BOROONDARA

Built Form Report

in support of the Camberwell Junction Structure and Place Plan


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1 Introduction

1.1 Purpose

The purpose of this report is to support the *Camberwell Junction Structure and Place Plan*. It provides a summary of existing built form conditions and a detailed analysis and testing of built form outcomes to justify future built form controls.

The purpose of this report is to:

- Summarise background research, analysis and recommendations that inform land uses supporting the centre's primary economic role.
- Outline the rationale for proposed floorspace and preferred development in support of a planning scheme amendment to implement relevant policy and controls.

1.2 Principles

The analysis set out in this report is guided by the following urban design principles.

Places for people

- Animating the street/edge
- Contribute positively to the public realm including solar access to footpaths
- Street wall height and setbacks for human scale
- Connect to the movement network and to open spaces
- Design for safety

Considerate built form

- Suitable building size and scale in appropriate locations
- Visually recessive upper levels
- Appropriate solar access to the public realm and residential amenity
- Sensitively designed interfaces and transitions to existing built form
- Equitable development/building separation
- Wind impacts do not negatively impact the public realm and amenity

Design for change

- Mixed use - commercial, retail, housing
- Adaptable/reuse
- Accessibility
- Environmentally Sustainable Design

Enrich the existing

- Respect the context and character
- Respect and/or protect existing heritage buildings

These principles guide future built form recommendations to ensure the amenity of the centre is enhanced, its character protected and allow it to perform its role as a Major Activity Centre

1.3 Study area

The study area extends from the intersection of Burke Road and Victoria Road in the north to Inglesby Road and Camberwell Sports Ground in the south; Fritsch Holzer Park in the north west, and Fairholm Grove and Read Gardens in the east and north east.

The study area is largely consistent with the 2011 Structure Plan and includes the commercial core of the activity centre as well as residential land within and adjoining the commercial core.

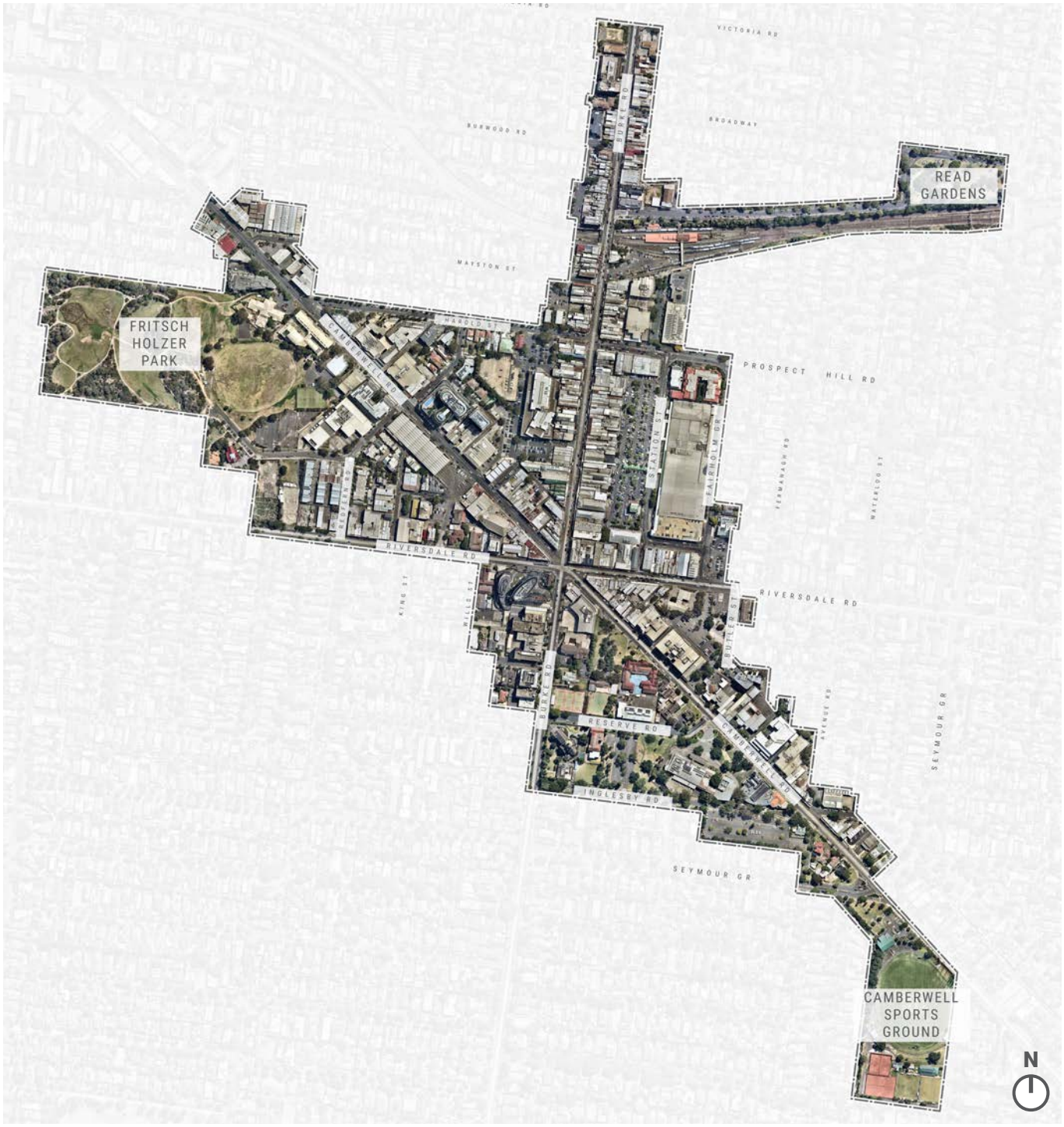


Figure 1: Camberwell Junction study area

1 Introduction

1.4 Policy

The following policy documents provide context for the built form for Camberwell Junction. This section should be read in conjunction with the Camberwell Junction Background Report which provides greater policy context.

State

Plan Melbourne 2017-2050

Camberwell Junction is identified as one of Boroondara's three Major Activity Centres in the Victorian Government's Metropolitan Planning Strategy Plan Melbourne 2017-2050 (Plan Melbourne).

Direction 2.2 seeks to facilitate jobs and housing supply in locations near services and public transport to support the creation of 20 minute neighbourhoods. In addition, Direction 4.2 seeks to ensure that new development is responsive to the character of the setting in which it is located.

Urban Design Charter

The Urban Design Charter is a commitment by the Victorian Government to make cities and towns in Victoria more liveable through good urban design. The Charter identifies the principles essential for the functioning of good public environments, in making places that are valued and significant for those who use them.

Planning Practice Note 60

Planning Practice Notes provide information and guidance to local councils on height and setback controls in Activity Centres and states the requirements for appropriate assessment. This has been considered as part of this Built Form report.

Regional

Boroondara forms part of the Inner South East Metro Region together with the municipalities of Bayside, Glen Eira and Stonnington Councils. Camberwell Junction is strategically located between Melbourne's CBD and the eastern/southern suburbs. The Centre also forms part of a network of important commercial centres in the region which includes Chadstone Shopping Centre, Malvern East, Caulfield, Box Hill, Bridge Road / Swan Street, Richmond and Chapel Street, Prahran.

Inner South East Metro Land Use Framework Plan (Draft - January 2021)

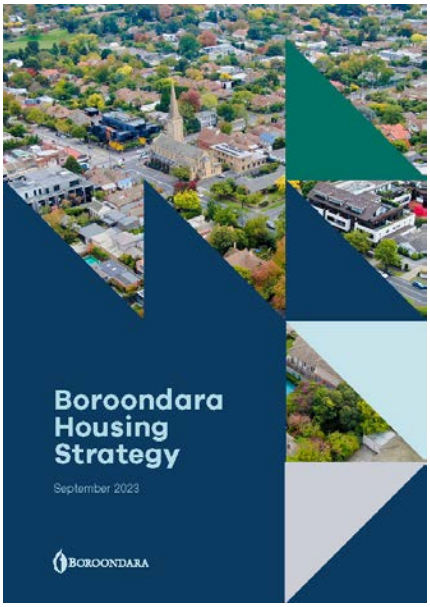
The Framework Plan identifies the following key directions for Camberwell Junction:

- Strengthen Camberwell Junction's distinctive mixed-use retail, commercial, hospitality and entertainment offerings.
- Recognise Camberwell Junction's role as a high-profile office location in the eastern suburbs.
- Encourage a complementary of social, cultural, entertainment, recreational and other community-related facilities, set around a vibrant and active public realm.
- Encourage a mix of housing types, with a particular focus on medium-density housing above active commercial ground floor uses in the core of the activity centre and on sites adjoining the commercial areas.
- Retain the traditional strip shopping centre character.
- Support transit-oriented development around Camberwell Station.

Local

Boroondara Housing Strategy (September 2023)

Boroondara is forecast to grow by around 28,700 additional residents and 9,400 additional dwellings over the next 15 years. This growth is expected to reach an approximate total of 200,000 residents and 80,000 dwellings. The Boroondara Housing Strategy supports the continued provision of new dwellings in locations well connected to existing jobs, services and public transport. In line with the strategic directions set out in Plan Melbourne, this includes the Camberwell Junction Major Activity Centre.



Boroondara Planning Scheme

The directions and objectives set by Plan Melbourne are generally supported by existing policy in the Boroondara Planning Scheme at state, regional and local levels. Specifically, the following clauses are relevant:

- *2.03-1 – Settlement* highlights the commercial focus of major activity centres and to ensure that residential development this focus while also minimising impacts on sensitive residential interfaces by way of visual bulk, noise, traffic and vehicle access.
- *11.03-1L-01 – Camberwell Junction Major Activity Centre* is based on the 1993 version of the Structure Plan and therefore outdated. Its key objectives are to retain the commercial focus, retaining Burke Rd as the retail core while also protecting the amenity of the centre and adjoining residential areas.
- *15.01-1L-01 Urban design and built form outcomes* seeks to achieve high quality urban design and built form outcomes which enhance streetscapes, maintain amenity and cater to a diversity of user needs. The strategies are relevant for development in major activity centres.
- *15.03-1L Heritage* seek to preserve significant and contributory heritage fabric and to facilitate sympathetic additions, alterations and new buildings.
- *16.01-1L Housing* relates to the state-wide housing objectives to facilitate well-located, integrated and diverse housing that meets community needs. It sets out strategies to support increased housing density and diversity at the upper levels above commercial uses in major activity centres.

Built form implications

The policy context at state, regional and local levels supports the broader objectives to provide stronger policy direction for economic growth, public realm environments, and site-responsive development throughout the centre. Importantly, objectives relating to growth need to be balanced with other strategic directions in the Planning Policy Framework such as ensuring that new development responds to its context appropriately. Change within Camberwell Junction needs to reflect its primary commercial function while minimising impacts on the centre's heritage buildings, its valued established character and its amenity.

2 Existing conditions

This section provides an analysis of existing conditions within Camberwell Junction and forms an important basis for future built form recommendations.

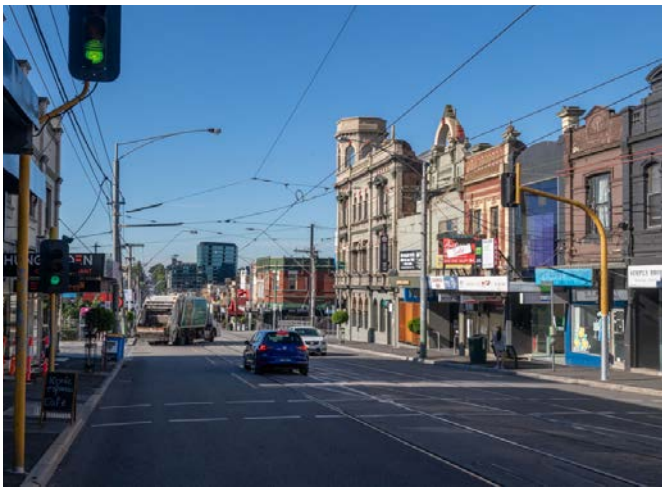
2.1 Topography

The topography of Camberwell Junction is generally hilly with significant slopes north-south along Burke Road and east-west along Prospect Hill Road that run down to a flatter area around the junction.

Built form implications

Any new development within this area should be designed to respond to steep topography, especially sites that are large scale, have broad street frontages or sensitive interfaces to lower scale residential uses.

Looking south east on Camberwell Road



Looking south on Burke Road

Looking south on Burke Street towards the six-way intersection

Looking north on Burke Road and Prospect Hill Road intersection

Figure 2: Topographical map

2 Existing conditions

2.2 Subdivision patterns

Lot sizes

The subdivision pattern typically has smaller fine-grained lots clustered along the traditional Burke Street retail strip and along parts of Riversdale and Camberwell Road. The remaining area within the centre is comprised of irregular lot patterns, with larger and smaller lots abutting each other. Triangle-shaped lots are clustered around the junction. Larger lots (300sqm+)are generally located on the periphery of the study area.

Built form implications

The potential for development within the retail core is dependent on opportunities for lot consolidation. Greater development potential exists on larger lots along Camberwell Road that have no or only limited sensitive interfaces to residential areas. It is noted that some larger lots have limited redevelopment potential as they are reserved for civic and institutional use or public open space.

Figure 3: Lot sizes within Camberwell Junction

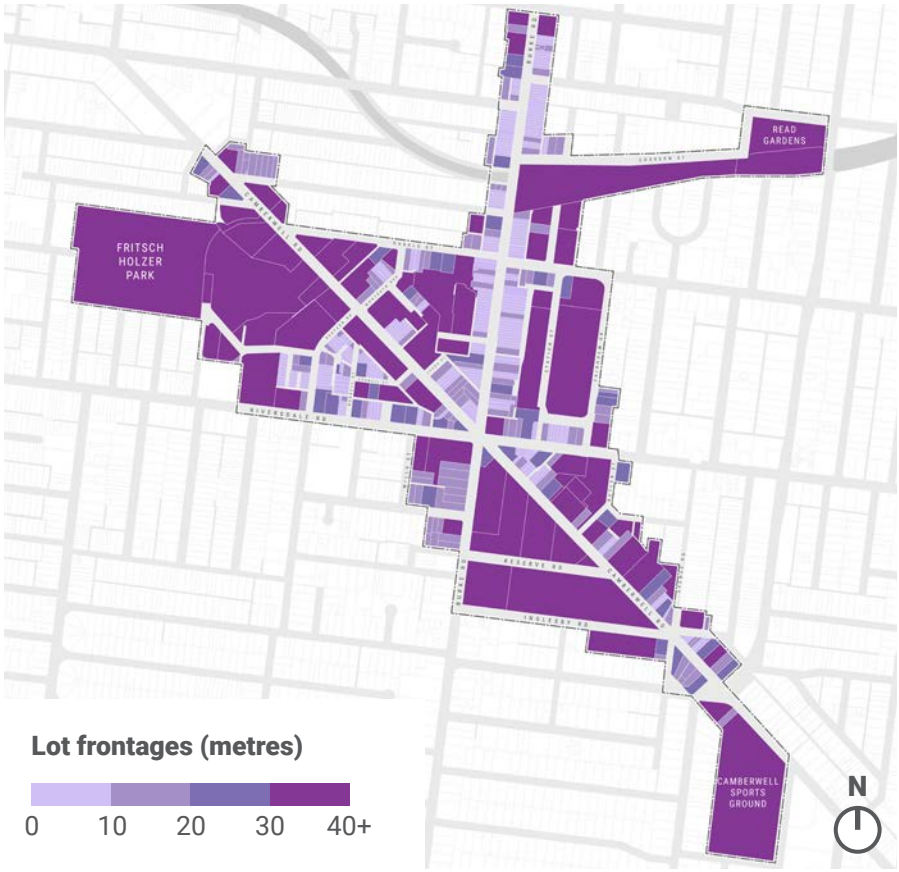


Figure 4: Lot frontages in Camberwell Junction

Lot frontages

Narrow lot frontages are clustered along the traditional Burke Street retail strip and small sections of Riversdale and Camberwell Road, often reflecting built heritage. Larger lot frontages are located on the periphery of the centre, often in the form of big box retail, apartment or commercial buildings.

Built form implications

Narrow lot frontages allow for a greater street activation opportunities. Larger lots, particularly those with a frontage to Camberwell or Riversdale Roads should be designed to provide street activation.

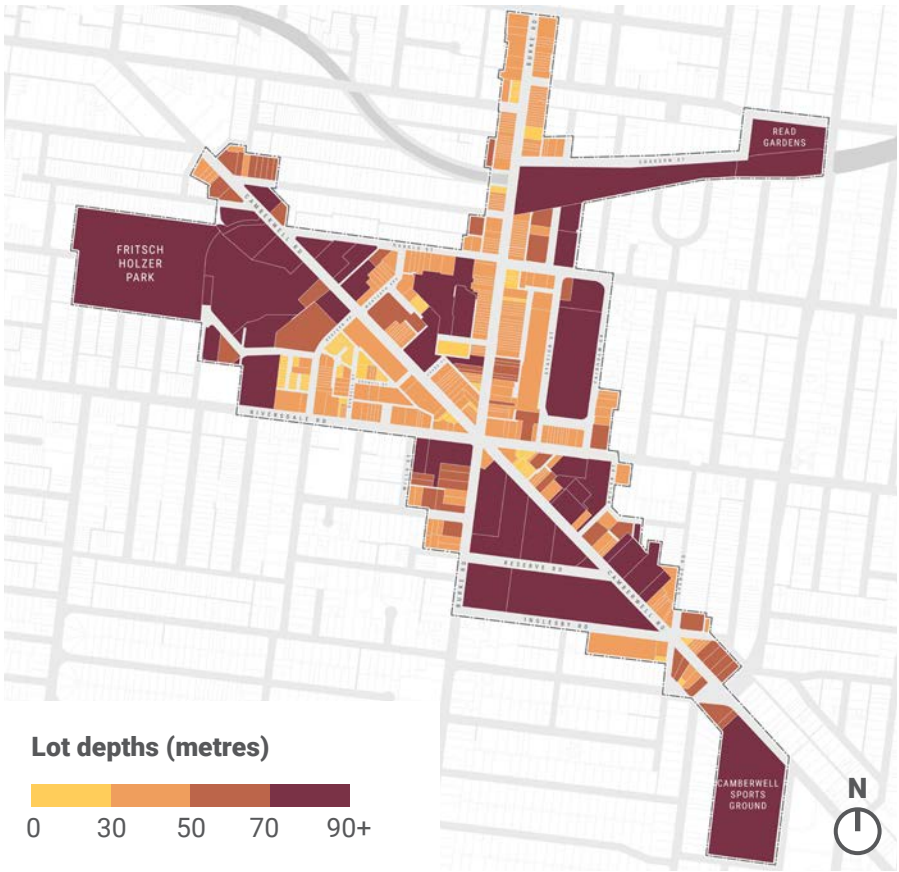


Figure 5: Lot depths in Camberwell Junction

Lot depths

Fine grain commercial lots along Burke Road have a greater depth than width. There are few lots in the area with a narrow depth compared to a narrow width.

Built form implications

Fine grain lots along Burke Road's character area may have capacity for upper level additions. Given the flexibility provided by the depth of these lots (between 30-50m), these additions can be designed to not be visually intrusive.

2 Existing conditions

2.3 Height and scale

Camberwell Junction is generally comprised of low rise (1-2 storeys) commercial or residential buildings. Taller and higher density built form (up to 9+ storeys) is found on larger sites across the centre, often in the form of large format apartments, commercial buildings or box retail. Street wall heights are generally 1-3 storeys along the traditional retail core while larger scale buildings have up to 4 storey street wall height.

Built form implications

The generally low scale built form and shopfronts along Burke Road retail core are a key element of the Junction's character. There may be opportunities to create upper level building extensions while maintaining the prevailing character of 2-3 storeys through use of appropriate setbacks above the street wall. The greatest capacity for height and scale exists on larger lots along Camberwell Road and Burke Street south of the junction that have no or only limited sensitive interfaces to residential areas.

Medium scale apartment building with retail at ground along Camberwell Road

Large scale apartment buildings

Mostly consistent street wall height along Burke Road

Older building with 3 storey street wall and turret along Burke Road

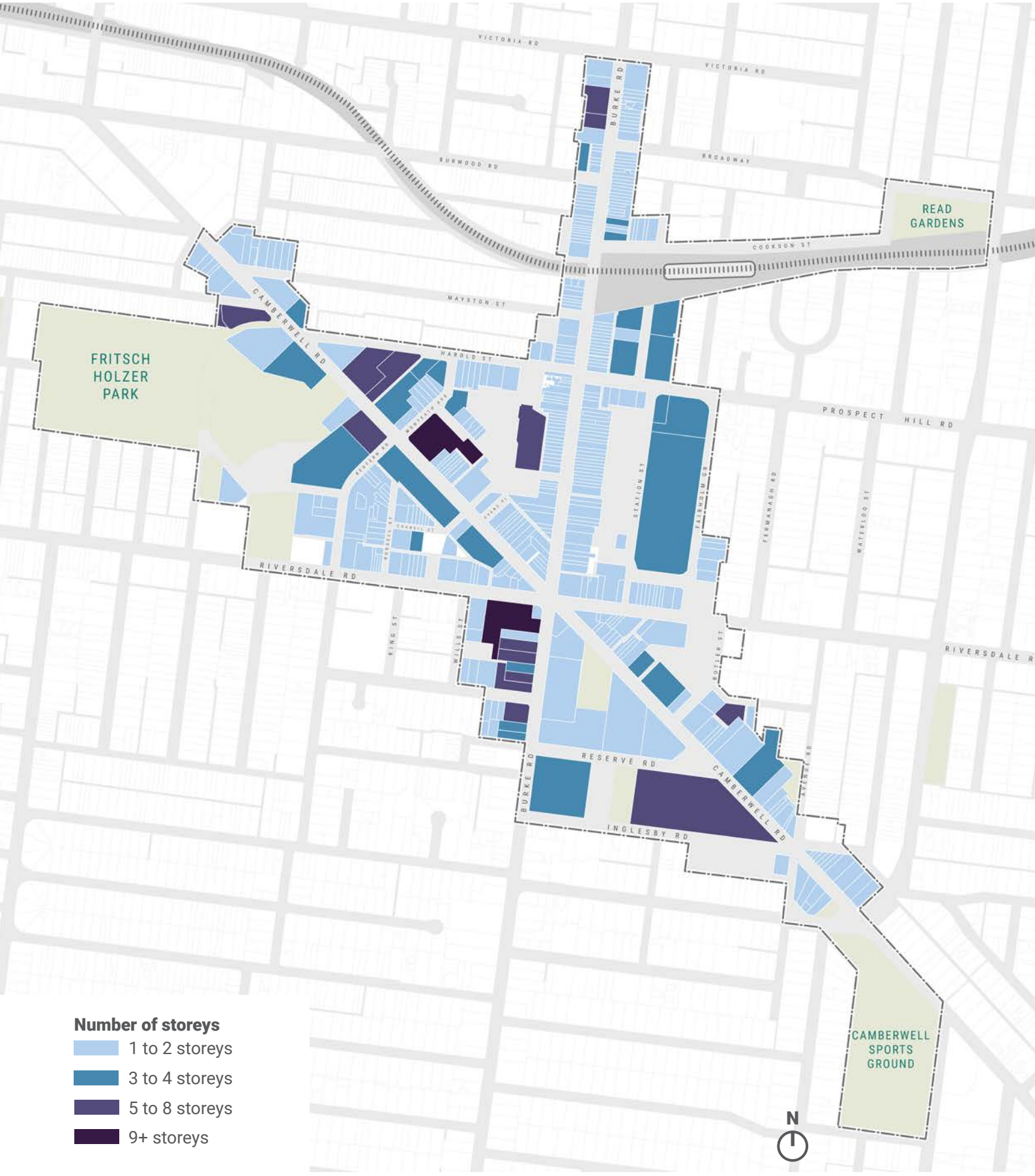


Figure 6: Existing building heights

2 Existing conditions

2.4 Architectural styles

There is a range of architectural styles and buildings typologies within Camberwell Junction from heritage/ historical Victorian era shopfronts to utilitarian warehouses, a range of office buildings, and elaborate public facilities to modern apartment high rises. Some include:

- Shopfronts ranging from the Victorian to Interwar eras, some of which have upper level façades of heritage or character significance, or intact street level details
- Modern shopfronts
- Warehouses
- Office developments dating from the 1960s to recent
- Art deco cinema
- Apartments of various heights and styles, including Interwar and modern developments
- Detached Victorian, Edwardian and Interwar era dwellings
- Detached and duplex Postwar and contemporary dwellings
- 'Island' buildings set within large surface car park areas.

Built form implications

Understanding architectural styles is important for contextual analysis and provides the basis for the development of preferred future character statements and built form recommendations.

Victorian era 'shop-top' buildings and Burke Road, north of the station

Office buildings on Burke Road, south of the junction

Rivoli Theatre

New mixed use development

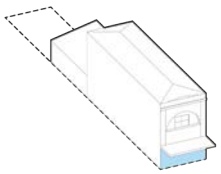
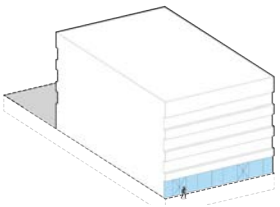
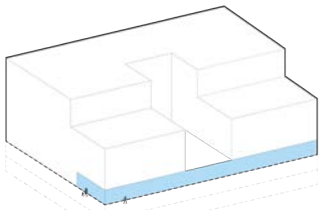
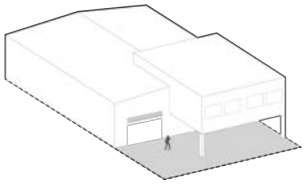
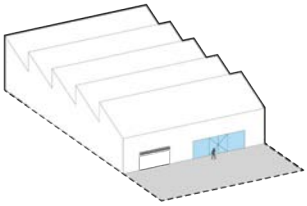
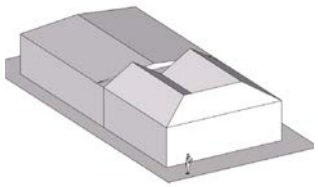
Former warehouse re-purposed for cafe use

Office building with landscape setbacks on Railway Parade

2 Existing conditions

2.5 Building typologies

The following building typologies provide analysis of redevelopment and adaptability potential throughout the study area.

Building typology	Description	Development potential	Adaptability
Shopfronts 	• Can be either heritage or contemporary, accommodating the majority of small and medium scale retail in the precinct. • Several of these terraces are used for commercial uses such as small offices (accountants, surveyors).	Medium	Medium
Office blocks 	• Large-scale office blocks are most commonly located along major roads outside of the immediate centre. • Highly consistent, characterised by deep and wide floor plates and the average site occupation is almost 100 per cent. • On-site car parking is a significant consideration and is provided underground or to the rear.	Low	Low
Large residential 	• Large-scale multi-residential developments represent the most recent constructions. • Often replace warehouses, single dwellings, and/or are an amalgamation of several of these sites.	Low	Low
Workshop 	• Found in Junction West precinct between Camberwell and Riversdale Roads. • Occupied by light manufacturing, commercial (small offices with warehouse for parking or storage) or a combination of the two. • On-site car parking is almost always a key feature.	Medium	High
Warehouse 	• Highly flexible, accommodating commercial, infrastructure and retail uses. • Often aged and located in clusters, thereby representing significant amalgamation and redevelopment potential to either commercial or multi-residential. • Many former warehouse sites have been developed.	High	High
Bungalow and 'island' 	• Bungalow represents the typical single-residential buildings. • 'Island' named for a small building in the middle of a large car park or surrounded by green/garden. • Sites include preschools, daycare, petrol stations, and even a defunct church.	Low	High

Built form implications

Understanding existing building typologies and their locations helps to inform redevelopment potential. Sites with higher development potential are more likely to be developed to higher intensity.

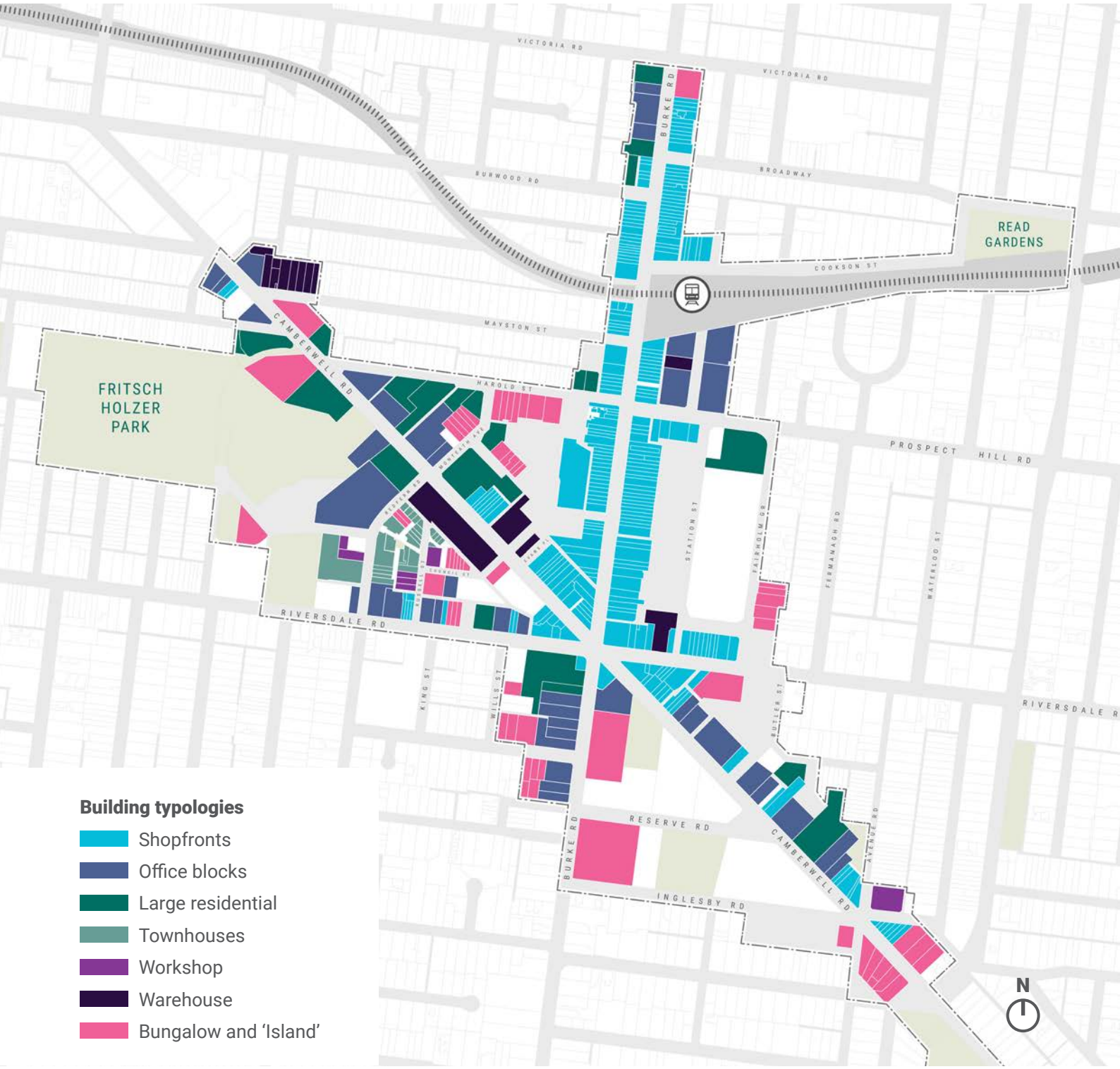


Figure 7: Existing building typology locations

2 Existing conditions

2.6 Heritage

Camberwell Junction has a rich history that is reflected in the centre's heritage buildings and precincts with significance beyond the centre itself. There is a range of heritage assets including Victorian, Art Deco Moderne, commercial and residential buildings and precincts, as well as public buildings and features such as railway station, civic buildings, a theatre, parks and gardens. Many of these places are of aesthetic, social, historic, cultural or technical significance to the municipality.

Properties included in the Heritage Overlay (Figure 8) are interspersed throughout the centre. There are also extensive residential areas in Heritage Overlays directly outside the study area.

The Camberwell Junction Structure and Place Plan Heritage Built Form Advice study (Extent, 2023) documents those buildings and places within existing Heritage Overlays and those on the Victorian Heritage Register. There a number of significant heritage buildings including Rivoli Theatre, Peppereli's Buildings, Charing Cross Buildings and the Camberwell Tram Depot.

Burke Road is a significant commercial heritage precinct due to its history and presentation as a strong streetscape with a visually coherent elevation. This precinct is characterised by its low-rise heritage fabric, with upper level features of buildings being largely intact. The precinct is defined by terraced shop fronts with either a parapet or full first floor facade above, and a lack of front setbacks.

Built form implications

Buildings within Heritage Overlays are less likely to see significant future change. In some cases heritage buildings on larger sites may still have some development potential. There is an expectation for new development on heritage sites to be recessive and not dominate the heritage fabric, particularly the Burke Road retail strip in terms of scale of development.

1 - Burke Rd North Commercial and Transport Precinct

2 - Charing Cross Buildings

3 - Essington Estate and Environs Precinct

4 - Pepperell's Buildings

5 - Rivoli Theatre

6 - Camberwell Tram Depot

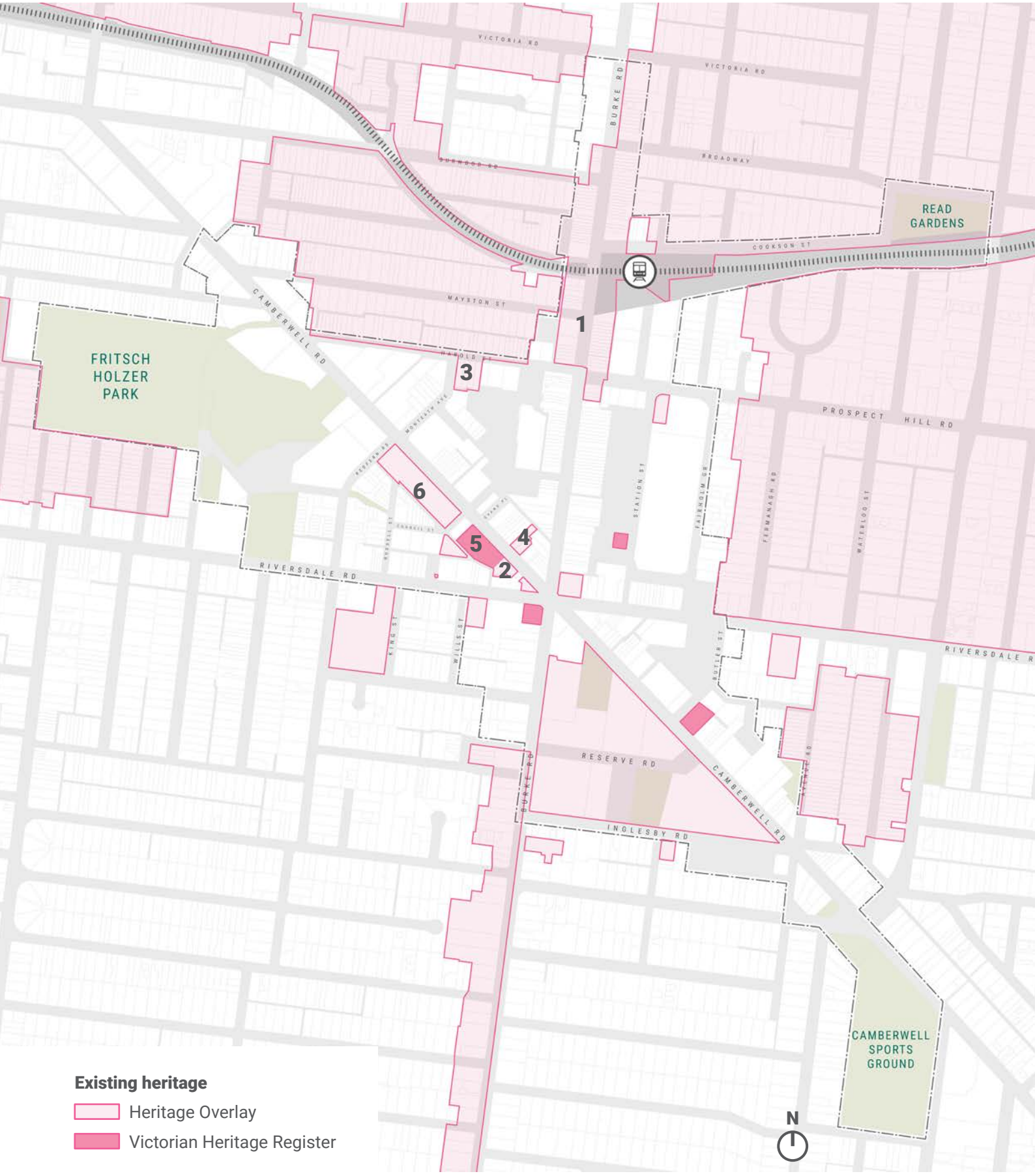


Figure 8: Heritage within the study area

2 Existing conditions

2.7 Interfaces

Nine interface conditions have been identified across Camberwell Junction. These reflect the relationship of existing built form with street and neighbouring buildings that needs to be considered in the development of future built form in terms of alignment, setbacks and boundary treatment.

Condition 1: Residential (direct abuttal)

Occurs at the direct boundary between commercial allotments and adjoining residential allotments. Future development controls should include interface management techniques to limit amenity impacts and achieve an appropriate transition to low-scaled residential settings.

Condition 2: Residential (street/laneway separation)

Occurs where a street separates the commercial boundary from residential allotments. Future development controls might include interface management techniques to limit amenity impacts to the public realm and the character of established residential settings. Alternatively, if the laneway is a low order rear laneway and is used for vehicular access only, built form could include a direct abuttal to the laneway.

Condition 3: Residential streetscape

Occurs in residential streetscapes where both sides of streets contain residential zoned land. Future development controls need to provide clear guidance on how to manage these interfaces to ensure the preferred character of residential and landscape settings are not compromised by poor interface responses.

Condition 4: Open Space (direct abuttal)

Occurs where an allotment directly abuts an open space. In Camberwell Junction, this occurs only to the rear or sides of allotments. Future development controls need to provide clear guidance on how to manage these interfaces to provide surveillance to open spaces and limit amenity impacts.

Condition 5: Main Road

Occurs along main commercial roads such as Burke Road, Camberwell Road and Riversdale Road. Future development controls should provide for active street frontages and limit amenity impacts such as overshadowing to pedestrian areas. Some sites may have upper level capacity for future development extensions, however this is dependent on subdivision considerations and heritage controls.

Condition 6: Commercial Street

Occurs along lower order commercial streets throughout the study area, such as Burwood Road, Redfern Road and other streets linking from main roads. Future development controls should include techniques to manage the provision of active street frontages and limit amenity impacts such as overshadowing to adjoining residential and pedestrian areas.

Condition 7: Commercial Laneway

Occurs where an allotment adjoins an existing laneway in the commercial core. As well as providing access, laneways may also offer commercial opportunities. Future development controls should include interface management techniques to provide safe connections and equitable development.

Condition 8: Rail Corridor

Occurs where allotments directly adjoin the rail corridor. Future development controls should include interface management techniques to manage amenity impacts from the rail corridor.

Condition 9: Community Use

Occurs where allotments directly adjoin a community use such as a school, church, community facility or the Boroondara Civic Centre. These uses are varied in when they are activated, such as all day, at specific times during the day or during weekends. Future development controls should include interface management techniques to manage viewlines to key community sites for wayfinding, limit amenity impacts and provide passive surveillance.

Interfaces

- Residential (direct abuttal)
- Residential (street/laneway separation)
- Residential streetscape
- Open space (direct abuttal)
- Main Road
- Commercial Street
- Commercial Laneway
- Rail Corridor
- Community Use

Figure 9: Interfaces

2 Existing conditions

2.8 Recent development activity

Several recent planning applications have significantly exceeded the proposed heights that were to be put forth in the *2011 Camberwell Junction Structure Plan.* As this plan was not adopted by Council it was therefore not translated into the Boroondara Planning Scheme. Without a document in place to strategically guide built form outcomes, developers are proposing a higher built form than anticipated.

This policy gap has also shifted the final built form outcome decision-making to VCAT, beyond the remit of Council. Key examples of recent development approvals are noted below:

Recent developments and planning applications

Map	Year	Address	Approved height	Dwelling types	Structure Plan 2011
1	2016	55 Camberwell Road, Hawthorn East	• 7 storeys	• 108 apartments	N/A -beyond centre boundary
2	2022	138 Camberwell Road, Hawthorn East	• 3 storeys	• 15 apartments	3 storeys - 11m height limit
3	2021	993 Burke Road, Camberwell	• 7 storeys	• 368 apartments, 11 townhouses	N/A - beyond centre boundary
4	2021	979-981 Burke Road, Camberwell	• 6 storeys (21m) • Decision by VCAT	• 32 apartments	3 storeys - 11m height limit
5	2020	4-14 Redfern Road, Hawthorn East (not built as of October 2023)	• 6 storeys (approx. 26m)	• 11 apartments	4 storeys - 14m height limit
6	2020	851-861 Burke Road, Camberwell (not built as of October 2023)	• 8 storeys (approx. 24-27m) • Decision by VCAT	• 40 apartments	3 storeys - 11m height limit
7	2018	153 Camberwell Road, Hawthorn East	• 2 buildings - 13 and 11 storeys (approx. 37.5m and 45.5m) • Decision by VCAT	• 139 apartments	5 storeys - 18m height limit & progressive setbacks
8	2013	347 Camberwell Road, Camberwell	• 6 storeys (approx. 20.5m) • Decision by VCAT	• 138 apartments	4 storeys - 14m height limit with upper setbacks
9	2018	469-471 Riversdale Road, Camberwell	• 6 storeys (23m)	• 12 apartments	6 storeys - no DDO requirement

Figure 10: Recent development activity

3 Growth forecast

3.1 Demographic projections

Camberwell Junction is located within a prestige residential market, where demand for housing is high.

Residential dwellings in Camberwell Junction are expected to increase from approximately 1,200 dwellings in 2021 to approximately 2,700 dwellings in 2051. In line with this, the Junction's population is projected to increase from approximately 2,500 to 5,800 over the same time period (HillPDA, 2022).

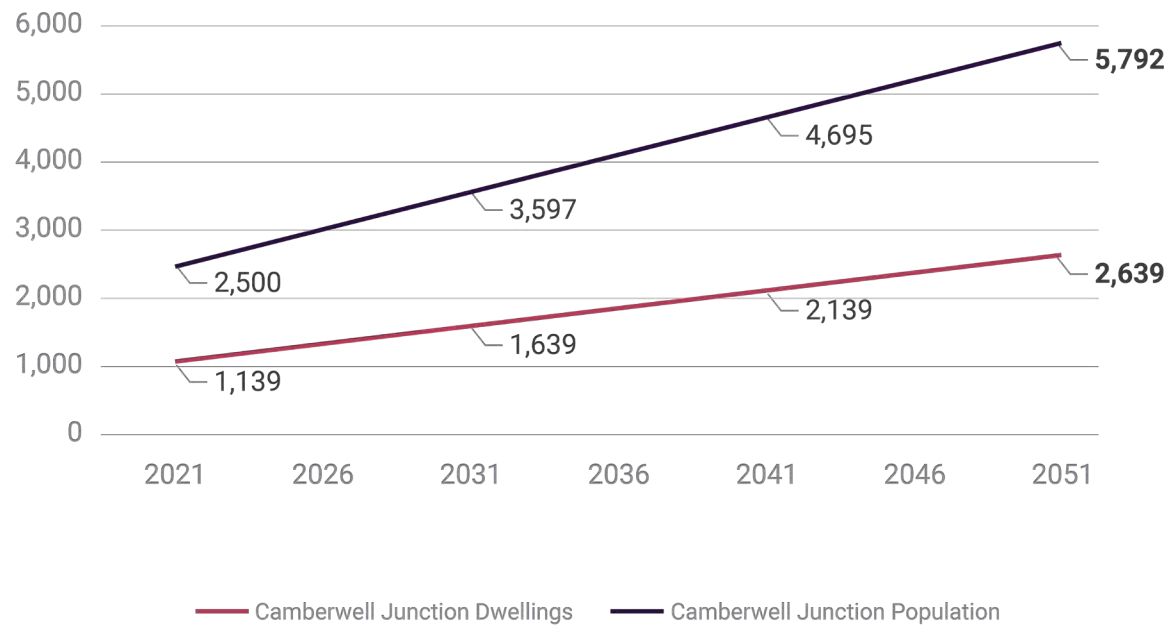


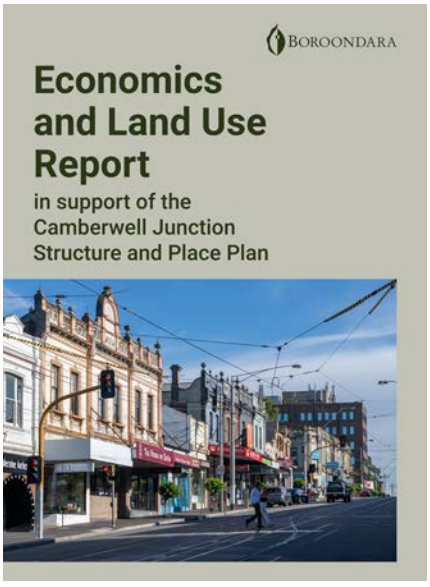
Figure 11: Population and dwelling projections (HillPDA, 2022)

Projected an additional
1,500
dwellings by 2051

Projected an additional
179,800
square metres by 2051

Further details

For further details and information on demographic breakdown, dwelling projections and future floorspace demand can be found the Economic and Land Use Report.



3.2 Economic growth and floorspace

In 2016, Camberwell Junction accommodated 10,200 jobs (ABS Census 2016). This number is projected to increase to approximately 11,600 jobs by 2041 and 12,600 jobs by 2051 (HillPDA, 2022).

Employment sectors projected to grow include professional, scientific and technical services, public administration, healthcare and social assistance and retail trade.

The growth potential for employment and residential floorspace is estimated as +48,000sqm to +57,000sqm from 2021 to 2031 and +159,600sqm to +180,100sqm from 2021 to 2051.

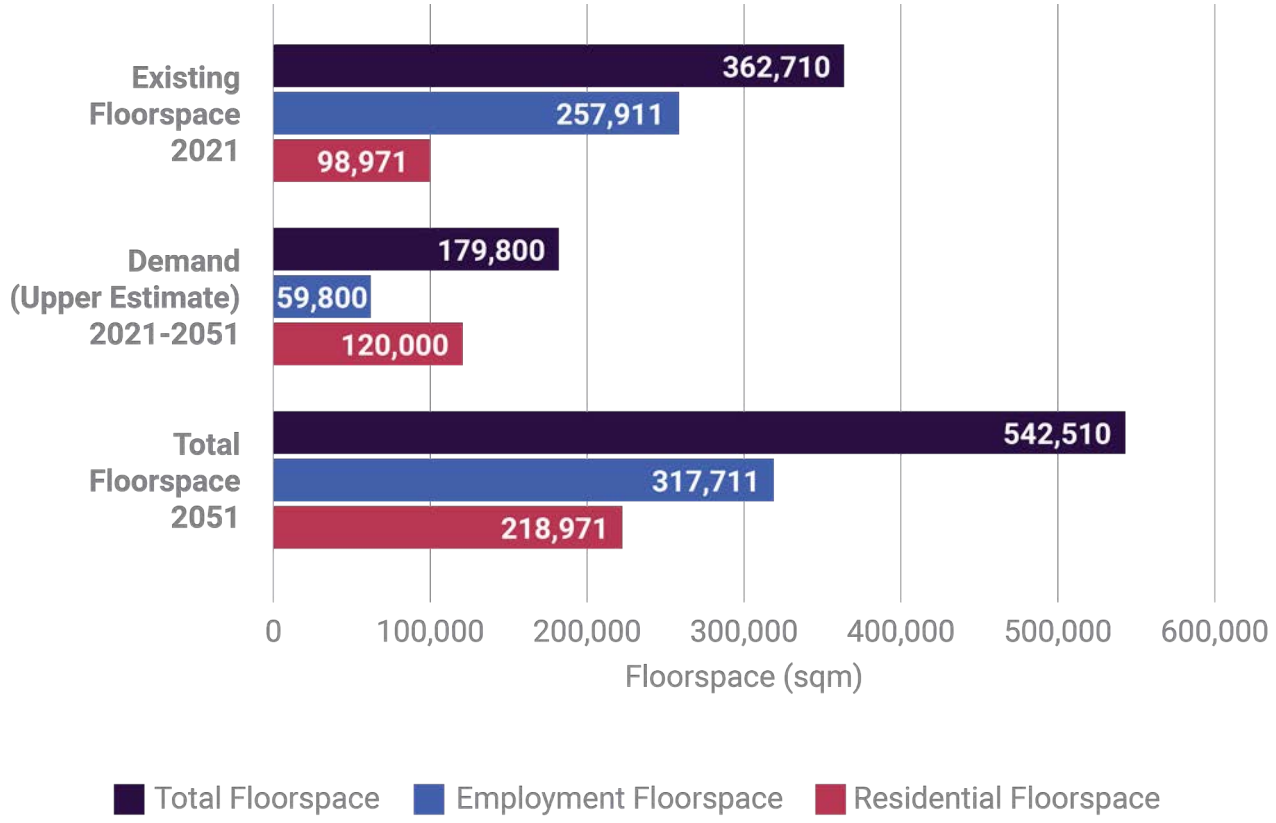


Figure 12: Floorspace projections (HillPDA, 2022)

Built form implications

To adequately manage built form outcomes and cater to increased demand, understanding dwelling and population projections and areas of forecast industry growth and floorspace requirements is needed. This can inform the types of buildings that may be required in Camberwell Junction.

4 Built form testing

4.1 Development potential

Understanding development potential is essential to conduct meaningful and accurate growth modelling. The following provides an analysis of all properties within the Junction, identifying sites with potential for future development.

1 Project area

To identify sites with future development potential all property parcels in the project area were studied.

2 Existing assets

Sites with limited development capacity were systematically excluded. Assets unlikely to be redeveloped e.g. parks, police stations, infrastructure were removed.

3 Narrow sites

Removed site too narrow to be feasibly developed.

4 Heritage

Removed properties within the Heritage Overlay.

5 Developed

Removed sites recently developed (up to 15 years) with 3+ storeys.

6 Amalgamation

Sites with potential for amalgamation into bigger, more feasible developments were re-included.

Growth opportunity sites

In summary, the sites shown below represent potential for future development. This is seen as an indication of likelihood only and does not preclude the development of excluded sites. Many development sites are clustered around the edges of the Junction, behind the office precinct on Burke Road south, as well as between Camberwell and Riversdale Roads. A variety of scales are represented across the selected sites, from 'superblocks' on Station and Rose Streets to smaller sites interspersed throughout the Junction.

Built form implications

Anticipating suitable sites for development enables potential planning controls to be proactively recommended to ensure appropriate provision of height and setback guidelines, green spaces, public realm improvements, pedestrian and cycling connections where necessary.

4 Built form testing

4.2 Built form modelling

This section outlines the methodology and findings to determine an indicative development yield for the centre for residential, retail and office uses.

From the outset of this project, Council had a strategic yield target to accommodate 1,500 dwellings within the centre as well as encouraging a mix of apartment style dwellings. Information sources that informed the scenario testing included planning policy, demographic profiling, dwelling and employment floorspace projections, the 2011 Camberwell Junction Structure Plan and apartment size and building composition assumptions based on recently approved developments.

Modelling methodology

A comprehensive 3D model of the study area was developed to test a range of development scenarios and understand how best to accommodate dwelling and floorspace projections. Primary assumptions made are outlined on page 28.

- **Development potential analysis:** identify sites with development potential and these will be the focus of floorspace projections. These sites were identified through the process outlined in chapter 4.1.
- **Scenario 1 - 2011 Structure Plan modelling**: floorspace calculations based on building heights proposed in the 2011 Structure Plan.
- **Scenario 2 - Maximum 8 storeys:** increase overall building height to 8 storeys on across the centre to test if projected demand will be met. Note: not all sites will reach this maximum, for example, Burke Road main street is limited to 6 storeys.
- **Scenario 3 - Increased heights with urban design:** in order to better meet floorspace demand, building heights are further increased on large sites such as 171-193 Camberwell Road (Dan Murphy's and Autobarn). Best practice urban design (including setbacks, building separation, site through links, contribution to public realm) is applied across the model and floorspace is recalculated. Upon review, additional height/floorspace may be required to account for floorspace loss due to urban design principles.
- **Scenario 4 - Large strategic sites included:** total floorspace and dwelling projections are calculated centre-wide. Projections from strategic site may be included in the final calculation. Note: Although 25 Station Street, Camberwell (Camberwell Central) is identified as a key strategic site due to its large footprint and current commercial tenancies, this site has been deemed unlikely to develop the near future. As a result, it has been decided any floorspace and dwelling calculations will not be included until the final scenario.

For further details on each scenario refer to pages 27-28.

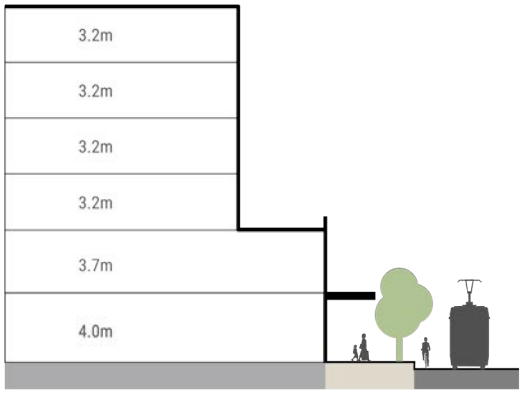
Assumptions

1. Floor to floor heights

Minimum ceiling heights measured from Finished Floor Level (FFL) to Finished Floor Level (FFL) are as follows:

- 4.0m for non-residential ground floor
- 3.7m for podium above ground floor
- 3.2m for residential above podium

Note: see 5.3 Street wall and setbacks for further details.



2. Building efficiency

Type of use	GBA to GFA	GFA to NSA
Residential	80%	80%
Retail	85%	85%
Office	85%	85%

Gross Building Area (GBA): the total area measured between the normal outside face of any enclosing walls, balustrades and supports. GBA measurement also includes external verandahs, balconies, porches and structural columns. Balconies are included in GBA measurement.

Gross Floor Area (GFA): the total floor area of a building, measured from the outside of external walls or the centre of party walls, and includes all roofed areas.

Net Saleable Area (NSA): the GFA minus circulation (stairs, corridors and lifts) and services areas.

All areas are measured in square metres.

3. Residential dwelling assumptions

Apartment mix	Mix (%)	Size (sqm NSA)
1 bedroom	35%	80
2 bedroom	55%	90
3 bedroom	10%	125
Average apartment		90

Apartment size and building composition assumptions based on recently approved developments - general apartments sizes are above average when compared to elsewhere in Melbourne.

4. Redevelopment likelihood (uptake)

Given the predictive nature of a yield study for an entire Activity Centre, comprising many properties (of diverse attributes) and multiple landowners it is impossible to accurately anticipate future land speculation and development activity.

Therefore, our yield calculation comprises 4 scenarios based on 'uptake' of sites and development. The calculations consider that **an uptake of 60%** best reflects the level of change and development within Camberwell Junction based on research conducted including history and economic trends.

Based on this uptake rate, it's shown that the centre can accommodate forecast dwellings.

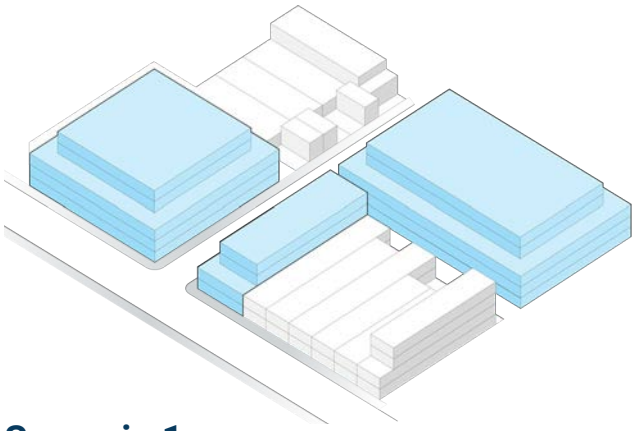
4 Built form testing

4.2 Built form modelling

Scenario concept testing

Based on the assumptions and modelling methodology set out on the previous pages, four built form scenarios were developed to test the capacity of the centre to meet projected floor space demand. The diagrams below are indicative-only and have been developed to illustrate each scenario.

All scenarios consider an uptake of 60% as the most appropriate likelihood of redevelopment given the centre's capacity, history, location and analysis.



Scenario 1

Structure Plan 2011

Development scenario based on the maximum building heights set out in the Camberwell Junction Structure Plan 2011.

Projected floorspace

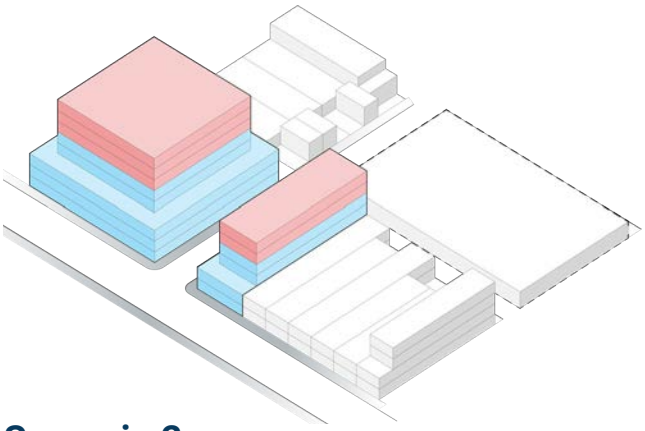
Total:	244,559 sqm
Uptake:	146,736 sqm

Demand not met

Projected dwellings

Total:	590
Uptake:	354

Demand not met



Scenario 2

Maximum 8 storeys

Overall building heights are increased (to a maximum of 8 storeys across the centre - not all sites will reach this maximum)

Projected floorspace

Total:	442,002 sqm
Uptake:	265,201 sqm

Demand met

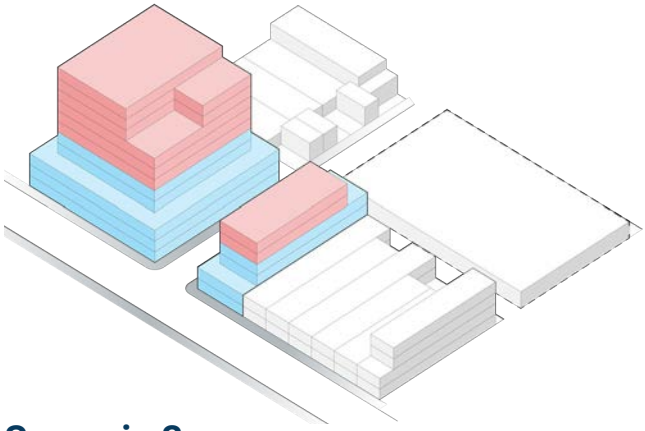
Projected dwellings

Total:	2,171
Uptake:	1,303

Demand not met

Built form implications

It is noted that HillPDA's demand projections are not met under with Structure Plan 2011 scenario. This implies that greater capacity must be found in Camberwell Junction through a combination of increased building heights and additional sites realised for redevelopment.



Scenario 3

Increased heights with urban design

Building heights are further increased with urban design principles are applied centre-wide. Upon review, added heights to account for floorspace to comply with the urban design principles.

Projected floorspace

Total: 476,405 sqm

Uptake: 285,843 sqm

Demand met

Projected dwellings

Total: 2,615

Uptake: 1,569

Demand met

Scenario 4

Large strategic sites included

Based on scenario 3, with projections from strategic site included in overall calculations.

Projected floorspace

Total: 339,683 sqm

Demand met

Projected dwellings

Total: 1,758

Demand met

Built form implications

It was found that the projected demand of 1,500 apartments and upper demand of 179,800 sqm of additional floorspace as forecast by HillPDA, can be realised through scenarios 3 and 4.

4 Built form testing

4.3 Street level testing

Following the floorspace capacity modelling, urban design analysis provided the final layer in determining appropriate built form outcomes. This final step in the analysis utilising quantitative and qualitative criteria to satisfy the overarching urban design principles set out in Chapter 1.

This analysis allowed further testing of the capacity model and to better identify its potential impact on the public realm. This step allowed further refinement of built form parameters (such as upper storey setbacks, building separation) to ensure high quality urban design outcomes.

Streetscape ratio

The pedestrian experience and character of an area is influenced by the sense of enclosure or openness of a street. A main street feels very different from a local street. This is partly attributed to the width of the road reserve compared to the height of the surrounding buildings - the taller the height of buildings compared to the width of the street the sense of enclosure will increase. Higher buildings will result in less light penetration into the public realm and can be perceived as overbearing. Areas that are expected to facilitate higher density developments and diverse land uses can provide ample opportunities for public surveillance and proximity to activities. This occurs while still retaining views up to the sky and good levels of daylight when the building heights are at least the same dimension as the street's width (a 1:1 ratio). This means that if the road and footpath were 25m wide, the buildings would be 25 metres high, or around 6-7 storeys. This ratio can increase, for example to 1:1.5 and above, creating a more 'urban' character without adversely impacting on the feel of the street if elements such as upper-level setbacks, building separation and quality design details are also introduced.

Built form implications

Where streets have clear and distinct heritage and character that is to be protected (e.g. Heritage Overlays) the streetscape ratio, defined by the street wall and upper level setbacks is crucial in measuring the impact of new development on this character. In other areas, a street wall closer to 1:1.5 is preferred to accommodate higher densities and increase pedestrian amenity through a feeling of enclosure and increased passive surveillance.

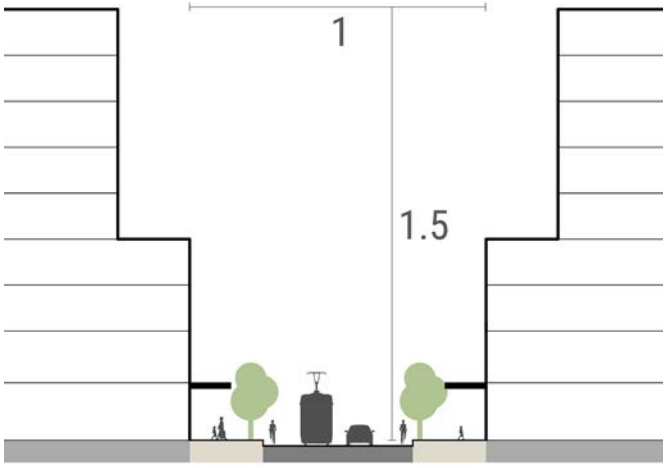


Figure 13: Street to wall ratio 1:1.5

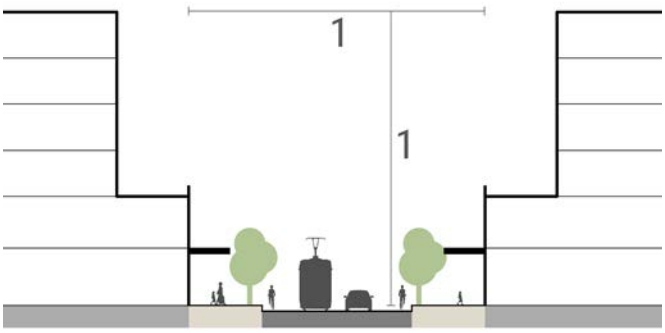


Figure 14: Street to wall ratio 1:1

Visual bulk and setback testing

Studies of building envelopes and sections have been undertaken to assess whether the proposed built form is appropriate to the place. This work has focused on the street wall and visual recessiveness of upper level development. Where opportunities for taller development exist, appropriate building separation is essential.. This will ensure that the amenity of existing and new dwellings is protected. Diagrams setting out minimum building separation relative to building height and outlook are provided later in this report.

The overall heights of buildings must also be carefully considered to ensure that the scale of buildings is complementary to the urban structure of Camberwell Junction. Streets that are wider can typically accommodate taller buildings without compromising the experience at street level. Building heights that are complementary to urban structure reduce visual bulk at the street level, maintain access to sunlight at the street level and are responsive to site size.

Built form implications

Setting back the upper levels of buildings above the street wall enables the benefits of the preferred street wall height to be realised.

On non-heritage sites, upper level setbacks of 3m and 5m are generally proposed while on heritage properties a 8-12m setback above the street wall is more appropriate.

The upper level setback requirements increases as buildings get taller. This allows for a clear delineation between the street wall and the upper levels and reduce the visual impact at street level. Additional upper level setbacks will be required in specific locations in order to meet the solar access requirements.

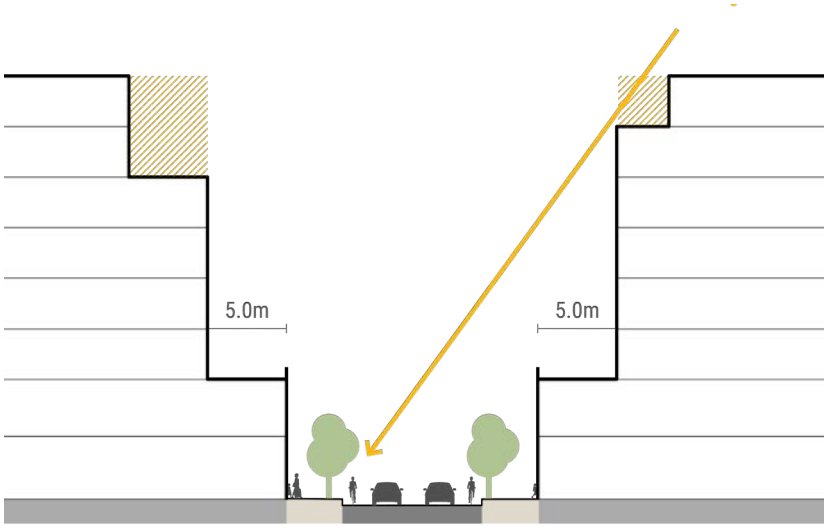


Figure 15: Built form with solar impact and urban design

4 Built form testing

4.3 Street level testing

Camberwell Junction contains a network of existing and future public realm and public open spaces. Key spaces have been identified for street level testing.

Modelling was undertaken to understand how potential building heights, bulk and various setbacks above the street wall may impact solar access to main streets and potential future open spaces.

Visual bulk and solar impact testing is preceded by the assessment of sites with development potential. Street views and shadow diagrams therefore consider development scenarios outlined on page 27 of this document.

Testing of solar access was carried out for times between 10am to 2pm at the September equinox and assumed a 2 storey street wall height, while trialling various upper floor setbacks.

The following pages shows the visual bulk testing and the highest potential overshadowing impact based on the recommended street wall setbacks on:

- Main roads (red boxes): Burke, Riversdale and Camberwell Roads
- Secondary streets and future open spaces: Railway Parade, Market Plaza and Green Plaza.

Built form implications

With careful design, sufficient solar access can be provided and visual bulk impacts minimised. Balance needs to be struck between new development and the constraints imposed by local setting.

Figure 16: Street level testing locations

4 Built form testing

4.3 Street level testing

Burke Road

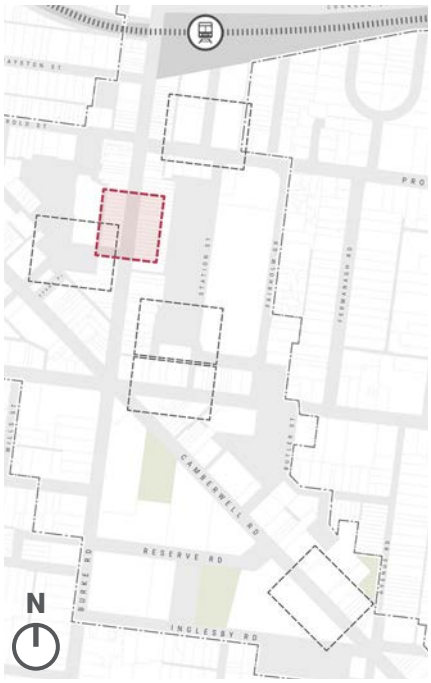
The Victorian-era shops and buildings along Burke Road provide a strong sense of character highly valued by the community with a need to be sensitively integrated in any redevelopment.

Analysis has been conducted in a central area of the Burke Junction Precinct (see plan below).

Heritage commercial/retail shop fronts and street wall heights should be retained.

A 3m setback was deemed inappropriate as it doesn't provide sufficient separation between the street wall and upper storeys. A 5m upper floor setback is preferred as it will deliver an appropriate balance between development capacity and streetscape ratio.

Study area



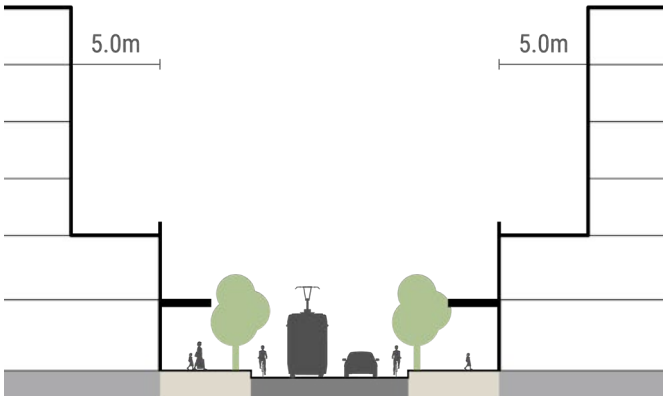
Visual bulk testing

3 metre upper level setback above the street wall

5 metre upper level setback above the street wall

10 metre upper level setback above the street wall

Solar impact analysis - September equinox



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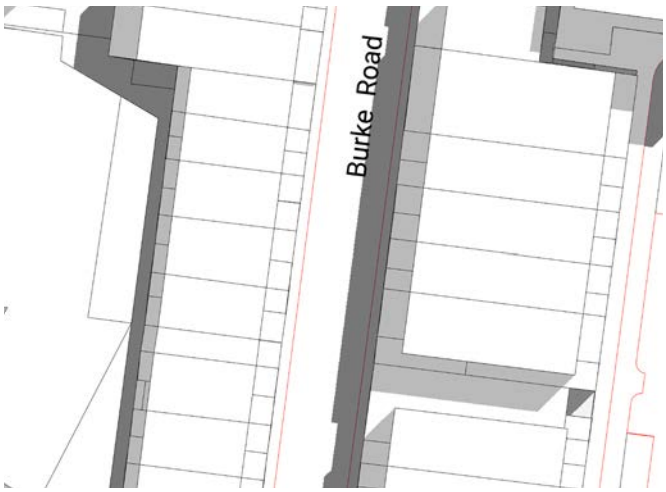
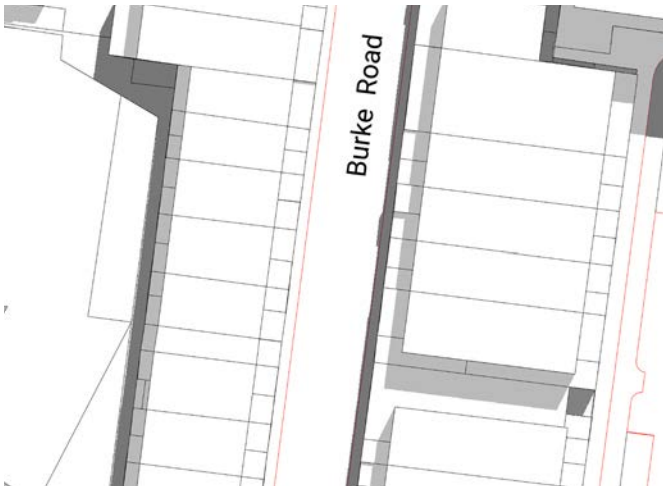
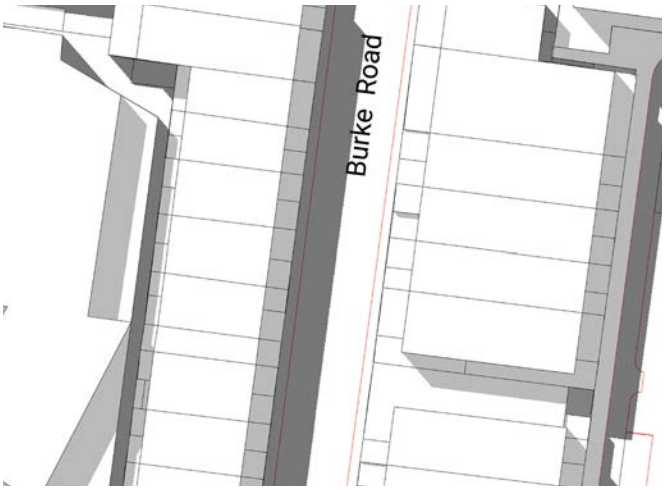


10am

1pm



11am



2pm

4 Built form testing

4.3 Street level testing

Riversdale Road

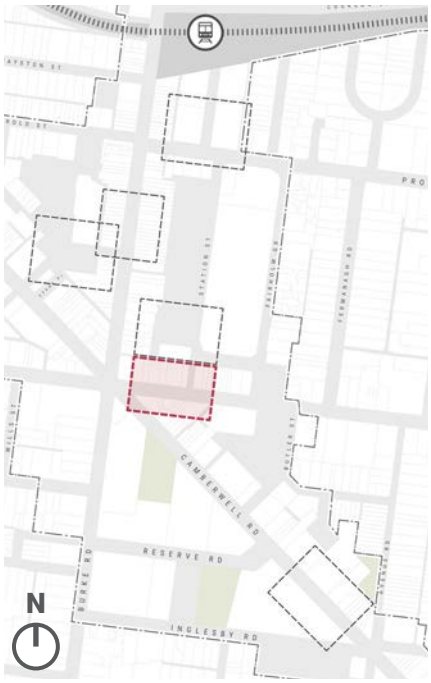
Riversdale Road runs east-west connecting Camberwell directly with the city by tram and car. It has a mixed character and contains several medium-sized lots with capacity for redevelopment

Analysis was conducted in the section of the street located directly to the east of the junction (see plan below).

Providing separation between a low-scale podium and upper level tower assists in grounding taller elements of buildings and integrating them within traditional low-scale streetscapes.

A 3m setback was deemed inappropriate as it doesn't provide sufficient separation between the street wall and upper storeys. A 5m upper floor setback is preferred as it will deliver an appropriate balance between development capacity and streetscape ratio.

Study area



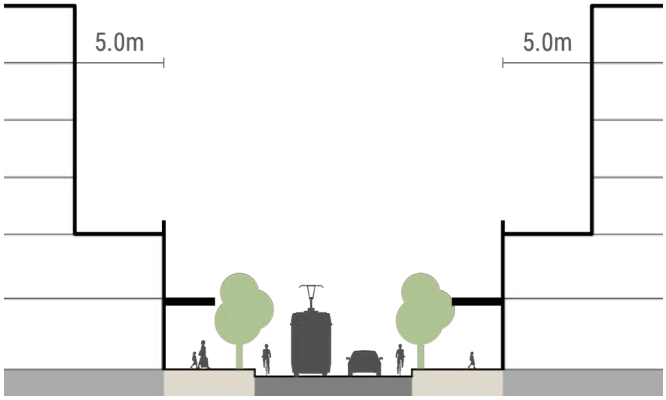
Visual bulk testing

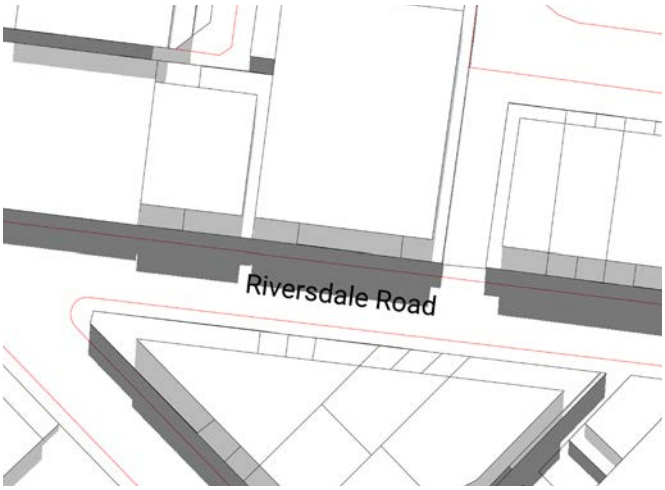
3 metre upper level setback above the street wall

5 metre upper level setback above the street wall

10 metre upper level setback above the street wall

Solar impact analysis - September equinox





12pm

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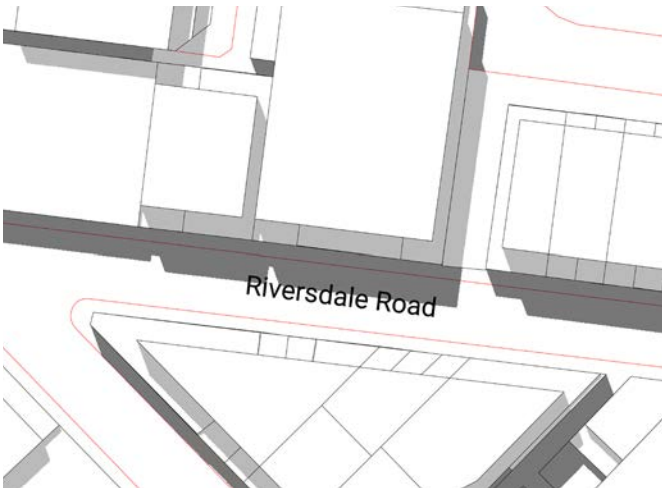

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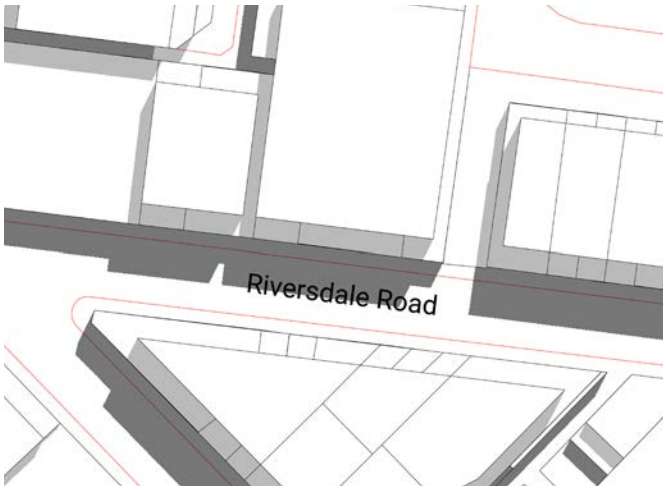

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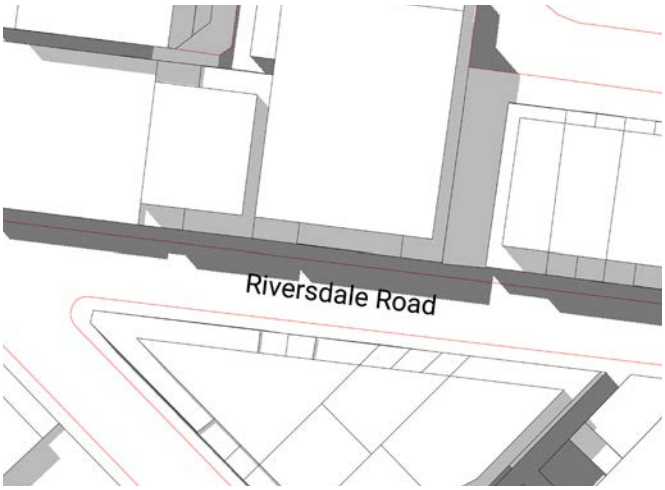


2pm

4 Built form testing

4.3 Street level testing

Camberwell Road

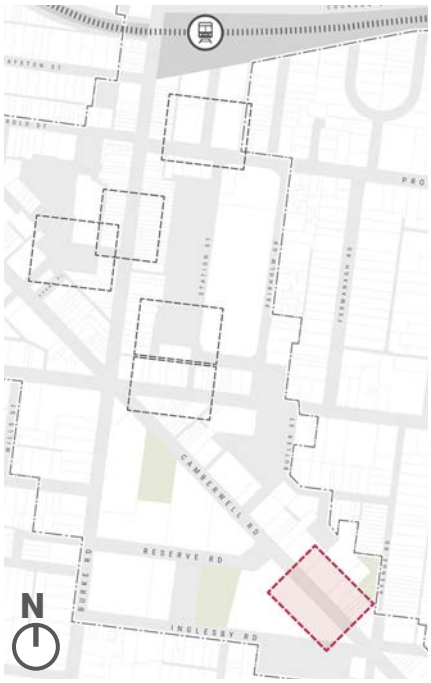
Camberwell Road is an important road that connects the junction with the Civic precinct in the south-east, and with Burwood Road in the north-west. It is used heavily by vehicles and trams.

Analysis has been conducted in an area of the Civic Precinct located in the south east corner of the centre (see plan below).

Built form is currently a mix of low scale shops and taller new mixed used development, all balanced with the heritage Civic buildings on the southern side of Camberwell Road.

A 5m upper floor setback is preferred as it will deliver an appropriate balance between development capacity and streetscape ratio.

Study area



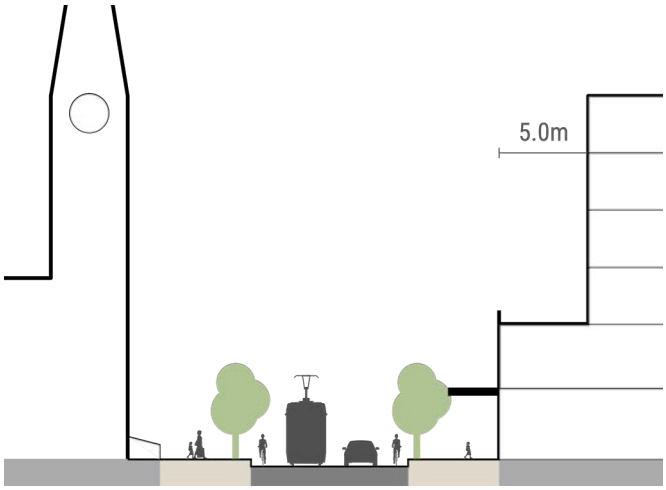
Visual bulk testing

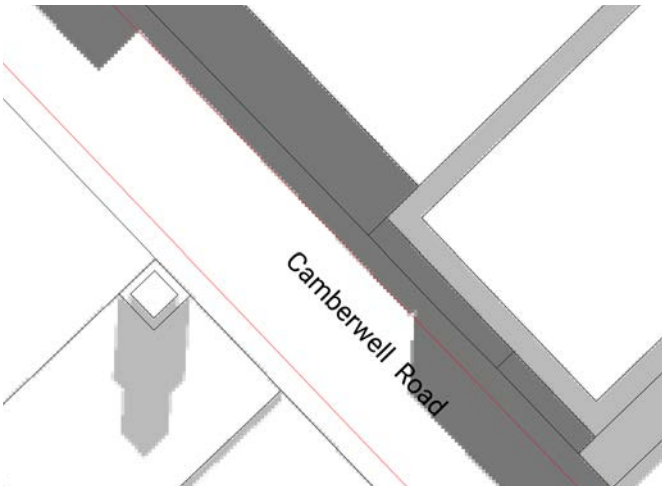
3 metre upper level setback above the street wall

5 metre upper level setback above the street wall

10 metre upper level setback above the street wall

Solar impact analysis - September equinox





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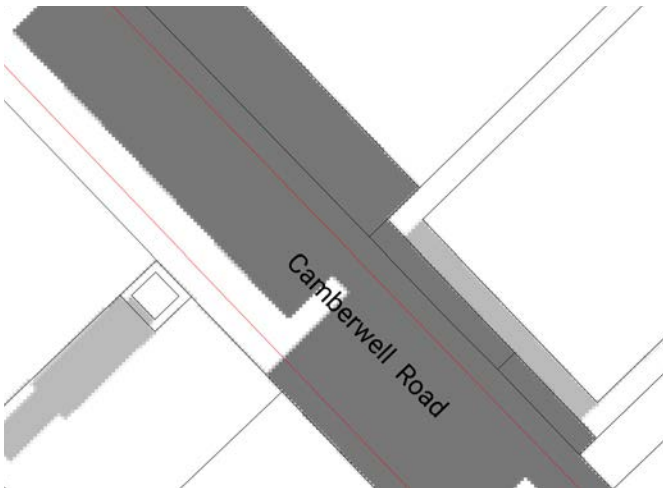

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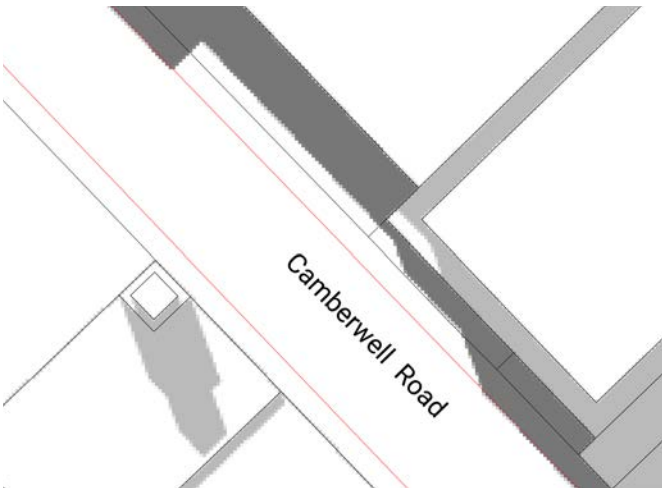

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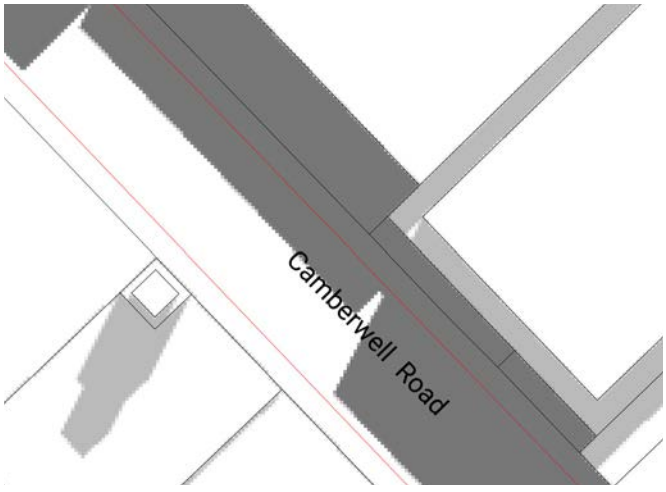

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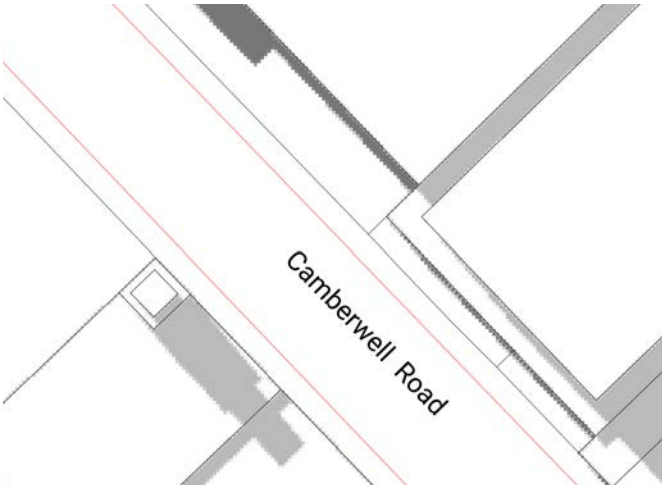


2pm

4 Built form testing

4.3 Street level testing

Railway Parade

Railway Parade is a north-south commercial street directly to the south of the train station.

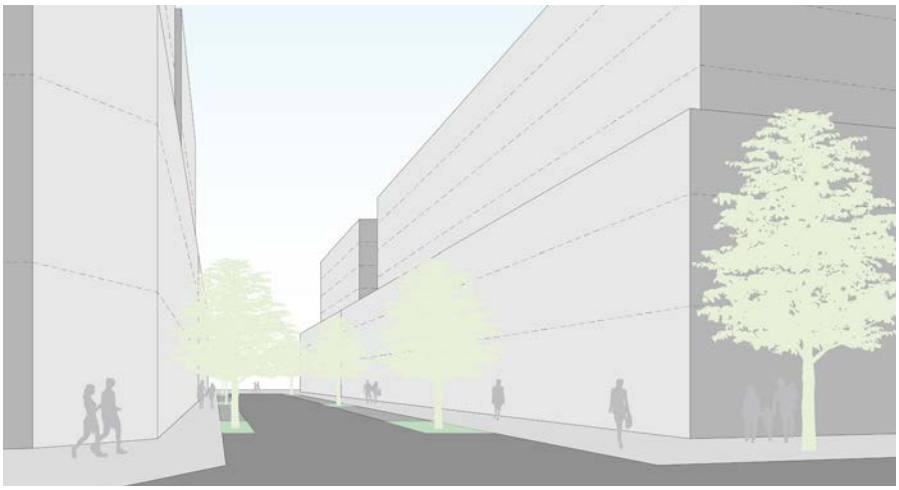
It features and existing pedestrian zone adjacent to the station, with cafe tenancies along the western edge and several office buildings on both sides.

Analysis has been conducted in the south end of the street, where it meets Prospect Hill Road (see plan below).

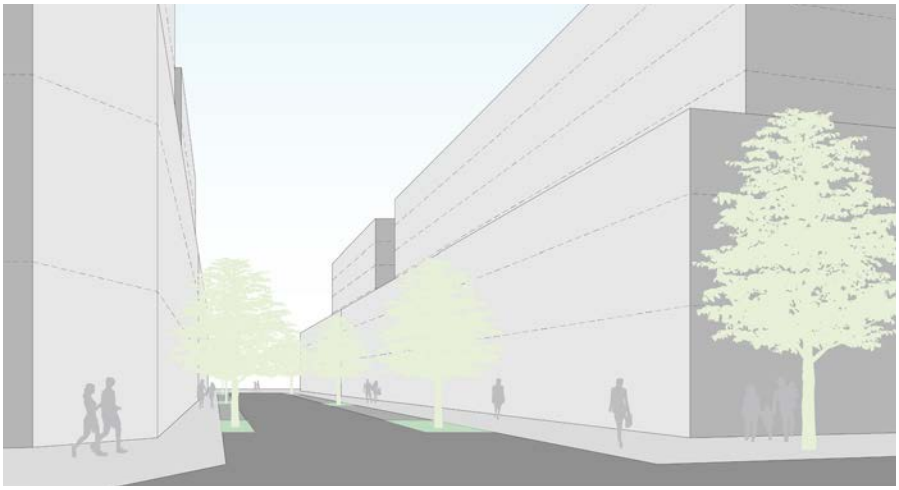
A distinct separation between a podium and upper level tower assists in grounding taller elements of buildings and integrating them within the streetscape. Additional top stories setbacks might be required to ensure sufficient solar reach to footpaths.

Study area

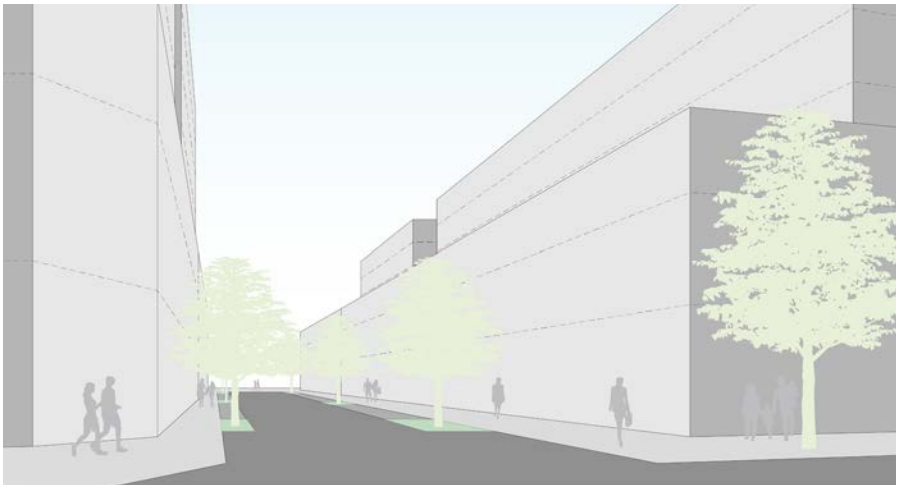
Visual bulk testing



3 metre upper level setback above the street wall

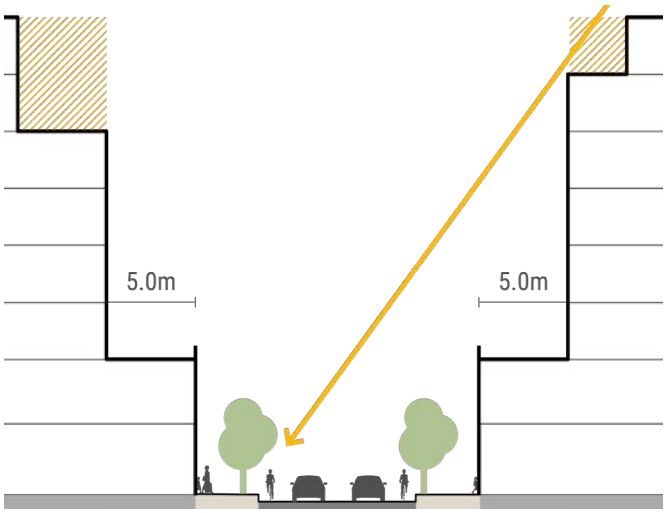


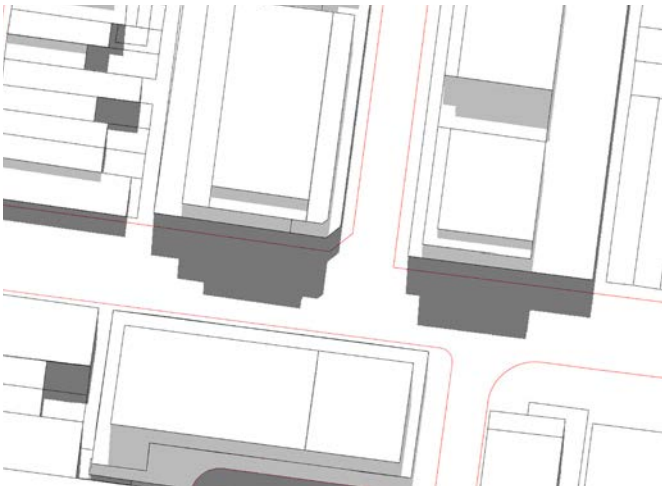
5 metre upper level setback above the street wall



10 metre upper level setback above the street wall

Solar impact analysis - September equinox





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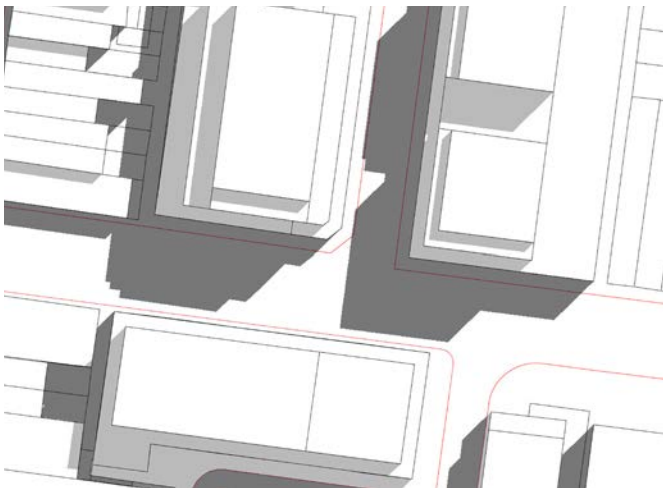

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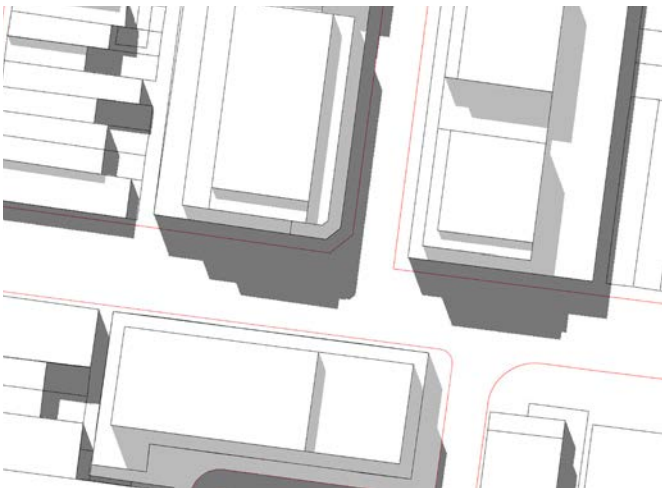

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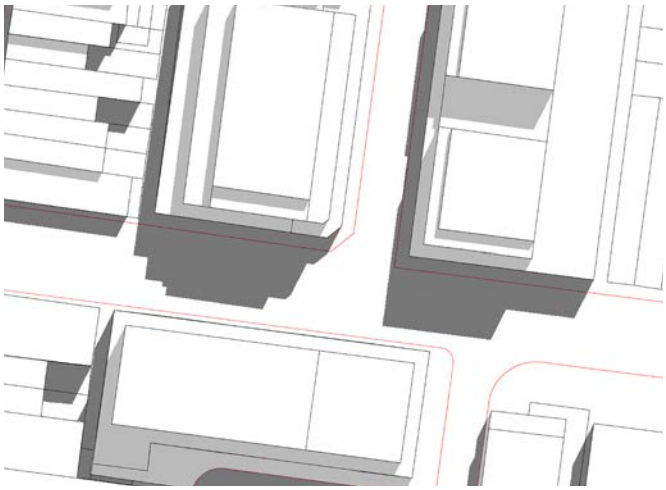

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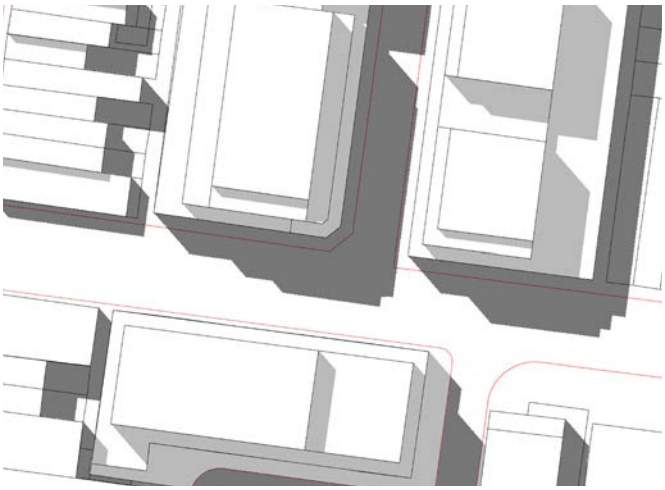


2pm

4 Built form testing

4.3 Street level testing

Burke Avenue parking

An important commercial destination, this area is currently dominated by at-grade parking.

Connectivity and public realm has the potential to be greatly improved.

The study area (see plan below) features larger retail, significant recent mixed use multi-residential developments, and some large undeveloped sites.

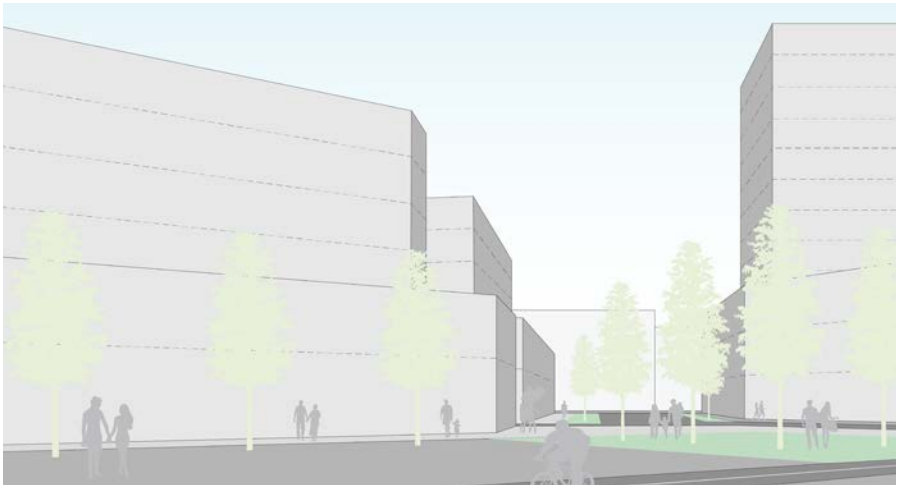
Visual bulk analysis focuses on the properties with development potential, currently located south and west of the public car park.

There is a great opportunity to work with developers to articulate a well-connected, high-quality network of streets and public places.

Study area

Visual bulk testing

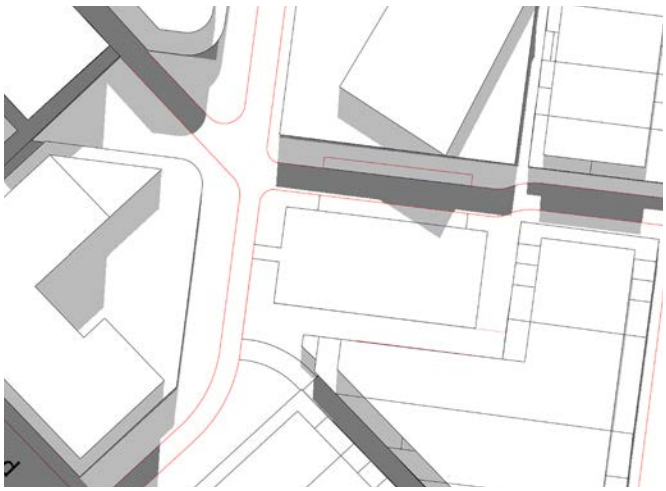
3 metre upper level setback above the street wall



5 metre upper level setback above the street wall

10 metre upper level setback above the street wall

Solar impact analysis - September equinox



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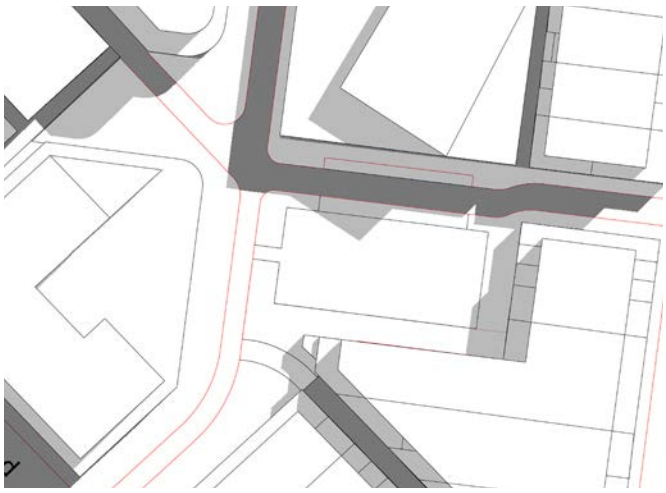

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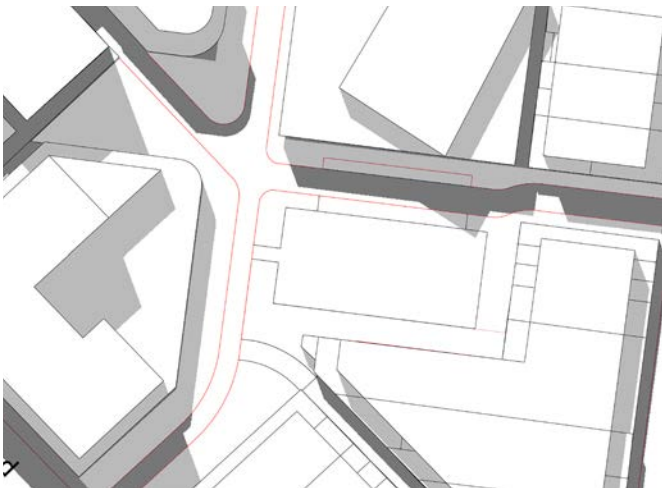

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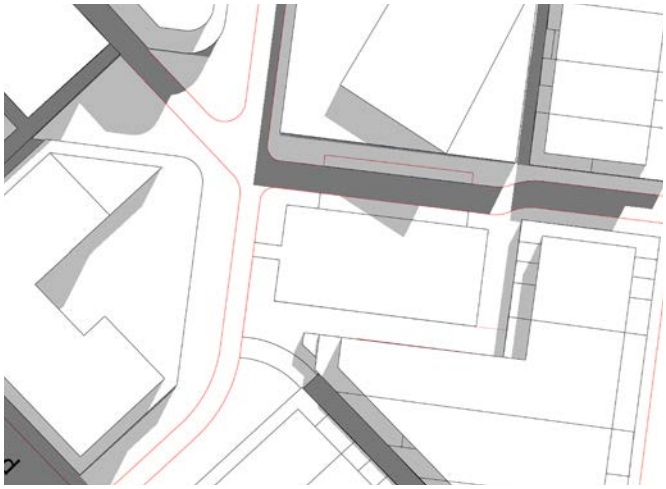

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4 Built form testing

4.3 Street level testing

Market Plaza

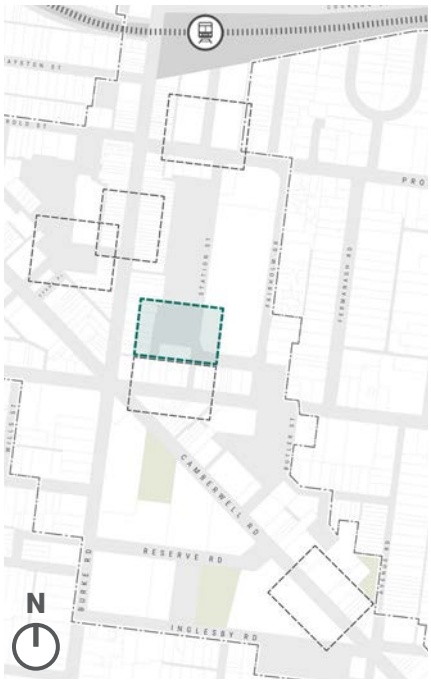
Camberwell Fresh Food Market opens onto a walkway along the edge of the Station Street car park.

This is a much-used space with scope to be significantly expanded to create a high-quality public space with a strong relationship to the market and shops along the Market Place edge.

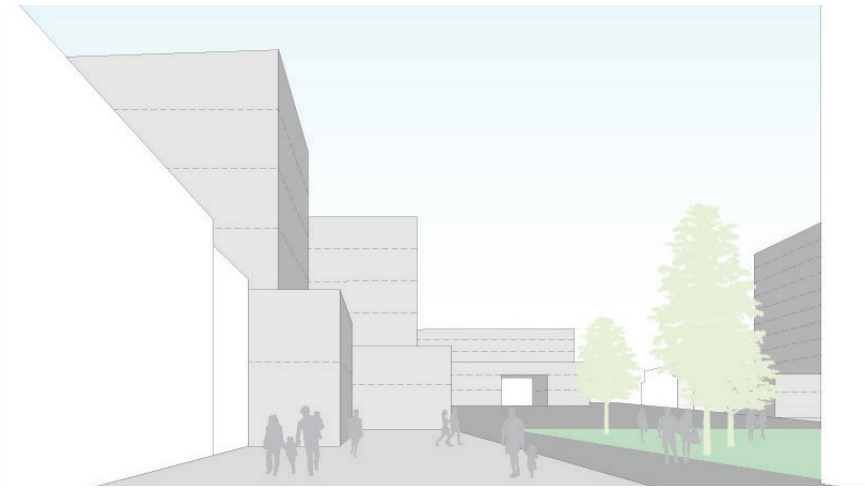
Solar impact analysis focuses on the proposed new public space to ensure sufficient solar access is retained in future.

Development capacity is mostly concentrated to the south and west of the study area (see plan below).

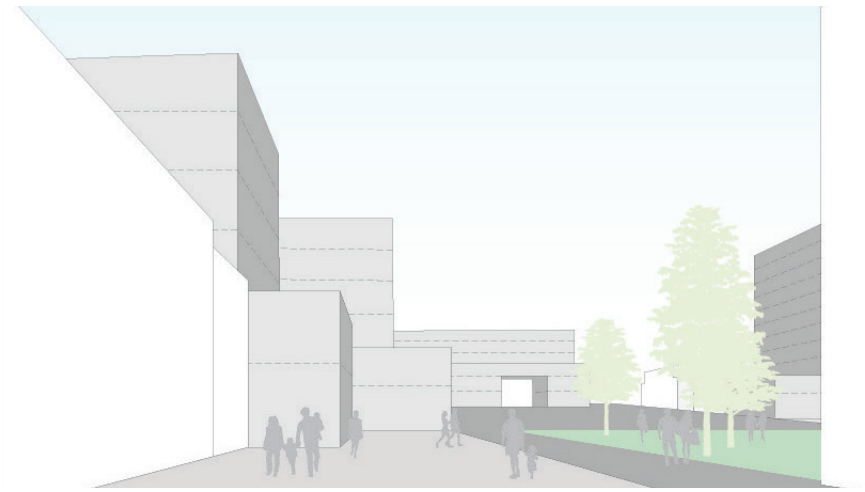
Study area



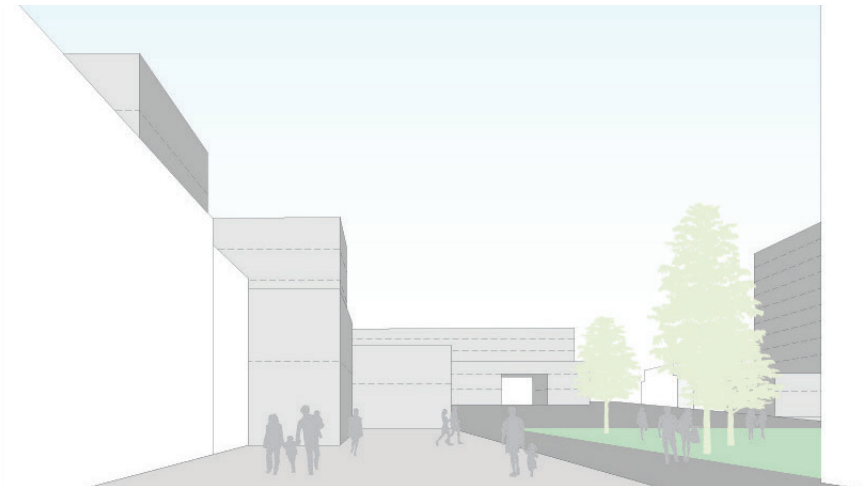
Visual bulk testing



3 metre upper level setback above the street wall

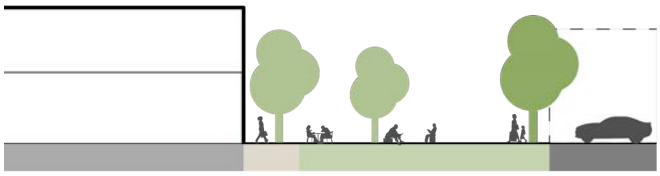


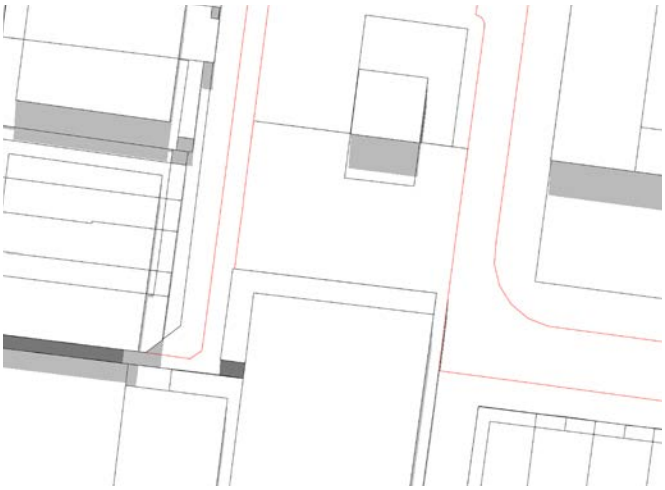
5 metre upper level setback above the street wall



10 metre upper level setback above the street wall

Solar impact analysis - September equinox





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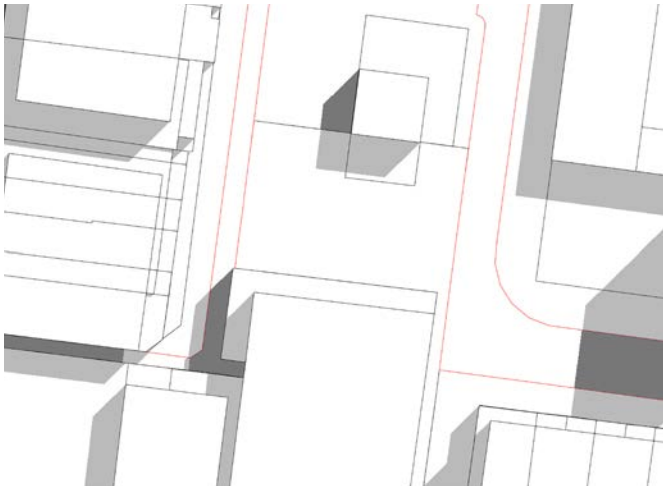

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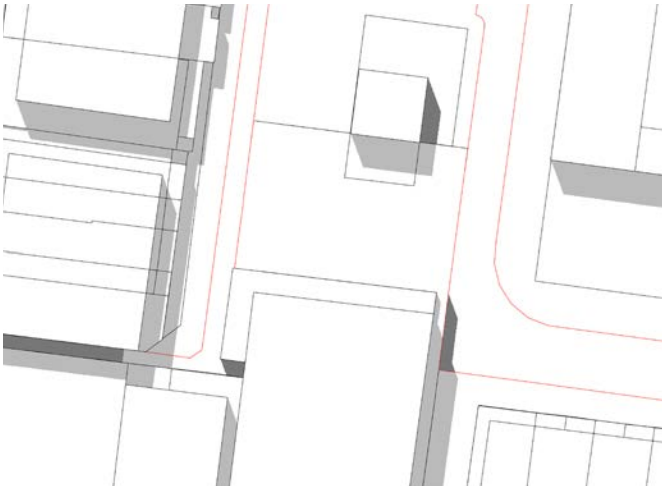

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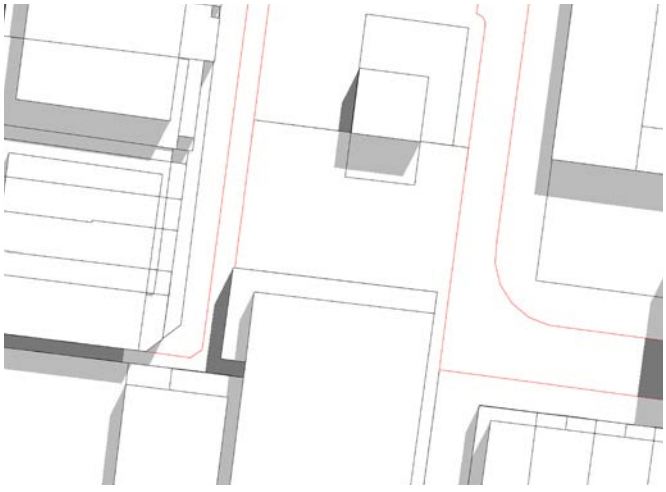

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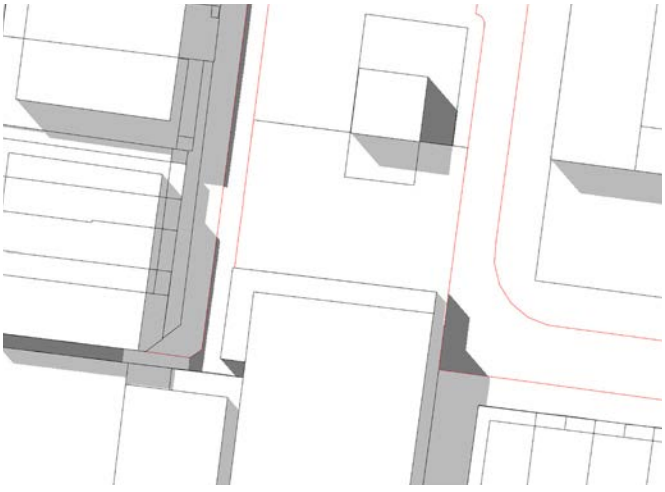


2pm

5 Recommended outcomes

5.1 Built form outcomes

The following built form recommendations for Camberwell Junction have been developed using a sound methodology that combines floor space capacity modelling with strong urban design principles. Recommended outcomes have been integrated into the Camberwell Junction Structure and Place Plan where appropriate.

This comprehensive approach was focussed on delivering built form outcomes that balance the need to accommodate required floorspace while also trying to protect and maintain the character of the centre. The analysis has identified areas that are capable of absorbing greater degree of change compared to others in a site and context specific way. This is achieved in part by directing higher built form to areas that will have less impact on character and avoids a homogeneous application of building heights.

Building height, form and siting

- Vary the heights of new buildings across the Junction so that a lower scale of development is maintained along the Burke Road retail strip and higher scale development is clustered along Camberwell Road, Riversdale Road and Burke Road (as shown in Figure 15 - Recommended building heights).
- Heights and/or setbacks of new buildings protect significant view lines.
- Encourage additional levels on sites, particularly those containing single storey buildings, to allow for additional floorspace in the Junction where possible.
- Ensure new development addresses each frontage. Consider the form of new taller buildings to be viewed from all angles i.e. make a positive visual contribution to the Junction.
- Maximise the potential of key redevelopment sites within the Junction and ensure a high standard of architectural design, especially when located on prominent corners or are highly visible.
- Ensure new buildings do not create a sense of visual bulk or impact on amenity such as overshadowing, especially on public open spaces and footpaths.
- Enhance the visual interest of street façades, as well as side or rear elevations of taller buildings that may be visible, through the use of colours and materials, composition of openings and setbacks and/or variations in wall surfaces and textures.
- Buildings should be designed utilising environmentally sustainable design principles.
- Provide frontage setbacks in alignment with the existing pattern of setbacks within the street. Retail buildings should be set up to the street edge, while residential buildings or larger scale offices should have landscaped setbacks that contribute to the public realm.
- Transition building height of new development to residential properties outside the Activity Centre to minimise overshadowing and overlooking and reduce the visibility of upper levels. Buildings should be set back from the adjoining residential boundary in accordance with ResCode provisions (Clauses 54 and 55 of the Boroondara Planning Scheme).

Heritage

- Encourage appropriate development that respects places with identified heritage values.
- Protect the integrity of historical streetscapes and clusters of heritage buildings of a similar scale and materiality.
- Ensure development respects the architectural form and qualities of heritage buildings and streetscapes and maintains the visual prominence of key individual places including the Rivoli Theatre, Former ES&A Bank, Camberwell Court House and Police Station, Camberwell Tram Substation and Dillon's Building and key precincts including Burke Road North Commercial and Transport Precinct and Camberwell Civic and Community Precinct.
- Promote design excellence that ensures new development respects the unique heritage character of Burke Road, Camberwell Road and Riversdale Road in particular.
- Ensure new development responds to sensitive interfaces by ensuring the overall scale and form of new buildings provides a suitable transition to lower scale residential areas, particularly within the Heritage Overlay.
- Support the conservation, enhancement, and reinstatement of elements of heritage and streetscape significance such as post supported verandahs, façade signs, and colour schemes.
- Facilitate sympathetic additions and alterations to significant and contributory heritage places which are massed, detailed, finished, and located to preserve the presentation of the place from the public realm.
- Ensure new buildings and works to 'non-contributory' properties are sympathetic to the heritage values of the precinct and complement significant and contributory built fabric by being respectful of the scale, massing, rhythm, and detailing.
- Ensure new development does not obstruct important views to and from HO places and precincts included within Camberwell Junction.
- Support sympathetic refurbishment of existing heritage buildings that are subject to redevelopment.
- The street wall height of infill development abutting a significant or contributory Heritage Overlay building or infill development on a non-contributory site located within a Heritage Overlay, should be no higher than the parapet height of an abutting significant or contributory Heritage Overlay building.

5 Recommended outcomes

5.2 Building heights

The maximum building heights have been calculated to:

- Preserve the low-scale traditional character of the Burke Road retail strip (while allowing some appropriate development opportunities).
- Increase building heights in peripheral commercial areas surrounding the retail core that complement but do not negatively impact the low-scale character of Burke Road and surrounding residential areas.
- Avoid detrimental impacts on the amenity of the public realm (including footpaths and public open spaces) and surrounding residential properties from overshadowing.
- Encourage heights that will support future population and employment floorspace demand.
- Have higher floor to floor heights in order to provide flexibility for future uses and allow for design elements such as parapets to be accommodated appropriately.

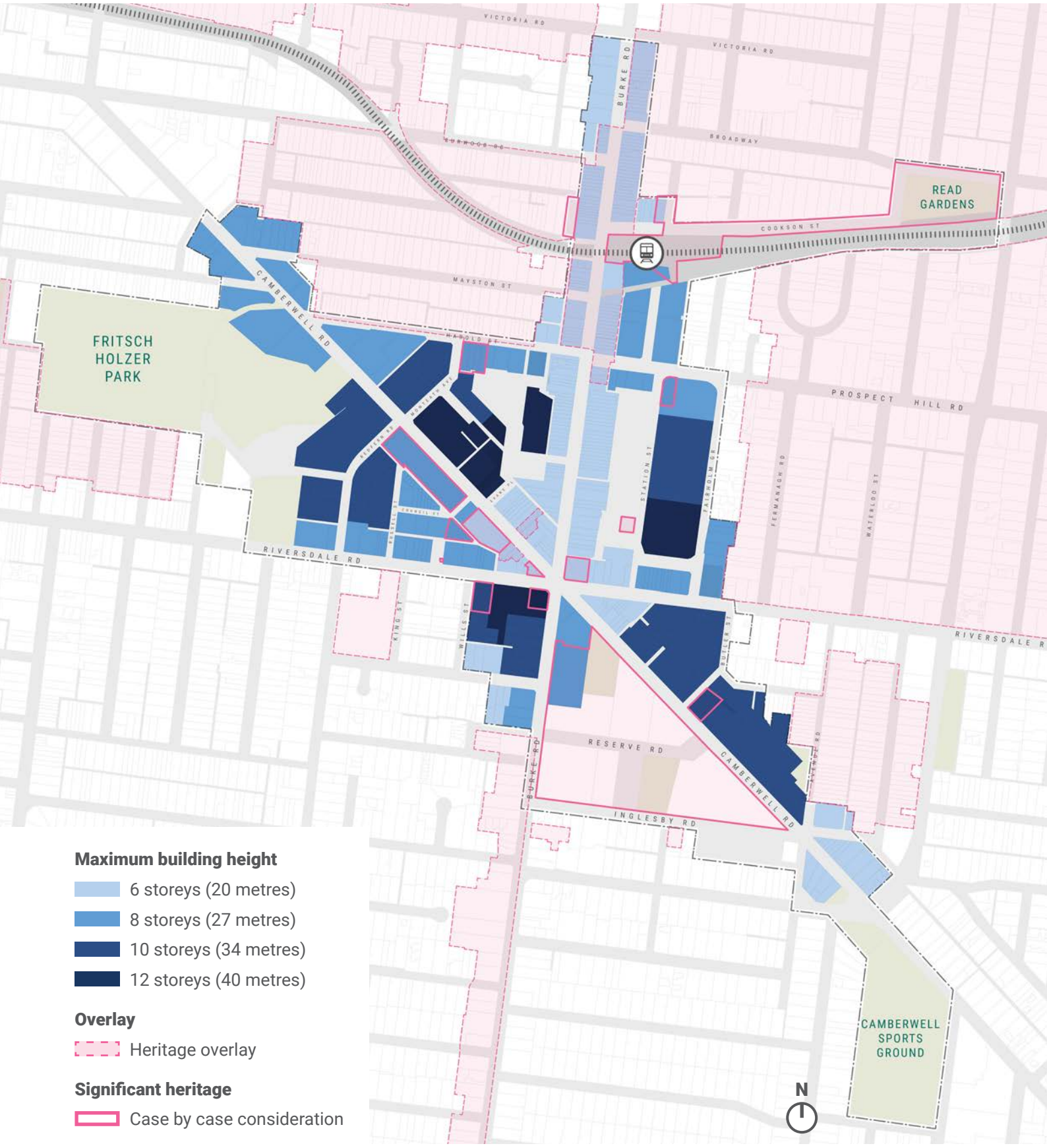


Figure 17 - Recommended building heights

5 Recommended outcomes

5.3 Street walls and setbacks

Street wall heights

The ‘street wall’ is the front façade of a building, generally built on the boundary or in close proximity. The street wall is important as it defines the public realm and reinforces the character of the street as experienced from pedestrian level.

New development should be in the form of built-to-boundary street walls/podiums with recessed upper floors (‘towers’ - noting the appearance of building will not always be tower form).

Providing separation between a low-scale podium and upper level ‘tower’ assists in grounding taller elements of buildings and integrating them within traditional low-scale streetscapes.

Street wall height and design should establish a human-scale, fine grain street proportion with active frontages and weather protection.

Street wall heights of 2 storeys will be supported on the main street of Burke Road, a continuation of the existing fine-grain, low-scale historic built form character that will be preserved along the main street.

Street wall heights of 3 storeys will be supported in strategic and renewal sites that currently have inconsistent streetscape character. This height will reinforce a contemporary urban character while continuing to deliver a sense of openness in the surrounds.

Setbacks above the street wall

Providing separation between a low-scale podium and upper level tower assists in grounding taller elements of buildings and integrating them within traditional low-scale streetscapes.

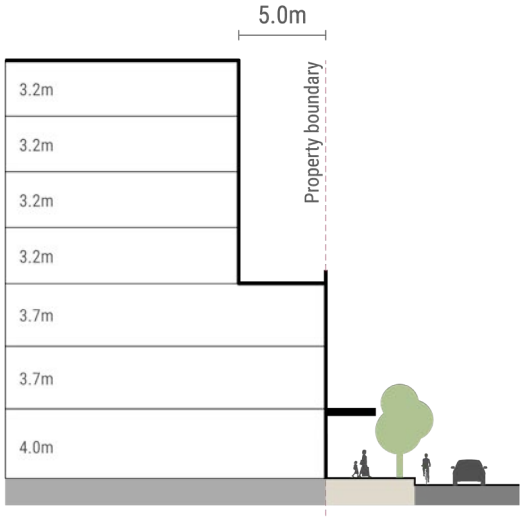
The plan generally nominates an upper floor setback of 5 metres setback on primary streets and 3 metres on secondary streets and laneways. For development with heritage sensitivities there is a setback above the street wall between 8-12m to allow for retention of the primary heritage building volume and additional storeys above the setback need to be visually recessive.

Laneways

The Structure and Place Plan identifies a coordinated network of shared, pedestrian only, and service laneways. The plan seeks to facilitate 6 metre wide laneways to accommodate intensified use of these areas. Realisation of the new network requires new connections and existing laneways be extended as part of future development (most historic laneways are 3 metres wide which will not accommodate intensification appropriately).

The identification process considered which part of each street block is best placed to deliver the laneway extension, generally prioritising larger sites. Refer to the Camberwell Junction Traffic and Parking report for more detail.

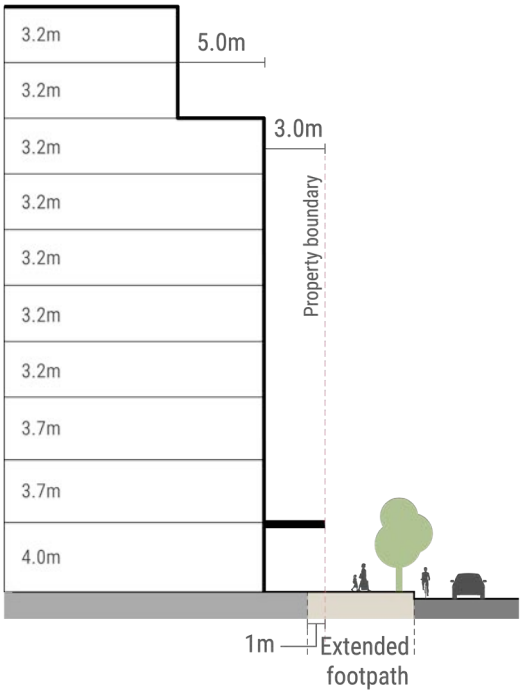
3 storey street wall



Street interface:

- 3 storey street wall (8 metres) including parapet design.
- Setback above street wall - 5 metres.
- Where 3 metre front landscape setback is required, setback above podium - 5 metres.

Commercial street wall

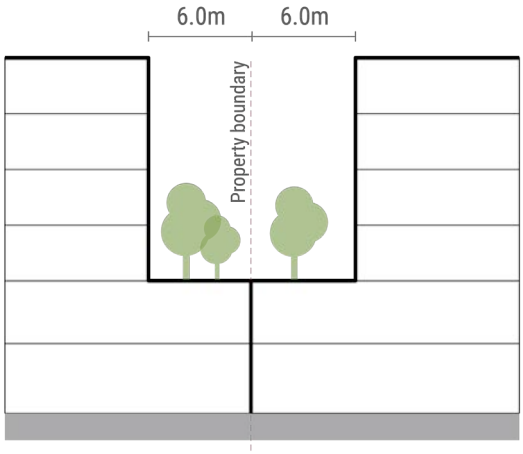


Street interface:

- Street wall to be setback 3 metre from property boundary to match established built form context.
- Additional 5 metre setback to upper levels.

Note: this interface only applies to the selected sites as shown in Figure 18 - Recommended street and boundary interfaces

Upper level separation



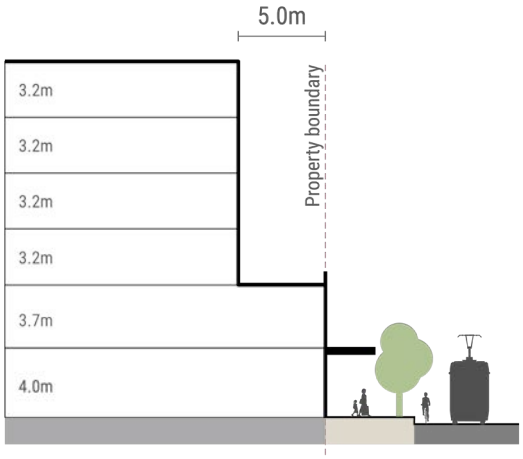
Provide a minimum of

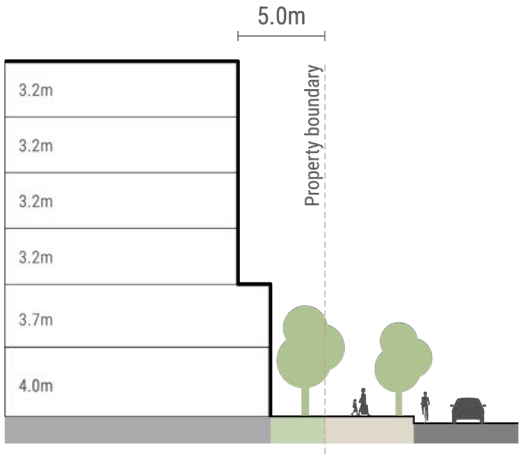
- 12m between habitable rooms (above street wall).

5 Recommended outcomes

5.3 Street walls and setbacks

2 storey street wall

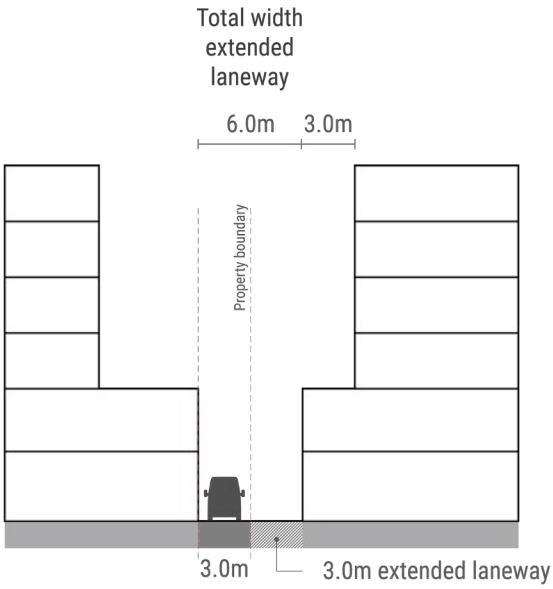


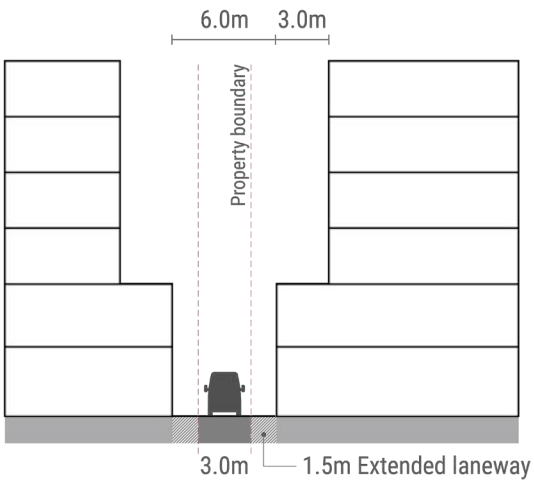


Street interface:

- 2 storey street wall (8 metres) including parapet design.
- Setback above street wall - 5 metres.
- Where 3 metre front landscape setback is required, setback above podium - 5 metres.

Extended laneways

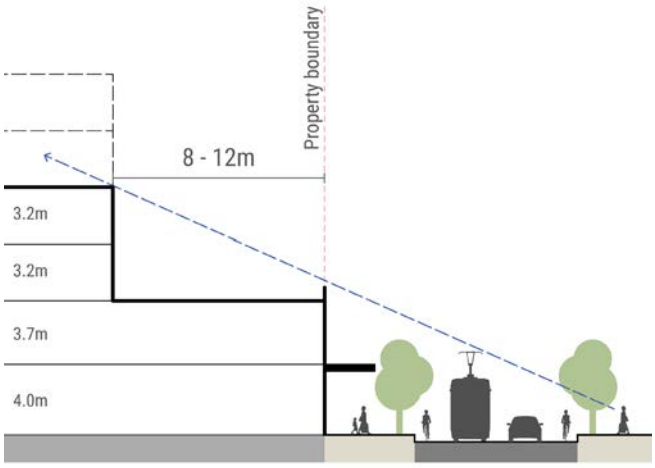




Street interface:

- Minimum 1.5m ground level setback from adjacent property boundaries to achieve 6m wide laneway.
- Alternative: if laneway widening can be achieved with only one side of the laneway - 3m laneway setback from property boundary.
- 3m upper level setback above podium.

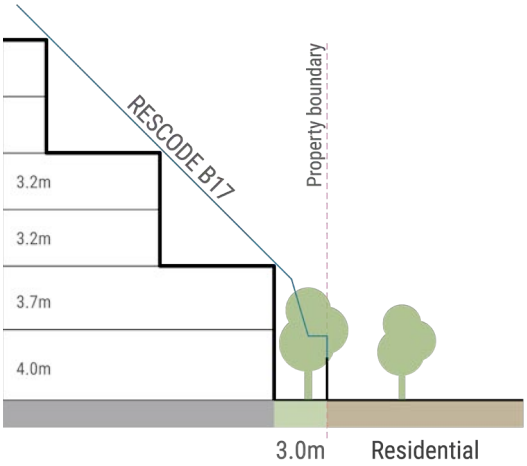
Heritage



Street interface for development within a heritage overlay (noting there are specific requirements for identified significant buildings - refer to Camberwell Junction Structure and Place Plan Heritage Built Form Advice, Extent 2023):

- Setback behind street wall - between 8-12m to allow for retention of the primary heritage building volume.
- Additional storeys above the primary building volume height should:
  - Be visually recessive
  - Utilise materials that are recessive in finish and colour
  - Minimise the visual intrusion of equipment and services.
- Additional storey heights should complement the alignment of the primary building.

Sensitive interface



An Activity Centre allotment directly abutting the rear or side boundary of land zoned residential.

Boundary interface:

- 2 storey podium (8m) with a minimum 3m ground level setback from boundary.
- Levels above the podium must be consolidated into a maximum of 2 setbacks within a the ResCode B17 profile.

5 Recommended outcomes

5.4 Street and boundary interfaces

Camberwell Junction has established character and heritage that needs to be treated with sensitivity. A diverse range of built form types and situations have been considered and analysed in this Plan. The map on the right identifies different building 'interface' situations, while the diagrams on this page provide built form envelope guidance accordingly.

These sensitive interfaces requires future built form to consider elements that transition from more urban typology to low-scale typologies. This may include changing setbacks and landscape requirements as well as consideration regarding increased traffic volumes and egress arrangements.

The following shows the recommended street wall and interface locations.

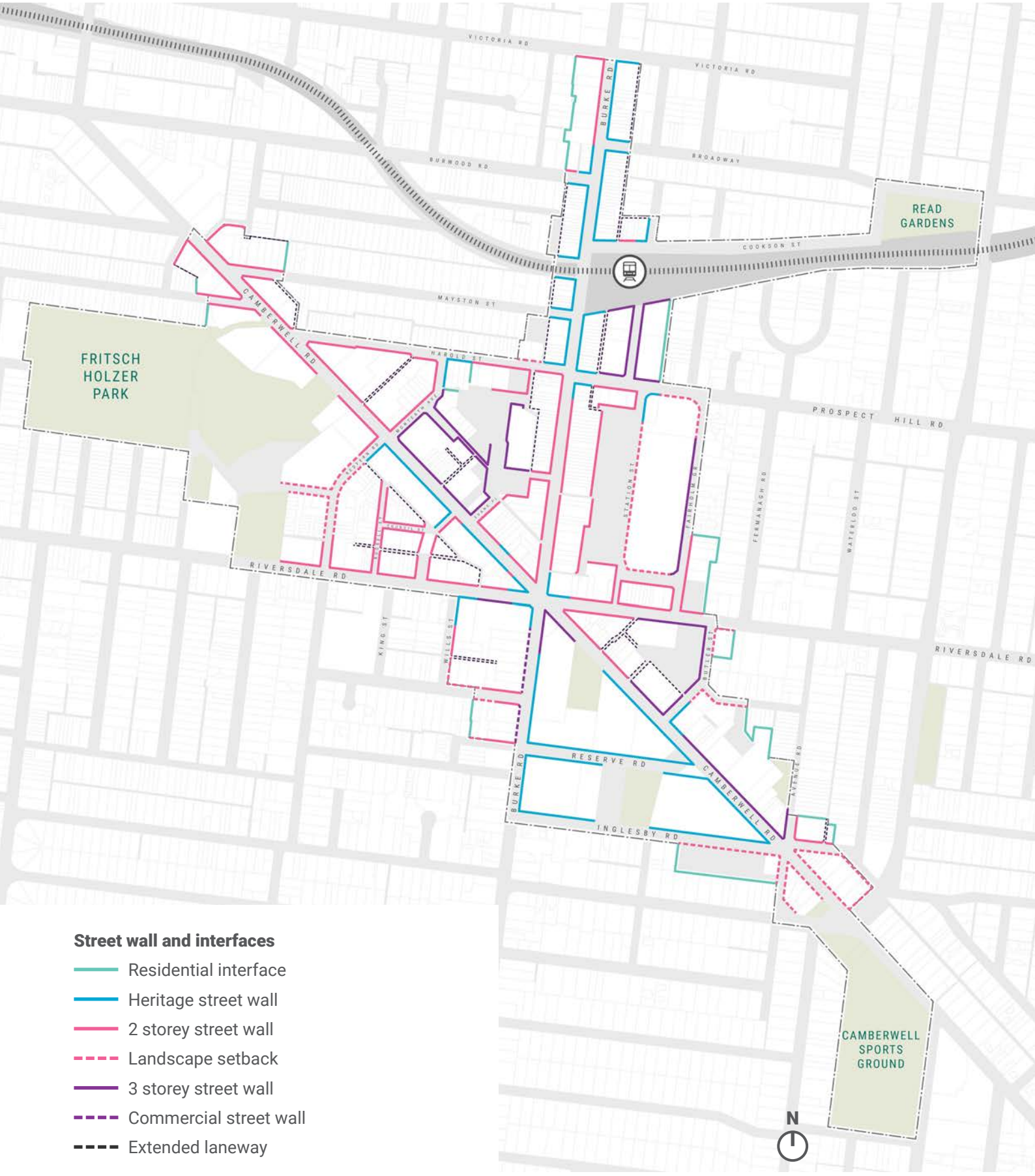


Figure 18 - Recommended street and boundary interfaces


BOROONDARA