



Masterplan Strategies

Masterplan Strategies



Figure 34: Masterplan Strategy One: Street Hierarchy



Figure 35: Masterplan Strategy Two: Public Open Space in Built-Up Areas

1 STRATEGY ONE: A HIERARCHY OF STREETS AND PEDESTRIAN LINKS

The Mascot Station Town Centre Precinct is well served by regional roads at its perimeter. Currently, Bourke Street and Church Avenue carry little regional traffic and provide pedestrian access to the railway station and amenity to existing Town Centre residents. The opportunity exists to enhance the roles of Bourke Street and Church Avenue as traffic-calmed streets, with good pedestrian amenity and serving a range of transport modes, including buses, taxis, service vehicles, bicycles and pedestrians.

The hierarchy of streets and pedestrian links is reinforced with new local streets and pedestrian links on sites west of Bourke Street and north of Coward Street. These will carry predominantly traffic related to the development of these sites, as through traffic links are limited to connections with Bourke Street. A pedestrian arcade is proposed through the retail core linking Bourke Street to the north-south New Street. Traffic calmed New Streets, with high levels of pedestrian amenity are located in the heart of the Precinct, separated from the regional roads.

2 STRATEGY TWO: PUBLIC OPEN SPACE IN BUILT-UP AREAS

The Town Centre Precinct is rapidly transforming from low density industrial uses to higher density, primarily residential uses. With an influx of residents there is an increased need for public recreation spaces, including new parks and street closures, and the enhancement of the Sydney Water SWSOOS. The new parks and street closures are located adjacent to new medium to high density residential developments. Their location west of Bourke Street complements the open space of the SWSOOS to the east of Bourke Street.

- N
- PARKS AND OPEN SPACES
- REGIONAL ROADS
- TRAFFIC CALMED CENTRAL STREETS
- NEW LOCAL STREETS
- THROUGH-SITE LINKS

Masterplan Strategies (cont.)



Figure 36: Masterplan Strategy Three: Focus Retail at Mascot Railway Station and Bourke Street



Figure 37: Masterplan Strategy Four: Space Between Towers

3 STRATEGY THREE: FOCUS RETAIL AT MASCOT RAILWAY STATION AND BOURKE STREET

Mascot railway station is the pedestrian hub of the Town Centre. Rail passengers are rapidly increasing in numbers. The opportunity exists to create a thriving, pedestrian hub by focusing retail and services at the railway station. Good permeability of blocks and pedestrian amenity is achievable with pedestrian arcades, continuous active frontages, wide footpaths, awnings, street trees, public art and the like.

Bourke Street is the main retail street in the Town Centre Precinct. Retail on its western side up to Gardeners Road is an opportunity to connect the retail north of Gardeners Road with the railway station and to make a continuous retail main street in the heart of the Town Centre.

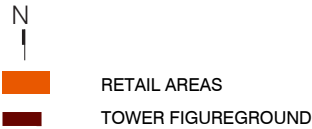
4 STRATEGY FOUR: SPACE BETWEEN TOWERS

The maximum building height of 44m (approximately 13 storeys) generates towers that have the potential to create continuous street walls and dark street canyons unless breaks are created between towers.

Spaces between towers provide sunlight to streets and courtyards. They also provide view corridors through blocks and out from courtyards, creating a sense of openness and connection to other parts of the Town Centre and beyond into the distance.

Spaces between towers reduce the potential for towers to be visually overbearing for pedestrians in the street. Towers become three-dimensional, with windows on all sides, providing the opportunity for façade articulation on all sides.

By providing spaces between towers, this emphasises the lower height of the podium buildings. The street has a predominantly 4 storey scale. There is an opportunity for architects to provide a defining cap to the 4 storey continuous street frontage building, and to differentiate it architecturally from the taller, separated towers. The maximum length of any tower at the street frontage above 4 storeys in height is 55m.





Mascot Station Town Centre Precinct Masterplan

Prepared for City of Botany Bay Council, April 2012

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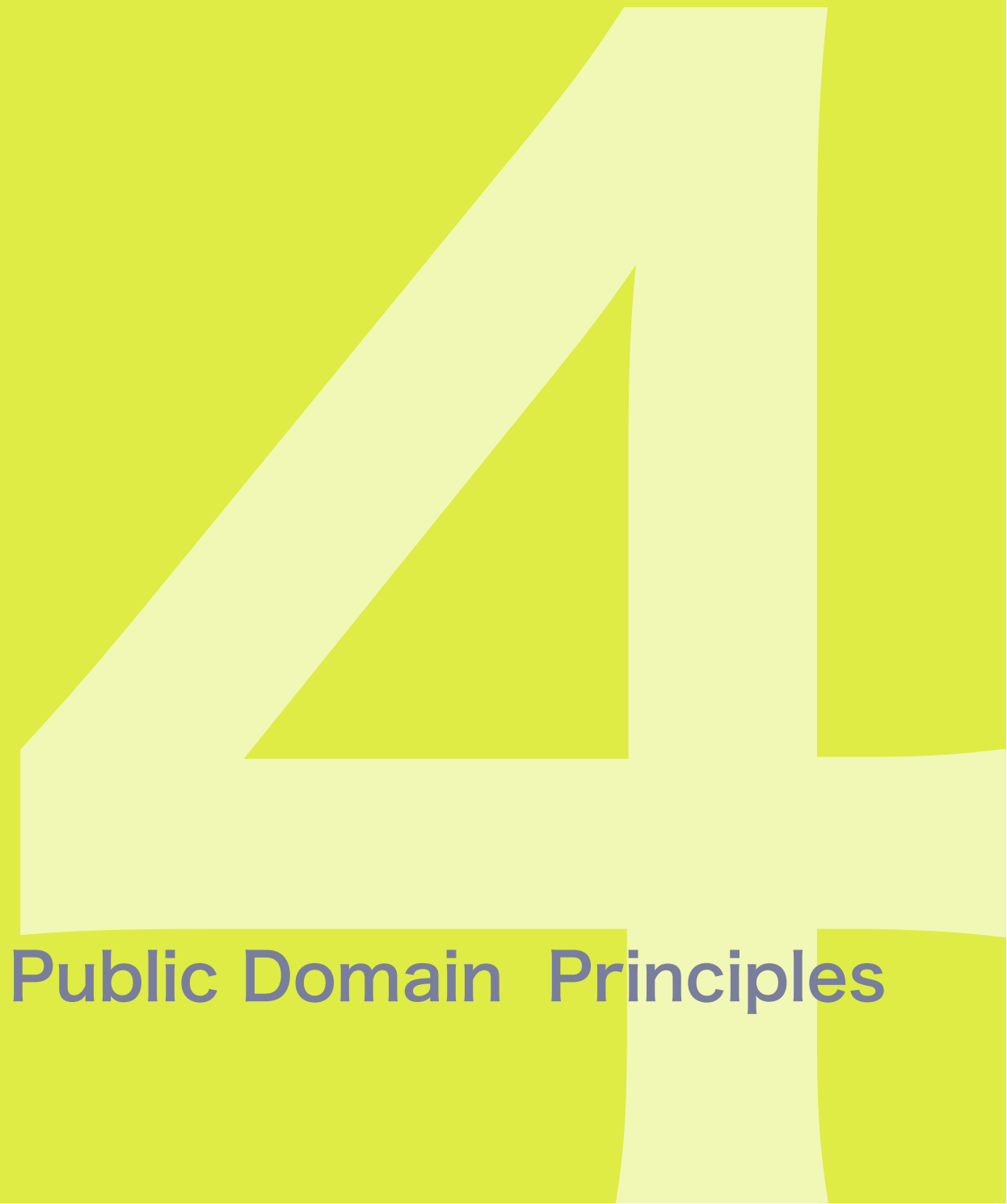
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Built Form and Public Domain Principles

Urban Blocks



Figure 31: Urban Block Comparison of Mascot, Melbourne, Sydney, Parramatta & Berlin all drawn to the same scale

ANALYSIS

The existing undeveloped sites in the Mascot Station Town Centre Precinct are very large, low-density industrial warehouses or distribution centre sites. These land uses require large, secure sites where pedestrian access is discouraged, often by having high fences around the sites and large blank walled secure sheds. These characteristics are completely at odds with creating a vibrant Town Centre, where active uses line streets and pedestrians walk from their apartments or offices to the rail station or shops, gaining access through permeable urban blocks. Also, the conversion from industrial sheds to primary residential high-rise buildings requires good vehicular and service access to all buildings and the provision of good street addresses to buildings.

The transformation of these very large existing sites into Town Centre blocks will require the extension of the network of streets and parks to create a permeable, walkable Town Centre. The appropriate degree of permeability is derived from comparisons with other relevant centres (Figure 31).

These centres are:

- A. Central Melbourne
- B. Central Sydney
- C. Parramatta and
- D. Berlin

These centres have been chosen on the basis that:

- Melbourne and Sydney have reasonable pedestrian permeability due to their street layouts, and both Councils have policies to enhance laneways and widen footpaths to improve pedestrian accessibility and amenity.
- Parramatta contains large urban blocks that are made more permeable by a network of lanes, places and squares in the centres of blocks.
- Berlin has been chosen as a European city example. It is, in fact, the European city with the largest urban blocks, and is therefore considered a fair comparison.

CONCLUSIONS FROM COMPARISON

- The Mascot Station Town Centre Precinct blocks are the same size as the Melbourne blocks between the major streets (Lonsdale, Bourke, Collins Street, etc). However the minor streets (Little Bourke, Little Collins Street, etc) and the lanes are entirely missing from the Mascot Town Centre. This minor streets and laneways contribute greatly to Melbourne pedestrian accessibility, vibrancy, nightlife and the like, with shops, cafes, bars interspersed throughout the small streets and laneways of the city.

Sydney's grid of major streets (Kent, Clarence, York, etc) is similar in spacing to Melbourne's major and little streets (Bourke Street and Little Bourke Street, etc). Central Sydney has approximately twice the permeability and twice the amount of public domain in comparison with Mascot Station Town Centre Precinct.

- Parramatta's major streets (Macquarie, George, Phillip, Church, Smith, etc) have a similar layout to the existing Mascot streets, however Mascot Station Town Centre Precinct entirely lacks the network of minor streets, places and squares (Civic Place, Horwood Place, etc) that give Parramatta pedestrian permeability, and provide building addresses throughout the Parramatta blocks.
- Berlin has a well-structured series of streets, with approximately twice the permeability of the Mascot Station Town Centre Precinct. The Berlin blocks also contain large courtyards not shown in these block plans, that provide further pedestrian permeability than currently shown.

These 4 city plans (Figure 31) show that new streets and public spaces such as pocket parks are essential elements in the re-development of the large Mascot Station Town Centre Precinct blocks. They will:

- Reduce pedestrian walking distances between developments near the periphery of the Study Area (near Gardeners Road, Kent Road, O'Riordan Street, etc) and the railway station and Bourke Street shops.
- Provide car access to carparking service access to shops and delivery access to apartment buildings (furniture removals, repair vehicles, etc).
- Provide building entrances and lobbies for apartment buildings onto streets.
- Provide safety and security in terms of CPTED by having the public domain of urban parks having vehicular access and active uses where possible at the park edges, and passive surveillance provided by buildings overlooking the streets and parks.

Public Spaces

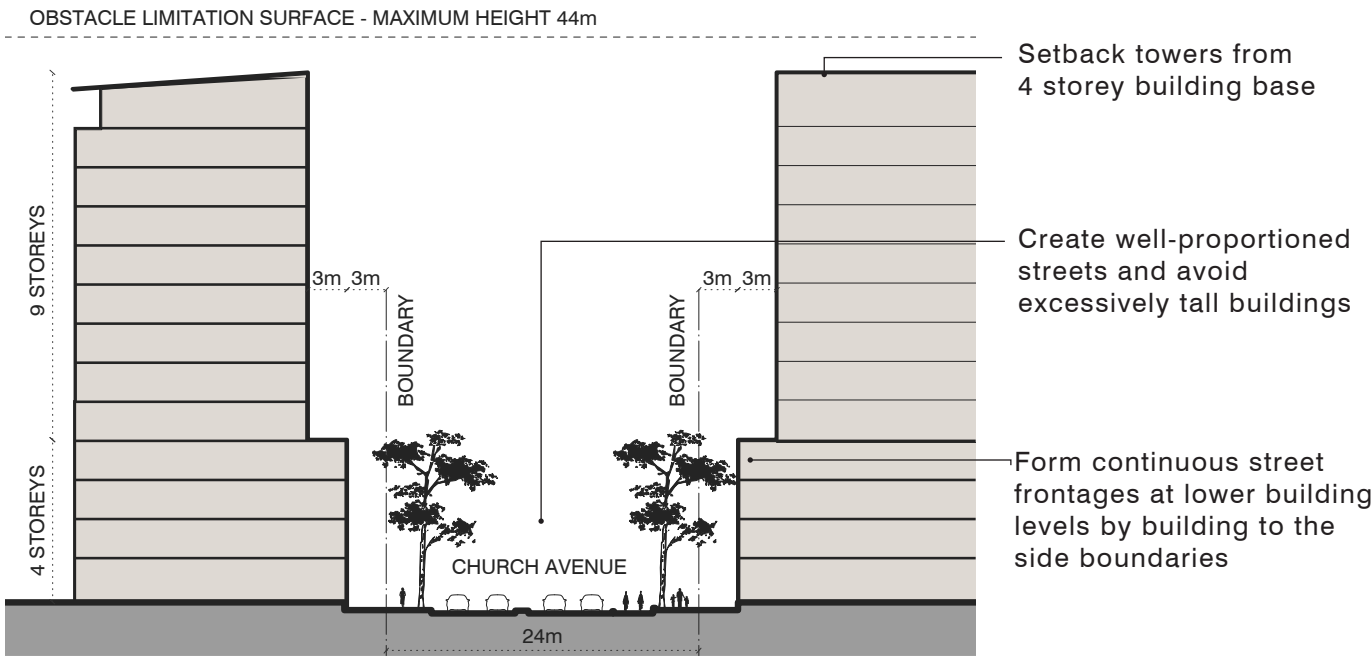


Figure 32: Illustration of well-defined space in the Masterplan

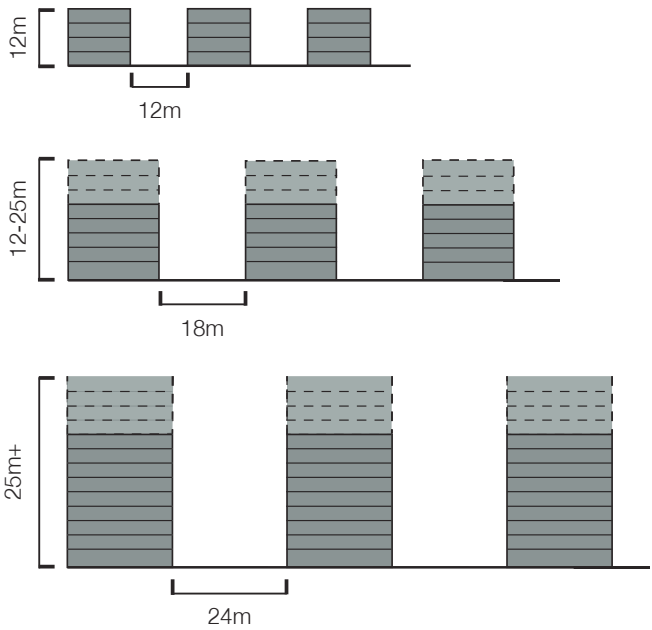


Figure 33: Building separation is proportionate to building height to facilitate urban form and improved residential amenity (Source: Residential Flat Design Code)

URBAN DESIGN PRINCIPLES

The Mascot Station Town Centre Precinct is comprised of public space, privately owned lots and built form varying in height and density. The formation and definition of well-proportioned public spaces by cohesive built forms is an important objective of this Study.

To achieve this objective the following urban design principles have been taken into consideration (see Figure 32):

- The spatial definition of streets and parks by predominantly building to the street alignment or property boundary.
- The creation of well proportioned streets and the avoidance of street canyons, where buildings are excessively tall and built to the street alignment for the full building height.
- The formation of continuous street frontages at the lower building levels by building to side boundaries and optimising development on each site without penalising neighbouring development.
- The provision of good residential amenity in terms of privacy and built form by complying with the SEPP 65 Residential Flat Design Code built form recommendations regarding separation between buildings and setbacks from side and rear boundaries (Figure 33).

WELL-DEFINED PUBLIC SPACE

Public space is formed primarily by consistent building alignment. Buildings that are consistently aligned and that address the public domain with major facades create good spatial definition of streets and parks.

Well defined streets and parks assist in creating a sense of place, and in helping pedestrians in orientating themselves around the Town Centre.

Continuous street frontages enable continuous activities at ground level, enhancing pedestrian interest and amenity. Continuous street alignment assists in providing safety and security, by ensuring that the public domain is overlooked by buildings.



A 4 storey building base may be delineated with landscape in the 3m setback zone



A 4 storey building base and 3m average setback to towers creates a good street space



Corner buildings have a role in addressing the corner

Public Spaces (Cont.)



The interface between the street and dwelling should be open to the street yet providing privacy to the ground floor residence



The transition from the public street to the private dwelling with well considered entry, privacy and landscape



A rhythm of shopfronts is achieved with robust columns and well designed signs



Communal courtyards over parking allow for a range of creative solutions to landscape design



The outlook from surrounding apartments is enhanced with good landscape design

“Buildings that are consistently aligned and that address the public domain with major facades create good spatial definition of streets and parks.”

BUILDING ENVELOPE CONTROLS

The built form control is to limit the height of the high-rise towers to a maximum of 44m. This has the benefits of allowing more daylight into the streets and further reducing the effect of street canyons from having continuous walls of 13 storey buildings.

All building envelopes shown in this Mascot Station Town Centre Precinct Study and DCP document comply with the building separation and building depth recommendations in the SEPP 65 Residential Flat Design Code.

STREET PROPORTION

Street proportions are the ratio between the height of buildings and the width of the street. Many fine urban streets are within a range (vertical to horizontal) of 1:1.1 to 1:2.5.¹ These proportions would mean that on a 20m wide street, a 22m high building would be the desirable maximum building height, to avoid overbearing buildings and canyon like streets. Of course, there are many streets with buildings that are taller than 22m. A widely used technique to avoid excessively overbearing buildings and street canyons is to have low-rise buildings built to the street frontage, with the high-rise upper floors set back from the street frontage. This provides street definition at the lower levels and a wider street space for the high-rise parts of the buildings.

¹ “Great Streets” by Allan Jacobs MIT Press 1995

“Well defined streets and parks assist in creating a sense of place, and in helping pedestrians in orientating themselves around the Town Centre.”

In Mascot Station Town Centre Precinct, it is proposed to have 4 storey street frontage heights and upper level setbacks of 2m to 4m (averaging 3m) for buildings above 4 storeys and up to 14 storeys high. As well as creating a street frontage and building base, the building podium protects pedestrians from wind downdrafts from the high-rise towers and the setback towers allow additional daylight to the street than if they were built to the street alignment.

The cross-section through Church Avenue (Figure 32) demonstrates how desirable street proportions have been achieved with 13 storey buildings. A 3m ground level setback on both sides increases the street space width to 30m. The setbacks also allow for entries and privacy to ground level residential. Further 3m setbacks above the 4th floor increase the width between towers to 36m. With a building height of 40m to 44m, this creates a vertical to horizontal ratio of approximately 1:1.1.

Public Domain Principles



OVERVIEW

The public domain is made up of streets, parks, and squares, and small incidental spaces that are formed through street closures, street widening and irregular geometries between buildings and kerb alignments. All spaces have equal weight and provide particular amenity in the public domain. It is essential that the public domain is comfortable and safe, accommodating all measure of pedestrian ability, and that it forms a network of spaces that allow for a variety of uses.

Public space in the Town Centre will be made up of existing and new streets and parks, with the majority of parks being delivered through development. The Masterplan includes improvement to existing public space, and the addition and reworking of green space currently associated with the SWSOOS.

Improvement and extension of the public domain offers opportunities for environmental initiatives including water sensitive urban design and reduction of urban heat loads. The master plan presents concepts as an outline of design objectives. Design development and documentation of all the illustrated spaces will be subject to consultation with Council, to determine appropriate use and furnishing.

Council's intention is that all parks and street closures will be public, with no barriers to public access.



The aims of these principles are to:

- Increase the quantum of public space in the Town Centre, to cater for the needs of an increased population, and greater visitor numbers.
- Create a diversity of space that accommodates different uses, and that is flexible over time.
- Provide a greater level of amenity in the most active areas, to support retail and commercial uses.
- Support the public transport hub through improved connections and pedestrian amenity.
- Provide better connections to facilities and between streets, to make a walkable Town Centre.
- Encourage cycle use, through addition of a connecting cycleway on Bourke Street, and through better connectivity to the cycleway.
- Introduce water sensitive urban design into the public domain, contributing to improved water quality in the catchment.
- Reduce the effects of urban heat island through increased vegetation cover.
- Provide better connections to facilities and between streets, to make a walkable Town Centre.
- Encourage cycle use, through addition of a connecting cycleway on Bourke Street, and through better connectivity to the cycleway.
- Introduce water sensitive urban design into the public domain, contributing to improved water quality in the catchment.
- Reduce the effects of urban heat island through increased vegetation cover.

STREETS

A high quality, considered, connected and comprehensive street network is integral to a successful public domain. Well designed streets provide a focus for pedestrian activity, and when combined with a considered private domain, create vibrant, lively and engaging environments. They not only serve as connections, but also as critical elements of the public open space network in themselves.

The existing network of streets reflects the market garden and more recent industrial past. Large blocks have been created with little pedestrian amenity. The public domain strategy proposes that the existing network of streets gets upgraded, while also providing new streets to create a finer grain more pedestrian friendly environment.

Successful streets encourage a diversity of use. Within the Botany Council local government area, the Mascot Station Town Centre Precinct offers particularly unique and exciting opportunities to create a vibrant urbane public domain through the creation of new streets and the recognition and definition of regionally significant streets.

Opportunities exist to connect to the wider region through public transport networks, and through integrating with the Sustainable Sydney 2030 plan by targeting commercial and retail development on regionally significant streets. Through encouraging use of public transport, recognising and reinforcing street hierarchy, through the allocation of on street parking, providing opportunities for cycling, but overall providing an integrated, mixed use network of streets, lanes and pedestrian connections, the vitality of the Town Centre can be greatly improved.

The aims of these principles are to:

- Design high quality streets with a pedestrian focus that are fully accessible including wide footpaths, encouraging slow vehicular traffic.
- Increase street tree numbers.
- Provide new low speed residential streets.
- Reinforce the role of significant regional streets through street tree allocation, provision of footpaths where appropriate.
- Incorporate portions of single lane traffic to discourage regional through traffic entering the Town Centre.
- Maximise opportunities for incorporating Water Sensitive Urban Design using techniques such as landscaped medians, tree pits and pocket parks to improve the quality of water entering Alexandra Canal and groundwater.

Public Domain Analysis



The Mascot Station Town Centre Precinct is undergoing a transformation from a predominantly industrial precinct into a high density mixed use urban environment. This has created an area that is lacking clear identity and character, has limited public open space and is lacking in amenity for pedestrians.

Given the predominantly industrial nature of the land uses within the Precinct, public open space allocation to date has been limited. The Study Area contains a single small public park. The largest area of supplementary open space is the Sydney Water SWSOOS land allocation, which is not currently publicly accessible. Council is currently negotiating with Sydney Water to lease the SWSOOS for public open space.

Micro catchment analysis and flood studies reveal a general west to east water flow (towards the Alexandra Canal). Church Avenue is particularly important in this system, being subject to flooding. With the redevelopment of the Precinct there is considerable opportunity to incorporate Water Sensitive Urban Design in the public domain.

There is a mix of street trees and street character throughout the Precinct. There is a variety of mature trees on the outskirts and recently planted species such as *Elaeocarpus reticulatus* around the Station itself. The streets themselves are in a state of flux with many having been half developed to the new road corridor leading to a disjointed public domain often with different paving types between developments.

The public/private domain interface is in many cases problematic with blank walls, and inappropriately designed ground floors. This has in many cases led to retrospective design additions creating furtive street spaces.

New street connections, parks, public open space and urban plazas present an opportunity to define the character of the Precinct and to provide a high quality, integrated public domain with regional significance.

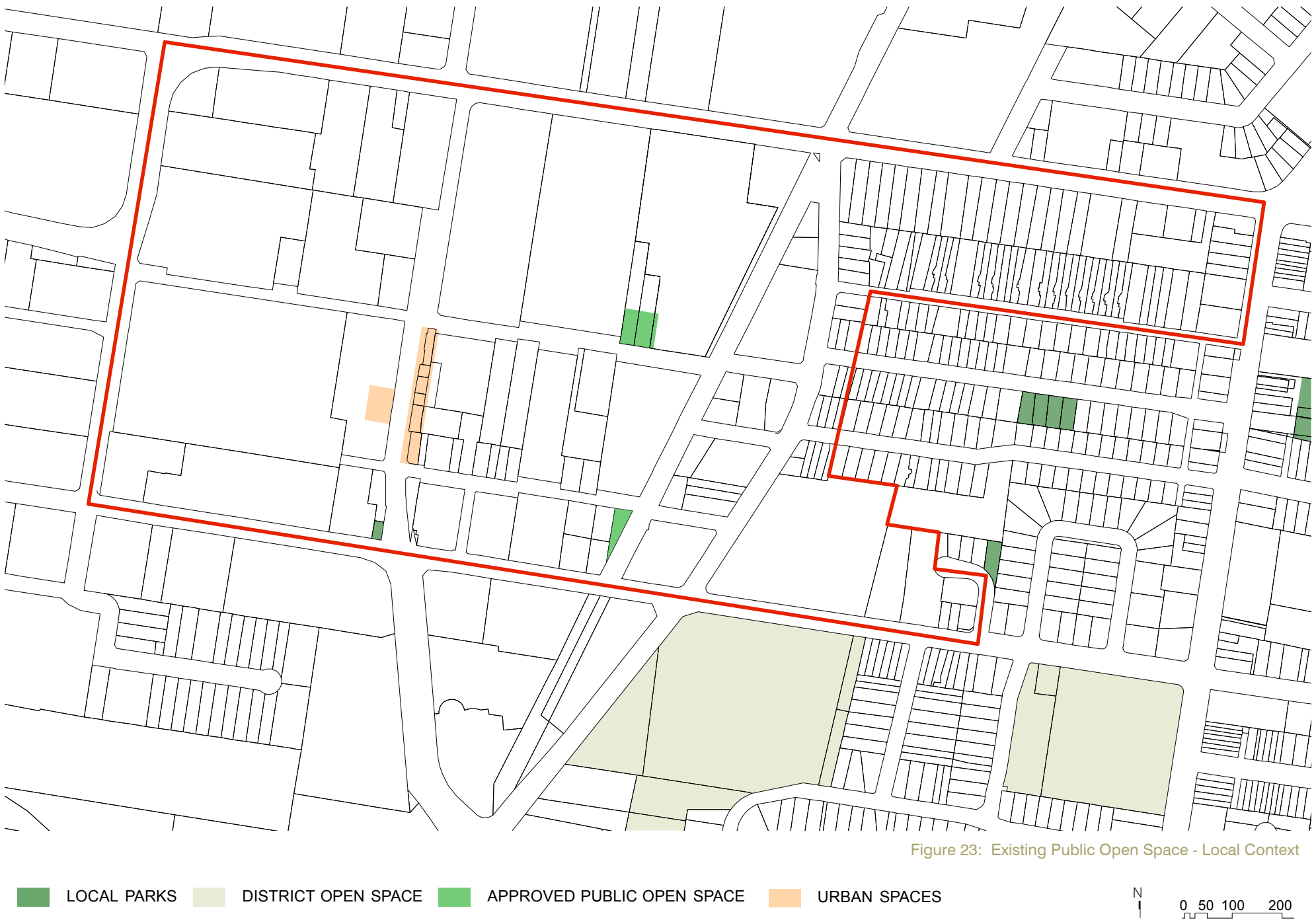
STREET TREES

Street trees contribute to the quality of the public domain. They can significantly affect street character, can influence microclimatic conditions, provide important urban habitat and reduce the urban heat island effect. Specifically, the placement and selection of trees contributes to the quality of human experience by affecting views, light, shadow, scent, wind, sound, temperature and colour. Close planted trees can create an intimate scale in residential streets.

It is not only trees on public land that contribute to the character of an area. Trees on private land also have the potential to positively contribute to the quality of the street and public domain. The Mascot Station Town Centre Precinct has a number of significant trees on private land (Figure 22), many of which are large mature native species. These should be retained as groups where possible.

Additional tree planting is proposed for most streets in the Study Area. Tree selection and species should reinforce the proposed street hierarchy and character. As well it should be highly dependent on localised soil and microclimatic conditions, underground infrastructure as well as desired street character.

Public Domain Analysis (Cont.)



PUBLIC PARKS IN THE LOCAL CONTEXT

The current provision of local open space in the Study Area comprises a single public park on the corner of Bourke Street and Coward Street (Figure 23).

With the changing nature and increased densities in Mascot Station Town Centre Precinct there is a great need to introduce more high quality public open space. This should include locally scaled parks that include trees, high quality robust materials, WSUD principles where possible and provide areas of respite in what will be a dense residential area.



Public open space on Hughes Avenue (outside Study Area)



Public open space at the corner of Bourke Street and Coward Street

Public Private Domain Interface



Figure 24: Existing Public & Private Domain Interface

The interface between the public domain of the street and the private domain of the individual site at ground level (Figure 24) is important in creating good pedestrian amenity. There are a number of factors, such as overland flow paths for water and above ground carparking, that can create conditions where active street frontages or good ground level transitions from the street to the private dwelling have not been achieved in some existing developments.

These flooding and carparking issues are able to be overcome with appropriate ground level uses and appropriate parking policies. Where the ground level of buildings is to be raised to avoid flooding, this transition can be used to provide privacy to ground level dwellings and a good transition from public to private.

Generally, parking below ground overcomes many of the interface problems of blank walls and the like, and reduced parking requirements assist in achieving this goal.



Examples showing good quality interface between public and private domains



Existing examples from Mascot Station Town Centre Precinct

Existing Traffic and Access

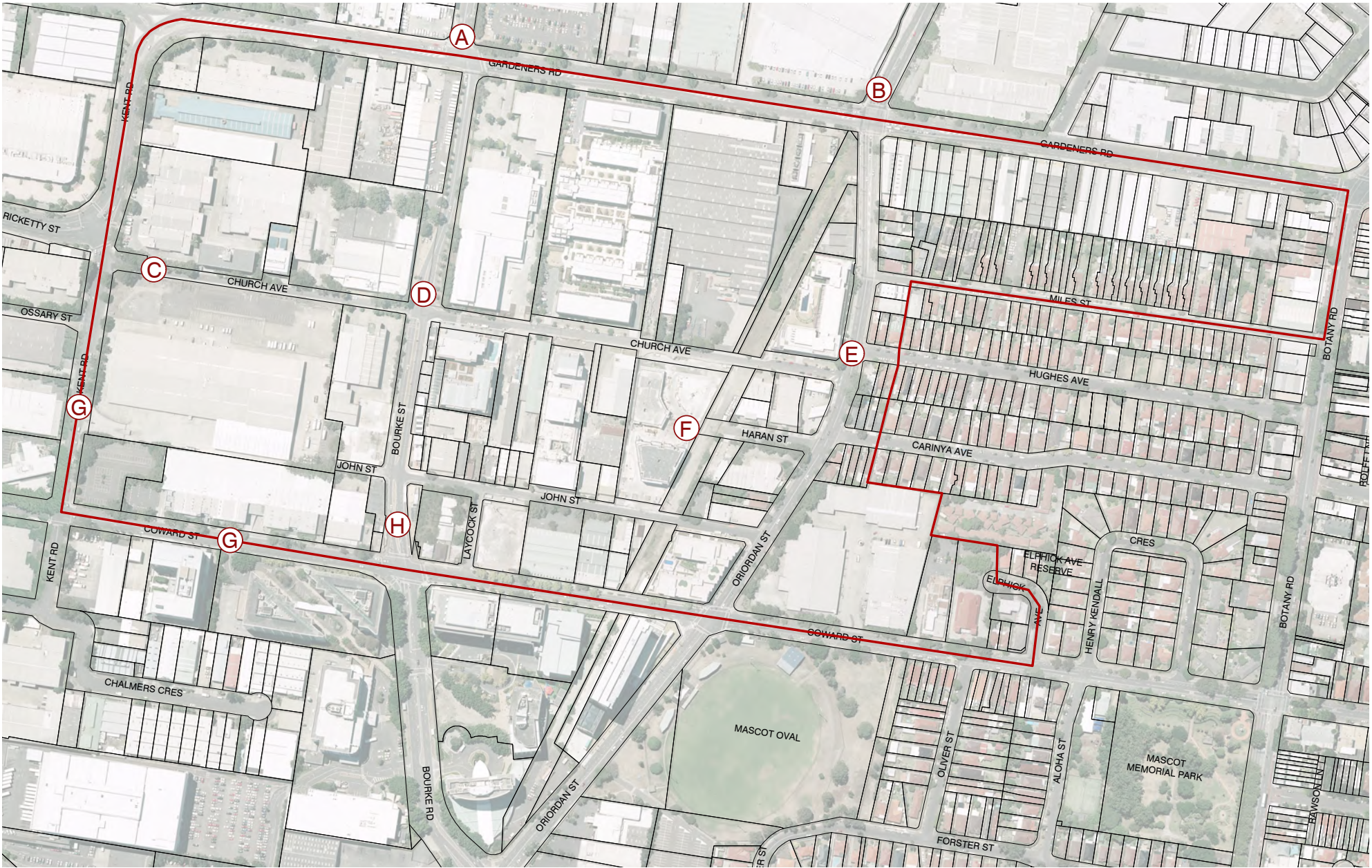
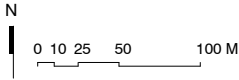


Figure 25: Existing Traffic & Access



SPECIFIC TRAFFIC CONSTRAINTS

- | | | |
|---|---|--|
| <p>A No bicycle connection between Precinct & Bourke Rd separated bike path. Inefficient intersection layout due to staggered N - S arms. No pedestrian / cycle crossing on western arm. No footpath on western side of Bourke St. No right turns into Precinct.</p> | <p>Poor Precinct access to Sydney Park. Access route via Rickety Rd. Limited opportunities to improve Church Ave intersection due to proximity of signals. One - way street in eastbound direction.</p> | <p>E Left turn only Precinct.</p> |
| <p>B No right turns into Precinct.</p> | <p>D Unusual intersection layout. Poorly located zebra crossing without pram ramps on northern side. Disjointed and non-continuous footpaths on both sides.</p> | <p>F No bicycle / pedestrian access to green corridor of Sydney Water Pipeline.</p> |
| <p>C Fragmented land ownerships may hamper deliver of 20m Church Ave corridor.</p> | | <p>G Significant truck volumes (Port Botany Road freight corridor).</p> |
| | | <p>H Pavement parking on pedestrian desire line. No pedestrian / cycle crossing on western arm.</p> |

The overall transport and traffic movement system of Mascot Station Town Centre Precinct is well structured and has great potential to create a Town Centre with good access for all and high amenity.

The strengths of the movement system were established in the original layout of the road system when Gardeners Road, Kent Road, Coward Street and O'Riordan Street carried all regional traffic and Bourke Street did not exist as a linking north-south street. Church Avenue has always remained traffic-calmed due to the geometry of its intersections and one-way traffic movement.

The siting of Mascot Railway Station in Bourke Street was an excellent strategy for prioritising pedestrian movements and amenity in a relatively low traffic environment. This also allowed interchanges with other modes such as buses, taxis, vehicle drop-offs and servicing to be achieved in a low traffic environment.

The Mascot Station Town Centre Precinct is undergoing transformation with much recent development, a relatively recent railway station and a rapid growth in numbers of local residents and office workers, particularly south of Coward Street. This rapid recent growth has raised issues regarding bicycle access to the railway station and through the Precinct; pedestrian access through large sites; pedestrian amenity for office workers accessing the railway station; difficult street geometries at key intersections such as Bourke Street and Gardeners Road; and other issues that are able to be resolved as the Precinct transforms.

The existing transport and traffic system has constraints that have been identified in the adjoining analysis.

GENERAL TRAFFIC CONSTRAINTS

1. Large block sizes limit fine grain network for pedestrian / cyclist permeability.
2. Peak hour traffic volumes significant on peripheral roads (> 40 000 per day.)
3. Lack of weekday peak period spare traffic capacity.
4. Limited mid-block pedestrian / cycle crossing facilities.
5. Limited dedicated cycle facilities internal to Precinct.
6. High level of on-street / pavement parking.
7. Restrictions on turning movements on key surrounding intersections
8. Restrict Precinct vehicle accessibility.
9. Limited existing cycle facilities to integrate adjoining residential areas.

Existing Car Parking



Figure 26: Parking Levels in Town Centre (Not to Scale)

In recent years the parking policy has required relatively high numbers of parking spaces in residential developments. This has led to parking levels often being built at ground level and at the 1st and 2nd levels above ground. This approach has created numerous problems for the design of street frontages, ground floor apartments and the provision of good quality private open space for ground floor apartments.

These plans of existing Basement Parking Levels (Figure 26) demonstrate that at least 2 basement parking levels have been built or approved in recent developments. On some sites 3 or 4 basement parking levels have been built or approved.

The Draft DCP Parking Provisions substantially reduce the amount of parking required to be built in future developments. This will provide the opportunity to meet carparking standards in basement parking levels only, with many sites requiring only 2 basement parking levels. This approach will provide the opportunity to enhance ground level street frontages, ground level apartments and the provision of public open space.

A large number of sites have parking on ground floor level which results in poor street interface. Most of these ground floor units do not have a private open space since the floor area is occupied by carparks at ground level. Therefore the only option for providing private open space for ground floor residential units is with-in the front setback which is not sufficient and leads to privacy and public domain issues.



Lack of active street frontage as a result of poorly resolved car parking on Bourke Street

Existing Building Uses

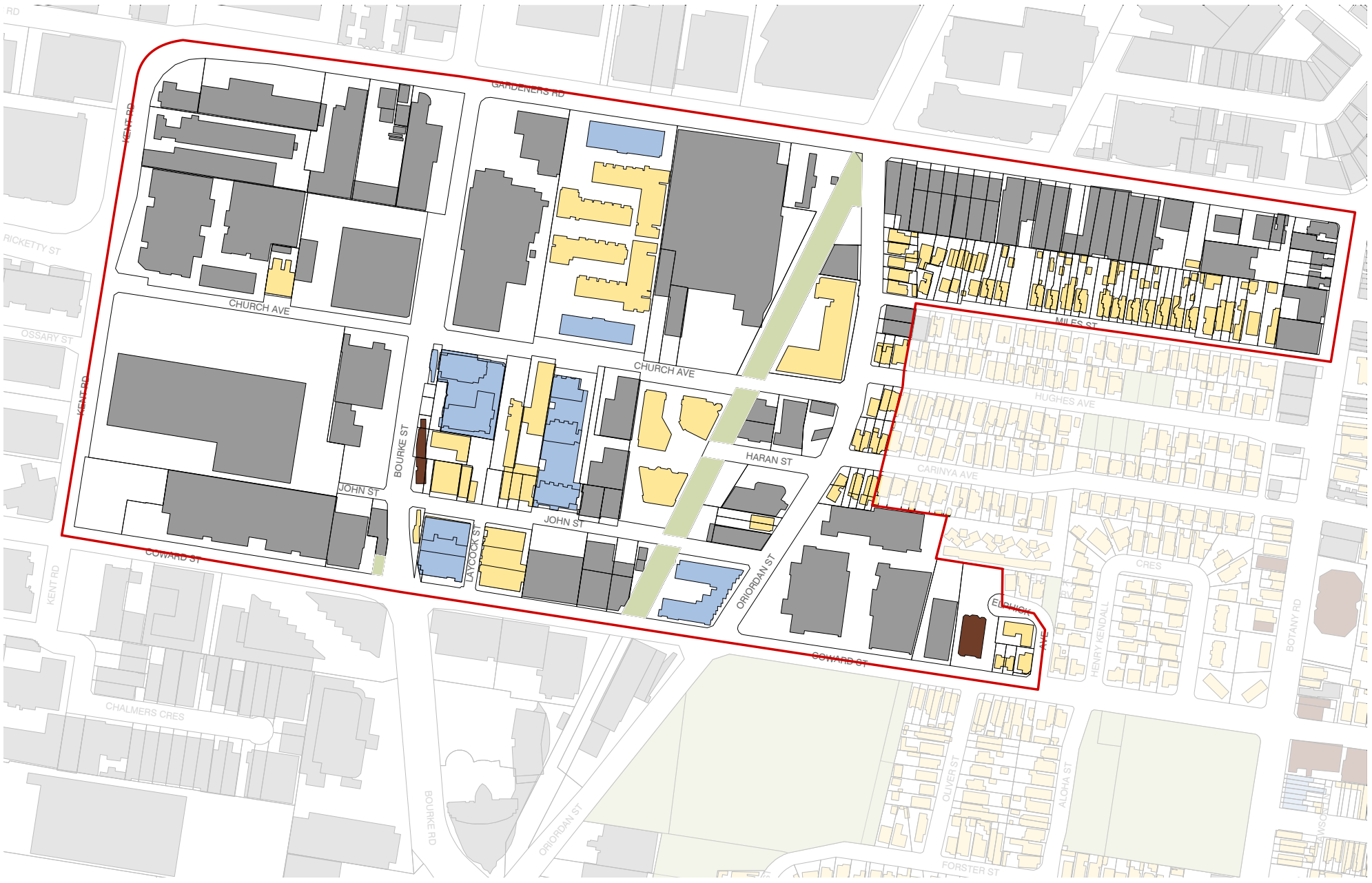
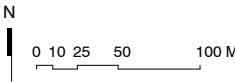


Figure 27: Existing Building Uses

- | | |
|---|------------------------|
| RESIDENTIAL | COMMERCIAL / WAREHOUSE |
| MIXED (RESIDENTIAL + COMMERCIAL/RETAIL) | PUBLIC |
| | OPEN SPACE |



The Study Area is characterised by a range of land uses described in the attached Figure 27. The land uses west of Bourke Street are predominantly industrial warehouses, distribution centres and transport related uses.

Between Bourke Street and O’Riordan Street, many new residential buildings have been built in recent years. Mixed use residential buildings have been built around the railway station and along Church Avenue.

East of O’Riordan Street commercial uses are located on Gardeners Road, detached houses on Miles Street and O’Riordan Street and a distribution centre on Coward Street.



Warehouse building located on Bourke Street

Existing Building Heights

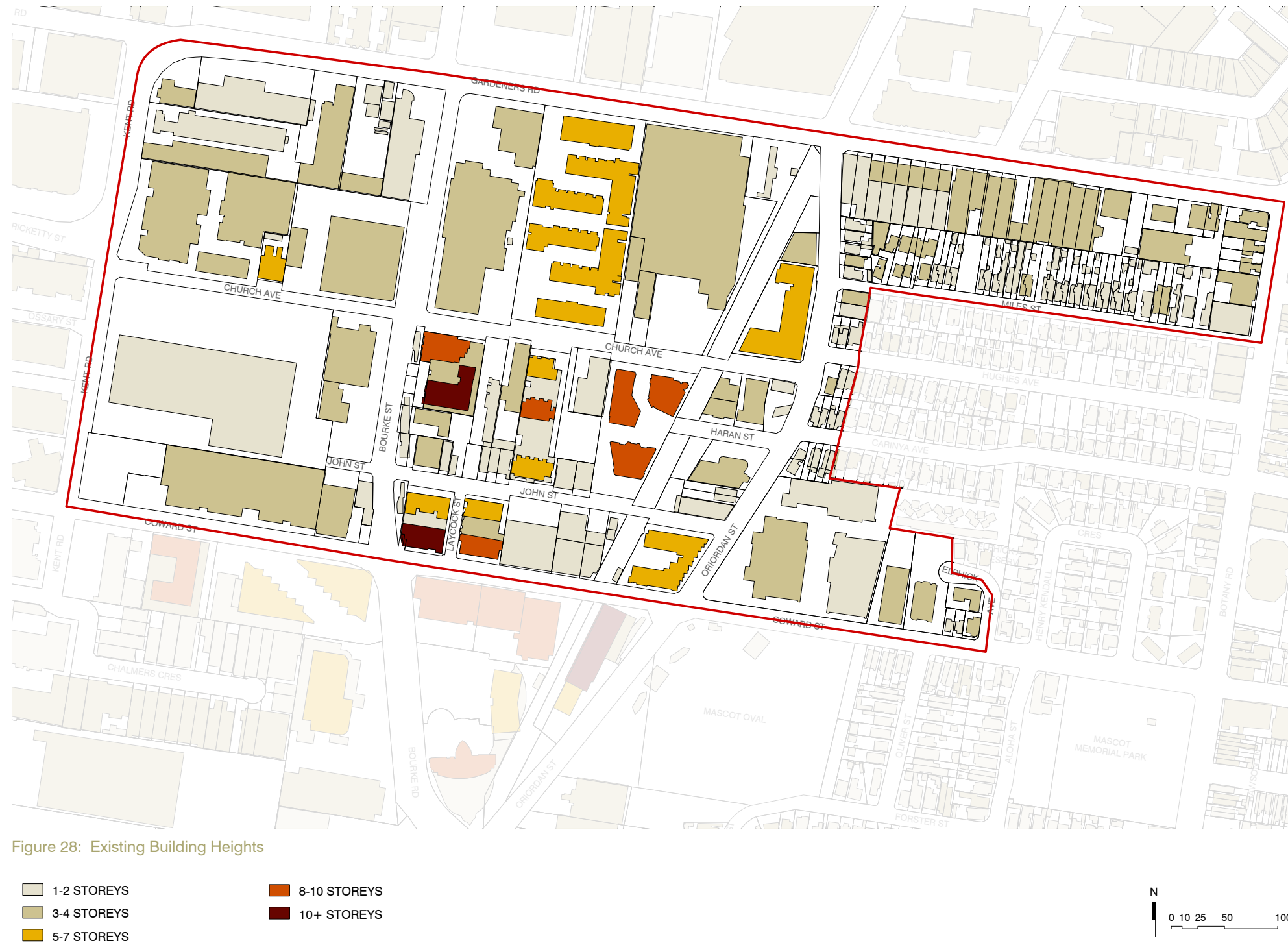


Figure 28: Existing Building Heights

Existing building heights west of Bourke Street are predominantly 1 and 2 storeys. The existing building heights of sites east of O'Riordan Street are 1 or 2 storey detached houses and townhouses. Recently developed sites have up to 12 storey buildings around the railway station. The existing height restriction due to OLS is 44m, which allows up to 13 or 14 storey high buildings.



Recently constructed residential flat buildings around Mascot Railway Station

Recently Approved DAs within Masterplan



Figure 29: Recently Approved DAs within Masterplan

West of Bourke Street are predominantly large lots containing industrial warehouses and distribution centres that have re-development potential due to the new land zonings in the Draft LEP.

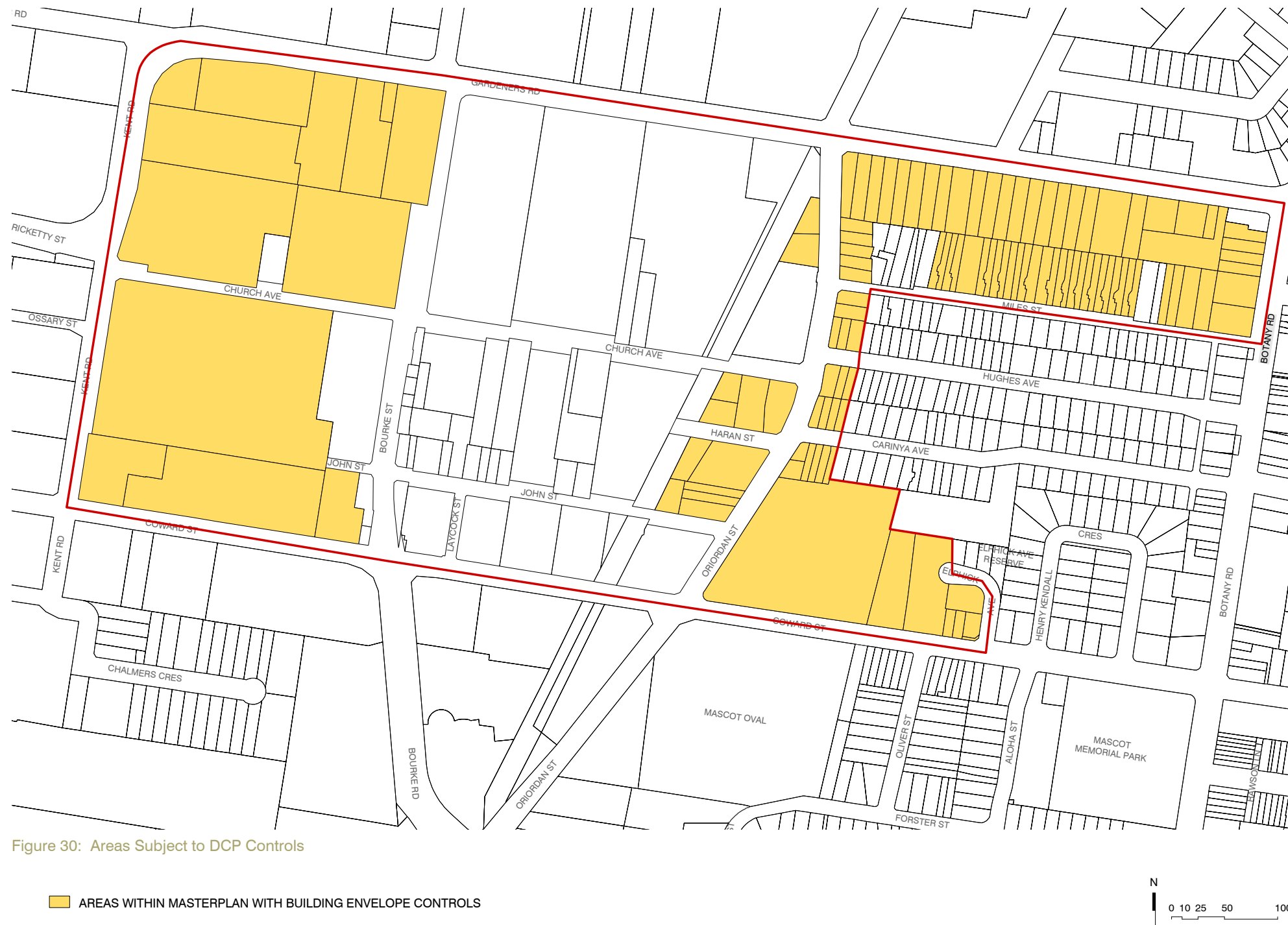
Between Bourke Street and O'Riordan Street many high-rise residential towers, some with ground floor retail, have been built in recent years. Also, a number of high-rise residential development applications have been recently approved in this area. Some of these are currently under construction.

There have been no recent DAs approved or residential buildings built east of O'Riordan Street.



Recently constructed residential flat building around Mascot Railway Station

Areas subject to DCP Controls



The Mascot Station Town Centre Precinct is a centre in transition. Large areas of the Town Centre Precinct have been recently re-zoned from low rise industrial uses to high-rise mixed uses. These areas are likely to re-develop in the near future and are the primary subject of this Masterplan and the Mascot Station Town Centre Development Control Plan.

As the Town Centre is in transition, there has been much new development in the past 10 years. There are many recently constructed high-rise residential and mixed-use buildings. There are many buildings currently under construction and many sites with approved Development Applications awaiting construction. These sites have been developed to heights and densities close to the maximum permitted under the new BBLEP 2012 controls. Due to the recent investment in these sites and the minimal additional development potential for these sites under this plan, these sites have been excluded from the building envelopes in this Masterplan and the development controls in the Mascot Station Town Centre Precinct DCP.

Building envelopes in the Masterplan and development controls in the Mascot Station Town Centre Precinct DCP having been prepared for the areas in yellow (Figure 30).



Planning and Policy Context

Metropolitan Plan for Sydney 2036 and Draft East Sub-Regional Strategy 2007

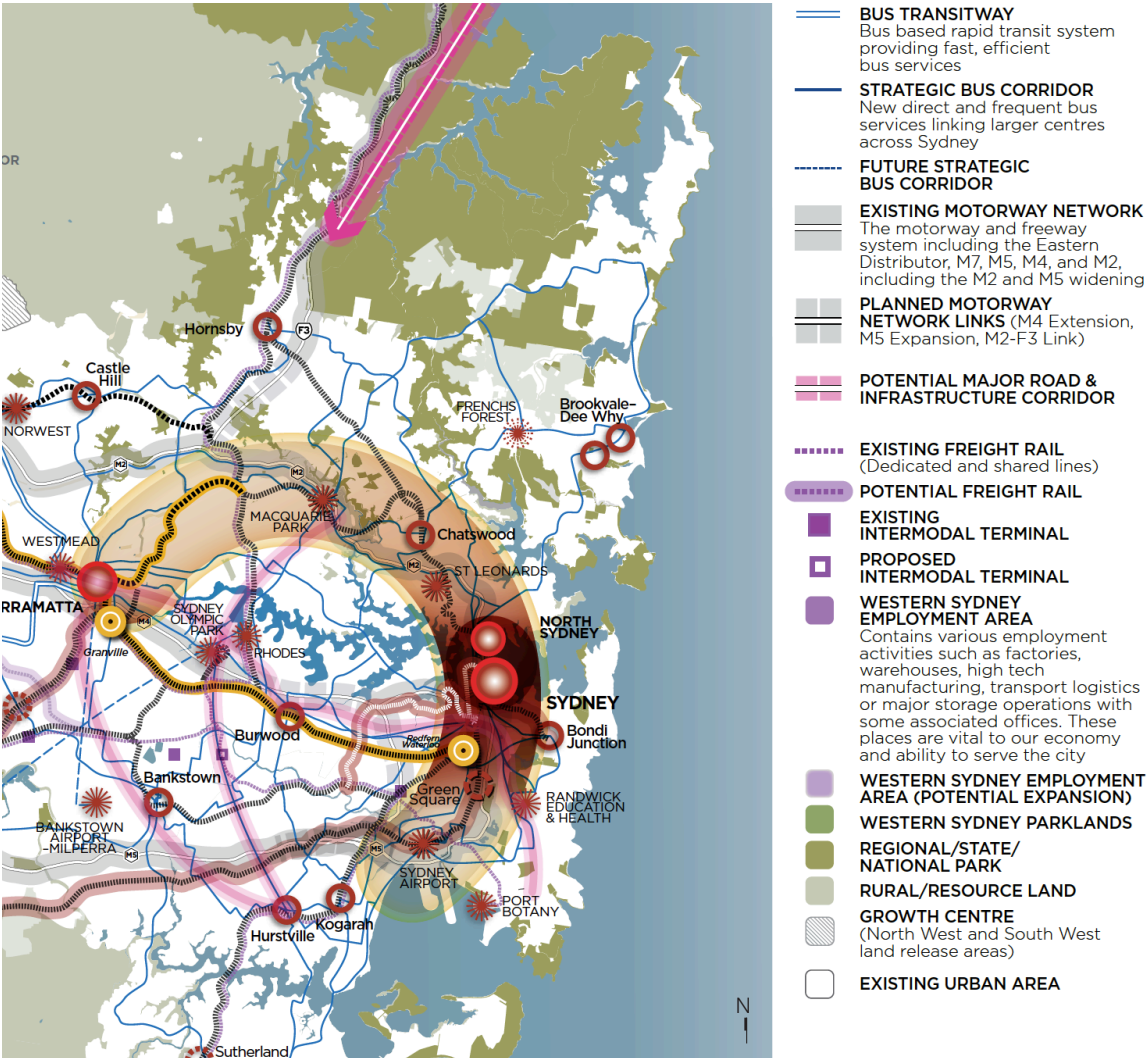


Figure 2: Centres (Extract from Metropolitan Plan for Sydney 2036)



Figure 3: Extract from Draft East Subregional Strategy 2007

1

METROPOLITAN PLAN FOR SYDNEY 2036

The Metropolitan Plan for Sydney 2036 aims to guide the growth of Sydney towards greater sustainability, affordability, liveability and equity for generations to come. It uses a range of strategies, directions and policy settings to meet Sydney's future transport, housing and employment needs while protecting our unique environment and lifestyle.

The Metropolitan Plan aims to locate 80 percent of the 770,000 additional homes needed by 2036 within walking distance of centres with good transport accessibility. The Botany Bay LGA is the location for two of the nation's major economic gateways, Sydney Airport and Port Botany. Both gateways are expected to experience significant increases over the next two decades, which will increase the significance of the gateways themselves and the adjoining employment land. In order to implement the Metropolitan Strategy, the metropolitan area of Sydney has been arranged into 10 sub-regions. The City of Botany Bay is located in the East Sub Region.

2

DRAFT EAST SUB-REGIONAL STRATEGY 2007

The Mascot Station Precinct has been identified as a future Town Centre in the Metropolitan Strategy. The Draft East Sub-Regional Strategy identifies that the City of Botany Bay Council has an employment target of 16,700 and a housing target of 6,500 new dwellings for the period 2001-2031.

The Draft East Sub-Regional Strategy 2007 is currently being revised, however remains a guiding document for detailed planning and investigations. Detailed Masterplanning is required to ensure that the Town Centre Precinct balances land uses to provide residential and employment activities which capitalise on the location in a well thought out and attractive public domain setting.

Botany Bay Planning Strategy 2031 and LEP Standards and Urban Design Study 2010

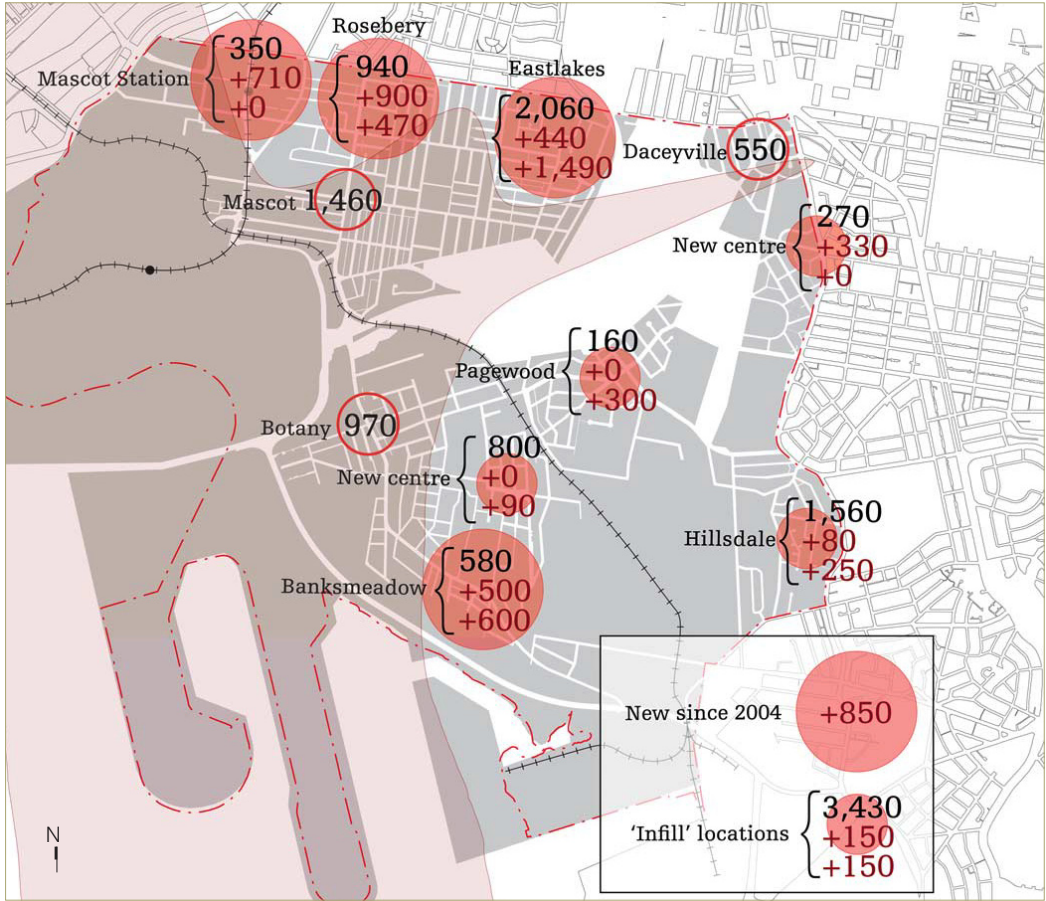


Figure 4: Image extracted from Botany Bay Planning Strategy

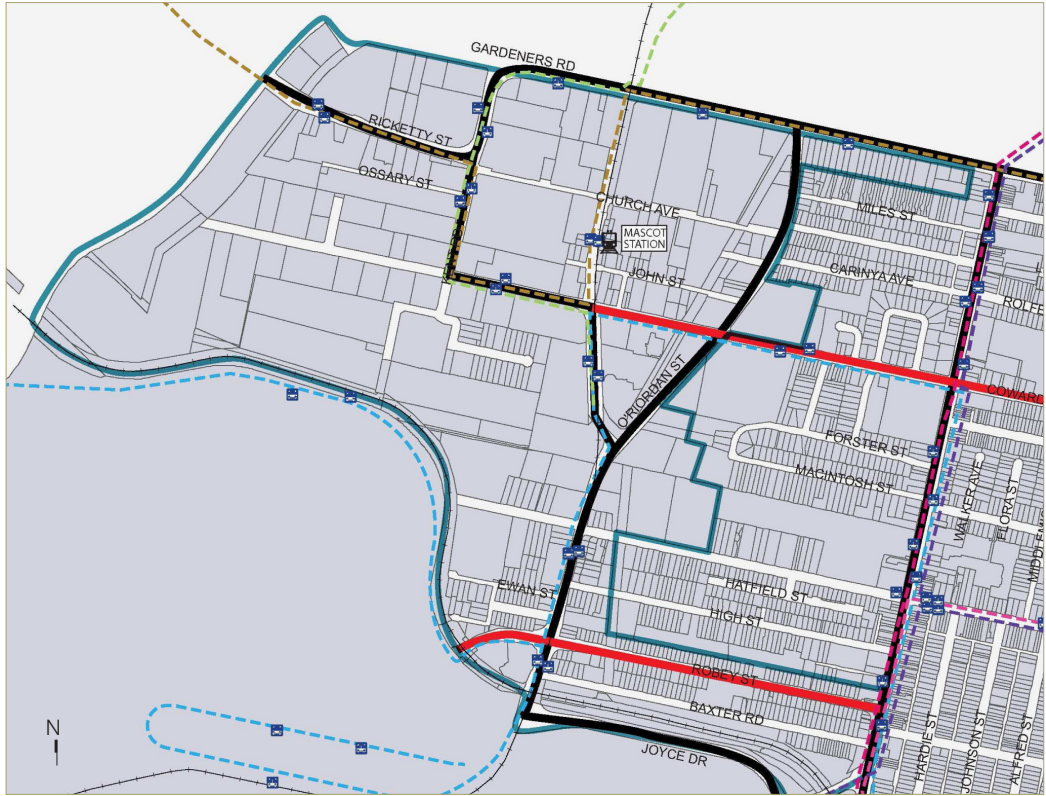


Figure 5: Image extracted from Movement Analysis of Study Area from LEP standards and Urban Design Controls Study by Neustein Urban / David Lock Associates

3

BOTANY BAY PLANNING STRATEGY 2031

The Botany Bay Planning Strategy 2031 (BBPS) prepared by SGS Economics and Planning made recommendations regarding the City of Botany Bay achieving its population targets for areas in Botany Bay, including the Mascot Station Town Centre Precinct.

The City of Botany Bay Council expects that the Mascot Station Town Centre Precinct will meet a significant proportion of the Council's residential and employment targets arising from the Metropolitan Plan for Sydney 2036.

The Botany Bay Planning Strategy 2031 indicates that Council can meet the employment capacity target within the LGA that is set by the Draft East Sub-Regional Strategy 2007, with the inclusion of growth from the Mascot Station Town Centre Precinct.

4

LEP STANDARDS AND URBAN DESIGN STUDY, 2011

The 'LEP standards and Urban Design Controls for the City of Botany Bay LEP 2011' study made recommendations for zoning, Floor Space Ratio and Height of Buildings for the Draft BBLEP (2011) for the Mascot Station Town Centre Precinct.¹

This study recommends that in Mascot Town Centre Precinct, which does not have the constraints of existing surrounding residential areas, the level of development is to be greatly expanded. The study also recommends that development will need to be subject to further studies such as the TMAP and Mascot Town Centre Precinct Masterplan.

The City of Botany Bay has had a Transport Management and Accessibility Plan (TMAP) prepared for the Mascot Station Precinct that has informed this Masterplan.

The increased densities recommended by the LEP Standards and Urban Design Controls study were identified as needing to be supported by "the suitable provision of open space, an appropriate pedestrian network and lively and creative open spaces and streets".

This Mascot Station Precinct Masterplan and associated recommendations for LEP and DCP Controls contains the public domain, built form and other urban design outcomes identified as the essential next step in the planning process for the Precinct.

¹ LEP Standards and Urban Design Controls Study for the City of Botany Bay 2011, David Lock Associates, Neustein Urban, Taylor Brammer

Draft BBLEP 2011 LEP Controls - Zoning & Active Frontage

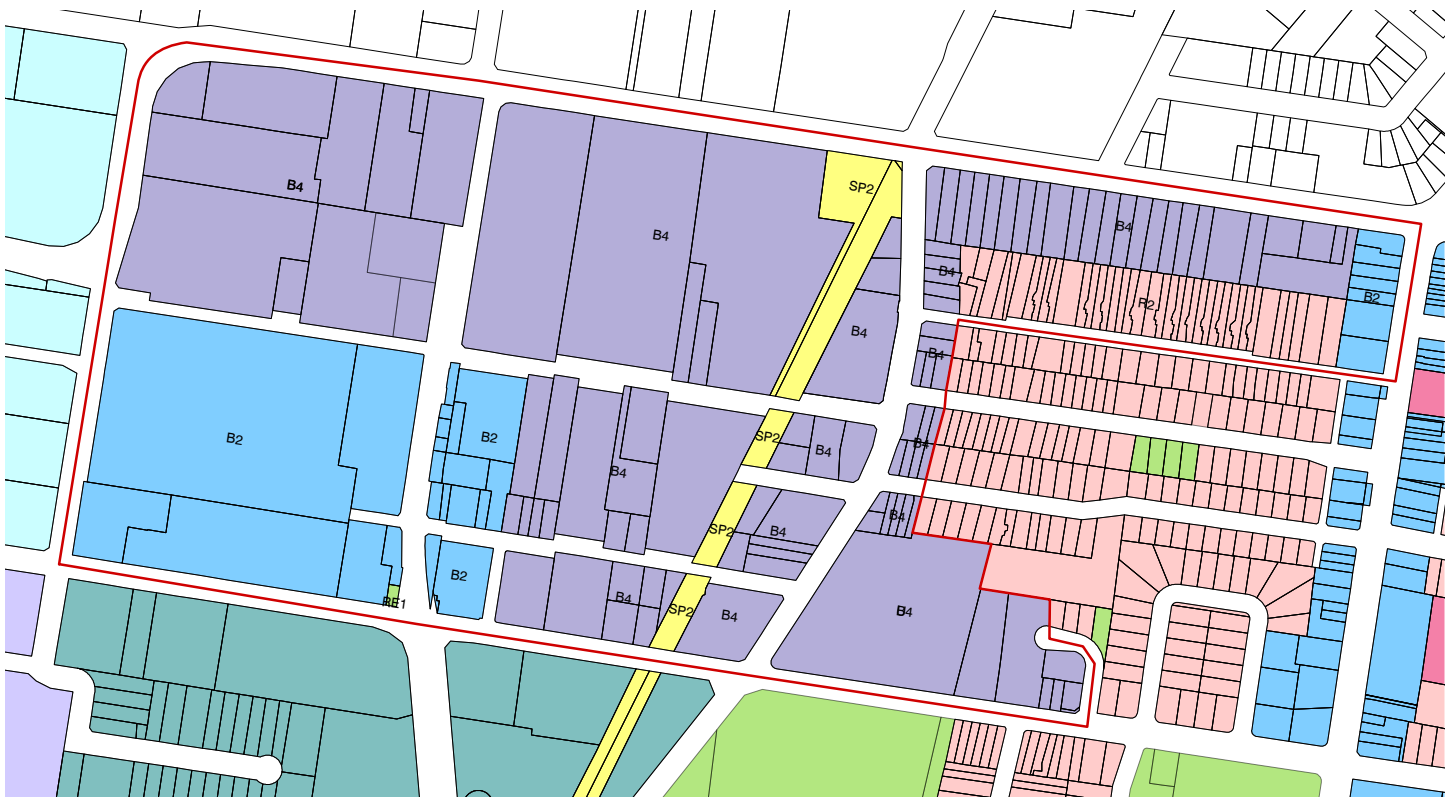


Figure 6: Zoning map (extracted from the Draft BBLEP 2011)

ZONING

Most larger urban blocks in the Study Area are zoned as B4 mixed use with an urban block zoned as B2 local centre and smaller lots facing Miles Street zoned as low density residential.

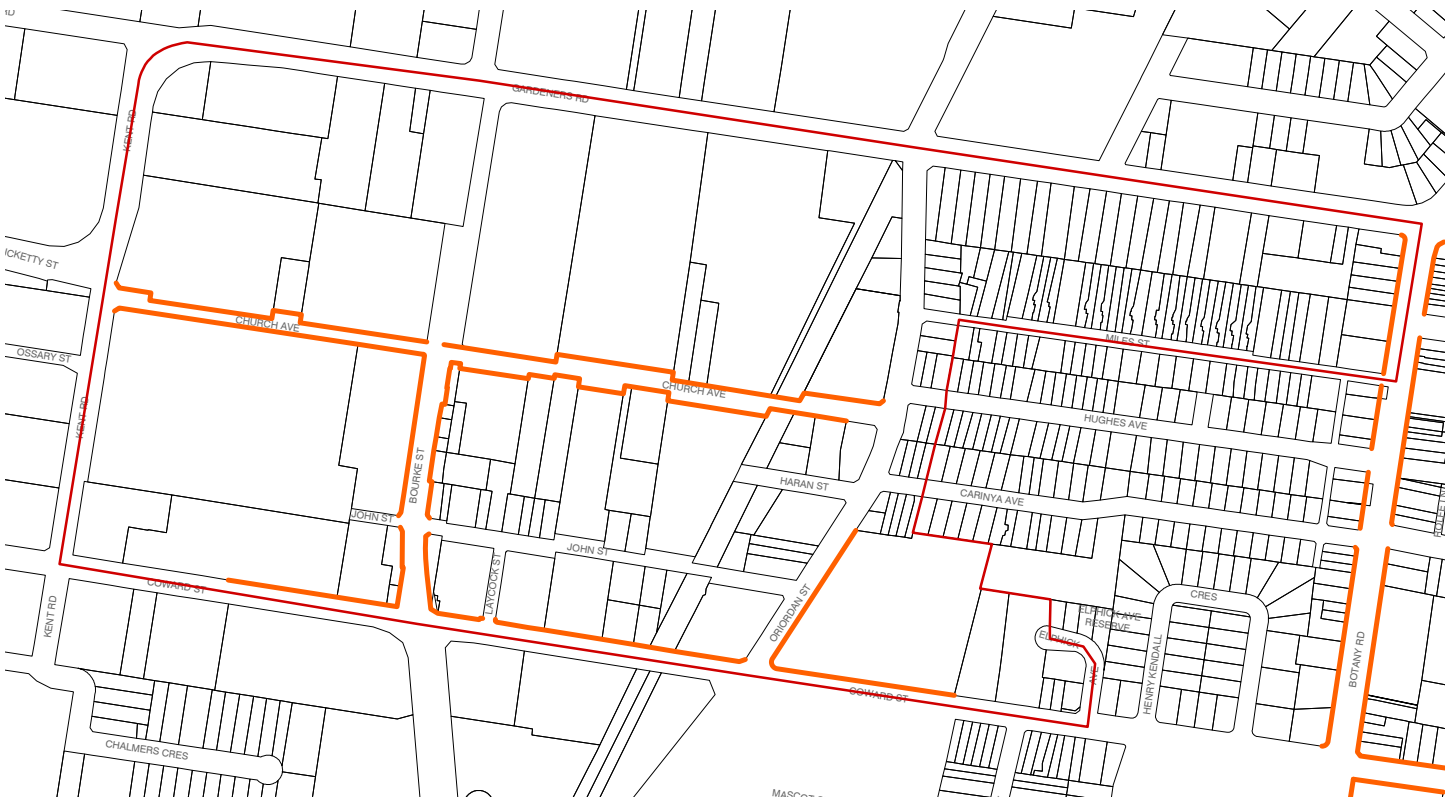


Figure 7: Active Frontage (extracted from the Draft BBLEP 2011)

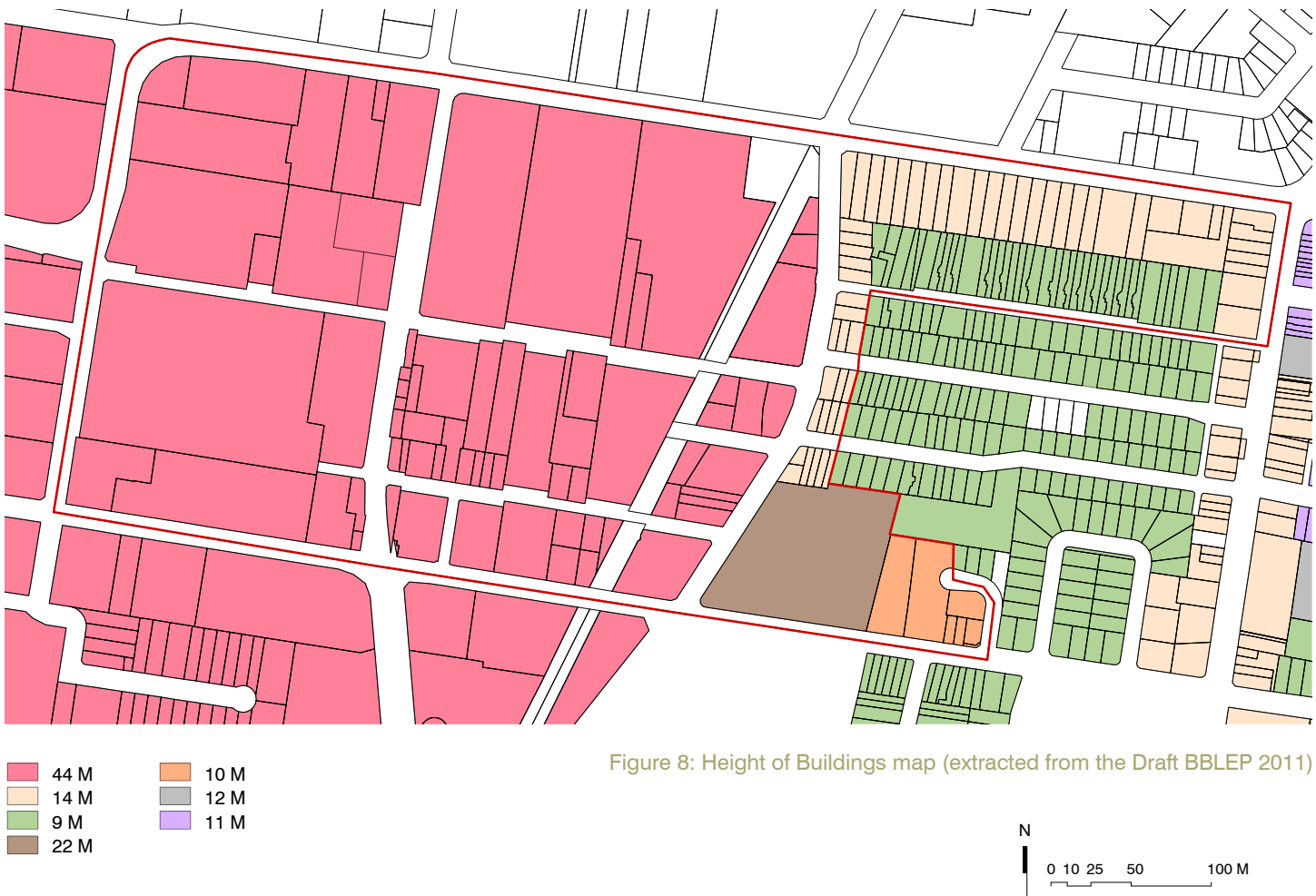
ACTIVE FRONTAGES

The Draft Active Street Frontage plan places an emphasis on Active Street Frontages on Church Avenue.

In response to the recommendations of the LEP standards and Urban Design Study 2010, Draft LEP standards were incorporated into Council's draft BBLEP2012. The LEP standards and Urban Design Study 2010 also recommended that more detailed urban design studies be undertaken, which were conducted as part of this Masterplan.

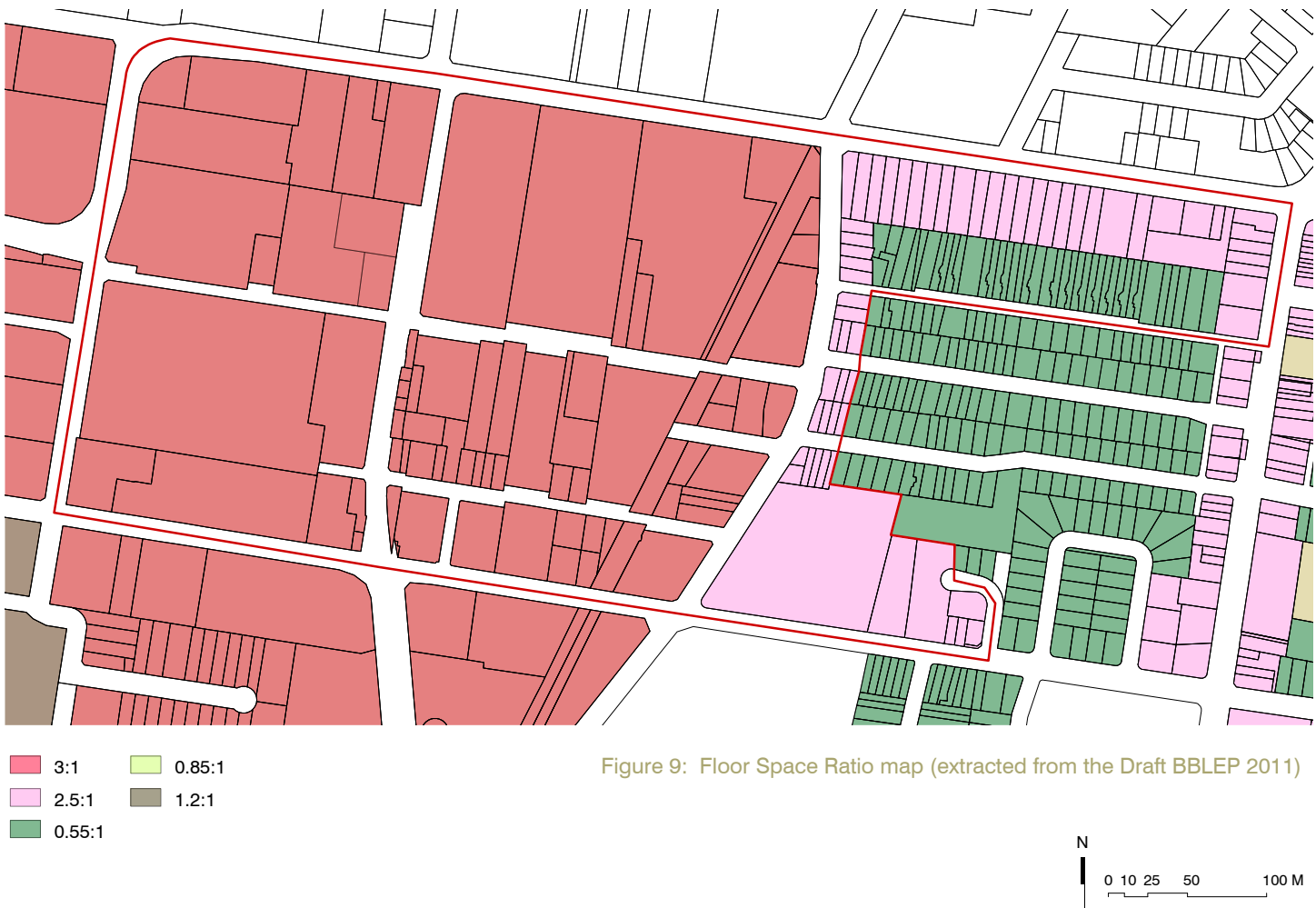
These more detailed urban design studies have led to recommendations to amend in part the BBLEP2012 controls (See Chapter 9). These recommendations aim to ensure that the controls are consistent and complimentary, that they will be easily implemented in practice and will lead to excellent urban design and architectural outcomes.

Draft BBLEP 2011 LEP Controls - Height of Buildings & Floor Space Ratio



HEIGHT OF BUILDINGS

A range of heights are proposed, from 9m-44m, for different types of developments which range from townhouses to higher density residential flat buildings. The height limit is subject to the Obstacle Limitation Surface (OLS) covering the area around Sydney airport which allows a max height of 44m (13-14 storey).



FLOOR SPACE RATIO

The majority of the Study Area has an existing FSR of 3:1 in the Draft BBLEP 2011 for all urban blocks located west of O'Riordan Street. The sites located east of O'Riordan Street have FSR of 2.5:1 and sites along residential street (Miles Street) has 0.55:1.

Introduction

Executive Summary

The Mascot Station Town Centre Precinct is a key centre in planning and development in the City of Botany Bay and is nominated as a Growth Centre in state and local planning strategies.

Mascot Station Town Centre Precinct is an important focus for the City of Botany Bay. Successive planning studies, including the 'Botany Bay Planning Strategy 2031'¹ and the 'LEP Standards and Urban Design Controls for the City of Botany Bay'² have identified Mascot Station Town Centre Precinct as the focus for increased population growth in the City of Botany Bay.

This Masterplan balances land uses by providing residential and employment uses that capitalise on accessibility to public transport and open space.

Development densities in the Masterplan relate to the suitable provision of public open space, transport measures and desirable built form outcomes.

Increased densities and a growing residential and employment population bring about the need to provide additional public open space for recreation. Mascot Station Town Centre Precinct currently contains no public park space. Urban spaces in Laycock Street and Bourke Street are insufficient to meet future recreational needs. The provision of new parks and public access to the Sydney Water SWSOOS in this Masterplan redresses the current lack of open space, and ensures that the open space needs of the future residential population will be met.

A growing town centre requires the suitable provision of public transport, the management of traffic and parking, cycling facilities and pedestrian access. A balanced approach is taken in this Masterplan to development density and the provision of transport measures. The Mascot Town Centre Precinct Transport Management and Accessibility Plan (TMAP) Report by SMEC has informed this Masterplan. Recommendations for transport measures are made as part of the Masterplan.

In terms of built form, fine streets and a desired future character for the Town Centre Precinct are achievable through built form testing based on development standards. Criteria for built form testing include the maximum height of 44m due to OLS restrictions; the street network; the SEPP 65 Residential Flat Design Code built form recommendations and statutory definitions in the LEP template. These criteria inform the Built Form Principles in this Masterplan to create a desired future character in the Town Centre Precinct.

The suitable provision of public open space, transport and built form outcomes have been achieved with increased densities in a balanced approach that is appropriate to the growth of the Mascot Station Town Centre Precinct.

Appropriate planning controls and urban design objectives are recommended for the BBLEP 2012 and the comprehensive BBDCP by providing appropriate built form, scale and density outcomes, and by providing a framework for development and associated public domain improvements for the Precinct.

This Masterplan provides the urban design framework for the Town Centre Precinct to evolve and strengthen its role in the City of Botany Bay.

1 *Botany Bay Planning Strategy 2031 by SGS Economics and Planning, 2007*

2 *LEP Standards and Urban Design Controls Study for the City of Botany Bay 2011, David Lock Associates, Neustein Urban, Taylor Brammer,*

Background and Masterplan Study Area



N
|
— STUDY AREA BOUNDARY

Figure 1: Mascot Station Town Centre Precinct - Study Area - Aerial Photograph (2009 - Not to scale)

The Sydney Airport to City corridor forms part of the Global Economic Corridor in the Sydney Metropolitan Strategy. As in most global cities, the airport is a generator of growth, and a vital part of the city. Sydney Airport is the generator of the City to Airport railway line, with one station being located at Bourke Street Mascot. Many commercial developments have been built immediately south of the railway station and Coward Street in recent years, partly as a result of the proximity of the Airport.

Noise generated by the airport has restricted residential uses in this commercial area. North of Coward Street, however, residential is generally permitted, and substantial numbers of residential apartment buildings have been built in recent years close to the railway station between Bourke and O’Riordan Streets. The proximity of the airport has also shaped this development, limiting its height to 44m.

Whilst the commercial development south of Coward Street and the residential north of Coward Street are not overlapping uses, their close proximity contribute to a range of activities at various times of the day and week, being centred on the railway station. This vitality of mixed uses is likely to increase in the future with the development of more retail and residential and some commercial in the Town Centre Precinct.

The Mascot Railway Station has had substantially increased patronage recently and this trend is likely to continue with the growth of the Town Centre Precinct.

This growth around a recently built railway station is an opportunity to put in place an urban design framework to guide development and provide a high quality public domain. This Masterplan report locates the study in its planning and policy context. It provides an analysis of the area as the basis for developing design strategies and the Masterplan. Urban design principles inform the public domain and built form outcomes. Recommendations for development controls are derived from this urban design based Masterplan.

To provide a holistic urban design approach to the Town Centre, the Masterplan team consisted of architects, urban designers, landscape architects / public domain designers, transport consultants and planners. Valuable input was provided by the Steering Committee consisting of City of Botany Bay planning staff and representatives from the NSW Department of Planning and Infrastructure.



Mascot Train Station from Bourke Street



Masterplan Vision

The Mascot Station Town Centre Precinct Masterplan presents the opportunity to create a vibrant and diverse Town Centre, where a spacious, high quality public domain is the setting for thriving activities and cohesive built form.

New uses such as a major supermarket and main street retailing will meet the needs of a growing centre. A fine grained network of shopping streets, lanes and arcades will create permeable blocks and a walkable Town Centre. Parks adjoining the retail and residential areas will provide the opportunity for relaxation and recreation.

The growth potential of Mascot Station Town Centre Precinct is to be guided by an urban framework that emphasises an extensive and high quality public domain, excellence in its urban and architectural design, an integrated transport network and sustainable development in the public and private domains.

Appendix B: Site Testing

Floor Space Ratio Testing



Figure 1: 3D Building Envelopes for Site Testing

The floor space ratios that are recommended in the Part 9 LEP Recommendations (Page 53-54) are derived from a thorough testing process for every site in the area containing building envelopes and development controls (Part 10 DCP Recommendations).

The LEP Standards and Urban Design Study 2011 recommended FSR of 3:1 for many sites west of Bourke Street and 2.5:1 for many sites east of O'Riordan Street in the Draft BBLEP 2012. That report also recommended that site testing be undertaken to establish public open space areas and final floor space ratios.

Site testing has been undertaken in this Masterplan to provide public domain areas in the form of new parks and streets to meet the recreation and access needs of a growing population and higher density housing.

Site testing has also been undertaken to ensure that :

- Ground floor uses (retail, residential etc) are proposed in appropriate locations;
- Street setbacks are appropriate to the uses and street character;
- Upper level setbacks are appropriate to the scale of development and street character;
- The impact of wind downdrafts and overshadowing;
- Proximity of adjoining owners and land use zones;
- Heritage items;
- Public and private domain interface design;
- SEPP65 Residential Flat Design Code recommendations such as building separation, building depth, natural ventilation and the like; and
- Maximum building height in the LEP.

To establish the appropriateness of a location for a particular control, facts about the existing site conditions have been taken into account. For example, when assessing appropriate locations for retail in active frontages, potential flooding necessitating raised floor levels is taken into account. Similarly, when assessing whether attached dwellings in an R2 zone are appropriate, the depth of the lot is an important consideration.

The design of building envelopes based on these controls generates a floor area achievable for each site. The building envelopes take into account the definition of floor area in the standard LEP definition, which excludes external walls, common vertical circulation, balconies, car driveways and the like. These are taken into account in calculating the floor area from the building envelopes by multiplying the floor area within the envelopes by 75% for residential floors and by 90% for retail or commercial floors (as these floors do not have balconies to subtract from the envelope). The floor areas for each site establish the floor area achievable for that site. This information then informs the Floor Space Ratio that is recommended for the LEP controls.

To establish compatibility between LEP controls, it is essential that all controls may be achieved without compromising other controls. For example, the floor space ratio may be achieved within the height of buildings control, in a development application that must comply with the Development Control Plan and other relevant codes such as the Residential Flat Design Code of SEPP 65.

This methodology requires that the LEP controls for Land Use, Floor Space Ratio, Height of Buildings and Active Street Frontage are coordinated. Developments can achieve their FSR within the building height controls of the LEP and DCP, whilst complying with SEPP65 RFDC. Active frontages and retail uses are taken into account. Should a development be a commercial office development (and not residential) in a mixed use zone, it will also be able to achieve the FSR, as floorplates for office buildings are typically wider than residential floorplates, and the floor area will be achievable within the height.

Shadow Diagrams for Masterplan 21st June: 9am to 10am



Figure 2: Shadow Diagram 1 - 21st June - 9am



Figure 3: Shadow Diagram 2 - 21st June - 10am

Shadow Analysis (Figure 2 - 8) informed the layout of parks and buildings.

The new north-south park south of Church Avenue has a splayed plan form to capture northern sun access for a large part of the day.

The height of buildings north of the new park on the northern side of Church Avenue is limited to 4 storeys to enhance solar access to this park for a large part of the day.

Gaps between tower buildings provide shafts of sunlight to streets, courtyards and other buildings throughout the day.

Shadow Diagrams for Masterplan 21st June: 11am - 1:00pm (cont.)



Figure 4: Shadow Diagram 1 - 21st June - 11am



Figure 5: Shadow Diagram 2 - 21st June - 12pm



Figure 6: Shadow Diagram 1 - 21st June - 1pm

Buildings on Gardeners Road east of O’Riordan Street step down from 8 to 4 storeys to avoid overshadowing the private and communal open spaces in the Miles Street housing.

The proposed low rise housing on the eastern side of O’Riordan Street minimises overshadowing of existing houses adjoining to the east.

Shadow Diagrams for Masterplan 21st June: 2pm - 3pm (cont.)



Figure 7: Shadow Diagram 1 - 21st June - 2pm



Figure 8: Shadow Diagram 2 - 21st June - 3pm

Public Domain Details



Public Art Strategy



Balfour Street Park, Chippendale.
Interesting and locally relevant lighting strategies



Distinctive, well considered and integrated urban structures have the potential to help create distinctive spaces and local character (Railway Park, Auburn)



Combining colours and material simplicity is a subtle strategy to create a distinct local character (Parramatta Station)



Public art does not necessarily need to be objectified. Well-considered artfully designed public open space can provide a more effective and more integrated urban outcome. (Railway Park, Auburn)

The Mascot Station Town Centre Precinct is changing from a regionally focused industrial hub, connected to various interstate and international activities via the airport, to a locally based new town centre. Public art represents a way to create an identity through this transition in a way that can define a new identity, recognise the past, enrich the public domain and generally add to the sense of place.

- Public art can include a large range of from the monumental to the temporal and can include:
- Free standing artworks, that could include sculpture;
- Artist involvement in the design and layout of public parks, squares and forecourts;
- Artist involvement in the design of specific elements of the public domain; and
- Festivals and other cultural events.

The public art strategy for the Mascot Station Town Centre Precinct should reflect the emerging local identity but also reflect on the diversity of the past.

- Create public art that enhances and contributes to the provision of quality facilities and amenities
- Public art is encouraged as part of building facades and forecourts, and in public spaces within building blocks.

The Town Centre should be defined by a hierarchy of spaces that could guide the provision of public art. Mascot railway station plaza is the hub of the Town Centre, and the point of entry for many. It is an important space that needs to be recognised with an important artwork/design. Smaller more community focused spaces such as pocket parks could incorporate community based works

On sites greater than 5000m² public art is to be provided in consultation with council.

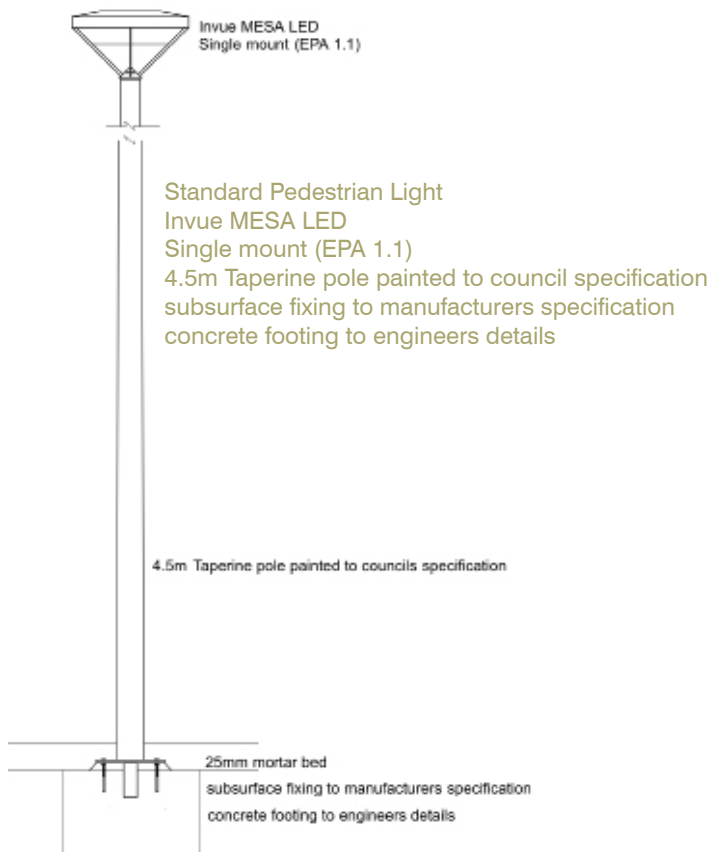
Street Furniture, Paving and Lighting



Standard Litter Bin
EM224-COBB as customed and supplied by Emerdyn.
120 Litre with additions including adjustable feet, butt
receptacle, 316SS hood.



Standard Seat
Urban Seat 1 : US1.18.MR.U.PL + USAR.PL
1800mm polished frame: US1.18.MR.U.PL
Frame materials and finishes
Cast aluminium-Polished
Body materials and finishes
Rose gum-Polyurethane coating
Concealed Sub-surface fixing



The design and construction of the public domain can reinforce important site characteristics and contribute to the identity Of the Mascot Station Town Centre Precinct. Street furniture, paving, and lighting create the detail and quality of the public domain.

Incorporating appropriate materials and streetscape elements from the greater municipality reflects the general locality and creates a seamless transition between existing and new streets. Consistency and continuity of materials is necessary for an integrated public domain. A limited palette of materials used in a variety of ways reinforces unity and allows for variation in detail where appropriate, to denote special places and reinforce hierarchy.

A number of public domain conditions will be established by the development requiring particular treatments. Each part of the public domain has an individual character and function that should be emphasised through design, however continuity throughout the entire Study Area is paramount.

DESIGN PRINCIPLES

LIGHTING

Establish a hierarchy of lighting levels based on civic significance of the street and perceived threat of crime. Bourke Street being the major urban and active street in the Precinct should have the highest level of illumination. Church Avenue and the civic portion of the new street that form key networks linking to Mascot railway station should also be highly illuminated.

Parks shall be lit to enhances security, access and legibility, while minimising impact on residential dwellings.

All lighting should be energy efficient where possible, with uniformity of colour temperatures set and maintained. Coordinate and standardise street lighting throughout the entire Mascot Station Town Centre Precinct.

MATERIALS

For parks establish a simple palette of materials that;

- compliments the streetscape palette in the rest of the Mascot Station Town Centre Precinct, but allows for individual identities to develop in different areas
- unifies the range of spaces within the public domain;
- reinforces hierarchies and details within the spaces; and,
- can be used in a variety of ways to allow for variation to suit local conditions.

STREET FURNITURE

Utilise simple, robust elements that are durable and fit for their purpose. The range of elements should be coordinated for streets and for parks, and relate to the character and function of these spaces.

Placement of furniture should provide an acceptable level of amenity, without creating clutter or obstruction.

SIGNAGE

Locate street name signs at intersections, wall mounted on buildings where possible to reduce clutter.

Consolidate traffic signs as far as possible, to reduce clutter.

No private identification sign is permitted within the public right of way.

Public access rights are to be clearly indicated for public space and, where relevant, over publicly accessible private land.

BICYCLE RACKS

Include cycle racks wherever possible, with numbers to suit the size and intensity of use of each centre. Position racks outside the general path of travel.

LITTER BINS

Position Litter bins outside the general path of travel.

Adhere to council standards for alignment, placement, colour and fixing

Paving treatments



Primary paver
Havenslab 400x200x50/60mm, honed
ebony with bluestone aggregate.



Secondary feature paver
Havenpave 200x200x50mm, honed
oatmeal with river gravel aggregate.

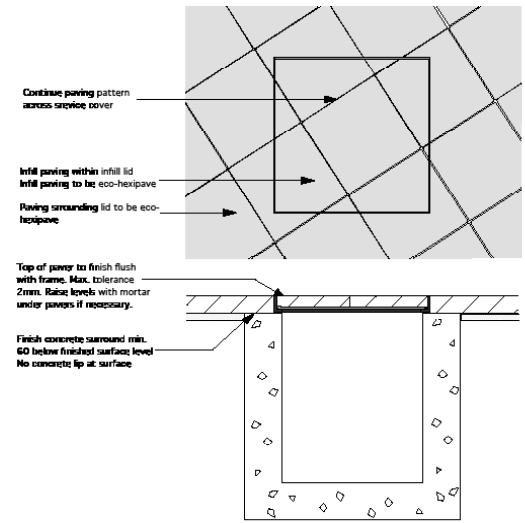


Figure 28: Typical infill paving service cover

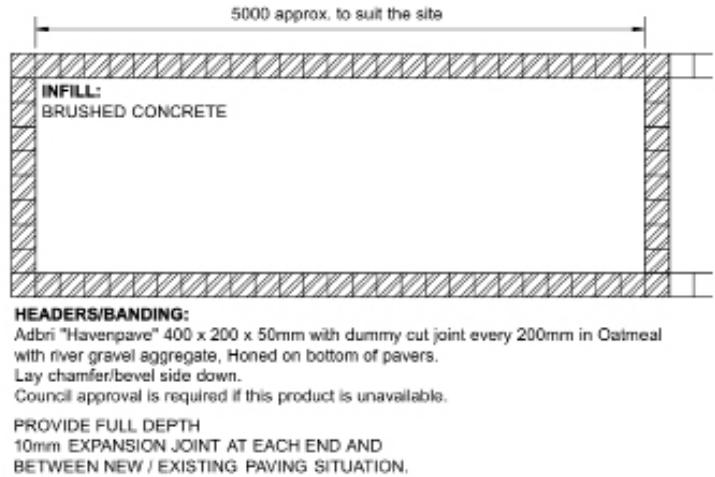


Figure 29: John Street southern properties detail plan (nts)
Refer council details for full technical information

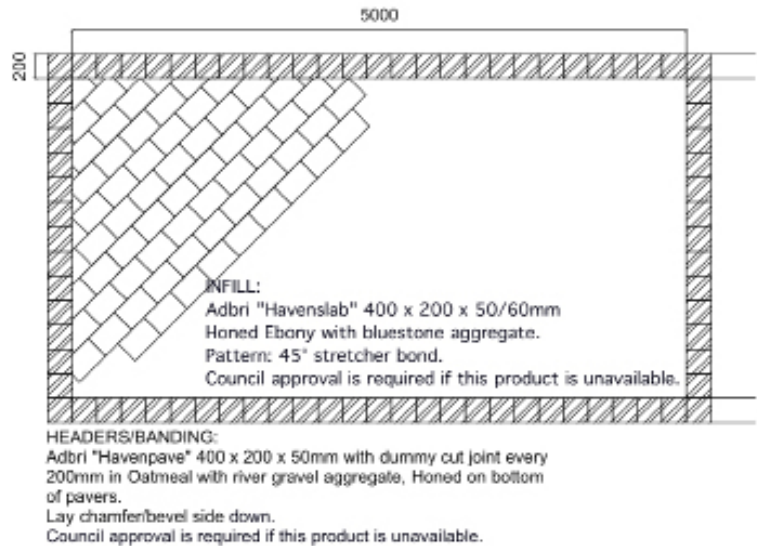


Figure 31: Church Avenue detail plan (nts)
Refer council details for full technical information

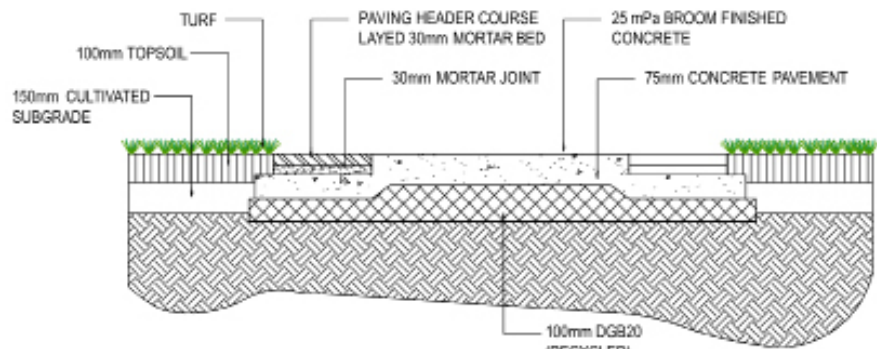


Figure 30: John Street southern properties detail section (nts)
Refer council details for full technical information

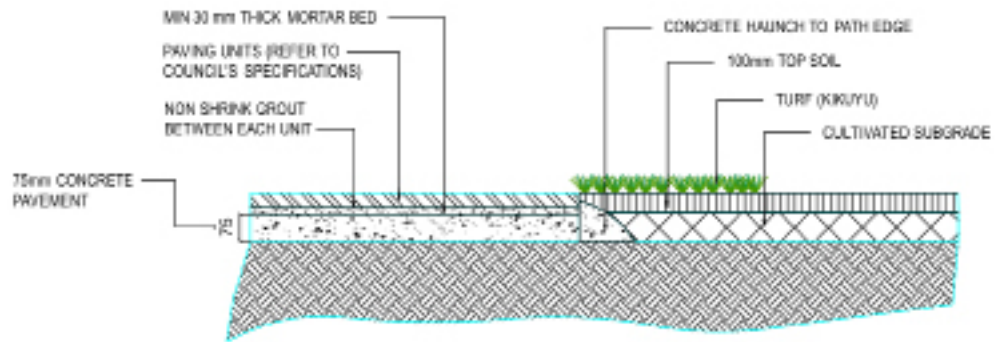


Figure 32: Church Avenue detail section (nts)
Refer council details for full technical information

PAVING AND SURFACE TREATMENTS

Materials used in the public domain should be durable, robust, and easily maintainable and should meet the requirements of environmental sustainability. Selection of paving materials and surface treatments is particularly important in coordination of the public domain to ensure consistency and continuity.

Footpaths should be a unifying element in the streetscape where buildings, signs, objects and people provide constant variation and change. They are to give a clear expression of pedestrian priority, and this message must be obvious to pedestrians and drivers. Continuity of footpath dimensions, levels, materials and edges are therefore important. Permanent and semi-permanent objects such as kerb ramps, footpath crossings, pedestrian refuges and street furniture are to appear as occasional interruptions in the overall pattern rather than as dominant elements of the streetscape.

All footpaths must provide ease of movement for everyone, including people with different degrees of disability. Visual simplicity and observation of pedestrian desire lines is important, as is the use of contrasting pavement textures and markings to alert street users to potential hazards such as intersections and footpath crossings.

Appropriate design of surfaces in streets is essential in meeting the access needs of all pedestrians. Establish a smooth, non slip, durable and even surface with a continuous crossfall (maximum 1:40). Ensure that accessibility considerations comply with best practice standards, and where appropriate meet the recommendations of AS 1428.1:2001.

TREE PIT SURROUNDS

Tree pit surrounds provide a detail in the paving and contribute to the character and quality of the streetscape. Because of the presence of awnings, tree pits are generally located in kerb extensions, small civic spaces or street closures.

Tree pits should be sized to suit the size of paving units in the dominant surrounding paving, to avoid cutting units.

The choice of tree pit surround should respond to the dominant paving condition.

PAVING DETAIL - SERVICES

The provision of services has the potential for impact on the quality of streetscapes, through the location and materiality of service covers and the provision of overhead services.

Consideration of service provision is essential in the design of the street.

The following are key principles for integration of services into the streetscape:

- Liaise with service authorities to determine future service requirements over whole blocks;
- Underground overhead wires as part of streetscape upgrades;
- Use infill pit covers for electrical and Telstra pits, to allow continuity of paving,
- Use service cover frames that allow for paving to finish flush with frames.
- Tactile indicators should be used in large areas where directional information is required and at the top and bottom of stairs.

EXISTING CONDITION

Church Avenue



John Street



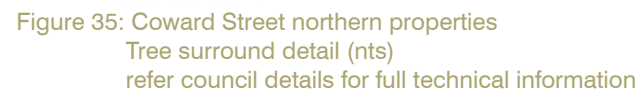
Bourke Street



Coward street



HEADERS/BANDING:



Special Places



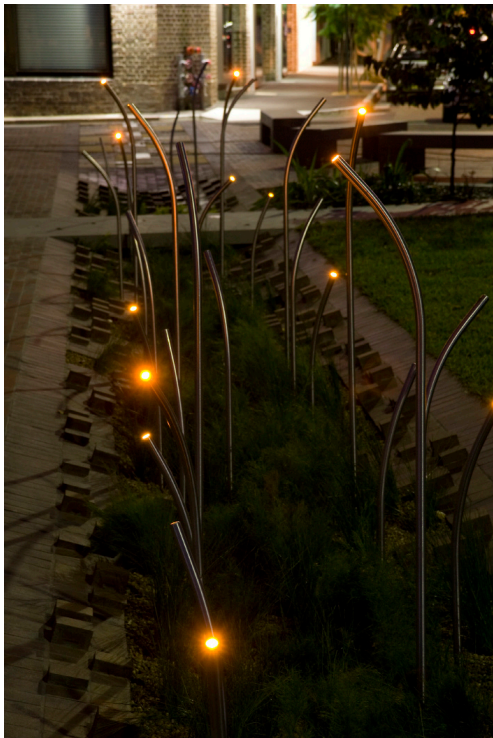
Custom concrete seating



Custom seating
Insitu off-form concrete walls with
hardwood timber battens.
Photo from Furphy Foundry.



Custom concrete seating



Custom lighting

PAVING
Within the Mascot Station Town Centre Precinct a number of small parks have been created by the configuration of building alignments, setbacks and street edges. These spaces are openings between buildings, and extensions of the street space. They offer opportunities for gathering and events, as well as casual socialisation, and add clarity to the urban form by forming void spaces in what will become a very densely populated area.

Parks should be treated as special places in the public domain, as they offer opportunities to highlight focal points, and express the particular character of The Mascot Station Town Centre Precinct. Each place can have either individual paving that contrasts with the standard street paving, utilise the standard paving in a particular way, or integrate standard street paving with a different material.

Paving for special places should include materials that express or reference the industrial heritage of Mascot. Over all design and materials of special places should be a response to the particulars of place and purpose.

FURNITURE + LIGHTING
Created within the developed Mascot Station Town Centre Precinct will be special places that punctuate the streetscape. As can be seen throughout the wider Mascot area these places often have a differentiation in paving from the standard, which can be complemented by unique furniture and lighting. The character of these spaces may be formed through the design and layout of seating, particularly in areas designed primarily as rest, or social spaces. Seating may be off the shelf, or custom designed to suit the space, function and budget.

Lighting should be incorporated where possible as an artwork and feature, through the use of different materials, colours and effects.

Material selection should draw inspiration from the Market Garden and Industrial heritage of the immediate area. Materials recommended are concrete, hardwood timber, corten steel, stainless steel, mild steel, cast iron all of which have various industrial connotations.

Potential material character referencing industrial past.
Materials should be robust, and solid, yet highly detailed and considered. Reference should generally be made in material type and character, not in scale.



Quality Principles



To achieve continuity and cohesiveness through the public domain improvements, it is preferable to prepare the detailed design of each street as a whole entity, rather than preparing a design for each property frontage. Piecemeal design of streets is evident in some of the existing streets, where different finishes, patterns and parking measures exist along the length of the street, resulting in loss of legibility and quality.

Implementation on this scale in one stage may not always be possible. Sometimes a new development will be required to implement the improvements as part of its obligation to make good the existing streetscape, or as part of a contribution to the upgrade. In these cases, detailed designs should be prepared for each section, showing how the section fits into the overall design for the street. In particular, the design plans should include:

- The relevant section of street shown as part of the block or overall street;
- Details of junctions with existing portions of the street;
- Dimensioned drawings showing set out of all elements, including parking bays, street;
- Trees, kerb alignment, paving set out;
- A full schedule of materials, including street trees;
- Details of junctions with the private domain, showing levels and alignment with adjacent;
- Materials;
- Specifications and details for soils, trees, and hardscape materials.

Designs and documentation may be commissioned by Council, or by developers for each site. In all cases, coordination and review of detailed design drawings, and inspection of quality of works during construction will be required by Council's urban designer/landscape architect and engineering professionals (including floodplain, civil and traffic) to ensure cohesiveness of design and implementation.

INFILL SERVICE COVERS

Design Intent:
Reduce the intrusion of service covers in the pavement as far as possible by infill paving surfaces of larger covers to match surrounding paving, and by minimising or avoiding concrete surrounds to covers.

Seek further advice from relevant service authority.

ADDITIONAL SERVICE DETAILS

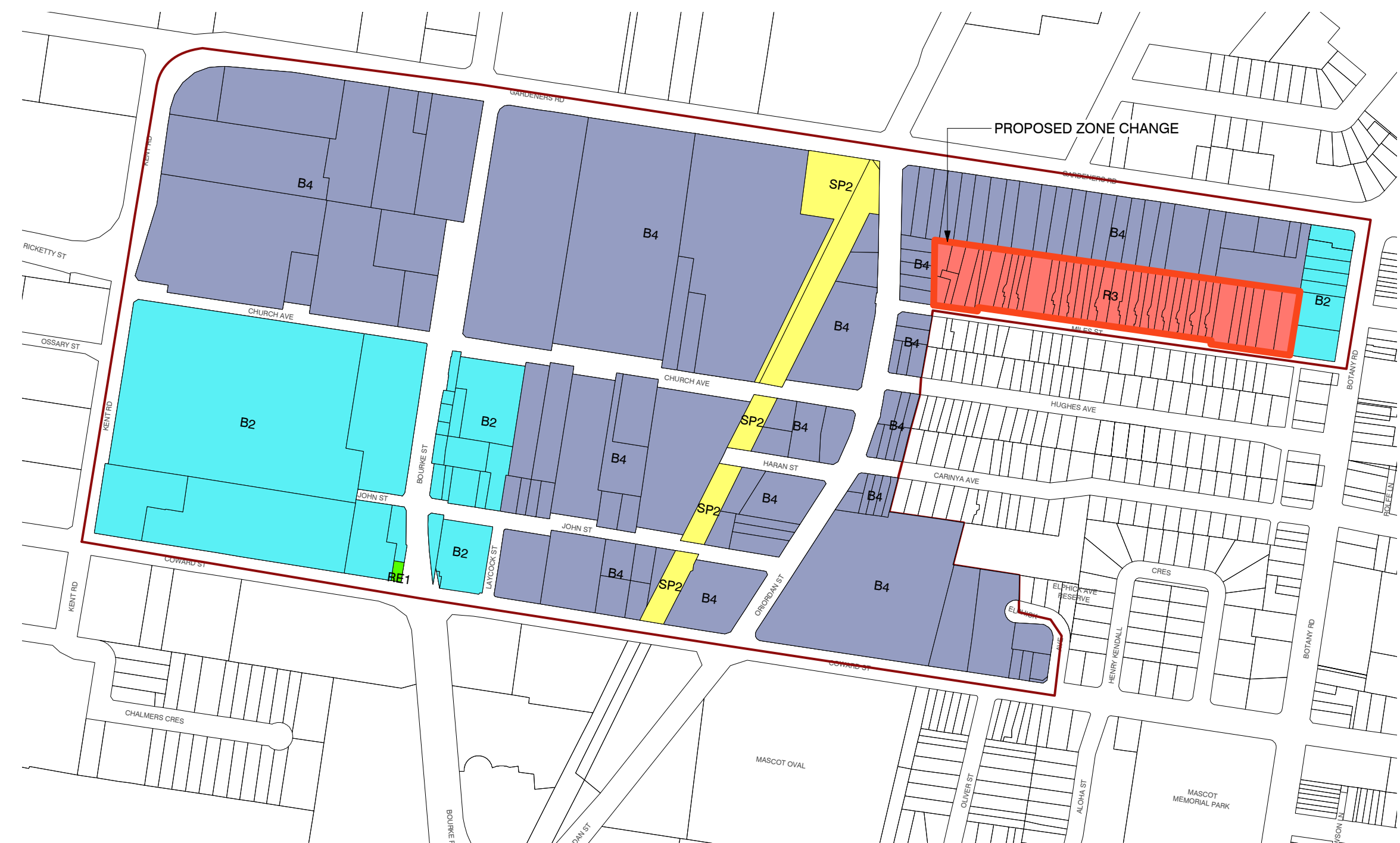
Developers are required to include hydrants within individual building envelopes to minimise imposition on the public domain

Developers are required to include electrical boxes within individual building envelopes to minimise imposition on the public domain

A large, stylized number '9' in a light yellow color, positioned on the right side of the slide. It has a thick stroke and a circular top loop.

LEP Recommendations

LEP Recommendations - Zoning Plan



For sites on the northern side of Miles Street Mascot, it is recommended that the zoning be changed from R2 zoning in the Draft BBLEP 2011 to R3 zoning in BBLEP 2012 (Figure 43). The reason for this recommendation is that the lots on the northern side of Miles Street are relatively deep (approximately 57m) and difficult to develop efficiently with attached houses (townhouses). The zoning is recommended to be R3 Medium Density, which will permit residential apartments.

This proposed re-zoning from R2 to R3 in Miles Street does not affect other adjacent zonings, with the properties fronting Gardeners Road north of the R3 zone remaining B4 zoning, as in the Draft BBLEP 2011.

Note: Miles Street is to be widened on its northern side (excluding heritage sites) in future development to achieve 15.5m width between lot boundaries on the northern and southern side

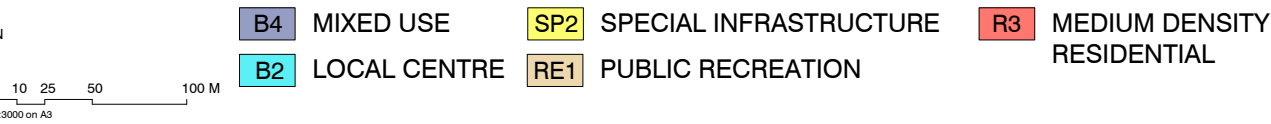


Figure 43: Recommended Zoning

LEP Recommendations - Height of Buildings

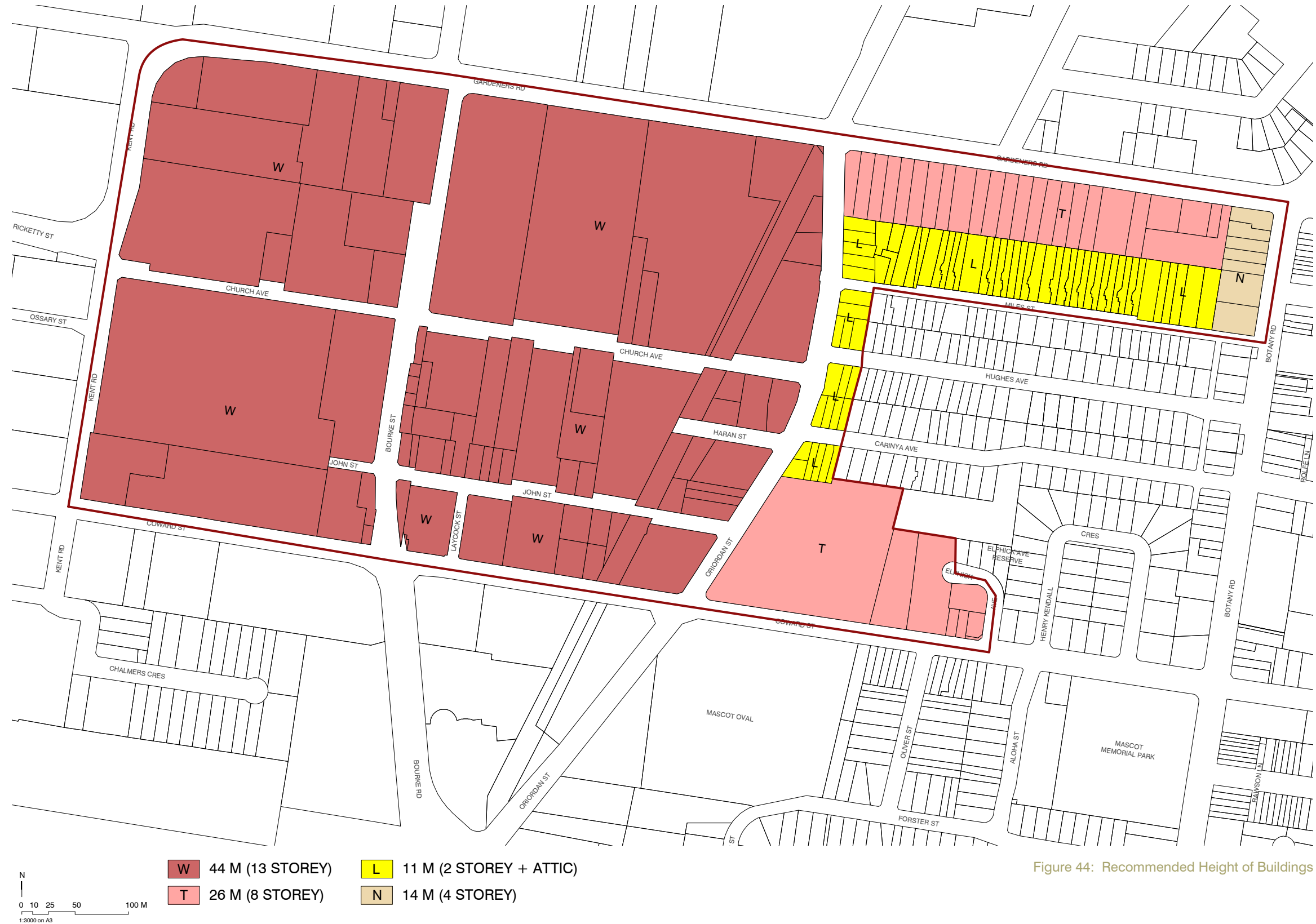


Figure 44: Recommended Height of Buildings

The Height of Buildings in Mascot Station Town Centre Precinct are subject to the Obstacle Limitation Surface (OLS) control that covers area around Sydney airport. The OLS limits the height of the buildings to 44m as a result the tallest buildings located around the Mascot Railway Station are limited to 44m/13 storeys height (sites highlighted as dark red in Figure 44).

The sites located away from Mascot Railway Station have a height limit of 26m/8 storeys (marked as light red). The height limit for sites facing Coward Street minimises overshadowing of the open space adjacent to Mascot Oval. The height limit is restricted to 8 storeys along Gardeners Road due to the traffic and pollution from a major road.

The sites located along east of O'Riordan Street and north of Miles Street (highlighted as yellow) create a transition of building heights from 8-13 storey towers to 1 or 2 storey detached houses. These sites have a limit of 2 storeys plus attic.

The sites along Botany Road have a height limit of 14m/4 storeys to suit the adjacent developments along Botany Road.

LEP Recommendations - Floor Space Ratio

The floor space ratio recommendations in this Masterplan relate to the suitable provision of transport, public open space, and built form outcomes.

TRANSPORT

The “LEP Standards and Urban Design Controls Study for the City of Botany Bay LEP 2011”¹ September 2010 states that the Mascot Town Centre Precinct has significant potential for an increase in residential employment capacity; however this can only be achieved if traffic and transport issues are resolved”² The study recommends that a TMAP of the area be undertaken to ascertain how the area will cope with this increase in density.³

The Mascot TMAP by SMEC contains, among many recommendations, measures to enhance public transport and cycling, and to manage traffic in and around the Town Centre Precinct. The TMAP takes as the basis for its traffic modeling, two floor space ratio scenarios provided by the LEP Standards and Urban Design Controls Study. These FSR scenarios are 3:1 and 3.5:1. The TMAP states that, to accommodate the traffic impact of redevelopment to FSR of 3.5:1, a mode share target of 57% car and 43% public transport is required⁴. This mode share target can be achieved with a combination of new high frequency bus services, construction of the M5 East extension and the implementation of the recommended TMAP package of measures⁵. These traffic projects and transport measures are medium term measures for implementation from 2021 to 2026.

This Masterplan recommends a floor space ratio of 3.2:1 for sites west of O’Riordan Street which is consistent with the recommendations of the LEP Standards and Urban Design Controls Study for the City of Botany Bay LEP 2011 and the Mascot TMAP. These two reports considered floor space ratios between 3:1 to 3.5:1 for testing. As identified above, the TMAP does not recommend that an FSR of 3.5:1 be implemented until a combination of large-scale traffic and transport measures are implemented in the future.

¹ *LEP Standards and Urban Design Controls Study for the City of Botany Bay 2011, David Lock Associates, Neustein Urban, Taylor Brammer, P.43*

² *LEP Standards and Urban Design Controls Study for the City of Botany Bay 2011, David Lock Associates, Neustein Urban, Taylor Brammer, P. 43*

³ *LEP Standards and Urban Design Controls Study for the City of Botany Bay 2011, David Lock Associates, Neustein Urban, Taylor Brammer, P. 43*

⁴ *Mascot Town Centre Precinct Transport Management and Accessibility Plan” by SMEC, Final Draft Report*

⁵ *Mascot Town Centre Precinct Transport Management and Accessibility Plan” by SMEC, Final Draft Report*

PUBLIC OPEN SPACE

A total area of 1.5 ha of open space has been provided in the Town Centre Precinct, for a future residential population of between 9,800 and 11,000 people, and an employment population of between 30,000 and 34,600 people⁶. This equates to 0.15 ha to 0.14 ha of open space per 1000 residential population (not including employment population)⁷.

The open space area of 1.5ha includes the existing Urban Spaces in Laycock Street and Bourke Street, the Sydney Water SWSOOS, new parks and landscaped street closures. This area is 3.8% of the Mascot Station Town Centre Precinct area of 39.3 ha. The average area of open space in inner Sydney is about 5% of the urban area.⁸ The provision of open space area in the Masterplan is less than the average 5% in inner Sydney urban areas. Floor space ratios greater than 3.2:1 would further reduce the provision of open space area, and are not recommended for this reason.

⁶ *“Mascot Town Centre Precinct Transport Management and Accessibility Plan”, by SMEC, Final Draft Report. Population Growth Forecasts for 2031, using floor space ratios of 3:1 and 3.5:1*

⁷ *The nearby Local Government Areas of Marrickville, Leichhardt and Waverley have (respectively) 1.5ha, 1.65ha and 1.8ha of open space per 1000 people.*

⁸ *“Recreation and Open Space Guidelines for Local Government” by the NSW Department of Planning 2010, states that “about 5% of inner urban Sydney is classified as open space”. The 3.8% provided in this Masterplan is below the existing percentage of open space in inner Sydney.*

BUILT FORM OUTCOMES

The recommended floor space ratios are derived from a thorough testing process for every site in the area containing building envelopes and development controls.

Site testing has been undertaken to ensure that :

- Ground floor uses (retail, residential etc) are proposed in appropriate locations
- Street setbacks are appropriate to the uses and street character
- Upper level setbacks are appropriate to the scale of development and street character
- The impacts of wind downdrafts and overshadowing are minimised
- Transition is made to adjoining land use zones and densities
- The interface between the public and private domains is well designed
- The SEPP 65 Residential Flat Design Code recommendations for building separation, building depth and natural ventilation are met
- The maximum building height in the LEP is complied with
- Heritage items are acknowledged

The Masterplan building envelopes are the result of this site testing. The floor space ratios in the Masterplan floor space ratio plan correspond to these built form outcomes. The detailed methodology for site testing is outlined in Appendix B - Site Testing.

LEP Recommendations - Floor Space Ratio

The Floor Space Ratio provisions are recommended as shown in the attached Figure 45.

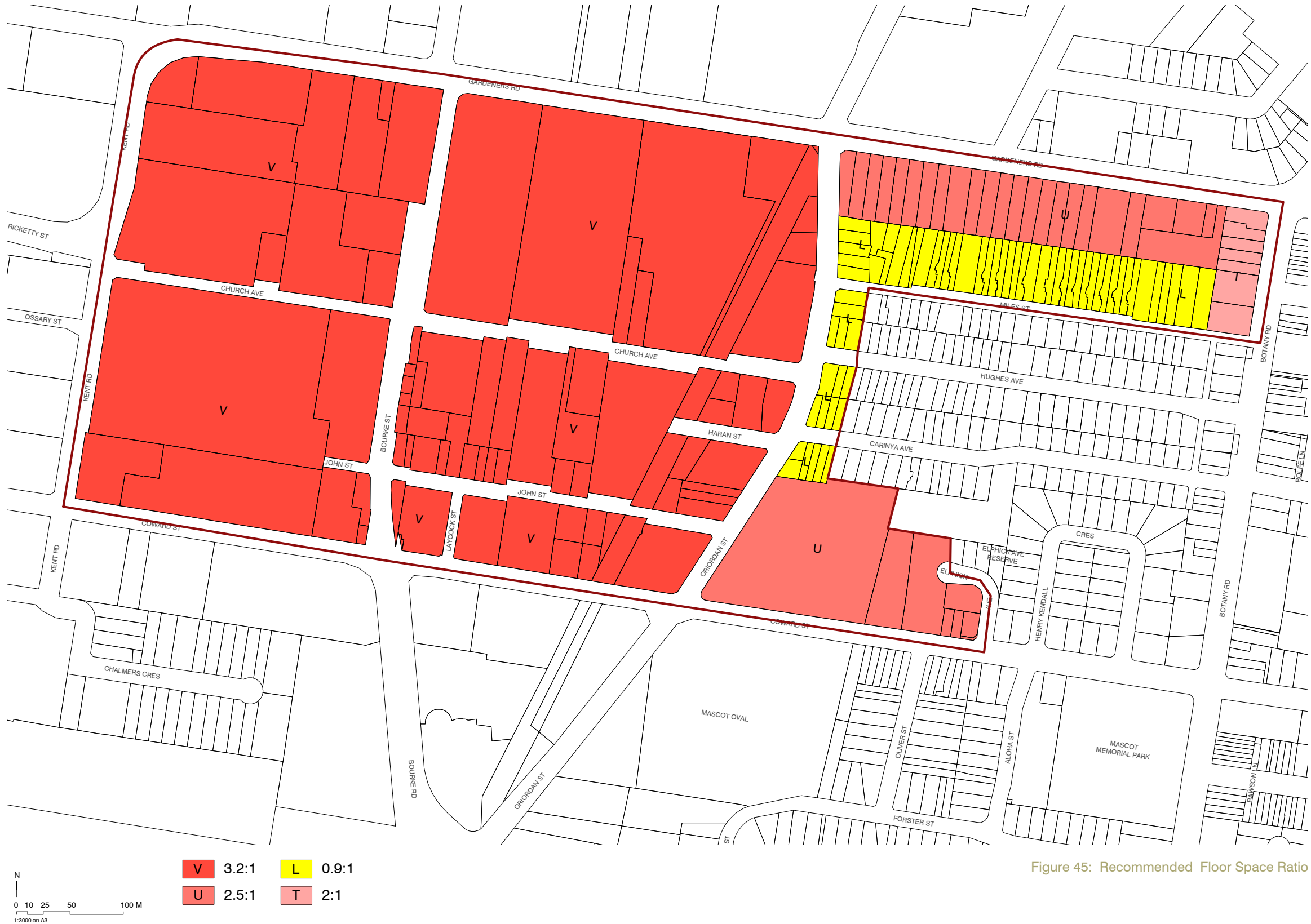
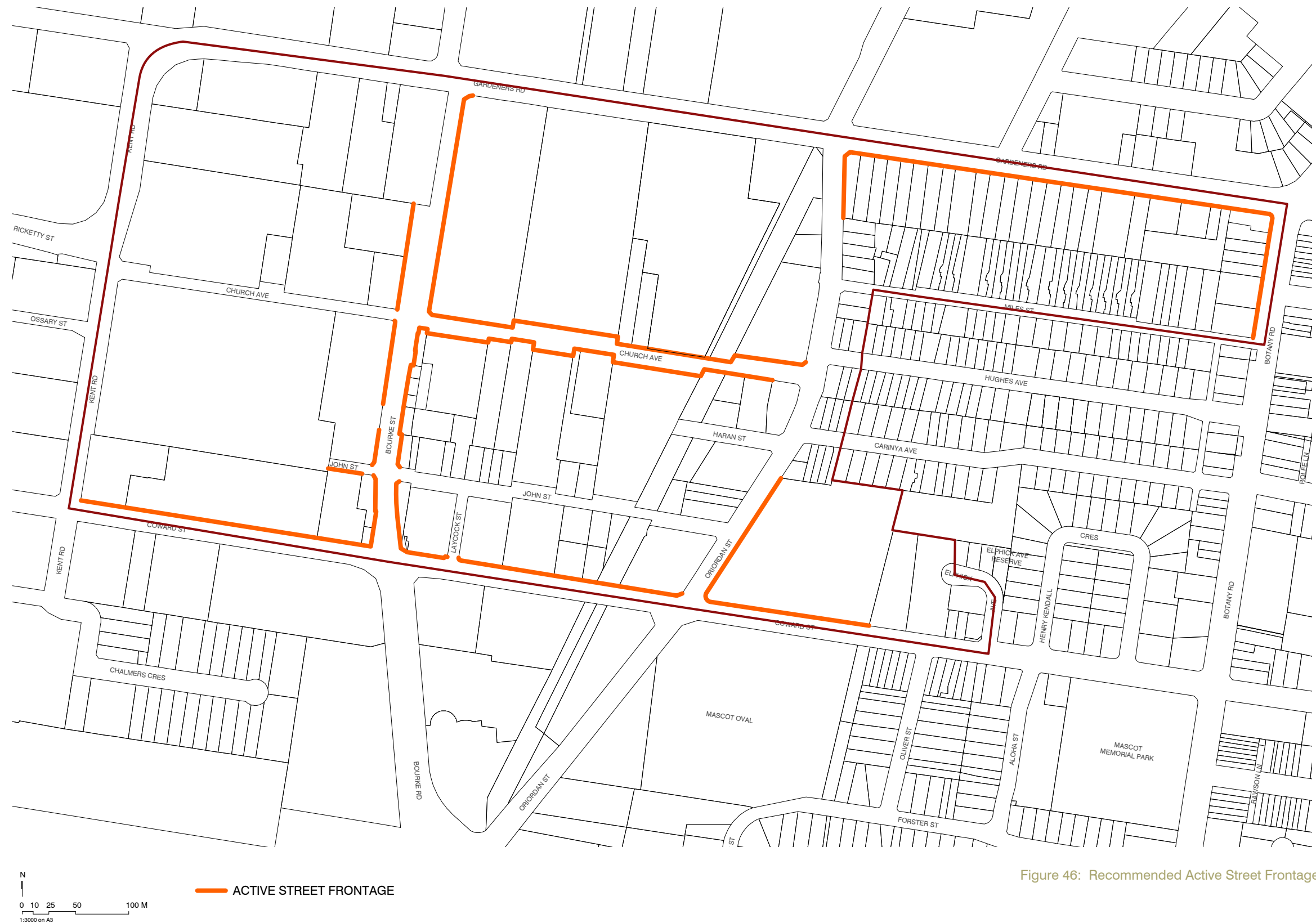


Figure 45: Recommended Floor Space Ratio

LEP Recommendations - Active Frontage



Active Street Frontages are removed from Church Avenue west, as in the Draft BBLEP 2011. The active street frontage is extended along Bourke Street north of Church Avenue and along Gardeners Road, Kent Road and the corner of O'Riordan Street and Coward Street. The Active Street Frontages (Figure 46) relate to the existing streets where retail or commercial ground floor frontages are required.

Figure 46: Recommended Active Street Frontage