



PARRAMATTA NORTH URBAN RENEWAL NEW PLANNING FRAMEWORK

SUMMARY REPORT NOVEMBER 2014

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00 EXECUTIVE SUMMARY

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The Parramatta North Urban Renewal [PNUR] provides a once in a lifetime opportunity to commence a comprehensive world class urban renewal to reinforce Parramatta as the gateway to Western Sydney.

The PNUR area consists of 146 hectares of NSW Government land and includes four distinct precincts: Parramatta Park Precinct, the Cumberland Precinct, the Old Kings School Precinct and the Sport and Leisure Precinct. The PNUR area is located between Westmead Medical Precinct and Parramatta CBD.

This document presents a new planning framework to support the rezoning of over 50 hectares of NSW Government-owned land north of the Parramatta CBD. Rezoning is proposed for portions of the Cumberland Precinct and the Sport and Leisure Precinct.

The land has been identified as being under-utilised and suitable for comprehensive urban renewal that can both provide for new uses and support established uses on these sites.

These lands have a deep history and social significance and contain a number of heritage buildings within a mature landscape setting.

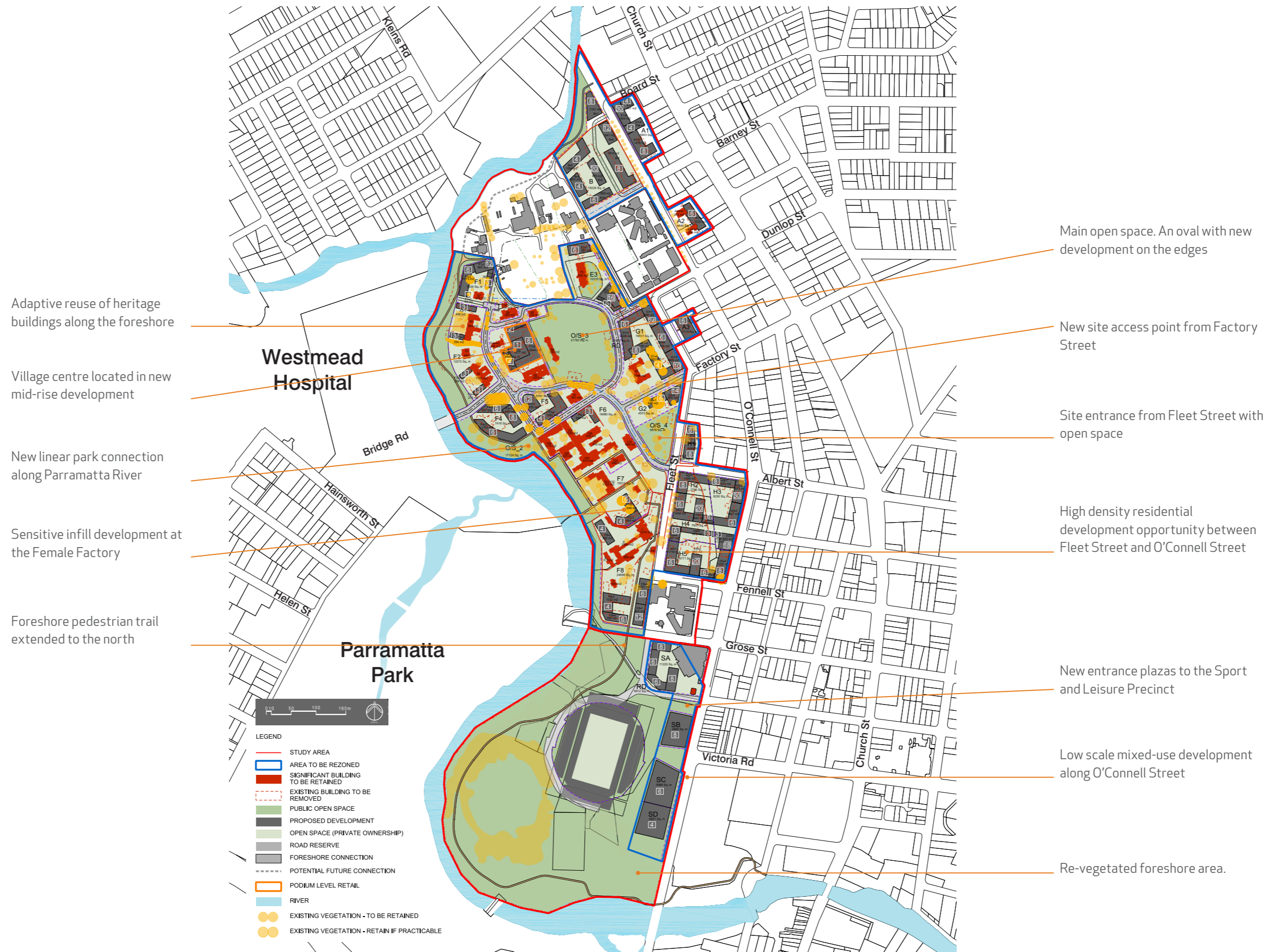
The plan supports both State and Local planning objectives, offers new long-term opportunities for home and jobs and will revitalise an area that connects with Parramatta CBD and the Westmead Medical Precinct.

The plan builds on a comprehensive stakeholder and community engagement process which contributed to a new vision for this land as an inner city suburb of Parramatta, where the heritage elements are re-set in the heart of a new contemporary environment.

Public benefits include access to a variety of open spaces, local connectivity, new spaces within fine heritage buildings, new community facilities and an opportunity to provide interpretative, tourist and educational infrastructure that will describe the history of the site and its importance to Australia's story.

Key features of the proposal are identified on the adjacent Indicative Layout Plan [ILP].

The Indicative Layout Plan





01 INTRODUCTION

01 INTRODUCTION

PROJECT OVERVIEW

The Parramatta North Urban Renewal [PNUR] area consists of 146 hectares of NSW Government land across four precincts: Parramatta Park Precinct, the Cumberland Precinct, Old Kings School Precinct and the Sport and Leisure Precinct, located between Westmead Medical Precinct and Parramatta CBD.

This land forms part of a unique collection of world, national and state listed heritage sites. The investment in, and renewal and redevelopment of, this land can ensure a lasting legacy and economic benefit for future generations.

As a large-scale urban renewal opportunity on the fringe of Parramatta CBD, two of these precincts - the Cumberland and Sport and Leisure - were identified by the NSW Government as having the potential to contribute to the strategic development of Parramatta CBD as a major mixed-use centre.

This report reflects the work undertaken by Allen Jack+Cottier [AJ+C] and partnering consultant team between July 2014 and September 2014 on behalf of UrbanGrowth NSW. The team included:

- + heritage architects and specialists
- + landscape architects
- + statutory planning
- + archaeologists
- + transport planners
- + civil and service engineers

This work builds on an earlier Framework Master Plan [FMP] for the site to guide government decision making and provide certainty for the community and industry on the future of the PNUR area.

This report supports proposed changes to the planning controls for parts of the subject lands. Proposed changes include alterations to land use zones, height of building controls, floor space ratio [FSR] controls and site-specific Development Control Plan [DCP] provisions.

The proposed plans have been developed with stakeholders from State and local government, as well as local community members and organisations.

Uniquely, the proposed plan have been publicly developed, with the key stakeholders participating in a series of charrettes and workshops that have shaped the plan from the ground up.

Extensive stakeholder engagement and community consultation during July and August 2014 looked at urban design; heritage and cultural significance; financial considerations; and the broader planning context. This approach combined proactive community consultation with extensive government agency consultation.

The FMP as drawn with the stakeholders - Nov 2013



The FMP updated by the consultant team - Nov 2013



Stakeholder consultation exercises, drawing the FMP - Oct 2013



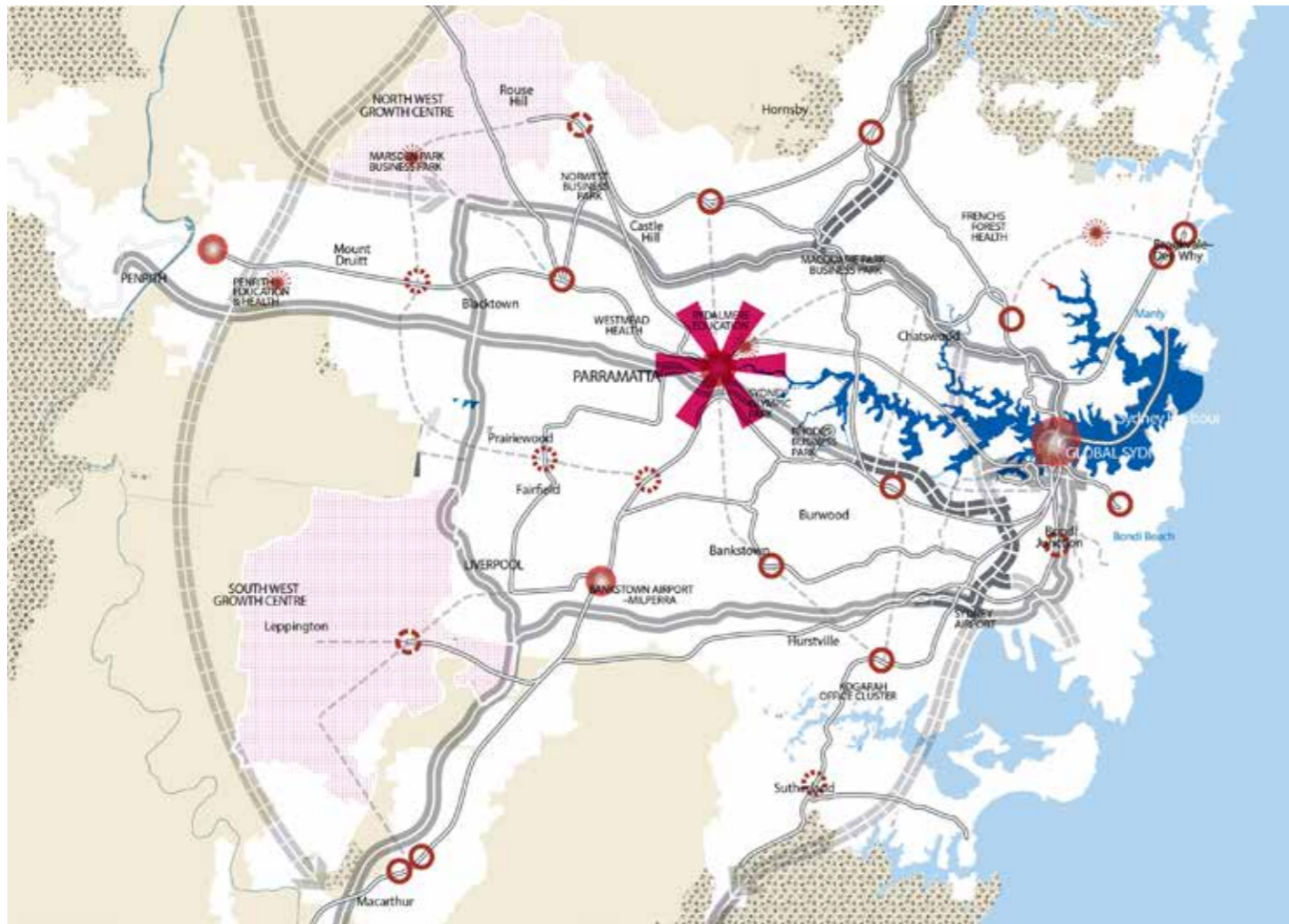
Stakeholder consultation exercises - Aug 2013



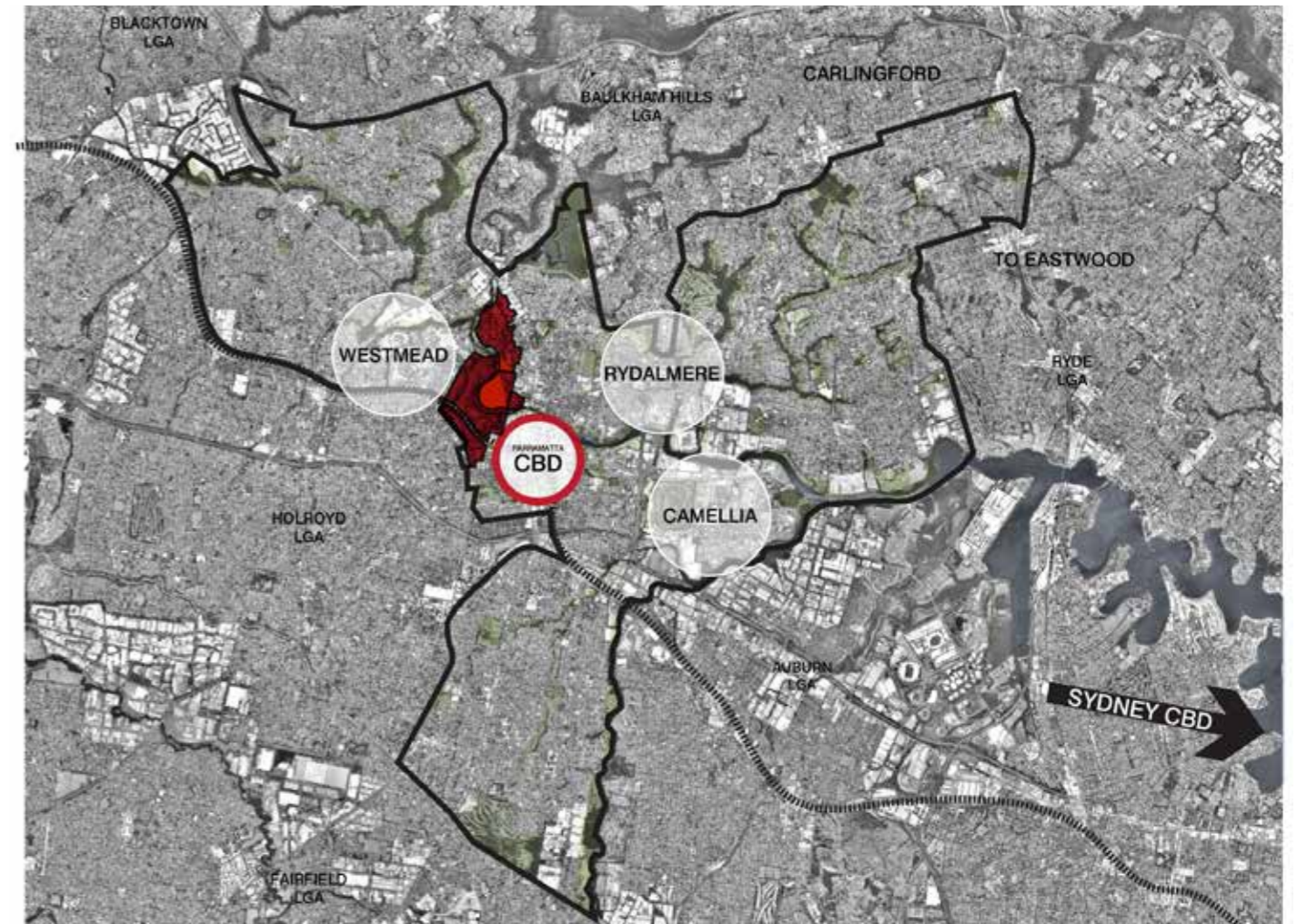
Stakeholder consultation exercises - Aug 2013



Parramatta CBD location



Precinct location



SITE LOCATION AND CITY CONTEXT

Metropolitan location

The PNUR area is located on the fringe of Parramatta CBD, at the geographical heart of Sydney, as well as other strategic areas.

Key locational aspects:

- + adjacent to Parramatta CBD, Westmead Medical Precinct, Rydalmere Education Precinct and Camellia, all major contributors for the NSW economy
- + close to major public transport corridors
- + located on the Parramatta River and part of a wider regional open space network that includes Parramatta Park and Lakes
- + one of a series of local sites with high heritage significance.

City planning context

This new planning framework supports the strategic city-making objectives of State Government plans, including NSW 2021 and Draft Metropolitan Strategy for Sydney 2031. The identification of Parramatta as a 'city shaper' in the Draft Metropolitan Strategy 2031 supports the PNUR area as a focus for urban renewal.

The amendment to the statutory planning provisions is anticipated to be undertaken via a State Environmental Planning Policy [SEPP] that will amend the provisions of Parramatta City Centre LEP 2007 and Parramatta LEP 2011. Site-specific DCP provisions are also proposed to guide development. Amendment of the planning framework will facilitate the lodgement of future development applications to be assessed and determined by Parramatta City Council under the provisions of Part 4 of the Environmental Planning and Assessment Act 1979.

PNUR Precinct location

The PNUR area is located west and north west of the Parramatta CBD, Sydney's second CBD and the premier centre in Western Sydney. The PNUR is east of the Westmead Medical Precinct, separated by the Parramatta River, and is also close to the Rydalmere Education Precinct and transport links.

The PNUR area fronts the Parramatta River and incorporates a rich history of Aboriginal, early colonial, 19th and 20th Century uses. It has the potential to deliver housing and employment opportunities while embracing and interpreting these heritage attributes in a way that facilitates their retention and re-use.

01 INTRODUCTION

PNUR PRECINCT

THE PNUR PRECINCTS

The PNUR is a 146 Ha area and has been divided into four distinct Precincts comprising:

- + The Cumberland Precinct [40 Ha]
- + Sport and Leisure Precinct [21 Ha]
- + Old Kings School Precinct [4 Ha], and
- + Parramatta Park Precinct [81 Ha].

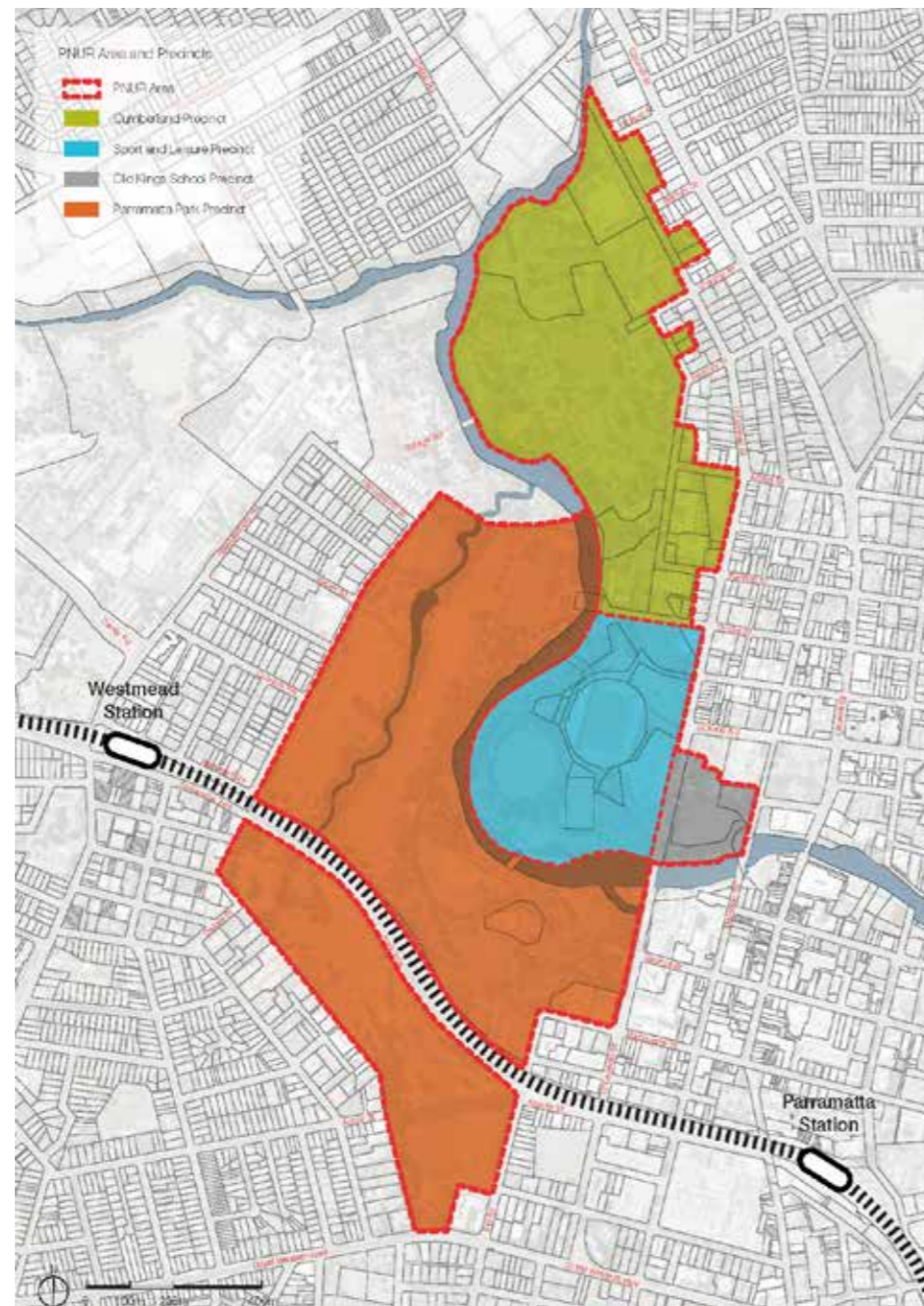
Land uses within the Cumberland Precinct include:

- + Cumberland Hospital
- + the NSW Linen Service
- + allied health related uses
- + the former Parramatta Gaol.

Land uses and facilities in the Sports and Leisure Precinct include:

- + Parramatta Stadium and associated facilities
- + Parramatta City Council public pool
- + Parramatta Leagues Club
- + open space parkland
- + on-grade venue car parking.

The PNUR precincts

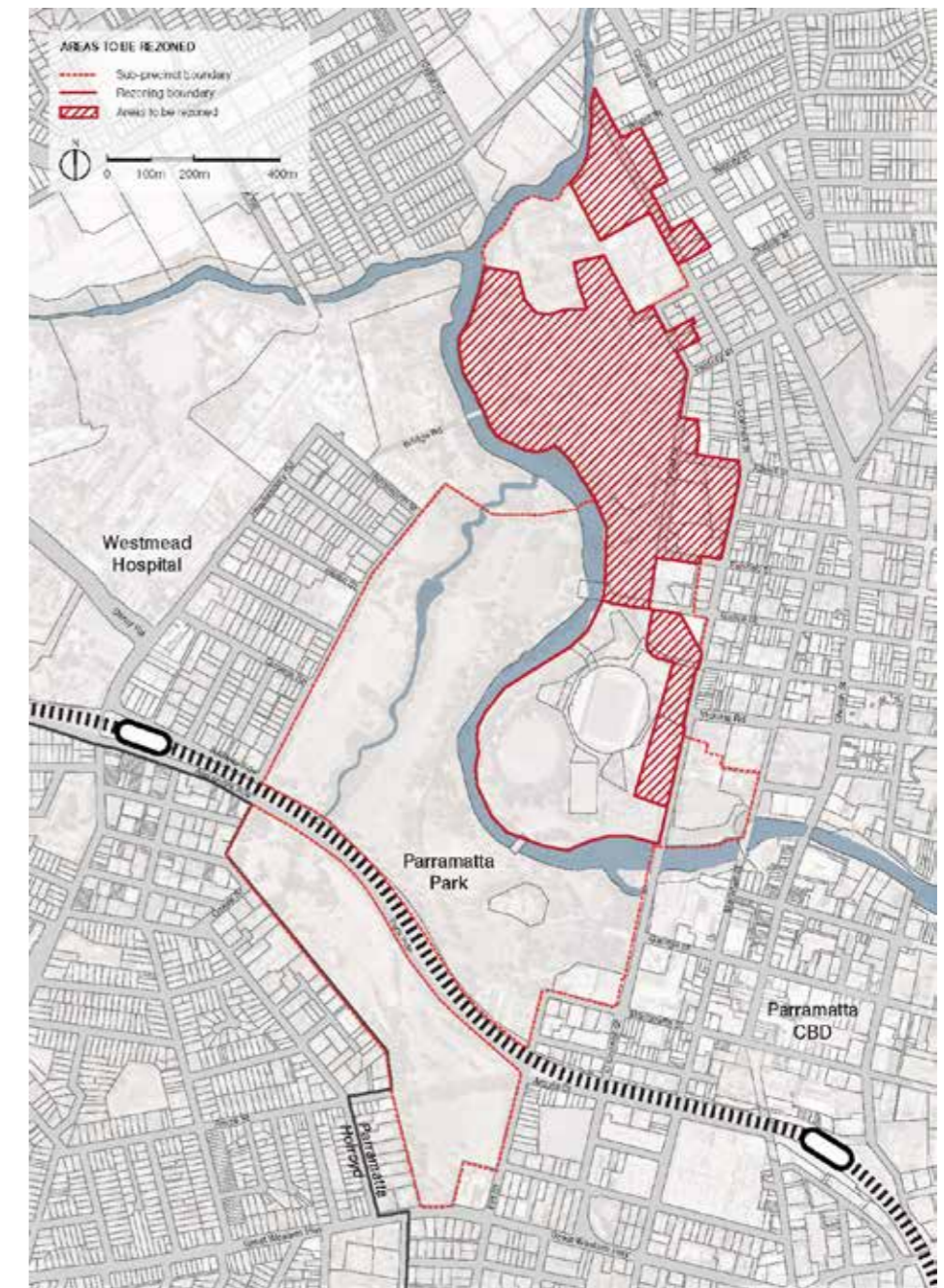


LAND SUBJECT TO REZONING

The study proposes amendments to the planning framework, including revisions to the development controls. The changes will facilitate a mixed use residential redevelopment of the study area. The proposed amended planning framework will be the basis for future development applications for the land in the study area.

The Study Area considers a portion of the land within the PNUR area. Of the Cumberland Precinct, 301,155m² of land is in the Study Area; of the 212,069m² Sport and Leisure Precinct, around 24,956m² is in the Study Area.

Area where changes to the existing zoning is proposed





Female Factory



View to Parramatta Park from Female Factory



Female Penitentiary - part of the Female Factory complex



Parramatta River



Parramatta River foreshore area



Parramatta Stadium

CHARACTER + HISTORY

The Precinct is characterised as an institutional landscape, with a rich built heritage. The site contains significant landmark buildings and walls in varying states of decay and disrepair.

The Precinct is currently under-utilised following the closure and relocation of many of the institutions. Some buildings are owned/occupied by NSW Health and still operate under ownership, lease or license as the Forensic Mental Health Unit and Mental Health Rehab Services.

Statutory Heritage Listings

The exceptional heritage values of the PNUR area are reflected by numerous listings of world, national, state and local heritage significance that apply to the area's sites, precincts, cultural landscapes, buildings and archaeology.

Early history

Aboriginal heritage is potentially significant and embedded in the landscape. Archaeological evidence of Aboriginal occupation in Parramatta dates back over 30,000 years. Some pockets of undisturbed land, particularly along the Parramatta River, are likely to retain buried evidence, which is an important dimension to the heritage value of the area.

The Cumberland Precinct

Following British settlement, the land bordering the upper reaches of the Parramatta River was reserved as government land. Its proximity to the river and the natural characteristics led to attempts to build a water mill along this stretch of the river. Around 1800, this was followed by farming and a vineyard.

In 1818, accommodation for female

convicts, known as the 'Female Factory', was constructed. With the end of convict transportation in 1840, it became the Parramatta Lunatic Asylum, then the Hospital for the Insane, Parramatta Psychiatric Centre and finally the Cumberland Hospital.

The southern parts of the Precinct house the Norma Parker Centre and Kamballa, the Roman Catholic Orphan School established c1838-1840. Many of the standing buildings are also of State heritage significance. The precinct also contains the historic Parramatta Gaol. All of the complexes continued in their institutional use until relatively recently.

The Sport and Leisure Precinct

The Precinct forms part of the Government Farm, established in 1789, also known as Dodd's Farm, after Henry Dodd who oversaw the use of convict labour to establish farming at Rose Hill for Governor Phillip.

The Precinct has potential to retain archaeological remains of the house, outbuildings associated with the farm and an early racecourse, which would be of exceptional heritage significance.

The riverfront is also the site of 'Little Coogee', a popular local swimming spot.

Precinct character

The Precinct has a strong landscape character with mature trees and a mix of natural and park landscape areas, two sports fields, a practice rugby field and cricket oval. The quality of the landscape character is diminished in the east with large expanses of surface car parks and poor public domain along O'Connell Street.

Buildings include Parramatta Stadium [the dominant built feature of the site], Parramatta Swimming Centre and the Parramatta Leagues Club.

These buildings and parkland areas are public destinations. The stadium is a major sporting and events venue as home ground to the Parramatta Eels and the Western Sydney Wanderers.

01 INTRODUCTION

LAND OWNERSHIP

OWNERSHIP AND DECISION MAKING

The following NSW Government stakeholders own land within the precincts:

- + Crown Lands
- + Government Property NSW*
- + Health Administration Corporation [NSW Health]
- + Housing Commission of NSW
- + Land and Housing Corporation
- + Minister for Corrective Services
- + Minister for Disability Services
- + Parramatta Park Trust
- + The State of NSW
- + Venues NSW [Parramatta Stadium Trust]

Private land owners are:

- + The Northcott Society*
- + Parramatta Leagues Club Ltd*

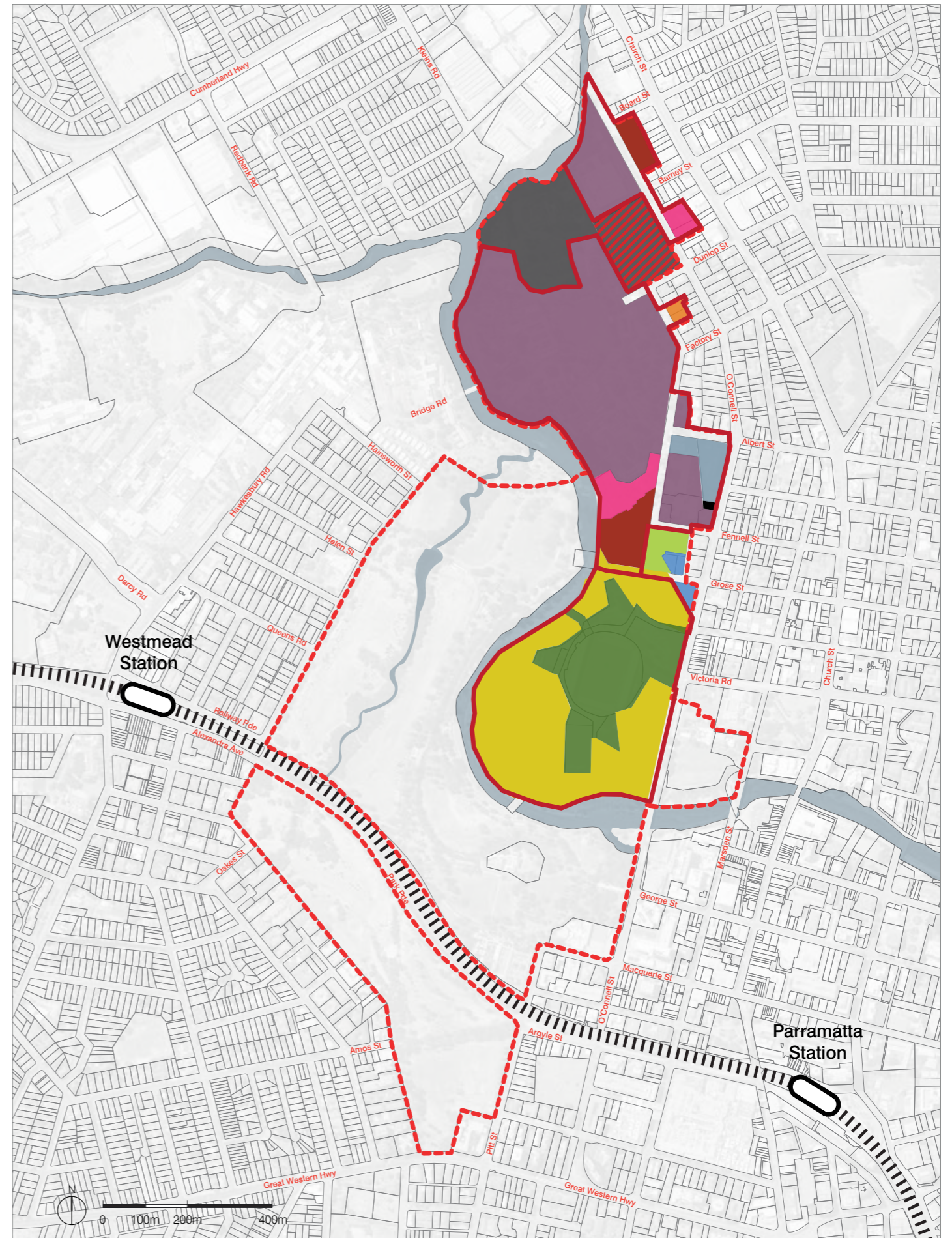
Note: Landowners marked with a * are not subject to the rezoning proposal

Australian, State and local government agencies and other entities with a decision-making role within the wider FMP area include:

- + Commonwealth Department of the Environment
- + Department of Education and Communities
- + Department of Family and Community Services
- + Department of Premier and Cabinet [Office of Communities]
- + Heritage Council of NSW - Heritage Division
- + Office of Environment and Heritage
- + Planning and Environment
- + Transport for NSW
- + Holroyd Council
- + Parramatta City Council



Existing pattern of ownership



The Framework Masterplan [FMP] defines the key land uses, public domain and connectivity actions in the context of the significant heritage setting that will shape the development of the PNUR area over the next 20 years.

FMP OVERVIEW

Finalised in December 2013, the FMP is a fully consulted framework for government decision making to conserve heritage and initiate urban renewal and economic growth.

The FMP's land use and public domain elements have informed the development of the Rezoning Plan:

- + a north-south link along the Parramatta River
- + new crossings over the Parramatta River
- + improved public domain
- + new residential development zones in the north of the Cumberland Precinct
- + zones for infill development where new buildings can be integrated with existing heritage buildings
- + new mixed-use development zones around Parramatta Stadium
- + an extension to Parramatta Parkland to create an open space network that spans over two kilometres along the Parramatta River
- + new open spaces
- + a network of restored and re-used heritage buildings and landscapes
- + a core zone to rationalise government management that spans from Parramatta Park in the south to the northern edge of the oval within the Cumberland Precinct
- + a Western Bank [Wisteria Gardens, Glengariff House and Phillips' Landing] as a possible extension of Parramatta Park.

The adjacent diagram describes the major initiatives set out in the FMP.

FMP principles

The FMP is based on five plan principles:

- + Narrative and Legacy
- + Connectivity
- + Amenity and Community
- + Vitality
- + Activation

These principles span precinct boundaries, land ownership and place management zones.

THE FRAMEWORK MASTERPLAN

- Precinct boundary
- - - Core zone for rationalised government management
- NEW CONNECTIVITY NETWORK**
- Foreshore pedestrian and cycle link
- - - Foreshore pedestrian and cycle link outside the boundary
- New pedestrian and cycle bridge
- Possible future transport corridor
- Enhanced public domain link
- New pedestrian and cycle path
- New vehicular connection
- ★ Enhanced pedestrian access point
- EXISTING CONNECTIVITY NETWORK**
- Vehicular route within boundary
- Pedestrian path within boundary
- Existing pedestrian crossing
- Existing vehicular river crossing
- NEW DEVELOPMENT**
- Residential with other supporting uses
- Mixed use - sports, retail, commercial, etc
- INFILL AND ADAPTIVE REUSE DEVELOPMENT**
- Residential with other supporting uses
- Non residential - commercial, arts, retail, etc
- Suitable future use subject to further investigations
- PROPOSED ACTIVATION**
- ★ Potential cafe/dining
- ★ Potential local retail
- ★ Potential cultural facility
- ★ Potential water based activities
- ★ Potential community facility
- EXISTING ACTIVATION**
- ★ Existing cafe/dining
- ★ Existing sports use
- ★ Existing events space
- PROPOSED OPEN SPACE**
- Potential open space extension
- Potential community use for sports field
- Riparian corridor open space
- EXISTING OPEN SPACE**
- Public open space area

The FMP diagram



01 INTRODUCTION

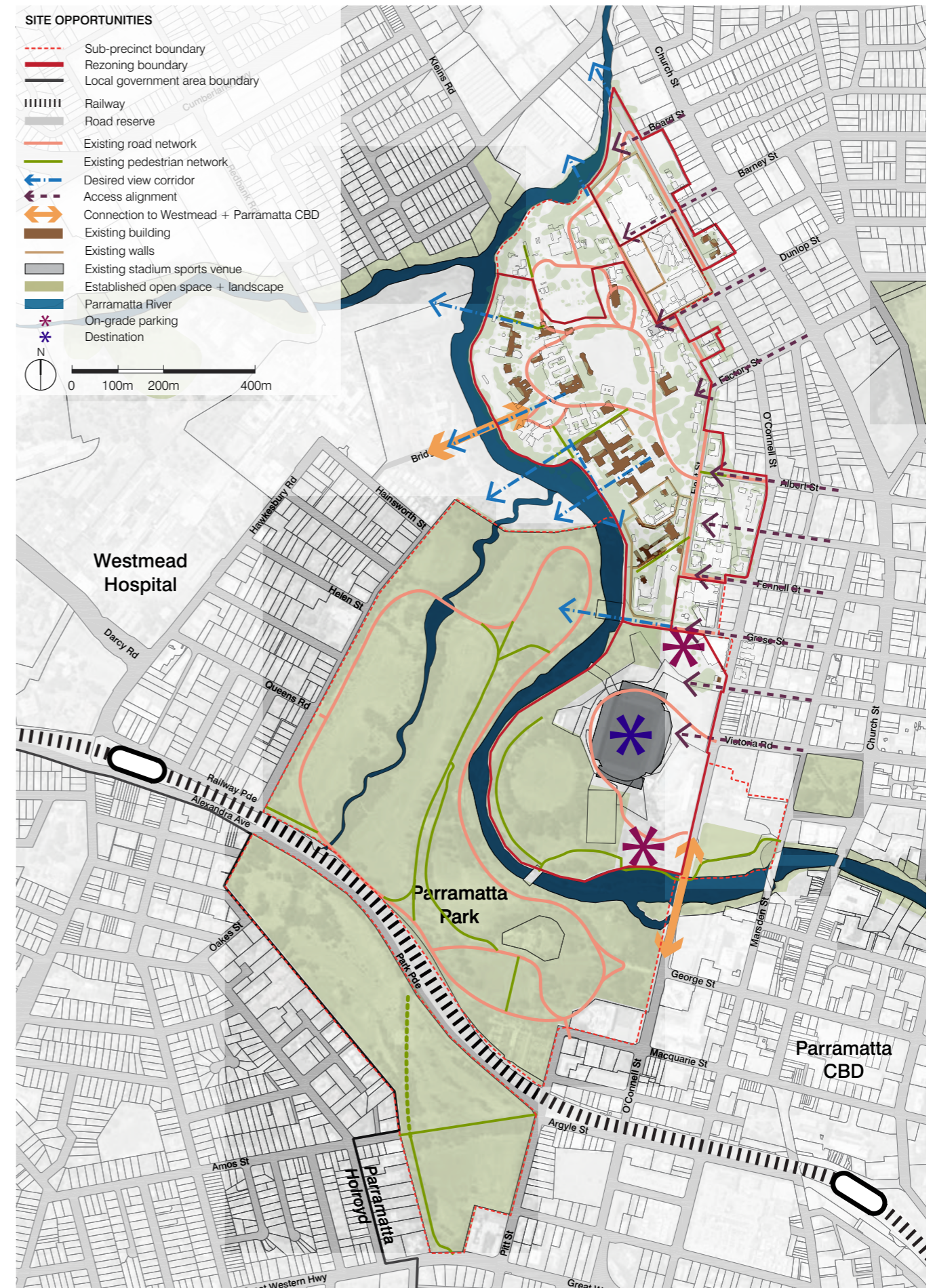
KEY OPPORTUNITIES

THE OPPORTUNITIES

Site visits, analysis mapping, consultations, meetings with stakeholders and design team workshops have identified the following opportunities:

- + extensive river foreshore area
- + connections to Westmead Medical Precinct
- + connections to Parramatta CBD
- + Parramatta Stadium as an established venue for sports events
- + existing mature landscape and open space network
- + heritage assets clustered to the west of the Cumberland Precinct
- + view corridors out of the precinct
- + archaeological potential
- + an established circulation network.

Key opportunities

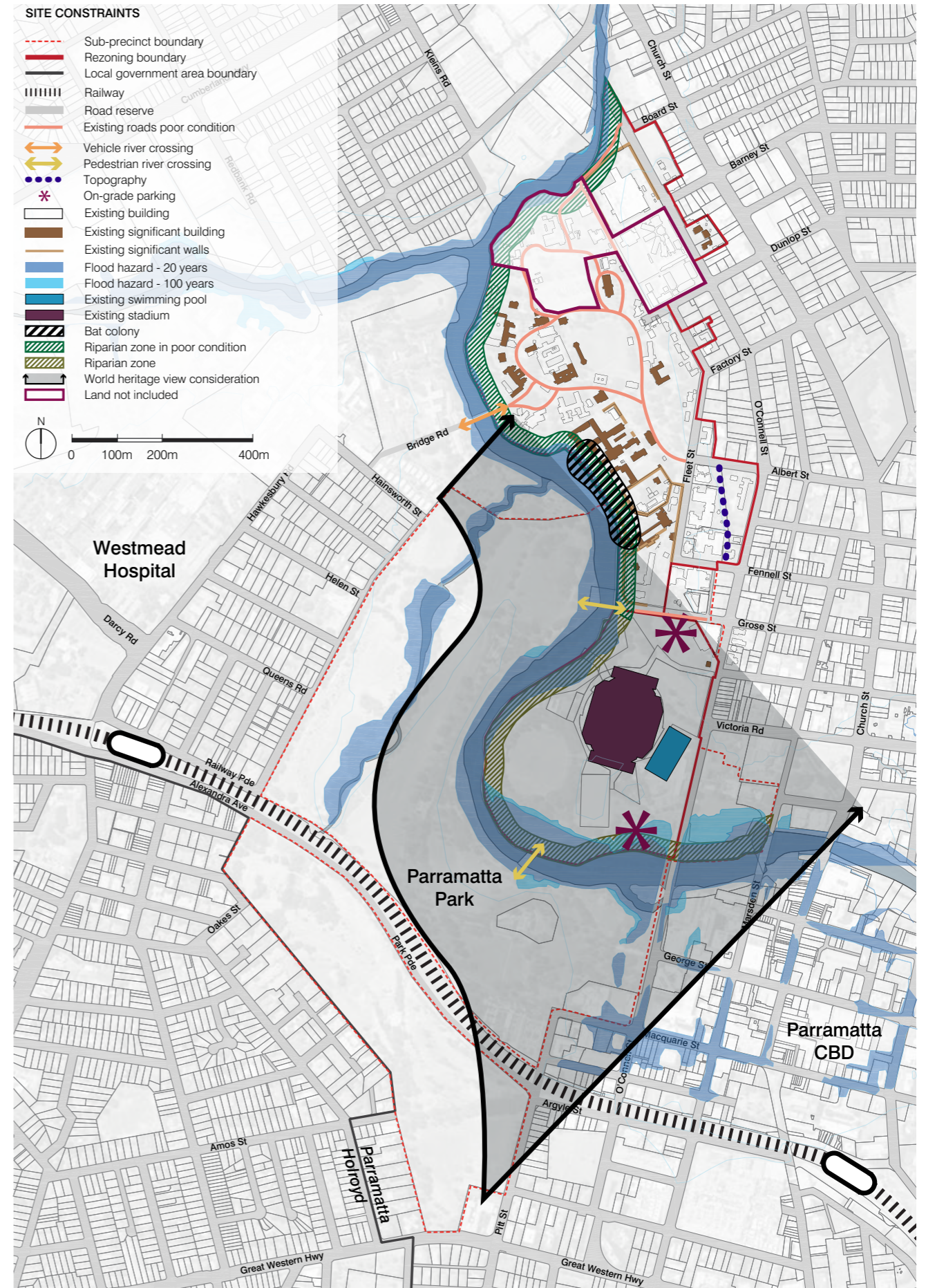


Key constraints

THE CONSTRAINTS

The Study Area is subject to the following constraints:

- + the river foreshore riparian zone presents some constraint along the foreshore and is largely in poor condition.
- + 20-year and 100-year flood hazard zones indicate that floods could affect some areas.
- + a number of existing buildings are of little to limited value while a number of existing heritage structures are of high significance.
- + topography limits connectivity to surrounding streets in some locations.
- + Parramatta Swimming Centre and Parramatta Stadium are situated within the Sport and Leisure Precinct.
- + a Grey-headed Flying Fox colony along riverfront will need to be protected.
- + the Study Area accommodates existing at-grade parking.
- + there are limited points of connectivity across the Parramatta River.
- + World heritage view corridors from Parramatta Park and Old Government House may affect development.



01 INTRODUCTION

THE PLAN GENERATORS

Plan Generators are the urban design initiatives that have informed the development of the new planning framework.

These have been derived from the FMP principles as spatial and place-based objectives

PLACE OBJECTIVES

Narrative

Cumberland Precinct

- + activate heritage buildings through new uses and incorporate them into larger development plots
- + acknowledge and respond to the multiple layers of social and cultural history on the site
- + interpret the long history of Aboriginal and European settlement along the river foreshore
- + create a zone on the west of the Study Area that incorporates a majority of the sites heritage buildings and structures
- + identify a place of conscience within the site of the Norma Parker Centre
- + include Interpretative elements along the Mill Race and in the open space on the site of Marsden's Mill
- + replace trees that are removed with identical species to continue the existing landscape character
- + scale development to respect the key heritage views and vistas.

Sport and Leisure Precinct

- + interpret Dodd's Farm
- + interpret of the long history of Aboriginal and European settlement along the river foreshore
- + interpret the old entrance path into the Domain leading to the weir crossing
- + scale development to respect the key heritage views and vistas around and through the precinct.

Connectivity

Cumberland Precinct

- + enhance east west connectivity and permeability
- + create a new site access point on Factory Street
- + create a new site access point on New Street
- + create a new connection to North Parramatta across the river
- + create a new north south connection to the Sport and Leisure Precinct
- + establish a clear site circulation loop based on the existing

road pattern centred around the main open space

- + create opportunities to enhance cycle infrastructure through the site.

Sport and Leisure Precinct

- + create new site access points that respond to entry points to Parramatta Stadium
- + create a new north south connection to the Cumberland Precinct
- + create a new connection to North Parramatta across the river.

Community and Amenity

Cumberland Precinct

- + build on the existing mature landscape qualities of the site
- + provide a linear open space on the bank of the Parramatta River that contributes to regional connectivity
- + provide an open space network that links to wider regional open spaces
- + provide discreet open spaces that offer active and passive recreation
- + make new open space areas accessible to the existing adjoining residential area
- + create a new community heart on the western edge of the major open space.

Sport and Leisure Precinct

- + create a new foreshore park to replace the existing at-grade car parking on the river edge
- + provide a linear open space on the bank of the Parramatta River that contributes to regional connectivity.

Activation

Cumberland Precinct

- + create a new village heart west of the main open space with retail and community uses
- + allow for adaptive re-use of existing heritage buildings
- + Sport and Leisure Precinct
- + allow for new development around Parramatta Stadium to support the existing land uses.

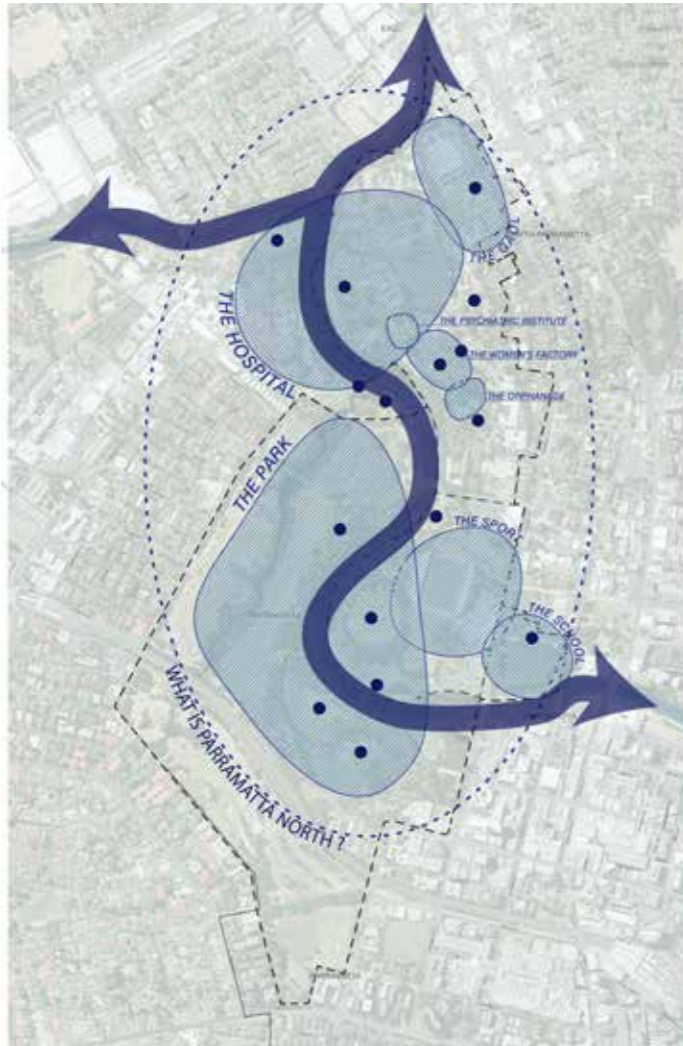
Vitality

Cumberland Precinct

- + provide zones for a mix of adaptive re-use and sensitive new medium density development around existing heritage buildings
- + provide zones away from existing heritage buildings for new high density development.

Sport and Leisure Precinct

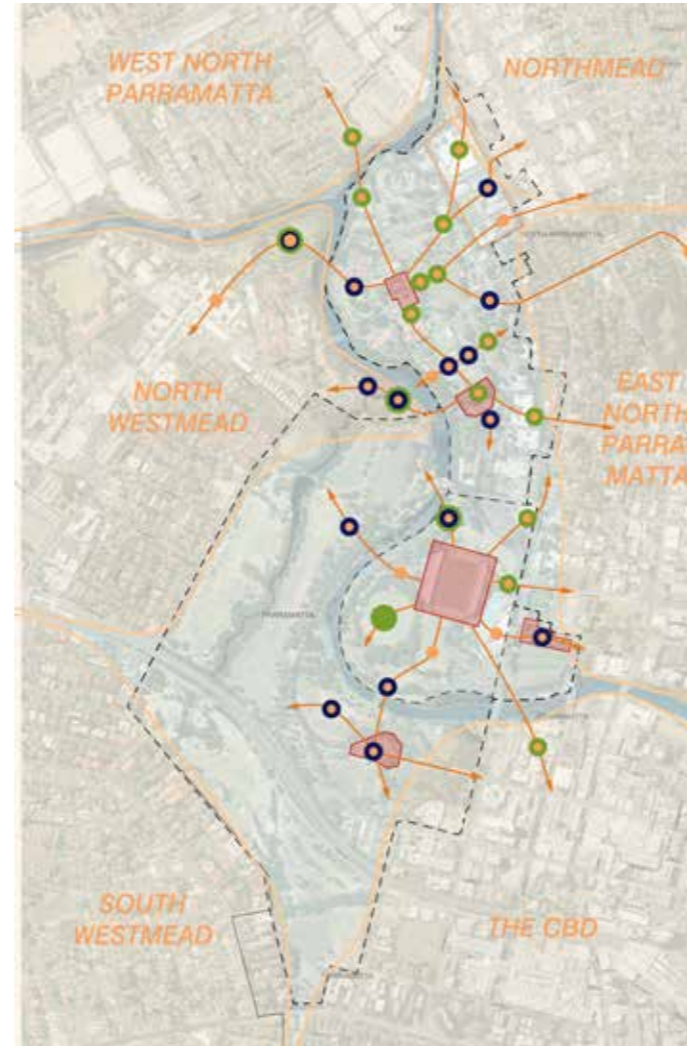
- + locate a new strip of development along O'Connell Street to activate the street.



Narrative

NARRATIVE

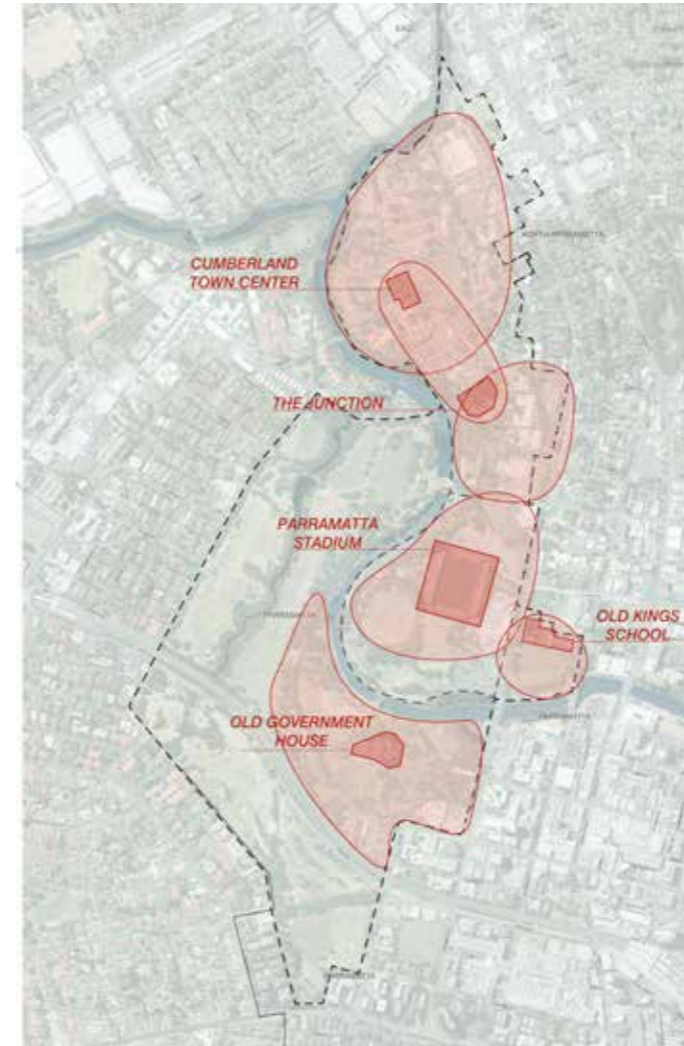
- - - Sub-precinct boundary
- ➔ River
- ▨ Zone of related activity
- Key heritage site



Connectivity

CONNECTIVITY

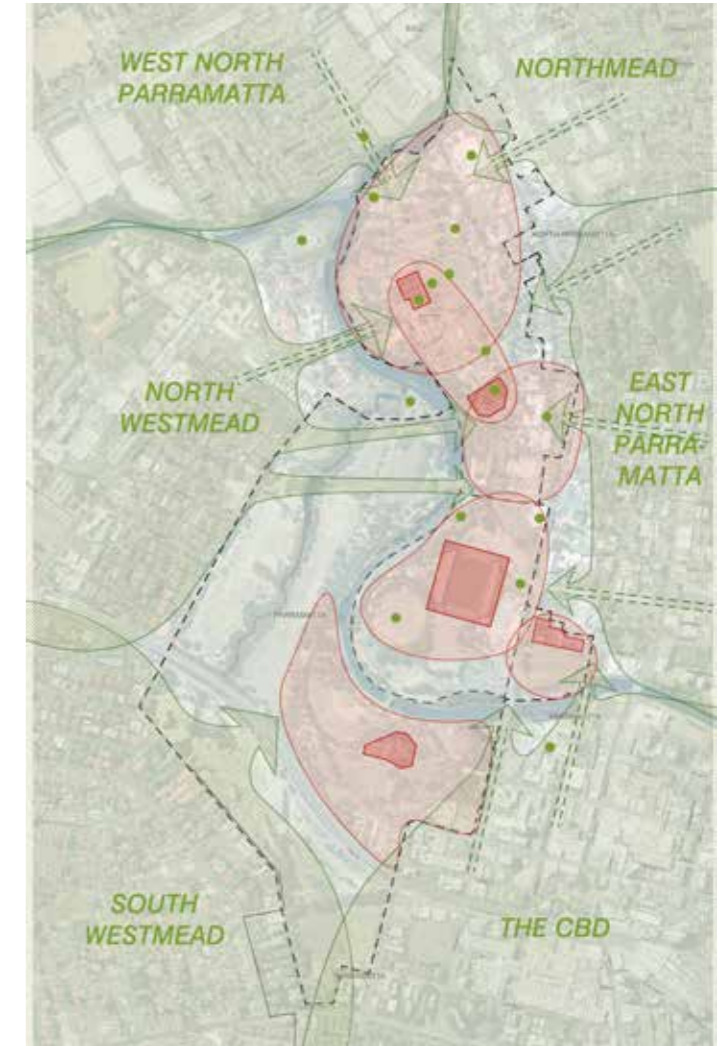
- - - Sub-precinct boundary
- ➔ Zone of related activity
- ▨ Existing community
- ▨ Key activation site
- Key heritage site
- Key community site
- Key site



Activation

ACTIVATION

- - - Sub-precinct boundary
- ▨ Zone of activity
- ▨ Key activation site



Community

COMMUNITY

- - - Sub-precinct boundary
- ↔ Community interface
- ▨ Existing community
- ▨ New community
- ▨ Key activation site
- Key community site



02 THE PROPOSAL

02 THE PROPOSAL

ILLUSTRATIVE MASTERPLAN

The new planning framework has been developed through stakeholder consultation that included interactive and responsive events.

This process drew out ideas, knowledge and vision by engaging with a diverse range of people and interest groups.

The adjacent image represents a possible built form outcome for the site under the controls being proposed.

The following pages describe the desired outcome for the Study Area along with artists' impressions of the developed sites.

The following development yields will be achieved through the new planning framework for the study area:

Cumberland Precinct

- + approximately 4,100 dwellings
- + approximately 28,000 m2 GFA of adaptive reuse of retained heritage buildings
- + up to 4,000 m2 GFA of retail space.

Sport and Leisure Precinct

- + approximately 34,000 m2 GFA of mixed-use [likely to be predominantly commercial]

Illustrative master plan



The Cumberland Precinct will be an active series of public spaces with a unique blend of heritage and new buildings within an urban river front setting.

FUTURE CHARACTER - CUMBERLAND PRECINCT

The Precinct will:

- + provide an amenable neighbourhood setting for residents and visitors
- + be active 24 hours
- + provide opportunities to interpret and present the Precinct's history and heritage
- + serve as an exemplar of heritage adaptation that responds to contemporary needs
- + see significant heritage buildings and structures restored and re-used
- + be a place that encourages association with the arts
- + support restored and improved riparian landscape
- + provide connections to the north and south as part of a continuous foreshore pedestrian and cycle network, linking the CBD with Parramatta Lakes
- + improve permeability to the north and west, with improved and new river crossings
- + improve permeability to the east, connecting into the existing road network
- + be easily accessible from the CBD
- + be an attractive destination for Sydney tourism.

Artists impression - Cumberland Precinct, view across the Parramatta River



02 THE PROPOSAL

The Sport and Leisure Precinct will build on existing destination strengths as a major venue for sports and community uses, while also engaging with the foreshore and site heritage

FUTURE PRECINCT CHARACTER - SPORT AND LEISURE PRECINCT

The Precinct will:

- + provide opportunities to interpret and present the heritage stories including those from the Government Farm and 'Little Coogee'
- + respect the predominant landscape setting in the Precinct's west
- + be an entrance to Parramatta Park
- + form a transition between the Parramatta CBD and the park
- + be easily accessible from the Parramatta and Westmead rail stations with safe and attractive pedestrian links
- + provide new entry points
- + be strongly associated with professional and community sports
- + provide amenity and facilities for spectators with entertainment and dining
- + create better foreshore connections to the north and east, as part of a continuous foreshore pedestrian and cycle network
- + provide new mixed-use development to the east of Parramatta Stadium.

Artists impression - Sport and Leisure Precinct, viewed across Parramatta Park



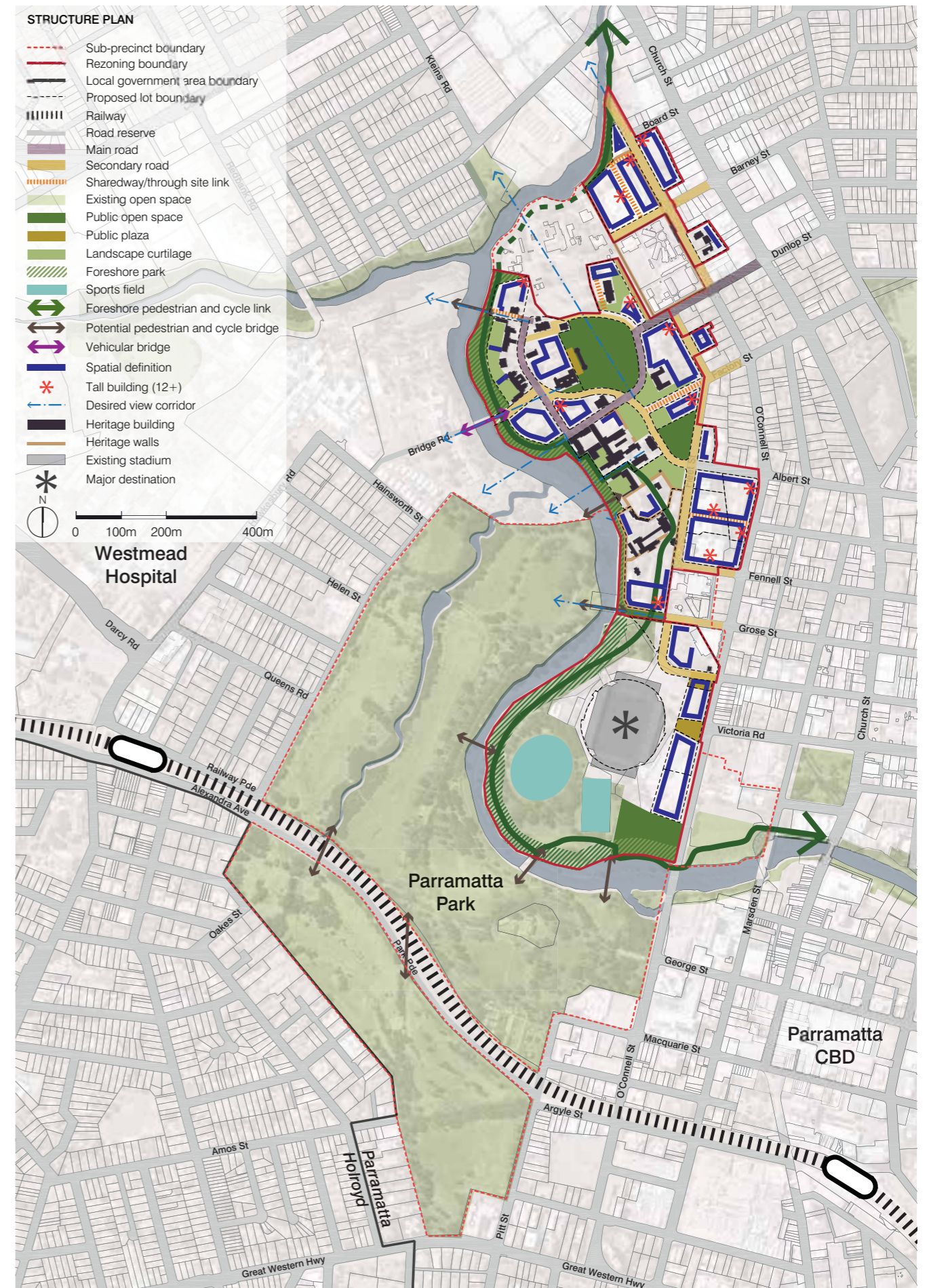
THE STRUCTURE PLAN

The structure plan provides a clear planning framework for the long-term development of the Study Area. It includes:

The planning logic includes:

- + a network of interlinked open spaces that build on the existing mature landscape setting
- + a foreshore park that extends along the northern bank of the Parramatta River and connects the CBD with Lake Parramatta
- + a clear, safe and logical pedestrian network
- + a built form distribution that balances the need to activate existing heritage buildings while also providing appropriate landscape curtilage
- + views into open space areas
- + connections to the local street grid
- + a road hierarchy that balances connectivity and permeability with the need for pedestrian priority
- + strong built edges that reflect the inner city character of the suburb as a progression of the Parramatta CBD
- + links across the Parramatta River
- + a north south connection between the Cumberland and Sport and Leisure Precincts
- + a curtilage around the Parramatta Stadium that allows for management of match day crowds and future expansion
- + new development sites around Parramatta Stadium that provide space that can be activated following relocation of the existing Parramatta Swimming Centre
- + an indication of the frontages and built edges that provide spatial definition to key public domain elements.

The Structure Plan



02 THE PROPOSAL

LAND USE

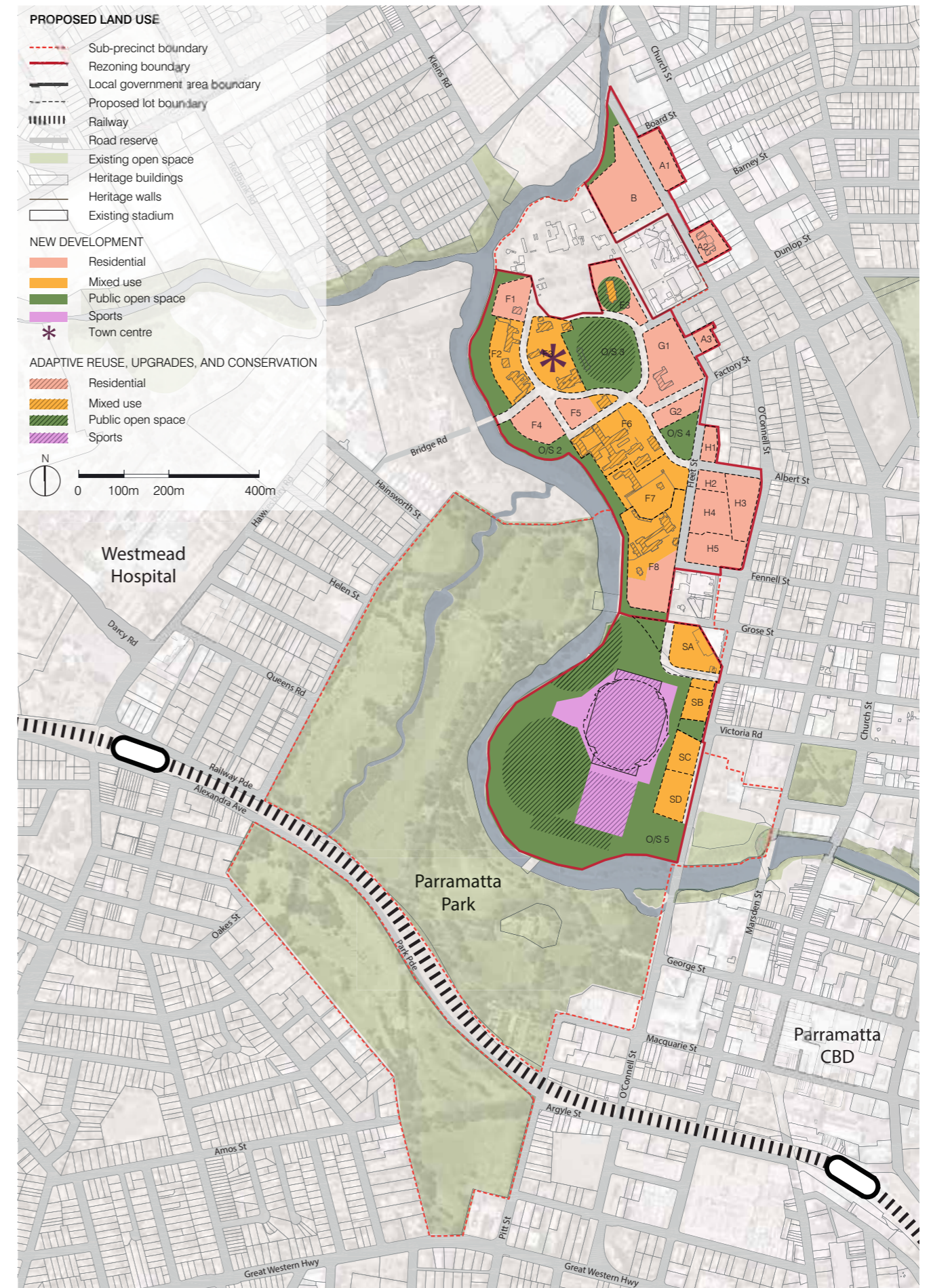
PREFERRED LAND USE

Distribution

Land uses have been structured to reflect the predominant residential outcome envisaged for the Cumberland Precinct, along with a retail centre west of the Precinct.

The current planning anticipates mixed-use development around Parramatta Stadium, where proximity to the CBD and the existing land use is more likely to lead to a greater degree of commercial and retail demand.

Proposed land use pattern



BUILT FORM

The proposed built form approach provides an appropriate scale between existing and new development as well as the public domain and new development.

The key drivers for the built form has been to:

- + scale development down around the existing heritage buildings
- + define open spaces with strong edges
- + site towers on the edges of the Study Area
- + locate towers off open space areas to minimise visual impact
- + locate taller buildings away from significant view corridors
- + create appropriate adjacencies between heritage buildings and new development
- + create a varied edge to the foreshore with a combination of large and intimate spaces
- + create a varied skyline that is a scaled down continuation of the developing Parramatta CBD skyline
- + use street wall edges to create a human scale to streets and the public domain.

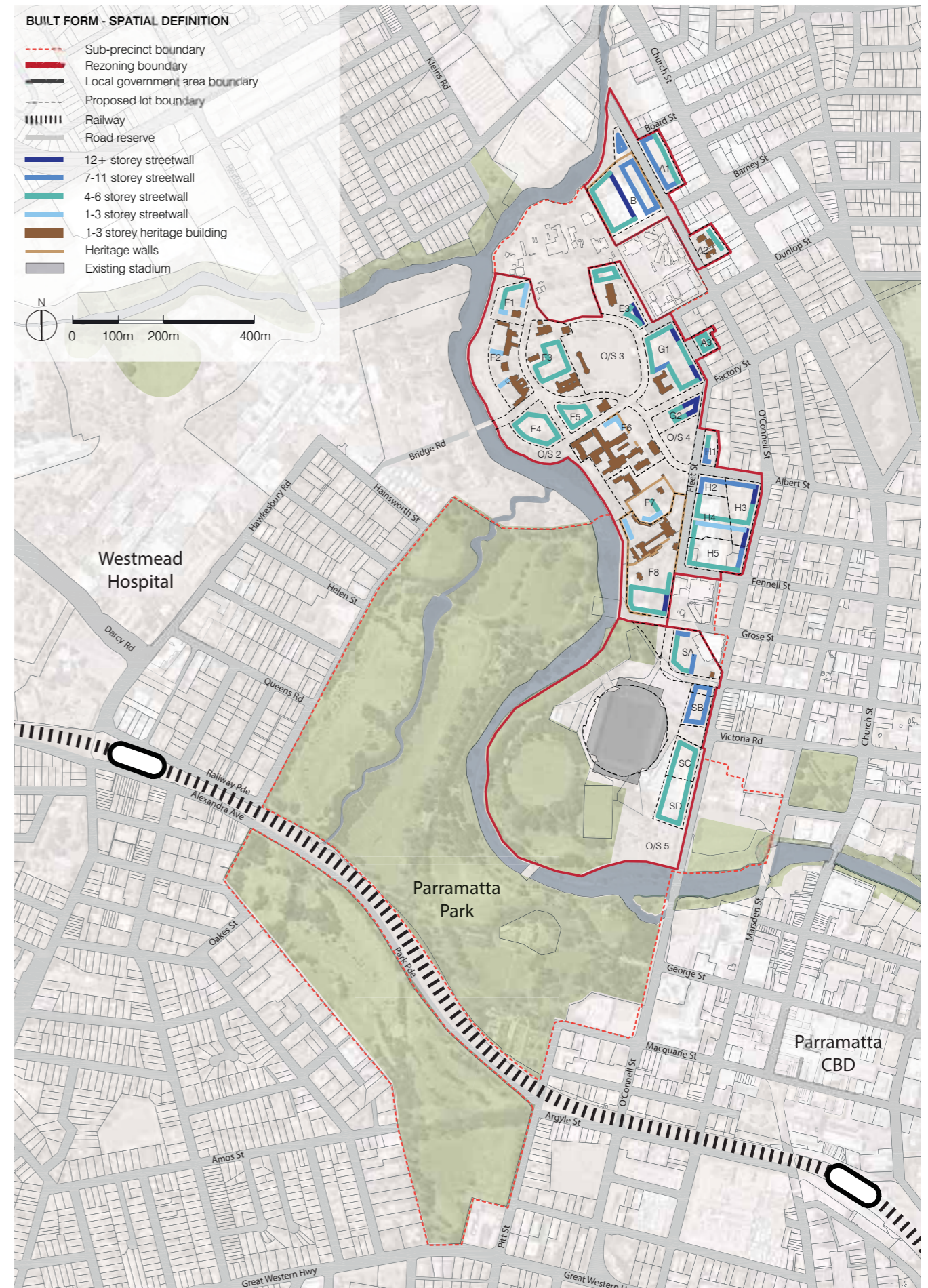
Built form controls

Key built form controls include:

- + tower floor plates above level 12 should not exceed 850m².
- + street wall lengths should not exceed 50 metres.
- + ground floors should not be raised by more than 0.5 metres above natural ground level.

The lack of established inner city residential typologies mean that the controls for the site can be different from the controls in the Parramatta DCP 2011.

Proposed built form controls



02 THE PROPOSAL

Building Heights

Building heights address the scale of existing heritage buildings on the site, provide a varied cityscape, and response to the diverse public domain spaces and places.

The adjacent plan has been tested for development yield according to State Environmental Planning Policy 65 – Design Quality of Residential Flat Development [SEPP 65] rules of thumb that have considered:

- + floor to floor heights [4.5 metres at ground and 3.1 metres above ground]
- + general alignment of high-rise elements on a north south axis
- + building separation controls and best practice
- + building depths generally between 16 metres and 24 metres depending on orientation
- + solar access to courtyard spaces
- + that development is occurring in an urban situation and solar access provisions are based on two hours solar access at mid-winter.

The Draft Parramatta City Centre Planning Framework Study includes a recommendation to redefine the Parramatta CBD to include the Study Area as well as recommendations on future planning controls that would apply to the Study Area. This includes consideration of FSR development standards of 6:1 with no height limit on land adjacent to the PNUR area. This Framework is currently on non-statutory exhibition.

While the eastern edge of the PNUR area proposes heights of up to 30 storeys (greater than currently contemplated) the future planning framework in the vicinity is anticipated to accommodate development of a compatible height and scale.

The ILP has considered potential impacts on neighbouring properties, including appropriate solar access and other criteria contained within the Residential Flat Design Code (RFDC). Shadow analysis for mid-winter and the

equinoxes (see Attachment 2) applies the RFDC benchmark of achieving two hours solar access in mid-winter for dense urban areas. This is considered to be the appropriate benchmark as the future character of the locality would be described as a dense urban area given the proposal to permit in adjacent areas buildings with FSRs of 6:1.

The analysis based upon the building mass of the ILP has demonstrated that good solar access is provided to new public and private open space. The building mass outlined in the ILP has been designed to minimise impacts upon adjoining residential land.

Building height calculation

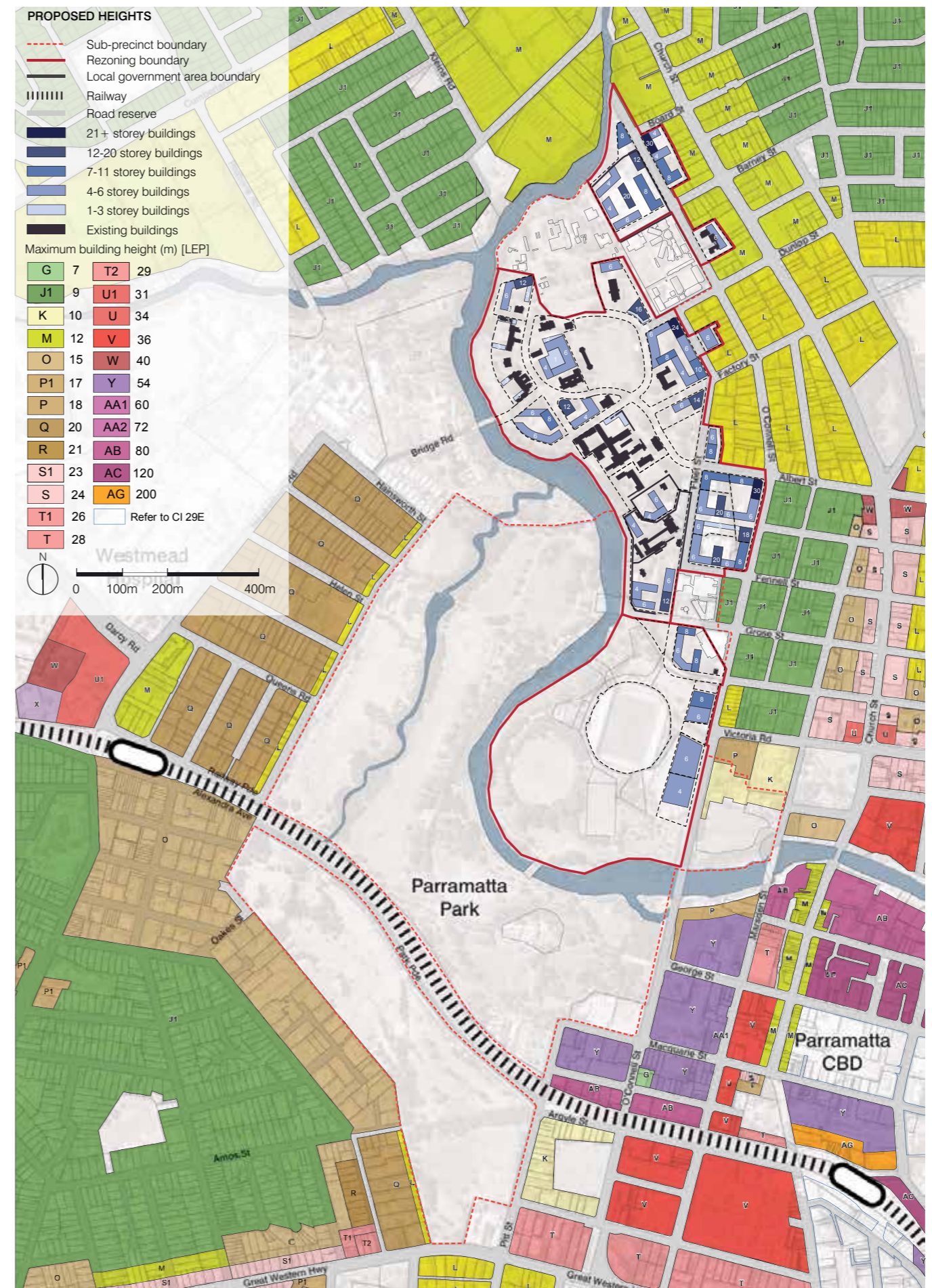
In estimating building heights for new residential developments the following assumptions have been made:

- + ground floor of 4.5 metres
- + upper levels of 3.1 metres
- + roof top plant allowance of 1.8 metres

The table below shows how the assumed height in storeys translates to metres.

No. Storeys	Height in Metres
3	13m
4	16m
6	22m
8	28m
10	34m
12	40m
14	47m
16	53m
18	59m
20	65m
24	80m
30	96m

Proposed building heights



SCALE RELATIONSHIP

The following pages show the variation in scale across the Study Area and in particular how new development interfaces with the existing heritage elements, shown in red.



SECTION A

Section location key



SECTION B

02 THE PROPOSAL



SECTION C

Section location key

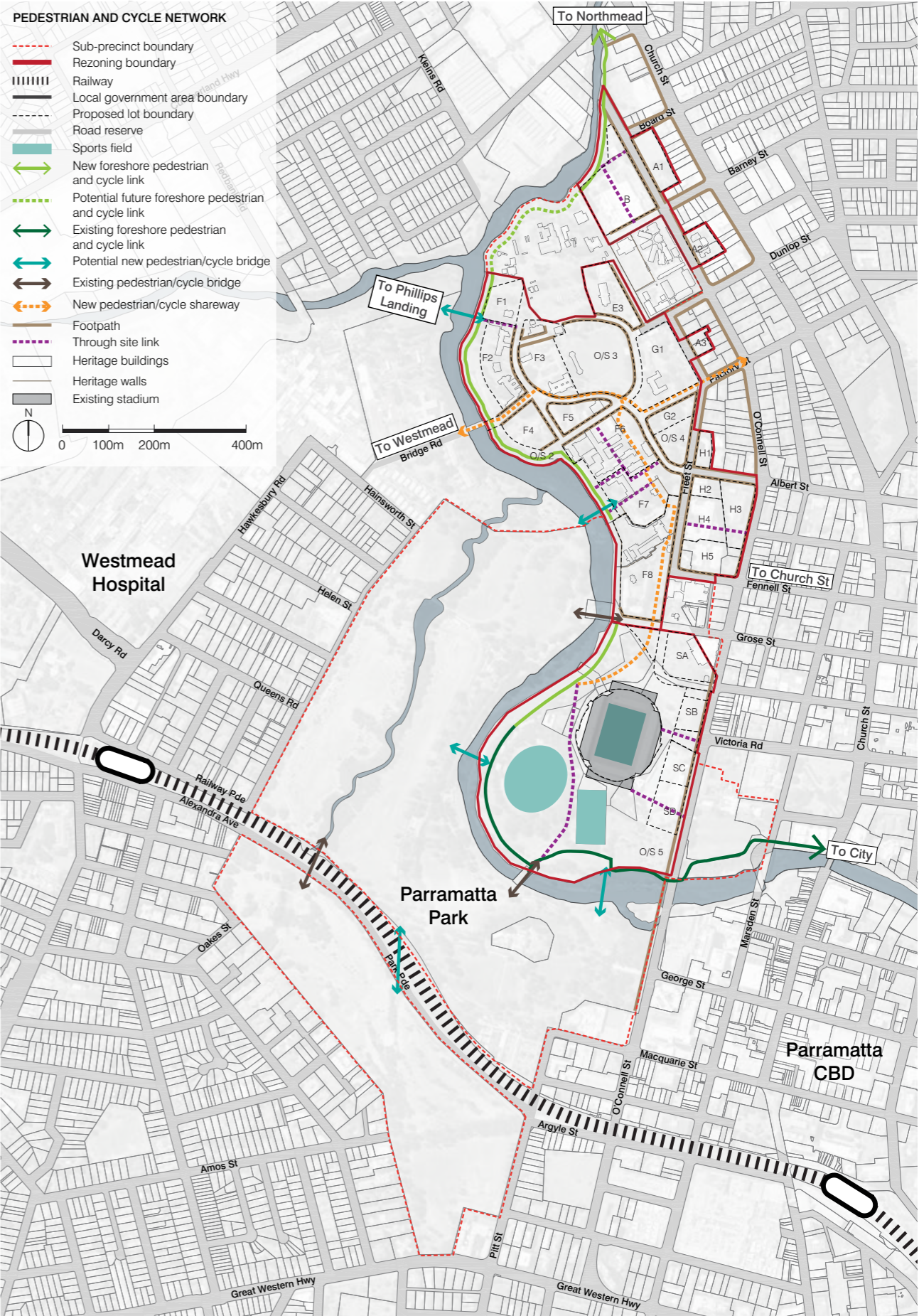


SECTION D

THE PEDESTRIAN AND CYCLE NETWORK

As a fringe CBD site the redevelopment of the site must prioritise walking and cycling as the primary mode of travel.

The ILP integrates the existing streets to the east with the open space links to the west, while also promoting connectivity along the foreshore and access to the major employment and destinations of Parramatta CBD and Westmead Medical Precinct.



02 THE PROPOSAL

PUBLIC TRANSPORT ACCESS

Heavy rail

The edges of the Study Area are a 15 minute walk from the Parramatta Transport Interchange and Westmead Station.

Both stations can be accessed via clear street routes and a level topography.

Bus routes

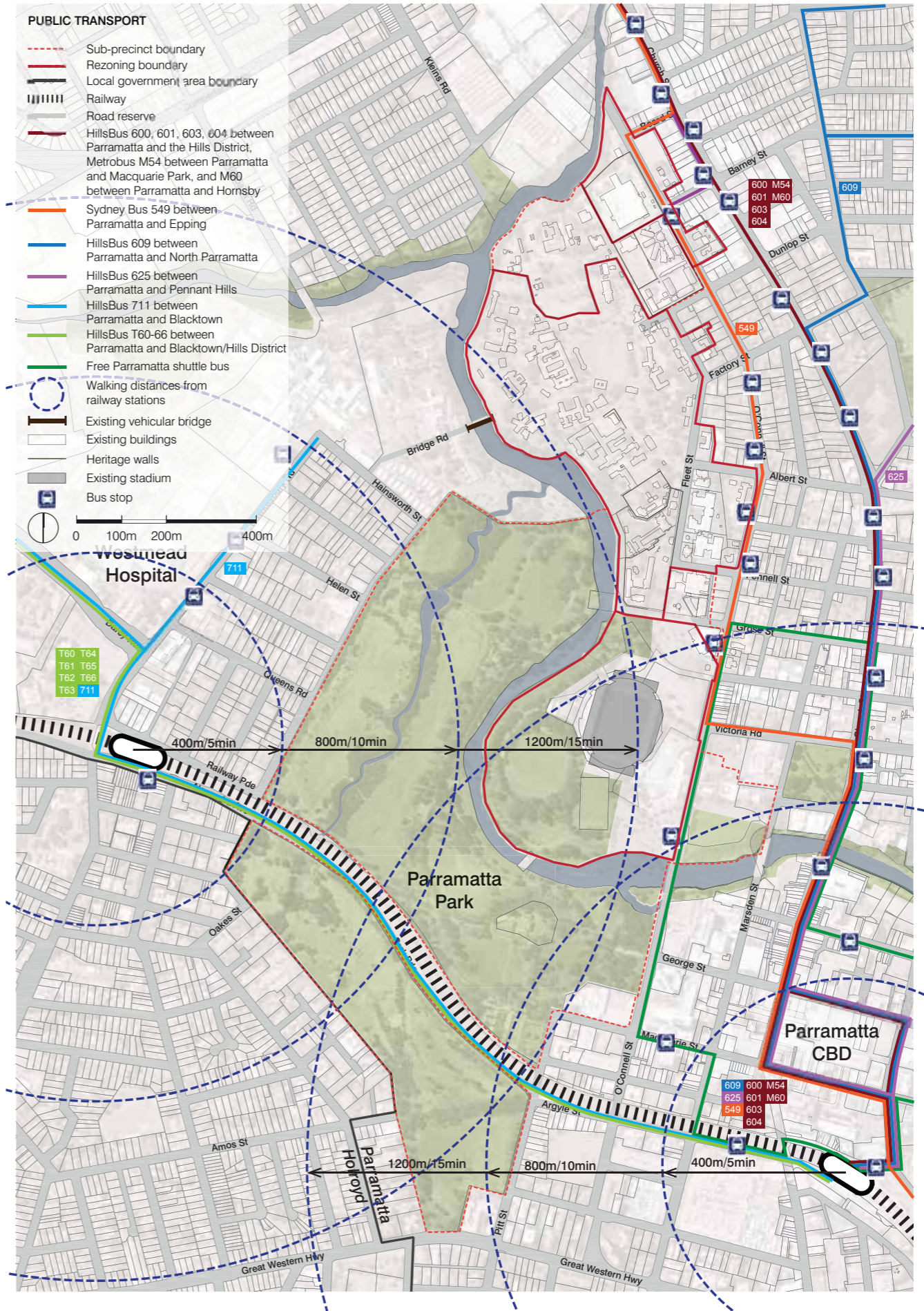
Buses run to the east of the Study Area along Church Street and O'Connell Streets and to the west on Hawkesbury Road.

Future transport

Transport for NSW is investigating the light rail routes proposed by Parramatta City Council in the Western Sydney Light Rail Feasibility Study Parts 1 and 2. Once identified, preferred routes will be subject to detailed design and feasibility. Four potential routes have recently been shortlisted, including routes that could serve the PNUR area.

Any light rail route that serves the PNUR area will expand the transport options available; however, modelling and urban design undertaken for this Study does not rely on a light rail transport solution. Light rail will be a positive additional opportunity for the PNUR area if it is delivered.

Relationship to existing public transport network



VEHICULAR MOVEMENT

Priority will be given to pedestrians, then cyclists, public transport and service vehicles. Private vehicles will be subject to the lowest design priority. To encourage walking, cycling and public transport, parking rates will be set at maximums, as derived from Parramatta DCP 2011.

However, vehicle access will still need to be managed. The design intent is to minimise the impact of cars and to minimise congestion at entrance points.

The following assumptions for on-site parking have been made:

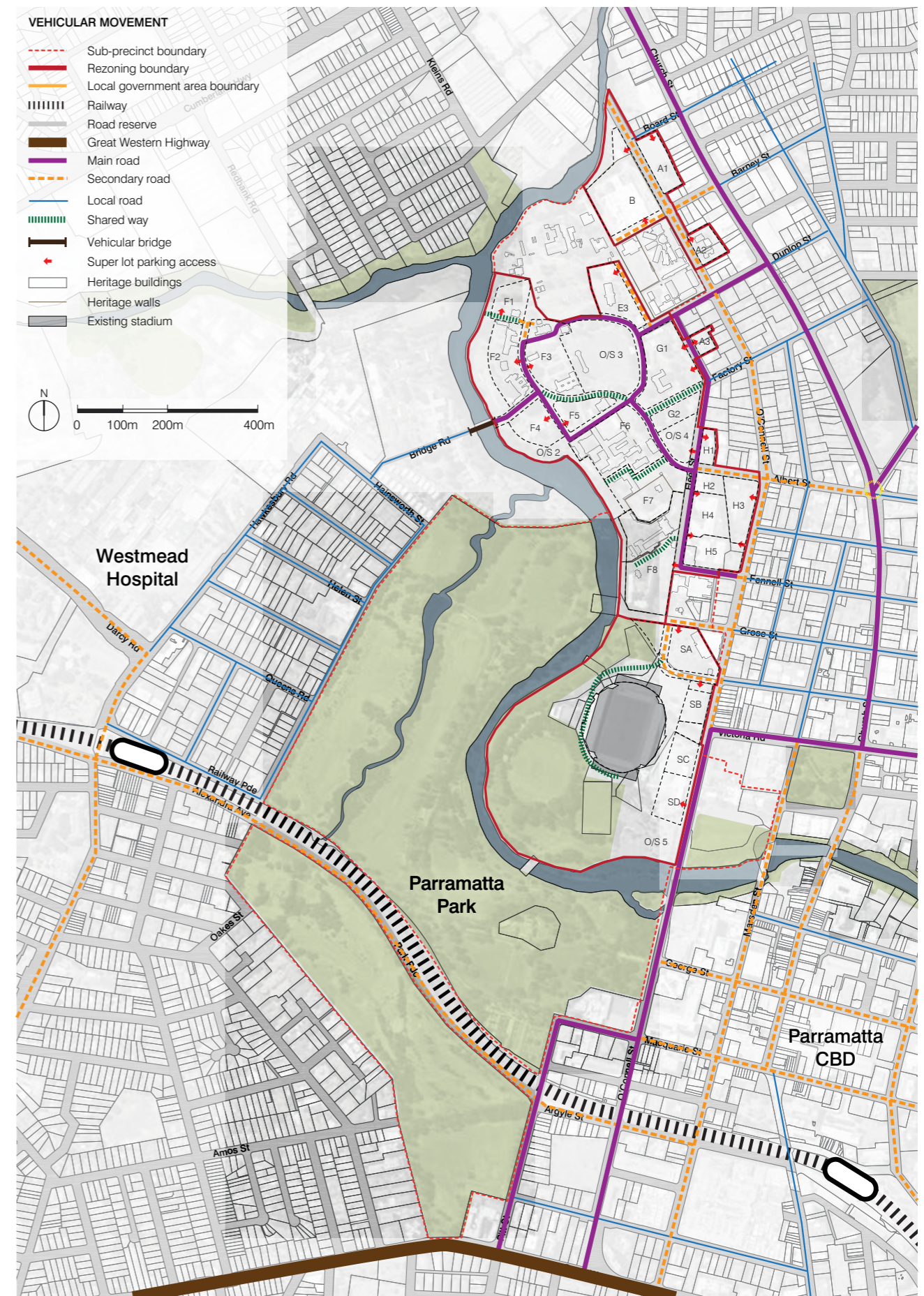
- + the predominant typology for parking and servicing will be basements.
- + podium parking will be permitted if sleeved with active frontages to reduce impacts and avoid blank building façades, as per Parramatta DCP 2011.
- + access to parking will be on plots predominantly from streets or shared ways with no open space address.
- + driveways will be a maximum of six metres wide.
- + basement parking only is permitted in curtilage zones with the finished ground level of roof structures not exceeding the surrounding natural ground level and capable of supporting reasonable landscape and feature tree cover.

Future development within the PNUR area will be subject to the car parking ratios under Parramatta City Centre LEP 2007 and Parramatta DCP 2011. Limiting car parking encourages alternate transport options in a well-served location such as the PNUR area. Proposed car parking rates are summarised in the table below.

Proposed use	Maximum number of parking spaces
Commercial	A maximum of 1 parking space to be provided for every 100m ² of gross floor area.
Housing: 1, 2 and 3 bedrooms	A maximum of 1 parking space to be provided for every dwelling plus 1 parking space to be provided for every 5 dwellings for visitors.
Shops	A maximum of 1 parking space to be provided for every 30m ² of gross floor area.

A summary of the traffic impact assessment is included in this report, refer page 66. Refer to the full traffic impact report for more detailed analysis.

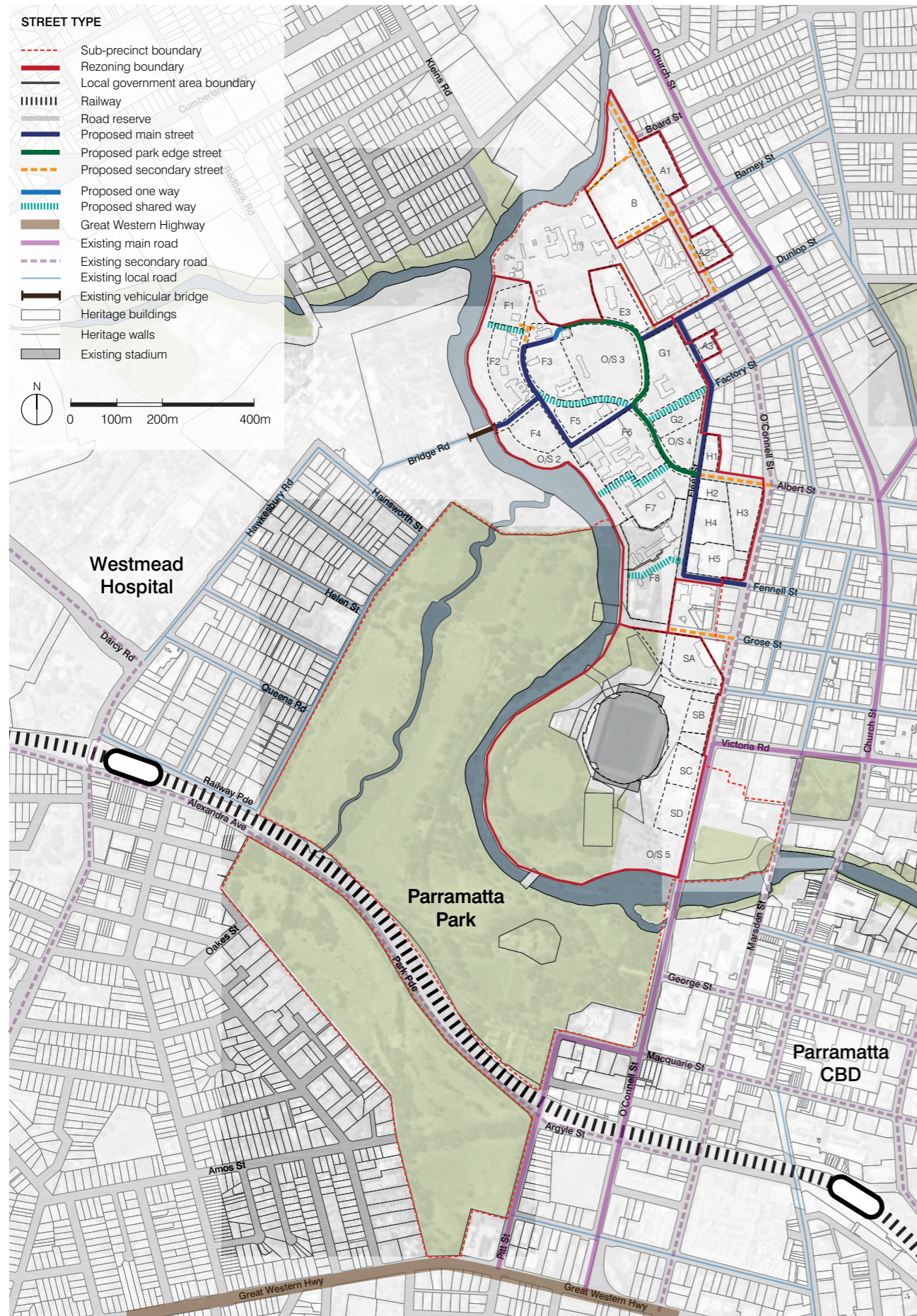
Proposed vehicular system



02 THE PROPOSAL

STREET TYPES

Proposed street types



PROPOSED STREET TYPES

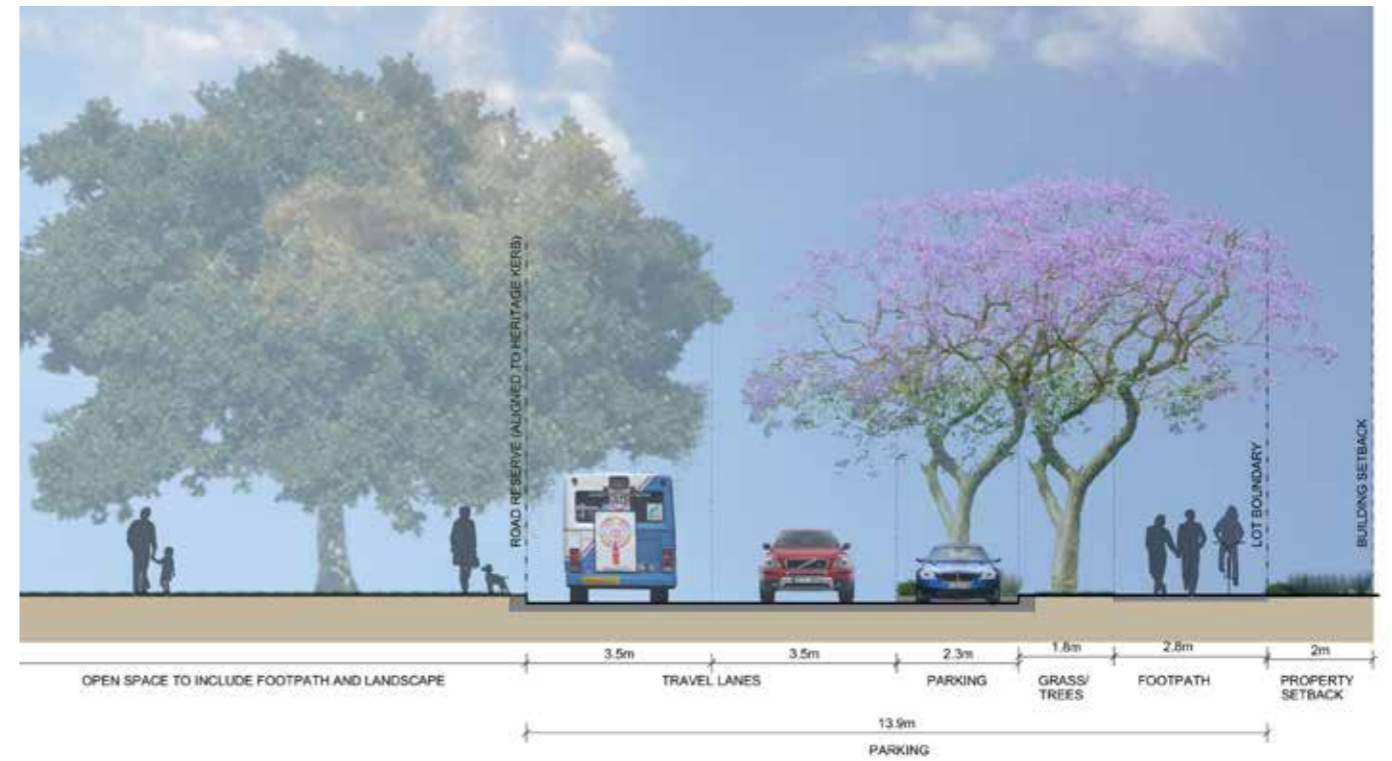
The street design has been derived from the Landcom Street Design Manual May 2008.

The key functional element being the carriageway width, with the footpath dimensions generally confirming to the guidance in the document.

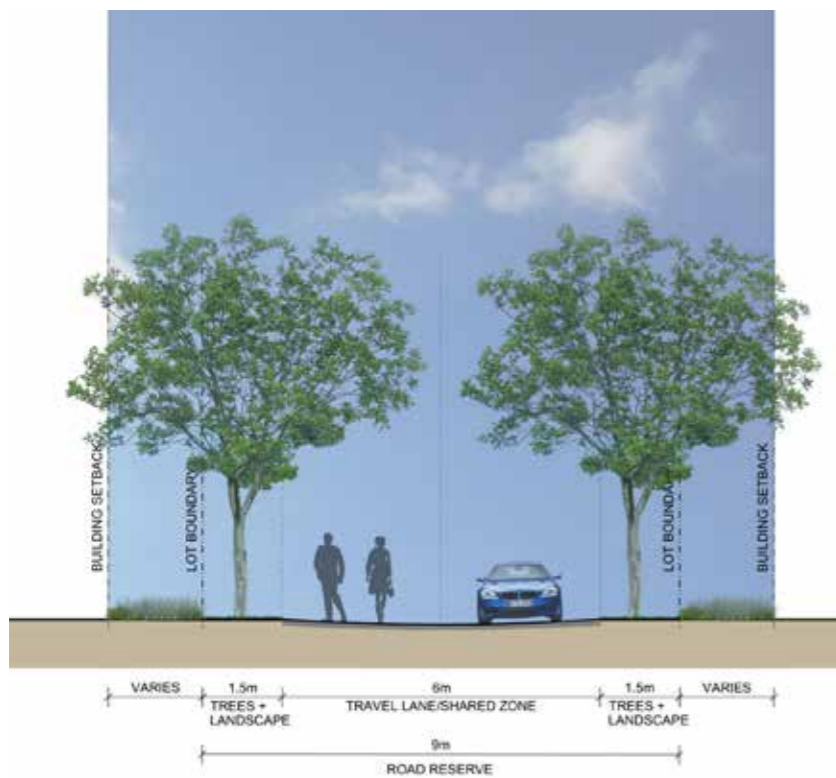
Some deviation to standard dimensions is primarily due to existing roads and the location of mature trees and heritage buildings.

Different street types to respond to these conditions are:

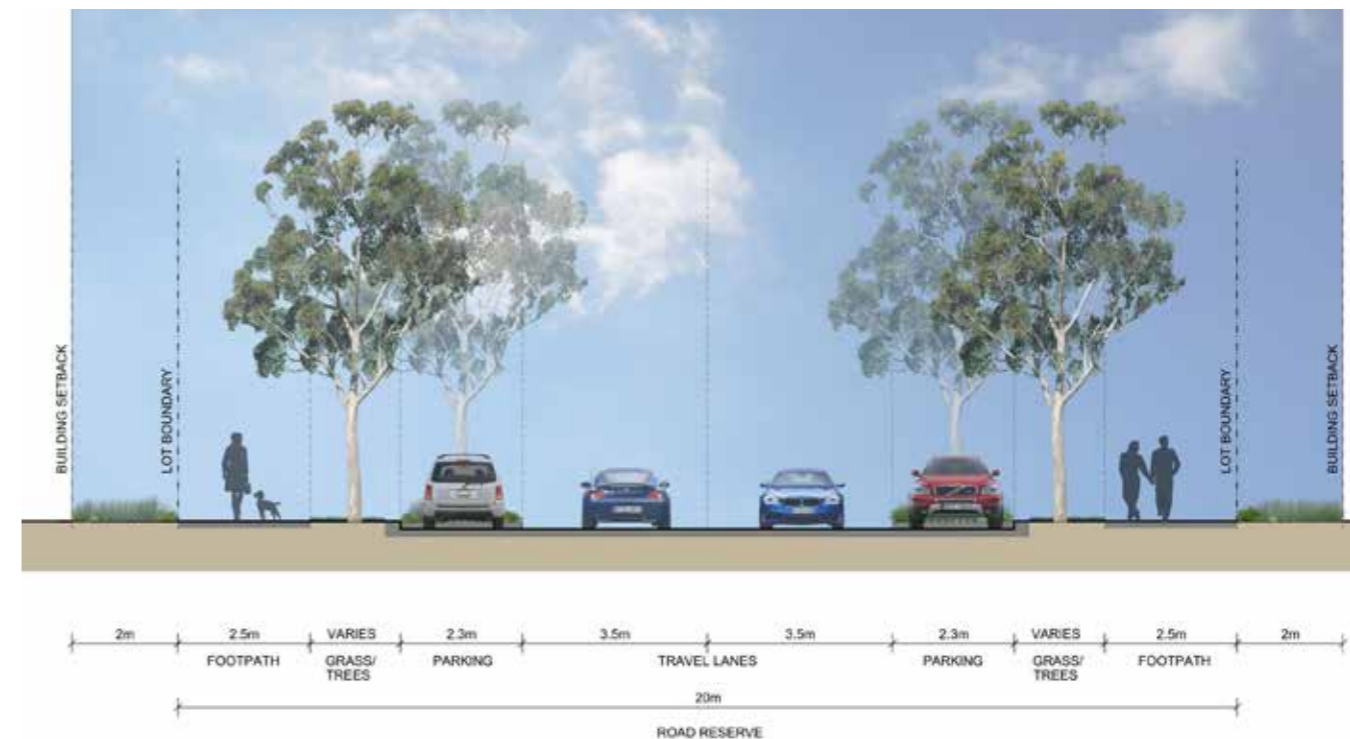
- + Main Street [Collector]
- + Secondary Street [Local]
- + Park Edge condition
- + Shared Street
- + Laneway/Shared Street



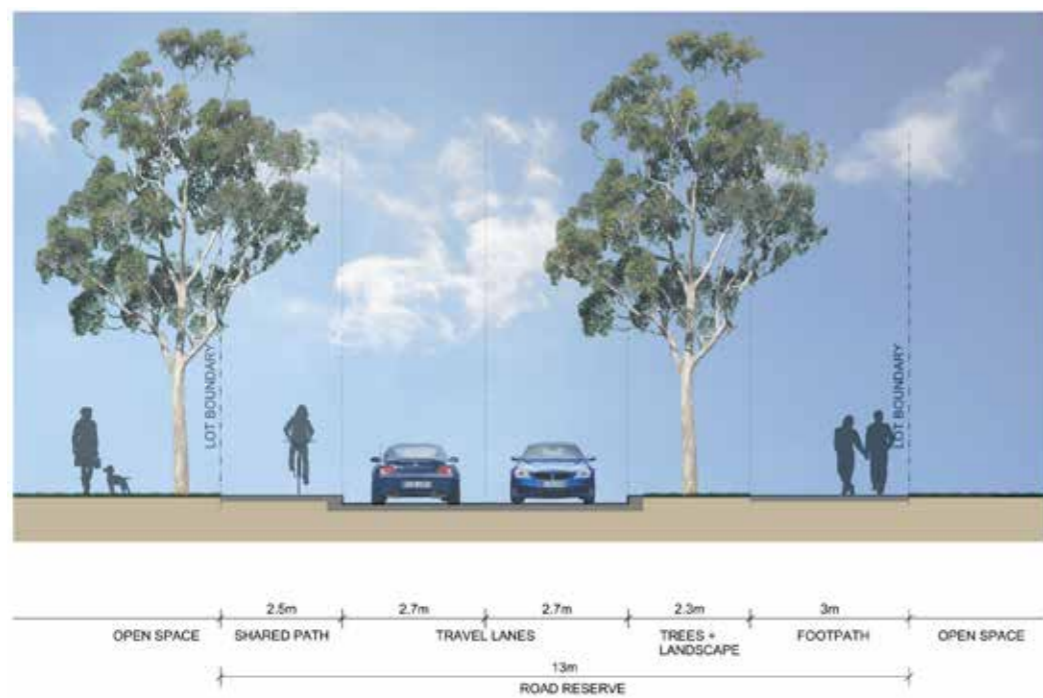
Collector Street Special Park Edge_Scale 1:100 @ A3



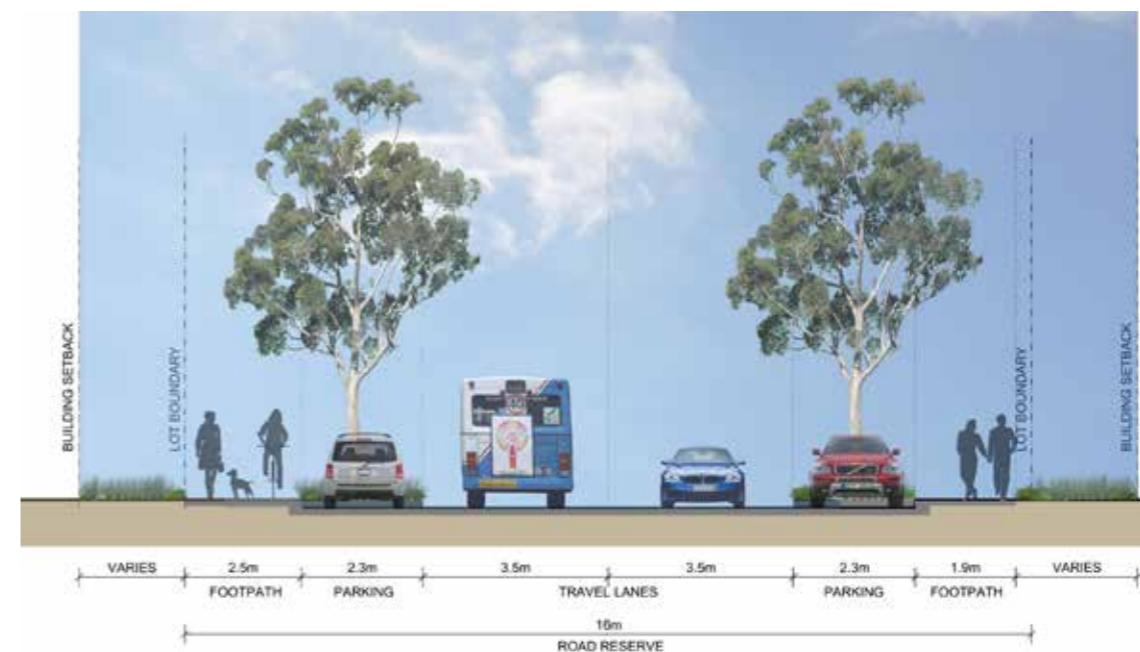
Typical Laneway / Shared Street_Scale 1:100 @ A3



Typical Local Street_Scale 1:100 @ A3



Local Street Special Park Edge_Scale 1:100 @ A3



Typical Collector Street_Scale 1:100 @ A3

02 THE PROPOSAL

PUBLIC DOMAIN

Artists impression of the Cumberland Precinct



THE PUBLIC DOMAIN DESIGN

The design of the public domain builds on the Study Area's mature landscape. Having evolved over thousands of years the river corridor, topography and flora on the site is irreplaceable. It sets the foundation for a new community on the banks of the Parramatta River.

The public domain design:

- + builds on the existing landscape
- + gives a unique identity that blends natural and urban elements
- + provides amenity
- + provides a mix of formal and informal, active and passive recreation opportunities

- + relates to the wider regional open space network
- + is a primary means of connectivity within and through the site
- + allows for interpretation of the Study Area's history
- + aligns open spaces with archaeological areas to help protect and preserve these elements.

Desired design outcomes

The desired design outcomes for the different open space elements are below.

Major open spaces

- + provide a legible pedestrian network around, across and through spaces
- + maximise usable space within the

park for sports and recreation particularly in level areas

- + maximise solar access in the afternoon
- + maintain existing mature trees and planted areas
- + incorporate cycle lanes/shared paths on the edges where desire lines are present
- + provide distinct recreation spaces.

Curtilage spaces

Proposed landscape zones around heritage buildings are predominantly in development lots. Their design should be sympathetic to the heritage character of the immediate area.

- + new planting should relate to the

existing and/or historic planting patterns

- + public access should be balanced with the privacy or security needs of the development.

Streets

- + re-lay sandstone kerbs or incorporate them into public domain areas
- + located parking around existing mature trees
- + where street reserves vary, retain the primary carriageway dimension with parking then reduce verge and footpath areas
- + planted street trees in the parking lane in large planting beds and rain gardens

- + ensure street trees are species already on site.

Shared zones

- + give pedestrians priority and reduce vehicle speed to 10 kilometres an hour
- + allow for access to development sites for parking and servicing
- + use high quality material.

Public art

Public art will:

- + contribute to the Study Area's identity
- + interpret the Study Area's history
- + link to the wider cultural and arts community within Parramatta
- + contribute to tourism.

The design of public spaces must conform to the principles and objectives of the NSW Police Safer by Design Strategy, unless it conflicts with the heritage requirements of the site.

Artists impression of the main open space with the Cumberland Precinct



02 THE PROPOSAL

THE OPEN SPACE NETWORK

The existing mature landscape sets the foundation for open spaces that will provide amenity, identity and a setting for the existing and new buildings.

The strong relationship between open space areas and heritage and archaeological zones will provide opportunities to interpret the site's history.

Open space principles

- + the open space forms part of a larger sub-regional 'green grid' connecting across Parramatta
 - + open spaces are linked both visually and physically
 - + major trees are retained in open spaces
 - + the north bank of the river is a continuous open space and important connector
 - + the open space network provides opportunities for active and passive recreation.
- + open spaces are safe and designed for universal accessibility
 - + open spaces form curtilage around heritage buildings
 - + overshadowing of open spaces is minimised, particularly in the afternoon
 - + some publicly accessible open space in development lots should contribute to the wider landscape character and setting.

Open space objectives

Cumberland Precinct

When not impeded by topography or environmental factors, a continuous open space connection along the foreshore of the Parramatta River should:

- + embellish the existing oval as the major open space area within the Precinct
- + provide a gateway open space along Albert Street as a foreground setting for the Female Factory buildings

- + provide a new public open space in the north west around Marsden's Mill
- + provide publicly accessible open space areas that provide curtilage to heritage buildings.

Sport and Leisure Precinct

- + create a new open space on the Parramatta River foreshore that replaces the existing on grade parking area
- + provide a continuous open space connection along the foreshore of the Parramatta River

- + provide a curtilage to the Parramatta Stadium
- + provide entrance plazas to the Parramatta Stadium to major pedestrian entrances
- + maintain sports fields for professional and community use.

Artists impression - The enhanced Female Factory public domain



Open space types and locations



Landscape master plan

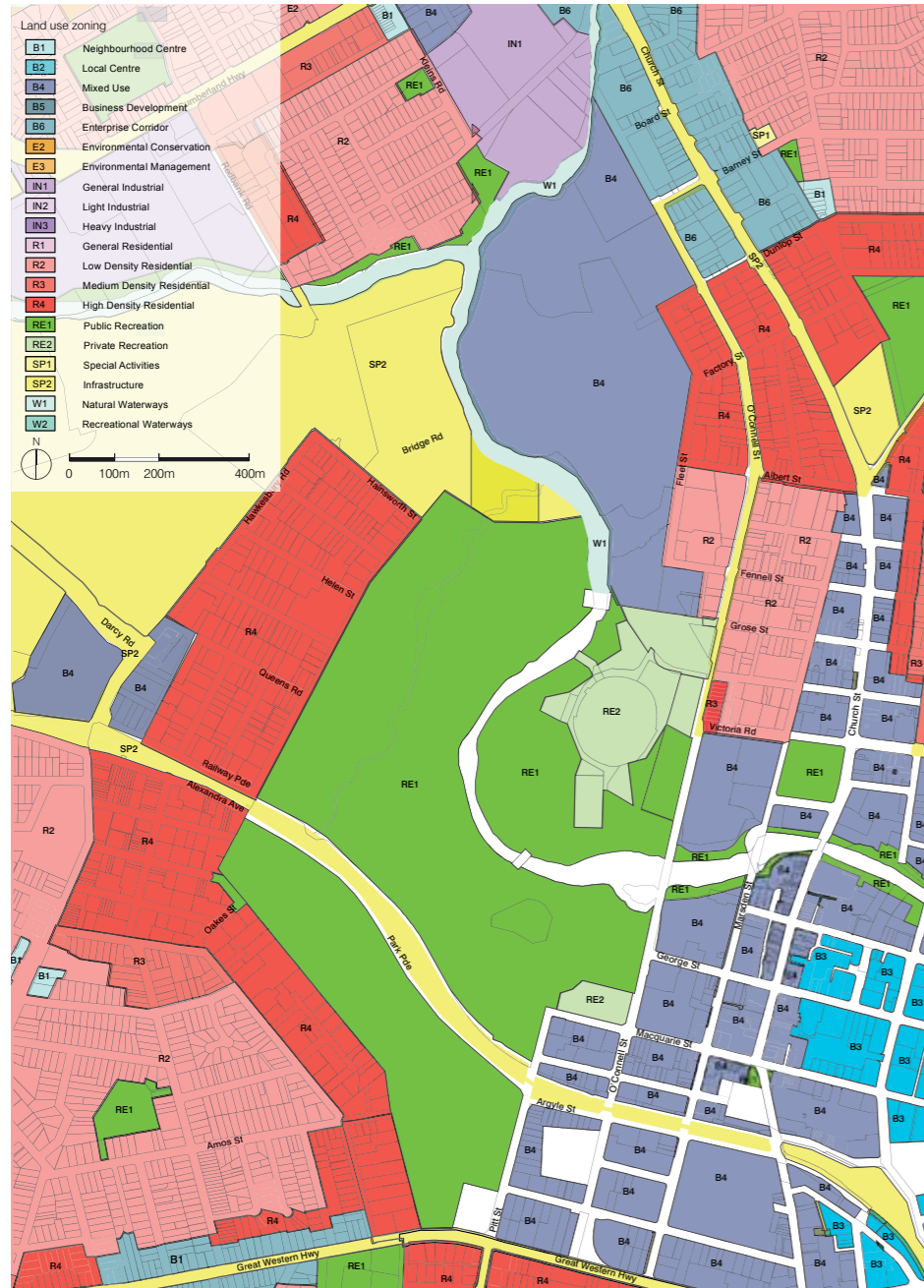




03 PROPOSED PLANNING CONTROLS

03 PROPOSED PLANNING CONTROLS

EXISTING LEP MAPS



Existing Land Use Zoning

The land use zones that apply to the site are as follows:

Cumberland Precinct

- + predominantly B4 - Mixed use along with medium and high density residential and a portion of enterprise corridor

Sport and Leisure Precinct

- + RE1 - Public recreation
- + RE2 - Private recreation



Existing Floor Space Ratio [FSR]

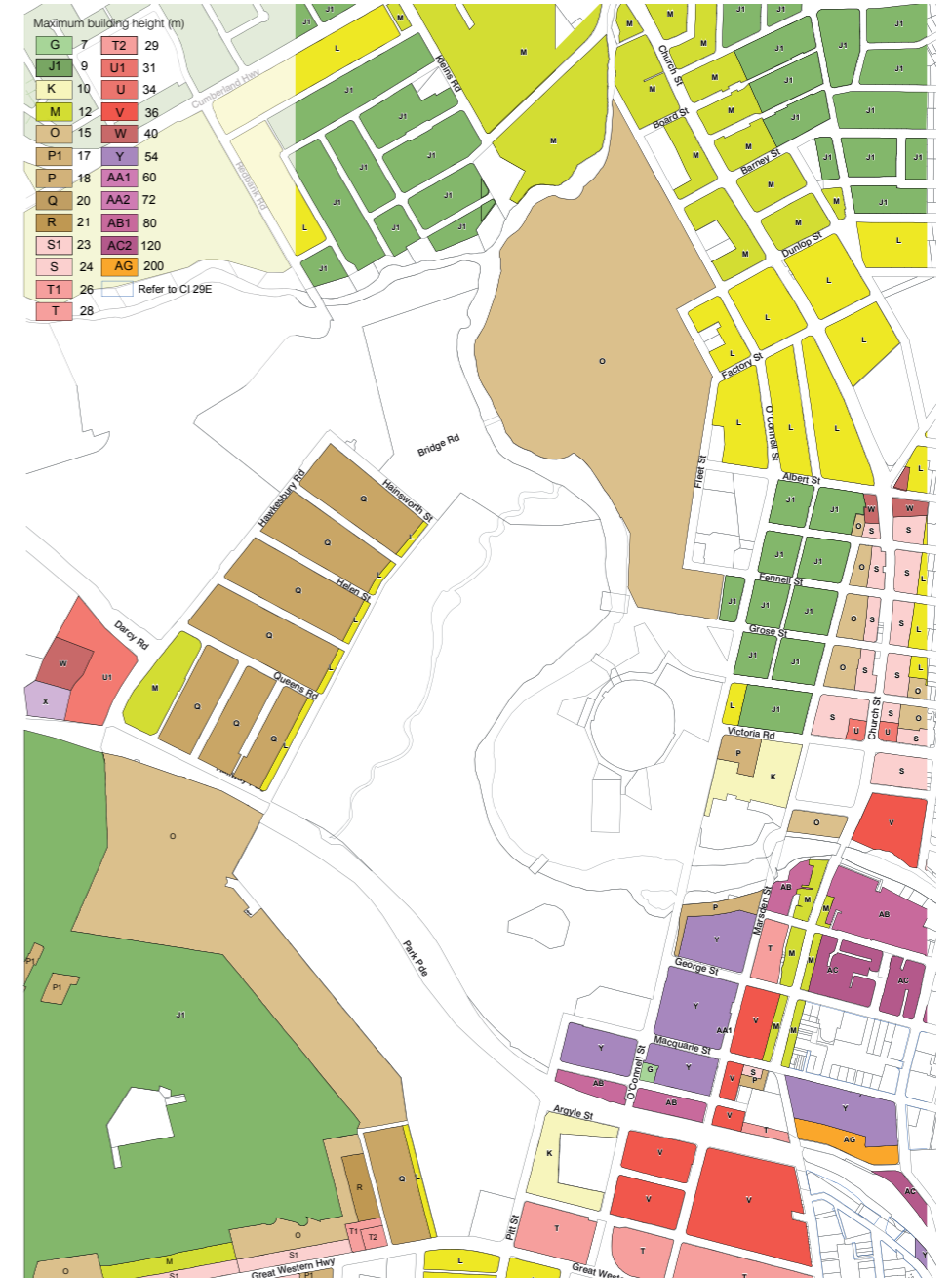
The floor space ratios that apply to the site are as follows:

Cumberland Precinct

- + 0.33:1, 0.5:1, 0.8:1 and 1.5:1

Sport and Leisure Precinct

- + FSR not indicated



Existing Height of Buildings

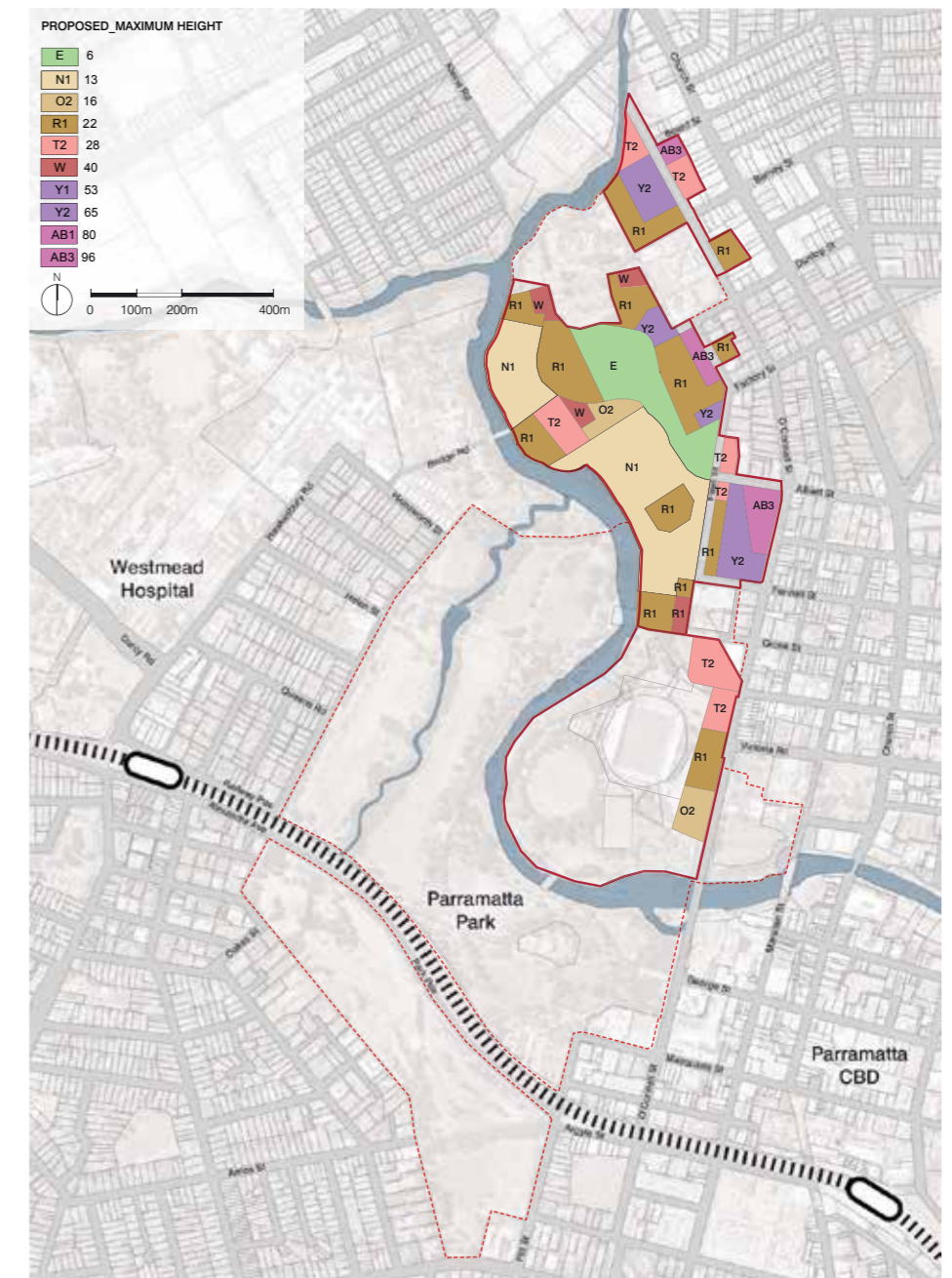
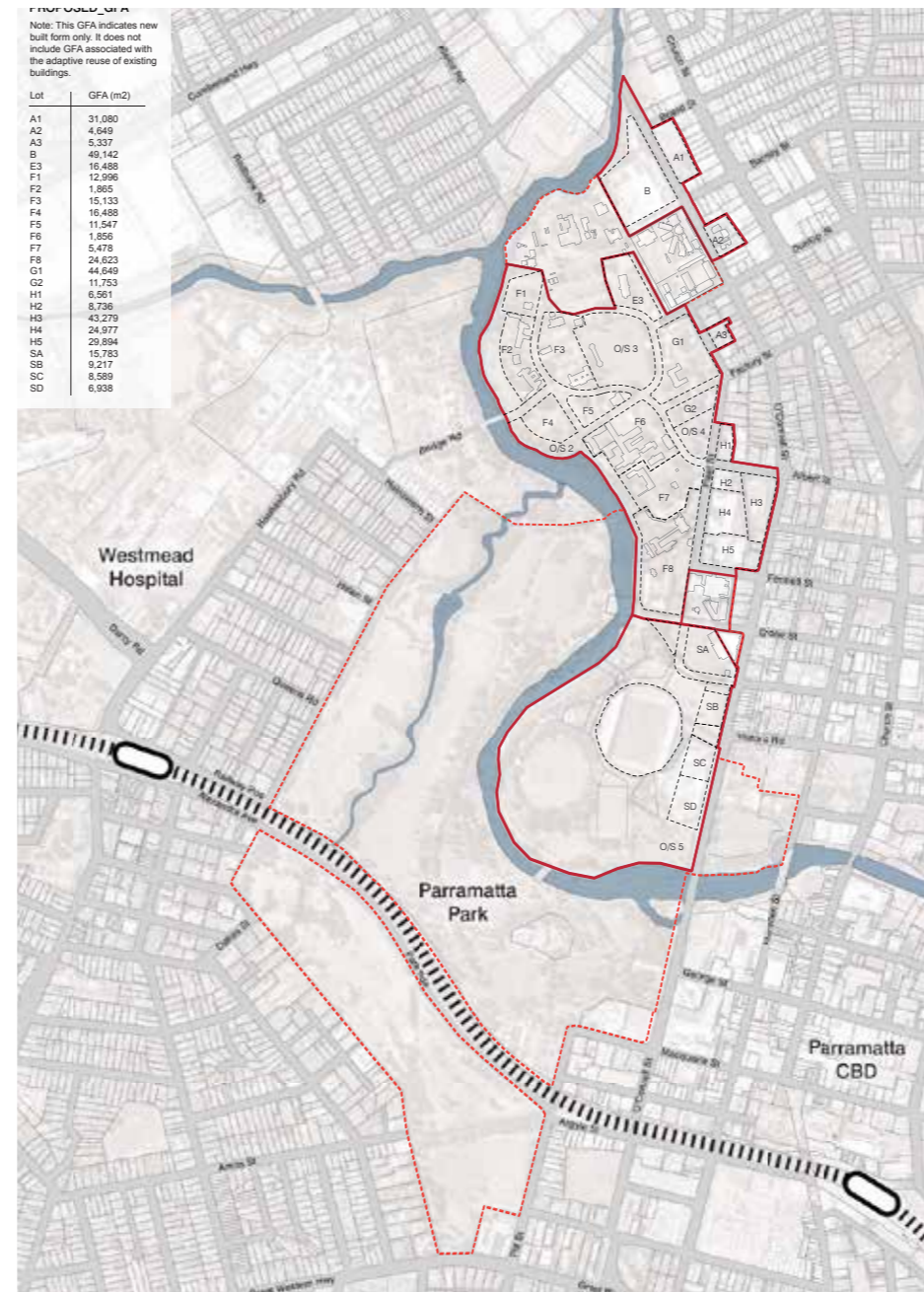
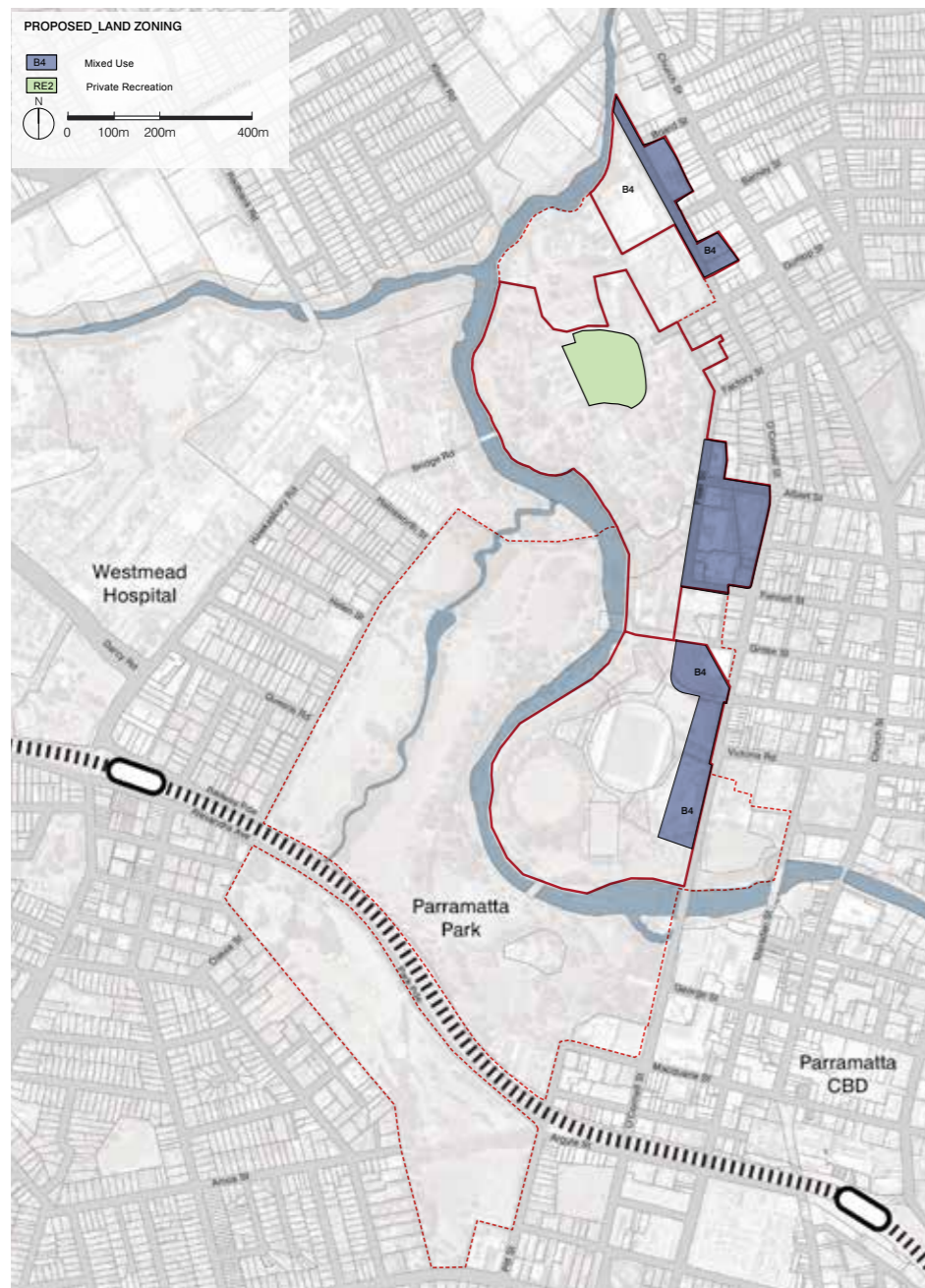
The maximum heights that apply to the site are as follows:

Cumberland Precinct

- + between 9m and 15m

Sport and Leisure Precinct

- + height not indicated



Proposed Land Use Zoning

The proposed land use zones, that vary from the existing controls, that apply to the site are as follows:

Cumberland Precinct

- + B4 - Mixed use
- + RE2 - Private recreation

Sport and Leisure Precinct

- + B4 - Mixed use

The pool site, currently zoned RE1 Public Recreation, is proposed to be rezoned to B4 Mixed Use. The central open space area within the Cumberland Precinct, currently B4, is proposed to be rezoned as RE2 Private Recreation which permits the pool as a land use and provides an offset against the loss of recreation zoned land. The application of the RE1 Public Recreation zone is not proposed as at this stage no appropriate government authority has agreed to the future ownership and management of the park.

Proposed Gross Floor Area

These GFA figures do not include the potential GFA that could be developed within existing heritage buildings to provide incentive for their adaptive re-use.

Proposed Height of Buildings

The plan above defines the proposed height of building controls for the lots within the precinct and should be read in conjunction with the detailed lot controls that can be found in the DCP.



04 SUPPORTING STUDIES

04 SUPPORTING STUDIES

HERITAGE

INTRODUCTION

The Parramatta North Urban Renewal [PNUR] is an area that is rich in heritage. These heritage attributes include Aboriginal and European archaeology, as well as built, landscape and cultural heritage. These layers provide significant opportunities for the PNUR and provide the potential to create a diverse urban environment which adapts, re-uses and interprets these many layers of heritage significance.

In recognition of the significance of the site and the multiple layers of heritage significance the following assessment reports have been prepared to inform and guide the development of the proposed planning framework and supporting ILP and DCP provisions. The approach has been to avoid development in the areas of the most archaeological significance to allow the retention in-situ of the archaeology of these areas. The approach to the built, landscape and social heritage has been to retain and protect the most significant places and identify those buildings which, subject to appropriate recording and interpretation, can be removed to facilitate the creation of the new precinct.

Aboriginal Heritage

The Aboriginal Archaeological assessment undertaken confirms that the Cumberland and Sport and Leisure Precincts are of importance to the local and broader Aboriginal community with the area having the potential to contain evidence of past occupation through to contemporary social associations with the area. The whole study area therefore has the potential to yield evidence of Aboriginal occupation.

The assessment has included a series of recommendations which have been incorporated into the ILP prepared to guide the formulation of the planning controls to guide future development of the land within the PNUR. For the amendment to the statutory planning framework the assessment has

recommended that:

- + Parramatta Park be excluded from the rezoning
- + view lines to and from Parramatta Park should be retained; and
- + research on Aboriginal incarceration and contemporary associations with the Cumberland and Sport and Leisure Precinct should be undertaken.

The amendment of the planning framework does not include the land within Parramatta Park to the west of the Parramatta River. Rezoning of land east of the stadium, already developed for urban purposes is proposed, and the proposal is therefore consistent with this recommendation.

In consideration of view line to and from Parramatta Park, these have been subject to detailed consideration of the cultural landscape assessment.

The underlying principles of the ILP have been to locate taller building opportunities to the north and eastern sections of the PNUR, while the Parramatta River eastern shoreline is to be retained, the vegetation enhanced and the significant heritage buildings in the western and southern areas retained.

The Aboriginal archaeological assessment confirms that the Study Area is important to the local and broader Aboriginal community. The Study Area has the potential to contain evidence of past occupation through to contemporary social associations with the area, presenting potential to yield evidence of Aboriginal occupation.

The assessment recommendations that have guided the ILP and Draft DCP provisions include:

- + excluding Parramatta Park from the rezoning
- + retaining view lines to and from Parramatta Park
- + undertaking research on Aboriginal incarceration and contemporary associations with the Study Area.

As the Study Area does not include the land within Parramatta Park to the west of the Stadium, the amended planning framework is consistent with the first recommendation.

The view lines to and from Parramatta Park have been considered in the cultural landscape assessment. The underlying principle of the ILP has been to locate taller building opportunities to the north and eastern sections of the PNUR area, while retaining the Parramatta River eastern shoreline enhancing vegetation and retaining heritage buildings in the western and southern areas.

The assessment report recommendations have also included provisions for site testing to be undertaken as part of future development proposals. These have been included in the proposed DCP provisions.

Historical Archaeology

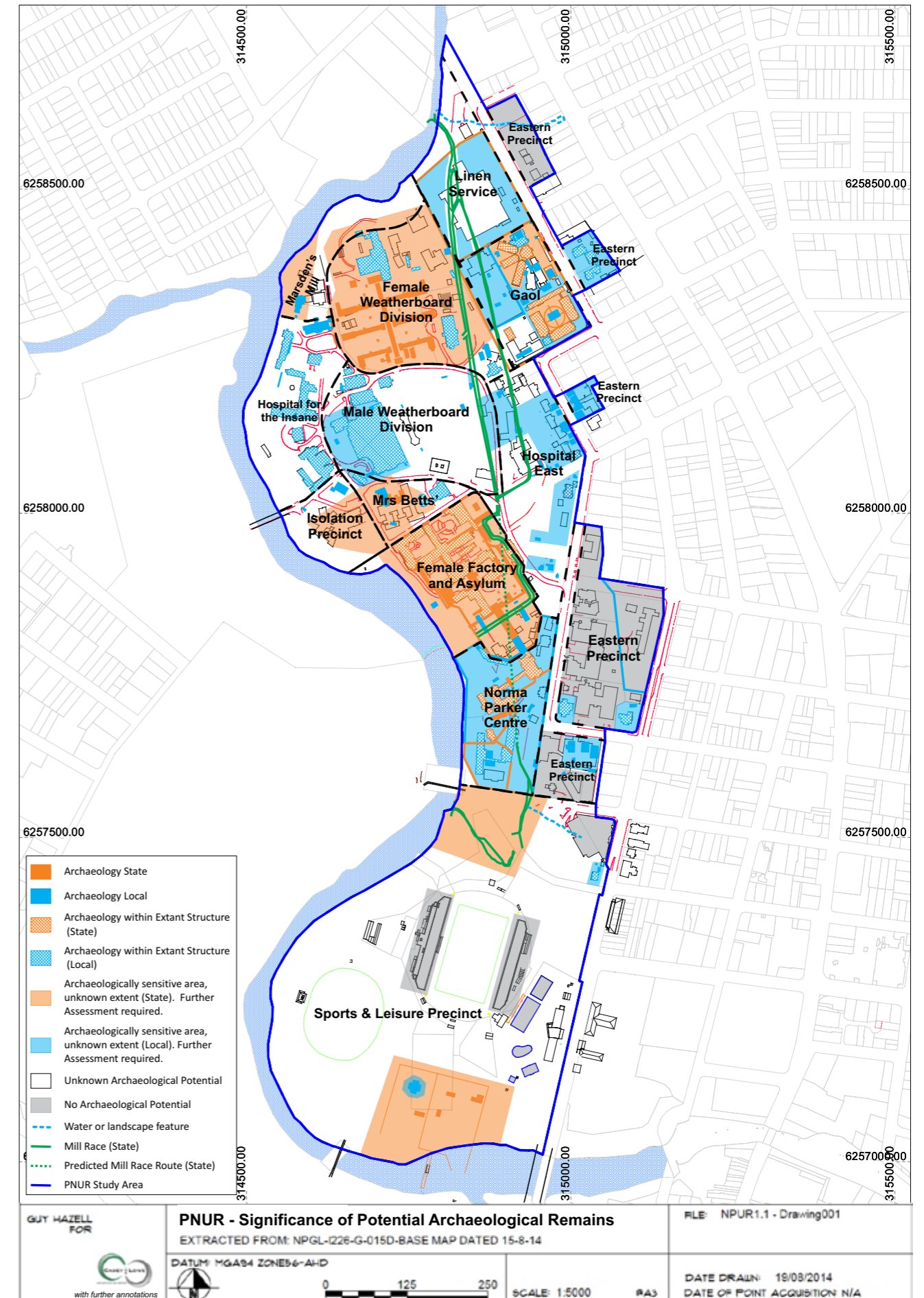
The assessment of historical archaeology has been prepared to consider the potential impact of development within areas of archaeological significance and to recommend the implementation of a management regime for development within the development lots in the PNUR.

This assessment has guided the preparation of the ILP prepared for the proposal with the concept avoiding development within areas that have been identified as having such archaeological significance these areas would be retained in situ. These areas which have been precluded and which will therefore retain any archaeological evidence in situ and interpreted are:

- + The Female Factory and Asylum;
- + Mill races associated with the Government water mill, and
- + Marsden's Mill.

The assessment has also concluded that development within the Sport and Leisure Precinct consistent with the ILP is unlikely to impact upon areas of archaeological significance.

Archaeological significance plan



To provide a regime of assessment of future Development Applications the assessment has included a series of recommendations which are to be incorporated into the proposed DCP provisions.

As identified the ILP, has avoided the areas of potential national significance to facilitate the retention of archaeological evidence in situ. The proposed DCP provisions for the PNUR include the required levels of site investigation to support any Development Application lodged in the area.

Built Heritage

The Built Heritage assessment confirms that the ILP in the proposed DCP provisions has been developed co-operatively by the project team to minimise the potential for adverse impacts on the heritage values of the Cumberland and Sport and Leisure Precincts.

The built heritage assessment has provided an extensive series of recommendations on the retention and re-use of the buildings, identification of built elements that can be removed, identification of the need for archival recording and adaptive re-use. The assessment provides specific recommendations for guiding future development throughout the Cumberland and Sport and Leisure Precincts. These recommendations will assist in the preparation of and determination of future development applications that will

occur in the PNUR.

These guiding principles have been encapsulated within the DCP provisions proposed to be implemented for the PNUR.

The ILP and Draft DCP have been developed by a project team that has worked to achieve a sustainable long-term future for the two precincts to facilitate the ongoing conservation of their significant heritage values through appropriate adaptive re-use of the significant buildings and spaces and integration of new development. The potential adverse impacts are associated with the following proposals for significant buildings and structures:

- + alterations and additions;
- + infill development;
- + new development within the vicinity; and
- + site services and infrastructure.

While the ILP has responded to the heritage significance of the place and the Draft DCP proposes some development controls, additional actions are recommended to ensure that the significant buildings and structures are retained, conserved and adapted to new uses and to avoid, minimise or mitigate potential impacts.

The DCP controls include specific provisions relating to the retention of landscape elements and features, setbacks to buildings and requirements for demolition. The ILP and development

lot tiles respond to the heritage assessment to establish a pattern of development that responds to the heritage considerations of the site. In addition to these DCP controls UrbanGrowth NSW will prepare a Built Heritage Management Strategy prior to development lots being released and will provide a detailed framework for the management and retention of significant buildings and structure within the PNUR area.

Recommended additional actions include:

- + prepare a Built Heritage Management Strategy that establishes how the significant buildings and structures within the Cumberland Precinct and Sports and Leisure Precinct are managed into the future.
- + prepare a procurement/divestment strategy that sets out which properties should remain in government ownership and which could pass into private ownership.
- + undertake urgent cleaning, maintenance and repairs to ensure that significant buildings and structures are made weather tight and on-going deterioration of their fabric is prevented.
- + implement measures to ensure that the buildings and structures are made secure from damage due to vandalism, graffiti and/or arson attack etc.

- + interpret the history and heritage significance of the Cumberland Precinct and Sports and Leisure Precinct and their significant institutions, buildings and structures consistent with the PNUR Interpretation Strategy.
- + consider opportunities to participate directly in Commonwealth, State and Local government heritage management initiatives and/or resource/funding partnerships and programmes and encourage other agencies and community groups to do so.
- + review and update as necessary the existing statutory listings that apply to the PNUR area [and the Cumberland Precinct and Sports and Leisure Precinct in particular] to ensure that inconsistencies and errors are removed and an appropriate level of statutory protection is provided for each of the significant buildings and structures.
- + establish site-specific exemptions and/or conservation agreements and agreed delegations with relevant consent authorities to minimise the need for unnecessary development applications, notifications or referrals.

The recommendations and heritage assessment outcomes have guided the preparation of the ILP. Where further management plans are recommended UrbanGrowth NSW will prepare these plans prior to the release of development lots.

The table below highlights the proposed demolitions on the Cumberland Precinct.

Buildings on site		Buildings to be retained		Buildings to be demolished	
Exceptional	25	Exceptional	25	Exceptional	0
High	22	High	22	High	0
Moderate	15	Moderate	0	Moderate	15
Little	32	Little	0	Little	32
Intrusive	11	Intrusive	0	Intrusive	11
No rating	8	No rating	0	No rating	8
Total	113		47		66

Building significance plan



04 SUPPORTING STUDIES

ECOLOGY

Landscape heritage

The Cultural Landscape Heritage Assessment of the Cumberland and Sport and Leisure Precincts has been prepared by Musecape Pty Ltd. The report confirms the findings of a number of previous expert studies that the cultural landscapes of the PNUR are of exceptional heritage significance at a State and potentially National level, with historical, associational, aesthetic, social, technical / research values and some components which are rare and / or representative. The precincts include elements and examples of many of the NSW historical themes and have interpretive potential for present and future generations. The sympathetic adaptive reuse and development of the precincts will enable the conservation of significant buildings and landscape, with potential benefits in terms of interpretive and cultural tourism opportunities for Parramatta, NSW and Australia.

The assessment confirms that the findings have been utilised to inform the ILP for the precincts and to contribute to site specific Development Control Plan provisions which will guide the fine grain development of the land.

No significant trees in the Sport and Leisure Precinct will be affected by the proposed rezoning and subsequent development. In the Cumberland Precinct a number of significant trees will need to be removed to accommodate new development on sites that have been chosen to maximise protection of the settings of retained significant buildings. While the loss of significant trees is regrettable, it must be remembered that they are living things with a finite safe and useful life expectancy. This report recommends provision for all removed significant trees to be replaced with at least as many specimens of the same species so that the historic landscape character of the Cumberland Precinct will be conserved.

There is also a recommendation for a succession planting plan to allow for the staged replacement of significant trees to respect and retain the historic and aesthetic values of the precinct. UrbanGrowth NSW has committed to completing this succession plan.

The plan on the following page shows the significant landscape elements on the Cumberland Precinct.

Social Significance

The baseline assessment of social significance of the Cumberland and Sport and Leisure Precincts has been undertaken by Musecape Pty Ltd. The baseline study has investigated social values significant to the heritage sites within the PNUR land and provides a brief thematic history of the sites. The study has examined the over-arching social values of the two Precincts within the PNUR site to assess their significance and presents recommendations for how the social significance can be managed through rezoning and redevelopment to facilitate community building, economic development and sustainable heritage tourism.

The two precincts investigated in the PNUR are significant for their social values which contribute to the overall heritage significance of the site. The social significance is derived from a number of elements reflective of the areas highly varied use over time and associations to pre and post European settlement.

The land is significant to Aboriginal people, as occupation and food-gathering ground, for its spiritual, social and cultural associations and for its ability to inform contemporary Aboriginal society.

The Sport and Leisure Precinct has social significance to Parramatta and Western Sydney for its association with the World Heritage listed Parramatta Park and for its association with organised professional, competitive and recreational sporting activities in Western Sydney, since 1847.

The Cumberland Precinct has, since 1818, been associated with institutions concerned with the welfare of disadvantaged and vulnerable people, especially women.

These associations and past uses confirm that buildings and landscape elements within the study area have National, State and local heritage significance and are significant for their potential to reveal through archaeological investigation, research and interpretation reveal and add to the knowledge and understanding of pre and post settlement of the area and the nation more broadly.

Detailed assessments, based on a wider review of academic sources and oral histories, will be required to inform specific redevelopments. Guidance on these outcomes are included within the proposed DCP provisions.

ECOLOGICAL ASSESSMENT

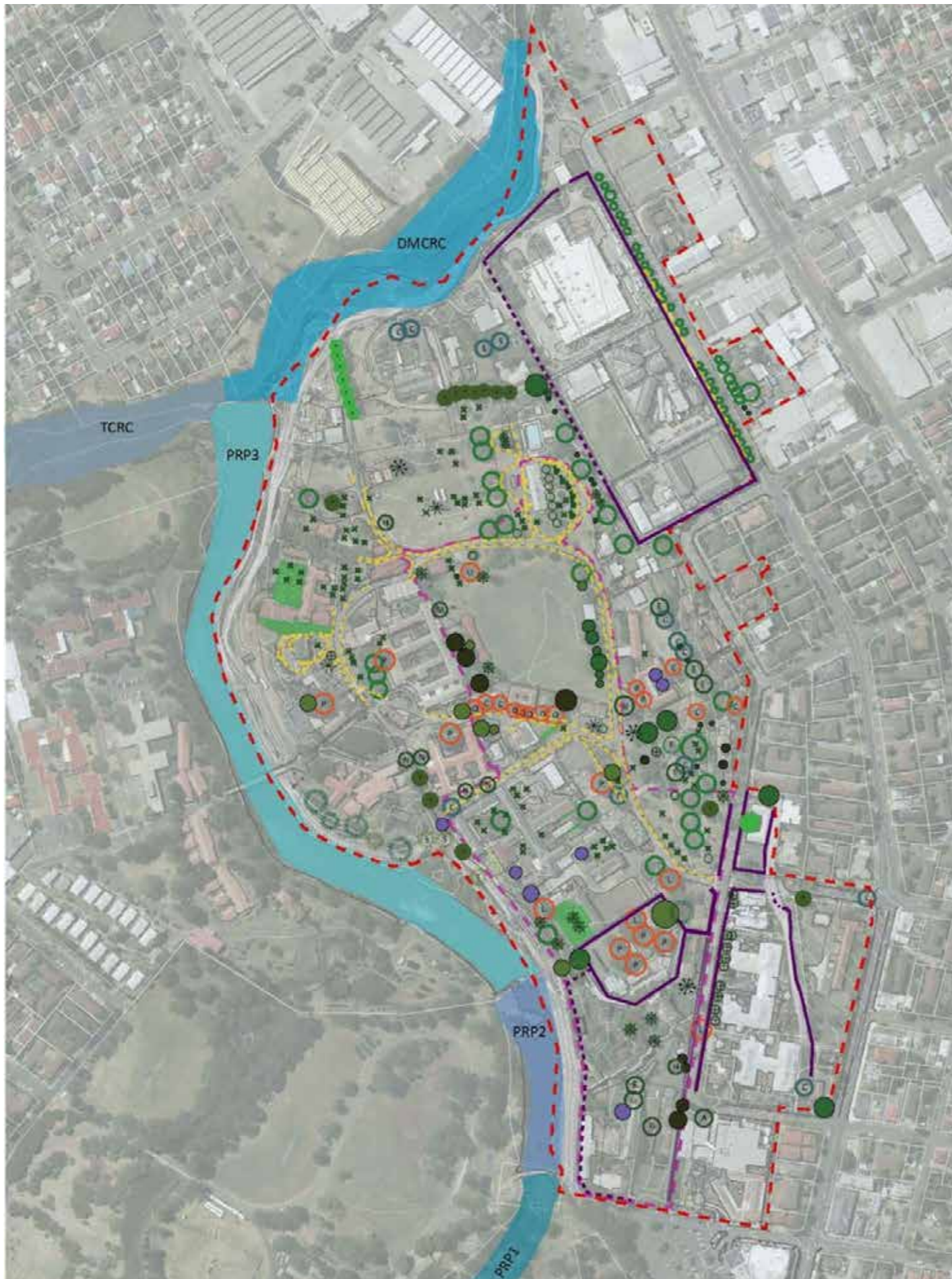
An assessment of the ecological impacts of the development by Eco Logical Australia includes the draft Ecological Management Plan for the Grey-headed Flying Fox camp. The ecological values of the site that may be impacted include:

- + Grey-headed Flying Fox – the camp, individuals, and foraging resources. This species is vulnerable under the NSW Threatened Species Conservation Act 1995 [TSC Act] and Commonwealth Environment Protection and Biodiversity Conservation Act 1999 [EPBC Act].
- + East Coast Freetail Bat and Eastern Bentwing Bat – both vulnerable under the TSC Act.
- + River-flat Eucalypt Forest – an endangered ecological community under the TSC Act.
- + Hollow bearing trees – an important resource for fauna, including threatened species.

The assessment has found that development consistent with the ILP will not require the removal of remnant vegetation and that the Flying Fox camp will be managed in situ with future development designed and constructed to minimise potential impacts to the camp.

The impact assessment has concluded that the proposal is unlikely to result in a significant impact to threatened ecological communities or threatened species if mitigation and management measures are implemented. The assessment has concluded that a species impact assessment under the TSC Act is not required.

Landscape significance plan



Legend

- Study Area Boundary
- Landscape Conservation Area: Exceptional significance
- Stone Wall
- Brick Wall
- Sandstone Dwarf Wall with Iron Palisade Fence
- Stone Kerb
- PRP 1 Parramatta River Pond 1
- PRP 2 Parramatta River Pond 2
- PRP 3 Parramatta River Pond 3
- DMCRC Darling Mills Creek Riverine Corridor
- TCRC Toongabbie Creek Riverine Corridor
- Garden Area

- Palms**
- Phoenix canariensis (Canary Island Date Palm)
 - Butia capitata (Wine Palm)
 - Archontophoenix cunninghamiana (Bangalow)
 - Jubaea chilensis (Chilean Wine Palm)
 - Washingtonia filifera/robusta (Washingtonia Palm)
 - Trachycarpus fortunei (Windmill Palm)
 - Livistonia australis (Cabbage Tree Palm)

- Evergreen**
- Agathis robusta (Queensland Kauri)
 - Lophostemon confertus (Brushbox)
 - Eucalyptus st Johnni (Gum Tree)
 - Eucalyptus nicholi (Willow Peppermint)
 - Corymbia citriodora (Lemon Scented Gum)
 - Eucalyptus saligna (Sydney Blue Gum)
 - Stenocarpus sinuatus (Queensland Firewheel Tree)
 - Flindersia australis (Crows Ash)
 - Eucalyptus sp. (Gum Tree)
 - Grevillea robusta (Silky Oak)
 - Angophora costata (Sydney Red Gum)
 - Eucalyptus microcorys (Tallow Wood)
 - Ilex cornuta (Chinese Holly)
 - Schinus terebinthifolius (Brazilian Pepper)
 - Schinus ariera (Peppercorn Tree)

- Deciduous**
- Liquidambar styraciflua (Liquidamber)
 - Quercus palustris (Pin Oak)
 - Platanus orientalis (Plane Tree)
 - Populus deltoids (Cottonwood)
 - Jacaranda mimosifolia (Jacaranda)
 - Ulmus parvifolia (Chinese Elm)
 - Celtis australis (European Nettle Tree)
- Conifers**
- Araucaria bidwillia (Bunya Pine)
 - Araucaria cunninghamii (Hoop Pine)
 - Araucaria heterophylla (Norfolk Island Pine)
 - Taxodium sp (Cypress)
 - Pinus roxburghii (Chir Pine)
 - Cupressus sp (Cypress)
- Figs**
- Ficus microcarpa 'Hillii' (Hills Weeping Fig)
 - Ficus rubiginosa (Rusty Fig)
 - Ficus macrophylla (Moreton Bay Fig)

04 SUPPORTING STUDIES

VIEW IMPACT ANALYSIS

VIEW STUDY UNDERTAKEN BY PLANISPHERE [2012]

A study of the World and National Heritage-listed site of Parramatta's Old Government House and Domain [OGH&D] identifies significant relationships between existing buildings and outlines controls for future development in relation to the existing sites with regard to important views.

View analysis

In order to understand the change in views a study projected a possible massing outcome onto a recreation of views from the Planisphere Report.

The following methodology was used:

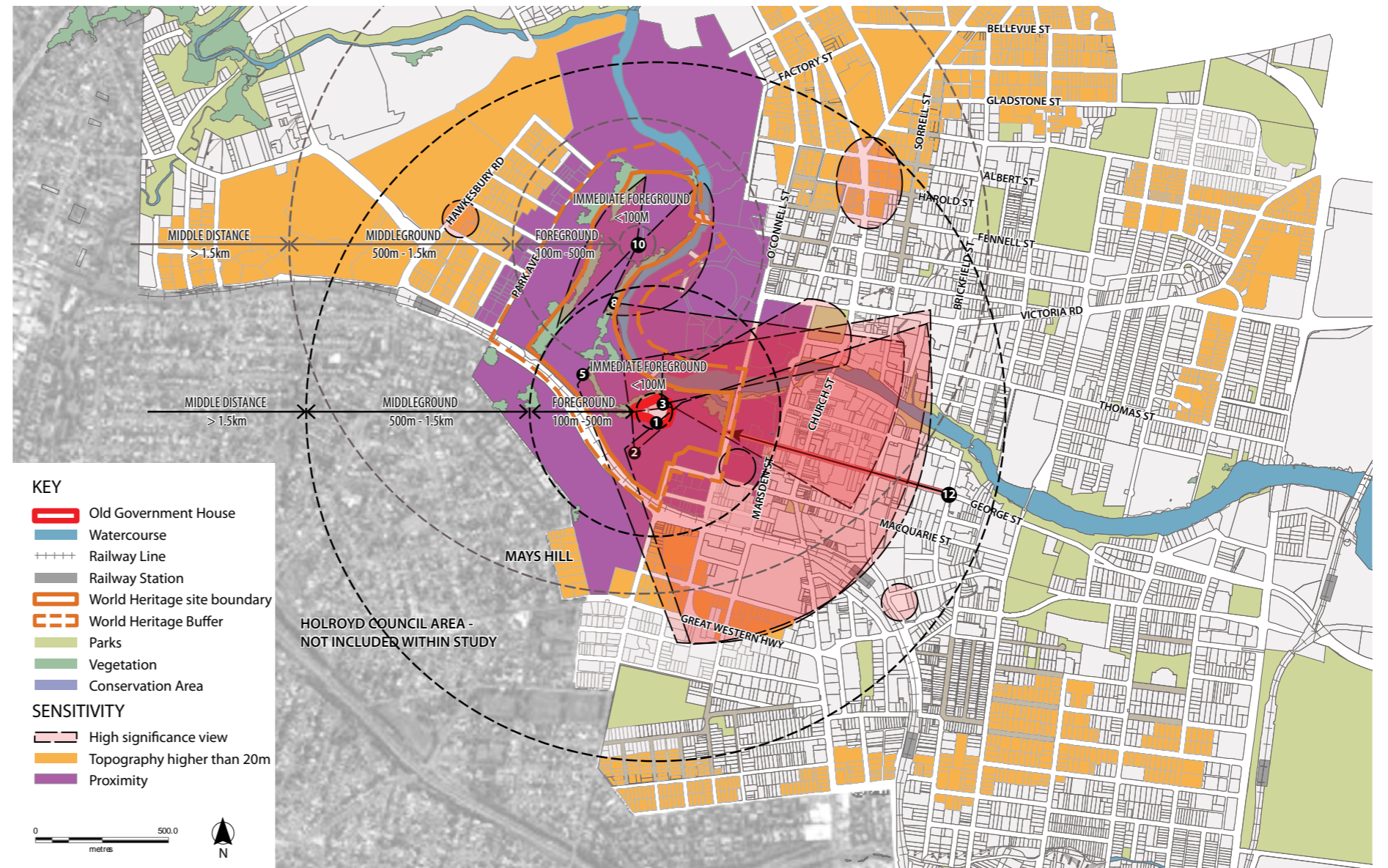
- + the view was identified.
- + a site visit was undertaken and the view recreated as accurately as possible.
- + the proposed massing was modelled in 3D space on a topographical GIS plan.
- + the view location was determined in the 3D model and a computer render produced to match the focal length and size of the original image.
- + the 3D render was projected onto the Photograph using landmark buildings to confirm the relative position.

Findings

The report found that the proposed rezoning and subsequent development will not have any unacceptable adverse impacts on Significant views to or from the OGH&D. Impacts on significant views other than those identified as important are within the limits of acceptable change and all impacts on significant views will be attenuated by design excellence in new buildings, with location, design and exterior finishes chosen to minimise adverse visual effects.

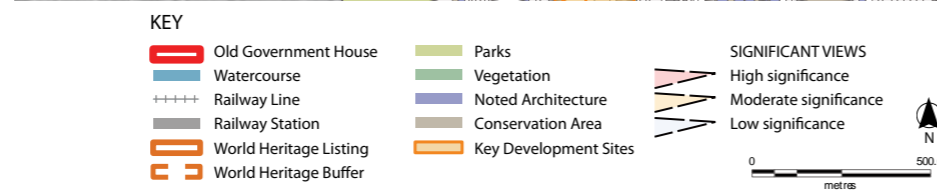
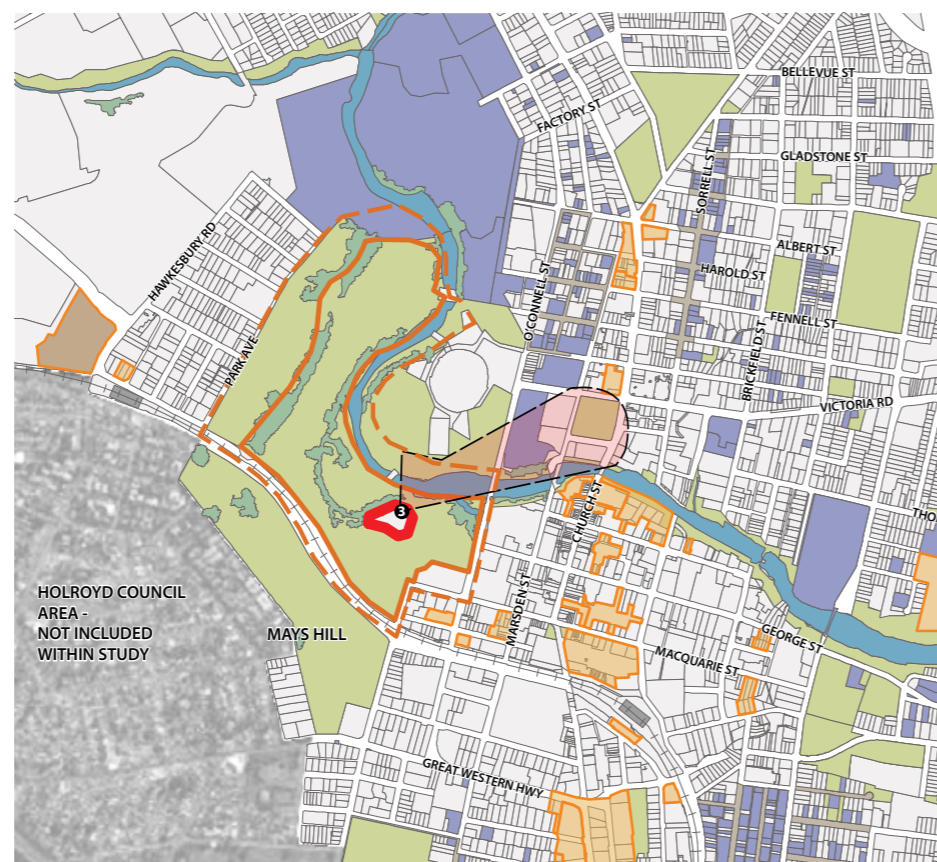
No significant trees in the Sport and Leisure Precinct will be affected by the proposed rezoning and subsequent development. In the Cumberland Precinct, a number of significant trees will need to be removed to accommodate development on sites that have been chosen to maximise protection of the settings of retained significant buildings. The report recommends provision for all removed significant trees to be replaced with at least as many specimens of the same species to conserve the historic landscape character of the Cumberland Precinct. There is also a recommendation for a succession planting plan to allow for the staged replacement of significant trees to respect and retain the historic and aesthetic values of the precinct.

DEFINING THE AREA OF POTENTIAL SENSITIVITY



Source Planisphere

View #3 from the Planisphere report, from OGH&D to the former King's School, assessed as of High significance, takes in some of the southern part of the Sport and Leisure Precinct including the site of the Government Farm and Parramatta Swimming Centre car park. Car parking in the foreground dominates the view and the middle ground view to St Patrick's Cathedral spire is mostly obscured by trees.



LOCATION OF VIEW

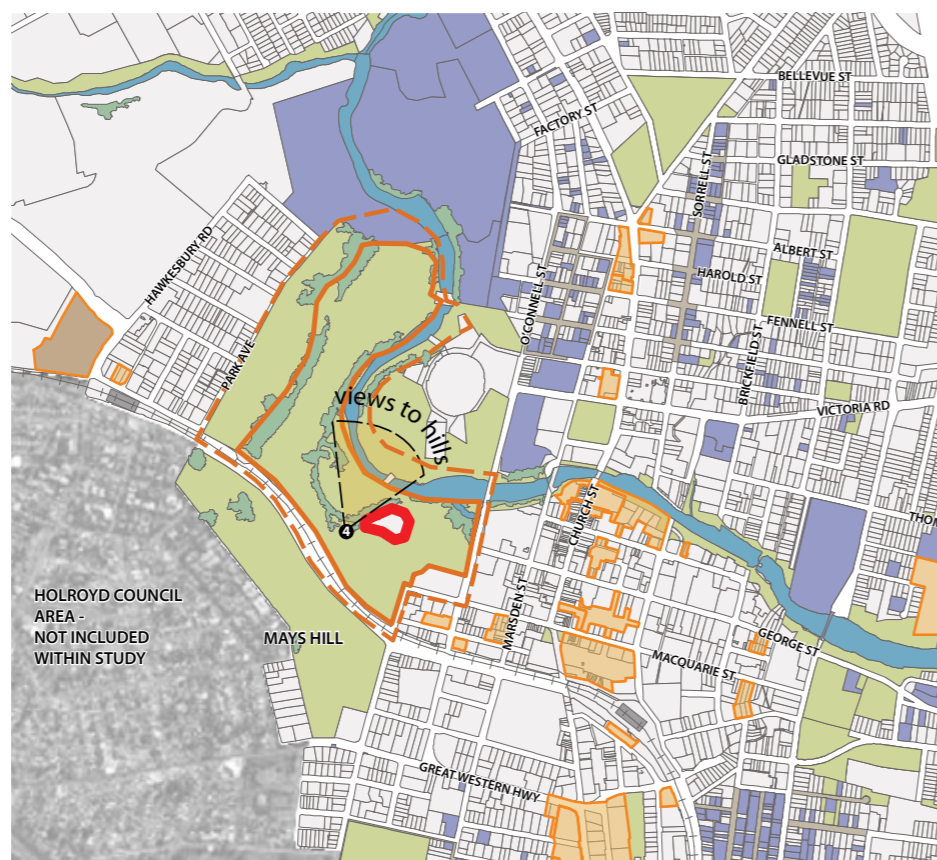
Source Planisphere

Photomontage showing the impact of proposed development in the PNUR ILP on Planisphere View 3. The massing of new buildings is indicated by the dashed orange line which shows that they will be almost entirely screened by existing vegetation when viewed from this point and the impact on OGH&D World Heritage values is considered minor and acceptable.



04 SUPPORTING STUDIES

View #4 from the Planisphere report, from the Crescent north, assessed as of Moderate significance, is interrupted to varying degrees by vegetation but extends to a vegetated horizon line, terminating in a vegetated ridge to the north of Parramatta. New works at the Amphitheatre and glimpses of the Parramatta Stadium light towers impact on the natural landform, vegetated hills on the horizon and the rural setting evoked by the landscape.



KEY		SIGNIFICANT VIEWS	
	Old Government House		High significance
	Watercourse		Moderate significance
	Railway Line		Low significance
	Railway Station		
	World Heritage Listing		
	World Heritage Buffer		
	Parks		
	Vegetation		
	Noted Architecture		
	Conservation Area		
	Key Development Sites		

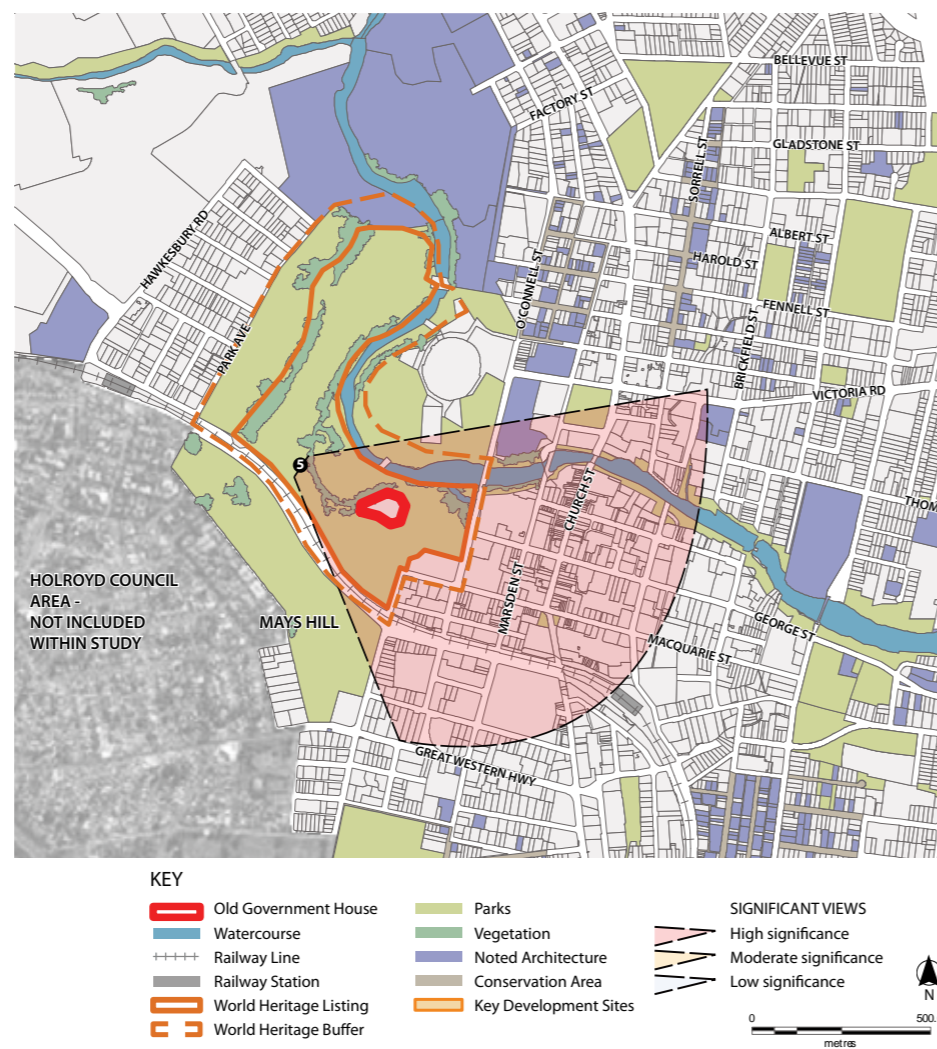
LOCATION OF VIEW

Source Planisphere

Photomontage showing the impact of proposed development in the PNUR ILP on Planisphere View 4. The paling fence at right marks the western boundary of OGH&D and the light coloured area at centre is new hard paving in the Parramatta ark amphitheatre. The massing of new buildings is indicated by the dashed orange line which shows that they will be screened by existing vegetation when viewed from this point. There will be no impact on OGH&D World Heritage values.



View #5 from the Planisphere report, from the Bath House area to city, assessed as of high significance, takes in the SE corner of the Sport and Leisure Precinct, including the site of the Government Farm and Parramatta Swimming Centre car park, the latter dominating the foreground view.



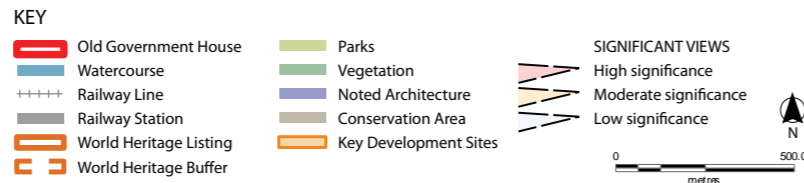
LOCATION OF VIEW

Source Planisphere

Photomontage showing the impact of proposed development in the PNUR ILP on Planisphere View 5. The massing of new buildings is not visible from this point and there will be no visual impact on OGH&D World Heritage values.



View #6 from the Planisphere report, from The Crescent north over the amphitheatre, assessed as of Moderate significance, takes in the SE corner of the Sport and Leisure Precinct including the Old King's School Oval and the Parramatta Swimming Centre as well as the view to St Patrick's Cathedral spire.



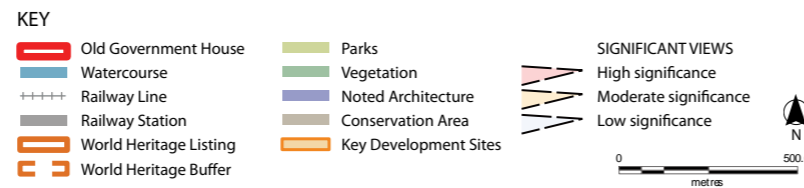
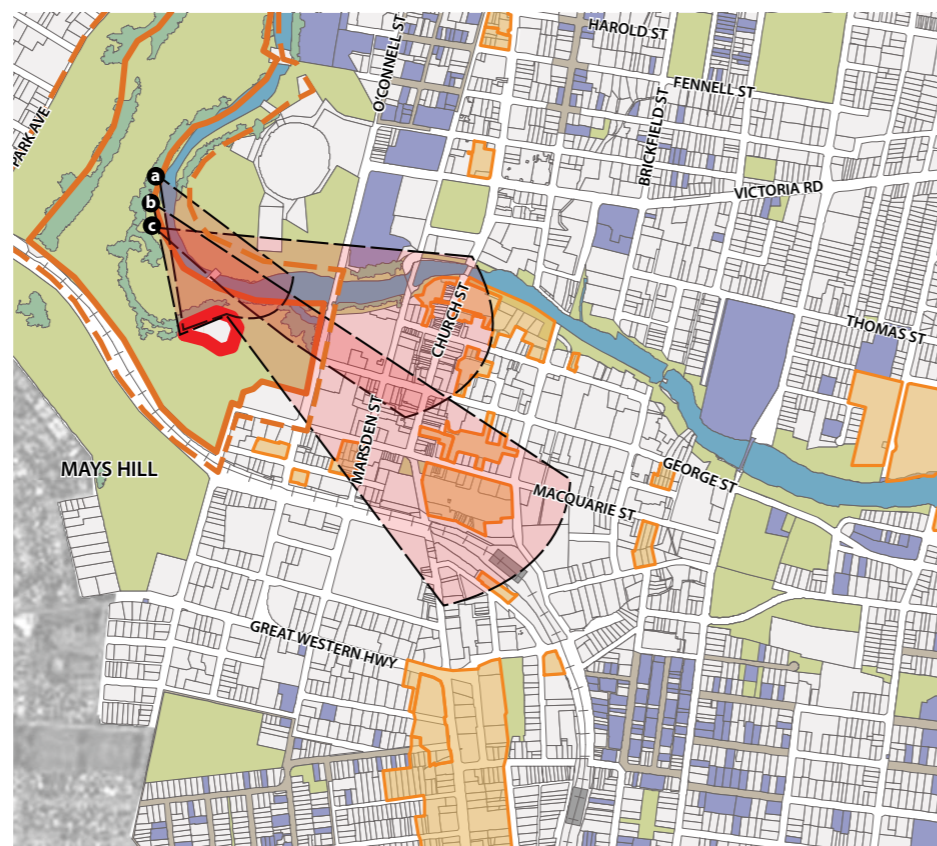
LOCATION OF VIEW

Source Planisphere

Photomontage showing the impact of proposed development in the PNUR ILP on Planisphere View 6, taken from the rim of the Parramatta Park amphitheatre looking north. The upper levels of some new buildings [orange massing] will be visible from this point but the visual impact of actual buildings will be attenuated by implementation of DCP controls on design, materials and exterior finishes. The visual impact on OGH&D World Heritage values is considered acceptable.



View #8 from the Planisphere report, Parramatta River views, assessed as of High significance, take in the southern and south-western part of the southern part of the Sport and Leisure Precinct including part of the Old King's School Oval, the Government Farm site, part of the Eels training ground and the Parramatta Swimming Centre carpark, providing strong landscape layering and evocation of Macquarie period although tree cover is now greater.



Source Planisphere

Photomontage showing the impact of proposed development in the PNUR ILP on Planisphere View 8, looking east along the Parramatta River, with the southern part of the Sport and Leisure precinct at left. The massing of new buildings is indicated by the dashed orange line which shows that they will be screened by existing vegetation when viewed from this point, with no negative impact on OGH&D World Heritage views.



04 SUPPORTING STUDIES

View #9 from the Planisphere report, from the northern part of the Crescent east to the city, assessed as of Moderate significance takes in the Old King's School Oval, the Eels training ground and the Parramatta Swimming Centre areas. A tree-lined ridge, is only partly visible to the north in this view, which is impacted by a number of tall buildings in the City.

Current work on the Amphitheatre is increasing the extent of hard paving visible.

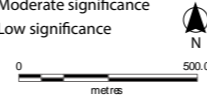


KEY

- Old Government House
- Watercourse
- Railway Line
- Railway Station
- World Heritage Listing
- World Heritage Buffer

- Parks
- Vegetation
- Noted Architecture
- Conservation Area
- Key Development Sites

- ### SIGNIFICANT VIEWS
- High significance
 - Moderate significance
 - Low significance



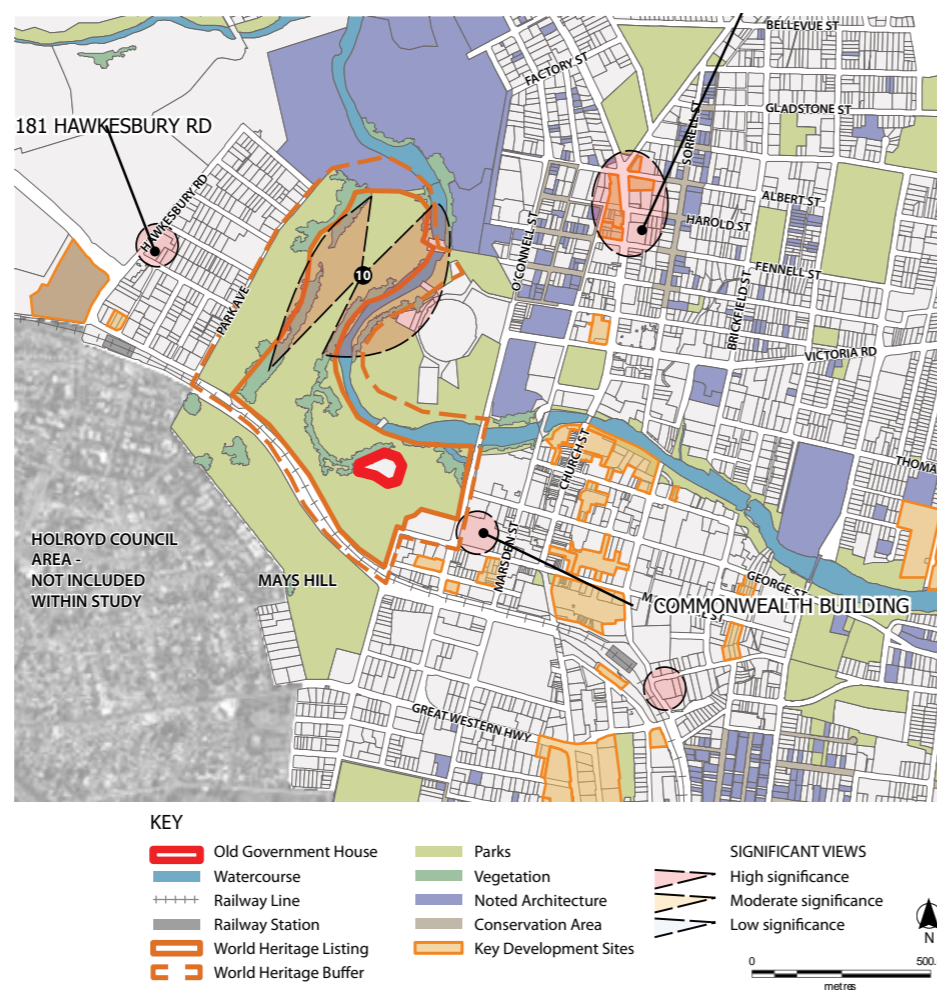
LOCATION OF VIEW

Source Planisphere

Photomontage showing the impact of proposed development in the PNUR ILP on Planisphere View 9, from the Crescent looking east to the Parramatta CBD, with the new amphitheatre paving at centre. The massing of new buildings is indicated by the dashed orange line at left which shows that they will be screened by existing vegetation when viewed from this point, with no visual impact on OGH&D World Heritage values.



View #10 from the Planisphere report, from the Dairy Precinct east, assessed as high significance, takes in the west part of the Sport and Leisure Precinct in an arc extending to the western side of the Parramatta Stadium



LOCATION OF VIEW

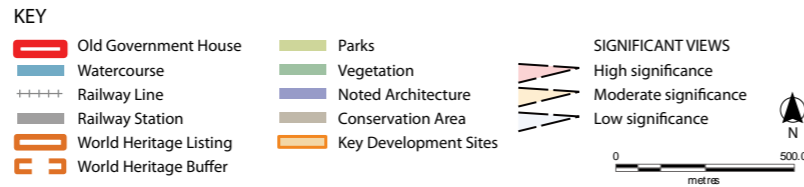
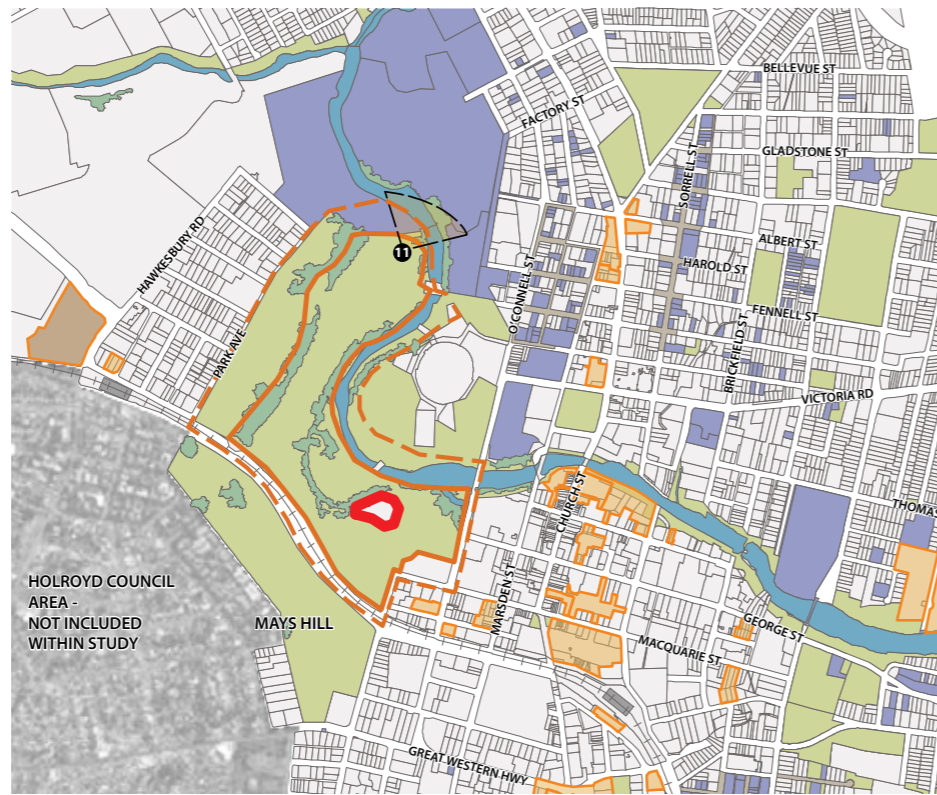
Source Planisphere

Photomontage showing the impact of proposed development in the PNUR ILP on Planisphere View 10, looking west across the western Domain to the Dairy precinct in Parramatta Park. The massing of new buildings is indicated by the dashed orange line which shows that they will be screened by existing vegetation when viewed from this point. There will be no visual impact on OGH&D World Heritage values.



04 SUPPORTING STUDIES

View #11 from the Planisphere report, from the northern part of the World Heritage listing to the Female Factory takes in the south-east corner of the Cumberland West Precinct and across part of the Parramatta River riparian corridor. Assessed as of Moderate significance, this view has potential for opening up the visual connection to some early buildings in the Cumberland Precinct.



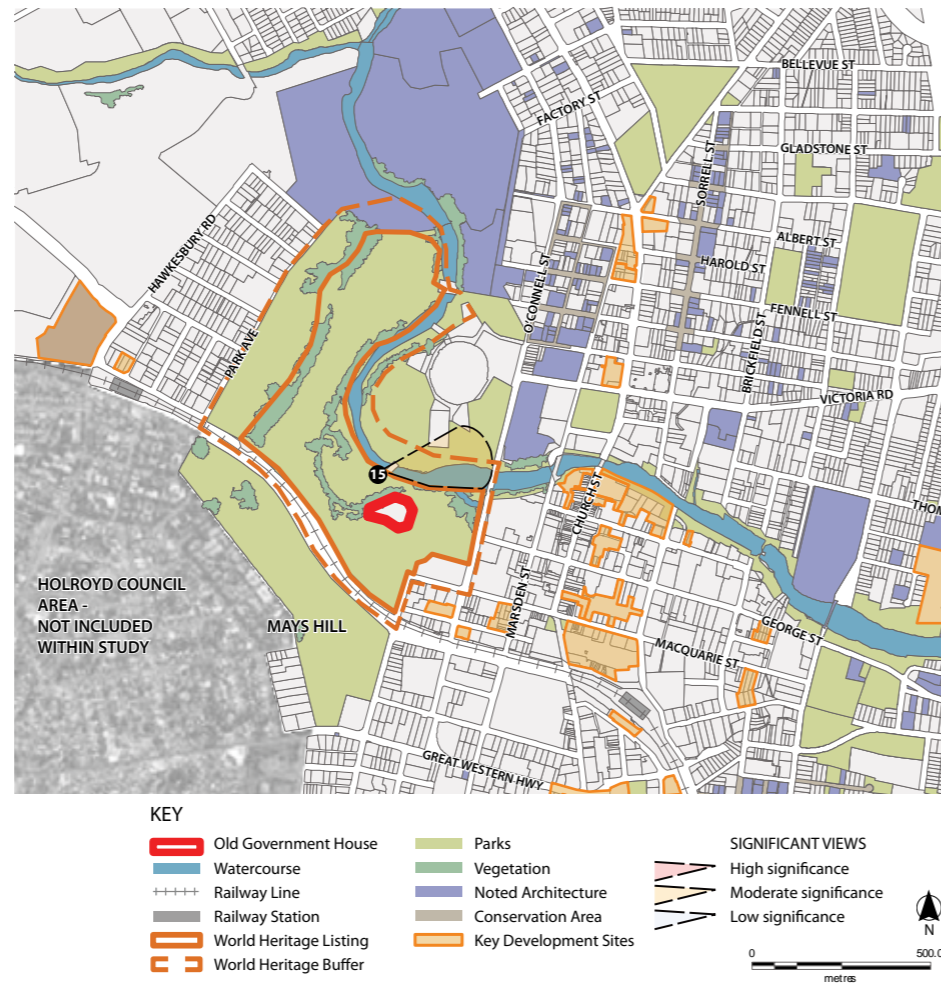
LOCATION OF VIEW

Source Planisphere

Photomontage showing the impact of proposed development in the PNUR ILP on Planisphere View11, from the northern end of Parramatta Park across the Parramatta River to the Cumberland Precinct. The iron paling fence marks the southern boundary of Wisteria Gardens. Existing buildings are indicated by the dashed green line. The massing of new buildings is indicated by the dashed orange line which shows that they will be screened by existing vegetation when viewed from this point. With the existing vegetation cover in the riparian corridor, there will be no visual impact on OGH&D World Heritage values



View #15 from the Planisphere report, northeast from the south side of the Parramatta River, assessed as of Moderate significance, takes in the southern part of the Sport and Leisure Precinct including the Old Government Farm site.

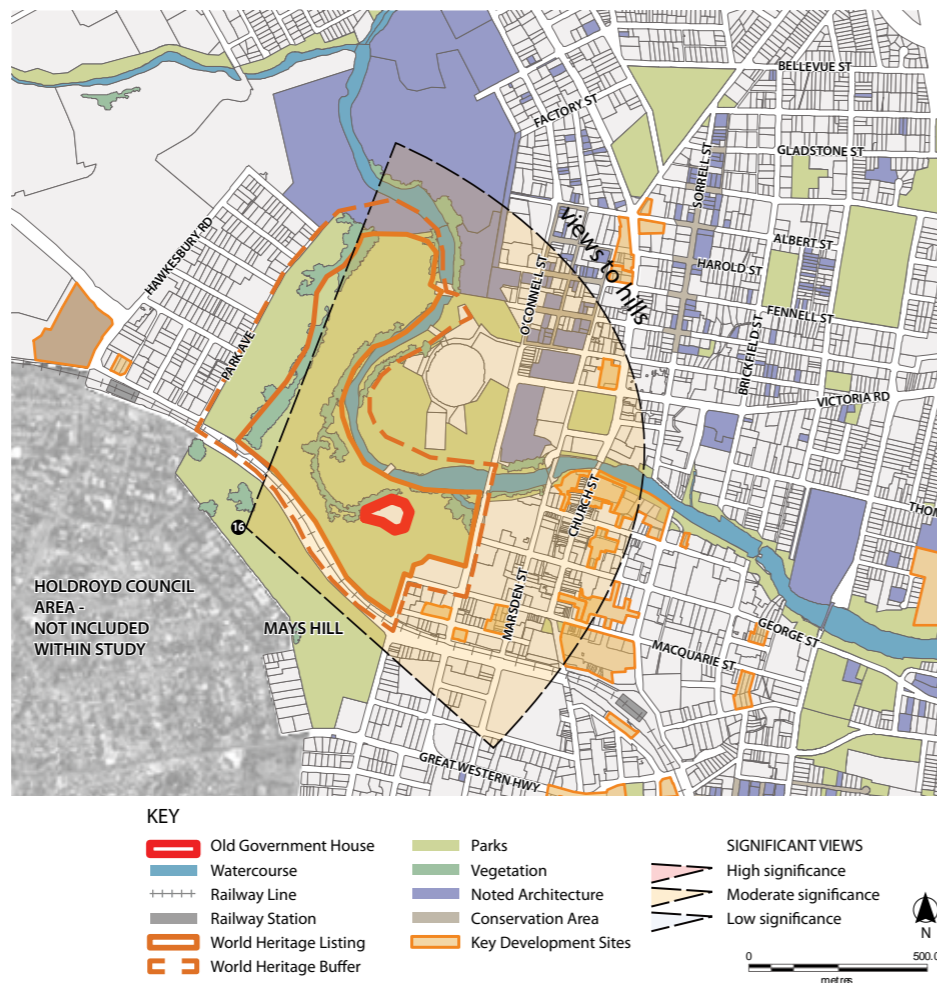


Source Planisphere

Photomontage showing the impact of proposed development in the PNUR ILP on Planisphere View 15, taken from the southern side of the Parramatta River, looking northeast to the Sport and Leisure Precinct. The upper levels of some new buildings [orange massing] will be visible from this point but the impact will be attenuated by distance and by implementation of controls in the existing draft Conservation Agreement. Visual impacts on OGH&D World Heritage values will be minor and acceptable.



View #16 from the Planisphere report, the “rare, one-off view from May’s Hill” over the city, takes in the whole of the Sport and Leisure Precinct and the southern parts of the Cumberland Precinct, including an area east of Fleet Street. Assessed as of Moderate significance, this view includes a strong layering of landscape elements in Parramatta Park and the City. New tall buildings in the Sport and Leisure Precinct and the Cumberland Precinct have potential to change this view considerably although their impact from this viewing point would be attenuated by distance.



Source Planisphere

Photomontage showing the impact of proposed development in the PNUR ILP on Planisphere View 16a, taken from Mays Hill looking north and northeast over Parramatta. The building and basketball court at right are part of Parramatta High School. The upper levels of some new buildings [orange massing] will be visible from this point but the impact of actual buildings will be attenuated by distance and by implementation of DCP controls on design, materials and exterior finishes. The visual impact on OGH&D World Heritage values is considered acceptable.



Photomontage showing the impact of proposed development in the PNUR ILP on Planisphere View 16b, taken from a point on Mays Hill further north-west than 16a, looking north and north-east over the golf course and Parramatta. The upper levels of some new buildings [orange massing and dashed line] will be visible from this point but the visual impact of actual buildings will be attenuated by distance and by implementation of DCP controls on design, materials and exterior finishes. The visual impact on OGH&D World Heritage values is considered acceptable.



04 SUPPORTING STUDIES

SHADOW ANALYSIS

IMPACTS

Shadow impacts both within and outside the site have been assessed based on the proposed floor space distribution, scale and built form arrangement already described in this document.

Visual Impact

The new planning framework proposal aims to minimise the impact on existing heritage elements as well as surrounding development, particularly the low-rise residential area to the east. A separate visual assessment describes these impacts and mitigations.

Overshadowing

The ILP massing has been developed to address impacts on existing neighbouring properties to ensure good solar access to new public and private open spaces and associated retail, and meet SEPP 65 rule of thumb criteria for new residential units.

The proposed massing has been designed to minimise overshadowing of any adjacent residential plots, and will be subject to detailed testing at development application stage. All new proposed public open spaces except the Foreshore Park have been assessed for overshadowing impacts.

Equinox

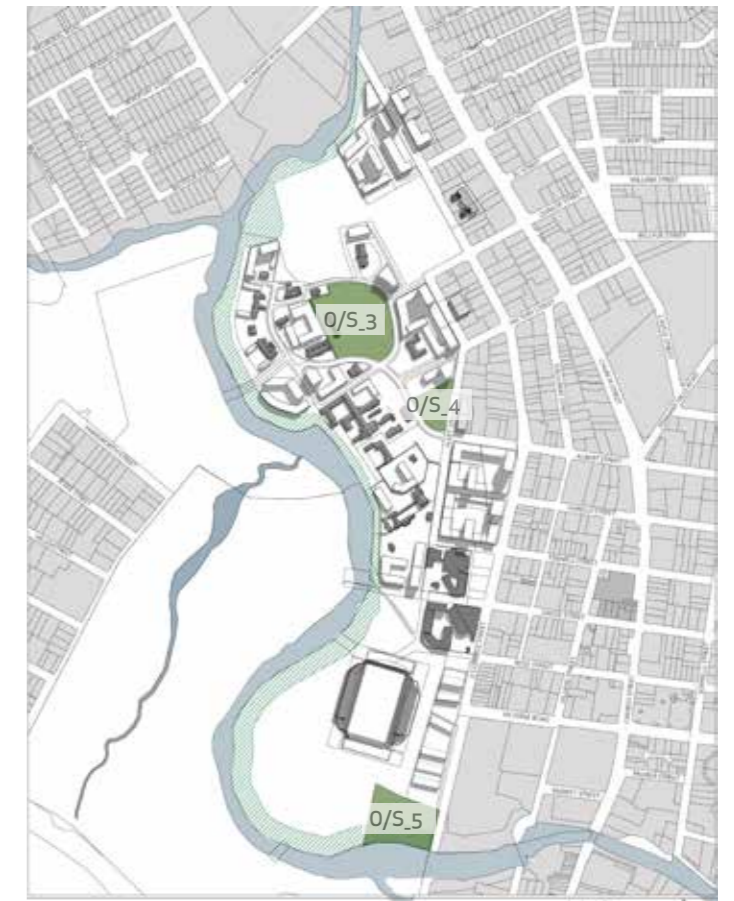
During the equinox no open space has more than 13 per cent total overshadowing.



09:00 am



10:00 am



11:00 am

EQUINOX		9:00 am		10:00 am		11:00 am		12:00 pm		13:00 pm		14:00 pm		15:00 pm	
	O/S Area m2	m2	%	m2	%	m2	%	m2	%	m2	%	m2	%	m2	%
O/S_3	22,900	2,885	13%	984	4%	462	2%	70	0%	0	0%	479	2%	1,400	6%
O/S_4	6,140	129	2%	389	6%	564	9%	644	10%	345	6%	320	5%	378	6%
O/S_5	13,600	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%



12:00 pm



13:00 pm



14:00 pm



15:00

04 SUPPORTING STUDIES

Winter overshadowing

During mid winter the main over shadowing impacts are in the morning., from 12 pm no more than 33% of any open space is overshadowed.



09:00 am



10:00 am



11:00 am

WINTER	O/S Area m2	9:00 am		10:00 am		11:00 am		12:00 pm		13:00 pm		14:00 pm		15:00 pm	
		m2	%	m2	%	m2	%	m2	%	m2	%	m2	%	m2	%
O/S_3	22,900	9,629	42%	4710	21%	2,405	11%	1024	4%	173	1%	500	2%	2,374	10%
O/S_4	6,140	2,165	35%	2,525	41%	2,295	37%	2039	33%	1,372	22%	1,301	21%	1,521	25%
O/S_5	13,600	11	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%



12:00 pm



13:00 pm



14:00 pm



15:00

04 SUPPORTING STUDIES

TRAFFIC

TRAFFIC ASSESSMENT

The transport assessment identified upgrades to intersections in the vicinity of Study Area to accommodate traffic generated by the development. Upgrades will occur as required and will reflect the traffic growth as development takes place. These upgrades will require testing and confirmation if significant changes occur to transport infrastructure, such as a mass transport system. The likely upgrades required include:

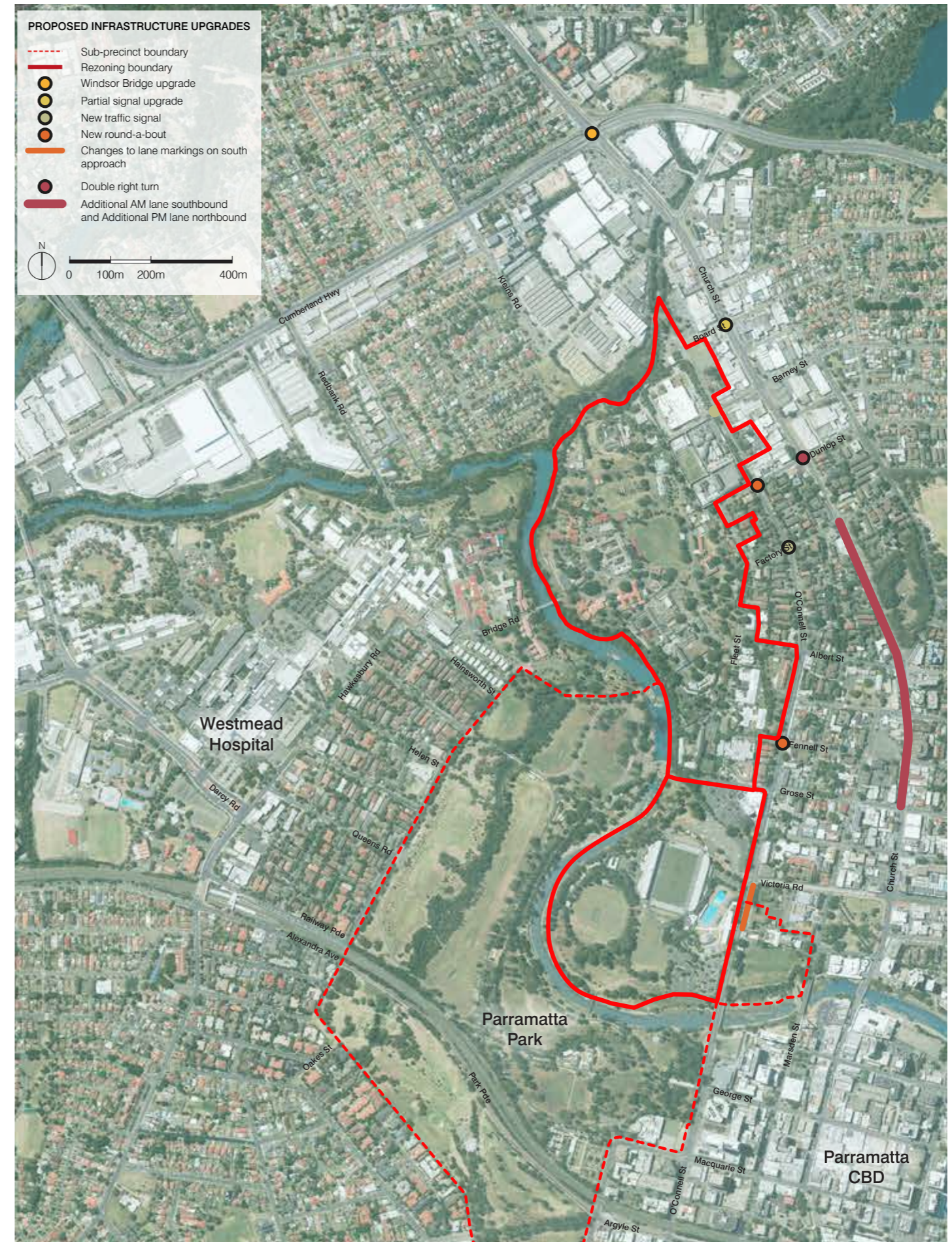
- + Church Street/Board Street – upgrade to a partial signal [west side of Church Street only]
- + Church Street/Barney Street – additional right turn lane from Church Street; Reconfigure Barney Street approach lanes
- + intersections on Church Street between Factory Street and Grose Street - an additional through lane for southbound traffic in the AM peak; an additional northbound through lane for the PM peak for the intersections on Church Street between east of Barney Street and Grose Street.
- + O’Connell Street intersection at Barney Street and Factory Street – upgrade to a signal
- + O’Connell Street intersection at Dunlop Street and Fennell Street – upgrade to a one-lane roundabout
- + O’Connell Street/Victoria Road signalised intersection – revise lane configuration.

The delivery of the required upgrades will be coordinated by UrbanGrowth NSW and will be implemented as traffic generation demand requires. UrbanGrowth NSW will also be responsible for the coordination and delivery of the new cycleway to the river foreshore generally running north to south.

The timing and staging of the upgrades will be driven by demand arising from proposed development. It is likely that the development and traffic infrastructure upgrades will commence in the northern areas of the PNUR area.

The road and circulation hierarchy has been developed to create slow zones and pedestrian and cycle safe areas. Detailed future development applications will determine the provision of traffic calming measures.

Proposed infrastructure upgrades



ECONOMIC FEASIBILITY

An economic impact assessment considered the economic impact of the proposal and the retail impact of the proposed support retail floor space within the Study Area.

Market Demand and Feasibility

The business case for the proposed development considered the costs for delivery of enabling works and restoration works to heritage significant buildings. These considerations have been the subject of extensive financial modelling and feasibility testing which support the approach being pursued.

Retail Impact

The ILP contemplates the provision of 4,000m² of retail floor space in the Cumberland Precinct. The assessment has considered the impact in retail turnover at surrounding existing centres though the introduction of this new retail floor space.

The quantum of retail floor space proposed will serve a minor retail role and primarily address the convenience retail demand generated by 4,000 additional dwellings and 28,000m² of adapted heritage floor space.

The assessment has identified that the potential incoming population would generate a retail floor space demand of 39,000m². The provision of up to 4,000m² of retail floor space equates to approximately 10 per cent of the total demand growth. Residual demand growth will support new and proposed retail floor space in existing surrounding centres.

The assessment has found there would be no adverse impacts to surrounding centres and that the development is likely to have a positive impact on existing centres due to the increased pool of expenditure available to be captured by other existing and surrounding centres.

Economic Impact

The economic impact assessment as considered the economic contribution of the PNUR to the Parramatta and NSW economies.

The PNUR comprises a construction value of approximately \$2.2 billion over the projected 15 to 20 year period of redevelopment. Of the \$2.2 billion construction spend, the modelling estimates that \$1 billion will be generated in industry output for businesses within the Parramatta Local Government Area.

The project has been estimated to equate to 7,500 full time equivalent [FTE] jobs for Parramatta residents over the construction period or 375-500 FTE jobs per annum. For the NSW economy as a whole the estimate is 13,700 FTE jobs over the construction period or 680-920 FTE jobs per annum.

Once occupied, the PNUR area is estimated to directly generate a total industry output of \$805.3 million per annum in Parramatta and \$917.8 million for NSW [inclusive of Parramatta].

Heritage Costs

The investigation of the heritage buildings has not included a detailed condition report to definitively prepare cost estimates of the restoration works. Enabling works to be coordinated by UrbanGrowth NSW include stabilisation and restoration works. The investment in these works is likely to be significant and the formulation of the business case has presumed the need for substantial restoration costs.

