Draft Parramatta City Centre
Development Control Plan 2021

Draft for exhibition

CITY OF PARRAMATTA

4.3.3. PARRAMATTA CITY CENTRE

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1 INTRODUCTION

1.1 APPLICATION

The provisions of this Part of the DCP apply to development in the Parramatta City Centre as shown in Figure (1), and will prevail where there is any inconsistency with other Parts of Parramatta DCP 2011.

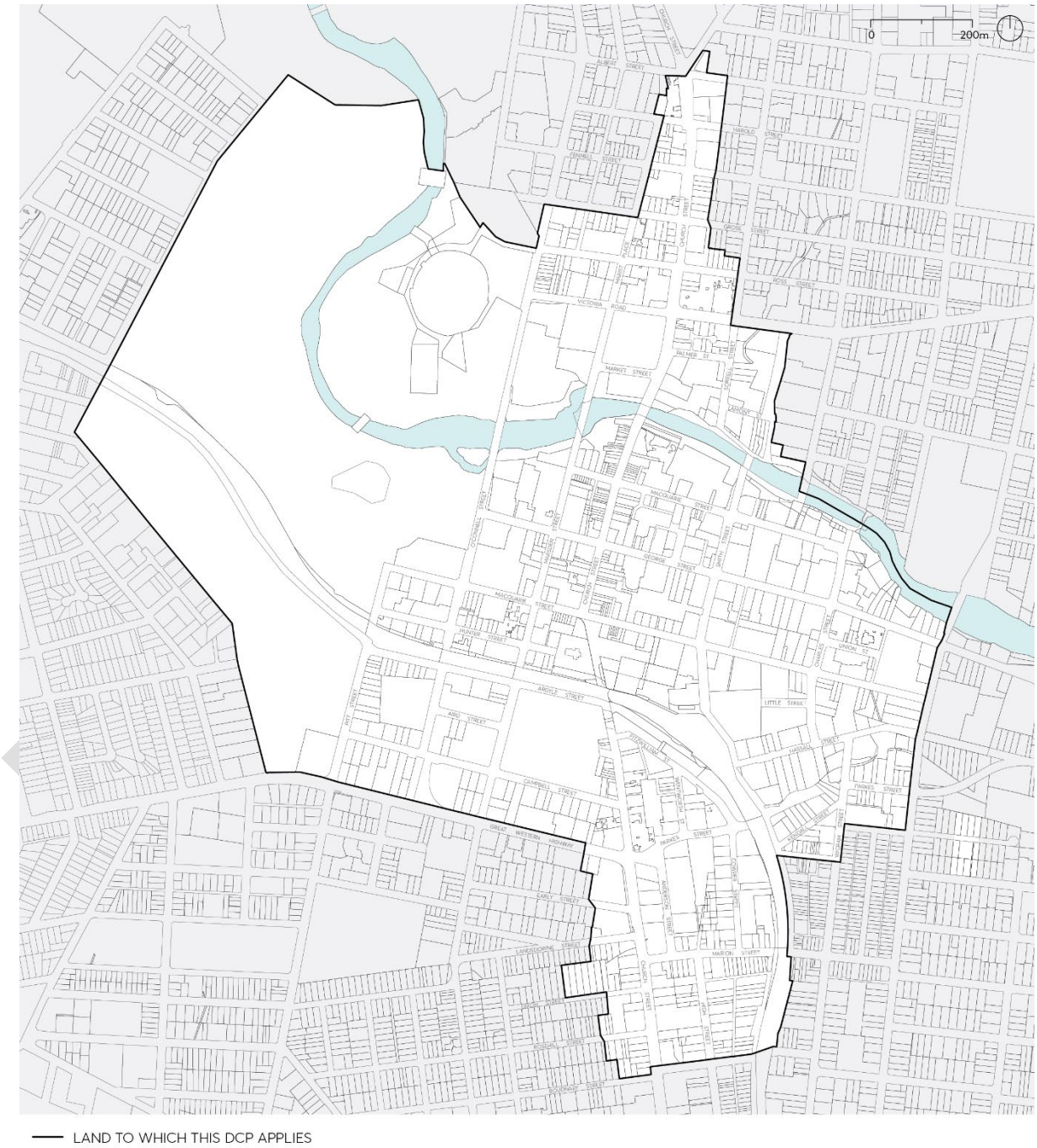


Figure (1) - Land Application Map – Parramatta City Centre

1.2 GENERAL OBJECTIVES

The City of Parramatta aims to foster the development of a lively, diverse and healthy City Centre, one which celebrates a sense of place and local character in both the public and private realms. The way people experience the city is an underlying consideration for all the objectives and controls in this Part of the DCP.

The clarity and quality of public spaces is essential to this conception of a City Centre focused on people. The public spaces – streets, squares and parks - are the basic and enduring structuring spaces of a city, of which streets are the most prevalent. The interaction of buildings and public spaces is critical in shaping the activities of the City Centre, which occur most intensely at the lower levels, where detail design plays an important part in the creation of an engaging pedestrian environment.

General Objectives

O.01 Create a legible, coherent and attractive City Centre characterised by lively streets of human scale and detail, and a distinctive skyline of tall, slender towers set back from the streets.

O.02 Ensure that the spaces of the public domain - streets, squares and parks - are of high quality and amenity.

O.03 Contribute to a thriving City Centre at street level with a well-designed interface at active frontages.

O.04 Prioritise pedestrian movements to enhance pedestrian safety and enjoyment of the city.

O.05 Promote urban and architectural design quality through planning procedures that foster design excellence.

O.06 Protect public parks and places from undue environmental impacts from development.

O.07 Reinforce the distinctive attributes and qualities of Special Areas in the City Centre.

O.08 Protect and celebrate heritage and provide for its conservation and interpretation.

O.09 Manage flood waters to protect and enhance the quality of the public domain and private property in the City Centre.

O.10 Limit the impact of growth and development on the City Centre environment with reduced energy and water use, greenhouse gas emissions and urban heat.

O.11 Protect and improve the natural environment.

2 DESIGN QUALITY

The promotion of good design in the built environment is an objective in the Environmental Planning and Assessment Act, and good design is a central aim for all development in the City Centre.

Design is a complex synthesis of multiple factors - technical, social, environmental, historic, aesthetic and economic. It responds to the context, physical as well as cultural, and generates sustainable living and working environments. It is concerned not only with how buildings look, but includes fundamental considerations of amenity for occupants and how buildings contribute to the development of quality urban places.

Good design generates spaces with a sense of appropriateness in which people naturally feel comfortable. It has detail and material quality, is long lasting, and it creates financial return through the making of places that people value.

Good design also incorporates an understanding that individual buildings should relate to each other as well as contribute to a larger whole. This conception of the importance of collective urban form is an underlying principle of the City Centre DCP controls.

Design quality procedures aim to include design quality as an integral part of development in the City Centre. An important aspect of this is to ensure that design intent is documented in detail and carried through all stages of projects to completion.

Objectives

O.01 Ensure that development individually and collectively contributes to the architectural and overall urban design quality of the city centre.

O.02 Incorporate design quality in public and private development as a central consideration through all stages of the process from design to completion.

O.03 Ensure that this DCP section is used as the basis for all Design Excellence competition processes.

O.04 Promote quality design through a competitive design process for large and prominent developments.

Controls

C.01 All Design Competition briefs must contain a reference to the objectives and controls of the City Centre DCP.

C.02 All Architectural Reference Designs in the City Centre developed as part of a Design Competition brief must use the City Centre DCP as the basis for building envelopes.

C.03 The City Centre DCP must form the primary basis of assessment of all Design Excellence winning schemes within the City Centre.

3 BUILT FORM

3.1 GUIDING PRINCIPLES

The Active frontages clause for the Parramatta City Centre require active ground floor street frontages for a large part of the City Centre. In these areas, the envisaged city form is broadly made up of two components: a lower stratum of defined streets and public spaces, and an upper one of tall, slender towers. The street wall, aligned with and attached to adjacent street walls, is the collective architectural component that defines the street and forms its character. The towers, set back from the street wall and free standing, generate a different type of city form of detached towers above the streets.

In areas zoned B4 Mixed Use that are not required to have active frontages, buildings with residential ground floors are possible. Where this occurs, the building is set back from the street, potentially generating a more fragmented built form at the lower levels. Here the role of landscape takes on added importance in defining the street, enriching its character and ensuring long term amenity.

The controls in this section apply to all developments in the Parramatta City Centre unless modified by Special Area controls.

The following principles apply to all development in the Parramatta City Centre:

P.01 In streets with active ground floor frontages, the development model for the city is for the lower 4-6 storeys to collectively define and articulate the spaces of the public domain, with towers set back as clearly distinct free standing buildings.

P.02 In streets with active ground floor frontages, street walls are designed at appropriate heights to create spatially defined streets that are well proportioned, humanly scaled and finely grained, with facades of tactile material quality.

P.03 Towers are set back above street walls to reinforce the scale of the streets, mitigate wind and urban heat impacts, enable views to the sky and protect amenity in streets and public places.

P.04 The design of the street wall responds, where relevant, to the existing heritage context.

P.05 Building depth, bulk and separation creates a city form that protects amenity, daylight penetration, views to the sky and privacy between adjoining developments and minimises the negative impacts of buildings on the amenity of the public domain.

P.06 Towers are proportioned to maximise their slenderness of form.

P.07 The design and materials selection of buildings and the public domain contribute to a high quality, durable and sustainable urban environment.

P.08 The gross floor area permissible under the applicable maximum FSR for each Development Lot in some circumstances may not be achievable when all planning, urban design and assessment considerations are taken into account. These may include, but are not limited to, matters such as street and tower setbacks, width of street frontage, the shape and size of the site, heritage curtilage, significant trees being retained, and significant archaeology on the site.

3.2 MINIMUM SITE FRONTAGE

Objectives

O.01 Ensure sites are of sufficient width to achieve:
- a) the necessary standard of amenity in relation to privacy, solar access, ventilation and outlook.
- b) adequate building separation in accordance with this DCP.
- c) street activation to the required extent.
- d) safe and efficient access and servicing.

O.02 Ensure development does not compromise potential development on adjacent sites.

Controls

C.01 A development lot must have a minimum street frontage width of 35 metres.

C.02 A corner lot must have a minimum frontage width of 35 meters for both streets.

C.03 Where a site has the minimum frontage width or more, it must nonetheless be demonstrated that the objectives of the control can still be satisfied.

C.04 Any development proposal for a site with less than 35 meters street frontage width must demonstrate how adjacent sites can be developed to their full potential.

3.3 THE BUILDING ENVELOPE

The building envelope resulting from the setbacks and heights outlined in this section constitute a three dimensional volume within which, together with all other applicable controls, a coherent built form must be designed.

3.3.1 STREET SETBACKS

The primary distinguishing characteristic for purposes of establishing street setbacks relates to ground floor usage. There are two principal categories:

- The building has an active ground floor frontage with an attached street wall (that is, a street wall with zero side setback); or
- The building has a residential ground floor frontage.

In areas with active street frontages the street wall is the part of the development that has most impact on the street and public domain experience. Together with the attached adjacent street walls, all built to the street alignment, it defines and articulates the street with appropriate scale and detail. Above the street wall, towers must be set back and designed as separate detached buildings.

In areas with residential ground floors, the building must be set back from the street alignment, allowing an arrangement which balances the need for resident privacy as well as engagement with the street, and also provides the necessary space for landscape amenity, both for residents and the street.

In areas where ground floor usage is uncertain, primarily areas at the fringes of the City Centre zoned B4 Mixed Use and not identified with an active street frontage on the Active Frontages Map, existing and possible future context must be taken into account in determining appropriate built form and ground floor arrangements.

Street setbacks and building separation controls outlined in this section contribute to the reduction of heat in the urban environment. View of sky is a significant factor in mitigating urban heat, refer Section 8 *Environment Sustainability*.

Objectives

O.01 Reinforce the spatial definition of streets and public spaces.

O.02 Emphasise the street as a distinct spatial entity, and design the street wall frontage with an appropriate human scale and sense of enclosure for the street.

O.03 Ensure consistent street frontages along the street alignment.

O.04 Recognise the variation in street frontage heights throughout the city, and allow flexibility to respond to context.

O.05 Protect daylight access at street level and permit views of sky from the street by providing setbacks above street frontage height that promote separation between buildings and assist in mitigating urban heat.

O.06 Ensure that building form achieves comfortable public domain conditions for pedestrians, with adequate daylight, appropriate scale, and mitigation of urban heat and wind effects of tower buildings.

O.07 Create a clear delineation between public and private space.

O.08 Reinforce important elements of the local context including public spaces, heritage buildings, monuments and landscape elements.

O.09 Provide space in residential areas for landscape amenity that also contributes to the public domain.

O.10 Ensure that built form enables a healthy environment for street trees.

Controls

C.01 For all buildings that have an active frontage:

a) Street setbacks and heights must comply with Figure (2), except where stated otherwise in the Special Areas Section of the City Centre DCP controls.

b) The street wall must be built to the street boundary a minimum of 14 metres and a maximum of 21 metres above the footpath level.

c) The tower above the street wall must be set back a minimum of 6 metres from the street boundary.

d) Only one step in the built form between the street wall and tower is permissible.

e) Setbacks above the street wall on corner sites apply to both streets.

f) The street wall on corner sites must incorporate a set back from the corner intersection for its full height, which may be splayed or curved, refer Figure (3).

g) Development applications must be accompanied by a streetscape analysis to determine the most appropriate street wall height within the permissible range.

h) Refer to Sections 3.4 and 3.5 for controls relating to the design of the street wall and the ground floor.

C.02 Where a development with an active frontage is affected by a widening notation on the Land Reservation Acquisition Map, a street wall with a recessed ground floor frontage may be considered, refer Figure (4). The detailed profile of the street wall must be determined in relation to the requirements and circumstances of each site, and must be capable of consistent application for the block. Applicants should contact Council at the start of the design process to establish the street profile for the development.

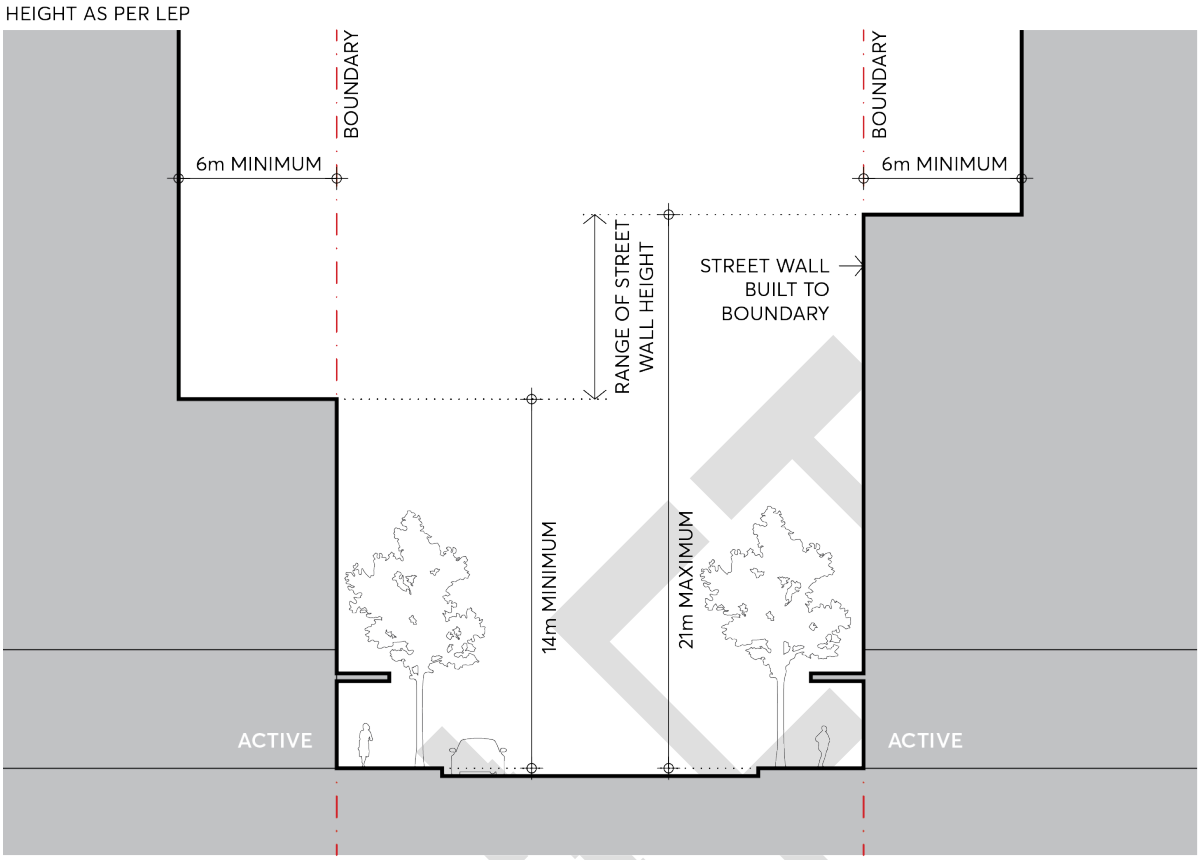


Figure (2) – Street Setbacks and Street Wall Height – Active Ground Floor Street Frontage

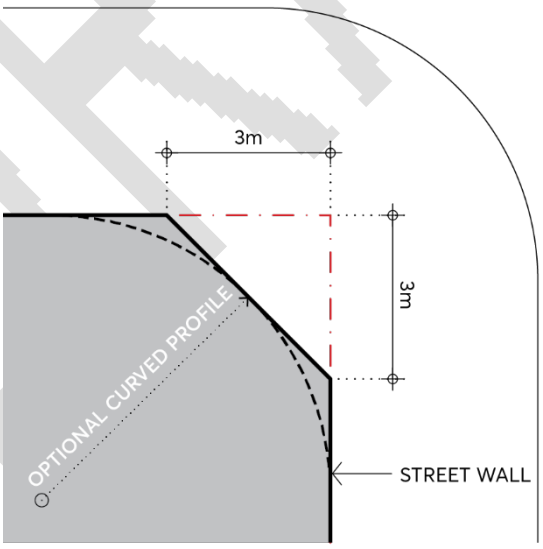


Figure (3) – Street Wall Corners

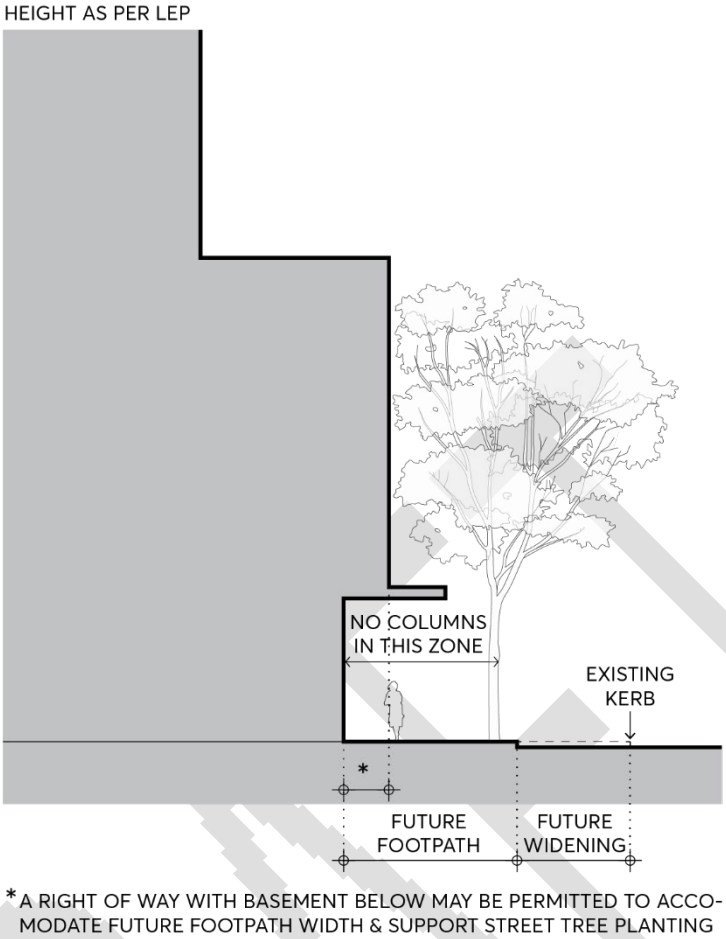


Figure (4) – Street wall subject to LRA

C.03 For all buildings with a lane frontage:

a) Street setbacks and heights must comply with Figure (5).

b) The street wall must be built to the lane boundary a minimum of 14 metres and a maximum of 21 metres above the footpath level.

c) The tower above the street wall must be set back a minimum of 3 metres from the lane boundary.

d) The above setbacks are subject to building separation controls in Section 3.3.2

e) Only one step in the built form between the street wall and tower is permissible.

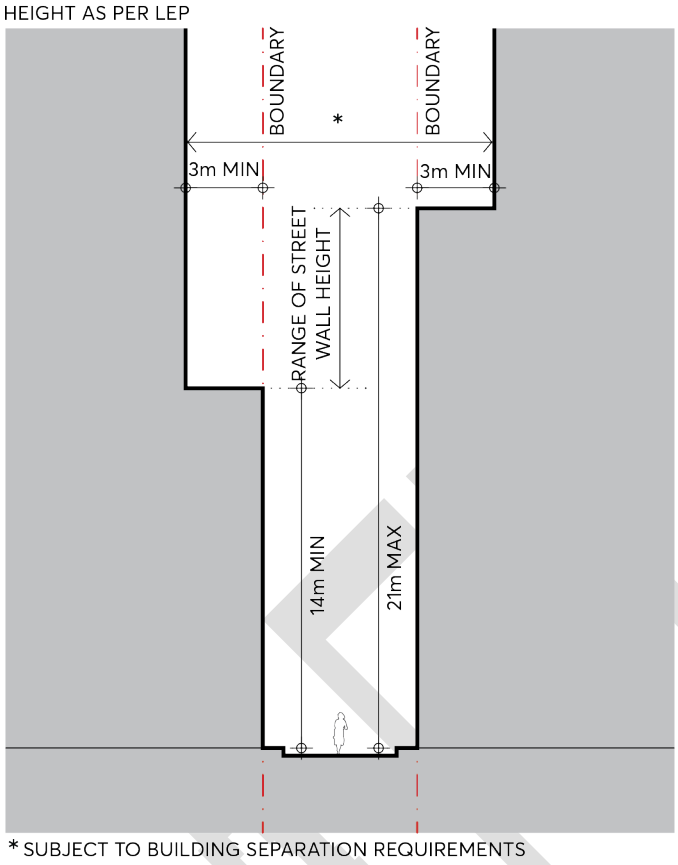


Figure (5) – Laneway Setbacks

C.04 For all buildings that have a residential ground floor street frontage:

a) Street setbacks must comply with Figure (6).

b) The building must be set back a minimum of 6 metres from the street boundary.

c) A 1 metre articulation zone is permitted forward of the setback, in which building elements may occupy a maximum of one third of the area of the facade. Services or lift shafts are not permitted in the articulation zone.

d) Refer to Section 3.5 for controls relating to the design of the ground floor.

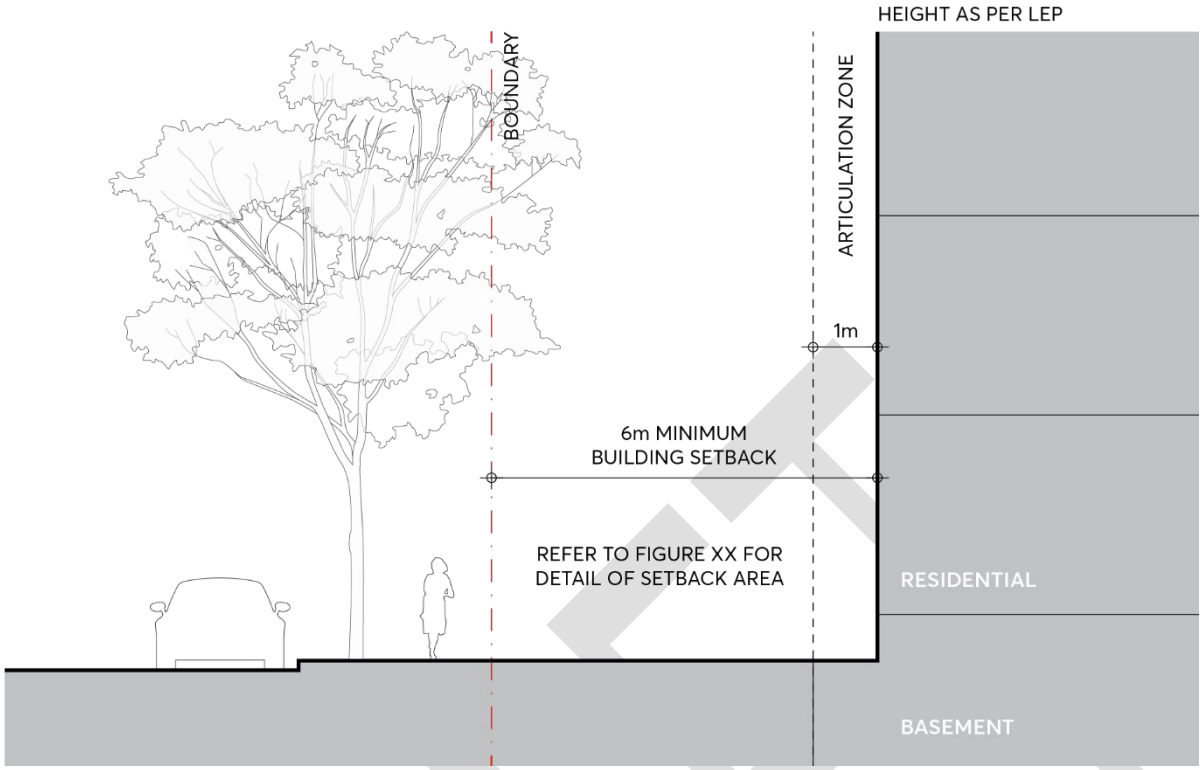


Figure (6) – Street Setbacks - Residential Ground Floor street frontage

C.05 For sites that are zoned B4 Mixes Use and are not required to have active ground floor street frontages in the LEP, an analysis of existing and likely future context must be submitted to determine the most appropriate ground floor uses, setbacks and built form at the street frontage.

C.06 Setbacks must be measured perpendicular to the boundary and extend to the outer faces of the building including balconies, sunscreens and the like.

3.3.2 BUILDING SEPARATION

Objectives

O.01 Protect the amenity of streets and public places by providing a healthy environment for street trees, and allowing adequate daylight and views to the sky.

O.02 Provide adequate privacy, access to light, air and outlook for the occupants of buildings, neighbouring properties and future buildings.

O.03 Ensure towers are sufficiently separated so that tower buildings are seen in the round.

O.04 Ensure development does not prejudice the re-development of adjoining sites in the future.

Controls

C.01 For commercial buildings in the B3 Commercial Core zone, building separation above street wall height must be a minimum of 12m. The separation distance must be apportioned equally between adjacent sites to determine side and rear boundary setbacks.

Refer Figure (6) XX A

C.02 For residential buildings in the B4 Mixed Use zone that have a residential ground floor, building separation must be a minimum of:

a) 12 metres up to 4 storeys.

b) 18 metres over 4 storeys

The above separation distances must be apportioned equally between adjacent sites to determine side and rear boundary setbacks.

Refer Figure (6) XX B

C.03 For mixed use buildings in the B4 Mixed Use zone that have an active ground floor street frontage:

a) Building separation above street wall height must be a minimum of 18m. The separation distance must be apportioned equally between adjacent sites to determine side and rear boundary setbacks.

b) An analysis of existing and possible future context must be submitted to determine the most appropriate built form below the street wall height at the side and rear boundaries.

Refer Figure (6) XX C

C.04 Only one step in the built form is permissible.

C.05 Separation must be measured to the outside face of the building including balconies, vertical and horizontal circulation, internal voids and external walls.

C.06 Separation must be measured perpendicular to the boundary to the outer faces of the building including balconies.

C.07 For purposes of these controls, serviced apartments and build to rent apartments must be treated as a residential building.

C.08 An existing adjacent building, even if heritage listed, cannot be used to justify a reduced setback which could compromise the development potential of the adjacent site in the future.

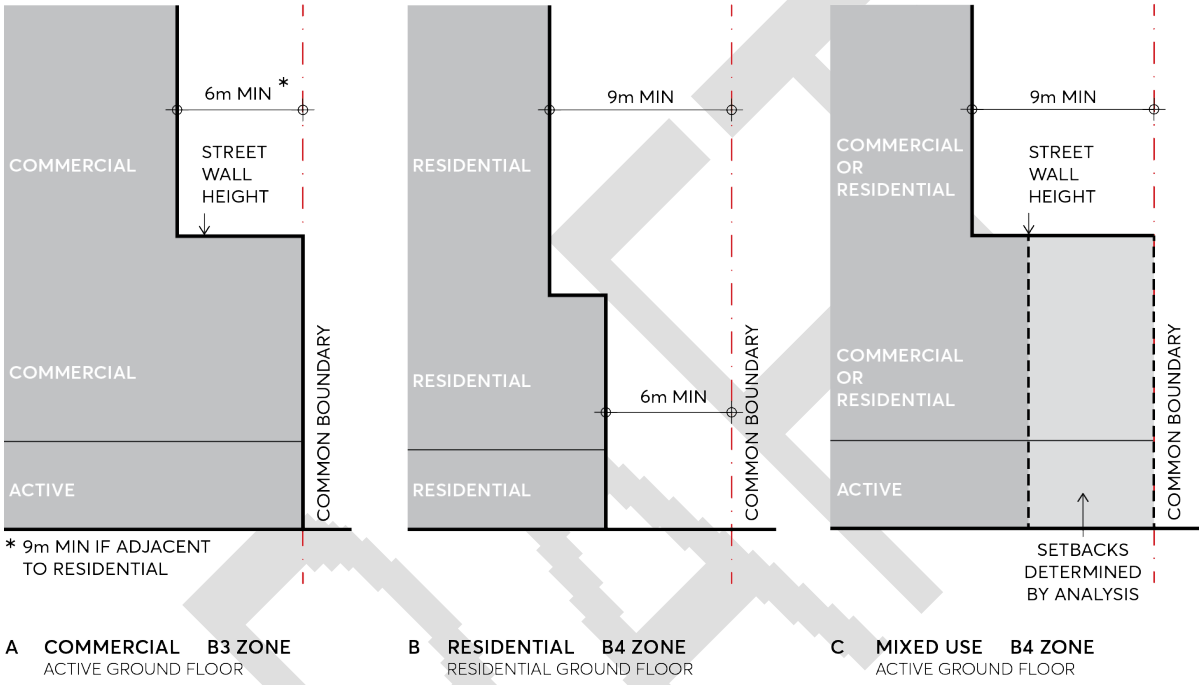


Figure (6) XX A, B, C – Building Separation

3.3.3 TOWER SLENDERNESS

The overarching objective of the City Centre controls is to generate a city form with well-defined streets of high amenity, and a skyline populated by tall slender towers.

The slenderness of towers is important both to achieve elegance of form as well as to maximise amenity and environmental performance. Plan area, plan proportion, and height are contributing factors in the perception of tower slenderness.

Objectives

O.01 Generate towers of slender proportions to achieve elegance of built form.

O.02 Mitigate the potential adverse effects that buildings may have on the public domain, including overshadowing, views to sky, urban heat, and wind effects.

O.03 Achieve living and working environments with good internal amenity, including solar access, natural ventilation, outlook and external amenity of open spaces,

O.04 Minimise the need for artificial heating, cooling and lighting.

Controls

C.01 The maximum floorplate area for a commercial tower in the B3 Commercial Core zone must be 2500 square metres.

C.02 The maximum floorplate area for a commercial tower in the B4 Mixed Use zone must be 2000 square metres.

C.03 The maximum floorplate area for a residential tower must be:

a) 800 square metres for a building which is less than 75 metres high.

b) 950 square metres for a building which is between 75-105 metres high.

c) 1100 square metres for a building which is greater than 105 metres high.

C.04 Maximum floor plate areas are subject to achievement of the setback and separation controls as outlined in Sections 3.3.1 and 3.3.2.

C.05 The maximum floorplate length for a commercial tower in the B3 Commercial Core zone must be 60 metres.

C.06 The maximum floorplate length for any tower in the B4 Mixed Use zone must be 45 metres.

C.07 The floorplate must be measured to the outside face of the building including balconies, vertical and horizontal circulation, internal voids and external walls.

C.08 Tower forms that are modulated into discrete elements are not considered as separate towers for purposes of these controls.

3.3.4 FLOOR HEIGHTS

Objectives

O.01 Provide adequate amenity for building occupants.

O.02 Ensure that floor heights support a range of uses and enable a change of use over time.

O.03 Ensure that above ground parking has adequate ceiling heights to enable it to be converted to future residential accommodation.

Controls

C.01 Minimum floor to floor heights must be as follows:

	Minimum Floor to Floor Height (metres)
Commercial	3.8m
Residential	3.1m
Ground floor active street frontage	4.5m
Above ground parking: In the B3 Commercial Core zone In the B4 Mixed Use zone	 3.8m 3.1m

3.4 THE STREET WALL

Together with the public domain, the attached street wall with active ground floor frontage is the built element that shapes the way most of the city is experienced. As the primary means of providing definition and spatial enclosure to the streets and other public spaces, it is the principal architectural component of collective civic intent. That is, it must operate in concert with other street walls to form a satisfyingly rich experience for the public spaces of the city, and its modulation, articulation and character must be guided by this understanding of its role. Its design must be derived from the general characteristics that make successful streets: spatial definition of the street, human scale, urban grain, facades of tactile material quality articulated with depth and shadow.

Seen this way, the street wall can be thought of as a separate project to the design of the tower, and can be distinct and different in character from the tower, but it should complement other street walls. In the foreground, it acts as a mitigating element for the set back tower building, able to define the street at the appropriate height and protect the street from the wind effects of the tower. The street wall height is set at a range that allows some flexibility with a maximum that generates a street width to height ratio in the order of 1:1.

Erosions or interruptions of the street wall generally work to undermine the vitality and definition of the street and are not favoured.

Objectives

O.01 Define the space of the street and public spaces and articulate their edges.

O.02 Design the street wall to provide appropriate scale, material quality and detail.

O.03 Create visual interest and variety in the streetscape within an overall framework of consistency in the definition of the street and its character.

O.04 Design the street wall to achieve fine grain modulation in the street.

O.05 Encourage walkability by locating active uses in streets.

O.06 Provide comfort and shelter for pedestrians.

O.07 Minimise large expanses of inactive frontage.

Controls

C.01 The street wall must:

a) Be built to the street alignment along its full frontage at all levels. Minor recesses in the profile for modulation and articulation are permissible.

b) Be modulated vertically in segments that relate to a fine grain subdivision pattern where the site frontage is more than 25m. Refer to Figure (7) The Street Wall.

c) Be of predominantly masonry character with no lightweight panel construction or curtain walling.

d) Be articulated with depth, relief and shadow on the street facade. A minimum relief of 150mm between the masonry finish and glazing face must be achieved.

e) Utilize legible architectural elements and spatial types - doors, windows, pilasters, sills, plinths, frame and infill, etc. - not necessarily expressed in a literal traditional manner.

f) Include an awning in accordance with Section 4.2 AWNINGS AND TREES ON STREETS.

g) Include a ground floor facade design which intensifies the walking experience with particular richness in detail, refer to Section 3.5 THE GROUND FLOOR.

C.02 Undercrofts or other interruptions of the street wall which expose the underside of the tower and amplify its presence on the street are not permitted.

C.03 Green walls, screens and the like must not be used as an applied cover that masks the architectural attributes of the street wall facade. Greenery may be incorporated in the street wall so as to complement its required character as set out in C.01 and C.02 above.

C.04 All development applications must include a streetscape analysis to determine the most appropriate street wall height, and provide details of the street wall. Submissions must include:

a) The street wall elevation at 1:200 scale in context showing existing buildings on the block.

b) A detailed street wall elevation at 1:100 scale including immediately adjacent buildings accurately drawn.

c) Sections through the street wall and awning at 1:50 scale including the public domain.

d) Detail street wall facade plans and sections at 1:20 scale, including ground floor active frontage and awning details, refer Sections 3.5, 4.2 and 4.3.

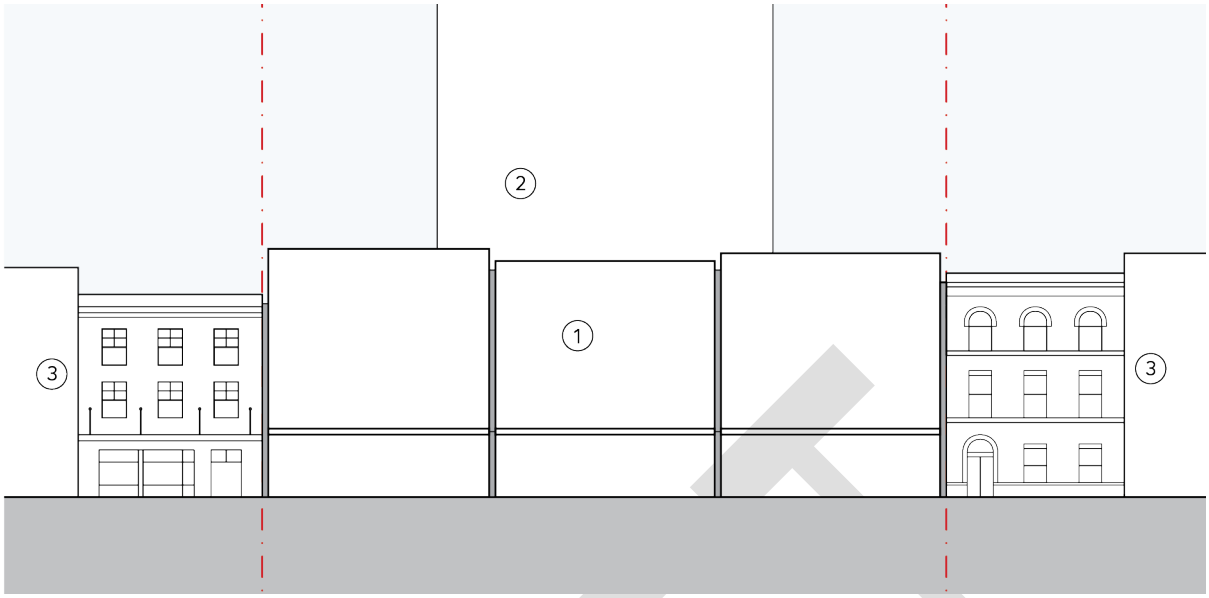


Figure (7) – The Street Wall

1. Street wall modulated in segments
2. Tower set back
3. Adjacent buildings

3.5 THE GROUND FLOOR

The active ground floor of the street wall is the part of the building that interfaces directly with the street or public domain. As such it has the most impact on the pedestrian experience, and its design must respond to the need for a lively, interesting and comfortable environment. Much of the success of this frontage, also critical to the success of the city, relies on a considered level of detail design and realization.

In the case of residential frontage at the ground floor, a different set of parameters applies, but its success is equally reliant on detailed consideration and treatment. Here, the building is set back from the street to afford a balance of privacy as well as engagement with the street for ground level residents, at the same time allowing space for a generous tree canopy providing amenity for the street and residents.

A large part of the city centre is flood affected, which, among other implications, may significantly affect the design of the ground floor in these areas. Objectives and controls for the design of ground floors are covered below for sites that are not flood affected in Section 3.5.1, followed by correlated provisions which apply for sites that are flood affected in Section 3.5.2.

Ground level design and detail must be integrated with public domain requirements, refer Section 5 The Public Domain.

3.5.1 NON FLOOD AFFECTED SITES

3.5.1.1 ACTIVE GROUND FLOOR FRONTAGE

The factors that make for a thriving active ground floor street environment are well established: a scale appropriate to the pedestrian, narrow shopfronts and many doors, a mix of tenancy types, good transparency to the inside, quality materials with expressed detail, vertically articulated facades (which make distances along the street appear shorter), and a plinth for the glazed frontages.

Where required, shelter and weather protection for pedestrians on footpaths must be provided by awnings. Colonnades are generally not favoured on streets as they restrict views of retail frontage and fragment the street interface, thereby undermining the intensity of public activity at the frontage. There may be limited situations where colonnades are considered reasonable, such as where they allow continuity of important view corridors.

Objectives

O.01 Provide for the amenity, interest and liveliness of the street environment.

O.02 Ensure a positive experience for pedestrians with the necessary fine grain environment of the street.

O.03 Enable sensory engagement with the street.

O.04 Provide an active ground floor frontage that is accessible and integrated with the design of the public domain.

O.05 Maximise the extent of active frontages in the public domain.

O.06 Ensure appropriate scale and proportion of foyers and lobbies in relation to site frontage.

O.07 Promote activity, connectivity and variety in the public domain.

O.08 Increase the number of safe routes of travel throughout the Parramatta City Centre.

O.09 Increase passive surveillance of the street and enhance safety.

O.10 Ensure security measures do not inhibit passive surveillance of the street.

Controls

C.01 The following numeric parameters apply to active ground floor frontage:

a) Active uses must fully occupy the ground floor frontage not taken up by services or vehicular access.

b) The minimum depth of tenancy must be 4m, and tenancies must have an unobstructed view to a depth of 4m from the footpath.

c) Where the street frontage is identified as having an active frontage on the Active Frontages Map, the maximum internal tenancy width allowed for must be 6 metres. Where active street frontage is not nominated on the Active Frontages Map, the maximum internal tenancy width allowed for must be 10 metres.

d) Foyers and lobbies in the B3 Commercial Core zone must be a maximum of 20 per cent of the frontage width.

e) Foyers and lobbies in the B4 Mixed Use zone must be a minimum of 3 metres and a maximum of 8 metres of the frontage width.

f) Where food and beverage premises have operable elements they must not be greater than 80% of the individual tenancy width.

C.02 The active ground floor frontage must be considered in detail and the following must be incorporated in its design, refer Figure (8):

a) A nominal 500mm interface zone at the frontage must be set aside to create interest and variety in the streetscape, to be used for setbacks for entries, opening of windows, seating ledges, benches, and general articulation.

b) The ground floor levels and facade masonry frame must allow for tenancy widths as noted above in C.01(c).

c) The facade must have a high level of expressed detail and tactile material quality.

d) The base of the facade must achieve a well resolved meeting with the footpath that takes account of any slope. A horizontal plinth, integrated in the design, must be incorporated at the base of glazing to the footpath.

e) A clear path of travel must be provided in the public domain as defined in the Public Domain Guidelines 2017.

f) Legible entrances must be formed in the frontage.

g) Fire escapes and service doors must be seamlessly incorporated into the facade with quality materials.

h) The facade must not have deep recesses for entry lobbies that compromise safety.

i) Colonnades are not permitted on streets. Awnings must be provided where required in accordance with Section 4.2 *Awnings And Trees On Streets*.

j) All required services must be incorporated in the design of the ground floor frontage at DA stage, refer Section 3.5.4 *Servicing And Utilities*.

k) Parking security grilles or doors must be aligned to the building edge as closely as safety constraints permit.

l) Security doors or grilles must be designed to be fitted internally behind the shopfront, fully retractable and a minimum 50% transparent when closed.

C.03 Refer to Section 3.5.2 for flood affected sites.

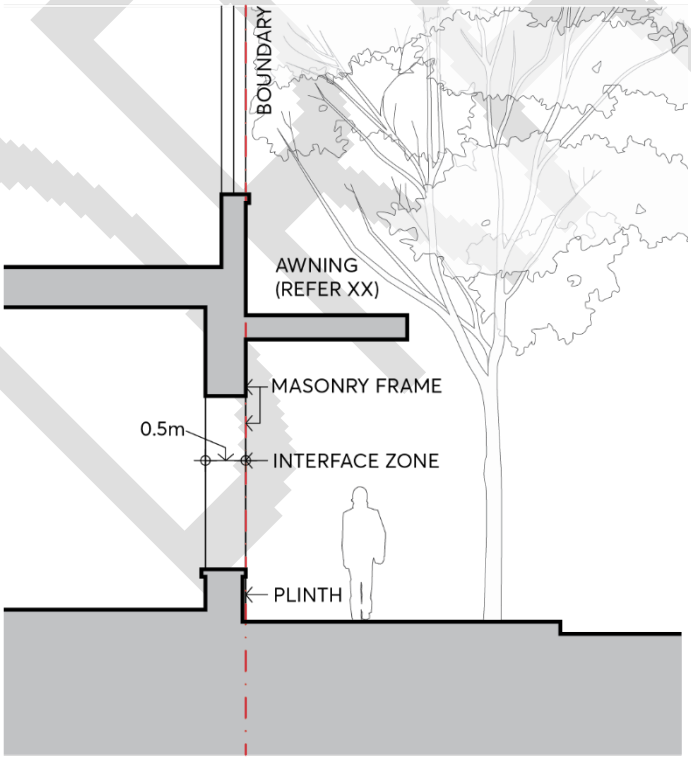


Figure (8) – Active Ground Floor Frontage

3.5.1.2 RESIDENTIAL GROUND FLOOR FRONTAGE

Residential buildings must be set back from the street boundary to provide amenity for ground floor residents, a landscaped setting for buildings, and a landscape character for the street.

The area between the facade and the street boundary must receive attention both in design and in its material quality. The subtleties involved in the design of ground level entries, private terraces or balconies, fences, walls, level changes and planting play an important part in the articulation of the street. A detailed resolution of these elements is essential in contributing to an unambiguous definition of public space, good street form, pedestrian scale, clarity of access and address, and a balance of privacy and passive surveillance. These details must all be designed with the same level of care given to the building.

The potential mix of possible street frontage conditions in the B4 Mixed Use zone that are not identified as having an active frontage on the Active Frontages Map must be subject to analysis in each situation. Existing and possible future context and use must be taken into account in determining the optimum built form.

Objectives

O.01 Establish new canopy trees that contribute to the landscape character of the street and residential amenity.

O.02 Appropriately define and design the street edge and setback area to achieve amenity and privacy for residents as well as engagement with and passive surveillance of the street.

Controls

C.01 The following parameters apply to residential ground floor street frontage, refer Figure (9)

a) The building must be set back 6 metres from the street boundary. A 1 metre articulation zone is permitted forward of the setback, in which building elements may occupy a maximum of one third of the area of the facade. Services or lift shafts are not permitted in the articulation zone.

b) Basements must be set back a minimum of 5 metres from the street boundary measured to the outside face of structure to allow deep soil in the setback area.

c) The setback area must allocate the front 3 metres adjacent to the footpath as common property for landscaping. Canopy trees must be planted in this area, a minimum 3.5 metres from any structure, to achieve greater than 13 metres mature height and spread, at the rate of 1 canopy tree for every 15 lineal metres of frontage.

d) A wall set back 3 metres from the street boundary must articulate the front areas in private ownership. The wall must be a maximum 1.2 metres high and of masonry construction, integrated with dividing masonry walls for private open spaces.

e) Impervious surface at ground level must be minimised in the setback area.

f) Ground floor apartment levels must be a minimum of 500mm and maximum of 900mm above footpath level.

g) All required services must be incorporated in the design of the ground floor frontage at DA stage, refer to Section 3.5.4 *Servicing And Utilities*.

h) Refer to Section 3.5.2 for flood affected sites.

C.02 Where individual apartment entries from the street serve as a primary address, separation between the entry and private open space, and a front door with a distinct entry space within the apartment, must be provided. If the entries are only for the use of residents they must be understated, with post boxes and street numbers located at the common entry.

C.03 All stairs and ramps providing access to lobbies must be internalised where necessary to ensure the street interface is not compromised.

C.04 For sites that are zoned B4 Mixed Use and not identified as having an active frontage on the Active Frontages Map, an analysis of existing and likely future context and use must be provided to determine the most appropriate built form and use at the street frontage.

C.05 A fully illustrated and co-ordinated ground floor design, showing all the necessary levels and detail, must accompany development applications. Drawings must include the following:

a) A detail ground level plan and sections as part of the architectural submission which illustrates the relationships between the interior and the exterior spaces of the setback area, including the landscape and hydraulic detail, and extends into the public domain.

b) Any required services must be discreetly integrated into the frontage design.

c) The architectural drawings must be fully co-ordinated with the landscape and hydraulic drawings.

d) Elevations and sections at minimum 1:50 scale of all built elements in the setback area must be provided.

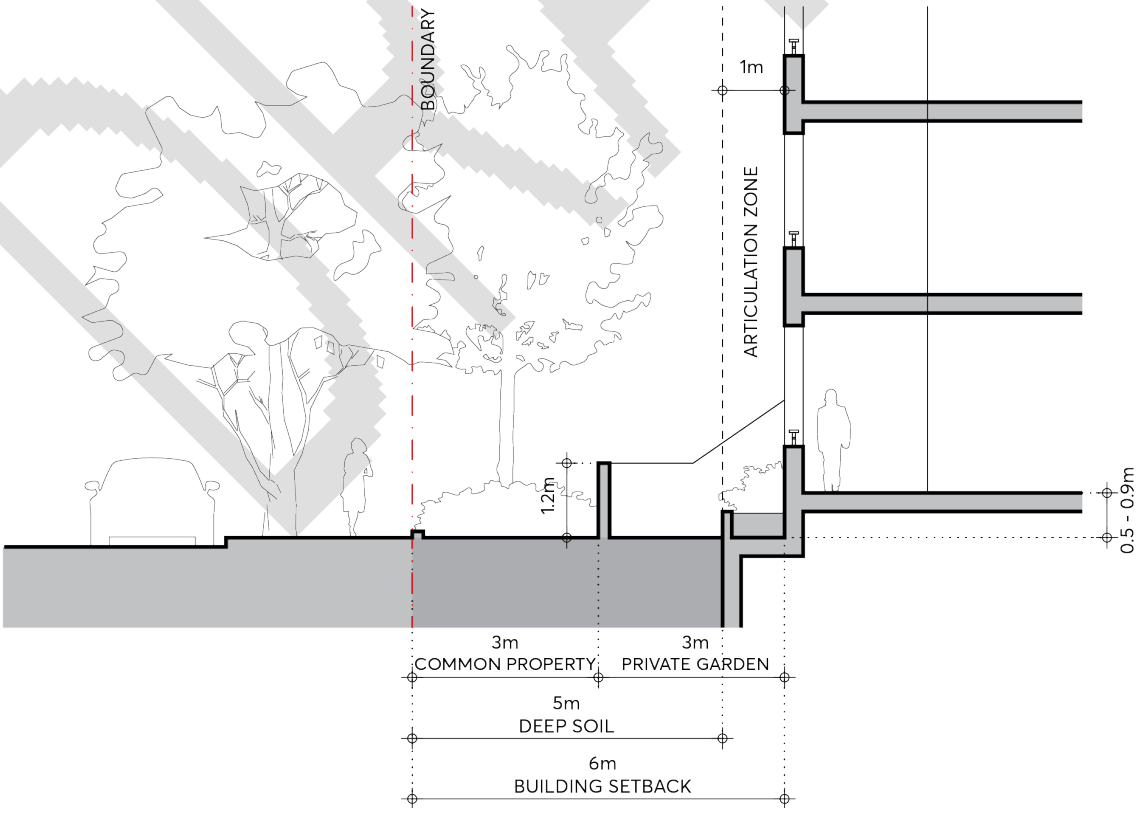


Figure (9) – Residential Ground Floor Street Frontage

3.5.2 FLOOD AFFECTED SITES

Controls for flood affected sites in this section apply to land within the Parramatta City Centre identified on the Floodplain Risk Management Map in Figure CH7.01XX. This section should be read in conjunction with Section 7 *Flood Risk Management* and follow the site planning and design responses outlined.

Flooding conditions can be a major constraint for any development and must be incorporated in the initial stages of design work. Applicants should contact Council's Flood Engineers at the beginning of the design process to establish the requirements and to avoid abortive work.

Flood affected sites generally require habitable floors to be raised above natural ground level, which may have important implications for ground level relationships with the public domain. In this section a number of possible arrangements at this interface are illustrated. In determining the appropriate layout for each development, the design must take into account and synthesize the flooding parameters, proposed ground level functions, and the context and conditions of the site.

Objectives

O.01 Achieve comfortable, well-scaled transitions between the footpath and raised ground floors.

O.02 Maximise adjacency and transparency between active frontages and the footpath.

O.03 Where possible, allow for a common and co-ordinated approach for active frontages that provides continuity of raised flood levels along the street.

3.5.2.1 ACTIVE GROUND FLOOR FRONTAGE

For ground floors with active frontages, it may be preferable in some circumstances to retain the direct relationship that shop fronts generally have with pedestrians at the footpath level. This may be possible for a portion of the tenancy adjacent to the footpath, provided that certain safeguards and design measures are incorporated. This strategy is also relevant for established fine grain retail areas and for adaptive re-use of heritage buildings.

Where fully elevated ground floor tenancies above the public domain are required, this potentially breaks the visual and physical connections necessary for effective activation. The challenge is to tailor a design solution based on the individual flood risk and site constraints that best meets both the flood management requirements as well as the everyday prerequisites for activation.

Consideration must be given to existing and future adjacent development and the possibility of integrating any proposal into a co-ordinated street frontage. This may be more easily achievable in some circumstances, such as where one development occupies a large portion of the street frontage of the city block.

Controls

C.01 Where Council considers it viable and in the public interest, particularly in a fine grain or heritage context, an area of the ground floor may be located at footpath level, refer Figure (10). This area must:

a) Provide a safe and easy transition within the building that meets Australian Standard for Disabled access to the remainder of the tenancy located at the floor level required by Council for flood protection.

b) Have a maximum interior level change of 1 metre.

c) Comply with requirements listed in section 7,2 Land Uses and Building Levels

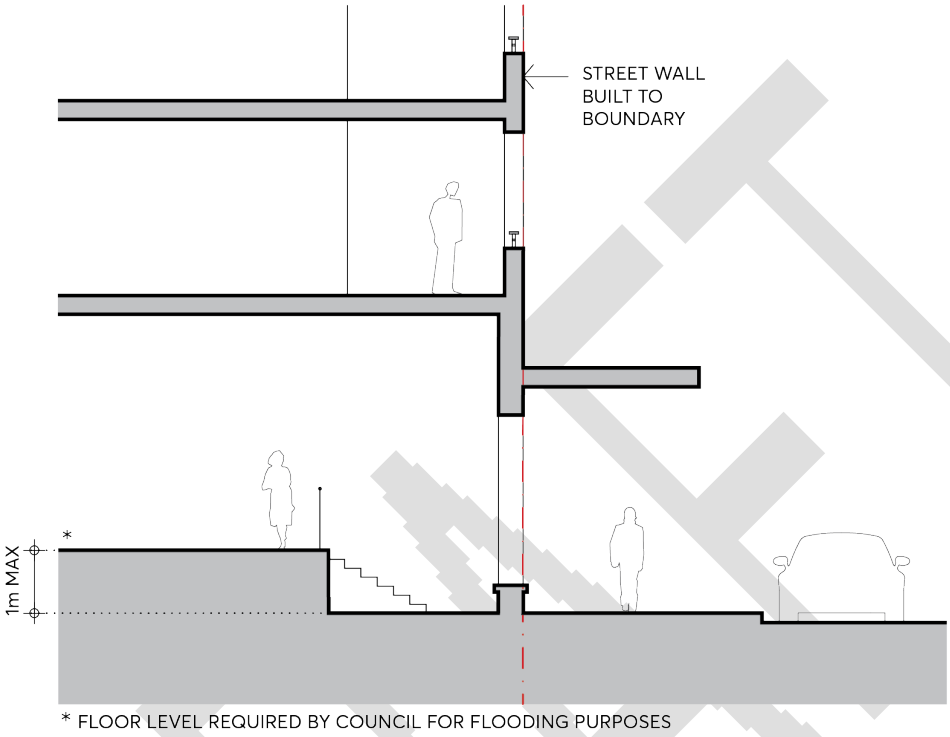


Figure (10) – Active Ground Floor: Floor level permitted partly at footpath level

C.02 Where the floor level required by Council for flood protection is a maximum of 1.5 meters above footpath level:

a) The active frontage may be set back from the street boundary with access and transition adjacent to the footpath, refer Figure (11) XX. In this case, the ground floor must:

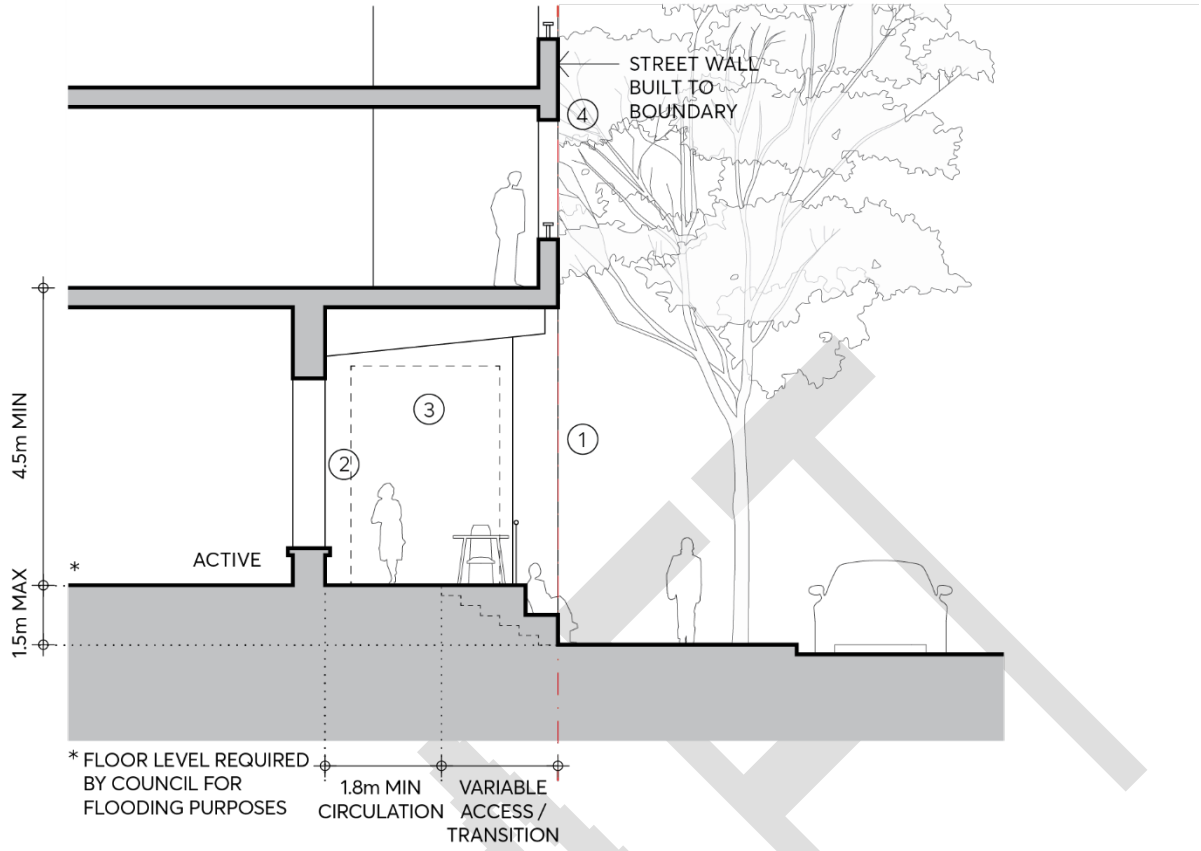
b) Have clear sightlines and maximise transparency and ease of circulation between the public footpath and upper circulation zone.

c) Be free of structure outside of the active frontage except at intervals to modulate the street wall into vertical segments, refer Figure (11) XX.

d) Have a minimum upper circulation zone width of 1.8 metres.

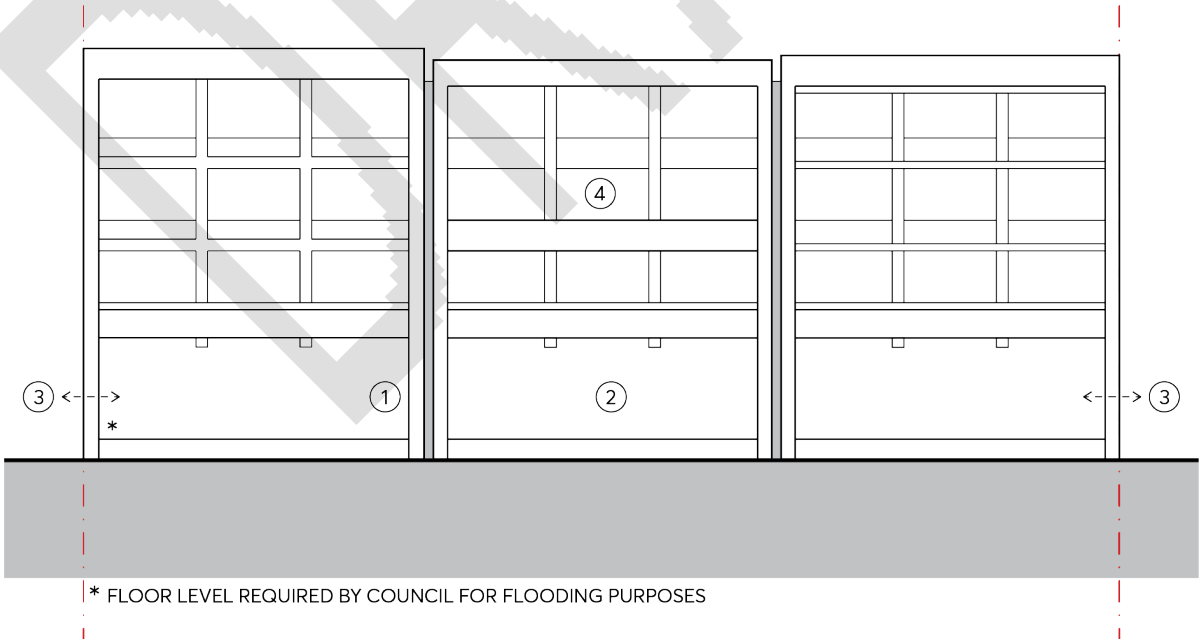
e) Incorporate universal accessibility to the raised level, fully accommodated within the boundaries of the site.

f) Allow for integration with existing and future development on adjacent sites. Side boundary walls extending to the street boundary must incorporate openings or removable sections to connect to existing or future development where this can be achieved.



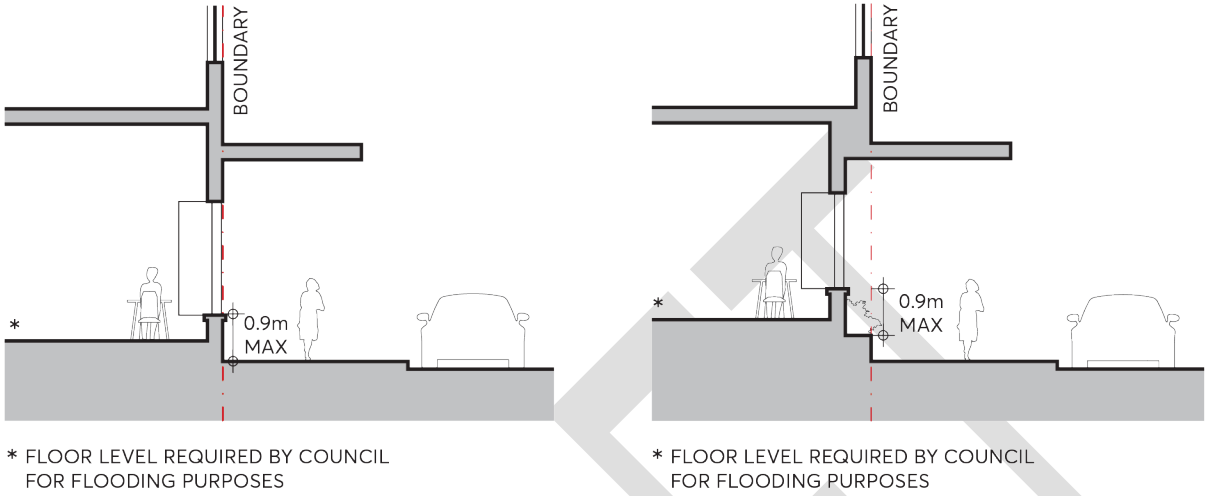
The Street Wall: Active frontage Set back

1. Ground level structure only at modulation of street wall
2. Active frontage set back, refer to 3.5.1
3. Possible connection to adjacent site
4. Design of the street wall, refer to 3.4



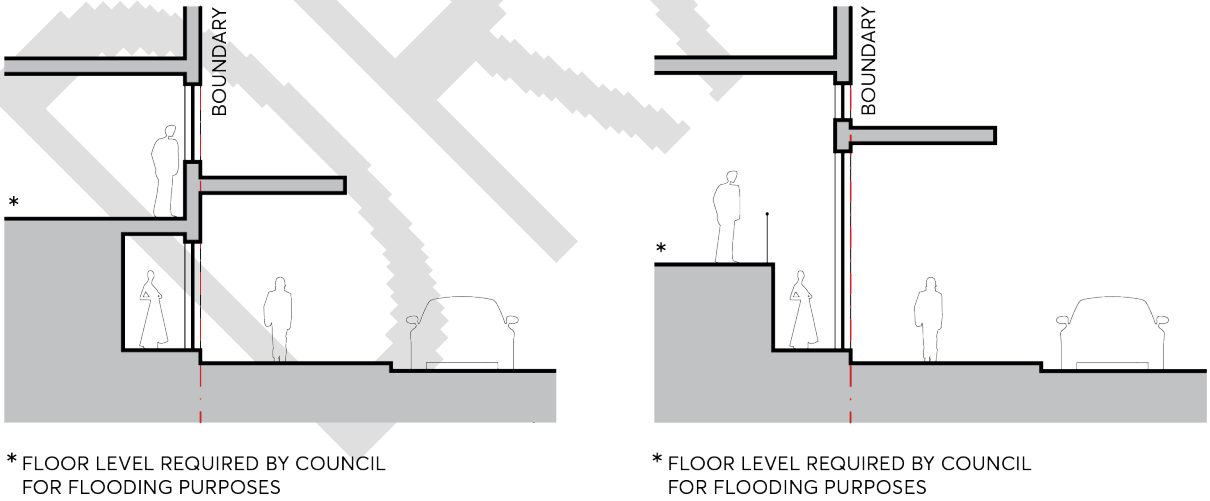
Figures (11) XX – Active Ground Floor: Floor level required up to 1.5m above footpath level

C.02 Where integration with adjacent frontage is not possible or desirable, active frontage may be located on or close to the street boundary, subject to the maximum height of any wall being 0.9m. Refer Figures (12) XX below.



Figures (12) XX Active Ground Floor: Frontage on or close to the street boundary

C.03 Where the floor level required by Council for flood protection is greater than 1.5m above footpath level, a raised frontage set back and adjacent to the footpath is unlikely to be practical, and the frontage may be activated with display windows, refer Figures (13) XX below.



Figures (13) Active Ground Floor: Floor level required greater than 1.5m above footpath level

3.5.2.2 RESIDENTIAL GROUND FLOOR FRONTAGE

Buildings with residential ground floors may be more easily able to incorporate the transition to the floor level required by Council for flood protection as they are set back from the street with deep soil landscape, and the desired spatial relationships at ground level are more suited to accommodate raised ground floors.

This section is correlated with the controls for residential ground floor frontage (Section *3.5.1.2 Residential Ground Floor Frontage)*, adjusted as necessary for flooding constraints.

Controls

C.01 Where the floor level required by Council for flood protection is 0.5-1.5m above footpath level the following parameters apply to the ground floor street frontage, refer Figure (14).

a) The building must be set back 6m from the street boundary. A 1m articulation zone is permitted forward of the setback, in which building elements may occupy a maximum of one third of the area of the facade. Services or lift shafts are not permitted in the articulation zone.

b) Basements must be set back a minimum of 5m from the street boundary measured to the outside face of structure to allow deep soil in the setback area.

c) The setback area must allocate the front 3m of the site adjacent to the footpath as common property for landscaping. Canopy trees must be planted in this area, a minimum 4.5 metres from the building facade, to achieve greater than 13 metres mature height and spread, at the rate of 1 canopy tree for every 15 lineal metres of frontage. Species selection and footing types must allow for optimum growing conditions as well as long term protection of any structures in the setback area.

d) A wall set back 3m from the street boundary must articulate the front areas in private ownership. The wall must be a maximum 1.2 metres high and of masonry construction only if acceptable to Council. If the street frontage is a significant overland flow path or floodway Council may require the use of vegetation screening (hedges, shrubs) or open fences instead of solid walls as spatial separators.

e) Where individual apartment entries from the street serve as a primary address, separation between the entry and private open space, and a front door with a distinct entry space within the apartment, must be provided. If the entries are only for the use of residents they must be understated, with post boxes and street numbers located at the common entry.

f) All stairs and ramps providing access to lobbies must be internalised where necessary to ensure the street interface is not compromised.

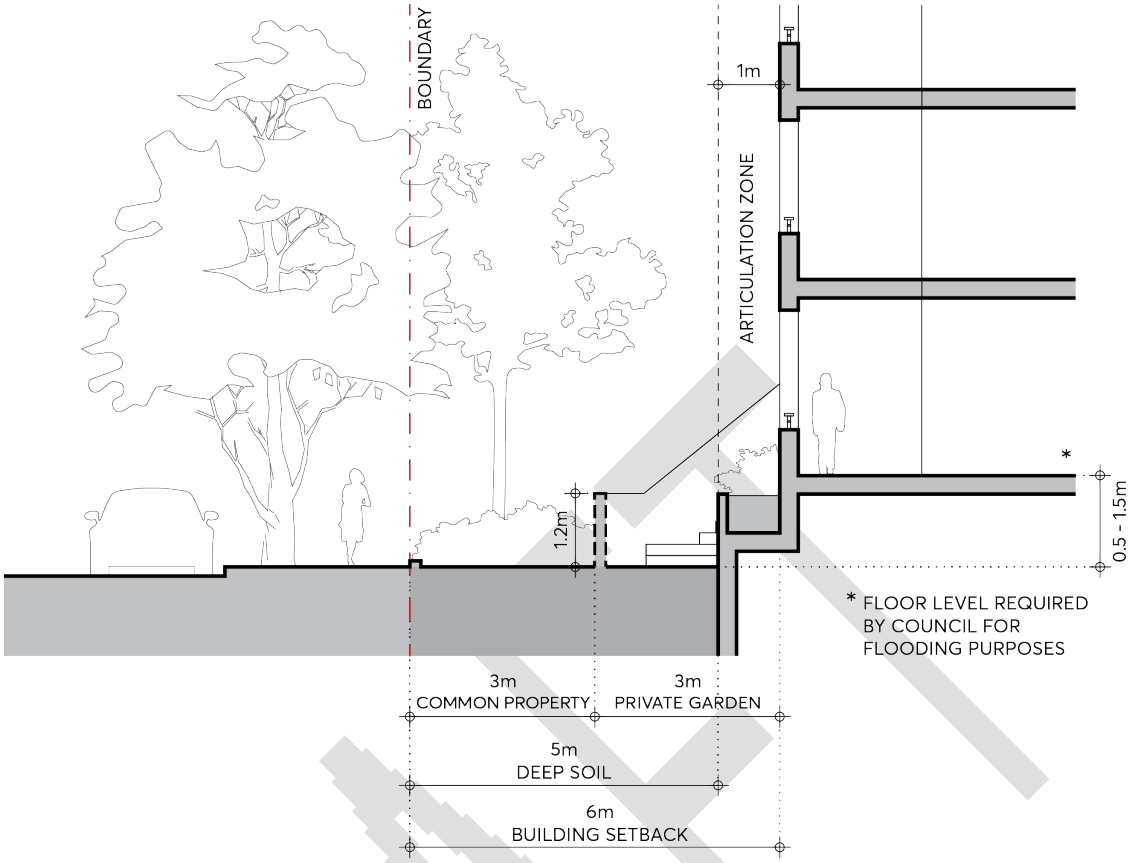


Figure (14) Residential Ground Floor: Floor level required 0.5-1.5m above footpath level

C.02 Where the floor level required by Council for flood protection is greater than 1.5m above footpath level, the following parameters apply to the ground floor street frontage, refer Figure (15) XX:

a) The building must be set back 6m from the street boundary. A 1m articulation zone is permitted forward of the setback, in which building elements may occupy a maximum of one third of the area of the facade. Services or lift shafts are not permitted in the articulation zone.

b) Basements must be set back a minimum of 5m from the street boundary measured to the outside face of structure to allow deep soil in the setback area.

c) The setback area of 6m must be in common property. Canopy trees must be planted in this area, a minimum 4.5 metres from the building facade, to achieve greater than 13 metres mature height and spread, at the rate of 1 canopy tree for every 15 lineal metres of frontage. Species selection and footing design must allow for optimum growing conditions as well as long term protection of any structures in the setback area.

d) A wall at the boundary must define the street frontage. The wall must be a maximum of 1.2 metres high and of masonry construction only if acceptable to Council. If the street frontage is a significant overland flow path or floodway Council may require the use of vegetation screening (hedges, shrubs) or open fences instead of solid walls as spatial separators. If solid walls are permitted, recesses in the wall of maximum 1.5m deep may be set in from the boundary at intervals to relieve its length.

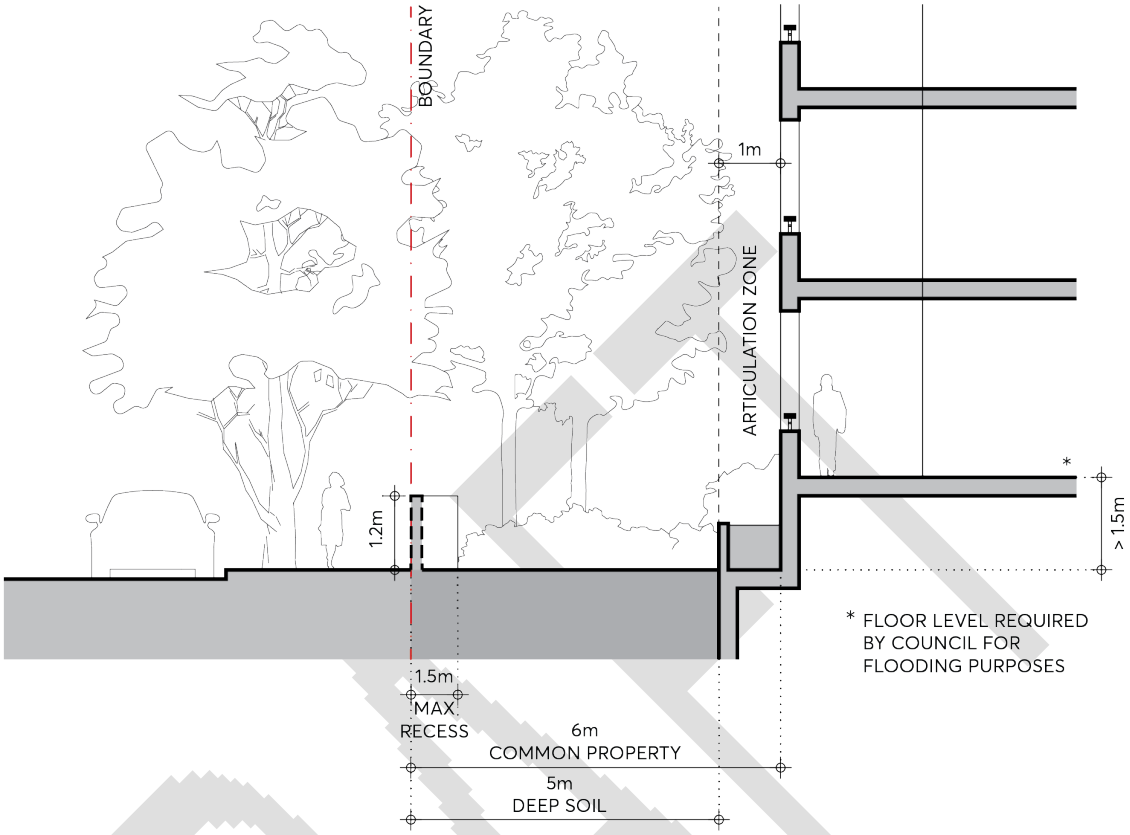


Figure (15) – Residential Ground Floor: Floor level required greater than 1.5m above footpath level

C.03 A fully illustrated and co-ordinated ground floor design, showing all the necessary levels and detail, must accompany development applications. Drawings must include the following:

a) A detail ground level plan and sections as part of the architectural submission which illustrates the relationships between the interior and the exterior spaces of the setback area, including the landscape and hydraulic detail, and extends into the public domain.

b) Any required services must be discreetly integrated into the frontage design.

c) The architectural drawings must be fully co-ordinated with the landscape and hydraulic drawings.

d) Elevations and sections at minimum 1:50 scale of all built elements in the setback area must be provided.

3.5.2.3 FLOODWATER MANAGEMENT DESIGN ELEMENTS

Council may require flood waters to be transmitted around or within the development on the surface. Generally Council will not permit floodwaters to be directed through or beneath buildings, including undercrofts, either for floodway conveyance or flood storage. Undercrofts, underfloor flow areas and similar structures are not supported.

Objectives

O1. Design the site layout and buildings to permit the flow of flood water on the surface around and possibly through development sites between substantial buildings and along streets where this is appropriate, safe and is a legitimate response to flood advice from Council.

O2. Minimise negative impacts of flood management design elements on public safety, built form and the public domain.

O3. Do not use unsafe and unmanageable design elements such as undercrofts, sub floor flow paths, tunnels, plenums and the like.

O4. Flood design and management must include allowance for water-borne debris as well as floodwaters. This includes providing substantial vertical clearance and space to the sky above flow paths.

Controls

C.01 A clear flow path of water must be provided as per flood advice.

C.02 The design of the flood conveyance area must incorporate high quality, durable, flood resilient and low maintenance materials to enhance the visual appearance of the built form edge.

C.03 Plants and landscape must be resilient to flooding, facilitate water permeability and have the ability to withstand temporary inundation. There may be some exceptional circumstances where infrequent but intense flooding is experienced and some planting may be intentionally designed to not withstand such extreme events. Liaise with Council to ensure planting and landscape design is appropriate for the flooding environment of the specifics of the site.

C.04 Building details must be designed not to gather rubbish, debris nor provide breeding grounds for vermin and weeds.

C.05 Flood management design elements must observe CPTED principles of natural surveillance, upkeep, ownership and territoriality.

C.06 Active and residential ground floor premises affected by flooding must be designed to respond to the flood risk environment and to the safety of occupants and the public as required by Council for the site in question. Such premises must provide ground floor layouts that maintain an attractive street address which promotes engagement with and casual surveillance of the street without unnecessary domination by hydraulic infrastructure.

3.5.3 ARCADES

Objectives

0.01 Improve pedestrian connectivity where appropriate.

0.02 Increase frontage for retail activity.

0.03 Expand the extent and variety of the pedestrian network.

Controls

C.01 Arcades must be located in a mid-block position or where connections can be made between other public spaces as agreed with Council.

C.02 Arcades must not compromise or take precedence over the activation of adjacent streets.

C.03 Where possible, arcades must be aligned with existing arcades or laneways across blocks.

C.04 Arcades must provide clear access and sight lines from one end to the other and be designed so as to:

a) Be well-proportioned with a minimum width of 4m and minimum ceiling height of 4m.

b) Have a 1:20 maximum gradient.

c) Connect one public space to another in a clear and obvious way.

d) Act as a supplementary connection rather than a primary one.

e) Conform to the relevant controls relating to active ground floor frontage in 4.5.1.1, Active Ground Floor Frontage.

C.05 Arcades must be publicly accessible 24 hours per day unless otherwise established during the Development Application assessment

3.5.4 SERVICING AND UTILITIES

The location of utilities and services can adversely affect the ground floor street frontage if not properly taken account of in the initial design stage. It is also essential that building services are located and designed to be free from flooding impacts. This may require innovative solutions and consultation with utility and service providers, particularly for single frontage sites.

Objectives

O.01 Minimise the extent of space and blank walls occupied by services, including electricity substations, fire boosters, fire doors, plant and equipment hatches.

O.02 Ensure services and utilities allow for maximum activation of the ground floor.

O.03 Locate building services to be free from flooding impacts.

O.04 Encourage innovative design and location solutions for services and utilities that minimise adverse visual, environmental and access impacts.

Controls

C.01 The location of all services and utilities must be clearly identified on plans prepared for any Design Competition, pre-lodgement application and development application.

C.02 Wherever possible, services and utilities must be located on secondary street frontages, laneways or non-active street frontages. Substations in particular should be located at the first floor, or in a basement, whenever possible.

C.03 Services and utilities must be designed and located so as to minimise the length of ground floor frontage occupied.

C.04 Development applications must be accompanied by evidence that the relevant electricity provider has been consulted in relation to the location of the electricity substation.

C.05 Where a site has a single frontage, documentation must illustrate consideration of the substation in a location that does not occupy ground floor frontage, and which satisfies the access, security, drainage and ventilation requirements of the electricity provider and any flood constraints on the site.

C.06 Where adjoining sites are being concurrently developed, documentation must be submitted outlining the service and utilities needs for both sites and a proposal for how shared service and utilities can be accommodated.

C.07 In flood affected sites, electricity substations must be located above the Flood Planning Level (Ausgrid NS185 Major Substations Building Design Standard), and suitable access and clearance for maintenance must be provided.

3.6 ABOVE GROUND PARKING

Objectives

O.01 Ensure that above ground car parking is of high quality design that integrates with the building and does not adversely impact the public domain.

O.02 Ensure that above ground parking facades are consistent with the character of the street walls as set out in Section 3.4 The Street Wall.

O.03 Promote active uses and casual surveillance on street and lane frontages.

O.04 Design above ground car parking that is able to be adapted to alternate uses over time.

Controls

C.01 The preferred location of car parking in the City Centre is basement car parking. Where there are identified constraints such as archaeological conditions or where a driveway crest to the Flood Planning Level is not practically achievable, car parking above ground may be appropriate in accordance with design controls in this section as well as Section 7 Flood Risk Management.

C.02 Where Council is satisfied that above ground parking is justified:

a) On streets, all parking must be sleeved with permitted uses: active or residential frontage on the ground level, and commercial or residential frontage on the first floor and above.

b) On lanes, parking is generally not required to be fully sleeved. Depending on site circumstances and context, activation or partial activation of the ground level frontage may be required by Council, and partial sleeving of upper levels to provide casual surveillance may be required.

c) On lane corner sites, the ground floor active street frontage must wrap around the corner into the lane frontage.

C.03 Where above ground parking is included in any building, the following controls apply:

a) Where non-sleeved parking is permitted or unavoidable, the street wall must nonetheless comply with the controls in 4.4 The Street Wall. Green walls, screens and the like must not be used as an applied cover that masks the architectural attributes of the street wall facade. Greenery may be incorporated in the street wall so as to complement its required character as set out in 4.4 The Street Wall.

b) Cars and car parking luminaires must not be visible from the public domain or nearby buildings.

c) If car parking is located on a roof top, it must not be visible from the sky or other buildings.

d) Above ground car parking must be set back from a rear boundary of the site by a minimum of 6m to allow for natural make up air supply to ensure efficient low energy operation.

e) Proposals must demonstrate how the layout and floor to ceiling height of above ground car parking can be adapted in the future for alternative uses.

3.7 RESIDENTIAL APARTMENT DESIGN QUALITY

Objectives

O.01 Ensure development achieves good amenity standards for residents in relation to daylight, ventilation, outlook and privacy.

Controls

C.01 Building indentations providing light and ventilation to single aspect apartments must have a minimum width to depth ratio of 2:1.

C.02 High level windows must not be used as the primary source of light, ventilation and outlook for habitable rooms.

C.03 Daylight and natural ventilation must be provided to all common circulation spaces and windows must be visible from lift cores as well as the ends of corridors.

C.04 Only cross-over, cross-through or corner apartments can be counted as naturally cross ventilated. Indentations in the facade cannot be used to classify adjacent apartments as naturally cross ventilated, nor can 2 storey single aspect apartments be counted as naturally cross ventilated.

C.05 Walls between apartment balconies must be of solid construction and extend from floor to ceiling.

C.06 Balustrades must take account of sightlines to balance the need for privacy within apartments and views out of apartments. A proportion of solid or translucent material must be used, which will vary according to outlook and height relationships.

3.8 WINTERGARDENS

Objectives

O.01 Improve amenity of balconies in high rise apartments and apartments fronting noisy environments such as busy roads or railway lines.

O.02 Provide acoustic attenuation for internal living areas.

O.03 Balance ventilation and wind impacts in high rise apartment balconies.

O.04 Maximise daylight access, views and comfort of balconies.

Controls

C.01 Wintergardens must be designed and constructed as a private external balcony with drainage, natural ventilation and finishes acceptable to an outdoor space and must not be treated as a conditioned space or weatherproof space

C.02 Effective natural ventilation must be provided as follows:

a) Not less than 80 per cent of the external wintergarden perimeter must be fully operable glass louvres.

b) If fixed glazing is proposed, permanent openings must be provided for an area not less than 15 per cent of the greater of the enclosed wintergarden floor area or external wintergarden facade area. 30-50 per cent of the fixed opening area must be provided in a zone within 500mm of the floor and the remainder within 500mm of the soffit.

c) Casement or awning windows are not permitted.

C.03 A generous opening must be provided between the wintergarden and any adjacent living area to allow connection of the spaces when ambient conditions are suitable.

C.04 Acoustic control for living areas and bedrooms must be provided on the internal facade line between the wintergarden and the living area or bedroom.

C.05 Glazing in the external facade of a wintergarden must have a solar absorption of less than 10 per cent.

C.06 The flooring of the wintergarden must be a drained impervious finish and provide exposed thermal mass.

C.07 No heat rejection source from any heating, ventilation and cooling systems are permitted to be located in a wintergarden.

3.9 DWELLING MIX AND FLEXIBLE HOUSING

Objectives

O.01 Ensure a range of dwelling types and size.

O.02 Promote the design of buildings that are adaptable and incorporate flexible apartments to suit the changing lifecycle housing needs of residents over time.

Controls

C.01 The following dwelling mix is to be used as a guide for mixed use and high density residential development:

Dwelling Type	Dwelling Mix
Studio / 1 Bedroom	10 - 20% of total dwellings
2 Bedroom	55 - 70% of total dwellings
3 Bedrooms	10 - 20% of total dwellings
4 Bedrooms	5 - 10% of total dwellings

C.02 Apartments may be configured as 'dual key' apartments provided that:

a) Where a strata plan exists, both apartments are contained within a single strata unit.

b) a maximum 10 per cent of apartments can be dual key apartments.

c) the primary and secondary units are accessed from a shared private lobby.

d) the minimum ADG requirements for internal space are met for each individual unit within the dual key apartment.

e) the secondary unit of the dual key apartment has either shared access to the primary unit's private open space or its own private open space of dimensions commensurate with ADG requirements.

f) the provision of car parking spaces for dual key units is as per the Parramatta LEP controls.

g) internal layouts allow for apartments that are adaptable over time to accommodate varied living arrangements with the use of moveable internal walls and considered location of services.

4 PUBLIC DOMAIN

Figure XX1 indicates the existing and intended future Public Domain of the Parramatta City Centre together with relevant surrounding places.

Public spaces – streets, squares and parks – are the most enduring spaces of the city, the shared social and cultural domain that make up the organising framework of the city. Their clarity, quality and amenity contribute in a fundamental way to the identity and experience of the city.

This section details aspects of the design of the public domain, and must be read in conjunction with the Public Domain Guidelines 2017, which sets out the process, design guidelines and submission requirements for all new public domain assets in the City of Parramatta.

Figure XX1 **The Public Domain**

4.1 SOLAR ACCESS TO SIGNIFICANT PARKS AND SPACES

Good solar access is an important contributor to the amenity of public spaces. Maintaining sunlight to significant public spaces within and close to the perimeter of the Parramatta City Centre will provide benefit to existing and future residents, workers, and visitors. The provision of solar access throughout the year is essential for a successful public open space. In addition, sunlight is crucial for the establishment and sustained health of tree planting and vegetation which provides attractive and cool environments for people in the City Centre.

The Parramatta LEP 2011 provides specific solar access controls for Parramatta Square, Lancer Barracks, the River Foreshore and Jubilee Park. Additional parks and spaces within and close to the perimeter of the City Centre have been identified in Figure X.1 of this section of the DCP as providing valuable opportunities to maintain and enhance solar access.

Objectives

O.01 Maintain or maximise solar access to the significant parks and spaces in and around the Parramatta City Centre during periods in the day when they are most used throughout the year.

O.02 Maintain or maximise solar access to spaces which have important recreation values, aesthetic qualities and or heritage significance.

O.03 Maintain or maximise solar access to existing spaces which may contribute to the open space network in the future.

O.04 Promote active and passive recreation to public spaces to service existing and planned population of the Parramatta City Centre and surrounds.

O.05 Ensure the successful growth and survival of trees and vegetation within these parks and spaces.

Controls

C.01 New development, or additions and alterations to existing buildings, must not create any overshadowing to areas marked 'no overshadowing' in all Figures referenced in Column 2 of Table X.1, between the nominated times listed in Column 3 of Table X.1. Contact Council to source CAD files of areas identified for 'no overshadowing'.

C.02 Where overshadowing of parks and spaces identified in Figure X.1 is likely, a statement with supporting solar access studies must be submitted by a registered architect demonstrating that the proposed development does not overshadow the affected open space consistent with all Figures referenced in Column 2 of Table X.1.

C.03 New development and additions or alterations to existing buildings are to comply with the solar access controls irrespective of the existing height of nearby buildings.

C.04 Ancillary structures such as columns, pillars, spires, flag poles, public art, and architectural roof features including equipment for servicing the building, such as plant, lift motor rooms, fire stairs and the like, must not be excluded from any overshadowing analysis.

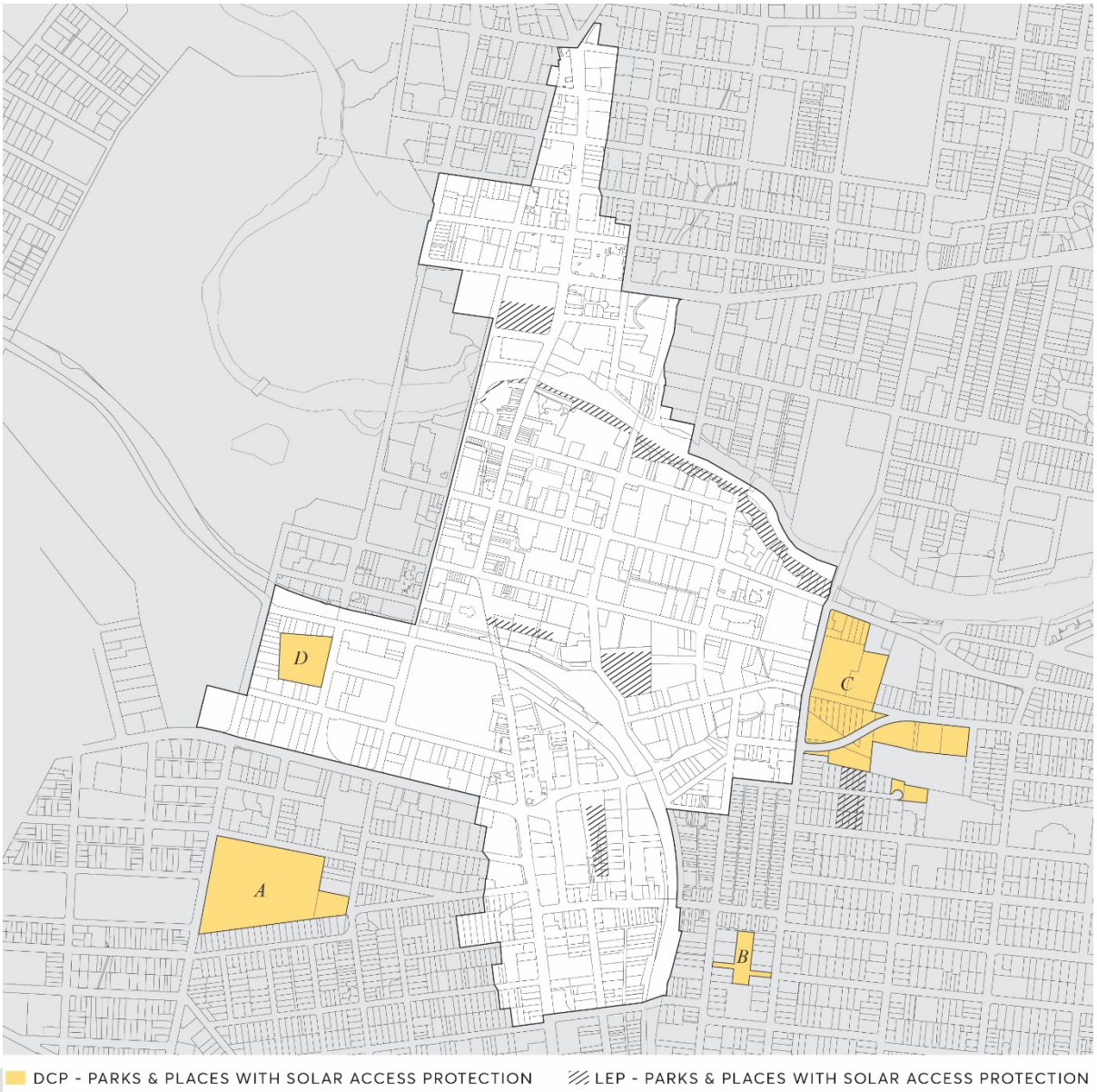


Figure X.1: Spaces protected by solar access controls

Column 1: Significant Park or Space	Column 2: Figure reference	Column 3: Nominated Time
A. **Ollie Webb Reserve**	Figure 2	10am to 12 midday all year round
	Figure 3	12 midday to 2pm all year round
B. **Rosella Park**	Figure 4	10am to 12 midday all year round
	Figure 5	12 midday to 2pm all year round
C. **Robin Thomas and James Ruse Reserve**	Figure 6	10am to 12 midday all year round
	Figure 7	12 midday to 2pm all year round
D. **St John's Cemetery**	Figure 8	10am to 12 midday all year round
	Figure 9	12 midday to 2pm all year round

Table X.1: Nominated Significant Parks and Spaces and times for solar access protection

Ollie Webb Reserve

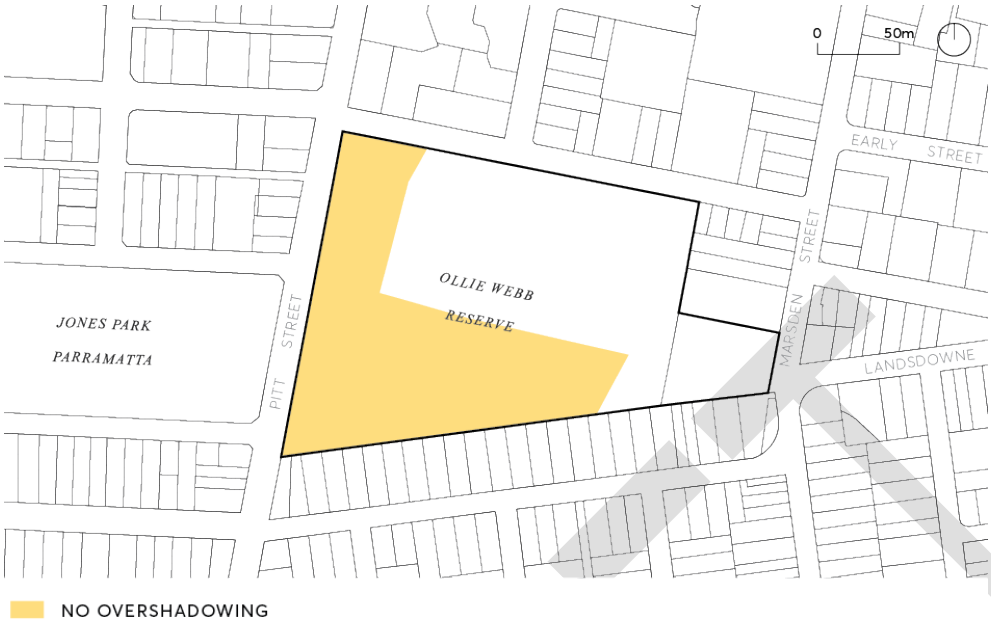


Figure X.2: Ollie Webb Reserve area of no overshadowing between 10am and 12pm

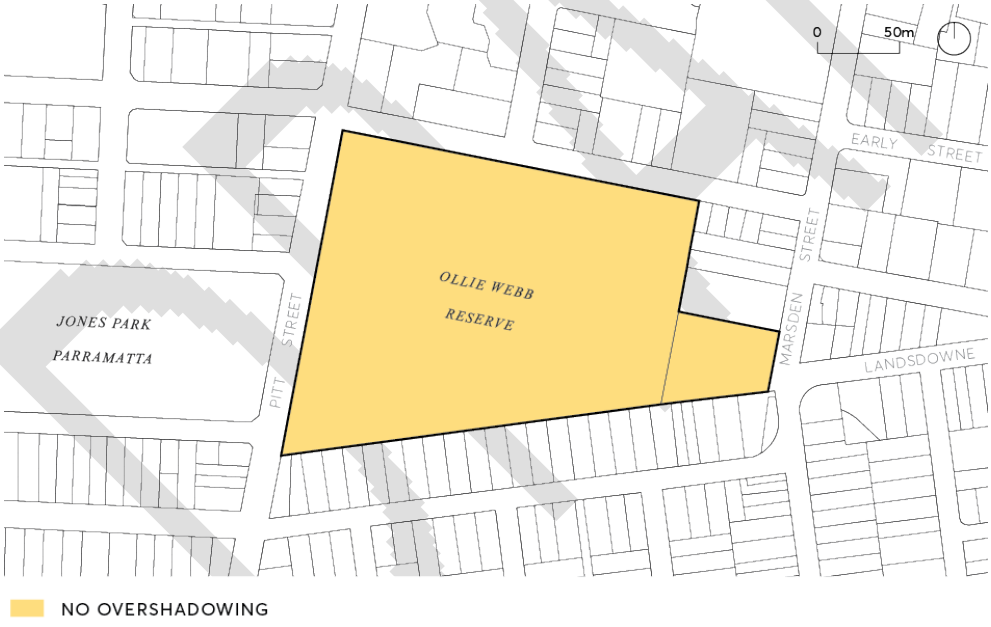


Figure X.3: Ollie Webb Reserve area of no overshadowing between 12pm and 2pm

Rosella Park

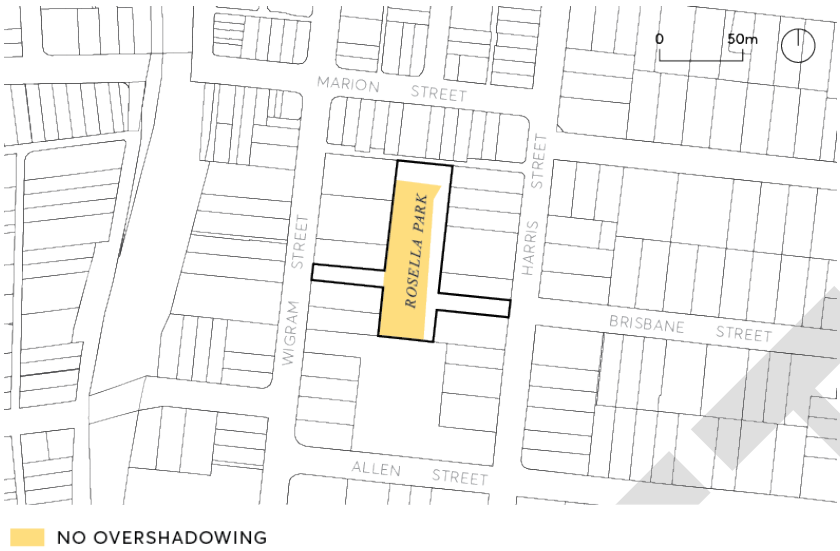


Figure X.4: Rosella Park area of no overshadowing between 10am and 12pm

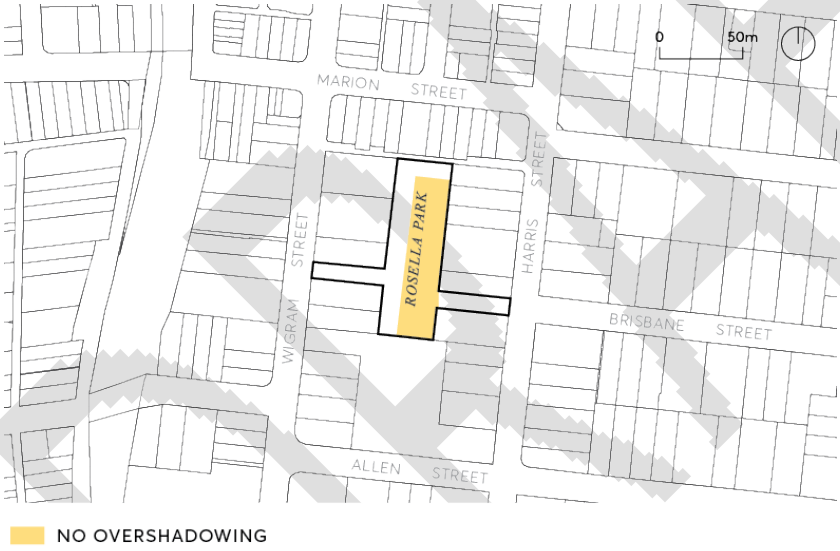


Figure X.5: Rosella Park area of no overshadowing between 12pm and 2pm

Robin Thomas and James Ruse Reserves

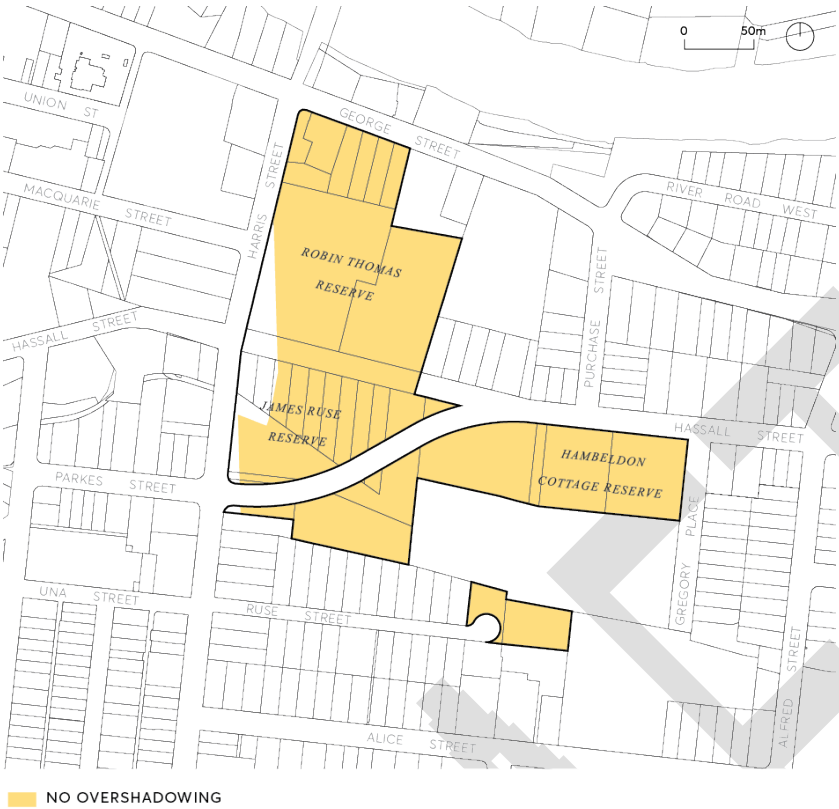


Figure X.6 Robin Thomas Reserve area of no overshadowing between 10am and 12pm

Figure X.7 Robin Thomas Reserve area of no overshadowing between 12pm and 2pm

St John's Cemetery

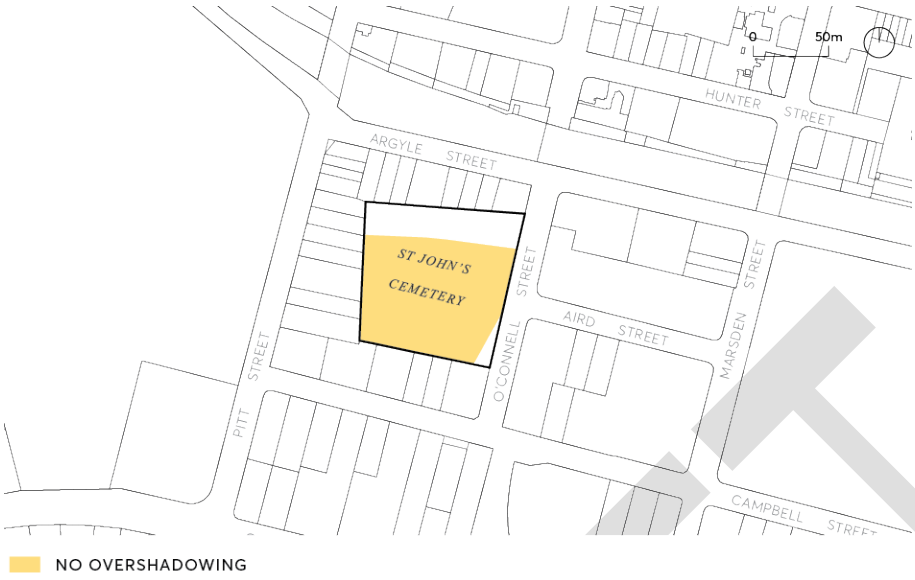


Figure X.8 St Johns Cemetery area of no overshadowing between 10am and 12pm

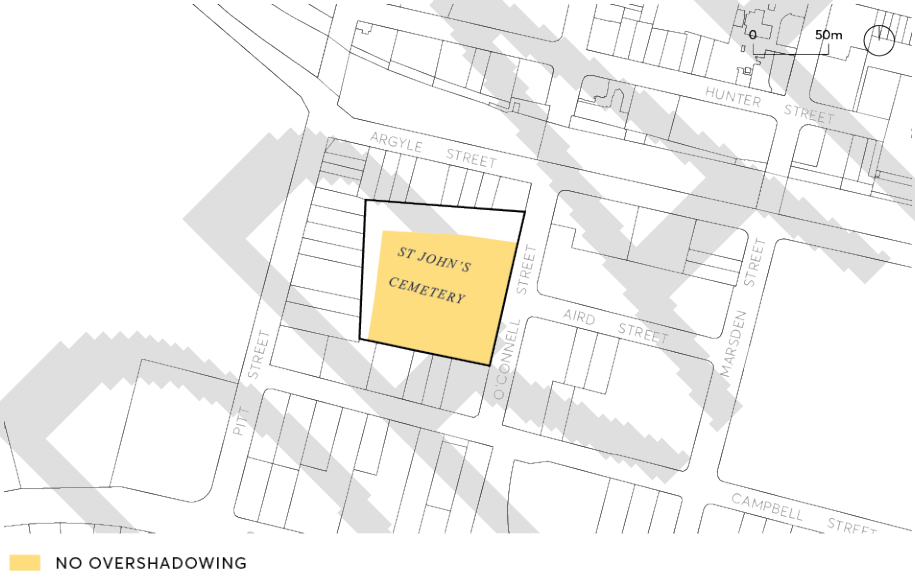


Figure X.9 St Johns Cemetery area of no overshadowing between 12pm and 2pm

4.2 AWNINGS AND TREES ON STREETS

Awnings encourage pedestrian activity along streets by providing comfortable conditions at footpath level and, in conjunction with active ground floor frontages, contribute to the vitality of the streets. Awnings are the favoured means to provide shelter and weather protection for pedestrians. Colonnades are generally not supported as they restrict views of the frontage and fragment the public domain.

Trees are essential for their contribution to the amenity and character of the city centre. When properly selected, located, planted and maintained street trees provide a multitude of benefits to the urban environment.

Ideally, in streets with active ground floor frontages, footpaths in the city centre would be wide enough for awnings as well as street trees, but public footpath widths are generally 3.6 – 3.9 metres, and mostly insufficient to adequately accommodate both. Consequently, the following sections nominate controls for those streets where awnings have priority, those where trees have priority, and a possible strategy to achieve both awnings and trees where circumstances permit.

4.2.1 AWNINGS HAVE PRIORITY

Objectives

O1. Ensure increased amenity in areas of high pedestrian volume by providing continuous protection from rain, sun and wind down draft.

Controls

C.01 Continuous awnings must be provided along streets where identified in Figure XX2

C.02 Dimensions of awnings must be in accordance with Figure XX3

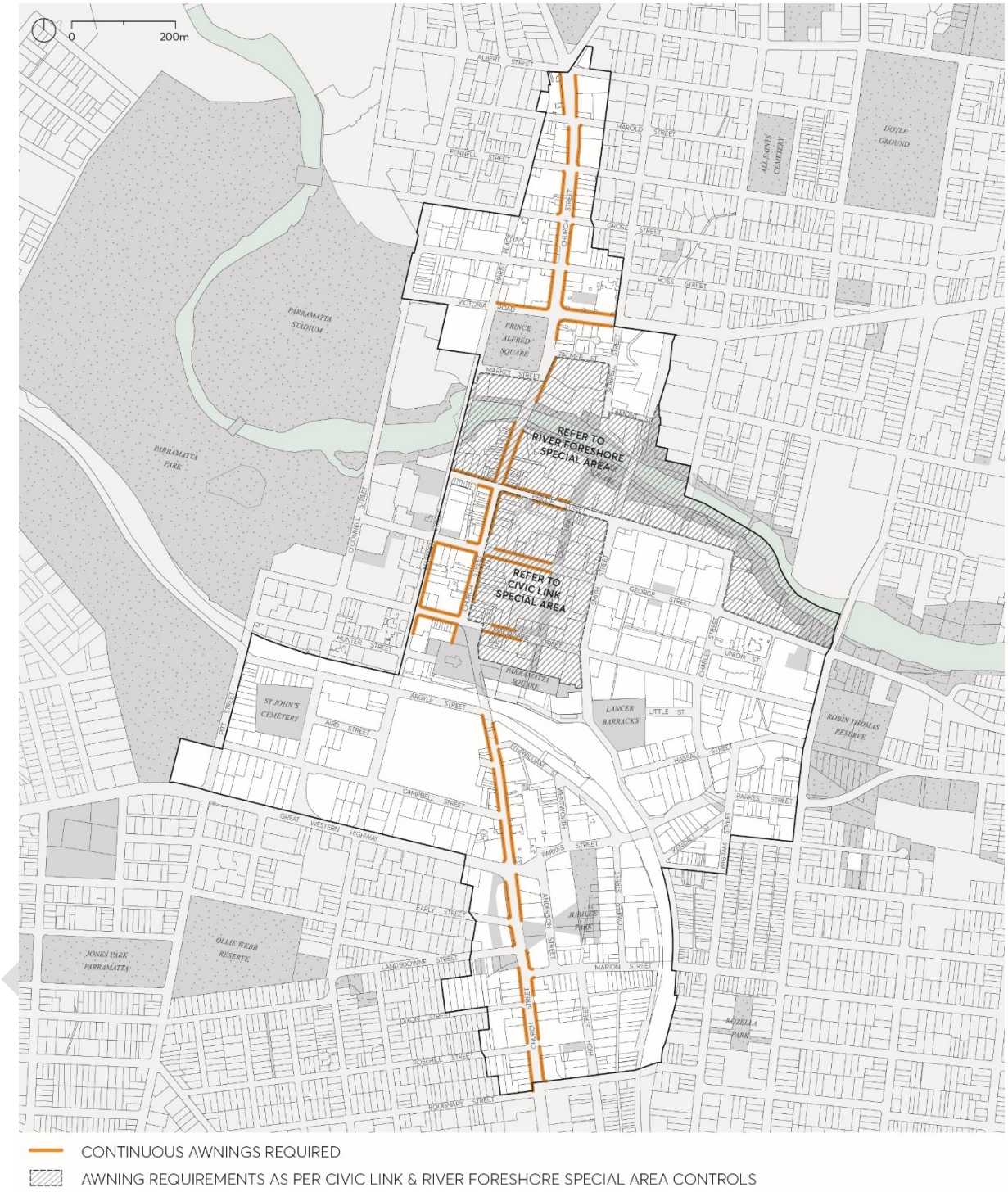


Figure XX2 – Awnings have priority

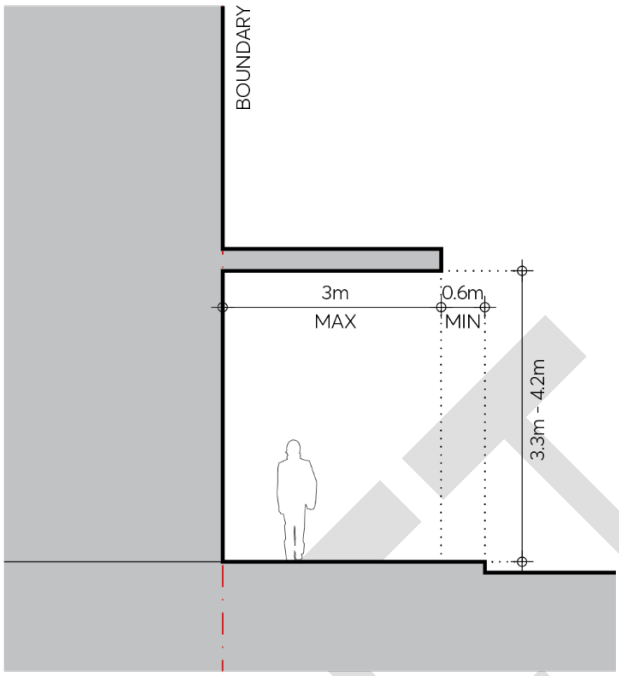


Figure XX3 – Awnings have priority

4.2.2 STREET TREES HAVE PRIORITY

In those areas where trees have priority, awnings of reduced width may be provided where footpaths are of sufficient width.

Council's adopted Parramatta CBD Street Tree Master Plan 2011 and Public Domain Guidelines 2017 identifies the location of street trees and species selection and should be consulted when proposing the delivery of street trees as part of any development.

Objectives

O.01 Maintain existing street trees and plant additional street trees within the public domain.

O.02 Improve and enhance environmental biodiversity and mitigate temperature at ground level.

O.03 Ensure maximum street tree crown development and performance.

O.04 Improve visual amenity of the public domain.

O.05 Improve quality of view for residents, workers and others overlooking the public domain.

Controls

C.01 Street trees must be provided along those streets identified in Figure XX4.

C.02 Where footpath widths are 3.9 metres or greater, narrow width awnings may also be provided in accordance with Figure XX5.

C.03 Street tree species and spacing must be as specified in the Public Domain Guidelines *2017*.

C.04 Street trees must be installed in accordance with the Public Domain Guidelines *2017* and Council Design Standards.

C.05 A Public Domain Alignment Plan indicating the street tree locations as detailed in the Public Domain Guidelines *2017* must be submitted for the Development Application and Construction Certificate Application.

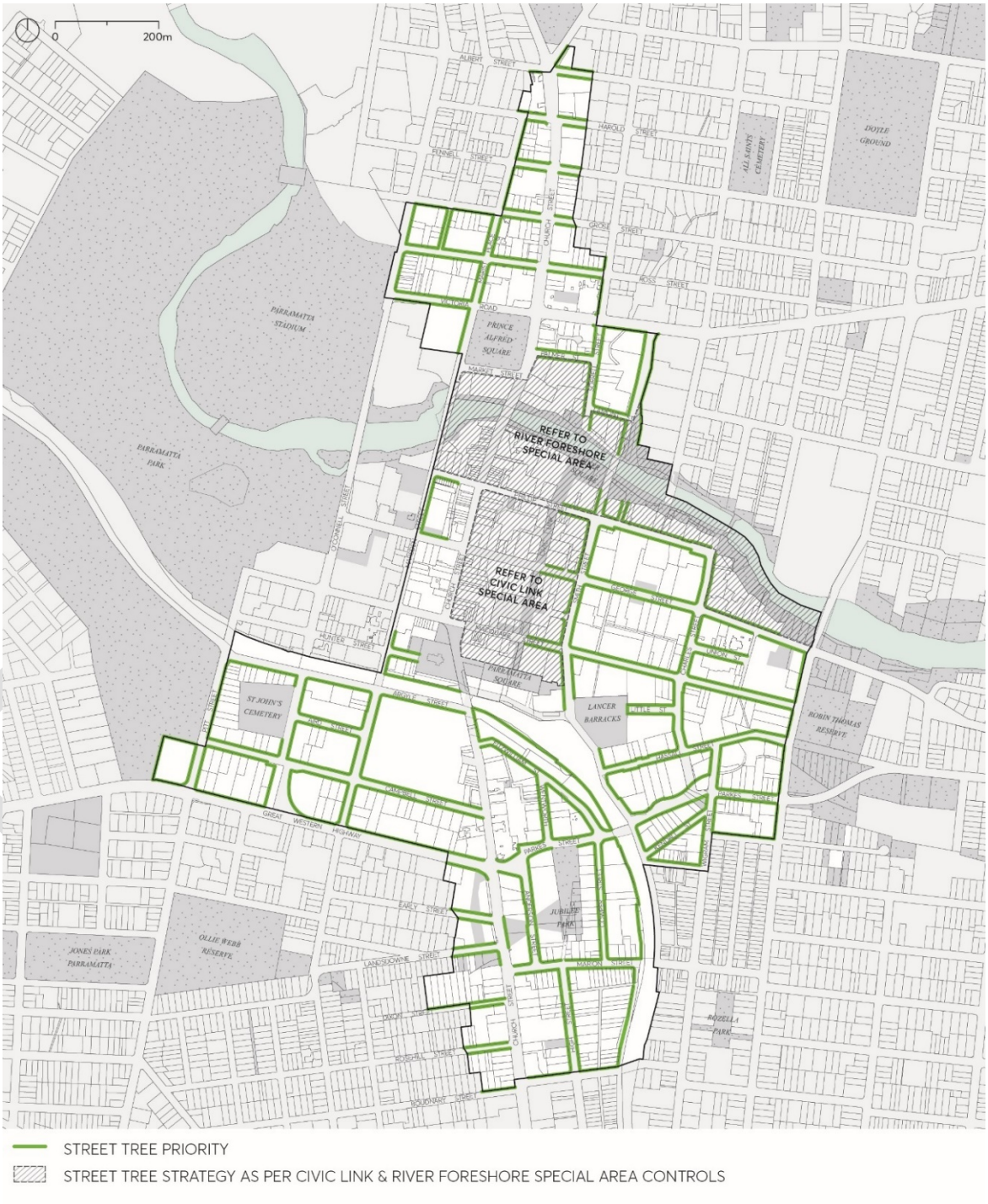


Figure XX4 – Street trees have priority

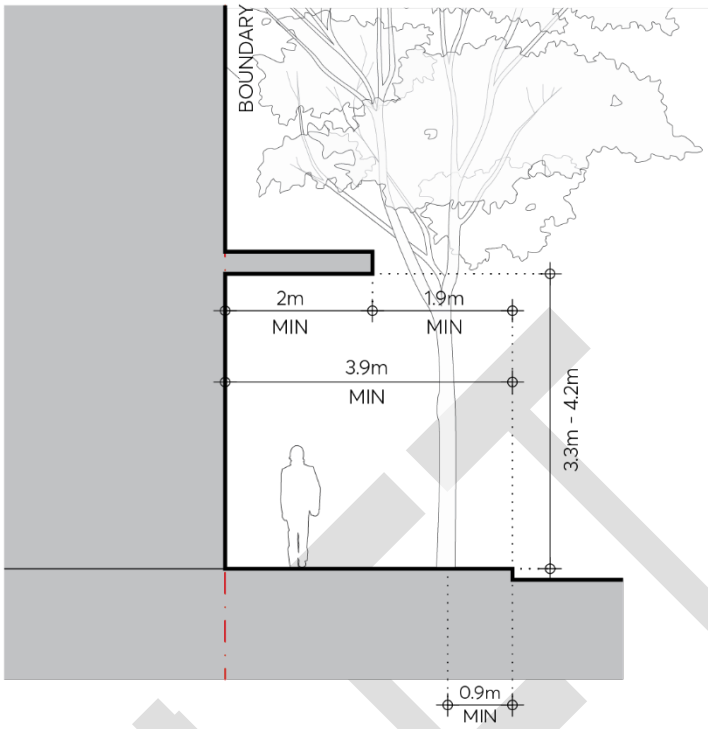


Figure XX5 Street Trees have priority, narrow width awnings

4.2.3 SEMI-RECESSED AWNINGS

Semi-recessed awnings are an option for consideration either where awnings or street trees have priority. Setting the ground floor frontage back from the boundary and integrating the awning with the building soffit above can provide a generous footpath width, good awning cover as well as the necessary space for street trees.

Existing and possible future adjacent context must be taken into account in determining whether this option is feasible in each situation. Applicants should contact Council at the start of the design process to establish the street and awning profile for the proposal.

Objectives

O.01 Allow for the possibility of generous footpaths, shelter from awnings as well as street trees where circumstances permit.

Controls

C.01 Semi-recessed awnings may be provided in accordance with Figure XX6.

C.02 Where a semi-recessed awning is proposed, the following must be incorporated in its design:

a) The awning must be integrated with the building soffit above as shown in Figure XX6.

b) The space under the semi-recessed awning must be free of columns.

c) The frontage must be integrated with the adjacent existing frontage.

d) A clear path of travel must be provided in the public domain as defined in the Public Domain Guidelines 2017.

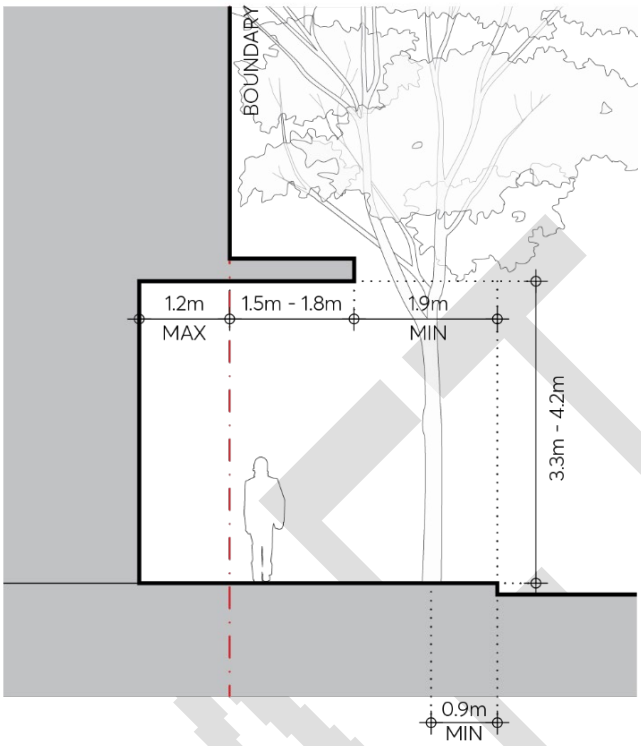


Figure XX6 Semi-Recessed Awnings

4.3 DESIGN OF AWNINGS

Well designed awnings provide a sheltered, humanly scaled space on the footpath that creates an accommodating pedestrian environment for shopping, dining, walking and lingering. They also provide weather protection for the doorways, openings and display areas of the active ground floor frontage of the building.

As an architectural element that is both part of the building as well as the public space of the street, the awning must integrate both with the characteristics of the building as well as existing and possible future adjacent awnings.

4.3.1 AWNINGS ON STREETS

Objectives

O.01 Design awnings to provide protection from rain, sun and wind down draft.

O.02 Maintain complementary architectural detail of awning design.

Controls

C.01 Awning dimensions must be in accordance with Figures XX, XX and XX.

C.02 Double height awnings are not permitted.

C.03 All awnings and shading devices must have non-reflective surfaces.

C.04 Glazed awnings are not permitted except for minor articulation purposes.

C.05 New awnings must be designed to take account of adjacent existing awnings.

C.06 The awning roof must be designed so that all gutters are concealed and downpipes incorporated in the building fabric.

C.07 Lighting and other fixtures must be recessed and integrated into the design of the soffit.

C.08 Where street trees are provided, the entire length of the awning must be set back from the kerb as shown on Figures XX, XX and XX. Cut outs for trees and light poles in awnings are not permitted.

C.09 The conversion of awnings to verandahs or balconies is not permitted.

C.10 Where a proposed building is located on a street corner and an awning is not required on one frontage, the awning must extend around the corner by a minimum of 6m from the boundary corner.

4.3.2 AWNINGS ON LANES

Objectives

O.01 Encourage well-designed entrance canopies in order to provide additional shelter in lanes.

O.02 Ensure that individual entry points are defined and address the lane.

Controls

C.01 Continuous awnings are not permitted in lanes.

C.02 Entrance canopies must not be supported with posts in order to maintain sight lines and a clear path of travel along the building edge, in accordance with the Public Domain Guidelines 2017.

C.03 Fixed awnings must not obstruct traffic.

C.04 Retractable awnings must be a folding arm type and that extends into the lane no more than footpath width, in accordance with the Public Domain Guidelines 2017.

C.05 Provide individual awnings at building entries that are visually attractive.

4.4 PEDESTRIAN LANES, SHARED ZONES and SERVICE LANES

Many street blocks within the Parramatta City Centre are long, some being over 250 metres in an east-west direction and over 140 metres in a north-south direction. The benefits of a finer network of lanes are numerous: greater connectivity, increased frontage for entries and business opportunities, and a spatial intimacy and variety in the public domain. Service lanes also assist with activation of primary street frontages by providing back of house vehicular access, thereby reducing the necessity for driveways disrupting major city footpaths.

Pedestrian lanes are non-trafficable and can be narrower in width than those with vehicular access. Shared lanes have pedestrian priority over vehicle movement and typically have a flush surface for the full width of the lane. Service lanes prioritise vehicle movement and separate pedestrian movement by the use of kerbs or barriers.

Council's City Centre Lane Policy and Public Domain Guidelines provide further guidance on the design of pedestrian lanes, service lanes and shared zones.

Objectives

O.01 Retain and increase connectivity in the public domain and variety in the street network.

O.02 Encourage vehicular entries from shared zones and service lanes and not primary street frontages.

O.03 Design lanes, shared zones and service lanes to encourage pedestrian amenity and safety.

O.04 Encourage active frontages along lanes, shared zones, and service lanes without compromising safe pedestrian access and use.

O.05 Ensure that any proposed privately owned lanes have a fully public nature equivalent to the public domain.

Controls

C.01 A development must fully or partially deliver a pedestrian lane, service lane or shared zone as shown in Figure XX7 Existing and required lanes in the Parramatta City Centre

C.02 Any development that proposes a new pedestrian lane, shared zone or service lane in addition to those indicated in Figure 1.1.6.1 must demonstrate that it meets the objectives and controls of this section.

C.03 The minimum width of a pedestrian lane must be 4 metres as measured from the property boundaries.

C.04 The minimum width of a shared zone or service lane must be 6.5m as measured from the property boundaries.

C.05 The design and finish of pedestrian lanes, shared zones or service lanes must be in accordance with the Public Domain Guidelines 2017.

C.06 All pedestrian lanes, shared zones and service lanes must:

a) Be fully open to the sky.

b) Be accessible to the public at all times.

c) Provide direct throughways with direct sightlines.

d) Be unencumbered by any basement car parking or any other private infrastructure under.

C.07 Where a proposed lane or shared zone is not able to be dedicated to Council:

a) The lane must be designed as part of the public street network, of equivalent status to the public domain, with its fully public nature embedded in the title arrangements.

b) The lane must be designed with the same parameters and finishes as required for Council owned lanes outlined in this section.

c) The lane must be named and signposted in the same way as for Council owned lanes.

C.08 Pedestrian lanes must be clear of all obstructions, including columns, stairs, escalators and fixed furniture. A minimum of 50 per cent of lane width is to provide clear pedestrian access.

C.09 Main building entry points on lanes must be clearly visible and defined as appropriately with canopies, building signage, lighting and high quality articulation. Steps, handrails, or Tactile Ground Surface Indicators must not protrude into or interfere with the lane.

C.10 Arcades are a secondary pedestrian option and must not to replace the role or function of a lane, shared zone or service lane.

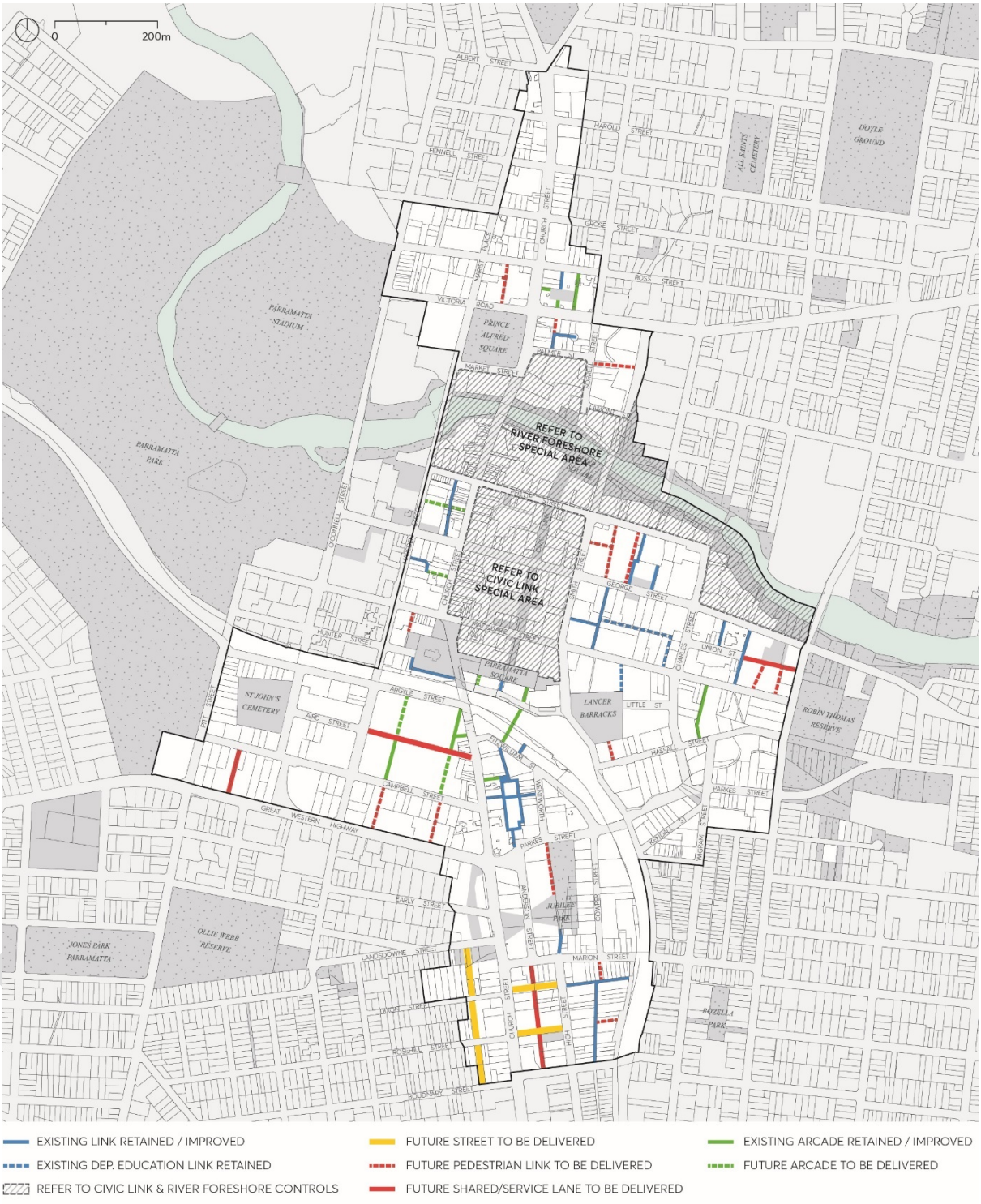


Figure XX7 – Existing and Required Lanes in the Parramatta City Centre

4.5 PEDESTRIAN OVERPASSES and UNDERPASSES

Pedestrian access at street level is considered a priority in the City Centre to encourage an active and lively public domain. Pedestrian overpasses and underpasses are discouraged as they may create access issues for the mobility impaired, degrade streetscape quality and obstruct views and vistas along streets.

New pedestrian underpasses or overpasses will only be considered where they would directly connect to major transport nodes such as bus interchanges, or railway or metro stations and would substantially improve pedestrian safety and access due to compromised conditions at footpath level.

Objectives

O.01 Minimise intrusions into the streetscape or wider public domain and maintain views and vistas along streets.

O.02 Provide substantially improved pedestrian safety and accessibility where these are significantly compromised to major transport nodes.

Controls

C.01 Any proposed overpass or underpass must demonstrate how it substantially improves pedestrian safety and accessibility.

C.02 Any proposed overpass or underpass must:

a) Provide access wholly within the development site, be accessed directly from a suitable public space and be flush with the street alignment boundary.

b) Provide direct connection under or above adjacent streets.

c) Not reduce dimensions or circulation space of existing public domain and footways.

C.03 The design of any overpass or underpass must satisfy 'safer by design' and crime prevention principles.

4.6 VEHICLE FOOTPATH CROSSINGS

The design and location of vehicle access to developments should minimise conflicts between pedestrians and vehicles on footpaths, particularly along primarily pedestrian streets. Vehicle access should also be designed to minimise visual intrusion and disruption of the public domain.
Porte-cocheres are not encouraged as they disrupt pedestrian movement, do not contribute to active street frontage, and provide no public benefit.

Objectives

O.01 Provide a simple, legible and direct pedestrian footway on all streets.

O.02 Make vehicle access to buildings more compatible with pedestrian movements and the public domain.

O.03 Prioritise safe pedestrian movements within the public domain.

O.04 Ensure vehicle entry points are integrated into the building design and contribute to high quality architecture and streetscapes.

O.05 Minimise the width of any vehicular footpath crossing.

O.06 Ensure vehicle access to heritage items is not detrimental to the values, setting or context of that heritage place.

Controls

C.01 No additional vehicle entry points will be permitted into the parking or service areas of development along those streets identified as significant pedestrian circulation routes in Figure XX8.

C.02 In all other areas, one vehicle access point only will generally be permitted, which is to include the access for service vehicles and parking for both residential and non-residential uses within mixed use developments.

C.03 Where practicable, vehicle access must be from lanes and minor streets rather than primary street fronts or streets with major pedestrian activity.

C.04 Vehicle slip lanes in public streets for private use are not permitted.

C.05 Where practicable, adjoining buildings must share or amalgamate vehicular access points. Internal on-site signal equipment must be used to allow shared access. Wherever appropriate, new buildings must provide vehicle access points that can be shared at a later date.

C.06 Vehicle access ramps must be perpendicular to the street frontage to minimise the width of vehicle entry and exit openings.

C.07 Vehicle landings (for the length of one vehicle) must be flush with the public domain to maximise visual contact with oncoming pedestrians.

C.08 The design of vehicle access doors to vehicle access points must be fitted behind the building facade and be of materials that integrate with the design of the building and that contribute positively to the public domain.

C.09 Vehicle entries visible from the street when doors are open must have a high quality finish to walls and ceilings as well as a high standard of detailing. No service ducts or pipes are to be visible from the street.

C.10 Porte-cocheres may be permitted in exceptional circumstances for hotels and major tourist venues, subject to high quality urban design, streetscape, heritage and pedestrian safety and amenity considerations.

C.11 If permitted, a porte-cochere must be internal to the building with one combined vehicle entry and exit point, or one entry and one exit point on two different street fronts of the development. In exceptional circumstances, for buildings with one street frontage only, an indented porte-cochere with separate entry and exit points across the footpath may be permitted.

C.12 A porte-cochere must be constructed level to the public domain.

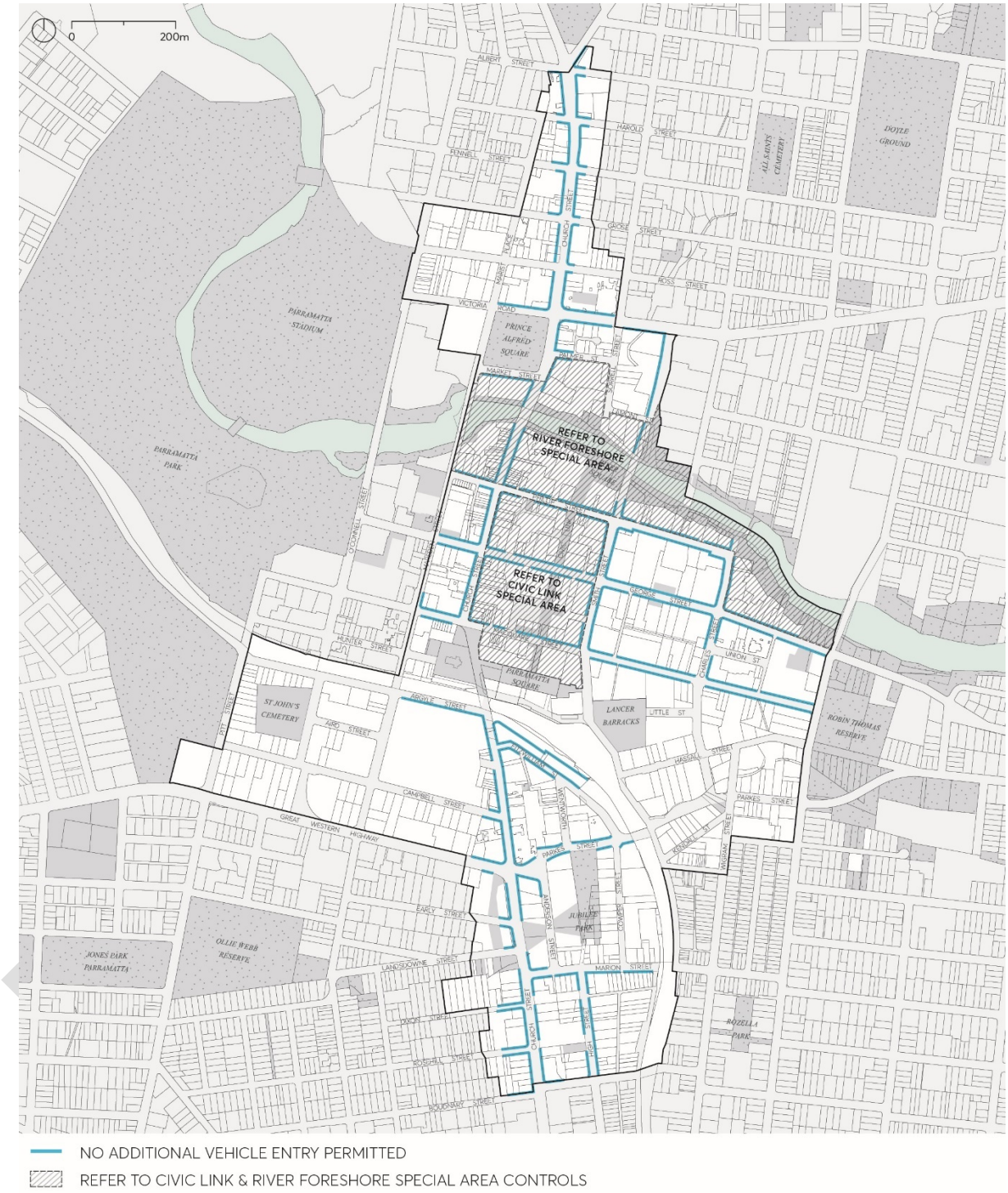


Figure XX8 – No Additional Vehicle Entry Permitted

4.7 VIEWS

Important views contribute to way finding and a sense of place and identity for the city. Views are shaped and informed by their surrounds.

The physical setting of the Parramatta City Centre, generally framed by Parramatta Park, Parramatta River, and the heavy rail corridor makes for special views of the natural setting with significant heritage and cultural elements. It is important that significant views within, into and out of the city are maintained from as many points in the public domain as possible.

Design that acknowledges the value of important views can protect and enhance these views, thereby contributing to the character and quality of the public domain.

Objectives

O.01 Reinforce the sense of place and way finding in the City Centre.

O.02 Maintain and enhance views from the city centre to significant heritage, natural features and significant trees.

O.03 Maintain and reinforce views along streets and to urban spaces.

O.04 Maintain views of silhouettes of the tops of major buildings or structures as seen against the sky.

O.05 Encourage views from Parramatta City Centre to Parramatta River and to Parramatta Park.

Controls

C.01 Where a proposed development is within the corridor of the identified views in Figure XX9 and Table XX9, an analysis must demonstrate:

a) The impact of the proposed development.

b) How the view is maintained and reinforced by the proposal.

c) How the view informed site planning, architectural form, finish, materials and detailing of the proposal.

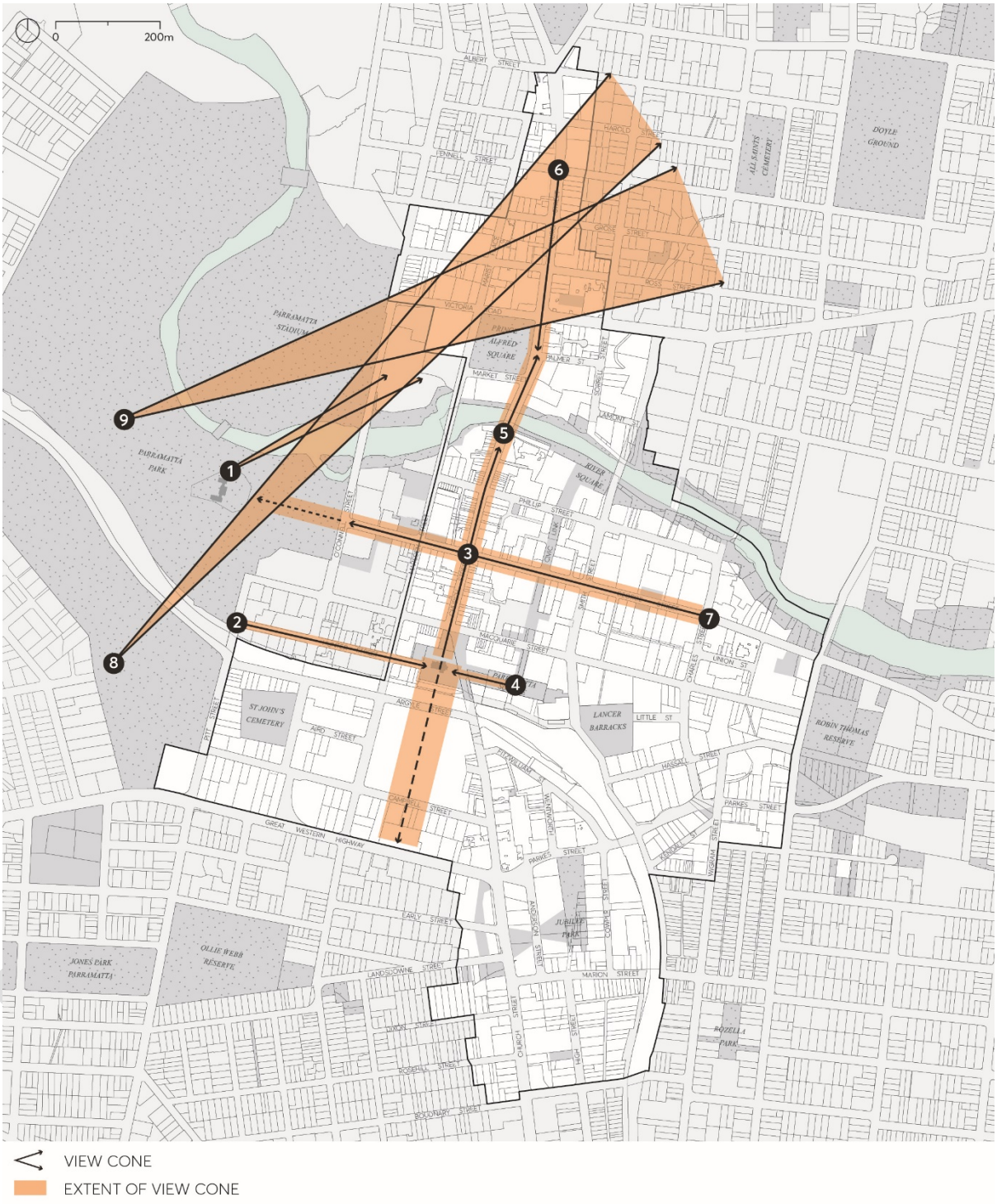


Figure XX9 – Historic Views to be protected

Table XX9 – Identified Historic Views to be protected

	Identified View	Significance
1.	Old Government House view northeast to the river, Old King's School building and site of former Government farm.	Key historic view demonstrating the relationship between the Governor, early Government farm and major school institution. Setting of both heritage items.
2.	Views east along Hunter Street to St John's Cathedral and spires, available back to Parramatta Regional Park.	Vistas along Hunter Street providing a framed view to St John's Cathedral, across the cathedral grounds towards the Town Hall, and to the site of the Governor's annual 'feast' with Aboriginal clans (instituted by Governor Macquarie) that took place at the rear (eastern end) of the Cathedral.
3.	Views southwards to and beyond St John's Cathedral and Centenary Square, and northwards along the procession of Church Street	Historic main street approach to city centre and St John's Cathedral with other heritage items in view, as well as the procession and views from St John's northwards, up Church Street. Views from Church Street towards St John's Cathedral must allow the silhouette of the Cathedral spires to be seen against the sky.
4.	Views west along Parramatta Square to St John's Cathedral, past the Town Hall	Backdrop and setting of church. Views to the Cathedral and spires.
5.	Views north and south along Church Street, including views of the Bankwest Stadium and heritage buildings, St John's Church spires to the south and St Peter's church.	Historic main street and approach to city, framed by a number of heritage buildings and recurrent views to Parramatta Park.
6.	Approach to Parramatta along Church Street from Fennell Street, and sequential views southward.	Historic main street and approach. Relatively consistent scale and setback of streetscape.
7.	Views along George Street to Parramatta Park gatehouse and trees.	Key historic street approach to the park and Old Government House. City edge of park, framing views to gatehouse, trees, and Old Government House (not now visible), views of streetscape, heritage items.
8.	View from Marys Hill across Parramatta's City Centre to distant hills.	Key historic viewing point from the highest part of the Parramatta Park with best views of the city in the river valley, glimpses to hills behind the city between buildings.
9.	View from The Crescent to the distant hills Key historic viewing point from the ridge of The Crescent	Key historic viewing point from the ridge of The Crescent to glimpses of distant hills between buildings.

5 SPECIAL AREAS

Special Areas are defined precincts with distinctive conditions that require specific controls relating to the characteristics of the area. Development within a Special Area must respond to the particular attributes and qualities of that place.

This Special Areas section of the DCP should be read in conjunction with the other sections of the City Centre controls. Unless modified or specifically excluded in this section, all controls in Sections 1-4 and Sections 6-9 of the City Centre controls apply to development in Special Areas.

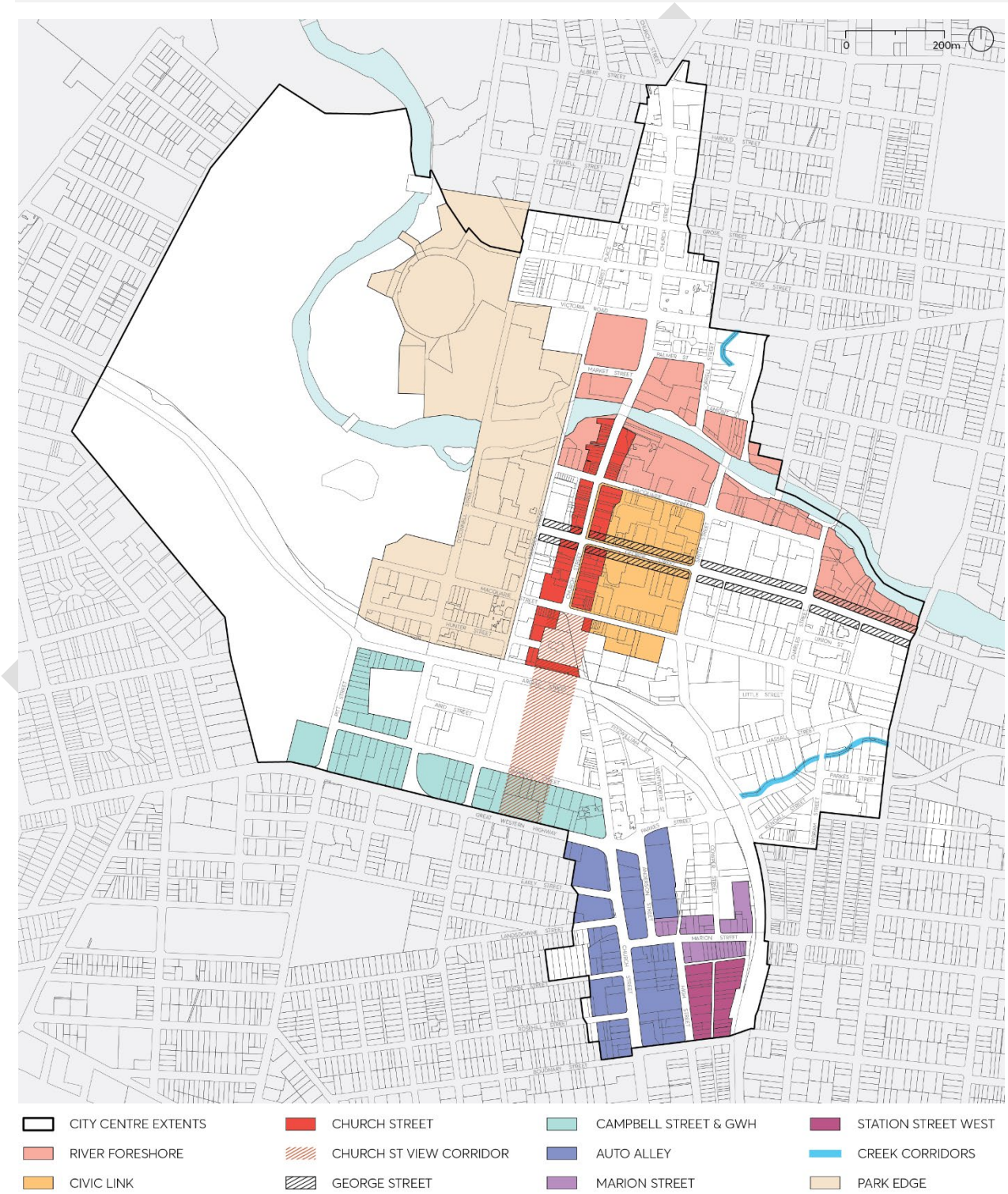


Figure 5.0.1 Parramatta City Centre Special Areas Precinct Map

5.1 CITY RIVER

The history of the Parramatta City Centre is interwoven with the River. The banks of the River have been inhabited by Aboriginal people for tens of thousands of years, providing fresh water, food and transport for the Dharug people and other Aboriginal clans that lived, met and sustained ongoing cultural practices along its course. The City River Special Area occurs at the place where the salt water of Sydney Harbour meets the freshwater extent of Lake Parramatta and continues to remain a culturally important place for Aboriginal people today. Traces of this rich history and ongoing culture are evident in the Pleistocene sand sheet and Aboriginal Archaeology which occur along the banks of the river, underpinning and in many instances occurring side by side with the City's European history and heritage.

Within the bounds of the City Centre, the river itself is approximately 30 metres wide and is traversed by several vehicular and pedestrian bridges. This includes the heritage listed Lennox Bridge, first completed in 1839, which carries Church Street across the River as the main north-south street in the City Centre.

Existing development on both sides of the river consists of low, medium, and large-scale buildings that vary in age, uses and ownership. A number of these buildings are of heritage significance which contribute to the character and the cultural importance of the precinct. The river frontage is edged with a mixture of buildings and green space. Pedestrian walkways are located along both sides of the river edge, however there are no public streets between the buildings and the water.

On the north bank, street blocks generally run perpendicular to the river responding to the hilly topography and providing views to the river and southern shore. On the south bank, consistent with the historical access from the river along George Street, the street blocks run parallel to the river on the flat topography of the floodplain. Views to the northern shore from the public domain on this side are more limited. The City River Special Area controls aim to acknowledge the different design responses that are required for the north and south banks.

A key unifying element within the City River Special Area is the River Square, which establishes a direct connection to Parramatta Square through Civic Link. The Riverside Theatre is located on the north bank between Marsden and Church Streets, and on the south bank the new Powerhouse Parramatta is to be located at the end of Civic Link. The City River Special Area also incorporates other important places such as the Charles Street Square adjacent to the Parramatta Wharf, and Prince Alfred Square – one of the oldest formalised civic spaces in New South Wales.

The following controls are designed to refocus activities along the river and to ensure that future development addresses and defines the river space. Existing view corridors will be reinforced by the buildings and new view corridors and connections introduced. Pedestrian paths above the flood plain level will offer opportunities to engage with the river.

The City River Special Area has been divided into a series of distinctive blocks that are bound by the Parramatta River's bridges as per Figure 5.1.1; the Cultural Block, the City West Block, and the City East Block.

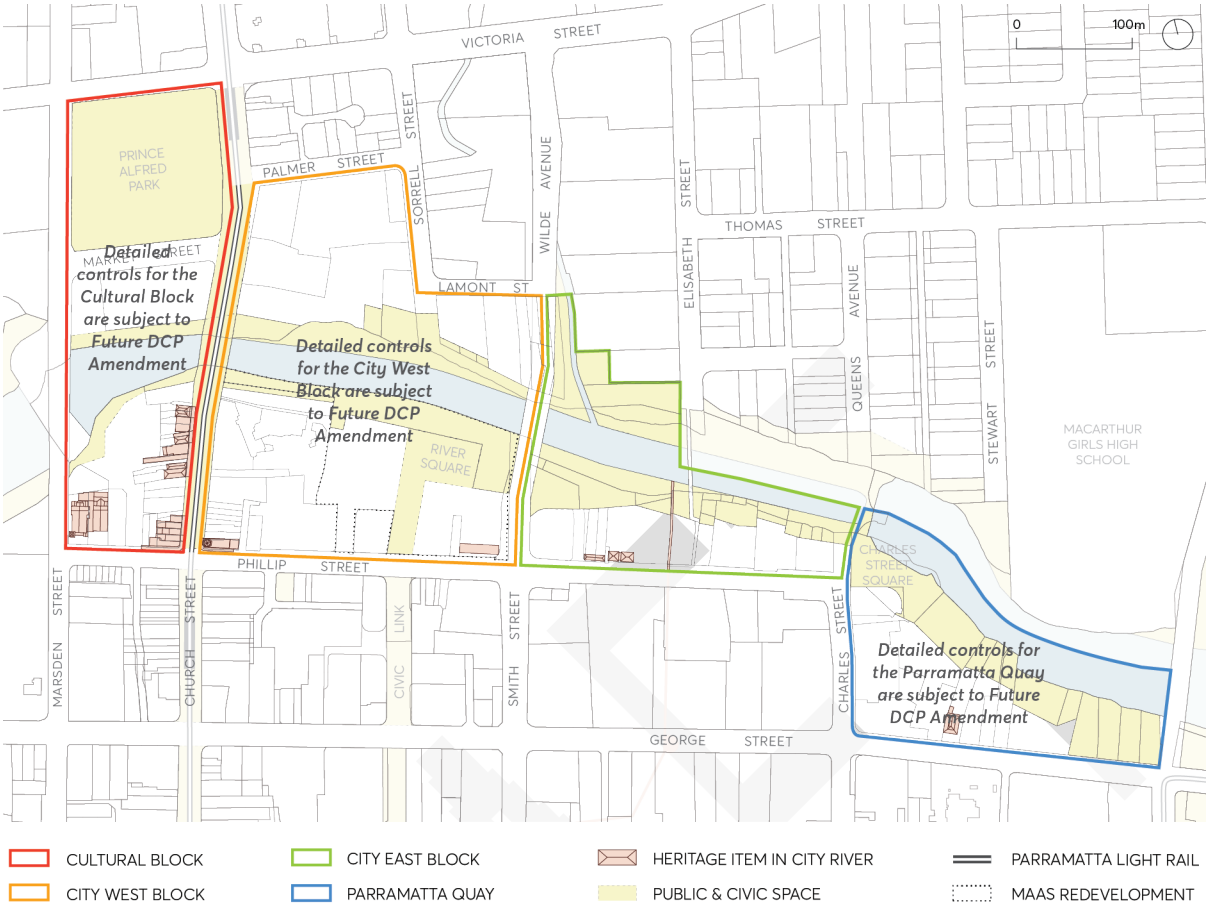


Figure 5.1.1 City River Special Area

Objectives

O.01 Respectfully acknowledge, celebrate and express the ongoing cultural importance of the Parramatta River to Dharug and Aboriginal people.

O.02 Celebrate the unique Parramatta River landscape setting, views, and topography of the City Centre.

O.03 Ensure future development contributes to the activation of the river, strengthening the significance of the river to the City Centre.

O.04 Strengthen the visual and physical north-south connections between the city and the river.

O.05 Maximise pedestrian connections at lower and upper levels of the river foreshore to ensure contiguous east-west movement is achieved.

O.06 Balance the needs of the natural and built environment, enhancing the Parramatta River as the major natural and cultural asset of the City Centre.

O.07 Maximise sun access to the foreshore and adjacent public open spaces.

O.08 Enhance the interface between private and public land along the river, ensuring future development addresses the river and contributes to the overall quality, safety and amenity along the river foreshore.

O.09 Preserve the Parramatta River as a priority corridor for ecological protection, flood sensitive design and future landscape improvements.

O.10 Ensure flood response is integrated into the design of future development and appropriate escape routes above the floodplain is provided to ensure safety for the community.

O.11 Frame the Parramatta River and its foreshore by providing consistent and defined building edge to the foreshore, with generous upper-level setbacks.

O.12 Achieve an appropriate consolidation pattern that allows the objectives of the City River Special Area to be integrated into development proposals.

O.13 Recognise the historical and contemporary importance of the precinct to the City's identity through:

a) preservation of appropriate curtilage, surrounding scale and view corridors to heritage items

b) contextually responsive design and adaptive reuse of heritage buildings,

c) a curated collection of high quality, contemporary heritage interpretation and public art which enlivens the public domain

5.1.1 City East Block

The following controls apply to the City East Block within the City River Special Area. This block is bound by Wilde Avenue, Phillip Street, Charles Street Square, and the north bank river foreshore open space. On both sides of the river, a continuous foreshore promenade allows pedestrian and cyclist access along the water's edge before the land slopes steeply up and away from the water. The north bank is more densely vegetated and characterised by 3- to 4- storey residential brick buildings that have been generously set back from the foreshore. The south bank commands a more urbanised character, and an existing mix of residential and non-residential uses address the river front.

Brickfield Creek also joins the Parramatta River in this location, and the historically significant Convict Drain dating back to the 1820s passes through the south bank. A series of single storey cottages remain along Phillip Street, breaking up the street wall scale and are to be retained as local heritage items.

The most significant opportunity in the City East Block is to enhance existing views, and establish new views, towards the River. A new upper level promenade is to be delivered by future development to allow a continuous and active edge to the River that would be fronted by cafés, restaurants, bars and other retail tenancies – all with views over the Parramatta River.

Figure 5.1.1.1 City East Block Framework Plan

Objectives

O.01 Define a continuous foreshore space between the river edge and future building face to provide a system of connected and accessible open spaces, as well as natural flood storage capacity.

O.02 Frame views between buildings from Phillip Street to the river foreshore by maintaining and expanding view corridors along existing streets and laneways, and by creating new laneways.

O.03 Create a premier river frontage and address for the City Centre that accommodates activities during the day and night.

O.04 Delivers high quality architectural resolution when viewed along the river, from bridges and from across the river to the north.

O.05 Provide a safe egress route during flood events that connects between Charles Street Square and George Khattar Lane and along George Khattar to Phillip Street or to refuge within buildings.

O.06 Ensure any future development on the north bank that is located outside the City Centre and City River boundary acknowledges the significance of the river foreshore and responds to the objectives of the City River Special Area.

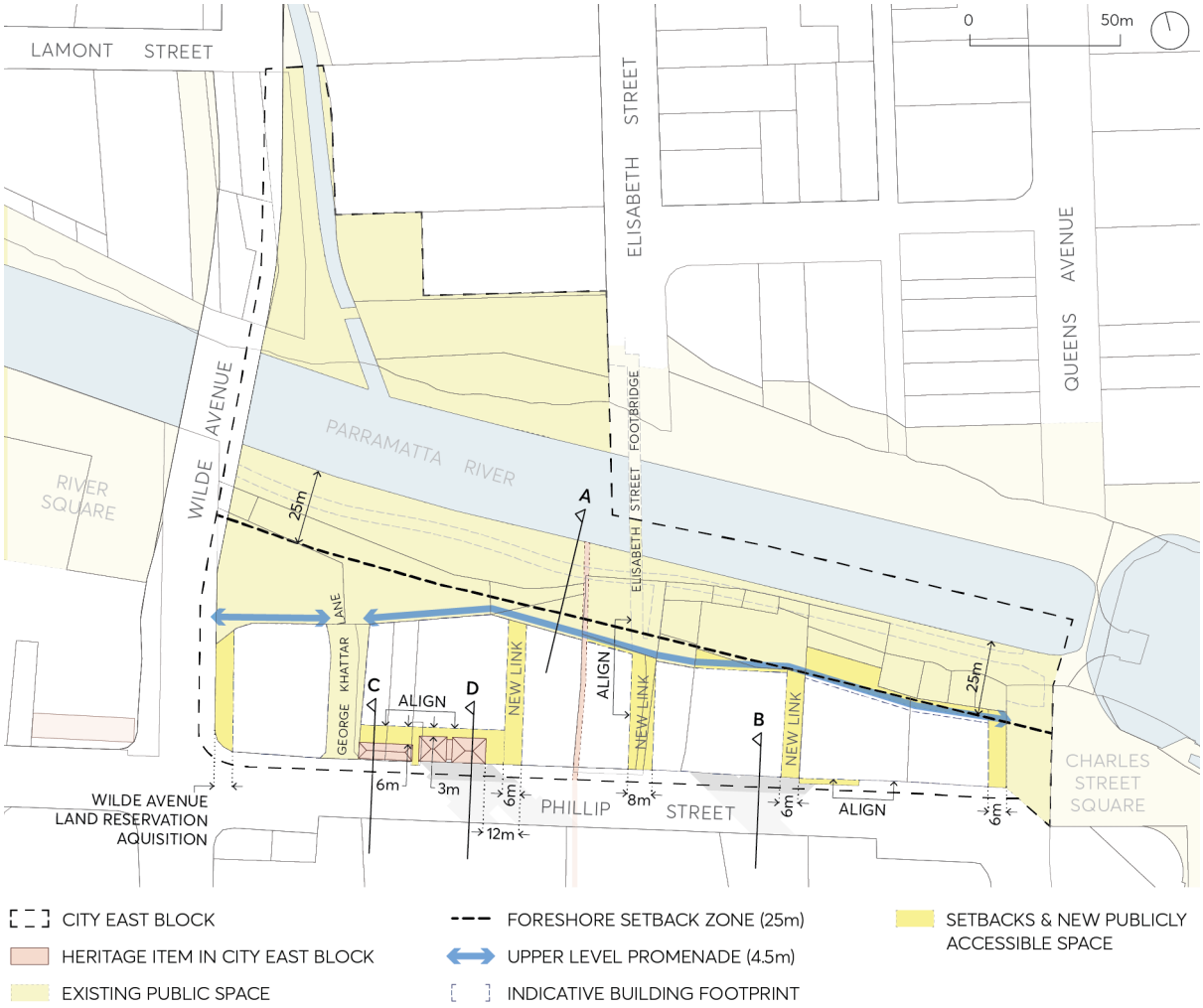


Figure 5.1.1.2 City East Block Public Domain

Controls

Unless modified or specifically excluded below, all controls in Sections 1-4 and Sections 6-9 of this DCP apply to development within the City River Special Area City East Block.

C.01 Development must comply with Figure 5.1.1.2 and be setback a minimum of 25m from the river's edge and / or align with the future alignment of the upper level promenade.

C.02 Site consolidation must allow for the realisation of the objectives of the City River Special Area and desired publicly accessible through site links to be delivered as per Figure5.1.1.2.

C.03 A new upper level promenade along the river frontage of properties must comply with Figure 5.1.1.3 (Section A). Development must provide a 4.5m wide open to sky pedestrian walkway above the flood planning level along the northern boundary that is shared with the river foreshore. The horizonal and vertical alignment of the promenade is to be determined in consultation with Council.

C.04 Street wall heights and setbacks along the river foreshore must comply with Figure 5.1.1.3 (Section A). Development on the south bank must provide a street wall height of 4-storeys along the foreshore, and towers must be set back 6 metres from the street wall.

C.05 Development must provide ground level building entries to lift lobbies and ground level retail or restaurant tenancies that are directly accessible from the upper level promenade. Multiple storeys of non-residential uses on the river frontage are encouraged to increase activity along the foreshore edge.

C.06 An awning must be provided along the upper level promenade for weather protection and outdoor dining must be located within the building footprint to provide space for unobstructed pedestrian travel as shown in Figure 5.1.1.3 (Section A

C.07 Street walls facing the river must comply with the street wall controls in Part 3 of the City Centre controls.

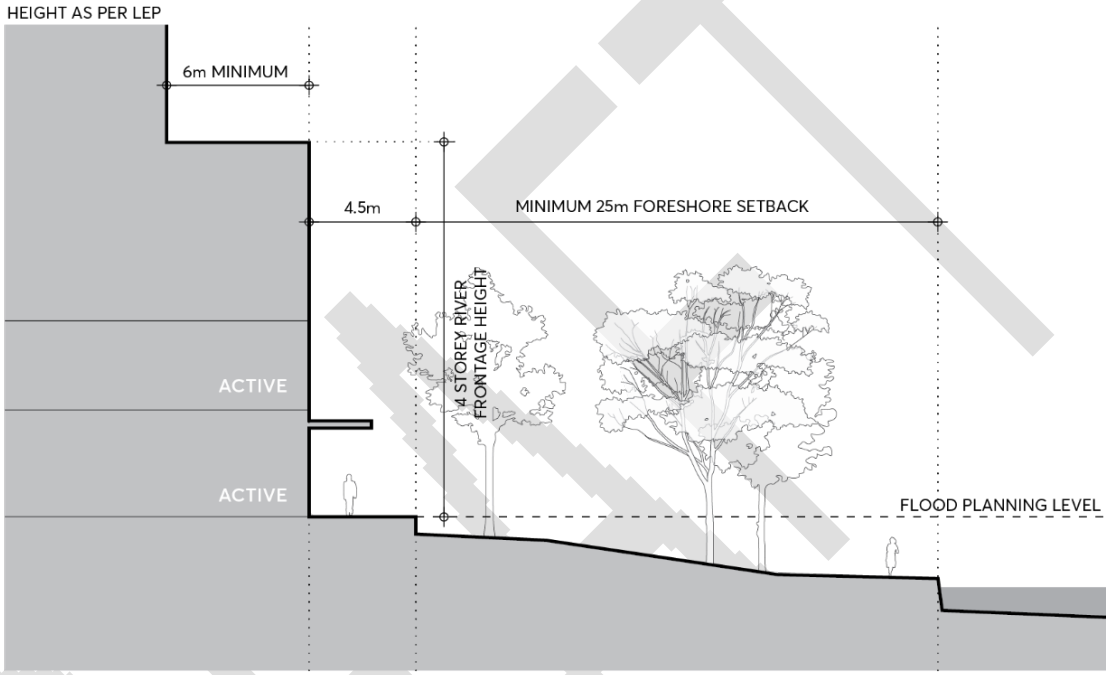


Figure 5.1.1.3 City East Block Typical River Frontage (Section A)

C.08 New through site links must be provided as per Figure 5.1.1.2. All new links must be open to sky, visually and physically connecting Phillip Street and the upper level promenade with extended views to the River corridor.

C.09 The existing laneway at Elizabeth Street bridge must be widened to 8m with clear site lines between the bridge and Phillip Street, as shown in Figure 5.1.1.2.

C.10 Development must prioritise locating car parking in basement structures to ensure active ground floor uses are provided along the river foreshore. Where basement car parking is considered inappropriate due to identified constraints such as archaeology or flooding, above ground car parking must be sleeved with active uses.

C.11 At 90-96 Phillip Street, noting the lot configuration and land commitments for public purposes, development must provide a minimum 3 metre tower setback along the Phillip Street, Charles Street and River foreshore frontage that addresses wind, solar access and design objectives.

C.12 At 60 Phillip Street, development must dedicate local road widening to Wilde Avenue as per the Land Reservation Acquisition map in Parramatta LEP 2011. The width of road widening must be determined in consultation with Council.

C.13 Street setbacks and street wall heights on Phillip Street must comply with Figure 5.1.1.4 (Section B). Unless the site contains a heritage item, the street wall must be built to the boundary, and towers must be set back a minimum of 6 metres from the street wall.

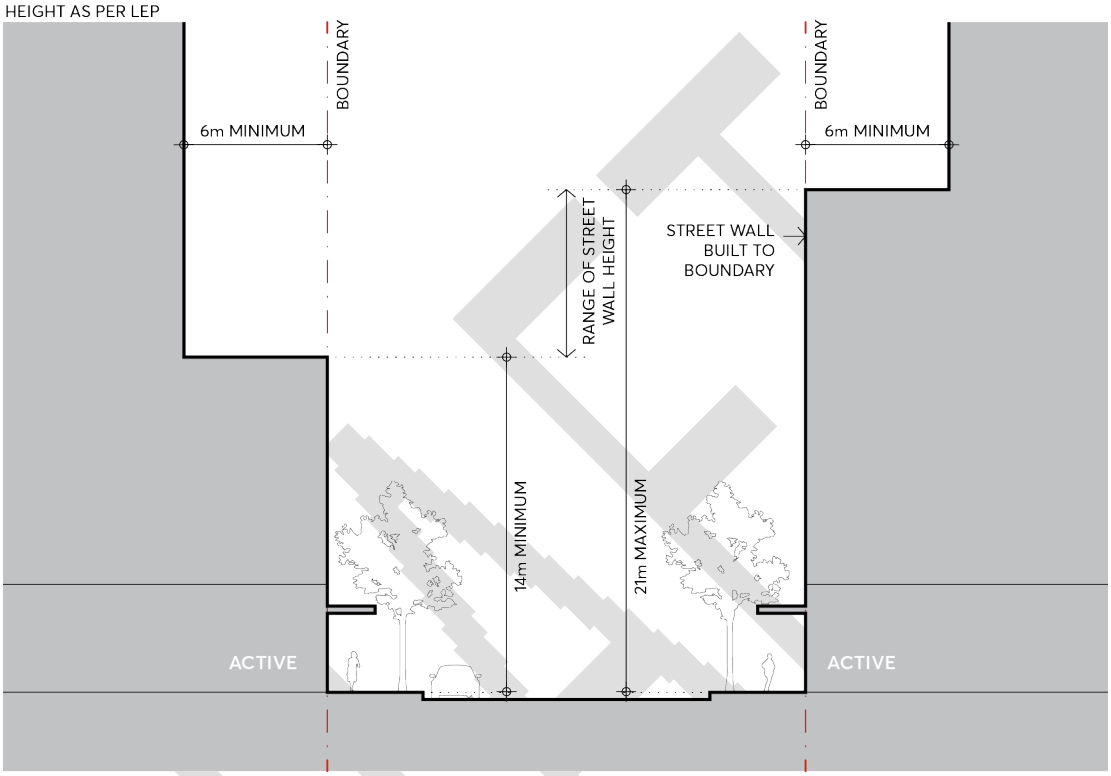


Figure 5.1.1.4 City East Block Phillip Street (Section B)

C.14 Development must provide a 6m setback to heritage cottages on the lot known as 66 Phillip Street as per Figure 5.1.1.5 (Section C), and a 3m setback to heritage cottages on the lot known as 70-74 Phillip Street as per Figure 5.1.1.6 (Section D). An aligned building setback must be provided on the southern façade across the two properties as shown in Figure 5.1.1.2.

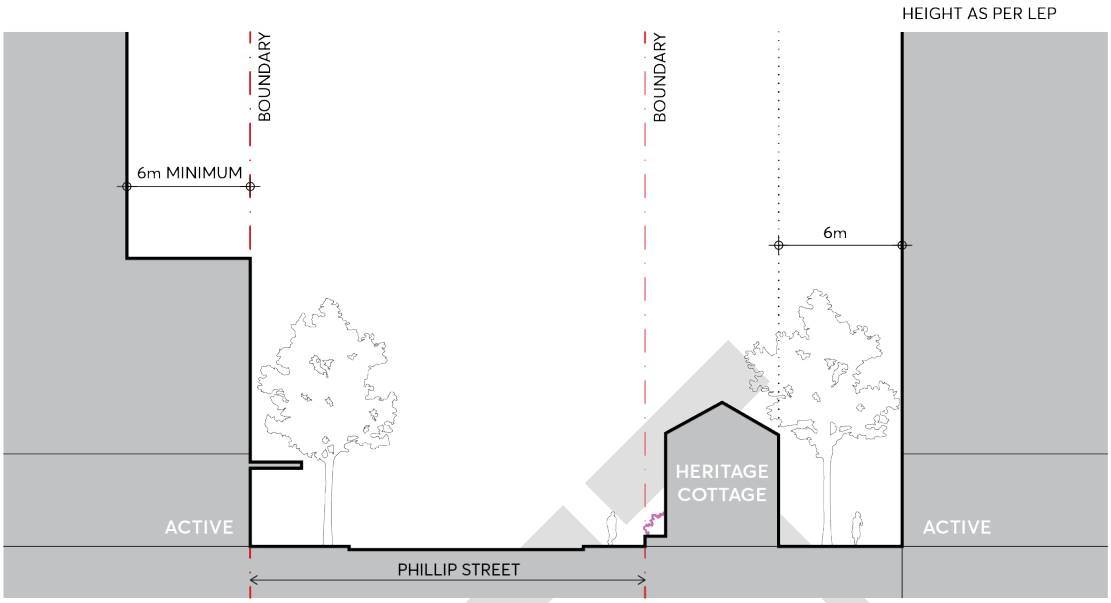


Figure 5.1.1.5 City East Block Phillip Street at 66 Phillip Street (Section C)

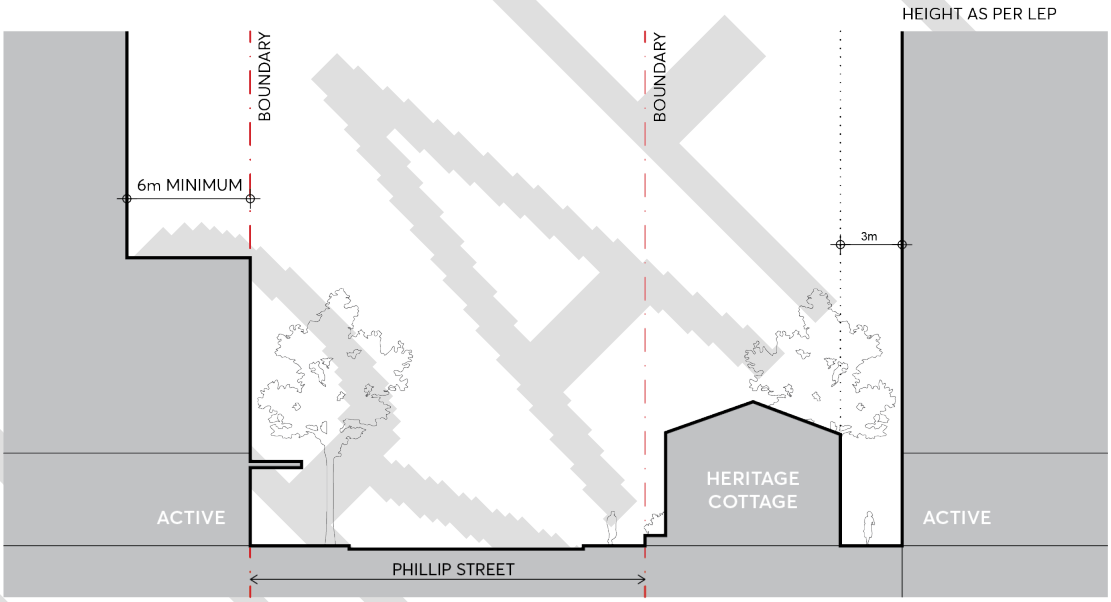


Figure 5.1.1.6 City East Block Phillip Street at 70-74 Phillip Street (Section D)

C.15 Heritage cottages must be adaptively re-used, allowing these items to contribute to an active streetscape character and maintain their significance.

C.16 Clear egress for emergency, maintenance, and event vehicles to access the foreshore must be provided from George Khattar Lane.

5.2 CIVIC LINK

The Civic Link Special Area is located in the heart of the Parramatta CBD. Central to the area is the Civic Link, a major new green, pedestrianised public space and cultural spine that connects Parramatta Square to the Parramatta River.

Civic Link spans 4 city blocks, divided by Macquarie, George and Phillip Street as shown in Figure 5.2.1.

In Block 1, the southern end of Civic Link is marked by the Leigh Memorial Church and the Town Hall. Civic Link connects directly to the Square and facilitates access to the existing bus and rail interchange and light rail stop.

In Block 2, Civic Link is a new north-south public space extending from Macquarie Street along the widened and pedestrianised eastern Horwood Place. The future underground metro station and associated development replaces the existing Horwood Place Car Park. Civic Link facilitates interchange between light rail, the metro station and the bus interchange on Smith Street. A new square provides a new setting for Kia Ora and the Leigh Memorial Church. The Roxy, a State listed heritage item, retains its use as a cultural landmark.

In Block 3, Civic Link follows the existing alignment of Horwood Place. Erby Place Car Park is retained in the short to medium term and continues to serve the CBD. A future site specific DCP for the centre of the block, including the Erby Place Car park, aims to facilitate the long-term realisation of a new north-south street and east-west laneway, major commercial developments and the full pedestrianisation of Civic Link.

In Block 4, Civic Link extends through the Parramatta Powerhouse site and connects physically and visually to the River Square and the River Foreshore. Refer to Part 5.1 City River of the City Centre controls for controls specific to this block.

The following Special Area controls for the precinct describe the alignment of Civic Link and supporting new streets and laneways to enable large city-shaping infrastructure, development projects and incremental change across multiple land holdings. New streets, laneways and squares increase pedestrian permeability and activity within the city centre and enable access to transport and major cultural destinations. Vehicle and service access to existing and future properties is provided with the conversion of Civic Link to pedestrian use. Lot consolidation supports new commercial towers. A diversity of building forms and defined street wall heights reinforce the human scale edge to Civic Link and celebrates the retention and adaptive re-use of heritage buildings.

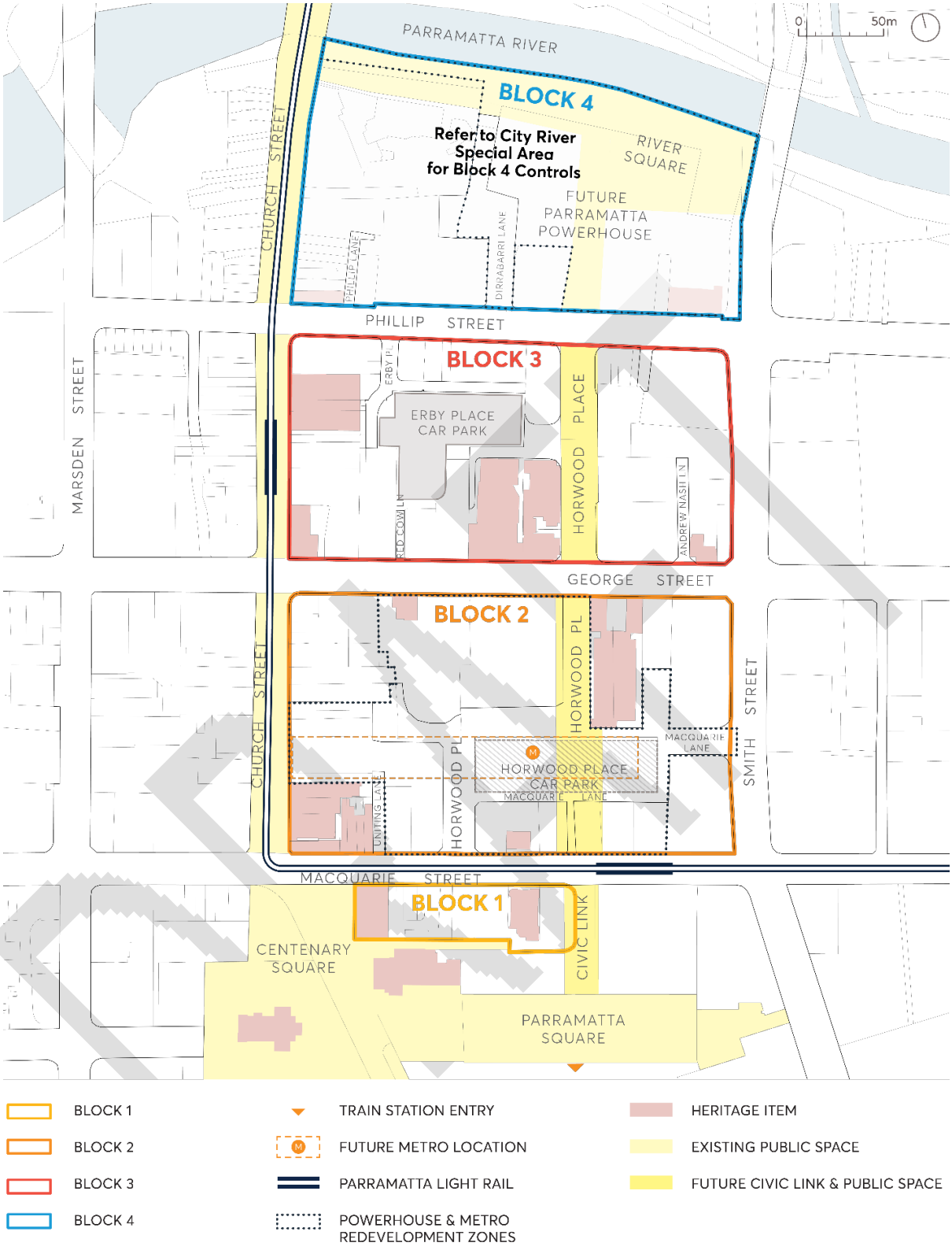


Figure 5.2.1 Civic Link Special Area Blocks with Existing Context

Objectives

O.01 Establish Civic Link as a new linear public space, open to sky and with an avenue of significant trees along its length, linking Parramatta Square to the Parramatta Powerhouse and River foreshore.

O.02 Expand the street and laneway pattern within the block to prioritises pedestrian use and public and active transport choice, while also providing controlled vehicle and service access to existing properties and future developments.

O.03 Dedicate Civic Link, streets, laneways and squares to Council.

O.04 Ensure development supports a pleasant microclimate during all times of the year by protecting sunlight to Civic Link during lunch hours, and by mitigating urban heat island and reducing wind impacts from large development within the area.

O.05 Frame view corridors along east-west streets and laneways toward Civic Link to reduce the perceived bulk of large commercial buildings.

O.06 Promote equitable, viable development that supports the commercial core of the CBD and enables staged development across development parcels over time.

O.07 Provide consolidated soil volume areas, stormwater management solutions, and underground utilities to facilitate a high-quality public domain. Structures under the public domain are not supported.

O.08 Reinforce the pedestrian scale of the public domain with architectural design that provides human scale detail and with ground and lower-level building uses and frontages that support activity across the day, night and week. Space for temporary and permanent cultural uses, events and incubator spaces within the area, and in particular along Civic Link is desirable.

O.09 Define building envelopes and street wall heights that assist in transitioning between large scale commercial buildings and retained heritage buildings.

O.10 Spatially and visually differentiate free standing heritage buildings, including Kia Ora and the Roxy, from surrounding new development.

O.11 Ensure the Roxy has a visual setting that allows it to be visually dominant in the immediate streetscape and not visually overwhelmed by new development.

O.12 Create a new square around Kia Ora within a public space and with a connected tree canopy as a backdrop, when viewed from Macquarie Street.

O.13 Create a new square to the east of Leigh Memorial Church that opens views to the church, expands pedestrian space and amenity adjacent the Parramatta Light Rail stop and define a generous threshold to Parramatta Square from Macquarie Street.

O.14 Facilitate legible and easy transport interchange for pedestrians and cyclist within the public domain between the new Metro station at Civic Link, buses on Smith Street, light rail stations at Church and Macquarie Streets and the existing bus and rail interchange.

O.15 Manage overland flow and stormwater to enable Civic Link's use as an escape route from the river to higher ground in the south during flood events.

Controls

Unless modified or specifically excluded below, all controls in Sections 1-4 and Sections 6-9 of the City Centre controls apply to development within the Civic Link Special Area.

C.01 The alignment and width of Civic Link must comply with Figure 5.2.3 and must be open to sky without building encroachments or overhangs, with the exception of required awnings, along the full length of Blocks 1. 2 and 3.

a) In Block 1, Civic Link must have a minimum 20m width with 17m wide clear to sky building separation as indicated on Figure 5.2.3

b) In Block 2, Civic Link must have a minimum width of 27m between Macquarie Street and Macquarie Lane, as indicated on Figure 5.2.3, with the exception of Control C.0.6 (g) for a Metro Station.

c) In Block 2, Civic Link must have a minimum width of 20 m between Macquarie Lane and George Street, measured from the western site boundary of the Roxy as indicated on Figure 5.2.2 (Section D)

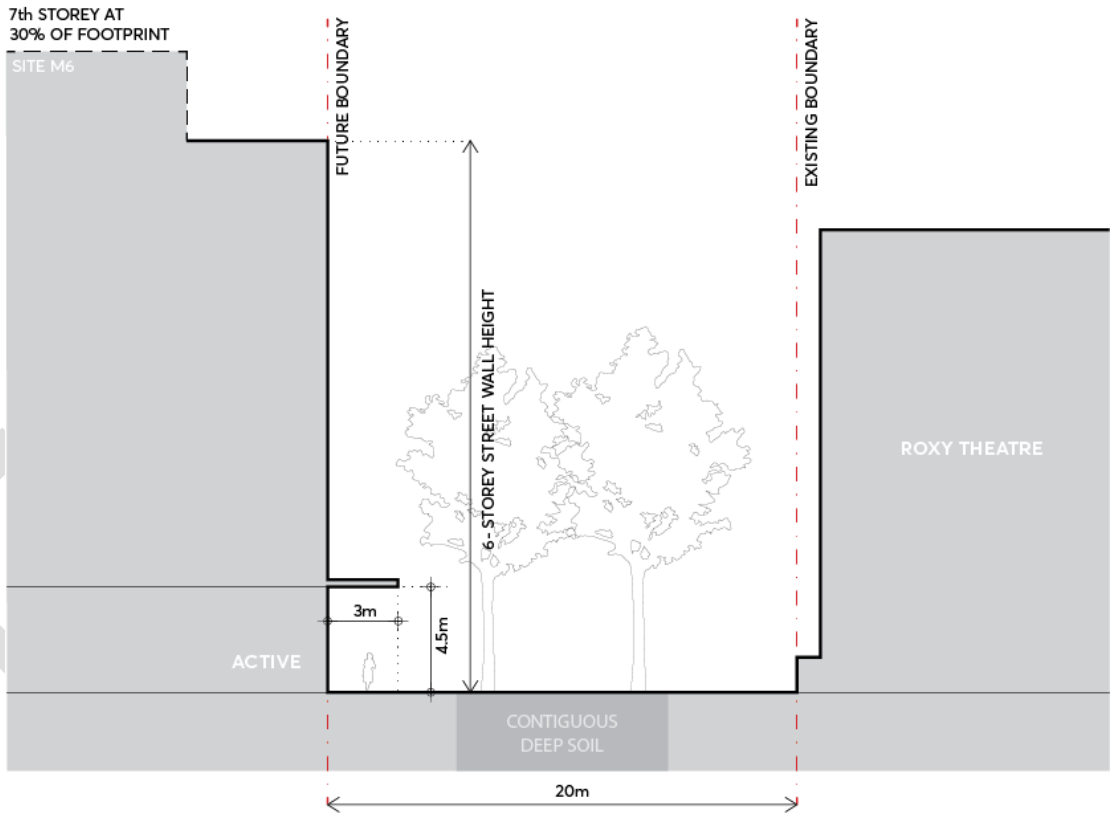


Figure 5.2.2 Future Civic Link in Block 2 (Section D) Setback & Building Height

d) In Block 3, Civic Link must follow the existing street reserve except on the eastern side where the predominant alignment at 1 and 3 Horwood Place (Sites 09 and 10) must be adopted as indicated on Figure 5.2.5.

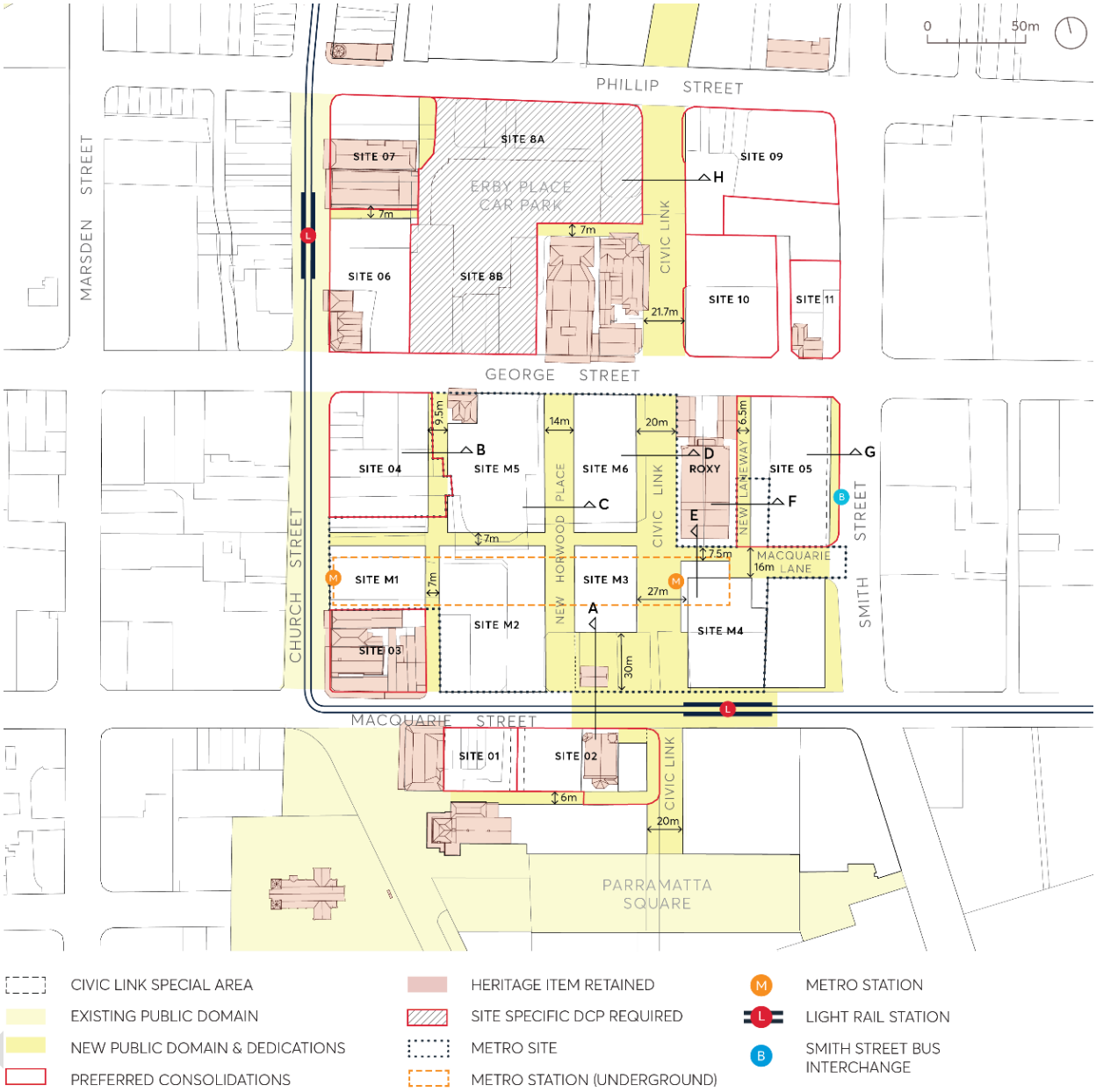


Figure 5.2.3 Civic Link Special Area Public Domain & Consolidation

C.02 Site consolidation must comply with Figure 5.2.3 to realise the objectives of the Civic Link Special Area. Where sites do not amalgamate as shown, buildings must comply with building separation, side and rear setback controls in Part 3 of the City Centre controls, including where an alternate amalgamation option for Site 05 is proposed that is exclusive of the Metro land.

C.03 Streets, lanes and open spaces as indicated on Figure 5.2.4 must be delivered through development or dedicated to Council for delivery in a coordinated manner.

C.04 New development and additions or alterations must not cause overshadowing of the pedestrian areas (Civic Link and squares and lanes) beyond the allowable building envelopes defined by the permissible FSR and building height in the LEP and the setbacks in this DCP.

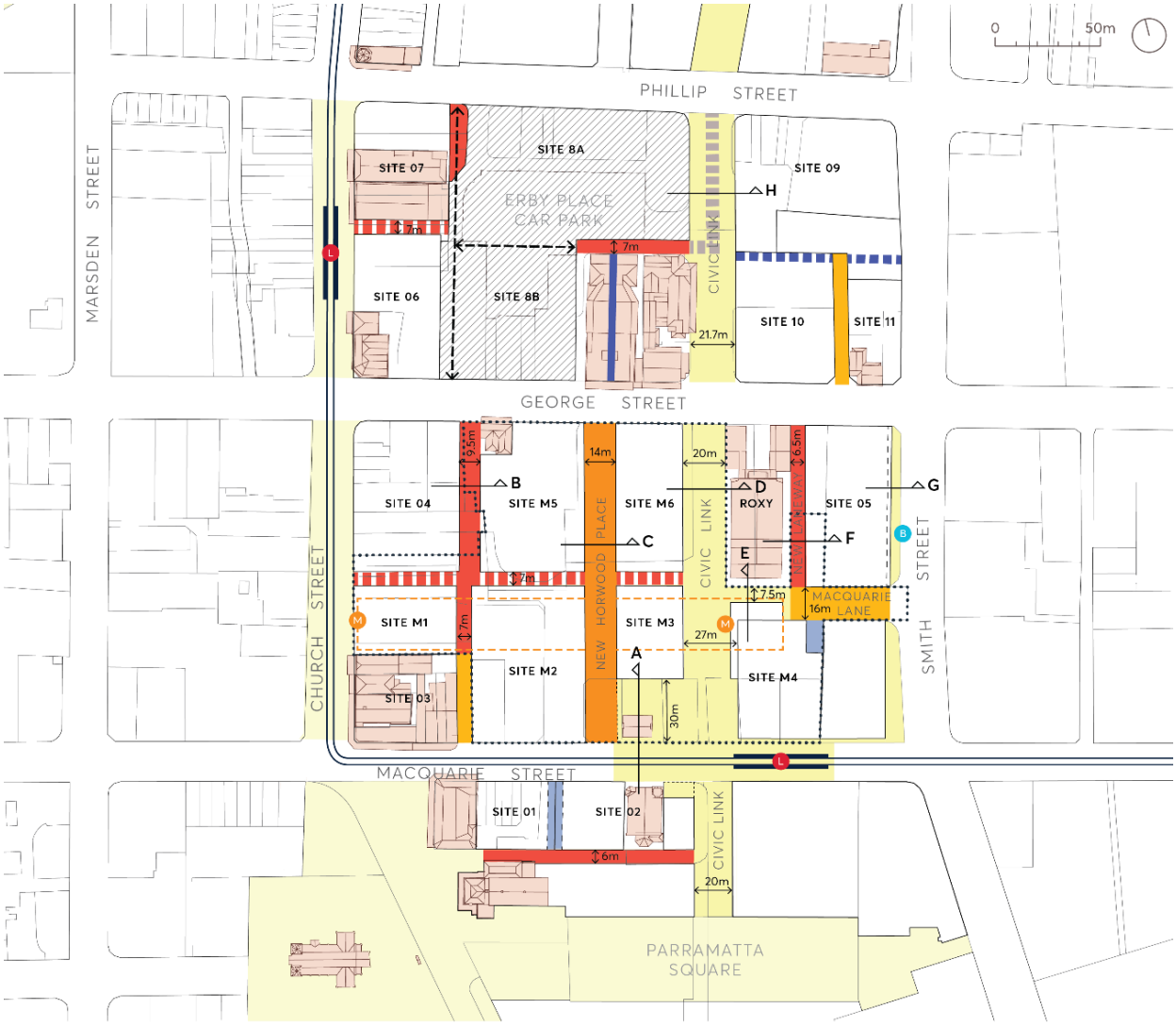


Figure 5.2.4 Civic Link Streets and Public Spaces

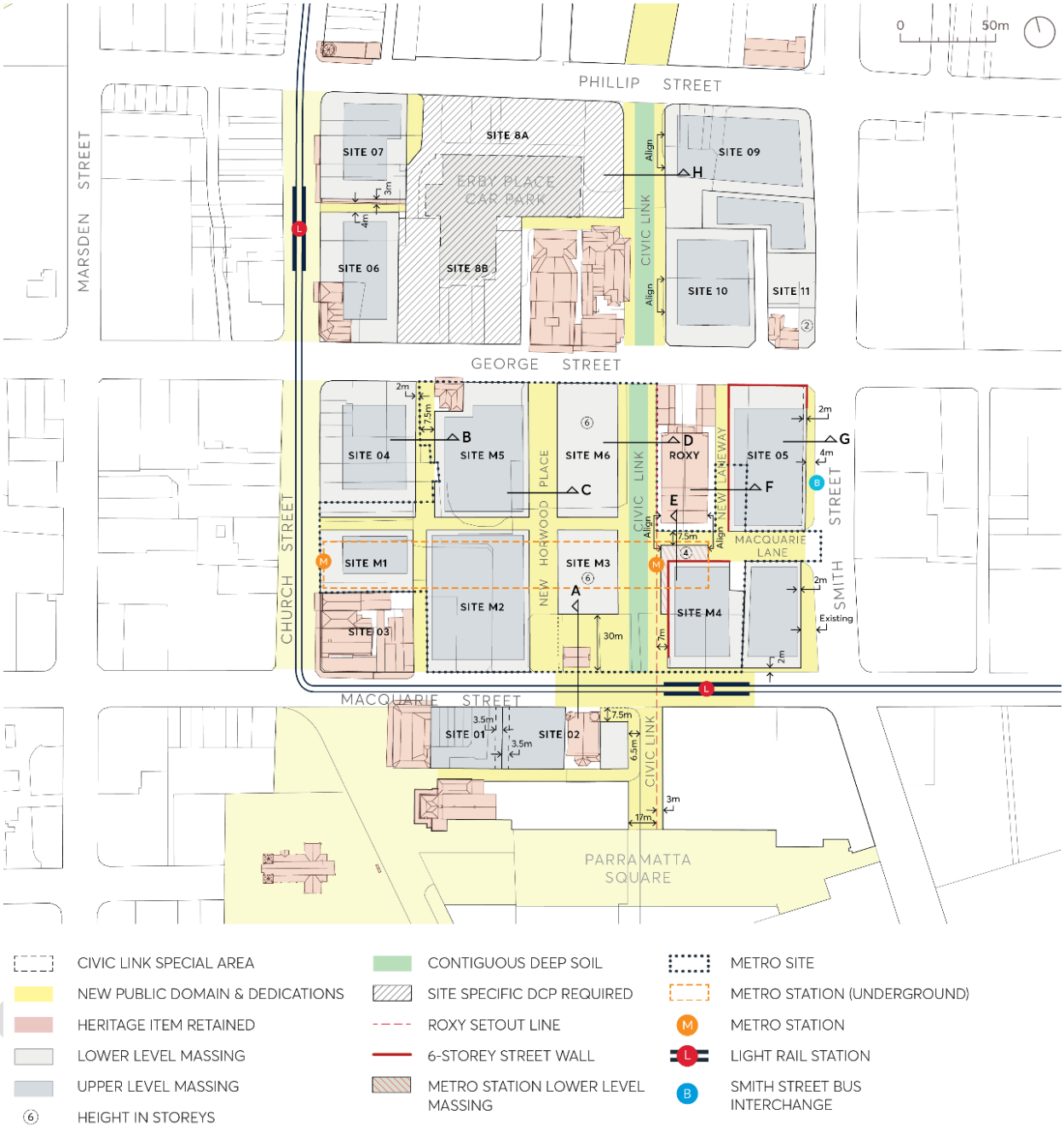


Figure 5.2.5 Civic Link Setbacks and Indicative Built Form

C.05 Development within Block 1 must comply with the following specified envelope controls:

a) Along Civic Link, a 4 storey / 22 metre street wall height with an upper level setback of 6m must be provided.

b) Along the south side of Macquarie Street west of the Leigh Memorial Church, buildings must follow the street alignment and be built to the boundary. At 97 and 99 Macquarie Street, development must provide a 2 storey high, 3.5m wide service accessway on each property along the common boundary to create a combined 7m shared service access way across both properties.

c) At 119A Macquarie Street, development must provide a minimum 7.5m setback to Macquarie Street in alignment with the southern edge of the Leigh Memorial Church; a minimum 6.5m setback along Civic Link to achieve a minimum 20m public domain corridor; and a minimum 6m setback from the southern boundary of 119A to achieve a laneway for vehicle and service access.

C.06 Development within Block 2 must comply with the following specified envelope controls:

a) Along the western edge of Civic Link and eastern edge of New Horwood Place in Block 2 (Sites M3 and M6), buildings must be a maximum of 6 storeys with an additional storey setback a minimum 6 metres with a maximum 30% footprint of the floor below to enable lift core, services and restaurant/ café uses. Landscape gardens on the remaining roof space is encouraged.

b) Along George Street, a street wall of 6 storeys must be provided at Site 05 and Site M6 with a 12m upper level setback to storeys above the street wall.

c) Street walls facing the Roxy at Site 05 western façade, Site M4 northern and western façade, Site M3 eastern façade and Site M6 eastern façade must be 6 storeys high (refer to Figure 5.2.6) and designed with a restrained architectural expression with the following:
   - a regular form;
   - a regular pattern of openings;
   - a limited materials, finishes and colour palette, and without strong contrasts;
   - a horizontal top to the street wall without any stepping;
   - limited decorative details;
   - signage limited to the ground floor;
   - concealed services;
   - discreet night time illumination.

Figure 5.2.6 The Roxy Framed By 6 Storey Street Walls

d) Setback new development 22m from Macquarie Street to the north of Kia Ora between Civic Link and New Horwood Place as per Figure 5.2.7 (Section A).

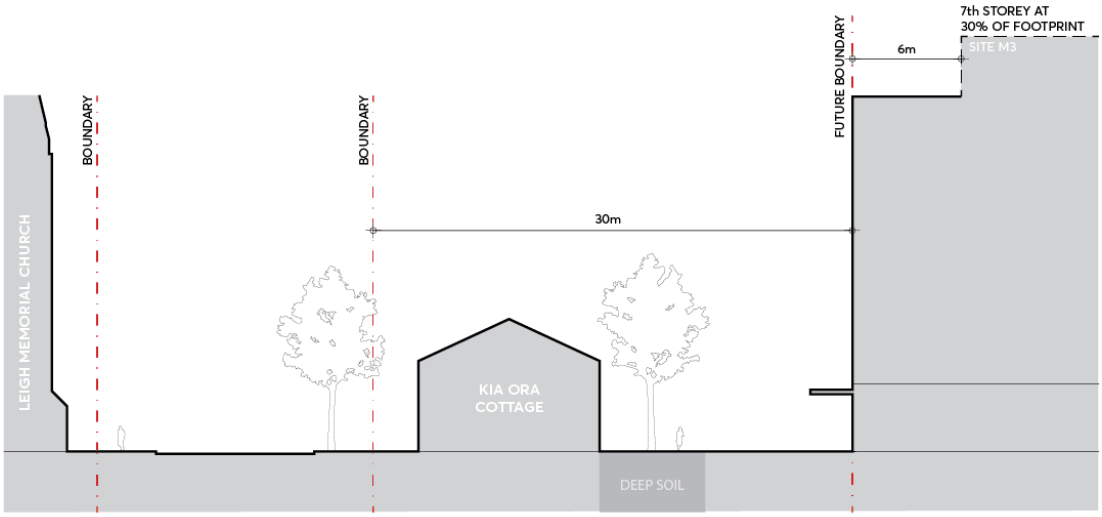


Figure 5.2.7 Kia Ora Interface (Section A) Setback & Building Height

e) Street setbacks and street wall heights on the New Horwood Place must comply with Figure 5.2.8 (Section C). Development on the western edge of Horwood Place must provide a street wall built to the future boundary, and minimum 3m upper level setback. Development on the eastern edge of Horwood Place must provide a 6-storey street wall height built to the future boundary, and 6m upper level setback.

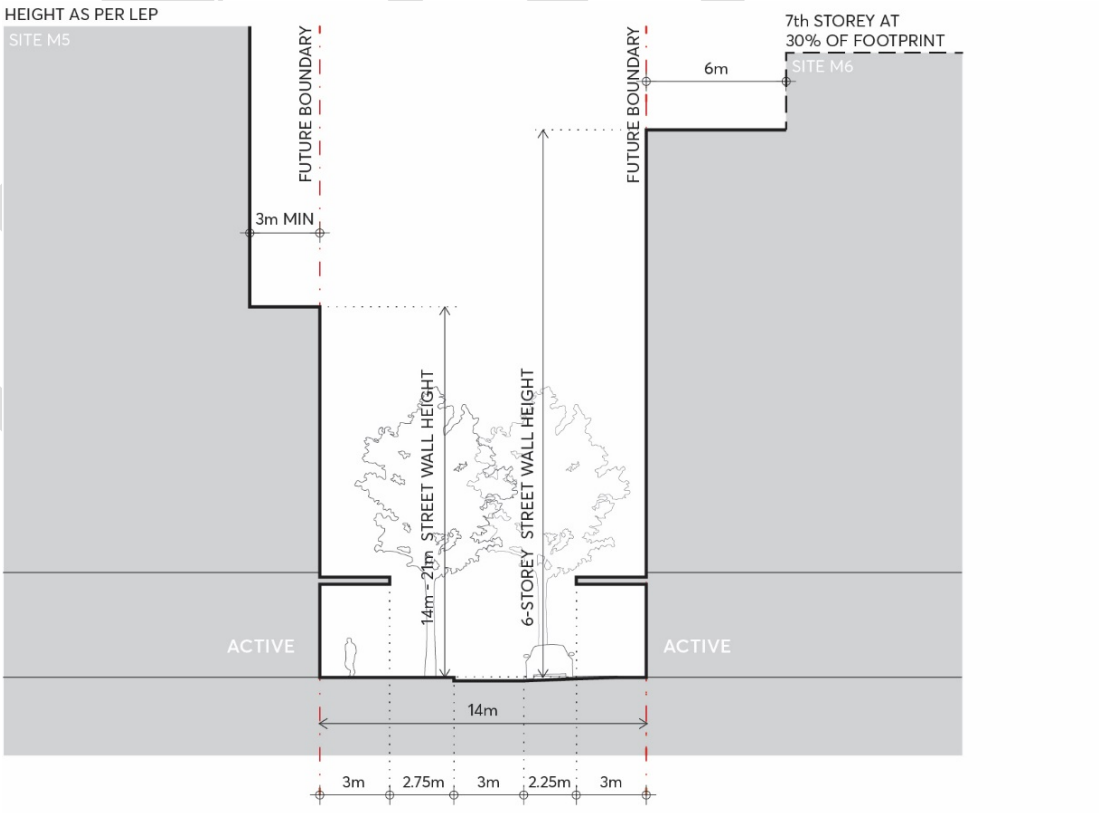


Figure 5.2.8 Future Horwood Place (Section C) Setbacks & Street Wall Height

f) Laneway setbacks and street wall heights on the new laneway to be provided between Site 04 and Site M5 must comply with Figure 5.2.9 (Section B). Development must provide a street wall built to the future boundary, and minimum 3m upper level setback.

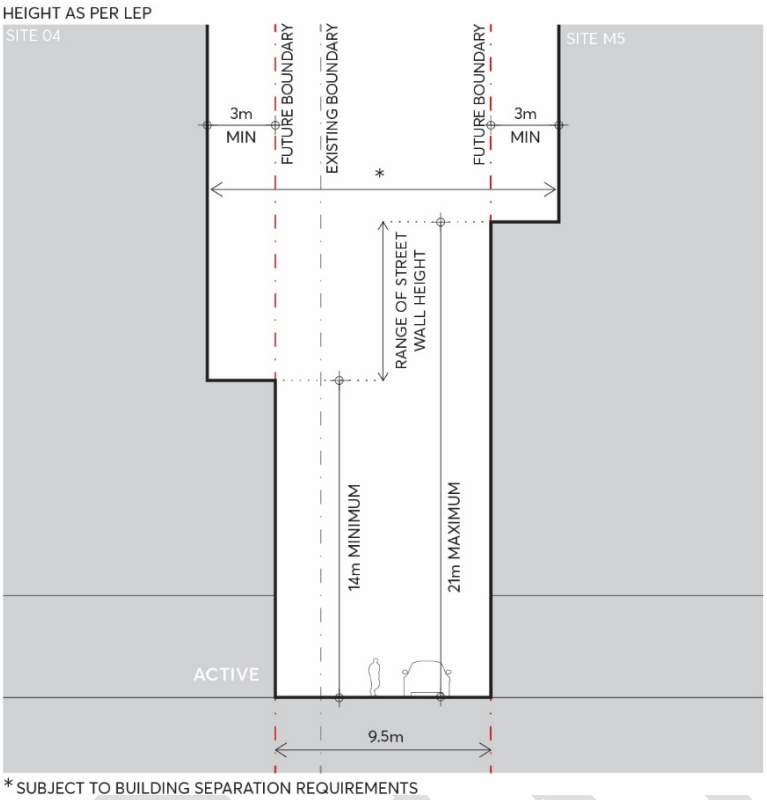


Figure 5.2.9 New Laneway between Site 04 and Site M5 (Section B) Setbacks & Street Wall Height

g) Laneway setbacks and street wall heights on Macquarie Lane must comply with Figure 5.2.10 (Section E). Development on the southern edge of Macquarie lane must provide a building setback of 16m from the existing boundary of the Roxy to a 6 storey street wall with a 3m upper level setback to the tower. A maximum 4 storey Metro station structure may project into the 16m Macquarie Lane alignment with a separation of 7.5m for an open to sky pedestrian laneway between the Roxy and any station structure. The envelope, shown hatched in Figure 5.2.5 must align with the Roxy east and western wall and be below the height of the Roxy's roof at the rear theatre volume.

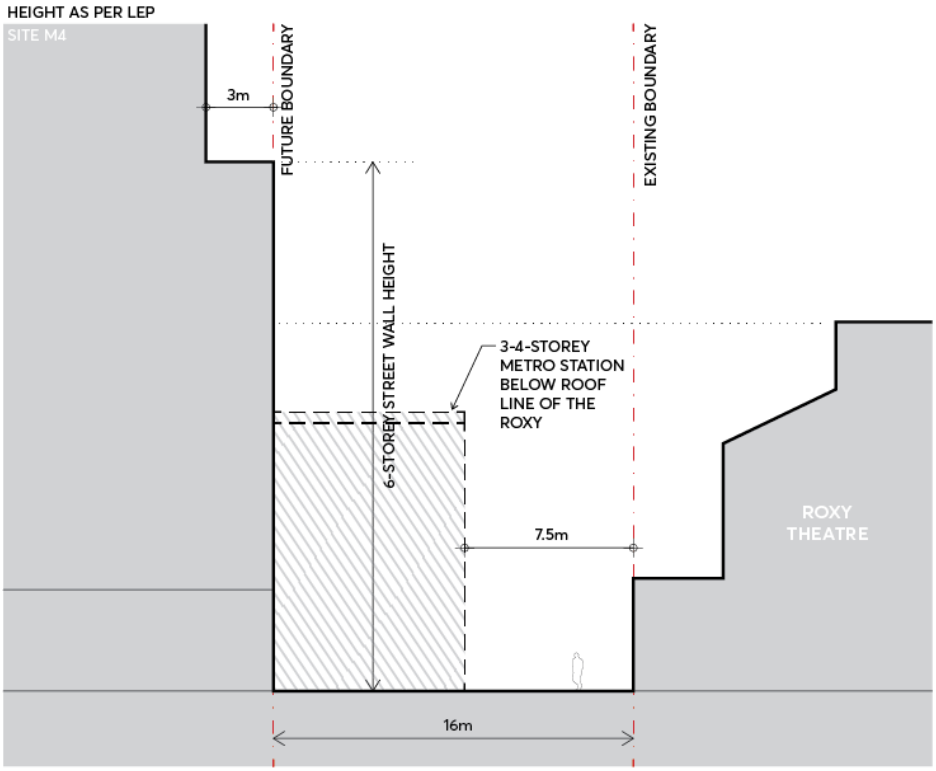


Figure 5.2.10 Macquarie Lane (Section E) Setbacks & Street Wall Height

h) At Site 05 street setbacks and street wall heights on Smith Street between George Street and Macquarie Lane must comply with Figure 5.2.5 and Figure 5.2.11 (Section G). Development must provide a 4m dedication for road widening to enable a pedestrian footpath; a 2m ground floor setback for use as additional pedestrian footpath; a maximum 8 storey street wall and a minimum 2m upper-level setback to the tower.

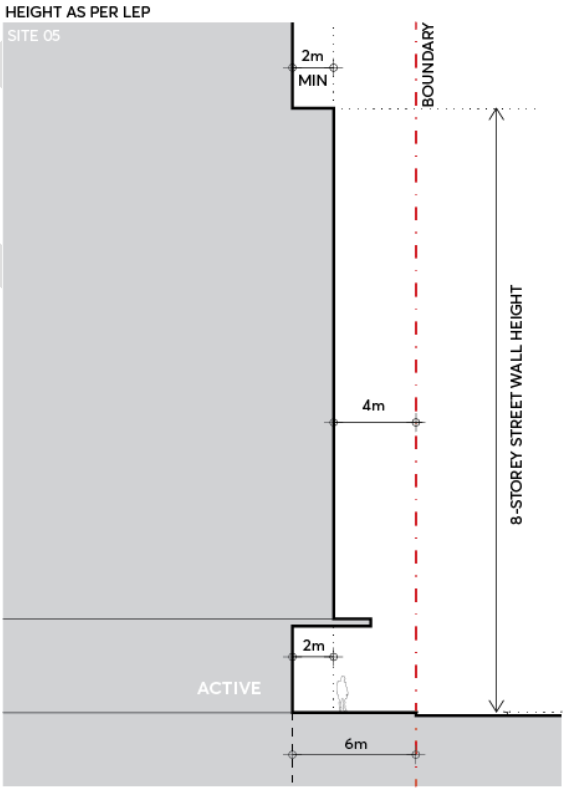


Figure 5.2.11 75 George Street at Smith Street (Section G) Setbacks & Street Wall Height

i) Laneway setbacks and street wall heights on the new laneway to be provided between the Roxy and Site M5 must comply with Figure 5.2.12 (Section F). Development must setback 6.5m from the existing Roxy boundary, and minimum 3m upper level setback.

j) Basement car park, service and loading entry and exit portals must be located on the New Laneway for Site 05 and are not supported on street frontages along George and Smith Street.

k) Site access and traffic measures to properties within Block 2, including The Roxy and Site 05, must prioritise safe, pedestrian circulation and interchange between Smith Street bus corridor stops and the Metro station.

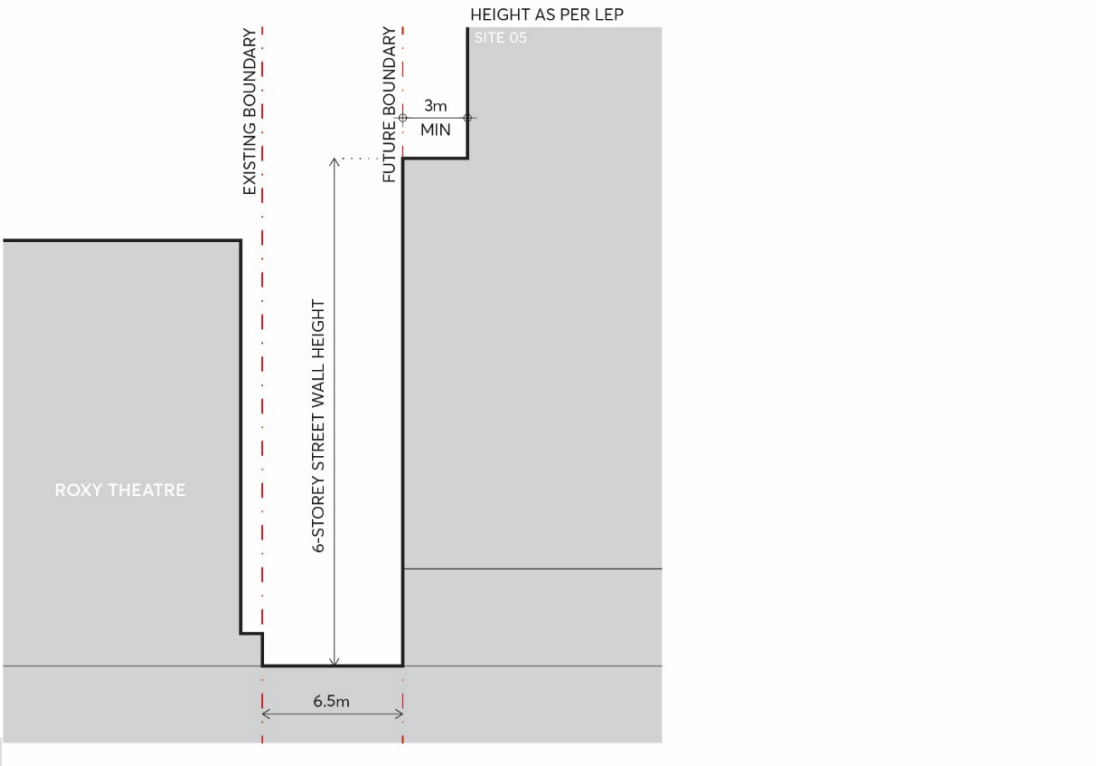


Figure 5.2.12 - New Laneway between the Roxy and Site 05 (Section F)

C.07 Development within Block 3 must comply with the following specified envelope controls:

a) Along Civic Link, where street wall and tower buildings are proposed, a 3-5 storey / 14-21 metre street wall height with an upper-level setback of 6m must be provided as indicated on Figure 5.2.13 (Section H)

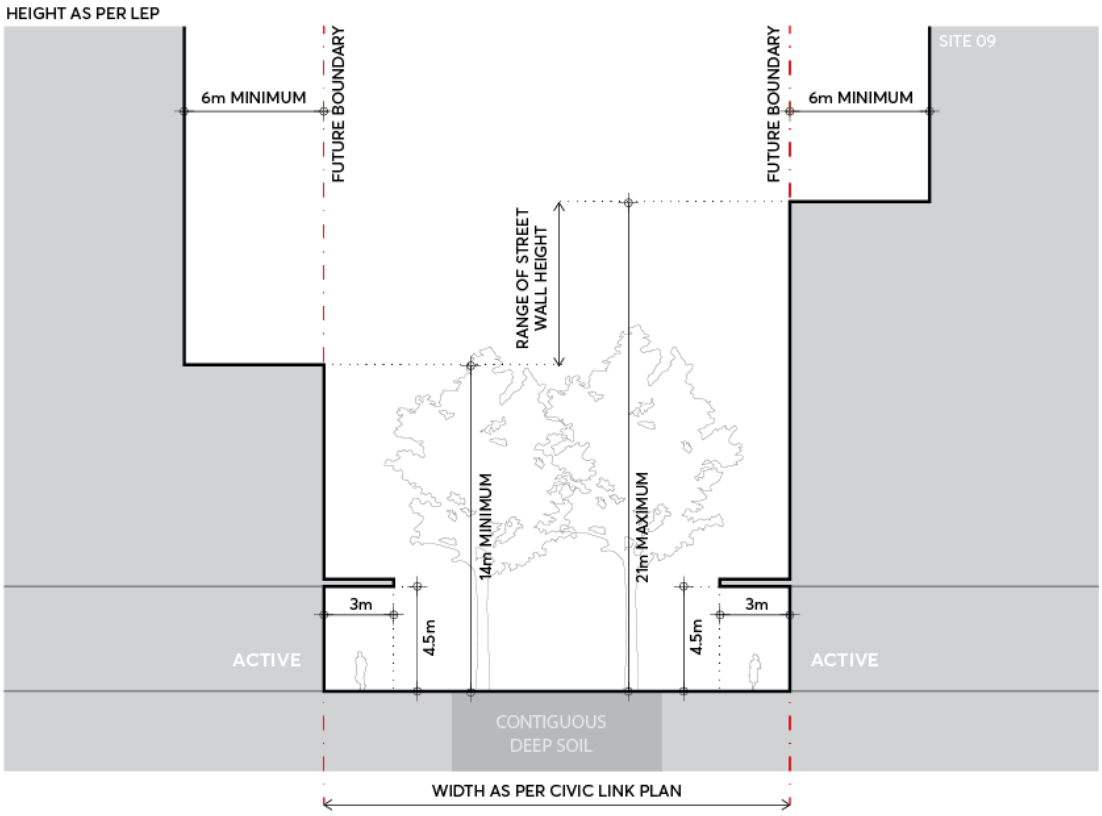


Figure 5.2.13 - Future Civic Link in Block 3 (Section H) Setback & Building Height

C.08 A site specific DCP (SSDCP) must be prepared for the hatched area between George and Phillip Streets as indicated on Figure 5.2.4 to provide the following:

a. A new north-south share lane or street that provides vehicle access to properties within the SSDCP area and along Church Street.

b. A new east-west pedestrian link or shared lane linking Civic Link to Church Street and the light rail stop.

c. Consolidated development footprints with address to Phillip Street or George Street and that enable CBD commercial towers, public carparking and/or cultural facilities.

d. A new square of 1000 sqm with direct frontage to Phillip Street.

C.09 Along Civic link, development must provide continuous awnings with a clearance of 4.5 metres and a depth of 3 metres for all new buildings.

C.10 Basement car park, service and loading entry and exit portals must be located on laneways or secondary streets and not on street frontages along Macquarie Street, George Street, Phillip Street and Smith Street, and along frontages to Civic Link.

C.11 On-grade parking within private land is prohibited. All car parking within buildings must be concealed from the public realm or located in basements beneath the building footprint.

C.12 Underground car parking must not extend under Civic Link, streets, laneways and public spaces. Structures underground may be considered, where limited in width and used only for the underground metro station, basement associated with transport infrastructure operations, and

for vehicle circulation between basements located under buildings. This is subject to demonstrated achievement of the following public domain outcomes:

a. Contiguous soil volumes within the extents shown in Figure 5.2.5 and with a minimum 1.8m set down including drainage layers and a minimum 1m of soil, and excluding slab structures,

b. utilities which are accessible from above ground. Suspended utilities within basements are prohibited,

c. water sensitive urban design swales and garden beds flush and/or below pavement level, and

d. adequate building structure and public domain fixtures to support large trees and vehicle loads for service and emergency vehicles.

C.13 Public domain fixtures and finishes must comply with CoP Public Domain Guideline and Technical Standards.

C.14 Emergency fire access, stabiliser and vehicle passing requirements must be confirmed at concept design stage or pre-DA equivalent.

C.15 Overland flow waters must be diverted away from the Civic Link.

C.16 Developments must seek to adaptively re-use heritage buildings within the Special Area for community facilities, entertainment uses and cultural uses.

C.17 Along Civic Link development must include direct access to ground floor and first floor tenancies with commercial lobbies primarily accessed from Macquarie, Smith, George and Church and New Horwood Place.

C.18 Walls between tenancies on ground and first floors in buildings along Civic Link must be non-load bearing to enable flexibility in tenancy shape and area over time.

C.19 Buildings along Civic Link must be designed with appropriate acoustic amenity for a live music and event environment.

5.3 GEORGE STREET

The Colonial township of Parramatta was planned in 1790, and its main street (George Street, formerly High Street) was Sydney's first formalised street. Originally planned at 200ft (60m) wide, spanning east-west from Government House to the public wharf, George Street was one of the primary axes in Parramatta's original Georgian Town Plan. To accommodate a rapidly growing population, the second stage of Parramatta's planning occurred in 1811, when George Street was resized to its present 20m width.

Today, George Street still holds significant historic value, starting at the Tudor Gates entrance to Parramatta Park, crossing a range of areas in the City Centre including the Justice Precinct, Church Street, the future civic link, and terminating with parklands at either end.

There is an existing architectural character along George Street as an outcome of remnant heritage items set among the more recent urban and commercial development. Generally, these items date from the nineteenth and early twentieth centuries, representative of a variety of colonial and Victorian architectural styles such as Harrisford House and Perth House. Significant inter-war redevelopment is also represented by noted buildings such as the Roxy, the former Rural Bank building and the Civic Arcade.

The tower setback control for George Street correlates with the 12m Height of Building limit on Church Street, emphasizing George Street and Church Street as the primary east-west and north-south streets in the City Centre, refer Figure 5.3.1. The tower setback control for George Street assists in preserving the spatial significance of its axis, as well as maintaining views to Parramatta Park, specifically the Tudor gates which terminate views to the west.

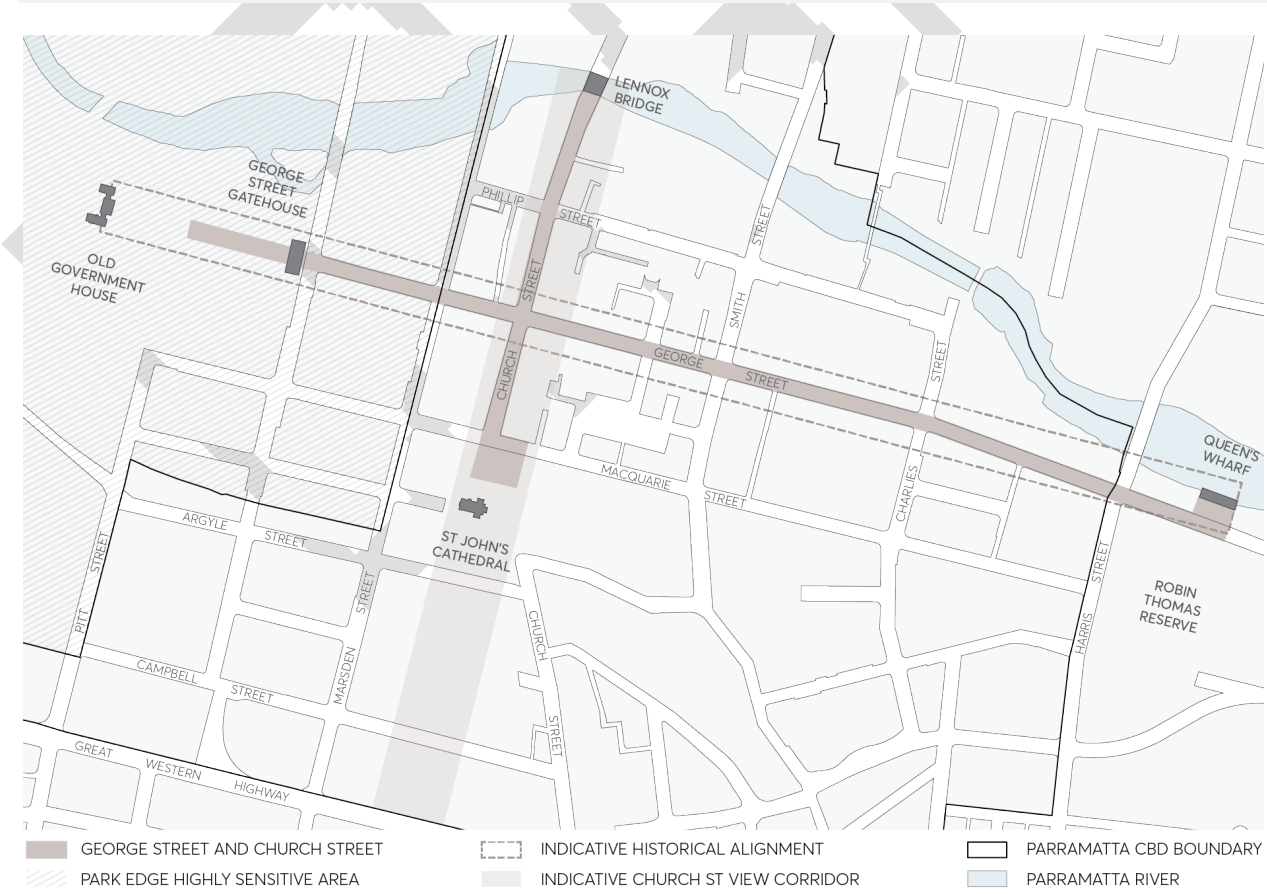


Figure 5.3.1 George Street and Church Street View Corridor

Objectives

O.01 Strengthen the framing of George Street by providing a consistent street wall alignment and generous upper level setbacks. Allow views and vistas to reinforce George Street's civic significance, defining and framing the view east from the Tudor Gates and west toward the Tudor Gates.

O.02 Ensure the protection and interpretation of Parramatta's significant heritage setting and recognise the UNSCO importance the original direct line of George Street (formally High Street) connecting Government House and Queens Wharf as a nationally significant cultural landscape.

O.03 Conserve heritage frontages to the highest standard and preserve existing fine grain activation. Maintain all existing open spaces, forecourts or associated curtilage collocated with heritage items along George Street and support the revitalisation of individual squares through upgrades to public domain and canopy planting.

Figure 5.3.2 George Street Special Area Framework Plan

Controls

Unless modified or specifically excluded below, all controls in Sections 1-4 and Sections 6-9 of the City Centre controls apply to development within the George Street Special Area.

C.01 The street wall must be built to the street boundary a minimum of 14 metres and a maximum of 21 metres above the footpath level as per Figure 5.4.3. Where identified, a dedication for future footpath widening and cycleway is to be provided at ground, consistent with the Land Acquisition Reservation Map.

C.02 Where identified in Figure 5.3.2 towers above the street wall must be set back a minimum of 12 metres from the street boundary, as per Figure 5.3.3, reinforcing the historical significance, views, alignment, and status of the street.

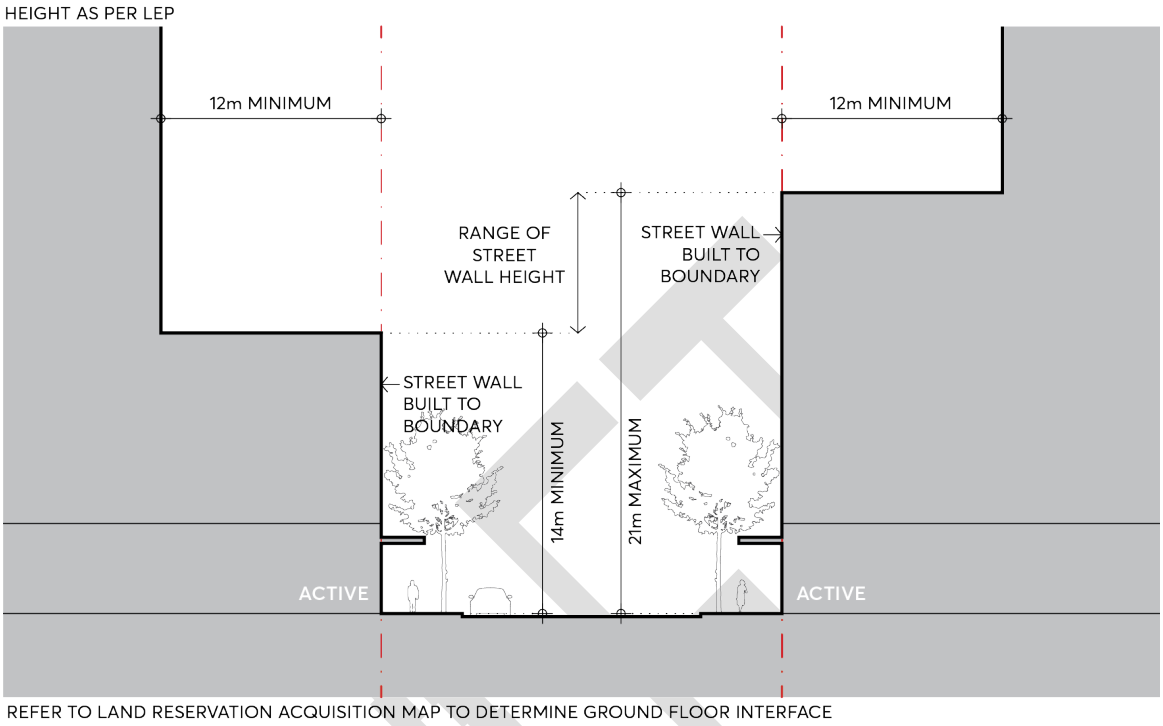


Figure 5.3.3 George Street - Street Setbacks and Street Wall Height

C.03 Building alignments and setbacks should respond to important elements of the nearby context including existing forecourts and heritage buildings. In some places, this may require greater setbacks or lower street wall heights than those specified in Figure 5.3.3.

C.04 Retain forecourts of heritage items which interpret the historic alignment of George Street, including Perth House, Brislington, and the Roxy Theatre.

C.05 Adaptively re-use and integrate heritage buildings as part of site development strategies, allowing these items to contribute to an active streetscape character and maintain their significance.

C.06 Refer to Section 5.2 Civic Link Special Area of this City Centre controls for requirements relating to developments adjoining the Civic Link Special Area. Where there is a conflict between the George Street controls and Civic Link controls, the Civic Link controls will prevail.

C.07 Refer to Section 5.10 Park Edge of the City Centre controls for requirements relating to developments on George Street between Parramatta Park and Marsden Street that fall within the Old Government House and Domain UNSCO heritage protection area.

5.4 CHURCH STREET

The Church Street Special Area is located between Lennox bridge to the north and the civic spaces at Centenary Square and St John's Cathedral to the south. Part of the original colonial town layout, Church Street today is the most active street in the city. Development must take care not to erode its evolved character, its vitality, grain and scale. Church Street forms the historic north-south spine of the city, and George Street, although different in character, is its east-west equivalent. Refer Figure 5.3.1.

Surviving views and vistas of St John's Cathedral have state historical significance. These include: east along Hunter Street to the Cathedral towers; east from Hunter Street across the northern Cathedral grounds towards the Town Hall and the site of the Governor's annual 'feast' with Aboriginal clans (instituted by Governor Macquarie) that took place at the rear (eastern end) of the Cathedral, and views from Church Street towards St John's Cathedral.

A consistent maximum building height along the entire axis of Church Street up to the Cathedral is applied to help preserve these views. The view corridor widens south of Macquarie Street to capture the spatial scale of Centenary Square and the grounds to St John's Cathedral. The most enduring and arguably most important civic space in Parramatta City Centre, the built elements that provide curtilage to this space must provide a sense of enclosure that is appropriately scaled.

As Church Street transforms with the development of the City Centre, its special identity must be retained and reinforced. Development must respond to and incorporate its fine grain, human scale, and active pedestrian character.

Objectives

O.01 Preserve the Church Street view corridor identified in Figure 5.4.1 to elevate the spatial significance of Church Street and views to St John's Cathedral, protecting the silhouette of the St John's Cathedral spires as seen against the sky from Church Street as well as the procession and views from St John's Cathedral northwards, up Church Street.

O.02 Strengthen the framing of Church Street by providing a consistent street wall alignment and consistent building height limit as required by the Parramatta LEP 2011 and Figure 5.4.2. Allow views and vistas to reinforce Church Street's civic significance, defining and framing the view south from the River towards St John's Cathedral.

O.03 Adaptively re-use heritage to foster the continuation of a fine grain character for Church Street. The street wall and ground floor design of development proposals must incorporate the active, fine grain subdivision pattern of Church Street, enabling sensitive urban infill that also compliments the remnant heritage along the street corridor.

O.04 Strengthen and support the distinct outdoor dining character of Church Street, reinforcing its unofficial identity as Parramatta's 'Eat Street'.

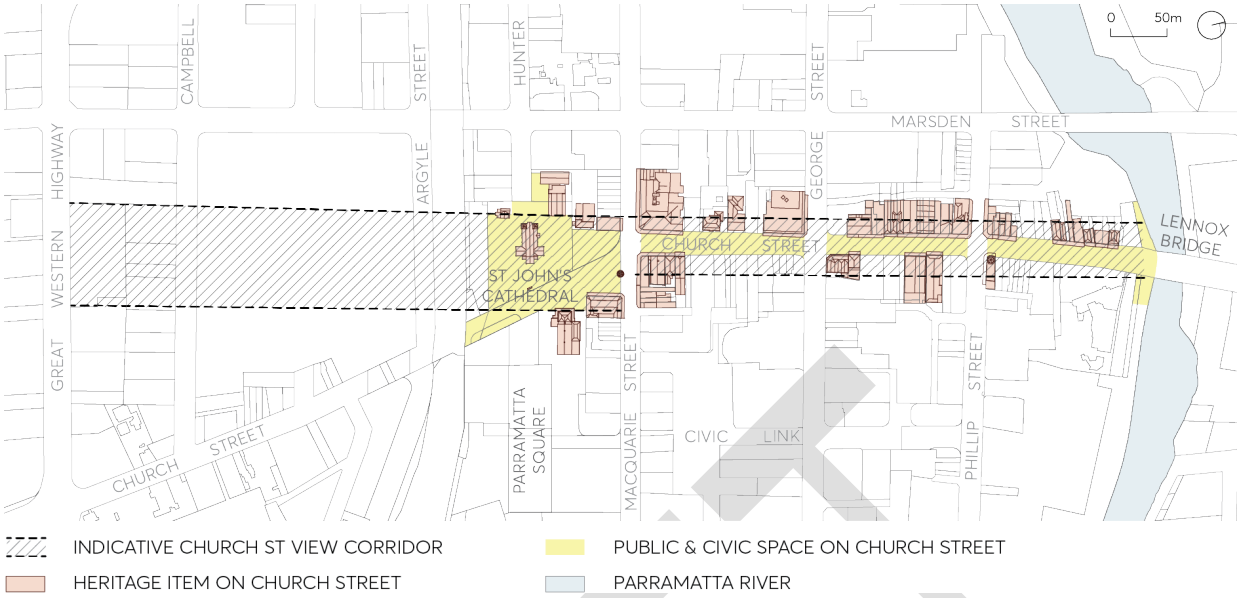


Figure 5.4.1 Church Street View Corridor

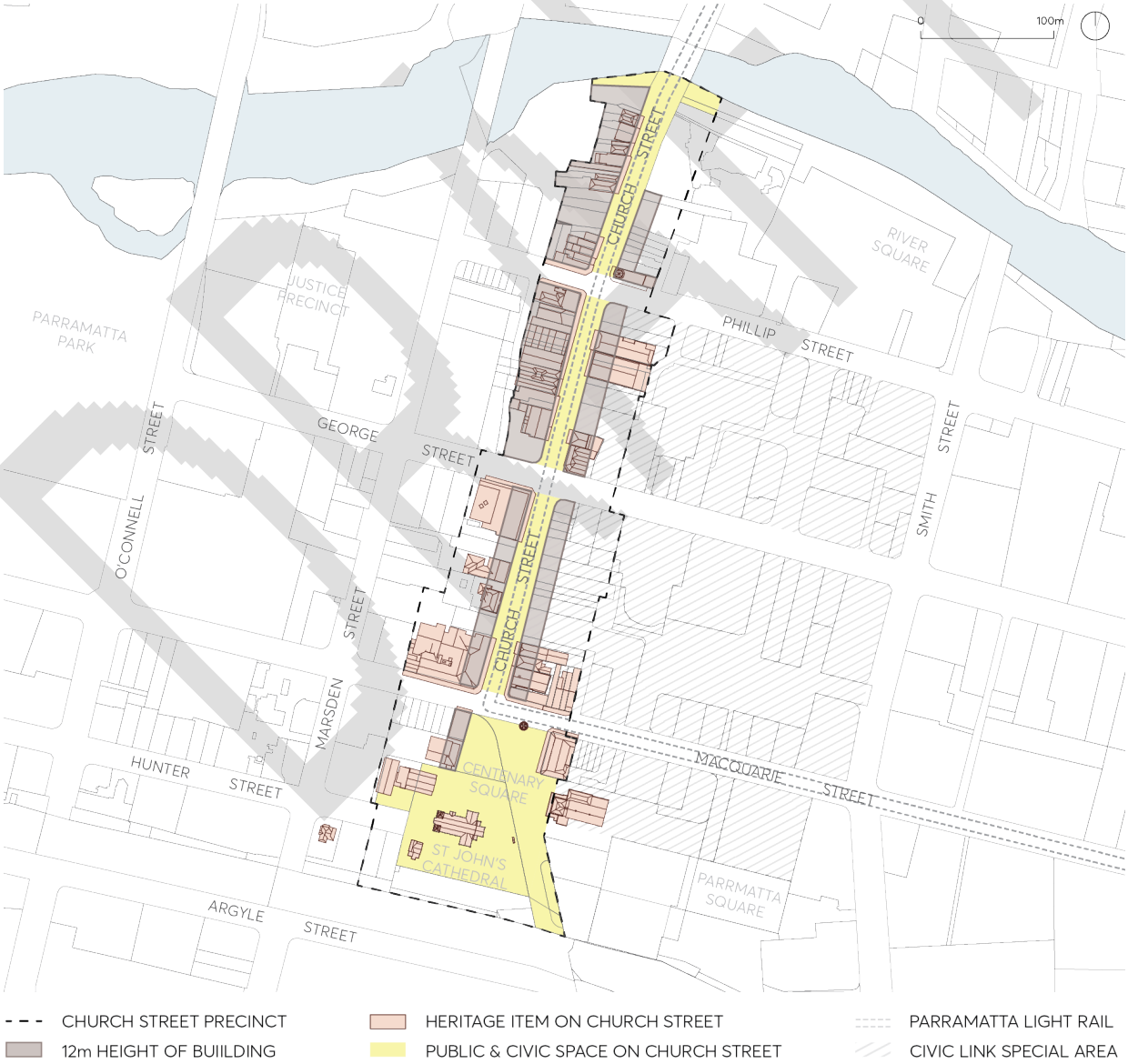


Figure 5.4.2 Church Street Framework Plan

Controls

Unless modified or specifically excluded below, all controls in Sections 1-4 and Sections 6-9 of the City Centre controls apply to development within the Church Street Special Area.

C.01 Street wall heights and street setbacks must comply with Figure 5.3.3. The street wall must be built to the street boundary and are encouraged to be at or close to the 12 metres in height. Towers above the street wall must be set back in accordance with the Height of Buildings Map in the Parramatta LEP 2011.

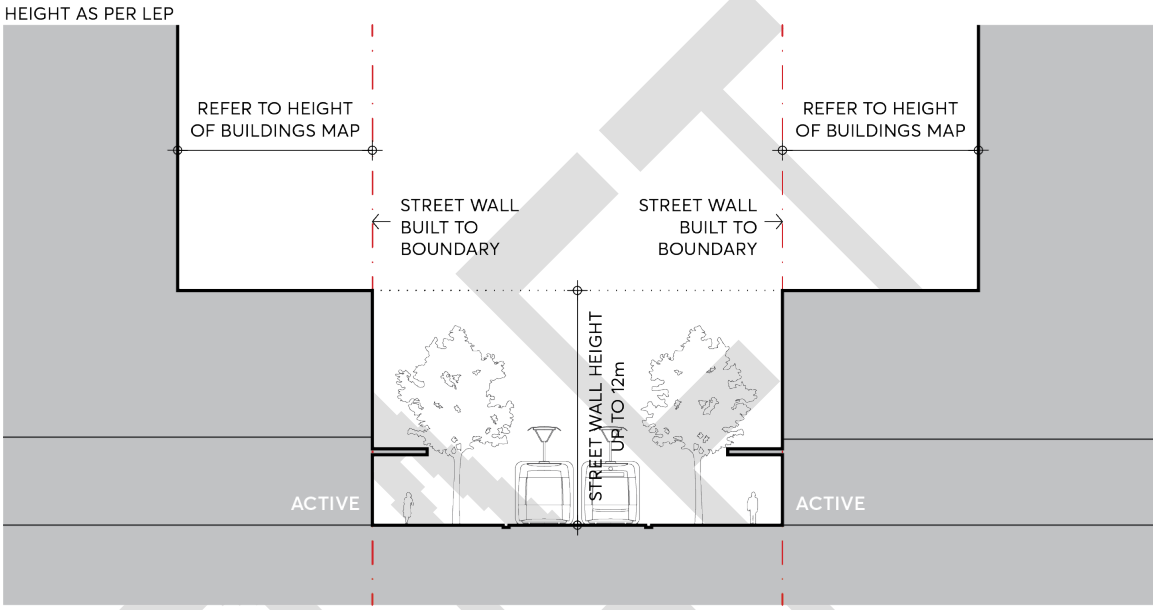


Figure 9.4.3 Church Street - Street Setbacks and Street Wall Height

C.02 Tower development is prohibited within the Church Street view corridor, as indicated in Figure 5.3.1, to preserve views down Church Street and the silhouette of St John's Cathedral seen against the sky, reinforced by the Building Heights Map in Parramatta LEP 2011.

C.03 Fine grain tenancies must be designed at the ground floor along Church Street, allowing for maximum 6 metres wide tenancies. All retail tenancies fronting Church Street must have primary entrances addressing Church Street.

C.04 Refer to and comply with City of Parramatta's '*Church Street Colour Scheme Volumes 1 and 2*'.

5.5 MARION STREET

The Marion Street Special Area is located toward the southern fringes of the Parramatta City Centre. The Eastern edge of the Special Area is directly next to the railway line which bisects Marion Street. Harris Park Train Station is located within walking distance towards the south-east, and the precinct interfaces with Auto Alley to the West, a major pedestrian and vehicular corridor. Jubilee Park is the closest public open space, and to the South, Marion Street is bounded by the Station Street West Special Area. A Council owned carpark is situated within the north-east block and site specific controls apply to the site at 33-43 Marion Street.

Marion Street consists primarily of low scale built form including several heritage cottages clustered within the central area of the street. While the buildings in the precinct vary in their style, scale, age and use, the surviving heritage cottages still maintain a consistent form, relationship to each other and to the street. They also have a spatial quality that contrasts the existing and potential future scale and form of the City towards this fringe. This collective value created by the heritage items adds to the significance of Marion Street as a Special Area.

The following Special Area controls for the precinct ensure that a more localised and heritage led response to the desired character of this street will be achieved and that heritage items are given longevity and a chance for integrated adaptive reuse as urban renewal of the area takes place.

Future built form must achieve a measured response to the existing developments within the surrounding built context and provide for the desired activation, pedestrian connectivity and amenity within the precinct.

Objectives

O.01 Conserve heritage buildings to the highest standard and activate street frontages through both the adaptive reuse of heritage items as well as the provision of active ground floor spaces within and around the heritage buildings.

O.02 Integrate heritage buildings as part of an overall site development strategy that achieves pedestrian interconnectivity and site permeability around the heritage buildings, resulting in a fine network of intimate streets and laneways in the area.

O.03 Enhance the traditional setting of heritage items with the retention and restoration of gardens, fences and paths associated with the buildings, reflecting the vegetated, intimate and eclectic character of Marion Street.

O.04 Implement a built form approach that places massing away from the street, behind heritage items, and ensures separation between heritage buildings and new development to maximise site permeability, connectivity with the public realm, transition of scale, views to sky and opportunity for solar access to the street and surrounding developments.

O.05 Improve legibility and pedestrian connections within the precinct by achieving a permeable ground plane with visual and physical connectivity through the blocks in accordance with Figure 5.5.1 - Marion Street Special Area Framework.

O.06 Achieve an appropriate consolidation pattern in accordance with Figure 5.5.2 that allows the principles and objectives of the Marion Street Special Area to be integrated into development proposals.

O.07 Maintain the existing heritage grain and pattern at street frontages along Marion Street through a generally low street wall and lower level massing approach to infill development in accordance with Figure 5.5.3.

O.08 Create a scale transition corridor along Marion Street that enhances solar access and views to sky by ensuring taller portions of massing are set back behind heritage items away from the main street with appropriate separation, ground plane permeability and interface with heritage buildings.

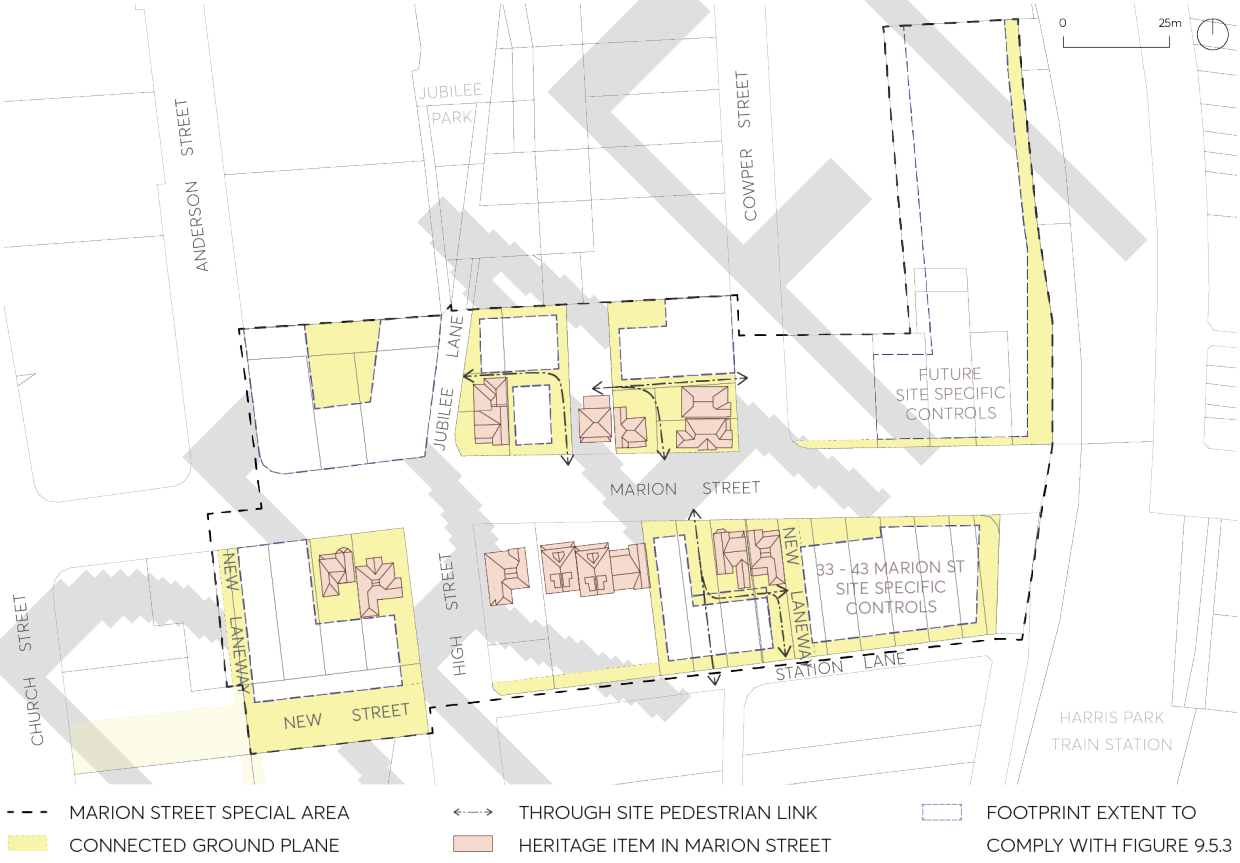


Figure 5.5.1 – Marion Street Special Area Framework

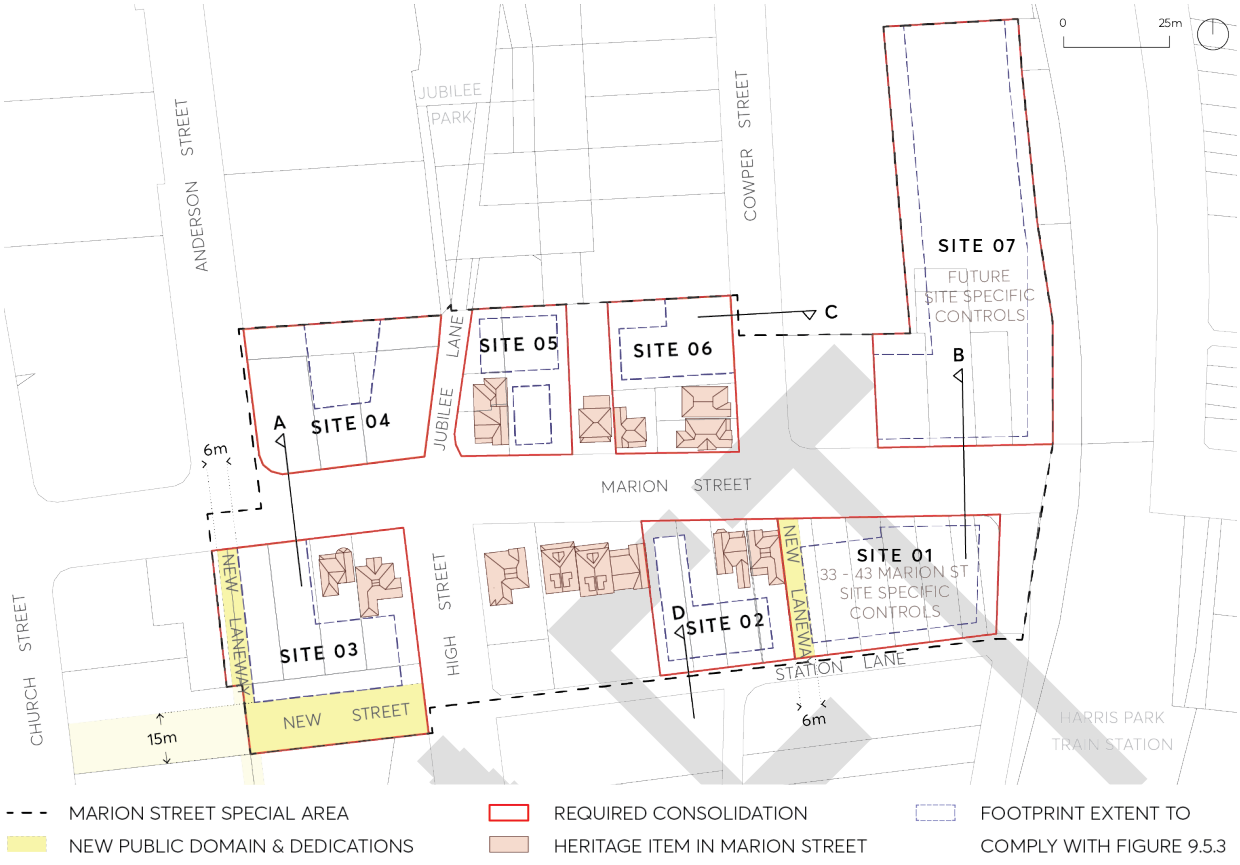


Figure 5.5.2 - Marion Street Special Area Public Domain & Consolidation Plan

Figure 5.5.3 - Marion Street Special Area Required Setbacks & Built Form

Controls

Unless modified or specifically excluded below, all controls in Sections 1-4 and Sections 6-9 of the City Centre controls apply to development within the Marion Street Special Area.

C.01 Site consolidation must comply with Figure 5.5.2.

C.02 Deliver new laneways, links and integrated pedestrian networks identified in Figure 5.5.1 through the inclusion of these elements in the plans for any proposed development within the precinct.

C.03 Development within the precinct must comply with the following specified envelope controls:

e) Street setbacks and street wall heights on Marion Street, west of High Street, must comply with Figure 5.5.3 and Figure 5.5.4 (Section A). On the southern side of Marion Street, the street wall must be built to the boundary for 3-storeys and towers set back a minimum 6 metres from the street wall. On the northern side of Marion Street, development may provide a street wall building up to full height under the Height of Buildings Map in the Parramatta LEP 2011.

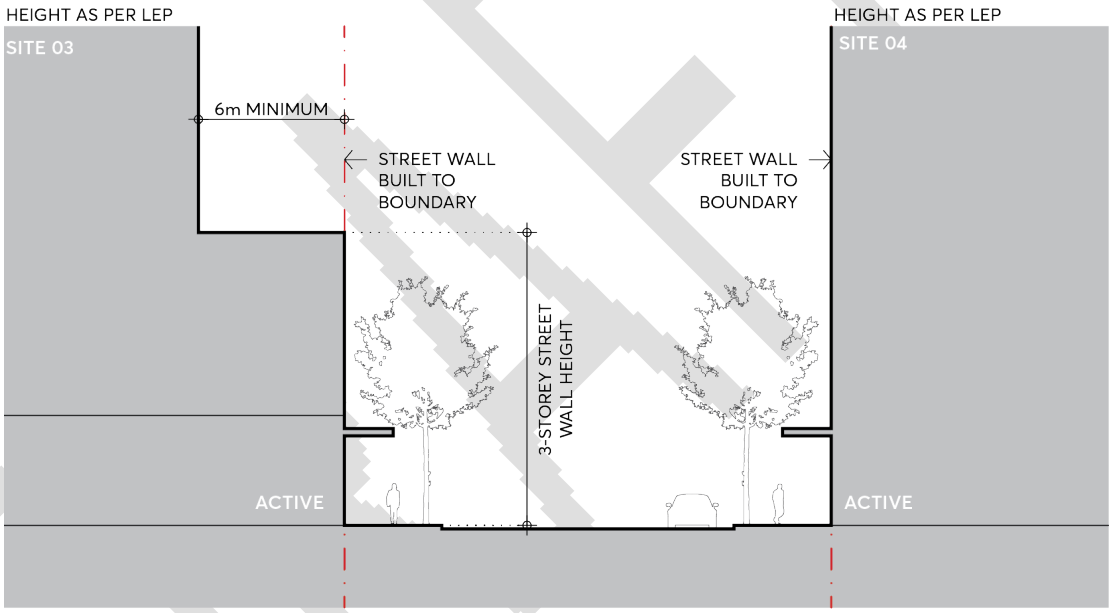


Figure 5.5.4 - Marion Street (Section A) Setbacks and Street Wall Height

f) Street setbacks and street wall heights on Marion Street, east of Cowper Street, must comply with Figure 5.5.3 and Figure 5.5.5 (Section B). The street wall must be set back 3 metres from the street boundary and upper levels set back a minimum 6 metres from the street wall. Any development on the northern side of Marion Street must provide the 3 metre street wall setback, but will be subject to additional future site specific controls to determine upper level setbacks.

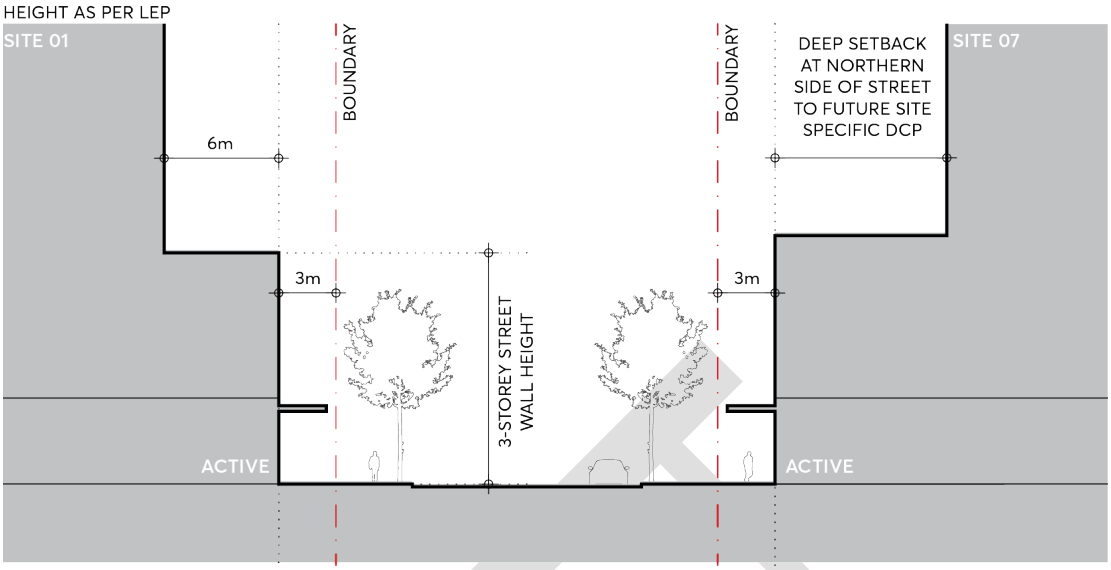


Figure 5.5.5 - Marion Street (Section B) Setbacks and Street Wall Height

g) Street setbacks and street wall heights on Cowper Street must comply with Figure 5.5.3 and Figure 5.5.6 (Section C). The street wall must be built to the boundary up to 4-storeys and tower setbacks are to match the prevailing conditions.

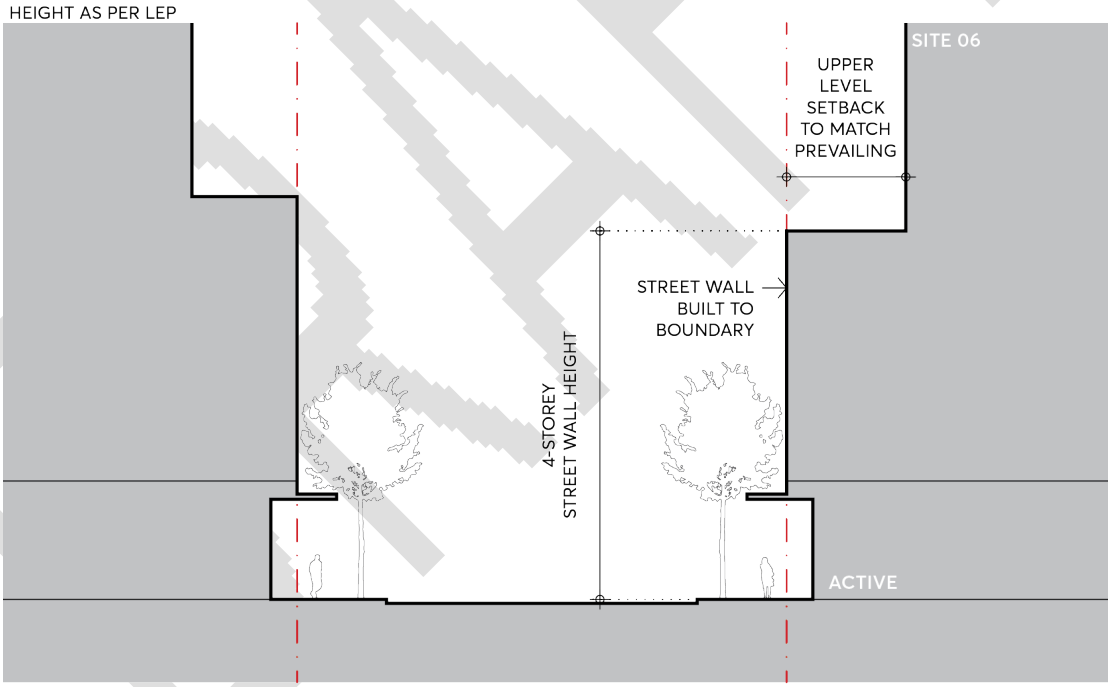


Figure 5.5.6 - Cowper Street (Section C) Setbacks and Street Wall Height

h) Street setbacks on High Street must comply with Figure 5.5.3.

i) Street setbacks and street wall heights on Jubilee Lane must comply with Figure 5.5.3.

j) Street setbacks and street wall heights on Station Lane must comply with Figure 5.5.3 and Figure 5.5.7 (Section D). The street wall must be set back 4 metres from the laneway boundary and upper levels set back a minimum 2 metres from the street wall.

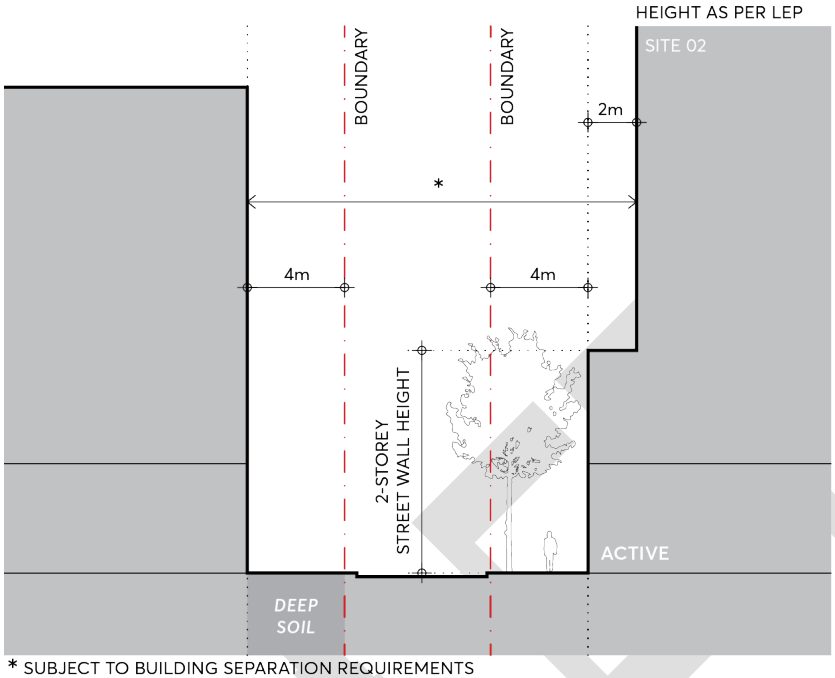


Figure 5.5.7 - Station Lane (Section D) Setbacks and Street Wall Height

C.04 Buildings on vacant or infill lots where they are set between heritage items along Marion Street, and are not specified with a street setback dimension or height of building on Figure 5.5.2 – Marion Street Special Area Public Domain & Consolidation Plan or Figure 5.5.3 – Marion Street Special Area Required Setbacks & Built Form, must:

a) adopt a similar or matching setback to the adjacent buildings,

b) adopt a similar street width for built form unless a dimension is specified, and

c) be of a single or double storey form unless a maximum height in storeys is specified.

C.05 Development within Site 07 must provide a contiguous area of deep soil in accordance with Figure 5.5.3.

5.6 CAMPBELL STREET & GREAT WESTERN HIGHWAY

The Campbell Street & Great Western Highway Special Area is located on the south-western edge of the City Centre, encompassing the state significant heritage grounds of St John's Cemetery. The area is characterised by its position at the periphery of the City Centre, proximity to Parramatta Park, diverse commercial and residential usage, and natural topographical cross-fall from the natural ridgeline of Great Western Highway.

Campbell Street is differentiated into two sections. Commercial development to the east between O'Connell and Church Street, and medium density residential blocks populate the western end of Campbell Street between O'Connell and Pitt Street. Campbell Street itself presents as a suburban street and most existing development has maintained 6m residential setbacks.

Future built form must also provide a measured response to the Church Street View Corridor (see Section 5.4 Church Street Special Area for greater detail). State and local heritage listed items located within the precinct, as well as the established canopy trees located in the generous street setbacks of buildings fronting onto Campbell Street and Great Western Highway– regardless of their ground floor usage - constitutes a uniquely vegetated setback character to be preserved.

Objectives

O.01 Preserve and reinforce the large canopy street trees and established planting character of the front setback zone of Campbell Street, Great Western Highway, Pitt Street and the perimeter of St John's Cemetery.

O.02 Improve pedestrian amenity and public domain quality, acknowledging any potential street widening that may occur into the future.

O.03 Apply an appropriate spatial definition on Campbell Street through a large building setback character to the street which recognises the increase in density.

O.04 Conserve heritage items to the highest standard and ensure future built form does not adversely impact the amenity of St John's Cemetery, protecting its access to sunlight.

O.05 Maintain a defined street wall for future development through consistent setbacks and strong sense of enclosure to St John's Cemetery.

O.06 Elevate the spatial significance of Church Street and protect the silhouette of St John's Cathedral spires as seen against the sky from Church Street by delivering low, modest development within the identified Church Street View Corridor.

O.07 Achieve an appropriate consolidation pattern that allows the objectives of the Campbell Street Special Area to be integrated into development proposals.

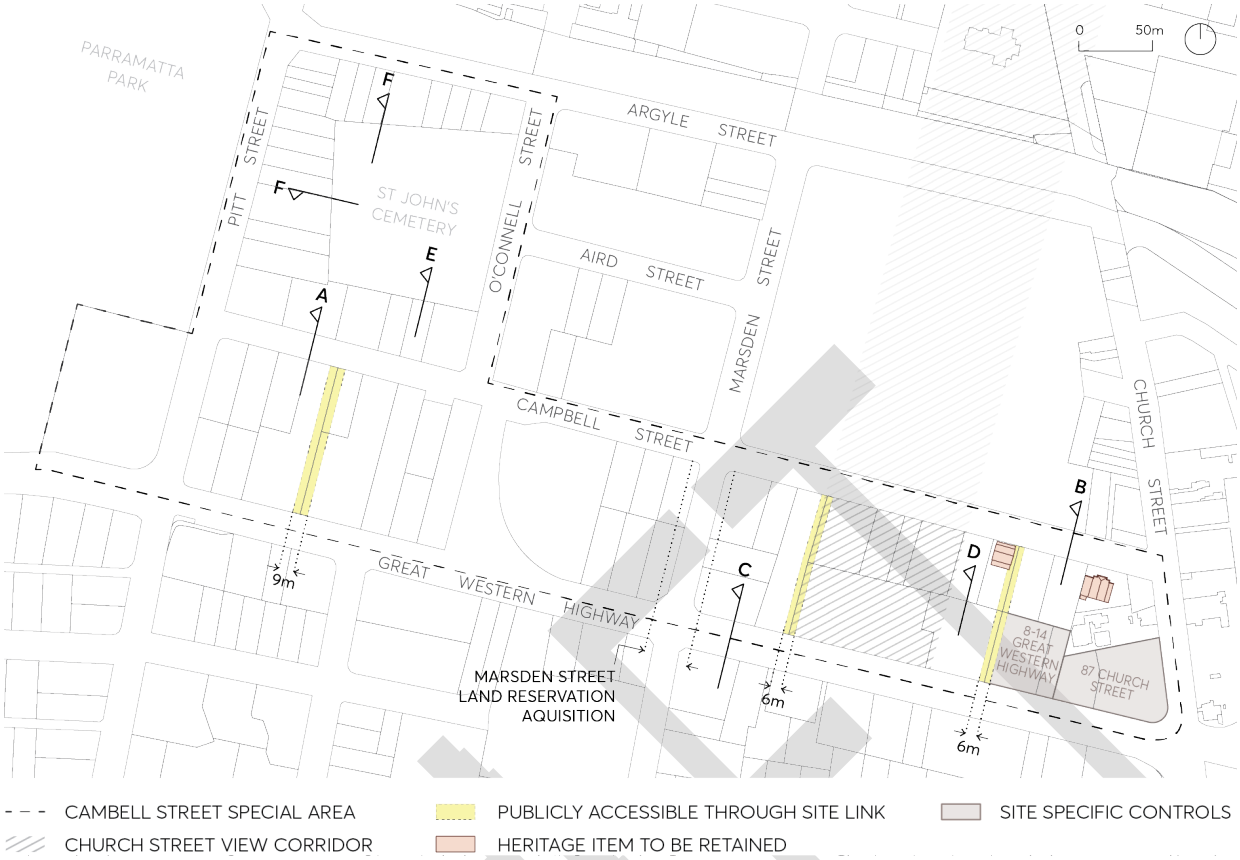


Figure 5.6.1 - Campbell Street & Great Western Highway Special Area Framework

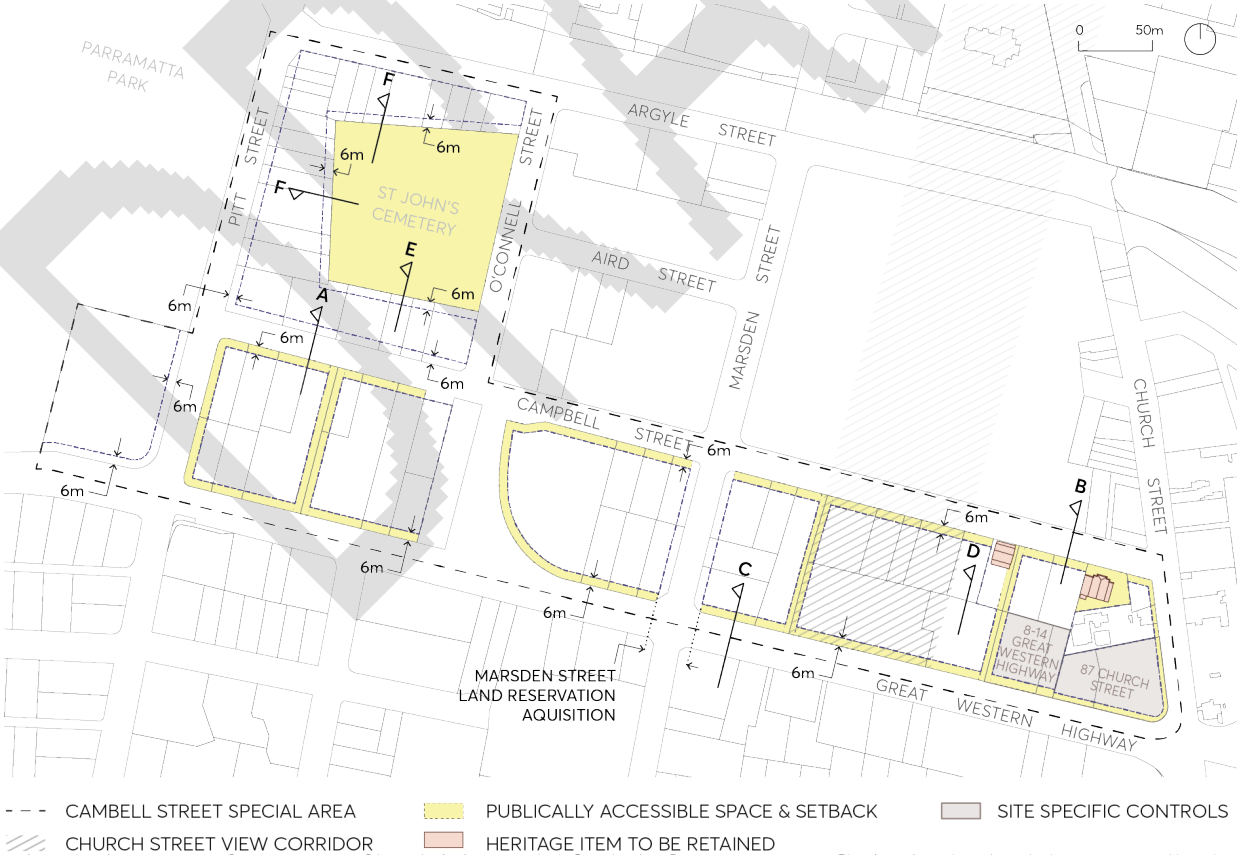


Figure 5.6.2 - Campbell Street & Great Western Highway Special Area Required Setbacks

Controls

Unless modified or specifically excluded below, all controls in Sections 1-4 and Sections 6-9 of the City Centre controls apply to development within the Campbell Street and Great Western Highway Special Area.

C.01 Site consolidation must allow for the realisation of the objectives of the Campbell Street Special Area and desired publicly accessible through site links to be delivered as per Figure 5.6.1.

C.02 Development within the identified Church Street View Corridor must not interrupt the views of the St John's Cathedral Spires as seen against the sky from Church Street as per Figure 5.6.1 and 5.6.2. Refer to Section 5.4 Church Street Special Area of the City Centre controls for further reference to the Church Street View Corridor.

C.03 Development must comply with the following street wall and setback controls:

i) Street setbacks and heights on Campbell Street, west of O'Connell Street, must comply with Figure 5.6.3 (Section A). The street wall must be set back 6 metres from the street boundary and, on the southern side of Campbell Street, the tower must be set back a minimum 6 metres from the street wall.

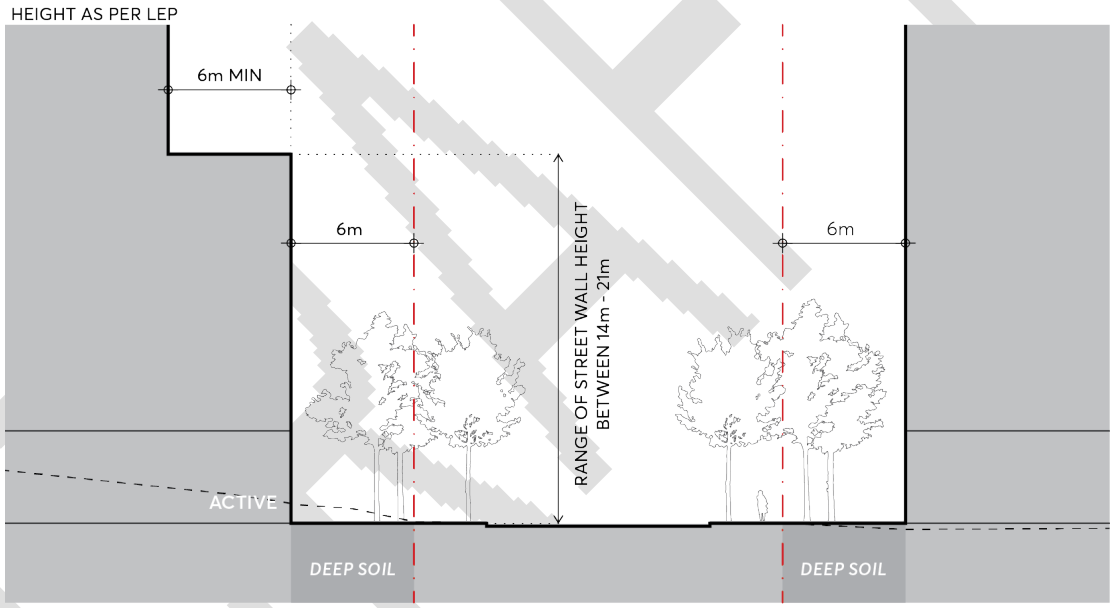


Figure 5.6.3 - Campbell Street (Section A) Setbacks and Street Wall Height

j) Street setbacks and heights on Campbell Street, east of O'Connell Street, must comply with Figure 5.6.4 (Section B). On the southern side of Campbell Street, the street wall must be set back 6 metres from the street boundary and the tower must be set back a minimum of 6 metres from the street wall. On the northern side of Campbell Street, development may defer to Part 3 of the City Centre controls.

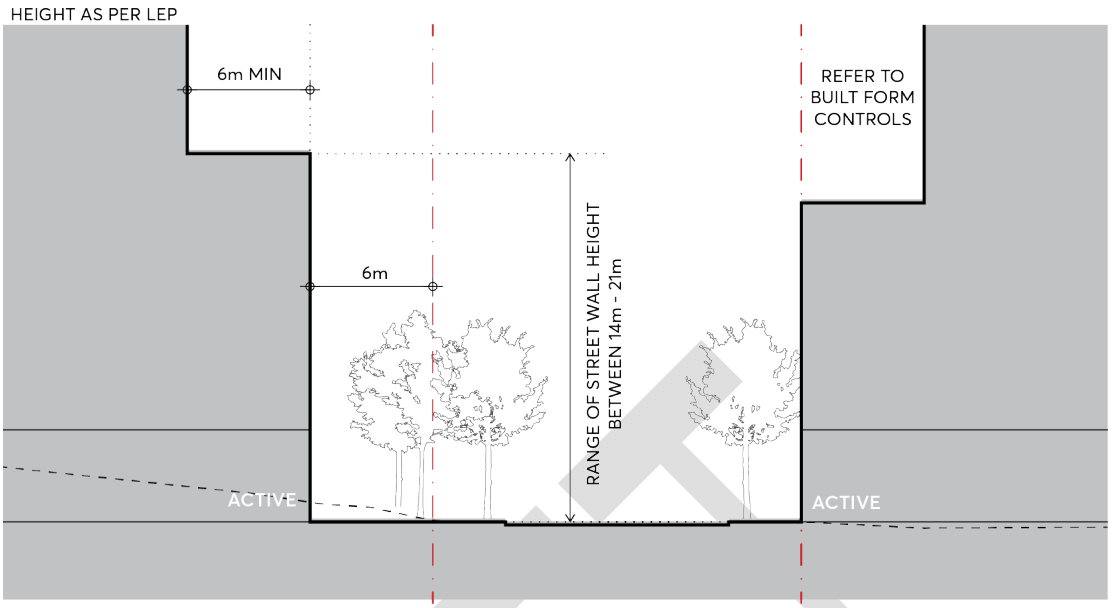


Figure 5.6.4 - Campbell Street (Section B) Setbacks and Street Wall Height

k) Street setbacks and heights on Great Western Highway must comply with Figure 5.6.5 (Section C). The street wall must be set back a minimum of 6 metres from the street boundary and the tower must be set back a minimum of 6 metres from the street wall. Where an established tree is located within the front setback zone, development must ensure the street wall is set back a minimum of 4m from the centreline of trunk.

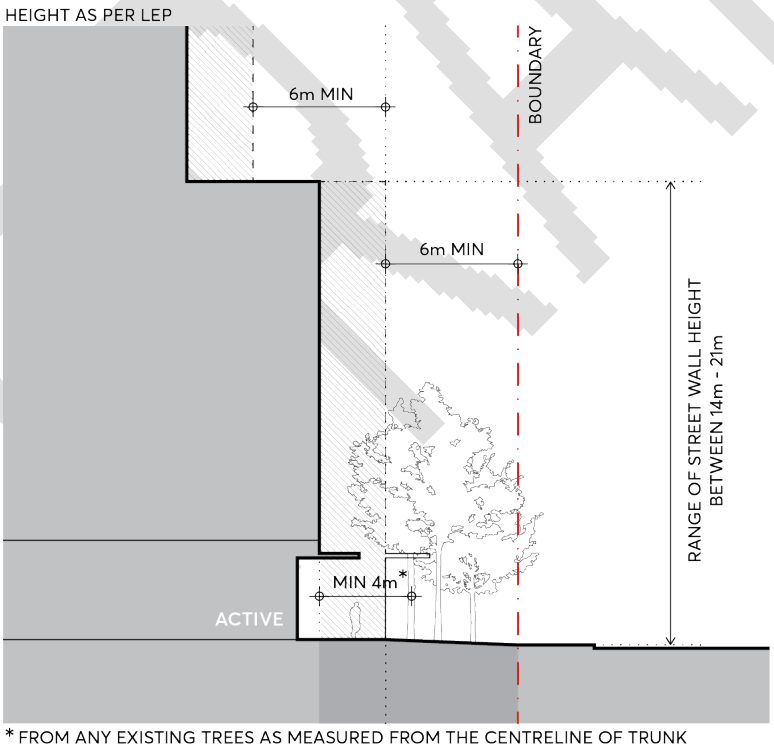


Figure 5.6.5 - Great Western Highway (Section C) Setbacks and Street Wall Height

l) Development on Great Western Highway must provide a 6m landscaped setback to the street as detailed in Figure 5.6.6. This privately owned publicly accessible setback zone adjacent to active uses at ground is to be relatively level with existing kerb lines.

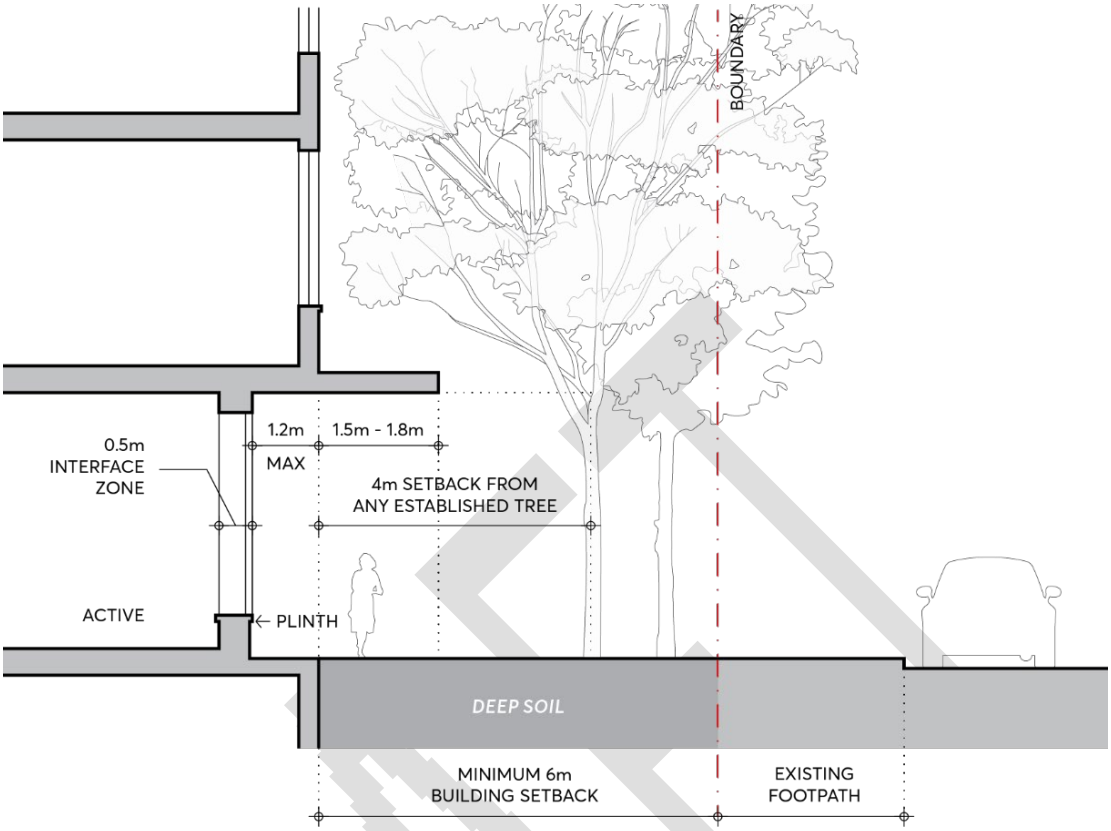


Figure 5.6.6 - Great Western Highway Ground Floor Interface

m) A shared planting zone must be provided to the rear of lots between Campbell Street and Great Western Highway to comply with Figure 5.6.7 (Section D). A minimum 6 metre rear setback and soil depth allowance clear of any basement structure must be provided to Council's satisfaction to facilitate planting of large canopy trees. Towers must be setback a minimum of 9m from the rear boundary and comply with the building separation requirements in Part 3 of the City Centre controls. .

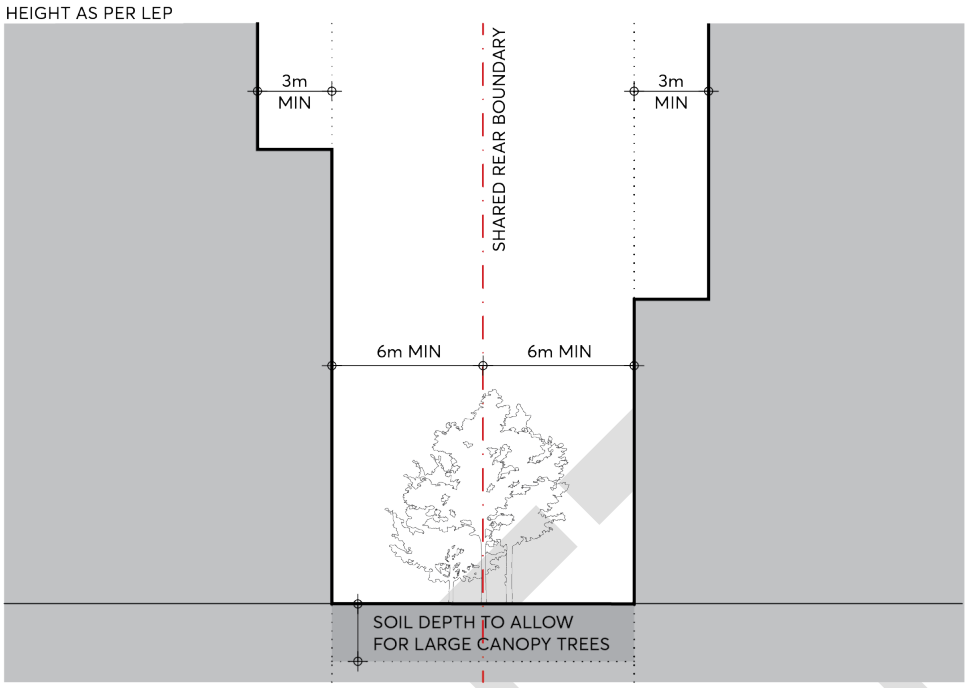


Figure 5.6.7 - Rear Setback (Section D) between Campbell Street and Great Western Highway

n) Setbacks and building heights along boundaries shared with St John's Cemetery must comply with Figure 5.6.8 (Section E) and 5.6.9 (Section F). Development must provide a building set back of 6 metres to any rear boundary shared with St John's Cemetery and a further minimum 6 metre setback for towers.

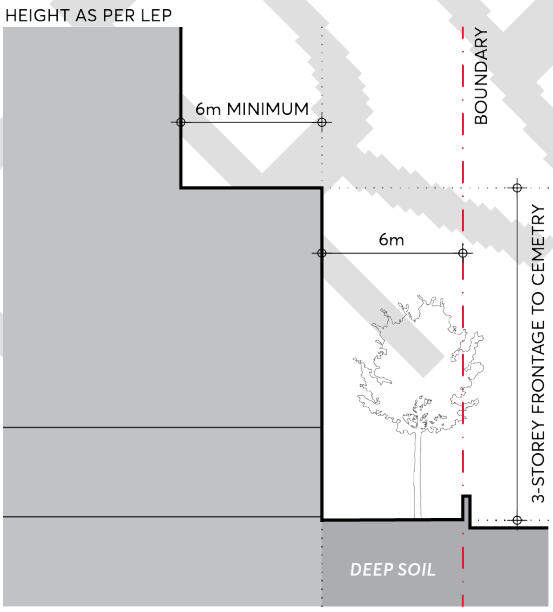


Figure 5.6.8 – Rear Setbacks (Section E) South of St John's Cemetery

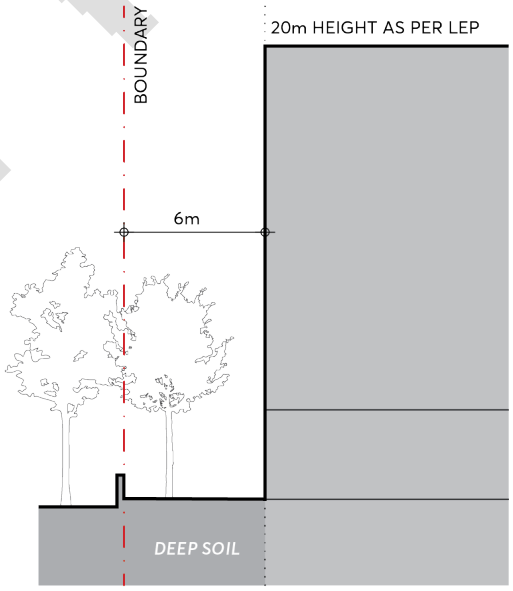


Figure 5.6.9 – Rear Setbacks (Section F) North and West of St John's Cemetery

o) Street setbacks on Pitt and Argyle Street must comply with Figure 9.6.2 and defer to Part 3 of the City Centre controls.

C.04 Deep soil is to be delivered within street setback zones and rear setbacks adjoining St John's Cemetery, provided with a minimum width of 6 metres.

C.05 Where the street setback adjoins active uses, the setback zone is to be provided as a publicly accessible space, as per Figure 5.6.2. All stairs and ramps on active frontages must be internalised to ensure the public domain and front setback zones are kept relatively level, accessible and uncluttered.

5.7 AUTO ALLEY

The Auto Alley Special Area has been identified as a long-term growth area for the City. The future form of Auto Alley is proposed to retain the existing large retail tenancies on the street for automotive uses, while also providing an opportunity for commercial redevelopment in the long term. The controls for this precinct ensure a more localised response to the specific character established by the historical usage of south Church Street and the remnant commercial occupancies.

The Auto Alley Special Area must also deliver future open space for the city centre and improve pedestrian connectivity in the south of the city. Approximately 1 hectare of park and plaza must be delivered alongside the redevelopment of Auto Alley. Several new streets must be provided: a north-south street is provided at the western boundary of the precinct; two east-west streets extend Dixon Street and Rosehill Street from Church Street to High Street; and a north-south lane extends Anderson Street from Marion Street to Raymond Street.

Built form must also consider the potential future development and public domain expected in the adjacent Marion Street Special Area to the north, and in the Station Street Special Area to the east. Specifically, the mixed-use eastern portion of the precinct must be considered as a transition area, as reflected in the lower building heights and FSR requirements in the Parramatta LEP 2011.

Objectives

O.01 Achieve an appropriate site consolidation that allows the Parramatta LEP 2011 controls to be realised with appropriate built form and allows the best response to the existing heritage items and surrounding street and site geometries.

O.02 Promote diverse commercial activity creating a complementary commercial core for the city centre.

O.03 Provide new open spaces to service the needs of resident and worker populations anticipated in the precinct.

O.04 Enable large canopy trees to be planted in Church Street, enhancing the southern approaches to the city centre, and improving the pedestrian environment along this busy section of the street.

O.05 Increase precinct permeability with the delivery of new public streets, through site links and appropriate servicing commensurate with the density of the precinct.

Figure 5.7.1 - Auto Alley Special Area Public Domain & Consolidation

Controls

Unless modified or specifically excluded below, all controls in Sections 1-4 and Sections 6-9 of the City Centre controls apply to development within the Auto Alley Special Area.

C.01 Site consolidation must comply with Figure 5.7.1 – Auto Alley Special Area Public Domain & Consolidation.

C.02 Delivery, location and dedication of new streets, lanes and open spaces in the Auto Alley precinct must comply with Figure 5.7.1.

C.03 Where specified, building envelopes must comply with Figure 5.7.2 to achieve the objectives highlighted for the Auto Alley Special Area.

Figure 5.7.2 - Auto Alley Setbacks and Indicative Built Form

C.04 Future development must comply with the following street setback controls:

a) Street setbacks and street wall heights on Church Street must comply with Figure 5.7.3 (Section A). The street wall must be set back a minimum of 5 metres from the street boundary, and towers must be set back a minimum 6 metres from the street wall.

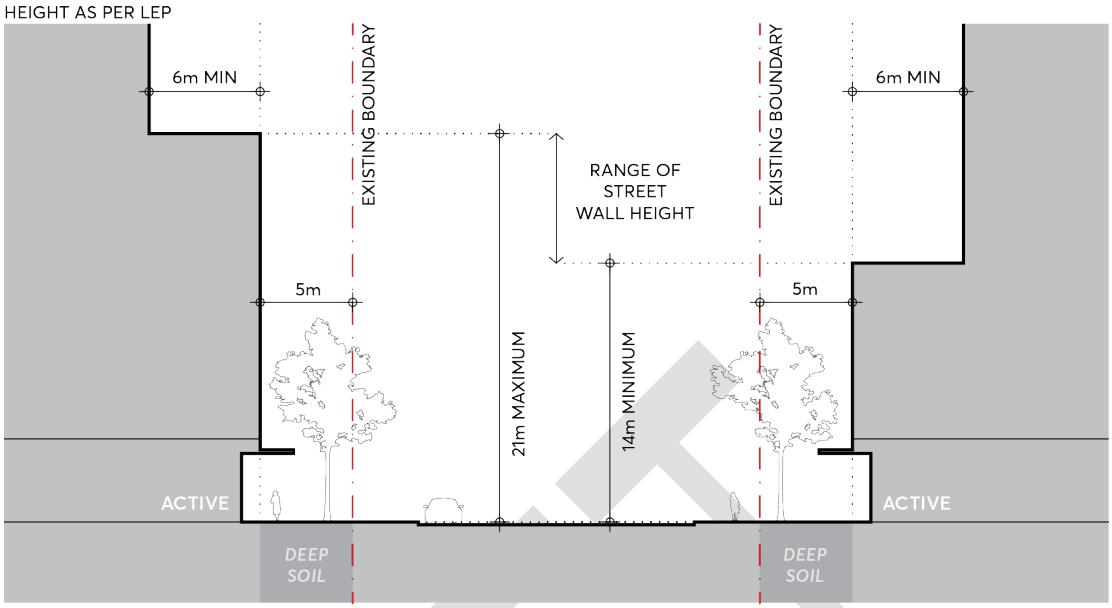


Figure 9.7.3 - Church Street (Section A) Setbacks and Street Wall Height

b) Development on Church Street must dedicate a 5 metre setback to the street as detailed in Figure 5.7.4. This setback is to improve the pedestrian amenity and must be provided as deep soil free of any basement structures below.

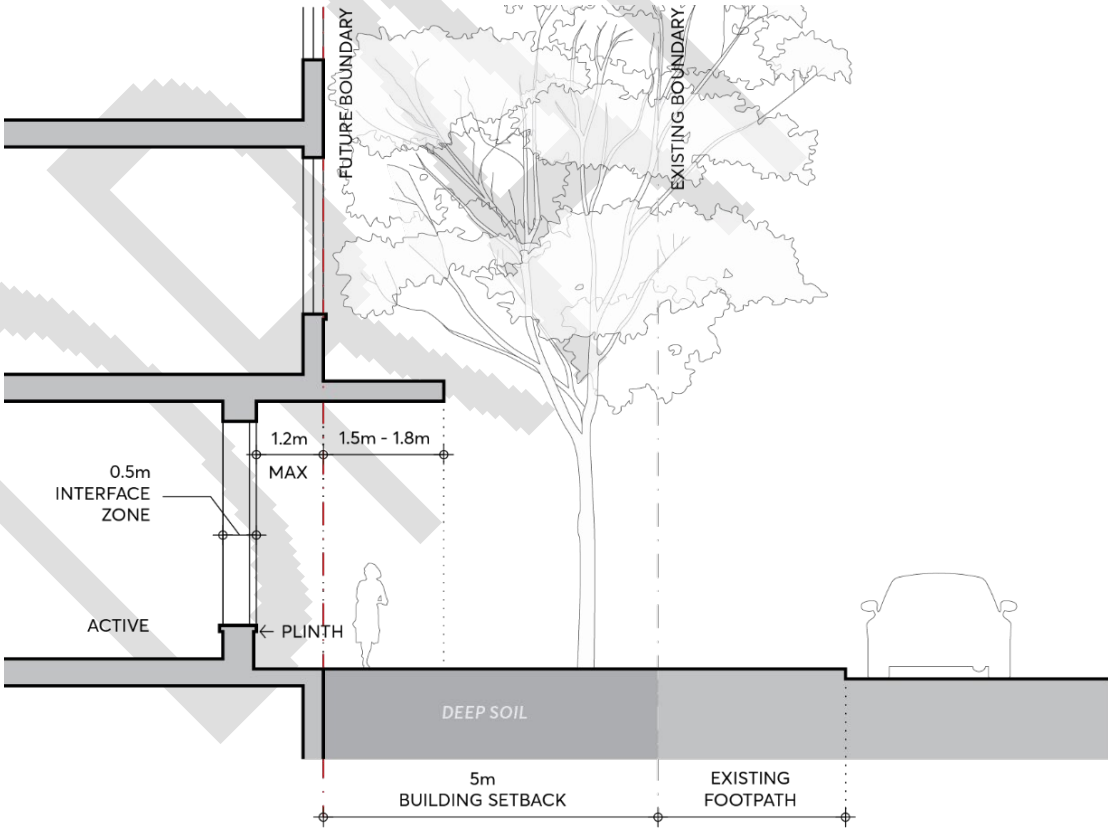


Figure 5.7.4 - Church Street Ground Floor Interface

p) Street setbacks and street wall heights on Dixon Street must comply with Figure 5.7.5 (Section B). On the southern side of Dixon Street, the street wall must be built to the boundary and the tower set back a minimum of 6 metres from the street wall. On the

northern side of Dixon Street, the street wall must be set back 3 metres from the boundary and the tower set back a minimum of 6 metres from the street wall.

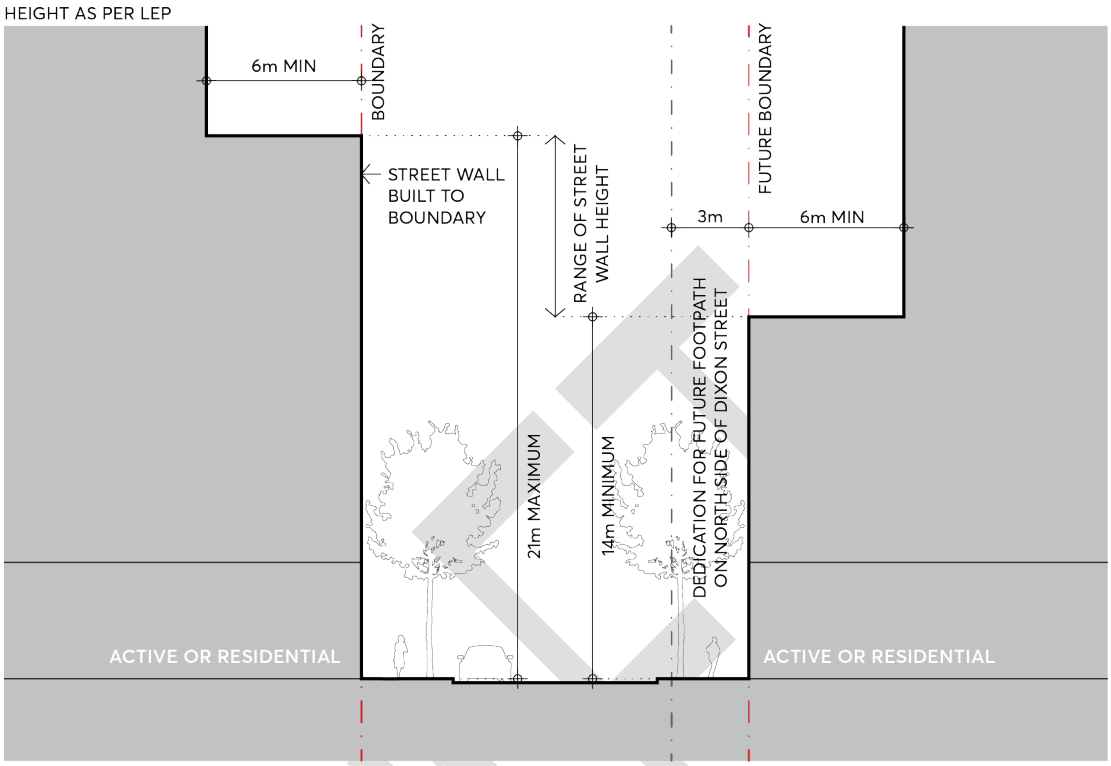


Figure 5.7.5 - Dixon Street (Section B) Setbacks and Street Wall Height

c) Street frontage heights and setbacks on High Street must comply with Figure 5.7.6 (Section C). A 12 metre high street wall must be set back 6 metres from the street boundary. Towers must be set back 15 metres from the street boundary in accordance with the Height of Buildings Map in the Parramatta LEP 2011 to respond to adjacent heritage fabric.

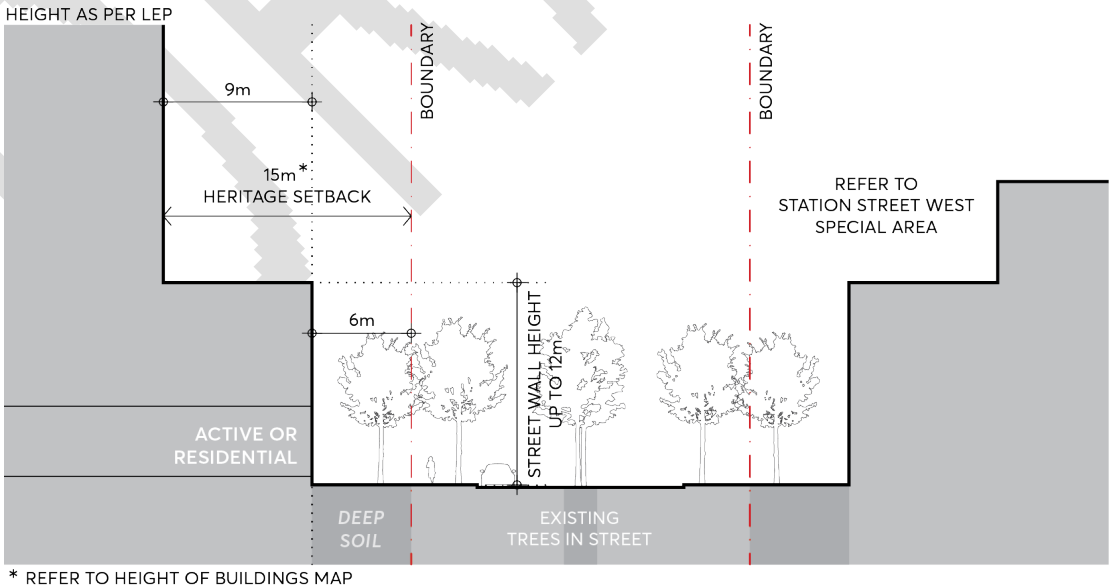


Figure 5.7.6 - High Street (Section C) Setbacks and Street Wall Height

d) Where residential uses are being provided at ground on new streets identified in Figure 5.7.1, street setbacks and street wall heights of development must comply with Figure 5.7.7 (Section D). The building must be set back 6 metres from the street boundary to provide for private and communal landscaping, consistent with Part 3 of the City Centre controls.

e) Where active uses are being provided at ground on new streets identified in Figure 5.7.1, street setbacks and street wall heights of development must comply with Figure 5.7.8 (Section D). The street wall must be built to the boundary and the tower must be set back a minimum of 6 metres from the street wall, consistent with Part 3 of the City Centre controls.

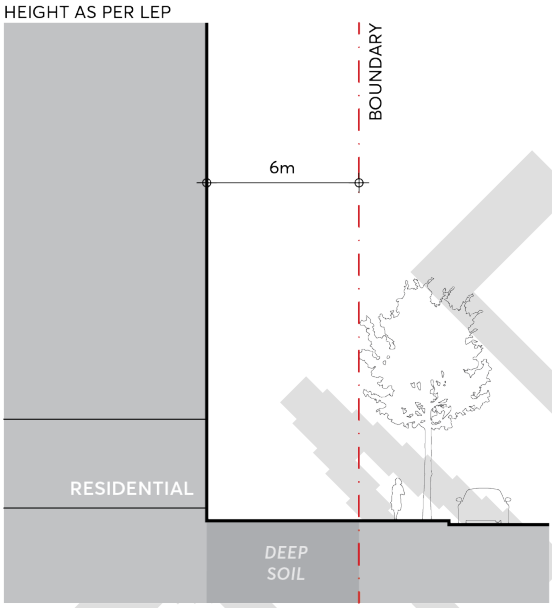


Figure 5.7.7 – New Streets (Section D) Setbacks and Street Wall Height Residential Ground Floor

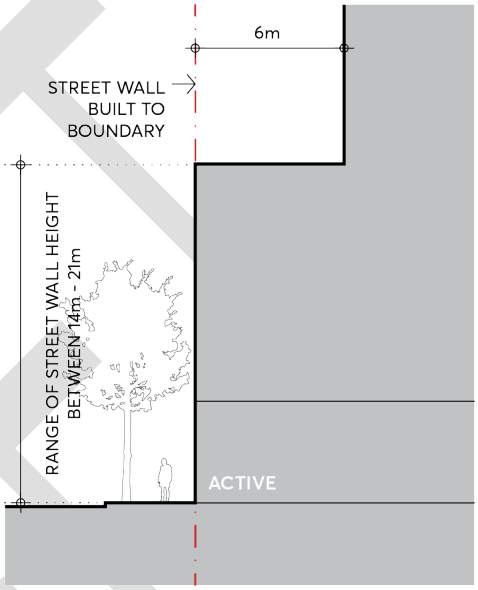


Figure 5.7.8 – New Streets (Section D) Setbacks and Street Wall Height Active Ground Floor

f) Street setbacks and street wall heights on the future laneway connecting Marion Street to Boundary Street, as identified in Figure 5.7.1, must comply with Figure 5.7.9 (Section E). To the west, the street wall must be set back 3 metres from the future boundary and the tower set back a minimum of 3 metres from the street wall. To the east, the street wall must be set back 0.6 metres from the future boundary and the tower must be set back a minimum of 3 metres from the street wall.

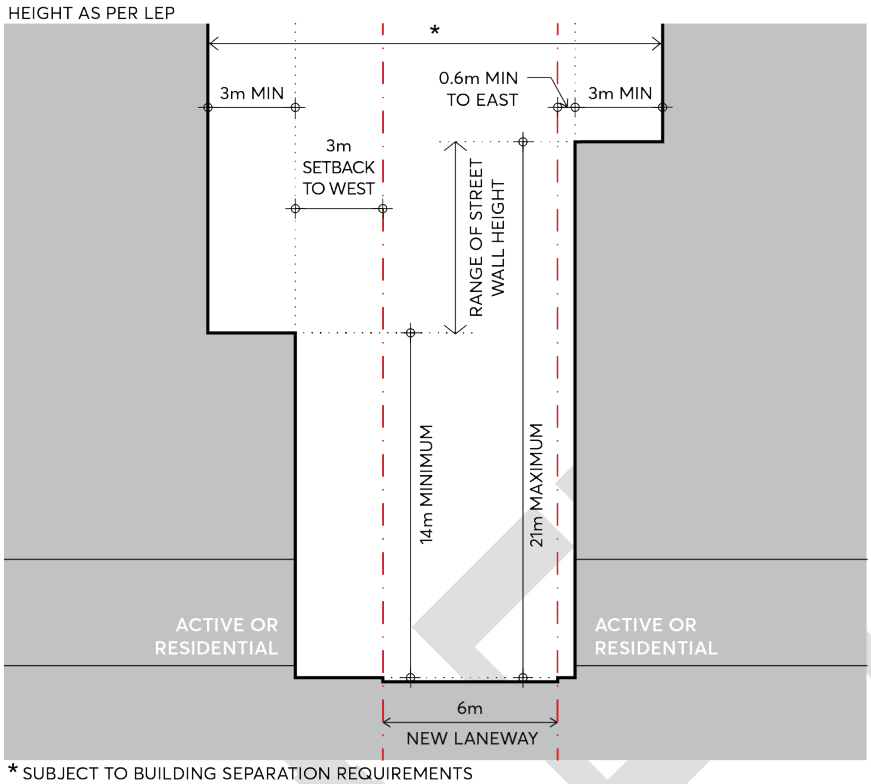


Figure 5.7.9 - New North-South Laneway (Section E) Setbacks and Street Wall Height

g) Setbacks and street wall heights to Jubilee Park must comply with Figure 5.7.10 (Section F). The lower building massing must be set back 3 metres from the Jubilee Park boundary to provide a publicly accessible through site link, and the tower must be set back a minimum of 15 metres from the Jubilee Park boundary.

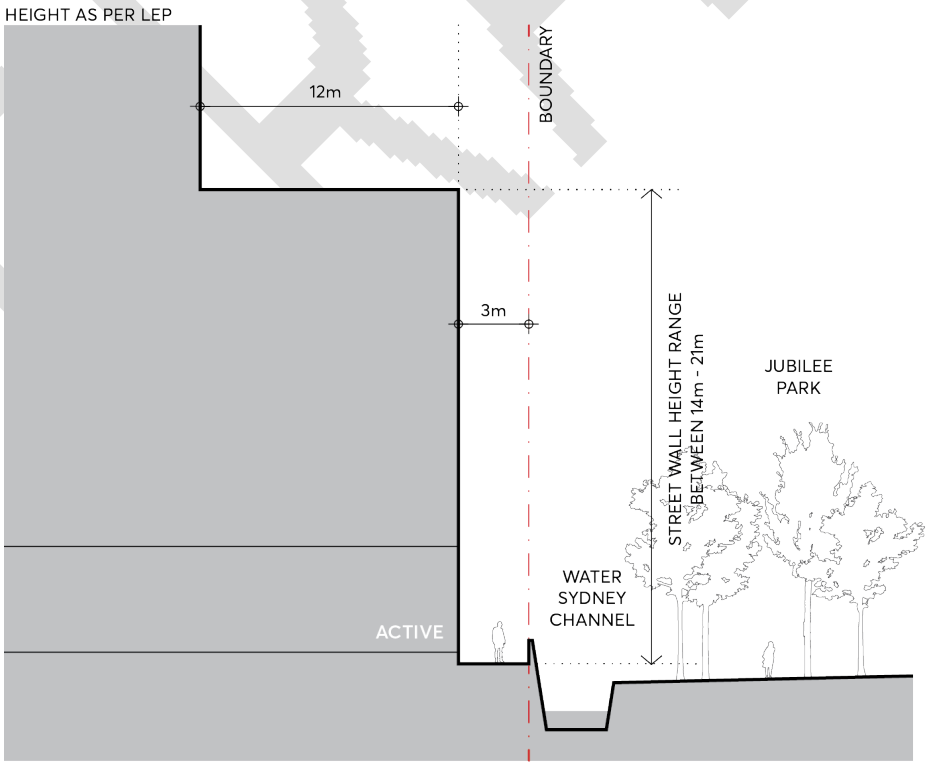


Figure 5.7.10 - Jubilee Park Edge (Section F) Setbacks and Street Wall Height

h) Setbacks and street wall heights to any new parks or plaza spaces must comply with Figure 5.7.11 (Section G). The lower building massing must be built to the boundary a minimum of 14 metres and maximum of 21m above the park or plaza level, and the tower must be set back 3 metres from the boundary.

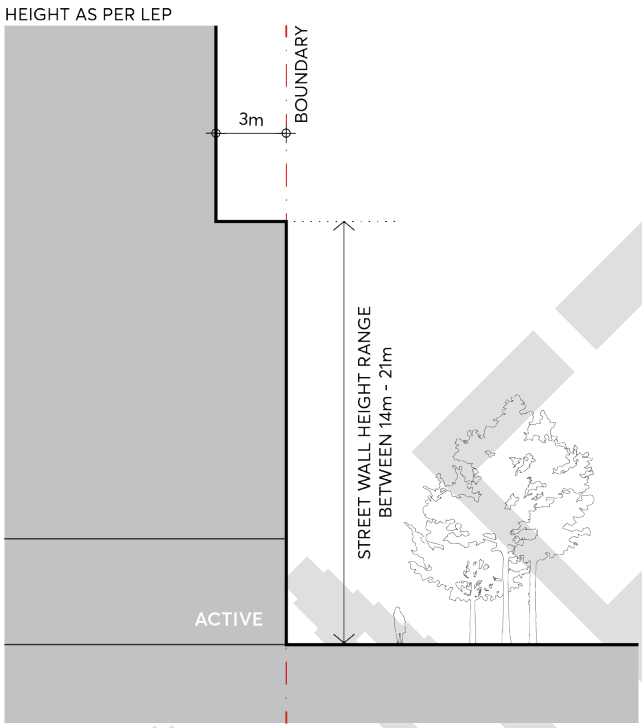


Figure 5.7.11 - New Civic Space or Park Edge (Section G) Setbacks and Street Wall Height

C.05 Driveways servicing new development are not permitted on Church Street and High Street. Future driveways must be minimised and provided on future servicing streets or laneways.

C.06 Tenancy widths on the ground floor in Church Street must allow for automotive or other large commercial uses.

C.07 Where necessary, proposals must consider how safe pedestrian movement may be reasonably provided within the Auto Alley Special Area.

5.8 STATION STREET WEST

The Station Street West Special Area is located on the southern edge of the city centre, characterised by its proximity to the railway line and high instance of built heritage, both in and around the precinct. The controls for this precinct ensure a more localised and heritage led response to the specific character established by these items, as well as setting a more defined edge to Station Street West as the precinct redevelops.

Future built form must consider the potential future development and public domain expected in the adjacent Marion Street Special Area to the north, and Auto Alley to the west. As a transition area, all development in the Station Street West Special Area must consider an expected massing of surrounding sites to ensure an appropriate response to future context. Development must also provide a measured response to the Tottenham Street Heritage Conservation Zone located to the south, ensuring future outcomes do not negatively impact the amenity of the Federation Period cottages in this location.

Objectives

O.01 Encourage respectful built form that relates to the existing subdivision, material, and scale of the area. Conserve heritage cottages to the highest standard and encourage the adaptive reuse of heritage items to maintain their importance into the future.

O.02 Ensure future built form does not adversely impact the solar amenity of the Tottenham Street Heritage Conservation Zone to the south.

O.03 Increase precinct permeability with the delivery of new, publically accessible through site links in desired locations.

O.04 Create a consistent edge to Station Street West that adjusts the street boundary, providing a more contiguous street frontage which follows the alignment of the street.

O.05 Minimise tower floorplates to encourage compliant separation distances and maximise amenity on narrow, east-west sites.

O.06 Improve the pedestrian amenity and legibility of Station Street West through an expanded public domain and dedicated easement for future footpath widening.

O.07 Create a scale transition corridor along High Street that enhances solar access and views to sky by ensuring tower components are set back as reinforced by 12m maximum building heights in the LEP.

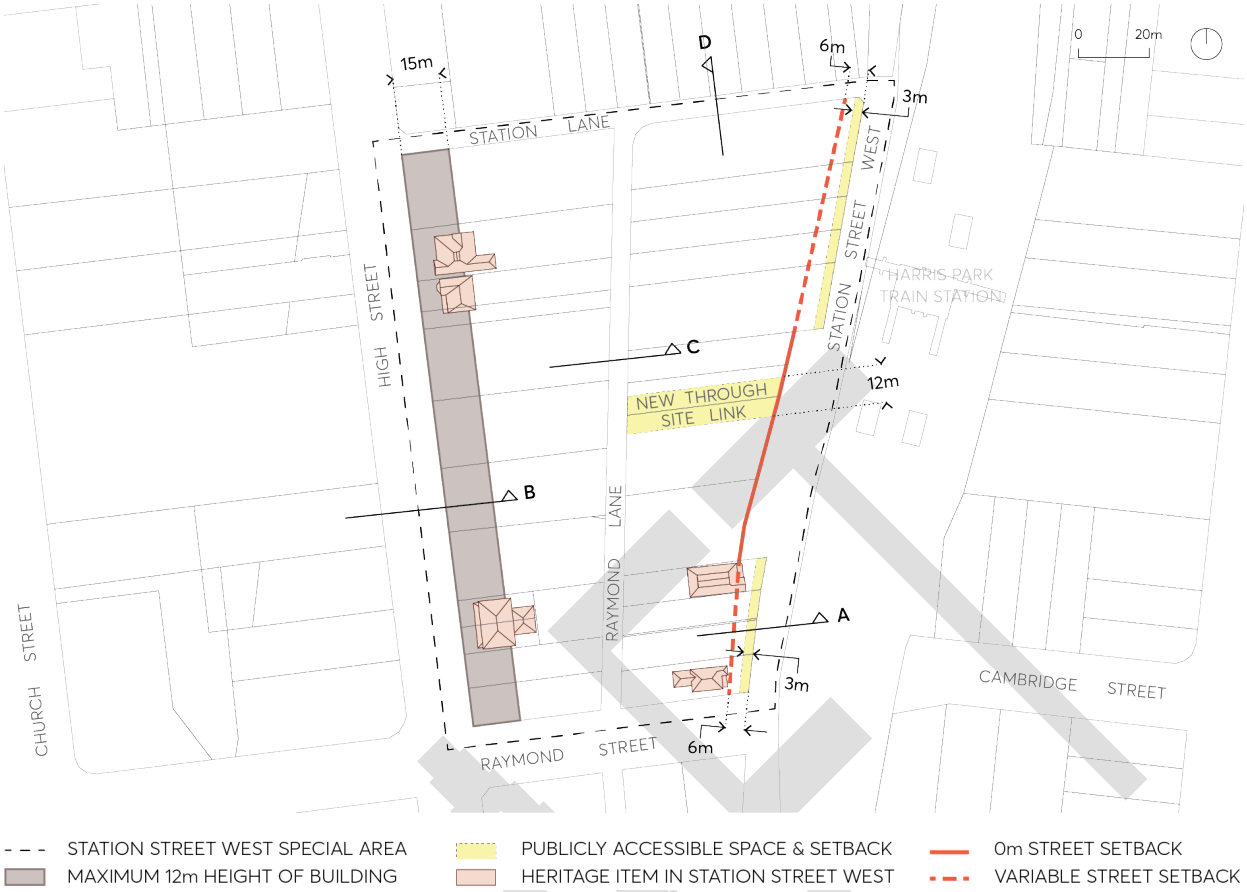


Figure 5.8.1 Station Street West Public Domain & Alignment

Controls

Unless modified or specifically excluded below, all controls in Sections 1-4 and Sections 6-9 of the City Centre controls apply to development within the Station Street West Special Area.

C.01 Future development must create a consistent edge to Station Street West that follows the alignment of the rail corridor and comply with the street setback line as per Figure 5.8.1. This alignment must facilitate a potential footpath widening on Station Street West to accommodate increased pedestrian traffic from Harris Park Train Station.

C.02 The delivery and location of new publicly accessible through site links in the Station Street Special Area must comply with Figure 5.8.1.

C.03 Future development must comply with the following envelope controls:

a) Street setbacks and street wall heights on Station Street West must comply with Figure 5.8.2 (Section A). A 3-storey street wall must be built to follow the variable street setback as per Figure 5.8.1, and towers must be setback a minimum of 6 metres from the street wall.

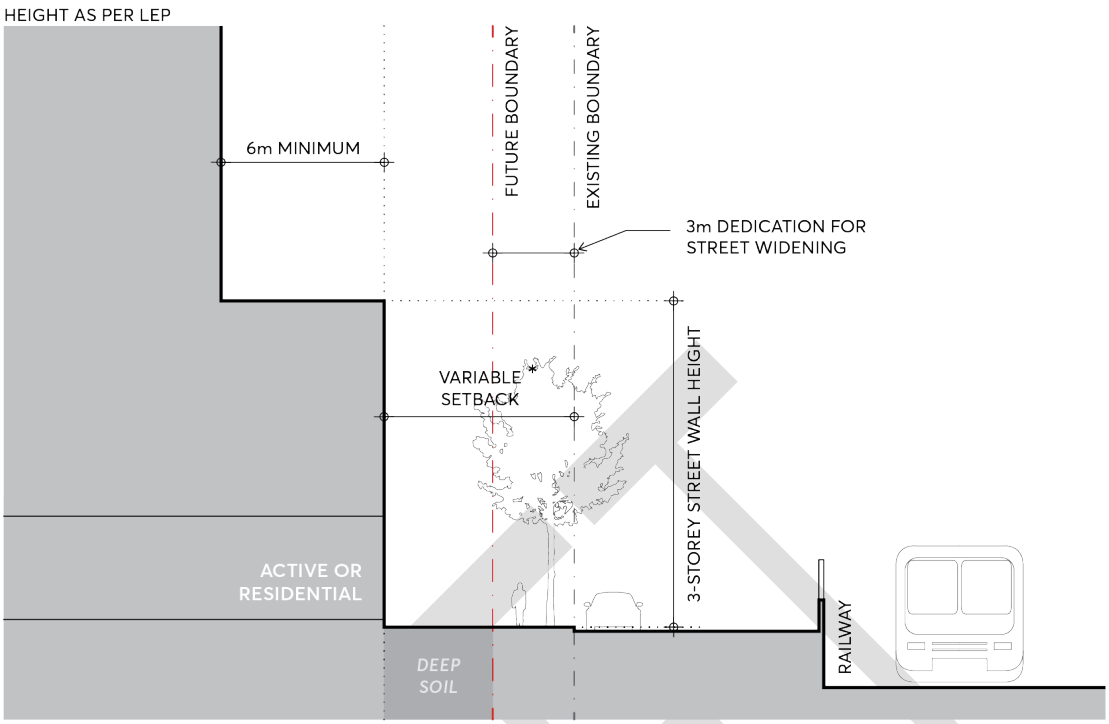


Figure 5.8.2 - Station Street West (Section A) Setbacks and Street Wall Height

b) Street setbacks and street wall heights on High Street must comply with Figure 5.8.3 (Section B). A 12 metre high street wall must be set back 6 metres from the street boundary. Any upper levels must be set back 15 metres from the boundary in accordance with the Height of Buildings Map in the Parramatta LEP 2011 in response to adjoining heritage fabric.

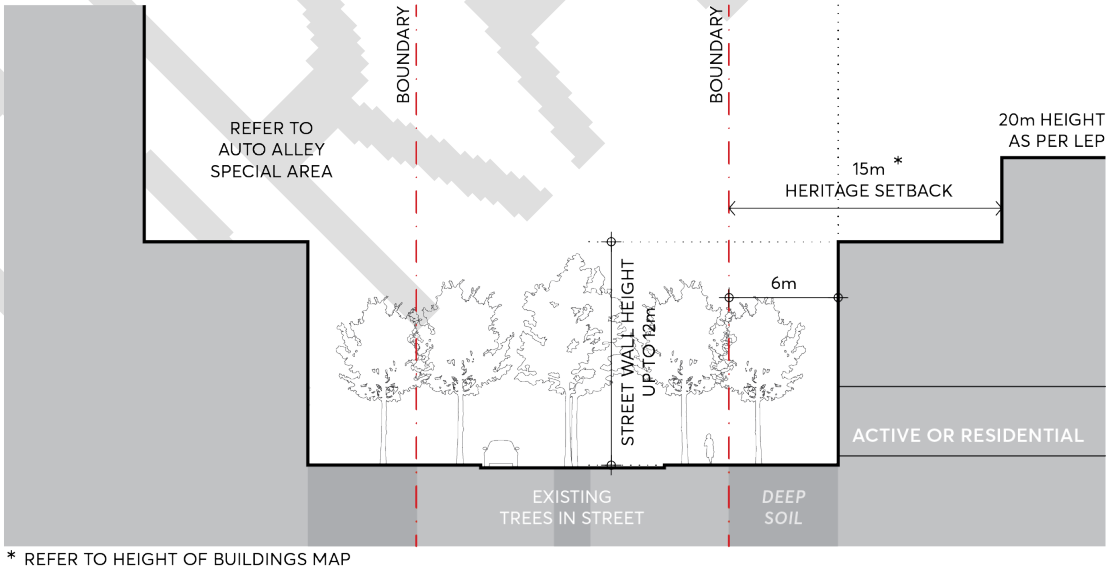


Figure 5.8.3 - High Street (Section B) Setbacks and Street Wall Height

c) Street setbacks and street wall heights on Raymond Lane must comply with Figure 5.8.4 (Section C). The building is to be set back 6 metres from the laneway boundary to provide private landscape, and towers on the eastern side of Raymond Lane set back a minimum 3 metres from the street wall.

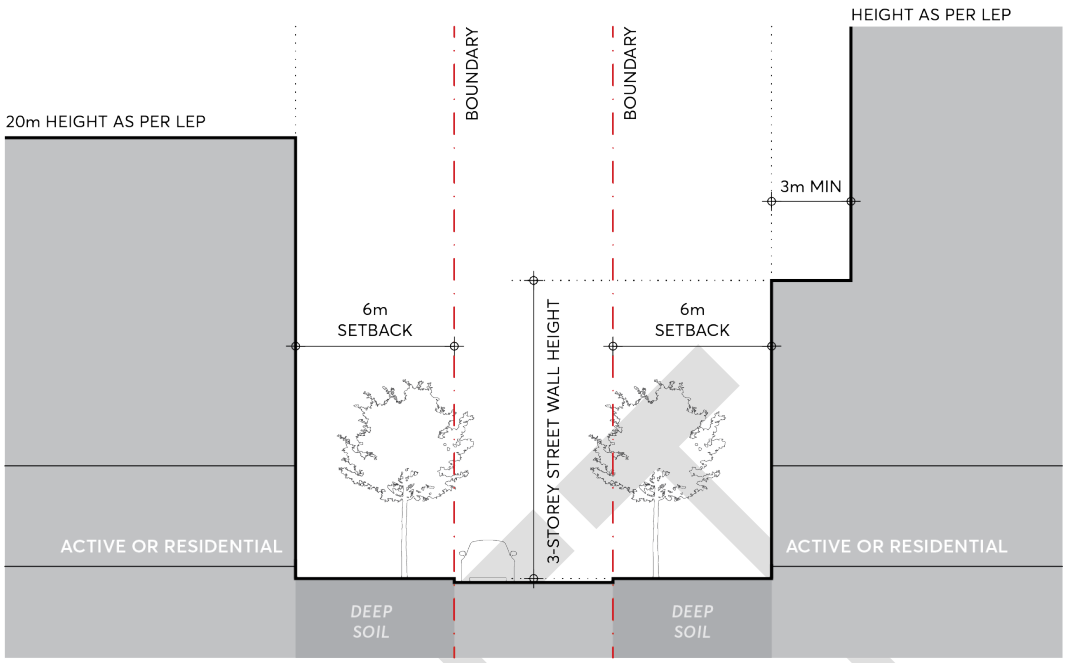


Figure 5.8.4 - Raymond Lane (Section C) Setbacks and Street Wall Height

d) Street setbacks and street wall heights on Station Lane must comply with Figure 5.8.5 (Section D). The street wall must be set back 4 metres from the laneway boundary and towers set back a minimum 3 metres from the street wall.

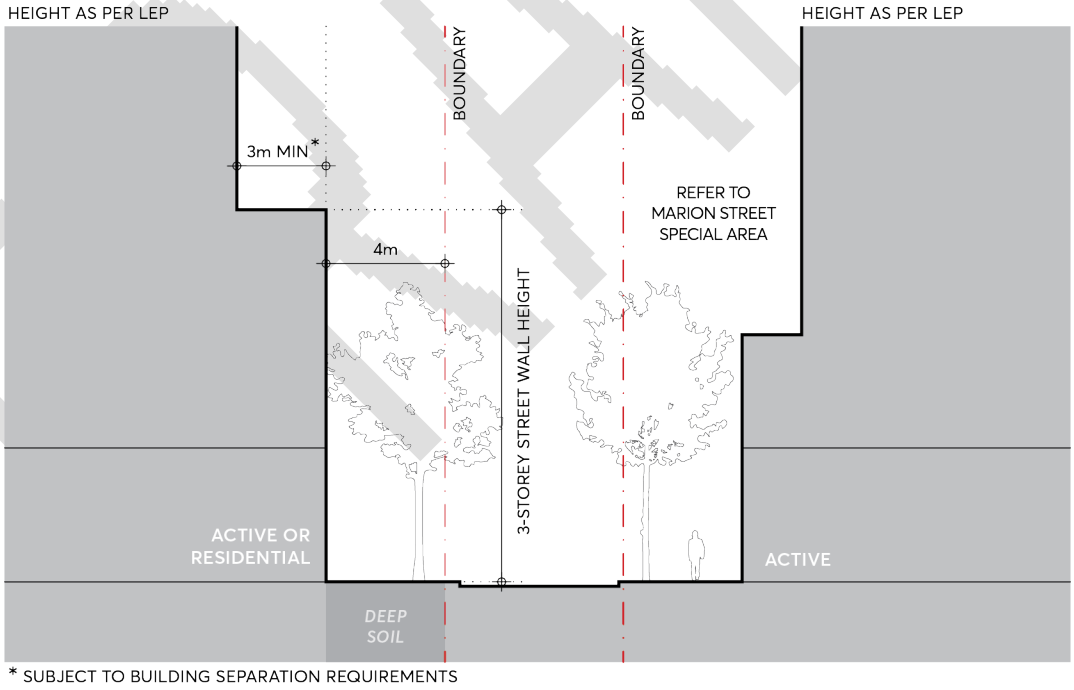


Figure 5.8.5 - Station Lane (Section D) Setbacks and Street Wall Height

e) Street setbacks and street wall heights on Raymond Street must comply with Part 3 of the City Centre controls.

5.9 CREEK CORRIDORS

The Parramatta River and its tributaries have been a place of cultural significance for first nations peoples for thousands of years. The land beside the stream now known as Clay Cliff Creek was a vital source of food and living resources, where fresh water met the ebb and flow of tidal water in the River. The land also played a critical role in the survival of Sydney, with well documented post-colonial occupation.

Development along the edges of Clay Cliff Creek and other creek corridors traversing the City must recognise their cultural and historical values as a shared public resource. While some significant development has already occurred through part of the City's creek corridors, the remaining open space must be enhanced to create a collective landscape corridor and flood mitigation element for the City.

By utilising a consistent deep soil setback to any development along the City's creek corridors, future development must create a highly visible, vegetated, and functional connection between existing green spaces, heritage destinations and transport nodes along creek corridors.

Objectives

O.01 Establish Clay Cliff Creek and other tributaries of the Parramatta River as priority green corridors for ecological protection, flood sensitive strategies and future landscape improvements.

O.02 Develop creek corridors as landscape and cultural assets, protecting landscape setbacks and biodiversity, and contributing to ecological resilience.

O.03 Protect and enhance local and regional biodiversity, maximising the extent and integrity of aquatic and natural land areas along creek corridors in the city centre.

O.04 Employ Water Sensitive Urban Design strategies to limit pollutants entering Parramatta River and its associated waterways.

O.05 Utilise a deep soil setback zone to create a contiguous landscape along creek corridors with the intention of leaving space for a publicly accessible movement corridor in the future.

O.06 Identify opportunities for interpreting cultural and environmental values in the adjoining landscape, built form and lighting subject to Council's strategies.

Controls

Unless modified or specifically excluded below, all controls in Sections 1-4 and Sections 6-9 of the City Centre controls apply to development within the Creek Corridors Special Area.

C.01 Creek frontage heights and building setbacks on any creek corridor must comply with Figure 5.9.1.

C.02 Development must provide a minimum building setback of 6 metres to any creek corridor, as measured from the top of bank, delivered as deep soil. The extent of open to sky deep soil adjacent to any creek corridor must be designed to the satisfaction of Council's flood engineers. In some instances, the minimum 6 metre building setback from top of bank may be inadequate for meeting Council's flood mitigation requirements.

C.03 Development must provide a minimum 6 metre tower setback to support views to sky from a creek corridor and natural daylighting to deep soil and vegetation.

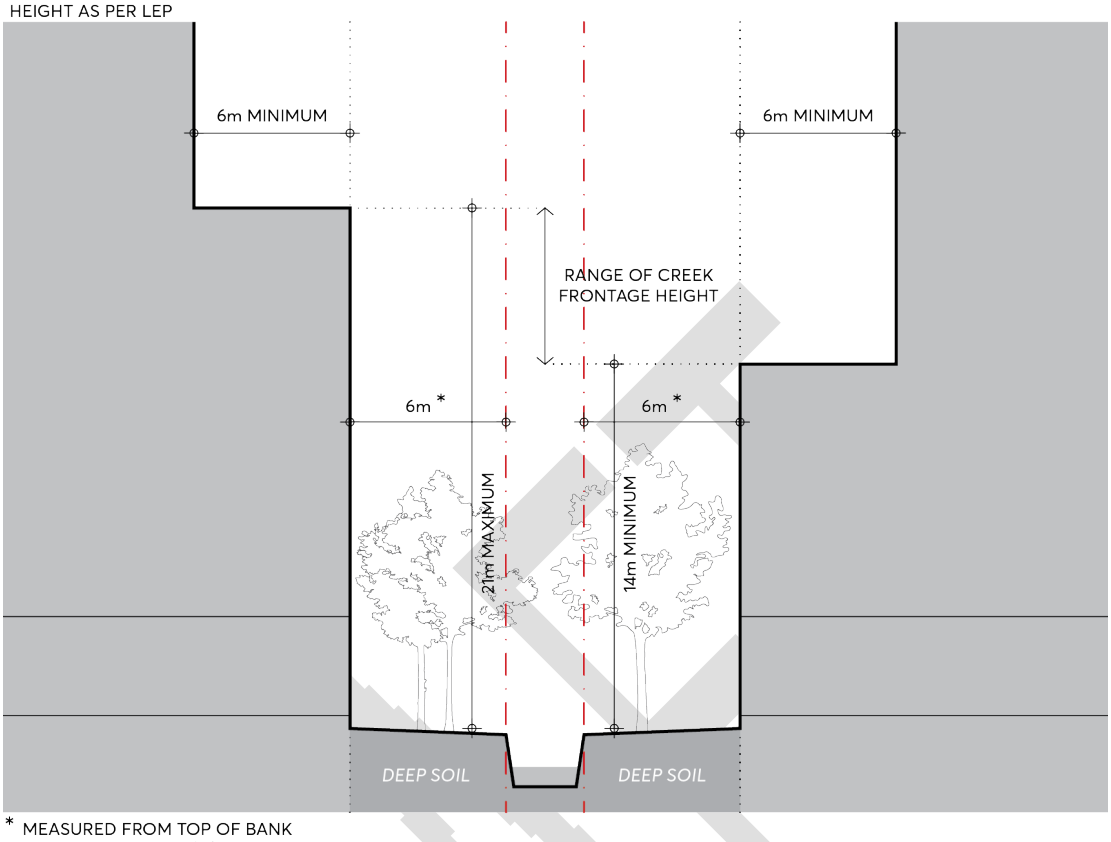


Figure 5.9.1 – Creek Corridor Setbacks and Street Wall Height

C.04 Protect existing vegetation that supports the ecological function of creek corridors. Future landscaping facing any creek corridor must be flood resilient and demonstrate its compatibility with the relevant riverine, estuarine or forest ecosystem.

C.05 Provide a sense of address to creek corridors, particularly where a future public connection may be provided, and follow design principles of The Street Wall contained within Part 3 of the City Centre controls. Where above ground carparking is included, commercial or residential sleeving must be provided for passive surveillance to landscaped areas.

C.06 Creek corridor setback zones must be free of ancillary elements, servicing, and other structures.

5.10 PARK EDGE

[Note: The controls in this section are from Section 4.3.3.7 (c) Park Edge of the Parramatta DCP 2011. However, the introduction of the draft Parramatta City Centre controls required some minor updates to this section. Any changes are shown in blue font.]

The Park Edge Special Area is located at the western edge of the Parramatta city centre adjacent to and including part of Parramatta Park (see Figure 5.10.1). Buildings within this area form a backdrop to Parramatta's Old Government House and Domain (OGHD).

OGHD is one of eleven sites in a group forming the Australian Convict Sites on the UNESCO World Heritage List. OGHD is also on the National Heritage List. The Park Edge (Highly Sensitive) Area has been identified in the study *Development in Parramatta City and the Impact on Old Government House and Domain's World and National Heritage Listed Values Planisphere 2012*, as an area where development is likely to have a significant impact on the world and national heritage values of OGHD, unless it is designed to mitigate potential impact to below a significant impact threshold.

In this study, the key determinants of whether development will have a significant impact on the world and national heritage values of OGHD are the view sheds of the highly significant views from and of OGHD, the proximity of the development to OGHD and topography.

Under the Commonwealth Environment Protection and Biodiversity Conservation (EPBC) Act, 1999, development that is likely to have a significant impact on the world and national heritage values of OGHD must be referred to the Australian Government Department of Sustainability, Environment, Water, Populations and Community for approval from the Australian Government Environment Minister.

As this requirement has led to uncertainty and additional assessment processes, Council has worked with the Commonwealth and State Governments to enter into a Conservation Agreement. This agreement is made under the EPBC Act and removes the need for Commonwealth referrals of developments within the Park Edge (Highly Sensitive) Area under the EPBC Act, so long as the proposed development complies with the specified planning controls in the agreement. Compliance with these specified planning controls will mitigate significant impacts of development on the values of OGHD under its world and national heritage listing.

The planning controls include the applicable maximum building height and floor space ratio controls under the Parramatta LEP 2011 ~~City Centre LEP 2007~~. They also include the DCP controls outlined in this section of the DCP. When development complies with these controls, applications will not need to be referred to the Commonwealth Government for approval under the EPBC Act.

Figure 5.10.1 Park Edge Highly Sensitive Area

Controls

The Park Edge Special Area is divided into four areas, with specific controls relating to each sub area as follows:

Area A1 - Parramatta Leagues Club Site

Development within Area A1 must comply with the following:

C.01 At least 80% of the building height must be contained below the level of the surrounding established tree canopy of Parramatta Park when viewed from any of the key viewing locations from OGHD shown in Figure 5.10.9. Any building element must be oriented to minimise the visual impact from these viewing locations.

C.02 External building materials must be muted in colour with matt finishes to minimise contrast with the park surrounds and be complementary to its setting.

C.03 Signage on the upper level of buildings must not face the Domain of Parramatta Park.

Area A2 – ~~Parramatta~~ CommBank Stadium Site~~, Parramatta Pool~~ and Car Park

C.04 At least 80% of the building height (other than lighting towers for ~~Parramatta~~ CommBank Stadium) must be contained below the surrounding established tree canopy of Parramatta Park when viewed from any of the key viewing locations from OGHD shown in Figure 5.10.9. Buildings must be oriented to minimise the visual impact from these viewing locations.

C.05 External building materials must be muted in colour with matt finishes to minimise contrast with the park surrounds and be complementary to its setting.

C.06 Signage on the upper level of buildings must not face the Domain of Parramatta Park.

Area B -

C.07 The street frontage height for podiums, setbacks to the street, side and rear boundaries must comply with Figures 5.10.5, 5.10.6 and 5.10.7.

C.08 Upper level building setbacks must contribute to spaces between buildings and an openness in the city skyline, with upper level setbacks of:

a. 8 metres at the river foreshore as shown in Figure 5.10.2; and

b. 6 metres at the street frontage as shown in Figure 5.10.3; except for George Street (see C.09)

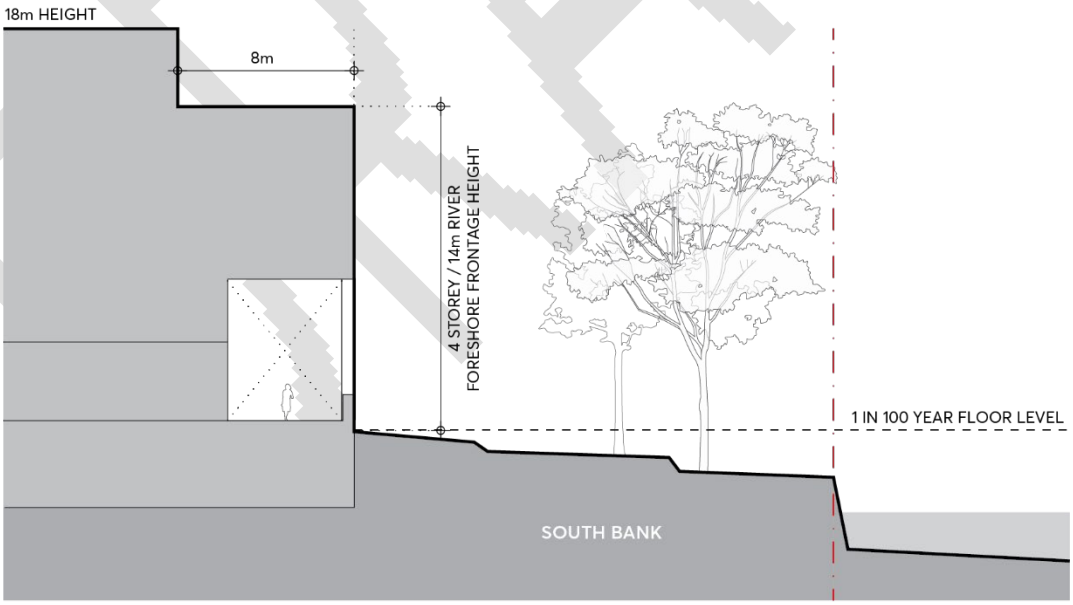


Figure 5.10.2 River Foreshore Frontage Height and Building Setbacks

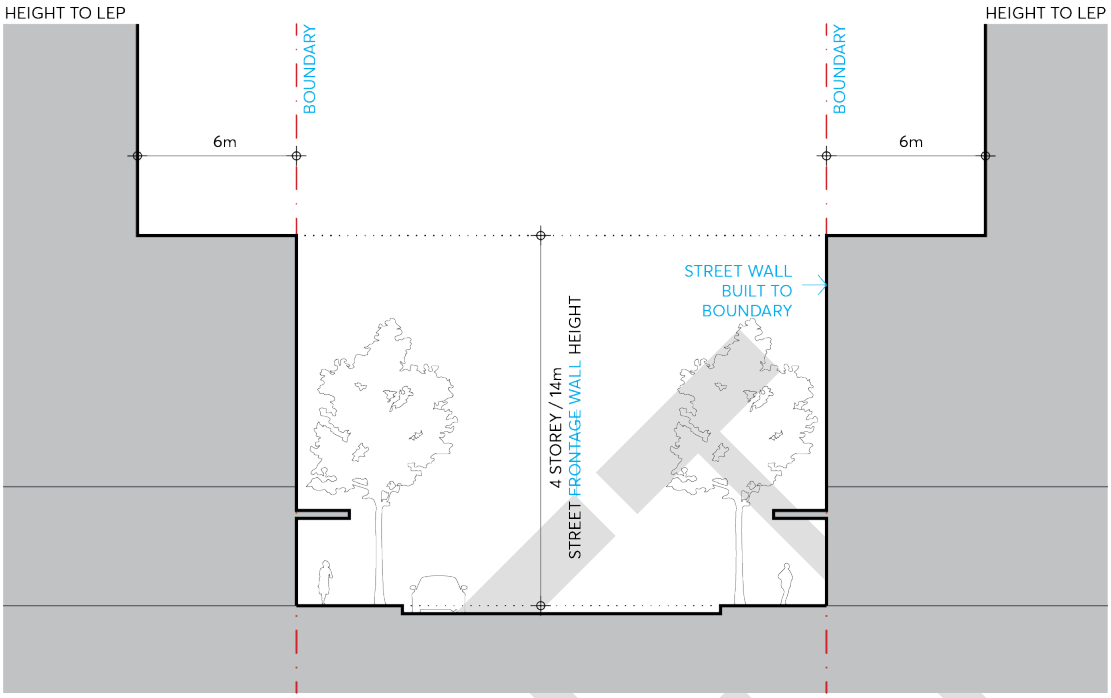


Figure 5.10.3 Park Edge Sensitive Area Street Wall Height and Setbacks

C.09 Upper level building setback to George Street of 20 metres must comply with Figure 5.10.4, to frame the vista along this street, reinforcing the historic Georgian town plan and the relationship between George Street and OGHD.

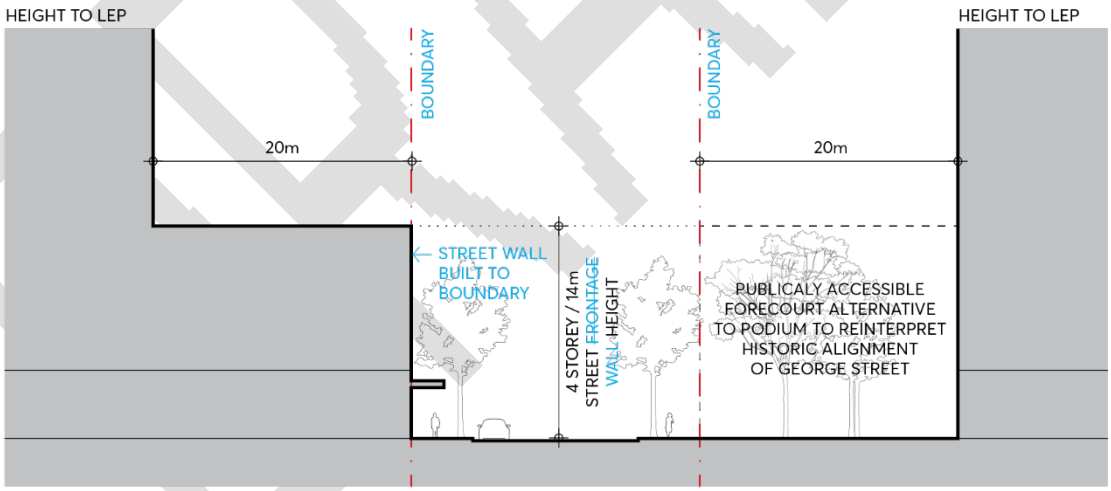


Figure 5.10.4 George Street west of Marsden Street – Street Wall Height and Building Setbacks

C.10 Upper level side and rear building setbacks must comply with Figure 5.10.5 to contribute to spaces between buildings and an openness in the city skyline.

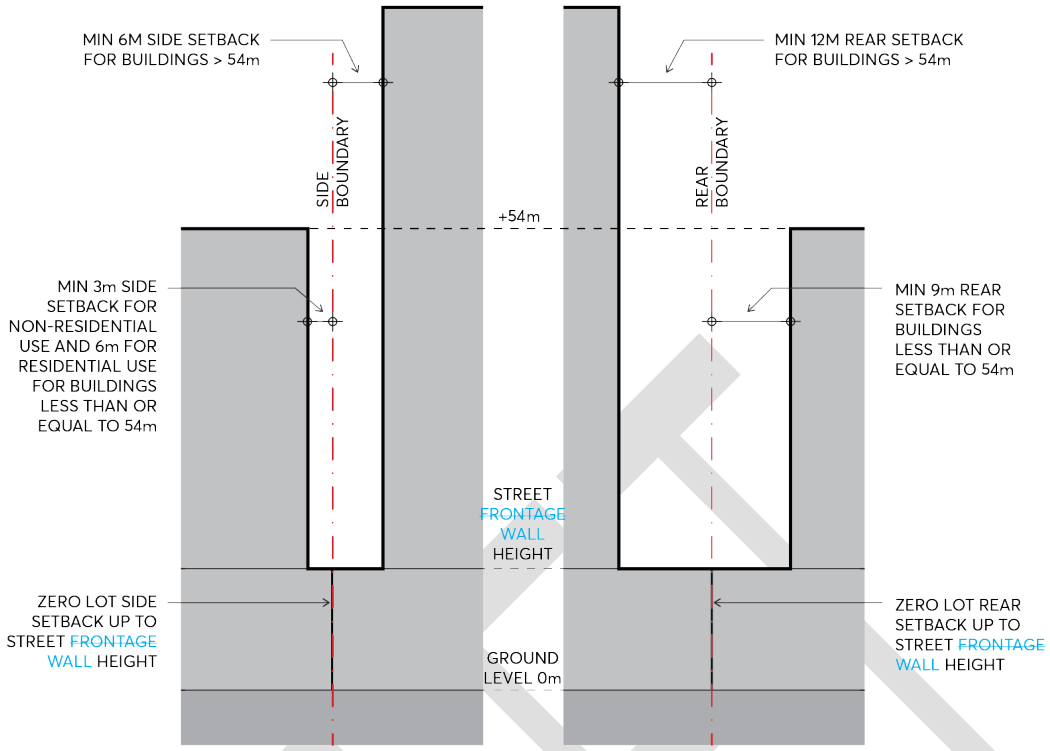


Figure 5.10.5 Park Edge Sensitive Area Side and Rear Setbacks

C.11 Where reasonably practicable, having regard to the orientation of the development parcel, buildings must be oriented with their narrow end not exceeding 30 metres in width facing the Domain.

C.12 External building materials must reduce visibility against the sky, for example, use of light colours or reflective surfaces.

C.13 Signage on the upper level of buildings must not face the Domain of Parramatta Park.

Minor departures exceeding the above built form controls (by up to 5%) for Area B will only be permitted where the consent authority is satisfied that the visual impact of the proposed development will not visually dominate OGHD as a result of any such variation when the proposed development is viewed from any of the key viewing locations from OGHD shown in Figure 5.10.9.

Figure 5.10.6 – Building Alignment and Front Setbacks (to streets, public domain and water courses)

Figure 5.10.7 – Street Wall / River Frontage Heights (Podiums)

Area B - Building Height and Floor Space Ratio controls

The Parramatta LEP 2011 ~~Parramatta City Centre LEP 2007~~ specifies the applicable maximum building height and floor space ratio controls for Area B within the Park Edge Special Area. Bonus height and floor space ratio provisions under the LEP apply when the development exhibits design excellence as judged under an architectural design competition.

When a design competition is carried out for development within the Park Edge Special Area, the brief for the design competition will specify that consideration must be given to the protection of the world and national heritage values of OGHD from significant impacts when the proposed development is viewed from any of the key viewing locations shown in Figure 5.10.9 and that development complies with the specific requirements of this section of the DCP.

In Area B, minor variations to building height such as for architectural roof features, or minor variations in floor space ratio of up to 5%, will only be permitted where the consent authority is satisfied that the visual impact of the proposed development will not visually dominate OGHD as a result of any such variation when the proposed development is viewed from any of the key viewing locations from OGHD shown in Figure 5.10.9.

Area C – Lot 362 DP 752058, No. 2 Macquarie Street Parramatta (RSL Site)

C.14 Built form is to provide minimum setbacks to Parramatta Park as indicated in Figure 5.10.8. The setbacks are to provide a transition from built form to the soft landscaping in Parramatta Park and are to be predominantly landscaped.

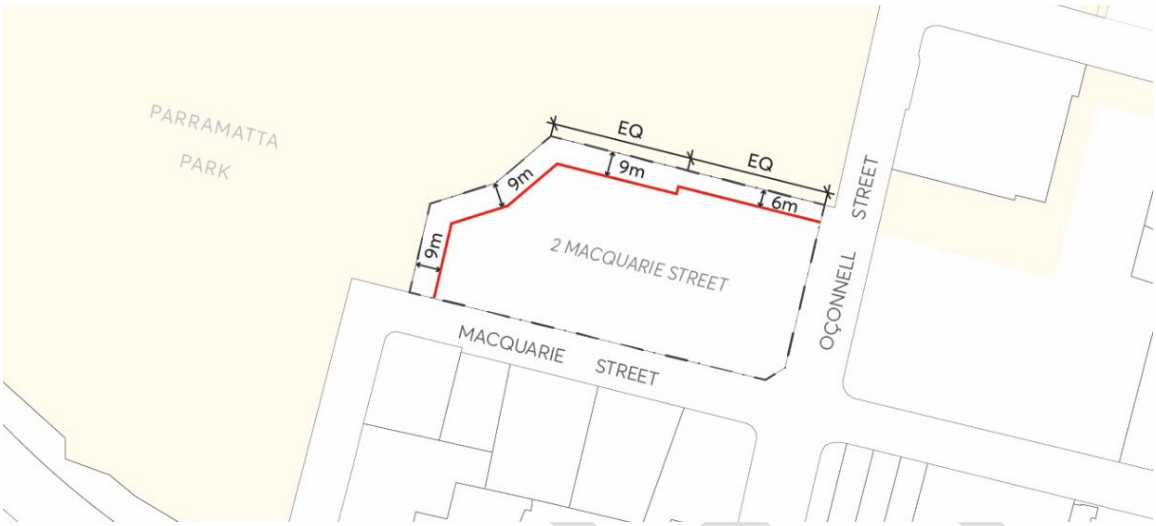


Figure 5.10.8 Setbacks to Parramatta Park at 2 Macquarie Street Parramatta

C.15 Buildings are to be sited to enable the retention and protection of the heritage fence at the O'Connell Street and Macquarie Street frontages. The siting and spacing of buildings across the site shall also respect the important relationship of the RSL site to the landscape setting of Parramatta Park, including the park entrance from Macquarie Street and the gatehouse at this entrance.

C.16 The maximum building height is 10 metres.

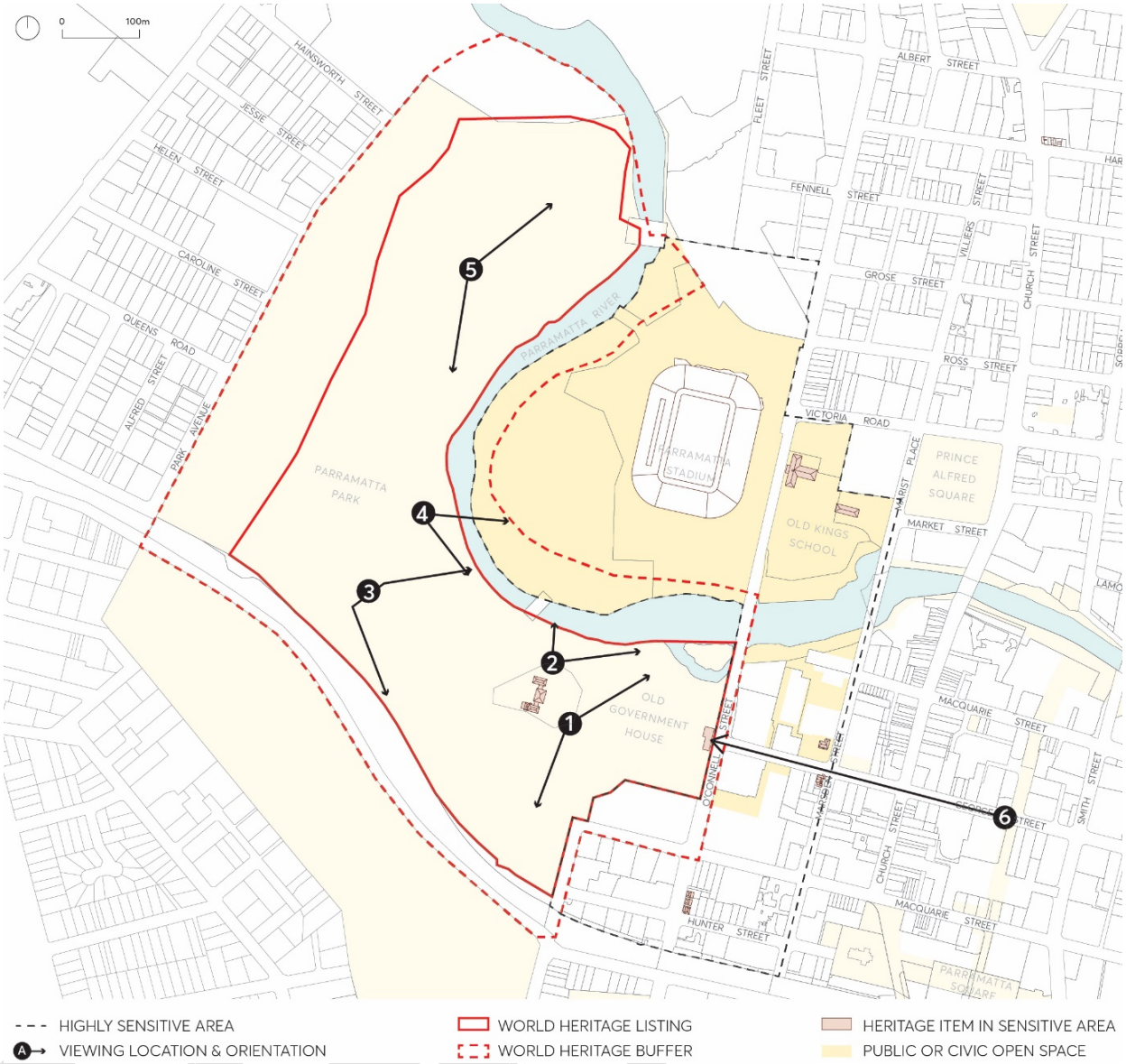
C.17 External building materials must be muted in colour with matt finishes to minimise contrast with the park surrounds and be complimentary to its setting.

C.18 Signage on the upper level of buildings must not face the Domain of Parramatta Park.

Protection of important views to and from Old Government House and Domain

Within the Park Edge Special Area, development must not be carried out that obstructs the sight lines between Old Government House and the Old Kings School site and the spire of St Patrick's Cathedral.

Note: Parramatta Park is also listed on the NSW State Heritage Register and as an item of State Heritage significance under the Parramatta LEP 2011. ~~Parramatta City Centre LEP 2007.~~ These listings mean that the provisions of the Heritage Act, 1977 and the heritage clauses of Parramatta LEP 2011 ~~Parramatta City Centre LEP 2007~~ must be complied with for development on or within the vicinity of OGHD. These considerations do not impact on the referral requirements of the EPBC Act.



View	Description
1	From lawns east and south of Old Government House towards the City
2	From the north-east corner of Old Government House to Old Kinds School
3	From Bath House area west of Old Government House to the City
4	Parramatta River views towards city from road within Parramatta Park on the west side of river.
5	From Diary Precinct within Parramatta Park looking north-east and south-east towards the City
6	West along George Street towards the Gatehouse of Old Government House

Figure 5.10.9 OGHD Viewing Locations

6 HERITAGE

This section of the DCP should be read in conjunction with Part 3.5 Heritage (including Part 3.5.3 which addresses Aboriginal cultural heritage), Part 4.4 Heritage Conservation Areas and Part 5.4 Preservation of Trees or Vegetation in *Parramatta DCP 2011*. Where there is an inconsistency between this section and other parts of the DCP, including where possible – flood planning, this section prevails.

This section of the DCP outlines Council's integrated approach to protecting and celebrating heritage within a collective urban form that has a strong focus on the pedestrian experience. These controls apply to all land in the Parramatta City Centre, not just sites containing a heritage item or next to a heritage item, because heritage items in the City Centre form a collective network of heritage places that together enliven and enrich the city.

This section must also be read in conjunction with relevant heritage inventory sheets, the Australia ICOMOS Burra Charter 2013, relevant heritage studies, and any heritage guidelines.

6.1 GUIDING PRINCIPLES

For over 60,000 years, the area comprising present day Parramatta has been occupied by the Burramattagal people, a clan of the Darug, who first settled along the upper reaches of the Parramatta River. The heritage of Parramatta includes places and items that are important to the local Aboriginal community or Aboriginal people of NSW. These are places or objects that people have a connection to, both physically and spiritually.

As the second town to be established on the continent, and the first to be planned, Parramatta has its roots in the earliest days of the British colony. It was a seat of government, the landing place for convicts, and the centre of administration through the British colonial period to 1840. However, Aboriginal people continued to have a strong relationship with the area and Parramatta has always been an important meeting place. Aboriginal people have a very close and special connection to a number of institutions in Parramatta, including the Native Institution, Parramatta Gaol, Parramatta Park, and the Women's Factory.

Parramatta grew into a city in the mid nineteenth century, was fully developed in all its civic institutions. That it retains so much of its heritage is evidenced in the listing of many heritage items at Local, State, National and World Heritage levels, and these should be capitalised upon and strengthened in any future development. The numbers of cities in the world that have items of World heritage significance are few, and Parramatta finds itself in unique company on a global scale. Its heritage is one of its key attributes and one that distinguishes it from other CBDs.

Parramatta was a town planned with its civic functions from the earliest days of its settlement. The city was given a defined grid both north and south of the River – George and Church Streets being the most significant - and a suite of civic buildings and institutional precincts within and without the grid. Commercial and residential buildings were also built. The totality of the CBD's heritage – its streets and spaces as well as its buildings - provides a rich network in which to read the layers of history of the city. This holistic vision is important for any future planning in and around the Parramatta City Centre – the next layer of its history. The conservation and enhancement of its heritage, and new development that responds appropriately to its heritage, will result in a CBD in which the present day will occupy its place in the built history of the city, and of which future communities can be proud.

A challenge for Parramatta is to retain the authenticity and setting of its heritage amidst new large scale, high-rise development, particularly as its heritage buildings are generally small in scale. Heritage places in the City Centre range from individual items such as churches, halls, banks, cottages, and rows

of shops, to groups and precincts comprised of related heritage items and spaces. Important groupings of heritage items include those of Centenary Square, and the masonry commercial buildings at the intersection of Church and Macquarie Streets.

Heritage in Parramatta must not be sidelined, isolated, swamped or ignored, but rather integrated with the new fabric of a thriving city environment. Its heritage places and the connections between these places, distinguishes the Parramatta City Centre from other areas, creating local identity and visual vitality, not only helping the CBD be more people-centred, but also delivering economic benefits. There is the opportunity for the new wave of development to support the conservation of heritage places. In addition, the retention of heritage buildings enhances the sustainability of the CBD, by conserving embodied energy and by providing a diversity of tenancy and dwelling types.

Heritage places in Parramatta CBD include places such as heritage items, conservation areas, archaeological sites, Aboriginal cultural heritage sites, cultural landscapes, and heritage precincts. It is of vital importance that the heritage values of a place are understood at the earliest design stages of any development. These heritage values are not only those embodied in the fabric of a heritage place, but also in its context, and in its relationships with the broader CBD. The identification and protection of special heritage precincts, the retention of adequate space around heritage places, the use of tree canopies to provide a setting for heritage items as well as a visual break between small items and larger development, and ensuring that new buildings form a neutral backdrop to heritage places, together will serve to protect the heritage of Parramatta CBD.

The *Australia ICOMOS Burra Charter, 2013* provides guidance for the conservation and management of places of cultural significance (cultural heritage places) and is useful tool in helping to make decisions about planning for development affecting heritage places.

The following principles apply to all development in the Parramatta City Centre:

P.01 Heritage listed places are retained, conserved and enhanced.

P.02 To conserve Aboriginal cultural heritage.

P.03 The heritage values of a heritage place, as well as the contribution of the broader context, including views, and the immediate setting, to the heritage values of the place (the relationship of a heritage place to its area), are understood prior to making decisions about changes to a place, including new development.

P.04 New development situated alongside existing heritage places is accommodated in a way that is respectful and appropriate, and in a way that will improve the heritage values of a place.

P.05 The adaptation of heritage buildings is sensitively undertaken to avoid harm to their heritage significance while allowing buildings to meet changing needs.

P.06 New development is carefully designed to protect and enhance the setting of heritage places and to acknowledge and strengthen the relationships between heritage places in the City Centre.

6.2 UNDERSTANDING THE PLACE

An understanding of the heritage significance of a place and its relationship to its context is crucial to directing the nature of change that would be appropriate for a heritage place and its setting. An informed design response relies on first understanding these heritage values and then addressing opportunities and constraints that arise from these.

Objectives

O.01 Ensure that the nature of change to a place is determined by a proper understanding of its heritage significance.

O.02 The nature of change to a site within the vicinity of a heritage item, within a heritage precinct, or which has a historical or visual relationship with a heritage item or conservation area, must be determined by a detailed understanding of the contribution the subject site makes to the heritage item or conservation area.

O.03 A development proposal must demonstrate that a detailed analysis has been undertaken of the relationship of the subject site to its context and to other heritage places in the Parramatta City Centre.

Controls

C.01 The Outstanding Universal Values of the World Heritage site of Australian Convict Sites, Old Government House and Domain and the National Heritage Values of the Old Government House and the Government Domain – Parramatta must be conserved and enhanced.

C.02 The heritage significance of places listed on the NSW State Heritage Register must be conserved and enhanced. Work must be guided by the policies of a conservation management plan (or similar) which is preferably no more than 5 years old, and in accordance with any management recommendations set out on the State Heritage Register heritage inventory sheet for the place.

C.03 The heritage significance of local heritage places must be conserved and enhanced. The work must be guided by the management recommendations set out on Council's heritage inventory sheet for the place, or in a relevant heritage management document such as a conservation management plan that Council has found acceptable.

C.04 A heritage impact statement must be submitted for work that will affect a heritage item or heritage conservation area.

C.05 The heritage impact statement must include an assessment of significance undertaken in accordance with Heritage NSW guidelines and an updated heritage inventory sheet prepared using the Heritage NSW template. The assessment of significance must include a grading of significance of the component parts of the places – its spaces, fabric and landscape etc. The assessment of significance must encompass the Aboriginal cultural heritage values of the place.

C.06 The heritage impact statement must include an analysis of the relationship of the subject site to its setting and to its broad context (such as other heritage places in the CBD). Analysis of the existing and proposed urban, historic, scale and visual relationships within the immediate, street and area settings relating to the heritage place must be undertaken. The local and city

wide context must be demonstrated by drawings in plan and in section at a range of scales, so that the heritage elements, and the spaces they inhabit, are well understood. The area of context of items and conservation areas must be large enough to capture all potential impacts.

C.07 An archival photographic recording and measured drawings must be submitted prior to the demolition of any building listed on the Australian Institute of Architects NSW Register of Significant Architecture, the National Trust Register, a s170 register (as made under the auspices of the Heritage Act 1977), a place registered by DOCOMOMO Australia or which is over 50 years old.

6.3 HERITAGE RELATIONSHIPS

The potential heritage impact of a proposed development is influenced by many factors, including the type, scale, and context of a proposal. A useful way to consider the impact of a new development upon heritage items and heritage conservation areas is to consider the relationship that will exist between these places and any proposed new development. Contemporary innovative design will respect the heritage values of a place while adding a new layer of architectural design, enhancing the diversity the CBD as layers of well-designed buildings result in attractive and welcoming streetscapes.

The conservation of heritage significance will involve identifying, conserving, restoring or creating these relationships in a way that retains and enhances the significance of a heritage item or heritage conservation area.

Relationships with heritage items and heritage conservation areas with their urban context (setting) are considered to operate primarily in four ways:

- Urban relationships such as mode of address to the street, and relation to historic subdivision pattern
- Historic relationships such as historic space around the item and to other heritage places, its relationship to the natural landscape, and the names of items and places
- Scale relationships, usually assessed in terms of height, bulk and setbacks
- Visual Relationships, comprising views to and from the heritage item, and the setting of a heritage item.

Where the relationship between a heritage item and its setting contributes to the significance of a heritage place, this relationship must be preserved. New development should complement the heritage place and leave a valuable legacy for the future. Good contemporary design respects heritage values. The careful consideration of scale, massing, materials, colours, and details is critical when designing within a heritage context. The appropriateness of a particular strategy to create an acceptable relationship between a new development and a heritage item will be dependent upon the particular features of the heritage item, such as its architectural style, height, form, and street address.

The retention and conservation of a heritage item at the expense of its dignity is not an acceptable outcome. An appropriate relationship requires: the protection of important aspects of a heritage item and landscape features; providing appropriate space around an item commensurate to the scale and typology of the item; modulation of the building form to create an appropriate scale; careful design of architectural elements; appropriate landscaping; and, the use of suitable materials and colours. Development that overhangs a heritage item will reduce the significance of that item and is not acceptable in any circumstances.

The relationship of a heritage item to its ground plane is a key element in the historical and visual qualities of a place. It is important that heritage items are not isolated from their context by either raising or lowering the surrounding ground plane in a way that disrupts significant relationships.

Setbacks are an important attribute of an appropriate setting for a heritage item or for buildings in a conservation area. Appropriate setbacks create a positive space for heritage items. Setbacks from all sides of a building need to be considered, side and rear setbacks as well as street front setbacks.

Objectives

O.01 Create appropriate relationships between new development and heritage items and conservation areas, in a way that retains and enhances the heritage value of a place and the Parramatta City Centre.

O.02 Ensure that the relationship between places comprised of linked buildings and spaces are maintained where this conserves and enhances heritage values.

O.03 Ensure that a setting which contributes to the heritage values of a heritage item or conservation areas is retained.

O.04 Ensure that heritage items retain their physical and visual relationship with the existing ground planes of the site and the immediate setting, as well as with the sky.

O.05 Ensure that setbacks help to provide heritage items with a visual context that responds to the historic relationships of these places to their setting, and allows heritage items to be visually prominent elements comfortably situated in relation to the spatial organisation of new development.

Controls

C.01 Existing positive relationships on the site of a heritage item and positive relationships between a heritage item and its broader context as well as its street, must be conserved.

C.02 New development must not isolate a heritage item from its immediate surroundings where these surroundings contribute to its heritage value and setting, nor diminish the contribution of a heritage item to its context.

C.03 New development must not physically overhang a heritage item or overhang the space that provides a positive visual curtilage for the item, nor have a visual perception of overhanging. The roof of a heritage item as well as the visual curtilage of the heritage item must be open to the sky.

C.04 The ground below a heritage item, or trees which contribute to the heritage values of the place, including its setting, must not be excavated.

C.05 New buildings must not be designed to step away from heritage buildings like a ziggurat, but must have vertical walls – with the line of the wall located such that the space around a heritage item is clearly defined and there is a positive visual and physical curtilage around the heritage item.

C.06 The architectural character of a heritage item, including important architectural elements such as massing, form, parapets, roof lines, gutter lines, materials, colours and the like, must be considered in the design of new development.

C.07 Priority must be given to uses for heritage items that involve less change to significant fabric than uses that require more change.

C.08 New development must ensure that its relationship with a heritage item will not require the necessity for upgrades to the heritage item such that there will be an adverse impact on the heritage significance of a heritage item.

C.09 New uses for heritage items resulting from new development must not adversely affect the amenity of a heritage item for users.

C.10 Those parts of a new development that form the backdrop to a heritage item must be designed so that the visual prominence of a heritage item is retained and, preferably, enhanced. A discordant visual relationship is not acceptable.

C.11 The modulation, proportions and rhythm of the design of development in the vicinity of heritage items must respond to the scale and visual character of heritage items.

C.12 New buildings must not use imitation period details as a device to try and blend with historic places.

C.13 The existing ground plane of a heritage item and its immediate setting must be retained. Heritage items must not be visually isolated by changes in ground planes.

C.14 Where flood risk management requires raised levels, a sufficient extent of existing ground plane must be retained around the heritage item in order to ensure an appropriate setting, including the deep soil area of any trees.

C.15 Where original ground levels have been raised such that they detract from the setting of a heritage item, original levels must be reinstated.

C.16 Materials, finishes and colours for new developments must make a positive contribution to the heritage values of a heritage item and its setting, and must not be visually intrusive.

C.17 New developments must seek to preserve historic setback patterns if this conserves and enhances the heritage values of the place.

C.18 Setbacks for new development must be sufficient to provide a heritage item with a surrounding space of appropriate scale. The height and bulk of a proposed new building in relation to the scale of heritage items and conservation areas must be considered in determining appropriate setbacks.

C.19 Setbacks must ensure views to and from a heritage item are protected, and enhanced where they have been lost.

C.20 Landscape features that contribute to the heritage values and setting of a heritage item and conservation area must be retained and enhanced. In the case where existing trees contribute to the heritage values and setting of a heritage item and conservation area, a deep soil area beyond the perimeter of the tree canopy must be retained to the satisfaction of Council, and a basement must not be built below this area.

C.21 In the case of an historic house, a landscape area, preferably deep soil, large enough for trees with spreading canopies taller than the roof of the house, must be provided behind and at the side of the building in order to convey the original detached nature of the dwelling and a garden setting. The landscaping in front of the house, including a front fence if appropriate, must be designed to enhance the heritage values of the house.

C.22 Signs must be located appropriately in relation to the architectural design of the façade and in locations where they were traditionally placed e.g. in recessed panels designed to contain signage. Signs must not conceal architectural features or details which contribute to the significance of the heritage place.

C.23 Signage adjacent to a heritage item must not obscure or adversely affect the setting of the heritage item.

6.4 DEMOLITION

Demolition of heritage items or contributory buildings in conservation areas is not supported, nor is the retention of only the façade of a heritage item. Demolition of parts of a building that have little or no significance is acceptable so long as the replacement development does not have an adverse impact on heritage values.

Objectives

O.01 Ensure heritage items and contributory properties in conservation areas are retained.

O.02 Ensure components of a heritage item or conservation area that contribute to the heritage values of the place are retained and conserved.

Controls

C.01 Heritage items and contributory properties in conservation areas must not be demolished or destroyed through neglect. The poor structural or aesthetic condition of a heritage item or contributory building will not be considered justification for permitting demolition.

C.02 Components of a heritage item and a conservation area that contribute to the heritage values of the place must be retained and conserved.

C.03 The three dimensional form of the primary part of a heritage building and any significant part of the building, including its roof, must be retained. The retention of only the façade of a heritage item is unacceptable under any circumstance.

C.04 Heritage items must not be dismantled with the intention of reassembling following building works or relocating on a new site. Heritage items must remain insitu, and the methodology for the protection of the heritage item and any landscape components that contribute to its heritage values, during construction works included in the heritage impact statement.

6.5 AMALGAMATION OF LOTS

The majority of sites in the City Centre will require amalgamation before redevelopment becomes viable or appropriate. However, the ability of sites to be amalgamated is not the only criteria as to whether a development may be suitably accommodated on a site. New developments must seek to recognise heritage items as vital parts of a rich urban fabric.

The historical pattern of the grid of Parramatta City Centre is characterised by small lots. Some amalgamations have the potential to significantly prejudice the potential for an appropriate relationship between new development and a heritage item, simply because of an unsuitable site shape, dimension and/or configuration that cannot be overcome by design solutions. In some cases, all proposed options for a site may in fact be inappropriate, with some sites simply unable to accommodate a proposal of a certain size, and further amalgamation may be required to provide an appropriate setting for a heritage item. The direction in which amalgamations occurs may also have a determinative effect on the future urban form.

Objectives

O.01 Prioritise heritage conservation considerations in assessing developments that amalgamate heritage sites.

O.02 Ensure developments respect the primary street address of a heritage item and, where appropriate, maintain the legibility of the historic lot boundary.

O.03 Ensure that amalgamation does not result in an adverse impact on the relationship of a heritage item to its historic and visual context.

Controls

C.01 Amalgamation must not result in the isolation of a heritage item from its immediate surroundings nor diminish its ability to contribute to the streetscape. Some sites may require further amalgamation before a development may become appropriate in heritage terms.

C.02 Any new development that affects a heritage item must ensure an appropriate setting is maintained or created to conserve the significance of that item. Where an inappropriate relationship is found to exist between the existing and proposed developments, further amalgamation may be required to achieve an appropriate outcome.

C.03 Where the sites of a number of adjacent heritage items are amalgamated, developments with podiums must respond to their setting so as to not conceal the historic subdivision pattern. Long, linear podiums that conceal street rhythm are not acceptable and must instead be designed to conserve the existing streetscape pattern and rhythm.

C.04 Development must not visually join together historic buildings which were historically separate items.

C.05 The primary street address of a heritage item must be maintained as well as an understanding of its historic context.

6.6 DEVELOPMENT TO BENEFIT A HERITAGE ITEM

Any development that derives benefit from a heritage item (such as gained floor space or reduced setbacks) must in turn benefit that heritage item.

Some historic buildings have been subject to insensitive alterations, which may have resulted in an altered building form, colour, or street presence. In many cases, the actual historic nature of the building may be totally disguised. Previous unsympathetic changes should be remedied where the opportunity exists.

An important way of conserving a heritage building is for it to have a viable use. The best use for a building is usually the one for which it was built. Where this is not possible, a use which requires minimal alterations should be found. Where a viable use is not able to be found, it is preferable for a building to be "mothballed" temporarily rather than have alterations carried out that result in significant loss of original fabric.

Heritage items may require to be upgraded to meet contemporary building standards. Upgrades must be undertaken in a way that conserves the maximum significance of the heritage item.

In order to create a positive relationship between new development and a heritage item, the particular properties of a proposed material must be considered, and whether such a choice of materials and colours will compliment or adversely impact the heritage significance of a place or item or its setting.

Landscaping, in particular trees, can play an important role in providing a sympathetic scale in the immediate vicinity of a heritage item or conservation area, and to visually "soften" the hard edges of surrounding built form.

Objectives

O.01 Ensure that the heritage values of a heritage item are conserved and enhanced.

O.02 Ensure that advantages and incentives to development obtained by its relationship to a heritage item benefits the heritage conservation of the item.

O.03 Ensure that the recovery of the authenticity of a heritage item, and the minimisation of changes to heritage significant fabric, spaces and landscaping, is given priority in the site planning and design of development proposals.

O.04 Building upgrades required to meet contemporary building standards are undertaken in a way that avoids adverse heritage impacts.

O.05 Ensure that changes are sympathetic to the heritage item and additions connect to the heritage item in a way that is considered and respectful.

O.06 Ensure that existing landscape features which contribute to the heritage values of a place are retained and enhanced.

O.07 Ensure that new landscaping enhances the setting of a heritage item.

Controls

C.01 Any development that derives an advantage from a heritage item must bestow a conservation benefit on the heritage item. The nature of this benefit must be agreed with Council.

C.02 Priority must be given to uses that require no change to significant fabric and spaces, or only minimal change, in order to help conserve the character, significant fabric, spaces, and setting of a heritage item.

C.03 Development must enhance a heritage item by removing unsympathetic alterations and additions and reinstating missing details, building and landscape elements, and original internal spaces.

C.04 Modifications to original fabric, spaces and landscaping must be negligible or limited. Change to significant fabric, landscape elements, or spaces must be minimised by locating new work away from these components.

C.05 Additions must be joined to a heritage item in a way which allows the form and important components and details of the heritage item and its setting to be retained.

C.06 Repairs and alterations to the historic section of buildings must use traditional techniques and materials unless alternative techniques and materials can offer substantial conservation benefits. Relevant information, including detail drawings, must be provided with the development application.

C.07 Building upgrades must be designed to complement the character of a heritage item. New elements associated with building upgrades must be located on parts of the building that are new, or have experienced change, and must be discretely located so as to have limited visibility.

C.08 Colour schemes must have a hue and tonal relationship with traditional colour schemes appropriate to the period and style of the building in order to ensure significance is enhanced. Or the original colour scheme, if known, can be reinstated.

C.09 Original face brickwork and sandstone must not painted, rendered or re-skinned.

C.10 New landscaping designed to enhance the setting of a heritage item must be an integral component of new development. New landscaping must incorporate trees with spreading canopies behind and around heritage items where these items were originally set in a garden, or where trees would enhance the setting by providing a visual "break" between the heritage item and the new development. The soil areas for new trees and other plants must be set level with the ground plane around the heritage item and not in raised planters.

C.11 Existing signage that is deemed to have heritage value must be retained and repaired, and not altered or obscured, including historic painted signage.

C.12 A detailed schedule of conservation works must be prepared for heritage items and submitted with the development application.

6.7 Interpretation

In some instances, on-site interpretation is a good means of communicating the heritage significance of a heritage item. However, interpretation needs to be carefully considered and installed.

Interpretive opportunities may include new features or reconstructions (such as the creation of a garden, or the re-opening of a doorway) or responses to archaeological evidence (such as the acknowledgement of earlier footings in a new paving design). Care must be taken in the interpretation of a place to ensure that the interpretation itself does not detract from the significance of the place.

Objectives

O.01 Utilise interpretation in order to assist in the understanding of the heritage significance of a place.

Controls

C.01 Interpretation must not be considered as a satisfactory alternative to the retention of an item.

C.02 Interpretation must be consistent with an appropriate Heritage Conservation Management Plan or other relevant policy guidelines for the item.

C.03 Interpretation must not reduce or obscure the heritage significance of the item or place.

C.04 Interpretation must be installed with no damage or impact to significant building fabric, and must be reversible.

C.05 The appropriate treatment of a heritage item's fabric, spaces and setting must be used as a means for the interpretation of each of the significant values of the item.

C.06 Important archaeological features of the site must be interpreted.

C.07 An interpretation plan must be submitted with any development application that includes works to a heritage item or is located on the site of a heritage item.

7 FLOOD RISK MANAGEMENT

Parramatta CBD sits in the floodplain of both the Upper andLower Parramatta River Catchments, Clay Cliff Creek and other tributaries. The City is prone to mainstream (or river) flooding events and local overland flow flooding. All of this is 'flash flooding' with short warning times for building occupants and people in the streets and public spaces.

This section of the DCP provides the guidance for early consideration of integrated built form solutions that address flood risk, flood safety and good design.

For many sites, conventional (horizontal) evacuation of a building during a flood event is suitable.For sites where this is not possible, taking refuge within buildings above the Probable Maximum Flood is required. This is termed 'Shelter in Place'. This DCP explains how these alternatives are pursued for new and upgrading development.

The controls within this section of the DCP apply to flood prone land in the Parramatta CBD identified as being within the 'Floodplain Risk Management Area' on the Floodplain Risk Management map in Parramatta Local Environmental Plan 2011.

This section of the DCP should also be read in conjunction with:

- Section 2.4.2.1 of Parramatta DCP 2011and where there is an inconsistency between this section and other parts of the DCP, this section prevails. Refer also to Section 3.5.2 'Flood Affected Sites'.

- Council's Floodplain Risk Management Policyand Plan which have been created as required by the NSW Flood Policy and NSW Floodplain Development Manual.[1]

[1] A word or expression used in this Section of the DCP has the same meaning as it has in the Floodplain Development Manual (ISBN 0 7347 5476 0), published in 2005 by the NSW Government, unless it is otherwisedefined in this DCP.

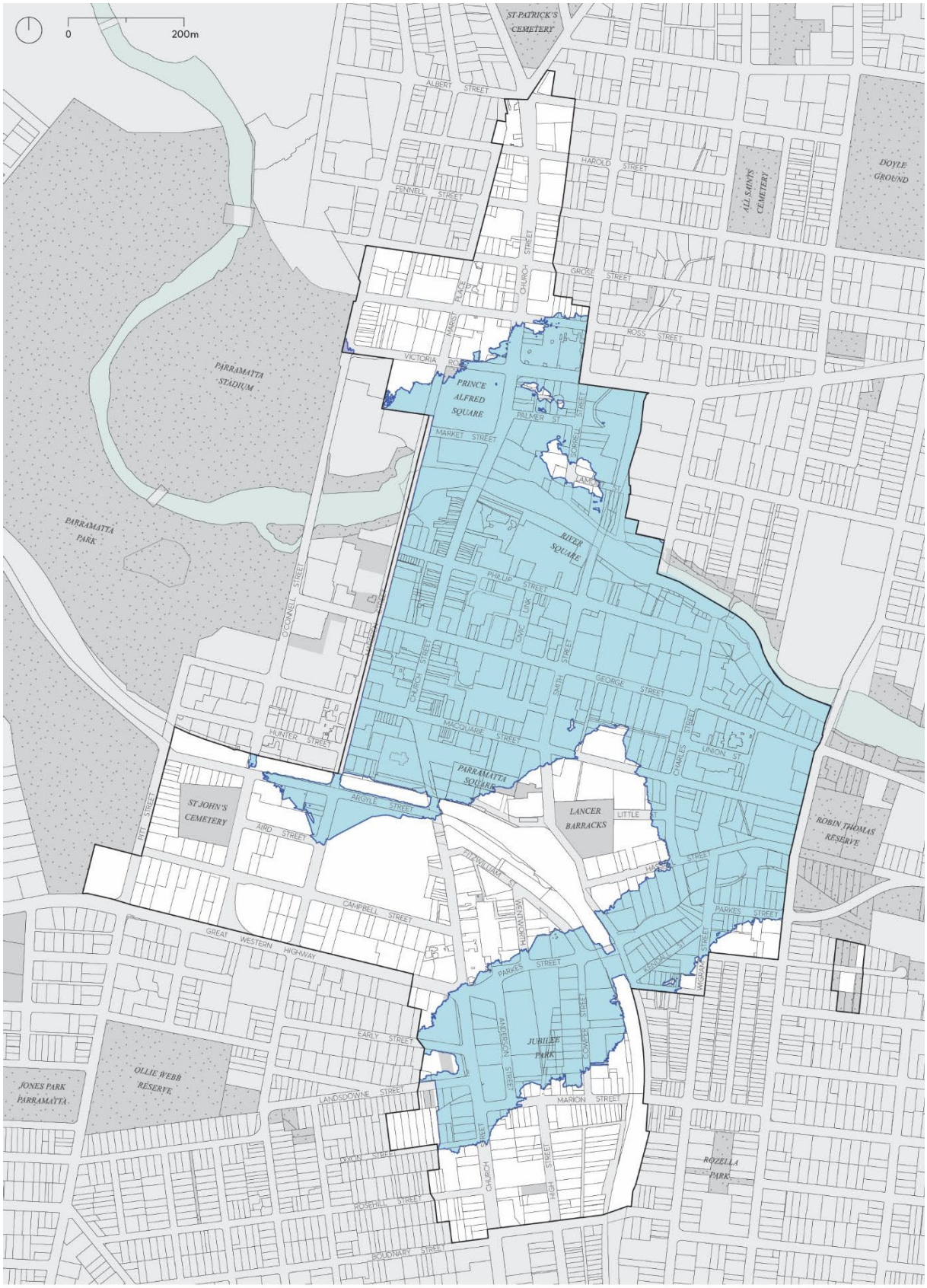


Figure CH7.01XX

Objectives

O.01 The flood environment, its risks and consequences are to be understood and responded to accordingly.

O.02 Levels of flood risk and threats to personal safety and property present for particular developments are to be minimised or significantly reduced with appropriate responses to this environment.

O.03 Council is to provide direction, guidance and regulation for the safe and sustainable development on all land affected by flooding.

O.04 Buildings and the uses they contain are to be compatible with the identified flood risk.

O.05 Early site planning and consideration of flood conditions is essential to achieve an integrated flood response that manages flood risk and provides optimum developmentdesign outcomes and interface with the public domain.

O.06 Adequate, safe flood conveyance and management of floodwaters is to be achieved, while providing for the rehabilitation, conservation and embellishment of floodways andother flood affected lands where appropriate.

Controls

C.01 Flood Hazard Modelling and hazard, risk and safety assessments for all development involving the construction of a new building or significant alterations to an existing building, and or intensification of a use is to address the PMF and floods greater than the 1% Annual Exceedance Probability (AEP) as part of the Development Application (DA), particularly where there is a potential risk to life.

C.02 Where this information is available, Council requires an Applicant to make a Flood Information Enquiry. The information supplied to an applicant via a Flood Information Enquiry will form the basis of the DA flood assessment.

C.03 In some cases, Council may require an applicant to prepare an additional flood study, for example for special local conditions, or if the proposed development is of a form or type that requires more site-specific flood modelling. Where Council requires an applicant to submit an additional flood study, the applicant must useparameters provided by Council to prepare the flood study.

7.1 ASSESSMENT AND MINIMISATION OF FLOOD HAZARDS, RISKS AND POTENTIAL FOR HARM

Risk and Merit Assessment

The NSW Floodplain Development Manual (FPDM) requires councils and consent authorities to adopt a 'risk-based approach' to floodplain development and mitigation of potential harm. This isbased on a 'merit assessment'. The FPDM sets out guidelines for this process and Council follows this approach.

The FPDM defines merit approach as:

"The merit approach weighs social, economic, ecological and cultural impacts of land use options fordifferent flood prone areas together with flood damage, hazard and behaviour implications and environmental protection and well-being of the State's rivers and floodplains.

"The merit approach operates at two levels. At the strategic level it allows for the consideration of social, economic, ecological, cultural and flooding issues to determine strategies for the management of future flood risk which are formulated into Council plans, policy and Environmental Planning Instruments (EPIs).At a site specific level, it involves consideration of the best way of conditioning development allowable under the floodplain risk management plan, local flood risk management policy and EPIs. "

"Risk of harm" is the product of likelihood and consequence. The likelihood is usually 1% AEP; and the consequence or harm describes the impact of the flow of floodwaters on people, property, buildings etc and the environment. Development proposals thatsignificantly increase risk of harm to occupants and other people, or to property within or off the development site, or to the environment will not be supported.

Hazard or 'hydraulic hazard' describes the behaviour of floodwaters and particularly the amount of flow, the extent, velocity and depth of that flow. This is primarily modelled for 1% AEP floods but may also be required for PMF conditions particularly in regard to shelter in place planning and for risk assessment of 'sensitive' and 'critical' uses.

The hazard categories H1-H6 briefly describe these impacts (see below) and shows the relationships between floodwater velocity and depth and consequent hazard for each level. Thismethodology also summarises the risk of harm for each hazard level.

Such hazard, risk and safety assessments will underpin Development Application assessment by Council and must be adequately addressed in any DA submission affected by mainstream or overland flow flooding. Often more detailed examination of hazard, risk and potential harm for a specific site and its proposed development will be required.

Objectives

O.01 Hazard, risk and safety assessments are required to demonstrate how risk and potentialfor harm to people, property, buildings, and the environment from floodwaters will be mitigated.

O.02 A risk-based approach to floodplain development and mitigation of potential harm basedon a merit assessment consistent with the Flood Plain Development Manual (2005 or as updated) is required.

Controls

C.01 All development involving the construction of a new building or significant alterations to an existing building, and or intensification of a use must be supported by flood hazard modelling that is:

a) based on the 'General Flood Hazard Vulnerability Curves' in Figure xx for the1% AEP flood and the PMF.

b) is assessed in terms of the following hazard categories and risks of harm:

- H1 – generally safe for people vehicles and buildings
- H2 – unsafe for small vehicles
- H3 – unsafe for vehicles, children and the elderly. This includes allfloodwaters greater than 0.5m depth.
- H4 – unsafe for people and vehicles
- H5 – unsafe for vehicles and people. All buildings vulnerable to structuraldamage. Some less robust building types vulnerable to failure.
- H6 – unsafe for vehicles and people. All building types consideredvulnerable to failure.

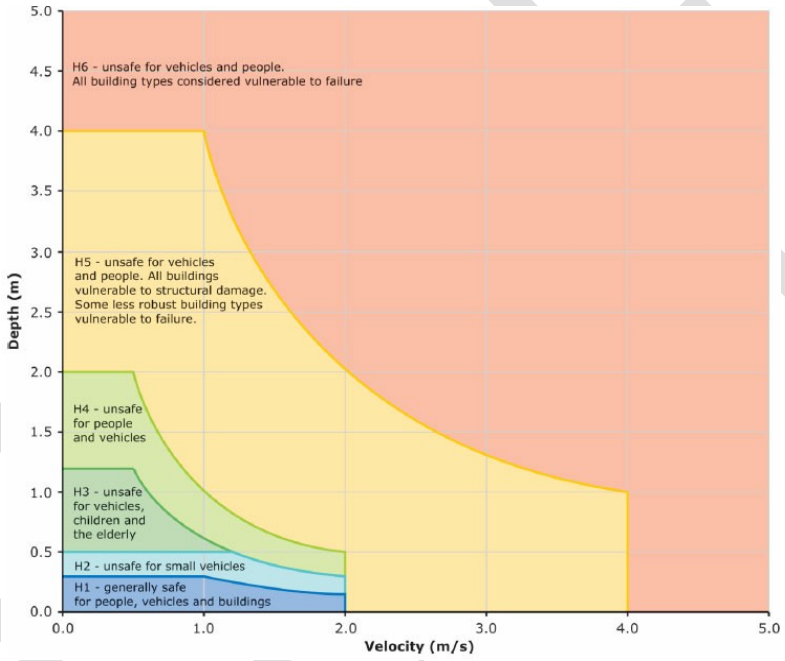


Figure x: General flood hazard vulnerability curves [2]

[2] Source: Australian Disaster Resilience Guideline 7-3 Flood Hazard (AIDR 2017)See also: Australian Rainfall and Runoff (2017, 2019)

C.02 All development involving the construction of a new building or significant alterations to an existing building, and or intensification of a use is to be supported by a merit-based flood hazard and risk assessment that:

a) Presents evidence-based analysis of the hazard, risk and harm to occupants and those in the surrounds and demonstrates how harmful factors will be mitigated.

b) Includes information on the following aspects as necessary, to enable Council to assess risk and potential for harm.

- 1% AEP and 5% AEP flood levels, flood extents, flow rates, depths and velocities for mainstream and overland flow floods,
- PMF levels, hazard, extent and behaviour for mainstream floods (not overland flow floods),
- Modelled hydraulic hazard levels, (H1-H6), extent and behaviour for 1% AEP mainstream and overland flow floods,
- Warning times and duration of flooding,
- Available warning systems (if any),
- Characteristics and vulnerabilities of future occupants
- Likelihood of multiple storms – and multiple flood peaks,
- 'horizontal' evacuation pathways including accessibility considerations
- 'vertical' evacuation opportunities and shelter in place facilities above the PMF
- Emergency services access availability,
- Local terrain,
- The development in context, and
- The proposed
- use and occupation of the development.

7.2 LAND USES AND BUILDING LEVELS

Objectives

O.01 Ensure the design of the building including floor levels and indoor and outdoor uses are appropriate for the flooding environment, particularly with regard to flood hazard and risks.

Controls

C.01 To achieve a safe environment for occupants within a building, residential habitable rooms mustbe set at or above the Flood Planning Level (FPL), which is the adjacent 1% AEP flood level plus a 500mm freeboard safety factor.

C.02 The following uses within a building will not be supported below the FPL:

a) Residential habitable rooms or uses, including those relying on flood gates, flood doors, barriers, crests, walls,windows or other physical barriers to exclude floodwaters up to the FPL

b) Gathering places such as places of worship and classrooms.

c) Uses such as child care centres, aged care facilities

d) Storage of valuable items including important records, archives and office files.

C.03 Indoor, non-habitable floor space and corresponding uses may be permitted below the FPL, subject to a satisfactory flood hazard and risk assessment and appropriate flood mitigation measures. Such uses may include:

a) Basement car parking and bicycle storage, with floodwaters excluded up to the PMF , . Subject to compliance with the controls in Section 3.9.

b) Plant and equipment, pumps, generators, batteries (all flood proofed as necessary if relied upon for shelter in place purpose)

c) Tanks, for water supplies, sewage holding, on site Detention, WSUD, liquid fuel, gas (all flood proofed as necessary relied upon for shelter in place purpose)

d) Loading docks, solid waste facilities, garbage and recycling transfer

e) Short stay parking, taxis, deliveries, couriers etc

f) Storage and warehousing of 'non-valuable items' will be assessed on merit.

C.04 Outdoor uses below the FPL may be permitted provided the design is flood risk responsive and will not unreasonably expose patrons to harm from high hazard conditions (Hazard Level H3 or greater). Development Applications for outdoor uses below the FPL must be supported by an effective Flood Emergency Response Plan and may include:

- Outdoor cafes, restaurants, bars
- kiosks,
- clubs,
- display areas,
- outdoor stages, cinemas and theatres.

C.05 Commercial and retail development at street level that is below the FPL within a building that occupies land subject to flooding in a PMF event may be permitted if:

a) a satisfactory flood hazard and risk assessment is undertaken and appropriate flood

mitigation measures are incorporated accordingly, and

b) the development is designed to minimise damage to property and risk to life, and

c) the development is not subject to or surrounded by high hazard flooding in the 1% AEP event, unless there is a flood free pedestrian access to a building (which could be another part of the same building) which is outside of the high flood risk precinct, and

d) any storage of goods below the FPL is only permitted where they are protected from floods up to the FPL.

C.06 Commercial and retail development within a basement below the FPL is, in general, not permitted within a building that occupies land subject to flooding in a PMF event.

C.07 Notwithstanding C 06, Council may at its discretion permit some types of commercial and retail development within a basement of a building below the FPL that occupies land subject to flooding in a PMF event if:

a) a satisfactory flood hazard and risk assessment is undertaken and appropriate flood mitigation measures are incorporated, and

b) occupants and visitors will not be subject to significant risk of harm caused by flooding at or near the site in a PMF event should any of the active flood barriers fail, and

c) the basement is capable of withstanding riverine and overland flow PMF forces including the weight of floodwaters potentially ponding in the basement should any of the active flood barriers fail, and

d) at least one access point from the basement to the shelter in place refuge is protected against a riverine PMF using passive, fail-proof barriers, and

e) the Flood Emergency Response Plan:

i. includes the information detailed in Control C.02 in Section 3.5 Flood Warning and Emergency Response Planning, and

ii. enables occupants and visitors of the development including those in the basement levels, to have direct flood-free access from the basement to the Shelter

iii. in place within the building that is above the PMF, and

iv. includes details of any physical flood exclusion measures in the development including procedures and practices for their operation, inspection and maintenance in perpetuity, and

f) building access and egress does not require people to traverse hazardous floodwaters – that is Hazard Level H3 and above in the PMF, and

g) any storage of goods below the FPL is only permitted where they are protected from floods up to the FPL.

7.3 SENSITIVE AND CRITICAL USES

Objectives

O.01 Ensure sensitive and critical uses and facilities are located away from unsafe floodconditions.

Controls

C.01 'Sensitive Uses and Facilities' and 'Critical Uses and Facilities,' as defined in Table 2.4.2.1.1of the Parramatta DCP 2011 Section 2.4.2. 'Water Management' (or as updated), are, in general, not permitted within a building that occupies land subject to flooding in a PMF event.

C.02 Council may at its discretion permit some 'Sensitive Uses and facilities' such as a centre-based child care, hospital or aged care facility within a building that occupies land subjectto flooding in a PMF event, if Council can be satisfied that:

a) occupants and visitors will not be subject to significant risk of harm caused byflooding at or near the site in a PMF event.

b) a Flood Emergency Response Plan is planned, designed and implemented in perpetuity to provide adequate refuge for shelter in place, as well as, emergency services access and evacuation of the centre or facility.

c) Building access and egress does not require people to traverse hazardous floodwaters – that is Hazard Level H3 and above in any flood between the 1% AEP and the PMF.

7.4 FLOOD WARNING AND EMERGENCY RESPONSE PLANNING

Evacuation plans, flood warning systems and flood emergency response plans are all important elements for reducing risk of harm during a flood event. However, it necessary to recognise that flood emergency response plans *"…cannot be soley relied upon to be effective in all flood events and therefore cannot be considered to reduce the hydraulic hazard. Atbest they reduce flood risk in events where they operate effectively and as such, flood emergency response plans should not form the basis of development consent"* [3]

Objectives

O.01 Ensure flood warning and emergency response planning is undertaken for flood prone developments to assist in reducing risk of harm. This includes:

- Flood Emergency Response Plan (FERP),
- Flood warning system
- Evacuation planning (horizontal and vertical) and emergency access and Shelter InPlace

O.02 To enable Shelter In Place, or vertical evacuation as an alternative to horizontal evacuation, for certain flood affected sites, enabling appropriate development to occur, while protecting occupants during floods.

O.03 To recognise that the difficulty of evacuation and accessing the Parramatta CBD as a whole during major floods, and the extent of the PMF from Parramatta River, means that Shelter In Place is likely to be the basis for most individual Flood Emergency Response Plans for new and renewed developments in the CBD.

Controls

C.01 All development involving the construction of a new building or significant alterations to an existing building, and or intensification of a use must be supported by a FERP.

C.02 FERPs submitted with Development Applications must include:

- both warning and evacuation measures (horizontal or vertical) for all building occupants (residents, workers and visitors) that includes the most appropriate 'safeareas' and 'safe evacuation routes';
- measures to prevent evacuation from the site by private vehicle;
- the most appropriate emergency response for flood and fire events that occurtogether;
- a building flood emergency response plan, similar to a building fire evacuation drill,and measures to ensure this is tested at least annually; and
- a statement about the consistency of the submitted FERP with the FERP for the Parramatta CBD
- evidence of consultation undertaken with relevant state and local agencies in the preparation of the FERP.

C.03 Horizontal evacuation measures are preferred for all building occupants (residents, workers and visitors) where the following can be satisfied:

[3] Floodplain Development Manual page L9

a) Pedestrians can evacuate safely from a building via a flood free pedestrian access ona 'rising road' to an area of refuge located above the PMF. The evacuation pathway must not require passage through deepening floodwaters.

b) An exit from a building is provided above the PMF that is accessible internally to all occupants.

c) Address requirements for accessibility and be available for all occupants (where possible)

d) If feasible and beneficial, provide a link to a neighbouring building by means of an internal access or a bridge, connecting buildings and leading occupants to an exit above the PMF

e) Not rely on lifts, elevators etc.

f) Address access into the property during floods by Emergency Services such as SES, Ambulance, Fire and Rescue.

C.04 Where horizontal evacuation is not feasible, Shelter In Place or vertical evacuation must be provided for all building occupants (residents, workers and visitors) that offers access to a safe indoor area of refuge or 'shelter in place' above the PMF where they can remain until the flood event has passed and any subsequent disruption after the flood has been rendered safe and serviceable.

C.05 Shelter In Place or vertical evacuation measures must satisfy the following requirements:

a) Refuge shelters must be adequate and fit for purpose (size, design, equipment, supplies) and maintained as such in perpetuity.

b) Unless otherwise advised by Council, facilities must be designed for a refuge stay of at least 72 hours, with longer time periods addressed in design, equipment and provisioning.

c) It is recommended, and may in some cases be required, that large and high rise residential buildings be provided with emergency back-up power, water supply and sewerage for all residential units and common facilities including lifts. This must be provided in the context of an overarching Emergency Response Plan that includes flooding, power outages, extreme weather events and other incidents.

d) Where the building design and back-up systems enable some residents to safely remain in their own apartments for extended periods during floods, all such residents must still have access to a communal refuge area of adequate size where support from other residents and emergency supplies are available.

e) The communal safe area of refuge must be permanently provided with as a minimum:

- emergency electricity supply, and lighting,
- clean water for drinking, washing and toilet flushing,
- working bathroom and toilets,
- suitable food,
- personal washing facilities,
- medical equipment including a first aid kit,
- a battery-powered radio and relevant communications equipment.

C.06 Requirements for the communal safe area of refuge must be detailed in the Flood Emergency Response Plan supporting the DA and must address:

- Numbers of people likely to need the facility and consequent size, equipment and provisioning requirements

- Means to ensure ongoing services such as power, water and wastewater disposal, communications
- Long term maintenance as part of the building management system
- Dual use of the refuge area for other non-emergency communal functions (if practical)

C.07 All safe areas of refuge (residents own apartment or a communal area) must have:

a) fail safe access to the safe area of refuge from anywhere in the building including the basement (lift access is not allowed) that is protected from floodwaters up to the PMF by suitable flood doors, flood gates and the like; and

b) fail safe access to an exit/entry point located above the 1% AEP flood level plus 0.5m freeboard that enables people to exit the building during a fire and/or flood, and allows emergency service personnel to enter a building to attend to a medical emergency.

7.5 DEVELOPMENT IN AND NEAR FLOODWAYS, RIPARIAN ZONES AND NATURALISED CHANNELS

Objectives

O.01 Development in and near floodways, riparian zones and naturalised channels requirescareful planning and detailed design to protect occupants and people in the locality while supporting flood conveyance requirements, beneficial environmental outcomes and optimising development opportunities.

O.02 Encourage naturalisation and semi-naturalisation of concrete floodway channels andcreeks where feasible.

Controls

C.01 Design of new waterways and rehabilitation of existing waterways and creeks must maximise habitat, ecological and landscape values, both in the aquatic and riparianenvironments, while ensuring hydraulic functions are not diminished.

C.02 Development adjoining creeks and rivers must incorporate protection and conservation of riparian zones, as well as facilitating human access, amenity andpublic safety as appropriate.

C.03 Where a site adjoins a creek or river, a substantial riparian buffer zone along the fullsite frontage is likely to be required to enable the river bank to be rehabilitated andecological damage to be repaired. Any stormwater infrastructure in this zone must address this and not impact it negatively, either immediately, or in the long term.

C.04 The overall development must provide for public safety, evacuation and such mattersas bank stability and erosion control, riparian vegetation and so on.

7.6 CONTROLS FOR FLOODWAYS

Objectives

O.01 To ensure floodways are not directed within or beneath a building

O.02 To consider open-air floodways on a site.

Controls

C.01 Council will not support proposals for flood flow-through or flood storage chambers withinor beneath a new building.

C.02 Council will consider on merit the use of part of the ground level building footprint for anopen-air overland flow path or floodway, provided that:

- The floodway within and beyond the footprint is designed and maintained for publicsafety and risk management.
- Flood hazard conditions are effectively managed to minimise risks to public safety.

C.03 Any cantilever building element (excluding any structural support columns or similar) must have a minimum 4 metre clearance above the ground surface level of the overland flow path throughout the site to enable a landscaped open space to be created. The landscaped open space must:

- be designed for low intensity and low risk pedestrian activities, recognising this islikely to be a site of 'high hazard' flash flooding;
- create a positive and safe experience for pedestrians;
- promote activity, connectivity and variety in the public domain;
- be designed having regard to aspect, height and proportions;
- be designed in conjunction with street levels to facilitate step-less access; and
- be provided with 'deep soil' and planted with appropriate tree and shrub species thatare satisfactory to Council for this context.
- The horizontal extent of any overhang is subject to Council approval and UrbanDesign requirements.
- Undercrofts are generally not supported.
- The cross sectional area and width of the floodway within the building footprint is lessthan the area and width of the floodway beyond the footprint.

C.04 A floodway or flow path adjacent to a building must not be obstructed by permanent design elements such as walls, stairs, ramps etc. Building support columns may be acceptable. Trees and 'soft landscape', appropriate surface treatments, including paving and ground cover, may be permitted, subject to Council approval.

C.05 Seating, tables, and small structures such as kiosks, coffee carts and market stalls may be permitted in a floodway if they are designed for public safety and do not significantly obstruct the floodway, and must satisfy the following:

- Such structures may be designed to collapse in floods provided they do not generate significant or hazardous debris in doing so.
- Each structure must be structurally able to withstand flooding for both the FPL and full immersion conditions, allowing for waterborne debris, hydrostatic and hydro- dynamic forces, flotation and scour. 'Withstand' may include as an alternative the ability of the structure to safely collapse without generating significant debris. 'Withstand' also includes presenting a minimum vertical surface area and maximum permeability to the moving floodwaters and associated debris. The structures may begiven external protection such as with large, deep rooted trees – but this must be justified structurally and arboriculturally.
- must be constructed with flood compatible materials and construction methods and services such as power lines, telecoms must be waterproofed.
- Such structures are not to be 'habitable' rooms, as defined by the Floodplain Development Manual, and must not be used for the storage of valuable items including important records. (Note bicycle storage is acceptable. Kiosks may be acceptable provided they do not create 'habitable' rooms, store valuable items, or significantly increase risk to the public and occupants.)
- As these structures are not habitable rooms/floors, there is no minimum floor level.

7.7 CONTROLS FOR PARRAMATTA RIVER BANK AND FORESHORES

Objectives

O.01 Parramatta River bank and foreshores require special consideration given its combinationof high flood risk, high public use and environmental values.

O.02 Careful design of Parramatta River bank and foreshores in the CBD is required toreconcile potential conflicts arising from 'high hazard floodway' conditions while encouraging public domain use and activation.

Controls

C.01 Design must provide for effective flood warning and evacuation pathways must besuitable for the frail, disabled and other vulnerable people.

C.02 Buildings and infrastructure must be minimal and appropriate for this severe environmentthat is regularly flooded.

C.03 'Habitable rooms' (as defined in the Floodplain Development Manual) must not be developed in such high hazard inundated areas – but some non-habitable facilities such as kiosks may be acceptable if designed appropriately. For further requirements refer elsewhere in this DCP regarding building in or near floodways.

7.8 CAR PARK BASEMENTS IN FLOOD PRONE AREAS

Objectives

O.01 Ensure the risks associated with car park basements in flood prone areas are adequately mitigated.

Controls

C.01 Council will only allow basement car parking in flood prone land if the proposal demonstrates:

a) effective floodproofing and flood exclusion of the basement against all floods up to the PMF; and

b) adequate safety for occupants of the basement and building including a flood free vertical evacuation path to a safe refuge above the PMF; and

c) consistency with other Council objectives (such as traffic management).

C.02 To seek to demonstrate the appropriateness of a basement car park within a flood prone area, the following details must be included as a minimum in the Development Application,

a) Demonstration that high hazard floodwaters (H3 or greater) will not occur in a 1%AEP event in the area adjacent to the driveway.

b) The basement must be protected from the ingress of floodwater by passive measuresat least up to the flood planning level. These measures are likely to include provision of a driveway crest at or above the flood planning level with associated wing / or bund walls to this level to prevent floodwaters flowing into the basement.

c) The basement must be protected from the ingress of floodwater via the driveway up to the Probable Maximum Flood level. These measures are likely to include provision of a self-triggering and self-powered flood gate at or near the driveway crest that reaches the level of the PMF, together with corresponding wing wall bunds etc. to thesame PMF level.

d) The basement must be protected from the ingress of floodwater via stairwells and other openings up to the Probable Maximum Flood level. These measures are likely to include a combination of a self-closing flood doors, flood gates and bund walls. Flooddoors may also be fire doors.

e) Provision of flood-free escape stairs from the basement up to a place of refuge withinthe building above the PMF level with adequate facilities for users during and after a flood.

f) Provision of adequate car parking for the disabled and an escape path that can befollowed to safety.

g) Submission of a comprehensive Flood Emergency Response Plan incorporating all of the above.

C.03 The Building Management System and Plan for the development must include all necessary measures to maintain, test and operate the flood protection devices including flood gates, doors and barriers, flood sensors, flood refuges and FERP.

C.04 Subject to other controls, automatic 'stacker' car parks may be acceptable in that they substantially reduce the likelihood of people being in the basements and needing to escape from them.

Glossary

Annual Exceedance Probability AEP % per annum - likelihood or probability of a specific flood occurring in any given year.

5% AEP (formerly 1 in 20-year flood) is a statistical event to describe a flood of this size or greateroccurring in any given year.

1% AEP - (formerly 1 in 100-year) flood is a statistical event (1% Annual Exceedance Probability) to describe a 1% chance of a flood of this size or greater occurring in any given year.

PMF – The Probable Maximum Flood (PMF) is the largest flood that can be predicted at a particular location, usually modelled from the probable maximum precipitation (PMP rainfall). ThePMF defines the extent of flood prone land, that is, the floodplain.

Flood Hazard – A combination of velocity and depth of floodwaters that generates varying degrees of unsafe conditions and risks for people and property now categorised as H1-H6 where H3 and above are unsafe for people.

Flood Planning Level (FPL) – is the level of the governing 1% AEP flood event plus 500mm freeboard. The governing 1% AEP flood is the higher of the mainstream (river or creek) flood leveland the overland flow flood level. The freeboard is a fixed safety factor which allows for modelling variation and factors such as waves and turbulence. It does not include an allowance for Climate Change.

Flood prone land – is land susceptible to flooding by a PMF event.

Climate Change is currently predicted to increase both rainfall intensity and tidal levels and must be considered in flood risk assessment.

Flash floods – Occurs when floods reach an area less than two hours after heavy rainfall. Parramatta River and its tributary creeks are subject to flash flooding.

Mainstream Flooding (or Riparian or Fluvial Flooding) – increased flow in major and minor rivers, creeks and tributaries causing a rising water level wave that usually overtops the banks. In Parramatta this is all flash flooding.

Overland flow flooding (or Pluvial Flooding) – Water that runs across the land after rainfall, before it enters a mainstream waterway. Overland flow is normally generated by intense rainfall in a localised catchment and is also flash flooding.

SES Emergency Response Classification - determined by the SES according to the impact a flood may have in a certain area based on operational issues of evacuation, resupply and rescue.

The Flood Planning Level is the 1% AEP flood level plus 0.5m freeboard safety factor.

The Flood Planning Level is the required minimum finished floor level of all habitable rooms.

The FPL is the higher of the river or creek mainstream flood level, or the local overland flow flood level - plus 0.5m freeboard in both cases.

The PMF is modelled only for river or creek flooding, not from overland flow flooding. Freeboard is not required for the PMF.

Resources and References:

Floodplain Risk Management Plan and Policy - City of Parramatta Council, Floodplain Risk Management Committee, 2021

Parramatta DCP 2011

Parramatta LGA Flood Study 2022 (in progress)

Parramatta LGA Flood Studies, Upper and Lower Parramatta River 2005, Duck Creek 2012 etc

Risk Management – Principles and Guidelines (International Organization for Standards, 2009). ISO 31000:2009

National Emergency Risk Assessment Guidelines Australian Disaster Resilience Handbook 10 - (NERAG) AIDR 2015,

Managing the floodplain a guide to best practice in flood risk management in Australia The Australian Institute for Disaster Resilience Commonwealth of Australia, 2017, 3rd Edition Handbook m7 and 2020

Australian Rainfall and Runoff: A Guide to Flood Estimation, Ball J, Babister M, Nathan R, Weeks W, Weinmann E, Retallick M, Testoni I, Geoscience Australia, Australia, 2016, 2017, 2019

NSW Flood Prone Lands Policy and Floodplain Development Manual 1985, 2005 – (currently being updated)

Public Domain Framework, City of Parramatta 2012;

Best Practice Urban Design in Flood Prone Areas, City of Parramatta 2021

Update of Parramatta Floodplain Risk Management Plans by Molino Stewart Pty Ltd February 2016 (Draft Version 5)

Reducing Vulnerability of Buildings to Flood Damage – Guidance on Building in Flood Prone Areas. Hawkesbury-Nepean Floodplain Management Steering Committee (HNFMSC), June 2006

8 ENVIRONMENTAL SUSTAINABILITY

Sustainability and infrastructure studies undertaken for the Parramatta CBD found that the predicted CBD growth under the development as usual scenario will result in:

- 3 x increase in energy and water demand,
- 4 x increase in sewer loads.

This will increase greenhouse gas emissions, place increasing pressure on our energy, water and sewer infrastructure, and lock households and businesses in to higher than necessary utility costs.

The temperature increases already experienced in Parramatta, and the densification of the CBD (less pervious surfaces, vegetation and trees, and increase in built form) mean that urban heat impacts will also increase as our city grows.

To limit the impact of this growth, it's important to design and build environmentally sustainable buildings that reduce energy and water use, greenhouse gas emissions and urban heat.

8.1 HIGH PERFORMING BUILDINGS

High energy and water performing buildings require development standards to be materially better than the national minimum regulated standards. To deliver high performing buildings in Parramatta CBD, a Best in Market approach has been adopted in the LEP, whereby specified non-residential development is required to perform within the top 15 percentile of similar existing building performance across Greater Metropolitan Sydney.

This approach reflects genuine best practice for energy and water performance, benchmarked in the NABERS performance databases, and ensures the requirements are technically and commercially feasible. The dynamic calibration of the best in market requirements, updated through the LEP, will ensure the currency of the target and delivery of high performing new development.

Objectives

O.01 Encourage high performing building design (namely the built form, layout and services) ofoffice premises, large-scale retail premises, hotel or motel accommodation, serviced apartments, residential flat buildings and mixed-use development that minimises the consumption of energy and water.

Controls

C.01 Verification of the LEP High Performing Building requirements (3a) must be evidenced bya National Australian Built Environment Rating System (NABERS) Commitment Agreement(s) for the development at the necessary level of performance.

8.2 DUAL WATER SYSTEMS

Objectives

O.01 Increase resilience and water security by providing an alternative water supply to buildings.

O.02 Reduce the technical and financial barriers to upgrading buildings to connect to futurenon-drinking water supply infrastructure.

O.03 Support the growth infrastructure requirements for the Greater Parramatta OlympicPeninsula.

Controls

C.01 All development involving the construction of a new building or significant alterations to an existing building must install a dual water or reticulation system to support the immediateor future connection to a recycled water network. The design of the dual reticulation system is to be such that a future change-over to an alternative water supply can be achieved without significant civil or building work, disruption or cost.

To facilitate this, the dual reticulation system is to have:

a) One reticulation system servicing drinking water uses, connected to the drinkingwater supply, and

b) One reticulation system servicing all non-drinking water uses, such as toilet flushing, irrigation and washing machines. The non-drinking water system is to beconnected to the rainwater tank with drinking water supply backup, until an alternative water supply connection is available. The non-drinking system is to be provided with a connection point adjacent the street boundary for easy connection to a future district non-drinking water supply.

c) Metering of water services is to be in accordance with the Sydney Water *Multi- level individual metering guide Version 9: June 2020*. Individual metering of the non-drinking water service is optional.

8.3 ALL ELECTRIC BUILDINGS

Buildings built today will be around for the next 50-100 years. Moving away from buildings that use on-site combustion of fossil fuels to power appliances is a key strategy for buildings to reduce emissions from the increasingly renewable grid supplied electricity, and transition to a low carbon future. All electric buildings also reduce construction and operating costs through the elimination of gas pipes and metering and ongoing connection and usage charges, as well as providing enduring health benefits to occupants.

Objectives

O.01 Reduce the combustion of fossil fuels through electric only connected new buildings, that benefit from the progressive greening of grid supplied electricity in NSW.

O.02 Reduce indoor air pollutants associated with the onsite combustion of gas to improve air quality for occupants.

O.03 Operational cost savings to occupants through the avoidance of gas connection and ongoing connection charges.

O.04 Reduction in need for utility cabinets in the street and on street walls.

Controls

C.01 All new buildings are to use only electricity (grid provided and on-site renewables) for all energy requirements associated with normal operations.

C.02 Where it is demonstrated that the intended use of the building requires a process or equipment that is not able to be served by electricity, fossil fuels may be provided to service that service only. Evidence shall be provided with the application of market testing and equipment supplier advice to confirm that an electricity powered alternative is not technically possible.

8.4 ELECTRIC VEHICLE CHARGING INFRASTRUCTURE

The transition to electric vehicles and the phasing out of fossil fuel use are key strategies to reduce emissions and move to a low carbon future. The following controls aim to provide the essential infrastructure for vehicle charging that will future proof the buildings and ensure residents can easily transition to electric vehicles. Without essential infrastructure, the future installation of charging facilities by an apartment owner can be much more expensive and, in some cases, technically impossible.

Objectives

O.01 Realise the positive benefits of increased electric vehicle adoption on urbanamenity including air quality and urban heat.

O.02 Ensure new development in Parramatta provides the necessary infrastructure tosupport the charging of electric vehicles.

O.03 Minimise the impact of electric vehicle charging on peak electrical demandrequirements.

Controls

The following Electric Vehicle (EV) technical terms are used:

EV Ready Connection is the provision of a cable tray and a dedicated spare 32A circuit provided in an *EV Distribution Board* to enable easy future installation of cabling from an EV charger to the *EV Distribution Board* and a circuit breaker to feed the circuit.

Shared EV Connection is the provision of a minimum Level 2 40A fast charger and Power Supply to a car parking space connected to an *EV Distribution Board*.

EV Distribution Board is a distribution board dedicated to EV charging that is capable of supplying not less than 50% of EV connections at full power at any one time during off-peak periods. This will ensure that the impacts of maximum demand are minimized, and that increases to electrical feed sizes are not required. To deliver this, the distribution board will be complete with an *EV Load Management System* and an active suitablysized connection to the main switchboard. The distribution board must provide adequate space for the future installation (post construction) of compact meters in or adjacent to the distribution board, to enable the body corporate to measure individual EV usage in the future.

EV Load Management System is a system capable of:

a) reading real time current and energy from the electric vehicle chargers under management

b) determining, based on known installation parameters and real time data, theappropriate behaviour of each EV charger to minimise building peak power demand whilst ensuring electric vehicles connected are full recharged.

c) scale to include additional chargers as they are added to the site over time.

C.01 All multi-unit residential car parking must:

a) Provide an EV Ready Connection to at least one car space for each dwelling.

b) Provide EV Distribution Board(s) in of sufficient size to allow connection of all EV Ready Connections and Shared EV connections.

c) Locate EV Distribution board(s) so that no future EV Ready Connection will require a cable of more than 50m from the parking bay to connect.

d) Identify on the plans submitted with the DA the future installation location of the cable trays from the EV Distribution Board to the car spaces allocated to each dwelling that are provided a Future EV connection, with confirmation of adequacy from an electrical engineer. Spatial allowances are to be made for cables trays and EV Distribution Board (s) when designing in other services.

C.02 All car share spaces and spaces allocated to visitors must have a Shared EV connection.

C.03 All commercial building car parking must

a) Provide 1 Shared EV connection for every 10 commercial car spaces distributed throughout the carpark to provide equitable access across floors and floor plates.

8.5 URBAN COOLING

Urban heat or the Urban Heat Island effect refers to the higher temperatures experienced inurban areas compared to rural or natural areas. Urban heat impacts our communities, businesses and natural environment in many ways, including increase demand for electricityand water, a less comfortable public domain for pedestrians and associated health impacts.On average, Parramatta experiences more frequent hotter days than Sydney average (Australian Bureau of Meteorology).

As more development occurs in the Parramatta Local Government Area, the build-up of heat inthe environment occurs through trapping of radiation in street canyons, increased hard surfaces, reduced vegetation, and heat rejection from buildings surfaces and air conditioning units. The build-up of heat is compounded as more dense urban environments reduce the amount of heat able to be removed by wind and re-radiation to the night sky, extending the period of discomfort.

This section of the DCP provides controls which aim to cool and remove heat from the urban environment at the city and local scale. These are innovative controls based on Australian and international evidence on cites and the urban heat island effect. The controls address the:

- reflectivity of building roofs, podiums and facades;
- reduce the impacts of heat rejection sources of heating and cooling systems;
- green roofs or walls.

The following complementary controls contained in the DCP assist with the reduction of urbanheat:

- encouraging laminar wind flows and reducing turbulence through the Setbacks aboveStreet and Lane Frontage height controls (refer built form section);
- vegetation and retention of soil moisture through Water Sensitive Urban Design (insertsection);
- street trees and vegetation in the public domain (insert section);
- well-designed Landscaping and Green Roofs and Walls; and
- awnings on streets (ref Public Domain).

Solar heat reflectivity should not be confused with solar light reflectivity, as these are distinctlydifferent issues. Solar heat contributes to urban warming and solar light reflectivity can be thecause of glare, which is covered in ref ESD section 8.11.

These controls do not consider energy efficiency or thermal comfort within buildings. These important issues are dealt with in other controls, State Environmental Planning Policies and the National Construction Code.

The following technical terms are used as part of controls in this section of the DCP:

Solar heat reflectance is the measure of a material's ability to reflect solar radiation. A 0% solar heat reflectance means no solar heat radiation is reflected and 100% solar heat reflectance means that all of the incident solar heat radiation is reflected. In general, lighter coloured surfacesand reflective surfaces such as metals will have typically higher solar heat reflectance, with dark coloured surfaces or dull surfaces will typically have lower solar heat reflectance. External solar heat reflectance measured at the surface normal (90 degrees) is used in these controls.

Solar transmittance is the percentage of solar radiation which is able to pass through a material. Opaque surfaces such as concrete will have 0% solar transmittance, dark or reflective glass may have less than 10%, whilst transparent surfaces such as clear glass may allow 80 to 90% solar transmittance.

Solar Reflectance Index (SRI) is a composite measure of a materials ability to reflect solar radiation

(solar reflectance) and emit heat which has been absorbed by the material. For example, standard black paint has a SRI value of 5 and a standard white paint has a SRI value of100.

Reflective Surface Ratio (RSR) is the ratio of reflective to non-reflective external surface on any given façade.

Reflective surfaces are those surfaces that directly reflect light and heat and for the purposes ofthis DCP are defined as those surfaces that have specular normal reflection of greater than 5% and includes, but is not limited to, glazing, glass faced spandrel panel, some metal finishes and high gloss finishes.

Note: for calculation in Table 1 and Table 3, RSR is to be expressed as a percentage between 1 and 100.

Non-reflective surfaces are those surfaces that diffusely reflect light and heat and for the purposes of this DCP are defined as those surfaces that have specular normal reflection of lessthan 5%.

Maximum External Solar Reflectance is the maximum allowable percentage of solar reflectance for the external face of a Reflective Surface. The percentage of solar reflectance is to be measureat a normal angle of incidence

Objectives

O.01 Reduce the contribution of development to urban heat in the Parramatta LocalGovernment Area; and

O.02 Improve user comfort in the local urban environment (communal/private open space and the publicdomain).

8.5.1 ROOF SURFACES

Objectives

O.01 Reflect and dissipate heat from roofs and podium top areas;

O.02 Improve user comfort of roof and podium top areas.

Controls

C.01 Where surfaces on roof tops or podiums are used for communal open space or other active purposes, the development must demonstrate at least 50% of the accessible roof area complies with one or a combination of the following:

a) Be shaded by a shade structure;

b) Be covered by vegetation consistent with the controls under Section 8.5.4 GreenRoofs or Walls;

c) Provide shading through canopy tree planting, to be measured on extent of canopycover 2 years after planting.

C.02 Where surfaces on roof tops or podiums are not used for the purposes of private or public open space, for solar panels or for heat rejection plant, the development must demonstrate

the following:

a) Materials used have a minimum solar reflectivity index (SRI) of 82 if a horizontal surface or a minimum SRI of 39 for sloped surface greater than 15 degrees; or

b) 75% of the total roof or podium surface be covered by vegetation; or

c) A combination of (a) and (b) for the total roof surface.

8.5.2 FACADES

Objectives

O.01 Minimise the reflection of solar heat downward from the building façade into communal/private openspace or the public domain.

Controls

C.01 The facades must demonstratea minimum percentage of shading calculated on the 21 December and evidenced with the provision of shadow diagrams with the development application. The time and extent of shading required for each façade orientation is detailed in the Technical Requirements UHI façade shading.

C.02 Shading may be provided by:

a) External feature shading with non-reflective surfaces;

b) Intrinsic features of the building form such as reveals and returns; and

c) Shading from vegetation such as green walls that is consistent with the controls insections 4.4 The Street Wall and 7.9 Green Roofs or Walls.

C.03 Where multiple reflective surfaces or convex geometry of reflective surface introduce the risk of focusing of solar reflections into the public spaces:

a) Solar heat reflections from any part of a building must not exceed 1,000W/m2 in the public domain at any time;

b) A reflectivity modelling report may be required to qualify extent of reflected solar heat radiation. The modelling is required to consider all aspects that influence the amount of solar heat reflected at any point in time, including three-dimensional geometry, façade articulation specularity and angular dependent reflectivity of surfaces.

8.5.2.1 Technical Requirements - UHI façade shading

The following technical requirements provides the details for demonstrating the minimum required shading under condition 8.4.2 C.01. The detailed technical requirements are provided to allow non-prescriptive design solutions to meet the minimum shading requirements for façade orientation and extent of *Reflective surfaces and* provide a simple means of confirming adequacy at the time of application.

Background

Unshaded facades reflect solar heat into streets and open space where is can be absorbed and contribute to the energy imbalance that causes the urban heat island effect. Modern glass often achieves energy efficiency by maximizing the amount of non-visible heat that is reflected from the glass, which reduces energy into the building but magnifies the amount of heat that is reflected into streets and open space. All glass and similar reflective materials also increase reflectivity of light and heat and low angles of incidence. It is these low angles of incidence where solar shading is most effective. The diagram below shows the amount of solar heat that 50% of solar heat would typically be reflected from best case untreated clear glass at a 10° angle of incidence without shading. Solar shading (right) performs well to reduce the amount of solar radiation that will be reflected into the streets and open space as it blocks both the sun from hitting the façade and solar reflections from the façade.

A. Facades requiring shading

Facades with reflective surfaces must demonstrate a minimum percentage shading as determined in Tables 1 and 2 for the 21 December, at the reference times included in Table 3.

Shading is not required on facades:

- where the *Reflective Surface Ratio (RSR)* is less than 30%
- that are orientated south of south-southeast and south-southwest.

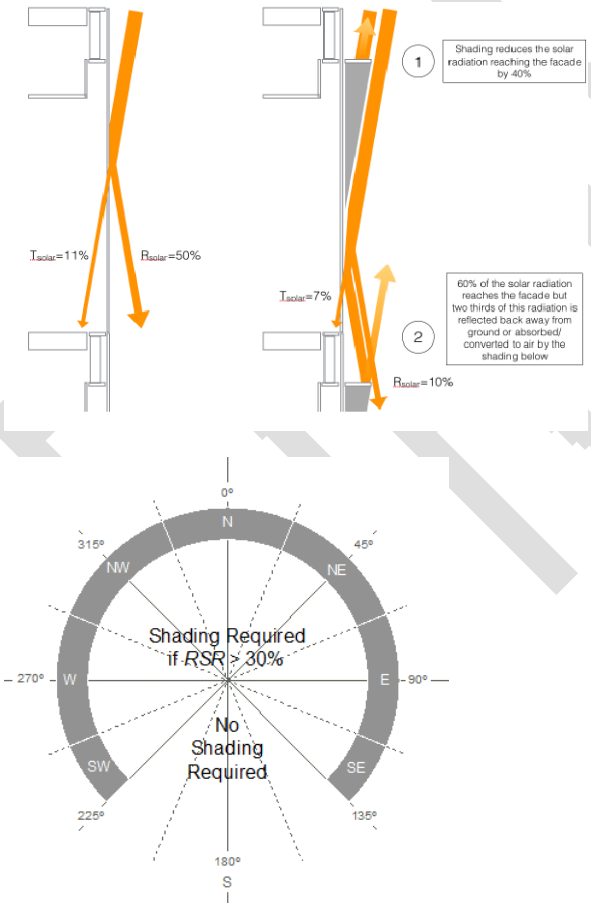


Figure 1 confirms the shading requirements for each facade orientation.

Elements which can be counted to shading the facade may be:

- External feature shading with *non-reflective surfaces*
- Intrinsic features of the building form such as reveals and returns
- Shading from vegetation such as green walls that are consistent with the controls on green roofs and walls.

The following elements cannot be counted as shading to the shading requirements:

- Existing buildings,
- Existing structures

B. Percentage of shading required

The percentage shading required to the Reflective surfaces to be shown in the shadow diagram is determined by the Reflective Surface Ratio (RSR) of each façade and the calculation tables below.

Reflective surfaces on street walls (or if no street wall, as measured from the first 21 metres from the ground plane) are to be provided with the minimum percentage shading in Table 1.

Table 1

Calculation of minimum percentage shading for *Reflective surfaces* on street walls

Reflective Surface Ratio (RSR)	<30%	30%-70%	>=70%
Minimum percentage shading (%)	0	(1.5*RSR)-45	75

Reflective surfaces on tower façades (above the street wall or if no street wall, asmeasured above the first 21 metres from the ground plane) are to be provided with the minimum percentage shading in Table 2.

Table 2

Calculation of minimum percentage shading for *Reflective surfaces* on tower facades

Reflective Surface Ratio (RSR)	<30%	30%-70%	>=70%
Minimum percentage shading (%)	0	(0.8*RSR)-24	40

C. Shadow Diagram requirements

Shadow diagrams must be submitted with the development application showing the extent of shading of *Reflective surfaces* at the nominated time for each relevant façade.

The shadow diagrams are to include a calculation of the percentage of shading provided and the RSR for each façade.

Table 3 provides the nominated sun angles and shadow diagram reference times for each façade orientation where shadow diagrams are required.

Orientation of facade	Time	Sun angles
East± 22.5°	10 am AEDT	Sun elevation: 51° Sun Azimuth: 86°
Northeast/Southeast ± 22.5°	11.30 am AEDT	Sun elevation: 69° Sun Azimuth: 66°
North± 22.5°	1 pm AEDT	Sun elevation: 80° Sun Azimuth: 352°
Northwest/Southwest ± 22.5°	2.30 pm AEDT	Sun elevation: 67° Sun Azimuth: 290°
West ± 22.5°	4 pm AEDT	Sun elevation: 48° Sun Azimuth: 272°

Table 3 Shading sun angles

Where it is demonstrated that shading cannot be achieved in accordance with the shading controls, a Maximum External Solar Reflectance as defined in Table 4 is generally acceptable.

Reflective Surface Ratio (RSR)	<30%	30%-70%	>=70%
Maximum External Solar Reflectance (%)	No Max.	62.5-0.75*RSR	10

Table 4 Calculation of *Maximum External Solar Reflectance*.

8.5.3 HEATING AND COOLING SYSTEMS – HEAT REJECTION

Objectives

O.01 Reduce the impact of heat rejection from heating, ventilation and cooling systems from contributing to the urban heat island effect in the Parramatta Local Government Area; and

O.02 Avoid or minimise the impact of heat rejection from heating, ventilation and cooling systems on user comfort in private/communal open spaces and the public domain.

Controls

C.01 Residential apartments within a mixed-use development or residential flat building, and non-residential development must incorporate efficient heating, ventilation and cooling systems (HVAC) which reject heat from a centralised source.

C.02 The location of centralised heat rejection for buildings should be the roof.

C.03 For residential apartments within a mixed-use development or residential flat building with more than 8 residential storeys, and where it can be demonstrated that a rooftop location is not practical, the centralised heat rejection can be located in dedicated on-floor plant rooms that are sufficiently sized to provide efficient heat rejection and suitably screened to reduce visual and noise impacts.

C.04 Where the heat rejection source is located on the upper most roof, these must be designed in conjunction with controls in this Section of the DCP relating to Roof Surfaces and the controls under Section x7.9 Green Roofs or Walls.

C.05 Heat rejection units must not be located on a street wall frontage.

C.06 HVAC heat rejection is not permitted to be located in wintergardens. Refer Section 4.8 for further controls related to Wintergardens.

8.5.4 GREEN ROOFS OR WALLS

Objectives

O.01 Ensure that green roofs or walls are integrated into the design of new development.

O.02 Encourage well designed landscaping that caters for the needs of residents and workers of a building.

O.03 Design green walls or roofs to maximise their cooling effects.

O.04 Ensure green walls and roofs are designed, located and maintained to respond to local climatic conditions and ensure sustained plant growth.

Controls

C.01 Green roof and wall structures are to be assessed as a part of the structural certification for the building. Structures designed to accommodate green walls should be integrated into the building façade.

C.02 Waterproofing for green roofs and walls is to be assessed as a part of the waterproofing certification for the building.

C.03 Where vegetation or trees are proposed on the roof or vertical surfaces of any building, a Landscape Plan must be submitted which demonstrates:

a) Adequate irrigation and drainage is provided to ensure sustained plant growth andhealth and safe use of the space;

b) Appropriate plant selection to suit site conditions, including wind impacts and solaraccess; and

c) Adherence to the objectives, design guidelines and standards contained in the *NSW Department of Planning and Environment's Apartment Design Guide* for 'Planting on Structures'.

C.04 Green roofs or walls, where achievable, should use rainwater, stormwater or recycled water for irrigation.

C.05 Container gardens, where plants are maintained in pots, may be an acceptable alternative, however, should demonstrate that the containers are of significant scale to support high quality vegetation growth for cooling and amenity.

C.06 Register an instrument of positive covenant to cover proper maintenance and performance of the green roof and walls on terms reasonably acceptable to the Council prior to granting of the Occupancy Certificate.

8.6 SOLAR LIGHT REFLECTIVITY (GLARE)

Objectives

O.01 Ensure that buildings in Parramatta City Centre appropriately limit solar light reflected from buildings to the public domain, communal/private open spaces, occupants of buildings, road users, and transportation operators.

O.02 Ensure reflected light minimises discomfort glare.

O.03 Ensure reflected light does not result in disability glare.

Controls

C.01 New buildings or significant alterations to existing facades must not result in solar light reflectivity that:

a) results in disability glare that is hazardous for road users and drivers of public transport.

b) causes discomfort for pedestrians, occupants of other buildings or users of private/communal open spaces and public spaces.

C.02 Subject to the extent and nature of glazing and reflective materials used, a Reflectivity Report that analyses potential solar light reflectivity and resulting glare from the proposed development on pedestrians, motorists, or surrounding areas may be required.

C.03 Notwithstanding C.02, new buildings, or significant alterations to existing facades, greater that 40m in height require a Reflectivity Report that includes the quantification of solar light reflected from the building on thesurrounding environment. Reflectivity reports are to include:

a) Sufficiently detailed calculations to quantify likely sources of disability and discomfort glare.

b) Where reflective surfaces are sloped or irregular/undulating, a 3D model should be used to model solar reflections.

c) All calculations are to be based on a published method.

d) Observer points tested should be sufficient to address all potential risks of disability glare and solar light reflections that might cause discomfort.

e) All calculations are to consider the angular dependant solar light reflectivity of the proposed finishes.

f) All calculations are to consider the full range of sun angles that may result in solar light reflections at receiver points and not include obstruction by vegetation outside the subject development or potential mitigation strategies of observers (sun visors, caps, etc).

g) Where solar light reflections from the development exceed thresholds of disability glare and discomfort for any point of observation detailed analysis must be undertaken to determine the range or sun angles or times of day and year that thresholds are exceeded.

C.04 Generally, specular solar light reflectivity from building materials used on facades must not exceed 20% at the angle of incidence . This requirement does not ensure compliance with the requirements of C.01.

8.7 NATURAL REFRIGERANTS IN AIR CONDITIONING

Synthetic refrigerant gases commonly used in air conditioning systems have a very high Global Warming Potential (GWP). The GWP is the number of times the refrigerant is more harmful to the atmosphere than carbon. The best practice synthetic refrigerant available (R32) has a 675 GWP, meaning it's 675 times more harmful than carbon. Natural refrigerants generally have a much lower GWP, typically 2.3, meaning that it is 2.3 times more harmful than carbon.

Leakage from air conditioning systems or the improper disposal of refrigerant can be a significant source of greenhouse gas emissions. Using natural refrigerants with low GWP will reduce the impact of the emissions from air conditioning systems.

These impacts are recognised under the Montreal Protocol, which from 2016 commenced the global phase-down of Hydroflurocarbons (HFCs), the most common type of synthetic refrigerant.

Objectives

O.01 Reduce the greenhouse gas emissions associated with the release to the atmosphere through leakage or the improper disposal, of synthetic refrigerant gases with high Global Warming Potential (GWP).

O.02 Future proof new HVAC (air conditioning) systems from the global phase-down of Hydroflurocarbon (HFC) under the Montreal Protocol.

Controls

C.01 All new air-conditioning and refrigeration equipment are to use refrigerants with a GWP of less than 10;

a) if the equipment can be supplied on similar terms to conventional systems, and

b) at a cost of not more than 10% higher than the market rate for conventional systems.

8.8 BIRD FRIENDLY DESIGN

Glass buildings are an increasing source of bird collisions resulting in significant numbers of mortalities and injuries. The primary cause of collisions is transparency and reflectivity associated with the high levels of glazing.

Birds, unlike humans, cannot perceive the external glazing and fly into it attempting to travel to the reflected view of open sky vegetation or parklands; potential perches, food or water sources; or other attractors. Incidents increase in times of drought as higher numbers of birds enter urban areas to forage. Nocturnal birds also fly into external glazing as they are attracted to internal lighting.

Documented bird fatalities from building collisions in the Sydney region include the critically endangered Swift Parrot, vulnerable Powerful Owl and White-Bellied Sea Eagle. The World Wildlife Fund (WWF) produced guidelines and recommendations for 'Swift Parrot-Safe Building Design' with support of the Australian Government in 2008.

Treatment and design of glazed facades to minimise bird strike will make an important contribution to the protection of endangered and migratory birds and also protect the urban native bird population.

Objectives

O.01 Minimise the risk of bird collisions due to high transparency, through treatment of external windows and other glazed building surfaces.

O.02 Require additional treatment, or reduced reflectivity and transparency of external windows and other glazed building surfaces, where buildings are located within 100 metres of specified waterways and parklands.

Controls

C.01 Treatment of all external windows and other glazed building surfaces of buildings is required to any new glazed surface (whether part of a new building or a building undergoing alterations and additions), when the glazed surface is:

a) less than 6 metres from another glazed surface such as corners and skybridges,

b) less than 6 metres from an internal planted area such as a green wall or plantedatrium,

c) projecting vertically more than 1 metre above the building roof line,

d) projecting horizontally more than 1 metre beyond the building enclosed façade.

C.02 Where buildings are located within 100 metres of the Parramatta River corridor, Parramatta Park, Prince Alfred Park, Robin Thomas Reserve, James Ruse Reserve, Experiment Farm, Jubilee Park and Ollie Webb Reserve, treatment to 95% of glazing is required.

Treatment to the glazing must be either:

- Bird strike UV patterning such as Ornilux,
- Fritted, etched, channeled or translucent glass such as Silk-screen with aminimum untreated dimension of 100mm x 100mm,
- External treatments such as angled, layers or recessed glazing, shadingelements such as

louvers, overhangs and awnings or mesh with a minimum open dimension of 100mm x 100mm.

8.9 WIND MITIGATION

Objectives

O.01 Ensure that the building form enables the provision of a safe and comfortable pedestrian level wind environment, including street frontages, outdoor eating areas, open spaces

O.02 To provide publicly accessible terrace areas within developments, as well as private communal terrace areas, and private balconies within developments

O.03 To ensure wind conditions promote outdoor planting, including green roofs and other landscaping elements.

Controls

C.01 To ensure comfort in and around new buildings, the following wind speeds are to be exceeded for less than 5% of the time around new buildings for both hourly mean and gust equivalent mean wind speeds:

< 2 m/s	Outdoor restaurant dining
< 4 m/s	Sitting (such as café style dining), or scheduled outdoor events
< 6 m/s	Standing, generally supports outdoor planting
< 8 m/s	Walking in retail areas / active street frontages?
< 10 m/s	Walking / non-active street frontages (objective walking from A to B or for cycling)

C.02 To ensure public safety, a 3 second moving average gust wind speed of 23m/s is to be exceeded for less than 0.1% of time.

C.03 A wind assessment report must be submitted with the DA for all buildings greater than 20 m in height.

C.04 For buildings greater than 40 m in height, or sites with more than one building greater than 20 m in height, the quantitative results from a wind tunnel test are to be included in the wind assessment report.

C.05 The wind study is to be conducted by an experienced professional wind engineer in accordance with the requirements outlined in the Technical Requirements – Wind Mitigation Performance Methodology.

8.9.1 Technical Requirements – Wind Mitigation Performance Methodology

Based on: *CCP Wind Assessment for: City of Parramatta November 2016 CCP Project 9776*

Expertise

A wind study shall be performed by a professional wind engineer with experiencein wind issues in the built environment. It is recommended that the applicant or the wind engineerconsults the City of Parramatta planning department to agree on the type and approach of the wind study required for the proposed development.

Wind data

Historical data of wind speed and direction collected over a minimum of 10 years shall be used as the basis of a pedestrian level wind study. Data from the Bankstown Airport Bureau of Meteorology anemometer starting earliest in 1993 shall be used and adequately corrected for the effects of differences in roughness of the surrounding natural and built environment. The use of wind data for daytime hours between 6am and 9pm is generally recommended and may be specifically requested by the City of Parramatta, however, wind data for all hours may be used as well, where appropriate. Climate data are to be presented in the wind study report.

Criteria

The criteria for pedestrian level wind comfort are based on published research, particularly on the criteria developed by Lawson (1990). Pedestrian safety is affected by both the mean and the gust wind speed. As such, the criteria defined below are to be applied to both the mean wind speed and the Gust Equivalent Mean (GEM), i.e. the 3 s gust wind speed in an hour divided by 1.85.

Comfort (maximum of mean and gust equivalent mean (GEM†.) wind speed exceeded 5% of the time)	
< 2 m/s	Outdoor restaurant dining
2-4 m/s	Sitting (such as café style dining), or scheduled outdoor events
4-6 m/s	Standing, generally supports outdoor planting
6-8 m/s	Walking in retail areas / active street frontages
8 - 10 m/s	Walking / non-active street frontages (objective walking from A to B or for cycling)
> 10 m/s	Uncomfortable
Distress (maximum of mean or GEM wind speed exceeded 0.022% of the time)	

Note: †. The gust equivalent mean (GEM) is the peak 3 s gust wind speed divided by 1.85.

The criterion for pedestrian safety is based on the Guidelines of the Australian Wind Engineering Society (2014)

Safety (maximum 3s moving average gust wind speed)	
<23m/s	not to be exceeded more than 0.1% of time per year

The wind study report shall show that the proposed development provides for adequate levels of comfort and safety in accordance with the above criteria taking into account the intended usage of a particular area. If the above criteria are not met, appropriate mitigation measures shall be identified, or the proposed building design is to be altered. Further, the existing wind conditions shall not be significantly degraded by a proposed development over the assessment area.

Mitigation Measures

If the wind study identifies areas that do not fulfil the comfort or safety criteria, mitigation strategies are to be developed and their effectiveness in improving the wind conditions to the required level is to be shown and tested in the wind tunnel. These measures may include, in order of preference:

1. Changes to the building massing or design including the addition or extension of podiums, tower setbacks, or
2. Addition of canopies or wind screens.
3. On-site vegetation may be used to improve the wind comfort for pedestrians, however, it is notan acceptable mitigation for exceedances of the safety criterion. To be accepted as a mitigation for wind comfort issues, the plants need to be effective at the time of installation and need to be able to provide improvement throughout the year.
    a. Furthermore, the plants shall require minimum maintenance and are to be able to thrivein the wind conditions of the site.
    b. The plants must be within the site boundary and not on public land.
4. Modifications of the usage of affected areas and provision of alternatives.

Type of Wind Study

Qualitative Wind Study

A qualitative wind study is generally required for developments with a building exceeding a height of 20 m above finished ground and less than 40m above finished ground and may be requested by the City of Parramatta on a case by casebasis for smaller developments. A qualitative wind assessment can be performed as a desktop study, or by Computational Fluid Dynamics (CFD).

A desktop study shall estimate the wind speeds at relevant locations in and around the proposed development taking into consideration the wind comfort and safety criteria described in the DCP Controls. The assessment is to be based on all prevailing wind directions and shall account for the frequency of occurrence.

CFD simulations shall appropriately represent the atmospheric boundary layer and model appropriate parts of the natural and built environment surrounding the proposed development. The study is to consider all prevailing wind directions as well as the frequency of occurrence.

Presentation of the results shall include horizontal planes at pedestrian level of approximately 1.5 m, horizontal and vertical planes are required for outdoor planting, and details of the computational mesh and consistency of the wind conditions across the modelled domain.

Quantitative Wind Study

A quantitative wind study shall be performed in a boundary layer wind tunnel capable of simulating the atmospheric boundary layer and appropriate profiles. A quantitative study is required for developments with a building exceeding a height of 40 m above ground and developments with more than 1 building exceeding 20 m in height.

Physical modelling of the proposed development shall be done at an adequate scale, typically 1:300 or 1:400, and appropriate levels of surrounding natural and built environment of at least a 400 m radius around the proposed development site shall be taken into account.

Wind speed measurements shall be performed in accordance with the Australasian Wind Engineering Society's Quality Assurance Manual (QAM) for Wind Engineering Studies of Buildings (AWES, 2001):

- Measurements shall be taken with instruments capable of measuring wind characteristicsat adequate resolution, e.g. hot-wire or hot-film anemometers, Irwin probes.
- Measurements for pedestrians shall be taken at the equivalent full scale height ofapproximately 1.5 m.
- Measurements for outdoor planting shall be taken to suit the proposed design
- Measurements shall be taken at a minimum of 1 location per 200 m2 of the plan area accessible for pedestrians or to be planted, and the selection of locations shall take intoaccount the intended use of the space.
- The assessment area shall include the public and private outdoor areas to a minimum distance of D from the building envelope, with D being the lesser of half the buildingheight or half the largest plan dimension of the building.
- Measurements shall be taken for at least 16 wind directions.

Configurations

To be able to compare the wind environment with the inclusion of the proposed development, measurements at representative locations are to be conducted in the existing configuration without the proposed development. This configuration shall include all existing surrounds, as well as developments that are approved or under construction. These surrounds shall also be applied in the proposed configuration. In specific circumstances the City of Parramatta may require additional testing of a future configuration to include future developments that may impact the wind conditions around the proposed development, e.g. developments currently in the approval process.

References

AWES (2001) Quality Assurance Manual for Wind Engineering Studies of

Buildings, AWES QAM- 1-2001.

Lawson, T.V., (1990), The Determination of the wind environment of a building complex before construction, *Department of Aerospace Engineering, University of Bristol*, Report Number

9 VEHICULAR ACCESS, PARKING AND SERVICING

9.1 VEHICLE DRIVEWAYS AND MANOEUVRING

This section should be read in conjunction with DCP controls for Vehicle Footpath Crossing in Section 4.6 of the Public Domain Chapter.

Objectives

O.01 Minimise the impact of vehicle access points and driveway crossovers on streetscape amenity, pedestrian safety and the quality of the public domain by:

a) Designing vehicle access to required safety and traffic management standards.

b) Integrating vehicle access with site planning, public domain requirements and traffic patterns.

c) Minimising potential conflict with pedestrians.

O.02 Minimise the size and quantity of vehicle and service crossings to reinforce a high quality public domain.

Controls

C.01 Where practicable, driveways must be provided from lanes and secondary streets rather than primary street fronts or streets with major pedestrian activity.

C.02 Driveways must be located:

a) Taking into account any services within the road reserve, such as power poles, drainage inlet pipes and existing or proposed street trees.

b) A minimum of 10 metres from the perpendicular of any intersection of any two streets.

c) If adjacent to a residential development, set back a minimum of 2m from the relevant side property boundary.

C.03 Design of driveway crossings must be in accordance with Council's Public Domain Guidelines, with any works within the footpath and road reserve subject to a S138 Roads Act approval.

C.04 Driveway widths must comply with the relevant Australian Standards.

C.05 Vehicle access must be designed to:

a) Minimise the visual impact on the street, public domain, site layout and building facade design.

b) Minimise the size, quantity and visual intrusion of the access.

c) Be a minimum of 3 metres from pedestrian entrances.

d) Not be located adjacent to doors or windows of habitable rooms of any residential development.

C.06 Vehicular access must not ramp along boundary alignments bordering the public domain, streets, lanes, parks, river foreshore frontages or heritage items.

C.07 All vehicles must be able to enter and leave the site in a forward direction.

C.08 Separate and clearly differentiate between pedestrian and vehicle access.

C.09 Car space dimensions must comply with the relevant Australian Standards.

C.10 Driveway grades, vehicular ramp widths and grades and passing bays and sight distance for driveways must be in accordance with the relevant Australian Standard (AS 2890.1)

C.11 Vehicular access, egress and manoeuvring requirements for NSW Fire Brigade vehicles must be provided in accordance with relevant NSW Fire Brigade guidelines as far as they apply to the subject development.

9.2 ON SITE CAR PARKING

On-site parking includes underground (basement), surface (at-grade) and above ground parking. It also includes car parking stations.

Underground and semi-underground parking minimises visual impact of car parking as viewed from the public domain. Above ground parking may be appropriate for some sites, especially for sites constrained due to flood levels or archaeology. Above ground parking will only be accepted if it is of high design quality and meets the design controls specified in Chapter 4 Built Form.

Car parking rates for developments within the Parramatta CBD are contained in the Parramatta Local Environment Plan 2011. These rates are maximums and are not to be exceeded.

This section should be read in conjunction with Section 3 of the DCP in relation to car share and green travel plan controls and Section 6.3 Bicycle Parking and End of Trip Facilities.

Car parking facilities require specific design considerations in flood risk areas in addition to the universal considerations that minimise the visual impact of these structures. A safely designed car park restricts flood water entry while providing failsafe opportunities for emergency egress. This section should be read in conjunction with Section 7.8 regarding flood risk management particularly for basement car parking.

Objectives

O.01 Facilitate an appropriate level of on-site parking for development within the Parramatta city centre to cater for a mix of development types.

O.02 Minimise the impact of on-site parking on the design quality of the building and the public domain.

O.03 Provide adequate space for parking and manoeuvring of vehicles, including service vehicles.

O.04 Recognise the current and existing demand for parking for bicycles and electric vehicles.

O.05 Design car parking for safe pedestrian and bicycles movements.

Controls

C.01 Basement car parking must be located within the site boundaries and must not encroach on the public domain.

C.02 Where car parking is provided in basements and semi basements which involve excavation, development must incorporate the recommended site management procedures set out in the Parramatta Historical Archaeology Landscape Management Study.

C.03 New access points to all parking (basement or above ground) are to be limited in accordance with Figure XX8 (in Section 4) of the DCP. New access points may be permitted from existing lanes or any new lanes proposed as part of the development.

C.04 Design car parking which:

a) Maximises the efficiency of car park design with predominantly orthogonal geometry and related to circulation and car space size.

b) Is well-lit and minimises reliance on artificial lighting and ventilation.

c) Is well-ventilated and uses natural rather than mechanical ventilation where possible.

d) Provides marked safe path so travel for pedestrians and cyclists with clear lines of sight and safe lighting.

e) Avoids hidden areas and enclosed areas. Where these are unavoidable use mirrors and similar devices to aid surveillance.

C.05 Provide readily accessible parking spaces at the rates specified under the National Construction Code which are designed and appropriately signed for use by people with disabilities in accordance with AS 2890.6.

C.06 Provide a separate parking space for 1 motorcycle for every 50 car spaces, or part thereof. The size of a motorcycle parking space is to be in accordance with AS 2890.1. Motorcycle parking does not contribute to the number of car parking spaces permitted.

C.07 On-site parking must meet the relevant Australian Standards.

C.08 For residential flat buildings or the residential component of a mixed use development, stack parking of up to 2 cars is permitted where spaces are attached to the same single dwelling unit.

C.09 To facilitate adaptation of car parking to other uses in the long term, or to promote de-coupled car parking, consideration will be given to car parking remaining as part of the common property and not part of or attached to individual strata units.

9.3 BICYCLE PARKING AND END OF TRIP FACILITIES

New developments should provide opportunities to support sustainable transport and active lifestyles by providing bicycle parking and end of trip facilities. These provisions provide facilities will help reduce private car use and the environmental impact of transport and promote active streets and community health and wellbeing.

Objectives

O.01 To provide quality bicycle parking and end of trip facilities to meet the needs of residents, workers of and visitors to the Parramatta CBD.

O.02 To ensure bicycle parking and end of trip facilities are convenient, safe for users and minimises conflict between people and vehicles.

9.3.1 BICYCLE PARKING

Controls

C.01 All development is to provide on-site bicycle parking designed in accordance with Australian Standard AS2890.3.

C.02 Bicycle parking spaces for new development is to be provided in accordance with the rates set out in Table x4.3.3.5.1.

Proposed use	Residents / Employees Bicycle Parking Spaces*	Visitors*
Residential:		
Residential accommodation	1 per dwelling	1 per 10 dwellings
Commercial		
Office premises or business premises	1 per 150sqm GFA over 600sqm of GFA	1 per 400sqm GFA
Shop, restaurant or café	1 per 250sqm GFA over 600sqm of GFA	2 for first 600sqm of GFA plus 1 per 100sqm over additional 100sq of GFA
Shopping centre	1 per 200sqm GFA over 600 of GFA	2 for first 600sqm of GFA plus 1 per 300sqm sales GFA
Community:		
Child Care Centre	1 per 10 staff	2 per centre
Library and community centres	1 per 10 staff	2 plus 1 per 200sqm GFA
Education Establishment	1 per 10 FTE staff	1 per 10 FTE students over Year 4- and accommodated securely undercover and within the campus grounds.
Tourist and visitor accommodation:		
Hotel or motel accommodation or serviced apartments	1 per 4 staff	1 per 20 rooms

Table x4.3.3.5.1 On-site bicycle parking rates

*Note: the total minimum number of bicycle parking spaces is to be rounded up to the nearest whole number.

C.03 If proposed use is not included in Table 4.3.3.5.1, a development is to provide bike facilities to accommodate mode share target for trips by bicycles as described in Council's Bike Plan.

C.04 Wherever possible, bicycle parking for residents and or employees should be provided at-grade. Where bicycle parking is provided within the basement or above ground levels, it is to be located on the first level of basement or first level above ground and in proximity to entry or exit points.

C.05 The following access to bicycle parking areas are to be provided and designed in accordance with Australian Standard AS2890.3:

(a) provide for a clear and safe path of travel to minimise conflict between vehicles, pedestrians and cyclists.

(b) accessible via a ramp;

(c) clearly identified by signage

(d) accessible via appropriate security or intercom systems.

C.06 The minimum secure bicycle parking facilities are to be provided in accordance with the following Australian Standard AS2890.3:

(a) Class B bicycle lockers for occupants of residential buildings and staff or employees of any non-residential land use;

(b) Class C bicycle rails for visitors of any land use.

C.07 Wherever possible, visitor bicycle parking shall be located within the development site, at grade, near entry points to the building, undercover and be accessible at all times. Where visitor bicycle parking cannot be provided at grade it is provided on the first level of basement or first level above ground adjacent to the visitor car parking and be accessible at all times.

C.08 The area required for bicycle parking is to be calculated in addition to storage areas required as per the NSW Apartment Design Guide.

C.09 The bicycle storage facility is to include 10A e-bike charging outlets to 10% of spaces with no space being more than 20m away from a charging outlet. Chargers are to be provided by the owner.

9.3.2 END OF TRIP FACILITIES

Controls

C.01 For non-residential uses end of trip facilities are to be provided at the following rates:

(a) 1 personal locker per bicycle parking space;

(b) 1 shower and change cubicle for up to 10 bicycle parking spaces;

(c) 2 shower and change cubicles for 11 to 20 or more bicycle parking spaces are provided; and

(d) 2 additional shower and cubicles for each additional 20 bicycle parking spaces or part thereof.

C.02 Shower and change room facilities may be provided in the form of shower and change cubicles in a unisex area.

C.03 Shower and change room facilities are to be designed to accommodate separate wet and dry areas, including an area to hang towels and clothes.

C.04 End of trip facilities are to be located:

(a) Where facilities are provided within the basement or above ground levels, it is to be located on the first level of basement or first level above ground and in proximity to entry or exit points;

(b) Provide for a clear and safe path of travel to minimise conflict between vehicles and pedestrians;

(c) In close proximity to bicycle parking facilities and the entry and exit points; and

(d) Within an area of security camera surveillance, where there are such building security systems available.

C.05 Development proposing multiple commercial tenancies must demonstrate how all tenancies will have access to the end of trip facilities and employee bicycle parking.

10 SITE SPECIFIC CONTROLS

This section includes objectives and controls for specific sites in the City Centre as identified in Figure 10.1.

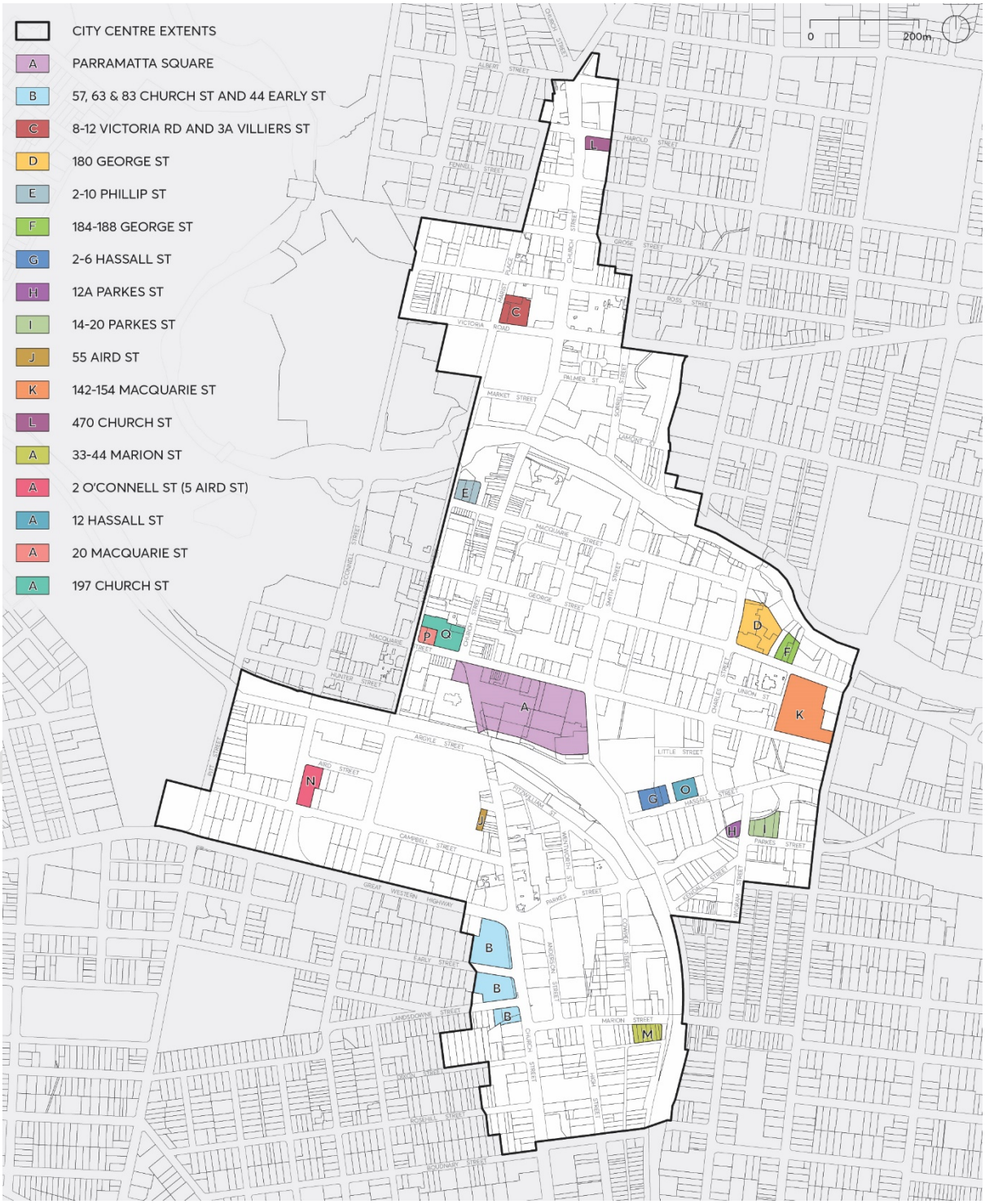


Figure 10.1 Areas with Specific Site Controls

10.1 PARRAMATTA SQUARE
10.2 57, 63 & 83 CHURCH AND 44 EARLY
10.3 8-12 VICTORIA RD AND 2A VILLERS STREET
10.4 180 GEORGE
10.5 2-10 PHILLIP
10.6 184 – 188 GEORGE STREET
10.7 2-6 HASSALL STREET
10.8 12A PARKES STREET
10.9 14-20 PARKES STREET
10.10 55 AIRD STREET
10.11 142-154 MACQUARIE STREET
10.12 470 CHURCH STREET
10.13 33-44 MARION STREET
10.142 O' CONNELL STREET (5 AIRD STREET)
10.1512 HASSALL STREET
10.1620 MACQUARIE STREET
10.17 197 CHURCH STREET

11 APPENDIX

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For non-English speakers, phone interpretation services are available via TIS National on 131 450.

KOREAN

본 소식지와 관련해 통역 지원이 필요하신 경우, TIS (131 450)에 전화하여 Parramatta Customer Service (9806 5050)를 연결해 달라고 요청하시면 됩니다. 업무시간은 월요일에서 금요일, 오전 8시 30분부터 오후 5시까지입니다.

ARABIC

إذا كنت بحاجة للمساعدة في ترجمة هذه النشرة، اتصل بـ TIS على الرقم 131 450 واطلب منهم الاتصال نيابة عنك بخدمة زبائن باراماتا على الرقم 9806 5050 من الإثنين إلى الجمعة بين الساعة 8:30 صباحاً و 5:00 مساءً.

CHINESE

如果你需要翻译协助阅读这份新闻简报，请联系 TIS，电话131 450，要求他们代表你接通巴拉玛打市议会顾客服务处，电话 9806 5050。顾客服务处的工作时间是每星期一至星期五，上午8:30至下午5:00。

HINDI

यदि आपको यह सूचना-पत्र समझने में सहायता चाहिए तो कृपया TIS को 131 450 पर फ़ोन करें और उनसे कहें कि आपकी तरफ़ से पैरामाटा कस्टमर सर्विस को 9806 5050 पर फ़ोन करें। यह सेवा सोमवार से शुक्रवार, सुबह 8.30 बजे से शाम 5.00 तक उपलब्ध है।