

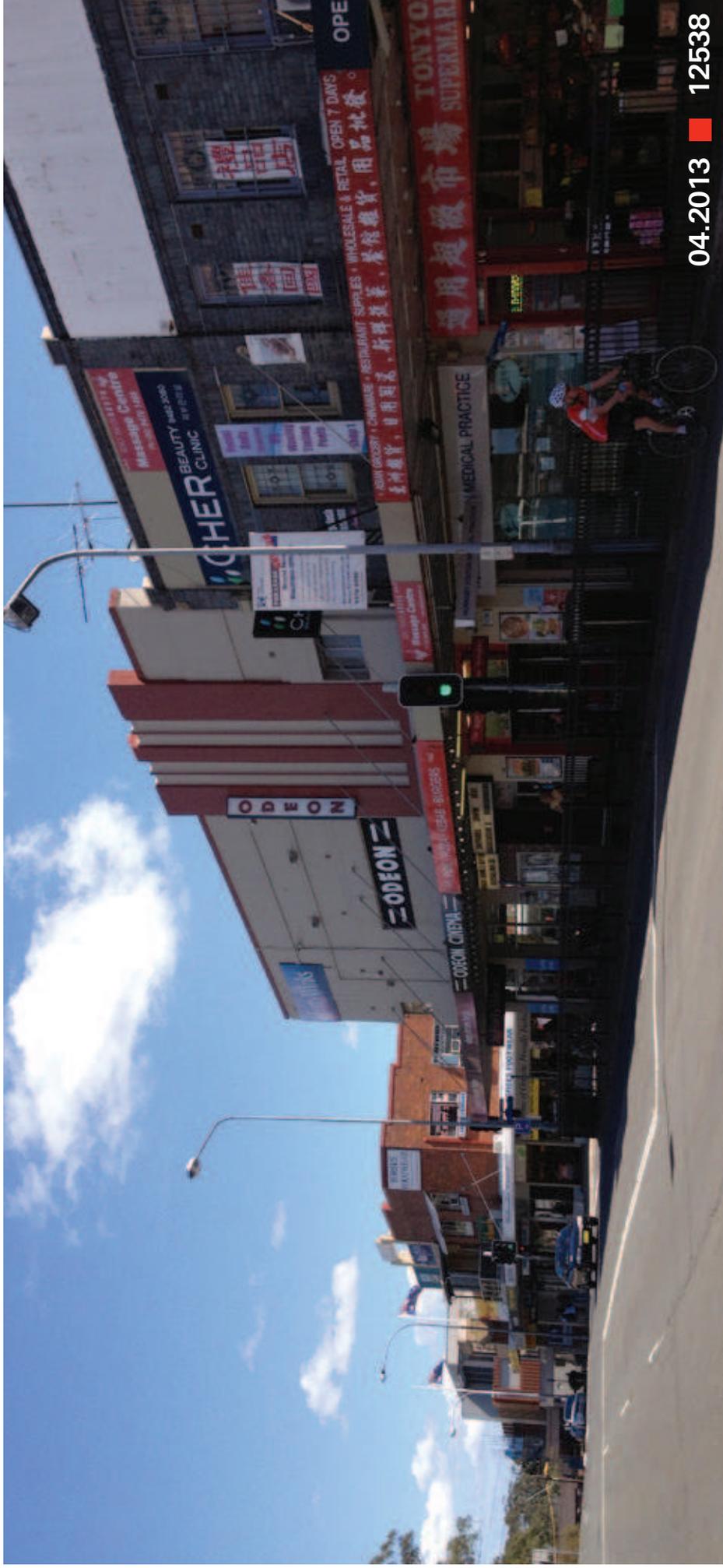
Appendix B

Urban Design Study
prepared by JBA Planning

Urban Design Analysis
Structure Plan

Hornsby West Side Precinct

Urban Design Analysis



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1.0 Introduction

1.1 About this Study

This Urban Design Study has been prepared by JBA on behalf of Hornsby Shire Council. It relates to the western side of the Hornsby CBD known as the Hornsby West Side Precinct. The study area is defined at **Figure 1**.

The aim of the study is to develop an urban structure plan and new development controls to facilitate urban renewal of the precinct. The genesis of this study arose from a combination of factors including:

- Development proposals from landowners suggesting substantial increases in development potential;
- The need to meet increased dwelling and employment targets under the Metropolitan Plan for Sydney 2036; and
- Recognition that the existing planning controls for the precinct were outdated.

The stated purpose of the study is to:

- Provide urban design input into the review and revision of the planning controls for the Hornsby West Side precinct to assist revitalise the Centre; and
- Prepare draft planning controls to increase residential and employment development opportunities within the Hornsby West Side precinct to contribute to the achievement of the revised targets for Hornsby Shire identified under the Metropolitan Plan for Sydney 2036.

The stated objectives of the project are:

- Prepare an urban structure plan for the Hornsby West Precinct that provides for mixed use development, housing choice, improved connectivity with the Hornsby Town Centre Core and conserves significant heritage items; and
- Provide draft development controls and key principles diagrams for insertion into Council's draft Hornsby Local Environmental Plan and draft Development Control Plan.

1.2 Study Team

The study team comprises:

JBA	Urban Design & Planning
Arcadia Landscape Architecture	Public Domain
Bitzios Consulting	Traffic & Transport
Hill PDA	Property Economics



Figure 1 – Study Area

2.0 Planning Context

2.1 Strategic Context

Metropolitan Plan for Sydney 2036

The Metropolitan Plan for Sydney 2036 is a strategic planning document prepared by the then NSW Department of Planning to manage growth and identify a vision for Sydney to 2036. The Metropolitan Plan updates the Sydney Metropolitan Strategy which was released by the Department of Planning in 2005, incorporating the content of the Metropolitan Transport Plan 2010. The Metropolitan Plan identifies 10 subregions within the Sydney Metropolitan Region.

Hornsby Town Centre is located within the North Subregion. The Metropolitan Plan guides the future growth through the following key principles or actions:

- provide 80% of new housing within the walking catchment of existing and planned centres;
- provide a mix of housing and improve affordability of housing;
- provide jobs closer to public transport;
- new retail development to be located in centres;
- growth in centres with public transport infrastructure; and
- improve quality of open space and the environment for walking and cycling links.

Draft North Region Subregional Strategy 2007

Under the Draft North Region Subregional Strategy, the growth targets for the Hornsby LGA are an additional 11,000 dwellings and 9,000 jobs by 2031. The Hornsby Town Centre, along with Chatswood, is identified as a major centre under the centres hierarchy outlined in the draft Strategy.

The key characteristics of a Major Centre are: “significant locations for shopping, business and services and play a key role as employment destinations. Their accessibility and amenity makes them appropriate for higher density housing. Major Centres are not expected to share identical growth paths; some may have a stronger focus as employment destinations while others may develop a broader mix of uses including more housing.”

The Strategy specifically identifies Hornsby as the Major Centre serving the north, and provides the following future directions:

- Provide for increased employment in retail and office uses;
- Provide for residential development within walking catchment of the centre;
- Investigate opportunities for better pedestrian links between eastern and western sides of the centre;
- Revitalise the traditional centre to the west of the station; and
- Investigate development opportunities to the west of the station.



Figure 2 – Draft North Subregional Strategy

Hornsby Housing Strategy 2010

The Hornsby Shire Housing Strategy was prepared in response to the housing target identified for Hornsby LGA within the draft North Subregional Strategy (i.e. 1,000 additional dwellings). The Housing Strategy is consistent with the Metropolitan Plan and draft Subregional Strategy by focusing new residential development (in the form of multi-unit housing) in centres with access to public transport, services and infrastructure.

Overall the Strategy found that the existing planning controls provided for an additional 4,500 dwellings within the LGA and the Housing Strategy provides the opportunity for a further 2,600 dwellings. This equates to 7,100 additional dwellings, a shortfall of 3,900 dwellings required to meet the housing target. Therefore, further development is required in the Hornsby LGA to meet the long term dwelling target of 11,000 additional dwellings.

Ku-ring-gai and Hornsby Subregional Employment Study

The Ku-ring-gai and Hornsby Subregional Employment Study, prepared for Council, found that there is adequate floor space within the Hornsby Town Centre to meet future demand without the need to rezone additional business land. However there is a need to increase the amount of office floor space. A recommendation of the Study is to preserve a commercial core and identify adjacent business development areas to facilitate growth in the Hornsby Town Centre.

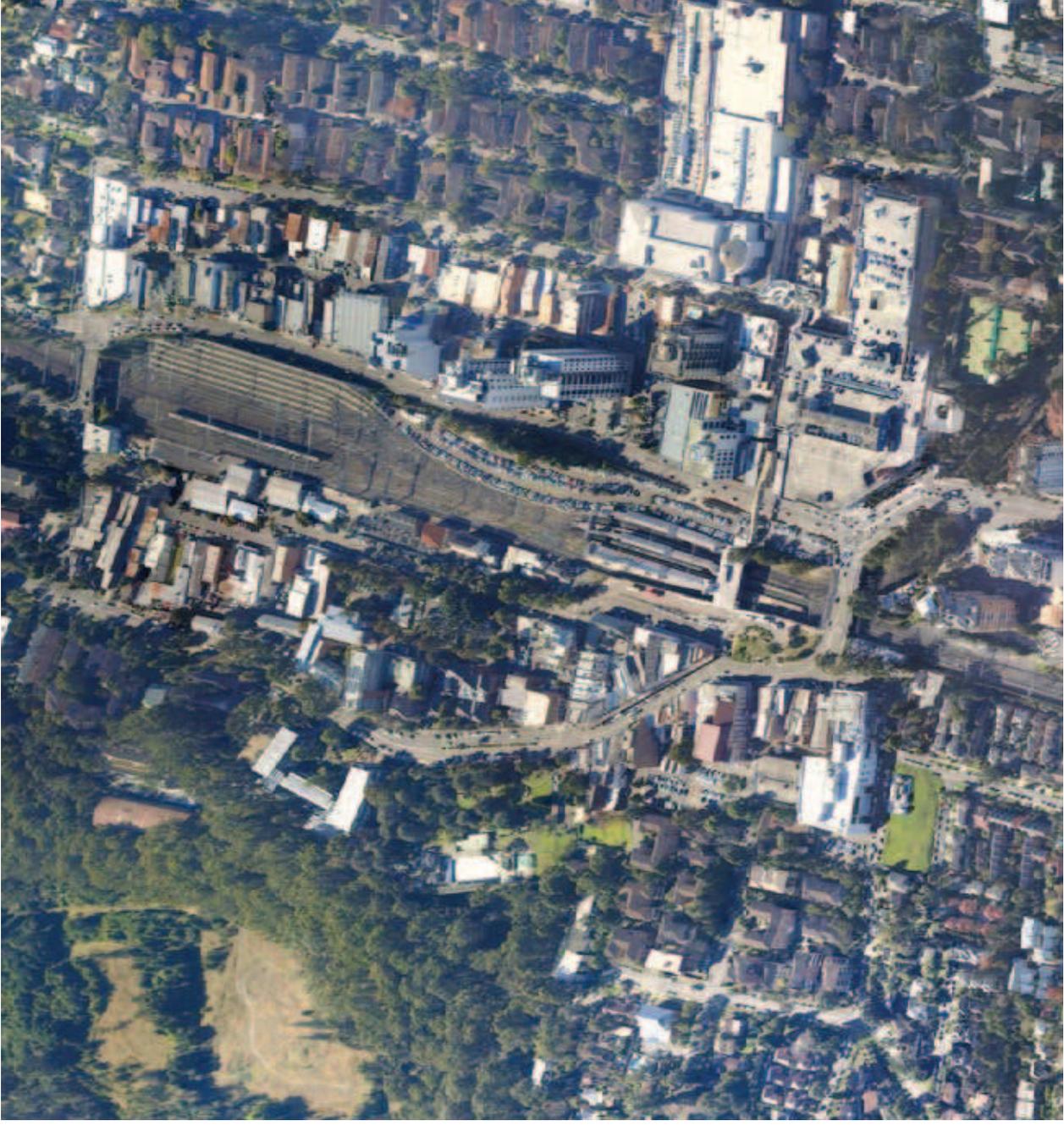


Figure 3 – View of Hornsby West from the South

2.2 Council Planning Controls

Local Environmental Plan 1994

Under LEP 1994, the study area is zoned Business F (Town Centre). A broad mix of uses are permissible within this zone. The base FSR is 2:1 with a bonus of an additional 1:1 (ie 3:1 maximum) for employment generating uses.

Draft Comprehensive Local Environmental Plan

The Draft Comprehensive Local Environmental Plan has been exhibited and forwarded to the Department of Planning and Infrastructure for gazettal. The draft LEP proposes a B4 Mixed Use zone for the study area (Figure 4). The objectives of this zone are:

- Provide a mixture of compatible land uses;
- Integrate suitable business office, residential, retail and other development in accessible locations so as to maximise public transport patronage and encourage walking and cycling; and
- Encourage development that supports the town centre in serving the needs of the local and wider community.

The draft LEP nominates a 16m height limit for the study area (Figure 5) and retains the same FSR provision as LEP 1994 (Figure 6).

Planning Proposal 2011

In early 2011, Council resolved to review the planning controls for the study area and to prepare a Planning Proposal to implement the findings of the various studies (including this one) that are being prepared to support the review.

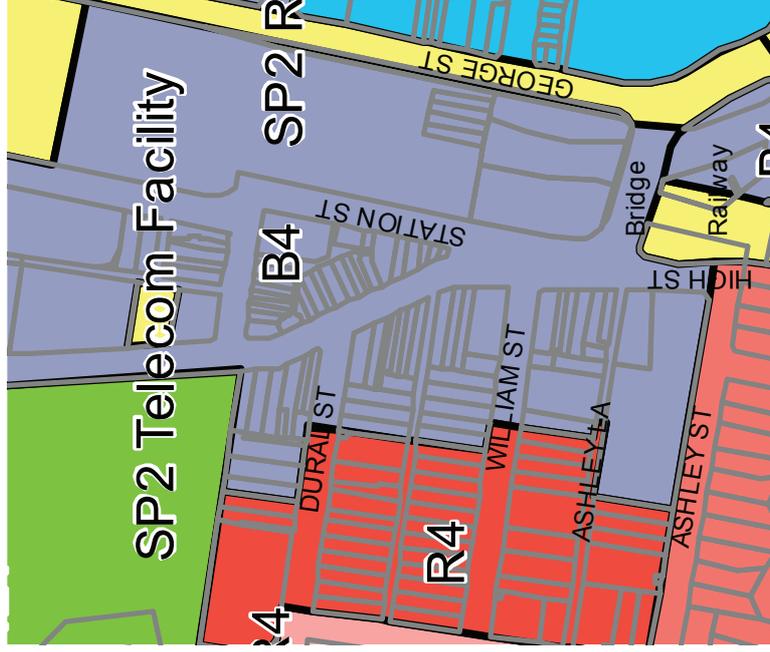


Figure 4 – Proposed Zoning under Draft LEP

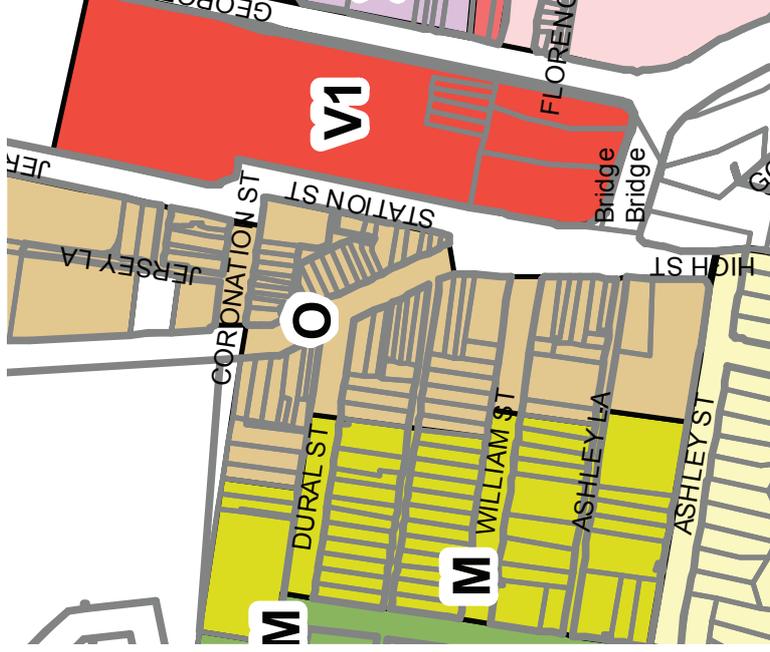


Figure 5 – Proposed Height under Draft LEP



Figure 6 – Proposed FSR under Draft LEP

Hornsby Town Centre Development Control Plan

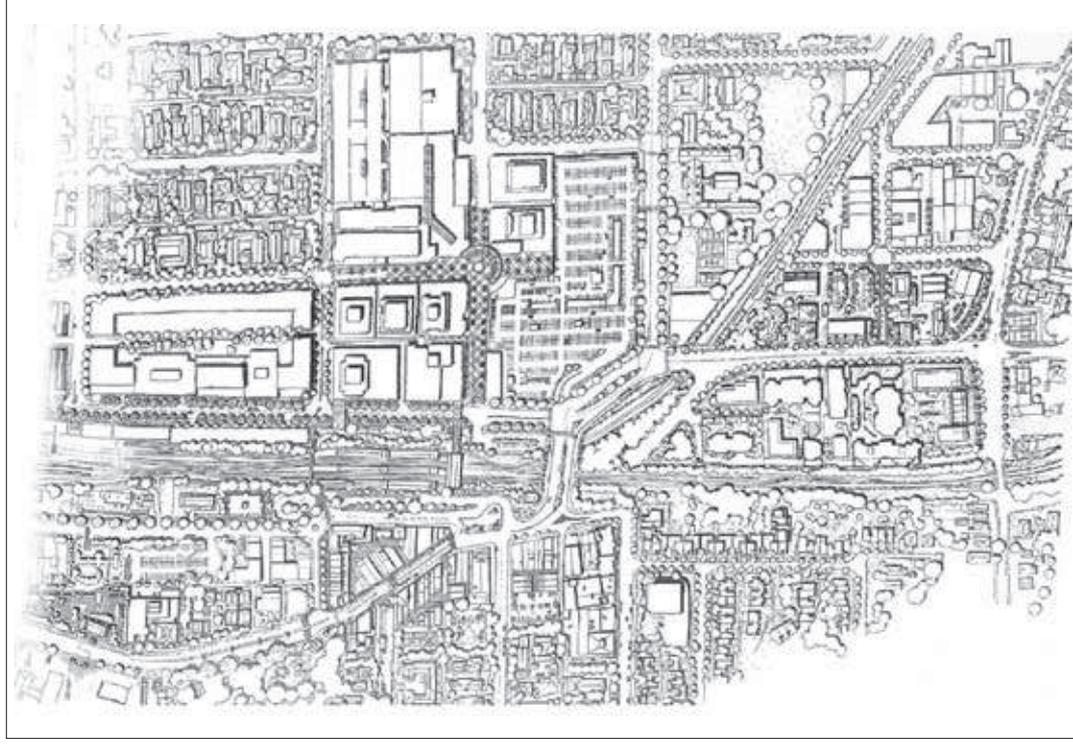
The Hornsby Town Centre DCP applies to the study area. It provides general controls for the Town Centre as well as specific controls for the 'West Precinct' being the study area. Below is a brief summary of the specific provisions relevant to the West Precinct.

Town Centre Strategy

- Development should preserve and enhance the 'Old Town Centre' character on the western side of the railway line.
- Development should enhance the character and heritage values of the Old Town Centre to provide an alternate experience and urban form to the commercial/retail core on the eastern side of the railway line.
- Development within the west precinct should increase the range of retail shops, food outlets and employment.
- Opportunities within the Town Centre to support the commercial/retail core and service the working and residential populations. Shop top housing should improve the vitality of the precinct.
- Development should facilitate links across the railway line between the older, western, and newer, eastern parts of the Town Centre.

Masterplan

- Development should facilitate the provision of improved physical connections across the railway line.
- Development should enhance the character and heritage values of the Old Town Centre on the western side of the Main Northern Railway line to provide an alternate experience and urban form to the commercial/retail core on the eastern side.



HORNSBY TOWN CENTRE MASTERPLAN

Figure 7 – Hornsby Town Centre Masterplan

Density

- The density of development within the west precinct should be in keeping with the precinct's role as a traditional shopping centre.
- The bulk, scale and intensity of development within the west precinct should be consistent with the older established streetscapes.
- Business Zone F maximum FSR 2:1, but if for employment generating development, max FSR 3:1.

Views and Vistas

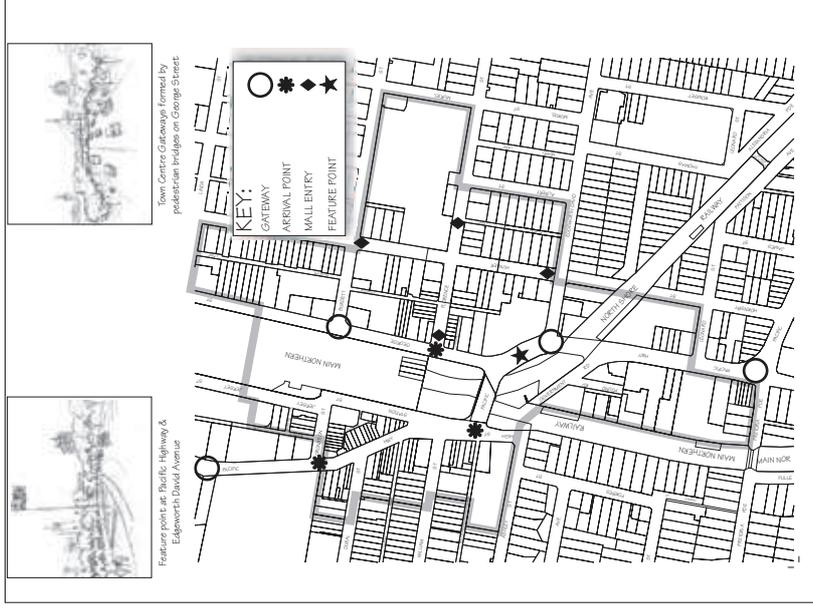
- Key vistas to and from the town centre include:
- South along Jersey Street
- North and south along the Pacific Highway adjacent to the Council Chambers and Hornsby TAFE

Open Space, Station Street Park

- Landscaping in the park on the corner of Station Street and the Pacific Highway should be reinforced and enhance the Hornsby War Memorial and Palms.
- Landscaping should link with trees in Station Street as part of the bus-rail interchange.
- Landscaping should signify arrival within the Old Town Centre.

Gateways, Arrival Points and Feature Points

- Arrival points should provide an important reference point within the public domain.
- The following areas represent arrival points within the Town Centre and require special treatment:
- Intersection of the Pacific Highway with Coronation Street
- Intersection of Pacific Highway and High Street

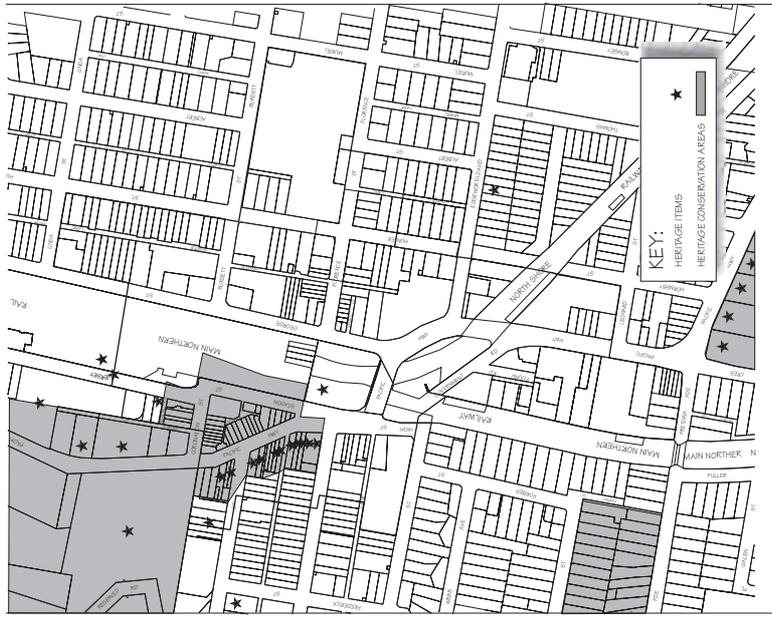


GATEWAYS, ARRIVAL & FEATURE POINTS

Hornsby Town Centre Development Control Plan

Heritage

- Development within the Hornsby West Side Heritage Conservation Area should be designed to be in keeping with the heritage characteristics of the area including (ie front setback of the buildings, materials, colours, textures, scale of buildings, height, bulk, roof form, pitch etc).



HERITAGE

Hornsby Town Centre Development Control Plan

Public Domain, Pacific Highway and Coronation Street

- Development along the Pacific Highway within the West precinct and Coronation Street should contribute to the creation of a sense of an Old Town Centre.
- Development of the Old Town Centre should include improvements such as footpath paving and widening, installation of planter boxes and bollards, provision of seating, installation of street furniture and traffic calming measures.
- Footpath widening along the southern side of Coronation Street should allow for outdoor dining at cafes and restaurants which may encourage more active use of the public domain.

Pedestrian Network

- A pedestrian overpass should be provided at the intersection of George and Burdett Streets to link future commercial/retail development on the eastern side of George Street with the railway station on the western side of George Street.

Traffic Circulation Routes

- Coronation Street and Jersey Street should provide the primary internal access route within the west precinct.
- Jersey Street and Coronation Street identified on Traffic Circulation Routes Strategy Plan as “traffic calming to discourage traffic movements”.

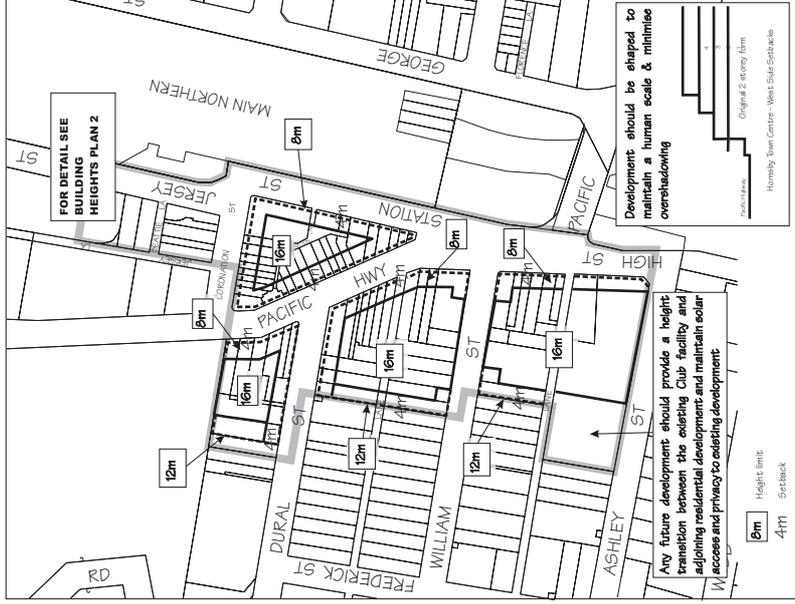
West Precinct Strategy

Design Objectives:

- To promote building design that is consistent with and enhances the Old Town Centre character and amenity of the precinct.
- To promote development which contributes to the establishment of an entertainment and restaurant district of the Upper North Shore.
- To encourage pedestrian comfort and amenity through the design of buildings which enhance safety and security, shade and shelter and access for people with a disability.

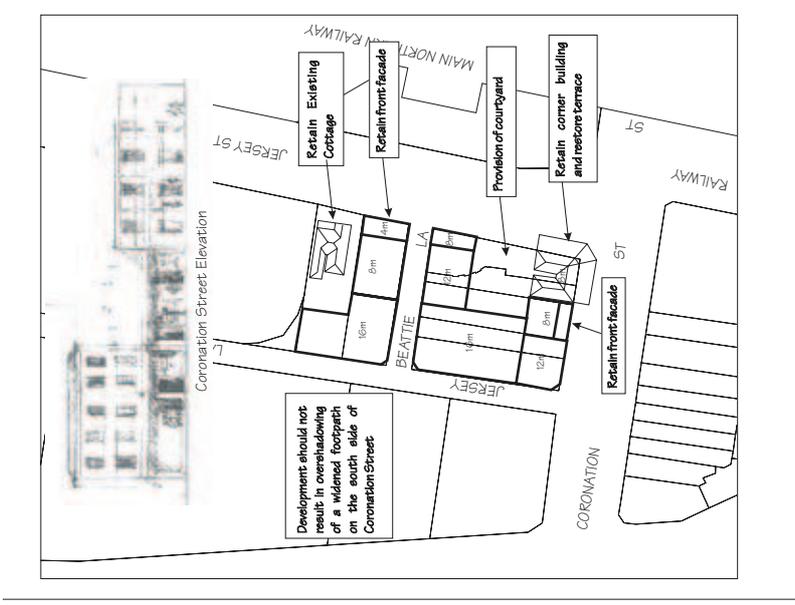
Height:

- The maximum height of buildings should not exceed 16 metres.
- The height of buildings should be a maximum of 8 metres at the street frontage and step back to a podium level to maintain the streetscape, provide a human scale and minimise overshadowing.



WEST PRECINCT - BUILDING HEIGHTS PLAN

Hornsby Town Centre Development Control Plan



WEST PRECINCT - BUILDING HEIGHTS PLAN 2

Hornsby Town Centre Development Control Plan

Landscaping:

- Tree planting along the Pacific Highway and Coronation Street should be limited to potted plants or planter box treatments to ensure that the facades of buildings are not screened and to minimise conflict with awnings.
- Footpath widening and planting should occur along the Pacific Highway and Coronation Street where possible.
- Where footpath widening occurs, street tree planting should be provided in front of the existing awning line.
- Brick paved footpaths, paving spaces and pedestrian crossings should be installed to reduce the visual impact of the bitumen road and reinforce the pedestrian scale and character.
- The bus and taxi interchange in Station Street should incorporate additional landscaping and screen planting to soften the visual impact of hard paved areas.

Car Parking

- Vehicular access to development sites should be restricted as indicated on the Access and Parking Plan.
 - Developments should not provide direct vehicular access to the Pacific Highway where alternative access is available. Direct vehicular access should be avoided from Coronation Street.
 - Where vehicular access is limited or site constraints dictate, tenant car parking should be provided on-site with customer car parking provided in a public car park.
 - Tenant parking should be provided onsite at a rate of 1 space per 80sqm.
 - Where vehicular access and/or site constraints restrict the ability to provide any parking on-site, all parking should be provided in a public car park to meet the projected demand.
 - To promote restaurant uses within the precinct, changes of use from a commercial or retail use to a restaurant does not require the provision of additional car parking.
- For sites unable to provide all the required parking on-site (as identified on the Parking and Access Plan) a contribution of \$22,000 per parking space will be required for each space not provided on-site. In calculating the contribution, any shortfall in parking required to cater for existing development on the site may be considered.
 - As future demand increases above the capacity of existing public car parks within the precinct, additional car parking should be provided through the provision of decked parking above the existing Council car parks in William and Dural Streets and the Hornsby RSL Club and Community

Jackson Teece, 2002

In 2002, Jackson Teece (**Figure 9**) prepared a draft Planning Strategy for the West Precinct (study area). This included undertaking two community workshops. The key findings are:

- Statement of Desired Future Character: "The West side of the Hornsby Town Centre, now known as the entertainment and restaurant district of the Upper North Shore, retains a village character along the historic section of the former Pacific Highway. It has become a fashionable place to live and operate small professional offices, offering as it does immediate access to the Metropolitan rail network, to good restaurants and to nearby bushland. It is also a short and pleasant stroll to one of the biggest and best regional shopping centres in Sydney"
- That office development was not viable and high demand for residential. Recommends emphasis on a mix of activity that would generate employment, but no detailed strategy on uses
- Strategy objectives still current ie, "better connections to the east", "encourage the establishment of a variety of small scale enterprises that attract people to the area for shopping, recreation and reinforce existing businesses", and "to conserve the best of the historic buildings and facades with high streetscape value."
- Possible strategies included familiar responses such as widening footpaths, reviewing parking supply, and carry out heritage and streetscape surveys. Proposals for medium rise redevelopment behind the heritage shops over the existing car parks and Dural Lane. Design idea includes 7,200m² office space above 2-3 levels of parking (240-360 cars) and 4-8 storeys residential
- Sketch indication of development on triangle site, but focus on western and southern sites.
- Given the current brief, strategies that could be described as 'bold' included:
 - A proposed pedestrian bridge over railway to Burdett Street
 - Negotiating air rights development over the railway to extend the Florence Street Mall westwards to the old Pacific Highway. Suggestion for a major mixed use high rise development over the railway and adjacent land at the bridge/memorial garden/park area



Figure 9 – 2002 Jackson Teece Study

2.4 Landowner Submissions

Two submissions were received by Council, prior to or during the course of this study, from landowners groups within the Study Area (see **Figure 10**).

Site 1 - Corner Pacific Highway and Dural Street, Lyon Group Australia (Dural Nominees Pty Ltd)

- Site area approximately 4000m²
- Identifies various opportunities, constraints and design principles
- Market review that recommends removal of requirement for employment generating floor space
- Proposed zoning B2 Local Centre
- Proposed height 7 - 22 storeys (2 storey podium)
- Proposed FSR 7:1
- Public domain improvements on northern side (new 'Quarry Road')

Site 2 - Between Pacific Highway and Station Street, various landowners

- Site area approximately 3000m²
- Proposed heights 14 - 22 storeys
- Two storey podium with food court / commercial uses
- New public domain improvements to Pacific Highway
- Closure of turn lane from Pacific Highway into Station street and integration with Cenotaph Park`



Figure 10 – Landowner submissions (Site 1 - top)

3.0 Site Analysis

3.1 Understanding Hornsby

The structure of Hornsby is of a town divided into two distinct precincts by the Main Northern Railway (Figure 11). These precincts are:

West Side Precinct - is the traditional heart of Hornsby located along the alignment of Pacific Highway. It is characterised by:

- A mix of uses comprising: civic, retail, education, open space and fringe residential
- Low scale 2-3 storey buildings
- Fine grain, street fronting built form
- Physically constrained to the west by bushland and residential uses.

East Side Precinct - is dominated by the Westfield Shopping Centre. It is characterised by:

- Large scale, internalised shopping centre
- Evolving high rise residential fronting George Street with ground floor mixed use
- Primary residential growth area for Hornsby
- Physically disconnected from the west side precinct and the train station by George Street and topography constraints.

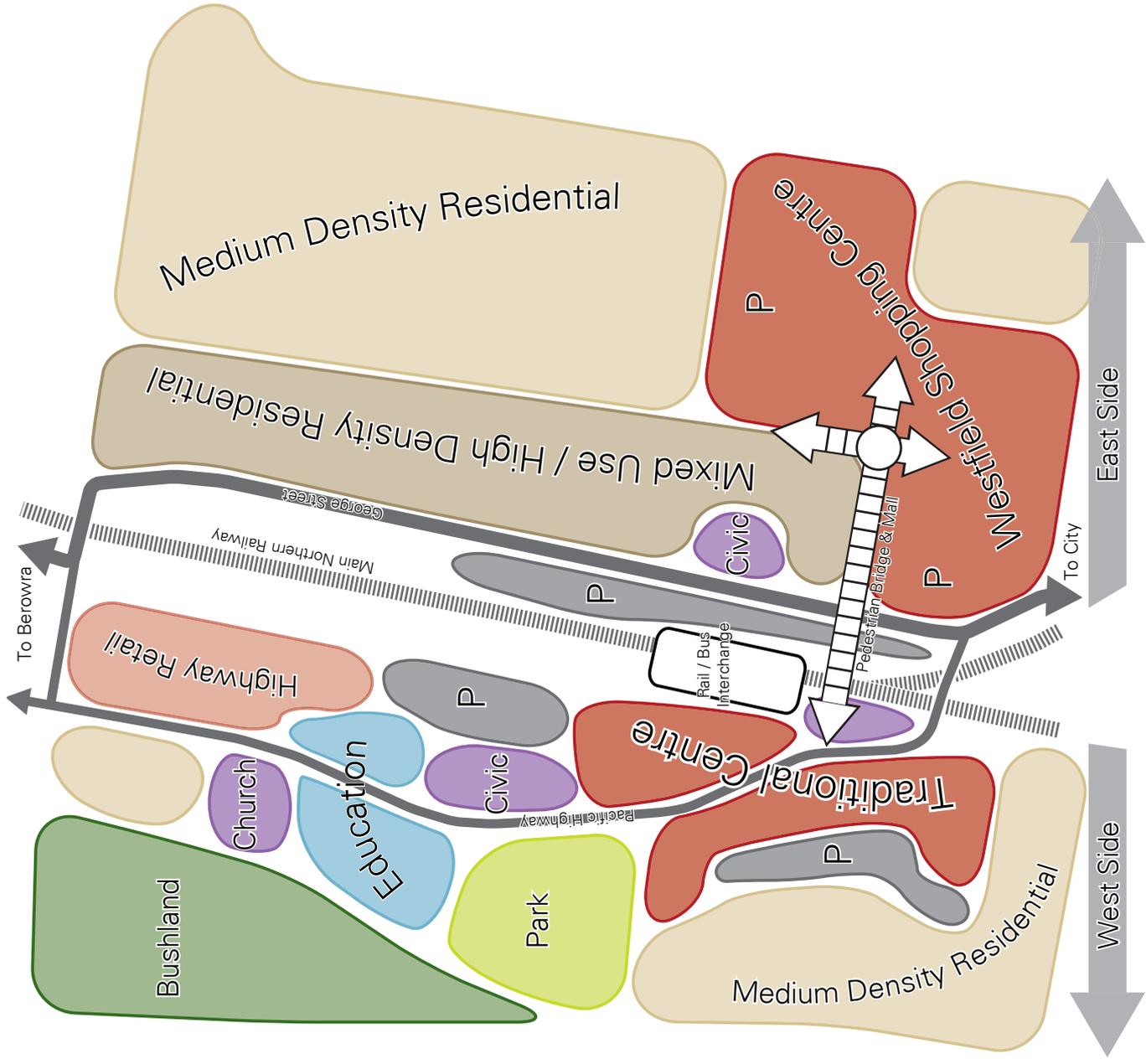


Figure 11 – Understanding Hornsby

3.2 Site Context

- The original settlement of Hornsby developed along a prominent ridgeline, also the alignment of Pacific Highway (**Figure 12**). The land falls away sharply to the west into residential neighbourhoods and bushland.
- Urban development is constrained to the west by topography, natural features, bushland and regional parks.
- The railway line is a strong divider in the town, with movement focussed across the two bridge crossings at Bridge Street and the Pacific Highway.
- To the north of the study area, the civic area of Council, the Police Station and the Courts, Hornsby Park and the TAFE gives way to an area of highway retail and medium density residential. The Pacific Highway leads onto suburbs further north.
- Jersey Street is a quiet north / south route as turning movements are limited at Bridge Street when compared to the two major north south roads of the Pacific Highway and George Street.
- The eastern side of the railway has become the main commercial and retail activity area, dominated by the large Westfield shopping mall. High rise apartment buildings have been built recently in the George Street precinct, and more are expected over the next decade.
- The west side has retained a traditional village character and street based pedestrian experience with a fine grained ownership pattern and shop front modulation.



Figure 12 – Hornsby Context

3.3 Site Character

The study area can be broadly broken down into six character areas (**Figure 13**). They are:

- Northern Gateway & Civic
- Coronation Street & Jersey Street
- Hornsby Station / Bus Interchange & Station Street
- Main Street
- Residential Interface
- Cenotaph Park & Southern Gateway

These areas are described in greater detail on the following pages.

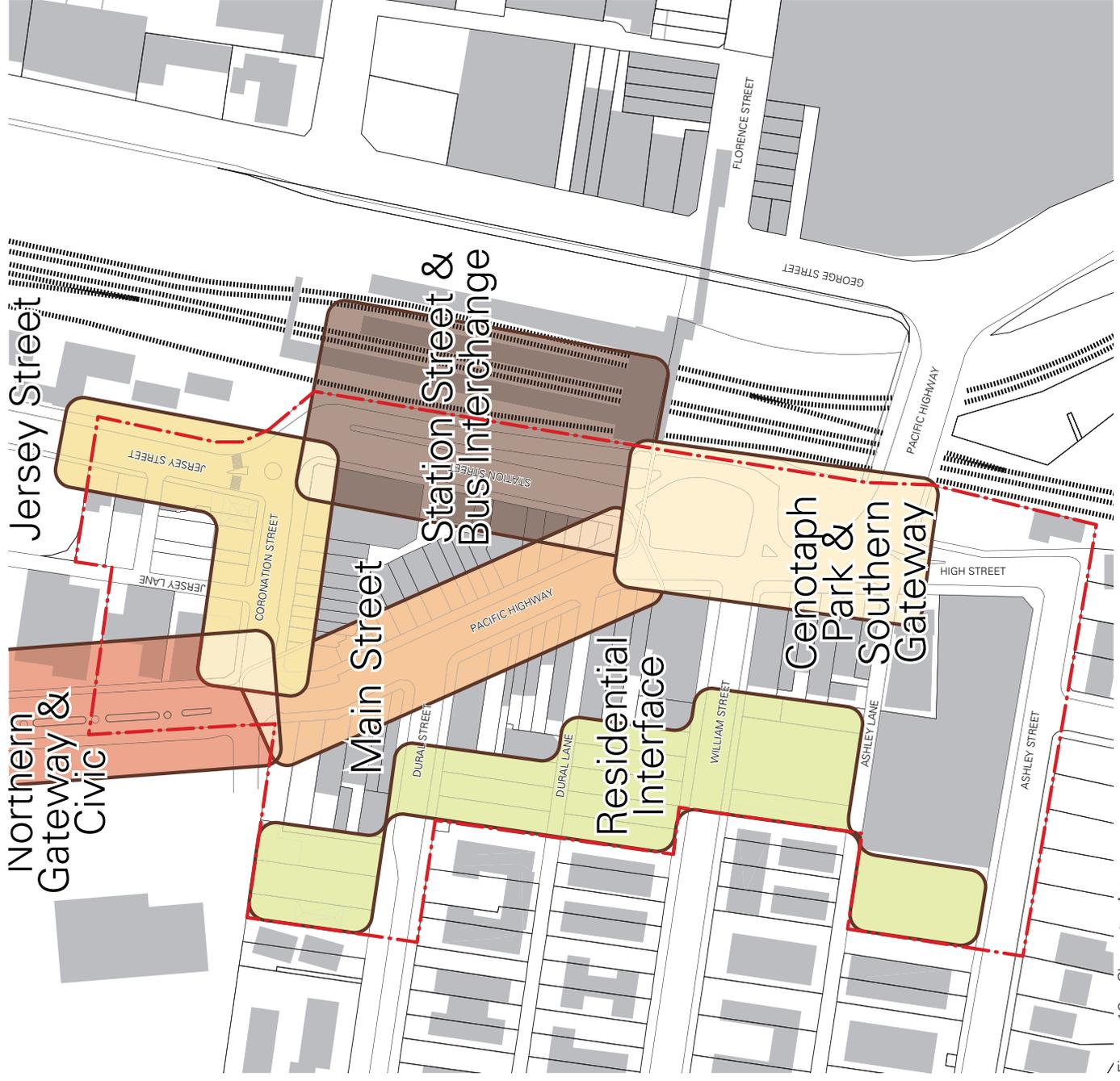
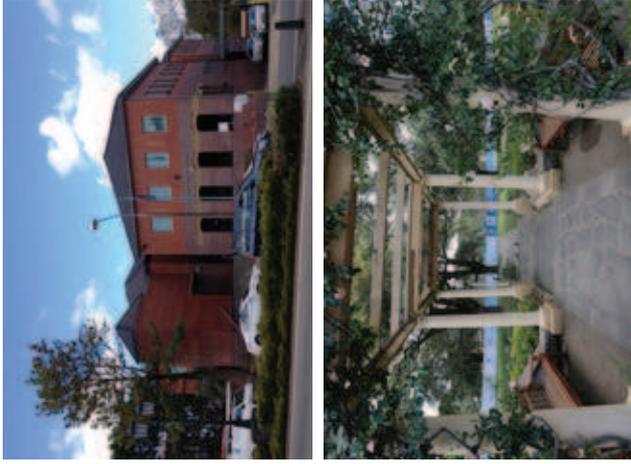


Figure 13 – Character Areas

Northern Gateway & Civic

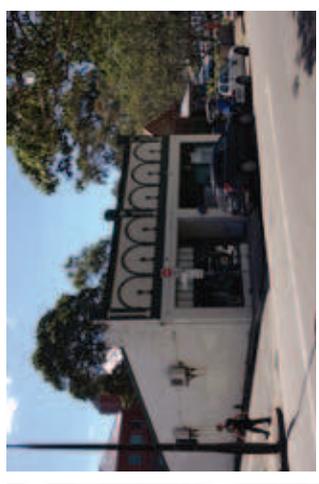
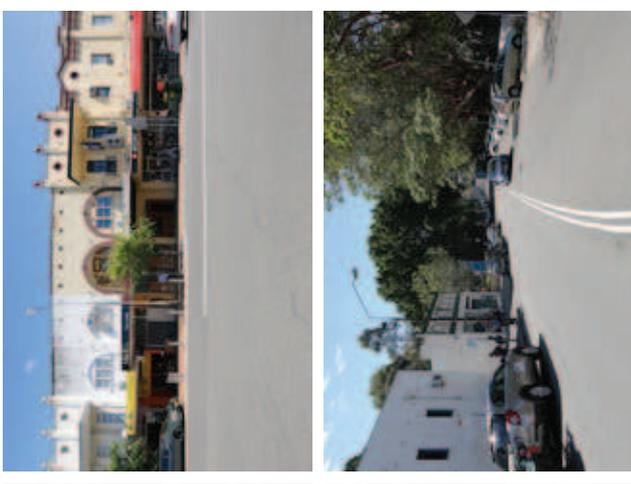
A wide street with a landscaped median lined on the east by a sequence of civic buildings of mixed architectural styles and on the west by the stately Hornsby Park. Angled car parking, mature trees and heritage lighting lend a distinctive, almost 'country town' feel to this area.



Coronation Street & Jersey Street

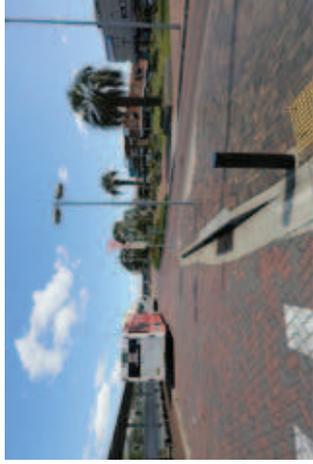
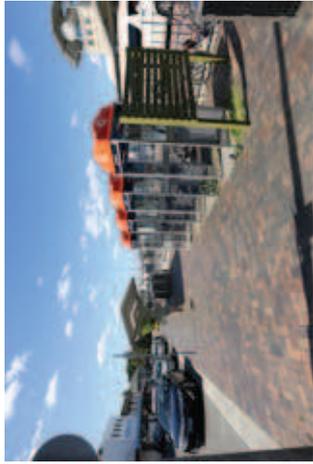
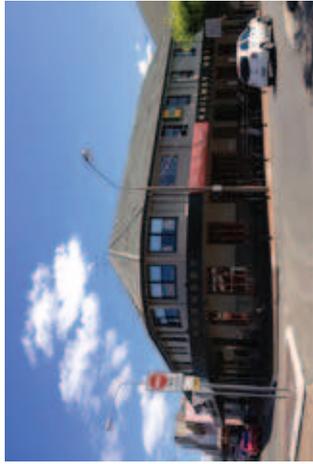
Coronation Street benefits from a northern aspect and recent streetscape improvements on the southern roadside, with most pedestrian interest and activity on the southern side under continuous shop awnings. These buildings form an attractive two storey composition when viewed from afar, and in particular, at the Coronation Street corner.

Jersey Street is notable for the mature brush box trees, and is dominated on the eastern side by railway associated uses. It lacks any notable built form character or active ground floor uses.



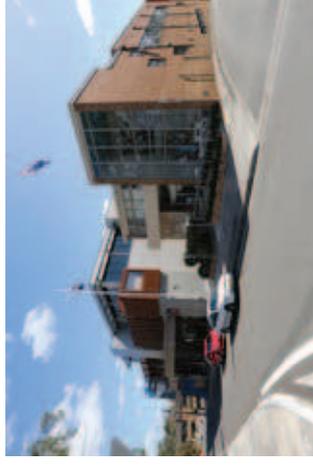
Hornsby Station / Bus Interchange & Station Street

The Bus Interchange in conjunction with Station Street creates a visually large and weakly defined open space. Combined with the restricted vehicular flow reducing passing trade and poor public domain infrastructure the retail uses have suffered. The architectural form above awning level is inconsistent with a mix of building styles and some unsympathetic buildings.



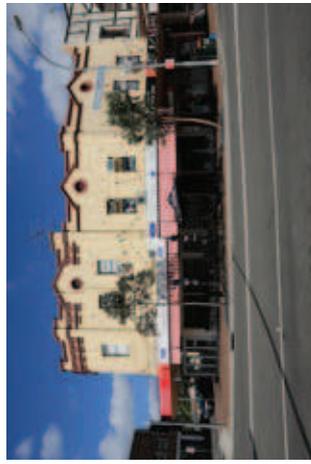
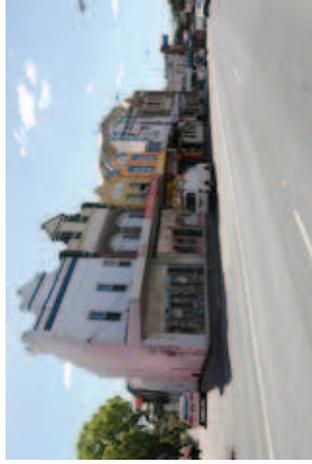
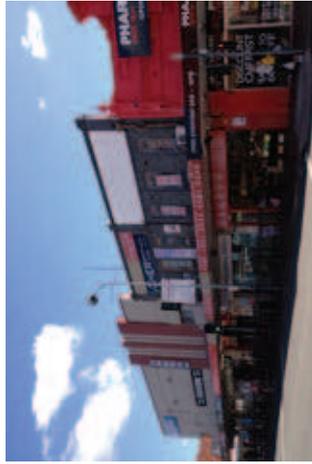
Cenotaph Park & Southern Gateway

The southern gateway is a sweeping vehicular experience past a tidy patch of roadside garden without a notable landmark or distinctive character. The mature palm trees and small grassed area forms a small visual oasis although it is compromised by the circulating traffic and noise. The road skirts the WW1 cenotaph.



Main Street

The Pacific Highway is a typical pre-war, ridge line shopping high street. It is lined with 5-6m shop frontages shaded by continuous awnings and some on-street parallel parking. Collectively, the built form above the awnings is a fairly consistent 2 storey parapet form of varying heritage architectural styles and condition, occasionally punctured by one or three storey exceptions. Underground electricity has removed the visual clutter of wires and poles, but there are few street improvements such as trees or build outs.



Residential Interface

The car parks at Dural Street and William Street are currently a visual break between the rear building forms and utilitarian character at the back of the Pacific Highway and the greener, 3 storey residential neighbourhood. The land slopes markedly to the west from the Pacific Highway ridge potentially exaggerating the height and shadowing impacts of any future potential development.



3.4 Pedestrian Experience

The major generators of pedestrian movement in the Hornsby West precinct are the bus stops located on Station Street, Hornsby Train Station, the TAFE, the Council offices on Pacific Highway, the service-orientated businesses located on Pacific Highway, Coronation Street restaurants and cafes and the Hornsby RSL.

There is some residual foot traffic from car parks located back from the highway.

Generally, pedestrian activity within the precinct is constrained by footpath widths and the presence of many obstacles, including poles, signs and furniture.

Pedestrian movement is further disadvantaged by constrained access to / from the eastern precinct / Westfield by the rail corridor.

Vehicular traffic movement is given priority throughout the precinct. Streets are busy and wide and there are many conflicts between pedestrians and automobiles, especially due to the many surface level carparks, loading docks, service entries and driveway crossings.

While a number of paths to move through the precinct are available, pedestrian experience of this network has low amenity.

Illegible, and sometimes open to the weather, these links meander through back of house environments affecting privacy and orientation.

Steep topography back from Pacific Highway weakens accessibility for pedestrians while changes in the block shape and roads geometrical patterns makes orientation challenging when landmarks are not readily visible.

The elongated nature of Pacific Highway foot print through the precinct creates a long, linear divide. The lack of a real core area disperses pedestrians which makes the area feel underpopulated and lacking in vitality.

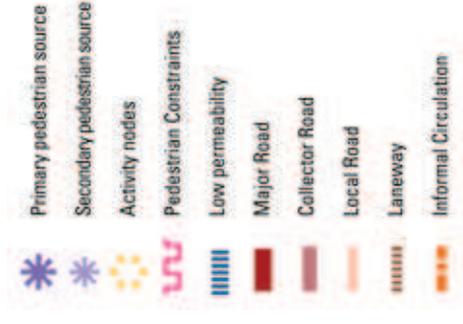
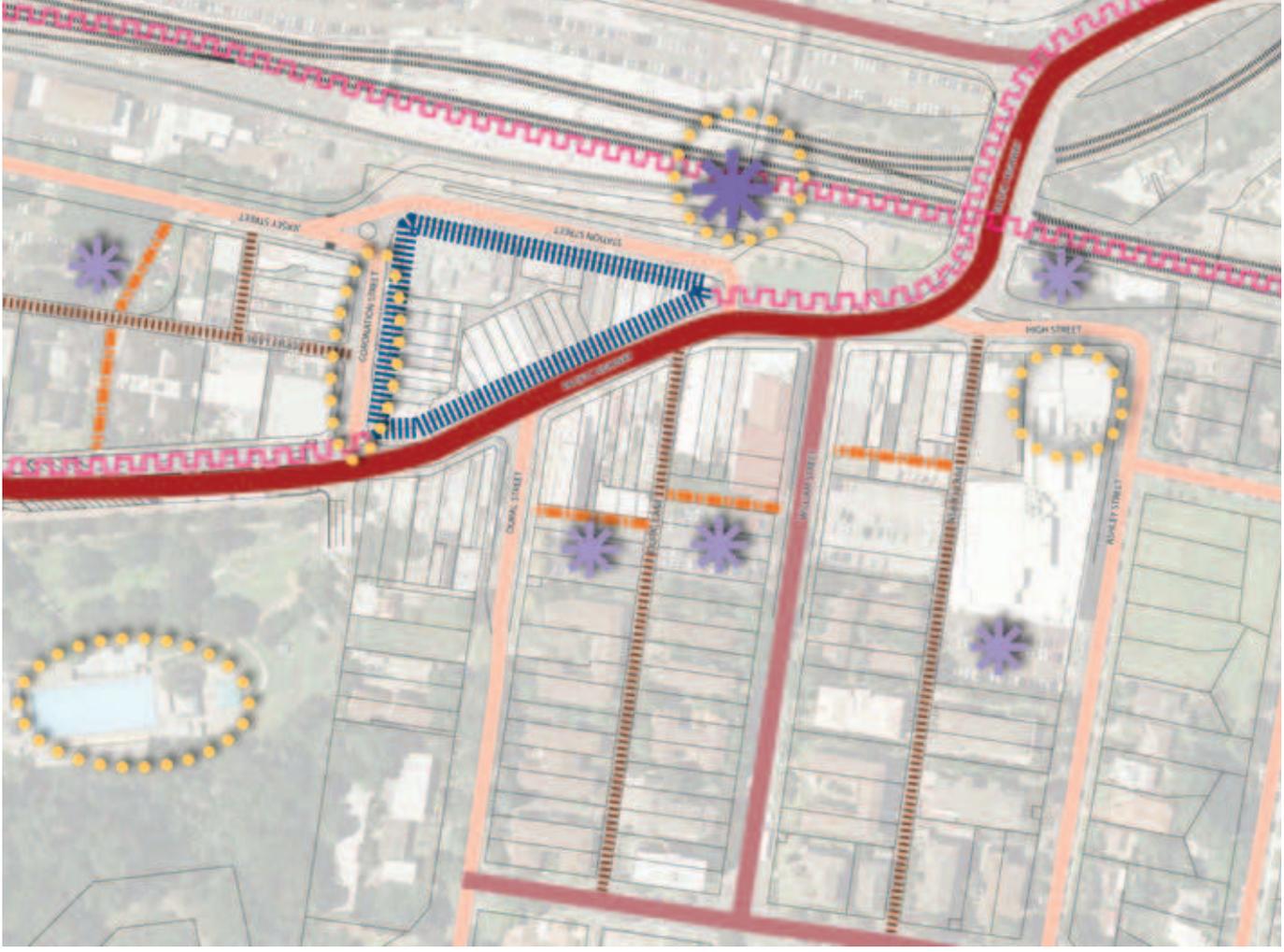


Figure 14 – Pedestrian experience

3.5 Open Space Positives

A number of positive attributes and potentials have been identified (**Figure 15**) throughout the Hornsby West Centre streetscapes:

- Significant street tree plantings of reasonable consistency and size
- Heritage landscapes that contribute to local character and identity
- Natural elements including native bushland planting and topographic features visible from certain street level vantage points
- Heritage buildings that contribute to local character, identity and streetscape amenity
- Landmark buildings
- Accessible bus pick up / drop off areas
- Street awnings are generally provided over the footpaths where there are associated retail uses. These provide shade and shelter amenity
- Views to landscape features such as the surrounding bush covered hills
- Areas of consistent setback and generous sidewalk widths along Pacific Highway and Coronation Street



Figure 15 – Open space positives

3.6 Open Space Negatives

- A number of factors have also been identified as contributing to negative streetscape amenity through aesthetics and / or use (**Figure 16**):
- Streets are dominated by vehicular use with little amenity for pedestrians
 - Low quality and inconsistent surface finishes, lighting and furniture
 - No sense of arrival or exit
 - Numerous carpark and building service entries break the urban form and present a hazard to pedestrians
 - Lack of identity and character with little sense of place
 - Lack of streetscape definition
 - No clear street hierarchy
 - Poor legibility and pedestrian wayfinding with a lack of eastwest access and circulation
 - Lack of passive surveillance and night time activation with implications for safety
 - Lack of green space and urban vegetation offering shade and microclimatic benefits
 - Vast surface level carparks and expansive areas of paving contribute to heat island effect
 - Blank walls and facades, empty tenancies and dilapidated buildings detract from streetscape aesthetics
 - Dated and low quality window displays and an abundance of advertising signage have a collective negative impact on character and impression of quality
 - Poor activation of public space

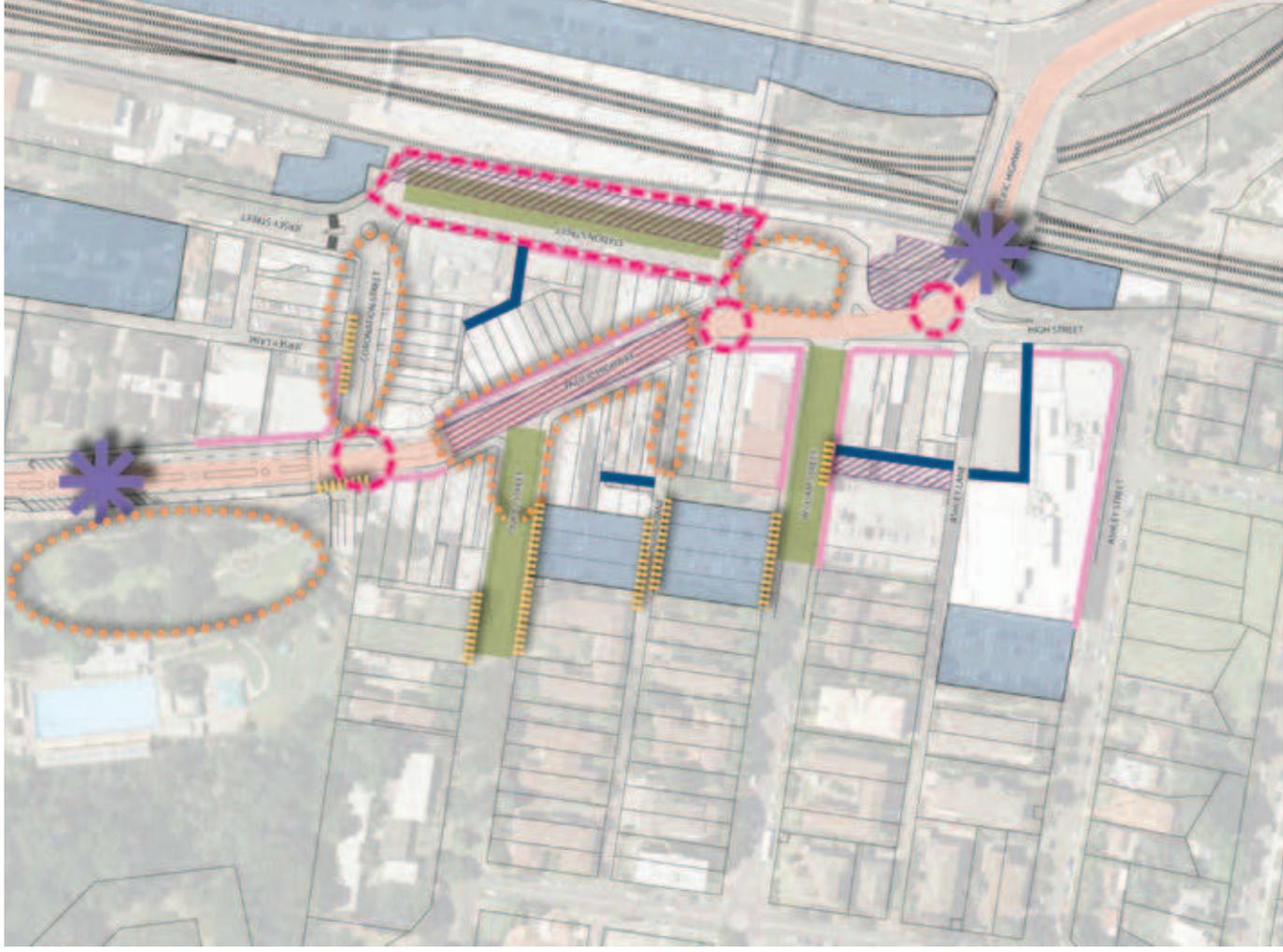


Figure 16 – Open space negatives

3.7 Existing Building Heights

Figure 17 illustrates the existing building heights within the study area. Currently predominantly two storey parapet "shop top housing" style buildings with a typical parapet height of approximately 8m.

Figure 18 illustrates the existing built form of the study area whilst **Figure 19** illustrates the current height envelopes under the Town Centre DCP.

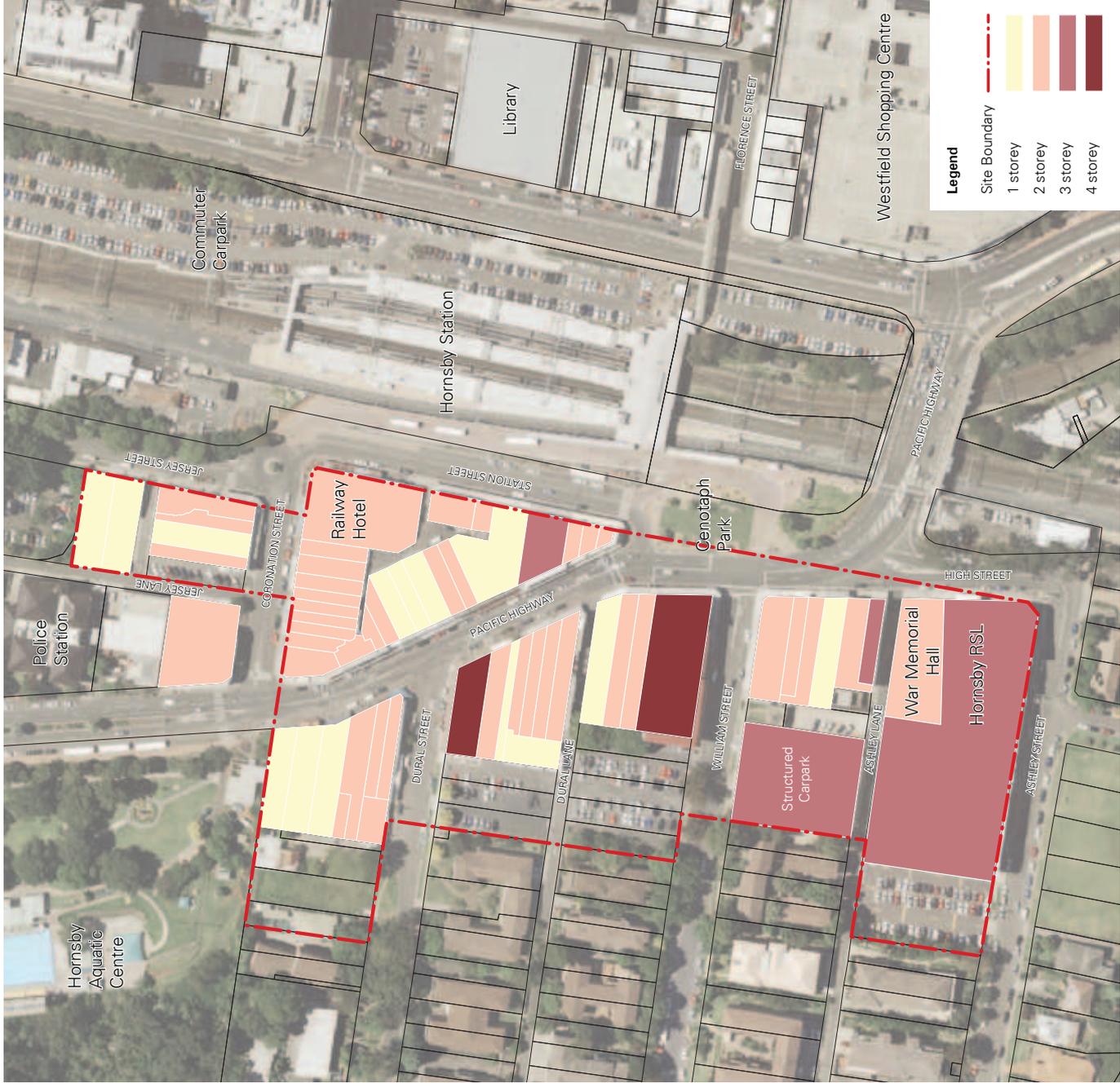


Figure 17 – Existing building heights plan

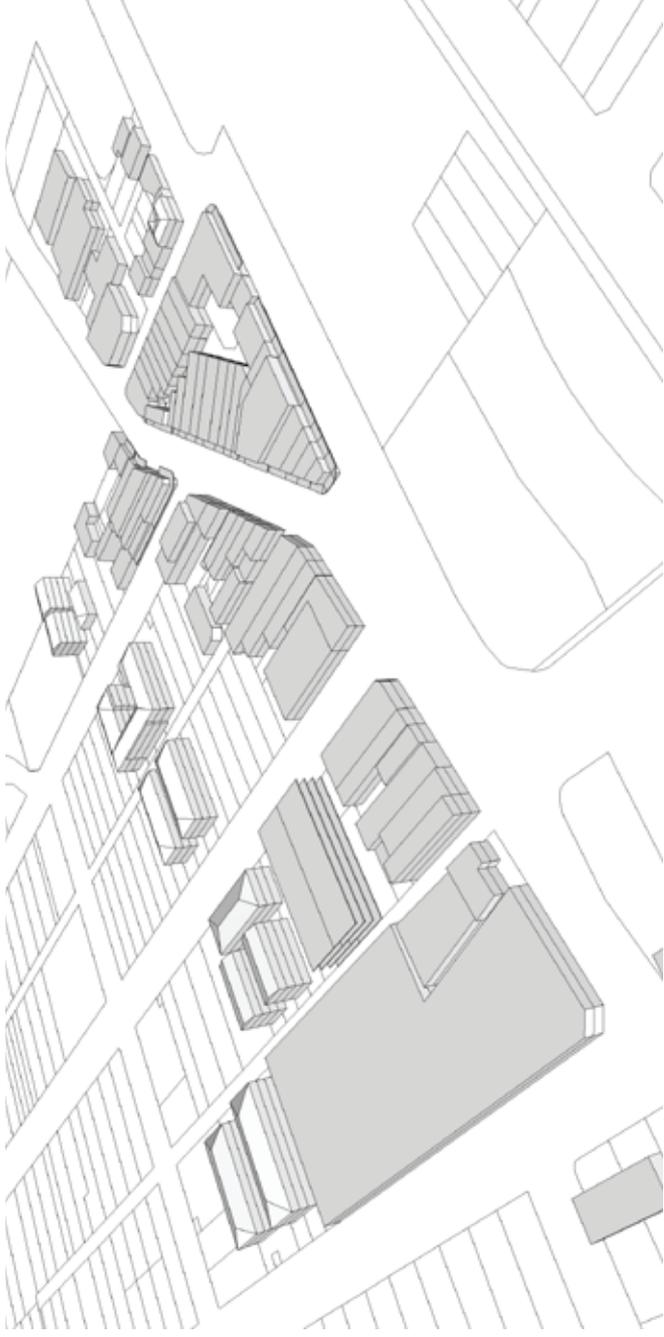


Figure 18 – Existing building heights



Figure 19 – DCP building envelopes

3.8 Heritage

Figure 20 illustrates the extent of existing heritage items and conservation area. All items within study area are listed as local significance in the Hornsby LEP 1994. Part of the study area is located within the Peats Ferry Road Precinct/Hornsby West Side Heritage Conservation Area. The Peats Ferry Road Precinct is identified as the old Hornsby Town centre, made up of original early twentieth century commercial buildings. The Heritage Chapter of the draft Hornsby Heritage DCP provides the following Statement of Significance:

"The Peats Ferry road Precinct is significant for its association with the development of Hornsby as a railway town, and role within the old town centre."

Extract from Council heritage inventory:

"Hornsby West Side Precinct is characterised by the early twentieth century parapeted shop fronts with first floor awnings overhanging the pavement. The village atmosphere of the town centre is brought about by the 'High Street' character, forming a distinct commercial and civic town centre. Landscaped areas within streetscapes also contribute to the overall character of the precinct. The exterior of the buildings appear to be substantially intact above the first floor awnings. Major alterations appear to have been made to internal spaces for current and past uses. However, further investigation is required to determine what significant fabric retains."

Only a few buildings within the area retain much of their original internal and external features, including the 'Pair of Federation Period Shops', property No. 1-3 Jersey Street (heritage item I 486) and The Browsey Cottage, property No. 5 Jersey Street (heritage item I 487). Hornsby Cinema, property No. 155 Pacific Highway (heritage item I 502), may also retain significant internal spaces."

Most heritage items and other buildings appear to have been substantially altered to the rear and internally. However, the items at 3-5 Jersey Street, the Odeon Cinema, and the corner buildings at 185 and 187 Pacific Highway appear to be relatively intact or restored.

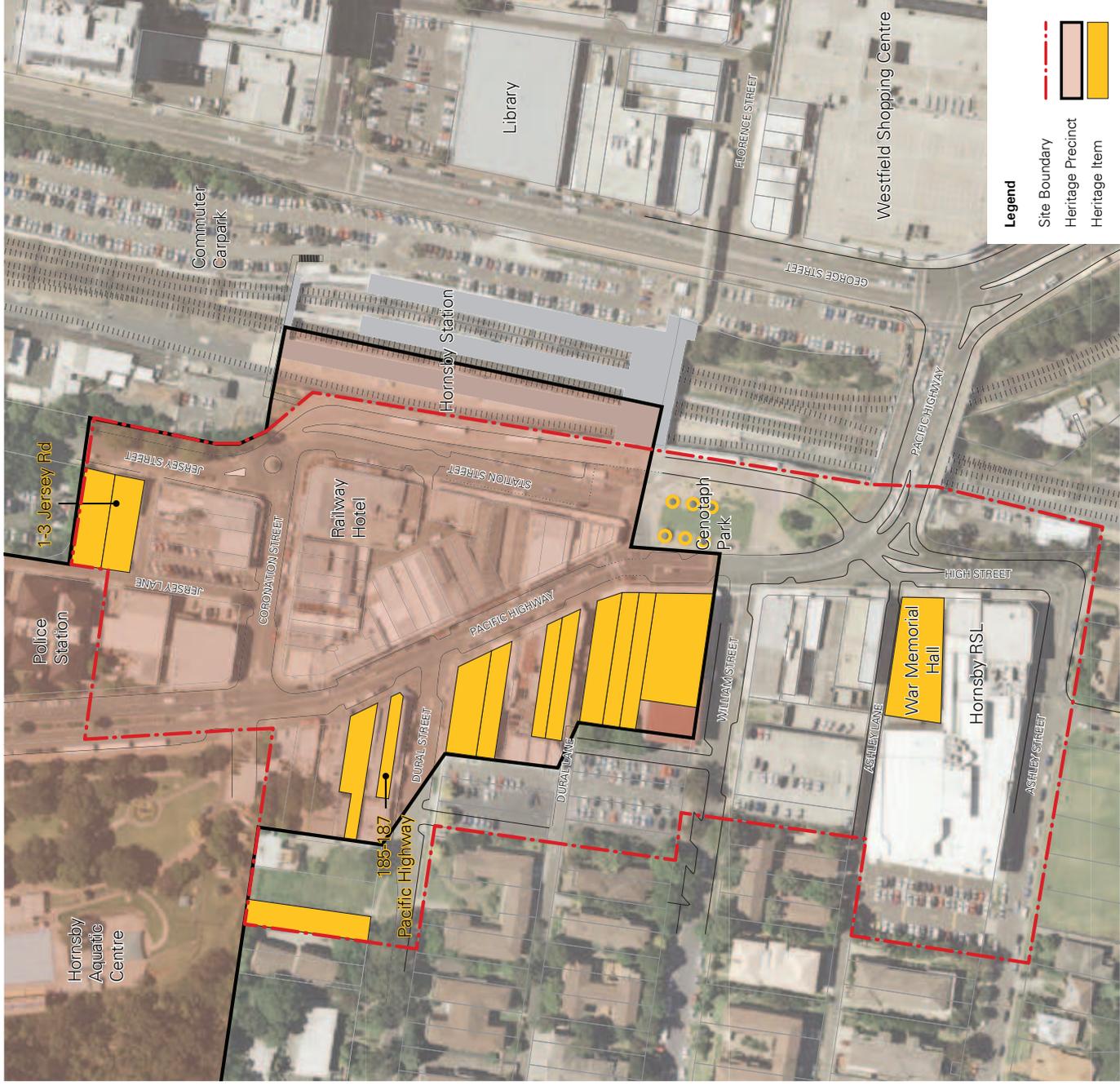


Figure 20 – Existing heritage items

3.9 Facade Analysis

The building facades within the study area show a range of quality.

Figure 21 is an analysis of how the facade contributes to the existing character of the centre, the physical condition of the building and the tenancy of the building. It does not take heritage into consideration.

A building facade may rank medium to low even if it is in good physical condition and occupied but detracts from the character of the centre.



Figure 21 – Facade analysis

3.10 Land Ownership

Ownership patterns help to identify potential development sites where individual lots have been amalgamated under one owner or are part of a larger landowner group (**Figure 22**). Key landowners are:

- **Hornsby RSL** - The RSL is a major landholder in the precinct with both surface and structured car parking facilities
- **Hornsby Council Sites** - The surface car park sites and the land north of Coronation Street offer Council the ability to play a major role in the transformation of the centre

There are also two main landowner groups being:

- **Site 1** - a strategic position fronting Hornsby Park and The Pacific Highway
- **Site 2** - Brings together the majority of the properties fronting the east side of the Pacific Highway including the visually iconic point of the 'Triangle'. It also connects the station and bus interchange with the centre.

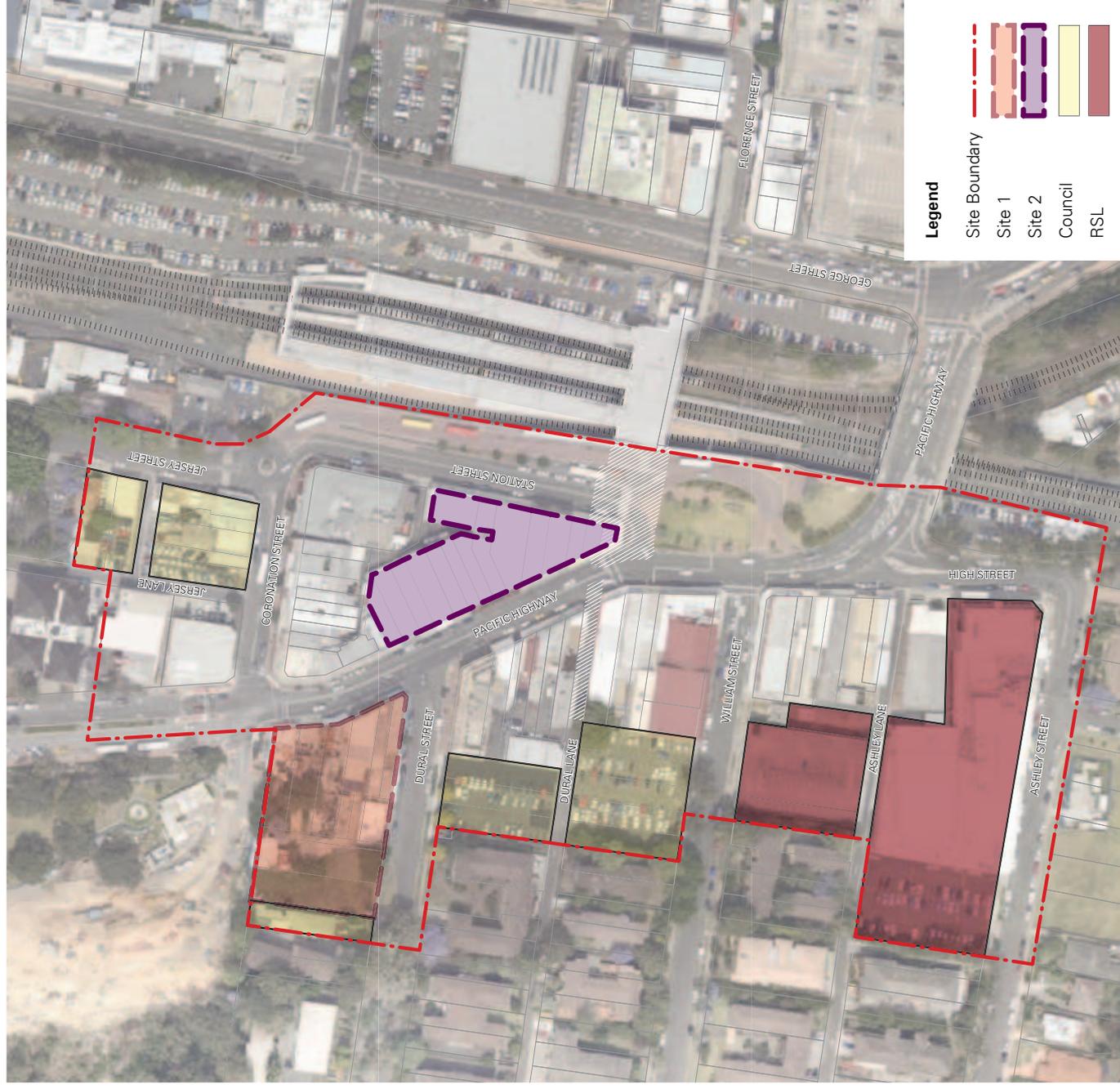


Figure 22 – Ownership Plan

4.0 Opportunities and Constraints

4.1 Opportunities

The West Side Precinct offers a wealth of opportunities for public domain improvements, new development and the prospect to revitalise the centre in significant and meaningful ways (**Figure 23**).

The primary asset of the West Side Precinct is its urban structure and character. The traditional centre of Hornsby was developed using robust and time tested town building principles of:

- Connected street network
- Laneway access
- Pedestrian scaled and fine grain built form
- Street fronting mixed uses

It is these principles that provide the basis for change and redevelopment. These principles should be respected to allow for evolution over time to suit the needs and desires of the local and regional population in the future.

The opportunities illustrated in the plan to the right highlight areas for further investigation and provide the building blocks for the urban structure plan.

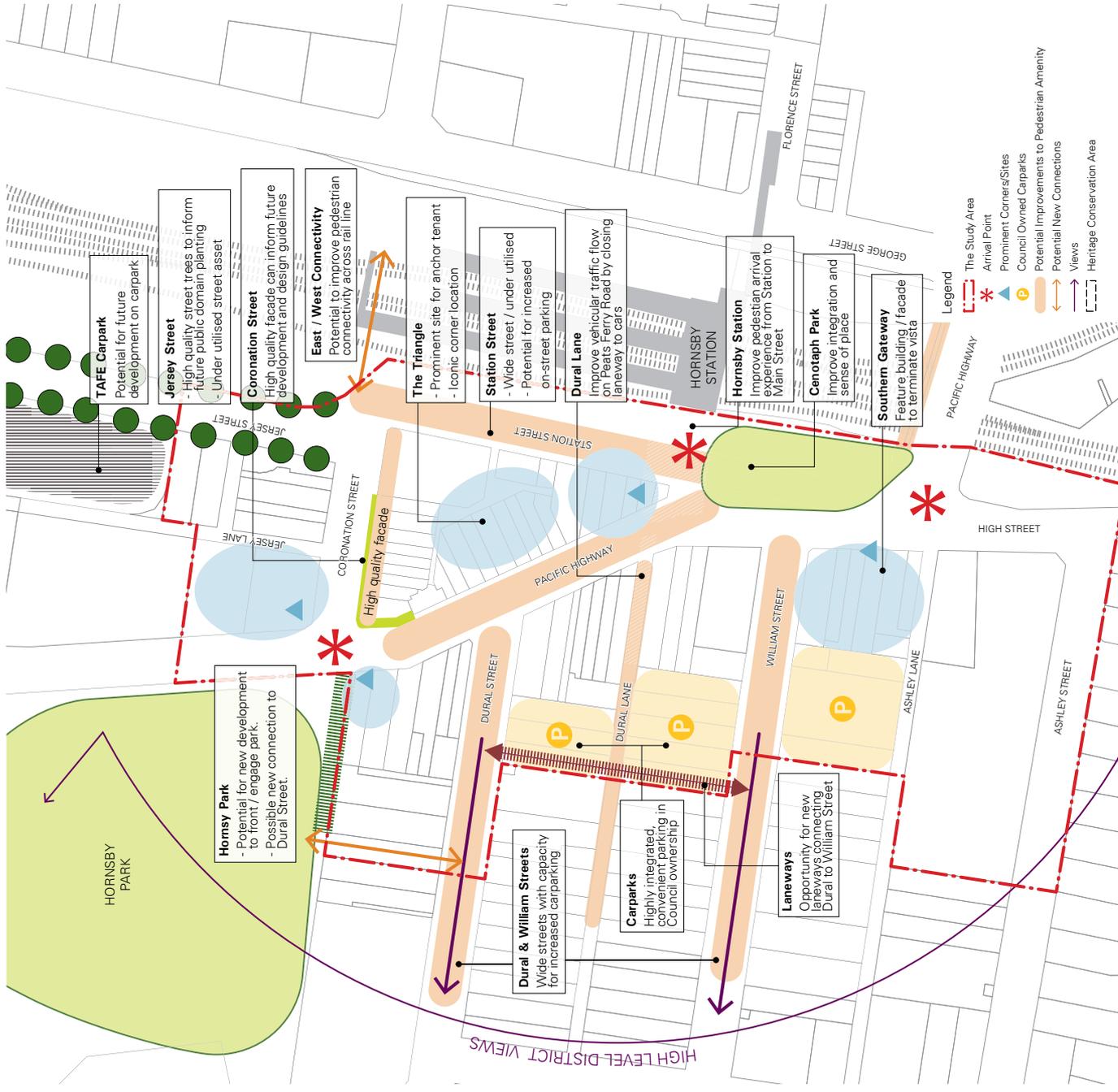


Figure 23 – Opportunities

4.2 Landscape / Streetscape Opportunities

Some landscape streetscape and open space opportunities (Figure 24) include:

- Street hierarchy and streetscape design amendments to enhance legibility and amenity for users
- Acknowledge and reinforce the differences in streetscape and urban character within the west precinct
- Draw on the character of existing built form and planting
- Improve pedestrian connectivity by creating or reinforcing mid block links and providing pedestrian priority
- Improve pedestrian access to / from Westfield and Hornsby East and provide a new address to the station
- Reclaim under utilised spaces throughout the precinct to create an open space matrix that provides residents and visitors with attractive, usable and connected open space
- Arrival sequence to emphasise the visual and physical gateways
- Connect quality open space and landscape features through an interpretive walkway that celebrates local character and culture
- Use building heights to articulate street edges, accentuate building corners and create breaks in the street edge to define urban places
- Relocate existing large at grade parking areas into basement or above ground parking wherever possible
- Create associations within the precinct to the wider landscape and adjacent ecologies including stronger pedestrian connections to wider context
- Integration of WSUD principles
- Reduce excessively wide carriageways to reclaim space for pedestrians
- Introduce traffic calming measures along Pacific Highway and at primary crossing points
- Introduction of a second tier of planting within streetscape to improve definition at a human scale
- Utilise planting to reinstate definition of streetscape where 'holes' in the built form (carparks / vacant plots) leave street space feeling exposed

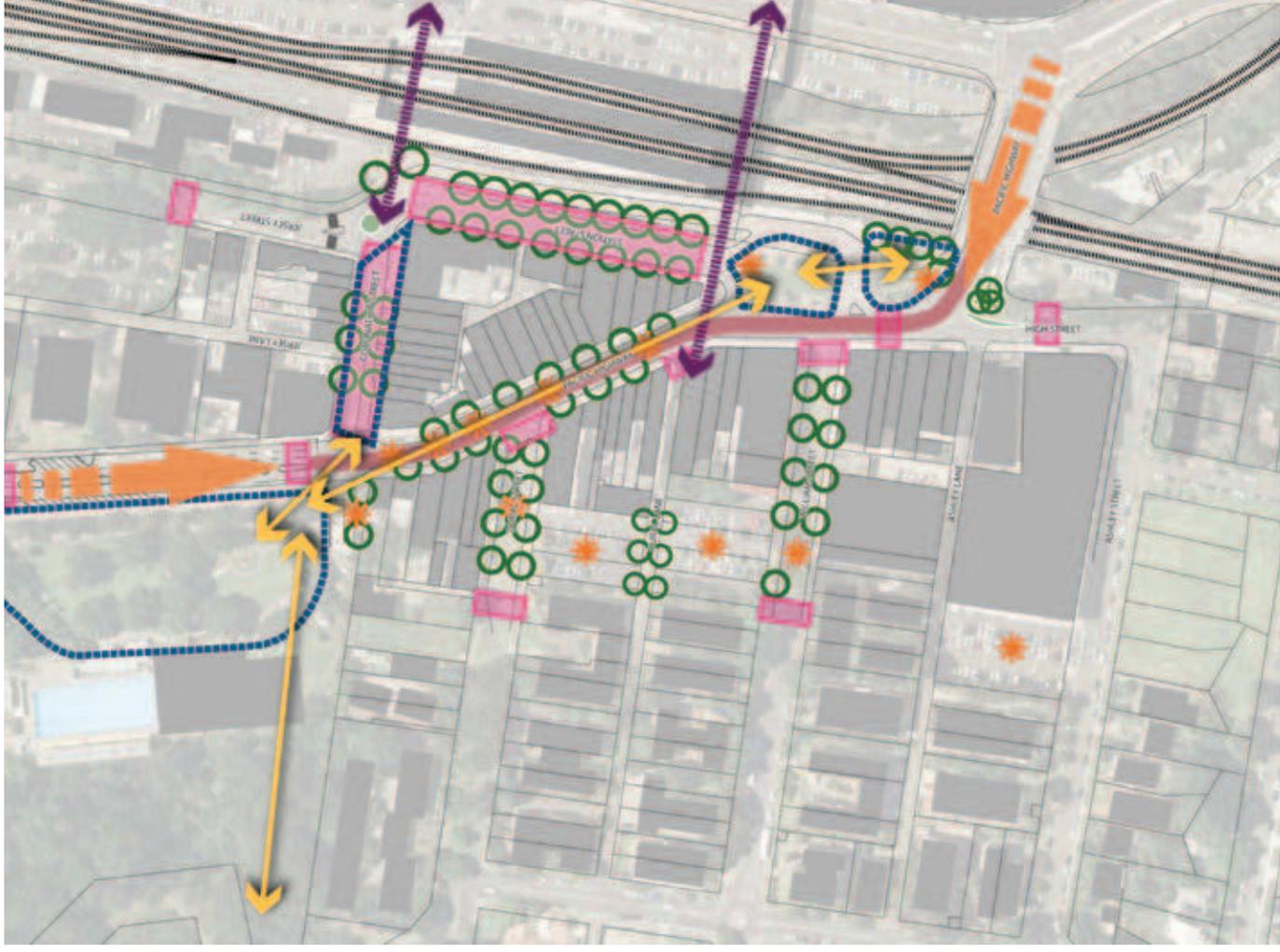


Figure 24 – Landscape / streetscape opportunities

4.3 Constraints

The primary constraints (**Figure 25**) for precinct fall within the following broad categories:

- Land ownership patterns – small scale individual ownership is a potential barrier to redevelopment
- Existing major infrastructure & traffic – traffic management and volumes detract from the amenity of the centre. The bus interchange, while an asset to the centre, impedes the restructuring of Station Street and highlights the piecemeal approach taken to the railway station edge.
- Heritage – This is both a constraint as well as an opportunity. Individual heritage items may impede development while the over arching heritage area can inform future development.



Figure 25 – Constraints

4.4 Landscape / Streetscape Constraints

- Constraints to be considered in relation to future development (**Figure 26**) include:
- Pacific Highway as a physical and visual barrier
 - Heritage buildings and conservation areas containing built form that contributes to Hornsby West sense of place and character
 - Natural landform and mature tree plantings that contribute to local character and identity
 - The linear layout of the Precinct along Pacific Highway makes circulation difficult for pedestrians
 - Lack of pedestrian links between Hornsby West and the eastern side of the town centre across the railway corridor
 - District views to be retained
 - Some pockets of bushfire susceptible land in close proximity
 - Street / block layouts that respond to irregular road alignments
 - Varied topography with challenges for access and usability
 - Existing built form of various age, quality, ownership and use

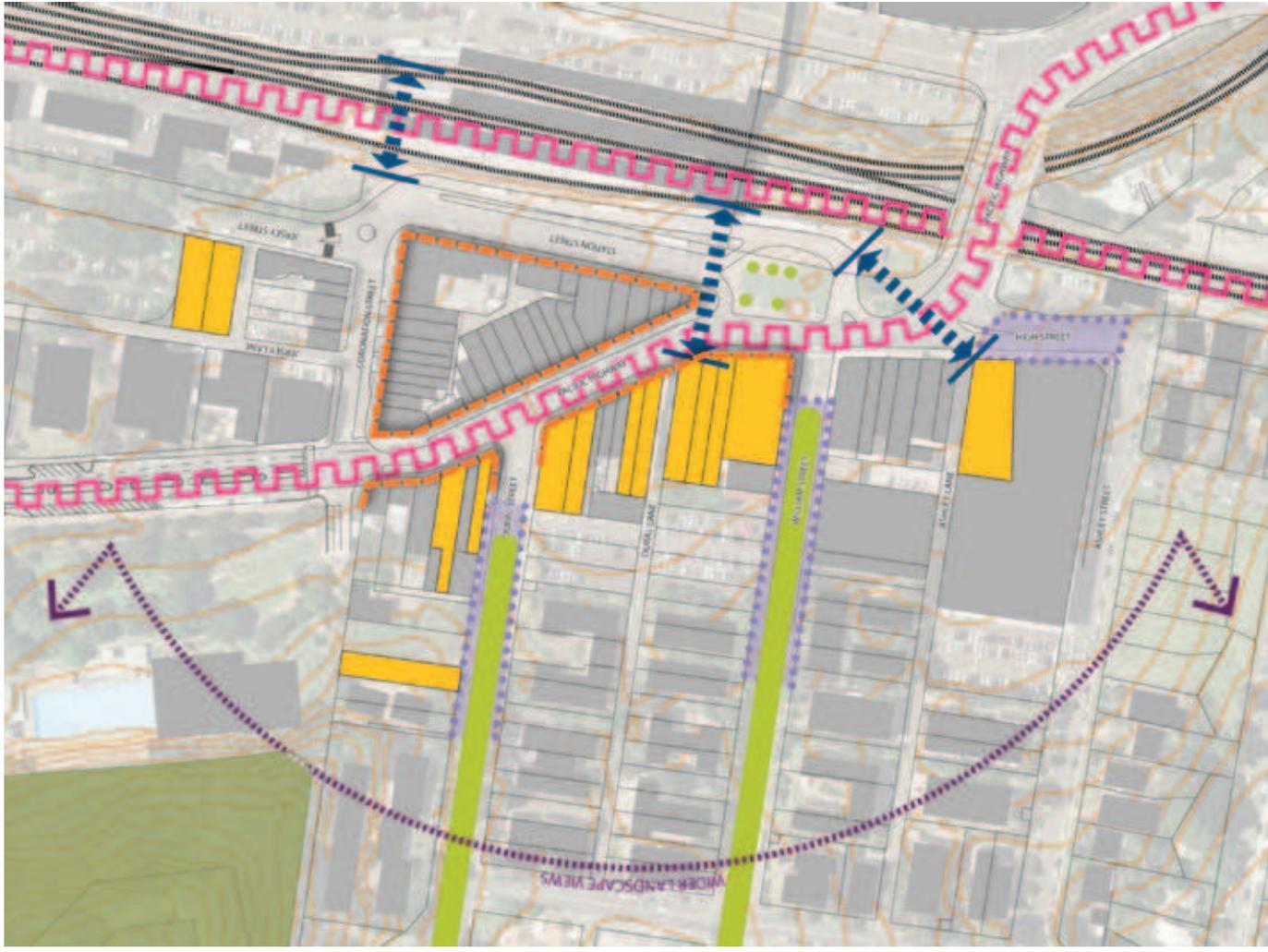


Figure 26 – Landscape / streetscape constraints

4.5 Opportunities for Development

From the site analysis and investigation into the opportunities and constraints of the West Side Precinct the following development sites have emerged for further investigation (**Figure 27**)

1. The Pacific Highway & Coronation Street – This site anchors the prominent northern gateway intersection to the heart of the West Side Precinct. This site is under two ownerships with excellent site aspect and access.
2. Coronation Street – This site is in Council ownership with no heritage restrictions.
3. Lyon Group Site – As part of a development consortium this site has an excellent position adjacent to Hornsby Park and fronting the Pacific Highway.
4. Triangle Site – As part of a development consortium this site has an excellent position adjacent to the rail station with high levels of pedestrian activity and potentially large enough to support an anchor tenant such as a small supermarket.
5. Dural Street Carpark – This site is under Council ownership.
6. William Street Carpark – This site is under Council ownership.
7. Southern Gateway – Fragmented ownership may reduce the development potential of this site, though there are no heritage constraints. The prominent position of this site terminates the vista of the Pacific Highway from the east.



Figure 27 – Potential development sites

5.0 Engagement

5.1 Design & Visioning Workshop

On the 21st of November 2012 a design workshop was held. The purpose of the workshop was to bring together the consultant teams (urban design, economic and traffic) and Council to:

- Report the initial findings of each of the teams to gain a comprehensive understanding of the issues relating to the West Side Precinct;
- Develop a vision for the future of the precinct; and
- Explore, discuss and develop principles for the built form and the public domain needed to deliver the vision.

Land Economics Hill PDA

Hill PDA has conducted a Preliminary Feasibility Analysis on Council's original brief which required a minimum employment generating FSR of 2:1 in any redevelopment of the West Side.

The Feasibility Analysis concludes that development with a 2:1 minimum employment generating FSR with residential units above would not be feasible until building heights reach 16-20 storeys. The Analysis also states that such a level of commercial floor space is expected to exceed demand and therefore, amalgamation and redevelopment would be difficult to encourage.

The Analysis concludes that lower minimum FSRs for employment generating development would be more feasible and that 1:1 could be sustainable subject to the overall building height controls. Based on these findings, the urban design review has been progressed on the basis of a requirement for a minimum employment generating FSR of 1:1.

Traffic and Parking - Bitzios Consulting

Bitzios Consulting has been engaged by Council to undertake traffic and parking study to assist in the review of the planning controls. The purpose of the study is to:

- assess existing traffic conditions;
- determine impacts from proposed new development and associated traffic improvement works required; and
- analyse existing and projected parking conditions.

Existing Traffic Conditions

A Paramics micro-simulation model has been created to cover the west side precinct and the major roads to the north, south and east (Bridge Road, Edgeworth David Avenue and George Street). The model has been calibrated and validated to RMS requirements, covering the weekday periods 0700 to 0900 and 1500 to 1800.

In general, southbound traffic is heavier in the AM peak period, and northbound in the PM peak period and traffic volumes are heavier on George Street than Pacific Highway. The model also revealed traffic 'hot spots' on Bridge Road between the Pacific Highway and George Street, and in the vicinity of Pacific Highway and George Street.

An analysis of existing car parking was also undertaken.

Figure 28 and the corresponding table illustrate the quantum and location of existing public car parking, both structured and on-street.

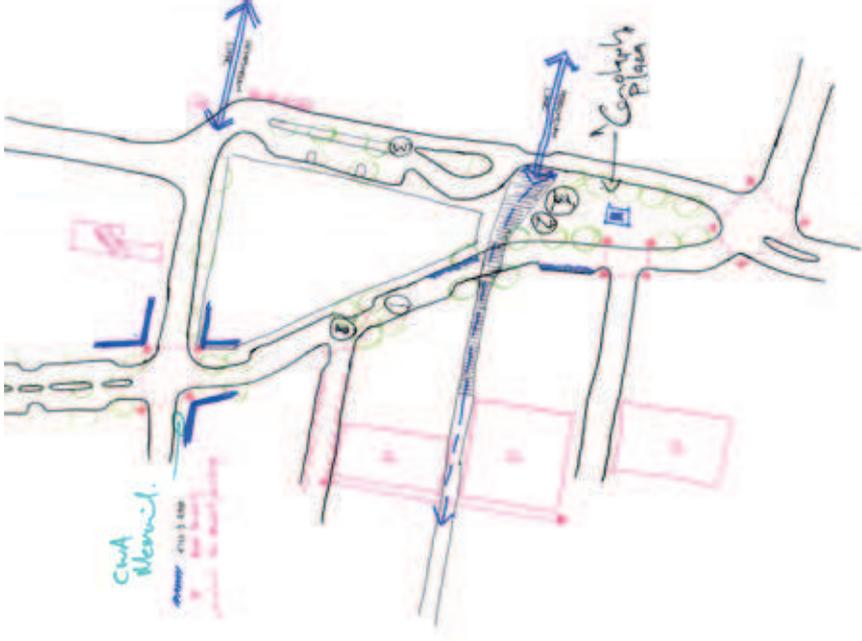


Figure 28 – Parking locations

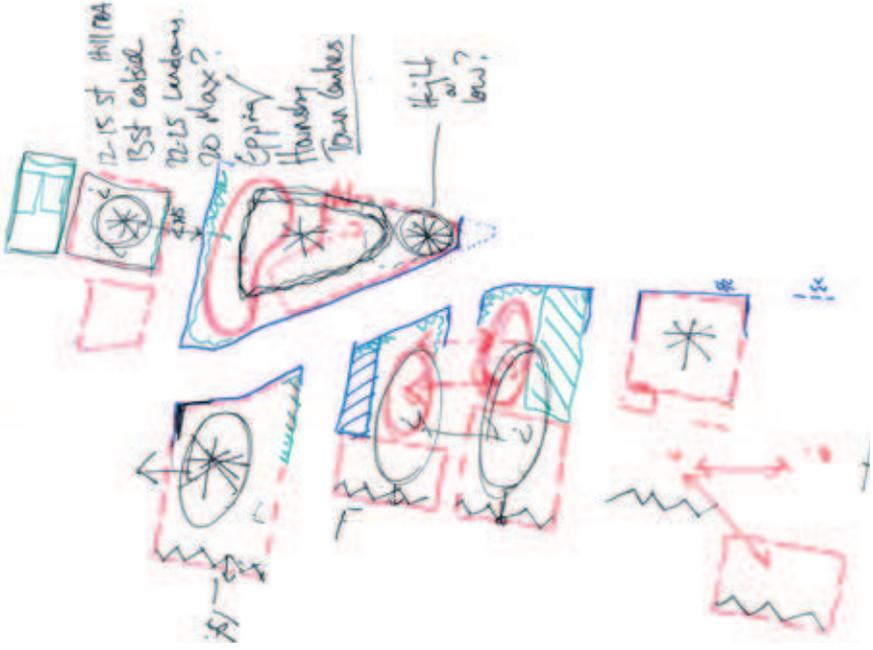
The results of the visioning exercise illustrated a strong desire for change and renewal with the acknowledgement that the existing character and urban structure of the precinct are valuable assets that should inform any interventions in the future.

Some of the themes and ideas discussed can be seen in the diagram to the right.

Public Domain Principles



Built Form Principles



5.2 Stakeholder Workshop

On 12 December 2012 a workshop was held for landowners within the West Side Precinct at the Council Chambers. The purpose of the workshop was to:

- Report the initial findings of the consultant teams regarding the opportunities and constraints and to illustrate a comprehensive understanding of the issues relating to the West Side Precinct;
- Inform the owners of the planning process and the history of the project; and
- Explore and discuss with the landowners issues relating to the study area and to gain insights into barriers to development in the area.

The results of the workshop illustrated:

- Need to rethink the current planning controls which have hindered redevelopment within the West Side Precinct and are seen as a reason for the decline within the area;
- A high level of enthusiasm and support for change though a good deal of scepticism that anything will happen; and
- Many of the landowners are ready to redevelop if suitable planning controls that allow for feasible development are adopted.



5.3 Community Survey

Between 6 December 2012 and 18 December 2012 Council surveyed the community about their perceptions and patronage of the West Side and what would be important in any revitalisation or redevelopment. A total of 660 responses were received.

The survey results show that:

- The main reasons for visiting the West Side include shopping, dining and catching the train;
- People would visit the West Side more often if there were better shops and more restaurants/cafes and outdoor dining;
- Some of the best things about the West Side are the character and atmosphere, the cafes, the Odeon Cinema, the RSL, and the fact that it is not Westfield;
- Some of the worst things about the West Side are its appearance and condition and the traffic;
- The majority of the community think the maximum height should remain at 5 storeys;
- In any revitalisation or redevelopment it would be important for the West Side to be pedestrian friendly, with convenient access to shops and lots of green space and landscaping; and
- In any revitalisation or redevelopment there would be support for improved pedestrian links, a market space/ town square, more retail shops and more parking.

Further information on survey results is contained within the Consultation Report - The Future of Hornsby West Side, prepared by Council.

6.0 Summary

The following is a summary of the opportunities and constraints for the West Side Precinct.

Opportunities

- Connected street network allows for a variety of redevelopment opportunities.
- Existing laneways provide a secondary vehicular network and allow for a higher quality streetscape.
- Development that fronts the street helping to create the potential for more active streetscapes.
- Access to major rail and bus serves.
- Council carparks are an asset to the community and the Council. Opportunities to redevelop while maintaining similar carparking numbers.
- Development consortia with major sites in high profiles areas within the West Side Precinct can help jump start new development and public domain works.
- General support for change from the landowners within the precinct.

Constraints

- Existing controls that seek to preserve the 'Old Town Centre' and heritage values.
- Retail dominance of the Westfield Shopping Centre.
- Reluctant to develop over the rail line contributes to a disconnected CBD as a whole.
- Bus interchange impedes the restructuring of Station Street.
- Heritage buildings may hinder site amalgamation and redevelopment.
- Land ownership patterns not conducive to redevelopment.
- Vehicular traffic along Pacific Highway hinders the creation of a 'High Street' character.

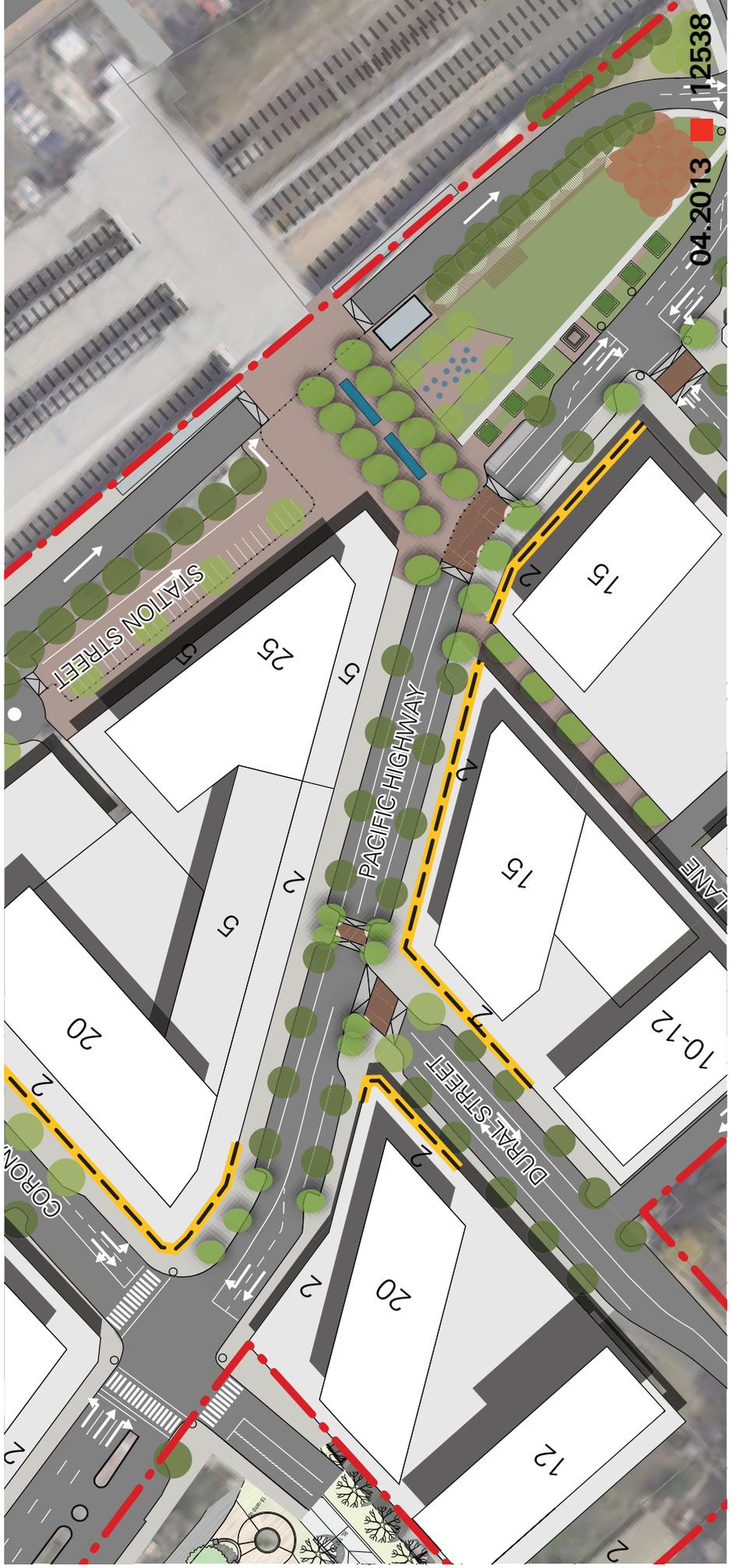
Key Elements of Structure Plan

- Retain character through significant facade retention and reuse
- Heritage items important to the community include the Odeon Cinema
- Change to the road layout to improve the pedestrian experience
- Establishment of an arrival sequence through the public domain and built form heights
- Capitalise on the opportunity to create an iconic site as pedestrians arrive from the station



Hornsby West Side Precinct

Draft Structure Plan



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1.0 Introduction

1.1 About this Study

This Structure Plan has been prepared by JBA on behalf of Hornsby Shire Council. It relates to the western side of the Hornsby CBD, known as the Hornsby West Side Precinct. The study area is defined in Figure 1.

The Structure Plan has been prepared in close consultation with Hill PDA and Bitzios Consulting, and is based on the findings of the Urban Design Analysis (JBA), Economic Studies (Hill PDA), Traffic Studies (Bitzios Consulting) and community consultation.

1.2 Study Team

The study team comprises:

JBA	Urban Design & Planning
Arcadia Landscape Architecture	Public Domain
Bitzios Consulting	Traffic & Transport
Hill PDA	Property Economics



Figure 1 – Study Area

2.0 Structure Plan

The Hornsby West Side Urban Structure Plan (**Figure 2**) is the guiding document that will shape the future built form and public domain for the West Side Precinct. The aim of this structure plan is to facilitate renewal within the precinct while providing greater amenity and a high quality public domain.

Principles

- Elevate the West Side Precinct as the 'Heart of Hornsby'.
- Rejuvenate the West Side Precinct through redevelopment and public domain improvements.
- Provide a point of difference to the East Side of Hornsby by retaining a traditional high street experience.
- Develop high quality public places for public gatherings, cultural and seasonal events and everyday casual meetings.
- Transform the Pacific Highway from a highway to a High Street creating an improved pedestrian experience.
- Increase development potential to allow for appropriate and feasible mixed use development.
- Encourage a new residential population to live, shop and recreate in the West Side Precinct.
- Connecting the major public open spaces with street trees and landscaping.

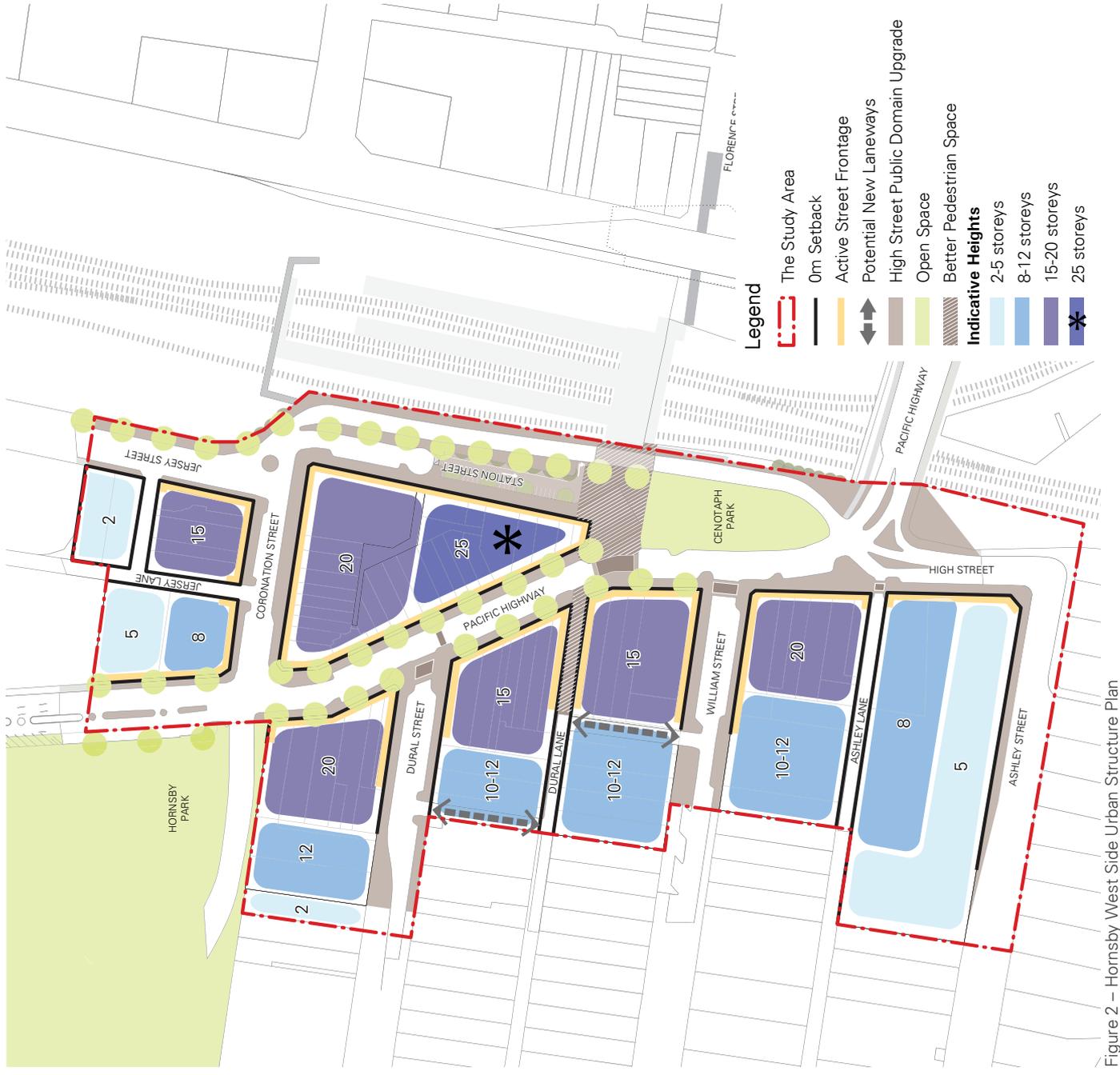


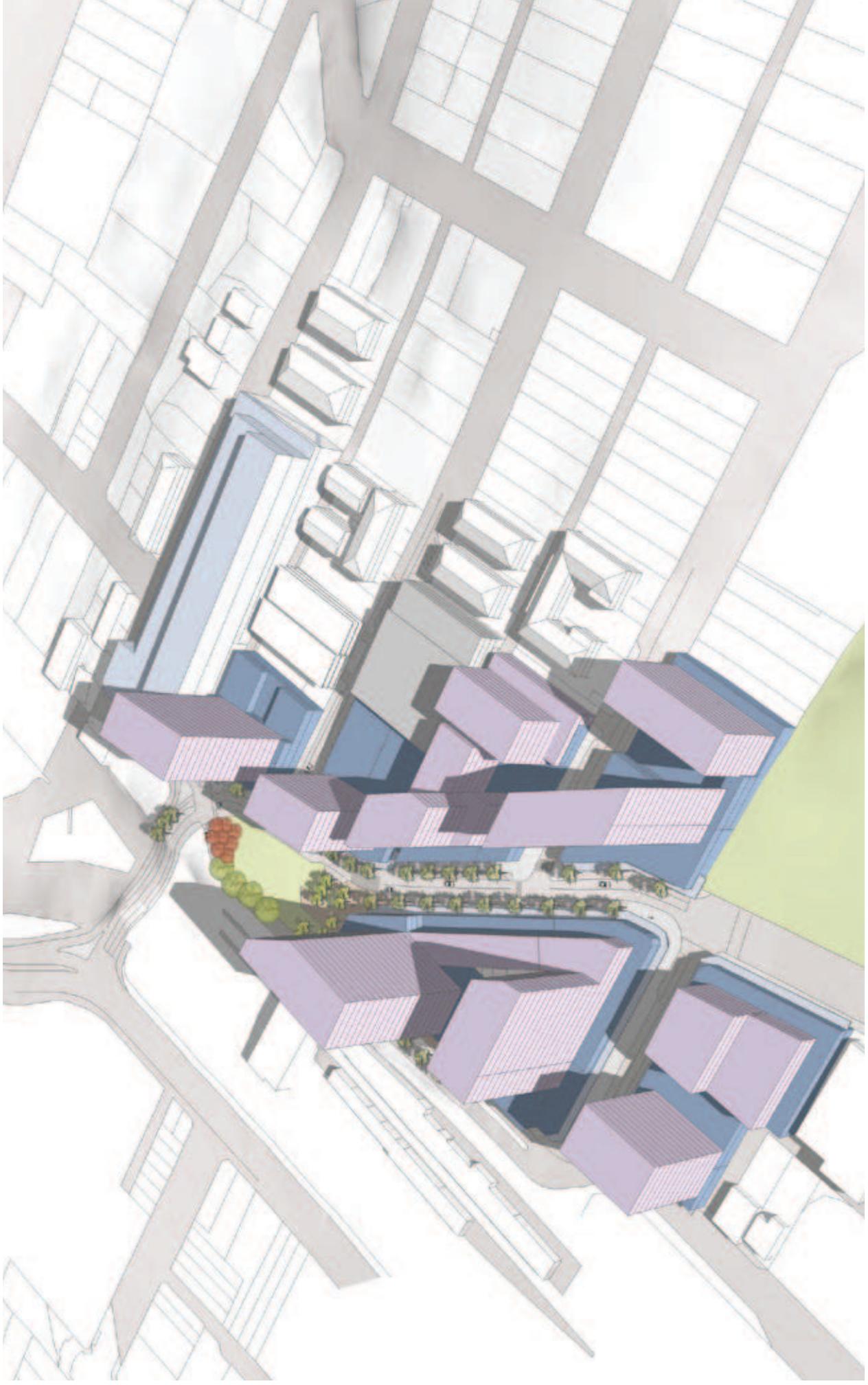
Figure 2 – Hornsby West Side Urban Structure Plan

Illustrative Concept - View towards Hornsby Park (north)



Note: Building envelopes shown are indicative only

Illustrative Concept - View from Hornsby Park (south)



Note: Building envelopes shown are indicative only

Indicative Overshadowing (Winter)



9am June 21



12pm June 21



3pm June 21

2.1 Built Form

Building Height

Principles

- Promote heights that are consistent with other significant town centres within the hierarchy of centres established in the Sydney Metropolitan Strategy.
- Re-establish the West Side Precinct as the heart of Hornsby through signature buildings and increased building heights.
- Locate higher buildings along the main street ridge and prominent gateway and icon locations.
- Provide a height transition to appropriately interface with residential areas to the west and civic buildings to the north.
- Balance development feasibility, urban design objectives and overshadowing impacts.

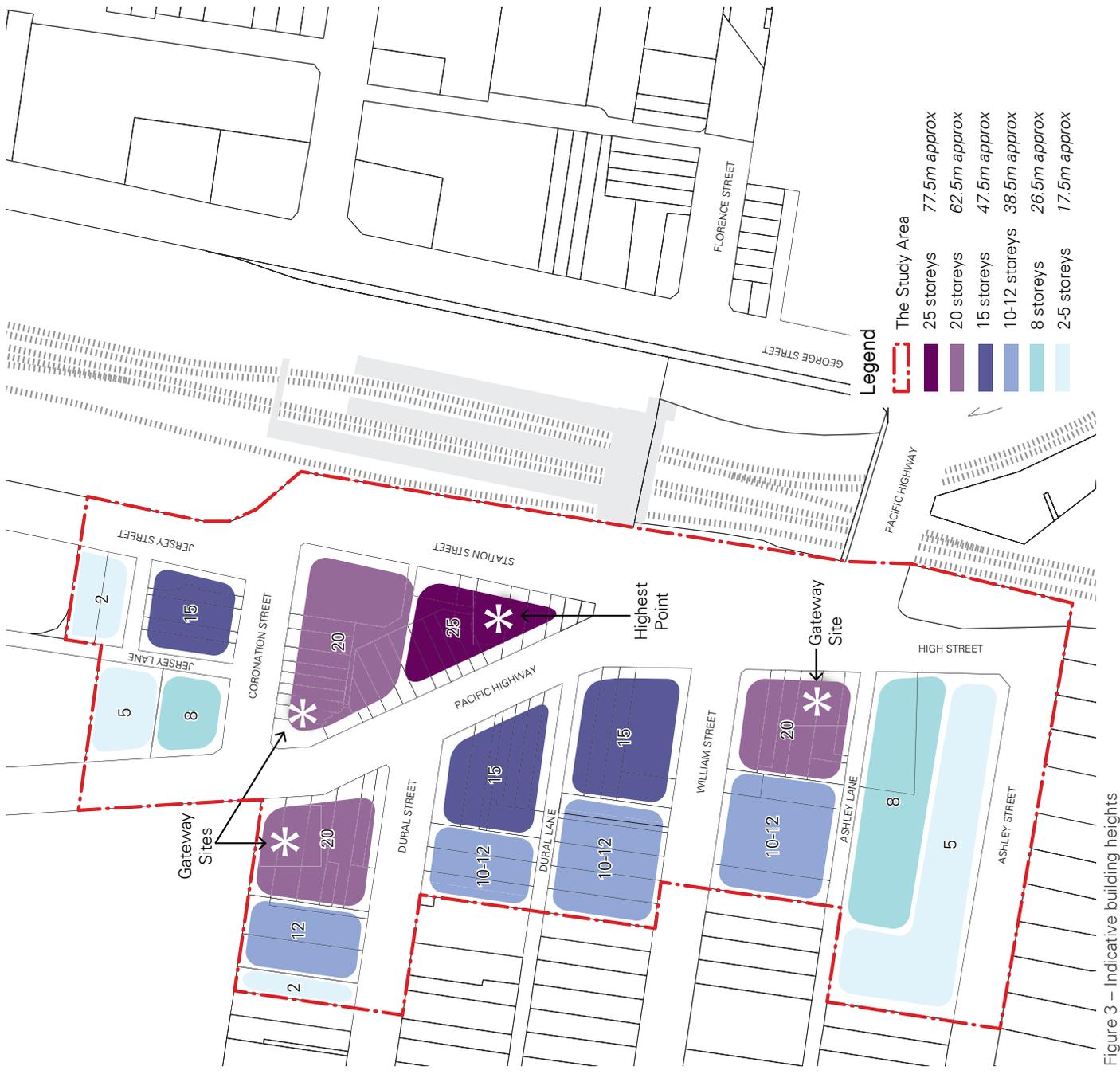


Figure 3 – Indicative building heights

Build To and Setbacks

Principles

- Maintain the traditional town centre character of block edge form.
- Encourage a safe public domain with no ambiguous spaces.
- Promote street front activities and visual interest at ground level, especially along streets and lanes of high pedestrian use.
- Strengthen activity along the main activity streets with retailing, business service, customer service, restaurants, cafes and dining uses in suitable premises.
- To transition between the build to street boundary / city centre forms and the residential character adjoining the study area.

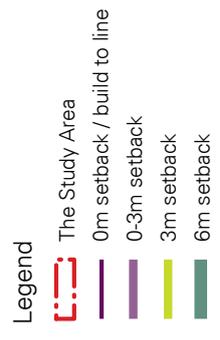
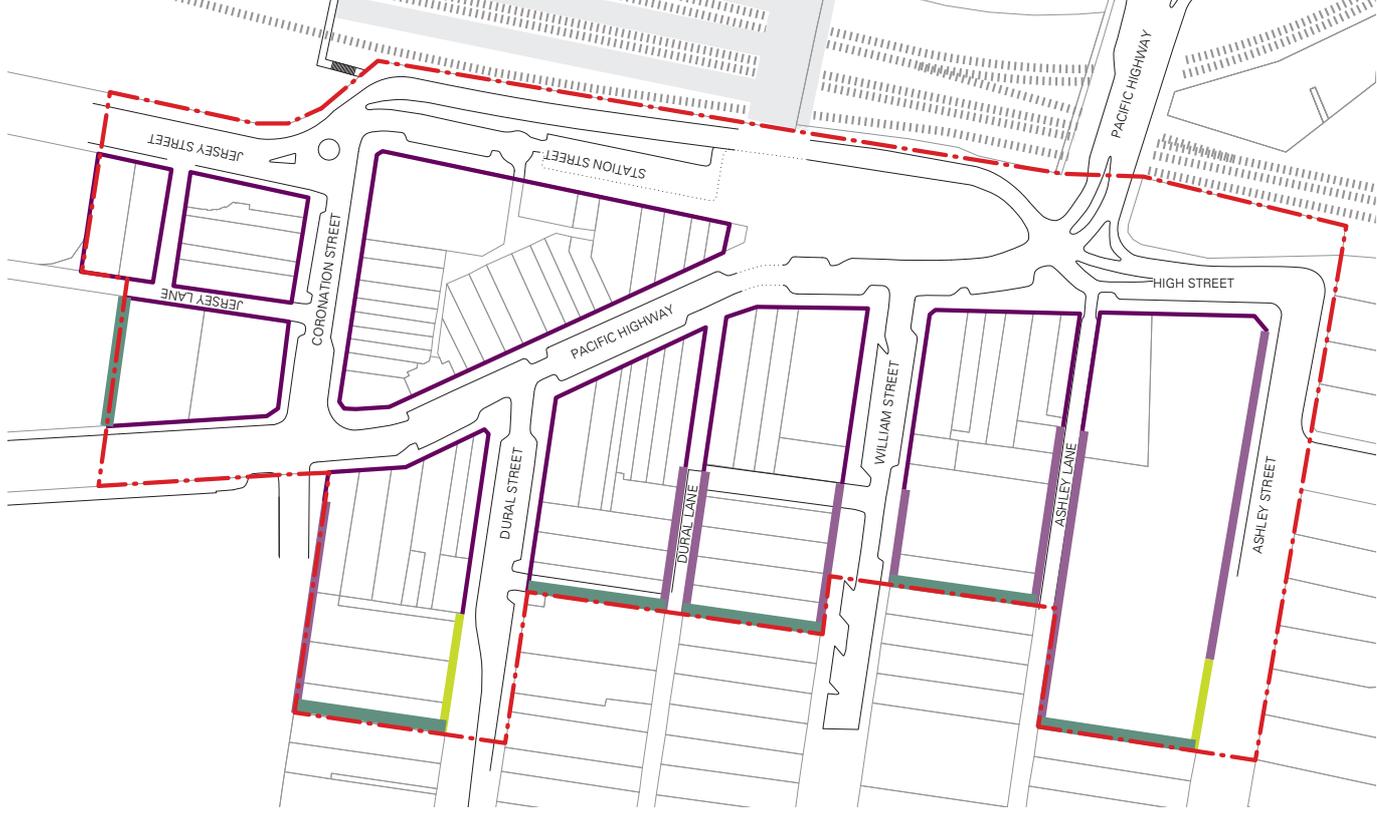


Figure 4 – Setbacks

Street Wall Height

Principles

- Develop a pedestrian scaled street level environment throughout the West Side Precinct, especially along the Pacific Highway.
- Emulate the traditional high street scale of the precinct by preserving a similar street wall height as the parapet line of existing buildings.
- Allow for the respectful integration of heritage buildings and retention of facades within new podiums.
- Provide a well proportioned enclosure to public open spaces without being dominated by tower forms.



Figure 5 – Street wall heights and tower setbacks

2 Storey Form

- Provides a well scaled pedestrian environment
- Alludes to the historic past of the precinct without being constrained by heritage.
- Objective is to integrate respectfully with retained facades and typical parapet height of heritage buildings (approx. 10m).



3 Storey Form

- Gateway frame and termination of Pacific Highway vista from the east.
- Continues current RSL parapet height.



5 Storey Form

- Frames central public open space and forms prominent icon site.
- Spatially contains the area of Station Street and the bus interchange.

Legend

- The Study Area
- 2 storeys
- 3 storeys
- 5 storeys
- Setback line for tower element

Street Wall Height cont...



Establish a similar street wall height as the parapet line of existing buildings



Figure 6 – Section through Station Street and the Pacific Highway looking south

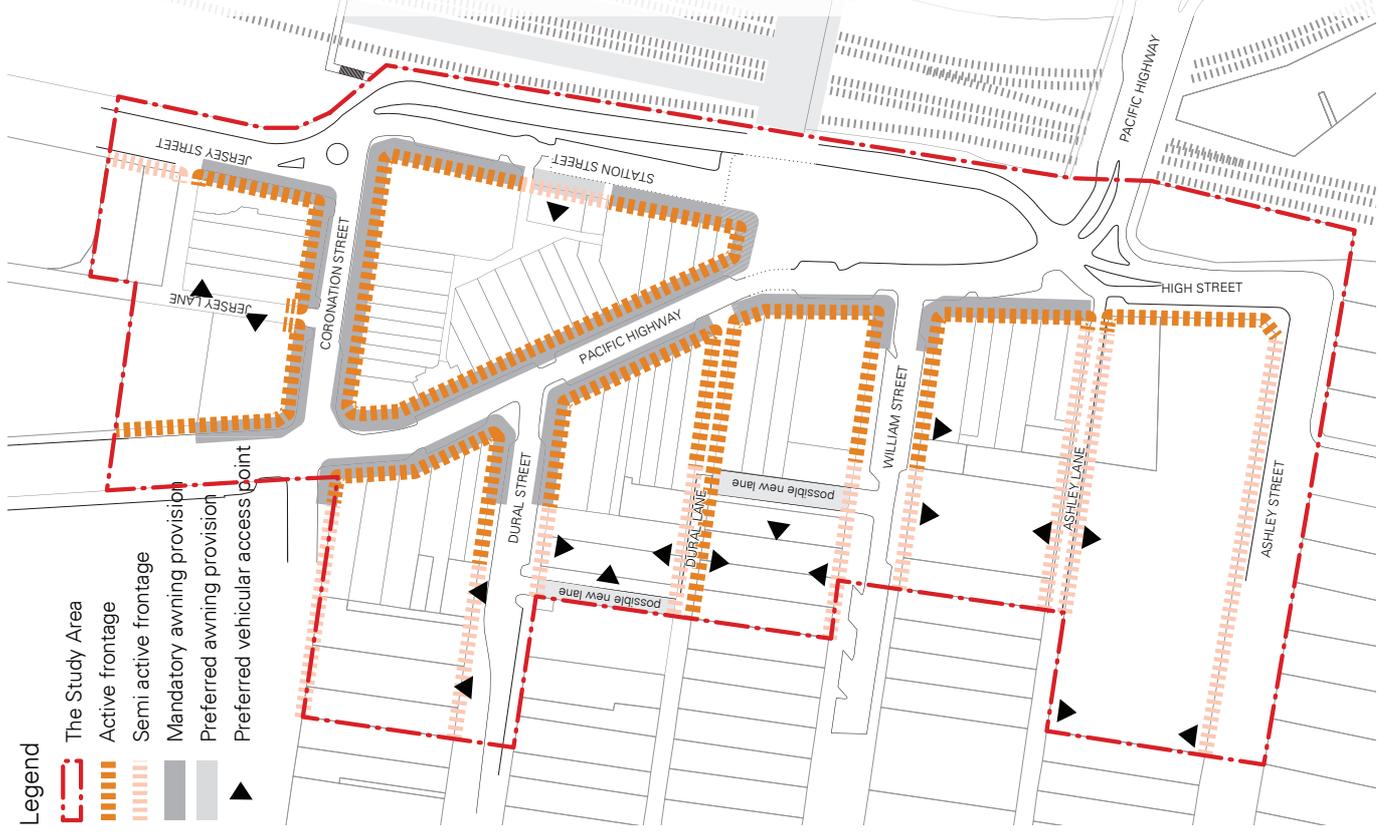
Active Frontages & Awning Locations

Principles

- Maintain the traditional street based retail and commercial experience throughout the precinct core.
- Provide street level activation along the primary pedestrian movement network.
- Capitalise on the movement economy of the centre to activate retail uses.
- Discourage internalised arcades.
- Provide “fine grain” traditional sized shop fronts.
- Increase pedestrian amenity with continuous weather protection along the key pedestrian streets.
- No vehicular access from the Pacific Highway or Coronation Street.

Legend

- The Study Area
- Active frontage
- Semi active frontage
- Mandatory awning provision
- Preferred awning provision
- Preferred vehicular access point



Active Frontage

- Active frontages are typically retail or commercial uses that directly engage the street to provide street life and interest.
- Typically built to the street boundary of the primary pedestrian streets.
- Buildings are proportioned to provide a regular rhythm of solid to opening. This can be an entrance or shop window.
- Entry lobbies to large apartment complexes can also be considered active due to high volumes of people leaving and arriving.
- Facade treatment should wrap corners of secondary streets and lanes to minimise abrupt transitions and add to the surveillance of the secondary frontage.
- Should have an awning cover.



Semi Active Frontage

- Frontages that may be more residential in nature though do not prohibit retail or commercial uses.
- Typically transitions between Active frontages and the suburban quality to the west, south or park edge.
- Usually not built to street but a small setback off the street to allow for greater levels of landscaping.

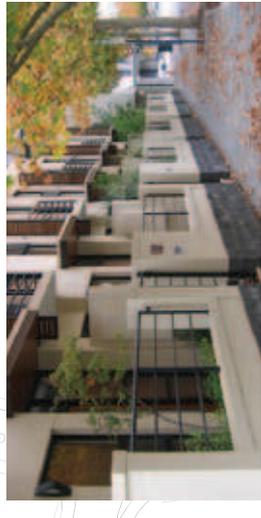


Figure 7 – Active Frontages & Awning Locations

Heritage and Facade Retention

Principles

- Ensure that development located in the vicinity of a heritage item is designed and sited to have regard to the heritage significance of the heritage item and its setting.
- Encourage the retention of significant heritage items.
- Facilitate adaptive re-use of heritage items where appropriate.
- Retain high quality facades where possible to help maintain the traditional streetscape character and experience of the precinct.
- New development interfacing with heritage items or retained facades should emulate the scale and rhythm of the retained building to contribute the overall character of the West Side Precinct conservation area.



Legend

- The Study Area
- Significant heritage item
- Other heritage items
- Preferred retention of building facade

Figure 8 – Heritage & Facade Retention

2.2 Street Network

Principles

- Move Station Street / Pacific Highway junction to south to create new 4-way intersection with High Street with egress only out of Station Street.
- Modify existing Station Street layout to incorporate turn around ability and 90 degree parking.
- Modify turning lanes at Pacific Highway / William Street junction.
- Pedestrianise the eastern end of Dural Lane (where it meets the Pacific Highway).
- Formalise access lanes through the Council car park sites (as part of any redevelopment) to link Dural Street to Dural Lane and William Street to Dural Lane. Exact location of access lanes to be flexibility.

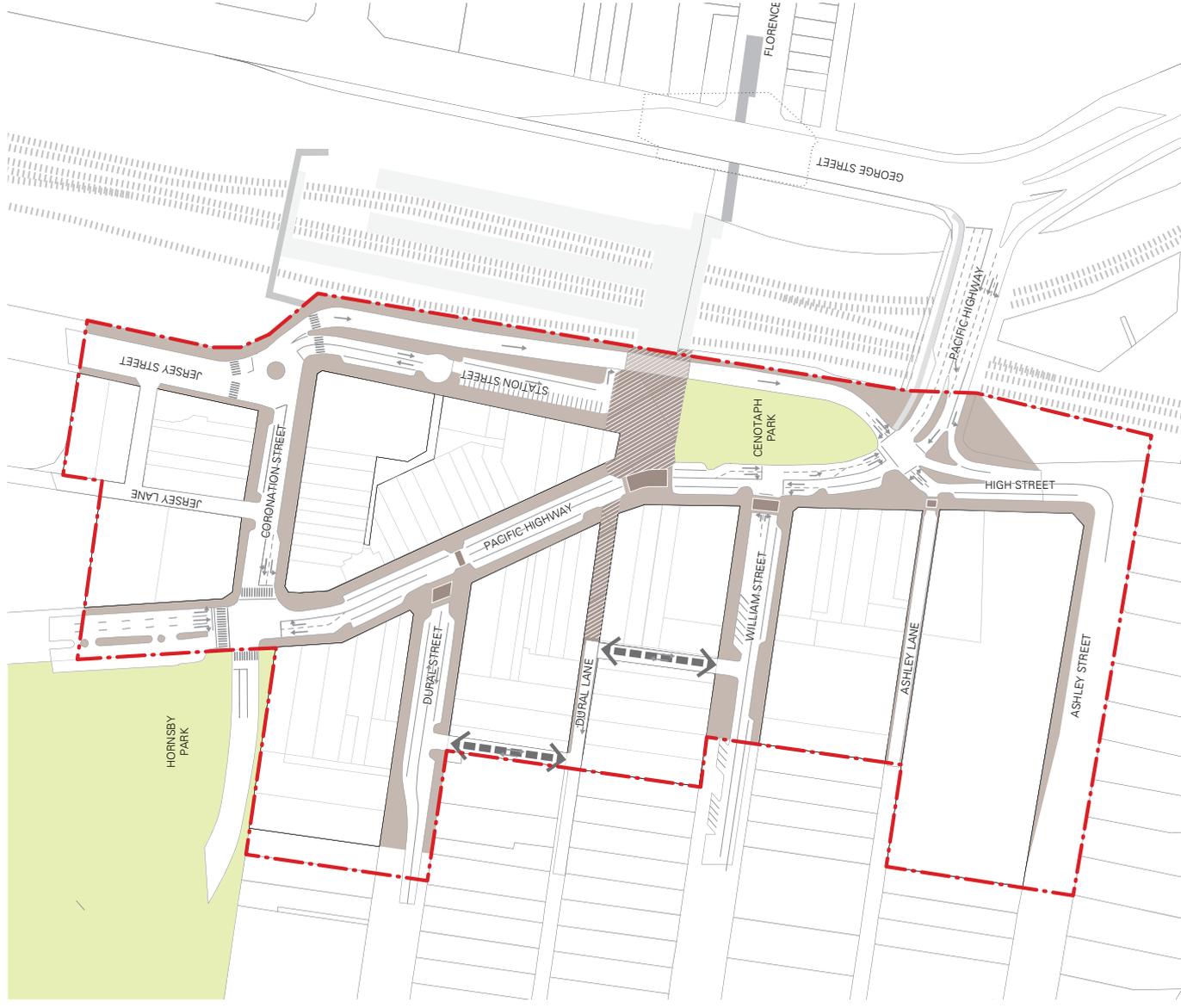


Figure 9 – Proposed Street Configuration

2.3 Public Domain Plan

Principles

- Promote walkability with pedestrian priority and amenity improvements.
- Rationalise carriageway for local traffic volumes and return space to the public realm for improved amenity.
- Encourage outdoor dining, seating and active uses along streets.
- Create West Hornsby Town Centre identity and outdoor civic space through placemaking.
- Retain highly desirable on street car parking and overall parking spaces.
- Provide street and open space tree plantings as part of greening strategy for the town centre.

The Public Domain Plan has been broken down into five character areas to better understand the principles for each area.

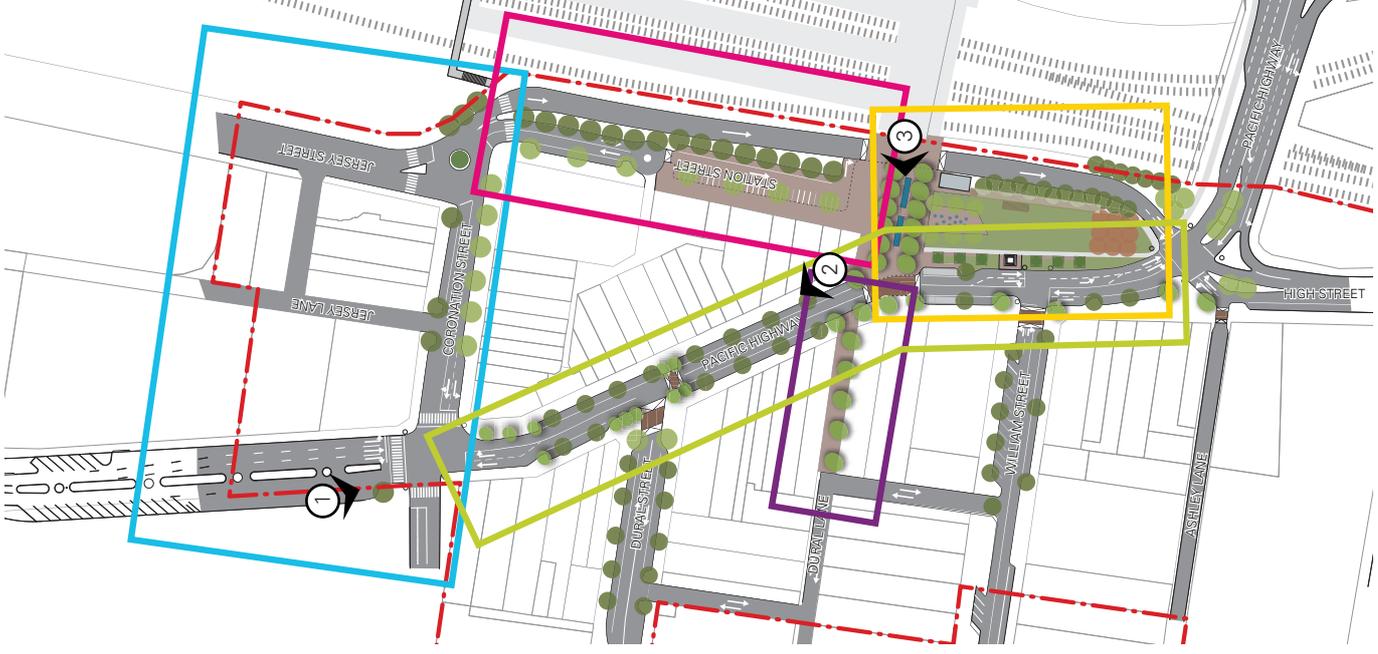


Figure 10 – Public Domain Structure Plan

2.5 Public Domain Detail Plans

Cenotaph Plaza & Southern Gateway

Principles

- Pedestrian plaza to address link through to eastern part of Town Centre and Railway Station
- Improve pedestrian safety and circulation with reduction of informal road crossing points and provision of pedestrian priority crossings to station entrance and across Pacific Highway at plaza
- Provide ample seating opportunities to both the plaza and park to encourage habitation of the spaces
- Integration of water elements to the edge of plaza / park for evaporative cooling and play
- Retain civic / memorial elements
- Adaptable open space provides potential community gathering space to complement future uses of Station Street and Plaza
- Multitude of zones / features within the open space to cater to wide variety of users
- Screening of the rail corridor and enclosure of the open space through planting
- Reduce the extent of the roadway with kerb realignment as a means of calming traffic and increasing the area of public realm
- Provide kiss and ride zones to Pacific Highway for convenient access to the railway station without requiring extra traffic movements
- Integrate feature elements and treatments to new public realm areas on focal entry axes
- Street edge and median planting to be implemented where feasible



Figure 11 – Public Domain Plan: Cenotaph Plaza & Southern Gateway

Station Street & Bus Interchange
Principles

- Enhance the pedestrian experience and provide strong connections to Coronation Street, Aquatic Centre and Civic Precinct
- Improve safety and accessibility for users
- Provide access to service area / future underground parking
- Create an adaptable community space that can exclude traffic functions as required
- Encourage outdoor dining, seating and active uses
- Reduce the scale of the space and provide screening of the Rail corridor utilising large trees to central median
- Discourage vehicle circulation through Cenotaph Plaza while still providing access
- Provide convenient, short stay car parking for access to shops and services
- Areas for Taxi rank / service vehicles to be included

Legend

- Roads
- Feature Paving Zone
- Raised Pedestrian Crossing
- Threshold
- Turf
- Existing Trees
- Feature Tree Planting
- Evergreen Tree
- Deciduous Tree
- Outdoor Dining Opportunity *

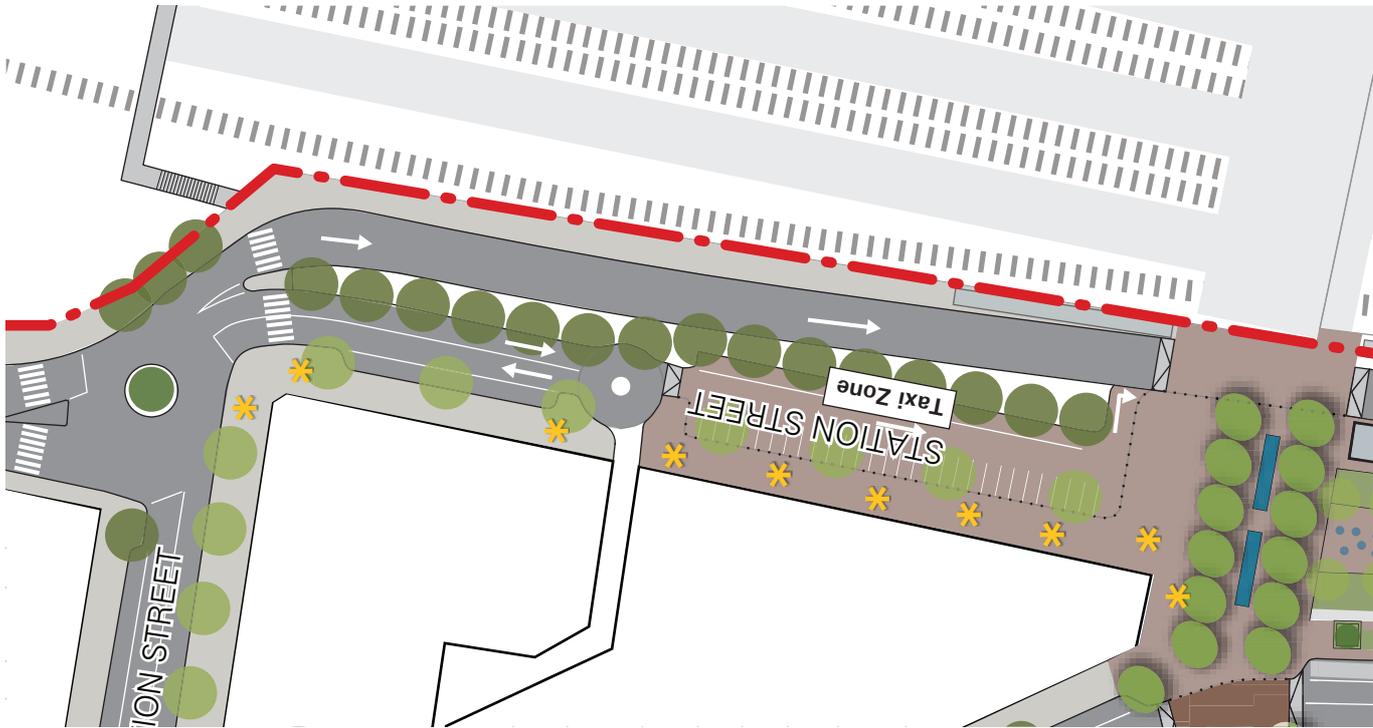
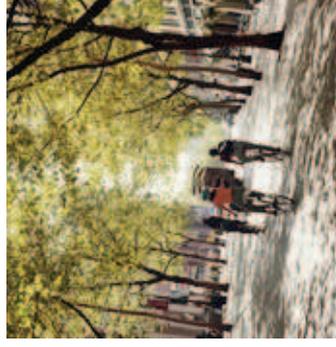


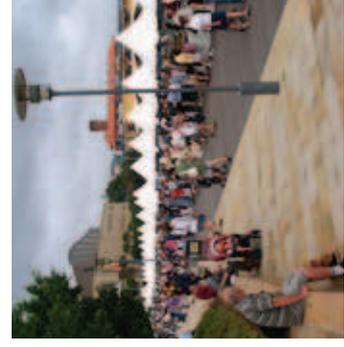
Figure 12 – Public Domain Plan: Station Street & Bus Interchange



Provision of comfortable spaces for gathering



Accessibility improved for all users



Adaptable community space provided

Main Street (Pacific Highway)

Principles

- Promote outdoor dining, seating and active uses from Coronation Street to High Street
- Improve pedestrian circulation and give priority at intersections and crossings
- Reduce the extent of the roadway with kerb realignment as a means of calming traffic and increasing the area of public realm
- Establish regular street tree plantings
- Provide feature tree plantings at nodal points that offer microclimatic benefits adjacent to the public realm
- Enhance facade and awning treatments to provide complementary character and improve pedestrian amenity

Legend

- Roads
- Feature Paving Zone
- Raised Pedestrian Crossing
- Threshold
- Turf
- Existing Trees
- Feature Tree Planting
- Evergreen Tree
- Deciduous Tree
- Outdoor Dining Opportunity *



Figure 13 – Public Domain Plan: Main Street (Pacific Highway)



Streets reduced and turned into public realm



Trees and furniture improve microclimate



Activation of streets and lanes

2.6 Dural Lane

- Enhance the pedestrian experience from Main Street through to Council Carparks and beyond
- Pedestrianise portion of lane from Pacific Highway for approximately the depth of the one block
- Continue paving material and lighting from Cenotaph Plaza through the Dural Lane to visually connect the lane to the plaza and the rail station
- Integrate interpretive elements that celebrate local heritage and culture to create a connection between open spaces
- Line pedestrianised portion of the lane with active uses
- Encourage outdoor dining, cafes, small bars and shops

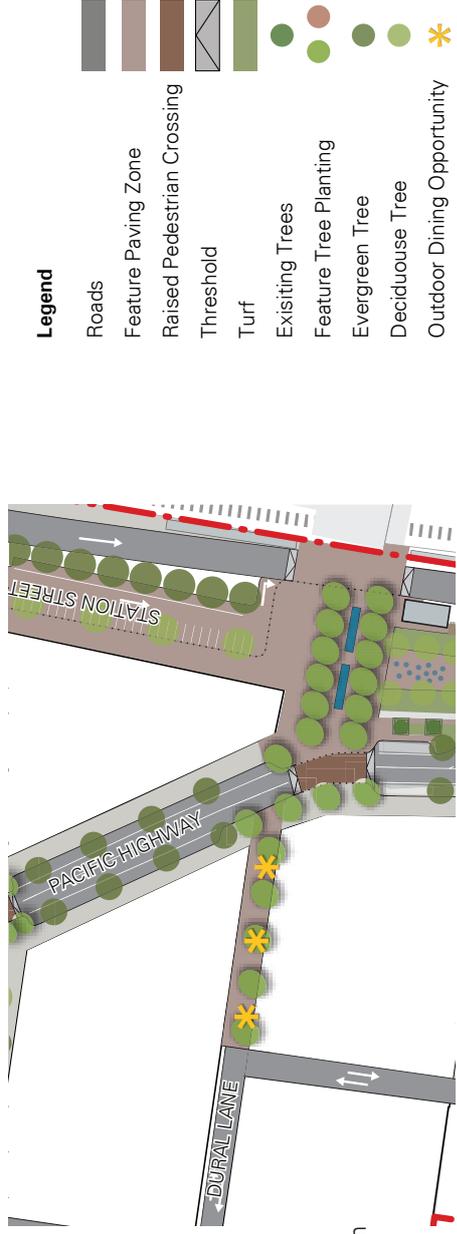


Figure 14 – Public Domain Plan: Dural Lane

Northern Gateway

Principles

- Promote outdoor dining, seating and active uses along Coronation Street
- Enhance facade and awning treatments to provide complementary character and improve pedestrian amenity
- Reduce street widths and remove parking to the southern side of the road
- Deciduous tree planting to southern verge to improve microclimates
- Investigate additional pedestrian overpass across rail corridor to Burdett Street
- Provide legible wayfinding and access for secondary pedestrian bridge link across the rail corridor

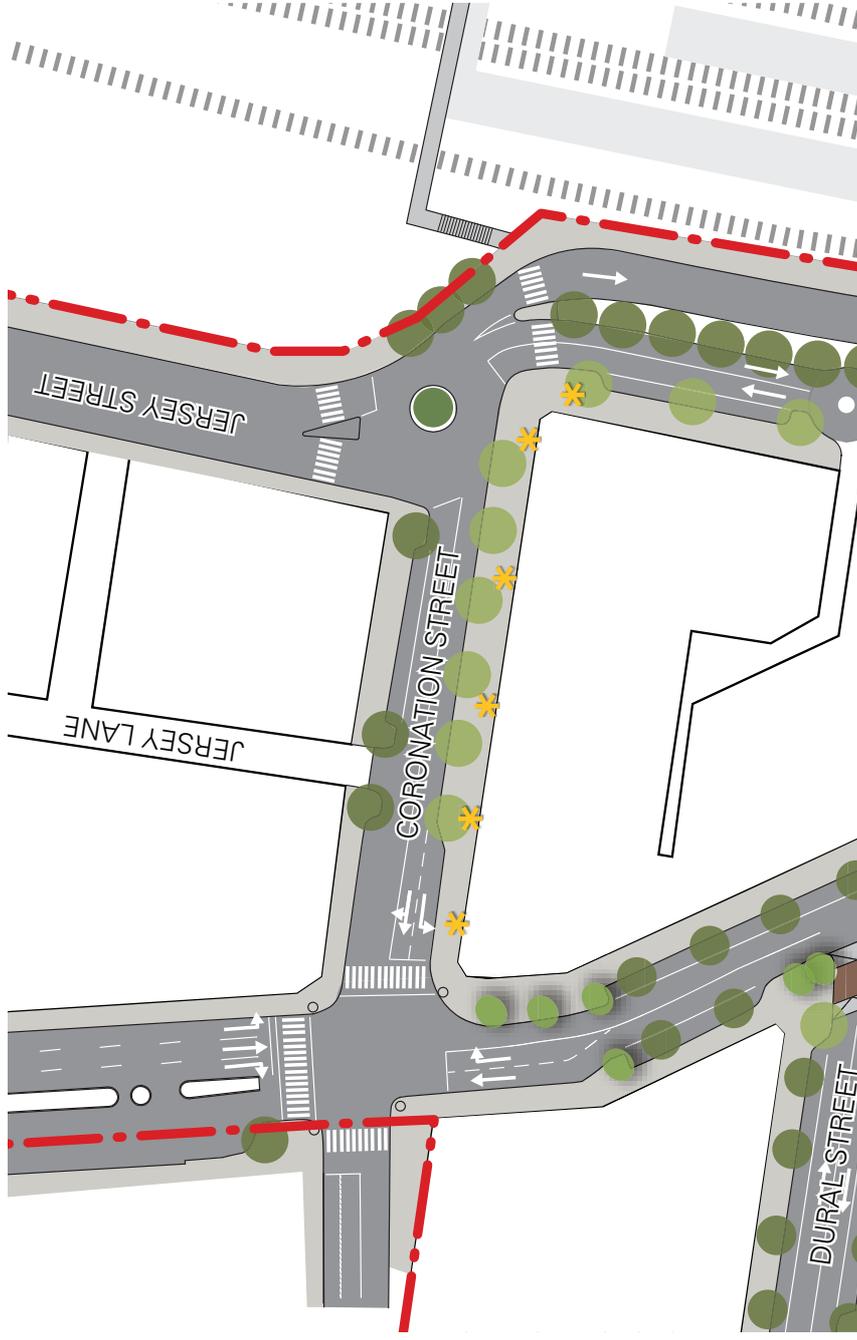
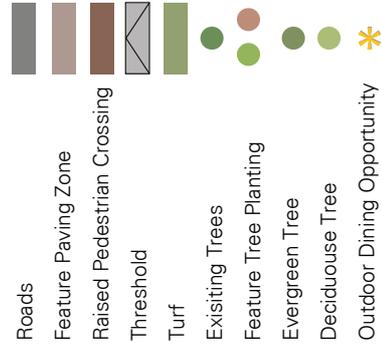


Figure 15 – Public Domain Plan: Northern Gateway



2.8 Tree Planting Strategy

Principles

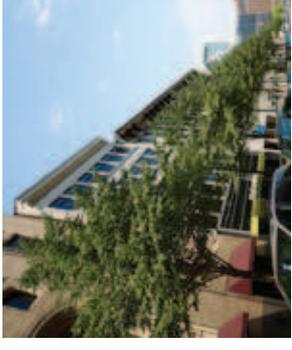
- Provide solar access to areas of low sunlight
- Provide shade to areas receiving hot summer sun
- Reduce the heat island effect by shading pavements and buildings where possible and substituting pavement for planted areas where feasible
- Provide year round greening
- Reduce the scale of adjacent built form through species selection and provision of acceptable growing medium to achieve large growth
- Where practical create bushland associations through utilisation of appropriate native tree and shrub species
- Placement of accent tree planting at nodal points
- Tree planting should be introduced in association with Water Sensitive Urban Design principles to ensure stormwater is recycled to irrigate street tree plantings
- Future tree species selection for the Hornsby West Precinct is to be coordinated with the street tree master plan in consultation with Council's Landscape Architect.

Legend

	Roads
	Feature Paving Zone
	Raised Pedestrian Crossing
	Threshold
	Turf
	Existing Trees
	Feature Tree Planting
	Evergreen Tree
	Deciduous Tree



Figure 16 – Tree Planting Strategy



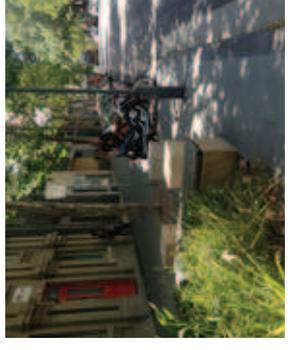
Trees reduce scale of adjacent development



Species selection creates bushland associations



Accent trees at high use nodal points



Pavement shading to reduce heat island effects

2.9 Public Carpark Options

Principles

- No net loss of carparking across the precinct.
- New carparks can be spread across precinct in conjunction with new development where desirable and feasible.
- Optimise on-street parking opportunities.

Scenario 1

- William Street Carpark sold for redevelopment.
- Dural Street Carpark retained with new 4-5 storey structured carpark to meet parking demand.



Scenario 2

- Dural Street Carpark sold for redevelopment.
- William Street Carpark retained with new 3 storey structured carpark to meet parking demand.



Figure 17 – Public carpark options

2.10 Indicative Development Yield

- The Structure Plan generates an indicative development yield of approximately additional 1,000 apartments and 30,000m² of non-residential floor space (ie retail and/ or commercial uses). The main assumptions used to generate these estimates include:
 - Yield may fluctuate by up to 10% above or below these figures;
 - The non-residential floor space is inclusive of the majority of existing non-residential floor space excluding the RSL club and theatre site;
 - Non-residential uses are constrained to the first and/or second storey;
 - Average gross apartment size (ie inclusive of circulation) of 100m²;
 - Residential efficiency (envelope to GFA) of 80%;
 - Non-residential efficiency (envelope to GFA) of 85%;
 - Yield has not been allocated to some sites such as the Telstra Exchange, the Theatre and RSL sites and some heritage sites on the grounds that the sites are constraints or are unlikely to redevelop; and
 - Certain assumptions around site amalgamation (see Figure 18). Alternative and additional amalgamations are possible and this may impact upon development yield.

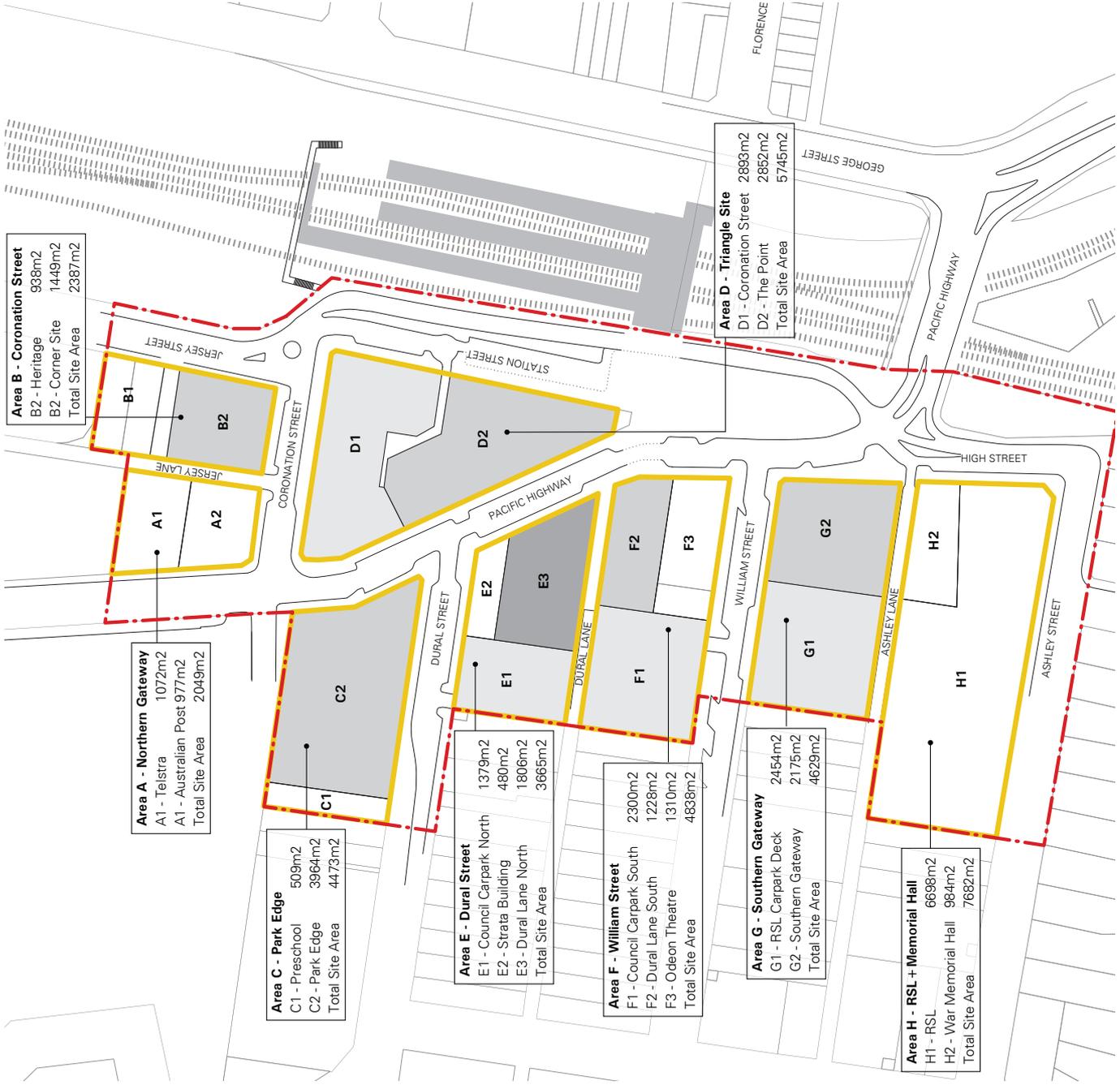


Figure 18 – Development scenario testing