

Appendix 2A – Urban Design Review

March 2022

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Urban Design Review

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Report contact	Greg Burgon Principal Urban Designer	
This report is considered a draft unless signed by a Director or Principal	Approved by: Greg Burgon	

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1.1 Background and Purpose of report

Background

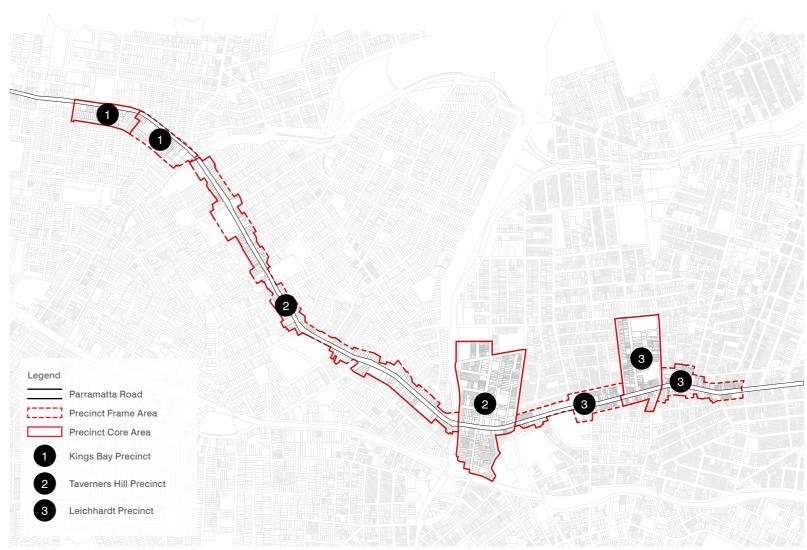
Inner West Council is preparing a Planning Proposal to amend the Inner West Local Environmental Plan for the Parramatta Road Corridor Urban Transformation Strategy (PRCUTS) Leichhardt, Taverners Hill and part of the Kings Bay precincts.

Council have prepared Draft Structure Plan maps for these precincts which encompass changes to existing planning controls and take into consideration the recommendations by PRCUTS.

Purpose of this report

Architectus has been engaged by Inner West Council to give peer review advice on Council's Draft Structure Plan maps which will inform the LEP/DCP, and design guidelines which will inform DCP controls. The fine grain design guidelines apply to individual precincts - Kings Bay, Taverners Hill and Leichhardt, as well as to general urban design issues across the three precincts.

Three reports have been prepared (one for each precinct) and structured according to the specific issues Council have identified and are seeking peer review advice on. This report covers the Leichhardt Precinct. The work for this precinct builds on the previous urban design study completed by Architectus for former Leichhardt Council in 2016.



Parramatta Road Corridor study area map

Background and Purpose of report

Approach

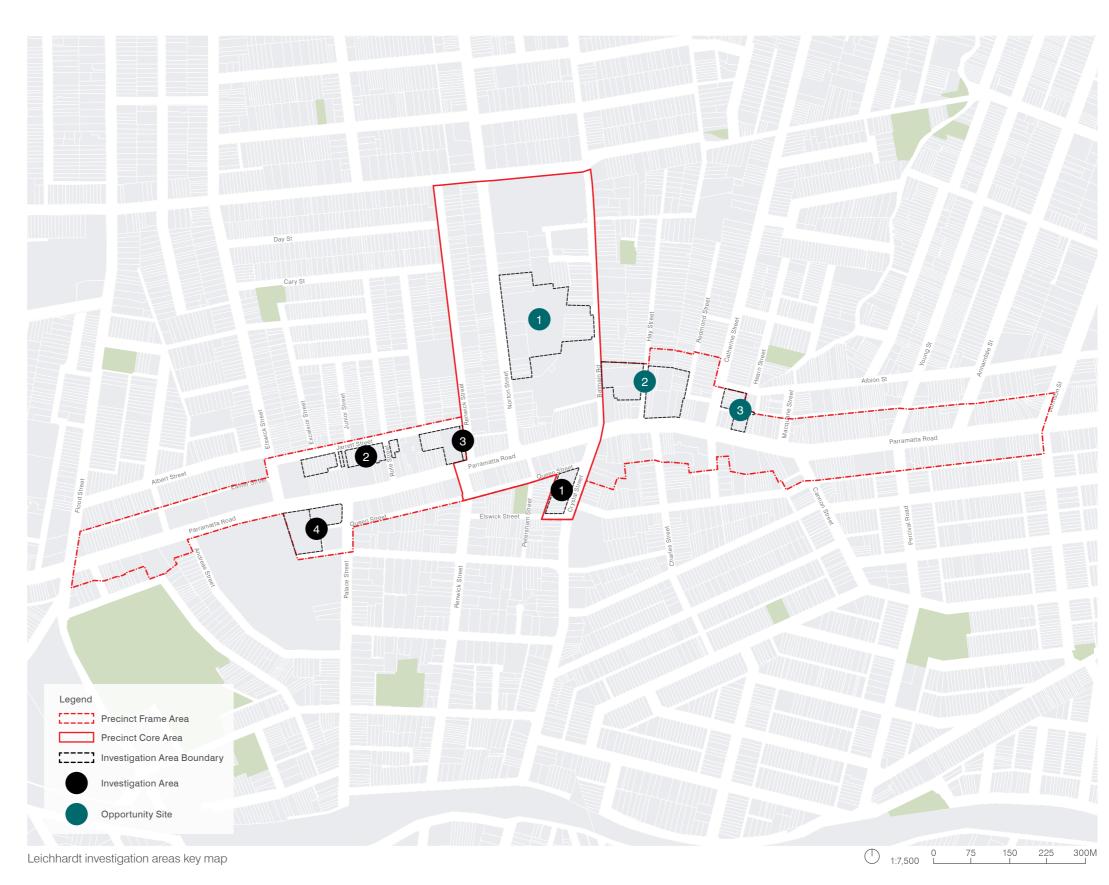
This report includes five investigation areas and three opportunity sites within the Leichhardt Precinct:

- Investigation Area 1 2-18 Crystal Street, Petersham
- Investigation Area 2 4 98 Jarrett Street, Leichhardt
- Investigation Area 3 10-12 Renwick Street, Leichhardt
- Investigation Area 4 592 610 Parramatta Road, Petersham
- Opportunity Site 1 Norton St
- Opportunity Site 2 Hay St
- Opportunity Site 3 Catherine St

Consideration of each issue may include some or all of the following sections as relevant:

- Existing, PRCUTS, and Draft Structure Plan LEP controls
- Existing character analysis
- Development constraints and opportunities
- Built form typology study
- Precedent imagery
- Solar analysis and overshadowing
- Recommendations

The final chapter of this report includes a summary of Architectus' key recommendations and summary tables of yield across the precinct.



Background and Purpose of report

General commercial and residential assumptions

B2 Efficiency (Commercial component 85%; Residential component 75%)

5m Ground - floor to floor (inclusive of 1m slope/topography allowance)
4m Typical first floor level (first floor upper level has potential to transition to commercial use in future based on demand for commercial floorspace)

3.1m Typical upper levels (sufficient for residential floor to floor height)

1.5m Lift overrun

B6 Efficiency 90%

5m Ground - floor to floor (inclusive of 1m slope/topography allowance)
3.6m Typical upper levels (sufficient for commercial floor to floor height)

1.5m Lift overrun

RFBs Efficiency 75%

4m Ground - floor to floor (inclusive of 1m slope/topography allowance)
3.1m Typical upper levels (sufficient for residential floor to floor height)

1.5m Lift overrun

Abbreviations

ADG Apartment Design Guide (accompanying State Environmental Planning Policy 65)

ALEP Ashfield Local Environmental Plan 2013

FSR Floor Space Ratio
GFA Gross Floor Area
HOB Height of Building
IWC Inner West Council

IWLEP Draft Inner West Local Environmental Plan 2021

LLEP Leichhardt Local Environmental Plan 2013

LZN Land Zoning

MLEP Marrickville Local Environmental Plan 2011
NLA / NSA Nett Lettable Area / Nett Saleable Area

PRCUTS Parramatta Road Corridor Urban Transformation Strategy 2016

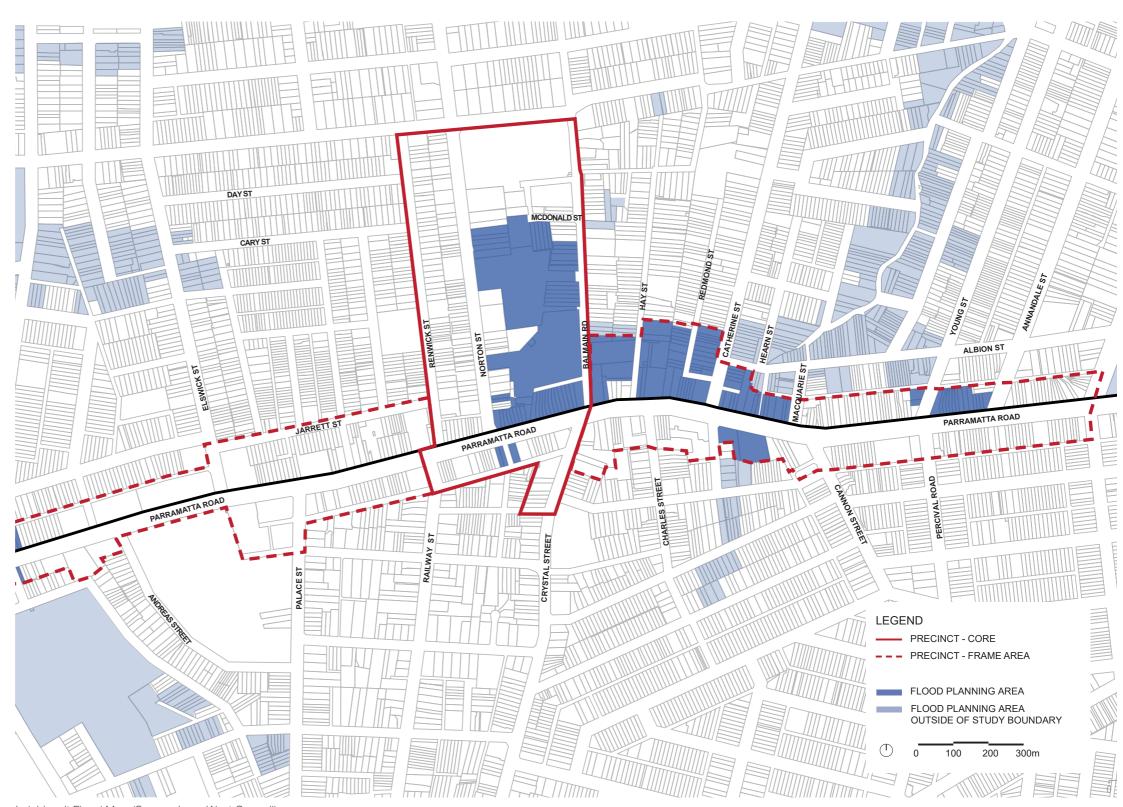
RFB Residential flat building

SEPP65 State Environmental Planning Policy 65

Background and Purpose of report

Flood mapping

The typology testing and selected sites is subject to hydrological engineering advice, with regard to minimum landscape area, setbacks and impacts of basement car parking.



This map is from Inner West Council Floodplain Risk Management Studies and Plans. Council is reviewing its flood management plan for this area which might result in changes to the flooding lots.

Leichhardt Flood Map (Source: Inner West Council)



Issue

2-18 Crystal Street, Petersham

Advice sought on proposed zoning and controls – existing B2 zoning should be retained or rezoned to R3 Medium Density residential. Advice also sought on appropriate development controls (FSR/heights/setbacks/street frontage heights/appropriate ground floor uses etc.)



Investigation area key aerial plan

LEP controls

The investigation area is currently zoned B2 Local Centre with an FSR of 1.5:1 and HOB of 14m.

PRCUTS recommends rezoning this investigation area from B2 to R3 Medium Density Residential with 3:1 FSR and 22m HOB.

Draft Structure Plan controls

The IWC Draft Structure Plan controls under consideration support the PRCUTS rezoning and FSR recommendations but suggest the HOB be reduced to 20m.

Existi	ng LEP controls
LZN	B2 Local Centre
FSR	1.5:1
НОВ	14m
PRCU	TS recommendations

PRCUTS recommendations LZN R3 Medium Density Residential FSR 3:1 HOB 22m

Draft Structure Plan controls under consideration







FSR 3:1 + bonus for public benefits



HOB 20m

Character

Lots and existing development

- Generally mixed built form character that consists of small residences, shop fronts and warehouses and a service station in the north of the investigation area.
- Developments along existing streetscape are 1-2 storeys approximately 5-9m high.
- Inconsistent front setbacks due to the mix of uses.
- No rear setbacks along Petersham Lane.

Streets

- Investigation area fronts Crystal Street; a main thoroughfare connecting Petersham to Parramatta Road, with high traffic.
- No existing parking to investigation area along Crystal Street frontage.
- Minimal planting along Crystal Street, due to wide driveway crossings providing access to existing businesses (service station and auto repair workshop).
- No existing rear access to investigation sites from Petersham Lane. Laneway is narrow with no footpath (approximately 2.4m wide).
- Queen Street to the northern side of investigation area provides rear access to sites along Parramatta Road. Predominately made up of driveways and parking bays.
- Elswick Street to the southern side of the investigation area is a narrow street with minimal footpath and no planting.





- 01 Existing developments at No.12-18 Crystal Street, currently zoned as B2 Local Centre.
- Existing service station development at No.
 2-10 Crystal Street. Located at intersection of Crystal Street and Queen Street.



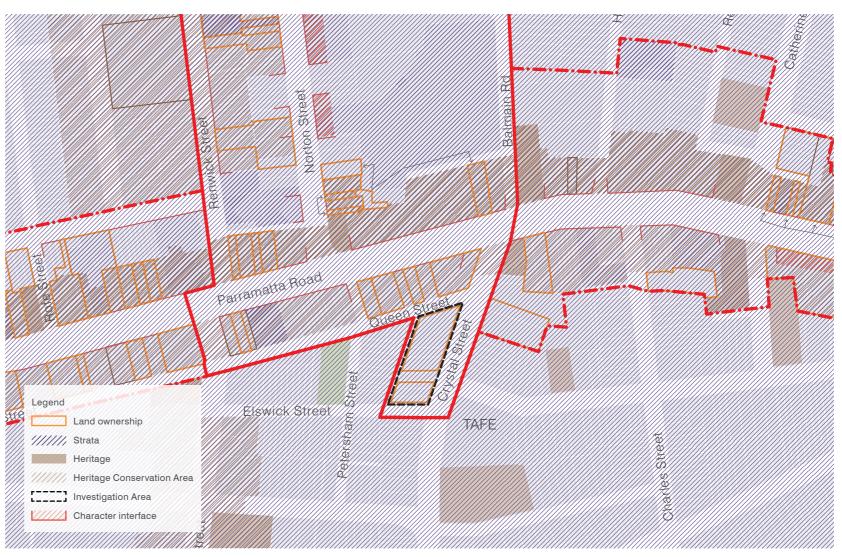
03 Petersham Lane (to rear of investigation sites)

Development constraints and opportunities

- Two significant land ownership sites within investigation area present feasible opportunities for amalgamation and large residential floorplates.
- Petersham Lane is very narrow, which presents vehicle access challenges from the rear.
- The western frontage of Petersham Lane consists of the rear courtyards of single dwellings.
 Separation, interface and amenity will need to be considered.
- The investigation area is generally unconstrained by heritage items and heritage conservation areas, although is adjacent to the HCA between Parramatta Road and Queen Street.
- Petersham TAFE situated opposite the south east corner of the investigation area is 5 storeys high.

Preliminary ideas

- Explore height commensurate to B2 zoned area to the north of the investigation area.
- Consider solar amenity to surrounding residential neighbours, particularly those along Petersham Lane to the west.
- Consider provision of adequate space to allow for access to the rear of site.
- Create opportunities for improved streetscape and pedestrian amenity along Crystal Street, including street tree planting and verges.

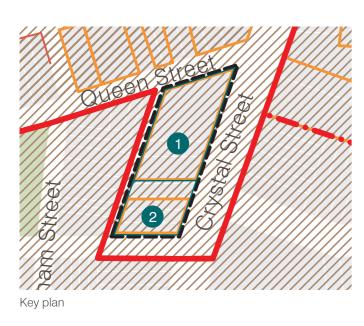


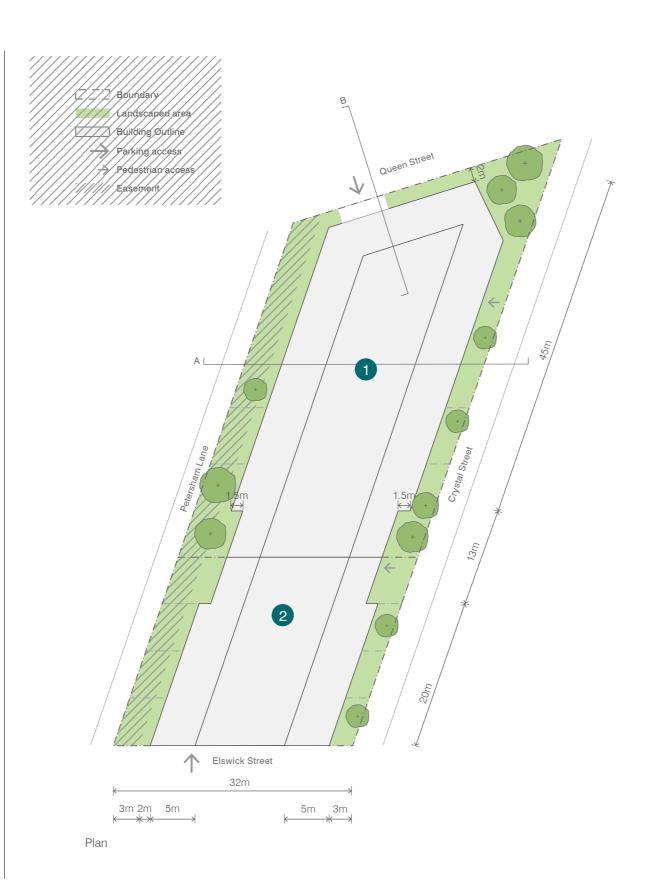
Constraints map

Built form typology study

The following study has been undertaken to understand potential built form outcomes for two sites, taking into consideration existing land ownership pattern.

- Existing land ownership of 3 lots to northern side of investigation area has been explored as one potential opportunity site. Includes existing service station site. R3 Medium Density Residential RFB typologies have been explored. Refer to Council's preliminary site investigation report for contamination assessment.
- Current land ownership of 3 lots to southern side of investigation area explored as one amalgamated site, with assumption that remaining lot at No. 14 Crystal Street would be included in future redevelopment. R3 Medium Density Residential RFB typologies have been explored.





Assumptions

 Built form typology requires amalgamation of 2 lots to achieve a minimum 12m site width and 31m depth for basement car parking.

Setbacks

- Min. rear setback of 5m to first 4 storeys and a further 5m setback to fifth storey from rear building line, to allow for rear access via Petersham Lane to basement parking, solar access, privacy and amenity to R2 zoned area to west of investigation area.
- Min. 3m front setback to Crystal Street to allow for planting, then a further 5m setback to 5th storey from building line.
- 5th storey setback to reduce the impact to neighbouring properties to the West.
- Min. 2m setback to Queen Street and additional 5m setback to the fifth storey form the building line.
- 0 setback to Elswick Street.

Building height and street wall

- Proposed 5 storey residential development.
- 4 storey street wall.
- 4m Ground floor to floor height.
- 3.1m floor to floor height for storeys above.
- Overall building height of 17.9m including services.

Acces

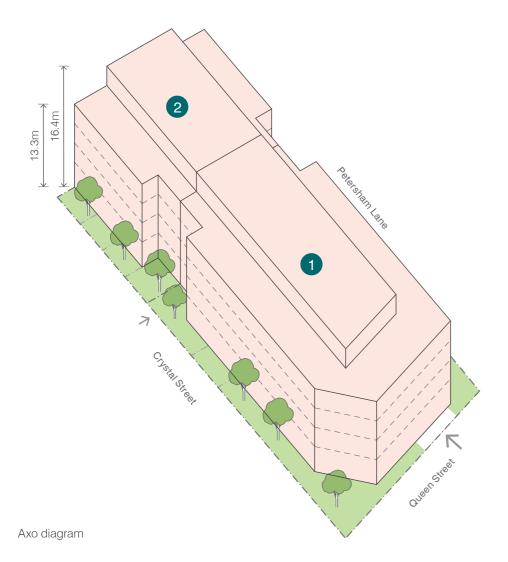
- Parking access from Queen St and Elswick St or from Petersham Lane.
- 3m zone for potential Petersham lane widening.

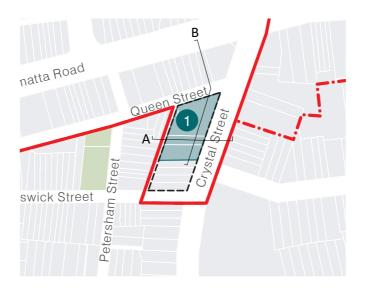
1:500 L 1 1 1 20 25M

RFB typology

12

- RFBs with an FSR of 2.2:1 have been explored for this investigation area, responding to the future redevelopment of Parramatta Road.
- Proposed building envelope achieves cross ventilation to apartments, and can be articulated further at design stage to respond to the built form pattern of Crystal St and reduce visual bulk
- Height and street wall considers the redevelopment of Parramatta Road properties and interface along Queen Street. The height and typology also responds to the 5-storey TAFE site to the southeast of the investigation area.





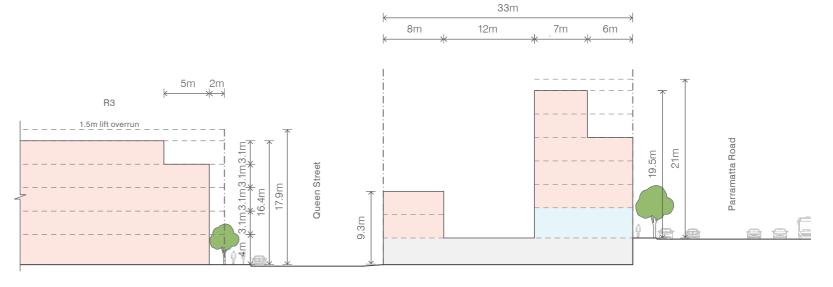
FSR	2.2:1
Site width	52m
Site depth	32m
Site area	1600m ²
Front setback (to Crystal St)	3m
Side setback (to Queen St)	2m
Rear setback	5m (incl. 3m for potential lane widening)
Upper level setback (to 5th storey from building line from Crystal St, Queen St and Petersham Lane)	5m
GFA	3586m²
Street wall	4 storeys
Height	17.9m (5 storeys)
Dwelling Yield	45



FSR	2.2:1
Site width	26m
Site depth	32m
Site area	806m ²
Front setback (to Crystal St)	3m
Side setback (to Elswick St)	0m
Rear setback	5m (incl. 3m for potential lane widening)
Upper level setback (to 5th storey from building line from Crystal St and Petersham Ln)	5m
GFA	1820m²
Street wall	4 storeys
Height	17.9m (5 storeys)
Dwelling Yield	23

Investigation site

Future development along Parramatta Road



Section B

Solar Analysis

Solar access requirements

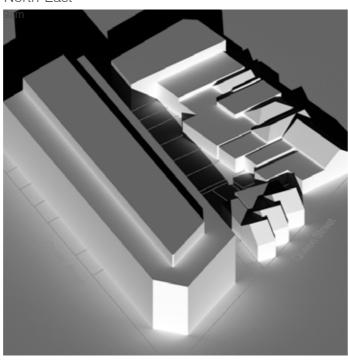
Minimum two hours of solar access to surrounding properties. Accompanying shadow diagrams are taken at 9am, 11am and 1pm on the 21st June.

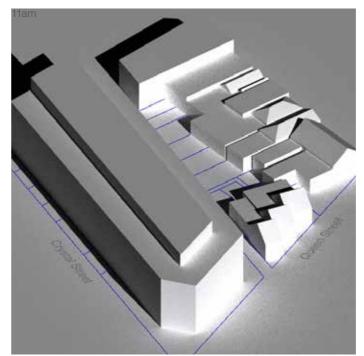
Summary

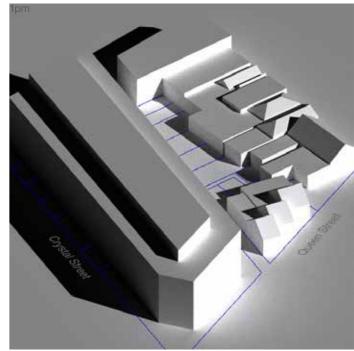
Proposed R3 zoned sites along Crystal Street maintain a minimum 2 hours of sunlight to open space of neighbouring R2 sites to West.

R2 to R3 interface

North-East



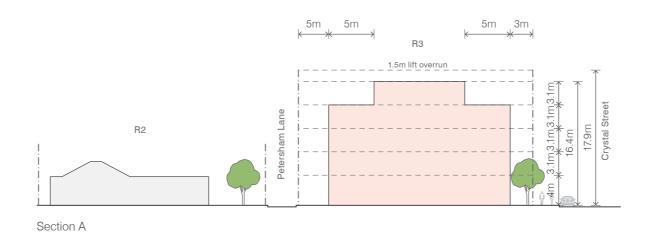




9am 11am 1pm









Recommendations

LEP recommendations

Architectus supports PRCUTS' recommendations to rezone the existing B2 investigation area to R3 Medium Density Residential (with RFBs as an additional permitted use) in keeping with its surrounding residential context. The testing indicates that a reduced HOB and FSR from those proposed by PRCUTS and the Draft Structure Plan would be more appropriate for this investigation area.

Justification

In order to achieve the 3:1 FSR recommendation put forward by PRCUTS and the IWC Draft Structure Plan, 6+ storeys would be required which is not in keeping with the local area and low density residential character. It would have negative solar impacts on neighbours, particularly those along Petersham Lane. 18m (5 storeys) with an FSR of 2.2:1 is more appropriate for this area and will provide a better interface to the B2 development to the north which is marked for 20m HOB and 3:1 FSR.

Existir	ng LEP controls
LZN	B2 Local Centre
FSR	1.5:1
НОВ	14m

PRCU	TS recommendations
LZN	R3 Medium Density Residential
FSR	3:1
НОВ	22m

Draft \$	Structure Plan Controls
LZN	R3 Mixed Use Residential
FSR	3.1 + bonus for benefits
НОВ	20m

Final r	recommendations
LZN	R3 Medium Density Residential + RFBs
FSR	T5 - 2.2:1
НОВ	P3 - 18m (5 storeys)

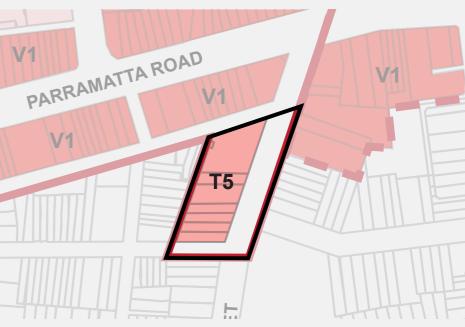


Floor Space Ratio Legend (n:1)

- 14	

S7 1.9

T5 2.2



Maximum Building Height (m)

P1 17

P2 17.5

P3 18

Q1 19 S 23





Issue

4 – 98 Jarrett Street, Leichhardt

Advice sought on proposed zoning and building/development controls considering the interface with the rear of properties along Parramatta Road.

Investigation area key aerial plan

LEP controls

The investigation area is currently zoned as B2 Local Centre with an FSR of 1:1 (maximum FSR 1.5:1 if active frontage is provided). HOB is currently undefined.

PRCUTS recommends decreasing the FSR to 1:1 (no bonus for active frontage), proposing 3:1 only for the eastern-most lot which is the Bel Mondo residential development. It also recommends a general HOB of 14m along Jarrett Street, with a 22m exception again for Bel Mondo.

Draft Structure Plan controls

The IWC Draft Structure Plan controls under consideration retain the existing LLEP FSR and HOB but seek peer review advice on future controls.

EXISTII	ng LEP controls
LZN	B2 Local Centre
FSR	1:1 + bonus 0.5 for active frontage
HOB	Undefined
PRCU	TS recommendations
PRCU LZN	
LZN	

Draft Structure Plan controls under consideration



LZN B2 Local Centre



FSR 1:1 (+ 0.5 bonus for active frontage) and 3:1



HOB Undefined (no change). 20m for Bel Mondo development

Character

Lots and existing development

- Mixed character along Jarrett Street including single storey dwellings, non-heritage terrace typologies, warehouses and a recent 5 storey apartment building, 'Atelier'.
- Predominately 1-2 storey developments approximately 5-9m high.
- Strong warehouse character and predominant brick materiality.
- The Atelier development consists of a smaller
 2-storey brick building along the street frontage keeping with the built form scale of the street, while the remaining storeys are set back approximately
 6m.
- Most dwellings built to side boundaries, with minimal 1m side setbacks.
- Some existing larger industrial/commercial warehouses on the western end of Jarrett Street.
- The northern side of Jarrett Street predominantly consists of the side boundaries of dwellings and commercial/light industrial properties.

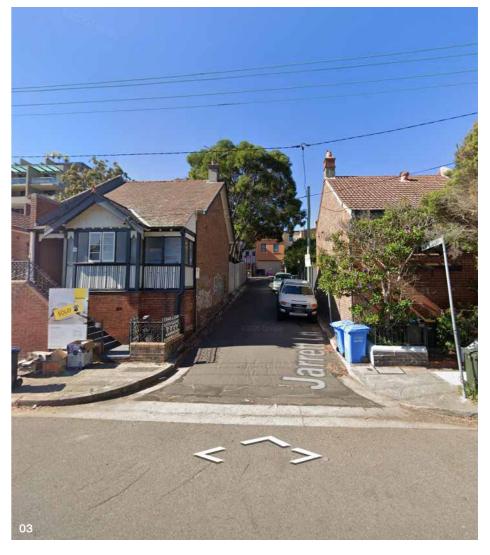
Streets

- Investigation area backs onto Parramatta Road to the south. Jarrett Street is relatively quiet with low traffic and streets of approximately 11m wide.
- Streetscape is predominantly hardscape with some significant mature street trees within the verge.
- Majority of dwellings without off-street parking, however there is driveway access to some warehouses from Jarrett Street.
- Jarrett Lane provides rear access to a number of commercial tenancies that front Parramatta Road.
- Driveway from Jarrett Street provides car parking access to the apartment building at 469-483
 Parramatta Road.





- O1 Existing dwellings along Jarrett Street. Character of streetscape features mix of small warehouses and semi-attached houses.
- 02 Existing 1-2 storey residential dwellings along Jarrett Street.



03 Jarrett Lane (to rear of investigation area) which services some sites along Parramatta

Development opportunities and constraints

- B2 along Parramatta Road to the south consists of shop-top housing etc.
- Single storey dwellings along the northern side of Jarrett Street.
- Investigation area has several lots under strata which are unlikely to be redeveloped and have been excluded from this testing.
- East of Rofe Street has a notably different character to the west. The east which includes the Bel Mondo residential development, consists primarily of terrace/townhouse typologies with the exception of the recent medium density 'Atelier' development. The east is also heavily constrained by existing strata developments.
- West of Rofe Street is more commercial in feel with several existing warehouse typologies and is largely unconstrained by strata.

Preliminary ideas

- Retain the current use and character of Jarrett Street. There are currently heritage contributing houses and small commercial and industrial workshops that front Jarrett Street and contribute to its unique character and use.
- Investigate B2 shop top typologies.
- Retain existing heritage contributing warehouses where possible.

Built form typology study

The following study has been undertaken to understand potential built form outcomes for Jarrett Street, taking into consideration its relationship with future proposed B2 development along Parramatta Road to the south and existing low density residential housing to the north.

4 storey shop-top housing that extends the existing B2 character of Parramatta Road has been explored as the preferred typology for this investigation area.

Typologies:

- Shop-top typology with access from Jarrett Street.
- Shop-top typology incorporating lots fronting Parramatta Road.



Constraints map

1:3,000 0 30 60 90 120 150M

Typology

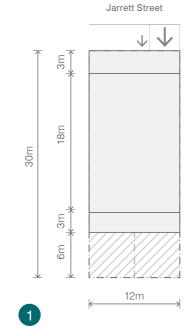
Proposed commercial ground floor with apartments above. Other commercial warehouses along street approx. 2-lot amalgamation. Investigation based off this pattern. Proposing to retain warehouse character.

Architectus has tested an option to redevelop the sites to achieve a 4-storey terrace typology: ground level retail/commercial with residential above.

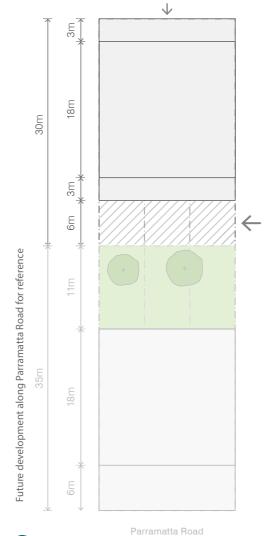
4m floor to floor height for first floor uses have been assumed to allow flexible use and potential transition to commercial uses in future.

General parameters for typology:

- Site depth 30m
- Site size Site 1 360m² and Site 2 540m² (amalgamated Site 2 1170m²)
- Street frontage 12m and 18m
- Access & Car-parking Basement car-parking.
 Extend Jarrett Ln as easement for Parramatta
 Rd lots



1. Amalgamated site to Jarrett St		
2.2:1		
12m		
30m		
360m ²		
0m		
3m to 3rd and 4th		
storey		
0m		
min. 6m		
784m²		
2 storeys		
16.7m (4 storeys)		
6		



18m

2. Amalgamated site to Jarrett St

Easement

Rear setback/ Potential

FSR 2.2:1 Site width 18m Site depth 30m Site area 540m² Front setback 0m Upper level front 3m to 3rd and 4th setback storey Side setback 0m Rear setback 6m GFA 1177m² 2 storeys Street wall Height 16.7m (4 storeys) Dwelling Yield





Proposed lot amalgamations key plan

Section 1

Residential
Commercial

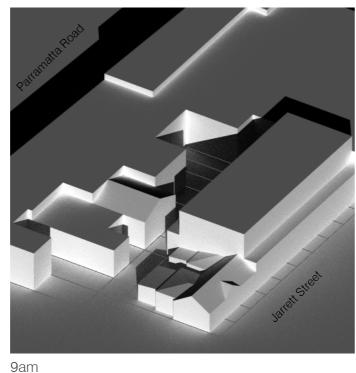
Solar Analysis

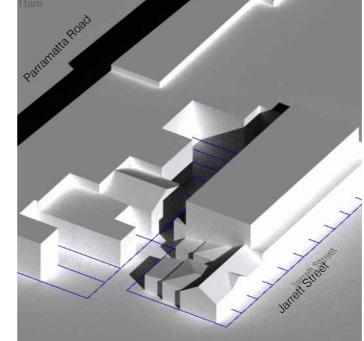
Minimum two hours of solar access to surrounding properties. Accompanying shadow diagrams are taken at 9am, 11am and 1pm on the 21st June.

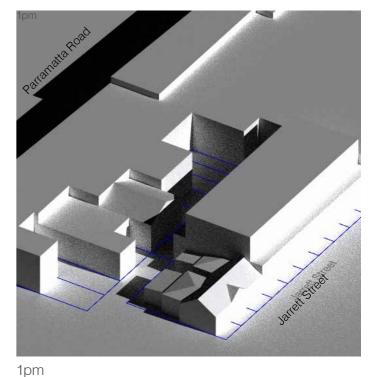
6m rear setbacks to built form along Jarrett Street to provide for adequate solar access to development fronting Parramatta Road. The testing indicates that this arrangement will achieve the minimum solar access requirements.

B2 - Parramatta Road to Jarrett Street interface

North-East







Setbacks

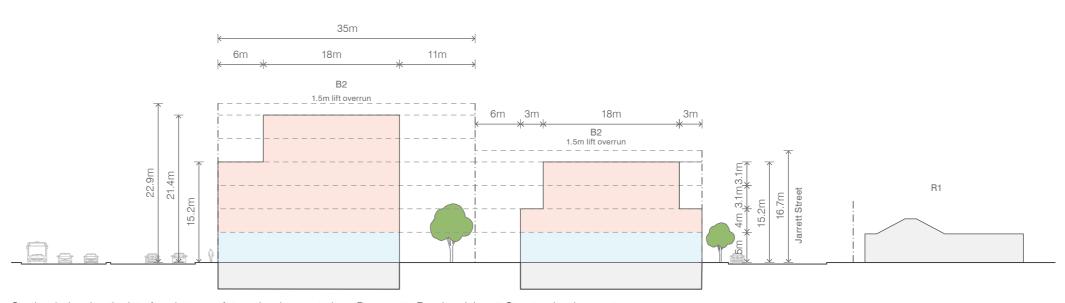
- Minimum rear setback of 6m to ground and first floor to allow for solar access, privacy and amenity.
- Further 3m setback to the third and fourth floor.
- 0 setback to Jarrett Street.
- Additional 3m setback to third and fourth floor from building line to Jarrett St.

Building height and street wall

- 4-storey (16.7m) overall building height
- 2-storey street wall.

Access

- Where possible, access provided via rear laneway (extend Jarrett Lane). In other cases, access to be provided from Jarrett street frontage.
- Where possible, access for lots fronting Parramatta Road to be provided via rear/ easements from Jarrett Street/Lane.



Section 2 showing the interface between future development along Parramatta Road and Jarrett Street redevelopments

Architectus | Leichhardt | Urban Design Review

11am



Recommendations

LEP recommendations

Architectus supports PRCUTS and the Draft Structure Plan's recommendation to retain the current B2 zoning for the Jarrett Street investigation area.

Architectus has tested an option to redevelop the site to achieve a 4 storey shoptop terrace typology. It was found that the B2 sites on Jarrett St are able to achieve FSR 2.2:1, at 4 storeys (16.7m) with a 2-storey street wall. The built form tested works with the diverse streetscape of Jarrett St.

Built form testing also indicated that it was difficult to achieve an FSR of 3:1 if lots were amalgamated to have a frontage to both Jarrett St and Parramatta Road; this was primarily to address an access issue via a battle-axe driveway, for lots on Parramatta Road.

Furthermore the Bel Mondo (4 Jarrett St), which currently has an FSR of 1.26:1 was tested, as it is a large site with Parramatta Road and Jarrett St frontage. The testing showed that 3 storeys would have to be added to the Jarrett St side (based on Parramatta Rd frontage being fixed at 6 storeys), in order to achieve FSR 3:1.

An appropriate outcome in terms of urban design would be to uplift the FSR 3:1 for Parramatta Rd fronting lots, and the lower FSR 2.2:1 for Jarrett St lots; with access to constrained Parramatta Road lots provided via easement as shown per Typology 2 where possible.

Maximum FSR may not be achievable in certain cases if adjoining lots fronting Parramatta Rd cannot provide appropriate setbacks/amenity to Jarrett Street lots. This will need to be demonstrated on a case by case basis.

Existi	ng LEP controls
LZN	B2 Local Centre
FSR	1:1 + bonus 0.5:1 for active frontage
HOB	Undefined
PRCU	TS recommendations
LZN	B2 Local Centre
FSR	1:1 with bonus 0.5:1 for active
	frontages
НОВ	14m and 22m
Draft	Structure Plan Controls
LZN	B2 Local Centre
FSR	1:1 + bonus 0.5:1 for active frontage and 3:1
НОВ	Undefined (no change).
Final	recommendations
LZN	B2 Local Centre
FSR	2.2:1

HOB 17m (4 storeys)



B2

PAF



Issue

10-12 Renwick Street, Leichhardt

FSR/heights in the Draft Structure Plan as per Architectus' 2016 recommendations. Peer review advice sought on the future development controls considering the interface with neighbouring properties.



Investigation area key aerial plan

LEP controls

Existing LEP controls		
LZN	B2 Local Centre	
FSR	1:1 + 0.5 bonus for active frontage	
НОВ	Undefined	
PRCLITS recommendations		

rhoots leconninendations		
LZN	B2 Local Centre	

FSR 3:1 HOB 22m

Draft Structure Plan Controls

EZN B2 Local Centre

FSR 1.9:1 + bonus for public benefits

HOB 14m

Final Recommendations

LZN	B2 Local Centre
FSR	1:1 + 0.5 bonus for active frontage
HOB	Undefined

Draft Structure Plan controls under consideration



LZN B2 Local Centre



FSR 1.9:1 + bonus for public benefits

\bigcirc

Recommendation

Due to the highly constrained nature of this site as well as its existing character, Architectus recommends no changes to the existing controls for this site, as the best urban design outcome. See "Appendix I - 10-12 Renwick St Testing" for testing undertaken for this site.



HOB 14m

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2



Issue

592 - 610 Parramatta Road, Petersham

Retain existing B6 zoning and adopt PRCUTS density and height controls to reflect the scale of existing and future development. Peer review advice sought.



Investigation area key aerial plan

22

LEP controls

The investigation area, which includes light industrial and retail uses to the south of Parramatta Road is currently zoned B6 Enterprise Corridor, with an FSR of 0.95:1 and an undefined HOB limit. At the edge of the frame boundary, the site backs onto a large SP2 zone to the south and west, where Fort Street high school is located.

PRCUTS recommends re-zoning the sites within the investigation area as B2 Local Centre, and further proposes to increase the FSR to 3:1 as well as identifying a maximum height control of 22m.

Draft Structure Plan controls

The IWC Draft Structure Plan controls under consideration support the current zoning of the site as B6 Local Centre, rather than PRCUTS recommendations for B2. The Draft Structure Plan supports PRCUTS' recommendation to increase FSR to 3:1 but suggests a lower HOB of 20m from the proposed 22m.

Existing LEP controls		
LZN	B6 Enterprise Corridor	
FSR	0.95:1	
НОВ	Undefined	
PRCUTS recommendations		
LZN	B2 Local Centre	
FSR	3:1	

HOB 22m

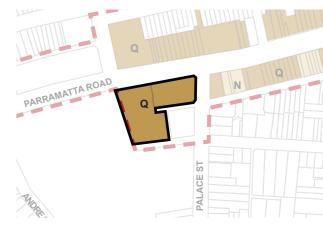
Draft Structure Plan controls under consideration







FSR VV



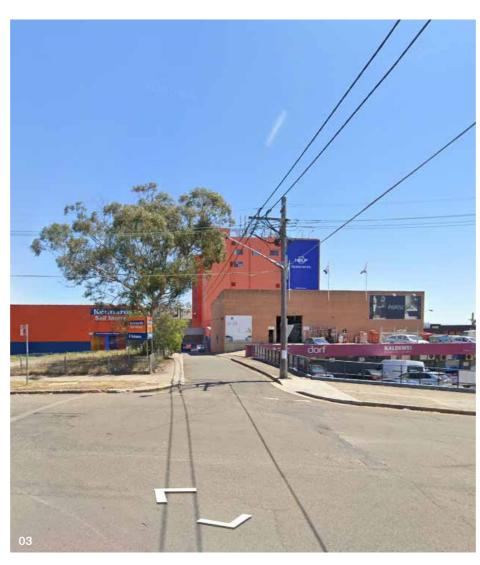
HOB 20m





O1 Existing development at No.592 Parramatta Road, Petersham.

O2 Existing storage warehouses at No.606-610 Parramatta Road. Site opposite intersection of Elswick Street and Parramatta Road.



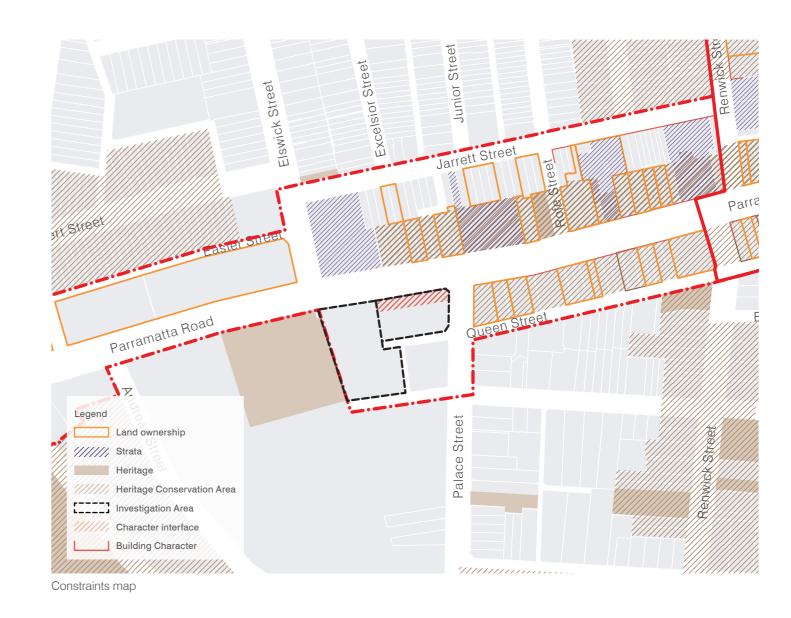
03 Queen Street (to rear of investigation site)

Development constraints and opportunities

- B6 zoned area interfaces with medium density shop top housing to the east and SP2 zoned site (Fort Street Hight School) to the south and west.
- Study sites have access via Queen Street running parallel to Parramatta Road.
- Investigation area is largely unconstrained by heritage and heritage conservation areas. Frontage to No. 592 Parramatta Road has been identified as interfacing a heritage conservation area to the northern side of Parramatta Road. There is an additional HCA on the eastern side of Palace Street.
- SP2 area adjacent to site to be considered in terms of any overshadowing impacts.
- Site is adjacent to Fort St High School and pedestrian bridge to the north of Parramatta Road—there isn't a pedestrian street level crossing for approximately 200m either east or west.

Preliminary ideas

- Retain site as B6 to provide for commercial development with large floor area to Parramatta Road.
- Minimum rear setback requirements to be established to ensure solar access, privacy and amenity for SP2 area to the south of study site.

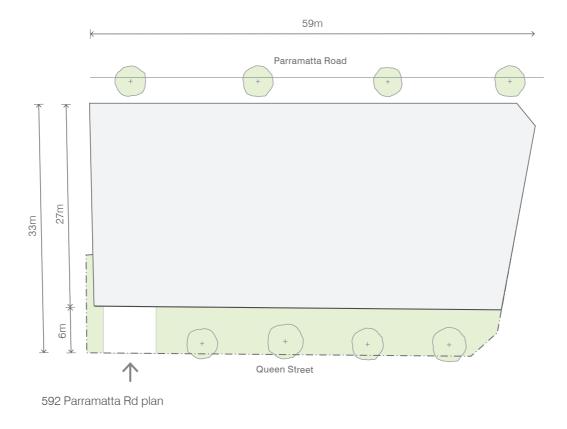


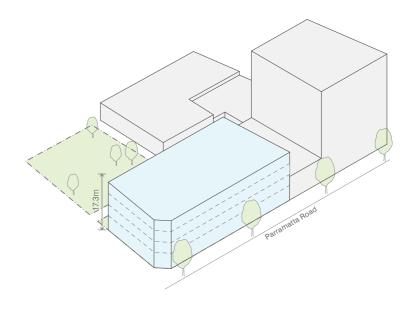


B6 Typologies

The proposed controls for 606-610 Parramatta Rd reflect the existing built form on the site and present an opportunity to retain a B6 use. 592 Parramatta Rd has the opportunity to provide increased density and different business uses.

The proposed typology for 592 Parramatta Rd allows for an increase in commercial floorspace that would compliment the existing neighbouring development.





592 Parramatta Rd axo diagram

Setbacks

 Minimum rear setback of 6m to allow for solar access, privacy and amenity to SP2 zoned area to south of investigation site as green open space.

Building height and street wall

- Proposed 4 storey built form
- 5m Ground floor, allowing potential for mezzanine
- 3.6m for the three floors above
- 1.5m lift overrun
- Overall building height of 17.3m.
- Street wall of 4 storeys

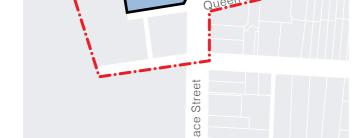
Access

- Potential access from Queen Street

592 Parramatta Road

FSR	3:1
Site width	59m
Site depth	33m
Site area	1861m ²
Front setback	0m
Side setback	0m
Rear setback	6m
Floor to floor height (ground)	5m
Floor to floor height (above ground)	3.6m
Lift overrun	1.5m
GFA	5515m ²
Street wall	4 storeys
Height	17.3m
·	





Key plan

Solar Analysis

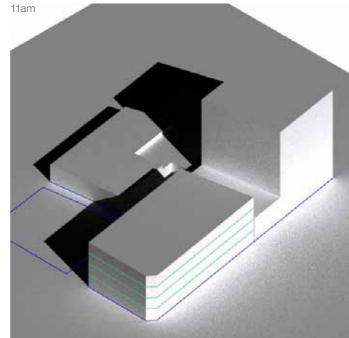
Accompanying shadow diagrams are taken at 9am, 11am and 1pm on the 21st June.

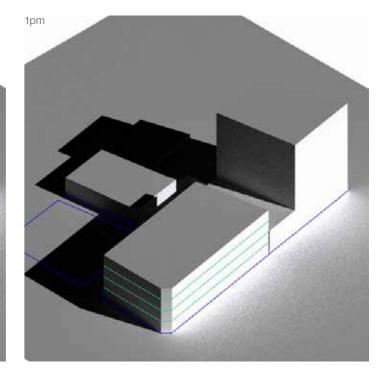
Summary

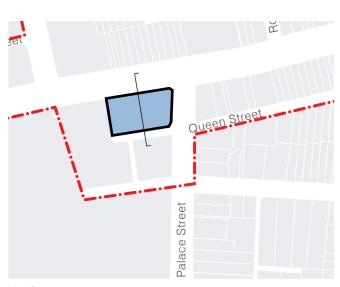
- The overshadowing diagram demonstrates that approximately 50% of the open space to the immediate south (part of Fort Street High School) achieves solar access for at least 2 hours.
- No significant overshadowing impacts to existing dwellings at 3-7 Palace St.

B6 Opportunity site



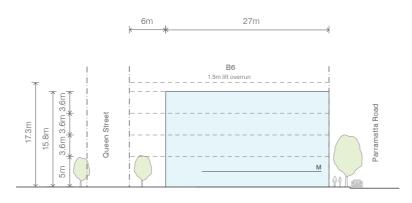






Key Plan

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Section diagram



LEP Recommendations

LEP recommendations

Architectus supports the Draft Structure Plan recommendation to retain the existing B6 zoning and increase the FSR to 3:1 for the investigation area. Testing suggests a reduced HOB of 17.5m (4 storeys) is more appropriate for the site which varies from the Draft Structure Plan's and PRCUTS' recommendation of 20m.

Justification

Architectus recommends the two sites to have the same LZN, FSR and HOB controls. If the Kennards Self Storage site (606-610 Parramatta Road) were to be redeveloped, at 4 storeys it would achieve an FSR of 3:1.

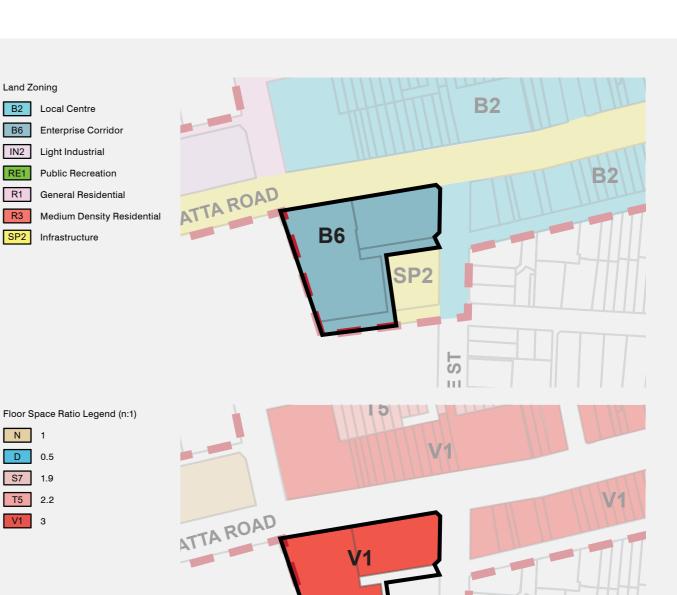
The proposed height of the new development has been informed by maintaining solar amenity to the SP2 zone (currently vacant space for the adjacent Fort St High School) to the south of the site.

Existing LEP controls		
LZN	B6 Enterprise Corridor	
FSR	0.95:1	
НОВ	Undefined	
PRCUTS recommendations		
LZN	B2 Local Centre	

LZN	B2 Local Centre
FSR	3:1
НОВ	22m

Draft Structure Plan Controls		
LZN	B6 Enterprise Corridor	
FSR	3:1 + bonus for public benefits	
НОВ	20m	

Final recommendations		
LZN	B6 Enterprise Corridor	
FSR	3:1	
НОВ	17.5m (4 storeys)	





PI	17
P2	17

P2 17.5





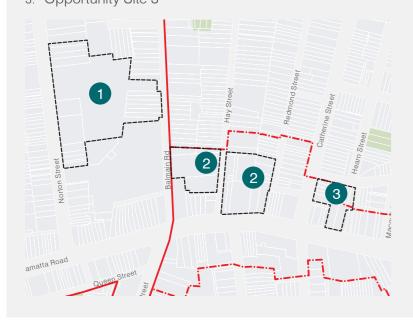


Advice also sought on mechanisms to incentivise the provision of public benefits in the redevelopment of opportunity sites and the type of public benefits sought for each key opportunity site. If bonus FSR and heights are considered appropriate, identify the incentives for each opportunity site.

Proposed new open spaces and how to incentivise provision of new open space through amalgamation of sites. Guidance sought on appropriate sites to target and LEP mechanisms to implement these provisions.

Advice sought on the location and size of proposed new open space as part of Norton Street plaza redevelopment.

- 1. Opportunity Site 1
- 2. Opportunity Site 2
- 3. Opportunity Site 3



LEP controls

The investigation area comprises three sites:
1. Norton Street Plaza, 2. Hay St Centrelink
building and adjacent car park, and 3.
Catherine, Albion Streets and Albion Lane.
The sites are predominantly zoned B2 Local
Centre with an FSR of 1:1 (1.5 for B2 where
active frontage is provided), and with undefined
controls for HOB.

PRCUTS proposes to retain the B2 zoning, except at 40-50 Balmain Road where R3 is proposed.

Draft Structure Plan controls

The IWC Draft Structure Plan controls under consideration support the current zoning of the site as B2 Local Centre. The Draft Structure Plan supports PRCUTS' recommendation to increase FSR to 3:1. The Draft Structure plan also proposes a lower HOB of 20m from the PRCUTS' recommended HOB of 22m.

Existing	LEP	controls
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LZN	B2 Local Centre
FSR	1:1 + 0.5 for active frontage for B2

HOB Undefined

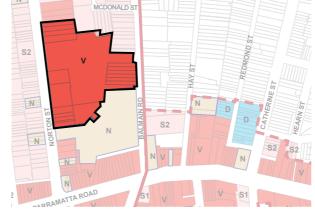
PRCUTS recommendations

LZN	B2 Local Centre	
FSR	3:1	
НОВ	22m	

Draft Structure Plan controls under consideration



LZN B2 Local Centre



FSR 3:1



HOB 20m

Existing Site

- The existing site comprises Norton Plaza, a local shopping centre. Norton Plaza comprises 3-storeys from Norton St level, with 2 basement levels. There is a 2-storey street wall to Norton St.
- Ground level contains a mix of retail including a
 Coles supermarket. Levels 1 and 2 have a relatively
 small footprint, with retail on Level 1 and a childcare
 centre on Level 2. The two basement levels contain
 car parking; basement level one contains a Harris
 Farm supermarket.
- The four lots at the northern part of the opportunity site comprise two-storey offices/retail (63-93 Norton St). 65-67 Norton St is a Montessori Academy.
- The opportunity site also includes two lots, under strata, one of which is a recent development; the other lot (39–45 Norton St) contains an open-air plaza which has limited contribution to pubic amenity to Norton St.
- The four lots in the southern part of the opportunity site (29-37 Norton St) contain a mix of one and two-storey retail.
- There are six lots at the eastern part of the Opportunity site (40-50 Balmain Rd) with 1-storey dwellings.

Existing built form

- Generally small two-storey buildings on Norton St from varying periods, from newer mid-block buildings to terrace housing which has been adapted to retail and business use. Large developments include the Forum and Norton Plaza.
- Irregular street setbacks ranging from 0-4m.
- Wide pedestrian footpaths, sections of street planting within on-street car parking zone.

Heritage

 The western side of Norton St is within a heritage conservation area (Excelsior Subdivision Conservation Area) notable for its Late Victorian boom period suburb architecture, street and lot pattern.

Strata

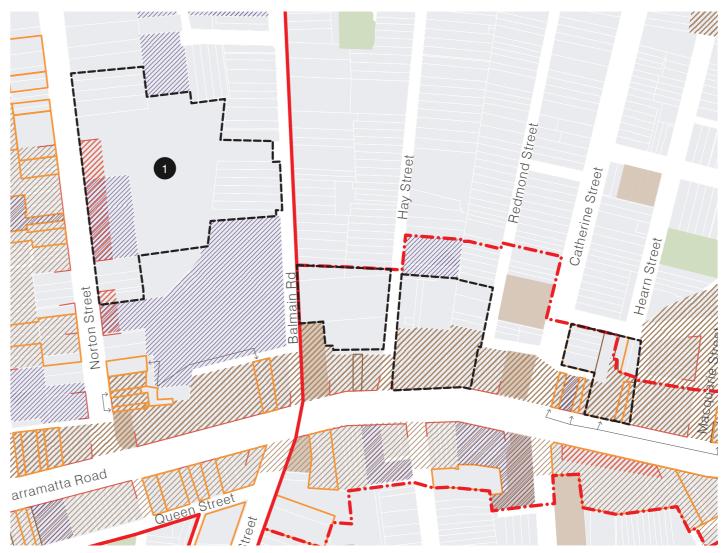
 There are two strata lots in the investigation area: 39–45 Norton St (29 units) and 47 Norton St (18 units).

Development constraints and opportunities

- Poor east west pedestrian links in block. Currently the Forum does not provide a well-used pedestrian link.
- Generally lack of open space throughout the precinct. The Italian Forum comprises privately owned open space however its popularity and vibrancy has declined in recent years due to tenancy issues.
- Balmain Rd Relative Level is approximately 8m lower than Norton St.
- Range of interfaces to opportunity site. The Italian
 Forum is built to boundary. The north-east part
 of the site backs onto rear private open space of
 typically 1-storey dwellings. 8A McDonald St is a
 3-storey multi-dwelling housing development built
 to northern boundary.

Preliminary ideas

- Provide green-link as part of future redevelopment to address poor pedestrian permeability and green open space.
- Provide active frontages to the through-site link where possible.



Opportunity sites constraints map



1:3,000 120 150N

Norton Street / Balmain Road

Built Form Response:

Built form testing demonstrates it is possible to obtain an FSR of 3:1 for this group of sites. Further preliminary ideas include:

- provide 25m wide green space/plaza to Norton St.
- maintain 3-4 storey street wall to Norton St, and place taller buildings in the middle of the site.
- provide a through-site public pedestrian/ cycling link
- provide active frontages and commercial uses on ground floor to all sites and to the uses fronting the proposed through-site link.





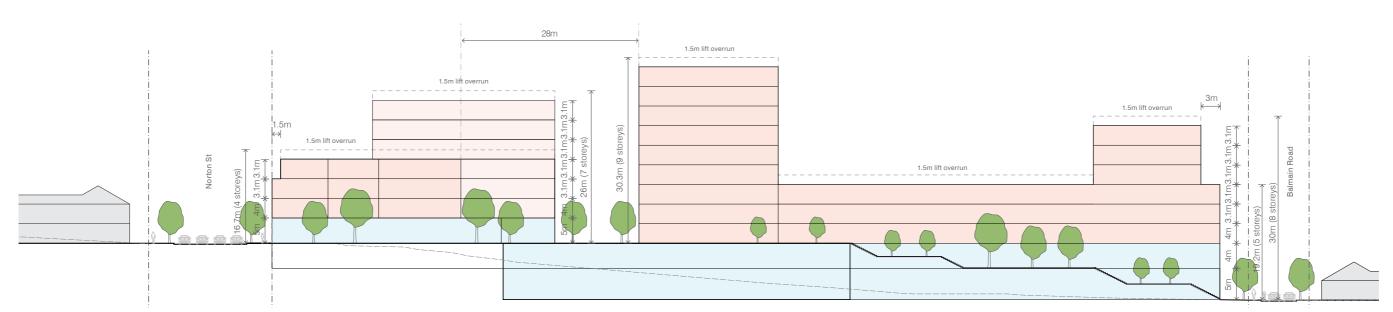


Opportunity Site 1 Key Plan

Site 1	
FSR	3:1
Site area	2754m²
Total GFA (Commercial)	3916m² (45%)
Total GFA (Residential)	4661m² (55%)
Total GFA	8577m²
Height	22.9m (6 storeys)
Street wall	4-storey
Site Coverage	67%
Communal Open Space	413m ² + 276m ² rooftop
Setback to the North (to the existing building)	25m to be used as a new plaza
Setback to Norton St	0m
Upper level front setback to Norton St and through-site link	3m above 5th storey
Rear setback	0-14m (due to L shape of the building)
Parking	Basement
Landscaped area	770m² (15% of the site as deep soil on sites greater than 1,500m²)
Dwelling Yield	59 dwellings

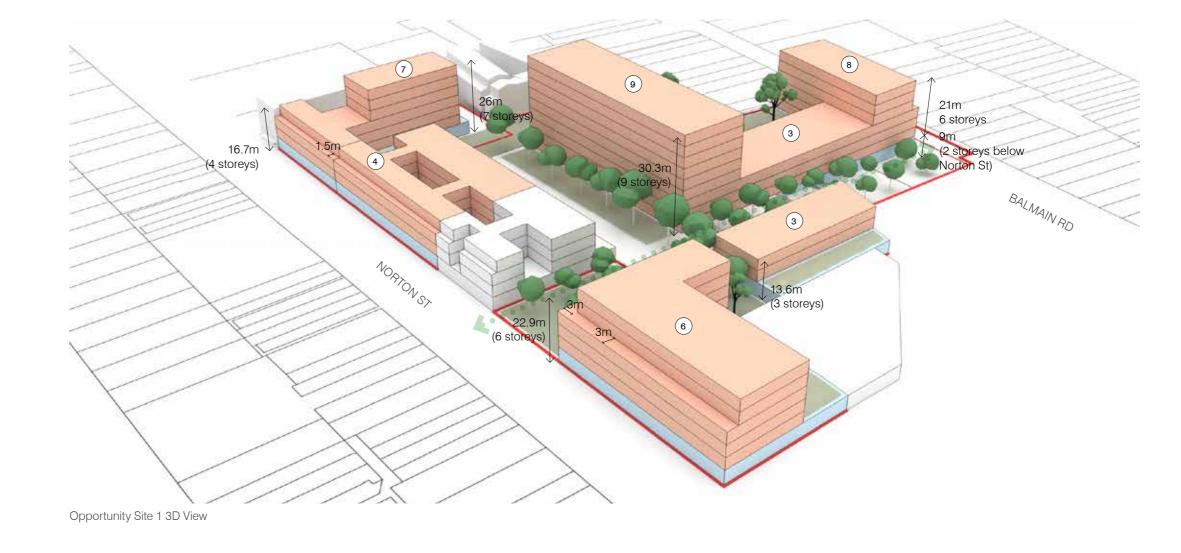
FSR	3:1
Site area	1975m²
Total GFA (Commercial)	3357m² (56%)
Total GFA (Residential)	2593m² (44%)
Total GFA	5950m ²
Height	16.7m - 26m (4-7 storeys)
Street wall	3-storey
Site Coverage	100% (due to basement structure)
Communal Open Space	493m ² (podium and rooftop)
Setback to Norton St	0m
Upper level front setback to Norton St	1.5m to 4th storey. 17m from building line above 4th storey
Rear setback	9-12m
Parking	Basement
Dwelling Yield	32 dwellings

Site 3		
FSR	3:1	
Site area	13248m²	
Total GFA (Commercial)	20738m² (54%)	
Total GFA (Residential)	17785m² (46%)	
Total GFA	38523m ²	
Height	13.6m (3 storeys) to 30m (8 storeys) on Balmain Rd 30.3m (9 storeys) within site	
Street wall (Balmain Rd)	5 storey	
Site Coverage	100% (due to basement structure)	
Communal Open Space	3312m ²	
Setback to Balmain Rd	5m (aligned to part of existing site boundary)	
Upper level front setback to Balmain Rd	3m from building line above 5th storey	
Parking	Basement	
Dwelling Yield	225 dwellings	

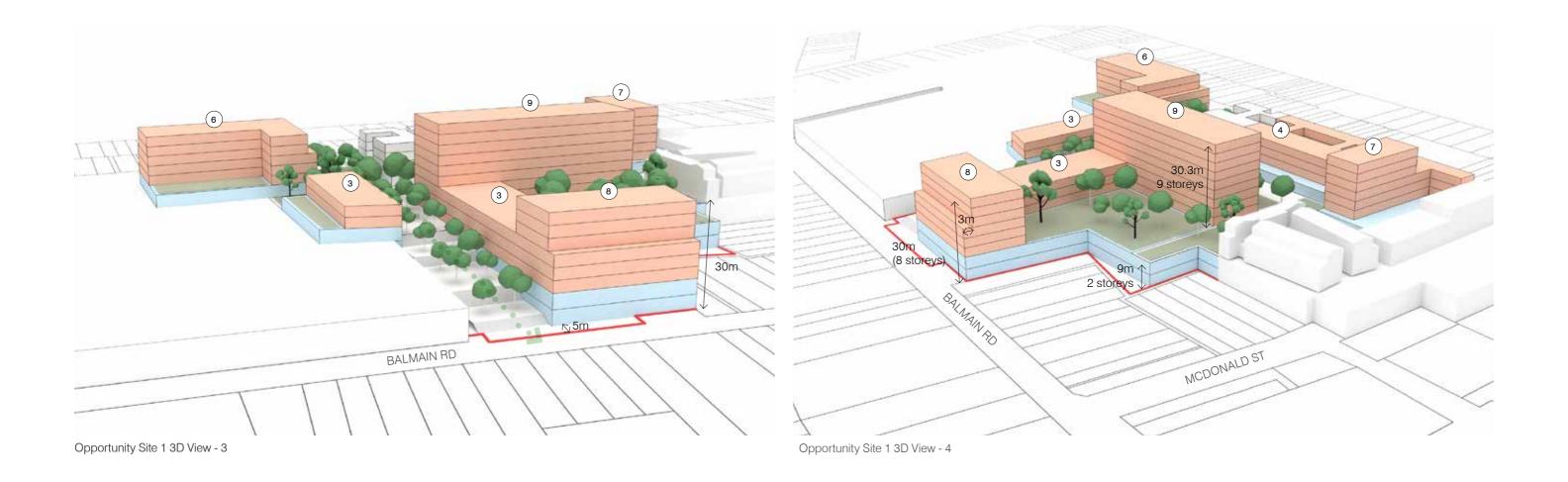


Opportunity Site 1 Section through the proposed through-site link

1 Norton Street / Balmain Road







Legend
Investigation area
Residential
Commercial
Communal Open Space
Basement Car park
Access*
Public Pedestrian/cycle link

Number of storeys (above street level)

Overshadowing testing - 21st June (winter solstice)

Overshadow testing was conducted for winter solstice (21st June), between 9AM to 3PM. The below overshadow diagrams demonstrate solar access requirements are achievable.

9am 11am 1pm NORTON ST

Opportunity Site 1 - Norton St/ Balmain Rd



LEP Recommendations

LEP recommendations

- Land Zoning controls to be retained as per Draft Structure Plan and PRCUTS.
- Increase HOB from 22m and 20m under PRCUTS and Council's Draft Structure Plan to 30.5m (9 storeys).
- Provide new landscaped open space/plaza fronting Norton Street (25m wide).
- Provide a new 18m wide through-site link for pedestrians between Norton Street and Balmain Road.

Justification

The redevelopment of Opportunity Site 1 has a potential to become the commercial and civic core of Leichhardt precinct. This is to be achieved by providing a new civic space/plaza fronting Norton Street and a through site-link connecting Norton Street and Balmain Road. This link is to be reasonably sized and designed so as to enable its use as a plaza with active frontages from the proposed ground floor employment uses.

The provision of a reasonably sized link and plaza requires that the site be provided with additional height of 3 storeys in the middle of the block over the 6 storeys envisaged in the Draft Structure Plan and PRCUTS. The built form testing indicates that FSR of 3:1 can be accommodated on the site within the 9 storey height limit.

Existing LEP controls	
LZN	B2 Local Centre
FSR	1:1 + 0.5:1 for active frontages
НОВ	Undefined

PRCUTS recommendations	
LZN	B2 Local Centre
FSR	3:1
НОВ	22m

Draft Structure Plan Controls	
LZN	B2 Local Centre
FSR	3:1
НОВ	20m
ПОВ	20111

Final recommendations	
LZN	B2 Local Centre
FSR	3:1
НОВ	23m (6 storeys), 26m (7 storeys), 30.5m (9 storeys)

Land Zoning

B2 Local Centre

B6 Enterprise Corridor

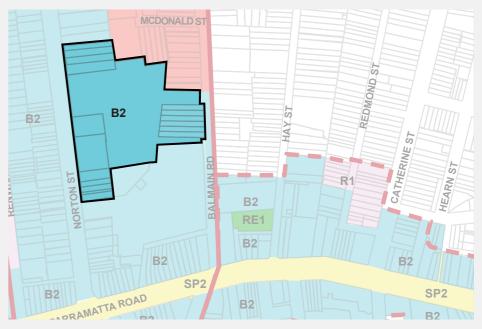
IN2 Light Industrial

RE1 Public Recreation

R1 General Residential

R3 Medium Density Residential

SP2 Infrastructure



Floor Space Ratio Legend (n:1)

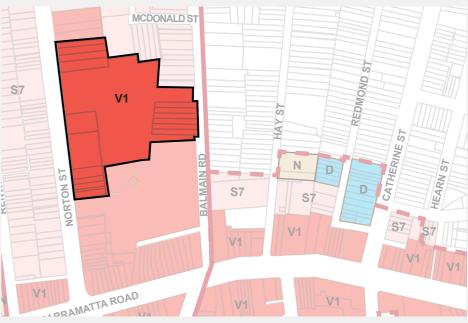
N 1

D 0.5

S7 1.9

T5 2.2

V1 3



Maximum Building Height (m)

P1 17

S 23

T

U 30.5





Issue

Advice also sought on mechanisms to incentivise the provision of public benefits in the redevelopment of opportunity sites and the type of public benefits sought for each key opportunity site. If bonus FSR and heights are considered appropriate, identify the incentives for each opportunity site.

Proposed new open spaces and how to incentivise provision of new open space through amalgamation of sites. Guidance sought on appropriate sites to target and LEP mechanisms to implement these provisions.

Advice sought on the location and size of proposed new open space as part of Norton Street plaza redevelopment.

- Opportunity Site 1
 Opportunity Site 2
- 3. Opportunity Site 3



LEP controls

Opportunity Site 2 is currently under B2 land zoning. Existing FSR is 1:1 (1.5 for B2 where active frontage is provided), with the R1 lot under a sliding scale FSR 0.6:1 HOB is undefined.

PRCUTS proposes 10 Redmond St, which is part to change from R1 to R3 zoning.

Draft Structure Plan controls

The IWC Draft Structure Plan controls under consideration support the current zoning of the site as B2 Local Centre, however proposes the car park at 2-24 Hay St be rezoned to RE1 Public Recreation. This is in line with PRCUTS' recommendations that the car park be turned into an open space.

The Draft Structure Plan supports PRCUTS' recommendation to increase FSR to part 3:1 and part 1.9:1 with no FSR/ HOB for the RE1 zone. The Draft Structure plan also proposes a lower HOB of 20m and 14m from the PRCUTS' recommended HOB of 22m.

Existing LEP controls	
LZN	B2 Local Centre + R1 General Residential
FSR	1:1 + 0.5 bonus for active frontage for B2; 0.6:1 for the R1 lot
НОВ	Undefined

PRCUTS recommendations	
LZN	B2 Local Centre
FSR	3:1
НОВ	22m

Draft Structure Plan controls under consideration



LZN B2 Local Centre; R1 General Residential; RE1 Public Recreation



FSR 3:1 and 1.9:1



HOB 20m and 14m

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Opportunity Site 2

Existing Site

- The existing site comprises two 2-storey office buildings (1-23, 25 Balmain Rd), one of which is occupied by Centrelink.
- There is an at-grade car park at 2 Hay St owned by Roads and Maritime Services.
- The block between Hay Street and Redmond St comprises a council car park (13, 13A Hay St) and a stretch of lots with an address to Parramatta Rd (305, 311, 315, 325, 327 Parramatta Rd). There are also three lots on Hay St (4, 6-8, 10) Hay St which comprise a small warehouse building and two dwellings.

Character

- Lots fronting Parramatta Rd between Balmain Rd and Hay St are fine-grain with one to three-storey buildings with red brick facades, some with street-art.
- The lots opposite and to the north of the opportunity site on Redmond St are 1-storey workers style terraces. Some terraces on the east side of Redmond St address the street (1–5 Redmond St), however the majority of the streetfrontage consists of rear garages of terraces on Catherine St.
- Redmond St itself is approximately 9 metres wide (one lane with on-street car parking), minimal planting and footpath on both sides.

Heritage

- There is a heritage item at 343-345 Parramatta Rd (former Bald Faced Stag Hotel) which backs onto the opportunity site, adjacent to the proposed open space on Hay St.
- All lots on Parramatta Rd adjacent to and within the opportunity site are within a heritage conservation area including 305, 307-309, 311-313, 315, 325, 327
 Parramatta Rd.

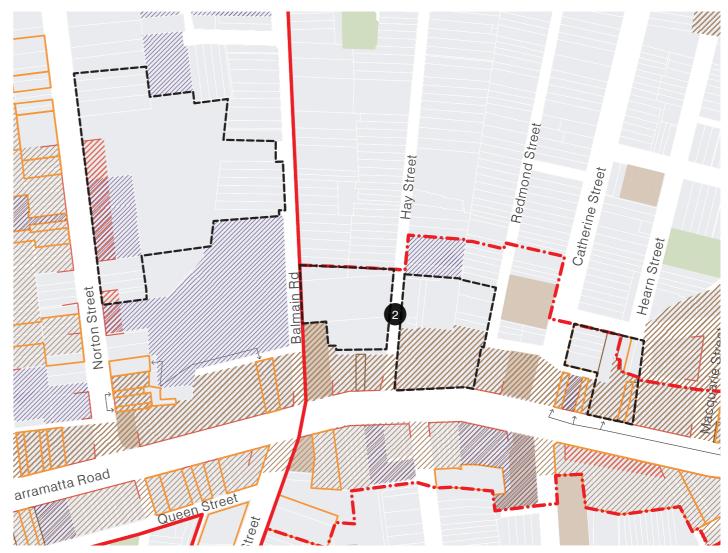
 This opportunity site addresses the rear of heritage lots on 8–16 Catherine St.

Development constraints and opportunities

- The opportunity site straddles Hay St and consists of at grade car parks, including Council and RMS owned sites.
- RMS owned car park at 2 Hay Street has been ear-marked as proposed open space in PRCUTS.
- Council has plans to redevelop its Hay St car park site into an affordable housing development.
- The opportunity site is adjacent to and opposite different scales of built form, e.g. opposite the 7-storey development on Balmain Rd at the west (The Italian Forum), and 1-storey workers cottages on Hay St, some of which are heritage items.
- Council as part of its Parramatta Road Urban Amenity Improvement Plan has proposed active transport link between Balmain Road Redmond Street which would run through the middle of the site close to the southern end of Bald Faced Stag hotel.

Preliminary ideas

 Re-purpose existing car park at 2 Hay Street as publicly accessible open space, and as part of human-scale pedestrian network running behind the lots to the north of Parramatta Rd.



Opportunity sites constraints map



1:3,000 L 30 60 90 120 150M

2 Hay St / Balmain Road

Built Form Response:

Opportunity Site 2 has been split into 4 sites. Refer to the Key Plan below. Built form testing demonstrates that Site 2 (Council car park) can accommodate an FSR of 1.9:1, as per Site 3 (Centrelink) as it interfaces more appropriately with the existing low-density development to the north. It is recommended that the height for Site 3 be increased to 23m as Sites 1 & 2. Further points include:

- provide new publicly accessible open space on Site 4.
- provide active frontages on ground floor for B2 zoned sites and to the proposed pedestrian/cycle link (9m wide).
- maintain solar access to proposed park and green link by locating communal green space in the centre of Sites 2 and 3.
- overall maximum height of 6 storeys for Sites 1, 2 and 3.

Site 1:

- maintain Parramatta Rd street wall of 4 storeys with a further 2 storeys at 6m setback.
- provide 4.5m setback to the rear to accommodate the proposed pedestrian and cycling link and additional 9m rear setback to the residential uses

Site 2:

locate taller buildings towards the west. This is



Opportunity Site 2 Key Plan

- to respond to the adjacent 2-3 storey apartment developments (note these lots' current max. FSR is 1.5:1, in contrast with surrounding low-density residential area with FSRs 0.5:1-0.8:1).
- provide 1.5m setback to ground floor uses fronting Hay St and Redmond St due to existing nature of narrow streets.
- restrict development to 4-storeys (with additional 3m setback to the top storey) on Redmond St, to address the 1-storey terraces in the surrounding area.
- provide 3m upper level setback to residential uses along Hay St and Redmond St.
- provide 9m setback to residential uses to 1-storey terraces on Redmond St and Hay St.

Site 3:

- locate taller buildings towards the west. This is to respond to the Forum opposite the site on Balmain Rd.
- provide 1.5m setback to ground floor uses fronting Balmain Road and Hay St.
- provide 9m setback to residential uses to 1-storey terraces on Balmain Rd.
- restrict development to 4-storeys (with additional 3m setback to the top storey) on Hay Street to provide a suitable transition to the 1-storey terraces to the north.



Opportunity Site 2 3D View

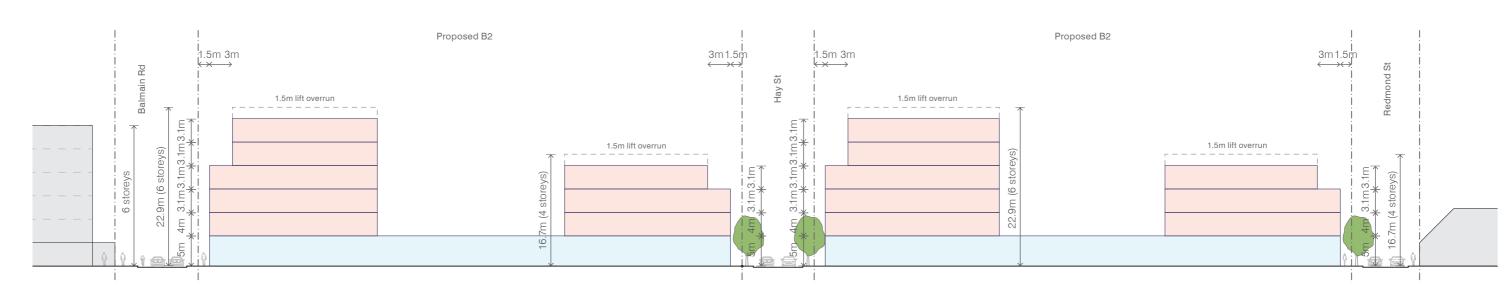
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Opportunity Site 2 Key Plan

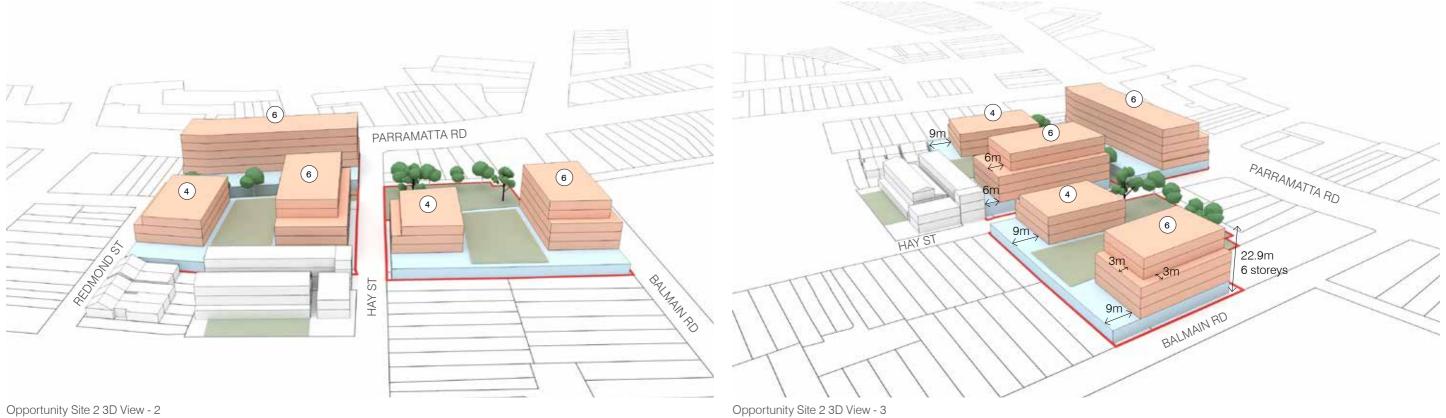
Site 1	
FSR	3:1
Site area	2201m ²
Total GFA (Commercial)	1871m² (28%)
Total GFA (Residential)	4691m² (72%)
Total GFA	6562m ²
Height	22.9m (6 storeys)
Street wall	4-storey
Site Coverage	53%
Communal Open Space	25% site area (podium/rooftop)
Upper level front setback to Parramatta Rd	6m from 5th storey above
Rear level setback	min. 4.5m to provide the through-site link
Upper level rear setback	9m from building line to residential uses on 2nd storey and above
Parking	Basement
Landscaped area	15% of the site as deep soil on sites greater than 1,500m ²
Dwelling Yield	59 dwellings

Site 2		Site 3	
FSR	1.9:1	FSR	1.9:1
Site area	3761m ²	Site area	3044m²
Total GFA (Commercial)	2671m² (37%)	Total GFA (Commercial)	2226m² (38%)
Total GFA (Residential)	4552m² (64%)	Total GFA (Residential)	3586m² (62%)
Total GFA	7223m²	Total GFA	5813m ²
Height	16.7m (4 storeys) fronting Redmond St 22.9m (6 storeys) fronting Hay St	Height	16.7m (4 storeys) fronting Hay St 22.9m (6 storeys) fronting Balmain Rd
Site Coverage	78%	Site Coverage	86%
Communal Open Space	976m ²	Communal Open Space	958m ²
Front setback from Hay St and Redmond St	1.5m	Front setback from Hay St & Balmain Rd	1.5m
Upper level front setback (Hay St) from building line	3m from 5th storey above	Upper level front setback (Hay St) from building line	3m from 4th storey above
Upper level front setback (Redmond St) from building line	3m from 4th storey above	Upper level front setback (Balmain Rd) from building line	3m from 5th storey above
Setback from north site boundary (Hay St)	6m to 2nd-4th storeys. 12m from 5th storey and above	Setback from north site boundary (Hay St)	9m to 2nd-4th storeys. 12m from 5th storey and above
Setback from north site boundary (Redmond St)	9m from 2nd storey and above	Setback from north site boundary (Balmain Rd)	9m from 2nd storey and above
Parking	Basement	Parking	Basement
Landscaped area	15% of the site as deep soil on sites greater than 1,500m ²	Landscaped area	15% of the site as deep soil on sites greater than 1,500m ²
Dwelling Yield	57 dwellings	Dwelling Yield	45 dwellings



Opportunity Site 2 Section

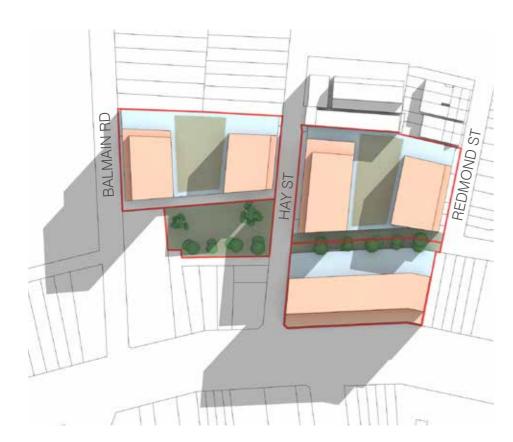
Opportunity Site 3D View from north



Overshadowing testing - 21st June (winter solstice)

Overshadow testing was conducted for winter solstice (21st June), between 9AM to 3PM. The below overshadow diagrams demonstrate solar access requirements are achievable.

9am



11am



1pm



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4



LEP Recommendations

LEP recommendations

- Retain B2 Local Centre and extend the B2 zone to 10 Redmond Street to allow cohesive redevelopment of the block. This is instead of the proposed R3 zoning at 10 Redmond Street as in PRCUTS and Draft Structure Plan.
- Rezone 2 Hay St to RE1 Public Recreation as per Draft Structure Plan and PRCUTS proposed Open Space Plan. Remove any associated FSR or HOB control from this part of the site.
- FSR for part of the site fronting Parramatta Road to be increased to 3:1 as per PRCUTS and Draft Structure Plan.
- FSR for the block between Balmain Road and Hay Street; and Hay Street and Redmond Street; to be reduced to 1.9:1 from recommended FSR of 3:1 under PRCUTS and Council's Draft Structure Plan, due to direct adjacency to residential lots of single storey workers cottages.
- Maximum HOB control of 23m to allow a loose built form and for FSR to be distributed across the site between 4-6 storeys. This approach would provide appropriately scaled building transitions to surrounding context.
- Provide new Active Transport link as indicated on the site plan.

Existing LEP controls	
LZN	B2 Local Centre; R1 General Residential
FSR	1.5:1; (0.5:1 for R1)
HOB	Undefined

PRCUTS recommendations	
LZN	B2 Local Centre; R3 Medium density Residential
FSR	3:1
HOR	22m

Draft Structure Plan Controls	
LZN	B2 Local Centre; R1 General Residential and RE1 Public Recreation
FSR	3:1
HOB	20m

Final recommendations	
LZN	B2 Local Centre and RE1 Public Recreation
FSR	1.9:1, 3:1 (nil for RE1)
HOB	23m (6 storeys) (nil for RE1)



Floor Space Ratio Legend (n:1)

N 1 D 0.5

S7 1.9

Land Zoning

B2 Local Centre B6 Enterprise Corridor IN2 Light Industrial

SP2 Infrastructure

Public Recreation

General Residential

T5 2.2



Maximum Building Height (m)

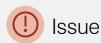
P1 17

Q1 19

S 23



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Advice also sought on mechanisms to incentivise the provision of public benefits in the redevelopment of opportunity sites and the type of public benefits sought for each key opportunity site. If bonus FSR and heights are considered appropriate, identify the incentives for each opportunity site.

Proposed new open spaces and how to incentivise provision of new open space through amalgamation of sites. Guidance sought on appropriate sites to target and LEP mechanisms to implement these provisions.

Advice sought on the location and size of proposed new open space as part of Norton Street plaza redevelopment.

- 1. Opportunity Site 1 2. Opportunity Site 2
- 3. Opportunity Site 3



LEP controls

Opportunity Site 3 is currently zoned B2 Local Centre. Three additional lots along Albion St zoned R1 General Residential are outside the PRCUTS frame area but included in the study area as part of Opportunity Site 3 to provide a block-level urban design response.

The existing FSR is 1:1 (1.5:1 for B2 where active frontage is provided), and sliding scale FSR 0.5-0.8:1 for R1 zoned lots. Existing HOB controls are undefined.

PRCUTS proposes to retain the B2 zoning, to lift the FSR to 3:1 and HOB to 22m.

Draft Structure Plan controls

The IWC Draft Structure Plan retains the current zoning of the site as B2 Local Centre and proposes to rezone R1 lots along Albion Street

The Draft Structure Plan proposes that FSR of 277, 267, 265 Parramatta Rd lots' be increased to 3:1. Other addresses within the opportunity site are proposed to have an FSR of 1.9:1. PRCUTS' recommends an FSR of 3:1.

The Draft Structure plan also proposes a lower HOB of 20m for 277, 267, 265 Parramatta Rd and 14m for 9-11 and 13-19 Catherine St. and 17m for 212, 210, 208 Albion St.

Existina	LEP	controls
		001111010

LZN	B2 Local Centre + R1 General
	Residential (lots outside PRCUTS)

1:1 + 0.5:1 for active frontage for B2; 0.5:1-0.8:1 for R1 (lots outside PRCUTS)

HOB Undefined

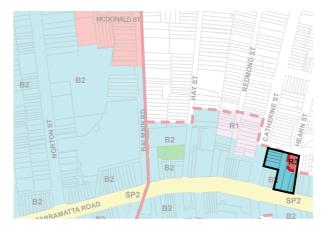
PRCUTS recommendations

LZN	B2 Local Centre + R1 General
	Residential

FSR 3:1 + 0.5:1-0.8:1 for R1 (lots outside PRCUTS)

HOB 22m + undefined for R1 (lots outside PRCUTS)

Draft Structure Plan controls under consideration







43

B2 Local Centre and R3 Medium Density Residential

FSR 3:1 and 1.9:1

HOB 14m, 17m and 20m

Opportunity Site 3

Existing Site

The opportunity site consists of 265 - 267, 277
 Parramatta Road, 13-19 and 9-11 Catherine Street, and 208, 210, 212 Albion St. Albion Lane runs adjacent to 277 Parramatta Road.

Existing Character

- 277 Parramatta Rd is a 2-storey former theatre/ cinema, approximately 24 metres wide. There is an existing screen for the full extent of the facade which is approximately 12m high.
- Catherine St is 20 metres wide with street planting and green verges. Although the street is wide it is dominated by on-street car parking particularly on the west and footpaths are narrow relative to the street.
- Predominantly one-storey residential terrace housing on narrow lots.
- Albion St at 12 metres wide is a human-scale street with good amenity.

Heritage

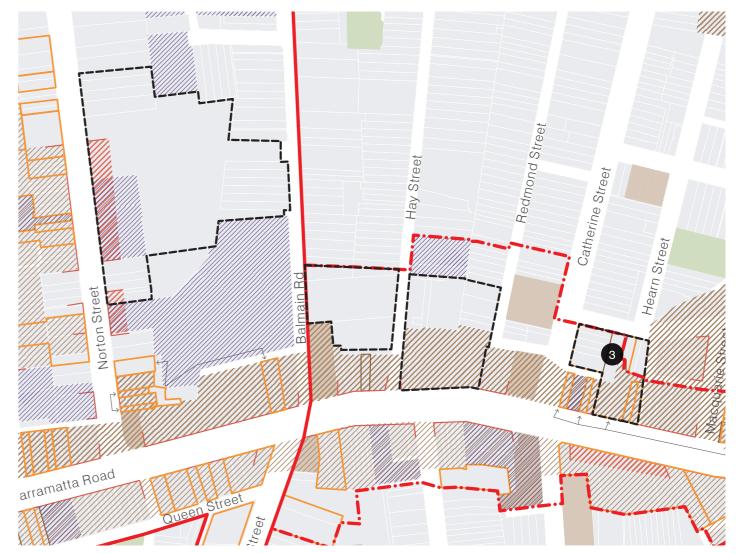
- The site is opposite a heritage conservation area to the east of Albion St.
- All lots on Parramatta Rd in this area are within a heritage conservation area. 265 - 267, 277
 Parramatta Rd is within the opportunity site; 279, 283-285, 287 Parramatta Rd are opposite across a service lane.

Development constraints and opportunities

- There is potential to extend Albion Ln to create a through-block pedestrian link.
- The northern part of the opportunity site has street frontage on three sides (Catherine St, Albion St, Albion Ln).

Preliminary ideas

- There is potential to incorporate publicly accessible open space with the proposed east-west through-site link.
- Potential for site to mark the beginning of Whites Creek Lane which leads to Whites Creek Valley Park.



Opportunity sites constraints map



3 Catherine St

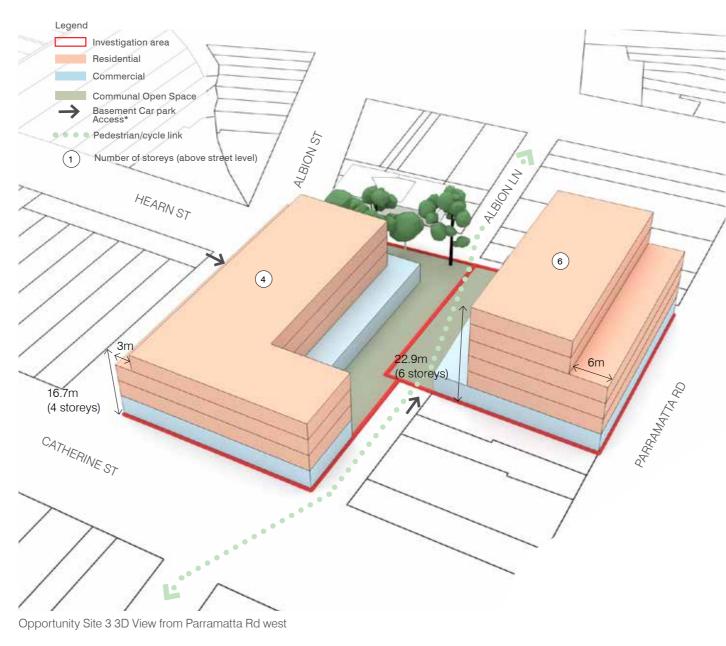
Built Form Response:

Opportunity Site 3 has been split into two sites for built form testing. The testing demonstrates that the draft Structure Plan controls can produce a good outcome; however a split FSR/HOB control may be required for 277 Parramatta Rd, as the lot extends to Albion St. It is better that the Albion St portion maintain a consistent height and FSR control. Further preliminary ideas include:

- maintain street wall of 4 storeys along Parramatta
 Road with further 2 storeys at 6m setback.
- provide a new pedestrian/cycle link from Albion St to Catherine Lane. New green/open space proposed adjacent to link.
- potential for rear laneway retail activation.
- 3-storey street wall with 3m setback from building line to fourth storey. This was designed in line with public domain improvements to Catherine St.
- 6m ground level setback and 9m setback to residential uses on the east boundary for Site 2 to provide appropriate transition to the 1 storey terraces along Albion St.
- Parramatta Rd ground level B2 can be accessed via lane off Catherine St.
- Basement car parking access for Site 2 via Albion St.



Opportunity Site 3 Key Plan



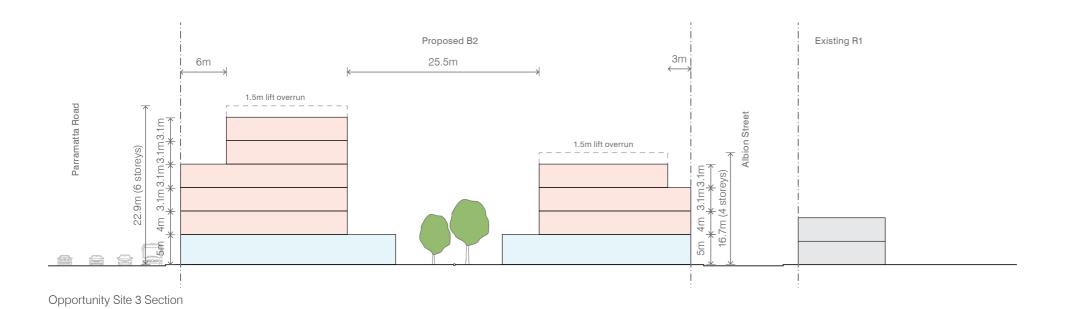
Site 1

FSR	2.9:1
Site area	1264m²
Total GFA (Commercial)	988m² (27%)
Total GFA (Residential)	2625m² (73%)
Total GFA	3613m ²
Height	22.9m (6 storeys)
Street wall	4-storey
Site Coverage	53%
Communal Open Space	25% site area (podium/ rooftop)
Upper level front setback to Parramatta Rd	6m from 5th storey and above
Rear setback	6-8.5m to accommodate the through site link
Parking	Basement
Landscaped area	10% of site area deep soil (ADG recommendation for sites 650-1500m²)
Dwelling Yield	33 dwellings

Site 2

Site 2	
FSR	1.9:1
Site area	1904m²
Total GFA (Commercial)	1174m² (32%)
Total GFA (Residential)	2436m² (68%)
Total GFA	3610m ²
Height	16.7m (4 storeys)
Street wall to Albion St	3-storey
Site Coverage	73%
Communal Open Space	520m ²
Setback to Catherine St	0m
Setback to Albion St	0m
Side setback at eastern boundary (Albion Ln)	6m on ground floor and 9m to residential from 1st storey and above
Rear Setback	6-9m to accommodate the through site link
Upper level front setback to Albion St to 4th storey	3m
Parking	Basement
Landscaped area	15% of the site as deep soil on sites greater than 1,500m ²
Dwelling Yield	30 dwellings
	Λ.





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Overshadowing testing - 21st June (winter solstice)

Overshadow testing was conducted for winter solstice (21st June), between 9AM to 3PM. The below overshadow diagrams demonstrate solar access requirements are achievable.



✓ LEP Recommendations

- Land Use B2 Local Centre to be retained as per Draft Structure Plan and PRCUTS. Rezone 208 - 212 Albion St from R1 to B2 so that new development can take place in a holistic manner at a block-level through continuation of B2 zone
- FSR 3:1 for lots fronting Parramatta Road as per Council's Draft Structure Plan and PRCUTS. HOB for these lots to be 23m (6 storeys).
- FSR 1.9:1 for lots fronting Catherine Street and Albion Street. HOB for these lots to be 17m (4 storeys).
- Provide a new through-site link to Catherine Street as extension of Albion Lane.

Existii	ng LEP controls
LZN	B2 Local Centre, R1 General Residential
FSR	1:1 (+ 0.5:1 for B2 active frontages), 0.5:1-0.8:1 for R1 lots

PRCUTS recommendations	

HOB Undefined

LZN B2 Local Centre, R1 General Residential (no change for lots outside PRCUTS)

FSR 3:1, 0.5:1-0.8:1 for R1 lots (no change for lots outside PRCUTS)

HOB 22m, undefined for R1 lots

Draft Structure Plan Controls

LZN B2 Local Centre, R3 Medium Density Residential

FSR 1.9:1, 3:1

HOB 14m, 17m, 20m

Final recommendations

ZN B2 Local Centre

FSR 3:1, 1.9:1 HOB 23m, 17m

Land Zoning

B2 Local Centre

B6 Enterprise Corridor

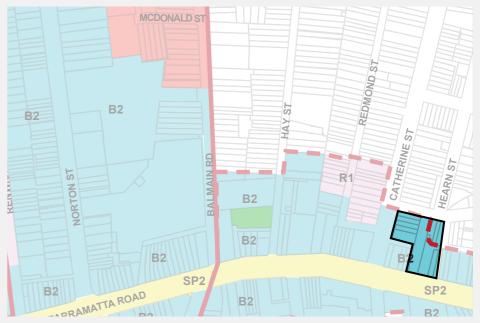
IN2 Light Industrial

RE1 Public Recreation

R1 General Residential

R3 Medium Density Residential

SP2 Infrastructure



Floor Space Ratio Legend (n:1)

N 1

D 0.5

S7 1.9

5/ 1.

T5 2.2

V1 3



Maximum Building Height (m)

P1 17

Q1 19

S 23



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1.9 Densities along Parramatta Road



Issue 5

Densities along Parramatta Road

With reference to Leichhardt Council's 2016
Parramatta Road and Norton Street urban
design study, clarification is sought regarding
Architectus' proposed densities of FSR 3:1
along Parramatta Road and Norton Street with
'bonus for public benefits' – what height and
FSR bonuses should be considered in return for
public benefits?

Guidance sought on appropriate LEP mechanisms to implement these provisions.

Justification

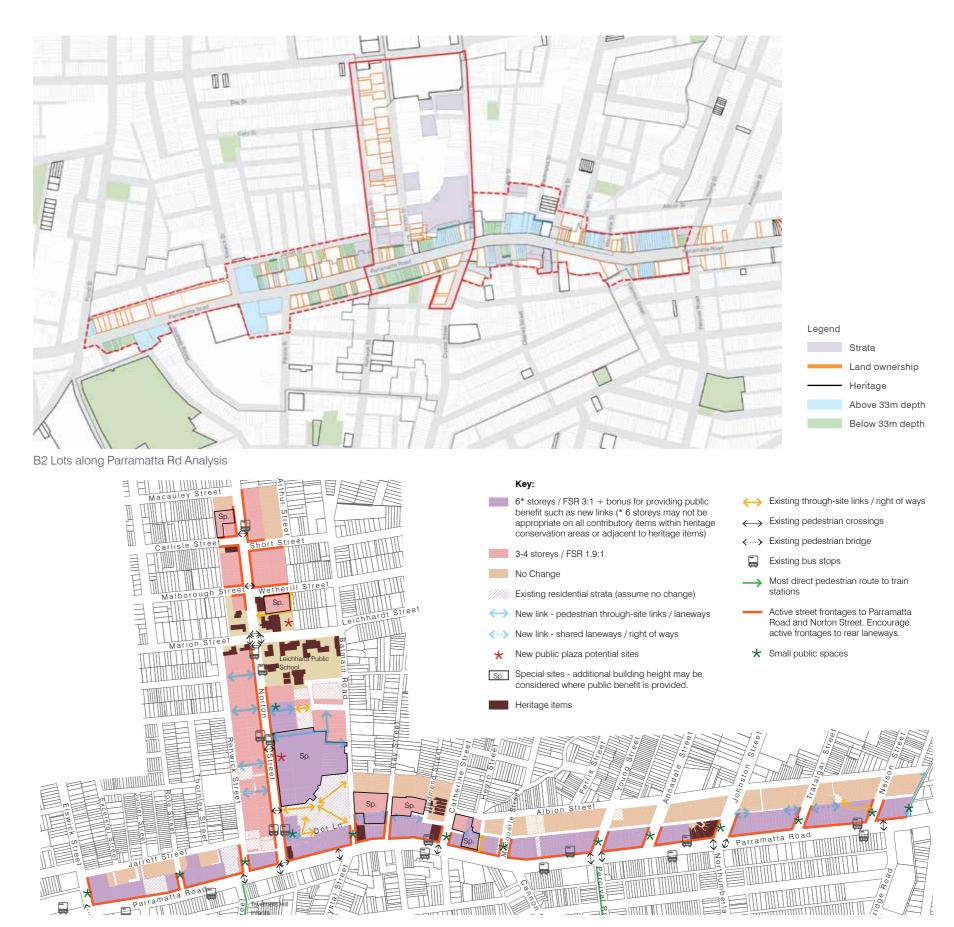
The previous section provides recommendations to building heights for the special or 'Opportunity Sites' that correspond with the provision of through-site links and public space. These through-site links are proposed in Council's Draft Structure Plan and should be delivered in redevelopment of the Opportunity Sites.

Regarding other sites along Parramatta Rd, and as per Architectus' 2016 report (p39), bonus height is recommended to incentivise the creation of mid-block connections or through-site links as a public benefit.

The following section provides testing to:

- 1. demonstrate that sites along Parramatta Rd can achieve FSR 3:1 and
- 2. determine the additional height to be incentivised for provision of a through-site link.

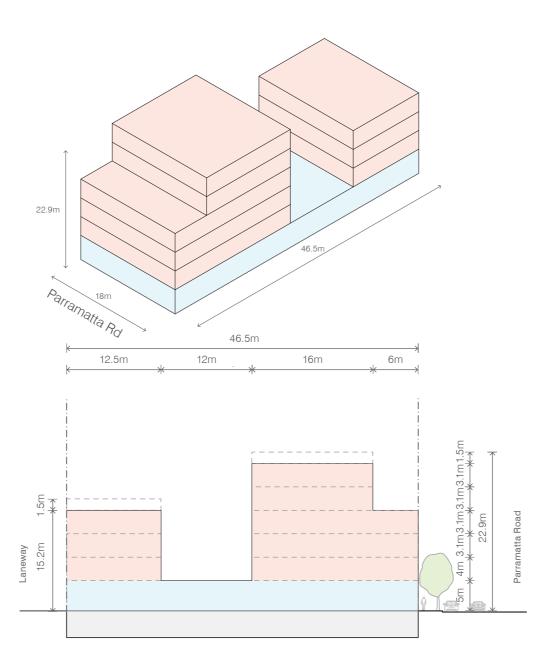
Testing is provided based on two typical lot depths of sites along Parramatta Rd: 33m lot depth and >33m lot depth (46.5m type), to test against constraints such as residential floorplate depths and ADG minimum building separation requirements.

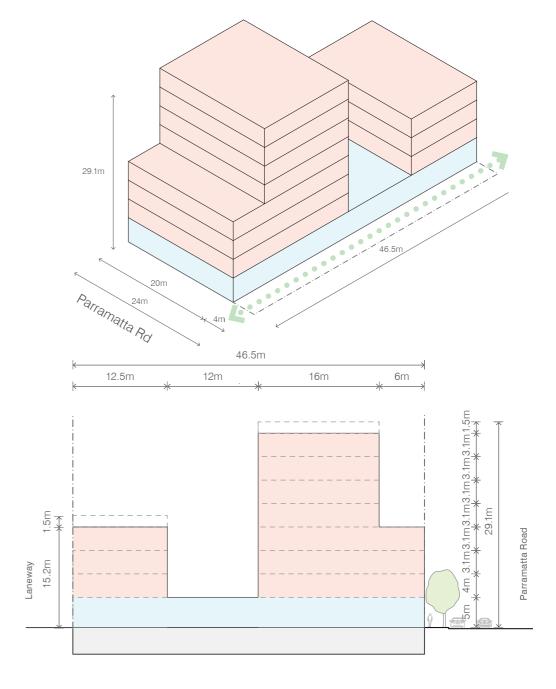


Architectus' 2016 Draft Structure Plan with indicative locations for through-site links

1 Lot depth 46.5m or >46.5m

- This typology is based on deep lots with rear laneway or easement access, and a building at the front and rear.
- 18m is minimum site width for lot amalgamation (to provide basement car parking with rear lane/easement access).
- 24m is minimum site width for lot amalgamation to access the bonus height of 2 storeys (resulting in overall building height of 8 storeys) with the provision of a 4m wide mid-block connection.





18m site width

FSR	3:1
Site width min.	18m
Site depth	46.5m
Site area	837m²
Front setback	0m, 6m above 4th storey
Upper storey front setback	6m above 4 storeys
Side setback	0m
Rear setback	0m
GFA	2540m²
Residential GFA	18m ²
Commercial GFA	711m ²
Street wall	4 storeys at front and rear
Height	22.9m (6 storeys)
Dwelling Yield	23 dwellings

B 24m site width (Bonus height)

FSR	3:1
Site width min.	24m (built form width 20m)
Site depth	46.5m
Site area	1116m²
Front setback	0m, 6m above 4th storey
Upper storey front setback	6m above 4 storeys
Side setback	0m, 4m wide through-site link
Rear setback	0m
GFA	3303m²
Residential GFA	2512m ²
Commercial GFA	791m ²
Street wall	4 storeys at front and rear
Height	29.1m (8 storeys)
Dwelling Yield	31 dwellings



Densities along Parramatta Road

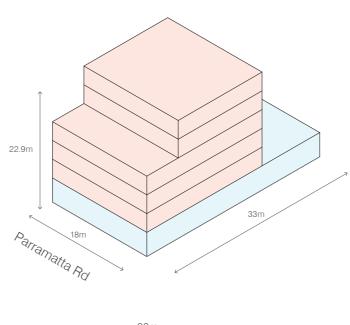
2 Lot depth 33m type

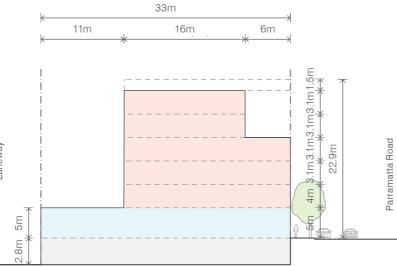
- This typology is based on lots that can only accommodate a building at the front with rear laneway or easement access.
- 18m is minimum site with for lot amalgamation (to provide basement car-parking with rear lane/easement access).
- 24m is minimum site width for lot amalgamation to access the bonus height of 2 storeys (resulting in overall building height of 8 storeys) with the provision of a 5m wide mid-block connection.

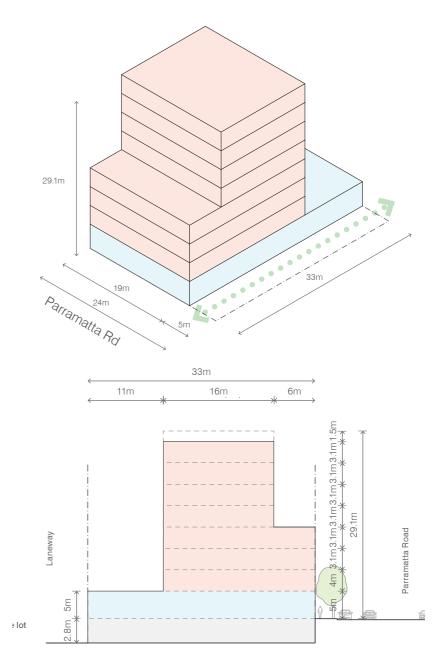


✓ LEP Recommendations

- Maximum 6 storey height (with setback of 6m above the 4th storey), 4 storey street wall, ground level commercial/retail at front, and 4 storey street wall at rear of sites.
- Provide height bonus of additional 2 storeys maximum (above the 6 storeys) to incentivise provision of through-site link/mid-block connections as public benefit.
- Testing demonstrates that minimum site width of 24m is required to provide a minimum 4m wide through-site link.
- The proposed height may not be appropriate on all contributory items within heritage conservation areas or for sites adjacent to heritage items.









A 18m site width

FSR	3:1
Site width min.	18m
Site depth	33m
Site area	594m²
Front setback	0m, 6m above 4th storey
Upper storey front setback	6m above 4 storeys
Side setback	0m
Rear setback	0m
GFA	1828m²
Residential GFA	1323m²
Commercial GFA	505m ²
Street wall	4 storeys at front, 1 storey at rear
Height	22.9m (6 storeys)
Dwelling Yield	16 dwellings

B

24m site width (Bonus height)	
FSR	3:1
Site width min.	24m
Site depth	33m
Site area	792m²
Front setback	0m, 6m above 4th storey
Upper storey front setback	6m above 4 storeys
Side setback	0m, 5m wide through-site link
Rear setback	0m
GFA	2385m ²
Residential GFA	1852m ²
Commercial GFA	533m ²
Street wall	4 storeys at front, 1 storey at
	rear
Height	29.1m (8 storeys)
Dwelling Yield	23 dwellings

1.10 Heritage

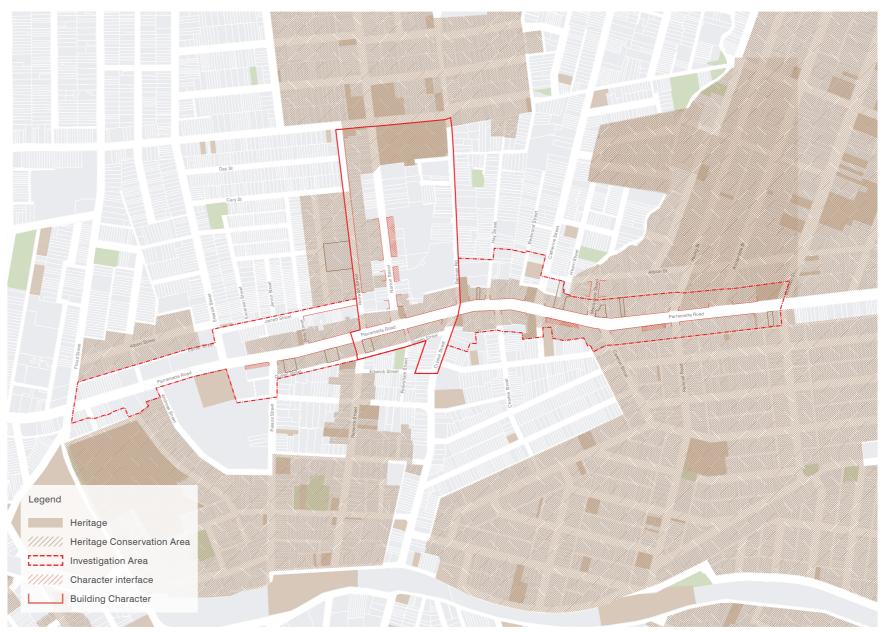


Issue

Heritage – Advice on the principle regarding retaining existing development controls for existing heritage and potential heritage items. How to manage transitions between developments adjacent to heritage items and adjacent to or containing contributory items - Architectus' previous work acknowledged that the 6 storeys and 4 storey street wall was unlikely to be appropriate on these sites. Guidance sought to implement these provisions.

Recommendations

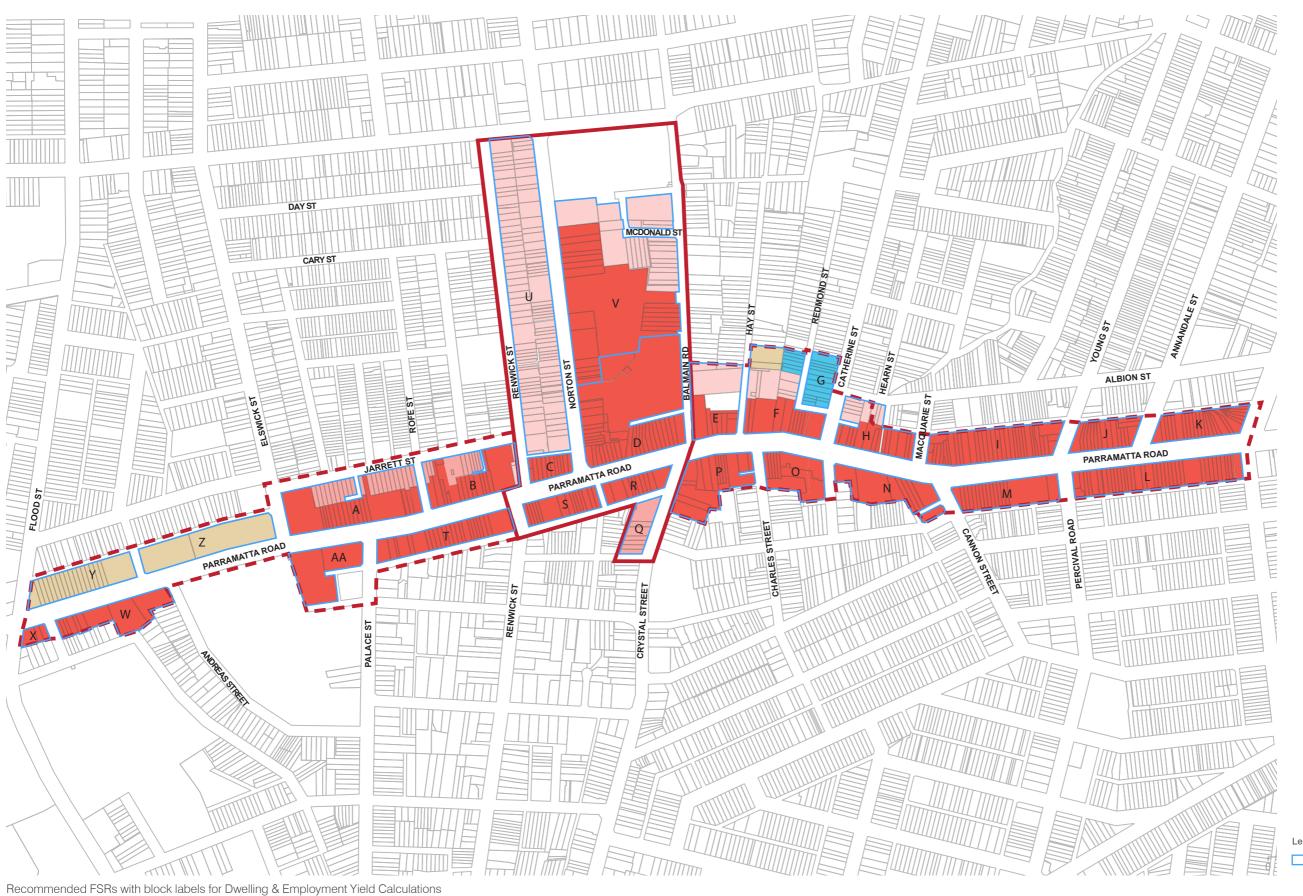
- Existing FSR and heights to be uplifted for existing heritage items and potential heritage items to match adjacent lots, under the caveat that development to the maximum controls may not be possible.
- Redevelopment of adjacent properties to the maximum proposed controls may not be possible due to setbacks that may be required to heritage items
- Future redevelopment on sites with heritage items or in heritage conservation areas should consider current NSW Heritage Office and AIA guidelines on heritage:
 - Design In Context: Guidelines for Infill
 Development in the Historic Environment by Heritage New South Wales and AIA"
 - "Better Placed: Design Guide for Heritage"
 by Heritage Council of NSW and Government
 Architects NSW document



Leichhardt Precinct Heritage Map

1:7,500 L I J J J J J

1.11 Dwelling and Employment Yield Calculations



recommended for is with block labels for blockling & Employment field odiculations

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Block outline

Employment Yield Assumptions

Zone	GFA sqm per employee
B2 Local centre	22
B4 Mixed Use	28
B6 Enterprise Corridor	38
IN2 Light Industrial	98

Commercial/Residential ratio

	% Commercial of Total GFA	% Residential of Total GFA
B6	100	0
B6 + Residential	30*	70
B2	15	85
B4	30*	70
IN2	100	0

^{*30%} of total GFA for commercial is an average percentage based on tested opportunity sites

Dwelling Yield Assumptions

Average Dwelling size

Apartment Mix	Mix	Dwelling size NLA/NSA (m²)	GFA (m²)
1 bedroom	30%	50	59
2 bedroom	55%	70	82
3 bedroom	15%	90	106
Average dwelling size	100%	67	79

Commercial/Residential ratio

54

Land zoning	% Commercial of Total GFA	% Residential of Total GFA
B6 + Residential	30	70
R3	0	100
B2	15	85
B4	30	70
R4	0	100
R1	0	100

Methodology

- Dwelling yield has been calculated based on FSR x block (or part of block area for which FSR is applicable to) / average dwelling size (79m² GFA).
- Employment yield has been calculated based on FSR x block (or part of block area for which FSR is applicable to) / GFA (m²) per employee according Land Zoning and as per table on this page.
- Employment to residential split in mixed-use zones has been assumed as stated on the left except for Opportunity sites, in which case the employment to residential ratio is based on the outputs of built form testing.
- Sliding scale FSR 0.5-0.8:1 based on site area is applicable to R1 sites, for purposes of capacity calculations, 0.5:1 is used in the tables.
- For R1 General Residential and R2 Low Density Residential, the total number of landholdings that could be converted to be either dual occupancy, accommodate a secondary dwelling or subdivision with an additional dwelling was assessed. A minimum lot size for either of the previous options was assumed to be 450sqm. R2 Low Density land in Heritage Conservation Areas above 450sqm can accommodate a secondary dwelling under current controls. For each applicable landholding, an additional dwelling was assumed in the theoretical capacity.

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Dwelling and Employment Yield Calculations

Summary of net additional employment and dwelling capacity

Summary of existing and proposed employment capacity	
Proposed Employment GFA capacity	126333m²
Existing Employment GFA capacity	58301m ²
Net additional employment GFA capacity	68032m ²
Proposed employees capacity	4993
Existing employees capacity 2111	
Net additional employee capacity	2882

Summary of existing and proposed dwelling capacity	
Proposed residential GFA capacity	413882m²
Existing residential GFA capacity	238152m ²
Net additional residential GFA	175730m ²
Proposed number of dwellings	5233
Existing number of dwellings	2974
Net additional number of dwellings	2259

1.12 Summary of recommendations

Issue	Architectus recommendations	Further controls for LEP/DCP
Issue 1	Land Use - R3 - Medium Density Residential	- 3m setback from Crystal St
2-18 Crystal Street, Petersham	+ RFBs	- 2m setback from Queen St
Advice sought on proposed zoning and controls – existing B2 zoning should be retained	FSR - 2.2:1	- 5m setback from Petersham Ln
or rezoned to R3 Medium Density residential. Advice also sought on appropriate development controls (FSR/heights/setbacks/street frontage heights/appropriate ground	Height - 18m (5 storeys)	- 0m setback from Elswick St
floor uses etc.)	Troight form (o storeys)	 4-storey street wall with 5m setback from building line for fifth storey on Crystal St, Queen St and Petersham Ln site boundary
		 redevelopment to follow lot amalgamation pattern identified in previous section on this issue; any proposal to redevelop that does not follow the lot amalgamation pattern to be assessed on a case by case basis
Issue 2	Land Use - B2	- 0m setback from Jarrett St
4 – 98 Jarrett Street, Leichhardt Advice sought on proposed zoning and building/development controls considering the	FSR - 2.2:1	 min. 6m setback from rear boundary with 3m further setback from building line from third storey above
interface with the rear of properties along Parramatta Road.	Height - 17m (4 storeys)	 2-storey street wall with 3m setback from third storey and above from building line
		Minimum street frontage 12m and minimum site depth 30m
		 Where possible, access provided via rear laneway (extend Jarrett Lane). In other cases, access to be provided from Jarrett Street frontage
		 Where possible, access for lots fronting Parramatta Road to be provided via rear/ easements from Jarrett Street.
		 Maximum FSR may not be achievable if adjoining lots fronting Parramatta Rd canno provide appropriate setbacks/amenity to Jarrett Street properties
Issue 3	No changes proposed to the existing LEP	- Nil
10-12 Renwick Street, Leichhardt	controls due to the outcomes of built form testing	
FSR/heights in the Structure Plan as per Architectus' 2016 recommendations. Peer review advice sought on the future development controls considering the interface with neighbouring properties.	looming	
Issue 4	Land Use - B6 Enterprise Corridor	Om setback from front and side boundary
592 - 610 Parramatta Road, Petersham	FSR - 3:1	min. 6m setback from rear boundary
Retain existing B6 zoning and adopt PRCUTS density and height controls to reflect the scale of existing and future development. Peer review advice sought.	Height - 17.5m (4 storeys)	 4 storey street wall with minimum 5m floor to floor height on ground level to accommodate mezzanine level/ flexible employment uses.
Issue 5 - Opportunity Sites	•	
Advice also sought on mechanisms to incentivise the provision of public benefits in the redevelopment of opportunity sites and the type of public benefits sought for each key opportunity site. If bonus FSR and heights are considered appropriate, identify the incentives for each opportunity site.		

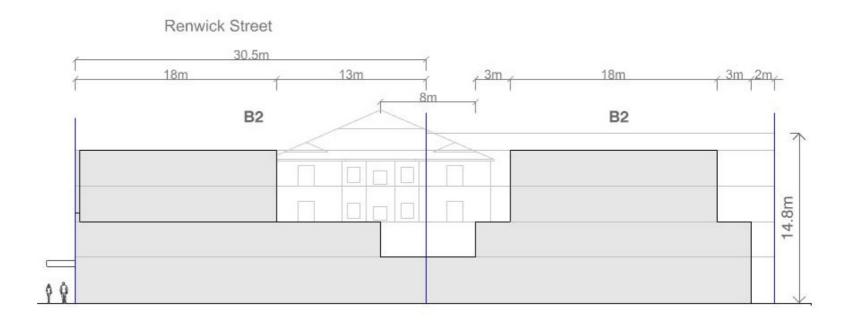
Summary of recommendations

Issue	Architectus recommendations	Further controls for LEP/DCP
Opportunity Site 1	Land Use - B2 - Local Centre	- Site 1
	FSR - 3:1	 Om setback to Norton St site boundary 4 storey street wall with 3m setback from building line above fourth storey
	Height - 23m (6 storeys), 26m (7 storeys), 30.5m (9 storeys) Proposed new 18m wide through-site link for pedestrians and cyclists between Norton Street and Balmain Road	 Site 2 Om setback to Norton St site boundary 3-storey street wall with 1.5m setback from building line for fourth storey
	Provide a new landscaped plaza 25m wide fronting Norton Street as shown in the key plan	 Site 3 5m setback (aligned to part of existing site boundary) on Balmain Rd 5-storey street wall with 3m setback from building line above fifth storey building separation, communal open space, and deep soil, solar access requirements as per ADG
Opportunity Site 2	Land Use - B2 - Local Centre, RE1 - Public Recreation FSR - 1.9:1, 3:1 (nil for RE1) Height - 23m (6 storeys, nil for RE1) Proposed new through-site link (for pedestrians and cyclists) and public open space as shown in the key plan	 Site 1 4-storey street wall to Parramatta Rd with 3m setback above fourth storey 4.5m setback to the rear on the ground level to accommodate through-site link and additional 9m to residential uses from building line above first storey Site 2 1.5m setback from site boundary on Hay St and Redmond St 3-storey street wall to Redmond St with 3m setback from building line for fourth storey 4-storey street wall to Hay St with 3m setback from building line above fourth storey 9m setback from north site boundary above ground floor on Redmond St 6m setback from north site boundary from second to fourth storeys, 12m from fifth storey and above on Hay St Site 3 1.5m setback from site boundary on Balmain Rd and Hay St 3-storey street wall to Hay St with 3m setback from building line for fourth storey 4-storey street wall to Balmain Rd St with 3m setback from building line for fifth storey above 9m setback from north site boundary from second storey and above on Hay St 9m setback from north site boundary from second to fourth storeys, 12m from 5th storey and above on Balmain Rd building separation, communal open space, deep soil, solar access requirements

Summary of recommendations

Issue	Architectus recommendations	Further controls for LEP/DCP
Opportunity Site 3	Land Use - B2 - Local Centre FSR - 1.9:1, 3:1 Height - 17m (4 storeys) and 23m (6 storeys) Proposed new through-site link (for pedestrians and cyclists) as shown in the key plan	 Site 1 Om setback to Parramatta Road 4 storey street wall on Parramatta Road with 6m setback above fourth storey 6-9m setback to the rear boundary at ground level to accommodate a through site link with additional 6m setback above ground floor Site 2: Om setback to Albion Street and Catherine Street 3 storey street wall along Albion Street with a 3m setback to the fourth storey 6m setback to east boundary with additional 3m setback above first storey Building separation, communal open space, and deep soil, solar access requirements as per ADG.
Issue 6 - Densities along Parramatta Road With reference to Leichhardt Council's 2016 Parramatta Road and Norton Street urban design study, clarification is sought regarding Architectus' proposed densities of FSR 3:1 along Parramatta Road and Norton Street with 'bonus for public benefits' (Refer to Architectus Structure Plan p.54) – what height and FSR bonuses should be considered in return for public benefits? Guidance sought on appropriate LEP mechanisms to implement these provisions.	Land Use - B2 - Local Centre FSR - 3:1 Height - 23m	 4-storey street wall with 6m setback from building line from fifth storey above bonus height for provision of through-site link capped at 8-storeys
Issue 7 - Heritage Advice on the principle regarding retaining existing development controls for existing heritage and potential heritage items. How to manage transitions between developments adjacent to heritage items and adjacent to or containing contributory items - Architectus' previous work acknowledged that the 6 storeys and 4 storey street wall was unlikely to be appropriate on these sites. Guidance sought to implement these provisions.	 Existing FSR and heights to be uplifted for existing heritage items and potential heritage items to match adjacent lots, under the caveat that development to the maximum controls may not be possible Redevelopment of adjacent properties to the maximum proposed controls may not be possible due to setbacks that may be required to heritage items 	

1.14 Appendix I - 10-12 Renwick St Testing



Parramatta Road Parramatta Road

10-12 Renwick St Metrics

FSR	2.1:1
Site width	6m
Site depth	30.5-59.5m
Site area	384m²
Front setback	0m
Side setback	0m
Rear setback	0m
GFA	808m ²
Street wall	2 storeys
Height	4 storeys
Dwelling Yield	7

Key map



Taverners Hill Precinct

Parramatta Road Corridor - Urban Design Peer Review

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Report contact	Greg Burgon Principal Urban Designer	
This report is considered a draft unless signed by a Director or Principal	Approved by: Greg Burgon	

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1.1 Background and Purpose of report

Background

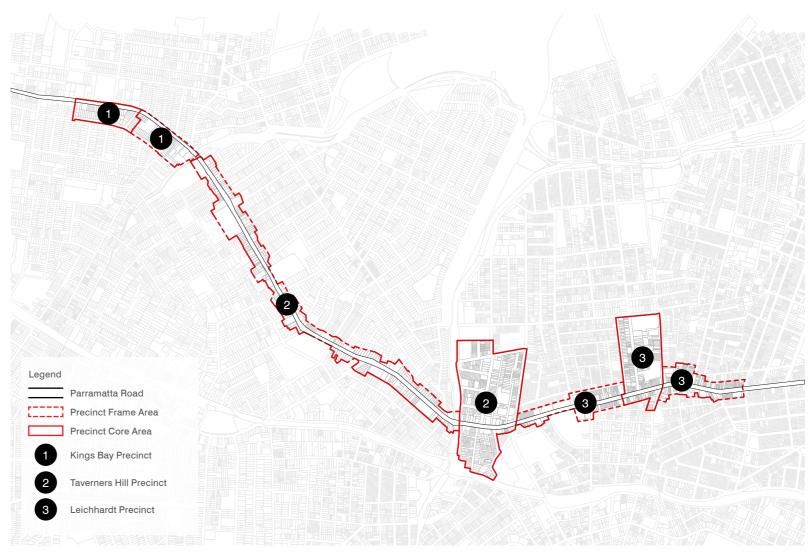
Inner West Council is preparing a Planning Proposal to amend the Draft Inner West Local Environmental Plan for the Parramatta Road Corridor Urban Transformation Strategy (PRCUTS) precincts including Leichhardt, Taverners Hill and part of the Kings Bay.

Council have prepared draft structure plan maps and design guidelines for these precincts which encompass changes to existing planning controls and take into consideration the recommendations of PRCUTS.

Purpose of this report

Architectus has been engaged by Inner West Council to give peer review advice on Council's draft structure plan maps and guidelines which will inform the LEP/DCP controls. The fine grain design guidelines apply to individual precincts - Kings Bay, Taverners Hill and Leichhardt, as well as to general urban design issues across the three precincts.

Three reports have been prepared (one for each precinct) and structured according to the specific issues Council have identified and are seeking peer review advice on. This report covers the Taverners Hill Precinct.



Parramatta Road Corridor study area map

Background and Purpose of report

Approach

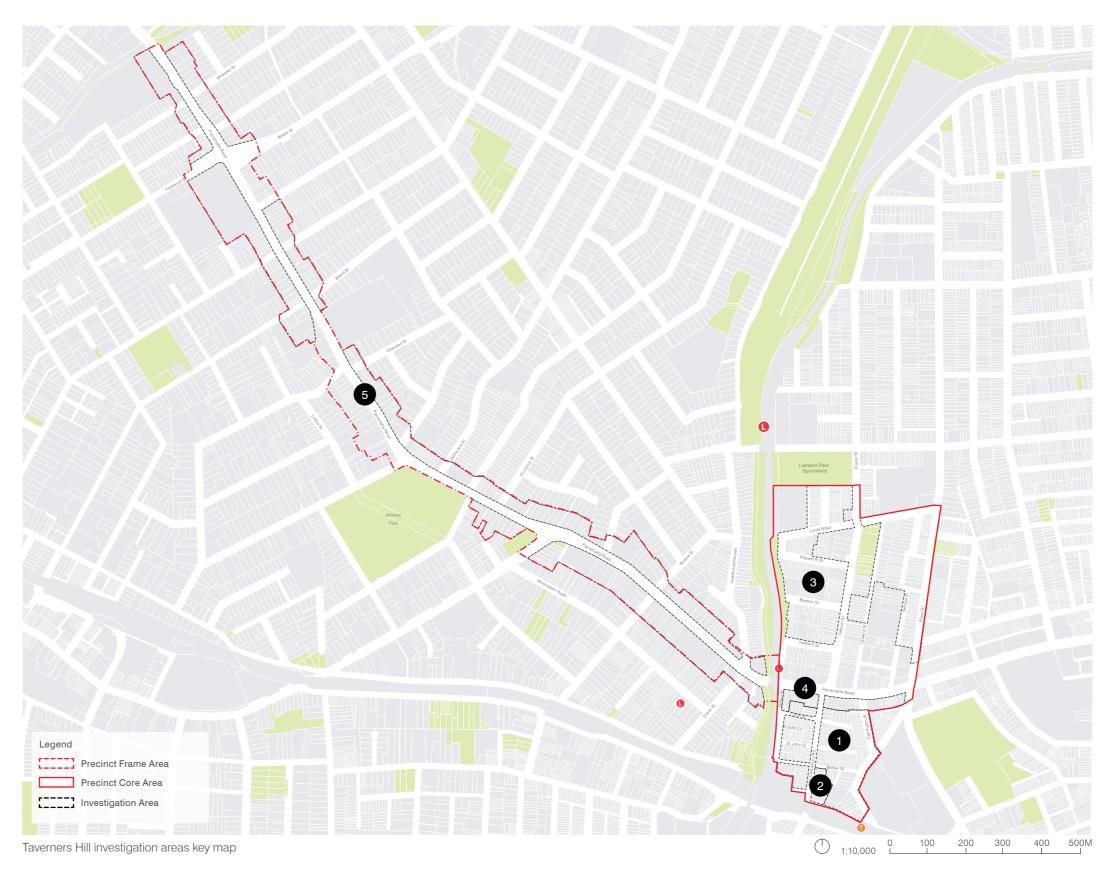
This report includes five main investigation areas within the Taverners Hill Precinct:

- Investigation Area 1 Residential South Taverners
 Hill
- Investigation Area 2 Residential South Taverners
 Hill (Old Canterbury Rd and Barker St Sites)
- Investigation Area 3 Residential North Taverners Hill
- Investigation Area 4 B6 Precinct Core Area
- Investigation Area 5 B6 Precinct Frame Area

Within each investigation a set of issues has been identified by Council which are considered sequentially in this report. Consideration of each issue may include some or all of the following sections as relevant:

- Existing, PRCUTS, and Draft Structure Plan LEP controls
- Existing character analysis
- Development constraints and opportunities
- Built form typology study
- Precedent imagery
- Solar analysis and overshadowing
- Recommendations

The final chapter of this report includes a summary of Architectus' key recommendations and summary tables of yield across the precinct based on this.



Background and Purpose of report

General commercial and residential assumptions

B6 Efficiency 90%

5m Ground - floor to floor (inclusive of 1m slope/topography allowance)
3.6m Typical upper levels (sufficient for commercial floor to floor height)

1.5m Lift overrun - 1.5m

RFBs Efficiency 75%

4m Ground - floor to floor (inclusive of 1m slope/topography allowance)
3.1m Typical upper levels (sufficient for residential floor to floor height)

1.5m Lift overrun - 1.5m

Definitions

ADG Apartment Design Guide (accompanying State Environmental Planning Policy 65)

ALEP Ashfield Local Environmental Plan 2013

GFA Gross Floor Area
IWC Inner West Council

IWLEP Draft Inner West Local Environmental Plan 2020
LLEP Leichhardt Local Environmental Plan 2013
MLEP Marrickville Local Environmental Plan 2011
NLA / NSA Nett Lettable Area / Nett Saleable Area

PRCUTS Parramatta Road Corridor Urban Transformation Strategy 2016

RFB Residential flat building

SEPP65 State Environmental Planning Policy 65

1.2 Residential Investigation Area 1



Issue

Provide medium density residential to the south of Parramatta Road

Peer review advice is sought on the proposed zoning and built form controls. Noting PRCUTS recommends townhouses and terrace type dwellings for this area in the supporting guidelines.

Investigation area



LEP controls

The residential investigation area to the south of Parramatta Road is currently zoned R2 Low Density residential with a building height of 9.5m and 0.6:1 - 1.1:1 FSR depending on lot site size.

PRCUTS recommends increasing residential density in this area, upzoning to R3 Medium Density, 12m HOB and 1.4:1 FSR.

Draft Structure Plan controls

The IWC Draft Structure Plan controls under consideration support PRCUTS' recommendations, including the retention of existing development controls for existing and proposed heritage items.

One of the objectives of this character area, as identified by PRCUTS, is to 'preserve the leafy, residential and low scale character of this part of the Precinct including pattern of grain, building typology and historic housing character'.

In keeping with PRCUTS' recommendations, townhouses and terrace type dwellings have been explored for this area.

Existing LEP controls	
LZN	R2
FSR	0.6:1 - 1.1:1 (sliding scale applies)
НОВ	9.5m

PRCUTS recommendations	
LZN	R3 - Medium Density residential
FSR	1.4:1
НОВ	12m and 17m for R3 Zones

Draft Structure Plan controls under consideration



LZN R3 - Medium Density residential



FSR 1.4:1 (0.6:1 for potential heritage properties under investigation)



HOB 12m (9.5m for potential heritage properties under investigation)

Residential Investigation Area 1

Character

Housing and lots

- The South Taverners Hill area is bounded by Cadigal Reserve (part of Hawthorne Canal) to the west, Parramatta Road to the north and Lewisham Station to the south.
- The area is predominantly single-storey residential consisting of Federation style detached and semi-detached dwellings, approximately 5-6m in height.
- There are some weatherboard cottages on Barker St, with a typical 2m setback, some with verandahs. The attached weatherboard cottages on 11-13 Old Canterbury Road are listed as heritage items.
- More recent development includes medium-density two-storey terraces and townhouses (2–4 St John St, 38-40 Old Canterbury Rd, 29-31 Cook St), with a mixed provision of on-street and off-street car parking.
- Sites fronting Cook Street and St John Street (to the western side of the study area) have secondary access to the rear via St John Lane. Additionally, several sites along Barker Street have secondary access via St John Street. These streets are relatively quiet as they are dead-end.
- 10m wide lots are generally located on Old Canterbury Rd and narrow lots with frontages less than 6m on the streets running east-west, and on Carrington St.
- Existing lots have setbacks to the street front that are approximately 2m, and minimal separation between dwellings which are built to the boundary and in some cases have side setbacks of approximately 1m.

Streets

- The streetscape is predominately leafy and green with significant mature tree coverage on the verges and streets.
- The area is generally hard-surfaced with sections of verges that are planted with low-height native trees. Carrington St is quite wide at 20m with grass verges.











- 03 Thomas St existing green and planted verges and front setbacks
- 04 Thomas St from Lewisham Station

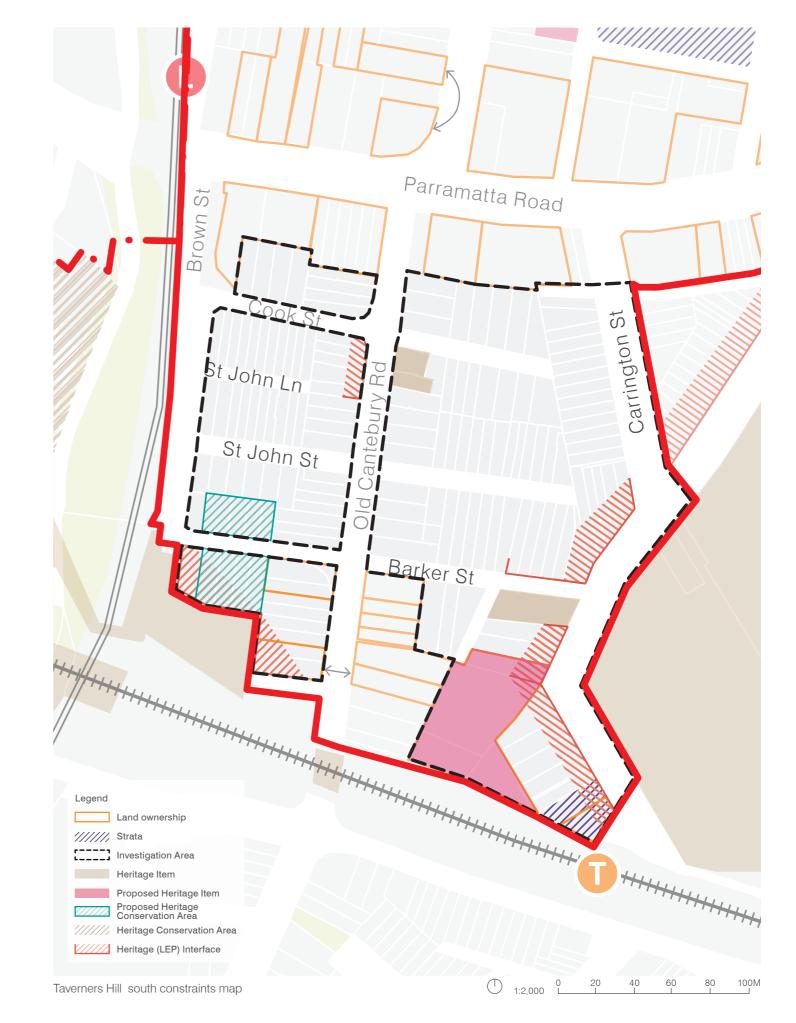
Residential Investigation Area 1

Development constraints and opportunities

- Small residential lots under fragmented ownership makes amalgamation difficult.
- Many lots have narrow street frontages under 6m making subdivision difficult.
- Narrow streets with on street parking and minimal footpath space impacts pedestrian experience.
- A complex vehicle movement network related to the Brown St bridge bypass creates some local street congestion.
- There is a new heritage conservation area proposed along Barker Street west. Any proposed development to take heritage interfaces into consideration.
- Block bound by Barker Street and Old Canterbury Road adjacent to the railway is zoned for higher density residential.
- Overhead power lines would impact redevelopment.
- Good access to public transport within 400m walking distance (5 minute walk) from Lewisham Train Station and Taverners Hill Light Rail Station.
- Good amenity generally and proximity to Greenway.
- Existing and proposed heritage items along Thomas Street. Opportunity Sites have been strategically selected to manage heritage interfaces.

Preliminary ideas

- Preserve the leafy, residential and low scale character of this part of the Precinct including pattern of grain, building typology and historic housing character.
- Take advantage of proximity to the train and light rail stations by providing increased residential density and reduced parking.
- Narrow streets suggest either amalgamation, or a more modest approach to residential height may need to be considered.



Residential Investigation Area 1

Built form typology study

The following study has been undertaken to identify existing character and lot patterns including street frontage, lot depth and access, to inform requirements for subdivision and amalgamation and possible future built form typologies within the investigation area.

A study based on subdivision of lots with terrace/ townhouse typologies was initially tested, as this typology was considered to be responsive to the fine grain character of the area.

However there were a number challenges to realise this approach including:

- the absence of planning mechanism to ensure that any additional floorspace would only go towards creation of new dwellings as a result of subdivision
- unintentional bulk and scale impacts due to additional FSR where subdivisions are not proposed
- reliance on on-street car parking
- impact on existing tree cover as lots get subdivided and redeveloped, particularly for subdivision down the site depth
- the development of battle-axe subdivisions

This testing is covered in "Appendix I - South Taverners Hill - Dwelling studies" on page 59.

In consultation between Architectus and Council, the above impacts were considered to be greater than the benefit that this development approach would provide in terms of dwelling yield. Subsequently, residential flat buildings on amalgamated lots, strategically located close to Lewisham Station, were tested and is proposed as the preferred approach.

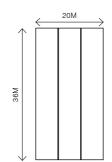
Character

To retain the existing character of the investigation area, part of two blocks bounded by Carrington St, Barker St and Brown St have been strategically selected for concentrated increased residential density given their proximity to public transport and B2 zoned land on the south side of the rail line.

The relatively deep lots of about 45m allow ample open space for tree cover while increasing the dwelling yield in the precinct which would work with overland flow constraints.

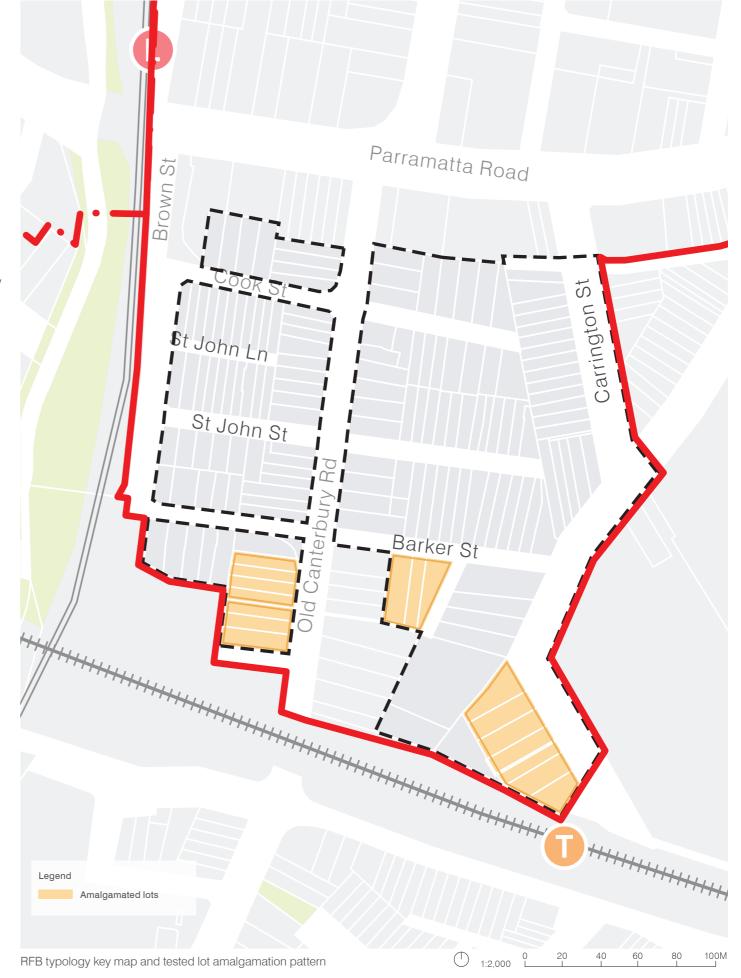
Amalgamation assumptions

Minimum 20m street frontage (typical 3 lot amalgamation) and minimum 36m lot depth.



Proximity to public transport

The proposed blocks for residential flat buildings are located within 400 metres walking distance to Lewisham Station. The sites provide an opportunity to provide limited parking due to proximity to public transport.



Overland flow

The typology testing and selected sites are subject to hydrological engineering advice, with regard to minimum landscape area, setbacks and impacts of basement car parking.

LEGEND PRECINCT - CORE --- PRECINCT - FRAME AREA LGA BOUNDARY FLOOD PLANNING AREA FLOOD PLANNING AREA
OUTSIDE OF STUDY BOUNDARY 200 300m

Taverners Hill Flood Map Source: Inner West Council

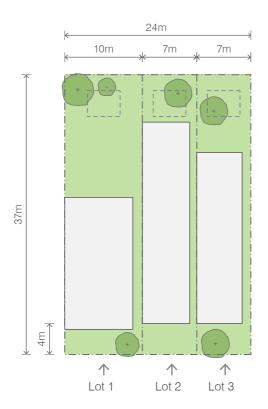
This map is from Inner West Council Floodplain Risk Management Studies and Plans. Council is reviewing its flood management plan for this area which might result in changes to the flooding lots

RFB Type 1 - Narrow infill apartment

The following RFB typology is based on the amalgamation of 3 existing lots. This typology is adaptable to deep sites and amalgamation of lots with narrow frontages; this typology ensures a regular street pattern and is based on the Narrow Infill Apartment (ADG Appendix 4). This typology maintains existing street character through landscaped front setbacks, reduces driveway crossovers, and retains existing vegetation at the rear. This typology is slightly deeper than the indicative plan with adjustments to account for greater lot depth.



RFB typology key map and tested lot amalgamation pattern



Plan of existing dwellings and lots



Plan of proposed RFB

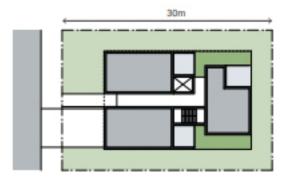
Existing dwellings' metrics

Lot	1	2	3
FSR	0.5:1	0.7:1	0.6:1
Max. FSR (under existing	0.6:1	0.8:1	0.8:1
LEP)			
Site width	10m	7m	7m
Site depth	37m	37m	37m
Site area	371m ²	270m ²	252m ²
GFA	180m ²	193m ²	148m ²
Height	5m (7m	– 2 store	ey at
	rear)		
Site coverage	43%	64%	53%
Private open space	211m ²	98m²	120m ²
Front setback	3m	4m	4m
Rear setback	16m	6m	10m
Side setback	0-1m	0-1m	0-1m
Upper storey front setback	N/A		
Street wall	1 storey		
Parking	On stree	et	
Landscaped area	57%	36%	47%
No. of dwellings	1	1	1

$\square \square \square$	Boundary
	Landscaped area
	Private Open Space
	Built form
\rightarrow	Parking access
\rightarrow	Pedestrian access

Proposed RFB metrics

FSR	1:1
Site width	24m
Site depth	37m
Site area	894m²
GFA	881m ²
Height	11.7m (3 storeys)
Site coverage	46%
Communal open space	278m ²
Front setback	4m
Rear setback	7m
Side setback	3m
Upper storey front setback	3m
Street wall	2-storey
Parking	Basement
Landscaped area	10% deep soil (ADG
	recommendation for sites
	650-1500m²)
No. of dwellings	11



Indicative apartment plan Source: Apartment Design Guide, 2015



RFB Type 1 - Narrow infill apartment

General parameters for typology:

- Lot depth - min.. 30m

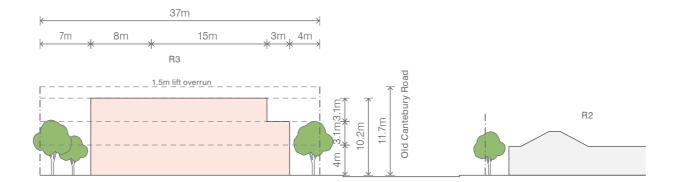
- Lot size approximately 720m²-1,000m²
- Street frontage min. 20mAccess & Car parking -
- Driveway to basement car-park
- Communal Open Space 25% Site area (ADG)

Note the sites tested (typically 3-lot amalgamations) meet the minimum recommended parameters for this RFB typology below:

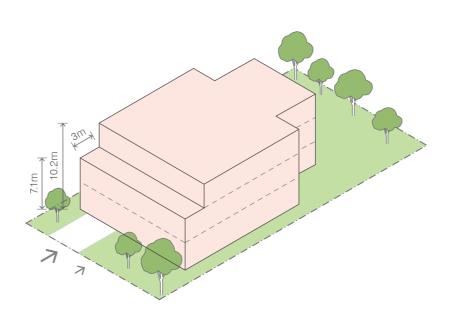
- Min.. lot size 720m²
- Min. street frontage 20m



RFB typology key map and tested lot amalgamation pattern



Section diagram of proposed RFB

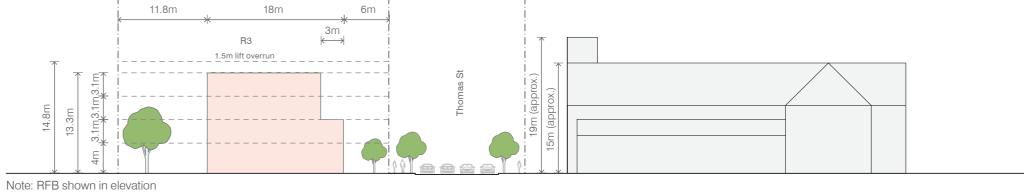


Axo diagram of proposed RFB

Maisonette apartment typology

General parameters for typology:

- Lot depth 30m
- <u>Lot size</u> 1500-2500m²
- Street frontage 40mAccess & Car parking -Basement car parking



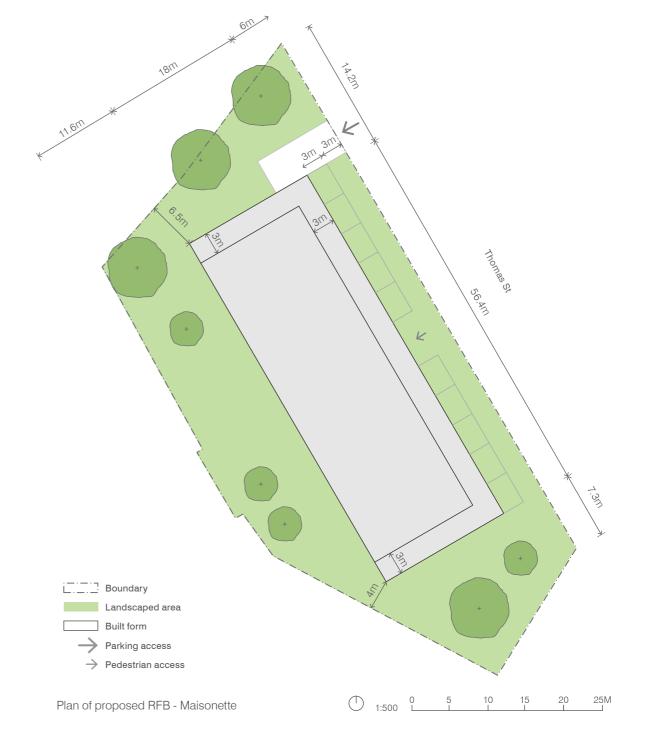
Section diagram of proposed RFB



RFB typology key map and tested lot amalgamation pattern

Proposed maisonette apartment metrics

FSR	1:1
Site width	78m
Site depth	35m
Site area	2499m ²
GFA	2425m ²
Height	14.8m (4 storeys)
Site coverage	37%
Communal open space	1432m ²
Front setback	6m
Rear setback	6m min
Side setback	6m
Upper levels setback	3m
Street wall	2 storeys
Site Coverage	40%
Parking	Basement
Landscaped area	15% deep soil (ADG recommendation
	for sites >1500m²)
Existing dwellings	11
Additional dwellings	25





Recommendations

LEP recommendations

Architectus recommends to retain the existing LEP zoning and characteristics of R2 - Low Density Residential for south Taverners Hill investigation area, north of Barker Street. This varies from PRCUTS' recommendation to upzone the entire area to R3 -Medium Density Residential. This is to retain as much of the fine grain character of the area as possible, and due to the impacts of small lot subdivision typologies as discussed under "Built form typology study" on page 10. No changes are proposed to the FSR and HOB controls for the blocks north of Barker Street, as well as parts of the blocks south of Barker St which are heritage items or adjacent to heritage items.

RFBs are proposed within strategically located blocks in the south of Barker Street, close to Lewisham Station, while the remainder of this investigation area is not proposed for change.

The testing suggests that a reduction in PRCUTS' recommended 1.4:1 FSR to 1:1 is required to retain green front setbacks and existing landscape character to go alongside RFB developments.

As the Draft IWLEP does not permit RFBs within R3 zoning, Architectus recommends these areas are zoned R3 with RFBs as an additional permitted land use. It is proposed that existing controls for existing and potential heritage items and heritage conservation areas be retained.

Existing LEP controls	
LZN	R2 - Low Density Residential
FSR	0.6:1 - 1.1:1
НОВ	9.5m

PRCUTS recommendations	
LZN	R3 - Medium Density Residential
FSR	1.4:1
НОВ	12m

Draft Structure Plan Controls		
LZN	R3 - Medium Density Residential	
FSR	1.4:1	
НОВ	12m	

Final ı	recommendations
LZN	R2 - Low Density Residential; R3 + RFBs adjacent to Opportunity Sites
FSR	1:1 (R3 + RFB), 0.6:1 - 1.1:1 (R2, Potential Heritage items and Heritage Conservation Areas)
НОВ	9.5m, 12m (3 storeys, R3 + RFBs), 15m

(4 storeys, R3 + RFBs)

Land Zoning

B6 Enterprise Corridor

R2 Low Density Residential

Medium Density Residential



Floor Space Ratio Legend (n:1)

F 0.6

N 1



Maximum Building Height (m)



M1 12

01 15

P2 17.5





Issue

35-53 Old Canterbury Road, Lewisham

Facilitate higher density residential uses in line with PRCUTS recommendations given the good proximity to public transport - peer review advice is sought regarding the appropriate density, height and built form controls.

Investigation area



LEP controls

This investigation area is currently zoned R4 High Density Residential with a building height of 17m, and FSRs of 1:1 and 1.1:1 FSR.

PRCUTS recommends down-zoning the area to R3 Medium Density Residential, consistent with the recommendation for the entire block. It proposes an increased FSR of 2.2:1 and recommends to retain the existing 17m HOB.

Draft Structure Plan controls

The IWC Draft Structure Plan controls under consideration support the existing LEP R4 zoning and PRCUTS' 2.2:1 FSR and 17m HOB.

Existing LEP controls		
LZN	R4 - High Density Residential	
FSR	1:1 and 1.1:1	
НОВ	17m	
PRCU	TS recommendations	
LZN	R3 - Medium Density Residential	
FSR	2.2:1	
HOB	17m	

Draft Structure Plan controls under consideration







FSR 2.2:1



HOB 17m

Character

Housing and lots

- Existing streetscape comprises of single storey dwellings with pitched roofs, approximately 5-6m in height.
- Some sites to the southern side of the study area have driveways fronting Old Canterbury Road.
- Relatively deep, wide lots. Individual site depths between 30-45m and frontage widths between 7-13m.
- Average street setback of 4m with soft landscaping to the front of the building line. The southern part of the study area has deeper setbacks of approximately 6-8m.
- Minimal separation between dwellings which are built to the boundary and in some cases have side setbacks of approximately 1m.

Streets

- The streetscape is predominately leafy and green with significant mature tree coverage within the nature strip along Old Canterbury Road.
- Old Canterbury Road is a major local vehicle connection. Some on street parking is provided, southbound, outside of peak hours.
- The busy road and narrow footpaths impact on pedestrian amenity.









02 Old Canterbury Road looking north and at R4 sites to right



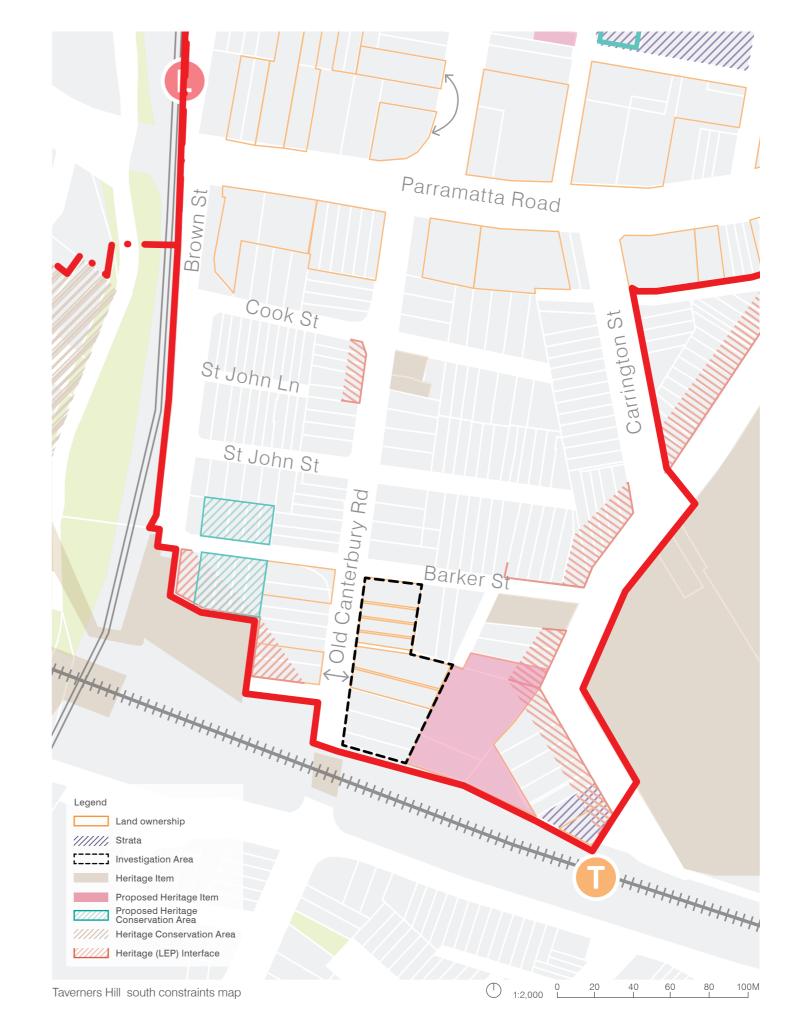
- 03 Existing streetscape along Old Canterbury Road
- 04 Barker St looking west towards Old Canterbury Rd and R4 site

Development constraints and opportunities

- Collective land ownership within the investigation area provides potential for amalgamation of lots and larger developments.
- Train line and rail corridor overpass runs along the southern border of the investigation area – Lewisham Station is within 400m walking distance.
- Potential for noise pollution due to proximity to the railway corridor and Old Canterbury Road.
- Old Canterbury Road is the primary road in this investigation area and can become heavily congested in peak hours.
- Existing and potential heritage items adjacent to the investigation area.
- Several mature street trees within investigation area along Old Canterbury Road.

Preliminary ideas

- Provide increased residential close to public transport. Reduce parking requirements as much as possible to support active and sustainable transport.
- Increased setback to street level to facilitate improved interface with Old Canterbury Road and pedestrian access to Lewisham Station.
- New development to consider sensitive interface with potential heritage item to the east
- New development to consider retention of existing mature street trees along Old Canterbury Road.



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Built form typology study

The following study has been undertaken to identify lot patterns including street frontage, lot depth and access, to inform requirements for subdivision and amalgamation and possible future built form typologies within the investigation area.

It is acknowledged that owners of the lots within Site A have put forward a proposal to amalgamate. A maisonette typology was tested as the starting point for this investigation area, given the potential resulting street frontage and site area. The typology is based on entrances to two storey terrace dwellings from street with apartment style dwellings above the terraces accessed from a ground floor lobby. This maintains the fine grain character of the investigation area, which is one of the intentions behind PRCUTS' recommendations.

Lot depth + Access assumptions

As an amalgamated corner lot, Site A has potential for access to basement parking via Barker Street. There is adequate site depth to allow for basement access to the rear of the site. As an amalgamated site, access to basement parking can be accommodated for Site B from Old Canterbury Road. As the typology has ground level dual-aspect apartments, the depth is limited to 18m as per ADG requirements.

Frontage to Old Canterbury Road

Both opportunity sites have frontages to Old Canterbury Road - a busy thoroughfare connecting Summer Hill, Lewisham and Dulwich Hill with Parramatta Road. There is potential to develop the interface with the street along this portion of Old Canterbury Road that is in close proximity to Lewisham Station.



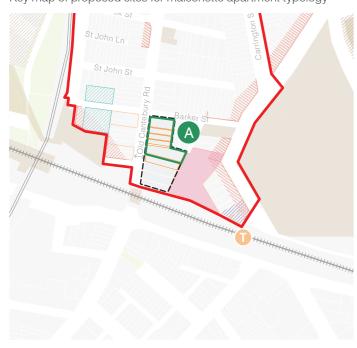
Map of sites for testing

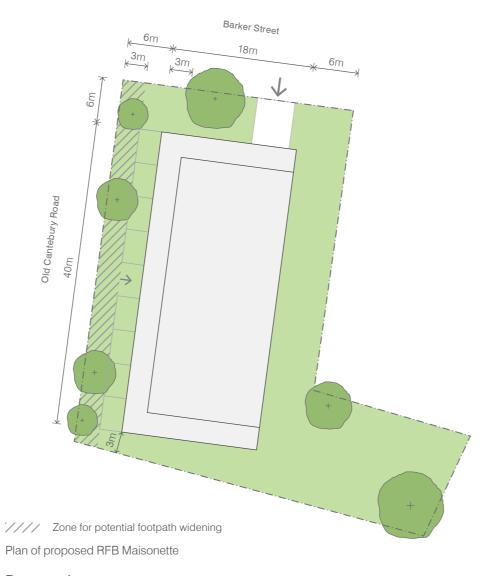
Site A - North maisonette apartment typology

General parameters for typology:

- Lot depth 30m
- <u>Lot size</u> 1500-2000m²
- Street frontage 40mAccess & Car parking -Basement car parking (reduced parking to benefit from proximity to Lewisham Station)

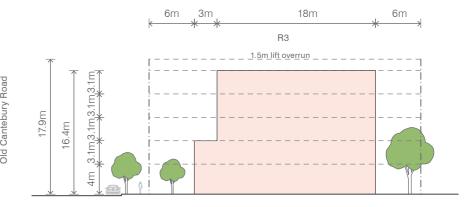
Key map of proposed sites for maisonette apartment typology



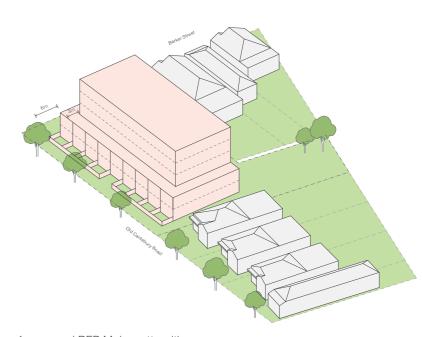


Proposed

FSR	1.2:1
Site width	48m
Site depth	30-40m
Site area	1825m²
GFA	2232m ²
Height	17.9m (5 storeys)
Site coverage	40%
Communal open space	626m² (min. 25% site area as per ADG)
Front setback	6m
Rear setback	6m min
Side setbacks	3m to first two levels and 6m above
Upper levels front setback	3m from building line to 3rd storey and above
Street wall	2 storeys
Site Coverage	40%
Parking	Basement (reduced parking requirements)
Landscaped area	15% deep soil (ADG recommendation for sites
	>1500m²)
Total no. of dwellings	25



Section of proposed RFB Maisonette



Axo of proposed RFB Maisonette with existing context



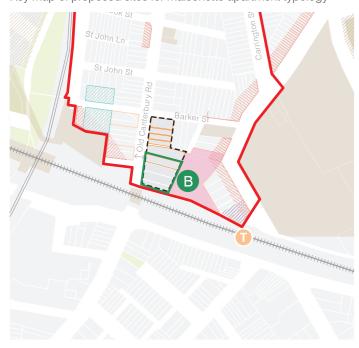


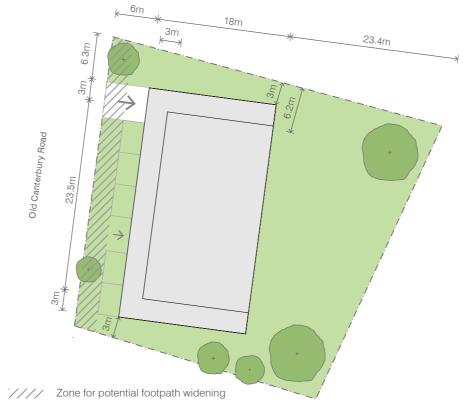
Site B - South maisonette apartment typology

General parameters for typology:

- Lot depth 30m
- <u>Lot size</u> 1500-2000m²
- Street frontage 40mAccess & Car parking -Basement car parking (reduced parking to benefit from proximity to Lewisham Station)

Key map of proposed sites for maisonette apartment typology

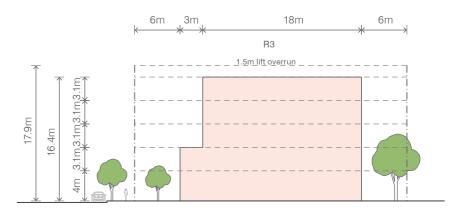




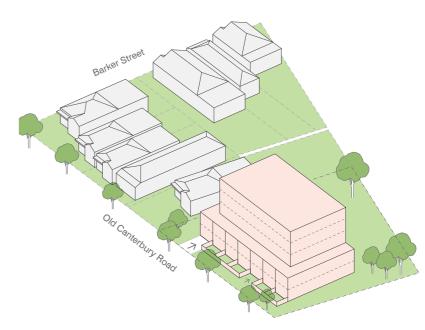
Plan of proposed RFB Maisonette

Proposed

FSR	1.1:1
Site width	41m
Site depth	48m
Site area	1717m²
GFA	1885m²
Height	17.9m (5 storeys)
Communal open space	725m ²
Front setback	6m to first two storeys
Rear setback	6m min
Side setback	3m to first two storeys and 6m to above storeys
Upper level front setback	3m from building line to 3rd storey and above
Street wall	2 storey
Site Coverage	34%
Parking	Basement (reduced parking requirements)
Landscaped area	15% deep soil (ADG recommendation for sites >1500m²)
Total no. of dwellings	23



Section of proposed RFB Maisonette



Axo of RFB Maisonette with existing context





Overshadowing testing - 21st June (winter solstice)

South Taverners Hill

The below testing shows overshadowing impacts on 21st June (winter solstice). It illustrates that proposed R3 + RFB apartments can meet ADG solar access and overshadowing requirements.









Recommendations

LEP recommendations

Architectus supports PRCUTS' recommendation to down-zone the existing R4 - High Density Residential zoned investigation area to R3 Medium Density Residential with residential flat buildings as an additional permitted use. This recommendation varies from the Draft Structure Plan controls which maintains the existing R4 zoning. This is in order to maintain consistency with the land zoning and RFBs between north and south Taverners Hill which fall within different former council areas and LEPs (RFBs are not permitted land use in R3 zoning under former Marrickville Council LEP).

Regarding FSR, our testing demonstrates that in order to achieve the PRCUTS and Draft Structure Plan FSR targets of 2.2:1, the resultant RFB would require 9 storeys which is not in keeping with the density or character of the area and would adversely impact the setting and views of nearby and adjoining heritage items and HCA (both existing and proposed). It would also be inconsistent with the height recommendation – there is a mismatch of proposed FSR and height controls in this location. The results of the testing support an FSR of 1.2:1 and 1.1:1. Architectus proposes an increased height of 18m (5 storeys) in order to attain this FSR on these sites, one of which is L-shaped and the other being quite a deep lot.

Existing LEP controls		
LZN	R4	
FSR	1:1 and 1.1:1	
НОВ	17m	
PRCU	TS recommendations	
LZN	R3 - Medium Density Residential	

LZN	R3 - Medium Density Residential
FSR	2.2:1
НОВ	17m

Draft Structure Plan Controls		
LZN	R4 - High Density Residential	
FSR	2.2:1	
НОВ	17m	

Final recommendations		
LZN	R3 - Medium Density Residential + RFB	
FSR	1.2:1 and 1.1:1	
НОВ	P3 - 18m (5 storeys)	





Floor Space Ratio Legend (n:1)

0 1.1 P 1.2



Maximum Building Height (m)

J2 9.5

M1 12

01 15

P3 18





Issue

Existing land use zoning, density and height has been retained for residential zoned land north of Parramatta Road however it is acknowledged that there may be potential to consider increased density and height - peer review advice is sought on appropriate zoning and built form controls. Noting PRCUTS recommends townhouses and terrace type dwellings for this area in the supporting guidelines.

Investigation area



LEP controls

The residential area to the north of Parramatta Road is currently zoned R1 Low Density Residential with 0.5:1 - 0.8:1 FSR. Currently there are no HOB controls in the LEP.

PRCUTS recommends increasing residential density in this area, upzoning to R3 Medium Density Residential, and up to 12m HOB and 1.4:1 FSR.

Draft Structure Plan controls

The IWC Draft Structure Plan controls under consideration support the existing LEP controls favouring lower density while recognising the potential for additional density in this area.

Existing LEP controls

LZN R1 - General Residential

FSR 0.5:1 - 0.8:1 (sliding scale applies)

HOB Controls undefined

PRCUTS recommendations

LZN R3 - Medium Density Residential

FSR 1:1 and 1.4:1 mix

HOB 12m and 8.5m mix

Draft Structure Plan controls under consideration



LZN R1 - Low Density Residential



FSR 0.5-0.8:1 (sliding scale applies)



HOB Controls undefined

Character

Housing and lots

- Low-scale post-war dwellings including semidetached and free standing cottages of historic housing character.
- More recent developments include medium-density two-storey terraces and townhouses as well as multiple high density apartments ranging from 4 to 8 storeys along Upward Street, 'Oasis Leichhardt' and 'Leichhardt Green Apartments'.
- Existing dwellings present as one and a half storeys along the streetscape, and are typically constructed of brick with pitched tiled roofs.
- Sites along Davies, Upward and Regent Streets have rear access.
- Lots are predominately narrow and deep.
- Streets predominately have a 3m front setback with soft landscaping and canopy trees forward of the building line.

Streets

- Streets are wide with generous footpaths and verges.
- Generally the streets are wide enough to accommodate on street parking on both sides and two lanes of traffic with the exception of George and Upward Streets in the east of the investigation area.
- Some front or rear driveway access. The recent development on Upward Street provides basement parking access from George Street.
- The streetscape is predominately leafy and green with significant mature tree coverage on the verges and streets.
- The Inner West Light rail and Greenway bounds the investigation area along the west and provides a green corridor.
- Interspersed through the area are local parks, playgrounds and schools that contribute to the neighbourhood's leafy character.







- 01 Beeson St, wide streets and green verges
- 02 Tebbutt St duplexes, green verges and front landscaped setbacks



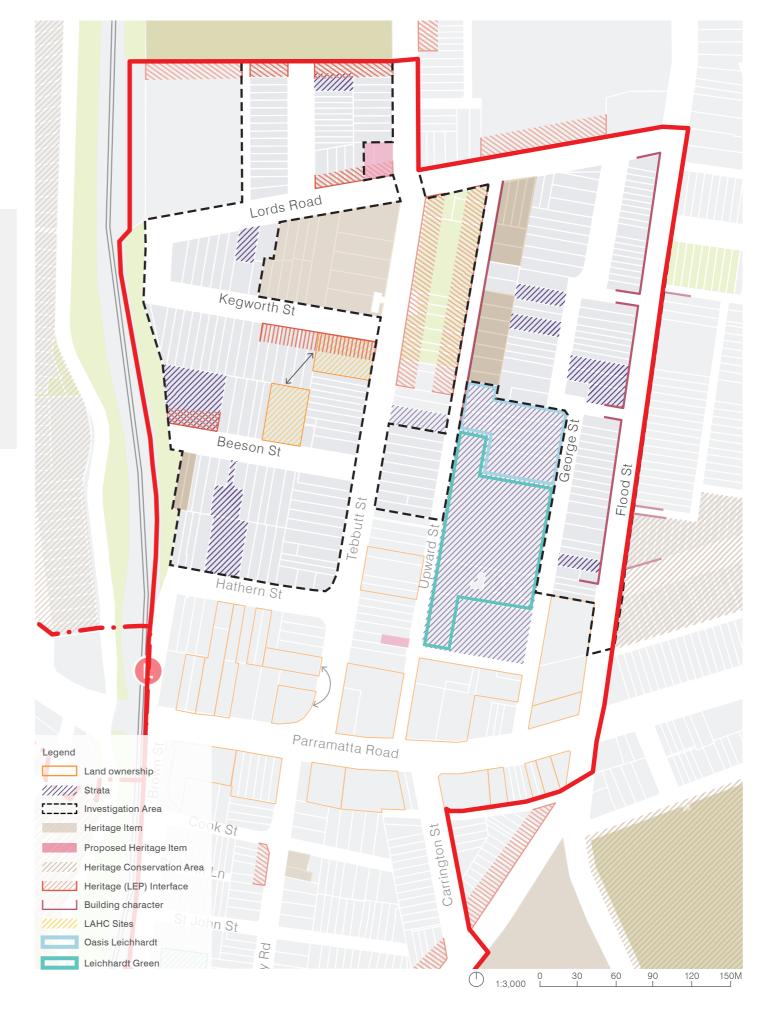
- 03 Beeson St LAHC Site
- 04 Treadgold St rear garages adjacent to front of dwellings on western side

Development constraints and opportunities

- Small residential lots under fragmented ownership.
- Minimal lots under strata.
- Single and dual access lots.
- The northern and southern parts of the investigation area are within a 400m walking distance from Marion Light Rail Station and Taverners Hill Light Rail Station, respectively.
- Access to the Greenway which runs along the entire western boundary of the investigation area.
- Investigation area is largely unconstrained by heritage items and heritage conservation areas with the exception of a row of heritage-listed cottages along the northern end of Upward Street and two dwellings on Beeson St.
- Sensitive interfaces to the heritage cottages along Upward Street and Kegworth Public School.
- The recent Oasis and Leichhardt Green developments provide a catalyst for higher density typologies.
- Through site link: an opportunity for a through site link has been identified between 37 and 39 Tebbutt St, which would also address overland flow. Note these are industrial zoned properties not within the investigation area.
- The typology testing and selected sites are subject to hydrological engineering advice, with regards to minimum landscaped area, setbacks and impacts of basement car parking.
- LAHC sites: 54-56 Tebbutt St currently has 14 dwellings. Turning this site over under the proposed controls won't substantially increase the yield therefore we recommend no change to this site.
 7 Beeson St currently has 10 dwellings; likewise turning this site over under the proposed controls won't substantially increase the yield. As a result, these sites have been excluded from our testing.

Preliminary ideas

- Opportunity for increased density close to Taverners Hill Light Rail Station.
- Opportunity for increased height in context of new high density development as well as industrial zone to the south of the investigation area.
- Explore consolidating density in key locations to retain existing fine grain character of remainder of the investigation area wherever possible.



Built form typology study

The following study has been undertaken to identify existing character and lot patterns including street frontage, lot depth and access, to inform requirements for subdivision and amalgamation and possible future built form typologies within the investigation area.

A study based on subdivision of lots with terrace/ townhouse typologies was initially tested (similar to residential area 1), as this typology was considered to be responsive to the fine grain character of the area.

However there were a number challenges to realise this approach including:

- ensuring that any additional floorspace would only go towards new dwellings as a result of subdivision
- impact on existing tree cover as lots get subdivided and redeveloped, particularly for subdivision down the site depth
- ensuring against the development of battle-axe subdivisions.

This testing is covered in "Appendix II - North Taverners Hill - Dwelling studies" on page 62.

In consultation between Architectus and Council, the above impacts were considered to be greater than the benefit in terms of dwelling yield of this development pattern. Subsequently, residential flat buildings on amalgamated lots, strategically located close to Taverners Hill light rail stop, have been proposed as the preferred approach.

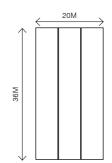
Character

To retain the existing character of the investigation area, two blocks bounded by Kegworth Street, Tebbutt Street and Hathern Street, as well as part of the eastern block of Tebbutt Street have been strategically selected for increased residential density given these blocks' proximity to public transport.

The relatively deep lots (approximately 45m) allow ample open space for tree cover while increasing the dwelling yield in the precinct. The relatively low building footprint (compared to 1-2 storey multi dwelling housing), in addition to greater potential for retention of existing tree cover, would be beneficial to overland flow constraints in the area. Furthermore the wide streets (Kegworth St and Beeson St are 20 metres wide), with green front setbacks can accommodate this increase in height and density.

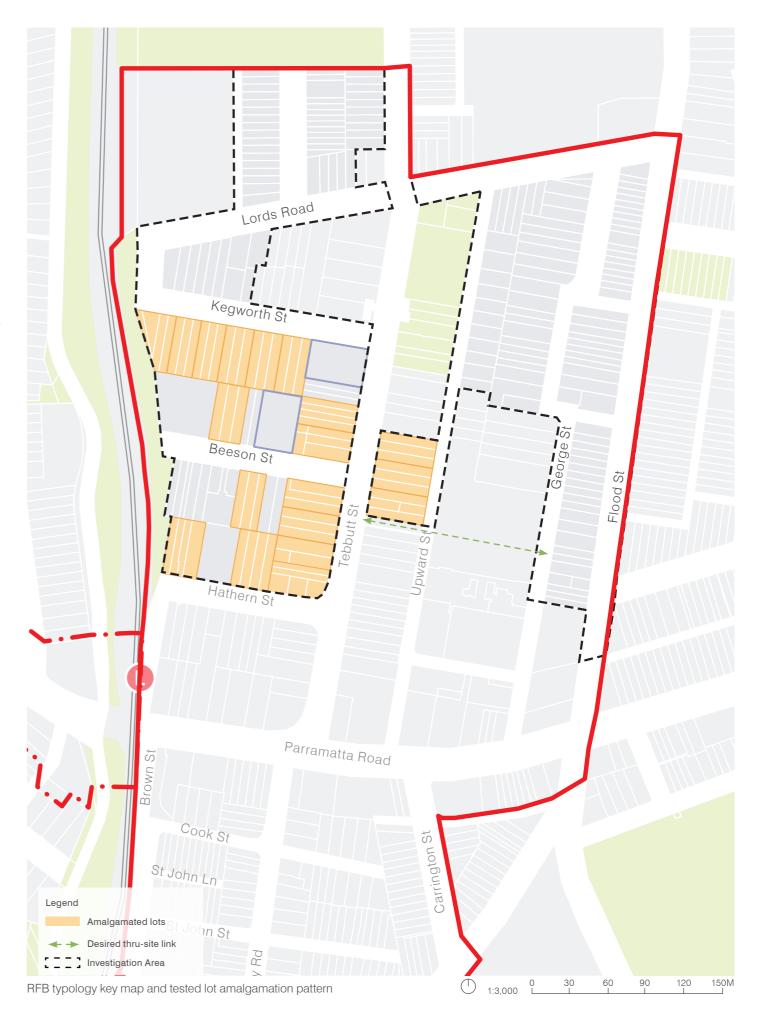
Amalgamation assumptions

Minimum 20m street frontage (typical 3 lot amalgamation) and minimum 36m lot depth.



Proximity to public transport

The proposed blocks for residential flat buildings are located within 800 metres walking distance to Taverners Hill Light Rail stop.



Precedent images









- 01 1538-1540 High St, Glen Iris, Ewert Leaf

- Harold Park, Mirvac
 Channel 9 Site Masterplan, CHROFI
 10 St George Road, Elsternwick, Ewert Leaf

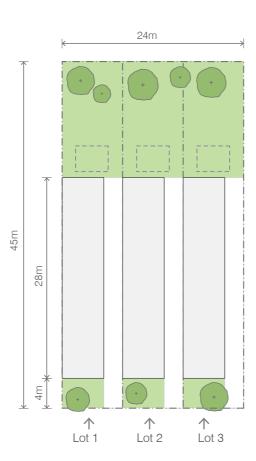
Built form typologies

RFB Type 1 - Narrow infill apartment

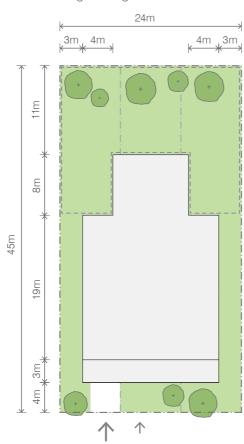
The following RFB typology is based on the amalgamation of 3-4 existing lots. This typology is adaptable to deep sites and amalgamation of lots with narrow frontages; this typology ensures a regular street pattern. This typology is based on the Narrow Infill Apartment (ADG Appendix 4). This typology maintains existing street character through landscaped front setbacks, reduces driveway crossovers, and retains existing vegetation at the rear.







Plan of existing dwellings and lots



Plan of proposed RFB typology

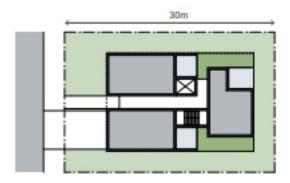
Existing dwellings' metrics

Lot	1	2	3
FSR as built	0.4:1	0.4:1	0.4:1
Max FSR (under	0.6:1	0.6:1	0.6:1
existing LEP)			
Site width	8m	8m	8m
Site depth	45.8m	45.8m	45.8m
Site area	367m ²	367m ²	367m ²
GFA	131m ²	131m ²	131m ²
Height	5m	5m	5m
Site coverage	40%	40%	40%
Private open space	122m ²	122m ²	122m ²
Front setback	4m	4m	4m
Rear setback	15m	15m	15m
Side setback	0-2.5m	0-2.5m	0-2.5m
Upper level	N/A		
setback			
Street wall	1 storey		
Parking	On-street	Off-street	On-street
Landscaped area	40%	40%	40%
No. of dwellings	1	1	1

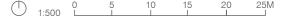
Proposed RFB metrics

	3 storey	4 storey
FSR	1:1	1.4:1
Site width	24m	
Site depth	45m	
Site area	1,080m ²	
GFA	1,030m ²	1,470m ²
Height	11.7m	14.8m
Site coverage	44%	48%
Communal open space	376m ²	368m
Front setback	4m	4m
Rear setback	min. 6m	min. 6m
Side setback	min. 3m	min. 3m
Upper level setback to the topmost storey from building line	3m	3m
Street wall	2-storey	3-storey
Parking	Basement	Basement
Landscaped area	10% deep soil	(ADG
-	recommendat 650-1500m²)	ion for sites
No. of dwellings	13	18





Indicative apartment plan Source: Apartment Design Guide, 2015



Built form typologies

RFB Type 1 - Narrow infill apartment

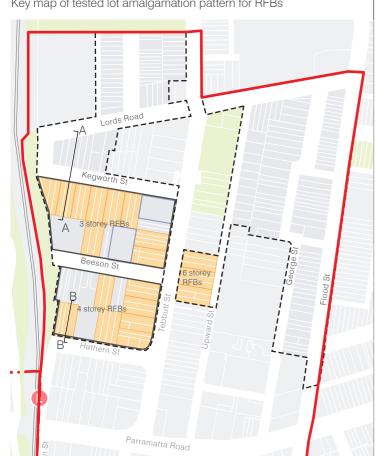
General parameters for typology:

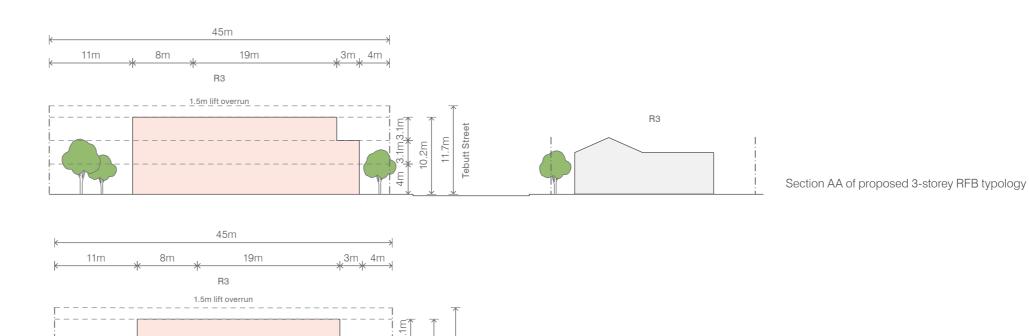
- Lot depth 45m
- Lot size approximately 1,000m²
- Street frontage 20m min..
- Access & Car parking -Driveway to basement car-park

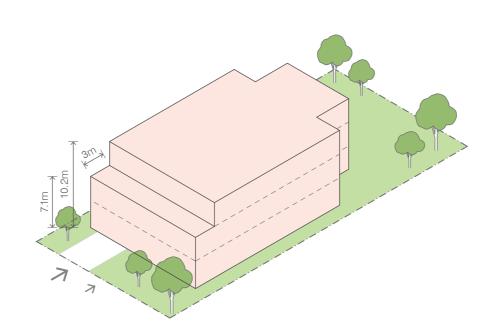
Note the sites tested (typically 3-lot amalgamations) meet the minimum recommended parameters for this RFB typology below:

- Min.. lot size 720m²
- Min. street frontage 20m

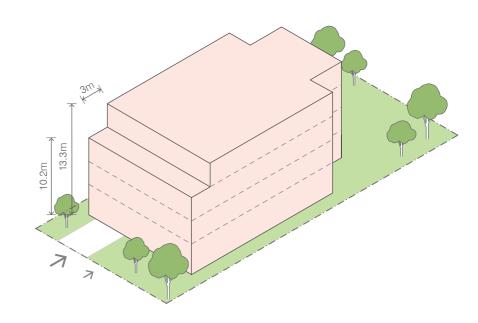
Key map of tested lot amalgamation pattern for RFBs











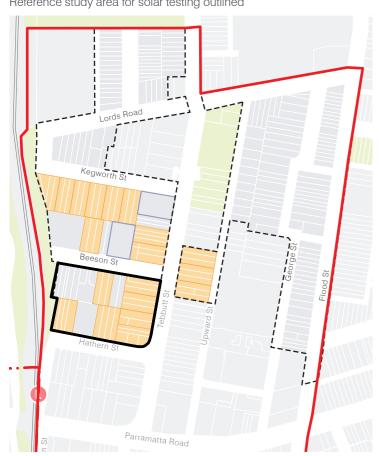
Axo of proposed 4-storey RFB typology

Section BB of proposed 4-storey RFB typology

Overshadowing testing - 21st June (winter solstice)

Overshadow testing was undertaken for winter solstice, between 9AM to 3PM for potential future scenario of 4-storey RFBs in the block between Beeson and Hathern St. It indicates that it is possible for lots adjacent to proposed RFBs to retain solar access to private outdoor space and communal open space (50% of communal open space to achieve 2 hours between 9AM-3PM at winter solstice).







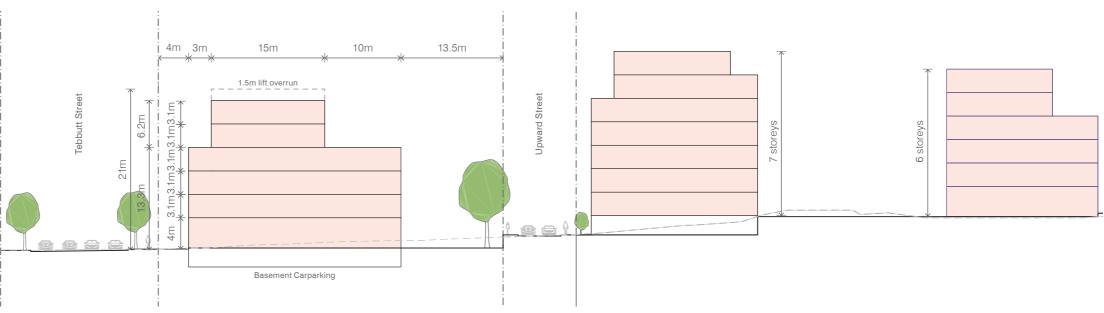






Tebbutt St 6-storey RFBs

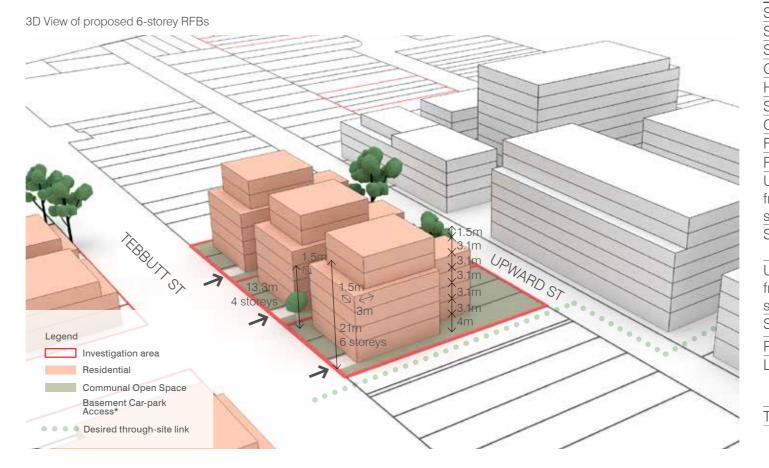
The section diagram (on the right) indicates that proposed 6-storey RFBs on Tebbutt St can mediate the existing high-rise Leichhardt Green development on George Street. Overlooking issues can be mitigated through 6m rear (Upward St) setbacks. Planting this zone with trees and providing for fence/screening on the Upward St boundary side can assist with direct overlooking issues from the neighbouring development. The 4-storey street wall with upper 2 storeys set back 3m on Tebbutt St responds to the proposed 3-storey and 4-storey RFBs in the two blocks between Hathern and Kegworth St.



Section through Tebbutt and Upward St block with proposed RFB

Key map of proposed indicative lot amalgamation pattern for RFBs





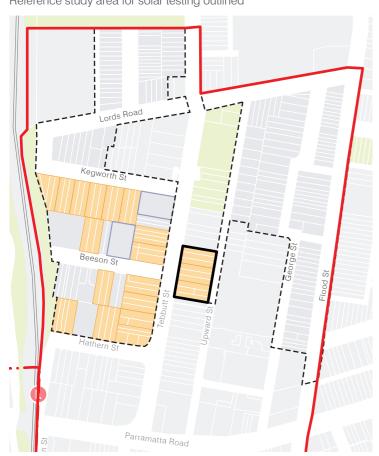
Proposed RFB metrics

Proposed RFB metrics	
FSR	1.5:1
Site width	23m
Site depth	45m
Site area	1035 sqm
GFA	1515 sqm
Height	21m (6 storeys)
Site coverage	39%
Communal open space	460 sqm
Front setback to Tebbutt St	4m
Rear setback to Upward St	13.5m
Jpper level front setback	3m
rom building line to 5/6th	
storey (Tebbutt St)	
Side setback	min 3m, additional
	1.5m to 5/6th storey
Jpper level rear setback	10m (or as required
rom building line to 5/6th	to satisfy ADG
storey (Upward St)	requirements)
Street wall	4-storey
Parking	Basement
_andscaped area	10% deep soil (ADG
	recommendation for sites
	650-1500m²)
Total no. of dwellings	19
1:500	15 20 25M

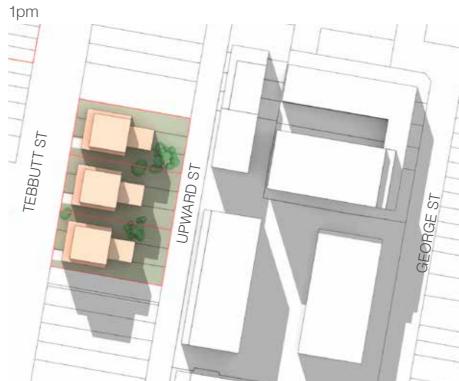
Overshadowing testing - 21st June (winter solstice)

Overshadow testing was conducted for winter solstice (21st June), between 9AM to 3PM. It indicates that it is possible for the proposed 6-storey RFBs to achieve solar access to apartments and communal open space as per ADG requirements.

Reference study area for solar testing outlined













Recommendations

LEP recommendations

The key recommendation in this investigation area is to uplift two blocks between Hathern St and Kegworth St, as well as the lots between Tebbutt St and Upward St to permit RFBs. It is recommended these blocks be upzoned to R3 with RFBs as a permitted land use.

It is recommended that the block between Hathern and Beeson St permit 4 storey RFBs (corresponding with FSR 1.4:1) due to:

- its proximity to the Taverners Hill Light Rail
- having no detrimental impact to surrounding character as the block is adjacent to IN2 zoned areas.

The block between Beeson and Kegworth St is recommended for 3 storey RFBs (corresponding with FSR 1:1) to respond to the proposed retention of R2 zoned area to the north.

The block between Tebbutt St and Upward St within the residential investigation area is recommended for 6 storey RFBs (corresponding with FSR 1.5:1) due to:

- its adjacency to R4 and B4 developments (Oasis, and Leichhardt Green) which are up to
- its proximity to the Taverners Hill Light Rail stop

Architectus recommends retaining the R1 -General Residential for the remainder of the investigation area, as per the existing LEP and Draft Structure Plan. The HOB and FSR for the remainder of the study area is recommended for no change, to be consistent with the R1 zoning just outside the PRCUTS Core Area (LLEP 2013 area). This is to retain the existing fine grain housing character of the area.

Note existing FSRs are recommended to be retained for heritage items.

Existi	ng LEP controls
1 7NI	R1 Conoral Regidential

LZN	RT - General Residential		
FSR	0.5:1 - 0.8:1 (sliding scale applies)		

HOB Controls undefined

PRCUTS recommendations

LZN	R3 - Medium Density Residential
FSR	1:1 and 1.4:1 mix

HOB 12m and 8.5m mix

Draft Structure Plan Controls

LZN	R1 - General Residential
FSR	0.5:1 (sliding scale applies)
HOB	Undefined

Final recommendations

LZN	R1 - General Residential; R3 + RFB
	Medium Density Residential

FSR 0.5:1 (R2) (LLEP sliding scale to be retained), N-1:1 (3 storeys R3 + RFBs), 1.4:1 (4 storeys R3 + RFBs), 1.5:1 (6 storeys R3 + RFBs)

HOB 12m (3 storeys, R3 + RFBs), 15m (4 storeys, R3 + RFBs), 21m (6 storey R3 + RFBs), Undefined (for remainder of study area)

Residential yield

	No. of dwellings
Maximum capacity under existing controls	586
Maximum capacity under recommended controls	955
Additional capacity under recommended controls	370

Note refer to "Dwelling and Employment Yield Calculations" on page 44 for methodology

Land Zoning

B6 Enterprise Corridor

General Residential

R2 Low Density Residential

Medium Density Residential



Floor Space Ratio Legend (n:1)

0.5





S1 1.5



Maximum Building Height (m)

J2 9.5

K2 10.5

M1 12

01 15

P2 17.5 P3 18

R1 21

U 32





Issue 1

Proposed B6 sites to the north of Parramatta Road recommended for increased FSR and height - peer review advice sought.

Investigation area



LEP controls

The group of lots to the east of Taverners Hill light rail stop are proposed as B6 Enterprise Corridor with an accompanying uplift in FSR, in Council's Draft Structure Plan.

PRCUTS' proposes changing these lots' zoning to R3 - Medium Density Residential. Council's Draft Structure Plan retains the remainder of the block as IN2, as recommended in IWC Employment and Retail Lands Strategy.

Existing	LEP	controls

LZN R1 Low Density Residential

FSR 0.5:1 - 0.8:1 (sliding scale applies)

HOB Undefined

PRCUTS recommendations

LZN R3 Medium Density Residential

FSR 1.4:1

HOB 17m

0

Recommendation

Based on testing (refer to Appendix III) it is difficult to obtain a workable B6 site at Hathern and Brown Streets. It is recommended that Council consider investigation of this entire block in a holistic way.

Draft Structure Plan controls under consideration



LZN B6 Enterprise Corridor



FSR 2:1



HOB 16m



Issue 2

Advice sought on the appropriate built form controls for B6 zoned areas considering the interface with the residential areas to the rear of B6, and ensuring minimal amenity impacts on the residential properties, especially to the south of Parramatta Road.

Investigation area



LEP controls

This investigation area which consists of employment uses along the north and south side of Parramatta Road is currently zoned B6 Enterprise Corridor with an FSR of 2:1 and HOB of 15m.

PRCUTS supports both the existing zoning and FSR but recommends increasing the existing height control of 15m to 16m.

Draft Structure Plan controls

The IWC Draft Structure Plan controls under consideration support all PRCUTS recommendations.

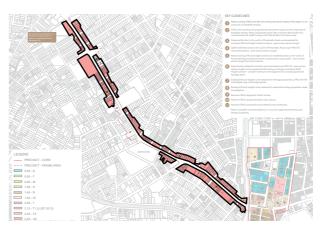
Existing LEP controls		
LZN	B6 Enterprise Corridor	
FSR	2:1 (south of Parramatta Road) and 1.5:1 (north of Parramatta Road)	
НОВ	15m (south of Parramatta Road) and 10m (north of Parramatta Road)	

PRCUTS recommendations		
LZN	B6 Enterprise Corridor	
FSR	2:1	
НОВ	16m	

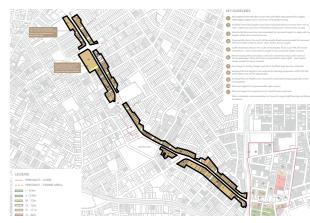
Draft Structure Plan controls under consideration







FSR 2:1



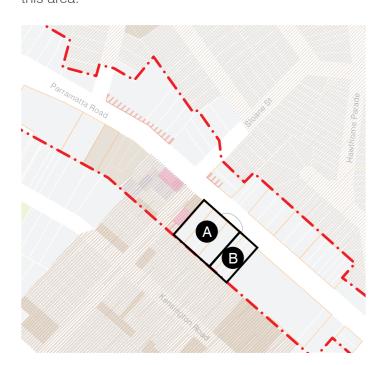
HOB 16m

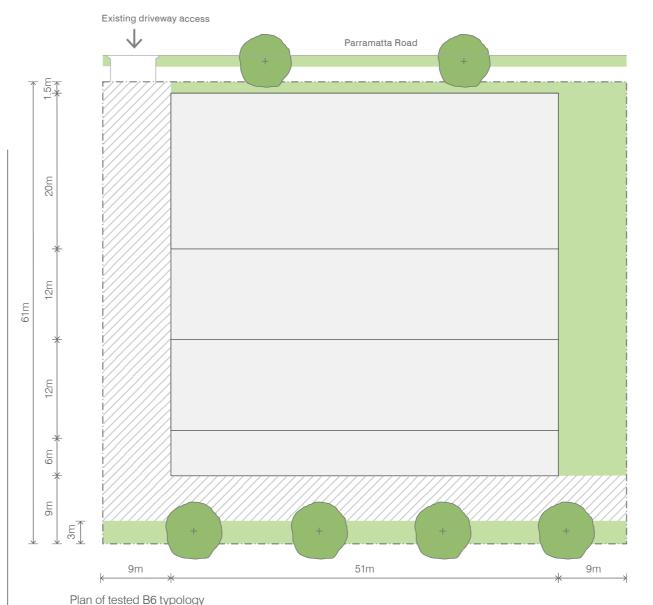
B6 Typology testing

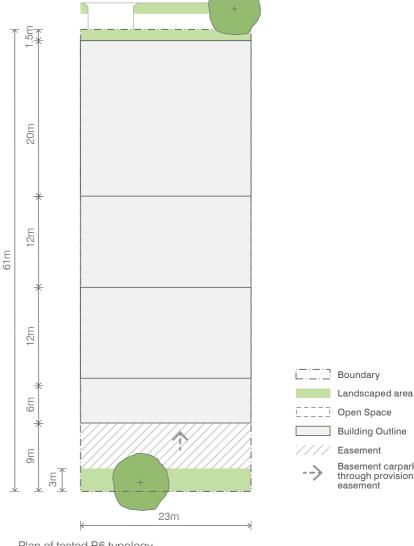
The two sites were studied (1 at >2000m² and the other at <2000m²) as this block encompasses a number of conditions which are prevalent throughout the Taverners Hill Frame Area:

- R2 zoned area to the south and to the west of Site A, some with large green setbacks and some adjacent lots with no setback
- the adjacent residential is a heritage conservation
- adjacent v48 Parramatta Road a heritage item.
- adjacent B6 zoned lots to the west are existing and proposed heritage items
- there will be mid-winter overshadow impact as the B6 zone is to the north of the R2 zoned area

These have been tested as a typology which includes smaller floorplate commercial uses over the ground floor as this is likely to achieve the highest FSR on potential sites. It is noted that other typologies of upper storey configuration may also be proposed in this area.







Existing driveway access

Parramatta Road

Plan of tested B6 typology

Sites >2000m² metrics

2:1
69m
61m
4231m ²
8357m ²
17.3m (4 storeys)
1.5m
9m with additional 6m to 3rd storey
9m
4 storey
61%
Basement



Sites <2000m² metrics

Sites <2000iii illetiit	.5
FSR	2:1
Site width	22.5m
Site depth	61m
Site area	1377m ²
GFA	2736m ²
Height	17.3m (4 storeys)
Front setback	1.5m
Rear setback	9m with additional 3m to 3rd storey
Side setback	0m
Street wall	4-storey
Site Coverage	83%
Parking	Basement

Building Outline

Basement carpark a through provisional

Overshadowing testing - 21st June (winter solstice)

The below overshadowing testing diagrams indicate that the recommended setbacks and building envelope for B6 zones maintains solar access to adjacent dwellings' private outdoor space and living areas for 2 hours between 9am-3pm on 21st June.



B6 Typology testing

The following study, within the B6 Frame Area was undertaken on the block between Dalhousie Street and Rogers Avenue on the north side of Parramatta Road. The two sites were based on land ownership. The constraints of this site which warranted testing include:

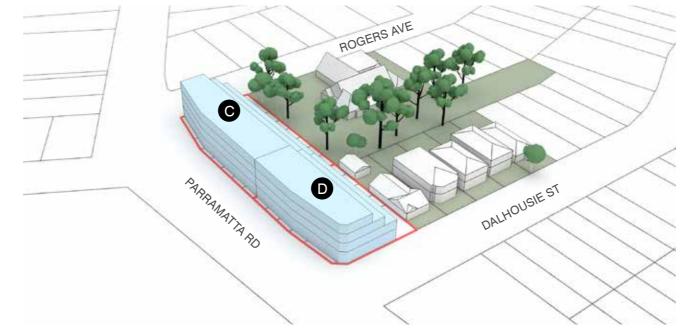
- adjacent to a heritage item on Rogers Ave
- adjacent to an R2 zone consisting of 1-2 storey detached dwellings and RFBs
- adjacent to heritage conservation area

Note that whilst the testing shows that FSR 2:1 is generally achievable on these sites, the maximum FSR may not be appropriate in instances where:

- sites are adjacent to heritage items/ Haberfield Heritage Conservation Area until further heritage investigation is undertaken
- sites to the south of Parramatta Road which cannot provide sufficient setbacks to low density residential area and may adversely impact on the solar amenity of these properties. This may be the case for properties which run parallel to Parramatta Road at the intersections with Parramatta Road.

Key map of tested sites in Taverners Hill north frame area



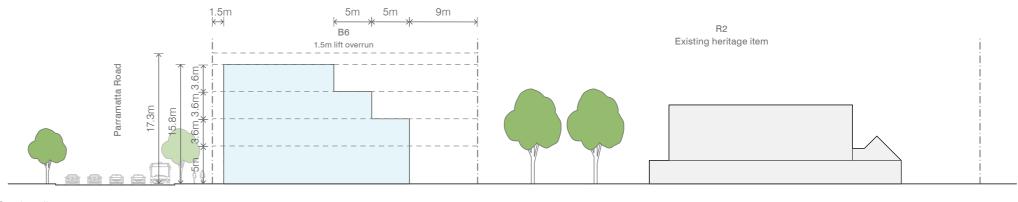


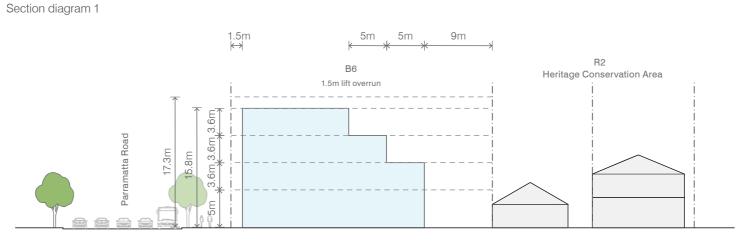
3D of B6 development on tested sites

Section diagram 2

B6 metrics

Site	С	D
FSR	2.1:1	2.1:1
Site width	61m	45m
Site depth	35m	35m
Site area	2084m²	1536m ²
GFA	4370m ²	3209m ²
Height	17.3m (4 storeys)	17.3m (4 storeys)
Front setback	1.5m	1.5m
Rear setback	9m with additional 5m from 3rd storey onwards	9m with additional 5m from 3rd storey onwards
Side setback	0m	0m
Site Coverage	70%	70%
Street wall	4 storey	
Parking	Basement car parking	





Overshadowing testing - 21st June (winter solstice)

The below overshadowing impact of a B6 development is primarily on Parramatta Road on 21st June. The below diagrams indicate that the recommended setbacks and building envelope for B6 zones maintains solar access to adjacent dwellings' private outdoor space and living areas for 2 hours between 9am-3pm on 21st June.

Site C & Site D

9am 11am 1pm



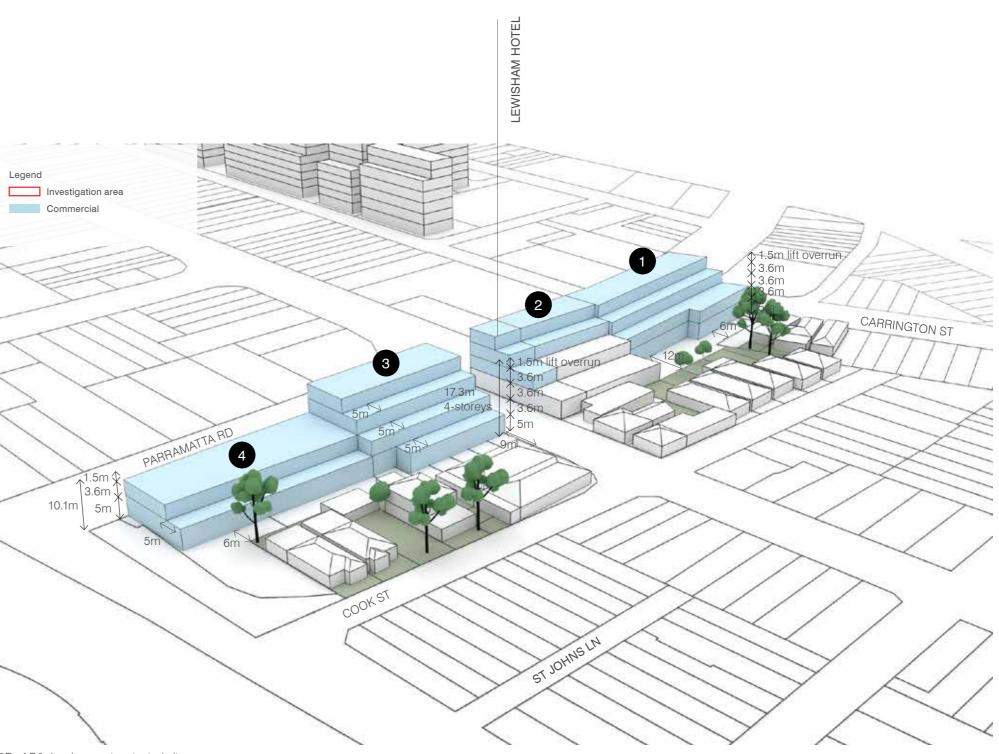
B6 Typology testing - south Taverners Hill

The following testing indicates the FSR in Council's Draft Structure plan is achievable on Sites 1-3. The recommended height is 4 storeys (maximum 17.5m) for sites 1-3. This proposed maximum building height can maintain adequate solar access to adjacent residential zoned lots' open space and living areas.

Site 4 would encounter difficulty reaching the FSR without having an undesirable overshadowing impact on adjacent residential lots to the south due to the shallow depth of this site, and the L-shaped lot to the west. The recommendation for Site 3 is 2-storeys max. height and FSR 1:1.

B6 metrics

Site	1	2	3	4
FSR	2:1	2:1	2:1	1.2:1
Site area (m²)	1,836m²	1,175m ²	1,335m ²	1,650m ²
GFA (m²)	3,651m ²	2,350m ²	2,615m ²	1,913m ²
Height (m)	17.3m	17.3m	17.3m	10.1m
Height (storeys)	4	4	2	4
Site coverage	70%	100%	59%	73%
Front setback (m)	0m	0m	0m	0m
Rear setback (m) (6-12m)	6m	N/A	6m	6m
Upper setback at rear (m)	5m	5m	5m	5m
Side setback (m)	0m	0m	0m	0m
Street wall	4 storey	4 storey	4 storey	2 storey
Parking	Basement car parking			



3D of B6 development on tested sites

Overshadowing testing - 21st June (winter solstice)

The following diagrams demonstrate that the proposed height and density, maintains solar access to the neighbouring R2 zoned dwellings to the south. (50% of private open space and living areas maintaining minimum 2 hours between 9am-3pm on 21st June).









1pm







Recommendations

LEP recommendations

Architectus generally supports the draft structure plan controls and PRCUTS FSR of 2:1. The FSR and height of B6 sites at the west end of the block on Old Canterbury Road are to be increased to 1.2:1 and 10.5m as any higher FSR/height would not be appropriate due to limited block depth, and setback for visual amenity and overshadowing to the R2 zoned lots to the immediate south.

Maximum height of building is recommended to be 17.5m to correspond with the tested B6 building form of 4 storeys.

As stated previously, the proposed B6 on the Hathern St, Tebbutt St block is recommended to be reconsidered and further investigated in a more holistic way with the rest of the IN2 zoned block. The proposed B6 in south Taverners Hill area is recommended to have no change to FSR and HOB.

The FSR and HOB of Taverners Hill Frame area is recommended to be increased to 2:1 and 17.5m. However, this maximum FSR and height may not be achievable for some sites as discussed earlier in this section.

Note - refer to Kings Bay package for advice regarding 'green edge setbacks' - the recommendations of which also apply to this investigation area.

Existing LEP controls		
LZN	B6 Enterprise Corridor	
FSR	2:1	
HOB	15m	

PRCUTS recommendations		
LZN	B6 Enterprise Corridor	
FSR	2:1	
HOB	16m	

Draft Structure Plan Controls		
LZN	B6 Enterprise Corridor	
FSR	2:1	
НОВ	16m	

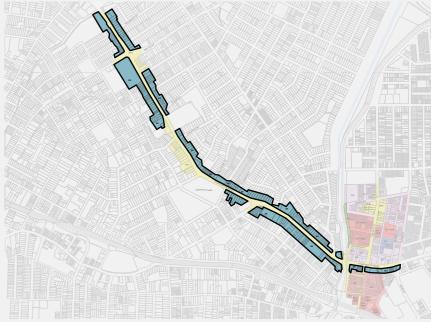
Final recommendations		
LZN	B6 - Enterprise Corridor	
FSR	1.2:1, 2:1	
HOB	10.5m, 17.5m	

Land Zoning

B6 Enterprise Corridor

R2 Low Density Residential

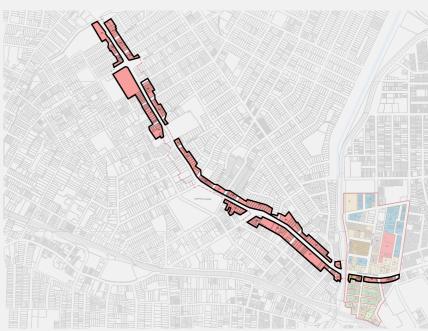
R3 Medium Density Residential



Floor Space Ratio Legend (n:1)

P 1.2

T1 2



Maximum Building Height (m)

J2 9.5

K2 10.5

M1 12

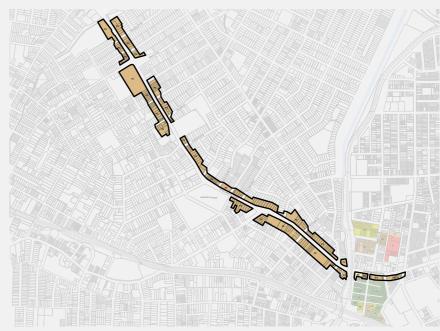
01 15

P2 17.5

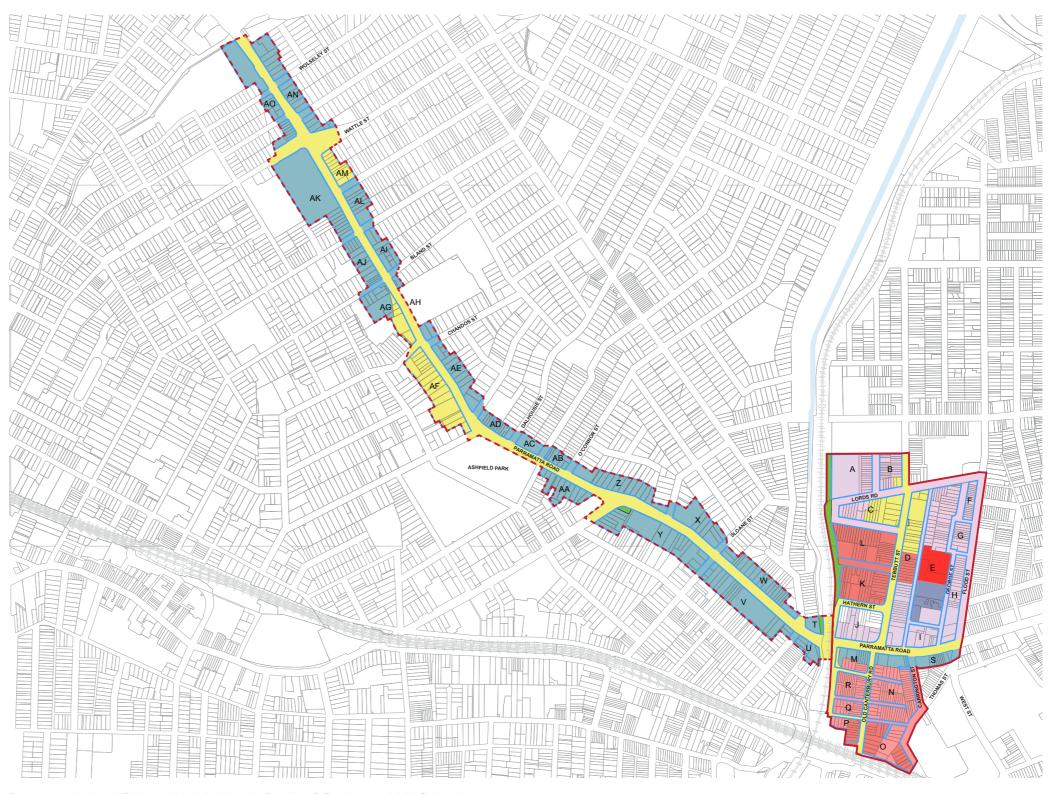
P3 18

R1 21

U 32



1.7 Dwelling and Employment Yield Calculations



Recommended Land Zoning with block labels for Dwelling & Employment Yield Calculations

Block outline

A Block ID

Land Zoning

B4 Mixed Use

B6 Enterprise Corridor

IN2 Light Industrial

R1 General Residential

R2 Low Density Residential

R3 Medium Density Residential

SP2 Infrastructure

Opportunity Sites - B6 + Residential

Dwelling and Employment Yield Calculations

Employment Yield Assumptions

Zone	GFA sqm per employee
B2 Local centre	22
B4 Mixed Use	28
B6 Enterprise Corridor	38
IN2 Light Industrial	98

Commercial/Residential ratio

	% Commercial of Total GFA	% Residential of Total GFA
B6	100	0
B6 + Residential	30*	70
B4	30*	70
IN2	100	0

^{*30%} of total GFA for commercial is an average percentage based on tested opportunity sites

Dwelling Yield Assumptions

Average Dwelling size

Apartment Mix	Mix	Dwelling size NLA/NSA (m²)	GFA (m²)
1 bedroom	30%	50	59
2 bedroom	55%	70	82
3 bedroom	15%	90	106
Average dwelling size	100%	67	79

Commercial/Residential ratio

Land zoning	% Commercial of Total GFA	% Residential of Total GFA
B6	100	0
B6 + Residential	30	70
R3	0	100
B4	30	70
IN2	0	100
R4	0	100
R1	0	100

Methodology

- Dwelling yield has been calculated based on FSR x block (or part of block area for which FSR is applicable to) / average dwelling size (79m² GFA).
- Employment yield has been calculated based on FSR x block (or part of block area for which FSR is applicable to) / GFA (m²) per employee according Land Zoning and as per table on this page.
- For R1 General Residential and R2 Low Density Residential, the total number of landholdings that could be converted to be either dual occupancy, accommodate a secondary dwelling or subdivision with an additional dwelling was assessed. A minimum lot size for either of the previous options was assumed to be 450sqm. R2 Low Density land in Heritage Conservation Areas above 450sqm can accommodate a secondary dwelling under current controls. For each applicable landholding, an additional dwelling was assumed in the theoretical capacity.
- Employment yield is lost due to WestConnex.
- The Beeson St heritage items even though part of the block proposed for rezoning to R3 (with RFBs a permitted land use) have been applied with the <450m² versus >450m² methodology (see below). Both lots are less than 450² so there is no difference between existing and proposed controls' yields.

Dwelling and Employment Yield Calculations

Summary of existing and proposed employment capacity			
Proposed employment GFA capacity	390615m ²		
Existing Employment GFA capacity	390092m ²		
Net additional employment GFA capacity	523m ²		
Proposed employees capacity	9792		
Existing employees capacity	9746		
Net additional employee capacity	46		

Summary of existing and proposed dwelling capacity		
Proposed residential GFA capacity	111868m²	
Existing residential GFA capacity	89606m ²	
Net additional residential GFA capacity	22262m ²	
Proposed dwelling capacity	1243	
Existing dwelling capacity	810	
Net additional dwelling capacity	433	

1.8 Summary of recommendations

Issue	Architectus recommendations	Further controls for LEP/DCP
Residential Investigation Area 1 - Issue Provide medium density residential to the south of Parramatta Road Peer review advice is sought on the proposed zoning and built form controls. Noting PRCUTS recommends townhouses and terrace type dwellings for this area in the supporting guidelines.	Land Use - R2 - Low Density Residential, R3 + RFB - Medium Density Residential FSR - 0.6:1 - 1.1:1 for R2, 1:1 for R3 + RFB Height - 9.5m (2 storeys), 12m (3 storeys), 15m (4 storeys)	 min 20m street frontage min site area 720m² for residential flat buildings redevelopment to follow lot amalgamation pattern identified in previous section on this issue; any proposal to redevelop that does not follow pattern to be assessed on a case by case basis landscaped zone within 4m front setback 7m minimum rear setback deep soil and communal open space as per ADG requirements 2 storey street wall with 3m front upper storey setback building façades to be articulated to reflect
Residential Investigation Area 2 - Issue 35-53 Old Canterbury Road, Lewisham Facilitate higher density residential uses in line with PRCUTS recommendations given the good proximity to public transport - peer review advice is sought regarding the appropriate density, height and built form controls.	Land Use - R3 + RFB - Medium Density Residential FSR - 1.1:1, 1.2:1 Height - 18m (5 storeys)	 existing grain (12m) 6m front setback with 3m landscaped private open space provide individual entrances to ground level terraces off street 6m minimum rear setback deep soil and communal open space as per ADG requirements 2 storey street wall with 3m front and side upper storey setback building façades to be articulated to reflect existing grain (12m)

Summary of recommendations

Residential Investigation Area 3 - Issue Existing land use zoning, density and height has been retained for residential zoned land north of Parramatta Road however it is acknowledged that there may be potential to consider increased density and height - peer review advice is sought on appropriate zoning and built form controls. Noting PRCUTS recommends townhouses and terrace type dwellings for this area in the supporting guidelines.	Land Use - R1 - General Residential, R3 + RFB - Medium Density Residential FSR - 0.5:1 - 0.8:1 for R1 area, 1:1, 1.4:1, 1.5:1 for R3 + RFB Height - Undefined for exiting R1 area, 12m (3 storeys), 15m (4 storeys), 21m (6 storeys) Retain existing FSR/height controls for existing heritage items	 min. 20m street frontage min. site area 720m² for residential flat buildings redevelopment to follow lot amalgamation pattern identified in previous section on this issue; any proposal to redevelop that does not follow pattern to be assessed on a case by case basis landscaped zone within 4m front setback 6m minimum rear setback
		 deep soil and communal open space as per ADG requirements 2-4 storey street wall with front upper storeys setback 3m side setbacks as per ADG building façades to be articulated to reflect existing grain of south side of Dalmar St (12m lot widths)
B6 Investigation area - Issue 1 Proposed B6 sites to the north of Parramatta Road recommended for increased FSR and height - peer review advice sought.	No changes to existing LEP controls are proposed.	- Based on testing (refer to Appendix III) it is difficult to obtain a workable B6 site at Hathern and Brown Streets. It is recommended that Council consider investigation of this entire block in a holistic way.
B6 Investigation area - Issue 2 Advice sought on the appropriate built form controls for B6 zoned areas considering the interface with the residential areas to the rear of B6, and ensuring minimal amenity impacts on the residential properties, especially to the south of Parramatta Road.	Land Use - B6 - Enterprise Corridor FSR - 1.2:1, 2:1 Height - 10.5m (2 storeys), 17.5m (4 storeys)	 2-4-storey street wall 6-9m rear setback to first two storeys, additional 5m for every upper storey where development is directly adjacent to residential zoned area to rear (for Sites 3 and 4, refer to page 41) where development is backing onto a lane, demonstrate solar access requirements to adjacent residential dwellings can be achieved where development is close to adjacent heritage items or conservation area, demonstrate that development is designed sympathetic to heritage - 1.5m green edge setback for Frame Area



Appendix I - South Taverners Hill - Dwelling studies

Built form typology study and assumptions

The following study has been undertaken to identify lot patterns including street frontage, lot depth and access, to inform requirements for subdivision and amalgamation and possible future built form typologies within the investigation area.

To retain the fine grain character of the area, in line with the recommendations of PRCUTS, subdivision of single lots and terrace/townhouse typologies have been explored as a preference to amalgamation and

Subdivision/amalgamation assumptions and development approach

Lot Depth and access

Dwelling on front/back subdivided dual access lots

1 Development approach: Lots with a depth greater than 30m and dual access can be horizontally subdivided, allowing a dwelling on a minimum 15m single lot depth.

Street frontage

Dwelling on subdivided single access lot

2 Development approach: Lots with a minimum street frontage of 9m can be vertically subdivided, allowing for a dwelling with a minimum 4.5m single street frontage.

Subdivision Amalgamation Width Length Width



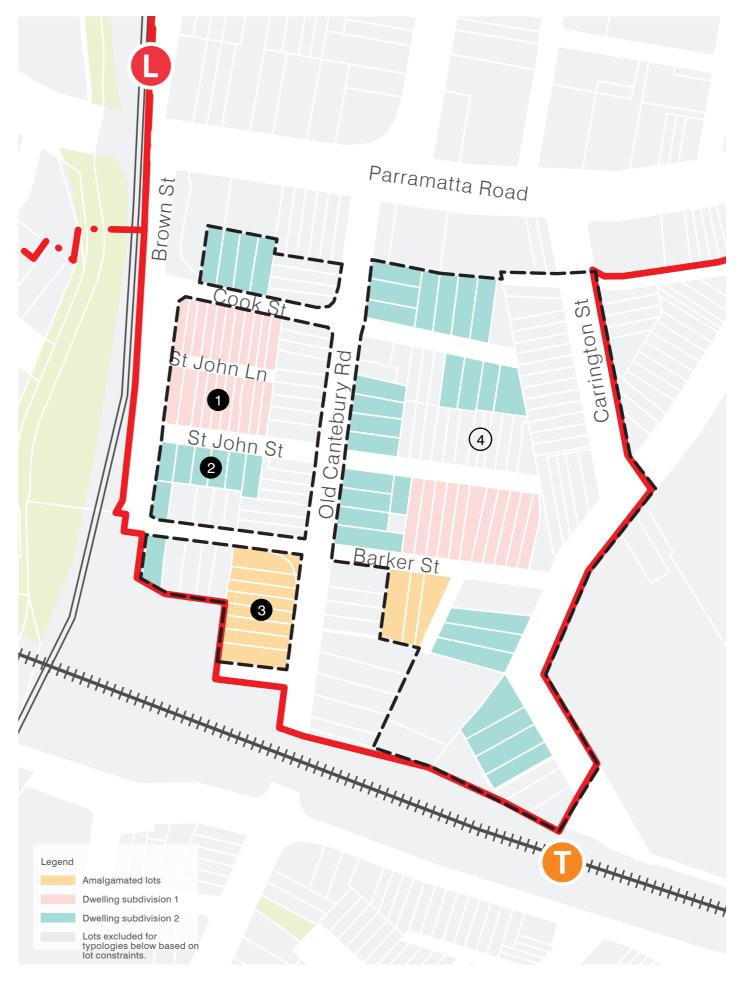
Residential Flat Building on amalgamated sites with basement car parking

Lots can be amalgamated to provide 18m-24m street frontage while maintaining a regular pattern of built form responsive to the fine grain character of the area, and meeting the minimum frontage for a driveway to basement car parking. These have been co-located with the area zoned for R4 - High Density Residential to maintain a consistency in built form and density in south Taverners Hill close to the Lewisham Railway Station.

Other

Lots that do not meet minimum lot depth or street frontage requirements

The lots indicated in grey are either too narrow i.e. less than 9m street frontage or too shallow i.e. less than 30m deep, to allow for subdivision for an additional dwelling. Multi-dwelling terrace housing was considered for these lots but ultimately does not return substantial yield to justify the removal of existing character housing.



Built form typologies











03 Residential flat building, Glen Iris Ewert Leaf

04 Harold Park, Mirvac

Appendix I - South Taverners Hill - Dwelling studies



Dwelling on front/back subdivided dual access lot

Minimum lot depth for subdivision

30m. Horizontal pattern of subdivision will convert existing backyard into a new lot and dwelling of minimum 15m depth.

Parking

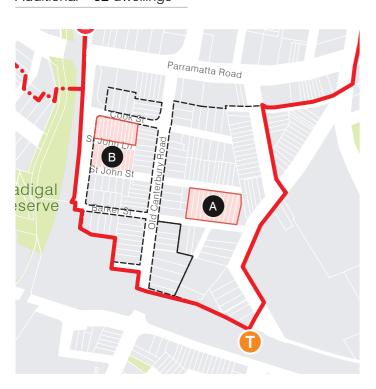
Zero off street car parking is proposed for subdivided lots given proximity to public transport. On-site parking would have an adverse impact on the character of the area and pedestrian amenity, including loss of trees, interrupted footpath, and the loss of street parking.

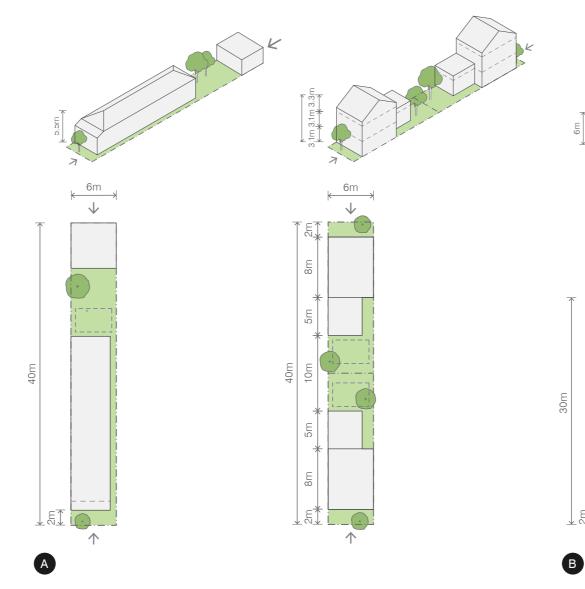
Vegetation

This subdivision pattern is most likely to impact existing vegetation in the backyard. Extra care should be taken to retain existing vegetation and mature trees wherever possible. Will not impact front setback.

Residential yield

Existing	32 dwellings
Additional	32 dwellings





Existing

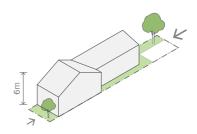
FSR	0.4:1
Max. FSR (under	0.9:1
existing LEP)	
Site width	6m
Site depth	40m
Site area	240m ²
GFA	97m ²
Height	5.5m
Site coverage	48%
Private open space	Min. 16m ²
Front setback	2m
Rear setback	0m
Side setback	1m
Parking	Off street
Landscaped area	43%

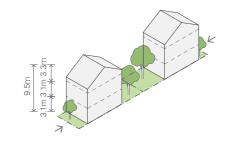
Proposed

FSR	1:1
Site width	6m
Site depth	20m
Site area	120m ²
GFA	121m ²
Height	9.5m
Site coverage	59%
Private open space	Min. 16m ²
Front setback	2m
Rear setback	5m
Side setback	Nil
Parking	On street
Landscaped area	35%
Solar access - 50% o 3 hours between 9an	
Additional dwellings	1

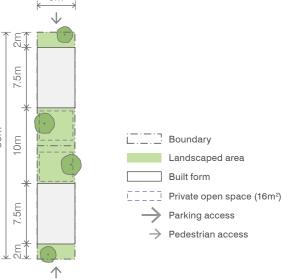
FSR	0.5:1
Max. FSR (under	1.1:1
existing LEP)	
Site width	5m
Site depth	30m
Site area	150m ²
GFA	75m ²
Height	5.5m
Site coverage	59%
Private open space	Min. 16m ²
Front setback	2m
Rear setback	8m
Side setback	Nil
Parking	Off street
Landscaped area	33%

Existing









FSR	1:1
Site width	5m
Site depth	15m
Site area	75m ²
GFA	78m ²
Height	9.5m
Site coverage	53%
Private open space	Min. 16m ²
Front setback	2m
Rear setback	5m
Side setback	Nil
Parking	On street
Landscaped area	50%
Solar access - 50% of	open space
3 hours between 9am	- 3pm
Additional dwellings	1



Dwelling on subdivided single access lot

Minimum lot width for subdivision

Street frontages with a minimum of 9m present an opportunity to vertically subdivide, allowing a minimum 4.5m frontage per dwelling.

Parking

Zero off street car parking is proposed for subdivided lots given proximity to public transport. On-site parking would have an adverse impact on the character of the area and pedestrian amenity, including loss of trees, interrupted footpath, and the loss of street parking.

Vegetation

Extra care should be taken to retain existing vegetation and mature trees wherever possible in both front and rear setbacks.

Residential yield

Existing	40 dwellings
Additional	40 dwellings





0.5:1

1:1

9m

20m

94m²

5.5m

61%

2m

4m

1m

30%

Min. 16m²

On street

180m²

20m

C

Existing

Max. FSR (under

existing LEP) Site width

Site depth

Site area

GFA

Height

Site coverage

Front setback

Rear setback

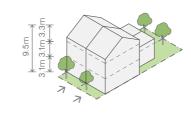
Side setback

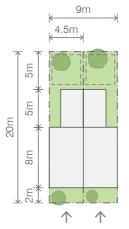
Landscaped area

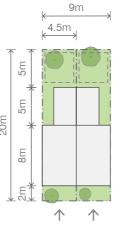
Parking

Private open space

FSR

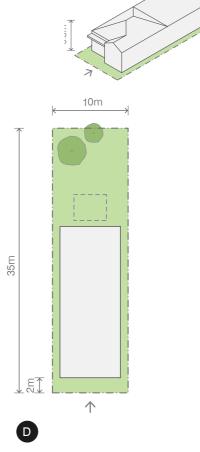


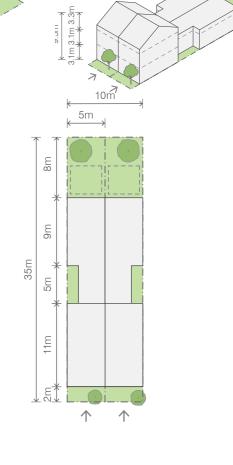






1:1
4.5m
20m
90m²
89m²
9.5m
57%
Min. 16m ²
2m
5m
Nil
On street
43%
of open space 3
- 3pm
1





Existing

J	
FSR	0.4:1
Max. FSR (under	0.7:1
existing LEP)	
Site width	10m
Site depth	35m
Site area	350m ²
GFA	136m ²
Height	5.5m
Site coverage	46%
Private open space	Min. 16m ²
Front setback	2m
Rear setback	13m
Side setback	1m
Parking	On street
Landscaped area	43%

FSR	1:1
Site width	5m
Site depth	35m
Site area	175m ²
GFA	168m²
Height	9.5m
Site coverage	70%
Private open space	Min. 16m ²
Front setback	2m
Rear setback	8m
Side setback	Nil
Parking	On street
Landscaped area	29%
Solar access - 50% of 3 hours between 9am	
Additional dwellings	1

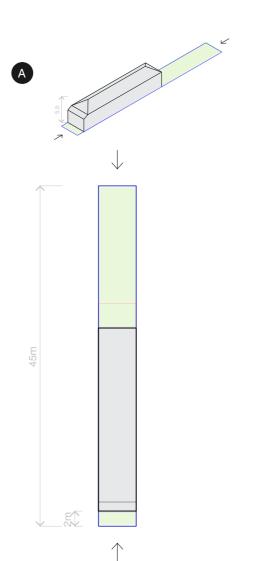
Built form typologies

Dwelling on front/back subdivided lot

Residential yield

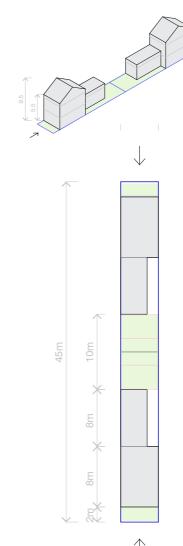
Existing	56 dwellings	
Additional	56 dwellings	





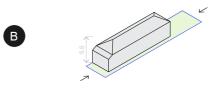
Existing

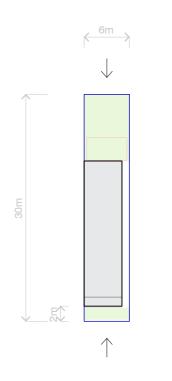
FSR	0.5:1
Max. FSR (under existing LEP)	0.9:1
Site width	5m
Site depth	45m
Site area	225m ²
GFA	103m ²
Height	5.5m
Site coverage	54%
Private open space	Min. 16m ²
Front setback	2m
Parking	On street
Landscaped area	41%
Existing dwellings	1



Proposed

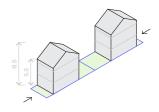
FSR	1:1
Site width	5m
Site depth	22.5m
Site area	112.5m ²
GFA	108m ²
Height	9.5m
Site coverage	59%
Private open space	Min. 16m ²
Front setback	2m
Parking	On street
Landscaped area	46%
Additional dwellings	1

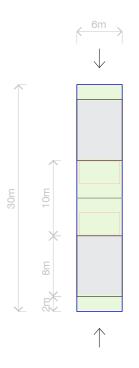




Existing

FSR	0.4:1
Max. FSR (under existing LEP)	1:1
Site width	6m
Site depth	30m
Site area	180m²
GFA	77m²
Height	5.5m
Site coverage	50%
Private open space	Min. 16m ²
Front setback	2m
Parking	On street
Landscaped area	47%
Existing dwellings	1





FSR	1.1:1
Site width	6m
Site depth	15m
Site area	90m²
GFA	102m ²
Height	9.5m
Site coverage	53%
Private open space	Min. 16m ²
Front setback	2m
Parking	On street
Landscaped area	50%
Additional dwellings	1

Built form typologies

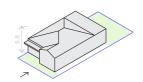
Dwelling on subdivided single access lot

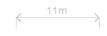
Residential yield

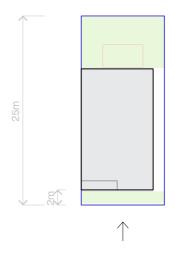
Existing	16 dwellings
Additional	16 dwellings





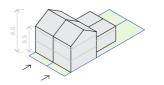


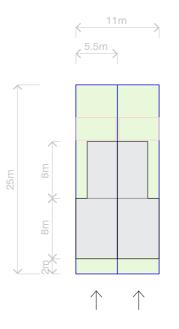




Existing

FSR	0.5:1
Max. FSR (under	0.8:1
existing LEP)	
Site width	11m
Site depth	25m
Site area	275m ²
GFA	129m²
Height	5.5m
Site coverage	53%
Private open space	Min. 16m ²
Front setback	2m
Parking	On street
Landscaped area	55%
Existing dwellings	1





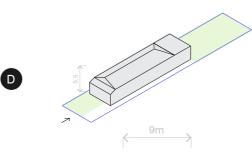
FSR	0.9:1
Site width	5.5m
Site depth	25m
Site area	137.5m ²
GFA	119m ²
Height	9.5m
Site coverage	54%
Private open space	Min. 16m ²
Front setback	2m
Parking	On street
Landscaped area	54%
Additional dwellings	1

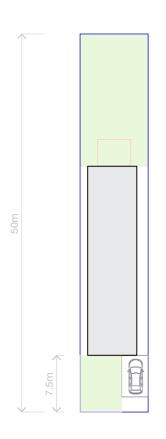
Appendix II - North Taverners Hill - Dwelling studies

Built form typologies

Dwelling on subdivided single access lot

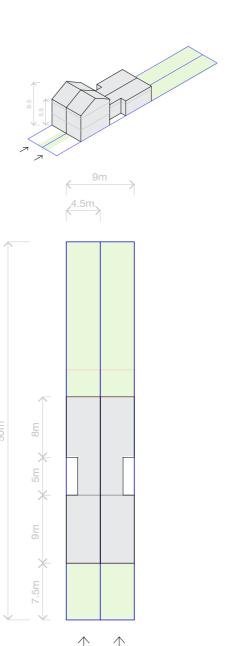






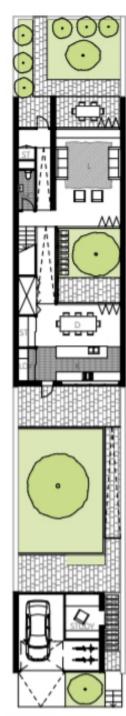
Existing

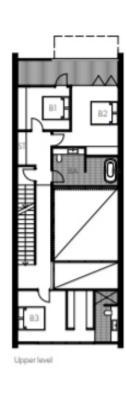
Exioning	
FSR	0.3:1
Max. FSR (under existing LEP)	0.6:1
Site width	9m
Site depth	50m
Site area	450m ²
GFA	138m²
Height	5.5m
Site coverage	59%
Private open space	Min. 16m ²
Front setback	7.5m
Parking	On street
Landscaped area	36%
e er Review ' Existing dwellings	1



Proposed

•	
FSR	0.6:1
Site width	4.5m
Site depth	50m
Site area	225m²
GFA	129m²
Height	9.5m
Site coverage	41%
Private open space	Min. 16m ²
Front setback	7.5m
Parking	On street
Landscaped area	41%
Additional dwellings	1





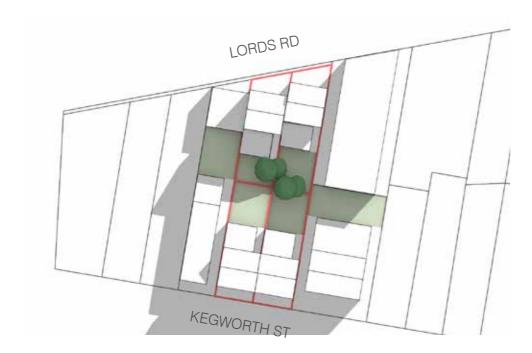
Applications

Indicative floor plan of terrace dwelling
Note: Internal courtyards provide natural daylight to the middle
of the dwelling and assist ventilation. Note this typology does not
include a rear garage.
Source: Medium Density Design Guide For Development

Solar testing

Dwellings on a lot subdivision, whereby the lot had front and rear access, was tested for overshadow impacts, being identified as having more overshadowing impact than lots that are subdivided across the width. This is due to built form placed at the rear of lots, potentially adjacent to neighbouring lots' open space.

9am



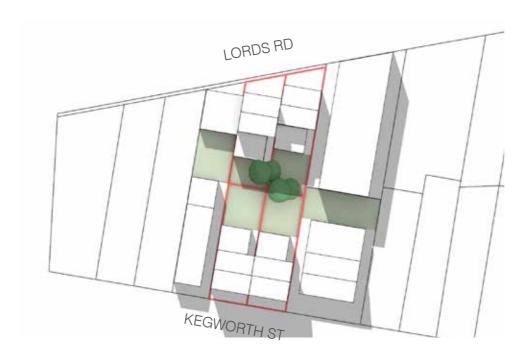
11am



Reference study area for solar testing outlined



1pm



B6 Typology testing

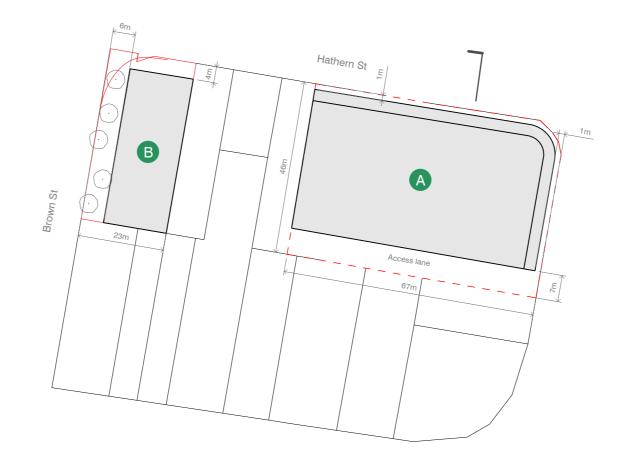
Site A

Built form testing shows it is feasible to achieve 2:1 FSR if these lots were to be amalgamated. Minimal front setback was tested to maintain a high FSR, whilst providing a rear access to basement car parking; there is potential for a rear access lane to be an easement to properties fronting Parramatta Road.

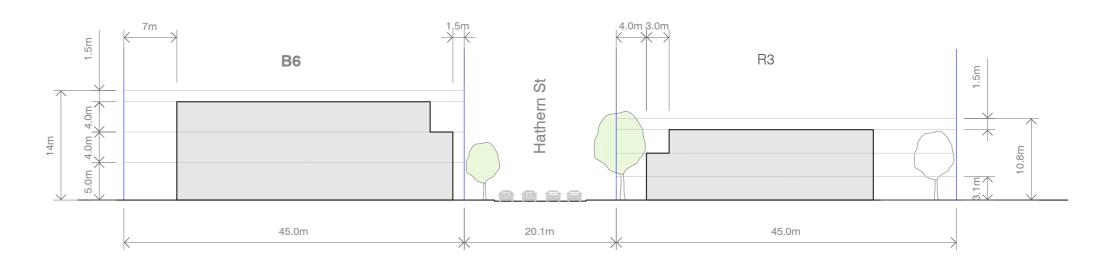
Site B

This lot (currently highly vegetated) is owned by RMS, Council suggests that it be formalised as public open space. If this is to pursued, this can be updated on the zoning maps and density and height can be removed from this lot. No supporting justification is required from Architectus - only map changes.





Α	В
2:1	1.3:1
67m	23m
46m	46m
3063m ²	1039m²
5996m ²	1400m ²
14.5m	14.5
3	3
1.5m	4m
7m	0m
6m	0m
80%	53%
Basement	
	2:1 67m 46m 3063m² 5996m² 14.5m 3 1.5m 7m 6m 80%



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Project and report	Parramatta Road Corridor - Urban Design Peer Review - Kings Bay Precinct	
Date	June 16, 2021	
Client	Inner West Council	
Document no.	K:\200509.00\Trans_Issue_Record_sets\N1: Final Package	2_Outgoing\210503_Kings Bay
Version and date issued	Issue A (Draft to client) - 21/12/20	Approved by: Greg Burgon
	Issue B (Draft to client) - 19/01/21	Approved by: Greg Burgon
	Issue C (Draft to client) - 04/02/21	Approved by: Greg Burgon
	Issue D (Draft to client) - 17/02/21	Approved by: Greg Burgon
	Issue E (Draft to client) - 08/03/21	Approved by: Greg Burgon
	Issue F (Final Draft to Council) - 13/03/21	Approved by: Greg Burgon
	Issue G (Final issue) - 08/06/21	Approved by: Greg Burgor
Report contact	Greg Burgon Principal Urban Designer	
This report is considered a draft unless signed by a Director or Principal	Approved by: Greg Burgon	

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1.1 Background and Purpose of report

Background

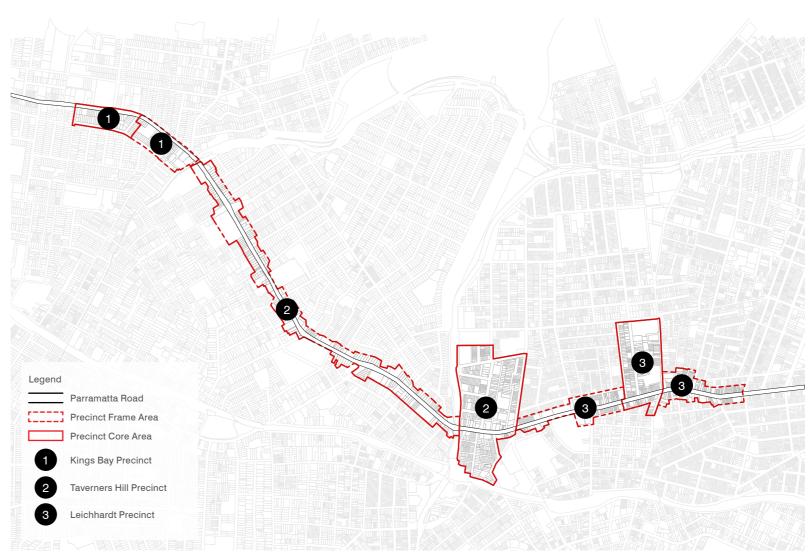
Inner West Council is preparing a Planning Proposal to amend the Draft Inner West Local Environmental Plan for the Parramatta Road Corridor Urban Transformation Strategy (PRCUTS) precincts including Leichhardt, Taverners Hill and part of Kings Bay.

Council have prepared draft structure plan maps and design guidelines for these precincts which encompass changes to existing planning controls and take into consideration the recommendations of PRCUTS.

Purpose of this report

Architectus has been engaged by Inner West Council to give peer review advice on Council's draft structure plan maps and guidelines which will inform the LEP/DCP controls. The fine grain design guidelines apply to individual precincts - Kings Bay, Taverners Hill and Leichhardt, as well as to general urban design issues across the three precincts.

Three reports have been prepared (one for each precinct) and structured according to the specific issues which Council have identified and are seeking peer review advice on. This report covers the Kings Bay Precinct.



Parramatta Road Corridor study area map

Background and Purpose of report

Approach

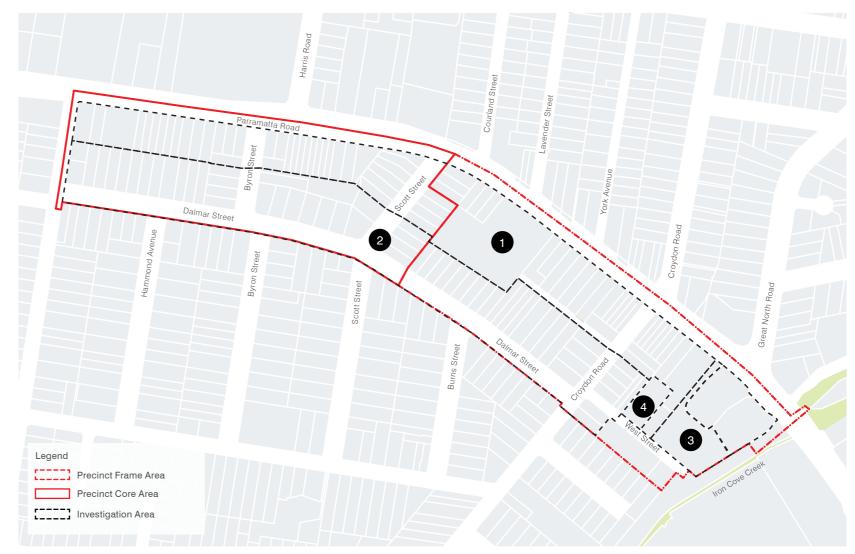
This report includes four main investigation areas within the Kings Bay Precinct:

- Investigation Area 1 Enterprise Corridor
- Investigation Area 2 Residential
- Investigation Area 3 B4 Zone
- Investigation Area 4 R3 Zone

Within each investigation area, a set of issues has been identified by Council which are considered sequentially in this report. Consideration of each issue may include some or all of the following sections as relevant:

- Existing, PRCUTS, and Draft Structure Plan LEP controls
- Existing character analysis
- Development constraints and opportunities
- Built form typology study
- Precedent imagery
- Solar analysis and overshadowing
- Recommendations

The final section of this report includes a summary of Architectus' key recommendations and summary tables of employment and dwelling yields across the precinct.



Kings Bay investigation areas key map

Background and Purpose of report

General Commercial and Residential assumptions

B6 Efficiency 90%

5m Ground - floor to floor (inclusive of 1m slope/topography allowance)
3.6m Typical upper levels (sufficient for commercial floor to floor height)

1.5m Lift overrun - 1.5m

RFBs Efficiency 75%

4m Ground - floor to floor (inclusive of 1m slope/topography allowance)
3.1m Typical upper levels (sufficient for residential floor to floor height)

1.5m Lift overrun - 1.5m

B6 + Residential Efficiency (B6) 90% / (Residential) 75%

5m Ground - floor to floor (inclusive of 1m slope/topography allowance)
3.1m Typical upper levels (sufficient for residential floor to floor height)

1.5m Lift overrun - 1.5m

Definitions

ADG Apartment Design Guide (accompanying State Environmental Planning Policy 65)

ALEP Ashfield Local Environmental Plan 2013

GFA Gross Floor Area

IWC Inner West Council

IWLEP Draft Inner West Local Environmental Plan 2021
LLEP Leichhardt Local Environmental Plan 2013
MLEP Marrickville Local Environmental Plan 2011
NLA / NSA Nett Lettable Area / Nett Saleable Area

PRCUTS Parramatta Road Corridor Urban Transformation Strategy 2016

RFB Residential flat building

SEPP65 State Environmental Planning Policy 65

1.2 Investigation Area 1 - Enterprise Corridor



Issue

In considering expansion of the B6 Enterprise Corridor zone to the rear of properties along Parramatta Road, as recommended in PRCUTS, peer review advice has been sought regarding the relationship of the B6 zone with adjacent residential areas.

Architectus has been requested to review approaches to manage the interface between different land uses especially the B6 land fronting Parramatta Road and the residential properties at the rear. There are concerns regarding the transition of building heights from B6 to adjacent residential areas.



Aerial key map of investigation area

LEP controls

The investigation area, which includes light industrial and retail uses to the south of Parramatta Road, is currently zoned B6 Enterprise Corridor, with a mix of 1.5:1 and 2:1 FSR and a mix of 10m and 15m HOB. This zone backs onto R2 residential lots to the south, consisting of mostly single storey detached dwellings.

PRCUTS recommends retaining B6 zoning for this investigation area and further proposes to extend this zoning into several existing R2 zoned lots to the south. Specifically, lots at No.42 Byron Street, No. 32, 30, 28, 26, 29,

27, 25 & 23 Scott Street, and No. 229 & 227 Croydon Road. PRCUTS recommends an increase in both FSR and HOB to 2.4:1 and 21m respectively.

Draft Structure Plan controls

The IWC Draft Structure Plan controls under consideration support the PRCUTS recommendations favouring the extension of B6 zoning and increasing the FSR and HOB.

Existing	LEP	controls

FOD	4 E.4 O.4 (0 7.4 (D0)
	Density Residential
LZN	B6 - Enterprise Corridor and R2 - Low

FSR 1.5:1 and 2:1 (0.7:1 for R2)

HOB 10m and 15m (8.5m for R2)

PRCUTS recommendations

I 7N	R6 -	Enterprise	Corridor
	\Box		OUITIGOI

FSR 2.4:1

HOB 21m

Draft Structure Plan controls under consideration



ZN B6 - Enterprise Corridor

Proposed additional sites for B6 zoning



SR 2.4:1 (2:1/1.5:1 for potential heritage properties - these FSRs reflect retention of the existing controls for the subject sites)



HOB 21m (10m/15m for potential heritage properties)

Character

Lots + Existing developments

- Lots along B6 corridor down Parramatta Road accommodate car yards, show rooms, large retail spaces, service stations and fast food restaurants
- Predominately single storey warehouse developments approximately 5-9m high
- No existing rear setbacks to the residential zoned area to the south
- Several existing developments currently have deep setbacks to Parramatta Road, many accommodating front of house functions (such as car sales displays, show rooms or fast food drive thru areas)

Streets

- Investigation area fronts Parramatta Road with high traffic volumes and a hostile pedestrian environment
- Parking is currently located within the front setback of lots
- No existing planting along Parramatta Road

Access

- Several existing developments within the B6 zone have vehicular access directly from Parramatta Road
- Selected sites (No.636-No.624 Parramatta Road) with access from rear laneway off Croydon Road
- Existing easement access via No. 31 Byron Street to rear of sites at No.688 to No.674 Parramatta Road







- 01 Existing B6 sites along Parramatta Road
- 02 Existing B6 sites along Parramatta Road with proposed heritage item substation



- O3 Transition between existing R2 (left) and B6 (right) sites along Byron Street.
- 04 Easement access from No. 31 Byron Street

Development constraints and opportunities

- B6 zone interfaces with low density residential dwellings to the south, impacting solar access, privacy and amenity
- Opportunity for redevelopment on larger amalgamated sites with several adjacent B6 lots along Parramatta Road with single ownership
- Some existing B6 sites have access from Parramatta Road. Consideration should be given to traffic, safety and pedestrian experience in the redevelopment of B6 sites
- Investigation area largely unconstrained by heritage and heritage conservation areas apart from the substation site in the eastern portion of the investigation area
- Sites fronting Scott Street may have opportunity to provide access to B6 sites as an alternative to access from Parramatta Road

Preliminary ideas

- Minimum rear setback requirements to be established to ensure solar access, privacy and amenity for residential zoned area to the south
- Existing access from Parramatta Road will need to be maintained however new access from Parramatta Road should be restricted where possible with side street access preferred
- Provision for access easement within rear setback area to be considered
- New development should be sympathetic to proposed heritage item to eastern side of investigation area

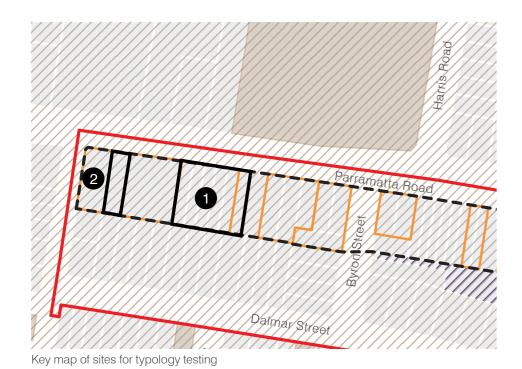


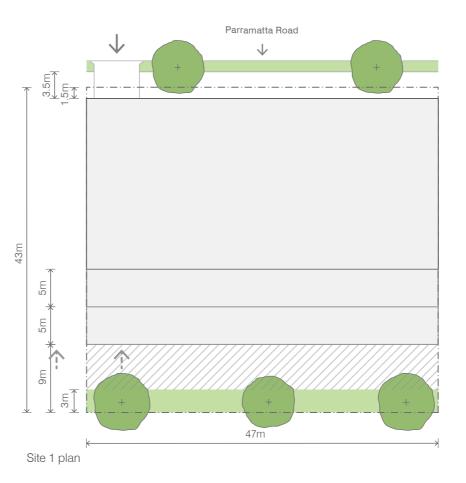
Kings Bay constraints map

Built form typology study

The following study has been undertaken to identify lot area patterns to inform requirements for amalgamation and possible future built form typologies within the investigation area. Built form envelopes have been investigated for amalgamated sites of approximately 2000m², based on current land ownership patterns as well as the typical existing single B6 lot area size, which is approximately 500m². These two lot sizes were selected to broadly correspond to the range of land uses permitted by B6 e.g. business premises and warehouses for larger site areas and light industry, which can occupy smaller lots.

The ideal outcome for car-parking access for B6 lots on Parramatta Rd is via a rear lane or easement which is developed over time. The provision for an easement is accommodated by a 9m rear setback (which also mitigates any overshadowing to rear residential lots). Mid-block lots with existing access from Parramatta Road can be redeveloped; however lots without existing access would require access via a future easement.

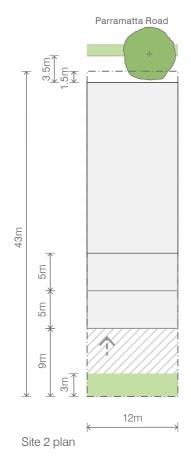






Amalgamated site over 2000m² metrics

FSR	2.4:1
Site width	47m
Site depth	43m
Site area	2000m ²
Front setback	1.5m
Side setback	0m
Rear setback (min.)	9m
Floor to floor (ground level)	5m
Floor to floor (other)	3.6m
Parking	Basement
GFA	4810m ²
Height	17.3m (4 storeys)







Typical B6 site metrics

Typical Bo ollo motiloo	
FSR	2.4:1
Site width	12m
Site depth	43m
Site area	516m ²
Front setback	1.5m
Side setback	0m
Rear setback (min.)	9m
Floor to floor (ground level)	5m
Floor to floor (other)	3.6m
Parking	Basement
GFA	1240m ²
Height	17.3m (4 storeys)

Investigation Area 1 - Enterprise Corridor

Assumptions

- B6 sites calculated at 90% GFA efficiency
- For purposes of GFA calculations: where provisions for basement parking encroach on ground floor area, mezzanine level is assumed
- Range of lot sizes depending on specific permitted development
- Two different site areas were investigated, to capture developments which require large or small

Setbacks

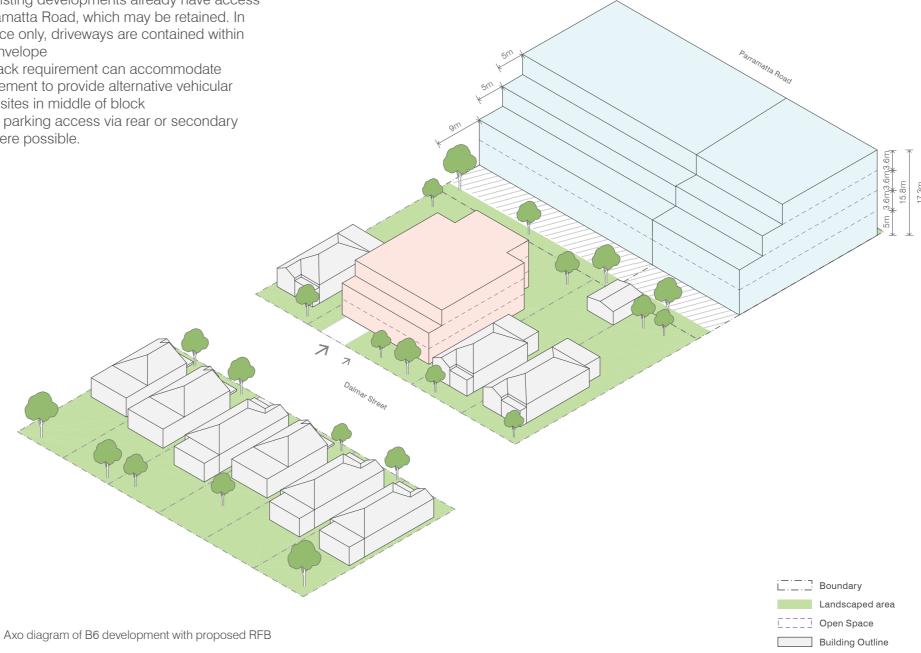
- Minimum rear setback of 9m to allow for solar access, privacy and amenity to residential zoning to south of investigation area
- Ground and first floor maintain 9m setback to rear boundary, then a further 5m setback to the third and an additional 5m setback to fourth storey
- 1.5m uniform front setback allowing for green edge along Parramatta Road
- 3m zone within rear setback area for planting

Building height and street wall

- 5m Ground floor, allowing more varied uses as well as the potential for a mezzanine floor
- 3.6m for the three floors above. Lower commercial floor to floor heights were investigated so as to minimise overshadowing on adjacent residential zoned areas to the south
- Overall building height of 17.3m (inclusive of lift overrun allowance)
- Street wall of 4 storeys or 16m.

Access

- Access from secondary streets preferable where possible
- Access from Parramatta Road not recommended. Several existing developments already have access from Parramatta Road, which may be retained. In this instance only, driveways are contained within building envelope
- Rear setback requirement can accommodate future easement to provide alternative vehicular access to sites in middle of block
- Basement parking access via rear or secondary streets where possible.



//// Easement Basement carpark access through provisional

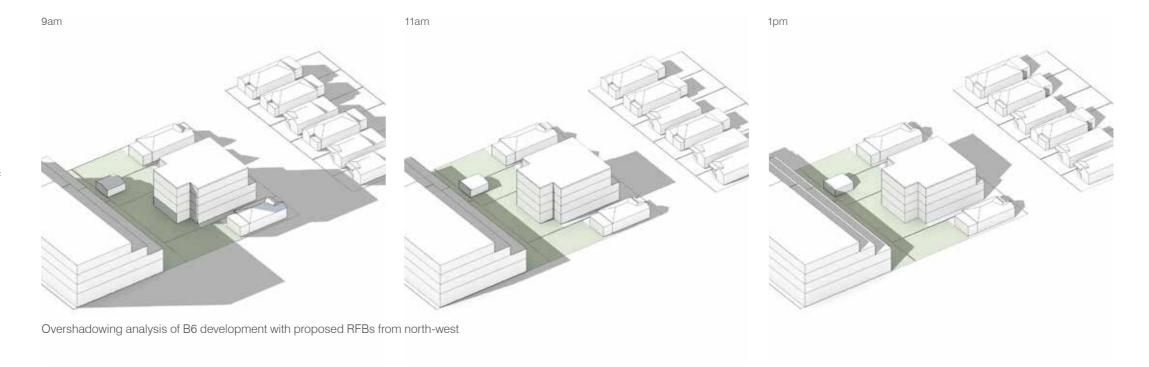
Solar Analysis & Overshadowing

Solar access requirements

Minimum two hours of solar access between 9am-3pm on 21st June, is achievable to adjacent existing dwellings and 70% apartments in proposed RFBs. Accompanying shadow diagrams are taken at 9am, 11am and 1pm on the 21st June. NB: this overshadowing study uses a previous version of the study using 4-storey RFBs.

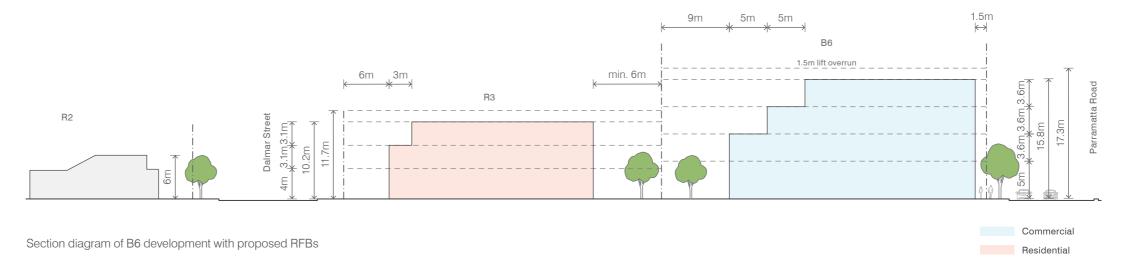
Summary

- Proposed R3 zoned sites to the southern side of the B6 corridor can achieve a minimum 2 hours of sunlight to open space
- Maximum building height of 17.3m (inclusive of lift overrun) within B6 corridor has been determined upon consideration of overshadowing impacts to proposed R3 zoned sites to south





Reference study area for solar testing outlined



Investigation Area 1 - Enterprise Corridor

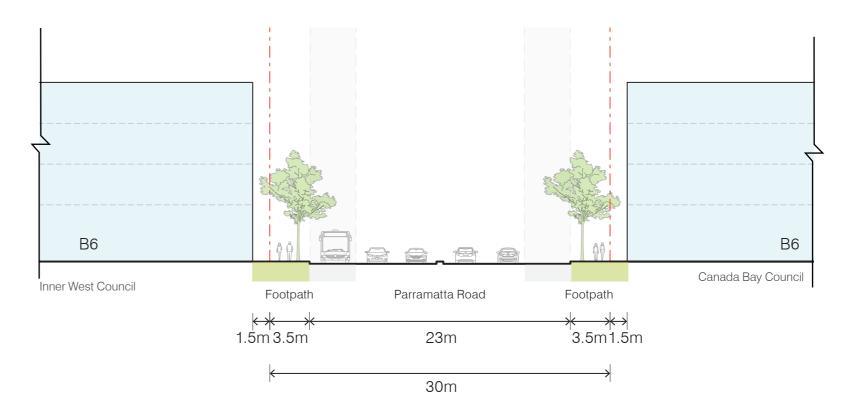


Issue

Green edge setbacks (6m) recommended in PRCUTS have been suggested to be deleted as Council's Transport planners have advised that the widening of footpaths, new landscaping and cycling paths should be provided within the existing road carriageway without relying on the provision of setbacks from surrounding lots which may practically never be achieved. Advice was requested on whether any setbacks to Parramatta Road should be provided.

Recommendations

- Architectus supports Council's recommendation to delete the 6m green edge setbacks (proposed in PRCUTS)
- 6m continuous setback all along Parramatta Road is unrealistic as developments occur on an ad-hoc basis
- 1.5m front setback is recommended to soften the built form and make provision for tree canopy, landscaping/planting within the existing road reserve
- Instead of 6m green edge setback, large rear setback of 9m is recommended to achieve appropriate transition to residential area
- Provision for further landscaping, footpath widening and cycling paths within existing road reserve to occur in future
- Discussions required with adjoining Canada Bay Council to achieve complementary public domain outcomes along Parramatta Road



Parramatta Road B6 section with proposed 1.5m front setback

Indicative zone for future landscaping, footpath widening and cycle paths



B6 Recommendations

LEP recommendations

Architectus supports the PRCUTS and proposed Draft Structure Plan controls to expand the B6 enterprise corridor zone to the rear of properties along Parramatta Road (highlighted areas) and 2.4:1 FSR for existing and proposed B6 sites in Kings Bay. While both recommend to increase the existing HOB to 21m, our findings support a lower height control of 17.5m (5m floor to floor height for ground floor and 3.6m floor to floor height for upper storeys) which allows for 4 storeys and is inclusive of lift overrun.

Justification

The recommendation to convert these particular sites to B6 will create a more defined divide between residential and commercial areas, as well as maximise the potential to achieve large floorplates suitable for B6 land uses; this is also considering that there are limited opportunities for large B6 sites in the wider area. This particularly applies to the B6 lots fronting Scott Street, which without further expansion present limited opportunity for meaningful renewal due to constrained lot sizes.

The testing suggests PRCUTS' recommended 21m HOB should be reduced to 17.5m including lift overruns. Street wall height to be no more than 16m equivalent to 4 storeys. This should be supported by a generous 9m rear setback to ensure the minimum solar access requirements of two hours to the residential zoned area to the south can be achieved. This height will also achieve a more appropriate transition to the residential area to the south.

Existing LEP controls

LZN B6 - Enterprise Corridor and R2 - Low Density Residential

FSR 1.5:1 and 2:1 (0.7:1 for R2)

HOB 10m and 15m (8.5m for R2)

PRCUTS recommendations

LZN B6 - Enterprise Corridor

FSR 2.4:1

HOB 21m (5 storeys)

Draft Structure Plan Controls

B6 - Enterprise Corridor

FSR 2.4:1

HOB 21m (5 storeys)

Final recommendations

B6 - Enterprise Corridor

FSR 2.4:1

HOB 17.5m (4 storeys - inclusive of 1.5m lift overrun)

Land Zoning

B4 Mixed Use

B6 Enterprise Corridor

IN2 Light Industrial

R3 Medium Density Residential

SP2 Infrastructure



Floor Space Ratio Legend (n:1)

H 0.7

N 1

Q 1.3

T7 2.4

S1 1.5 T3 2.1



Maximum Building Height (m)

M1 12.5

O1 15

P2 17.5

Q1 19

R 22

S 23

Proposed additional sites for B6 zoning



B6 + Residential Opportunity Sites 1 and 2

Analysis was undertaken to consider residential uses on existing B6 sites at the east of Kings Bay Frame Area along Parramatta Road and Croydon Road, which is 800m away from the proposed Five Dock Metro Station. This would enable increased residential development to be provided in vicinity of the committed transport infrastructure.

Character

- The adjoining West St is more urban in character, with existing multi-residential up to 4 storeys, as well as a light industrial building on the southern side of West St.
- Croydon Rd has no verge, and some low-height street planting, 3-4 storey developments would be in keeping with the immediate character.

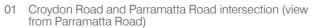
Development constraints and opportunities

- The group of sites are just over 800 metres to the future Five Dock Metro Station.
- Croydon Station is 1.5 kilometres to the south, so there is potential for Croydon Road to be established as a strategic north-south link.
- There is potential for a development across Site 2 that would be an opportunity for Design Excellence to address the proposed heritage item on 590-594 Parramatta Road (substation).













O3 Existing 2 storey buildings along Parramatta Road within proposed B6 + Residential zoning.

Use

- Commercial use at ground floor to promote businesses along Parramatta Road and provide for range of employment uses
- Residential for 4 upper storeys to increase dwelling capacity of area and make use of improved transport connections along Parramatta Road and accessibility (800m / 10 mins walk) to proposed Five Dock Metro Station

Setbacks

- Ground floor employment built to boundary facing Croydon Road
- 1.5m setback along Parramatta Road allowing for trees and planting
- 6-9m setback to residential on podium to south.
- 6m setback to residential on podium from Croydon Road
- 9m setback to residential from the proposed heritage item on the east of Site 2
- 6m further setback from building line to residential on 5th storey along Parramatta Road

Building height

- 5m commercial floor to floor height at ground level
- 3.1m floor to floor height for the 4 upper floors
- Overall building height 18.9m equivalent to 5 storeys (inclusive of 1.5m lift overrun)

FSR

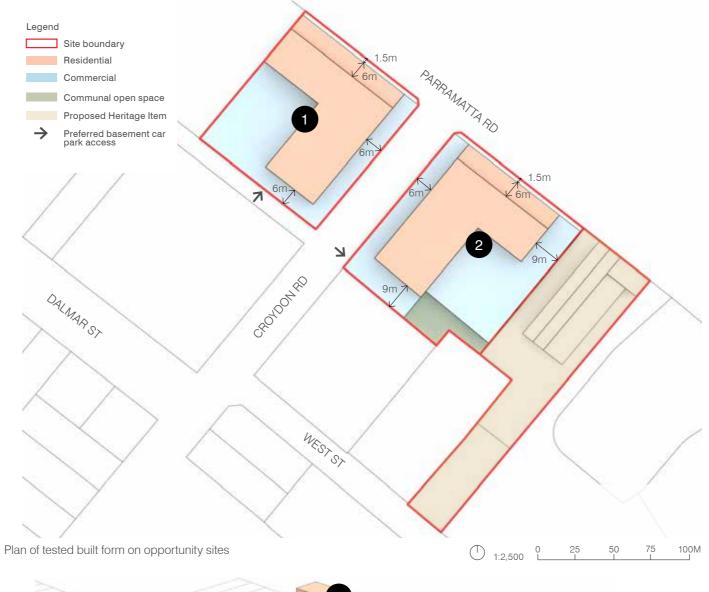
- FSR 2.4:1 is achievable for Site 1
- FSR 2.1:1 is recommended for Site 2 due to its shape and maximum recommended width of residential floorplate. Note that maximum FSR for Site 2 is subject to further information on proposed heritage item

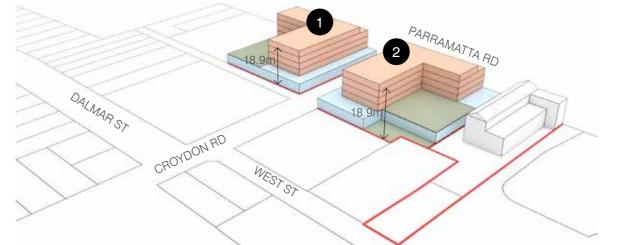
Access + Parking

- Vehicular access to Site 1 via rear lane
- Vehicular access to Site 2 via Croydon Rd
- Note access subject to satisfaction of traffic safety issues

Efficiency

Note: B6 + Residential GFA is calculated at 90% efficiency and 75% efficiency respectively





3D of built form testing (note - solar testing provided further in the report)

Opportunity Sites 1 & 2 metrics

B6 + Residential opportunity sites			
Site	1	2*	
FSR	2.4:1	2.1:1	
Site width (m)	48.8	53.4m	
Site depth (m)	53.3	60m	
Site area (m²)	2,672m ²	3,107m ²	
GFA (m²)	6,353m ²	6,395m ²	
GFA (m²) Commercial	2,340m ²	2,521m ²	
GFA (m²) Residential	4,013m ²	3,873m ²	
Height (m)	18.9m	18.9m	
Height (storeys)	5	5	
Site coverage	100%	93%	
Communal Open Space (m²)	758m²	975m²	
Deep soil	0m ² *	228m² (7%)	
Front setback (m)	1.5m	1.5m	
Rear setback (m) (Residential)	6m	9m	
Side setback (m) (Residential)	6m	6m	
Upper (5th storey) setback to building line along Parramatta Rd (Residential)	6m	6m	
Street wall	4 storeys (t Rd)	o Parramatta	
Parking	Basement	car-parking	
No. Of additional dwellings**	51	49	

^{*}Metrics for Opportunity Site 2 exclude proposed heritage item, which is to be redeveloped under a Design Excellence process. Final metrics subject to further details and survey of heritage item.

^{**}Additional dwellings in typology testing have been based on individual floorplate calculations. These may slight vary from the final block by block yield calculations at the end of this report. This would apply to all typologies discussed in this report.

B6 + Residential Opportunity Site 3

Sites at 584 and 582 Parramatta Road have been further investigated for B6 and residential uses to align with Parramatta Road/ Croydon Road opportunity sites in order to achieve a coherent future character in the east of the investigation area.

Character

Lots + Existing developments

- Irregular lot geometry, each has an approximate street frontage of 35-40m and site depth of around 60m
- Existing developments comprise two large fast food outlets with drive thru access and a service station
- Deep existing setbacks to Parramatta Road to facilitate car parking and access
- B4 Mixed Use zoned site to south side of opportunity site 3 with apartments (approximately 69 dwellings)

Streets

- Investigation area fronts onto Parramatta Road at intersection of Great North Road, which is heavily congested
- No existing planting along Parramatta Road
- Iron Cove Creek to eastern side of opportunity sites

Access + Parking

- Existing access from Parramatta Road services both sites
- Both sites include parking bays adjacent to Parramatta Road

Development constraints and opportunities

- Several strata sites surround the investigation area
- Proposed planning controls to consider proposed heritage item at 590-594 Parramatta Road, adjacent to this opportunity site
- Potential for servicing and access to be shared with existing B4 site to the south of opportunity site, which has access to West Street

Preliminary ideas

- Rezone to support flexible employment uses on ground floor and residential uses above. Zoning in keeping with proposed B6 + Residential nominated for sites at the intersection of Croydon Road and Parramatta Road
- Create additional public green space shared between the lots due to adjacent B4 Mixed Use development.
- Maximise amenity benefit of new active transport corridor along Iron Cove creek
- Consolidate shared vehicular access to Parramatta Road with site at 586 Parramatta Road, which has also has vehicular access to West Street.
- Consider relationship to proposed heritage item to west site boundary







- 01 Existing access to opportunity sites from West Street.
- 02 Existing opportunity sites frontage to Parramatta Road.

Built form study

Use

- Commercial use on ground floor to promote businesses along Parramatta Road and provide for a range of employment uses
- Residential for 5 upper storeys to increase dwelling capacity of the area and make use of improved transport connections along Parramatta Road. Opportunity for increased density just over 800m walking distance from proposed Five Dock Metro Station

Setbacks

- 12m setback to rear boundary to allow for solar access, privacy and amenity to adjacent B4 mixed use sites
- 1.5m front setback allowing for trees and planting along Parramatta Road
- Additional 6m setback to upper two residential floors from the building line along Parramatta Road
- Additional setback to existing driveway to provide for adequate access

Building height

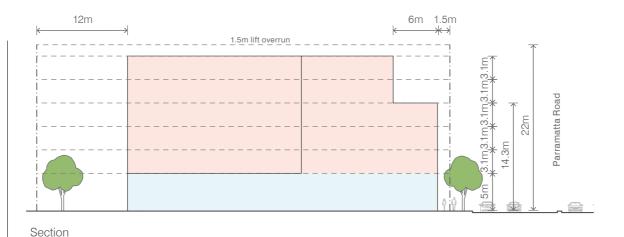
- 5m commercial floor to floor height at ground level
- 3.1m floor to floor height for the 5 upper floors
- Street wall height along Parramatta Road 14.3m or 4 storeys
- Overall building height 22m equivalent to 6 storeys

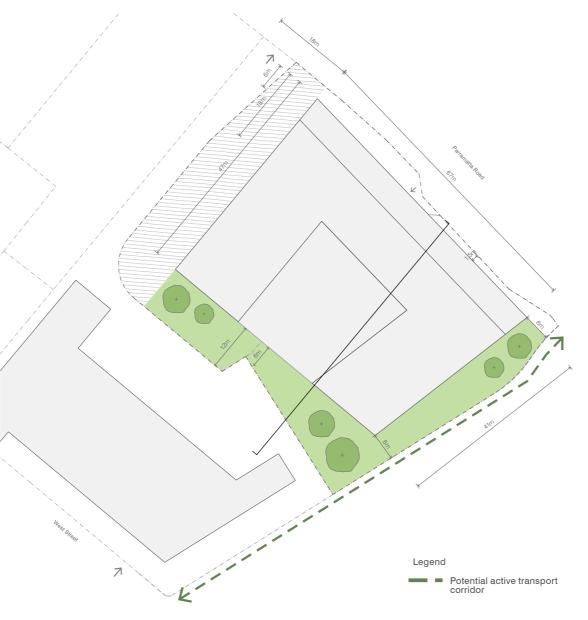
Access + Parking

 Additional setback provided to western site boundary to allow for potential driveway and access to basement car-parking

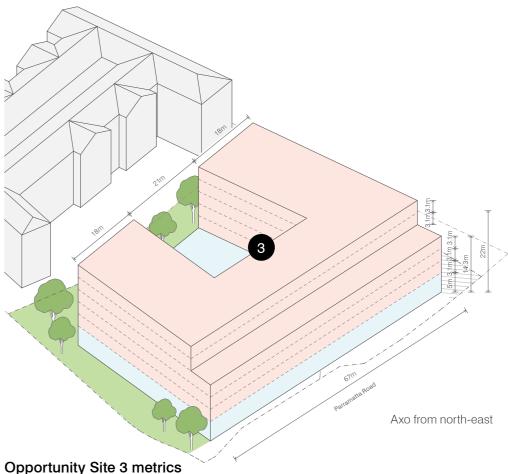
Efficiency

 Note: B6 + Residential opportunity site GFA is calculated at 90% efficiency and 75% efficiency respectively









Opportunity Site 3 metrics			
B6 + Residential opportunity sites			
FSR	2.1:1		
Site width	82m		
Site depth	61m		
Site area	4711m ²		
GFA (total)	9,753m ²		
GFA commercial	2,455m ²		
GFA residential	7,298m ²		
Height	22m (6 storeys)		
Total storeys	6		
Site coverage	58%		
Communal open space	622m ²		
Landscaped area	1036m ² or 22%		
Deep soil area	15% as per ADG for sites >2500m ²		
Front setback	1.5m		
Rear setback	6 - 12m		
Side setback (to creek)	6m		
Upper setback to 5/6 storey along Parramatta Road from building line	6m		
Street wall	14.3m (4 storeys)		
Dwelling Yield	96		

Parramatta Road Corridor - Urban Design Peer Review | Kings Bay Precinct | Architectus

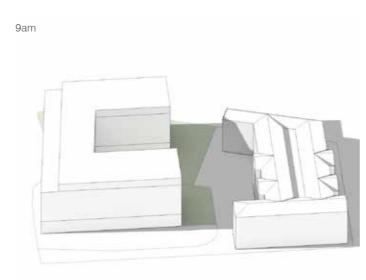
Solar Analysis & Overshadowing

Solar access requirements

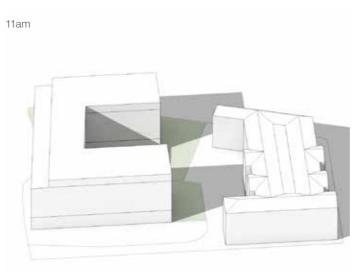
Minimum two hours of solar access between 9am-3pm on 21st June to 70% of apartments in new development as per ADG requirements. Accompanying shadow diagrams are taken at 9am, 11am and 1pm on the 21st June.

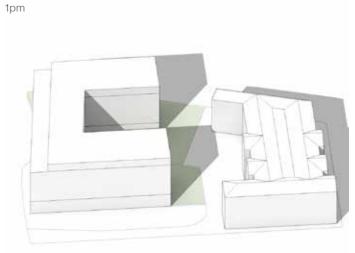
Summary

The following diagrams indicate ADG solar access requirements are achievable on Opportunity Site 3 and the existing B4 Mixed Use zoned site. Furthermore, the proposed setback to the western boundary of 18m is sufficient to achieve minimum solar access requirements for both Opportunity Sites 2 and 3 when both are redeveloped in future.

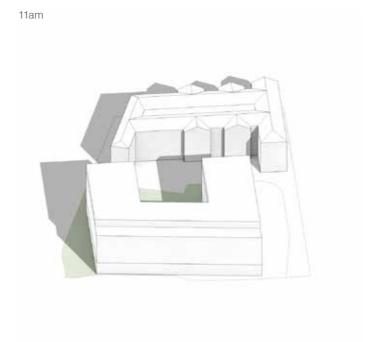


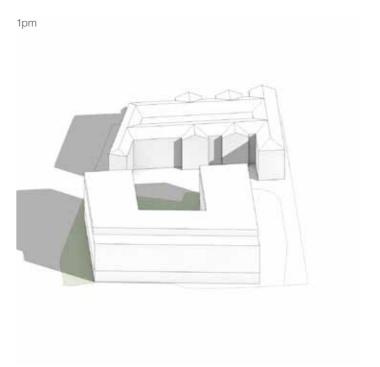
Overshadowing analysis of development from north-west











B6 + Residential: Precedent Imagery

The following precedents demonstrate the application of design principles to the Croydon Road study area (B6 + residential): defining street wall and built form articulation.





- 01 Foveaux St Mixed Use Apartments, SJB
- 02 The Wedge Studios, Hill Thalis



B6 + Residential Opportunity Sites Recommendations

LEP recommendations

Through the analysis of the B6 zoned investigation area along Parramatta Road, three opportunity sites have been identified for B6 (with residential flat buildings as an additional permitted land use for these sites) due to their strategic location to the proposed transport infrastructure.

Justification

Opportunity Site 1 & 2 - Croydon Road

The recommended FSRs are an outcome of testing for overshadowing, setback requirements to adjacent sites, the Parramatta Road street wall, as well as maintaining an appropriate transition to the surrounding sites, particularly to the proposed heritage item.

Opportunity Site 3 - McDonald's Site

Building heights and FSRs have been developed based on the unique constraints of the lot including its shape, depth, address to the existing residential building at the rear, access, adjacency to Iron Cove Creek, setbacks and open space requirements.

Note that larger setbacks to residential uses along Parramatta Road may be required if the development cannot appropriately mitigate noise and air quality issues from the existing traffic conditions on Parramatta Road. This is to be determined on a case-by-case basis at the development application stage for all opportunity sites.

Proposed Heritage Item

It is recommended to uplift the FSR and HOB controls for the proposed heritage item site corresponding to the controls of Opportunity Site 2. However, due to its proposed heritage significance, maximum FSR of 2.1:1 may not be achievable until detailed heritage investigation is undertaken.

Existing LEP controls			
LZN	B6 - Enterprise Corridor and R2 Low Density Residential		
FSR	1.5:1 and 2:1 (0.7:1 for Residential)		
HOB	10m and 15m		

PRCUTS recommendations			
LZN	B6 - Enterprise Corridor		
FSR	2.4:1		

Draft Structure Plan Controls		
LZN	B6 - Enterprise Corridor	
FSR	2.4:1	
HOB	21m	

Final recommendations			
LZN	B6 - Enterprise Corridor (with		
	and all and the little title to the control of the		

residential flat buildings as an additional permitted land use) **FSR** 2.4:1 (Site 1) and 2.1:1 (Sites 2 & 3)

HOB 19m (Sites 1 & 2 - 5 storeys) and 22m (Site 3 - 6 storeys)

Residential yield

Calculations" for methodology

HOB 21m

	No. of dwellings
Maximum capacity under existing controls	2
Maximum capacity under recommended controls	245
Additional capacity under recommended controls	243
Note refer to "1.6 Dwelling and E	Employment Yield

Land Zoning

B4 Mixed Use

B6 Enterprise Corridor

IN2 Light Industrial

Medium Density Residential

SP2 Infrastructure



Floor Space Ratio Legend (n:1)

H 0.7 N 1

Q 1.3

S1 1.5

T3 2.1

T7 2.4





Maximum Building Height (m)

M1 12

P2 17.5

Q1 19

R 22

S 23

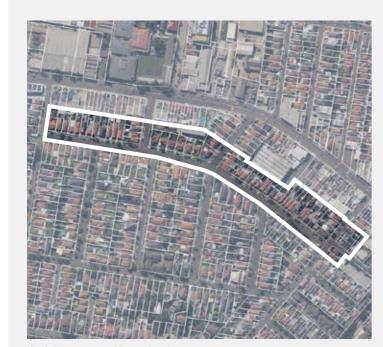


1.3 Investigation Area 2 - Residential



Issue

Council seek to retain the existing R2 Low Density Residential zoning in this area, however wish to investigate opportunities for medium density housing. Architectus' advice has been sought regarding the appropriate zoning, height, density and built form controls. This needs to consider appropriate transitions and solar access requirements for the residential areas from the B6 zoned land along Parramatta Road.



Aerial key map of investigation area

LEP controls

The residential area to the south of Parramatta Road is currently zoned R2 Low Density residential with 0.7:1 FSR and 8.5m HOB. Dwelling lots back onto commercial properties zoned B6 Enterprise Corridor to the north.

PRCUTS recommends increasing residential density in this area, upzoning to R3 Medium Density, and up to 12m HOB and 1.4:1 FSR.

Draft Structure Plan controls

The IWC Draft Structure Plan controls under consideration support the existing LEP controls. An urban design review of the proposed PRCUTS controls was requested.

RFBs were investigated and seen as an opportunity to mediate the transition in built form from the B6 zoned area fronting Parramatta Road and the context of predominantly residential detached dwellings of Croydon, whilst addressing the dwelling targets set across the PRC precincts.

Existing LEP controls	
LZN	R2 - Low Density Residential
FSR	0.7:1, 0.5:1 for properties along West St.
НОВ	8.5m

PRCUTS recommendations		
LZN	R3 - Medium Density Residential	
FSR	1.4:1	
НОВ	12m	

Draft Structure Plan controls under consideration







FSR 0.7:1



HOB 8.5m

Character

Housing and lots

- Predominant housing Federation style and Californian Bungalow style.
- Typical 12m lot frontage, predominantly singlestorey brick detached housing, 4m-6m setbacks, front boundary fencing and landscaped gardens
- Well-maintained footpaths with driveways to predominantly rear garages, some carport structures at front boundary
- Heritage items on Dalmar St (40, 52 Dalmar Street) inter-war Arts and Crafts and Californian Bungalow style
- Some historical residential flat buildings (18-22, 16 Dalmar St)
- West St is more urban in character with 3-storey and 4-storey brick residential flat buildings opposite light industrial brick warehouse, which is approximately 5m tall
- Croydon Rd between Parramatta Rd and Dalmar St is characterised by single-storey brick detached residential on small lots, with front gardens or solid walls at front boundary. The northern side is dominated by front setback car parking to businesses

Streets

- Wide streets, road verge on Dalmar St
- No verge on Croydon Rd
- Mix between off-street and on-street parking
- Predominantly low-height native street trees, some mature native trees east of Dalmar St









03 Medium density residential on West St

Development constraints

- Small residential lots under fragmented ownership
- Dwelling lots back onto commercial retail properties with B6 zoning to the north which has potential solar access impacts
- Investigation area is largely unconstrained by heritage items and conservation areas, however new development should be sympathetic to heritage items on southern side of Dalmar St and to the general residential character
- Investigation area is largely unconstrained by strata apart from one battle-axe lot between Byron and Scott Streets which has been excluded from testing

Preliminary ideas

- Ensure height transition and solar access impacts from B6 area to the north are appropriate
- Explore amalgamation and residential flat building typology. Establish a minimum lot width for amalgamated lots to ensure RFBs maintain integrity of street front character and limit streetscape dominated by garage entries
- Leverage proximity to proposed Five
 Dock Metro Station and improved public
 transport along Parramatta Road by
 providing additional residential density where
 appropriate
- Respond to existing character by ensuring sufficient landscaped area in front setback of new developments



Kings Bay constraints map



Built form typology study

The following study has been undertaken to identify lot patterns including street frontage, lot depth and access, to inform requirements for subdivision and amalgamation and possible future built form typologies within the investigation area.

RFB typologies have been investigated to provide for a better transition between the B6 zoned lots on Parramatta Rd to the R2 zoned low-rise residential area to the south. This would require the amalgamation of existing lots. The following pages will discuss the following typologies developed for this study in more detail:

RFB 1A - Narrow lot infill

RFB 1B - Narrow lot infill (deep lot)

RFB 1C - Narrow lot infill (Croydon Road corner lot)

RFB 2 - Row house



RFB typology key map and desired lot amalgamation pattern



Investigation Area 2 - Residential

A flood map has been included for reference; the outcomes of this study and its recommendations are subject to advice and coordination with hydrological engineers with regard to minimum site landscaped areas and overland flow paths.



Kings Bay Flood Map Source: Inner West Council

This map is from Inner West Council Floodplain Risk Management Studies and Plans. Council is reviewing its flood management plan for this area which might result in changes to the flooding lots

Residential Flat Building precedent imagery

The following precedents demonstrate how residential flat buildings can be applied sensitively to a suburban context, through built form articulation to break down the building scale, materials, height responding to context scale (3–4 storeys), front setbacks, outlook of private open space, and planting in the setback areas.







- Clovelly Apartments, Squillace ApartmentsFinlayson Street Apartments, Candalepas Associates
- 03 21 Riversdale Road, Hawthorn, Ewert Leaf

RFB Type 1A -Narrow Infill Apartment

RFB 1 typology is based on the amalgamation of 2 existing lots. This typology is adaptable to deep sites and amalgamation of lots with narrow frontages. It has been designed to ensure a regular street pattern. Apartments face the street or are provided appropriate separation to orientate to the side or rear of the property within amenity standards. This typology is based on the 'narrow infill apartment' shown in the Apartment Design Guide (ADG Appendix 4) with adjustments to account for greater lot depth.

General parameters for typology:

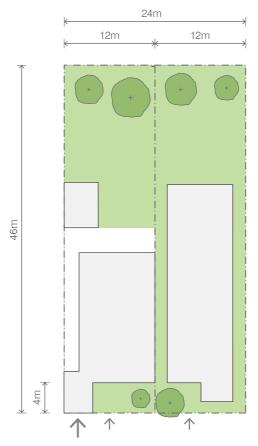
- Lot depth min. 30m
- Lot size min. 720m²
- Street frontage min 20m
- Access & Car-parking Driveway to basement car park
- Communal Open Space 25% Site area (ADG)

Note the sites tested for 1A, 1B, 1C (typically 2-lot amalgamations) meet the minimum recommended parameters for this RFB typology below:

- Min. lot size 720m²
- Min street frontage 20m



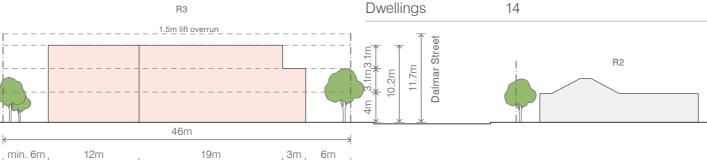
Key plan of lot amalgamation pattern for typology

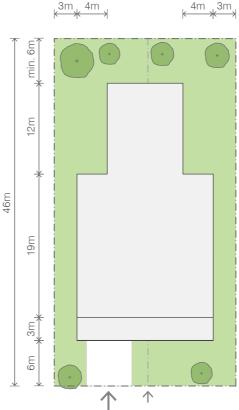


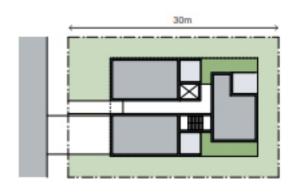
Plan of existing dwellings and lots

Existing dwellings' metrics

FSR	0.4:1	0.4:1
Site width	12m	12m
Site depth	46m	46m
Site area	552m²	552m ²
GFA	192m ²	237m ²
Height	5m	5m
Site coverage	36%	44%
Private open space	341m ²	297m ²
Front setback	4m	4m
Rear setback	Varies	
Side setback	1m	1m
Upper setback	N/A	
Street wall	1 storey	
Parking	Carport	On street
Landscaped area	Varies	
Dwellings	1	1







Indicative apartment plan 'narrow infill apartment' Source: Apartment Design Guide, 2015

Proposed RFB metrics

Plan of proposed dwellings and lots

FSR	1:1
Site width	24m
Site depth	46m
Site area	1104m²
GFA	1121m²
Height	11.7m (3 storeys)
Site coverage	45%
Communal open	356m
space	
Front setback	6m min.
Rear setback	6m min.
Side setback	3m min.
Upper level setback	3m from building line
Street wall	7.1m (2 storeys)
Parking	Basement
Landscaped area	10% deep soil (ADG recommendation
	for sites 650-1500m²)
Dwellings	14

Section diagram of relationship of RFB to low density residential

Investigation Area 2 - Residential

RFB Type 1B - Narrow Infill Apartment

RFB 1B is based on lots equal to or deeper than 52m to generate greater dwelling yield; these are located to the east of the Kings Bay investigation area towards Croydon Rd. This typology is adaptable to deep sites and amalgamation of lots with narrow frontages. It ensures a regular street pattern. Apartments face the street or are provided appropriate separation to orientate to the side or rear of the property within amenity standards. This typology is based on the 'narrow infill apartment' shown in the Apartment Design Guide (ADG Appendix 4) with adjustments to account for greater lot depth.

General parameters for typology:

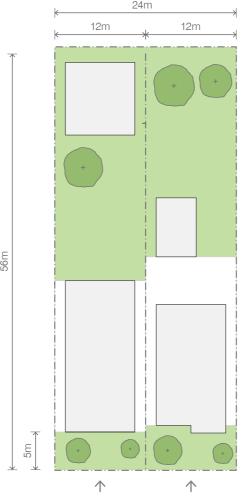
- Lot depth 50m
- Lot size approximately 1000m²
- Street frontage 20m min.
- Access & Car-parking Driveway to basement car park
- Communal Open Space 25% Site area (ADG)

Note the sites tested for 1A, 1B, 1C (typically 2-lot amalgamations) meet the minimum recommended parameters for this RFB typology below.

- Min. Lot size 720m²
- Min street frontage 20m



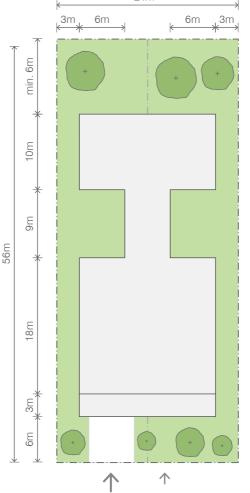
Key plan of lot amalgamation pattern for typology



Plan of existing dwellings and lots

Existing dwellings' metrics

FSR	0.4:1	0.3:1
Site width	12m	12m
Site depth	56m	56m
Site area	672m ²	672m ²
GFA	272m²	205m ²
Height	5m	5m
Site coverage	40%	30%
Private open space	406m ²	473m ²
Front setback	5m	5m
Rear setback	0m	25m
Side setback	1m	1m
Upper setback	N/A	
Street wall	1 storey	
Parking	On street	
Landscaped area	Varies	
Dwellings	1	1



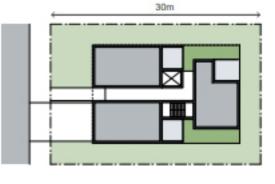
Plan of proposed dwellings and lots

Proposed RFB metrics

FSR	1:1
Site width	24m
Site depth	56m
Site area	1,344m ²
GFA	1,337m ²
Height	11.7m (3 storeys)
Site coverage	50%
Communal open	336m² min.
space	
Front setback	6m
Rear setback	6m min.
Side setback	3m
Upper level setback	3m from building line
Street wall	7.1m (2 storeys)
Parking	Basement
Landscaped area	10% deep soil (ADG
	recommendation for sites
	650-1500m ²)
Dwellings	16



Section diagram of relationship of RFB to low density residential



Indicative apartment plan 'narrow infill apartment' Source: Apartment Design Guide, 2015

18m

55m

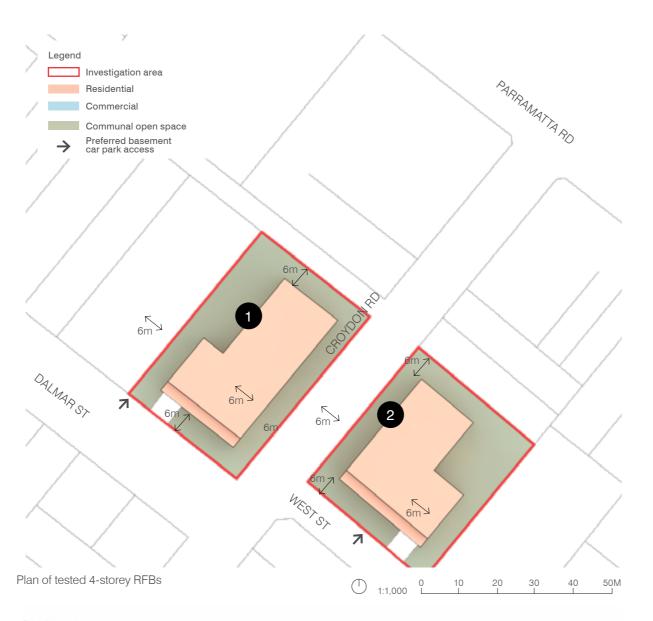
RFB Type 1C -Narrow Infill Apartment - Croydon Road

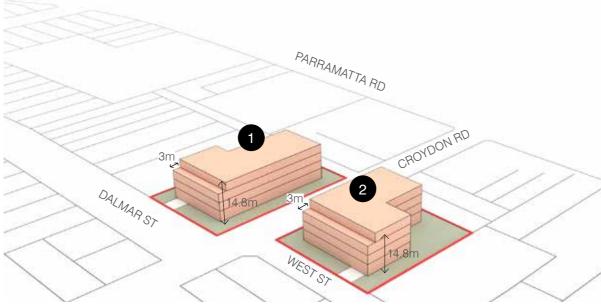
General parameters for typology:

- Corner Lot
- <u>Lot depth</u> 46-55m
- Lot size approximately 1850-2000m²
- Street frontage 36-40m (Dalmar St & West St)
- Access & Car-parking Basement car-parking
- Communal Open Space 25% Site area (ADG)
- No. of storeys 4 storey RFBs were tested and considered to be acceptable on these sites with the follow justification:
 - Sites are located in the proximity of existing medium density residential developments on West St, where existing controls allow for height up to 23m
 - 4-storey also enables a height transition from the proposed 5-storey B6+Residential Opportunity Sites to the north
- Note the sites tested for 1A, 1B, 1C (typically 2-lot amalgamations) meet the minimum recommended parameters for this RFB typology below.
 - Min.. lot size 720m²
 - Min. street frontage 20m



Key plan of lot amalgamation pattern for typology





3D of tested 4-storey RFBs

Proposed RFB metrics

Site	1	2
-SR	1.3:1	1.3:1
Site width (m)	36.6	40.2m
Site depth (m)	55.7	46.4m
Site area (m²)	2,036m ²	1,866m²
GFA (m²)	2,657m ²	2,345m ²
GFA (m²) Commercial	0m²	0m²
GFA (m²) Residential	2,657m ²	2,345m ²
Height* (m)	14.8m	14.8m
Height (storeys)	4	4
Site coverage	44%	43%
Communal Open Space (m²)	506m ²	471m ²
Front setback (m)	6m	6m
Rear setback (m)	6m	6m
Side setback	6m	6m
Upper storey setback from puilding line (to Dalmar and West St)	3m	3m
Street wall (Dalmar and West St)	10.2m (3 storeys)	
Street Wall (Croydon Road)	13.3m (4 sto	reys)
Parking	Basement ca	ar-parking
_andscaped area	15% deep soil (ADG recommendation for sites >1,500m²)	
Dwellings	34	30

^{*}Height inclusive of 1.5m for lift overrun

Solar Analysis

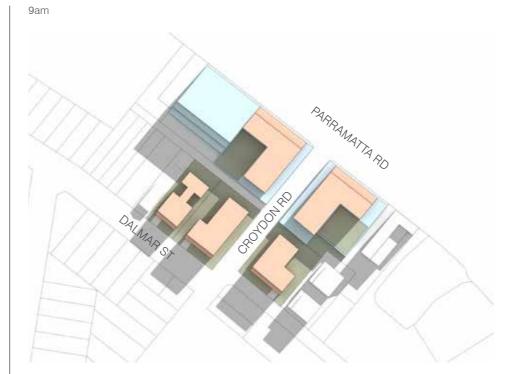
The following diagrams indicate the solar impacts of B6 + residential development on Opportunity Sites 1 and Site 2 (corner of Parramatta and Croydon Road), and 4-storey RFBs to the south of these sites. Natural ground slope has been factored in by way of the allowance given in the floor to floor height of the first storey (see assumptions page at the beginning of document).

Solar access requirements

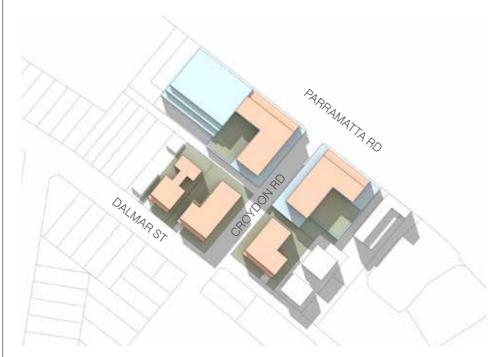
Minimum two hours of solar access to surrounding properties. Accompanying shadow diagrams are taken at 9am, 11am and 1pm on the 21st June.

Summary

The shadow analysis indicates that it is possible to meet solar access requirements as per ADG.







Solar analysis midwinter (June 21): RFB Type 1 C and B6+Residential development to the north





RFB Type 2 -**Row Apartments**

The configuration of existing lot on the block bounded by Byron St, Dalmar St and Scott St does not fit the parameters for a narrow lot infill RFB when assuming all lots in this block are to be amalgamated and turned over. The proposed typology is based on the 'row apartment' type in the Apartment Design Guide (ADG Appendix 4), which is suited to wide frontage, shallow lots. This typology can be adapted to suit corner lots. For the purposes of this study 25 Byron St and 45-49 Dalmar St are amalgamated, so as to not leave any resulting L-shaped adjoining lots which limit the redevelopment potential of this block.

General parameters for typology:

- Lot depth 33m
- Lot size approximately 1,000-2,000m²
- Street frontage 33.5m
- Access & Car-parking -Driveway to basement car park
- Communal Open Space 25% Site area (ADG)

Note the sites tested for 2 (2 to 3-lot amalgamations) meet the minimum recommended parameters for proposed RFB typology.

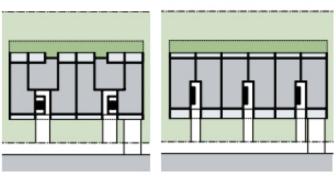
- Min. lot size 720m²
- Min street frontage 20m



3D of tested 3-storey RFBs

Key plan of recommended lot amalgamation pattern





Indicative apartment plan 'narrow infill apartment' Source: Apartment Design Guide, 2015

- redevelopment to follow lot amalgamation pattern identified for this block. Any proposal to redevelop that does not follow pattern to be assessed on a case by case basis. This is to avoid instances where mid-block sites are precluded from future redevelopment.

Proposed RFB metrics

Site	1	2	3
FSR	1:1	1:1	1:1
Site width (m)	44m	33.5m	72m
			(frontage)
Site depth (m)	44m	33m	33m
Site area (m²)	2,278m ²	1,116m ²	1,867m ²
GFA (m²)	2,255m ²	1,100m ²	1,766m ²
Height* (m)	11.7m	11.7m	11.7m
Height (storeys)	3	3	3
Site coverage	47%	49%	47%
Communal open space (m ²)	690m ²	244m²	511m ²
Front setback (m)	6m	6m	6m
Rear setback (m)	6m min.	6m min.	6m min.
Upper storey setback (m)	3m	3m	3m
Street wall	2 storeys	2 storeys	2 storeys
Side setback (m)	6m	3m	6m
Parking	Basement		
Landscaped area	10% deep soil as per ADG recommendation for sites with an area of 650m ² - 1,500m ² and 15% deep soil for		
	sites > 1,500m ²		
Dwellings	28	14	22

*Height inclusive of 1.	.5m for lift overrun
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Residential Recommendations

LEP recommendations

Architectus supports to upzone the R2 zoned investigation area to R3 Medium Density Residential as well as increase HOB to 12m (3 storeys), and 15m (4 storeys) at corner sites on Croydon Rd and West St/Dalmar St. The testing supports a reduction to PRCUTS' FSR recommendation from 1.4:1 to 1:1, and 1.3:1 at corner sites on Croydon Rd and West St/ Dalmar St.

Justification

This residential investigation area is positioned directly south of the B6 zoned area along Parramatta Road which has also been flagged for uplift as identified in previous sections of this study.

Medium density residential flat buildings are proposed to support this future employment growth and provide a better height transition and solar amenity from B6 to residential. Investigation included RFBs of 3 and 4 storeys and it is recommended to limit development to 3 storeys, as a 2-storey street wall with third storey setback of 3m is responsive to low-density housing along the south side of Dalmar Street. A maximum of 3 storeys for residential development along Dalmar St also minimises overshadowing impacts on adjacent

Landscaped front setbacks and deep soil provisions (achieving larger deep soil zones for larger site areas) respond to the existing character of the area and enhances amenity. The proposed street front built-form pattern (typical 18m wide buildings on 20m lot widths) is responsive to existing street built-form pattern of 1 to 2-storey houses on narrow lots. An FSR of 1:1 is recommended to ensure adequate setbacks, communal open space and deep soil provisions.

The maximum height proposed at the intersection of Dalmar St and Croydon Rd is 4 storeys: 3-storey street wall with 4th storey setback. This provides a height transition from the 5-storey lots (B6 + residential), and responds to the 3 and 4-storey residential buildings on West St. The proposed height corresponds with the proposed FSR of 1.3:1.

Existing LEP controls			
LZN	R2 - Low Density Residential		
FSR	0.7:1		
НОВ	8.5m		

PRCUTS recommendations			
LZN	R3 - Medium Density Residential		
FSR	1.4:1		
НОВ	12m		

Draft Structure Plan controls		
LZN	R2 - Low Density Residential	
FSR	0.7:1	
HOB	8.5m	

Final Recommendations			
LZN	R3 - Medium Density Residential + RFBs		
FSR	1:1, 1.3:1		
НОВ	12m (3 storeys) and		

Residential yield

Calculations" for methodology

15m (4 storeys)

	No of dwallings	
	No. of dwellings	
Maximum capacity under existing controls	113	
Maximum capacity under recommended controls	372	
Additional capacity under recommended controls	259	
Note refer to "1.6 Dwelling and Employment Yield		

Land Zoning

B4 Mixed Use

B6 Enterprise Corridor

IN2 Light Industrial

R3 Medium Density Residential

SP2 Infrastructure



Floor Space Ratio Legend (n:1)

H 0.7

N 1

Q 1.3

S1 1.5

T3 2.1

T7 2.4



Maximum Building Height (m)

M1 12

01 15

P2 17.5

Q1 19 R 22

S 23



1.4 Investigation Area 3 - B4



Issue

Council's preliminary recommendation has been to retain existing FSR for this site as it is unlikely to develop due to existing strata. Architectus has been asked to review this.



Existing LEP controls		
LZN	B4 - Mixed Use	
FSR	1.5:1	
НОВ	23m	
PRCU	TS recommendations	
LZN	B6 - Enterprise Corridor	
FSR	2.4:1	
HOB	21m	

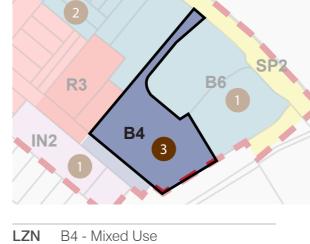


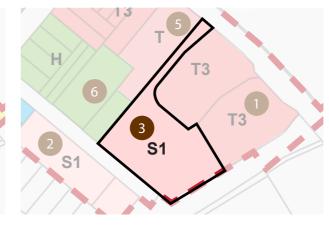
Recommendation

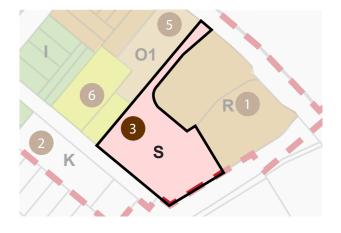
The site is currently zoned as B4 - Mixed Use, however there is currently a 4-storey residential building with access from both West St, and Parramatta Rd. Currently there are 69 dwellings under strata, therefore it is unlikely that this site will be redeveloped to generate a higher residential yield.

Architectus supports the existing and draft structure plan controls to retain existing zoning, FSR and HOB.

Draft Structure Plan controls under consideration







FSR 1.5:1

HOB 23m

1.5 Investigation Area 4 - R3



Issue

6 – 10 West Street, Croydon is zoned R3 medium density in ALEP but has the same FSR as the existing R2 Low Density Residential. PRCUTS recommends higher FSR and reduced building height.



Aerial key map of site

Existing LEP controls		
LZN	R3 - Medium Density Residential	
FSR	0.7:1	
НОВ	12.5m	
PRCUTS recommendations		
LZN	R3 - Medium Density Residential	
FSR	1:4:1	
НОВ	12m	

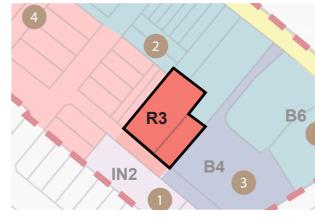


Recommendation

6-10 West St is currently zoned as R3 medium density. Site area 1,400m² and there are currently 2 x 3-storey residential buildings (6-8 West St) down the length of the site, with access to basement car-parking from West St. There are 27 dwellings under strata, therefore it is unlikely that this site will be redeveloped to generate a higher residential yield. It is recommended that the existing controls for 6-8 West St are retained.

10 West St is a vacant lot with site area of 508m², and is part of the proposed heritage item on 590-594 Parramatta Road. As such the FSR and HOB controls for this particular lot are proposed to be uplifted as per the proposed heritage item.

Draft Structure Plan controls under consideration







FSR 0.7



HOB 12.5m

1.6 Dwelling and Employment Yield Calculations



Legend

Block outline

A Block ID

Land Zoning

B4 Mixed Use

B6 Enterprise Corridor

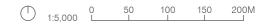
IN2 Light Industrial

R2 Low Density Residential

R3 Medium Density Residential

SP2 Infrastructure

Opportunity Sites - B6 + Residential



Dwelling and Employment Yield Calculations

Employment Yield Assumptions

Zone GFA sqm per employee

B2 Local centre 22
B4 Mixed Use 28
B6 Enterprise Corridor 38
IN2 Light Industrial 98
Note above assumptions provided by Council

Commercial/Residential ratio

Land zoning	% Commercial of Total GFA	% Residential of Total GFA
B6	100	0
B6 + Residential	30*	70
B4	30*	70
IN2	100	0

^{*30%} of total GFA for commercial is an average percentage based on tested opportunity sites in Kings Bay

Dwelling and Employment Yield Calculations

Dwelling Yield Assumptions

Average Dwelling size

Apartment Mix	Mix	Dwelling size NLA/NSA (m²)	GFA (m²)
1 bedroom	30%	50	59
2 bedroom	55%	70	82
3 bedroom	15%	90	106
	Average dwelling size	67	79

Note above assumptions were provided by Council

Commercial/Residential ratio

% Commercial of Total GFA	% Residential of Total GFA
100	0
30	70
0	100
30	70
	100 30 0

^{*30%} of total GFA for commercial is an average percentage based on tested opportunity sites in Kings Bay

Methodology

- Dwelling yield has been calculated based on FSR x block (or part of block area for which FSR is applicable to) / average dwelling size (79m² GFA)
- For existing R2 Low Density Residential, the total number of landholdings that could be converted to be either dual occupancy, accommodate a secondary dwelling or subdivision with an additional dwelling was assessed. A minimum lot size was assumed to be 450sqm. R2 Low Density land in Heritage Conservation Areas above 450sqm can accommodate a secondary dwelling under current controls. For each applicable landholding, an additional dwelling was assumed in the theoretical existing capacity. The total existing capacity was calculated to be at 179.
- The existing (as built) no. of dwellings was calculated to be at 174, which is slightly less than the maximum capacity under existing controls. This could be due to, but not limited to:
 - strata site on Byron St actually having 6 dwellings, as per the methodology for sites
 >450m² in R2 zone, this lot would have a theoretical capacity of 2 dwellings
 - strata on R3 and B4 have 27 and 69 dwellings respectively whereas the below calculates 17 and 49 dwellings respectively
 - there are only 42 out of 71 R2 zoned lots >450m²
 - the current B6 zone over the proposed heritage item does not include the adjoining lot on West St

Dwelling and Employment Yield Calculations

Summary of existing and proposed employment capacity		
Proposed employment GFA capacity	85390m ²	
Existing Employment GFA capacity	69325m ²	
Net additional employment GFA capacity	16065m ²	
Proposed employees capacity	2207	
Existing employees capacity	1563	
Net additional employee capacity	644	

Summary of existing and proposed dwelling capacity		
Proposed residential GFA capacity	57453m ²	
Existing residential GFA capacity	28730m ²	
Net additional residential GFA capacity	28723m ²	
Proposed dwelling capacity	694	
Existing dwelling capacity	179	
Net additional dwelling capacity	515	

1.7 Final LEP recommendations

Issue	Architectus recommendations	Further controls for LEP/DCP
Expand the B6 Enterprise Corridor zone to the rear of properties along Parramatta Road as recommended in PRCUTS – peer review advice sought considering the relationship with the adjacent residential areas. Manage the interface between different land uses especially the B6 land fronting Parramatta Road and the residential properties at the rear. For peer review, note that there are concerns regarding the transition of building heights from B6 to adjacent residential areas. Green edge setbacks (6m) recommended in PRCUTS are suggested to be deleted as Council's Transport planners have advised that the widening of footpaths, landscaping and new cycling paths should be provided within the existing road carriageway without relying on the provision of setbacks from surrounding lots which may practically never be achieved. The substantial 6m setback will also reduce the redevelopment potential of these lots which are not very deep. Feedback sought on whether any setbacks to Parramatta Road should be provided.	Land Use - B6 - Enterprise Corridor (with residential flat buildings as an additional permitted land use for opportunity sites) FSR - 2.4:1 and 2.1:1 Height - 17.5m (4 storeys), 19m (5 storeys) and 22m (6 storeys)	 4-storey street wall 9m rear setback to 2 storeys then an additional 5m per storey above 2 storeys 1.5m front setback to Parramatta Road Access preferred via secondary streets or rear through easements
Retain existing R2 low density residential housing with the potential to investigate opportunities for medium density housing - peer review advice sought regarding the appropriate zoning, height, density and built form controls. Consider appropriate transitions and solar access requirements for the residential areas from the B6 zoned land along Parramatta Road.	Land Use - R3 - Medium Density Residential (with residential flat buildings as an additional permitted land use) FSR - 1:1 and 1.3:1 Height - 12m (3 storeys) and 15m (4 storeys)	 min. 20m street frontage min. site area 720m² for residential flat buildings redevelopment to follow lot amalgamation pattern identified in previous section on this issue, particularly for block between Byron St and Scott St. Any proposal to redevelop that does not follow pattern to be assessed on a case by case basis landscaped zone within 6m front setback 6m minimum rear setback deep soil and communal open space as per ADG requirements 2-3 storey street wall with front upper storey setback 3m building façades to be articulated to reflect existing grain of south side of Dalmar St (12m lot widths)
586 Parramatta Road and 12 West Street, Croydon - Retain existing FSR for the mixed-use site as it is unlikely to redevelop (strata) - peer review advice sought	Land Use - B4 - Mixed Use (no change) FSR - 1.5:1 (no change) Height - 23m (no change)	N/A
6 – 8 West Street, Croydon is zoned R3 medium density in ALEP but has the same FSR as the existing R2 low density residential. PRCUTS recommends higher FSR and reduced building height - peer review advice sought regarding the proposed controls.	Land Use - R3 - Medium Density Residential (no change) FSR - 0.7:1 (no change) Height - 12m (no change)	N/A

1.8 Appendix I - Green Edge Setbacks

The diagrams on this page are section studies of various scenarios: 1.5m setback to ground and first floor with second and third floor overhang, no setback and reduced travel lane, and existing condition with street planting.

These have informed the final recommendation for a 1.5m front setback of built form to Parramatta Road. Architectus supports Council's recommendation to delete the 6m green edge setbacks proposed in PRCUTS with a preference for amenity improvements to Parramatta Road to occur within the 30m road corridor.

