

A 3D architectural rendering of a proposed building complex. The main building is a large, multi-story structure with a grey facade and a series of horizontal lines. To its right is a taller, more complex structure with a purple and pink facade. In the foreground, there is a green, sloping area. The background shows a cityscape with other buildings and a cloudy sky.

5-7 PARKES ST PARRAMATTA

Urban Design Study

5-7 Parkes Street, Parramatta

Urban Design Report

Client: NR Parkes Pty Ltd c/o Think Planners
ABN: 29 144 586 596

Prepared by

AECOM Australia Pty Ltd
Level 21, 420 George Street, Sydney NSW 2000, PO Box Q410, QVB
Post Office NSW 1230, Australia
T +61 2 8934 0000 F +61 2 8934 0001 www.aecom.com
ABN 20 093 846 925

© AECOM Australia Pty Ltd (AECOM). All rights reserved.

AECOM has prepared this document for the sole use of the Client and for a specific purpose, each as expressly stated in the document. No other party should rely on this document without the prior written consent of AECOM. AECOM undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document. This document has been prepared based on the Client's description of its requirements and AECOM's experience, having regard to assumptions that AECOM can reasonably be expected to make in accordance with sound professional principles. AECOM may also have relied upon information provided by the Client and other third parties to prepare this document, some of which may not have been verified. Subject to the above conditions, this document may be transmitted, reproduced or disseminated only in its entirety.

23 September 2013

Job No.: NSW-B13-2204

AECOM in Australia and New Zealand is certified to the latest version of ISO9001 and ISO14001.

Quality Information

Document	5-7 Parkes Street, Parramatta: Urban Design Report
Ref	Job Number
Date	23 September 2013
Prepared by	Krista McMaster
Reviewed by	Katie Joyner

Revision	Revision Date	Details	Authorised	
			Name/Position	Signature
Initial Draft	28-08-2013	Initial draft for discussion	Katie Joyner Principal Urban Designer	
Final Report	4-09-2013	Final for issue	Katie Joyner Principal Urban Designer	
Variation 1	18-09-2013	Variation to preferred option	Katie Joyner Principal Urban Designer	

TABLE OF CONTENTS

Executive Summary	5
Site Analysis	7
Local Context	7
The Site	8
Existing Planning Controls	9
Parramatta City Centre Local Environmental Plan 2007	9
Parramatta City Centre Development Control Plan 2007	11
SEPP 65 - Residential Flat Design Code	13
Existing Approved Development Application	14
Auto Alley Urban Renewal Study	15
Development Options	17
Option 1 - Complying development	18
Option 2 - Meeting the 4:1 FSR	20
Preferred Option 3 - Development under the sun access plane	22

Executive Summary

AECOM has been engaged to provide an urban design capacity study for the site, known as 5-7 Parkes Street Parramatta.

This report provides a summary of the applicable planning controls for the site, from both the Parramatta City Centre LEP 2007 (PCCLEP 2007) and the Parramatta City Centre DCP 2007 (PCCDCP 2007). Reference has also been made to an existing approved DA (DA/948/2010) for the site and recent proposals for the adjacent Auto Alley Urban Renewal Area.

The site is currently zoned under the PCCLEP 2007 for mixed use development, at a maximum height of 18m and with an FSR of 4:1. The PCCDCP 2007 applies a range of setbacks and built form constraints, including sun access controls to Jubilee Park, which significantly effect the built form outcome on the site.

The approved DA is for a mixed use building 18m in height (excluding plant), with and FSR of 2.86:1.

Proposed changes to building heights and FSR within the Auto Alley precinct have been considered in a range of development options, at the latter part of this report.

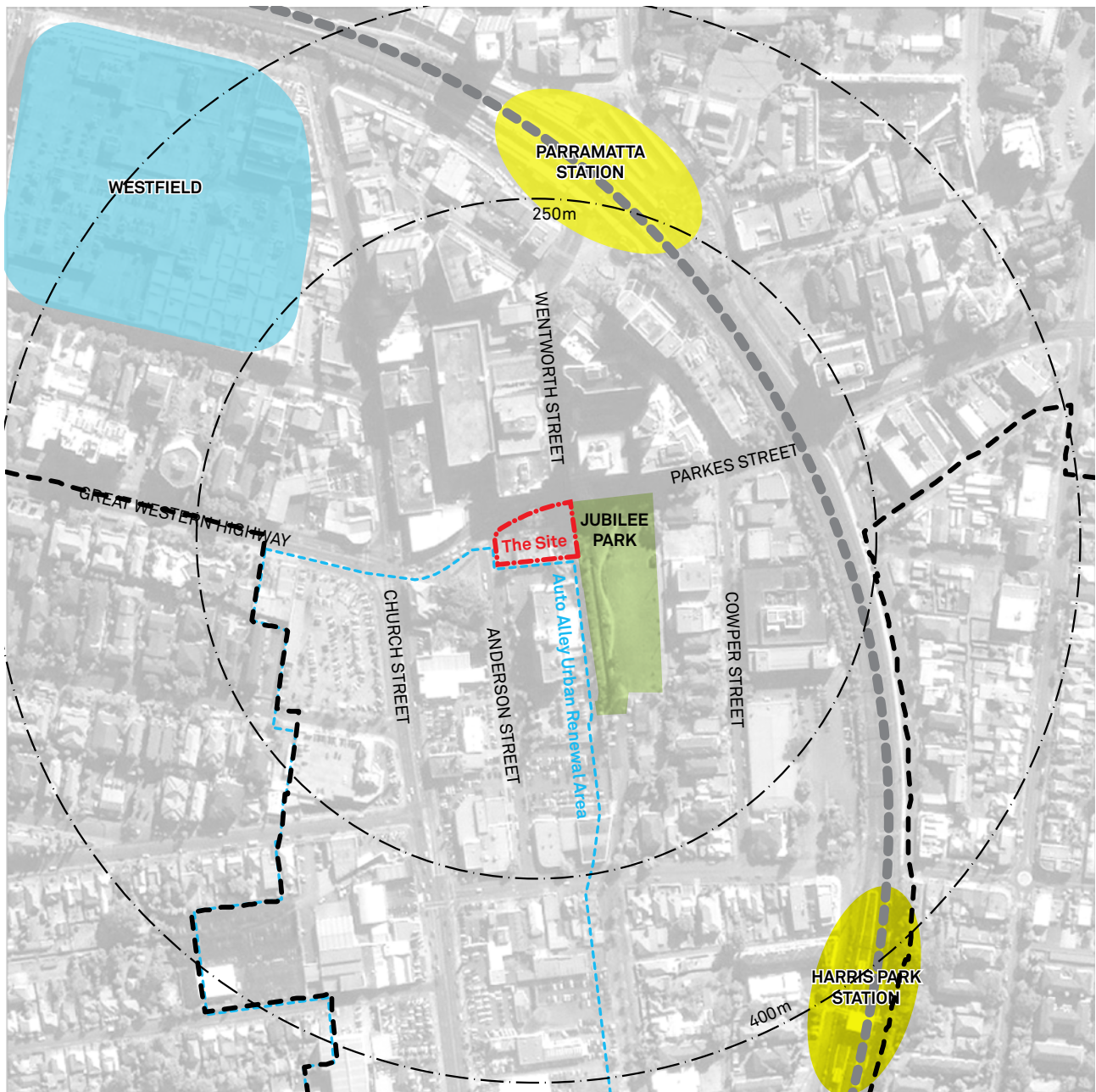
Options explore compliant and non compliant building envelopes, as summarised below:

- Option 1 presents a compliant building envelope of 18m in height and an FSR of 2:1.
- Option 2 explores the built form outcome achieved if the permissible FSR of 4:1 is reached. The height of the building is increased to 39m.
- The preferred option 3 has been designed to demonstrate a taller built form, considered consistent with the proposed future heights of the Auto Alley precinct, at a height of 60m and an FSR of 8:1. This option presents good urban design outcomes and conforms to sun access requirements for Jubilee Park as set out in the PCCDCP 2007.

Site Analysis

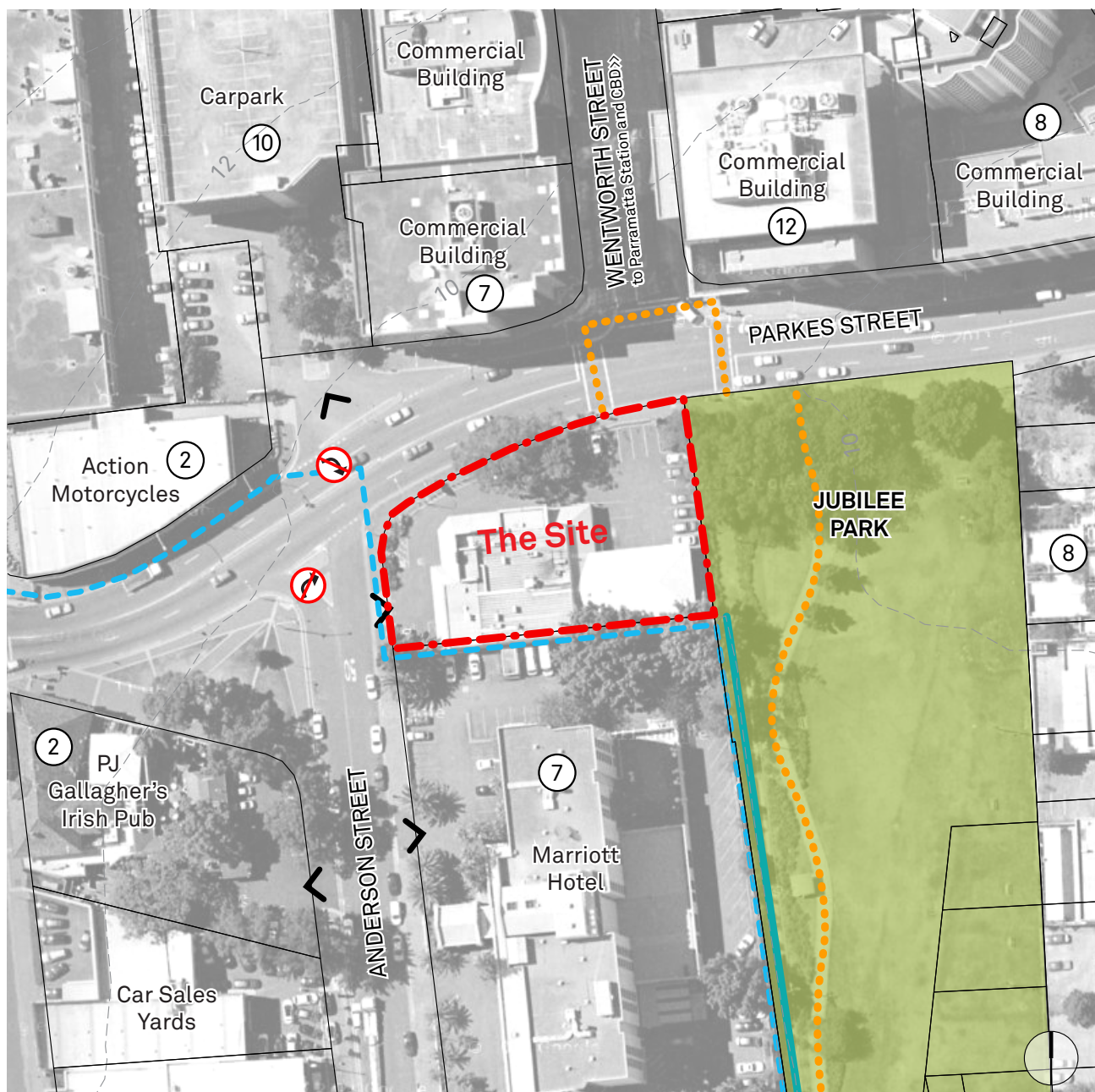
Local Context

- Located at 5-7 Parkes Street, Parramatta and is within Council's defined City Centre Boundary
- Main frontage to Parkes Street, wrapping the corner of Anderson Street. The eastern boundary is shared with Jubilee Park.
- Well located for access to public transport within 250m of Parramatta Station and bus interchange, and within 400m of Harris Park Station.
- Within walking distance of the Parramatta CBD, Westfield Shopping Centre and the Parramatta River.
- The site is immediately adjacent the Auto Alley renewal precinct, which is currently under study.



The Site

- Located amidst a range of land uses including commercial buildings, multi level carparks, a hotel, a pub, car and motorcycle sales showrooms and residential flats (on the eastern edge of Jubilee Park)
- Surrounding buildings vary in height and form, including 2 storey warehousing, through to 12 storey commercial towers.
- Active frontages in the immediate area are limited to showroom frontage, car parks and small retail outlets.
- The site is currently accessed by vehicles via Anderson Street. Access to Anderson Street is restricted to left only off Parkes Street
- The site is immediately adjacent the Auto Alley renewal precinct, which is currently under study.

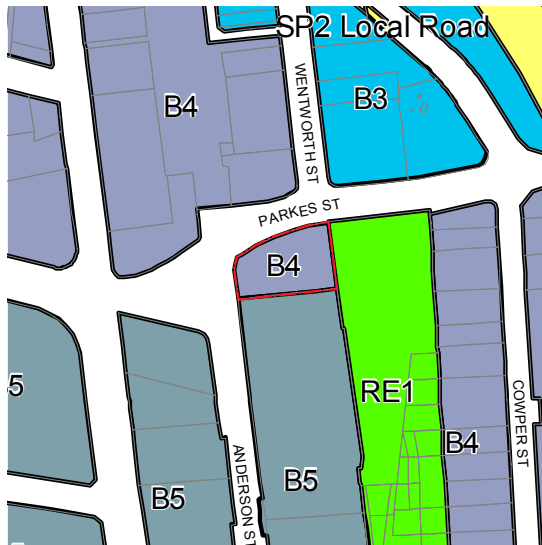


Legend

- | | |
|--|---|
| [Red dashed line] The Site (5-7 Parkes Street) | 2 Building height (storeys) |
| [Blue dashed line] Auto Alley Urban Renewal Area | ➤ Access points |
| [Orange dotted line] Pedestrian pathway/crossing | Contour lines |
| [Green line] Drainage Canal | ↘ No right turn |

Existing Planning Controls

Parramatta City Centre Local Environmental Plan 2007 (PCCLEP 2007)

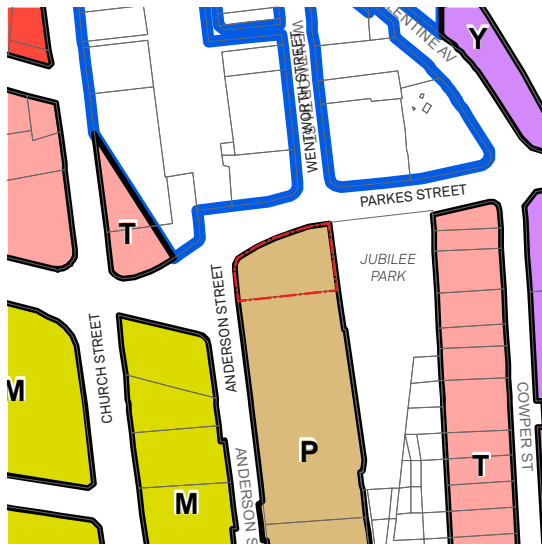


Land Zoning

The site is zoned B4 Mixed Use which encourages a mix of compatible land uses, including commercial and retail development, cultural and entertainment facilities, tourism, leisure and recreation facilities, social, education and health services and high density residential development.

The ground floor must have an active street frontage consistent with the City Centre Development Control Plan, and be used for commercial activities or retail activities.

- | | |
|---|--|
| The Site (5-7 Parkes Street) | B5 Business Development |
| B3 Commercial Core | RE1 Public Recreation |
| B4 Mixed Use | SP2 Infrastructure |



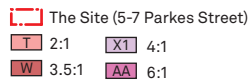
Height of Buildings

The site is limited to buildings of 18m in height.

- | | | | |
|--|--|--|--|
| The Site (5-7 Parkes Street) | M 12m | T 28m | Height subject to
overshadowing impacts |
| | P 18m | Y 54m | |

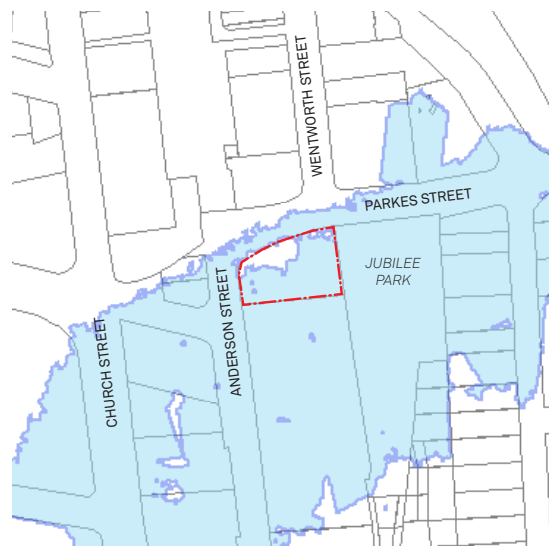
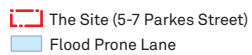
Floor Space Ratio

The site is allowed a floor space ratio of 4:1.

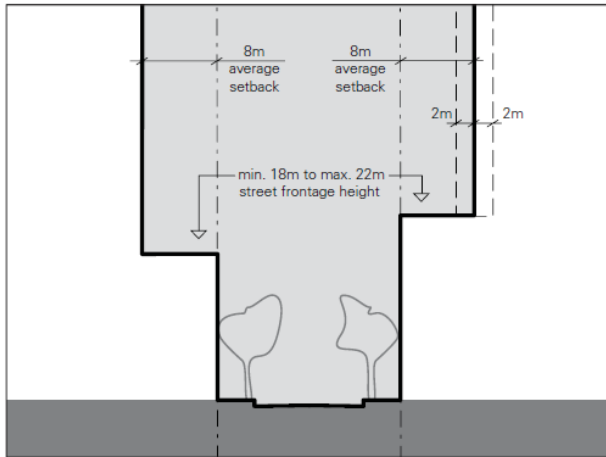


Flood Prone Land

The site is located within flood prone land. Special consideration will need to be given to ground floor treatment and underground carparking. A more detailed study on the effects of flooding will need to be undertaken.



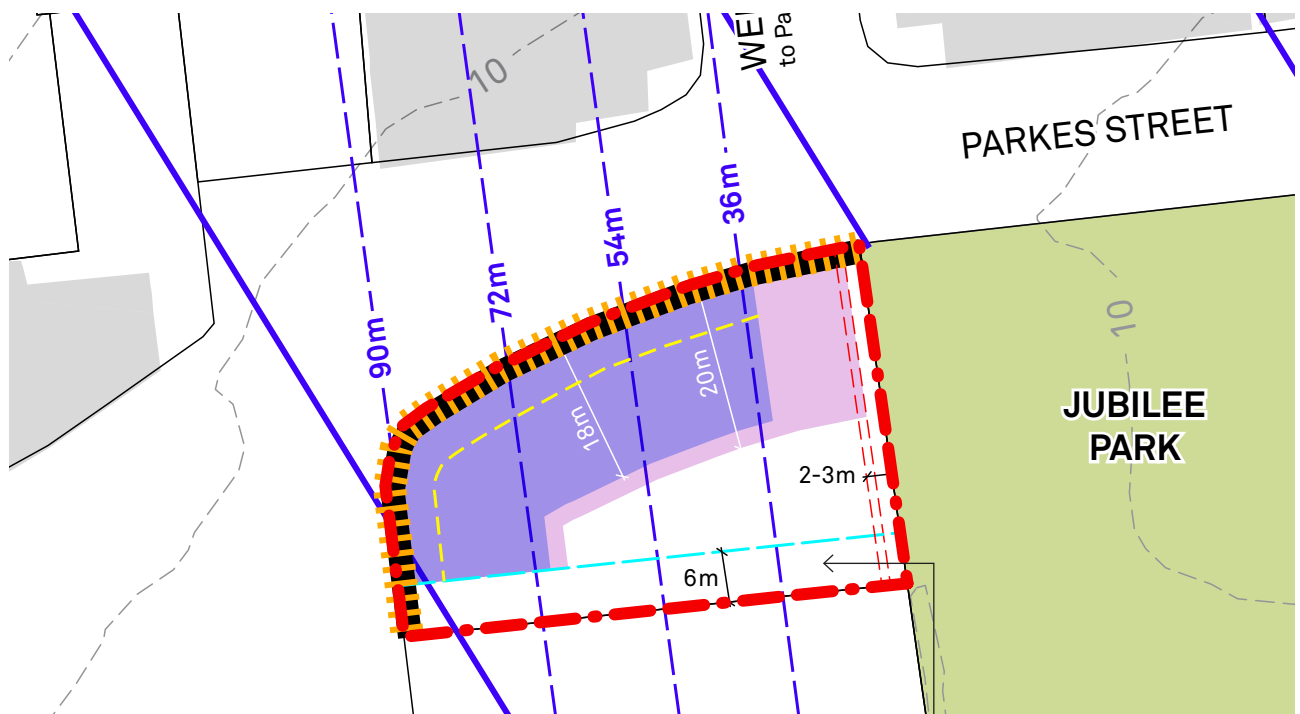
Parramatta City Centre Development Control Plan 2007 (PCCDCP 2007)



Applicable street frontage setbacks

Source: p12, PCCDCP 2007

- The diagram below identifies DCP controls which apply to the site, including:
 - a continuous built edge to Parkes and Anderson Streets (ref Figure 2.1 PCCDCP 2007)
 - Continuous built edge, setback 2–3m from street alignment to Jubilee Park (ref Figure 2.1 PCCDCP 2007)
 - Street wall height between 18–22m along Parkes and Anderson Streets (ref Figure 2.3 PCCDCP 2007)
 - Above street frontage heights, buildings are to be set back a minimum of 6 metres, a maximum of 10m (ref Figure 2.3 PCCDCP 2007)
 - Preferred max. floor plate area of non-residential buildings is 1,200m² and max. depth 20m
 - Preferred max. floor plate area of residential or serviced apartment buildings is 900m² and max. depth 18m (ref p15 PCCDCP 2007)
 - Generally the lower levels of buildings are to be built to the boundary at the street frontage OR set back at least 6 metres. Applies to all side and rear boundaries (ref Figure 2.12 PCCDCP 2007)
- The limitations imposed by the sun access plane to Jubilee Park are explored detail on the following page.



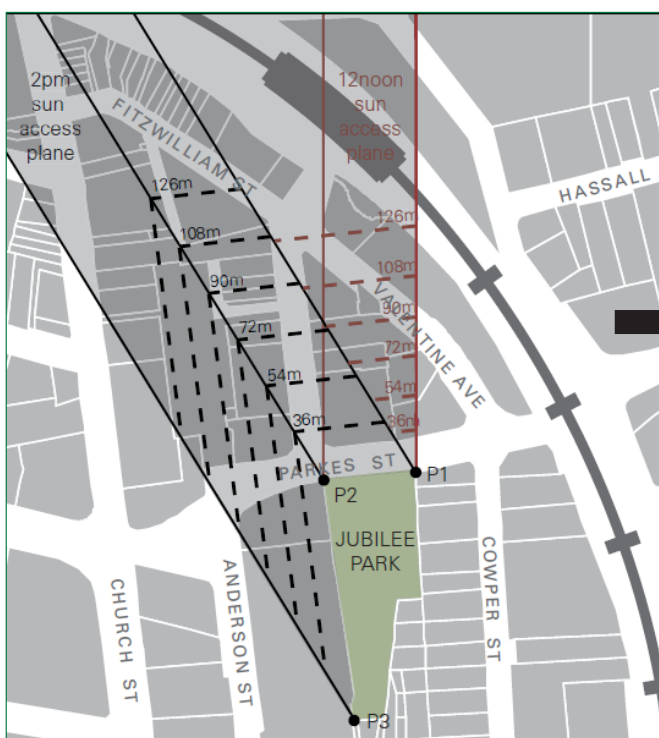
Legend

- | | |
|--|---|
| The Site (5-7 Parkes Street) | Street frontage height 18-22m |
| Continuous built edge (0m setback) | Sun access planes |
| Continuous built edge (2-3m setback) | Max commercial floor plate (1,200m ²) |
| Rear setback (6m min.) | Max. residential floor plate (900m ²) |
| Upper level setback (6-10m above street frontage height) | |

Whilst the southern boundary has been interpreted as the rear boundary of the site in this diagram, it is also possible that it be considered as a side boundary and require no setback

Sun access plane

- The PCCDCP 2007 applies a sun access control to public spaces, including Jubilee Park.
- Clause 2.9 (b) states:
The erection of a building so that any part of the building is above the sun access plane shown on the sun access plane diagrams is prohibited, unless that part of the building is a minor architectural roof feature
- The sun access plane diagram is shown below, and the impact of this on 5-7 Parkes Street is shown in the 3D model to the right.

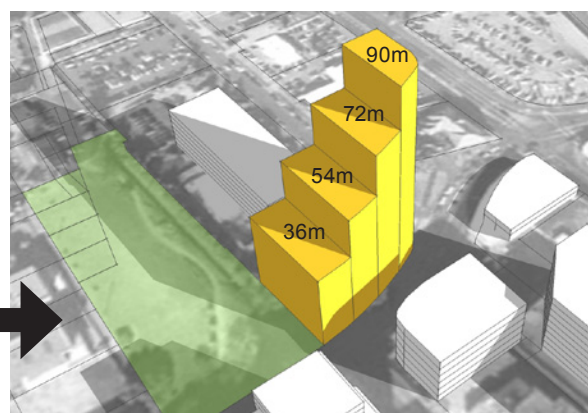


Sun Access Plane Diagram - Jubilee Park

Source: p23, PCCDCP 2007

Deep soil zone

- The PCCDCP 2007 requires that a deep soil zone is provided, for *residential development or mixed use development that is predominantly residential (greater than 80% of total floor space of development)*.
- Clause 2.6 (c) requires at least 15% of the site area is to be provided as a deep soil zone. *If multiple deep soil areas are provided they must have a minimum dimension (in any direction) of 6 metres.*



Resulting envelope under the sun access plane (shadow shown at 2pm on June 22)

Figure 2.18: Sun Access Plane Diagram – Jubilee Park.
The sun access plane is generated from sun access to Jubilee Park on June 22 between 12 noon and 2pm, measured at 20 metres above surveyed ground level at points P1, P2 and P3 (P1 = 9.2m AHD; P2 = 9.9 AHD; P3 = 12.5m). Building heights are indicative only

Gateway corner sites

- The PCCDCP 2007 applies a special emphasis clause to those sites deemed to be on a corner or gateway location. We recommend that 5-7 Parkes Street be considered as a gateway site, due to its prominent position at the northern edge of the proposed Auto Alley Precinct, and as a visual marker at the eastern end of the Great Western Highway.

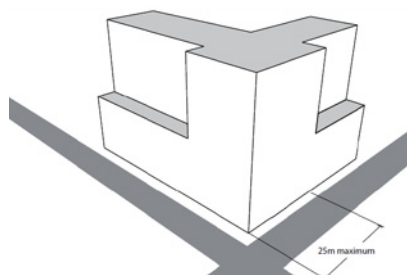
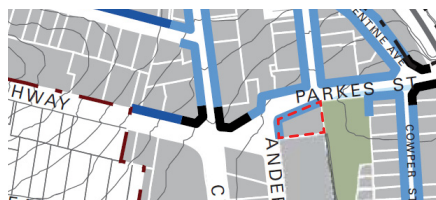


Figure 2.10: On identified gateway corner sites in Figure 2.2, buildings may be built to the street edge for a maximum distance of 25 metres



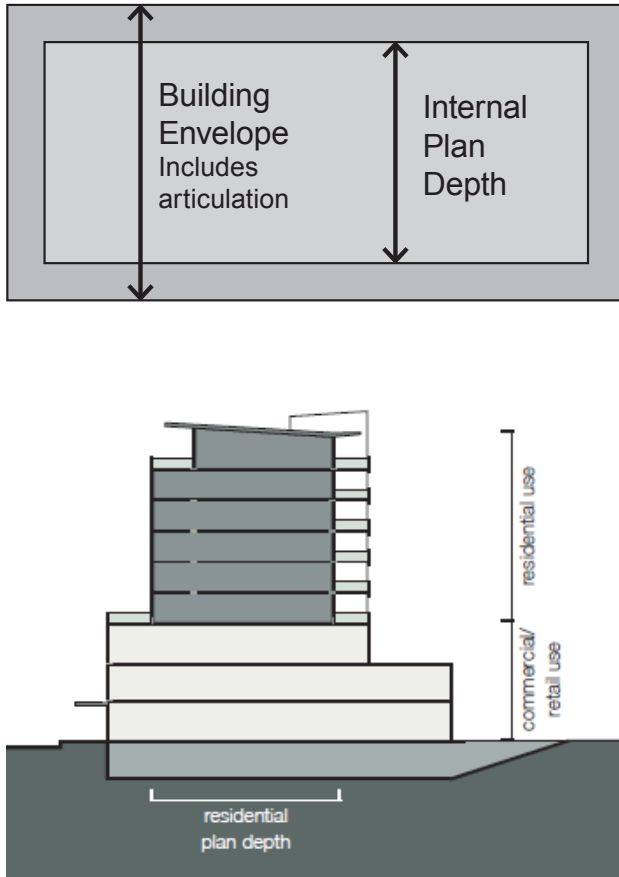
Extract from Figure 2.2 showing corner or gateway locations
Source: p11, PCCDCP 2007

SEPP 65 - Residential Flat Design Code

Building depth

The Residential Flat Design Code (SEPP 65) sets out guidelines for the depth and configuration of buildings:

- *When a building envelope is being used, set depth controls in metres. The envelope includes the articulation zone (balconies, bay windows, shading devices)*
- *The maximum internal plan depth of a building should be 18 metres from glass line to glass line.*
- *The 18 metre guideline generally applies to street wall buildings, buildings with dual and opposite aspect and buildings with minimal side setbacks.*
- *Freestanding buildings (the big house or tower building types) may have greater depth than 18 metres only if they still achieve satisfactory daylight and natural ventilation.*
- *In general, an apartment building depth of 10-18 metres is appropriate. Developments that propose wider than 18 metres must demonstrate how satisfactory daylighting and natural ventilation are to be achieved.*



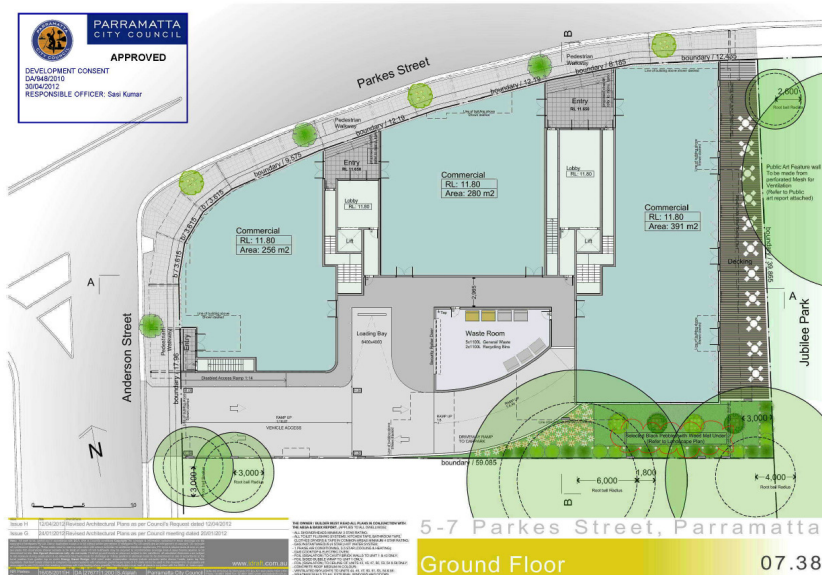
p 26, Residential Flat Design Code

Existing Approved Development Application

- Height 18m + plant
- FSR 2.86:1
- 56 Apartments
- Ground floor commercial, upper levels residential

Non Compliance:

- 0m setback at 'rear' boundary (this could also be considered as a side boundary)
- 18m height excludes plant



Auto Alley Urban Renewal Study

- The Auto Alley Urban Renewal Study identifies 5-7 Parkes Street as being immediately adjacent the boundary for renewal.
- The study suggests a height of 15m for the site (a drop in height from the existing LEP allowance of 18m)
- The site adjacent 5-7 Parkes Street (the Marriott Hotel site), is proposed to have heights increased significantly up to 20-30 storeys.
- Other mixed use sites within the Auto Alley Precinct are proposed to have heights of 6-30 storeys.



Source:

http://www.smda.nsw.gov.au/sites/default/files/file_root/PDFs/News%26Resources/On_exhibition/Auto_Alley/Auto_alley_Consultation_version2.pdf

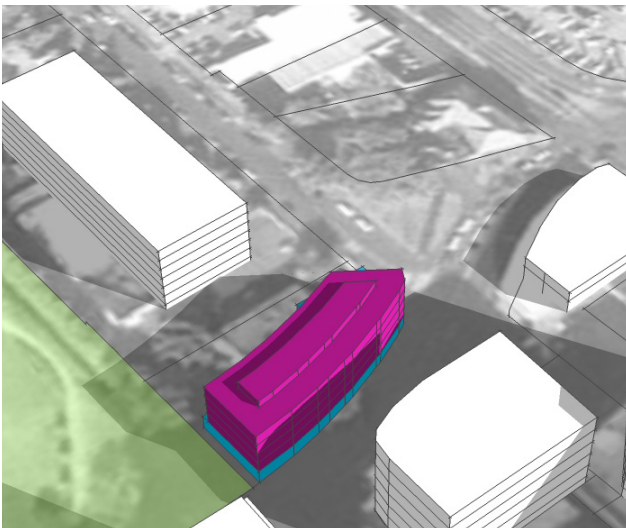
Development Options

This section explores 3 built form outcomes for redevelopment of 5-7 Parkes Street as a mixed use development.

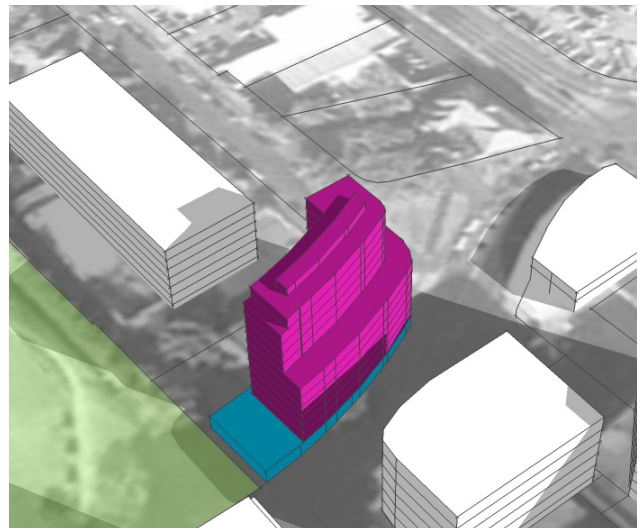
Option 1 presents a compliant building envelope.

Option 2 explores the built form outcome achieved if the permissible FSR of 4:1 is reached.

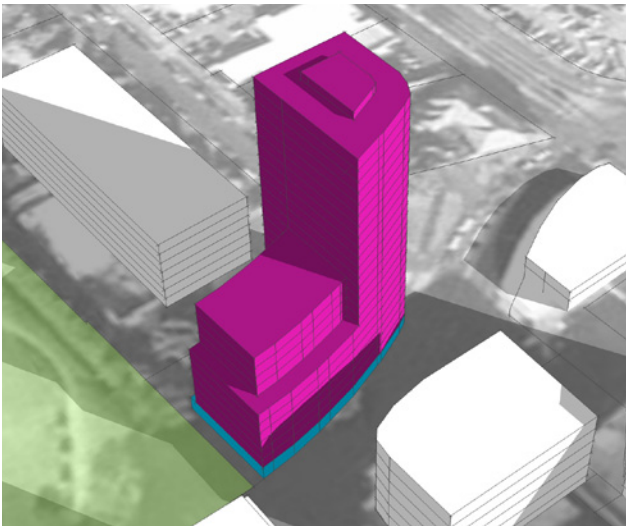
The preferred option 3 has been designed to demonstrate a taller built form, considered consistent with the proposed future heights of the Auto Alley precinct, at a height of 60m. This option presents good urban design outcomes and conforms to sun access requirements for Jubilee Park as set out in the PCCDCP 2007.



Option 1



Option 2



Preferred option 3

Option 1 - Complying development

Controls

The modelled development complies with the following controls as set out in the PCCLEP 2007 and PCCDCP 2007:

PCCLEP 2007		PCCDCP 2007	
Zone	B4 Mixed Use	Setback to Parkes St	0m
Height	18m (5 storeys)	Setback to park	2m
FSR	4:1	Commercial floorplate	1,200m ² max. 20m
		Residential floorplate	900m ² max. 18m

Comment

- The existing controls allow for an FSR of 4:1. The maximum FSR achievable under the 18m height limit is much lower at 2:1, when taking into account setbacks, maximum floorplate considerations and sun access plane controls as set out in the DCP.
- Existing surrounding development presents taller and bulkier buildings.
- Overshadowing of Jubilee Park is minimal and occurs only after 12:30pm (mid winter 22 June).

Resulting Built Form

Complying Built Form	Floorplate (m ²)
Ground Floor	1,200
Level 1	900
Level 2	900
Level 3	900
Level 4	900
Total Floor Space	4,800
Total GFA*	4,080
Resulting FSR^	2 : 1
Height**	18m
Yield	34 Apartments^^

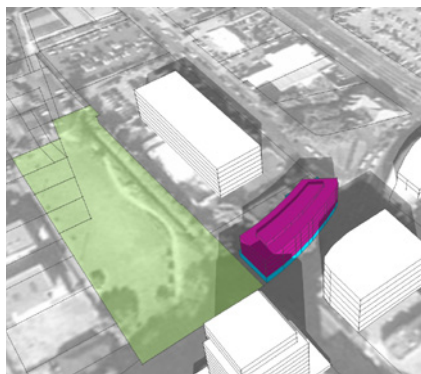
Assumptions

* GFA calculated at 85% of overall floor space

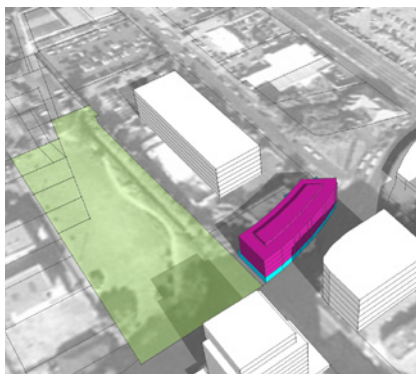
**Ground floor commercial/retail use (4m floor to floor); upper levels residential (3m floor to floor)
Plant allowance on roof 2m

^FSR calculated as Total GFA/Site Area

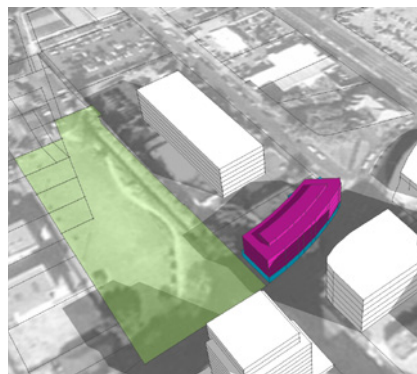
^^ Apartments assumed average size of 90m²



10am June 22



12pm June 22



2pm June 22

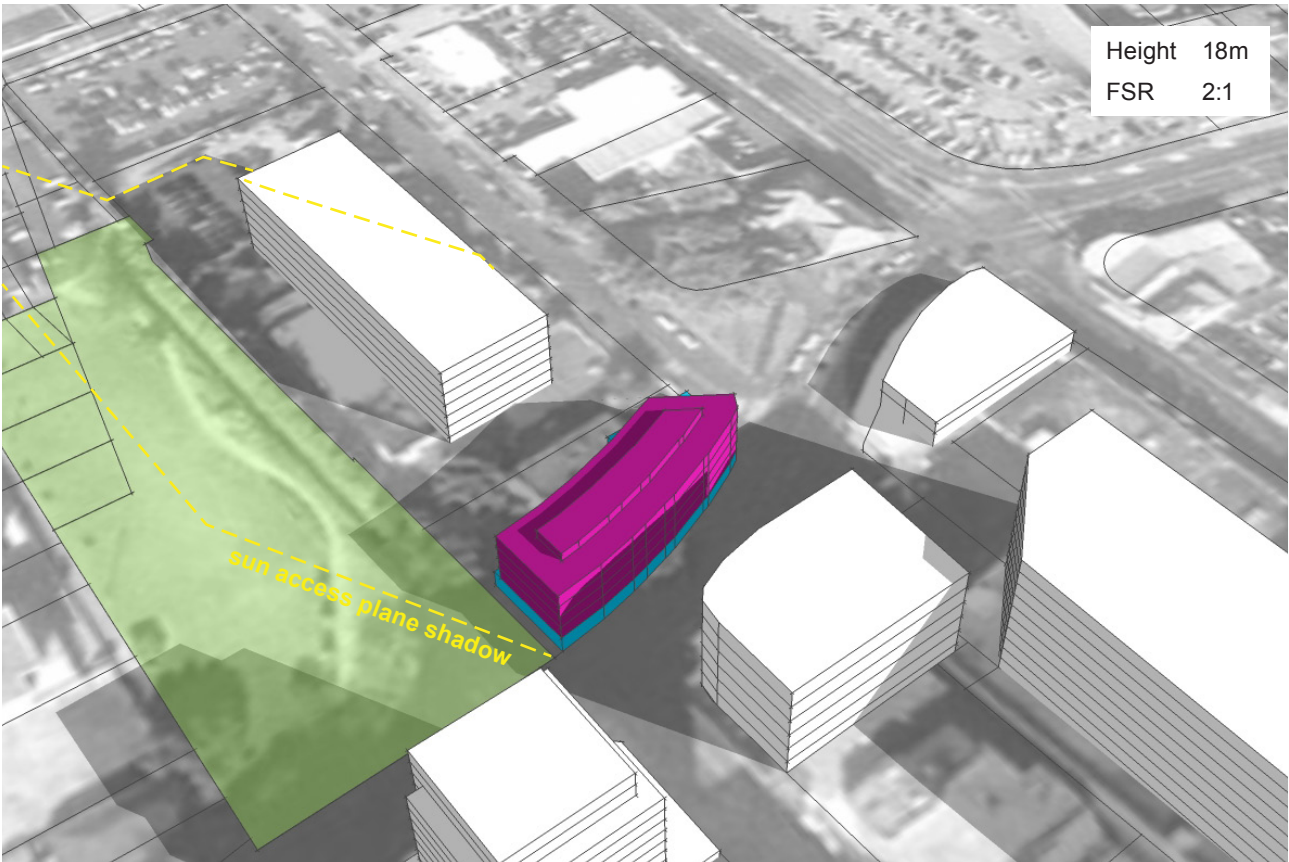


Figure 1 Complying built form - Perspective View (shadow shown at 2pm on June 22)

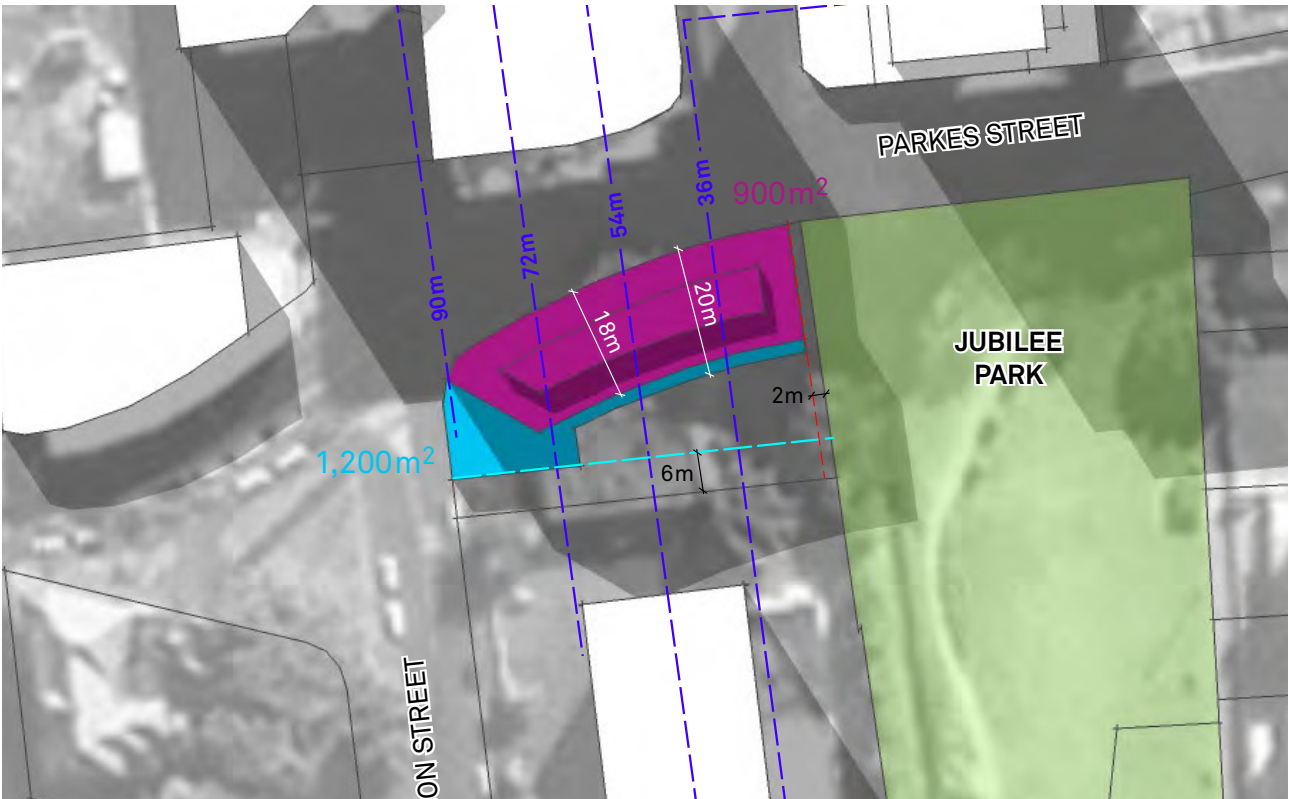


Figure 2 Complying built form - Plan View (shadow shown at 2pm on June 22)

Option 2 - Meeting the 4:1 FSR

Controls

Option 2 has been modelled on the controls as set out in the table below.

PCCLEP 2007		PCCDCP 2007	
Zone	B4 Mixed Use	Setback to Parkes St	0m
Height	39m (12 storeys) non compliant	Setback to park	2m
FSR	4:1	Commercial floorplate	1,200m ² max. 20m
		Residential floorplate	900m ² max. 18m

Resulting Built Form

Complying Built Form	Floorplate (m ²)
Ground Floor	1,200
Level 1-6	900
Level 7-10	540
Level 11	512
Total Floor Space	9,272
Total GFA*	7,881
Resulting FSR^	3.9 : 1
Height**	39m
Yield	76 Apartments^^

Assumptions

* GFA calculated at 85% of overall floor space

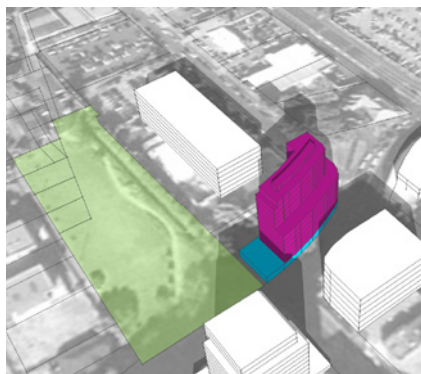
**Ground floor commercial/retail use (4m floor to floor); upper levels residential (3m floor to floor)
Plant allowance on roof 2m

^FSR calculated as Total GFA/Site Area

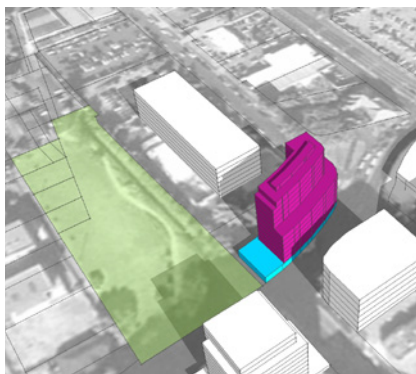
^^ Apartments assumed average size of 90m²

Comment

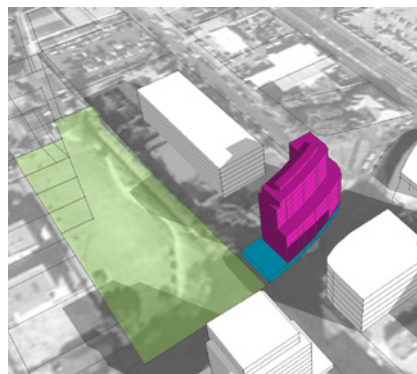
- In order to meet the permissible FSR of 4:1, and taking into account setbacks, maximum floorplates and sun access plane controls as set out in the DCP, the built form requires a height envelope of 39m.
- The required street frontage setback of 6m min. above 18-22m creates a residential floor plate width of only 12m.
- Maximum floorplate controls restrict the use of lower level floor space, resulting in a building envelope that is taller.
- The sun access plane requires that the highest form occurs on the north east corner of the site, fronting the intersection of Parkes and Anderson Streets.
- Overshadowing of Jubilee Park is minimal, and only slightly more than Option 1, occurring only after 1pm (mid winter 22 June).



10am June 22



12pm June 22



2pm June 22

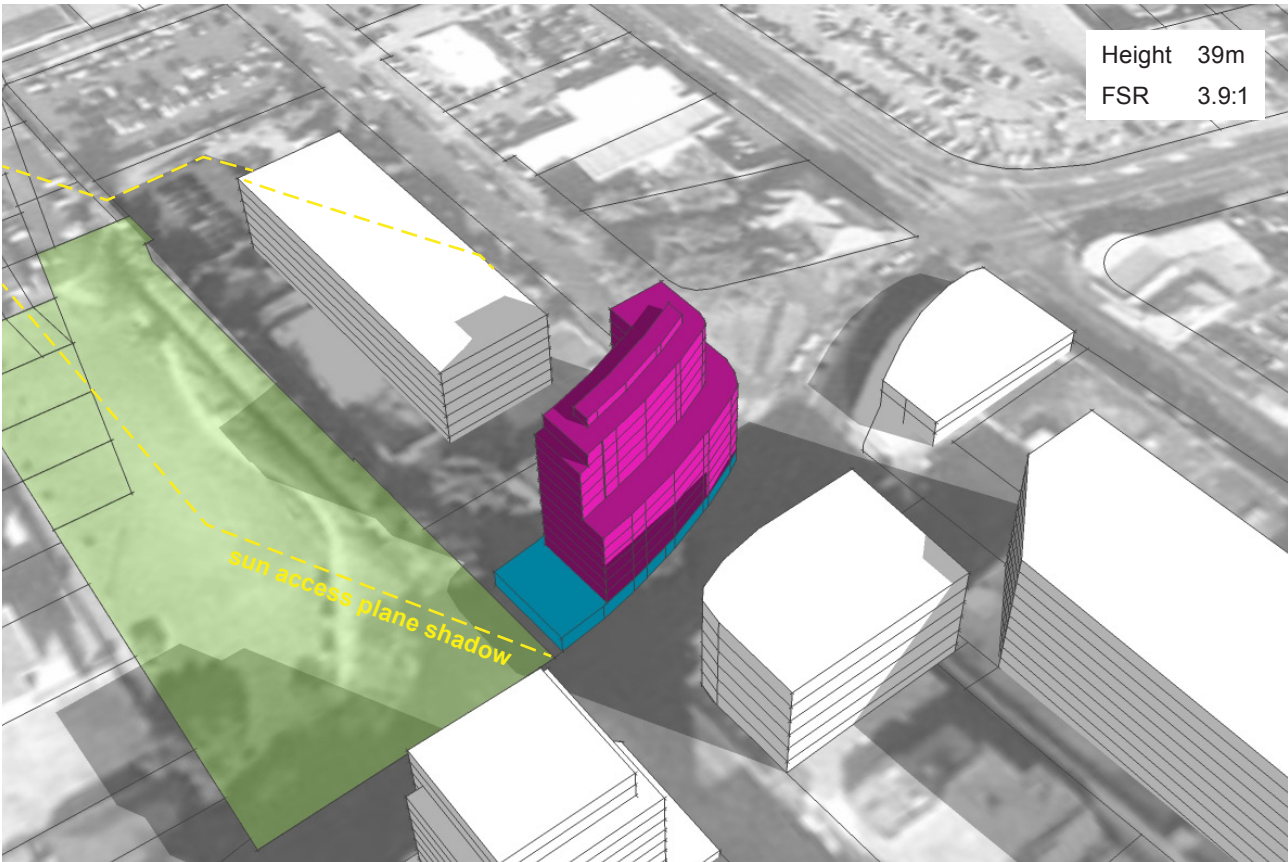


Figure 3 Possible built form that reaches an FSR of 4:1 - Perspective View (shadow shown at 2pm on June 22)



Figure 4 Possible built form that reaches an FSR of 4:1 - Plan View (shadow shown at 2pm on June 22)

Preferred Option 3 - Development under the sun access plane

Controls

Option 3 has been modelled on the controls as set out in the table below.

PCCLEP 2007		PCCDCP 2007	
Zone	B4 Mixed Use	Setback to Parkes St	0m
Height	60m (18 storeys) non compliant	Setback to park	3m
FSR	8:1 non compliant	Commercial floorplate	1,500m ² max. 26m
		Residential floorplate	680- 1,450m ² max. 24m

Resulting Built Form

Complying Built Form	Floorplate (m ²)
Ground Floor	1,530
Level 1-6	1,450
Level 7-10	1,260
Level 11-18	680
Total Floor Space	18,770
Total GFA*	15,955
Resulting FSR^	8 : 1
Height**	60m
Yield	177 Apartments^^

Assumptions

* GFA calculated at 85% of overall floor space

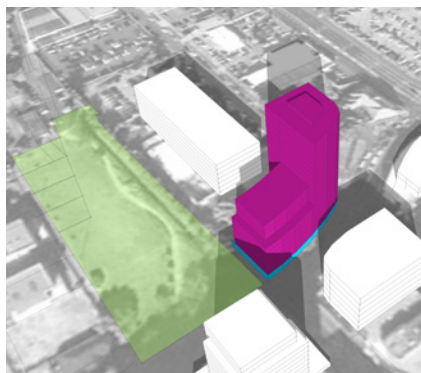
**Ground floor commercial/retail use (4m floor to floor); upper levels residential (3m floor to floor)
Plant allowance on roof 2m

^FSR calculated as Total GFA/Site Area

^^ Apartments assumed average size of 90m²

Comment

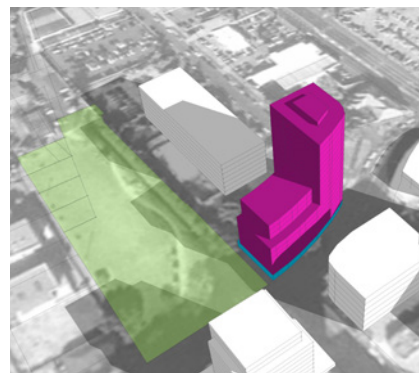
- Option 3 demonstrates an envelope which conforms to sun access plane height and overshadowing controls.
- Whilst the PCCDCP 2007 recommends a residential building depth of 18m and floor plate of 900m², there is potential for increase due to the stand alone nature of the building, and the tower form which provides more opportunity for solar access into apartments. This approach is supported by the guidelines as set out in the Residential Flat Design Code (SEPP 65).
- This option demonstrates a building envelope which makes adjustments to the DCP controls, including:
 - Ground floor (non residential) floor plate has been increased to a width of 26m (from 20m), and a maximum floor plate size of 1,530m² (from 1,200m²). We consider a dimension of 26m and a larger floorplate to be more a more flexible approach to planning for non residential use.
 - Upper residential level floor plates have been increased to a width of 24m (from 18m), and floor plates ranging from 680m² to 1,450m² (an average floor plate size of 940m²).
 - This option complies with the controls for a corner or gateway site (as discussed on page 12). A tower is recommended to be built to the boundary for the entire street frontage height, on the corner of Parkes and Anderson Streets.
 - The street frontage setback above 22m has been reduced to 4m from 6m for the remainder of the building located west of the tower.
- The built form modelled requires a height envelope of 60m (18 storeys) and an FSR of 8:1.
- Overshadowing of Jubilee Park complies with the sun access plane controls (Figure 2.18 PCCDCP 2007), occurring only after 12.30pm (mid winter 22 June).
- It is considered that the built form outcome of this option is consistent with proposed renewal for the immediate area surrounding the site, and conforms to best practice urban design principles.



10am June 22



12pm June 22



2pm June 22

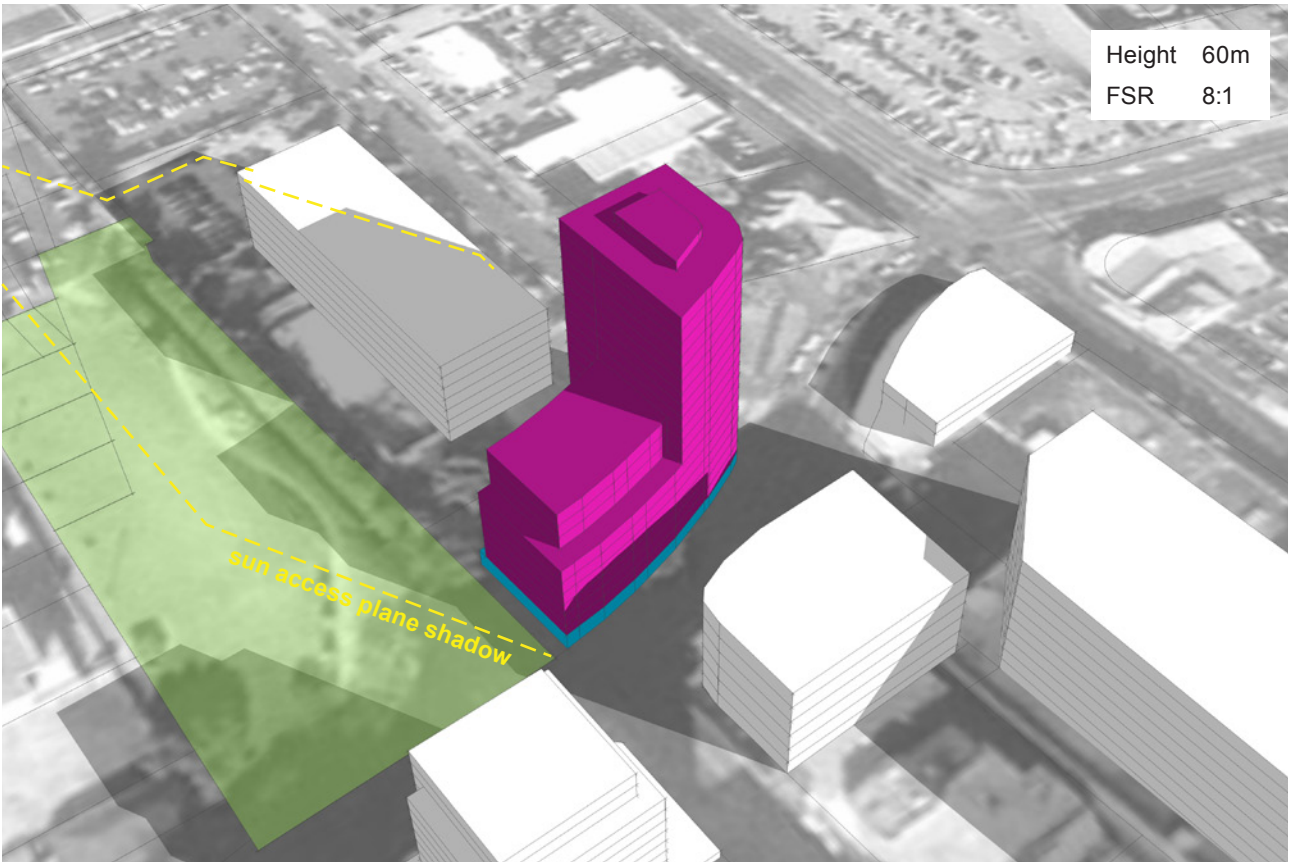


Figure 5 Preferred built form - Perspective View (shadow shown at 2pm on June 22)



Figure 6 Preferred built form - Plan View (shadow shown at 2pm on June 22)