
Parramatta Road and Norton Street

Urban Design Study

For Leichhardt Municipal Council
29 February 2016



Architectus Group Pty Ltd
ABN 90 131 245 684

Nominated Architect
Managing Director Sydney
Ray Brown
NSWARB 6359

Architectus Sydney
Level 18 MLC Centre
19 Martin Place
Sydney NSW 2000
Australia
T +61 2 8252 8400
F +61 2 8252 8600
sydney@architectus.com.au

Contents

1.0	Background	5
1.1	Introduction	6
1.2	Council's strategic direction for Leichhardt	8
1.3	Existing planning strategies and controls	10
2.0	Analysis	13
2.1	Norton Street and Parramatta Road: site analysis	14
2.2	Existing building heights	26
2.3	Existing capacity estimate	27
2.4	Heritage conservation areas and items	28
2.5	Opportunity sites	29
2.6	Key issues and opportunities	30
3.0	Land use and built form options	35
3.1	Urban design principles	36
3.2	Norton Street and Parramatta Road: vision	38
3.3	Built form examples	46
3.4	Design principles to mitigate noise impacts	50
3.5	Activating small public spaces	51
3.6	Built form types and indicative capacity estimate	52
3.7	Structure Plan	54
4.0	Appendix A: site testing	57



MCCARTHY MAISONNETTES

1.0 Background



1.1 Introduction

The vision for Leichhardt is to build on the area's unique vibrant mixed use character, encouraging intensification and renewal in appropriate locations. This report has been prepared by CHROFI and Architectus for the Parramatta Road and Norton Street Precinct (refer plan opposite).

Purpose of this report

The purpose of the study is to establish the desired future character for the study area and inform the future land use planning framework to achieve viable development of appropriate massing, scale and grain.

Key outputs of the study is to provide:

a) *a consolidated analysis plan for the Parramatta Road/Norton Street study area which illustrates the key strengths, weaknesses, opportunities and constraints within the existing urban form. This analysis will inform the future character and liveability of the area.*

b) *draft objectives and guiding principles for the precinct in collaboration with Council within the following themes:*

- Built Form
- Movement
- Public Domain

Consideration should be given to:

- *implementing the recommendations of the 1996 Hill Thalys Leichhardt Town Centre Urban Design Study in relation to opportunities for mid-block pedestrian links and laneway connections to improve accessibility and provide retail and commercial frontages;*
- *the potential to extend retail and commercial activity into side streets (Strategy 1.1.2.e.iii of the Employment and Economic Development Plan – 4 Year Service Delivery Plan);*
- *locations that may require the dedication of land to enhance the open space and public domain networks;*
- *the draft "Building Envelopes" and related guidelines for the UnitingCare sites prepared by Allen Jack + Cottier. The study should have regard to the work undertaken for these sites but not reconsider the outcomes already prepared.*

– In addition to the original brief, this report takes into consideration mapping of heritage listed buildings, contributory buildings, neutral buildings and detracting buildings, based on a Heritage Assessment of Norton Street and Parramatta Road Corridors by NBRS (2015).

c) *Identify appropriate built form outcomes by way of discussion, plans and illustrations. Consideration should be given to:*

- *height (storeys and metres)*
- *massing*
- *grain*
- *setbacks*
- *building typologies*
- *site specific provisions for key sites e.g. gateways*
- *integration and retention of heritage*
- *site amalgamations*
- *solar access and overshadowing*
- *permeability/connectivity*
- *parking*

d) *If mixed residential/commercial development outcomes are deemed appropriate, investigate the potential for appropriate mixed-use built form typologies that address aircraft and traffic noise impacts for residential components.*

Built form options tested in this report have taken into account the commercial and retail study by SGS Economics and Planning which determined the existing capacity and future demand for commercial floorspace within the project area to inform the land use future of the B2 zoned land.

The Study Area

The study area is loosely defined by 1 block north of Parramatta Road between Elswick and Nelson Streets, and 1 block either side of Norton Street from Parramatta Road to Macauley Street, just South of Pioneers Park (refer plan opposite). Due consideration is given on solar access to blocks on the south side of Parramatta Road.

Council's vision for Leichhardt

The vision for Leichhardt is to build on the area's unique vibrant mixed use character, encouraging intensification and renewal in appropriate locations to create jobs, new public spaces, revitalise retail precincts and provide new dwellings.

The objectives for this project are to:

- Map the heritage character of the area, ensuring that new built form integrates with existing and adds positively to the character of the precinct
- Review existing built form, ownership and urban design quality of the public domain within the study area
- Identify opportunity sites that are more readily developed
- Identify new laneway and / or street connections that would facilitate improved pedestrian connections within the precinct
- Define an appropriate built form scale for Norton Street and Parramatta Road
- Test several built form options on typical sites to determine an appropriate scale and density that could be applied to the rest of the precinct
- Propose revised built form outcomes for the study area

1.2 Council's strategic direction for Leichhardt

Council has undertaken and commissioned a range of studies focused on the Parramatta Road corridor through the Leichhardt LGA. These studies have informed land use planning, including preparation of and amendments to the Leichhardt LEP 2013.

These documents, and the key strategic directions relevant to the Parramatta and Norton Street precinct planning are summarised below:

Leichhardt 2025+

Leichhardt 2025+ is Leichhardt Council's Community Strategic Plan which guides the Delivery Program and Operational Plan in line with the community's aspirations for the next ten years. The vision statement from Leichhardt 2025+ is:

Community and Council will work together to promote and develop Leichhardt as a sustainable, liveable and connected community.

The plan also sets goals for community participation and best practice planning.

Leichhardt Employment and Economic Development Plan

The Leichhardt Employment and Economic Development Plan (EEDP) is a 10-year strategy for the future economic development of Leichhardt LGA. Its purpose is to identify initiatives that can make a fundamental improvement to Leichhardt's economy.

A key strategy relevant to this study is:

- Strategy 1.1: Drive the renewal of key centres sites and corridors through place-based planning and making.

Leichhardt Community and Cultural Plan

The Leichhardt Community and Cultural Plan (CCP) comprises an integrated 10 year strategic service plan, supported by a 4 year service delivery plan, that addresses the social and cultural aspirations and challenges of the Leichhardt LGA.

Key strategies relevant to this study are:

- Strategy 2.1.2: Work with local businesses, community and cultural groups to foster an identity responsive to the changing community
- Strategy 2.2.2: Develop positive interaction between public and private spaces
- Strategy 2.2.3: Manage and encourage shared use of the public domain.
- Strategy 2.4.1: Encourage pedestrian and cycle friendly neighbourhoods with access to local services, spaces and places.



Community Strategic Plan



Leichhardt 2025+

Leichhardt Town Centre Urban Design Study, Hill Thalys, 1996

The Hill Thalys study undertook a thorough analysis of topography and environment, street layout, blocks, mid-block links, public facilities, subdivision, built form and conservation areas in the Norton Street area. Key recommendations include:

- Increased density for mixed uses on Norton Street.
- Increased permeability and new through site links into Norton Street.

Fine Grain Density Modelling, RAW Architects + Callagher

RAW Architects and Callagher undertook an analysis and assessment of Parramatta Road within the Leichhardt LGA and prepared massing models to consider various densities. Key recommendations include:

- Allow for renewal along Parramatta Road on one or two lots to retain a fine grain.
- Consider the transition to adjoining neighbourhoods, with density focussed on Parramatta Road.

Leichhardt Shopfront Improvement Audit, GMU, 2014

The audit concluded that Leichhardt and Parramatta Road are most in need of improvements to passive surveillance and the pedestrian experience. Key recommendations include encouraging active and transparent shop fronts, introducing new mid-block pedestrian links, activating side streets, and improving landscape character.

Off Broadway Live Music Reference Group Final Report, 2014

This report identifies opportunities to enhance the potential of Parramatta Road and Sydenham as cultural, live music and performance destinations. Recommendations include the promotion and management of the area as a live music and cultural space, including small, affordable, flexible venues for emerging artists and ancillary uses (cafes, small bars, clothing, design). The report also makes recommendations to manage interface, including building construction requirements.



1.3 Existing planning strategies and controls

1.3.1 Planning strategies

A Plan for Growing Sydney

- A Plan for Growing Sydney sets out goals and actions for the Sydney metropolitan area to achieve the State's vision for 'a strong global city, a great place to live'.
- Leichhardt is part of the Central Subregion, which is expected to provide an agglomeration of high-value industries and employment while increasing residential density in appropriate centres to deliver a city of housing choice, with homes that meet our needs and lifestyles, by accelerating housing supply across Sydney and accelerating urban renewal across Sydney.
- Parramatta Road is identified as a key area of focus for delivering additional dwellings through the transformation of underutilised lands. The corridor will be 'a focus for increased housing, economic activity and social infrastructure'.

Leichhardt 2025+

- Leichhardt 2025+ represents the community's main priorities and aspirations for the future, guiding Council's actions through ten year strategic service plans, a four year delivery program and annual operational plan.
- A key goal of Leichhardt 2025+ is a 'thriving business and a vibrant community working together to improve the local economy'.

Leichhardt Employment and Economic Development Plan

- The Leichhardt Employment and Economic Development Plan is a ten year service strategy supporting Leichhardt 2025+ that identifies initiatives to support Leichhardt's economy.

1.3.2 Planning Controls (Local Environmental Plan)

The Leichhardt Local Environmental Plan 2013 (LLEP 2013) sets planning controls for the LGA.

Land Use Zoning

Land in the study area is zoned B2 Local Centre, adjoining areas of R1 General Residential zoning.

Objectives of the B2 Local Centre Zone are:

- To provide a range of retail, business, entertainment and community uses that serve the needs of people who live in, work in and visit the local area.
- To encourage employment opportunities in accessible locations.
- To maximise public transport patronage and encourage walking and cycling.
- To ensure that development is appropriately designed to minimise amenity impacts.
- To allow appropriate residential uses to support the vitality of local centres.
- To ensure that uses support the viability of local centres.
- To provide a mixture of compatible land uses.
- To reinforce and enhance the role, function and identity of local centres by encouraging appropriate development to ensure that surrounding development does not detract from the function of local centres.
- To integrate suitable business, office, residential, retail and other development in accessible locations.

The zone permits, with consent, the following uses:

Attached dwellings; Boarding houses; Child care centres; Commercial premises; Community facilities; Dual occupancies; Dwelling houses; Educational establishments; Entertainment facilities; Function centres; Information and education facilities; Medical centres; Multi dwelling housing; Passenger transport facilities; Recreation facilities (indoor); Registered clubs; Residential flat buildings; Respite day care centres; Restricted premises; Roads; Rural workers' dwellings; Semi-detached

dwellings; Service stations; Shop top housing; Tourist and visitor accommodation; any other development not specified as prohibited.

The zone prohibits a range of uses, including:

Agriculture; Air transport facilities; Airstrips; Animal boarding or training establishments; Biosolids treatment facilities; Camping grounds; Caravan parks; Cemeteries; Correctional centres; Crematoria; Depots; Eco-tourist facilities; Extractive industries; Farm buildings; Forestry; Freight transport facilities; General industries; Heavy industrial storage establishments; Heavy industries; Helipads; Highway service centres; Industrial training facilities; Marinas; Mooring pens; Open cut mining; Port facilities; Recreation facilities (major); Rural industries; Sewage treatment plants; Storage premises; Transport depots; Truck depots; Vehicle body repair workshops; Warehouse or distribution centres; Waste disposal facilities; Waste or resource transfer stations; Water treatment facilities; Wharf or boating facilities; Wholesale supplies.

Additional local provisions apply, clause 6.11A:

- (1) The objective of this clause is to promote residential accommodation as part of mixed use developments in business zones to support the vitality of neighbourhood and local centres.*
- (2) This clause applies to land in Zone B1 Neighbourhood Centre and Zone B2 Local Centre.*
- (3) Development consent must not be granted to development for the purpose of residential accommodation on land to which this clause applies unless the consent authority is satisfied that:*
 - (a) the building comprises mixed use development, including residential accommodation, and*
 - (b) the building will have an active street frontage, and*
 - (c) the building is compatible with the desired future character of the area in relation to its bulk, form, uses and scale.*
- (4) In this clause, a building has an active street frontage if all floor space on the ground floor of the building on the primary street frontage is used for a purpose other than residential accommodation (with the exception of areas for access or service purposes).*

Floor Space Ratio

Maximum FSR in the study area is 1:1 for B2 zones, with provisions for 'Area 1' to have a maximum FSR of 1.5:1 to encourage mixed use development that have active ground floor frontages (clause 4.4A).

Adjoining R1 zoned land has FSRs of 0.5:1 and 0.6:1.

Height of Buildings

There is no applicable maximum height of buildings control for the study area.

Heritage

- Approximately half of the the western side of Norton Street (south of Marion) is within a Conservation Area.
- Both sides of Norton Street, north of Marion Street is within a Conservation Area
- Almost the entire frontage of Parramatta Road within the study area is in a Conservation Area

A more detailed heritage study has been undertaken by NBRS who have classified buildings within the study area into Heritage Items and Contributory, Neutral and Detracting buildings (refer section 2.4).

1.3.3 Planning Controls (Development Control Plan)

Parking

- The Leichhardt DCP 2013 provides minimum and maximum parking rates for a range of land uses. The following table sets out parking rates for key land uses relevant to this study (not including visitor parking).

Residential

1 bedroom unit	minimum 1 space per 3 dwellings	maximum 0.5 space per 1 dwelling
2 bedroom unit	minimum 1 space per 2 dwellings	maximum 1 space per 1 dwelling
3 bedroom unit	minimum 1 space per 1 dwelling	maximum 1.2 spaces per 1 dwelling

Business premises	minimum 1 space per 100sqm	maximum 1 space per 60sqm
--------------------------	----------------------------	---------------------------

Office premises	minimum 1 space per 100sqm	maximum 1 space per 80sqm
------------------------	----------------------------	---------------------------

Industry	minimum 1 space per 250sqm	maximum 1 space per 150sqm
-----------------	----------------------------	----------------------------

Shops	minimum 1 space per 50sqm	maximum 1 space per 50sqm
--------------	---------------------------	---------------------------

Bulky goods premises	minimum 1 space per 125sqm	maximum 1 space per 100sqm
-----------------------------	----------------------------	----------------------------

Flooding

- Land towards the south of the study area within the Whites Creek catchment is flood affected.
- In order to approve a development on these lands, Council must be satisfied that the development is compatible with the flood hazard of the land and responds appropriately to flood risk through building design.
- a 500m freeboard above the 100 year ARI flood event must be provided.



2.0 Analysis



2.1 Norton Street and Parramatta Road: site analysis

Norton Street Precinct

Norton Street is an important retail, restaurant and civic street serving the local community. The built form of Norton Street ranges from good to poor quality with some of the more recent developments improving the activation of Norton Street (eg. Norton Plaza, Berkelouw and Palace Cinemas) while some mid to late twentieth century buildings with parking lots facing the street detract from the vibrancy of Norton Street.

The Forum is the tallest (6 storeys) and one of the only large mixed-use developments that includes both residential and retail. It has declined in vibrancy in recent years.

The urban design characteristics of the precinct are:

1. Fine grain built form on western side of Norton Street (adapted terrace and shop houses) and larger format commercial and retail premises on the eastern side of Norton Street (south of Marion Street).
2. A cluster of civic buildings around the intersection of Norton Street and Marion Street, situated on the local topographic high-point (the 'civic' precinct).
3. Long, north-south blocks with some east-west informal pedestrian connections on private land.
4. Some detracting built form, particularly between Marion Street and Parramatta Road.
5. Generally consistent fine-grain built form (shop houses) north of Marlborough Street.

The precinct is currently zoned B2 'Local Centre' and SP2 for the civic uses (school, town hall and church) at the intersection of Norton Street and Marion Street.

Parramatta Road Precinct

Parramatta Road provides a range of commercial and retail premises within relatively old building stock (typically late nineteenth century) on fine-grain lots, 2-3 storeys, with most lots from Renwick to Johnston Street fronting both Parramatta Road and the rear lanes (Renwick, Dot, Redmond and Albion lanes) on lots typically 30-40m deep.

The two blocks from Johnston to Nelson Streets, and from Renwick to Elswick streets are typically 60m deep, consist of less regular built form and lot subdivision and lack rear lane access.

The urban design characteristics of the precinct are:

1. Generally consistent 2-storey fine grain built form (shop houses) on both sides of Parramatta Road, and larger warehouse-style commercial and retail premises and several heritage pubs - typically these are on larger, corner lots.
2. Transition from retail and commercial premises fronting Parramatta Road to lower density individual residential dwellings to the north.
3. Some isolated examples of recent mixed use development (4-5 storeys) with residential units above retail / commercial ground floor.
4. Long, east-west blocks, 60-190m in length.
5. Some detracting built form, particularly those that lack street activation (eg. surface car parks) or with large, blank walls.



Norton Street and adjoining laneways



A strong heritage building marks the corner of Norton Street and Parramatta Road.



The eastern edge of Norton Street is characterised by large blocks, poor built form and low footpath amenity with many driveway entries.



Norton Plaza offers a concentration of people, however the activity does not continue down the street to neighbouring buildings.



A legacy of good cafes and restaurants on Norton Street needs to be built upon with new commercial opportunities.



The Town Hall at the corner of Marion Street and Norton Street marks the local topographic high point and, together with the school and Post Office building, is an important landmark in the area.



The intersection of Marion Street and Norton Street is a focus for civic uses that punctuates the continuous retail strip of Norton Street.

Norton Street and adjoining laneways



Example of empty tenancies and unused open space Norton St.



Example of potential land to develop between Renwick St and Norton St.



Misaligned street setbacks create a visually cluttered experience.



Large blocks on the eastern side of Norton St often present blank frontages to the streetscape.



The entry to the Forum is marked with high signage, a pedestrian crossing and low level planting.



Underutilised sites fronting Norton Street.



Renwick Street footpath widening near to Parramatta Road offers a well functioning small public space with trees, a cafe and small scale retail - it connects to Norton Street via Renwick Lane, and is on the most direct and pleasant pedestrian route to Petersham Station.

Side streets intersecting with Parramatta Road



Existing warehouse buildings provide a strong character and opportunity for redevelopment.



Nelson Street next to the Annandale Hotel. Perpendicular parking area could be better used for extending the footpath and providing shade trees to create a small public space similar to Renwick Street.



Young Street built form upgrades and reuse of existing warehouse buildings can combine with some additional footpath width and planting.



Catherine Street is anchored by the heritage listed Albert Palais Events, but has little greenery or shade. The development on the south side of Parramatta Road illustrates new built form set back from the heritage 2 storey building.



Macquarie Street has good built form but many empty retail tenancies, no greenery or shade trees.



Annandale Street is wide enough to create some significant green spaces with on street parking.

Parramatta Road - typical elevation

This elevation illustrates the fine grain built form on Parramatta Road, typically 2 storeys.



Typical Parramatta Road street elevation - between Macquarie St and Young Street

Parramatta Road and rear laneways



Parramatta Road is a noisy, vehicular dominated environment.



Declining retail development along Parramatta Road needs revitalisation.



Rear lanes offer pedestrian friendly environments and due to their narrow width (typically 12m), vehicular traffic is slow.



A large proportion of lots fronting Parramatta Road also front rear laneways - these are often more active places.



Continuous awnings front Parramatta Road (with a few exceptions) provide weather protection for pedestrians.



A recent example of residential development fronting McCarthy Lane, behind the Annandale Hotel.

2.1.1 Built form - street edge and underutilised land

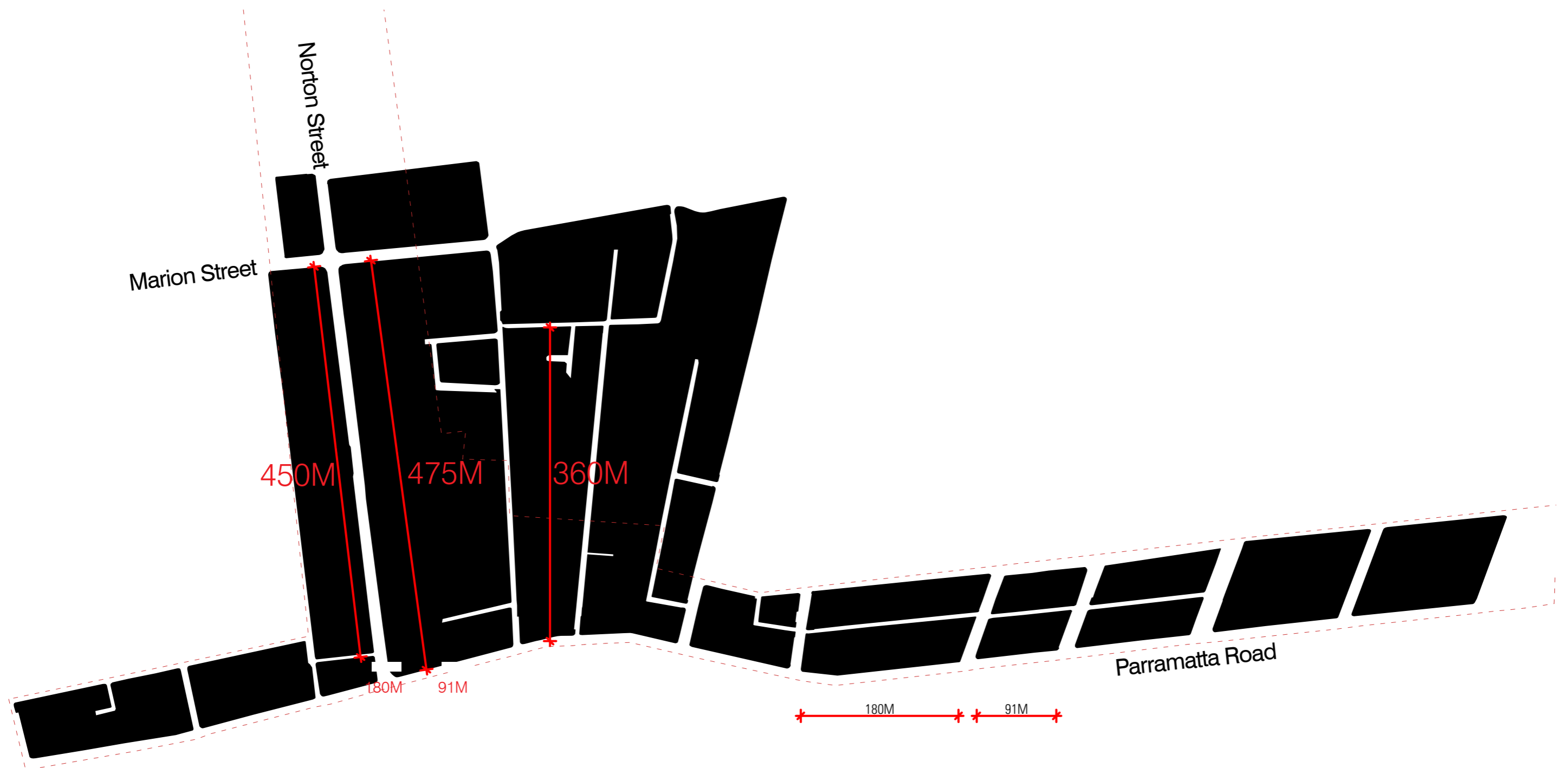
This diagram illustrates the prevalence of underutilised land in the Norton Street area that weakens the centre as a hub of activity. It also illustrates the distinct north and south sub-precincts of Norton Street divided by Marion Street. Refer to 2.2 for existing building heights.



2.1.2 Movement

This diagram illustrates the lack of pedestrian connections between Norton Street and adjacent Renwick Street and Balmain Road. This makes it difficult for pedestrians to access Norton Street, weakening it as a centre of activity.



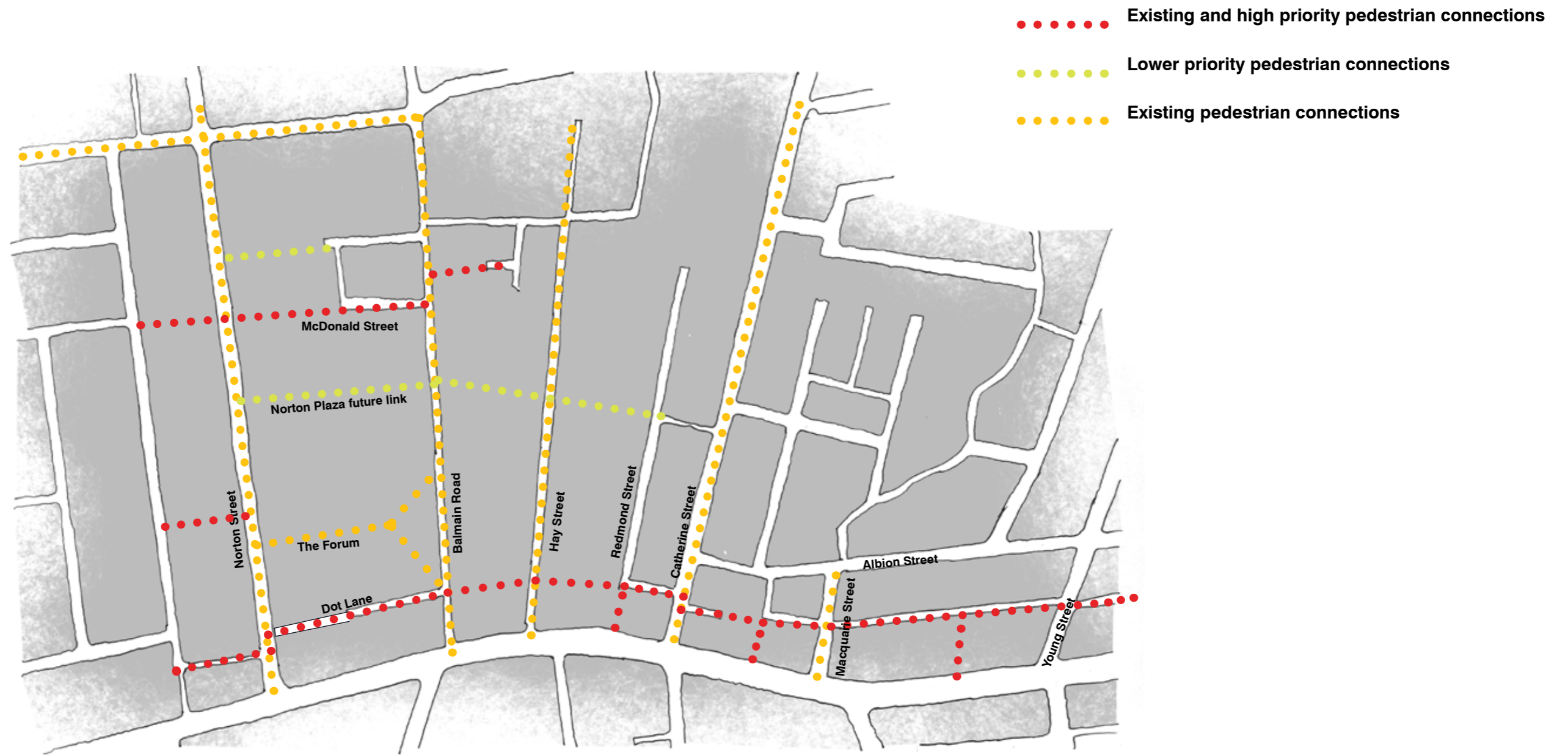


Large Blocks

Large impenetrable blocks along Norton Street and Parramatta Road make it difficult for pedestrians to access Norton Street from adjoining neighbourhoods. A series of laneways and new pedestrian connections could help the residential areas reach the retail areas.

Block Length Norton St: Parramatta Road to Marion: 475m

Block Length Parramatta Road: 180m max



2.1.3 Public Domain

This diagram illustrates the comparative lack of street trees on the south side of Norton Street and complete lack of trees on Parramatta Road. Some streets that intersect with Parramatta Road do offer good street trees that improve the public domain.



2.1.4 Norton Street and Parramatta Road: SWOC

Strengths

- Close proximity to the CBD
- Good bus connections
- Rear laneways provide rear loading, pedestrian and cycle friendly environment
- Dominant heritage buildings on many corner sites act as strong anchors to the built form
- Heritage character of conservation areas provides a good built form and public domain
- Good building stock with shop top housing
- Good services
- Continuous awnings on northern side of Parramatta Road provide shade and weather protection for pedestrians
- Strong civic centre at intersection of Marion Street and Norton Street

Weaknesses

- Poor pedestrian amenity
- Lack of pedestrian access to Parramatta Road particularly at the mid block
- Parramatta Road traffic - noise, air pollution, vibration
- Parking on Norton Street is in limited supply
- Retail decline resulting in many empty tenancies and poor built form upkeep
- Inflexible buildings due to complexity of fine grain lots
- Lack of good amenity/ open space
- Long block lengths on Norton Street and lack of through block links from residential areas
- Many driveway entries across the footpath
- Lack of shaded footpaths on Norton Street - particularly in the afternoon on the eastern side
- Lack of continuous awnings on Norton Street
- Poorly defined street edge on Norton Street
- Cluttered and visually incoherent street character on Norton Street
- Italian focus dispersing to other centres (Haberfield, Five Dock, Lewisham) diluting the strength of the brand
- Some poor quality built form, insufficient ground level activation, surface car parks

Opportunities

- Maximise underutilised sites
- Encourage fine grain mixed use development
- Improve laneways for shared use and a protected retail environment
- Revive the retail experience
- Revive the quality of the existing building stock
- Provide density with no negative visual or overshadowing impact on the area
- Opportunity for protected and green side streets along the length of Parramatta Road
- Create identity for this precinct
- Improve pedestrian connections in the east/ west direction to break down the large blocks on Norton Street
- Add life and activity to support the retail high street with increased residential density
- Create a strong sense of community focused on a well connected high street
- Improved pedestrian experience eg through the provision of street awnings and a defined street edge on Norton Street
- Connect to the Forum and good civic services eg library, town hall, schools
- Good public transport access means requirements for car parking in redevelopments could be reduced or eliminated entirely to better utilise sites and provide more active uses at ground level

Constraints

- Heritage items and Conservation Areas require a sensitive approach to redevelopment
- Strata (residential) limits development potential
- Aircraft noise and road noise and vibration from Parramatta Road
- Sensitive edges - low scale residential require a lower scale built form so as not to adversely impact the view amenity and privacy for rear yards of single dwellings.
- Small lots limiting opportunity for basement parking and feasibility of development (eg. limits number of apartments per storey)
- Fragmented ownership and limited potential for amalgamation requires fine grain built form controls that allow individual sites to redevelop

2.2 Existing building heights

Assumptions:

A visual assessment has been made to determine existing building heights. In some cases a single building footprint is made up of 1 and 2 storeys elements.

Storey heights and footprints are then used to determine an estimated gross floor area.

An assumed efficiency of footprint to GFA calculation is 90% for commercial / retail and 75% for residential - which does not take account of non-GFA uses within existing building envelopes.



2.3 Existing capacity estimate

Block	Footprint Area	Storeys	Site Area	BEA	GFA	FSR
A	2,353	1	11,977	18,509	13,882	1.16
	2,898	2				
	2,452	3				
	751	4				
B	13	1	8,290	11,071	8,303	1.00
	5,529	2				
C	175	1	1,896	3,389	2,542	1.34
	1,607	2				
D	456	1	5,778	8,981	6,736	1.17
	3,577	2				
	457	3				
E	1,226	1	9,355	10,294	7,721	0.83
	3,721	2				
	542	3				
F	896	1	9,944	10,084	7,563	0.76
	4,594	2				
G	161	1	1,308	1,217	913	0.70
	528	2				
H	281	1	5,673	10,249	7,687	1.35
	2,770	2				
	1,476	3				
I	1,112	1	1,245	1,112	834	0.67
J	841	1	8,411	12,037	9,028	1.07
	4,581	2				
	678	3				
K	3,612	1	7,755	6,540	4,905	0.63
	1,464	2				
L	86	1	3,630	5,854	4,391	1.21
	2,884	2				
M	580	1	3,452	3,442	2,582	0.75
	1,431	2				
N	363	1	4,716	6,805	5,104	1.08
	3,221	2				
O	1,190	1	5,160	4,642	3,482	0.67

Block	Footprint Area	Storeys	Site Area	BEA	GFA	FSR
P	1,726	2	12,820	15,058	11,294	0.88
	1,953	1				
	4,666	2				
Q	1,257	3	12,370	15,473	11,605	0.94
	2,106	1				
	5,391	2				
R	861	3	2,670	1,412	1,059	0.40
	706	2				
S	1,197	1	2,926	1,611	1,208	0.41
	207	2				
T	6,633	1	26,980	16,356	12,267	0.45
	3,241	3				
U	2,210	1	48,526	102,904	77,178	1.59
	10,174	2				
	17,842	3				
V	4,470	6	3,673	2,178	1,634	0.44
	612	1				
	212	2				
W	380	3	7,079	10,019	7,514	1.06
	1,255	2				
	1,631	3				
X	654	4	3,662	5,204	3,903	1.07
	276	1				
	2,464	2				
Y	1,154	1	7,006	10,394	7,796	1.11
	1,998	2				
	1,748	3				
Z	637	1	3,641	6,718	5,039	1.38
	951	2				
	1,393	3				
AA	3,279	1	8,449	7,679	5,759	0.68
	2,200	2				
					Total GFA	231,924
					Average FSR:	0.92

2.4 Heritage conservation areas and items



Norton Street

- The fine grain western side of Norton Street offers fewer detracting buildings with numerous neutral buildings interspersed with contributory buildings
- The intersection of Norton Street and Marion Street has a cluster of heritage buildings
- Renwick Street offers a more consistent street frontage of contributory buildings

Parramatta Road

- The whole frontage along Parramatta Road is within LEP heritage conservation areas
- The predominate built form is two storey commercial development with varying levels of heritage detailing
- Corner sites are often held by high quality heritage items

LEGEND

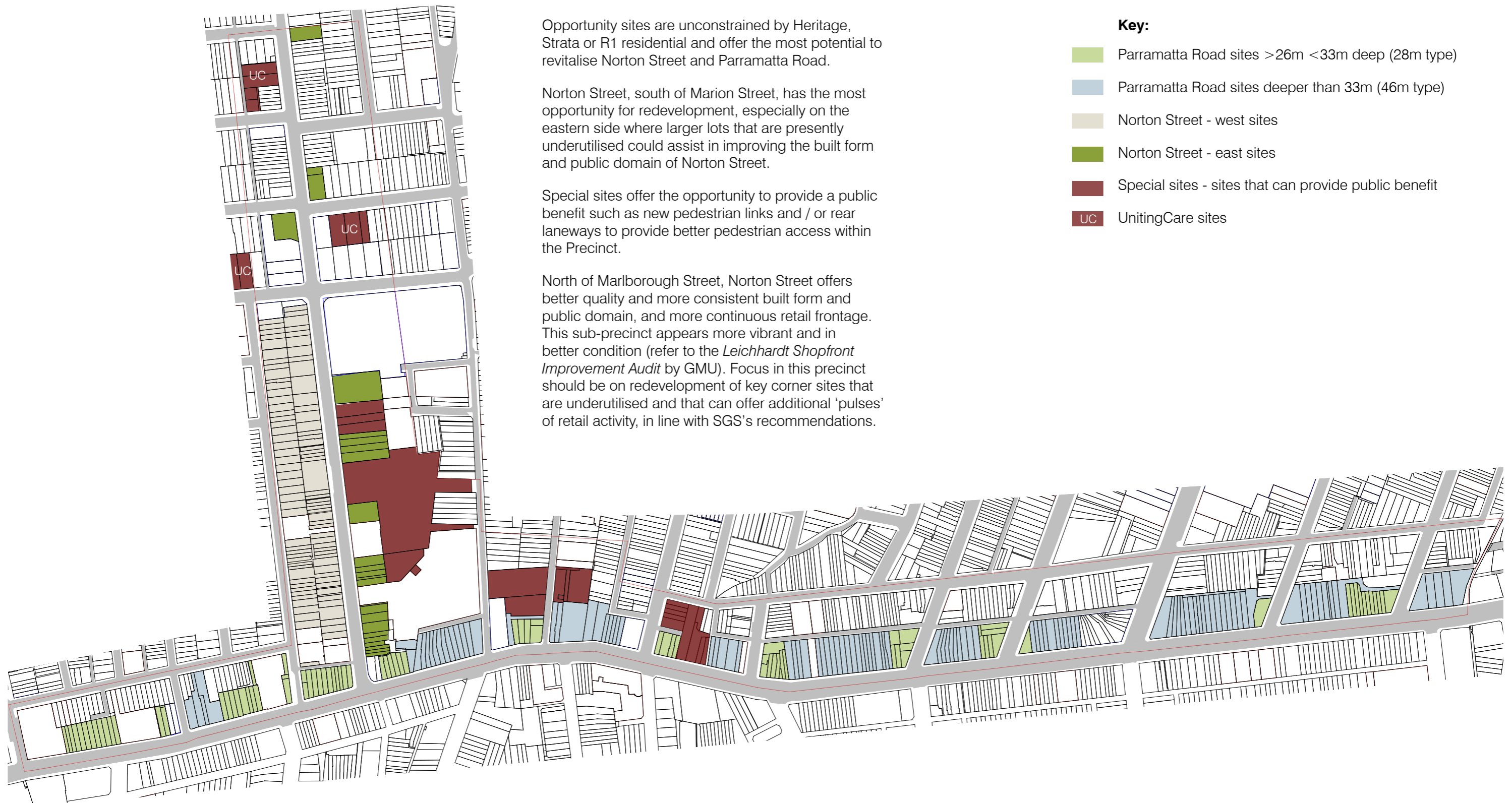
■ Contributory Item	■ Heritage Item- General
■ Neutral Buildings	■ Heritage Item- Landscape
■ Detracting Buildings	□ Study Area
■ Vacant Sites or Car Park	□ Suburb



Renwick to Elswick Streets not covered in NBRS study

(adapted from Leichhardt Municipal Council)

2.5 Opportunity sites



Opportunity sites are unconstrained by Heritage, Strata or R1 residential and offer the most potential to revitalise Norton Street and Parramatta Road.

Norton Street, south of Marion Street, has the most opportunity for redevelopment, especially on the eastern side where larger lots that are presently underutilised could assist in improving the built form and public domain of Norton Street.

Special sites offer the opportunity to provide a public benefit such as new pedestrian links and / or rear laneways to provide better pedestrian access within the Precinct.

North of Marlborough Street, Norton Street offers better quality and more consistent built form and public domain, and more continuous retail frontage. This sub-precinct appears more vibrant and in better condition (refer to the *Leichhardt Shopfront Improvement Audit* by GMU). Focus in this precinct should be on redevelopment of key corner sites that are underutilised and that can offer additional 'pulses' of retail activity, in line with SGS's recommendations.

Key:

- Parramatta Road sites >26m <33m deep (28m type)
- Parramatta Road sites deeper than 33m (46m type)
- Norton Street - west sites
- Norton Street - east sites
- Special sites - sites that can provide public benefit
- UC UnitingCare sites

2.6 Key issues and opportunities

Built form/ Land use

	issue	opportunity
1.	Poor building alignments and lack of identifiable built edge along Norton Street.	Encourage consistent built form alignment and street activation for new development.
2.	Many sites on Norton Street are underutilised with surface car parks and building stock nearing the end of its useful life that detract from the street environment. This weakens Norton Street as an activity and retail hub.	These sites offer the best opportunities for development that will also assist in activating Norton Street. Height and built form which creates a successful liveable street to be explored in conjunction with public domain upgrades and improved pedestrian through connections.
3.	Lack of activation of rear laneways behind Parramatta Road.	<p>The rear lane of Parramatta Road (Albion/Dot Lane) offers opportunity for building heights to step down to the single storey residential areas, and opportunities for studios above garages.</p> <p>Additional density along the laneway to be tested in scale, with preference for commercial activation along the laneway. Concessions for parking may be necessary to allow for feasible/affordable development and a more active ground plane.</p>
4.	Fine grain built form and small lots.	Built form should encourage the retention of fine grain allotment and building scale with existing heritage and contributory façades. Infill development and additional storeys to be tested on Parramatta Road and the western side of Norton St which keep heritage frontages and encourage single lot development. Consider allowing reduced or no on-site parking for sites along Parramatta Road due to proximity to public transport, in return for better urban design outcomes.
5.	On grade parking sites currently adjoining large potential development sites	Opportunity for increased built form combined with open green space. Consider infill development potential of these sites.



Poor building alignments and lack of identifiable built edge on Norton Street



Heritage and civic centre at the Norton Street and Marion Street intersection

Movement

issue	opportunity
1. Key missing laneway connections on Dot/Albion Lane.	Explore the potential location of key links against current site ownerships, heritage items, and potential development sites. Encourage development sites that can provide key links and laneway connections with incentive based development controls.
2. Poor pedestrian connections and large impenetrable blocks. Residents are unable to reach Norton Street on foot from the surrounding streets due to large block and few east west streets, while poor amenity makes walking along Parramatta Road undesirable.	Mid block links are vital in breaking down block lengths along both sides of Norton St and Parramatta Road. With retail decline usually at the centre of the block, pedestrian links combined with a connected laneway system make the high streets accessible.
3. Whilst the precinct is very well serviced by bus routes, it is poorly serviced by high quality public transport such as rail. The precinct will need to continue providing parking for people to drive to the precinct, yet also encourage the local community to travel by cycling and walking.	Encourage an active transport network of laneways and connections both within the precinct and across Parramatta Road to the rail stations. Encourage central parking options accessed off side streets rather than Norton St which will provide opportunity for better pedestrian amenity on the high street.
4. The Forum's location away from the high street and the steep level change make it isolated and unlikely to help local street activation.	Focus for pedestrian activity and retail revitalisation on activating the streets and lanes around the Forum.



An active laneway system vital to the precinct



Potential Dot Lane connection to Norton Street

Public Domain

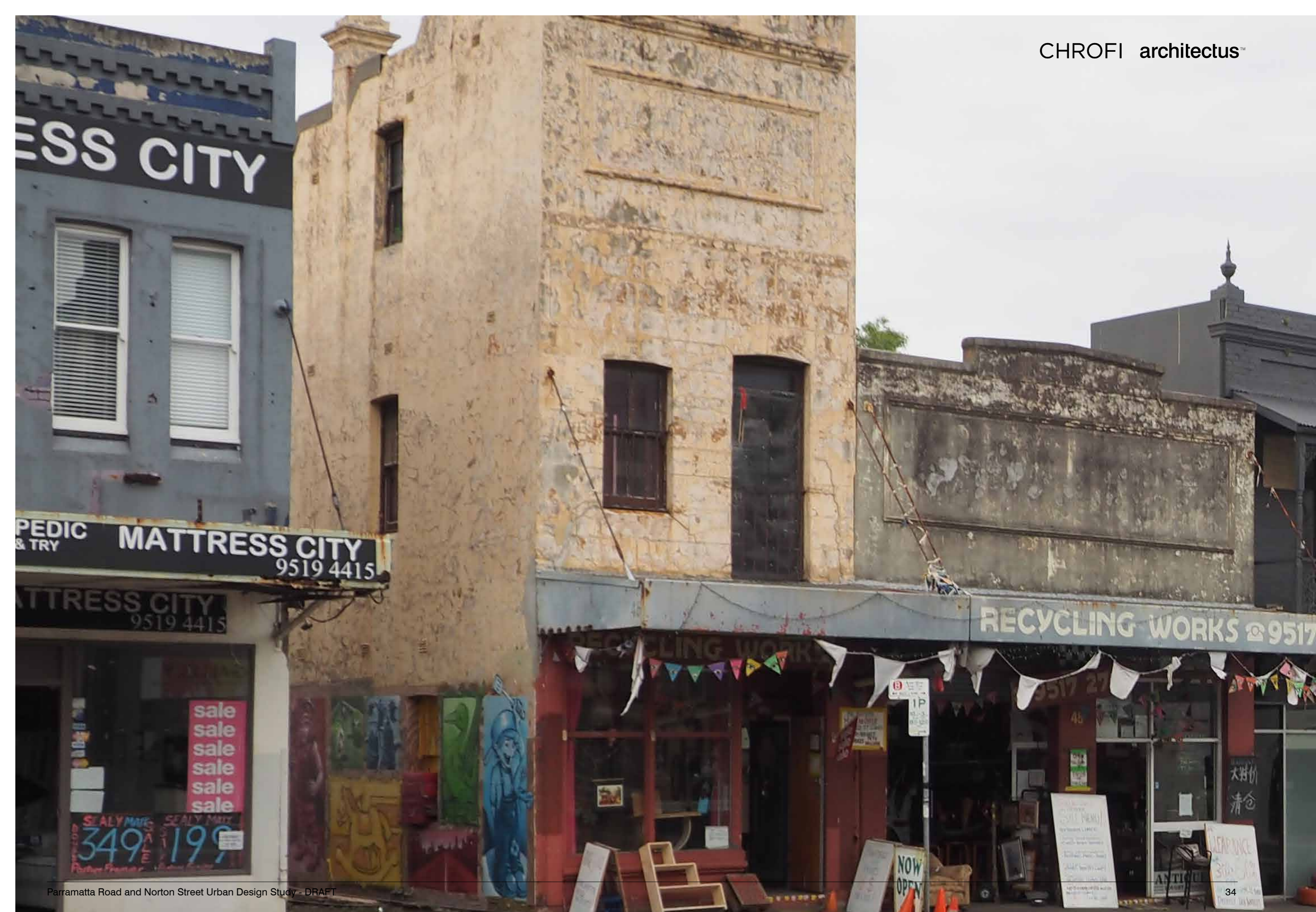
issue	opportunity
1. Retail decline, lack of activation.	Focus public domain improvements on a connected network of active links and diverse spatial types including laneways and small public spaces that support small businesses.
2. The precinct lacks any significant open green space or public plazas (other than the forum) to focus community activity.	Opportunity to provide a new public plaza on the Norton Plaza site as part of a redevelopment, and/or the Council-owned sites near to Town Hall.
3. Parramatta Road footpaths are narrow, limiting green street planting opportunities and its future design as a rapid transit link is unknown.	Focus on the side streets to create public domain amenity along the length of Parramatta Rd. Widened foot paths and street planting provide protected and pleasant public spaces away from the noise of Parramatta Road. Trees will also be visible along the length of Parramatta Road providing a visual break to the built form.
4. Public domain in Norton Street (south) is run down, inconsistent in approach, lacking in public seating, high quality finishes or consistent awnings. The footpath is cluttered and poorly defined.	Additional investment in the public domain combined with additional links can revitalise the street. These improvements can boost local businesses and attract development.
5. The Marion St/ Norton St intersection is a strong civic centre with the town hall, public school and church, however it lacks activation on Norton Street.	Public domain improvements should enhance connection to this area and draw on its heritage character. Consider locating the library or community centre closer to this civic centre.



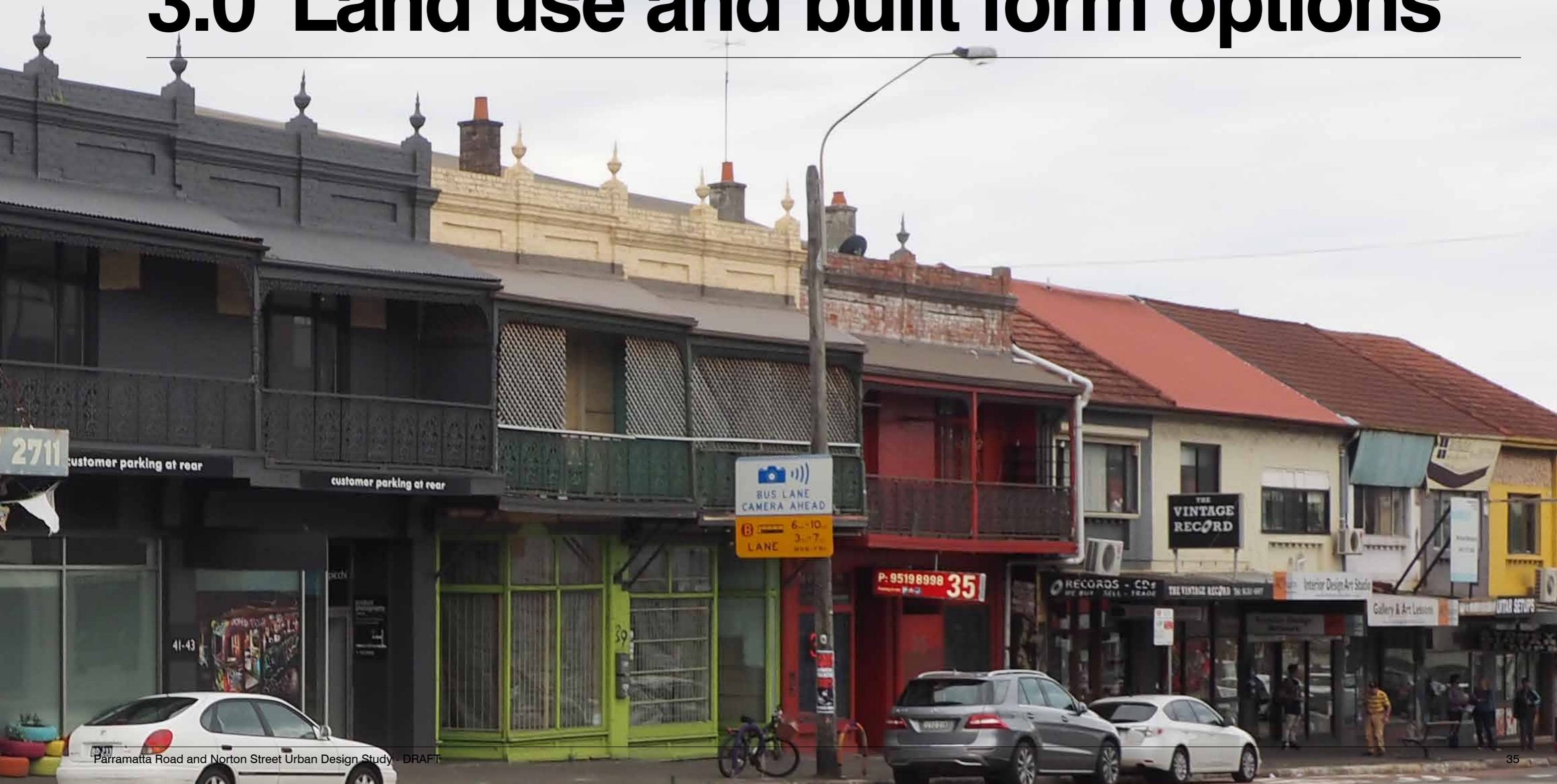
The Norton Street public domain is tired and lacking shade or high quality built form.



Renwick Street is a good example of public amenity and active frontages on streets that intersect with Parramatta Road.



3.0 Land use and built form options



3.1 Urban design principles

The following urban design principles underpin the site testing undertaken in this study.

Built form

- Built form should manage potential interface between different land uses on site and at the 'edges' of the precincts - to the R1 General Residential areas. Consider a form that mediates between Parramatta Road and single level dwellings one block behind.
- Encourage built form that maintains fine grain and are not reliant on lot amalgamation. Provide for 1, 2 & 3 lot amalgamation options.
- Encourage ground level commercial. Allow for flexible commercial / residential uses on the second storey. Residential uses above.
- Encourage two levels (garage with studio or two level dwelling) - North/residential side of laneway.
- Create a defined laneway edge. Building form could start back from the laneway but the street edge should be held by garage door or some built form element.
- Built form should facilitate lot permeability while managing access and security.
- Built form should adequately mediate noise to apartments that face Parramatta Road while ensuring ability to achieve cross ventilation as per SEPP65.
- Built form should respond intelligently to level changes by facilitating entries to different land uses at different levels.
- A four storey, 15m street wall should be encouraged to provide an appropriate built form scale to Parramatta Road while keeping the existing character of the contributory façades prevalent on Parramatta Road and Norton Street.
- Upper levels (level 5 and 6) should be setback from the street wall - a 6-8m setback above a 4 storey street wall to reduce apparent building bulk and scale.
- Allow a maximum of three levels to laneway - Parramatta Road side. Setback levels above 3 storeys 10m (minimum).
- Car parking should be in a basement level or levels to encourage the most efficient use of the site.
- Sites under 17m in width that require multiple basement car park levels

should be amalgamated to improve floorspace efficiency and to allow for minimum car park space and aisle dimensions.

- Alterations and additions to buildings with heritage value in Conservation Areas should adhere to the controls in Council's adopted heritage studies for Parramatta Road and Norton Street.
- Ground and first floor floor-plates should be as flexible as possible to ensure buildings can respond to changes to market demand over time. Floor-plates on the second storey above ground level should be designed with a 3.6m floor to ceiling height to allow either commercial or residential uses. This ceiling height also works better with the historic 2 storey shop house façades.
- Allow additional height where new development creates public benefit e.g. desired mid-block connections.
- Norton Street built form scale to be 3-4 storeys generally. 6 storeys permissible for special sites that provide public benefit and Norton Street East sites (south of Marion Street) where lot sizes are generally larger, existing built form quality is lower, and lots can more readily be amalgamated.

Streets and laneways

- Streets and laneways should facilitate the functionality of retail and commercial uses, including accommodating large vehicles where possible.
- Streets and laneways should be activated throughout the day and evening to increase the perceived and actual safety and vibrancy of the precincts.
- Streets and laneways should provide amenity for pedestrians to encourage patronage to local businesses.

Public domain

- Pedestrian connectivity to retail and key community assets should be facilitated through improved site permeability and pedestrian links.
- Opportunities for new or improved public spaces to support the amenity of Parramatta Road and Norton Street and additional demand driven by increased capacity should be identified.
- In the winter solstice, allow sunlight to southern footpath of Parramatta Road (typically a maximum of six storeys will achieve this with setbacks to the upper levels).

What not to do

The large, recessed, unrelenting form dominates over the heritage frontages. Example from Auckland New Zealand. Key design elements that this example lacks are:

- the building form should have gaps between to allow cross ventilation and minimise single-aspect apartments that face a busy road; and
- be reflective of fine grain ownership patterns and heritage façades.



Good examples

Retention of heritage façades and building articulation

The recessed form is clearly articulated from the front facade with form and materiality. The front facade to the street takes its form from the scale and divisions of the other heritage façades.



Adaptive reuse of fine grain with active ground level that accommodates level changes

Commercial terraces with a level change to the street are opened up with wide steps, stepped planting and footpath dining. This approach may be applied to the western side of Norton Street.



Human-scale laneways

2 and 3 storeys is a good built form scale to the laneway and provides good opportunities for passive surveillance.



3.2 Norton Street and Parramatta Road: vision



1. Revitalise Norton Street. Intensification of residential and retail uses is essential to creating a critical mass in the neighbourhoods around Norton Street and bringing life back to the precinct.

2. Maximise east-west through site connections into Norton Street. The street blocks in this area are incredibly long, pedestrians cannot access the central part of southern Norton Street from surrounding residential precincts because of the long impenetrable blocks on both sides. Improved access to the retail street will be critical in making Norton Street busy and active, and businesses viable.

3. Retain the existing fine grain built form character. The shop fronts on Parramatta Road, and residences on the western side of Norton Street and on Renwick Street have fantastic character, and many have been identified as “contributory items” in the conservation areas. Ensure that new development allows for the retention of the front elements of these contributory buildings, with new development above and set back.

4. Create pockets for retail and small public spaces just off Parramatta Road. The north-south streets intersecting with Parramatta Road could evolve as green, active spaces that are sheltered from the noise of Parramatta Road. The spaces can take advantage of the footfall created from public transport and pedestrians on Parramatta Road.



5. Public domain upgrades on Norton Street. Public domain plans should be developed to provide for trees, shade, seating and open spaces.

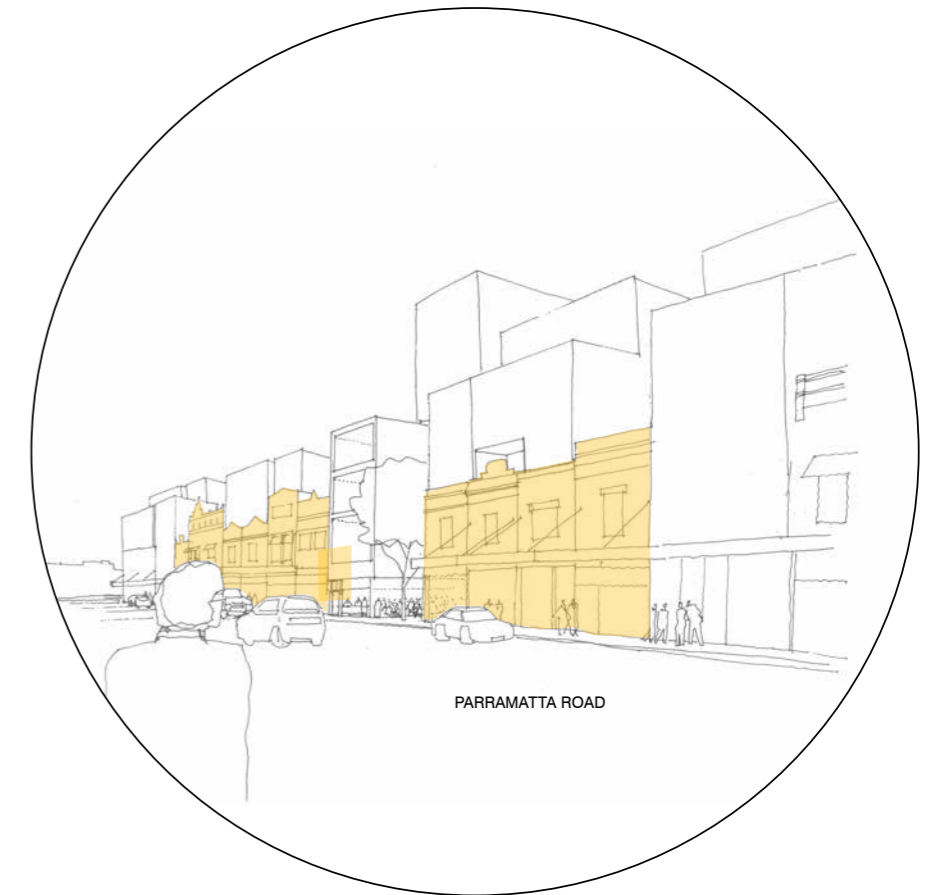
6. Focus civic and cultural uses and potential new open space on Norton Street – to increase visitation to Norton Street and extend dwell times.



Allow additional height where new development creates public benefit - eg. desired mid block connections



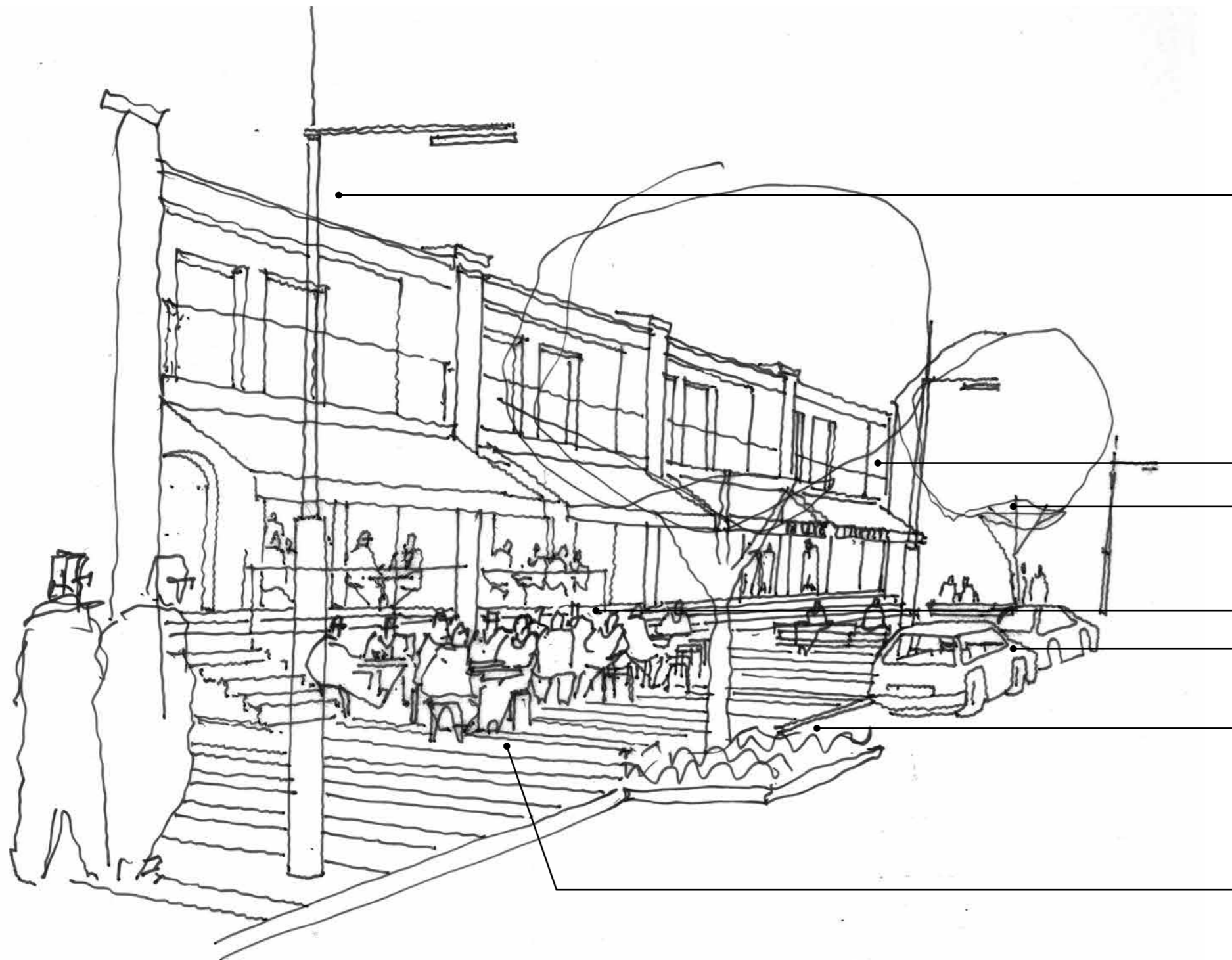
Allow a fine grain of development



Retain historical, contributory façades



3.2.1 Norton Street (west)



Improved lighting strategy

Heritage facade retained

Successful street landscaping

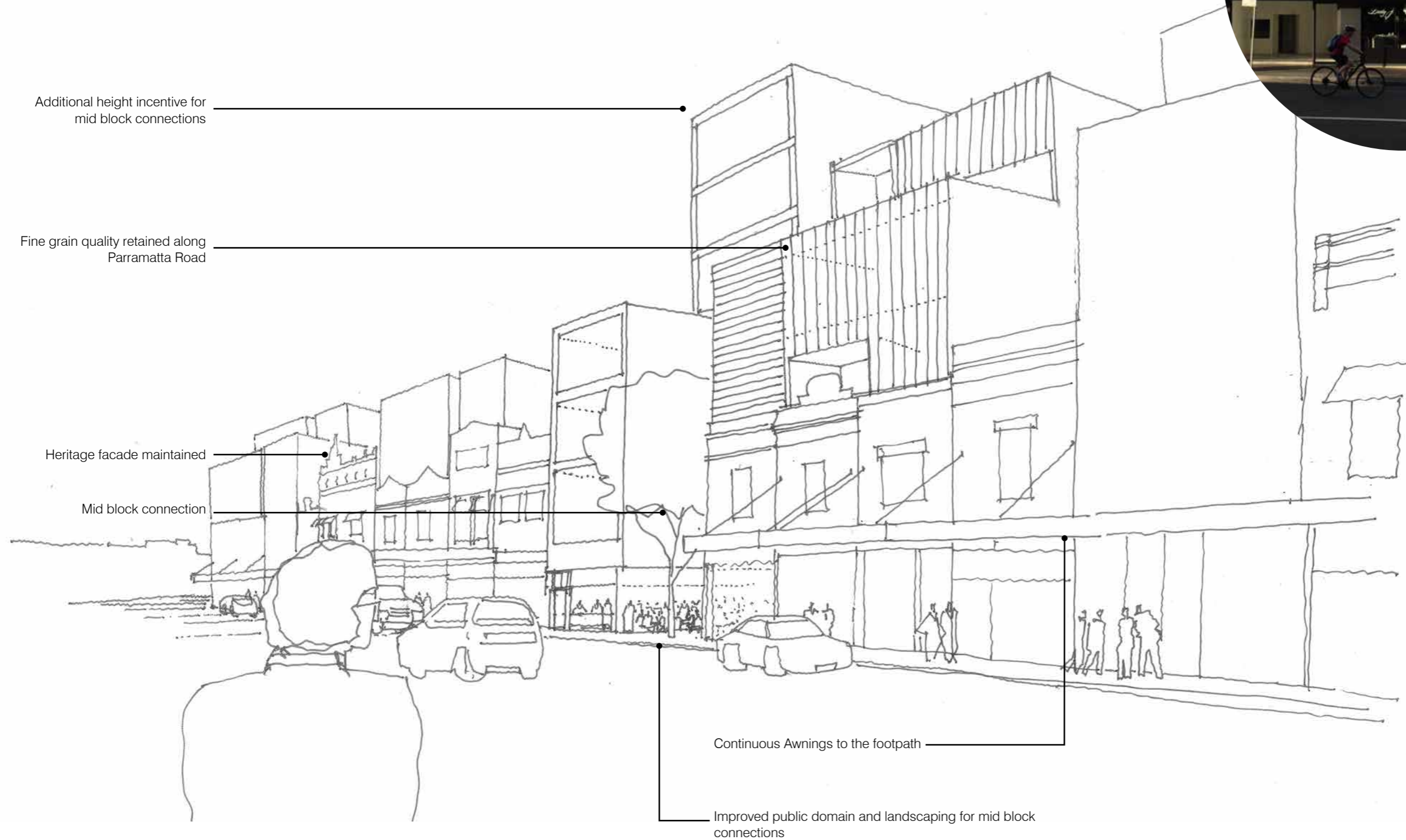
Improved level change / footpath interface

On street parking maintained

Improved paving

Activated footpath and street scape

3.2.2 Parramatta Road and Norton Street (east)



3.2.3 Parramatta Road - street wall and setback options

The following sections compare a 2-storey street wall (with upper levels setback) to a 4 storey street wall. Option 2 is preferred as it provides:

- a better street scale, with less building bulk visible from the street;
- 1.5 levels visible above the 2 storey parapet, with levels 5 and 6 barely visible from the street;
- Good solar amenity to the footpath on the southern side; and
- Improved noise mitigation to the upper 2 levels.

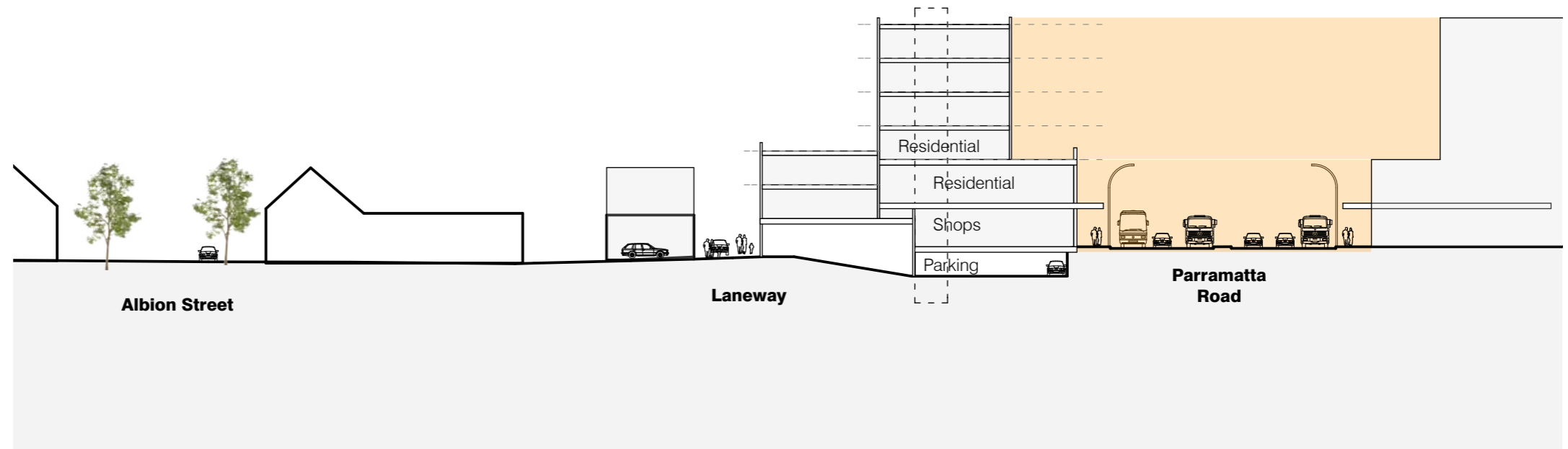
Option 1 - setback above 2 storeys

Providing a 6m setback behind the predominant 2-storey parapet would make sense if the total height was only 3 storeys. Council's DCP 2013 (App B Building Typologies, p36) refers to seeing the sky behind the parapet when viewed across the street. Seeing the sky would not be achievable with a 6 storey height without severely impacting on the feasibility (as the setback would have to be very large) and therefore the likelihood of redevelopment is very low – especially when considering the desired 'fine grain' development approach. For heritage items this is a good response, however it's not likely to result in widespread redevelopment of non-heritage items and contributory items.

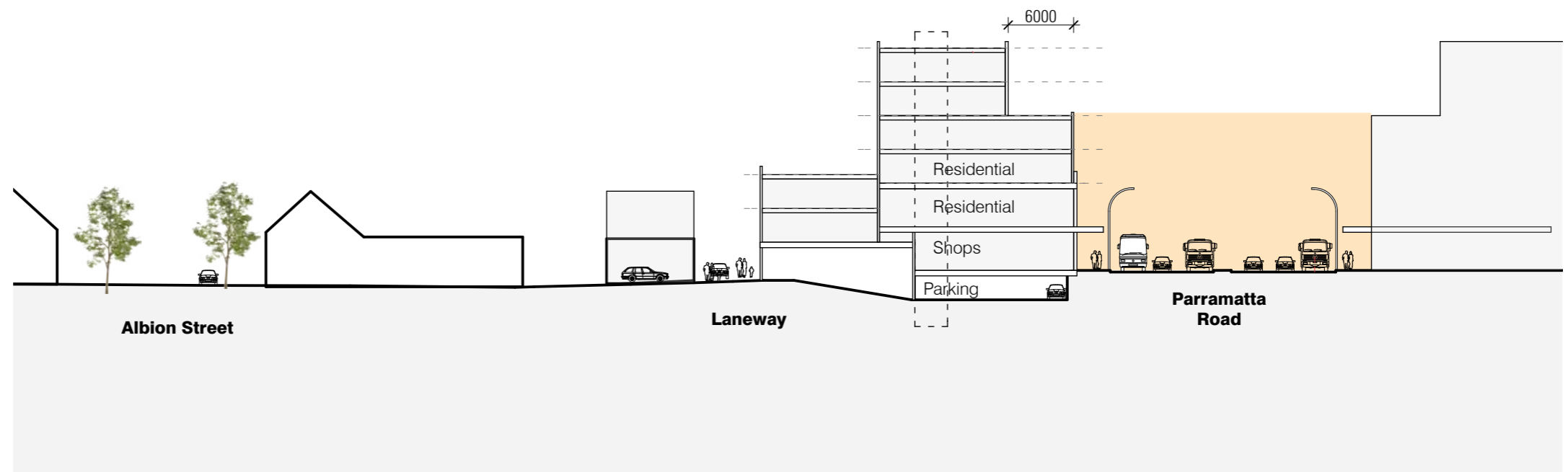
Option 2 - setback above 4 storeys

The preferred Option 2 shows the 3rd and 4th storeys setback to the rear face of the façade – so that the historical façade is clearly visible separate to the additional storeys (this difference in old and new can be further enhanced with a contrasting material and contemporary approach to the design).

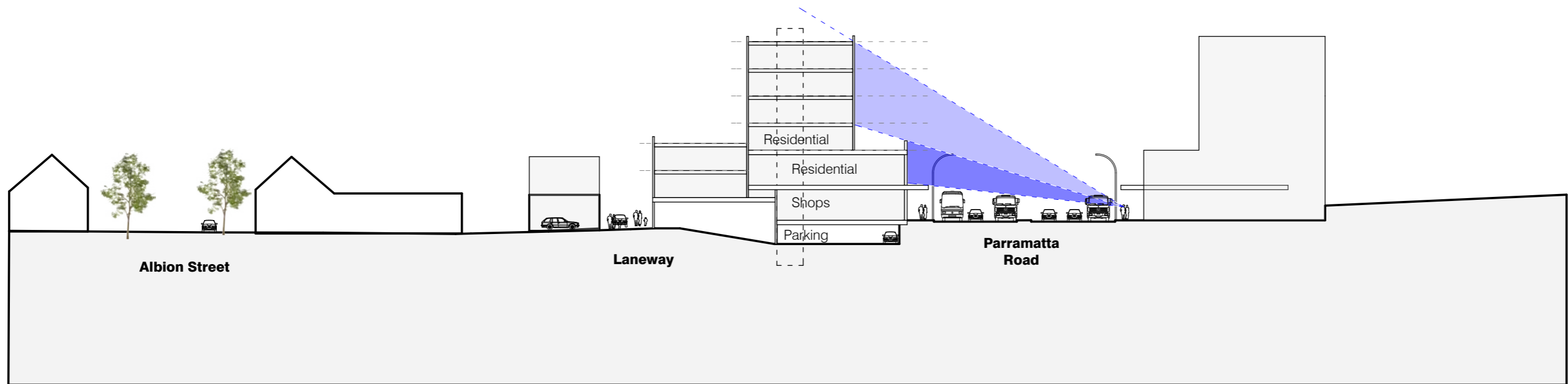
Option 2 is the best urban design response that retains the possibility of fine-grain development, while keeping the character of the historical façades, and is a suitable built form scale for Parramatta Road. Built form examples of this approach are shown in section 3.3.



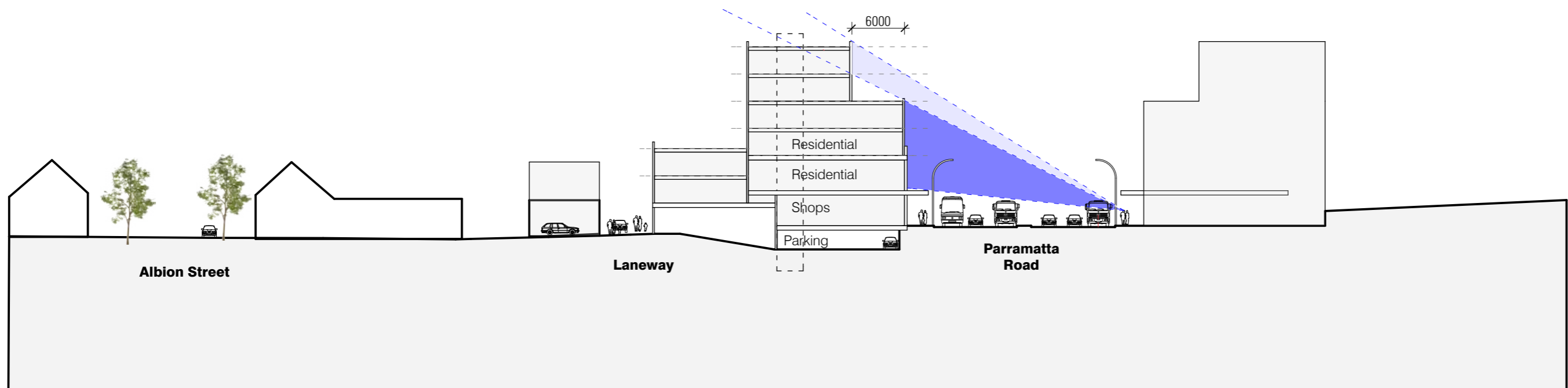
**Built form and street scale
OPTION 1 - SETBACK BEHIND EXISTING FACADES**



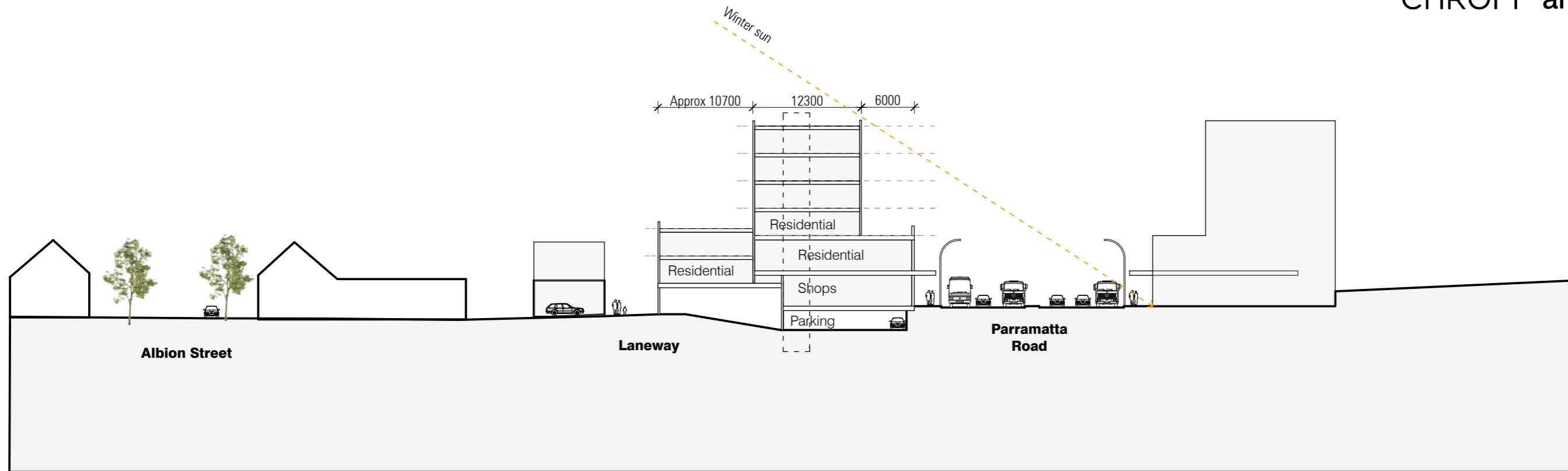
**Built form and street scale
OPTION 2 - 4 STOREY FACADE TO PARRAMATTA RD**



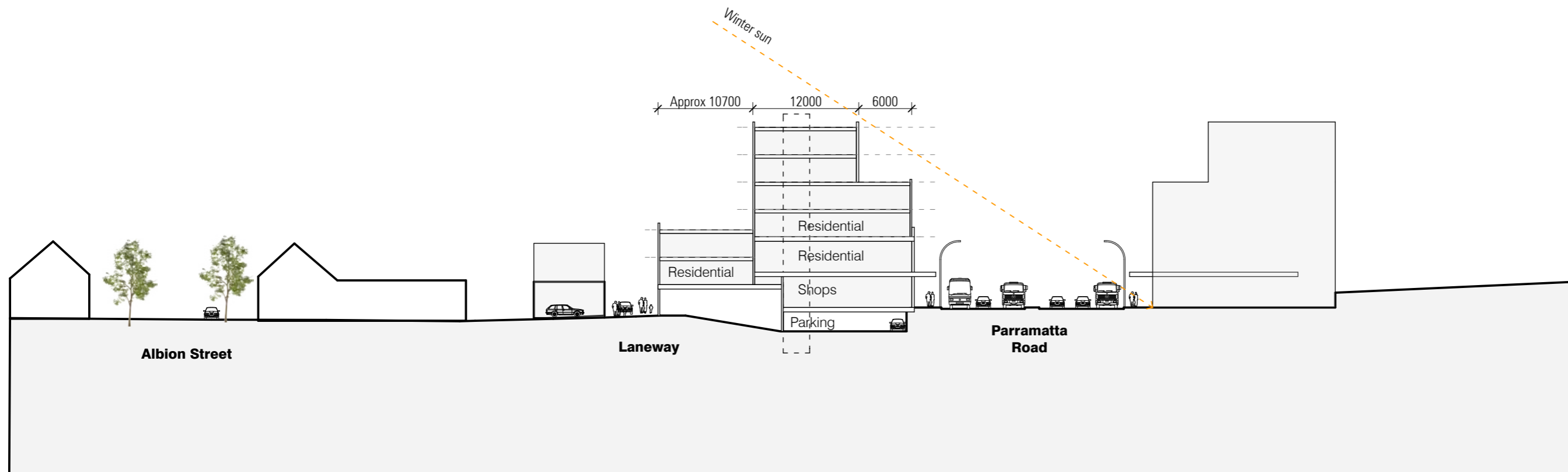
Bulk and visibility
OPTION 1 - SETBACK BEHIND EXISTING FACADES



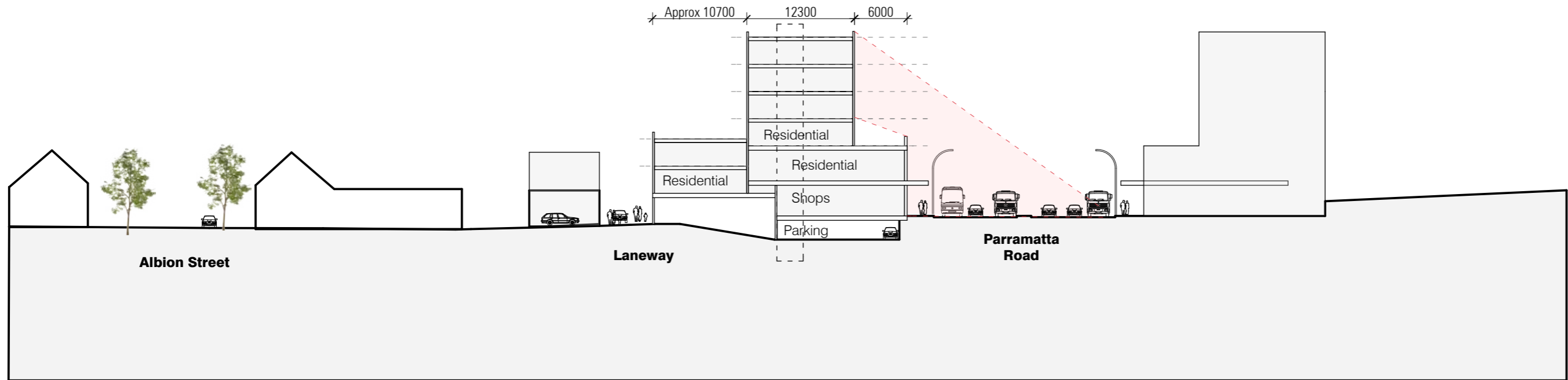
Bulk and visibility
OPTION 2 - 4 STOREY FACADE TO PARRAMATTA RD



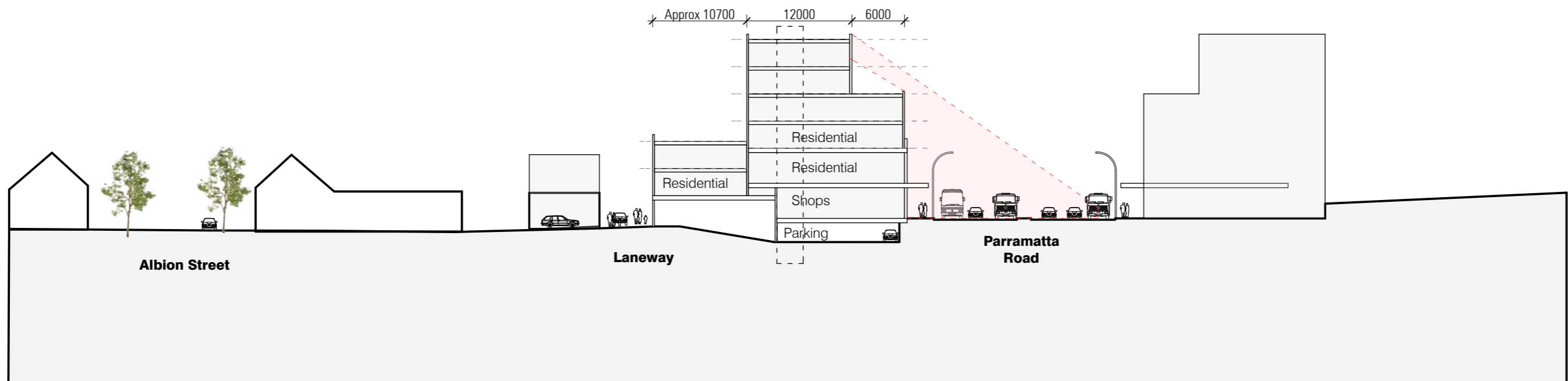
**Solar angle
OPTION 1 - SETBACK BEHIND EXISTING FACADES**



**Solar angle
OPTION 2 - 4 STOREY FACADE TO PARRAMATTA RD**



**Noise mitigation
OPTION 1 - SETBACK BEHIND EXISTING FACADES**



**Noise mitigation
OPTION 2 - 4 STOREY FACADE TO PARRAMATTA RD**

3.3 Built form examples

3.3.1 Melbourne and Sydney examples of upper storey additions with little or no setback above old shop fronts and warehouse buildings.



3.3.2 Overseas examples of upper storey additions with no setback



3.3.3 Small scale laneway additions to upper storeys with no setback



3.3.4 Examples of upper storey additions above 2 storey shops with 6-8m setback



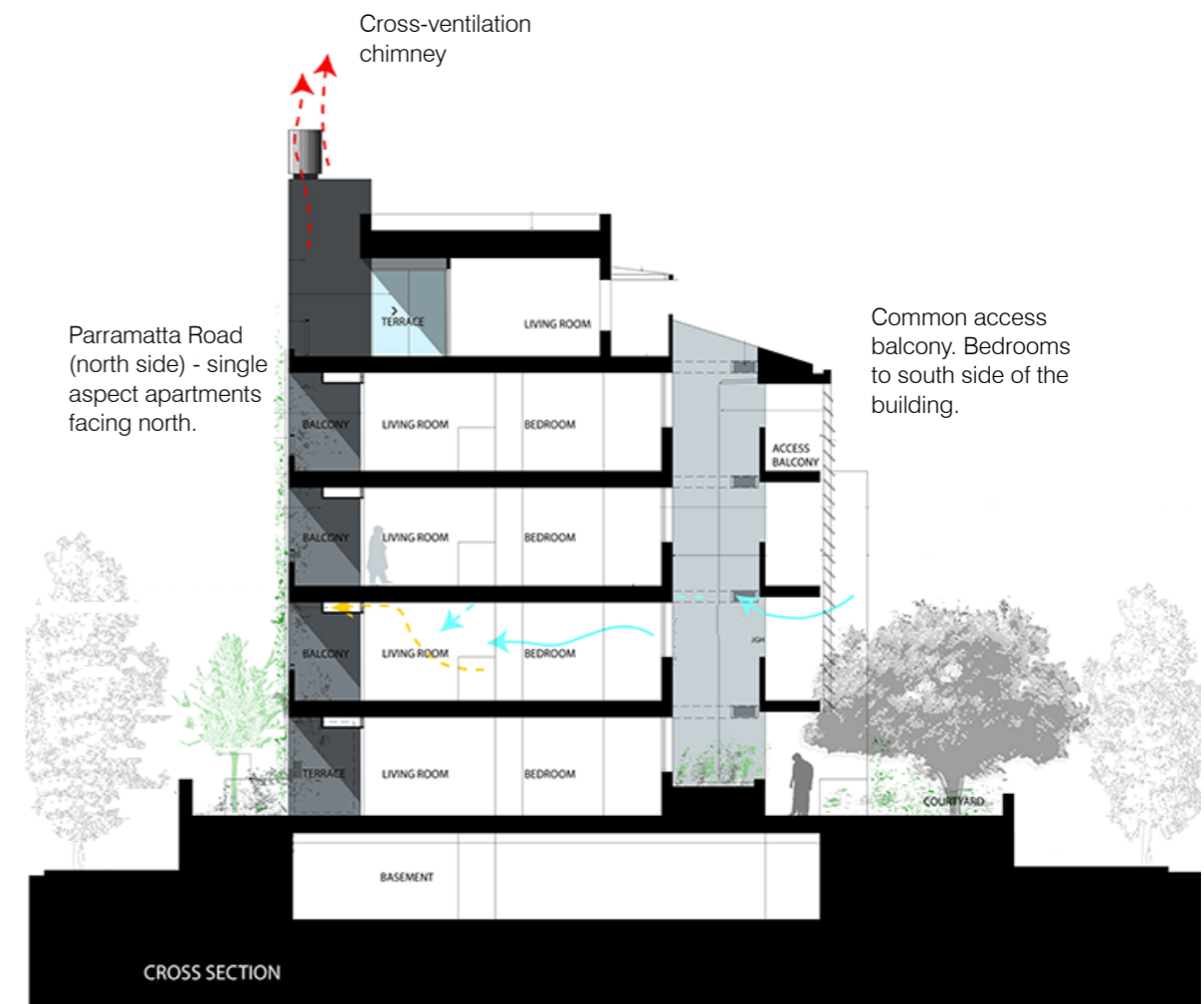
These examples demonstrate why a setback behind the 2 storey street facade is not desirable.

The setback increases the visibility of the upper levels and makes the building appear bulkier.

3.4 Design principles to mitigate noise impacts

The following built form design principles are recommended to mitigate noise impacts on the residential components of mixed use development fronting Parramatta Road and for sites are impacted by aircraft noise.

1. No single aspect apartments facing a busy road
2. Use winter-gardens instead of balconys
3. Consider common corridors facing busy roads (single loaded apartments)
4. Higher performance glazing that reduces the noise
5. Setback the upper levels to shield balconys from the noise source
6. No ground floor residential
7. Provide common stairwells to the main road, and cross ventilation through these spaces and a courtyard/light well (refer example on this page).
8. Ensure living spaces and open balconies are located away from the noise source and towards solar access (ie rear of sites on the north of Parramatta Rd)
9. Place secondary living spaces such as bedrooms to the main road with winter garden buffers to mitigate noise.



The site testing has taken into consideration noise impacts on lots fronting Parramatta Road.

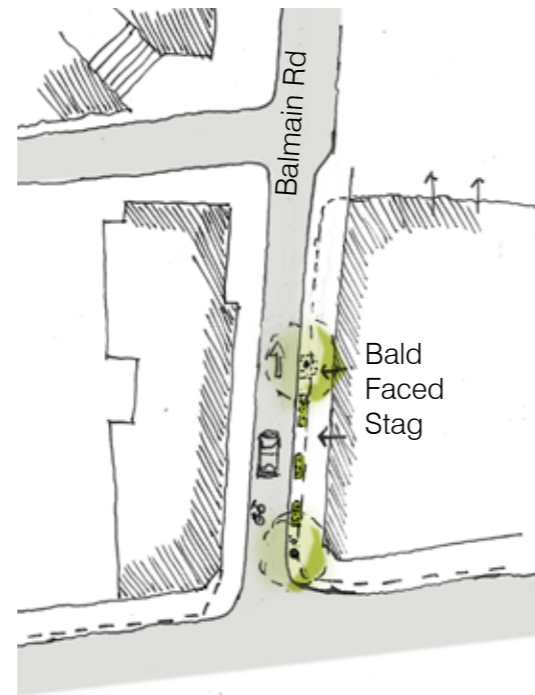
3.5 Activating small public spaces

Corner lots on Parramatta Road have potential to provide public benefit through provision of enhanced and activated public spaces.

The existing public footpath widening and street tree planting on Renwick Street provides an example of a successful small public space that also enhances the retail uses that adjoin.

These side streets off Parramatta Road have much improved traffic noise reduction than Parramatta Road and have the potential to be very successful small public spaces.

These spaces also lead to the rear laneways (eg. Albion Lane) that run parallel to Parramatta Road that offer a much more pleasant pedestrian and cycle experience than Parramatta Road.



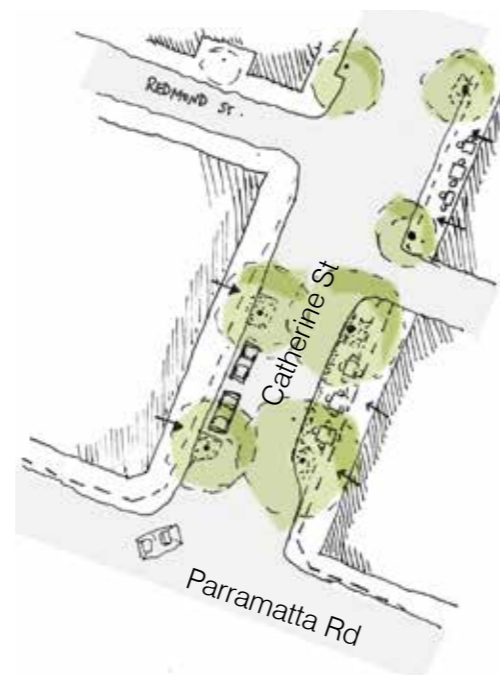
Balmain Road/ Hay Street could sacrifice some on street parking for a wider footpath adjoining the Bald Faced Stag hotel for some greenery and seating.



Bald Faced Stag, Footpath St View on Balmain Road



Bald Faced Stag, Aerial View



Catherine St can widen footpaths, add greenery and still retain existing on street parking.



Catherine St, Footpath St View



Catherine St, Aerial View

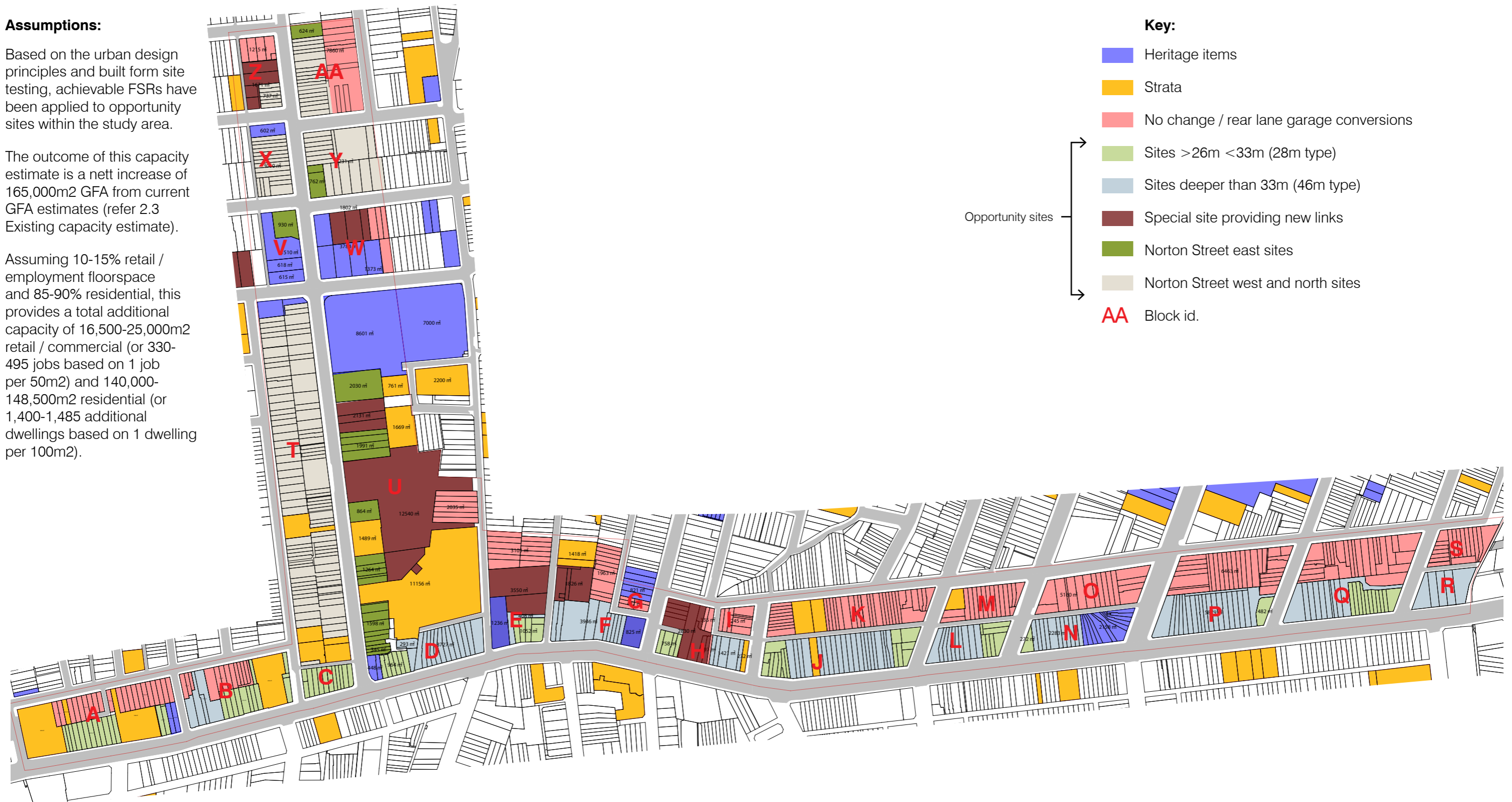
3.6 Built form types and indicative capacity estimate

Assumptions:

Based on the urban design principles and built form site testing, achievable FSRs have been applied to opportunity sites within the study area.

The outcome of this capacity estimate is a nett increase of 165,000m² GFA from current GFA estimates (refer 2.3 Existing capacity estimate).

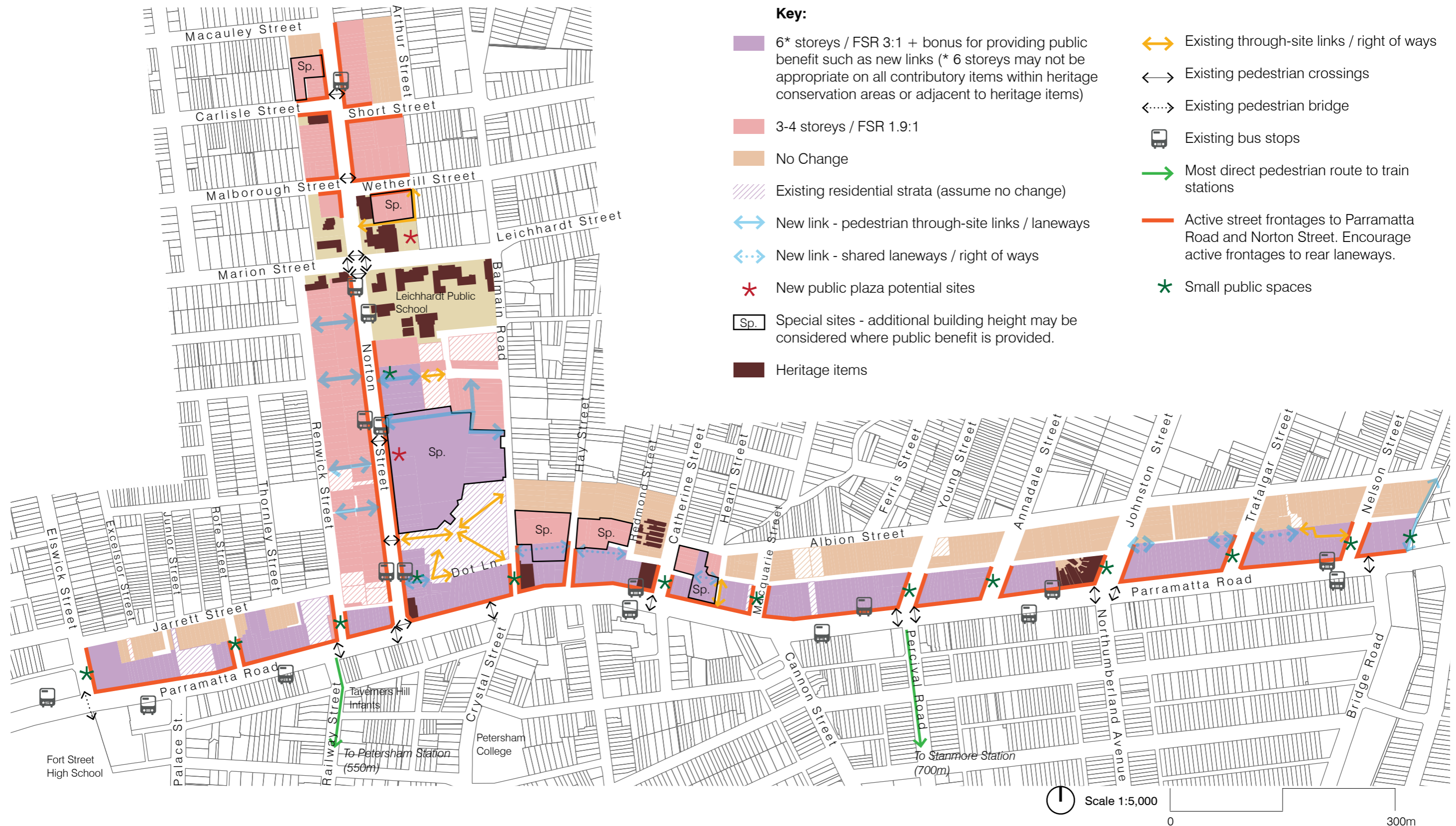
Assuming 10-15% retail / employment floorspace and 85-90% residential, this provides a total additional capacity of 16,500-25,000m² retail / commercial (or 330-495 jobs based on 1 job per 50m²) and 140,000-148,500m² residential (or 1,400-1,485 additional dwellings based on 1 dwelling per 100m²).

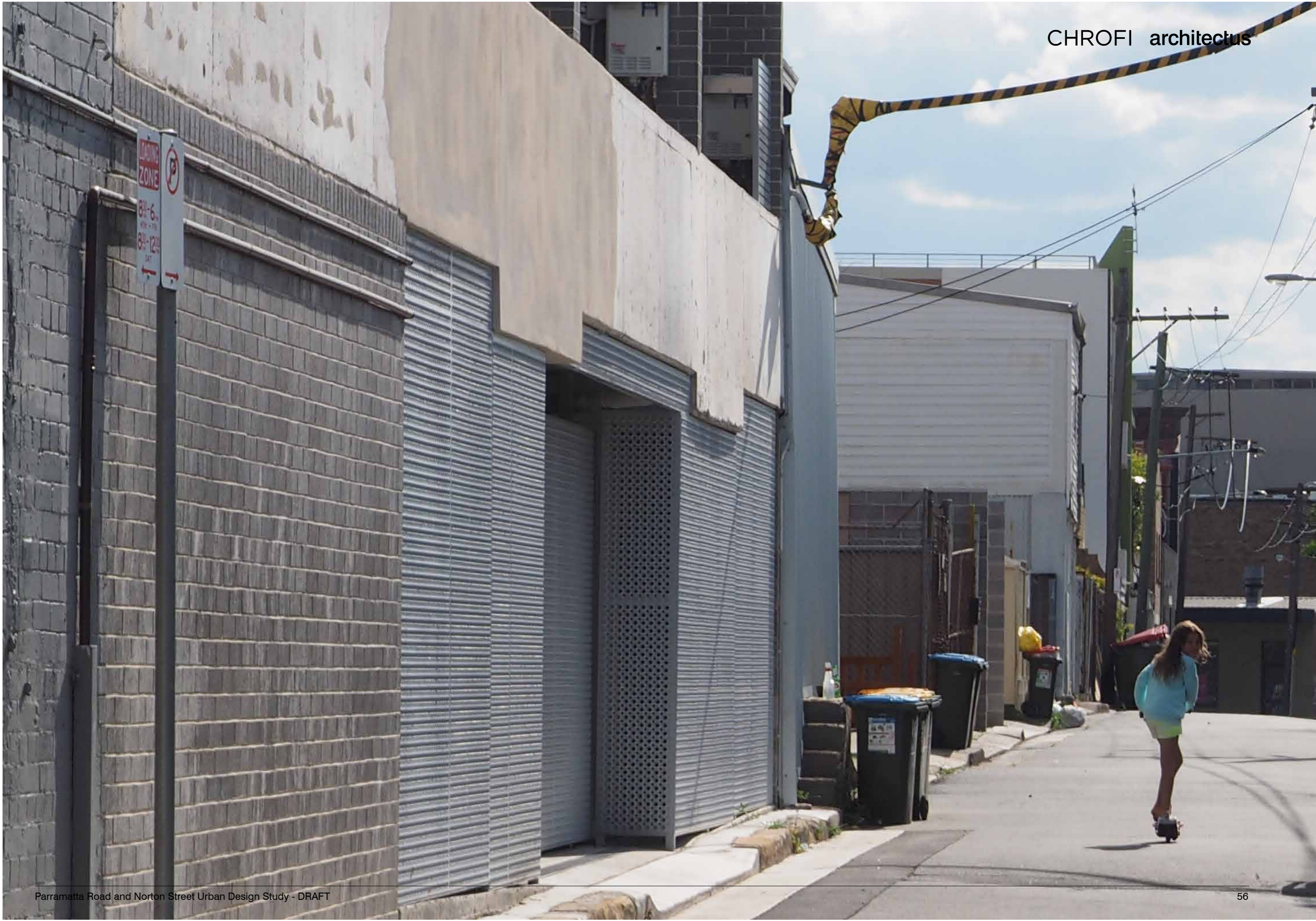


Block	Type	FSR	Site Area	Total Block Area	GFA	Total GFA
A	heritage/strata/no change	1.16	9,232	11,975	10,709	18,938
	small blocks	3	2,743		8,229	
B	heritage/strata/no change	1	4,259	8,275	4,259	15,355
	small blocks	3	2,112		6,336	
	large blocks	2.5	1,904		4,760	
C	small blocks	3	1,902	1,902	5,706	5,706
	heritage/strata/no change	1.17	448	5,777	524	14,156
D	small blocks	3	964		2,892	
	large blocks	2.5	4,020		10,050	
	Norton East	2	345		690	
E	heritage/strata/no change	0.81	4,339	9,349	3,515	14,791
	small blocks	3	1,052		3,156	
	large blocks	2.5	408		1,020	
	special sites	2	3,550		7,100	
F	heritage/strata/no change	0.73	4,206	9,978	3,070	12,935
	large blocks	2.5	3,946		9,865	
	special sites	0	1,826		-	
G	heritage/strata/no change	0.7	1,308	1,308	916	916
H	heritage/strata/no change	1.35	664	5,673	896	14,647
	small blocks	3	758		2,274	
	large blocks	2.5	1,421		3,553	
	special sites	2.8	2,830		7,924	
I	heritage/strata/no change	0.67	1,245	1,245	834	834
J	heritage/strata/no change	1.07	427	8,409	457	21,657
	small blocks	3	2,490		7,470	
	large blocks	2.5	5,492		13,730	
K	heritage/strata/no change	0.63	7,755	7,755	4,886	4,886
L	small blocks	3	1,158	3,635	3,474	9,667
	large blocks	2.5	2,477		6,193	
M	heritage/strata/no change	0.75	3,455	3,455	2,591	2,591
N	heritage/strata/no change	1.08	2,158	4,713	2,331	8,854
	small blocks	3	272		816	
	large blocks	2.5	2,283		5,708	
O	heritage/strata/no change	0.67	5,160	5,160	3,457	3,457
P	heritage/strata/no change	0.91	6,463	12,824	5,881	22,025
	small blocks	3	482		1,446	
	large blocks	2.5	5,879		14,698	
Q	heritage/strata/no change	0.98	6,805	12,384	6,669	21,530
	small blocks	3	1,828		5,484	
	large blocks	2.5	3,751		9,378	
R	large blocks	2.5	2,670	2,670	6,675	6,675
S	heritage/strata/no change	0.41	2,945	2,945	1,207	1,207

Block	Type	FSR	Site Area	Total Block Area	GFA	Total GFA
T	heritage/strata/no change	0.45	4,057	26,991	1,826	45,400
	Norton West	1.9	22,934		43,575	
U	heritage/strata/no change	1.61	26,128	48,546	42,066	100,081
	Norton East	2	7,747		15,494	
	Special sites - Norton Plaza	3	12,540		37,620	
V	Special sites - Norton Plaza Nth	2.3	2,131		4,901	
	heritage/strata/no change	0.44	2,743	3,673	1,207	3,067
W	Norton East	2	930		1,860	
	heritage/strata/no change	1.06	5,157	6,959	5,466	9,070
X	special sites - united care	2	1,802		3,604	
	heritage/strata/no change	1.07	601	3,660	643	6,761
Y	Norton north	2	3,059		6,118	
	Norton north / east	2	6005	6993	12,010	12,010
Z	heritage/strata/no change	1.38	1,215	3,640	1,677	8,159
	Norton north	2	793		1,586	
	special sites - united care	3	1,632		4,896	
AA	heritage/strata/no change	0.68	4,313	8,638	2,933	11,583
	Norton north	2	4,325		8,650	
Average FSR		1.87		Total GFA		396,958

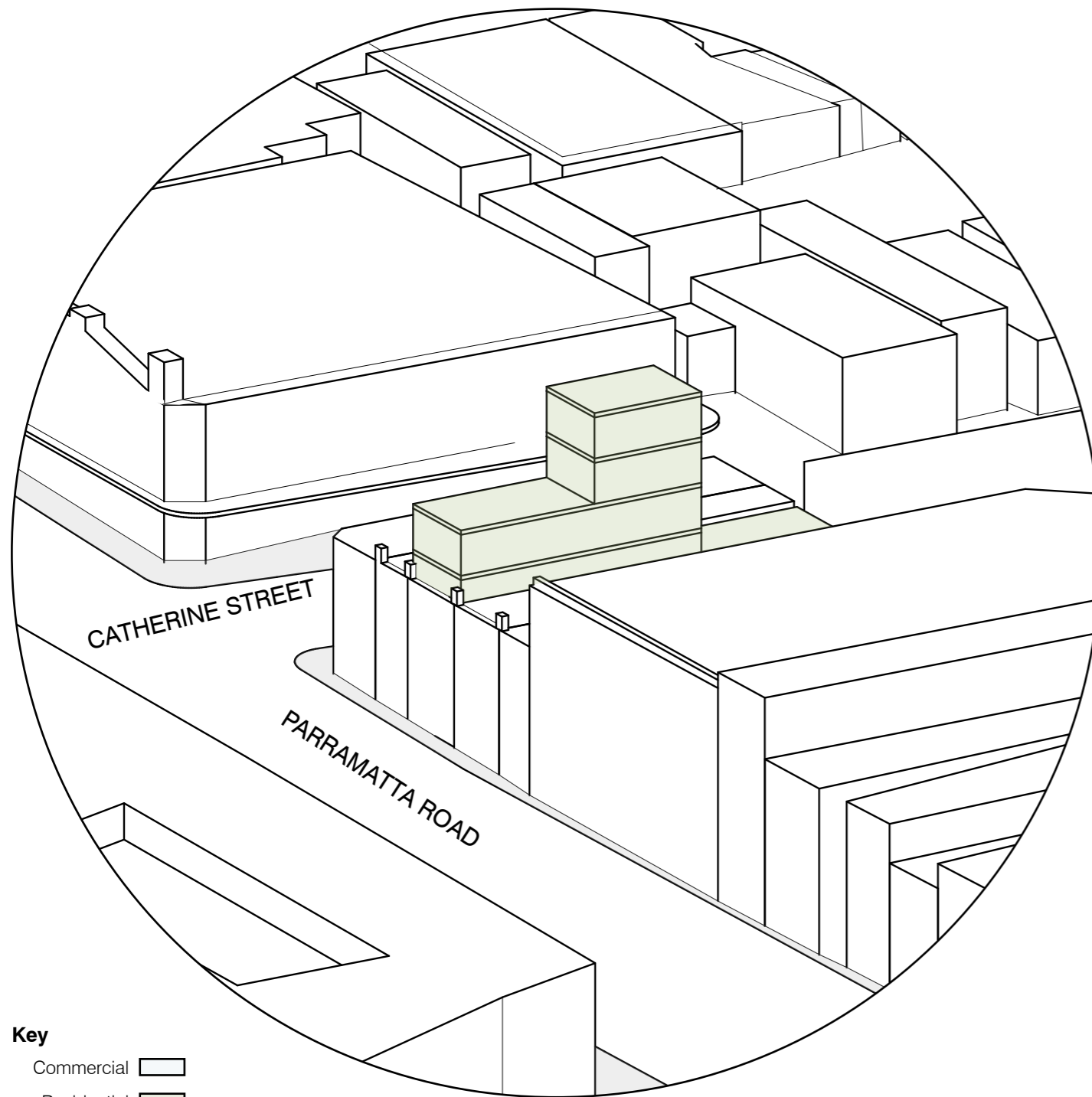
3.7 Structure Plan





4.0 Appendix A: site testing

4.1 Parramatta Road - 28m deep site



- Key**
- Commercial
 - Residential
 - Parking

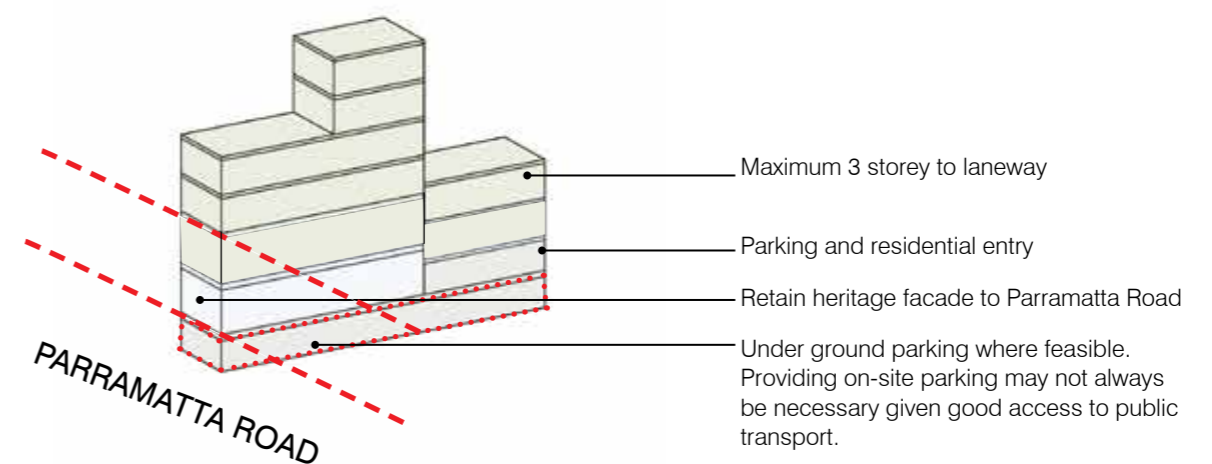
28 M DEEP SITE x 6M WIDE		Area (sqm)
Lot area		168
Building footprint		168

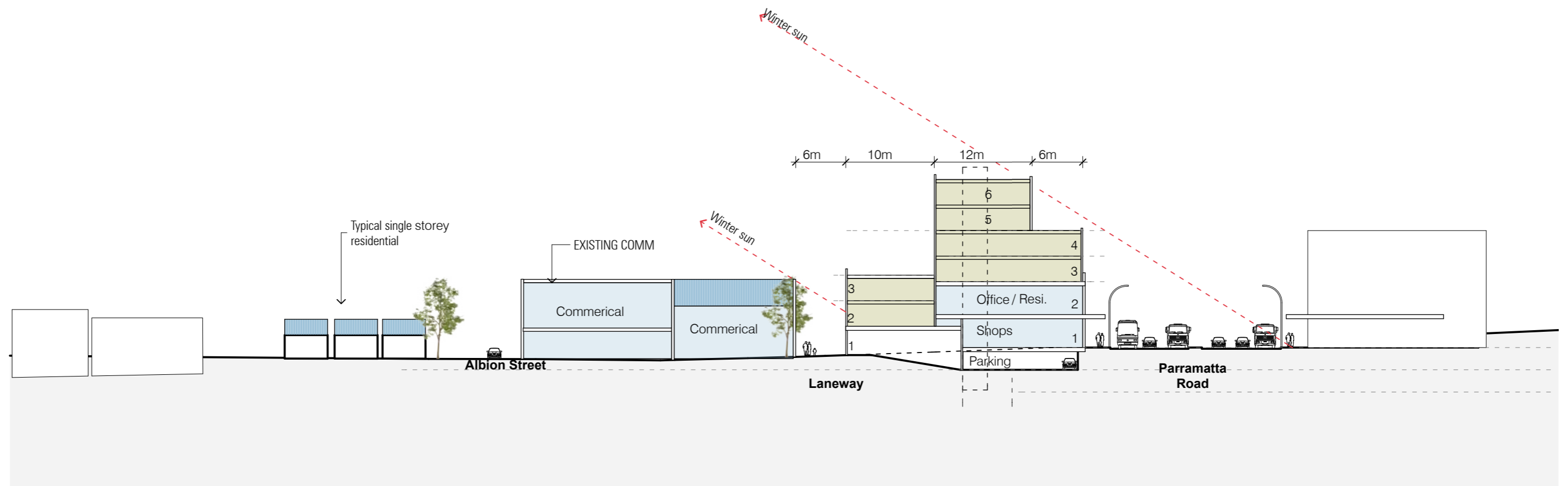
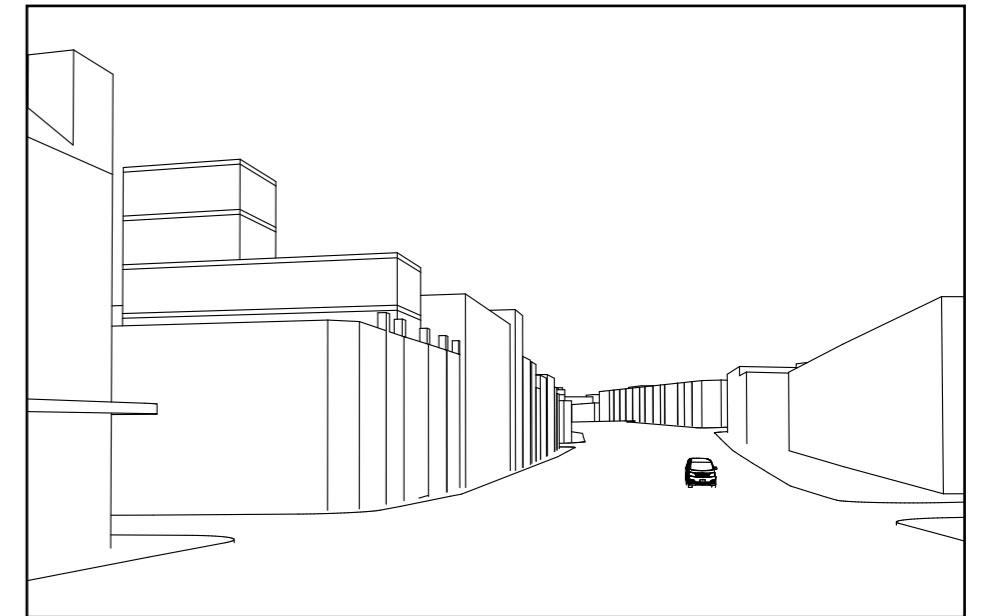
Type	Storeys	BEA (sqm)	Efficiency	GFA (sqm)	No. units	Car spaces*
Commercial	1	108	90%	97	0	1
Commercial	1	90	90%	81	0	1
Residential lower	2	108	75%	162	2	1
Residential upper	2	60	75%	90	1	1
Residential rear	2	63	75%	95	1	0

Total					4	4
					Total car park area (35sqm/car)	
						132
					Site area coverage	
						79%

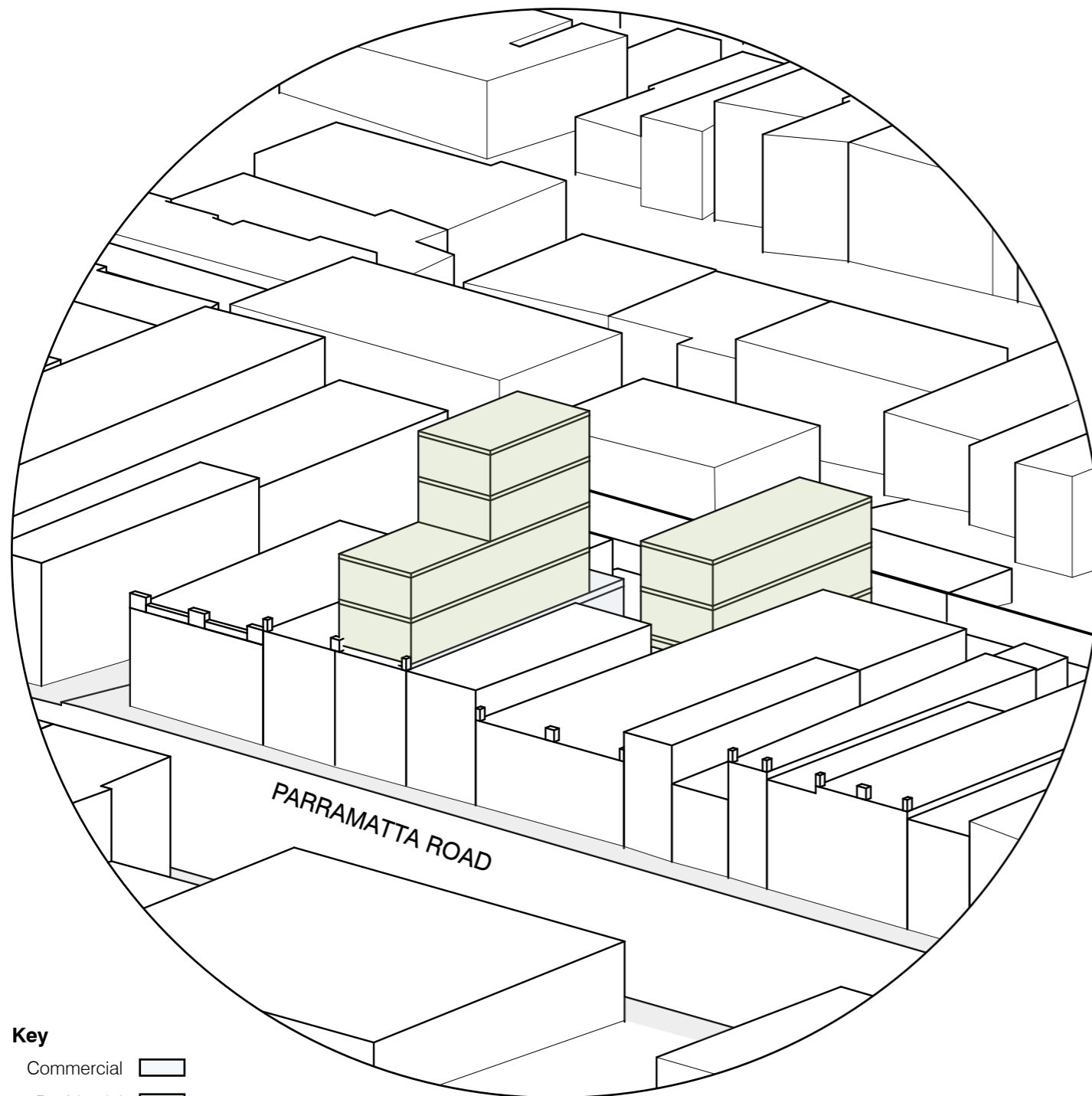
Total GFA	525
Industrial GFA	0
Non-resi GFA	178
Resi GFA	347

FSR (n:1)	3.1
------------------	------------





4.2 Parramatta Road - 46.5m deep site

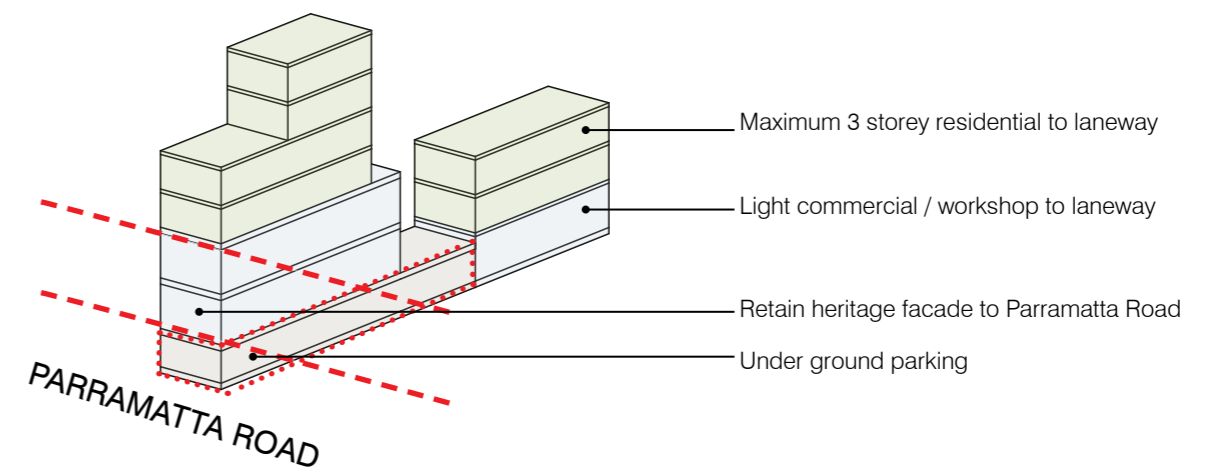


- Key**
- Commercial
 - Residential
 - Parking

46.5m deep x 6m wide (single lot)		Area (sqm)
Lot area		279
Building footprint		279

Type	Storeys	BEA (sqm)	Efficiency	GFA (sqm)	No. units	Car spaces*	
Commercial / Shops	1	207	90%	186		2	
Office / Business	1	132	90%	119		1	
Residential Tower lower	2	108	75%	162	2		
Residential Tower upper	2	60	75%	90	2		
Residential Terraces	2	78	75%	117	1	3	
Total					3	6	
					Total car park area (35sqm/car)		194
					Site area coverage		70%

Total GFA	674
Industrial GFA	0
Non-resi GFA	305
Resi GFA	369
FSR (n:1)	2.4

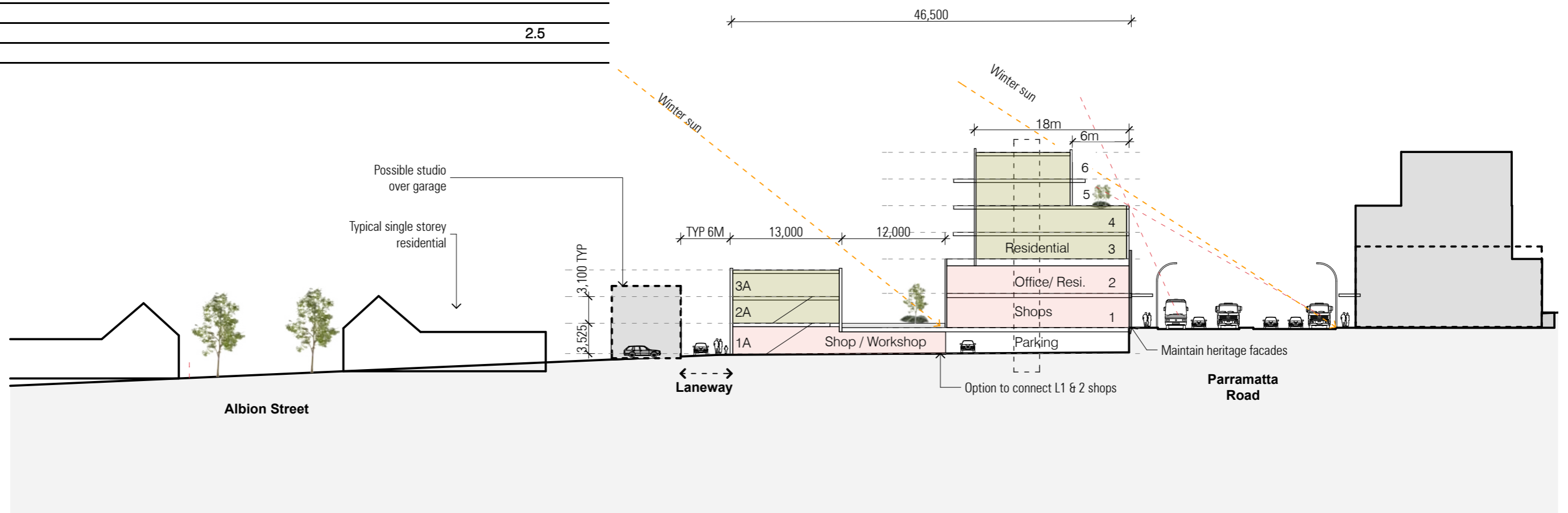
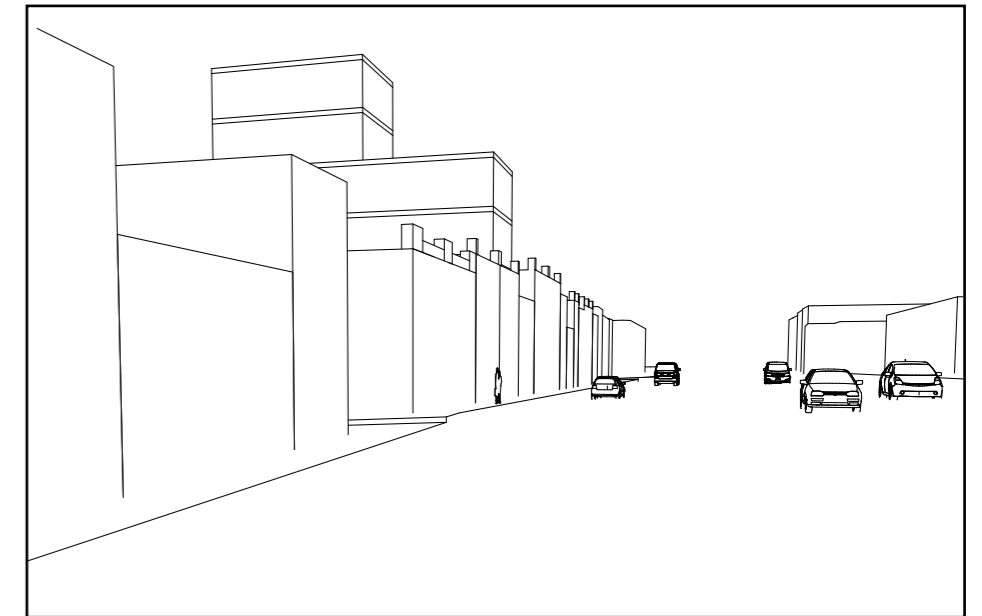


46.5m deep x 12m wide (2 lot amalgamation)

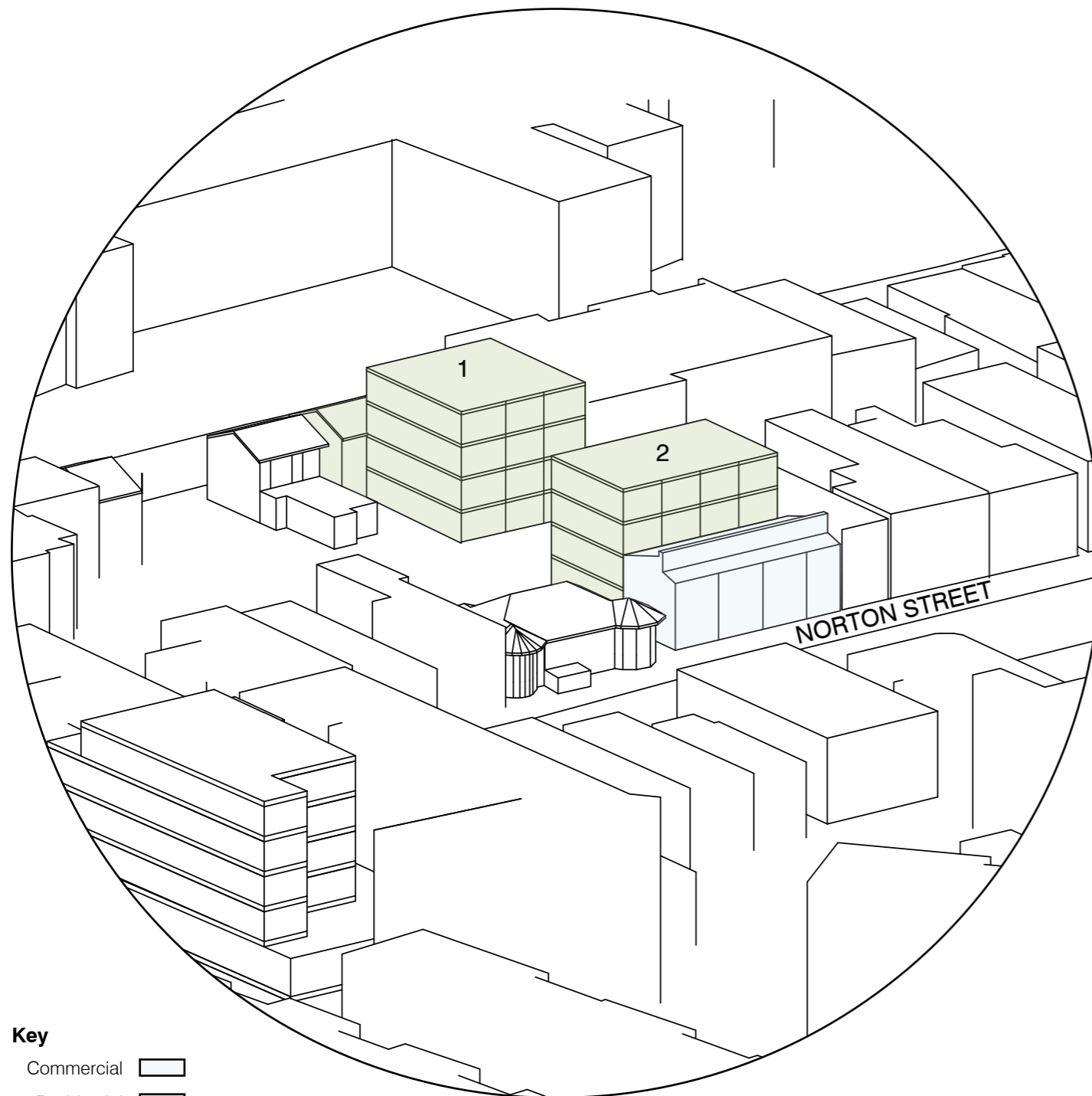
	Area (sqm)
Lot area	558
Building footprint	558

Type	Storeys	BEA (sqm)	Efficiency	GFA (sqm)	No. units	Car spaces*
Commercial / Shops	1	489	90%	440		4
Office / Business	1	264	90%	238		2
Residential Tower lower	2	216	75%	324	4	
Residential Tower upper	2	120	75%	180	2	
Residential Terraces	2	156	75%	234	4	3
Total					6	9
					Total car park area (35sqm/car)	325
					Site area coverage	58%

Total GFA	1416
Industrial GFA	0
Non-resi GFA	678
Resi GFA	738
FSR (n:1)	2.5



4.3 Norton Street - Renwick Street



Key
 Commercial
 Residential
 Parking

1 RENWICK ST TEST SITE	Typical single lot 4.5m (width) x 31m (depth)	Area (sqm)
Lot area		139.5
Building footprint		95
Existing FSR (n:1)		1

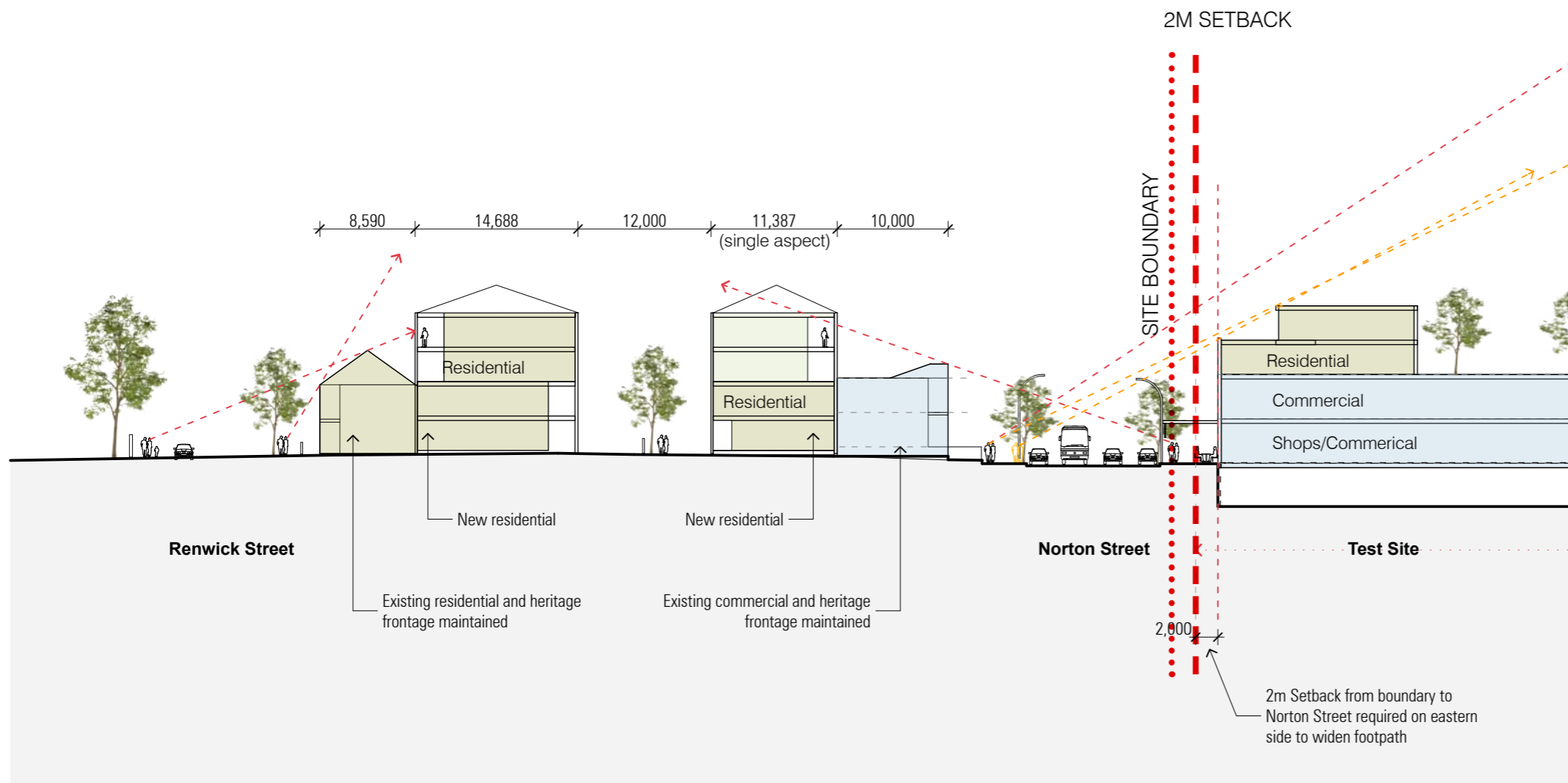
Type	Storeys	BEA (sqm)	Efficiency	GFA (sqm)	No. units	Car spaces*
Commercial	0	0	90%	0	0	0
Heritage Residential	2	29.75	75%	45	1	0
Rear Residential	4	65.25	75%	196	2	
Total					0	0
					Total car park area (35sqm/car)	0
					Site area coverage	0%

Total GFA	240
Non-resi GFA	0
Resi GFA	240
FSR (n:1)	1.7

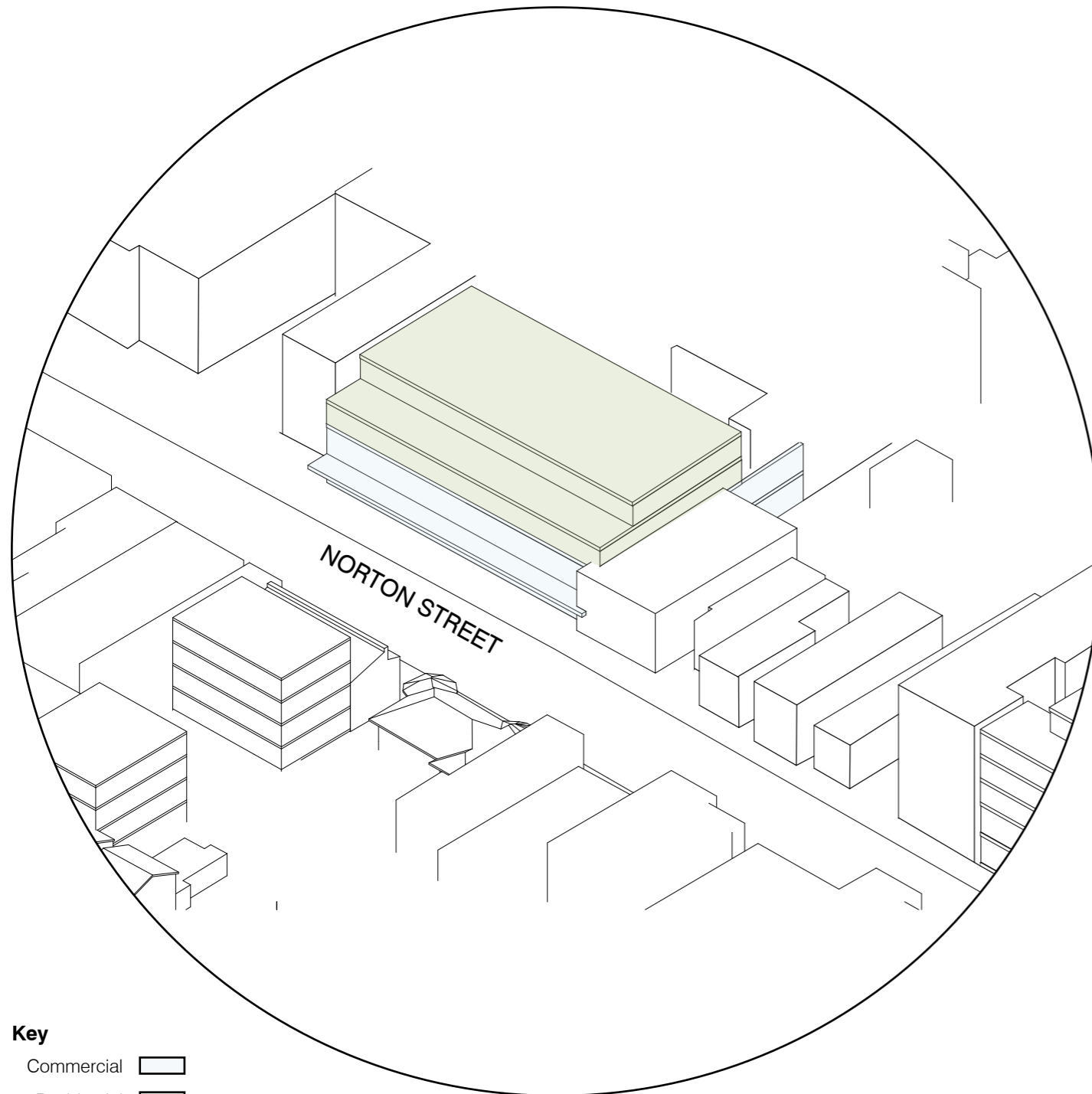
2 NORTON STREET WEST TEST SITE	Typical single lot 4.2m (width) x 27.5m (depth)	Area (sqm)
Lot area		115.5
Building footprint		88
Existing FSR (n:1)		0.6

Type	Storeys	BEA (sqm)	Efficiency	GFA (sqm)	No. units	Car spaces*
Commercial	2	42	90%	76	0	0
Rear Residential	4	46.2	75%	139	2	0
Total					2	0
					Total car park area (35sqm/car)	0
					Site area coverage	0%

Total GFA	214
Non-resi GFA	76
Resi GFA	139
FSR (n:1)	1.9



4.4 Norton Street - east



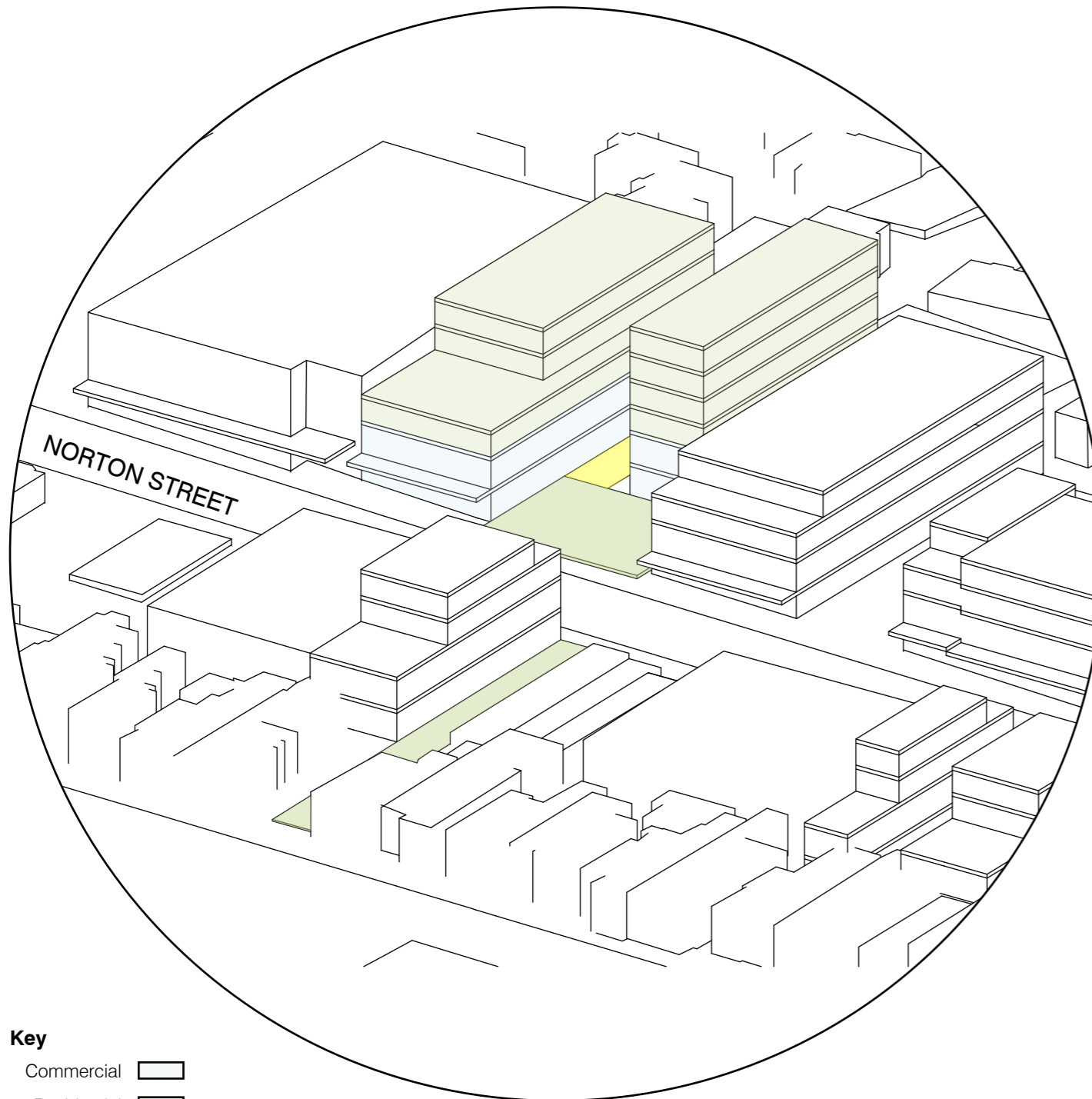
- Key**
- Commercial
 - Residential
 - Parking

NORTON STREET EAST TEST SITE Typical single lot 41.5m (width) x 35.8m (depth)		Area (sqm)
Lot area		1489
Building footprint		1489
Existing FSR (n:1)		0.6

Type	Storeys	BEA (sqm)	Efficiency	GFA (sqm)	No. units	Car spaces*
Commercial	2	1390	90%	2502	0	25
Residential lower	1	630	75%	473	5	3
Residential upper	1	287.5	75%	216	2	
Total					2	28
					Total car park area (35sqm/car)	981
					Site area coverage	66%

Total GFA	3191
Industrial GFA	0
Non-resi GFA	2502
Resi GFA	688
FSR (n:1)	2.1

4.5 Norton Plaza - northern site

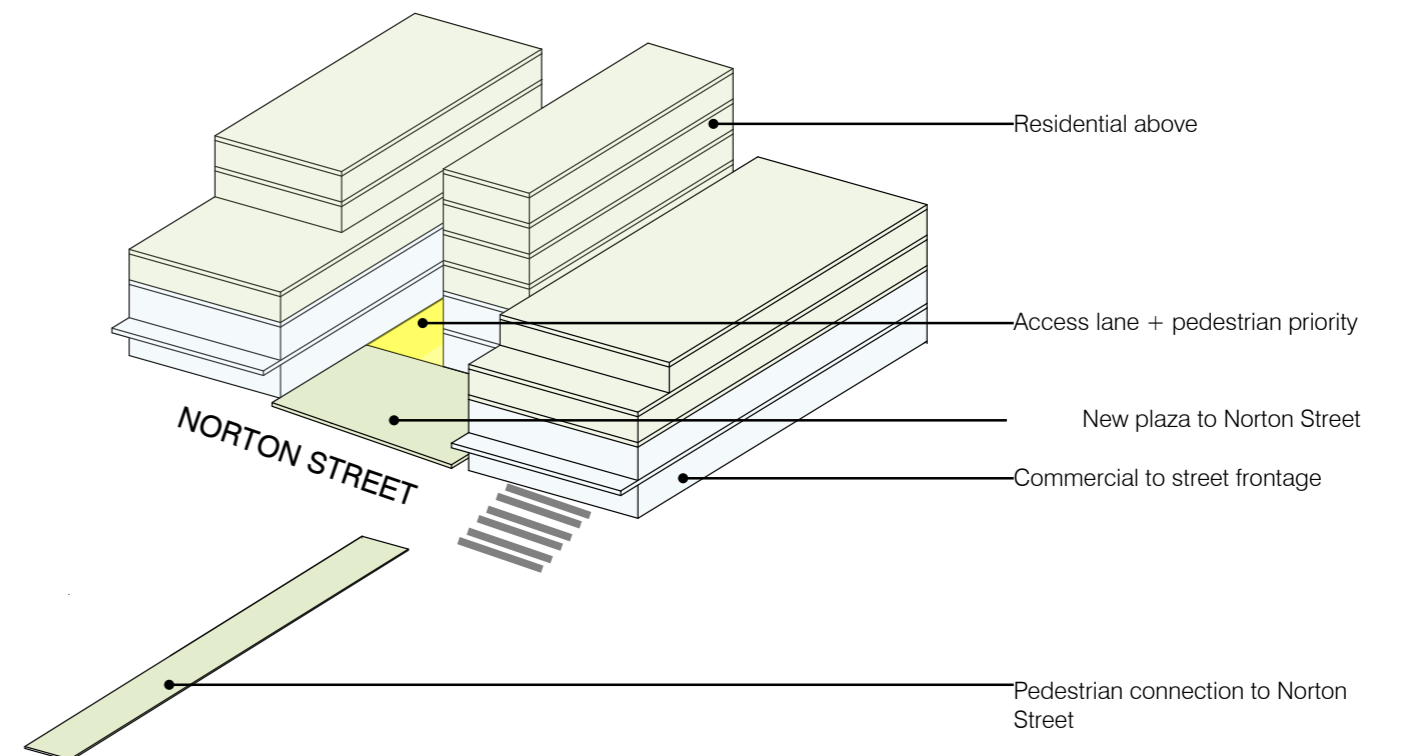


NORTON STREET COMMUNITY PLAZA (Public benefit: plaza and 6m pedestrian lane connection)		Area (sqm)
Lot area		2131
Building footprint		1265
Existing FSR (n:1)		1.8

Type	Storeys	BEA (sqm)	Efficiency	GFA (sqm)	No. units	Car spaces*	
Commercial	2	1265	90%	2277	0	23	
Residential lower	1	1265	75%	949	5	3	
Residential upper	2	893	75%	1,340	2		
Residential upper	1	367	75%	275	2		
Total					2	26	
						Total car park area (35sqm/car)	902
						Site area coverage	42%

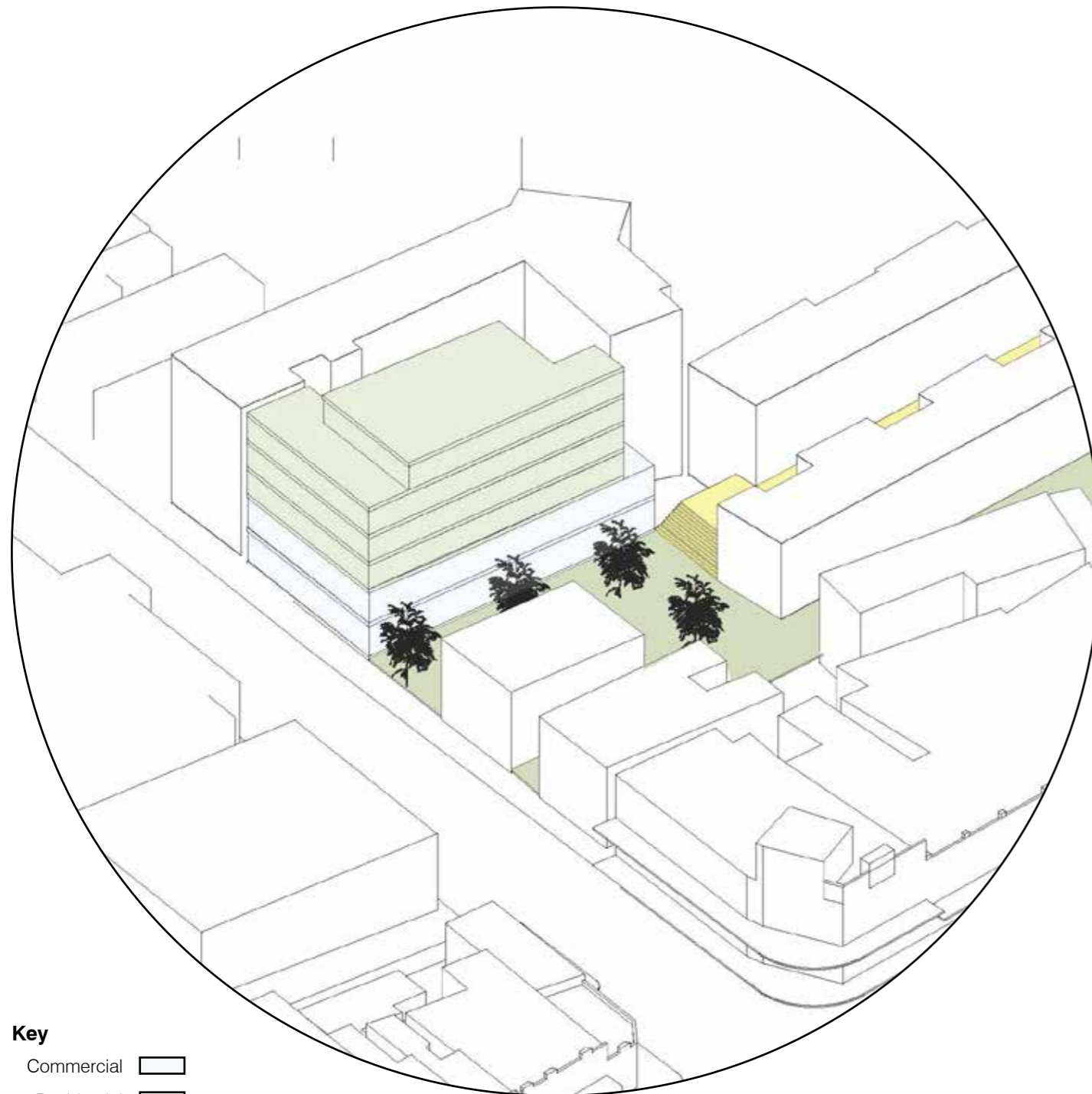
Total GFA	4841
Industrial GFA	0
Non-resi GFA	2277
Resi GFA	2288
FSR (n:1)	2.3

Represents a 10% bonus in base 2.1 FSR allowance to create pedestrian link and plaza.



- Key**
- Commercial
 - Residential
 - Parking

4.6 Norton Street - Dot Lane



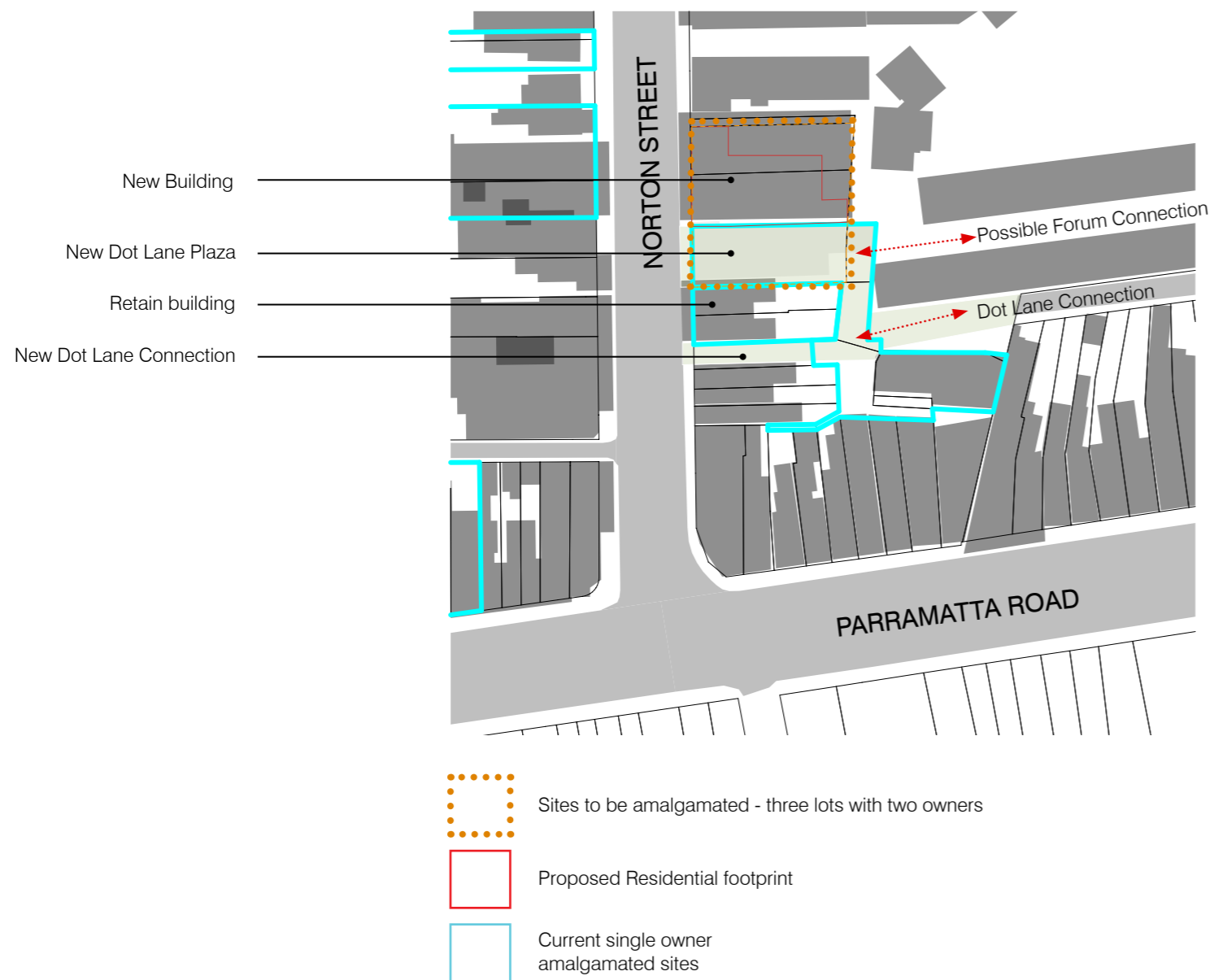
- Key**
- Commercial
 - Residential
 - Parking

DOT LANE PLAZA SITE (3 lots amalgamated. Public benefit: Dot Lane extension)	Area (sqm)
Lot area	1059
Building footprint proposed	tbc
Existing FSR (n:1)	1

Type	Storeys	BEA (sqm)	Efficiency	GFA (sqm)	No. units	Car spaces*
Commercial	2	667	90%	1201	0	12
Residential	3	452	75%	1017	5	
Residential	1	332	75%	249	2	
Total					7	16
						Total car park area (35sqm/car)
						560
						Site area coverage
						53%

Total GFA	2218
Non-resi GFA	1201
Resi GFA	1017

FSR (n:1)	2.1
Includes additional bonus 15% FSR (Typical 2.1:1 FSR) + additional height/storeys	
Bonus to fund public domain laneway connection	



Existing site is a single level cafe and a two storey funeral home

