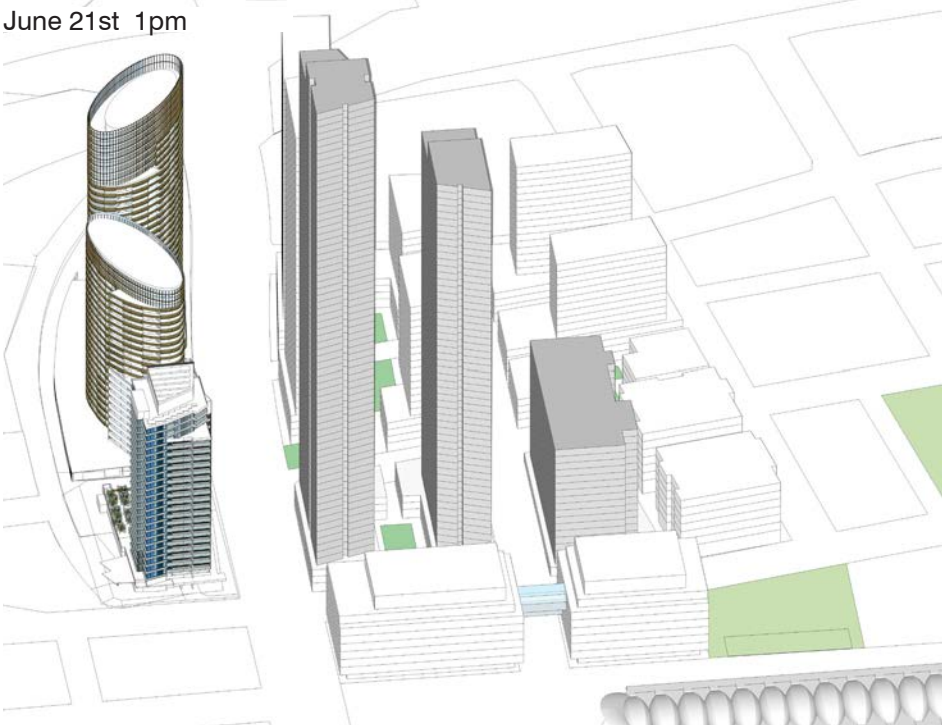
June 21st 11am



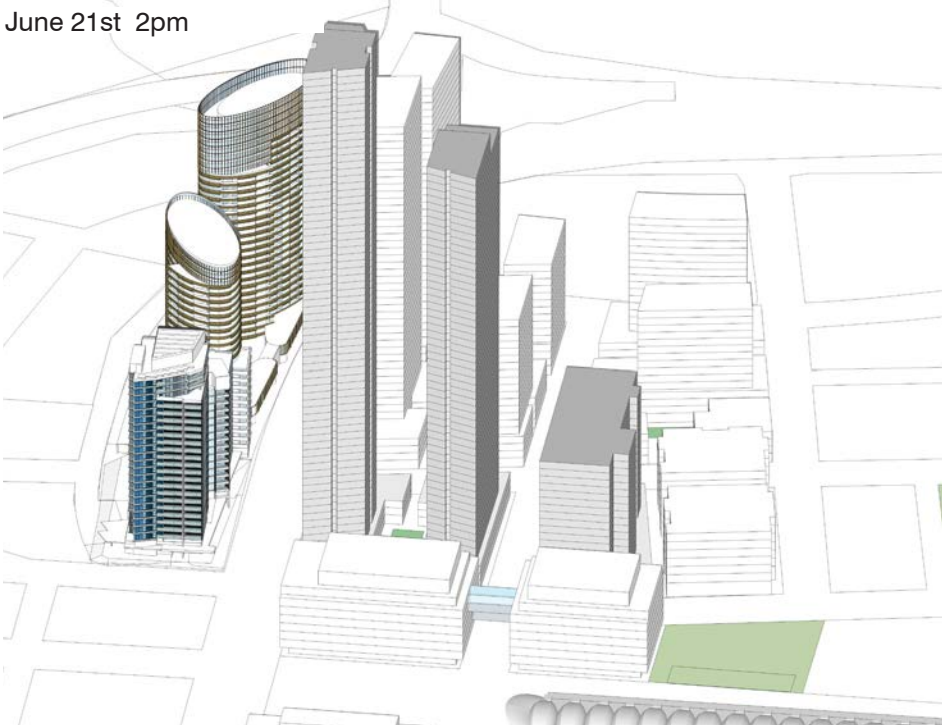
June 21st 12pm



June 21st 1pm

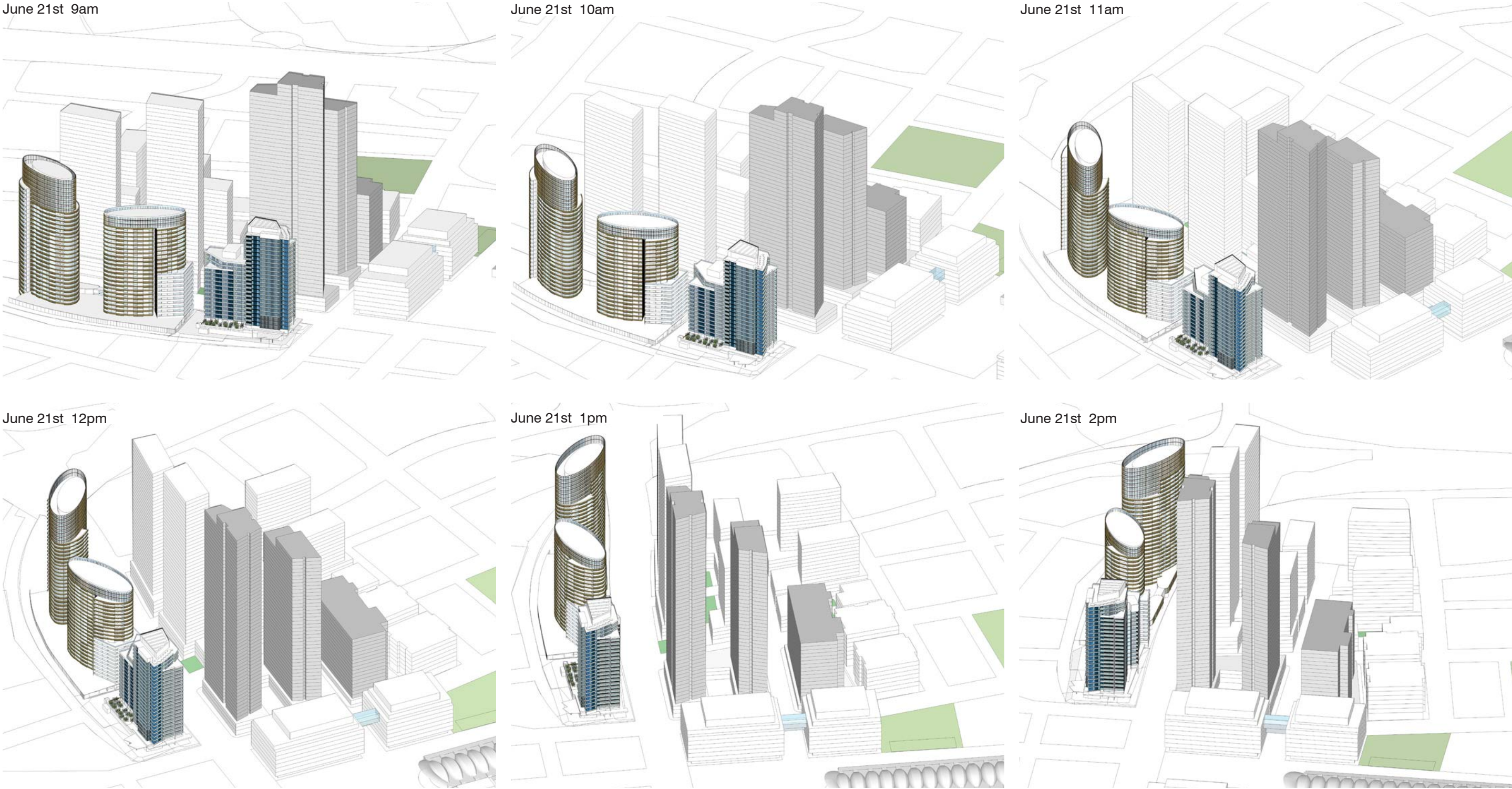


June 21st 2pm





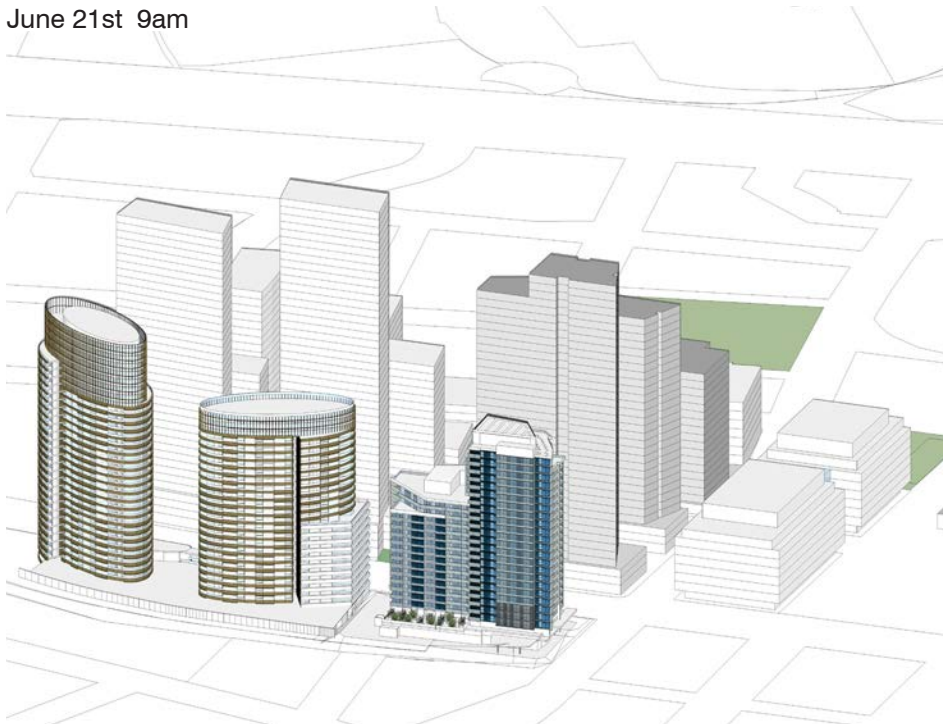
# Option 2 - views from the sun 10.0:1



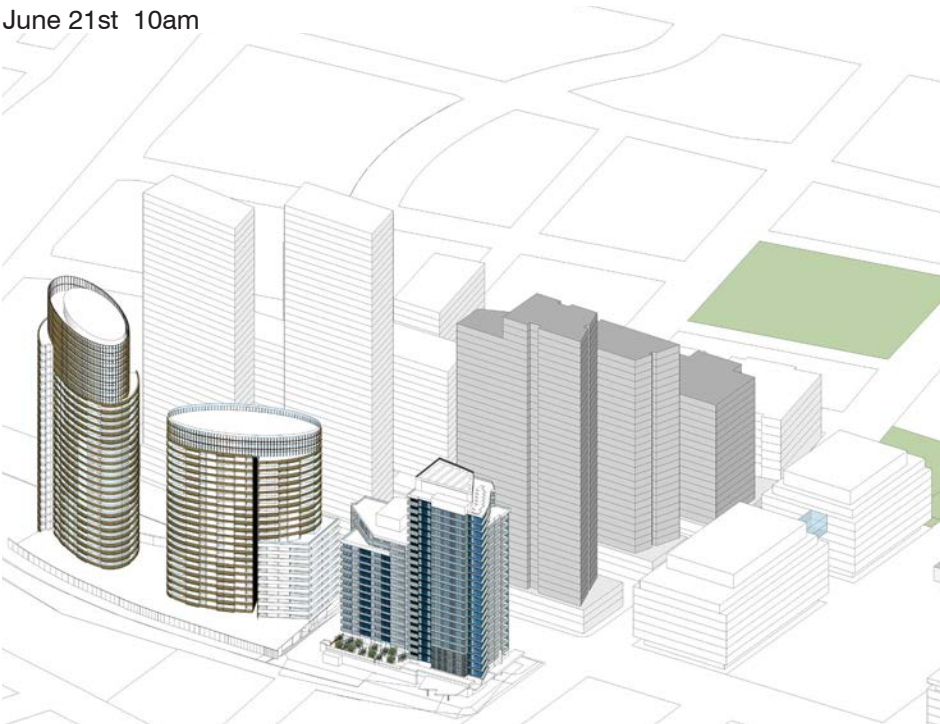


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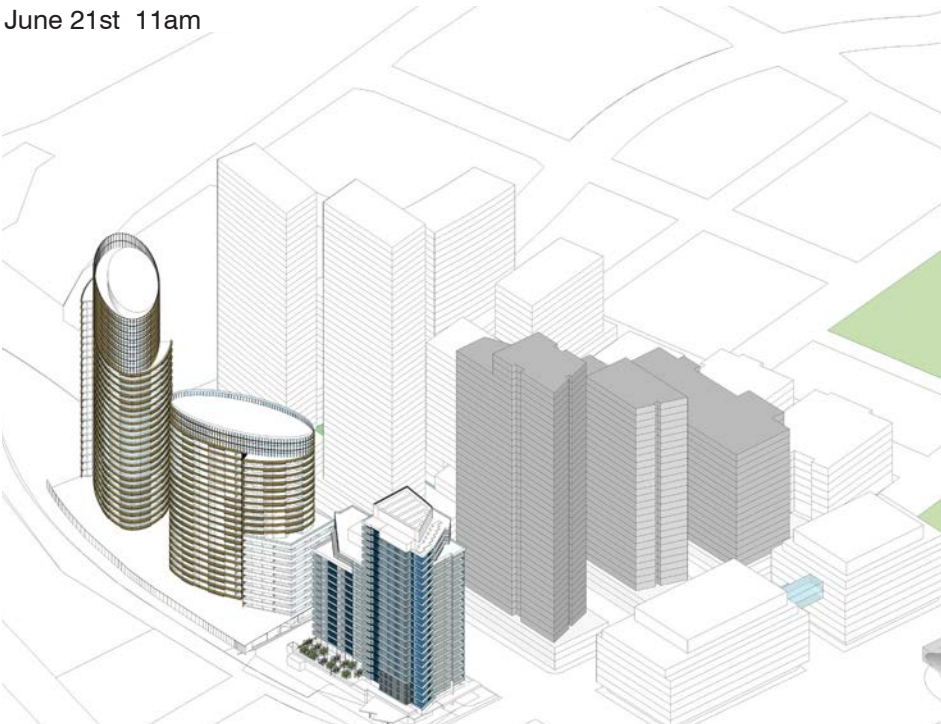
June 21st 9am



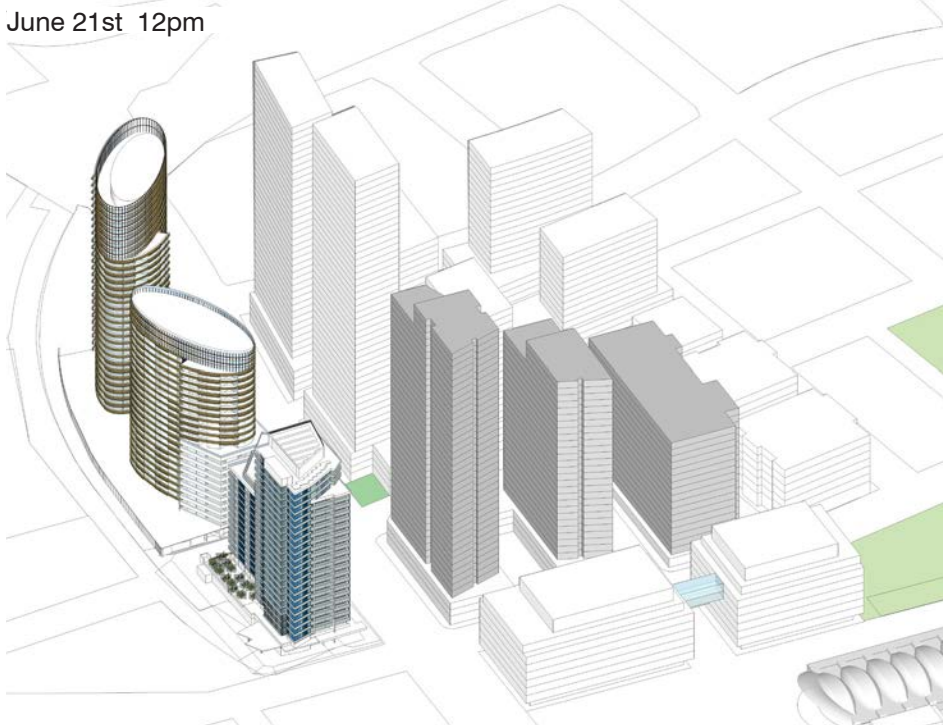
June 21st 10am



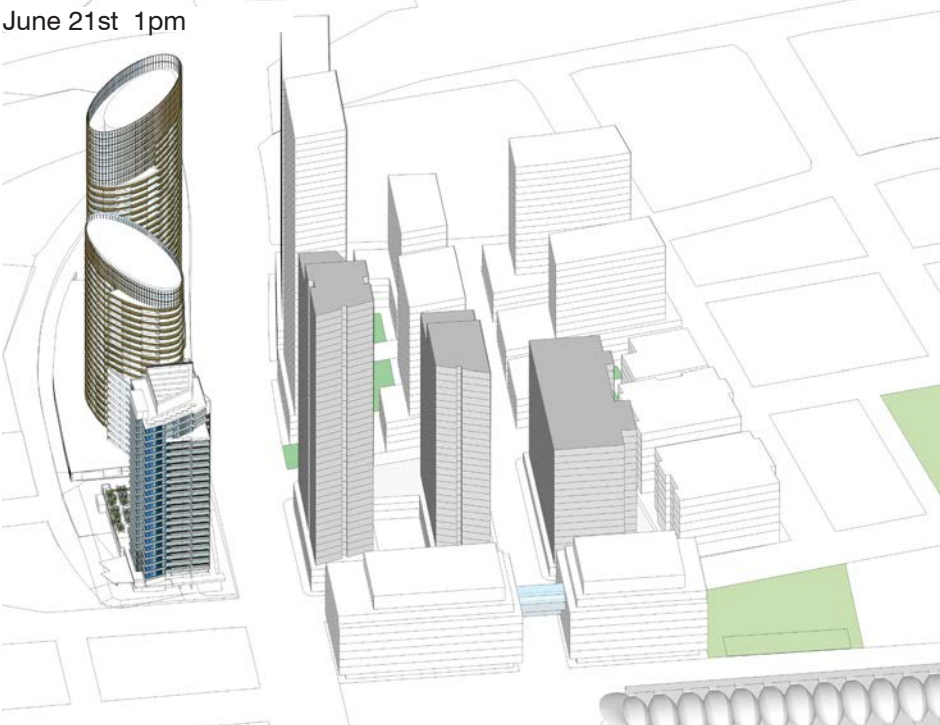
June 21st 11am



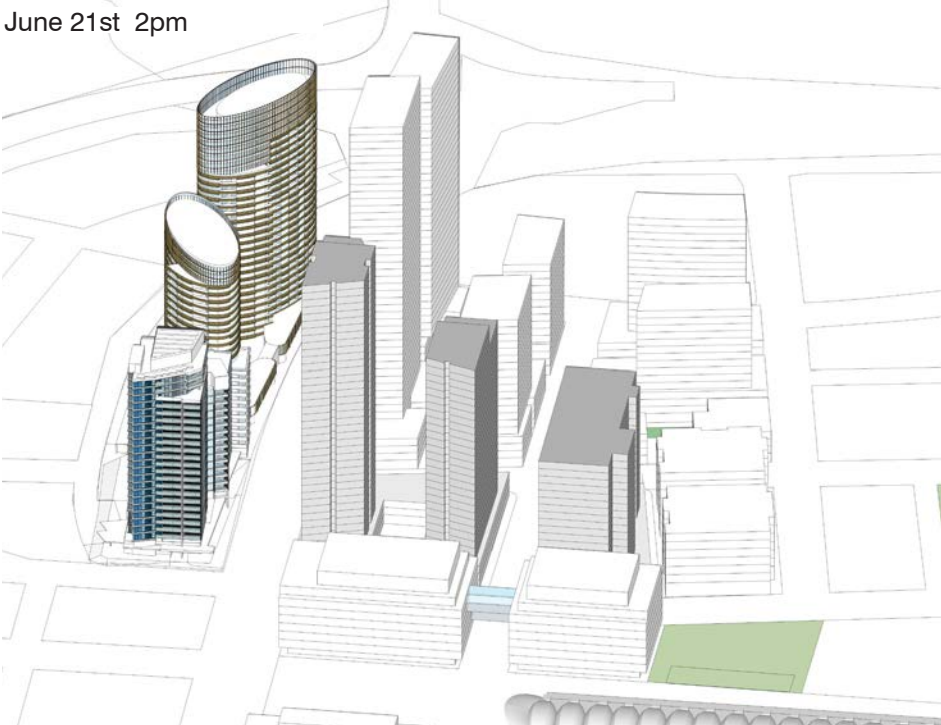
June 21st 12pm



June 21st 1pm

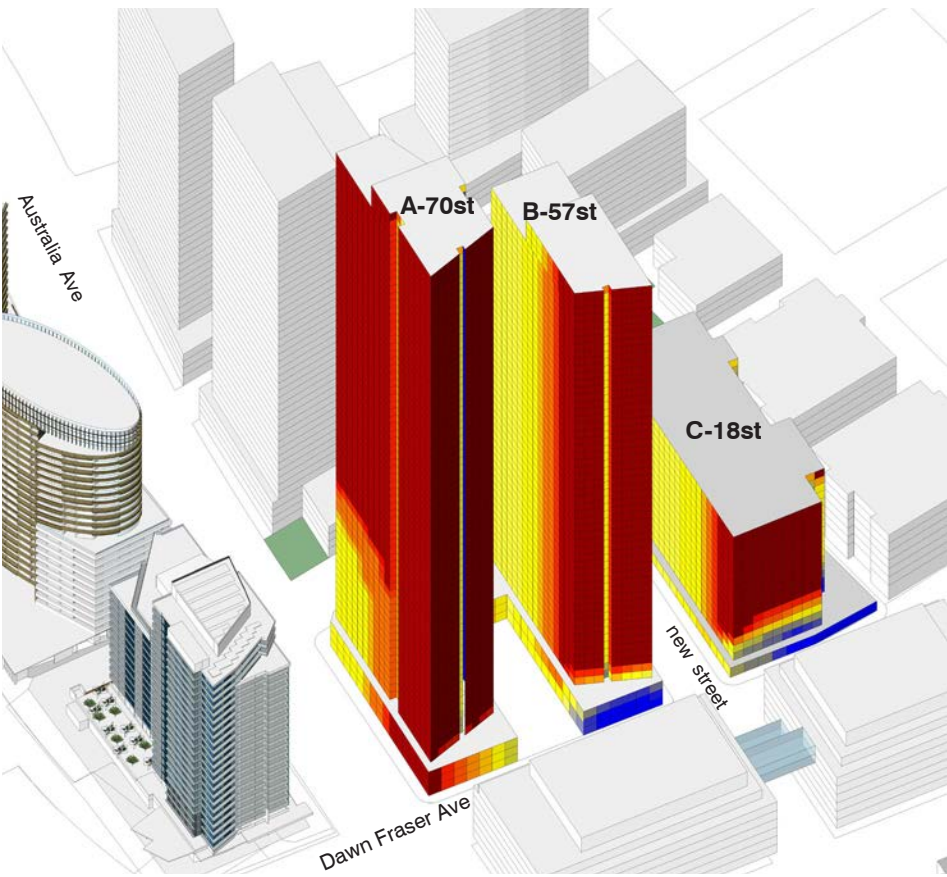


June 21st 2pm

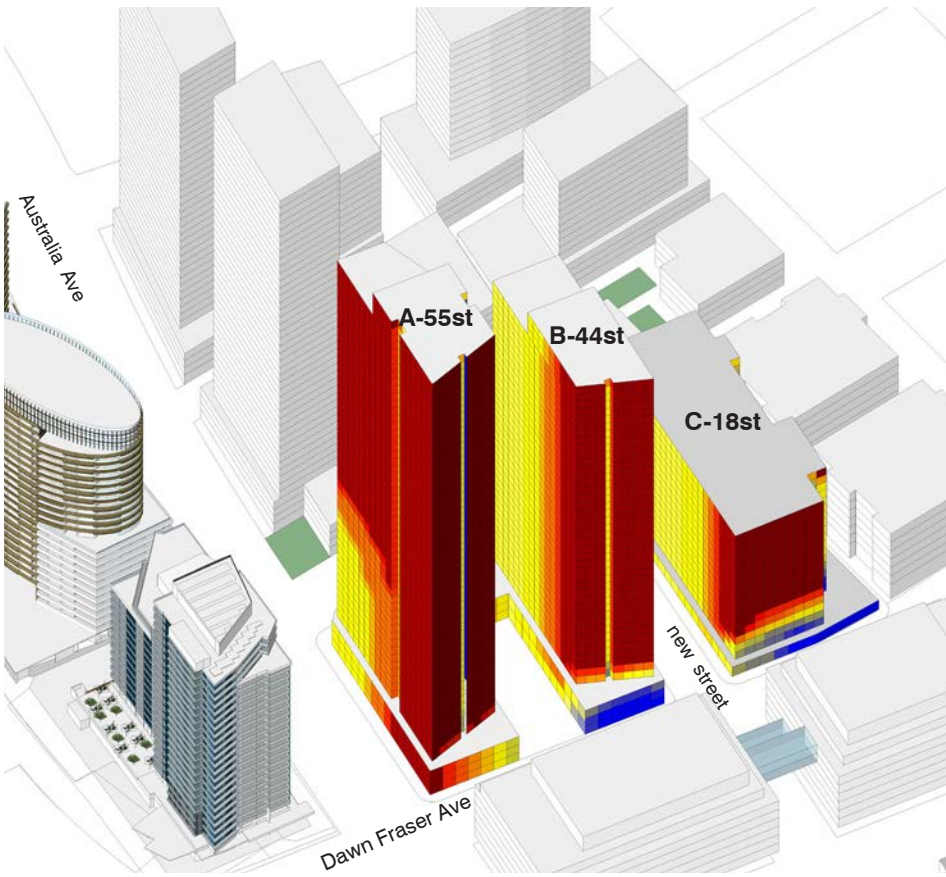




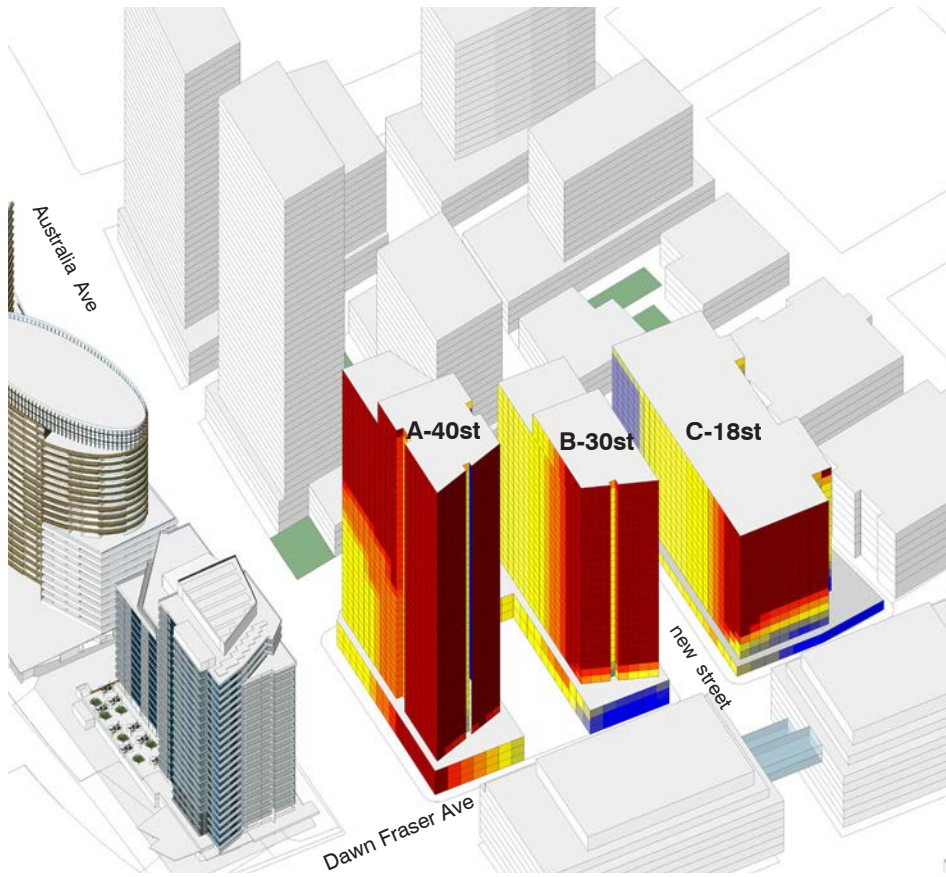
# Solar access to apartments



Option 1- Built form 12:1



Option 2- Built form 10:1



Option 3- Built form 8:1

- KEY
- <2 hours
  - >2 hours
  - >4 hours



