



Introduction

The Civic Link is one of at least three major public spaces to be delivered in Parramatta CBD over the next 10 years, along side Parramatta Square to the south and the River foreshore precinct, including River Square, to the north. Together, these revitalisation projects will contribute to the transformation of Parramatta CBD into world class, resilient, human centric city as well as catalysing investment and development.

1.1

Project overview

Background

The City of Parramatta issued a tender seeking a multi-disciplinary design team to develop a framework plan for the Civic Link: a public space connection between Parramatta train station and the River, through the heart of the city. In response to this tender, ASPECT Studio and SJB were commissioned for project and worked in partnership with City of Parramatta to develop this Framework Plan.

The Civic Link project is an extraordinary opportunity to connect pedestrians to precincts and destinations, creating a network which enhances the diverse range of offers for people.

The aspirations for the Link is needed to pro-actively manage and respond to the high change profile stimulated by increased development, new public transport infrastructure, city growth and demand for attractive public spaces.

The Link was originally identified and proposed in the *Parramatta Lanes Strategy 2010*. It was also the subject of initial design proposals undertaken as part of the Design Parramatta Project, which suggested incorporating solar access, green and water elements.

The key objectives for the Framework are;

- Be an identifiable place within the CBD with a memorable name and sense of place
- Connect (physically and symbolically) Parramatta Square Transport Interchange to River Square and corridor
- Complement and extend the vibrant street life (day and night) of Church Street
- Create a second activated North-South spine through the heart of the commercial core, transitioning from the civic, built environment to the river foreshore environment
- Have a “civic” quality
- Recognise and respond to heritage along the Link, including interface with George Street
- Be addressed by buildings that have active façades and regular entries, with minimal back of house elements facing the Link
- Activate the commercial core beyond 9-5
- Catalyse the upgrade of adjoining commercial spaces, ground floor areas and the redevelopment and renewal of underutilised sites along the Link
- Respond to and incorporate Council's broader social, cultural, transport and environmental aspirations into it's development and future design
- Protect and incorporate a fine grain scale and character
- Provide a key connection between major public space and cultural destination in the CBD

The Civic Link project is an extraordinary opportunity to connect pedestrians to precincts and destinations, creating a network which enhances the diverse range of offers for people. This project will create a significant piece of public domain, which in combination with Parramatta Square and the River Foreshore will propel Parramatta towards its vision of being ‘the next great city’, one that is more attractive and liveable, more creative and dynamic.

Importantly this Framework Plan is not a design: it is a strategic document which defines the aspirations that can be understood and championed by a range of different stakeholders. These stakeholders include;

- Council - the report will assist Council in considering planning applications, amendments to planning policy and controls and will assist in the planning of future infrastructure and services
- Arts & Culture Organisations – it will set the aspiration for a new arts and culture precinct, inviting cultural makers to the City
- Developers - it will articulate the aspiration for the Link and indicate how private developments can contribute to delivery
- Designers - it will define the project need, aspirations and critical success factors to consider and deliver in the detailed design phase
- Community - it will articulate the exciting future ahead for Parramatta and encourage community members to get involved with the project delivery

Project Methodology

The Civic Link Framework Plan has been prepared through a five phase process comprising;

Stage 01: Analysis

The objective of this stage was to understand the opportunities, challenges and aspirations for the Civic Link. The analysis findings reveal how the project can respond to existing and future conditions and inform the development of stage 02 Aspiration and Place Principles. Key outputs are;

- Context Analysis
- Site Analysis

Stage 02: Aspiration and Place Principles

The aspiration and place principles form the foundation for the Civic Link strategies moving forward. Key outputs are;

- Project Aspiration
- Place Principles

Stage 03: Concept development

Strategies for the Civic Link were prepared to respond to the stage 01 and 02 outputs. The proposed strategies aim to demonstrate the positive impacts that the project would have on the CBD in an holistic manner, that seamlessly integrates the social, economic and environmental processes together.

Key outputs;

- Strategies
- Concept options

Stage 04: Draft Framework Plan

The conclusions from stage 03 were refined and developed into delivery priorities and concepts within the CBD. Key outputs are;

- Draft Framework Plan

Stage 05: Final Framework Plan

The project will be placed on public exhibition in early 2017 for community and stakeholder input before finalisation. Key outputs in this stage are;

- Public Exhibition
- Final Framework Plan

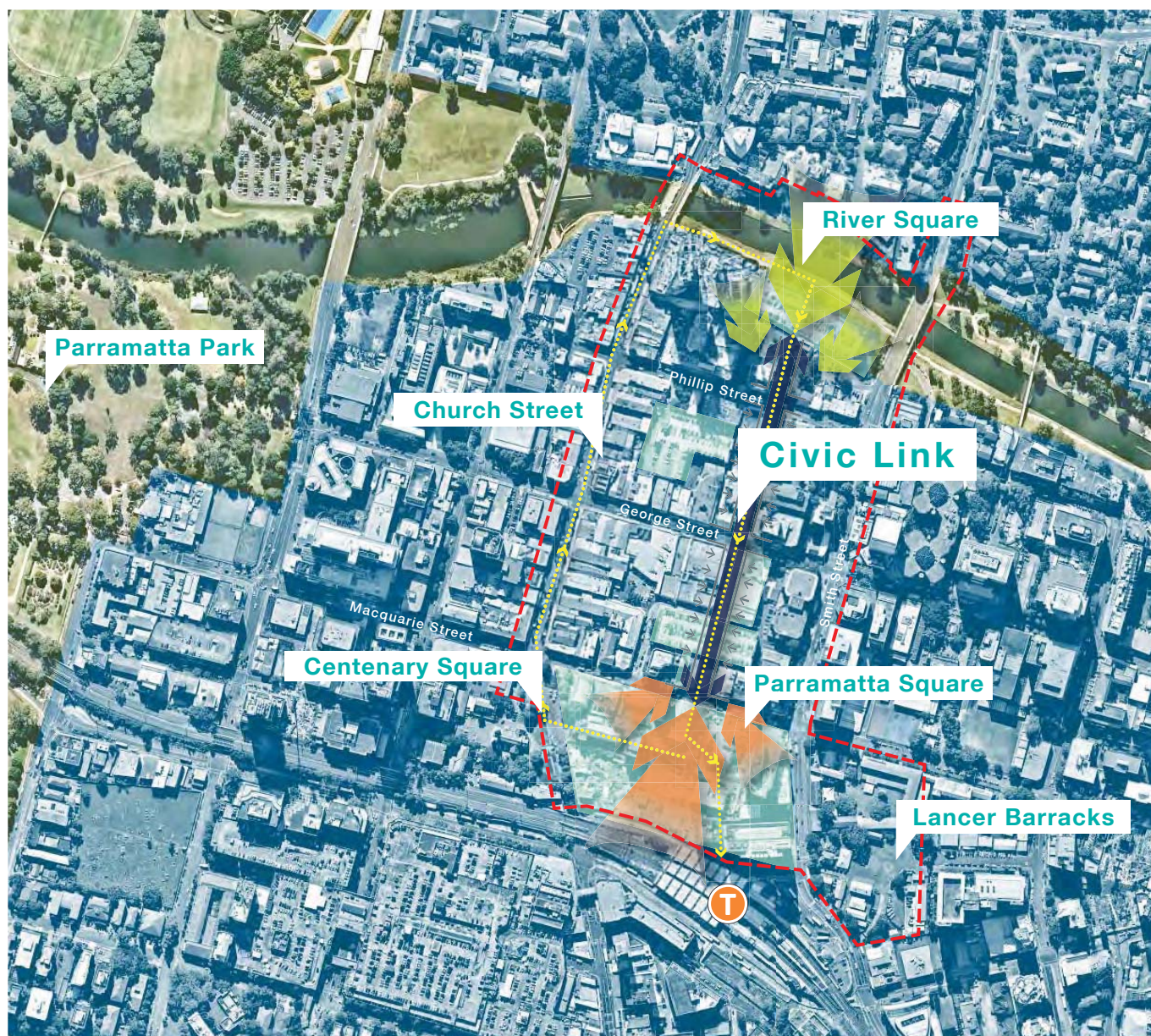
City context

Parramatta is located at the geographic heart of Sydney metropolitan area, 20km west of the Sydney CBD.

The study area

Study Area extends half a block to either side of the Link and covers an area of approximately 23ha and covers four city blocks, extends over the river to the north, and includes Lancer Barracks, Parramatta Square and Centenary Square.

It adjoins a number of heritage buildings and connects significant public spaces and cultural destinations along its length. It also includes a variety of built conditions and adjoins multiple sites that are currently in planning phases or scheduled for redevelopment.



Site location plan

The Site

The site area

The Civic Link Site Area is approximately 490m in length, and approximately 20m wide, beginning at the northern edge of Parramatta Square Public Space and extends through the CBD up to the Southern edge of River Square.

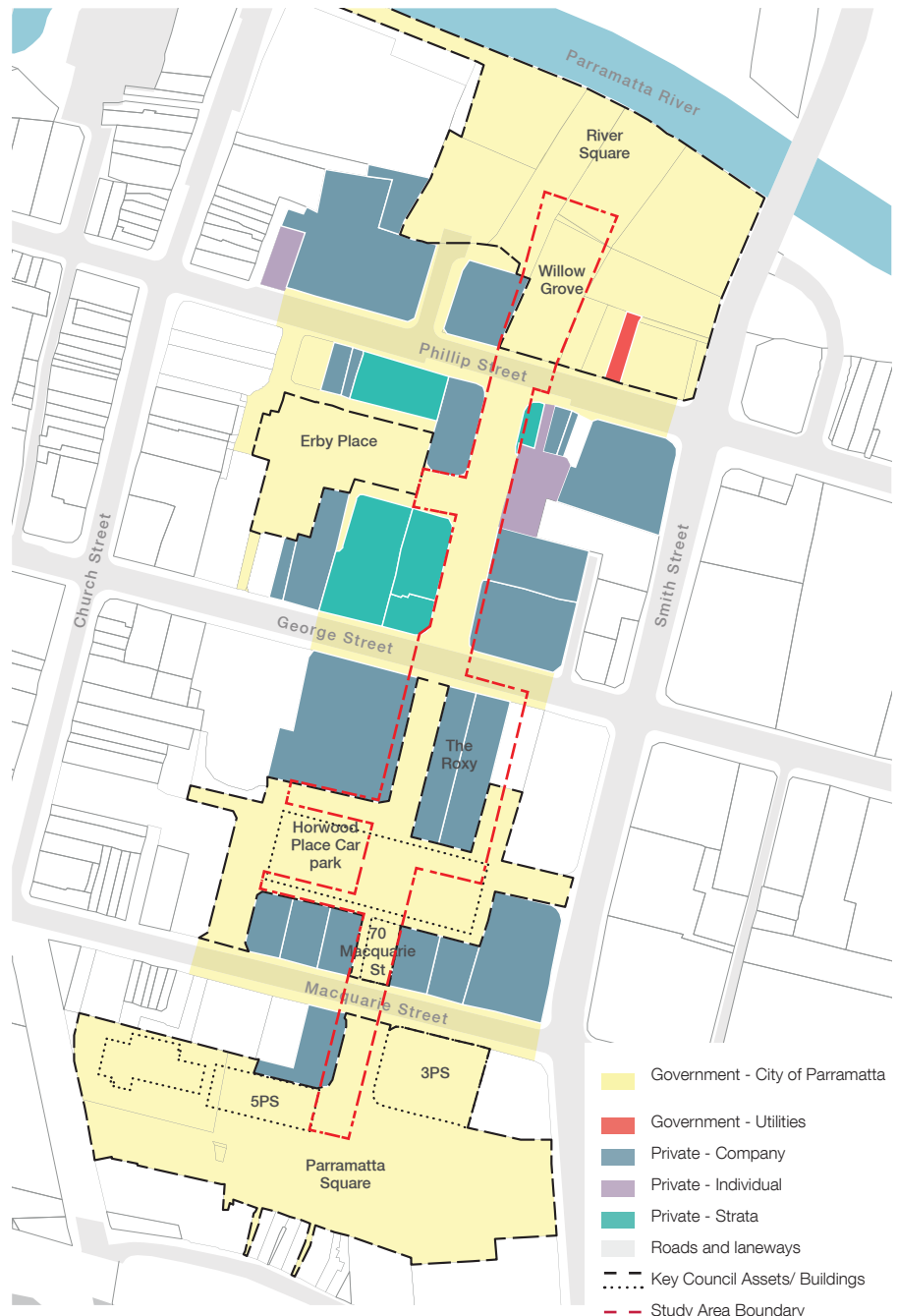
Key land ownership

A number of properties adjoining the Civic Link are privately owned by a company (single ownership), which has many benefits such as allowing a coordinated approach of design elements and delivery.

Within the study area, City of Parramatta owns close to 8ha of land. The Council is the majority land owner including Horwood Place Car Park and 70 Macquarie Street, two sites which are critical to the realisation of the Link.

The Horwood Place Car Park has been identified for closure in The Draft Public Car Parking Strategy 2017. The closure of this car park creates an opportunity to demolish the Horwood Place Car Park, unlock the redevelopment the site, and for CoP to deliver the Civic Link. Given the Horwood Place Car Parks situation in the middle of the commercial core, new built form indicated on this site reflects preliminary building envelope testing for commercial buildings, however this is indicative only. The purpose of this framework is to confirm CoP's aspiration for the Civic Link and guide the development of the surrounding precinct moving forward.

The Council is also a major land owner and development partner in the Parramatta Square redevelopment, which enables it to influence setbacks to the Link from Parramatta Square.



Horwood Place, looking towards Willow Grove



The Roxy Theatre



Horwood Place car park, Council Owned, development site



Context

Understanding the past, current and future context of the project site.

2.1 Growth and Development

Metropolitan Context

Sydney's second CBD - Metro Plan

The current 20-year planning strategy for Greater Sydney is A Plan for Growing Sydney, released by the NSW Government in December 2014.

The Metropolitan Plan identifies six subregions within the Sydney Metropolitan Region. Parramatta is located within the West Central Subregion and includes Auburn, Bankstown Blacktown, Holroyd, Parramatta and The Hills.

Heart of the west - District Plan

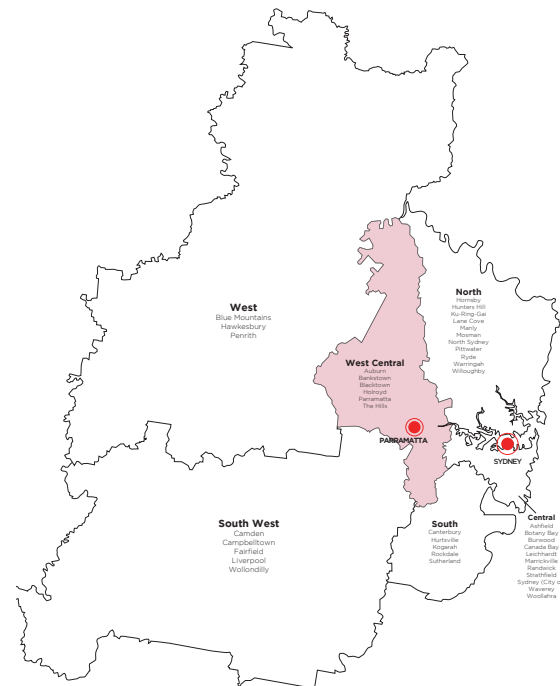
The draft West Central District Plan is one of six draft District Plans developed by the Greater Sydney Commission for each of Sydney's Districts.

The West Central District is one of the most dynamic and rapidly growing regions in Australia. This District plays a pivotal role in Greater Sydney's future as an economic and employment powerhouse, a core hub for transport and services and the home of vibrant and diverse centres and communities. It will be at the core of Greater Sydney's 'Central City'.

The District Plan proposes the establishment of the 'three city model', with Parramatta becoming the Central City:

Concentrated on the developing job hubs of the Greater Parramatta area, with a foundation in health and education, advanced manufacturing, innovation driven enterprises as well as urban services and Greater Parramatta being the administrative and business centre for Greater Sydney. Strong transport capacity and connections to the Eastern City and Western City will be crucial for the success of the Central City.

Parramatta continues to gain momentum as Sydney's Central City through major public and private sector investment and support.



Source: Parramatta Strategic Framework



Source: District Plans

- Study area boundary
- CBD
- Regional City Centre
- Strategic Centre
- Greater Parramatta Growth Area
- Transport gateway: airports and ports
- Enterprise corridor

Once In A Lifetime Transformation

Boomtime

There are a significant number of projects set to be delivered in the Greater Parramatta and Olympic Peninsula area over the next decade. The extent of this change has been termed a “once in a lifetime transformation”.

With significant planned investment currently occurring in Parramatta CBD, including Sydney Metro West and the Parramatta Light Rail as well as private investment, the City of Parramatta is dedicated to facilitating and capturing the exciting new opportunities generated by this intensive growth and change.

Supporting the future workforce

The Parramatta office market is the fifth largest in Australia with around 700,000 m² of office floor space¹. Sydney CBD has approximately 4,900,000 m² of office space and Macquarie Park, North Ryde and North Sydney have approximately 850,000 m² each. o The City of Parramatta has released a draft Parramatta CBD Planning Proposal (2016) which recognises and plans for its future workforce and commercial needs. This includes an expanded and more intense commercial core surrounded by higher density mixed use to create a vibrant core and support the role of Parramatta as Sydney’s Central City

Growing pains and gains

One of the key challenges facing Western Sydney is matching its growing population and labour force to the jobs available within the region. The divergence of local jobs and local population means that Western Sydney residents are currently travelling further, and this in turn affects productivity and quality of life.²

- The Parramatta CBD residential population is forecast to grow from 12,455 in 2016 to 34,632 by 2036³
- The working population is expected to grow from 49,000 in 2011 to 83,000 in 2041⁴

A vibrant city

To support this growth the City of Parramatta has identified the need for additional arts, culture and social infrastructure, as outlined in ‘Culture and Our City: Cultural Discussion Paper’ (CoP 2017). Many of these projects are likely to be in close proximity to the Civic Link including:

- Major arts presentation and exhibition space
- Theatre and performance facilities
- Creative industries and cultural production spaces
- Parramatta Artist Studios, National Theatre of Parramatta, performing arts rehearsal spaces
- Clusters of cultural activity including small bars, live music, public art, and lighting treatments
- Year round programs of events, festivals and activations



Parramatta CBD is experiencing an unprecedented number of commercial and mixed use development proposals



Artist impression of River Square

¹ Parramatta CBD Planning Strategy (Adopted April 2015)
² http://www.uws.edu.au/cws/gws_research
³ Forecast ID
⁴ Parramatta CBD Planning Strategy (Adopted April 2015)

2.2 People

People + Culture: Aboriginal Estate

Local Darug people used, occupied, managed and exploited Country for thousands of generations through indigenous farming techniques such as mosaic fire regimes and eel traps. Land and water sustainability is central to the Aboriginal estate; its founded on the Dreamtime and associated knowledge systems such as totems, songlines, rituals and ceremony. Darug people continue this deep connection to Country.

There are many clans of Darug custodians responsible for Country around modern Parramatta. The Burramatta or Baramada Clan lived along the upper reaches of the Parramatta River. The, Burramatta, whose name comes from the Darug word, burra for 'eel', is thought to mean 'place where the eels lie down'.

Parramatta is a meeting place.

Parramatta is the meeting point of three different clan groups of the Darug, and is also the meeting of Saltwater and Freshwater. Some of this land, south of the river, is the land of the Wattegora.

The importance of the River to the Burramatta people is widely recognised.

The foreshore was of immense significance to the local Darug People as it was the meeting place of the salt water from Sydney Harbour and the fresh water from the Parramatta River. The tides and extremes in climate meant that this section of river could range from being virtually empty of water to a raging torrent.¹

Civic Link connects sites of significance to Aboriginal culture

Parramatta has always been an important meeting place for Aboriginal people.

Many historical policies and initiatives were first implemented in Parramatta and had major impacts on Aboriginal and Torres Strait Islander (ATSI) society. The policies that ultimately led to the Stolen Generation began near the site of Parramatta's Town Hall in 1814 through Macquarie's assimilation initiatives. They have had lasting and profound effects throughout Australia, and the consequences resonate into present day generations. Some Aboriginal people have an intimate, and often distressing, connection to a number of institutions in Parramatta, including the Native Institution located near Parramatta Square.

¹ <http://arc.parracity.nsw.gov.au/the-river-foreshore-parramatta/>

Trees

Trees were important to the first people of Australia; they 'provided shelter and protection for the people, our homes and homes for our native animals. These trees also provided food, medicines and tools. Trees are Aboriginal people's history books.

They represent a people's soul and the embodiment of their culture and history. A record of our people living amongst the trees, on this land for generations²

Today, many Darug, other Aboriginal people and Torres Strait Islanders live, work, study and play in Parramatta, and Western Sydney has the largest ATSI population of any

² ref: Memory of Trees website.



Parramatta Green Wattle



Parramatta River



NAIDOC week

People of Parramatta

The people of Parramatta make up a diverse melting pot of cultures, ages, backgrounds and needs.

We are Young

As seen in the table below, the age structure forecasts¹ for City of Parramatta between 2011 and 2026 indicate:

- 52.7% increase in population under working age
- The largest 5 year age group in 2026 is 25 to 29 years, with a total of 36,322 persons
- In 2011, the dominant household type in the City of Parramatta was 'Couple families with dependants', and by 2026 the largest forecast increase is expected in 'Couples without dependents'

We are Diverse

Western Sydney is the focus of Australia's migration intake and is a key driver of Western Sydney's population growth and diverse demographic profile;

- The number of Western Sydney residents born overseas outstrips the national average of 24.6% at 35%.²
- Collectively, Parramatta residents speak over 140 languages
- 50% of the population speaks a language other than English at home
- The Indian-born community in Parramatta is one of the fastest growing in Australia, and one of the largest communities is in the city.

We are Changing

The population of Parramatta is changing in terms of size, diversity and the way people live;

- Parramatta's population is forecast to grow from 187,409 in 2015 to 236,864 by 2036.
- Growing lone person households (from 23.4% in 2011 to 27.0% in 2036)
- More people are living in medium or high density homes (48.2% in 2011, compared to 43.9% in 2006)
- From 2006 to 2011, City of Parramatta's overseas born population increased by 15,188 people (25.4%)³

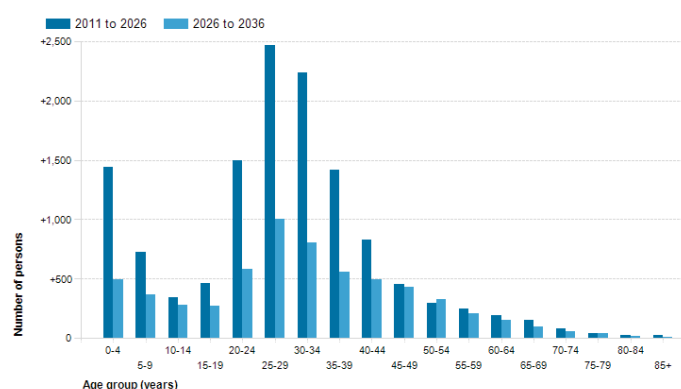
We need to be inclusive

Parramatta's population should be considered holistically in the creation of Civic Link, in a way that acknowledges and respects that some people in the community need extra support to reach their full potential.

- Indigenous people (0.8%)
- People of diverse genders and/or sexuality (2%)
- Children under 12 years (15.6%)
- Young people 12 - 14 years (16.6%)
- People over 55 years (21.2%)
- People with disabilities (18% - 22%)
- People from culturally and linguistically diverse backgrounds (50.2%)
- Disengaged youth (15 - 24 years old neither working or studying)
- People who may be homeless or disadvantaged

We need additional social infrastructure in the form of flexible, multi-purpose community spaces

Relative to comparable LGAs in Western Sydney, Parramatta has a low provision of social infrastructure in the form of facilities such as community centres, halls and meeting rooms. Parramatta has 33m²/per person of social infrastructure, compared to Liverpool that has up to 80m²/per person. In this context there is a strong case for providing outdoor public spaces that are multi-use and allow for activities traditionally restricted to indoor facilities.



Population and household forecasts, 2011 to 2036, prepared by .id the population experts, January 2014.

.id
the population experts

Population and household forecasts, 2011 to 2036

¹ Forecast ID - Forecast.id.cm.au/parramatta
² http://www.uws.edu.au/cws/gws_research
³ Forecast ID - Forecast.id.cm.au/parramatta

2.3 Culture

The City of Parramatta has an ambition to be driven by culture; to be a world-class city known for its diversity and energy, with people, ideas and creativity at its core. Culture is key to activating, celebrating and promoting the changing City. It is a driving force of vibrancy, a contributor to prosperity and the agent for showcasing and celebrating the Parramatta story.¹

The 2017 Cultural Discussion Paper for Parramatta's CBD Culture and our City sets the aspiration for an activated global city which values its people and assets, and invests in programs, activities and major events that tell local stories, contribute to the vibrancy of Parramatta and reflect the diversity of its people.

The 2014 A Plan for Growing Sydney identifies Parramatta as an area where arts and cultural opportunities need to grow to include state-level facilities. The plan considers the relocation of the Museum of Applied Arts and Sciences (MAAS) as a catalyst for increased opportunities and enhanced arts and culture.² Relocation of the Museum of Applied Arts and Sciences to the northern end of the Link

¹ Culture and our City: A Cultural Discussion Paper for Parramatta's CBD, 2017, City of Parramatta

² Culture and our City: A Cultural Discussion Paper for Parramatta's CBD, 2017, City of Parramatta

provides an opportunity to create a new arts and cultural precinct along this critical corridor, anchored by a regional cultural destination.

As Parramatta grows into its role as Sydney's Central City, there is a need to expand its cultural offering in line with other global cities. The Civic Link is being developed in parallel with work around CBD cultural planning and infrastructure and offers many opportunities to spread life throughout the City, building on the current mix of arts and culture agencies.

The Civic Link presents a unique opportunity to connect major cultural facilities including the Museum of Applied Arts and Sciences, the Roxy Theatre and the Civic Centre at 5 Parramatta Square. Its new buildings and laneways offer the potential for fine-grain spaces to support incubators, small bars, collaborative work spaces and creative industries. Its public spaces will serve as a platform for art and heritage interpretation, everyday activation, events, festivals, and places to gather for the diverse population of Parramatta.



Riverside Theatres and MAAS



5 Parramatta Square: Cultural Centre, Library & Council offices



Christmas in Parramatta



Parramasala



NAIDOC week



Australia Day in Parramatta



Parramatta Lanes Festival



Angel of Incidence by Julia Davis

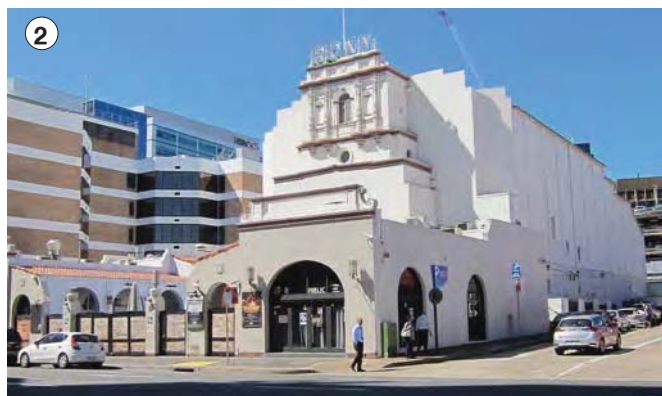
2.4 Urban Fabric

Heritage

Parramatta is an important place in the historic narrative of both Aboriginal and European life in Australia.

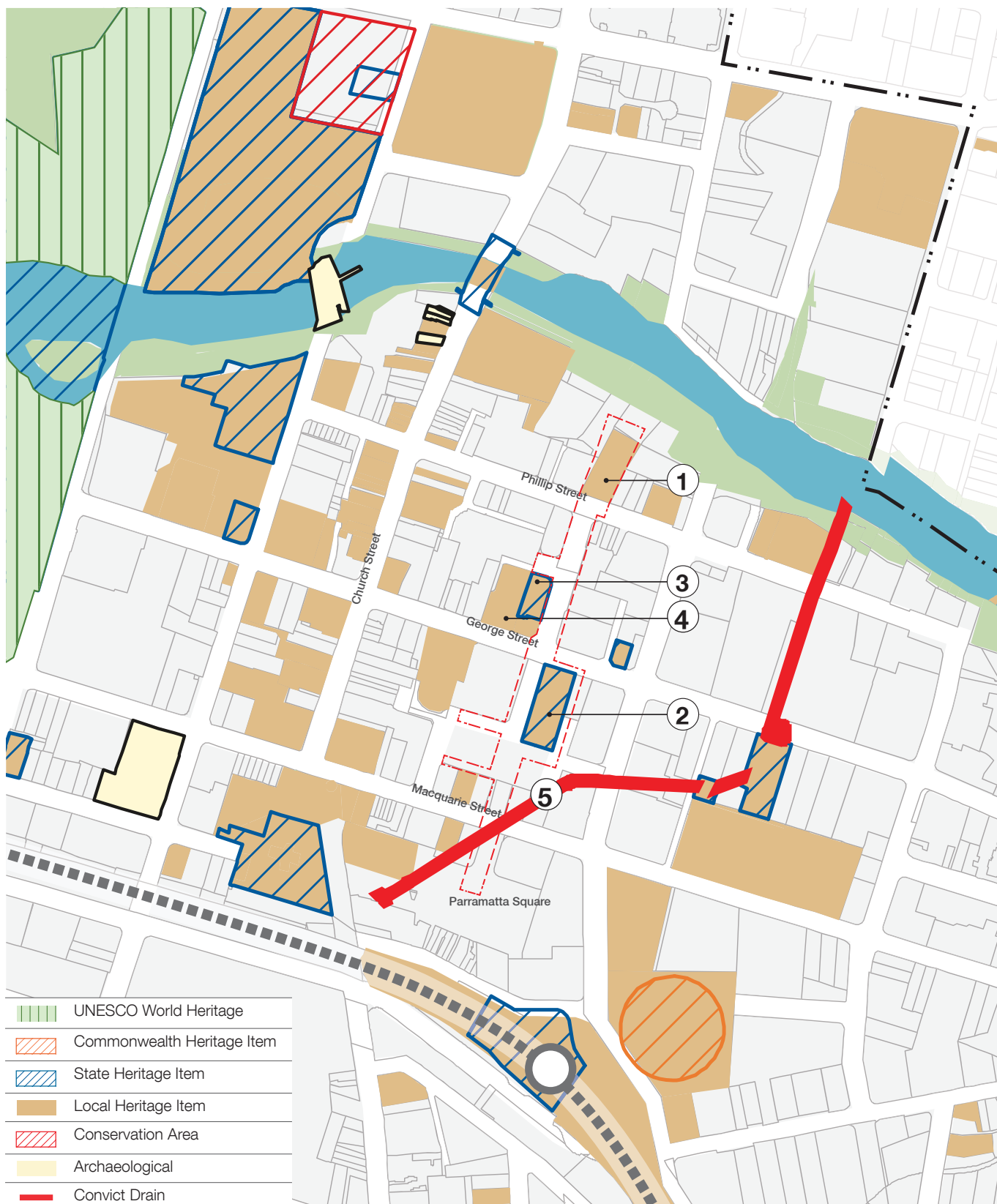
Parramatta is Australia's second oldest city (10 months younger than Sydney) and as a result, there are a number of heritage items listed on the world, state and local heritage registers, that are located within the site. The items help to create a character, a sense of place and landmarks that include;

1. **Willow Grove:** Originally built as a private home some-time between 1870 and 1880, it was a private hospital, then a Telecom office, commercial building, and now in the ownership of a private company.
2. **Roxy Theatre:** The Roxy is a purpose-built Inter-War Spanish Mission theatre and, with its overall form and surviving original fit-out and fabric, it displays the major attributes of this building type. The theatre provides evidence of the changing nature of film theatres since the 1920s and the size of architectural character of the building also reflects American cultural influences in the inter-war period and the profitability of 'Picture palaces'. More recently, it has been converted into a bar, restaurant and nightclub complex.
3. **Dr. Pringles House:** Dr George Hogarth Pringle was a famous surgeon who invented the 'Pringle manoeuvre', which is the technique to minimise blood loss during surgery.
4. **The Civic Arcade:** Former theatre re-purposed as an arcade by 1980.
5. **Convict Drain:** Possibly constructed in the 1820's during Macquarie's Governorship. It commenced near the junction of Argyle and Church Streets, and across Macquarie, Smith, George and Phillip Streets before it emptied into Parramatta River. It was thought to have helped manage flooding issues.



Built Form Context

Parramatta CBD presents a diverse mix of architectural eras and quality of building. As the Civic Link extends from the station in the south to the Parramatta River in the north, it touches many different types of built form that ranges from the new A Grade office buildings at Parramatta Square, to the heritage Roxy theatre, to older commercial buildings and shops on Phillip Street. The Civic Link will need to act as a unifying element, that ties together the varied city fabric.



2.5

Public Transport and Active Travel

A key priority for the Civic Link framework plan is to clarify and enhance existing and future pedestrian, cycling and public transport offers.

Public Transport

Parramatta Heavy Rail

Parramatta is the fourth busiest train station in Sydney in the 6.00 to 9.30 AM peak, and the sixth busiest overall.¹

Sydney Metro

In November 2016, the State Government unveiled plans for a new \$10 billion metro rail line from Sydney CBD to Parramatta via the Bays Precinct and Olympic Park.²

Parramatta Light Rail

Stage 1 of the Parramatta Light Rail is planned to extend from Westmead, through Parramatta CBD to Carlingford in the north, totalling a length of approximately 12km.

Ferry

The Parramatta Ferry Wharf is located approximately 400m to the east of the northern end of the Civic Link. New ferry wharfs are proposed at Parramatta and Rydalmere to replace existing infrastructure. In May 2015, the NSW³ Government announced \$100 million boost to Parramatta River ferries, which will deliver four brand new vessels purposely designed for the river and an extra 80 weekly services.

Active Transport

Cycling

Cyclists in Parramatta connect to the surrounding region through the Parramatta Valley Cycleway, a 15km, off-road facility that runs along the river foreshore. In the CBD cyclists currently use Church Street, Smith Street and Charles Street to travel north and south, although the small number of cyclists observed on these streets in comparison with the separated Parramatta Valley Cycleway suggests that the lack of dedicated cycle facilities deters users.

The 2017 Parramatta City River Strategy Transport Study identified the need for regional, segregated bike lanes in the CBD to support cycling. The City of Parramatta has drafted a plan for segregated cycle facilities through the CBD,

connecting to north-south and east-west regional routes. It is not envisaged that the Civic Link will deliver one of these segregated facilities, but rather will support slow cycling to local destinations through shared, pedestrian-friendly paths.

Walkability

The site area supports a fine grain network of public and private laneways and arcades, encouraged by a slow traffic environment at Horwood Place.

The Civic Link's north-south alignment through the heart of the city is already part of many daily routines and journeys of workers, residents and visitors. It transects some of the largest blocks, improving the finer grain permeability of the city, and creating more opportunities for retail, commercial address and a different type of public realm. The removal of the Horwood Place Car Park will greatly improve the experience of this journey for both existing and future users.

The Civic Link also has an opportunity to complete a walkable 'loop' around the city; from the train station, up Church Street to the River Foreshore and down the Civic Link to Parramatta Square and the train station, with opportunities to filter through Parramattas expanding plethora of laneways along the way.

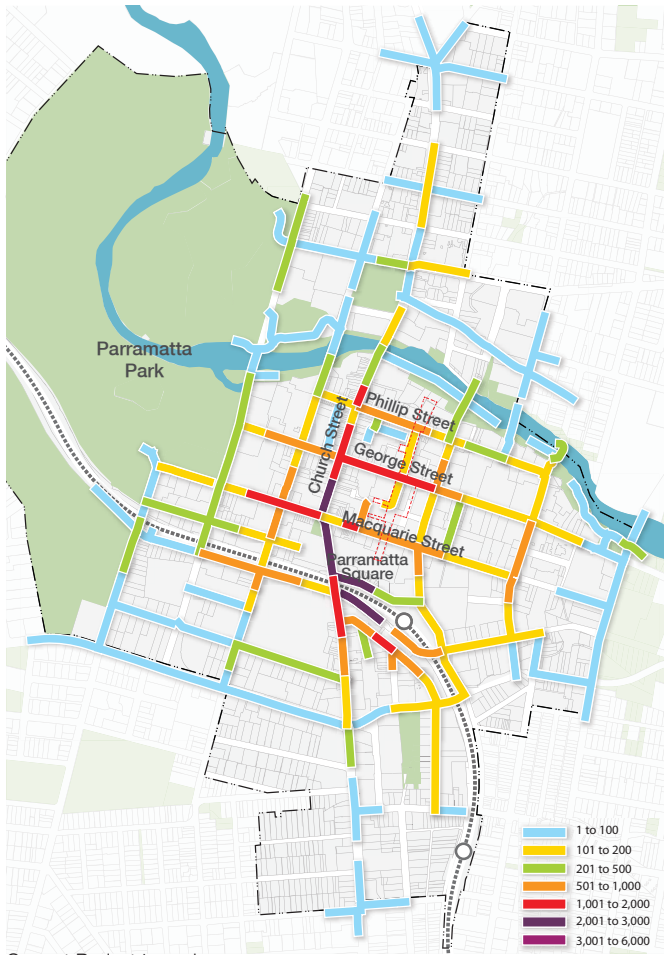
More space for pedestrians

The Parramatta City River Strategy Transport Study undertaken by Cardno and City of Parramatta identified that:

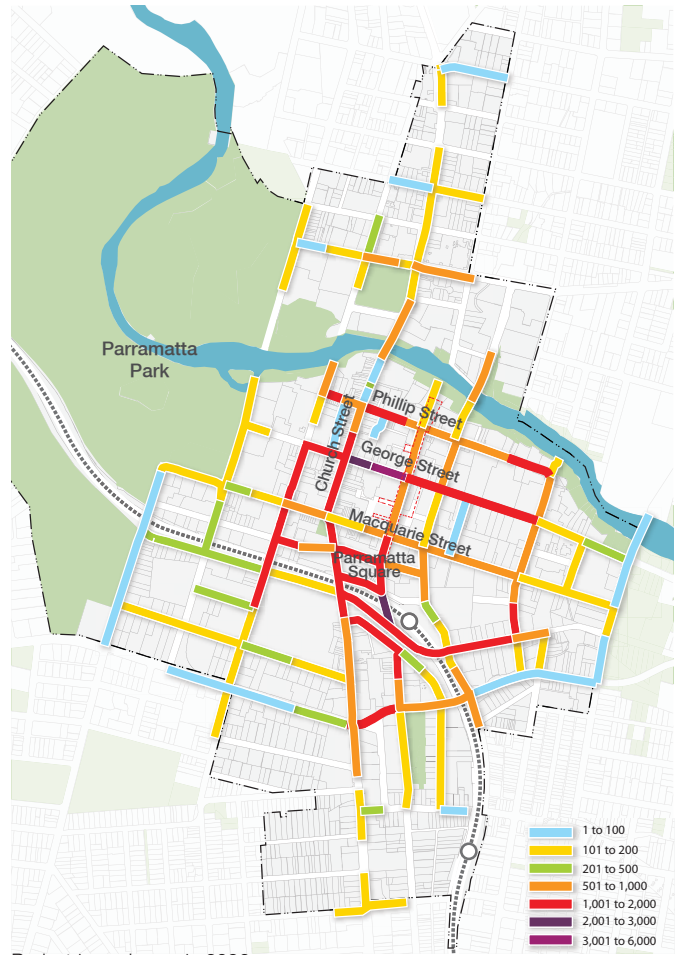
'Within the CBD, the busiest location for pedestrians is close to the Parramatta Transport Interchange. 2016 pedestrian surveys on a typical Thursday identified that Horwood Place currently caters for up to 1,000 bi-directional pedestrians in the one peak hour of 12:30 - 1:30pm. Pedestrian volumes surrounding Horwood Place were generally higher, with up to 3,000 pedestrians recorded on Church Street, up to 2,000 pedestrians on Smith Street, Macquarie Street and George Street and up to 1,000 pedestrians on Phillip Street in the same time frame.' (p15)

It also identified the need for more space for pedestrians as the city grows. The following diagrams illustrate the current pedestrian volumes, as well as projected pedestrian volumes for 2026, 2036 and 2056. The Civic Link is expected to carry 1,000 - 2,000 pedestrians per hour in peak times (12:30-1:30pm), whilst pedestrian use of Church Street will remain high.

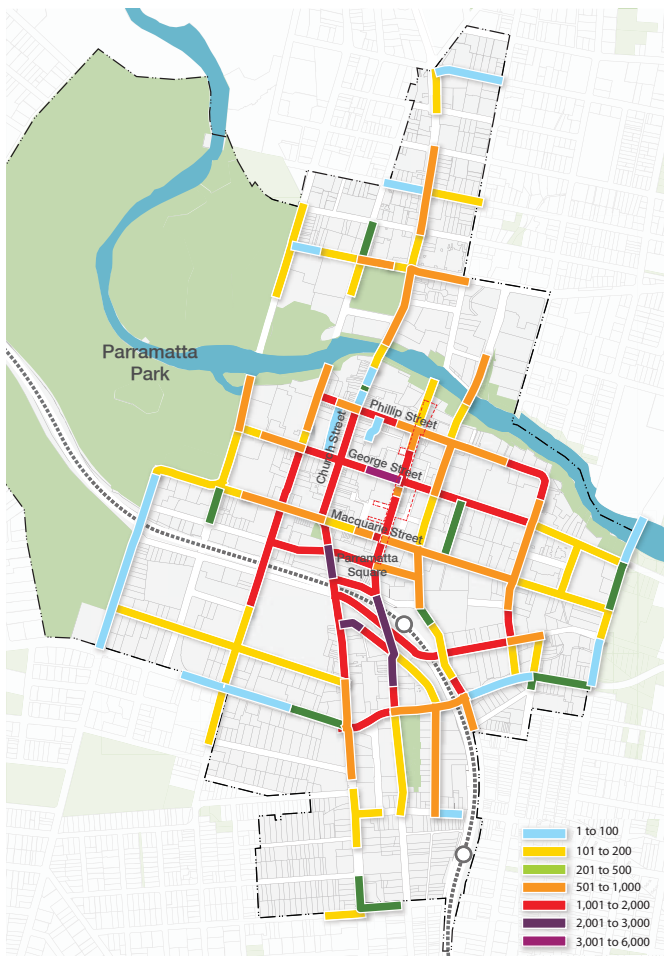
¹ Parramatta City River Strategy Transport Study - Cardo 2016
² Parramatta City River Strategy Transport Study - Cardo 2016
³ Parramatta City River Strategy Transport Study - Cardo 2016



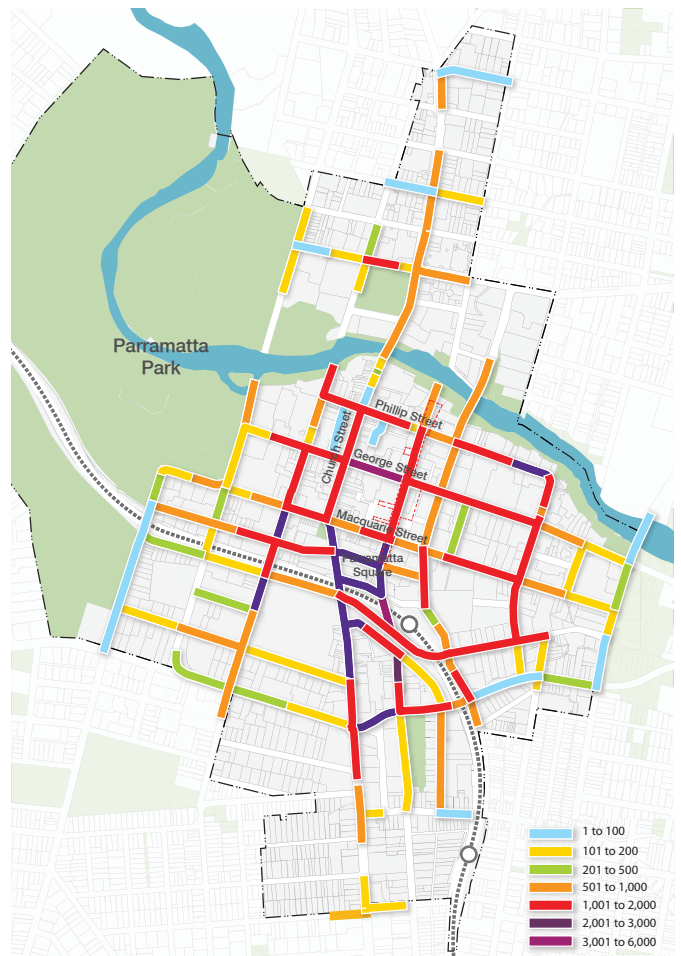
Current Pedestrian volumes



Pedestrian volumes in 2026



Pedestrian volumes in 2036



Pedestrian volumes in 2056

2.6 Public Domain

Public Space Character: Existing

Parramatta CBD is one of the oldest European settlements in Australia. Traditional gridded streets layered with heritage items and contemporary architecture, anchored by a river, are qualities that many of the great cities across the world share with Parramatta.

Within this traditional structure, there is a collection of diverse precincts that link together to create a city that is unique, of its place, and reflects the rich cultural and natural history of Parramatta.



Parramatta Park

- Large, world heritage listed regional parkland of 85ha
- 3.2km walking and cycle loop
- Events and community celebrations
- Heritage items and self-guided walking tours
- BBQ facilities
- Children's play elements
- Cafe, event centre and tea rooms



Erby Place Pocket Park

- Mature tree canopy with dense coverage
- Fixed public seating
- Quiet + enclosed
- Afternoon use and activation through adjacent dining



Centenary Square and St Johns Cathedral

- Current civic heart of the CBD
- Recent revitalisation with de-cluttered design
- Fixed and loose public furniture
- Turf areas
- Temporal water play jets
- Mature deciduous trees with moderate coverage
- Morning and afternoon use



Justice Precinct

- Varied spaces, urban or garden-like in character
- Mature tree canopy with good coverage
- Fixed furniture



Parramatta City River Foreshore

- Proposed for upgrade in City River Strategy
- Currently park-like, open corridor with active running and cycle links
- High solar access
- Quiet and reflective sections
- Daytime activity
- Fixed public seating



Willow Grove

- Heritage garden, proposed integration with new Museum of Applied Arts and Sciences precinct
- Quiet + enclosed nature
- Limited program, no public furniture
- Passive enjoyment



Lancer Barracks

- Heritage landscape with restricted public access

Public Space and Street Character

The identity of existing and proposed public spaces in the CBD should inform the positioning, character and role of the Civic Link. Analysis of these spaces supports the Link being a pedestrianised, green, fine-grain, and cultural space.

Civic Link is located between two new major event spaces; River Square and Parramatta Square

The location of Civic Link between the proposed Parramatta Square (south) and River Square (north) presents the opportunity for the space to serve as a major pedestrian connector that links the two event spaces with the broader network of active and public transport in the Parramatta CBD. Within this context, there is a strong rationale for the Link to provide complimentary fine grain spaces that are more 'local' in character and scaled to a diversity of cultural offers and activities.

Church Street has a strong identity as the traditional 'Eat Street' with a diverse hospitality offering

Civic Link is the opportunity to complement the vibrant hospitality and retail offering of Church Street and surrounding CBD streets by providing dynamic outdoor spaces that can be inhabited by the community. The green, cultural focus of the Link holds potential to differentiate its spaces from the existing retail offering, and reinforce the CBD's overall identity as a regional destination.

Parramatta has a clear and established street hierarchy

Parramatta CBD is based on a conventional street grid pattern. Three important east-west streets intersect with the Civic Link; Macquarie Street, George Street and Phillip Street. Of particular significance is George Street - the oldest planned street in Australia (still in existence).

Running parallel to the Civic Link, Church Street, known as 'Eat Street' is the city's première dining destination and centre of night time economy. As the city grows, the Civic Link will need to work in unison with Eat Street to complement it and jointly contribute to a more diverse offer in the CBD.

To the east is Smith Street, which plays an important role in carrying high volumes of traffic, bus routes and commuter cyclists through the CBD, due to its connectivity to Victoria Road in the north, over the river and through the city to station interchange and south to Harris Park.



Proposed River Square



Proposed Parramatta Square



Centenary Square



2.7 Environment

Green Public Space in and around the CBD

Analysis of Parramatta CBD reveals a lack of green, vegetated public space and an urban tree canopy that is under performing. This uniquely positions the Civic Link to inject vegetation, trees and green infrastructure for amenity and wellbeing benefits for the CBD and its residents.

There is a shortage of green public space in the CBD relative to the LGA as a whole.

Whilst Parramatta LGA typical compares favourably to similar council areas in Western Sydney in terms of public space provision, this space is not distributed evenly across the LGA. A large area of public space exists at Parramatta Park, though analysis of the area surrounding Civic Link highlighted a lack of green public space in this highly built urban context. The Civic Link is an opportunity to ensure the provision of green space in the CBD is equitable and CBD residents and workers can take advantage of the health and wellbeing benefits that green spaces provide.

The strategic positioning of the CBD as a major centre and attractor for workers puts additional pressure on its public spaces

The high number of workers that enter the CBD daily means that urban public spaces have to accommodate higher densities of users. The CBD is also projected to grow in number of residents and workers disproportionately relative to surrounding areas, placing further pressure on public space into the future. The Civic Link represents an opportunity to address current shortfalls in green space and also future proof the CBD to accommodate future growth in density.

The CBD's urban tree canopy is under performing

Whilst the percentage of tree canopy cover for the total City of Parramatta LGA is around 23%, for the CBD study area this number sits around 9%¹. This is well below best practice guidelines for central business districts, which recommends around 15% coverage to maximise the amenity benefits. This shortfall is a key opportunity to improve visual amenity and comfort through new trees plantings.



¹ Jacobs, B., Mikhailovich, N., and Delaney, C. (2014) Benchmarking Australia's Urban Tree Canopy: An i-Tree Assessment, prepared for Horticulture Australia Limited by the Institute for Sustainable Futures, University of Technology Sydney



Biodiversity in Parramatta CBD

Whilst much of the original biodiversity has been lost from Parramatta CBD, the Link can still support efforts to increase and protect biodiversity across the broader Parramatta LGA.

Most of Parramatta LGA's rich and endangered biodiversity has been lost from the CBD

Parramatta LGA is home to a rich variety of species, including 600 species of plants and 230 species of animals, a number of which are unique to the area. This richness reflects significant variation in soil type, rainfall and topography across the LGA and broader Sydney bioregion. Parramatta's history of industrial and residential development means the CBD today is heavily built, and most of the original vegetation and natural features have been lost. This has led to a commensurate loss in the number of species that can be found in the CBD today.

The Civic Link's proximity to the Parramatta River Corridor is an opportunity to enhance biodiversity by keying into the 'Parramatta Ways' Project

The Parramatta Ways project is an initiative that seeks to encourage walking by bringing an overarching, connected approach to Parramatta's green spaces to maximise their contribution to quality of life and the environment. It recognises the importance of connecting green spaces such as river and creek corridors to strengthen resilience and enhance biodiversity. The Civic Link's proximity to the Parramatta River corridor means that it has a role in supporting the corridor species and their ecological function.

This can occur in a number of ways:

- Planting locally endemic species which provides habitat for urban populations of native wildlife. It also supports plant species in nearby areas of remnant vegetation by increasing cross pollination and the diversity of the gene pool. This helps to make these areas more resilient to pressures such as climate change.
- Using the Link to manage stormwater runoff and increase stormwater quality improves the health of the Parramatta River and enables it to support a greater diversity of species

Demonstrating Parramatta's biodiversity provides opportunity for celebrating the cultural heritage of the area

The history of human occupation of the Parramatta area is closely aligned with the biodiversity of the region. For around 60 000 years the Burramuttagal people's occupation of the area reflected in part the richness of the Parramatta River as a source of food. Much more recently, the fertile soils and the junction of fresh water and salt water also attracted European settlers seeking to establish agriculture to feed the early colony. There are opportunities for planting choice and design decisions to celebrate this relationship and reinforce a strong sense of place identity.



Acacia parramattensis | Parramatta Green Wattle



Eucalyptus parramattensis | Parramatta Red Gum

Urban Heat Island

The Urban Heat Island will exacerbate the impacts of climate change for Parramatta CBD

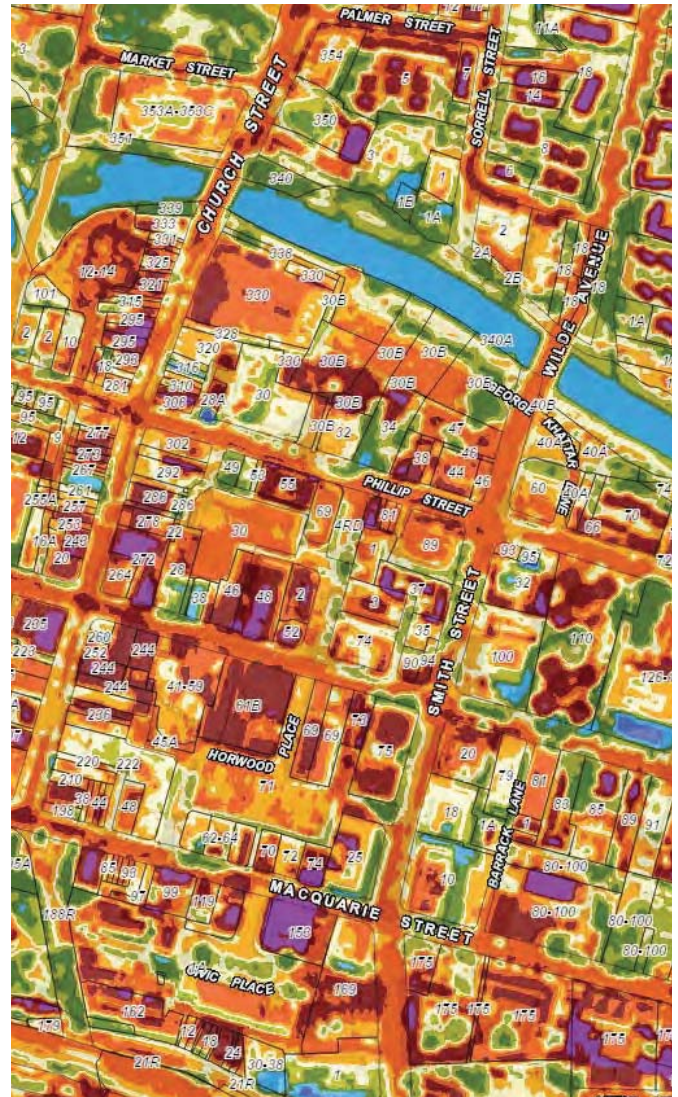
The urban heat island effect will exacerbate extreme heat days (days over 35°C), which are projected to impact Western Sydney disproportionately as the climate warms. The Civic Link is an important opportunity to provide a cool, green respite from the heat of the CBD.

Parramatta CBD is hotter than surrounding areas in the LGA due to the Urban Heat Island (UHI) Effect

Urban thermal imagery undertaken by City of Parramatta Council in 2013 demonstrates a concentration of heat in the more densely built areas of the CBD compared to the other areas of the LGA. This demonstrates the impact of the Urban Heat Island (UHI) effect - the phenomenon in which built surfaces absorb and radiate heat, thereby raising the ambient temperature in urban areas. Research shows that the urban heat island effect may increase temperatures in built areas by 1 to 3 degrees Celsius compared to surrounding areas. This has important implications for health, well-being, and liveability.

Western Sydney is projected to be disproportionately impacted by climate change

Due to its distance from the moderating influence of the ocean and the absence of cooling coastal breezes, the gap between temperatures in Western Sydney and the eastern suburbs has been observed to grow as the climate warms. On average Parramatta now experiences 4 times as many hot days as Sydney City, up from 3 times as many in the 1970s¹. This trend is projected to continue, meaning that Western Sydney will experience more extreme heat days above 35 degrees each year. The combined impact of the UHI effect and climate change highlight the need for public spaces that employ a range of strategies to mitigate and adapt to heat.



Daytime Surface Temp in Degrees Celsius from http://coolparramatta.com.au/heat_maps



¹ Steffen W. and Hughes L., "The Critical Decade, New South Wales climate impacts and opportunities", 2012, Climate Commission, Commonwealth of Australia

2.8

Water Management and Expression

Water Expression in the CBD

Parramatta's historical identity as a 'River City'

The Parramatta River has played a central role in the pattern of human occupation of the area for many thousands of years, including early decisions that have led to the development of the Parramatta CBD in its current form. The historic and cultural importance of the River is reflected in the identity of Parramatta as the 'River City', and is expressed through the location of many of its civic buildings and historic cultural institutions. Despite this historical importance, successive urban development decisions have had the effect of turning the city's back on the river corridor by reducing connectivity and human engagement with the river's waters. A key focus of the Parramatta City River Strategy (2015) is the reorientation of the city to the river in recognition that the corridor represents a major natural asset and opportunity for social and economic energising.

Civic Link's role and physical orientation lend it to strong expressions of water

By connecting the proposed River Square with Parramatta Square, the Civic Link will have significance as a gateway to the river corridor and symbolic connection between this natural asset and the institutional heart of the CBD. The movement of people along the Link and the physical orientation of the Link are also suggestive of nearby tributaries of the Parramatta River, such as Duck River. There exists scope to consider the Link a symbolic cultural tributary of the river, carrying people from its headwaters at the transport interchange and Parramatta Square to its confluence at the proposed Museum of Applied Arts and Sciences and River Square. The concept of the Link as a stream should be explored through expression of water and WSUD treatments along the Link.

Existing and proposed expressions of water in the Parramatta CBD are more civic in nature

The event focus of Centenary Square and River Square mean that the expression of water in these locations is appropriately civic and flexible in nature. Whilst flexibility and multi-use must be central to the design of Civic Link, the finer grain, green character of the Link also allows for more diverse expressions of water that are both ephemeral and permanent, and integrate vegetation and stormwater systems.

Stormwater and Flood Management

Effective stormwater management can improve water quality, help to reduce the impacts of flooding and improve the health of Parramatta River

Parramatta CBD is prone to flooding

Although Parramatta River has a history of flooding, the built nature of the CBD has contributed to 'increased peak water levels during flood events, as well as increasing the risk that floodwaters may rise rapidly'. It is beneficial then that future developments in the CBD look to increase the capacity for temporary detention of stormwater to reduce the speed with which rain enters the river and contributes to flooding. Council's flood map shows that the Civic Link is relatively less impacted by water levels in a 1 in 100 year flood than adjacent Church and Smith Streets. It may be appropriate to consider the Link for flood evacuation purposes.

Stormwater quality remains a significant factor in the health of the Parramatta River

The Parramatta River catchment area is one of the most highly urbanised in Australia. This means stormwater quality remains one of the biggest factors in river health, because the high proportion of hard, impervious built surfaces allow pollutants to be readily carried to the river. The local catchment of streets and buildings surrounding the Civic Link is emblematic of this issue and is a strong rationale for implementing water sensitive urban design to improve run off into the river. Through initiatives such as rain gardens that collect and filter runoff, pollutants such as vehicle particulates, pesticides and pet wastes can be removed before entering the river.

The Civic Link is an Opportunity to support the *Our Living River* Initiative to make the Parramatta River swimmable again

Our Living River is an initiative of the Parramatta River Catchment Group that aims to improve the health of the river and make it swimmable by 2025. The plan includes significant community and resident engagement to create 'buy-in' and promote the benefits of river health in terms of liveability, social connection, and economic indicators. The Civic Link presents an opportunity to raise awareness and lead through example best practice WSUD principles that ultimately can be rolled out across the LGA.

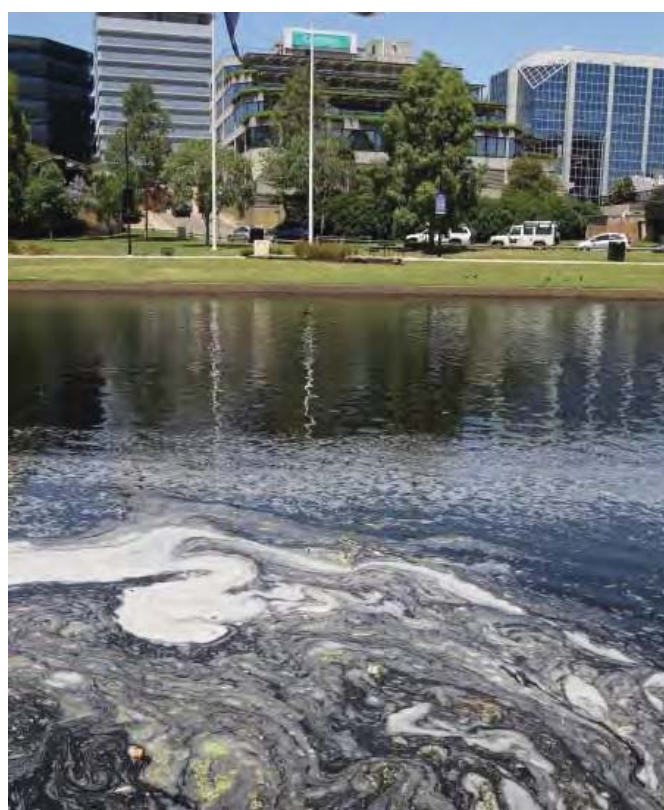
2.9 Utility and Infrastructure

The City of Parramatta has a vision for a smart and sustainable future. As Parramatta is growing into tomorrow's Central City, its ageing infrastructure is struggling to manage the demands of today, and those planned in the future.

The City faces many complex challenges, including growing energy demand, the urban heat island effect, drainage systems that cannot manage the City's rainfall, and poor water quality in the Parramatta River as the result of urban pollutants. There is a growing need for augmentation of the City's utility systems to support the demands of a rapidly growing CBD.

Technology is playing an ever important role in the management of utilities. The City already has plans to install early flood warning systems, ambient temperature monitoring, and iTree monitoring of canopy development. It aims to conduct comprehensive utility investigations, adopting a collaborative approach with service providers to explore the opportunity for shared service corridors, energy and water recycling plants, and multi-functional stormwater treatment for a smart and future-focused City.

The Civic Link presents an opportunity for the City to deliver integrated and innovative solutions to its present and future utility challenges.



2.10 Summary of Opportunities

The Civic Link covers a diverse and extensive cross section of Parramatta CBD, resulting in a significant number of opportunities and challenges that the project must consider and address. These are summarised in the diagrams below and opposite.



2.11 Summary of Challenges



