



LIVERPOOL CITY CENTRE PUBLIC DOMAIN MASTER PLAN

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Urban Design Team
City Design and Public Domain Department
Liverpool City Council

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For further information

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Front Cover Image: View looking south along Macquarie Mall, Liverpool NSW (Liverpool City Council)

EXECUTIVE SUMMARY

The Liverpool City Centre Public Domain Master Plan is a ten year plan of public domain improvements across the Liverpool city centre. The master plan will deliver a high quality public domain that responds to the planned future of the city centre and achieves positive outcomes for the community and environment. Liverpool City Council has developed the master plan in collaboration with the community, businesses and stakeholders including NSW Government agencies, to produce a mutually agreed master plan that is both a city vision and improvement plan for the city's public domain.

Liverpool city centre is fast becoming Sydney's third Central Business District (CBD), as the capital of Sydney's South West and the gateway city to the future Western Sydney (Nancy-Bird Walton) International Airport and Aerotropolis. As a result, the Liverpool city centre is currently experiencing rapid change and development which is placing greater importance on the city's public domain, in meeting the needs of the growing community. In response, Council has prepared a coherent and cross-discipline master plan to guide the development of the city's public domain, acknowledging that now is a crucial time to revitalise the city's public domain, in order to capitalise on the growth of Western Sydney, as a result of the future Western Sydney (Nancy-Bird Walton) International Airport and Aerotropolis.

In 2018, the Greater Sydney Commission developed the Liverpool Collaboration Area Place Strategy, as part of the Western Sydney Region Plan, and Greater Sydney Region Plan. These strategies establish the regional, district and place scale vision for Liverpool. The master plan aims to deliver on this vision through implementing strategies and actions from these plans at the fine grain level. The master plan delivers on Council's Community Strategic Plan - Our Home Liverpool 2027, through public domain interventions that are aligned with the four directions of the plan. The master plan is also aligned with Council's strategic planning framework, including the Liverpool Local Environmental Plan 2008 (Amendment 52), Liverpool Development Control Plan 2008 - Part 4 Development in Liverpool City Centre, and Liverpool Local Strategic Planning Statement - Connected Liverpool 2040.

The master plan will be used by Council, private developers, businesses and the community, for the following purposes:

- Providing design direction, standards and information for Development Application (DA) processes and Voluntary Planning Agreement (VPA) negotiations;
- Informing future updates to the Liverpool City Centre Development Contributions Plan;
- Informing the scope of works and budgeting for Council's forward capital works programs;
- Providing supporting information for grant funding applications, related to public domain projects;
- Informing strategic planning decisions within Council and NSW Government departments and agencies;
- Providing information to Council staff, businesses and the community on public domain improvements, and
- Providing a common goal for all public domain projects within the city centre.

The master plan aims to deliver a city centre that is a great place in which to live, work, recreate and visit. To achieve the vision, the master plan includes the following key strategies:

1. Improved Streets - Streets are improved to be healthier (i.e. as per The Healthy Streets Approach™), more people-focused, and provide increased priority to active and public forms of transport. Streets are considered to be part of the open space network, with increased amenities and facilities, including street trees, vegetation and new streetscape infrastructure.
2. Activated Serviceways/Laneways - Serviceways/Laneways are activated through encouraging businesses to be dual-facing (i.e. addressing both the street and laneway frontages) and new laneway-specific infrastructure to develop a distinctive laneway character and encourage pedestrian usage. Laneways are upgraded to better accommodate community events.
3. Improved Gateways - Gateways are improved to better define the transition between the city centre and surrounding areas, create a sense of arrival, and function as a wayfinding mechanism to help motorists, cyclists and pedestrians recognise entry points to the city. Gateways treatments reflect the character of the city, and incorporate high quality infrastructure.
4. Increased and Improved Car Parking - Existing parking strategies are supported and there is an increase in the quantity of parking, based on private vehicle demand for parking, with respect to public transport availability and to support modal split shift to increased public transport use. Parking demand and traffic congestion in the city core is reduced, including through encouraging parking around the periphery of the city centre.
5. New and Upgraded Open Spaces - The quality and quantity of open space is increased, including through the retention and embellishment of existing open spaces, and introduction of new pocket parks and potential shared-use spaces. Parks include new trees, vegetation, amenities, sporting and recreational facilities, and new public domain infrastructure.
6. Improved Rivers and Creeks - The Georges Rivers and Brickmakers Creek is improved through increased connections to the waterfronts and embellishment of the areas around both water bodies, with recreational infrastructure and opportunities to interact with the water. The health and condition of both water bodies is improved through measures to treat stormwater runoff.
7. Enhanced Heritage Spaces - Indigenous, European, and Migrant and Transnational Heritage is conserved, enhanced and promoted in the city centre. Heritage items including buildings, structures, parks and monuments, are celebrated through site-specific interventions and heritage-inspired treatments, such as trees, vegetation, landscaping and custom signage.

The master plan is to be used as a guide for public domain improvements in the city centre. It has been developed with input from several disciplines across Council, the community, businesses and stakeholders. The master plan strategies will support the city's economy and existing and future Council and NSW Government initiatives, and improve the overall user experience while retaining the unique qualities of the city centre, including its history and character.

MESSAGE FROM THE MAYOR



Liverpool is fast becoming Sydney's third CBD and will be the premier edge city of the new Western Sydney International Airport.

Our city is also one of Australia's oldest. Its grid-like structure provides the bones for a walkable, city centre that's easy to navigate.

Council has developed the Liverpool City Centre Public Domain Master Plan to future-proof our city centre and prepare for the challenges and opportunities that lie ahead.

The plan presents a 10-year vision for the city centre as a thriving space focused on people and the environment. It will set the framework for a high-quality public domain that is resilient, sustainable and supportive of the future growth of the city, as we welcome new residents, workers and visitors.

The Master Plan was developed with extensive community and stakeholder consultation and reflects the aspirations of our community, for the kind of city that they want to live in.

I am pleased to see that our community has such lofty ambitions of our city centre. Throughout consultation, we found conversations returned to the common themes of active transport, walkability, green open space, and city innovation.

Overall, this Master Plan will assist Council, private developers, local businesses and the community to continue to build a city centre that provides its citizens with a holistic experience of urban life.

It will make provisions for a multitude of recreational and entertainment options, improved environmental outcomes, increased active transport, new and improved open spaces, and increased safety, accessibility and inclusion.

Through the implementation of this Master Plan, we can achieve a better quality of life for all who engage with the city centre.

Mayor, Wendy Waller

24 June 2020

MESSAGE FROM THE CEO



Over the next 10 years Liverpool will experience a period of immense change. Liverpool is developing into a major strategic centre, with new residents and jobs, and an international airport at our doorstep.

Council is leading the community through this period of change and growth, towards a more dynamic city, with a vibrant, safe and well-connected city centre.

The Liverpool city centre has a lot to offer its residents, workers and visitors.

It has a diversity of assets and uses. Our walkable city grid, public parks and open space are enhanced by heritage sites, public art and a diverse retail offering.

A growing commercial presence, the health and education precinct, and an increasing assortment of mixed-use developments will provide career opportunities for those who live and study in the region.

The Liverpool City Centre Public Domain Master Plan will assist in guiding the city through its growth by implementing key public-domain improvements that will ensure resilience and sustainability, for a thriving population and economy.

The Master Plan was produced through a comprehensive methodology, beginning with a thorough review of Federal, State, Regional and Local planning documents, followed by a detailed analysis of the current conditions in the city centre and an extensive community and stakeholder consultation process.

The result is an evidence-based approach to shaping the city centre public domain, with a comprehensive set of design principles at its core. The principles are to:

- Improve connectivity
- Enhance liveability
- Increase productivity
- Achieve sustainability
- Deliver governance

The Master Plan is honest about the current and future challenges that exist in the city centre, and provides detailed projects, interventions and recommendations to address these challenges.

We now have the opportunity to re-think the way we understand these challenges in order to discover new and innovative solutions for the future city centre.

A handwritten signature in black ink, appearing to read 'Kiersten Fishburn'. The signature is stylized and fluid.

CEO, Kiersten Fishburn

24 June 2020

The background of the page is a large-scale, light-colored mosaic artwork. The mosaic is composed of many small, irregular, light-colored tiles. Overlaid on this mosaic are several large, stylized, light-colored silhouettes of Indigenous Australian figures and symbols. One prominent figure is a man in a traditional headdress, looking to the left. Another figure is a woman in a traditional dress, looking to the right. There are also some abstract shapes and patterns scattered throughout the mosaic. The overall effect is a textured, artistic representation of Indigenous culture.

Acknowledgment of Country

We would like to acknowledge the Cabrogal Clan of the Darug Nation who are the traditional custodians of the land that now reside within Liverpool City Council's boundaries. We acknowledge that this land was also accessed by peoples of the Dhurawal and Darug Nations.

Background Image: Indigenous artwork in Liverpool City Library forecourt, Liverpool NSW (Liverpool City Council)

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This chapter of the report provides an introduction to the project, including the purpose of the Master Plan, overview of the project site and context, strategic alignment of the Master Plan with key NSW Government and Liverpool City Council strategies, an overview of the methodology undertaken to develop the Master Plan, and the structure of this report.





1.0

INTRODUCTION

1.1

INTRODUCTION ABOUT THE MASTER PLAN

Overview

What is a Public Domain Master Plan?

A Public Domain Master Plan is a dynamic long term planning document that guides the future growth and development of public and shared spaces, in accordance with clearly defined aims and needs. Public and shared spaces consist of all publicly accessible urban spaces, the structures that relate to those spaces, and the infrastructure that supports and serves them. Publicly accessible spaces include; streets, footpaths, arcades, laneways, plazas and malls, car parks, areas for café and restaurant seating, entries and foyers to buildings, parks and reserves, and areas around water courses, such as rivers and creeks. Structures that relate to urban spaces include; buildings and public spaces to which they are connected. Public infrastructure that supports urban spaces include; awnings, bridges, cultural artefacts, drainage infrastructure, lighting, public art, signage, and streetscape furniture, fixtures and fittings.

A Public Domain Master Plan aims to provide a coherent vision that responds to the physical, visual, social and environmental layers of the public and shared spaces. These layers include; topography, hydrology, geology, ecology, climatic conditions, environmental conditions, open space, trees and other vegetation, heritage items, transport (i.e. public, private and active transport), road systems, on-street and off-street car parking, traffic direction and speed, planning controls that directly or indirectly affect the public domain, built form, street setbacks, awnings and shade structures, active street frontages, places of interest (e.g. important locations, landmarks and community facilities), character areas, public infrastructure (e.g. lighting, public art, signage, and streetscape furniture, fixtures and fittings), paving treatments, late night trading areas, community event locations, and above and below-ground utilities and services.

Urban Design is the discipline that typically leads the development of a Public Domain Master Plan, and it encompasses several other built environment disciplines including; Architecture, Landscape Architecture, Heritage, Town Planning, Public Art and Traffic Engineering. The Government Architect NSW describes Urban Design as “an integrated discipline, and the large-scale process of designing and intentionally shaping the built environment. It is the complex interface between infrastructure, public domain and development and is framed by contending social, economic and environmental factors (Government Architect NSW). The Planning Institute of Australia describes the aim of Urban Design as “the creation of useful, attractive, safe, environmentally sustainable, economically successful and socially equitable places. Good urban design pursues local identity and sense of place, cultural responsiveness and purposeful environmental innovation. It achieves a high level of quality, comfort, safety, equity, beauty and cohesion in the overall, physical outcome of all the development, planning, engineering, architectural and landscape design decisions that contribute to urban change” (Planning Institute of Australia, 2019).

Why has a Public Domain Master Plan been developed for the Liverpool City Centre?

Liverpool city centre is fast becoming Sydney’s third Central Business District (CBD), as the capital of Sydney’s South West and the gateway city to the future Western Sydney (Nancy-Bird Walton) International Airport and Aerotropolis. As a result, the Liverpool city centre is currently experiencing rapid change and development which is placing greater importance on the city’s public domain, in meeting the needs of the growing community. In response, Council has prepared a coherent and cross-discipline Master Plan to guide the development of the city’s public domain, acknowledging that now is a crucial time to revitalise the city’s public domain, in order to capitalise on the growth of Western Sydney, as a result of the future Western Sydney International Airport and Aerotropolis.

Key drivers behind the development of the Liverpool City Centre Public Domain Master Plan include:

- Implementing the Greater Sydney Commission’s vision for Liverpool, as established in the Liverpool Collaboration Area Place Strategy, at the fine grain level;
- Aligning the future development of the city’s public domain with Council’s strategic planning framework, including the Liverpool Local Environmental Plan 2008 (Amendment 52), Liverpool Development Control Plan 2008 - Part 4 Development in Liverpool City Centre, and Liverpool Local Strategic Planning Statement - Connected Liverpool 2040;
- Updating Council’s directions for the city’s public domain in order to meet the current and future needs of the growing local community;
- Capitalising on development opportunities in the city centre, where public domain works can be delivered through Development Application conditions of consent and Voluntary Planning Agreements;
- Bringing together various strategies, plans, policies and guidelines that relate to the city centre, into a coherent vision, framework, and plan to shape the city’s public domain;
- Developing a document that will provide design direction and achieve consistency in public domain treatments across the city centre;
- Identifying opportunities for public domain upgrades in the city centre, that are both internally and externally funded;
- Transforming the city centre through re-prioritised streets and serviceways/laneways that are people focused, rather than vehicle focused;
- Identifying strategies that will improve environmental conditions within the city including through cooler temperatures and increased shade, and
- To better integrate the social and environmental aspects of the city centre.

1.1

Introduction

About the Master Plan - Overview

Who will use this Public Domain Master Plan and for what purpose?

This Public Domain Master Plan will be used by Liverpool City Council staff, private developers, local businesses and the community, for the following purposes:

- Providing design direction, design standards and information for Planning Proposal and Development Application (DA) processes;
- Providing design direction, design standards and information for Voluntary Planning Agreement (VPA) negotiations;
- Providing input into future updates to Council's Development Contributions Plan for the city centre;
- Providing design direction, design standards and information for capital works projects to be delivered by Council;
- Informing the priority order and budget allocation for Council's forward capital works programs;
- Providing information to support grant funding applications for public domain works in the city centre;
- Informing strategic planning decisions within Council and NSW Government departments and agencies;
- Providing information to local businesses and the community on public domain improvements within the city centre, and
- Providing information and a common goal for Council staff, regarding public domain improvements within the city centre.



Figure 1.1 Image of Water Play Area in Macquarie Mall, Liverpool NSW. (Liverpool City Council)



Figure 1.2 Image of Table Tennis Tables at Macquarie Mall, Liverpool NSW. (Liverpool City Council)



Figure 1.3 Image of Macquarie Mall facing north, Liverpool NSW. (Liverpool City Council)

1.2

INTRODUCTION PROJECT LOCATION & SITE

Overview & Location

Site Context

The Liverpool Local Government Area (LGA) is located in South Western Sydney, within the state of New South Wales (NSW), Australia. The Liverpool LGA comprises 42 city, suburban and rural suburbs in an area of 305 square kilometres. The Liverpool city centre is situated at the eastern end of the LGA and is approximately half way between the existing Sydney Kingsford Smith International Airport located in Mascot, and the future Western Sydney (Nancy-Bird Walton) International Airport located in Badgerys Creek, and is close to the existing Bankstown Airport. Liverpool is located 13km south-west of the Parramatta Central Business District (CBD) and 27km south-west of the Sydney CBD. Liverpool is also centrally located to other major centres within Greater Sydney, situated 17km south of Blacktown, 19km north-east of Campbelltown and 27km south-east of Penrith, and is also 15km from the Australian Nuclear Science and Technology Organisation. (See Figure 1.5).

The Liverpool area was originally inhabited by the Dharug and Tharawal Aboriginal people, and Liverpool itself is one of the oldest urban settlements in Australia. Liverpool was founded on 7 November 1810 as an agricultural centre by Governor Lachlan Macquarie, who named it after Robert Banks Jenkinson, Earl of Liverpool (i.e. who was then the Secretary of State for the Colonies) and the British city of Liverpool, upon which some of the area's architecture is based. Liverpool is now home to more than 212,000 people, which is expected to increase to more than 300,000 people over the next 20 years, and the Liverpool city centre is fast becoming Sydney's third Central Business District (CBD), as the capital of Sydney's South West and the gateway city to the future Western Sydney (Nancy-Bird Walton) International Airport and Aerotropolis. As a result, the Liverpool city centre is currently experiencing rapid change and development which is placing greater importance on the city's public domain, in meeting the needs of the growing community.



Site Overview

The spatial area of the Liverpool City Centre Public Domain Master Plan project site comprises the entire Liverpool city centre, which is bound by the Hume Highway and Copeland Street to the north and west, Mill Road to the south and the railway line and Georges River to the east (See Figure 1.8). This has been adopted as the project site in accordance with the Greater Sydney Commission's Liverpool Collaboration Area Place Strategy, encompassing the identified city centre core and frame areas. The Liverpool city centre is a similar size to other city centres such as Parramatta, Melbourne and Brisbane city centres (See Figure 1.6).

The city centre street layout, comprising a grid of north-south and east-west streets, is the Town Plan of Liverpool that was set out by James Meehan in 1810 under the instruction of Governor Lachlan Macquarie. The Town Plan set the basis for the development of other towns including Windsor, Richmond and Camden. The plan was formalised in 1819 and officially documented when Robert Hoddle prepared a plan for Liverpool in 1827. The street grid forms the overall layout of the city and is heritage listed, along with various parks, buildings and other items in the city centre. The city is bordered by two natural water bodies (i.e. Georges River and Brickmakers Creek) and includes several public parks. There is various commercial, retail and mixed-use buildings located in the city core, and residential dwellings are mostly located in periphery areas. The city centre is serviced by two railway stations and bus services cover most areas within the city centre. Points of interest in the city centre include the Liverpool Hospital and healthcare precinct, university and college campuses, schools, Places of Worship, retail shopping centres (e.g. Westfield Shopping Centre and Liverpool Plaza) and various other shops, restaurants and cafés (See Figure 1.8).



Figure 1.4 Liverpool City Centre - National, State and Regional Context (Liverpool City Council)

1.2

Introduction

Project Location & Site - Location and Scale Comparison

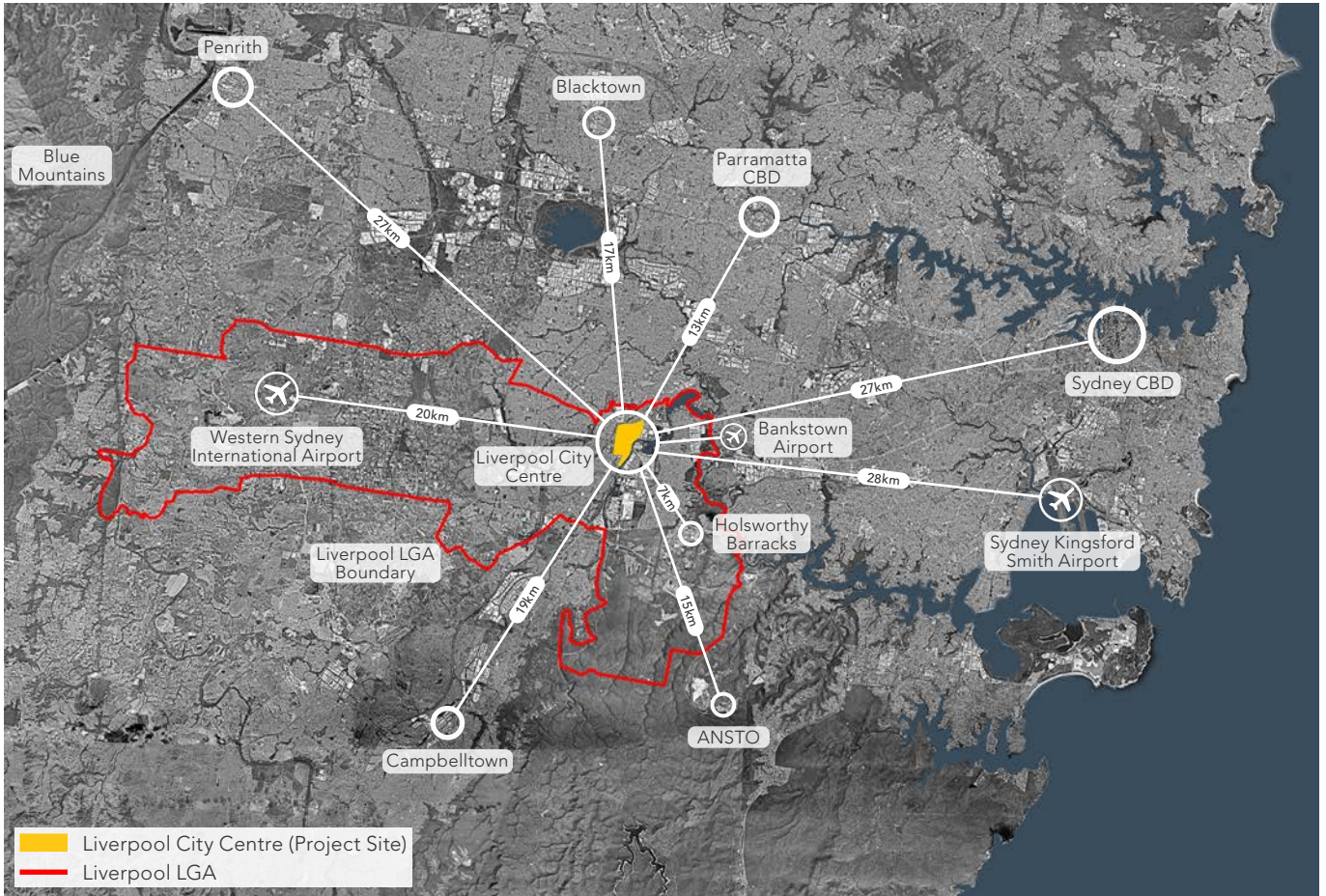


Figure 1.5 Liverpool City Centre - Context within Greater Sydney (Liverpool City Council)

Scale Comparison

These images compare the size of the Liverpool city centre with other major city centres in Australia, to provide an understanding of the scale and extent of the project site, compared with other city centres.

- Liverpool City Centre (Project Site)
- Other City Centre



Figure 1.6 Scale comparison of the Liverpool City Centre and other City Centres (Liverpool City Council)

1.2 Introduction Project Location & Site - Project Site



Figure 1.7 Liverpool City Centre - Places of Interest (Liverpool City Council)



Figure 1.8 Liverpool City Centre - Master Plan site and context (Liverpool City Council)

1.3

INTRODUCTION STRATEGIC ALIGNMENT

Overview & Key Documents

Overview

The Greater Sydney Commission (GSC) and Liverpool City Council have a vision for Liverpool, as identified in key documents which establish the strategic framework for the Master Plan. The Master Plan is aligned with the vision, objectives and actions within these key documents. The Master Plan is also aligned with Council's corporate vision and values, which underpin the principles and standards of behaviour, guiding the work that Council undertakes. This chapter explains how the Master Plan is aligned with, and delivers on the GSC and Council's vision for Liverpool, and Council's organisational vision and values.

The GSC is an independent organisation that is funded by the NSW Government and was established in 2015, to coordinate and align the planning that will shape the future of Greater Sydney. The GSC is delivering a vision for a more productive, liveable and sustainable Greater Sydney, including through the development of the following key strategic plans:

- Greater Sydney Region Plan - A Metropolis of Three Cities;
- Western City District Plan - Our Greater Sydney 2056, and
- Liverpool Collaboration Area Place Strategy.

Council's vision for the Liverpool Local Government Area (LGA), including the Liverpool city centre is established in the following key Council documents, planning instruments, and organisational vision and values:

- Our Home, Liverpool 2027 - Community Strategic Plan (CSP);
- Liverpool Local Environmental Plan (LLEP);
- Connected Liverpool 2040 - Local Strategic Planning Statement (LSPS), and
- Council's Corporate Vision and Values.

These key documents, planning frameworks, vision and values have been instrumental in initiating and guiding the Master Plan, and the Master Plan aligns with, and delivers on the vision, objectives and actions set within these frameworks, translating them into resolved spatial arrangements.

Additionally, there is 50 other national, state, regional and local documents, including strategies, plans, policies and guidelines that relate to the development of the city centre and have guided the Master Plan. This includes; existing Council-adopted Master Plans for specific sites located within the city centre, existing Council-adopted specifications and guidelines for public domain infrastructure within the city centre, industry best practice guidelines, and environmental management plans and policies related to the city centre. A summary of each document and how it has informed the Master Plan is within Chapter 2.0 Strategic Review of this report.

Greater Sydney Commission's Vision

The Greater Sydney Commission's Greater Sydney Region Plan, Western Sydney Region Plan, and Liverpool Collaboration Area Place Strategy establish the regional, district and place scale framework to guide the growth and development of Liverpool. The Master Plan is aligned with the objectives and actions within these documents (See Figure 1.14). A description of each document and how it relates to the Master Plan is below.

Greater Sydney Region Plan

The Greater Sydney Region Plan - A Metropolis of Three Cities is a 40-year vision to transform Greater Sydney into a metropolis of three cities; the Western Parkland City, the Central River City, and the Eastern Harbour City. The aim is for most residents to live within 30 minutes of their jobs, education and health facilities, services and great places. The plan was prepared concurrently with Future Transport 2056 and the State Infrastructure Strategy, to align land use, transport and infrastructure planning. The plan identifies the significance of Liverpool as both a metropolitan cluster and Health and Education Precinct within the Western Parkland City. A summary of the Greater Sydney Region Plan and how it has informed the Master Plan is within Chapter 2.0 Strategic Review of this report.

Western Sydney District Plan

The Western City District Plan - Our Greater Sydney 2056 is a 20-year plan to achieve the 40-year vision established in the Greater Sydney Region Plan, at the district level. The plan is structured around strategies for infrastructure and collaboration, liveability, productivity, sustainability, and implementation. The plan acknowledges that the Western Parkland City will transform over the next 20 years; drawing on the strength of the new Western Sydney (Nancy-Bird Walton) International Airport and Aerotropolis and the first stage of a North South Rail Link that will create the opportunity for a Western Economic Corridor, and will capitalise on established centres including Liverpool, which will form part of a metropolitan cluster. A summary of the Western Sydney District Plan and how it has informed the Master Plan is within Chapter 2.0 Strategic Review of this report.

Liverpool Collaboration Area Place Strategy

The Liverpool Collaboration Area Place Strategy identifies Liverpool (i.e. including the Liverpool city centre) and surrounding areas as one of three collaboration areas within the Western Parkland City. The vision established within the Strategy is, by 2036 Liverpool; is a rejuvenated river city, offering diverse and growing residential and employment opportunities, has major health, education and retail precincts, and a network of open spaces and parklands alongside the Georges River, with a rich mix of jobs and workplaces, public spaces, shops and entertainment. The Master Plan implements several of the priorities and actions of the Strategy. A summary of the Liverpool Collaboration Area Place Strategy and how it has informed the Master Plan

1.3

Introduction Strategic Alignment - Overview and Key Documents

Liverpool City Council's Vision & Values

Council's Community Strategic Plan (CSP) sets the vision and establishes the priorities of the community to guide the work that Council undertakes. Council's Local Strategic Planning Statement (LSPS) and the Liverpool Local Environmental Plan (LLEP) guide planning decisions, including for the Liverpool city centre. A description of these documents and Council's corporate vision and values, and how they relate to the Master Plan is below.

Community Strategic Plan (CSP)

The Community Strategic Plan (CSP) is a 10-year plan that defines the vision and priorities of the community. The CSP is the overarching plan that sets the direction for Council and all stakeholders, including federal and state governments, business, the not-for-profit sector and residents. The Master Plan delivers on the four directions within the CSP, these being; Creating Connection, Strengthening and Protecting our Environment, Generating Opportunity, and Leading Through Collaboration (See Figure 1.15). A summary of the CSP and how it has informed the Master Plan is within Chapter 2.0 Strategic Review of this report.

Liverpool Local Environmental Plan (LLEP)

The Liverpool Local Environmental Plan (LLEP) is the primary instrument used to guide planning decisions for land located in Liverpool. The LLEP reduces the area of the Liverpool city centre zoned as B3 Commercial Core and increases the area of the city centre zoned as B4 Mixed Use, in order to attract a more diverse set of uses (including residential) and support the revitalisation of the area. The co-location of residential, commercial, retail, education, health services and amenity within the city centre is outlined as a key opportunity to bring investment into the city. A summary of the Liverpool Local Environmental Plan and how it has informed the Master Plan is within Chapter 2.0 Strategic Review of this report.

Local Strategic Planning Statement (LSPS)

Council's Local Strategic Planning Statement - Connected Liverpool 2040 (LSPS), is a 20-year vision for land use and expected growth in the Liverpool Local Government Area (LGA), including within the Liverpool city centre. The document details 16 planning priorities based around 4 categories focused around; achieving better connections, promoting liveability, improving productivity, and promoting sustainability within the LGA. The Master Plan supports and aligns with these priorities. A summary of the LSPS and how it has informed the Master Plan is within Chapter 2.0 Strategic Review of this report.

Corporate Vision and Values

Through the process and outcomes of the Master Plan, the project team and Master Plan itself has demonstrated alignment with Council's; corporate vision, this being "Aspiring to do great things - for ourselves, our community and our growing city", and corporate values, these being; Ambitious, Authentic, Collaborative, Courageous, Decisive and Generous.

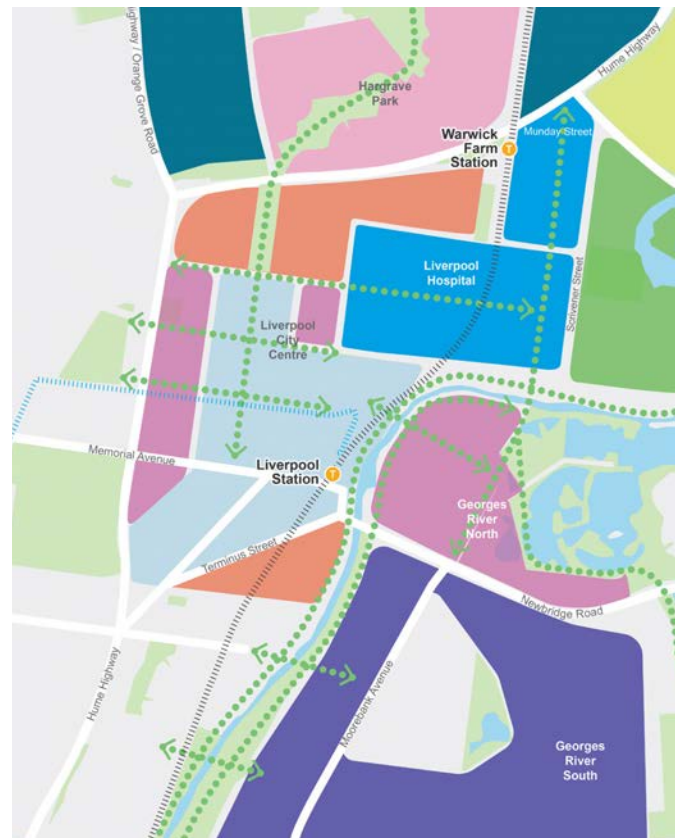


Figure 1.12 Place Strategy for Liverpool diagram, from the Liverpool Collaboration Area Place Strategy (Greater Sydney Commission)

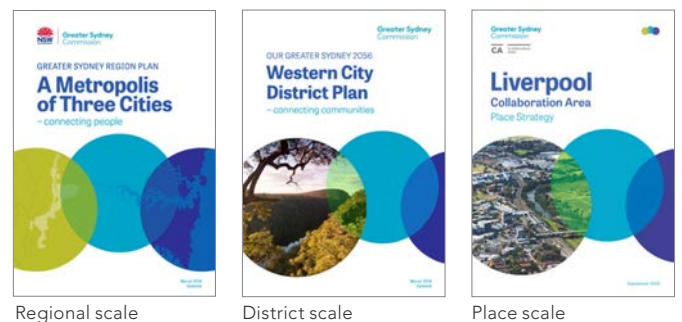


Figure 1.10 Greater Sydney Region Plans (Greater Sydney Commission)

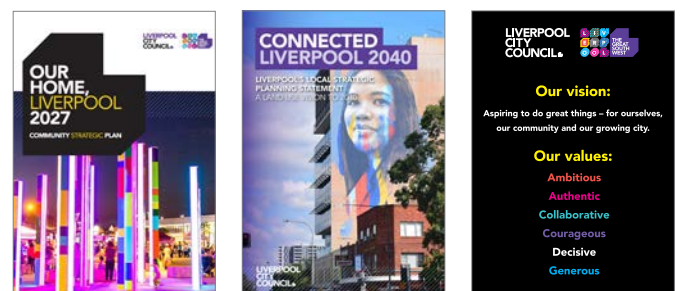


Figure 1.11 Council's Community Strategic Plan, Local Strategic Planning Statement, and Corporate Vision and Values (Liverpool City Council)

Introduction

1.3

Strategic Alignment - Greater Sydney Region Plan

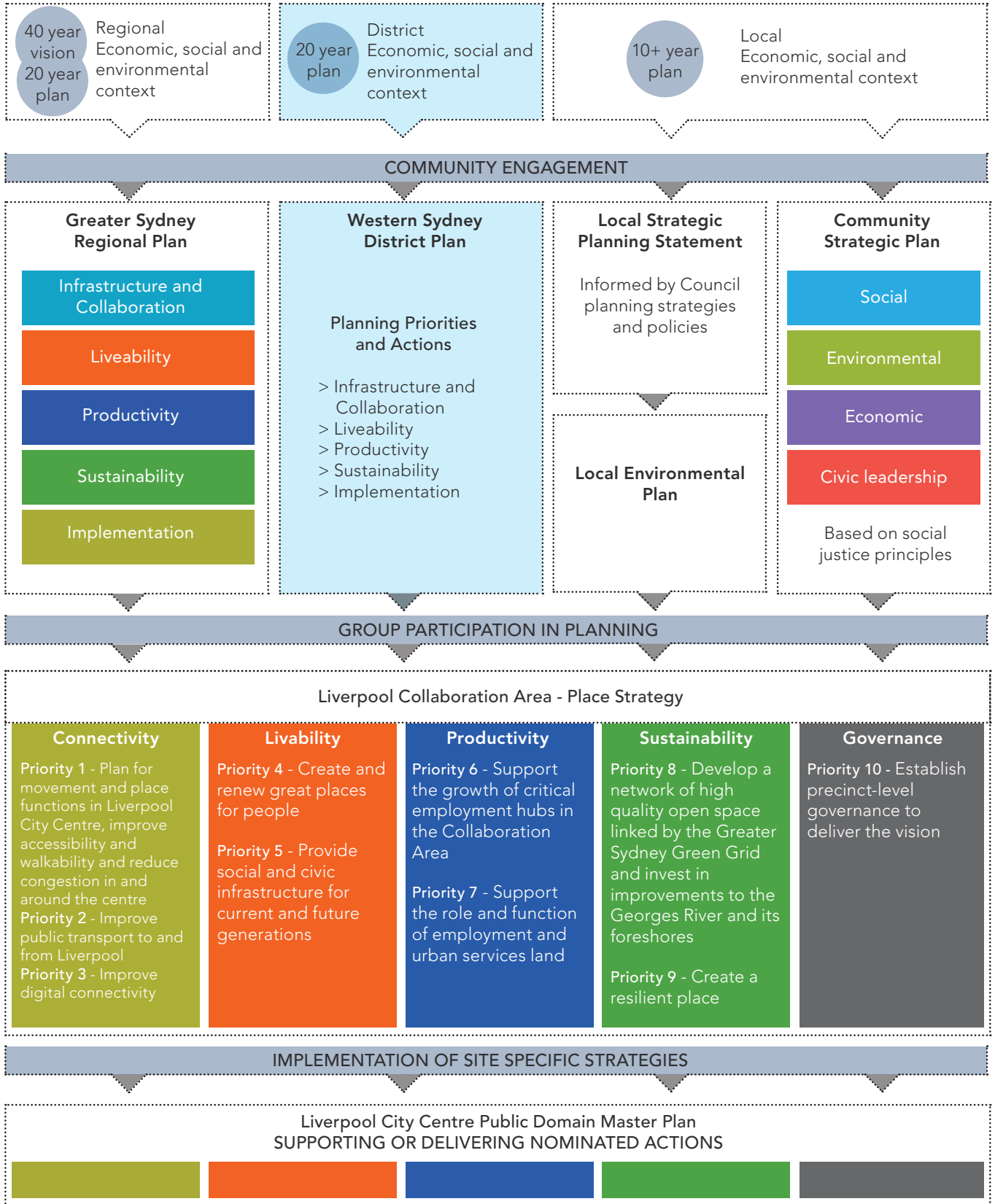


Figure 1.14 Strategic relationships between the Greater Sydney Commission’s Regional Plan, District Plan, Liverpool Collaboration Area Place Strategy and Council’s Community Strategic Plan, Local Environment Plan, Local Strategic Planning Statement and the Master Plan (Liverpool City Council)

1.3

Introduction

Strategic Alignment - Community Strategic Plan (CSP)

Community Strategic Plan (CSP) Directions	Liverpool City Council will: (As stated in the CSP)	The Liverpool City Centre Public Domain Master Plan will:
<p>Direction 1: Creating Connection <i>This direction emphasises the importance of connections within Liverpool to create a harmonious community.</i></p> <p>The community wants:</p> <ul style="list-style-type: none"> > An area where connection is created between all people in the community > More community activities and events > Facilities to be well maintained and multi-purpose > Access provided to all (youth, seniors, people with disability) > Our history to be respected 	<ul style="list-style-type: none"> > Celebrate diversity, promote inclusion and recognise heritage > Deliver a range of community events and activities > Implement access and equity for all members of the community > Provide community facilities which are accessible to all > Create a dynamic, inclusive environment, including programs to support healthy living 	<ul style="list-style-type: none"> > Provide inclusive places for all people > Recognise and celebrate history and place > Provide places that can be used for a range of community and cultural events > Ensure places are accessible > Provide places that will allow programs to support healthy living
<p>Direction 2: Strengthening and Protecting our Environment <i>This direction emphasises the importance of connections within Liverpool to create a harmonious community.</i></p> <p>The community wants:</p> <ul style="list-style-type: none"> > Clean public places > Creation of more green spaces > Increased use of renewable energy > Well-managed development > Creation of well-planned, attractive and people-friendly urban environments > Improvement to access and safety in public areas 	<ul style="list-style-type: none"> > Manage the community's disposal of rubbish > Protect and enhance bushland, rivers and the visual landscape > Encourage sustainability, energy efficiency and the use of renewable energy > Exercise planning controls to create high-quality, inclusive, urban environments > Develop, and advocate for, plans that support safe and friendly communities 	<ul style="list-style-type: none"> > Provide the ability for the community to dispose of their rubbish and promote recycling when they are in public spaces > Ensure the city centre is a water sensitive city with shade trees and Water Sensitive Urban Design (WSUD) > Where possible specify sustainable and energy efficient public domain furniture and features > Develop plans that create safe and friendly communities
<p>Direction 3: Generating Opportunity <i>This direction underlines the need for Council to support economic growth, including employment and investment options.</i></p> <p>The community wants:</p> <ul style="list-style-type: none"> > To attract more jobs and businesses to the area > To upgrade shop-fronts > Improved traffic management > Small business to be supported 	<ul style="list-style-type: none"> > Meet the challenges of Liverpool growing population > Attract businesses for economic growth and employment opportunities > Create an attractive environment for investment > Advocate for, and develop, transport networks to create an accessible city 	<ul style="list-style-type: none"> > Provide direction for public domain improvements that support Liverpool's growing population > Provide a city centre that facilitates its function with ease, is comfortable to walk around and facilitates economic growth & employment opportunities > Provide a centre that has a safe and attractive environment and is appealing for investors > Deliver a transport network which is connected and integrated. Prioritise public & active transport
<p>Direction 4: Leading Through Collaboration <i>This direction highlights the importance of Council pro-actively leading the community, while continually engaging the community to ensure an aligned vision.</i></p> <p>The community wants:</p> <ul style="list-style-type: none"> > More collaboration > Stakeholders who listen and actively seek out their opinions > To be led to achieve the best outcomes > Well managed use of their resources 	<ul style="list-style-type: none"> > Seek efficient and innovative methods to manage our resources > Increase community engagement > Encourage community participation in decision-making > Strive for best practice in all Council processes 	<ul style="list-style-type: none"> > Ensure the proposed strategies minimise maintenance costs and requirements > Base decision making and delivery of infrastructure on evidence and community engagement > Ensure engagement seeks a wide range of participants to include all users > Ensure proposed strategies are based on best practice and benchmarking

Figure 1.15 Strategic alignment of the Liverpool City Council Community Strategic Plan and the Master Plan (Liverpool City Council)

1.4

INTRODUCTION METHODOLOGY

Overview

Project Methodology

The project methodology has been undertaken in 10 separate phases (See Figure 1.16). Some of the phases occurred concurrently, to ensure that project milestones and the overall project deadline were met. A description of the each of the 10 phases is below.

Stage 01 - Project Establishment

The project establishment phase included preparation of a project brief, which established the project aims and objectives, scope of works, methodology and program, internal and external project stakeholders, communications and engagement strategies, risk management measures, resourcing requirements and approvals process.

Stage 02 - Strategic Review

The Strategic Review phase included a review of 56 existing documents that directly or indirectly relate to the development of the Liverpool city centre. This included national, state, regional and local policies, plans, strategies and guidelines. Summaries were prepared to identify the relevance of each document to the project and provide an understanding of how the aims, objectives and actions within these documents will inform the Master Plan.

Stage 03 - Site Analysis and Appraisal

The Site Analysis and Appraisal phase included the collection, interpretation, analysis and mapping of information and data relating to existing site conditions in the city centre. Opportunities and constraints were identified and documented for each aspect of the city that was analysed and these were used to inform the Master Plan. A photo inventory was also completed, documenting the existing condition of public spaces in the city centre.

Stage 04 - Community and Stakeholder Engagement

The Community and Stakeholder Engagement phase included completing a series of online and in-person engagement activities, including interactive sessions, intercept surveys, an online survey, presentations, meetings and workshops to seek input from the community and stakeholders. Feedback was collated, interpreted, analysed and used to inform the Master Plan.

Stage 05 - Visioning, Principles and Benchmarking

The visioning, principles and benchmarking phase included the consolidation and distilling of the research undertaken (i.e. in the previous project phases) into a vision statement and set of design principles to guide the Master Plan. A benchmarking study was completed through site visits and desktop reviews of precedent projects, and through meetings and discussions with other Councils and industry professionals, to understand current local and international best industry practice Urban Design, and lessons learnt during implementation.

Stage 06 - Development of a Draft Master Plan

The development of a Draft Master Plan phase included the preparation of sketch designs to test various spatial arrangements and design options. The sketch designs were used for discussion with stakeholders across multiple disciplines that provided feedback, and the designs were refined based on their comments. A draft report was prepared with written and graphic content, to articulate the proposed Master Plan projects and interventions (i.e. diagrams, plans, sections, 3D before and after renders and precedent images).

Stage 07 - Council Endorsement and Public Exhibition

The Council Endorsement and Public Exhibition phase included finalisation of the draft Master Plan report and preparation of a Council report, seeking endorsement for the report to be placed on public exhibition for comment. The draft Master Plan was endorsed by Council and placed on public exhibition for a period of 10 weeks. A Fact Sheet, promotional video and other material was produced to advertise the project and encourage feedback from stakeholders and the community on the draft Master Plan.

Stage 08 - Finalisation of the Master Plan

The Finalisation of the Master Plan phase included the collating, interpreting and analysing of the responses received during the public exhibition period. Over 280 individual pieces of feedback was received, which informed updates to the Master Plan. A schedule was prepared to track the feedback and respective updates made to the Master Plan. The Master Plan was refined and completed, to ensure it meets the project brief and expectations of the community and stakeholders.

Stage 09 - Council Adoption of the Master Plan

The Council Adoption of the Master Plan phase included the preparation of a Council report, with the final Master Plan attached, seeking adoption of the final Master Plan.

Stage 10 - Implementation

The Implementation phase includes the progressive implementation of the Master Plan through the delivery of individual projects identified within the Master Plan. The projects will be delivered over a 10-year period by Council and private developers, and will be guided by the Implementation Plan that is included within the final Master Plan report. Members of Council's City Design and Public Domain department will provide review and comments through referrals, Project Working Groups and Project Control Groups and that will be established to monitor progress, as individual projects progress through to detailed design and construction phases.

1.4

Introduction
Methodology - Overview

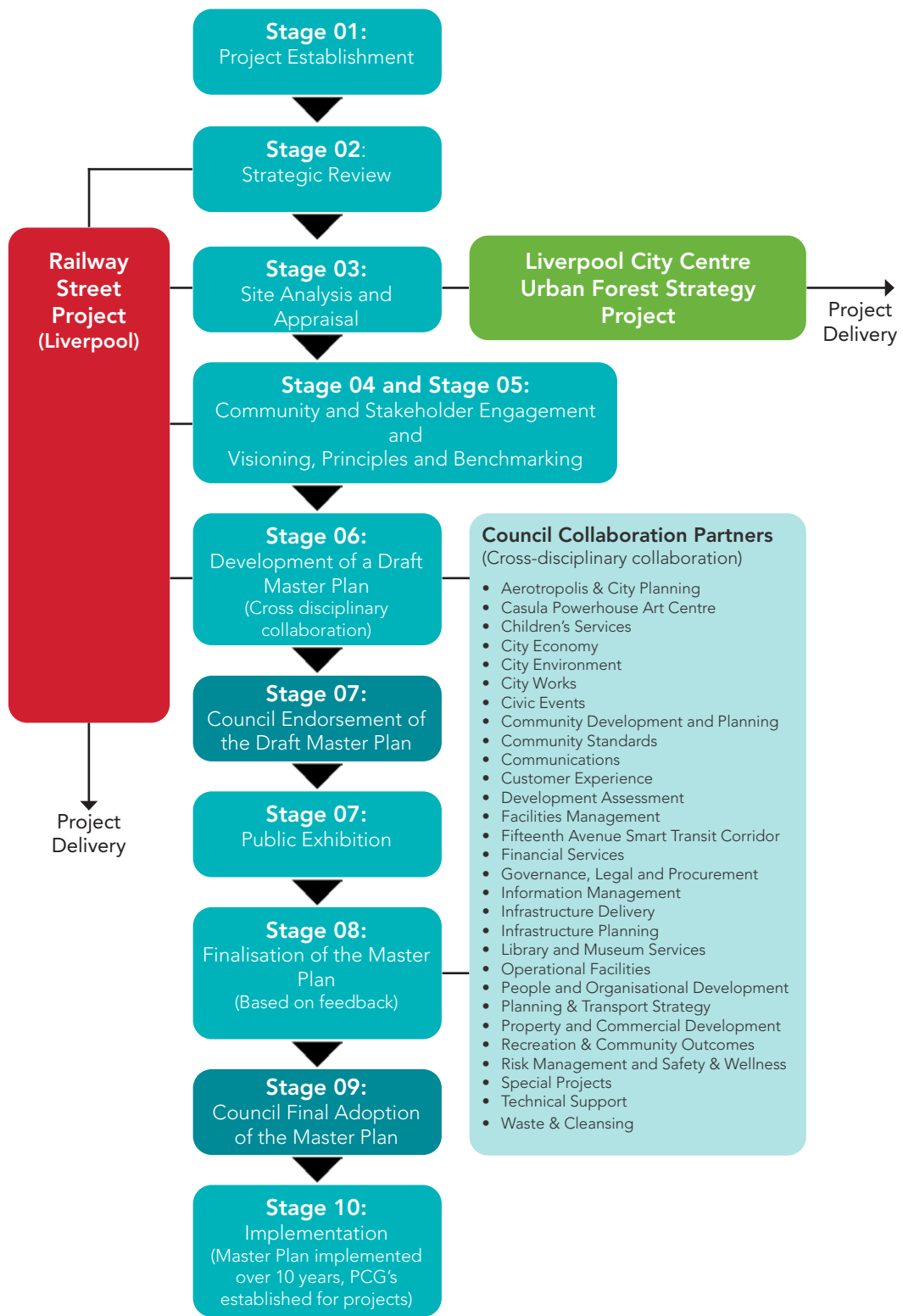


Figure 1.16 Diagram showing the methodology undertaken to develop the Master Plan, and interrelated projects that are currently being developed and delivered by Council (Liverpool City Council)

1.5

INTRODUCTION DOCUMENT STRUCTURE

Overview

Structure of this Report

This report is a holistic reference guide for public domain improvements in the Liverpool city centre. The document is divided into 8 separate chapters that are arranged in chronological order (See Figure 1.17). Each chapter covers different aspects of the project, however they are interrelated and inform each other, forming a comprehensive report. A description of each chapter is below.

Chapter 1.0 - Introduction

The Introduction chapter provides an overview of the project, including an explanation of what the Master Plan is, why it is being developed, who will use the Master Plan and for what purpose. An introduction to the national, state, regional and local site context, and to the project site itself is included. An overview of the strategic alignment of the project with the Greater Sydney Commission and Council's vision and values is provided. This chapter also includes an overview of the project methodology and structure of this report.

Chapter 2.0 - Strategic Review

The Strategic Review chapter provides an overview of 56 existing documents that directly or indirectly relate to the development of the Liverpool city centre. This included national, state, regional and local policies, plans, strategies and guidelines. Summaries of each document are included that identify the relevance of each document to the project and provide an understanding of how the aims, objectives and actions within these documents have informed the Master Plan.

Chapter 3.0 - Site Analysis & Appraisal

The Site Analysis & Appraisal chapter includes a series of maps showing the existing site conditions within the city centre. Corresponding information is provided, including an overview of each layer analysed and respective opportunities and constraints that were identified and used to inform the Master Plan. A photo inventory was completed as part of the Site Analysis and Appraisal and has been included with Chapter 8.0 Appendices. The photo inventory shows the existing condition of public spaces in the city centre.

Chapter 4.0 - Community & Stakeholder Engagement

The Community & Stakeholder Engagement chapter includes an overview of the Liverpool community and of the internal and external project stakeholders. An overview of the approach taken to engage with the community and stakeholders is provided, including a description of each of method undertaken and photos of some of the engagement activities that was completed. This chapter also includes a summary of the feedback received that has informed the Master Plan, which has is explained through text, diagrams and images.

Chapter 5.0 - Vision, Principles & Benchmarking

The Vision, Principles & Benchmarking chapter includes a Vision Statement and set of Design Principles which is based on the consolidation and distilling of the research undertaken in the previous project phases. An explanation of each principle and how it has provided design direction for the Master Plan is provided. This chapter also includes an overview of benchmarking studies that was undertaken, for the 5 character areas within the city centre that were established in Chapter 3.0 Site Analysis & Appraisal. Text and precedent images have been included that explains the process undertaken, common principles identified and examples of precedents that were researched.

Chapter 6.0 - Master Plan

The Master Plan chapter includes the consolidation vision and design direction, in response to the information gathered and work completed in the previous chapters of the report. This chapter is organised around a context plan (i.e. which establishes the context of the city centre and respective key moves and opportunities), a structure plan (i.e. which provides the overall spatial arrangement for the city centre), and a projects plan (i.e. which provides an overview of the projects that deliver on the structure plan). This is followed by sub-chapters that detail the projects based on their typology (i.e. streets, serviceways/laneways, gateways, car parking, open space, hydrology, heritage, public art, trees and vegetation, paving, furniture, fixtures and fittings, signage and wayfinding, safety, accessibility and inclusion, sustainability, maintenance, and tactical urbanism), through text, diagrams, plans, sections, before and after 3D renders, and images.

Chapter 7.0 - Implementation Plan

The Implementation Plan includes an overview of how the projects, within Chapter 6.0 Master Plan will be delivered, over a 10-year period. The list of the projects, and description of each project with corresponding page references is included (i.e. referring to the proposals within Chapter 6.0 Master Plan). Actions (e.g. Detailed Design, Construction), timeframe (i.e. short/medium/long term) and Opinion of Probable cost is provided for each project. An overview of potential funding sources and considerations to cost escalation has been included. A project validation list is included showing how the Master Plan projects align with the objectives of key documents.

Chapter 8.0 - Appendices

The Appendices chapter includes supporting and additional information that is intended to be read in conjunction with the relevant chapters of the report. This includes the photo inventory that was completed as part of Chapter 3.0 Site Analysis & Appraisal, and other information such as excerpts from key industry documents that have been referred to in other chapters within the report.

1.5 Introduction

Document Structure - Overview

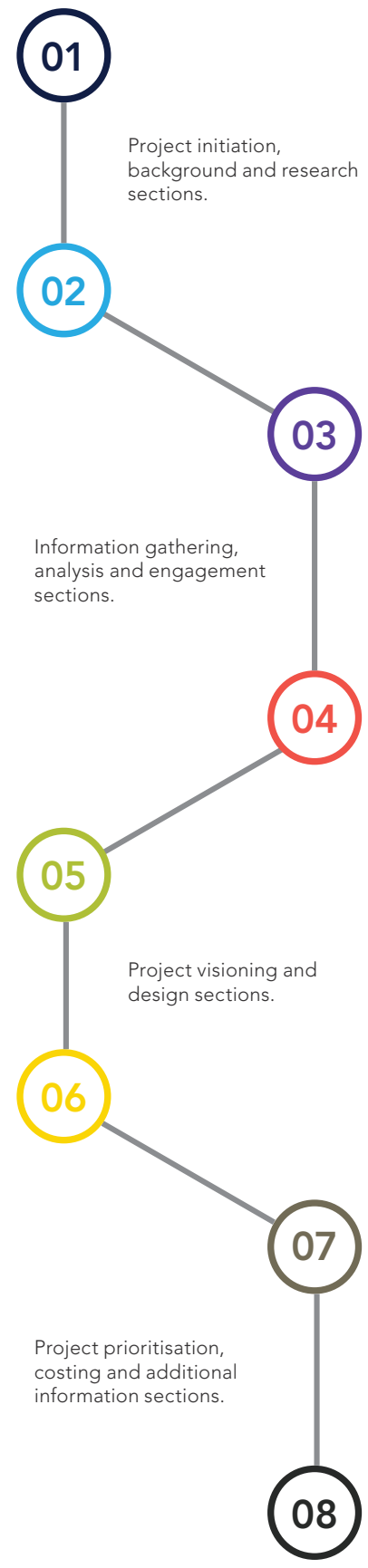


Figure 1.17 Diagram showing the structure of this report (Liverpool City Council)

This chapter provides an overview of the key national, state, regional and local plans, policies, strategies and guidelines that relate to the city centre. A summary of each document is provided, articulating the key strategies and actions from each document that have contributed to the development of the Master Plan.





2.0

STRATEGIC
REVIEW



2.1

STRATEGIC REVIEW OVERVIEW

Overview

This chapter of the report includes a review and summary of 56 strategic documents that relate to the development of the Liverpool city centre. This includes national documents (i.e. those that apply to the whole of Australia), state documents (i.e. those that apply across the state of New South Wales), regional documents (i.e. those that apply to the Western Sydney region), and local documents (i.e. those that apply to the Liverpool Local Government Area and/or specifically to the Liverpool city centre and immediate surrounding areas). The purpose of reviewing these documents is to identify the existing strategies, plans, policies and guidelines that relate to the development of the Liverpool city centre, and understand how they will impact the Master Plan.

The strategic documents reviewed include:

- Existing Council-adopted Master Plans for specific sites located within the Liverpool city centre (e.g. Master Plans for Parks and Reserves). These plans have been acknowledged and reviewed to understand how they will work in the context of the broader Liverpool City Centre Public Domain Master Plan;
- Existing Council-adopted specifications and guidelines for public domain infrastructure within the city centre (e.g. Tree planting guidelines and paving specifications). These have been reviewed to understand if they are suitable and/or need to be updated to better align with the Master Plan;
- Existing National, State, Regional and Local strategies, plans, policies and guidelines that directly or indirectly relate to the Liverpool city centre. These have been reviewed to determine their relevance to the project, and understand how these strategies and policies can be translated into spatial arrangements at the fine-grain scale;
- Industry best practice guidelines (e.g. the latest NSW Government design guidelines). These have been reviewed to ensure that the Master Plan aligns with the objectives and design principles of these guidelines, and ensure the Master Plan delivers best practice Urban Design, and
- Environmental Management Plans and Policies, including those relating to natural resources, ecology, biodiversity, and native flora and fauna within the city centre. These have been reviewed to ensure that existing environmental conditions are understood and respective strategies are considered as part of the Master Plan.

The Master Plan amalgamates the ideas and objectives embedded within these plans, policies, strategies and guidelines into a clear and succinct plan, to guide the future development of the Liverpool city centre. See Figure 2.19 to 2.23 for examples of some of the documents reviewed. A list of all documents reviewed is on page 27, and summaries of how each document relates to the Master Plan is on pages 28 to 55.



Figure 2.19 Existing Council-adopted site-specific Master Plans

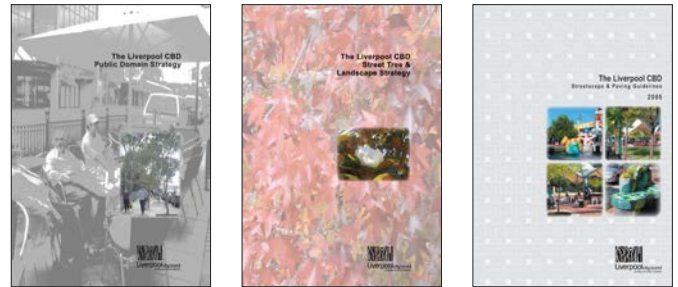


Figure 2.20 Existing Council-adopted Specifications and Guidelines

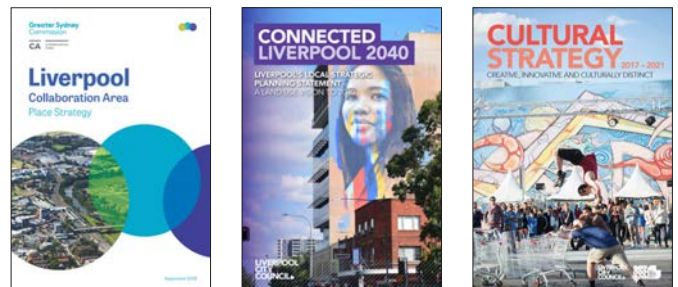


Figure 2.21 Existing Strategies, Plans, Policies and Guidelines

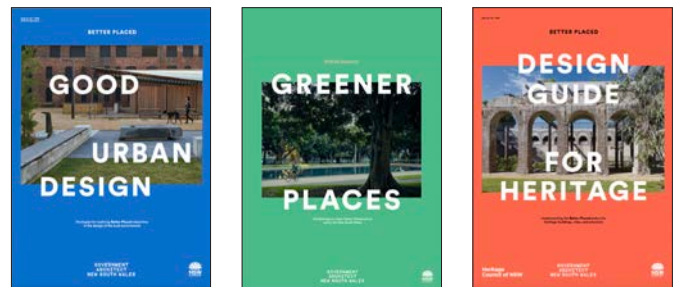


Figure 2.22 Industry Best Practice Guidelines

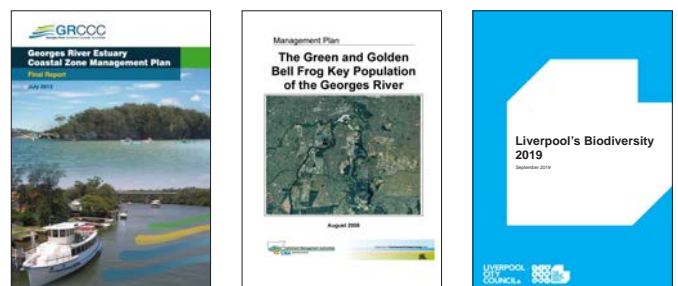


Figure 2.23 Environmental Management Plans and Policies

2.1

Strategic Review Overview

Documents Reviewed



National

- Guide to Road Design
- Smart Cities Plan



State

- Greater Sydney Region Plan - A Metropolis of Three Cities
- Better Placed - Good Urban Design
- Greener Places (Draft)
- Design Guide for Heritage
- Beyond the Pavement
- Landscape Guideline
- Building Momentum - State Infrastructure Strategy 2018-2038
- Future Transport Strategy 2056



Regional

- Our Greater Sydney 2056 - Western Sydney District Plan
- The Green and Golden Bell Frog Key Population of the Georges River - Management Plan
- Georges River Estuary Coastal Zone Management Plan
- Western Sydney City Deal



Local

- Liverpool Collaboration Area - Place Strategy
- Our Home, Liverpool 2027 - Community Strategic Plan
- A Transport Strategy for Liverpool City Centre
- Apex Park Master Plan
- Building Our New City
- City Activation Strategy 2019-2024
- Connected Liverpool 2040 - Local Strategic Planning Statement
- Liverpool City Centre Open Space Analysis Report
- Community Facilities Strategy
- Cultural Strategy 2017-2021
- Destination Management Plan (Draft)
- Georges River Precinct Plan (Draft)
- Innovation Liverpool
- Lighthorse Park Landscape Master Plan (Draft)
- Liverpool's Biodiversity (2019)
- Liverpool CBD Active and Public Transport Study
- Liverpool CBD Street Pavement Guidelines 2018
- Liverpool City Centre Civic Improvement & Contributions Plan 2007
- Liverpool City Centre Precinct Car Parking Strategy Report
- Liverpool CBD Site Design & Regeneration Study
- Liverpool City Centre Streets
- Liverpool City Centre Study, Access Strategy Traffic Modelling Report
- Disability Inclusion Action Plan 2017-2021
- Liverpool City Centre Development Control Plan (DCP), Part 4
- Liverpool Economic Development Strategy 2013-2023
- Liverpool: The Gateway to Sydney's Aerotropolis
- Liverpool Heritage Strategy 2019-2023
- Liverpool Local Environment Plan 2008 (Amendment No. 52)
- Local Refugee Action Plan
- Macquarie Street Mall and Bigge Park Masterplan Design Report
- Reconciliation Action Plan 2017-2020
- Recreation, Open Space and Sports Strategy, 2018-2028
- Reimagining... the Liverpool Health, Education, Research and Innovation Precinct
- Revitalising Liverpool, City Centre Plan 2006
- The Liverpool CBD Public Domain Strategy
- The Liverpool CBD Street Tree & Landscape Strategy
- The Liverpool CBD Streetscape & Paving Guidelines
- Liverpool City Centre Parking Strategy 2019-2029
- Youth Strategy 2012-2017 and Action Plan 2013-2017
- Reimagining Innovation in Health, Education and Research
- Liverpool Bike Plan 2017-2022
- Liverpool Contributions Plan 2018 - Liverpool City Centre

2.2

STRATEGIC REVIEW

NATIONAL DOCUMENTS

Guide to Road Design

Austrroads, 2015

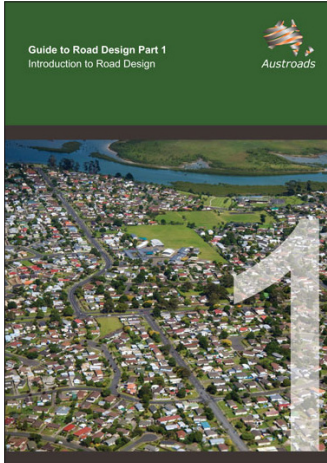


Figure 2.24 Guide to Road Design, Austrroads

The Austrroads Guide to Road Design is a framework that promotes efficiency in design and construction, economy and both consistency and safety for road users. The guide promotes the concept of 'context-sensitive design', allowing designers the flexibility to exercise their critical, engineering judgment.

The Guide comprises of 15-parts, several of which have been referred to in the development of the Master Plan, including:

- Part 1: Introduction to Road Design;
- Part 2: Design Considerations;
- Part 3: Geometric Design;
- Part 4: Intersections and Crossings – General;
- Part 4A: Unsignalised and Signalised Intersections;
- Part 4B: Roundabouts;
- Part 4C: Interchanges;
- Part 5: Drainage – General and Hydrology Considerations;
- Part 5A: Drainage – Road Surface, Networks, Basins and Subsurface;
- Part 5B: Drainage – Open Channels, Culverts and Floodways;
- Part 6: Roadside Design, Safety and Barriers;
- Part 6A: Paths for Walking and Cycling;
- Part 6B: Roadside Environment, and
- Part 8: Process and Documentation.

Smart Cities Plan

Australian Government Department of the Prime Minister and Cabinet, 2016



Figure 2.25 Smart Cities Plan, Australian Government Department of the Prime Minister and Cabinet

The Smart Cities Plan sets out the Australian Government's vision for the nation's cities, and a plan for maximising their potential. The plan includes three pillars; Smart Investment, Smart Policy and Smart Technology

The plan recognises that Australia has some of the best, most liveable cities in the world, and that our cities (i.e. regional and metropolitan) are also where most Australians live and where most of Australia's economic output is produced. As the Australian economy continues to transition and the knowledge based industries grow, so too do Australian cities. To respond to this growth, and take advantage of tomorrow's economic opportunities, the plan identifies that need to rethink the way our cities are planned, built and managed today.

Australia's economic transition and growth is important, but it can present challenges, including placing pressure on housing affordability, access to local jobs and our natural environment, as well as increasing congestion and traffic. To secure Australia's future prosperity and global competitiveness, all levels of government need to work in partnership to support Australian cities, large and small. The plan identifies that in order to achieve this, a long term framework is needed, this being the Smart Cities Plan.

Smart Policy includes delivering 'City Deals' such as The Western Sydney City Deal – a partnership between the Australian Government, NSW Government and local governments (including Liverpool City Council) to deliver coordinated investment to cities, including Liverpool. The Master Plan supports the directions and concepts included in the Smart Cities Plan, such as a '30 minute city', high quality urban design, green urban spaces and sustainable cities.

2.3

STRATEGIC REVIEW STATE DOCUMENTS

Greater Sydney Region Plan - A Metropolis of Three Cities

Greater Sydney Commission, 2018

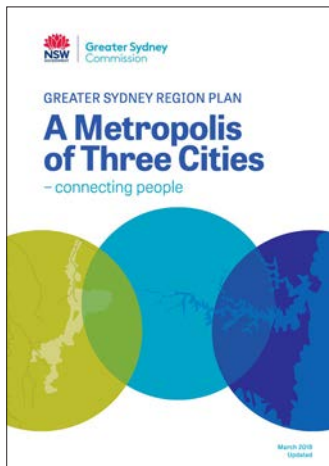


Figure 2.26 Greater Sydney Region Plan - A Metropolis of Three Cities, Greater Sydney Commission

The Greater Sydney Region Plan - A Metropolis of Three Cities is built on a vision of three cities where most residents live within 30 minutes of their jobs, education and health facilities, services and great places. The vision seeks to transform Greater Sydney into a metropolis of three cities; the Western Parkland City, the Central River City and the Eastern Harbour City. The plan was prepared concurrently with Future Transport 2056 and the State Infrastructure Strategy, to align land use, transport and infrastructure planning. The plan identifies the significance of Liverpool as both a metropolitan cluster and Health and Education Precinct within the Western Parkland City. The vision for the Western Parkland City includes an infrastructure, liveability, productivity and sustainability framework to guide the delivery of the vision.

The Master Plan supports the ten key directions for the plan, these being:

- A city supported by infrastructure;
- A collaborative city;
- A city for people;
- Housing the city;
- A city of great places;
- A well-connected city;
- Jobs and skills for the city;
- A city in its landscape;
- An efficient city, and
- A resilient city.

Better Placed - Good Urban Design

Government Architect NSW, 2017

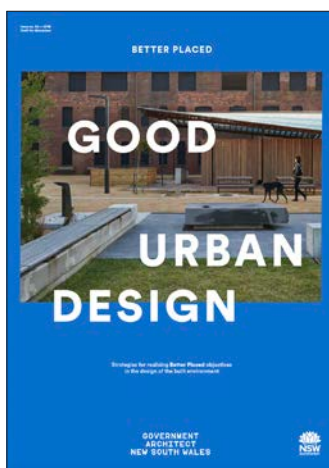


Figure 2.27 Better Placed - Good Urban Design, Government Architect NSW

Better Placed - Good Urban Design is an integrated design policy for the built environment of NSW. It seeks to capture the NSW Government's collective aspiration and expectations for the places where people work, live and play. It creates a clear approach to ensure good design is achieved that will deliver the architecture, public places and environments that people want to inhabit now and in the future.

The Government Architect NSW defines a well-built environment as being; healthy, responsive, integrated, equitable and resilient. There are seven objectives within the Better Placed - Good Urban Design document that define the key considerations in the design of the built environment, these being:

- Better fit;
- Better performance;
- Better for the community;
- Better for people;
- Better working;
- Better value, and
- Better look and feel.

These objectives have been considered in the development of the Master Plan, including through proposed interventions that are aimed at being; contextual, sustainable, adaptable, durable, inclusive, connected, diverse, safe, comfortable, liveable, functional, efficient, fit for purpose, adding value, engaging, inviting and attractive.

2.3

Strategic Review

State Documents

Greener Places (Draft)

Government Architect NSW, 2018



Figure 2.28 Greener Places (Draft), Government Architect NSW

Greener Places is a draft policy to guide the design, planning, design and delivery of Green Infrastructure in urban areas across NSW. Green Infrastructure is the network of green spaces, natural systems and semi-natural systems including parks, rivers, bushland and private gardens that are strategically planned, designed and managed to support good quality of life in the urban environment.

The aim of the policy is to create a healthier, more liveable, more resilient and sustainable urban environment by improving community access to recreation and exercise, walking and cycling connections. Greener Places builds on the Sydney Green Grid strategy which was developed by the Government Architect NSW to create a network of high quality green areas that connect town centres, public transport networks and major residential areas in Sydney. The Master Plan seeks to deliver on the Sydney Green Grid and the draft Greener Places policy. Several of the green and blue links identified within the Sydney Green Grid have been incorporated into the Master Plan with specific projects within the plan aimed at delivering the links. The Master Plan also supports the four design principles of the draft Greener Places policy.

The four design principles of Greener Places are:

- Integration, including combining Green Infrastructure with urban development and grey infrastructure;
- Connectivity, including creating an interconnected network of open space;
- Multi-functionality, including delivering multiple ecosystem services simultaneously, and
- Participation, including involving stakeholders in development and implementation.

Design Guide for Heritage

Government Architect NSW, 2019

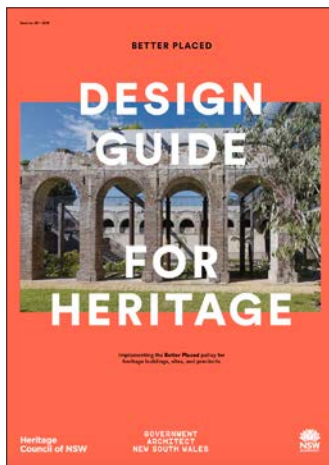


Figure 2.29 Design Guide for Heritage, Government Architect NSW

The Design Guide for Heritage is a resource to help ensure that good design in heritage places is achieved. The guide aims to assist owners, architects, consultants and builders who are working on the buildings, sites and precincts that contribute to heritage. It is also aimed at helping government, organisations and members of the community to understand the value and opportunity in the existing built environment, and outlines the steps to ensure that heritage places are conserved, maintained and enhanced through good design. The guide was developed as a collaboration between the Government Architect NSW and the Heritage Council of NSW, and draws on earlier publications developed by the Australian Institute of Architects NSW Chapter and Heritage Council of NSW. The guide incorporates material from the previous documents, and supplements them with further information.

The seven objectives of the guide are:

- Better fit;
- Better performance;
- Better for the community;
- Better for people;
- Better working;
- Better value, and
- Better look and feel.

The Design Guide for Heritage is complemented by a set of case studies, which show how principles of good design have been applied across a wide range of heritage contexts, scales and building types to meet a variety of briefs and requirements. The design guide has informed proposed interventions at key heritage listed sites within the Master Plan.

2.3

Strategic Review

State Documents

Beyond the Pavement

NSW Roads and Maritime Services, 2014



Figure 2.30 Beyond the Pavement, NSW Roads and Maritime Services

Beyond the Pavement is an Urban Design policy designed to govern all work undertaken by the NSW Roads and Maritime Services. It is based on three physical design outcomes, these being:

- Sensitivity to environments;
- Connectivity, and
- The quality of the public domain.

Building on these outcomes, the policy also includes nine design principles, these being:

- Urban structuring;
- Fitting in with built fabric;
- Connecting modes and communities;
- Fitting in with the landform;
- Responding to natural patterns;
- Incorporating heritage;
- Designing an experience in movement;
- Creating self-explaining road environments, and
- Achieving integrated and minimal maintenance design.

These design outcomes and design principles have been utilised in the development of the Master Plan, including in the design process of streets and streetscapes in the city centre.

Landscape Guideline

NSW Roads and Traffic Authority, 2008

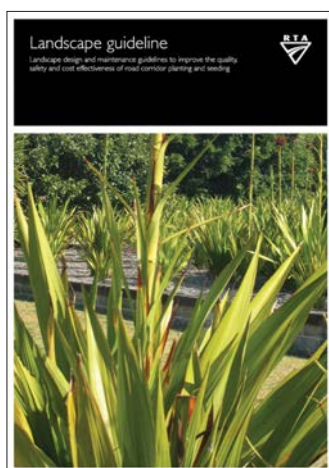


Figure 2.31 Landscape Guideline, NSW Roads and Traffic Authority

The Landscape Guideline is a landscape design and maintenance guideline, to guide the greening of road corridors that are owned and managed by NSW Roads and Maritime Services (RMS). It was published as part of the RMS's Beyond the Pavement urban design initiative and sets down the approach taken to the design and management of planting and re-vegetation.

The guidelines highlights the benefits of vegetation within road corridors, including:

- Providing character, colour, texture and interest;
- Helps filter air and water borne pollutants;
- Provides shade and comfort from the sun;
- Converts carbon dioxide to oxygen;
- Is the perfect foil for the hard elements of roads and buildings;
- Helps provide structure and form to road alignments;
- Helps integrate roads into built and natural settings;
- Provides distinct frontage or entry to towns, and
- Helps create a unique sense of place which assist way-finding.

The guidelines are aimed at improving the quality, safety and cost effectiveness of road corridor planting and have been utilised to assist in the design approach, guidelines and drawing standards that were developed for streetscape planting proposals in the Master Plan.

2.3

Strategic Review

State Documents

Building Momentum - State Infrastructure Strategy 2018-2038

Infrastructure NSW, 2018



Figure 2.32 Building Momentum - State Infrastructure Strategy 2018-2038, Infrastructure NSW

The Building Momentum - State Infrastructure Strategy 2018–2038 builds on the NSW Government’s major long-term infrastructure plans over the last seven years and sets out the NSW Government’s priorities for the next 20 years. Combined with the Future Transport Strategy 2056, the Greater Sydney Region Plan and the Regional Development Framework, the strategy brings together infrastructure investment and land-use planning for the cities and regions of NSW.

The new strategy switches the focus from developing an infrastructure project pipeline to achieving sustainable growth in the NSW population and economy, aligning investment in infrastructure with the way we build our communities and achieve innovation in service delivery.

The vision includes:

- Metropolitan NSW – As a metropolis of ‘three cities’ by 2056;
- Regional NSW – Communities growing around a hub-and-spoke network of economic regions;
- Better integrating land use and infrastructure;
- Delivering infrastructure to maximise value for money;
- Optimising asset management;
- Making our infrastructure more resilient;
- Improving digital connectivity, and
- Using innovative service delivery models.

Future Transport Strategy 2056

Transport for NSW, 2018

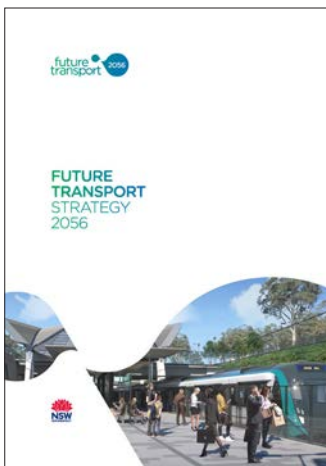


Figure 2.33 Future Transport Strategy 2056, Transport for NSW

The Future Transport Strategy 2056 is an update of the 2012 Long Term Transport Master Plan for NSW. It is a suite of strategies and plans for transport, developed in conjunction with the Greater Sydney Commission’s Sydney Region Plan, Infrastructure NSW’s State Infrastructure Strategy and the NSW Department of Planning and Environment’s regional plans to provide an integrated transport vision for NSW.

The Strategy sets a 40 year vision, strategic directions and an outcomes framework for customer mobility in NSW, which will guide transport investment over the longer term. Services and Infrastructure Plans underpin the delivery of these directions across the state and supporting plans will provide more detailed issues-based or place-based solutions to help implement the Strategy across NSW. Future Transport 2056 acknowledges the vital role transport plays in the land use, tourism, and economic development of towns and cities. It includes issue-specific and place-based supporting plans that shift the focus away from individual modes of transport, toward integrated solutions.

The Strategy and Plans also focus on the role of transport in delivering movement and place outcomes that support the character of the places and communities for the future. Future Transport 2056 unpacks how rapid advancements in technology and innovation can transform the customer experience and boost economic performance across NSW.

The Strategy acknowledges that planning for 40 years is bold given the rapid pace of technological innovation and uncertainty as to what the future will look like. Our population is set to increase to 12 million people by 2056, freight volumes are estimated to double in the Greater Sydney area and increase by 25 per cent in regional NSW and the passenger network preparing for 28 million trips a day, which places great importance on planning for the future.

2.4

STRATEGIC REVIEW REGIONAL DOCUMENTS

Our Greater Sydney 2056 - Western Sydney District Plan

Greater Sydney Commission, 2018

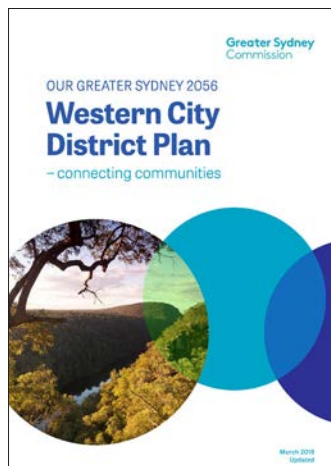


Figure 2.34 Our Greater Sydney 2056 - Western Sydney District Plan, Greater Sydney Commission

The Western City District Plan is a guide for implementing A Metropolis of Three Cities – the Greater Sydney Region Plan at a District level. It is structured around the strategies for infrastructure and collaboration, liveability, productivity, sustainability and implementation. The document provides a 20-year plan to manage growth and achieve the 40-year vision, while enhancing Greater Sydney’s liveability, productivity and sustainability into the future.

The District Plan:

- Informs local strategic planning statements;
- Informs local environmental plans;
- Informs the assessment of planning proposals;
- Informs community strategic plans and policies;
- Assists Council’s to plan for and support growth and change;
- Assists Council’s align their local planning strategies to place-based outcomes;
- Guides the decisions of State agencies, and
- Informs the private sector and the wider community of approaches to manage growth and change.

The plan acknowledges that over the next 20 years the Western Parkland City will transform; drawing on the strength of the new Western Sydney (Nancy-Bird Walton) International Airport and Badgerys Creek Aerotropolis, and the first stage of a North South Rail Link that will create the opportunity for a Western Economic Corridor, and will capitalise on the established centres of Liverpool, Greater Penrith and Campbelltown-Macarthur, which form a metropolitan cluster.

The Green and Golden Bell Frog Key Population of the Georges River - Management Plan, 2008

NSW Department of Environment & Climate Change

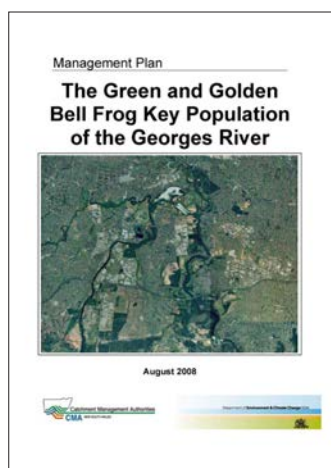


Figure 2.35 The Green and Golden Bell Frog Key Population of the Georges River - Management Plan, NSW Department of Environment & Climate Change

The Georges River Green and Golden Bell Frog (GGBF) Management Plan has been prepared to assist in identifying and, where possible addressing the threats and other issues/factors affecting or likely to affect the conservation of the GGBF species on the Georges River and contribute to the conservation of the species in the wider region. The Plan also aims to assist with managing the species in accordance with the Draft GGBF Recovery Plan.

The objectives of the Management Plan are; Maintain the GGBF population and its outliers, where possible enhance existing GGBF habitat and thus measures of population viability, and increase connectivity within and between sub-populations.

The strategies to achieve the objectives of the Management Plan are:

- Further development of GGBF breeding and other habitat components, where appropriate, on public and private lands;
- Improvement of habitat within the GGBF key populations;
- Education and communications to build awareness of the GGBFs and encourage action;
- Reduction of external threats to GGBFs;
- Monitoring and research to better understand the extent and dynamics of the Lower Georges River GGBF population, and
- Coordination and communication between stakeholders, land managers & the community.

The Master Plan acknowledges the objectives and strategies of the GGBF Management Plan, specifically with relation to identified areas with records of GGBF populations within the vicinity of the Master Plan area, including at Lighthouse Park. A Master Plan for this site is being completed and reviewed as part of this Strategic Review.

2.4

Strategic Review

Regional Documents

Georges River Estuary Coastal Zone Management Plan

Georges River Combined Councils' Committee, 2013

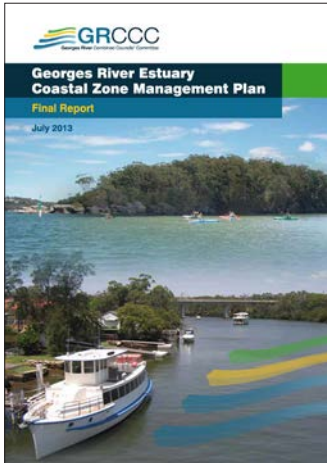


Figure 2.36 Georges River Estuary Coastal Zone Management Plan, Georges River Combined Councils' Committee

The Georges River Estuary Coastal Zone Management Plan provides a strategic framework and plan for the future management of the Georges River Estuary, covering all estuarine waters of the Georges River, from Towra Point to Liverpool Weir. The Plan covers the river foreshores, the Botany Bay foreshore between Towra Point and Cooks River (i.e. predominantly Lady Robinsons Beach) and all tidal waters that flow into the study area. Consideration has also been given to the wider Georges River catchment insofar as it impacts on estuarine quality and ecological health. The Plan does not cover any open coast sandy beaches or rocky headlands. The Plan presents a summary of the relevant environmental processes of the estuary, and their interactions with the human use and other social and economic values places on the estuary, its foreshores, and the wider catchment area. The Plan provides direction and guidance on future strategic and environmental planning within the estuary and its catchment. It also provides an Action Plan for undertaking targeted works and other initiatives aimed at achieving the overall goal of improving estuary condition.

The Master Plan area is located within the Georges River Catchment and a section of the Georges River Estuary (i.e. upstream of the Liverpool Weir) is also located within the Master Plan area. The Master Plan incorporates the Coastal Management Principles included in the plan, in particular, supporting the on-going use of the Georges River Estuary waterway and public foreshore areas for recreational pursuits. The Master Plan supports the key aims of the Management Plan, including, to protect and enhance public access to the foreshore and to plan for and adapt to the potential impacts of climate change on the natural and built environments of the estuary. Key Actions from the Management Plan are supported by the Master Plan, including, retrofitting appropriate new Water Sensitive Urban Design devices in existing urban areas.

Western Sydney City Deal

Australian Government, NSW Government & Local Governments (Blue Mountains, Camden, Campbelltown, Fairfield, Hawkesbury, Liverpool, Penrith & Wollondilly), 2018

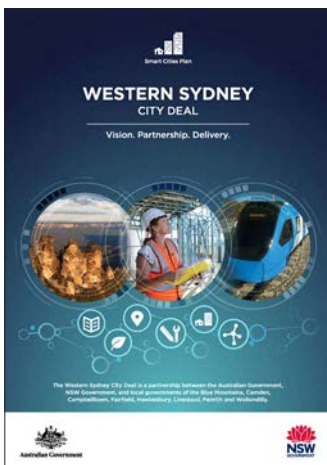


Figure 2.37 Western Sydney City Deal, Australian Government, NSW Government & Local Governments (Blue Mountains, Camden, Campbelltown, Fairfield, Hawkesbury, Liverpool, Penrith and Wollondilly)

The Western Sydney City Deal is a partnership of the Australian Government, NSW Government and the local governments of the Blue Mountains, Camden, Campbelltown, Fairfield, Hawkesbury, Liverpool, Penrith and Wollondilly, to deliver on the Australian Government's Smart Cities Plan and the Greater Sydney Commission's Western City District Plan. The Western Sydney City Deal is focused around:

- Delivering for the Western Parkland City with enduring tri-level government;
- Respecting and building on local character through a \$150 million Liveability Program;
- Realising the 30-minute city by delivering the North South Rail Link;
- Coordinating and innovating through a Planning Partnership;
- Creating 200,000 jobs by supercharging the Aerotropolis and agribusiness precinct as catalysts, and
- Skilling residents in the region and initiating an Aerospace Institute.

The Western Sydney City Deal includes six commitments that are aimed at unlocking opportunities in education, business and employment of the Western Parkland City and its people (which includes Liverpool), these being:

- Connectivity;
- Jobs for the future;
- Skills and education;
- Liveability and environment;
- Planning and housing, and
- Implementation and governance.

2.5

STRATEGIC REVIEW LOCAL DOCUMENTS

Liverpool Collaboration Area - Place Strategy

Greater Sydney Commission, 2018

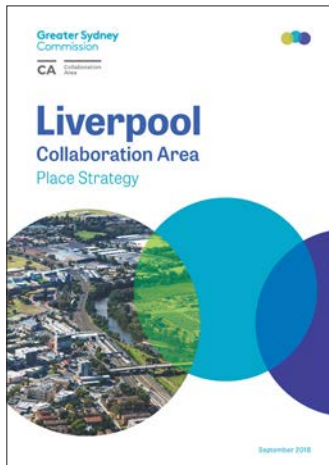


Figure 2.38 Liverpool Collaboration Area - Place Strategy, Greater Sydney Commission

The Liverpool Collaboration Area, one of three in the Western Parkland City, includes Liverpool's City Centre, the health and education precinct, the Warwick Farm precinct, and nearby residential and industrial lands. The Liverpool Collaboration Area Place Strategy brought together all the different stakeholders involved in the future planning of Liverpool and built on Council's strong foundation, to set out a vision, priorities and actions that will improve the quality of life as Liverpool grows and changes. Through recognising complex, place-specific issues, the strategy will inform public and private policy and investment decisions.

Specifically, the strategy:

- Establishes a vision for the Liverpool Collaboration Area, based on the community's vision expressed in Liverpool City Council's Our Home Liverpool 2027 – Community Strategic Plan and the Greater Sydney Commission's Western City District Plan;
- Identifies impediments and opportunities;
- Sets priorities for the Collaboration Area, and
- Identifies actions to deliver the vision.

The vision established within the Strategy is, by 2036 Liverpool; is a rejuvenated river city, offering diverse and growing residential and employment opportunities, has major health, education and retail precincts, and a network of open spaces and parklands alongside the Georges River, with a rich mix of jobs and workplaces, public spaces, shops and entertainment. Whilst Council has not endorsed this strategy, the Master Plan considers and implements many of the priorities and actions of the Strategy at the fine grain street level. As such, the stakeholder agreed actions from the Strategy have been used to inform the Master Plan.

Our Home, Liverpool 2027 - Community Strategic Plan

Liverpool City Council



Figure 2.39 Our Home, Liverpool 2027 - Community Strategic Plan, Liverpool City Council

Our Home, Liverpool 2027 - Community Strategic Plan is Liverpool City Council's long term vision for the future. Based on consultation with more than 1500 members of the community, it is a plan to develop Liverpool as a high quality, attractive regional city for South Western Sydney. The Community Strategic Plan is a ten-year plan that defines the vision and priorities of the community. The Community Strategic Plan is the overarching plan that sets the direction not only for Council but for all stakeholders, including government, business, the not-for-profit sector and residents. The directions from the Plan provide a guide for stakeholders to work together and to capitalise on the opportunities which will keep Liverpool moving forward.

The Plan defines the vision and priorities of the community and sets measures for assessing the fulfilment of collective community priorities. The Plan sets several key strategic directions and promotes Council as an organisation that embraces innovation, excellence, sustainability and equity in delivering the most efficient and effective services to the community.

A quadruple bottom line is established in the Plan to help categorise the priorities identified by the community:

- Direction 1 - Creating Connection (Social Priorities);
- Direction 2 - Strengthening and Protecting our Environment (Environmental Priorities);
- Direction 3 - Generating Opportunity (Economic Priorities), and
- Direction 4 - Leading through Collaboration (Civic Leadership Priorities).

For each of these directions, the Plan outlines the wishes of the community, how the community and Council can facilitate the execution of these wishes, and measurement criteria. The Master Plan supports these directions with specific actions that work to deliver on the Plan.

2.5

Strategic Review

Local Documents

A Transport Strategy for Liverpool City Centre

Liverpool City Council, 2017



Figure 2.40 A Transport Strategy for Liverpool City Centre, Liverpool City Council

The Transport Strategy for Liverpool City Centre Report presents a transport strategy to support the intended changes to land use, as a result of the planning proposal submitted by Liverpool City Council to rezone portions of the city centre from B3 to B4. The Strategy notes that traffic modelling shows that, irrespective of the infrastructure upgrades proposed, the 2031 traffic generated within the Liverpool city centre cannot be accommodated on the primary road network (i.e. Hume Highway). In order for Liverpool city centre to grow and develop into an economically successful and vibrant regional centre as intended, a package of strategic transformations will be required that encourage and support a major shift in peoples' travel habits. In particular:

- The current mode split in the city centre will not be sustainable with the planned development in 2031;
- The dominance of car traffic needs to be changed;
- A significant modal shift to active transport and public transport needs to be achieved in the city centre, and
- Modal shift needs to be facilitated through initiatives and infrastructure projects that encourage active and public transport and discourage car travel in the city centre.

The report proposes a package of multi-modal transport interventions to address the issues associated with the expected significant increase in traffic, in the city centre. The Master Plan supports recommendations made in this Strategy, including:

- Promoting sustainable transport outcomes;
- Improving access to public transport;
- Improving the connectivity and amenity of walking and cycling facilities, and
- Reviewing car parking facilities and conditions, within the Central Business District.

Apex Park Master Plan

Liverpool City Council



Figure 2.41 Apex Park Master Plan, Liverpool City Council

A Concept Plan has been prepared for Apex Park, which is located within the Master Plan area. The Concept Plan proposes several opportunities for the park, including:

- New park entry at the main intersection of Elizabeth Drive and the Hume Highway, providing more direct access, and capturing site views into the park. Providing a paved entry plaza with a large ornamental tree, park vistas and cutting back of the existing mound planting;
- A more intimate park by reinforcing the sites garden perimeter, retained mounded gardens and new perimeter beds, trees and low shrubbery to retain views and safety;
- New formal pathway network with pole top lighting for greater accessibility and permeability;
- Upgraded verge footpaths and incorporating street tree planting in accordance with Council's Street Tree and Landscape Strategy (future works);
- New open space, kick around lawn area, children's playground, picnic facilities, shelters, grassed picnic area, and a new location for the existing steam roller;
- A First Settlers memorial space incorporating interpretation signage and seating, and
- New interpretive gardens using traditional planting species associated with memorials such as Rosemary, Lavender, Lillies and Thyme, in keeping with the 'garden park' envisaged in the 1950 Act and the sites Conservation Management Plan. Interpretive elements suggesting past uses, and low key signage. Access to the space provided through narrow pathways.

The Concept Plan has been acknowledged within the Master Plan, and proposals for surrounding sites work to integrate the Concept Plan. The Master Plan acknowledges that the proposed improvements to Apex Park will positively contribute to the city centre.

2.5

Strategic Review

Local Documents

Building Our New City Liverpool City Council



Figure 2.42 Building Our New City, Liverpool City Council

The Building Our New City project involved a team of Australia's most creative city-makers, collaborating to oversee a transformation of the Liverpool city centre into a vibrant hub that can accommodate Liverpool's rapid growth. The team included professionals from Liverpool City Council, Architectus, Urbis, SJB, The United States Studies Centre, NSW Public Works and The University of Sydney.

Key projects that have been completed or are in progress include:

- A Health and Education Precinct;
- Creation of an Eat Street in the southern part of the city centre, with short, medium and long term, strategies to achieve social and urban outcomes;
- Revitalisation of Macquarie Mall, including revitalisation of shop façades, a central promenade with feature lighting, improved links to carparks and arcades, recreational space, new paving and furniture, play elements, relocating infrastructure to create more space, and introducing new trees;
- New Green linkages between the city centre and Georges River;
- Transformation of Bigge Park, and
- New defined Entry Points/Gateways into the city centre, including at Liverpool Railway Station, at the intersection of Newbridge Road/Heathcote Road and at various intersections along the Hume Highway.

These spaces are important parts of the Liverpool city centre, and their transformations and contributions to the public domain have been considered in the development of the Master Plan.

City Activation Strategy 2019-2024 Liverpool City Council, 2019

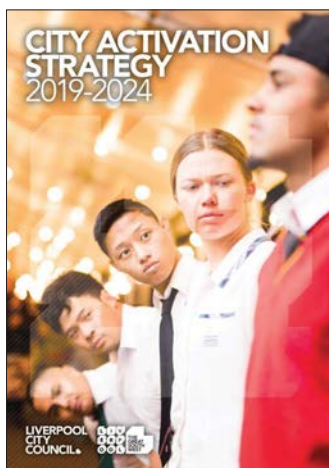


Figure 2.43 City Activation Strategy, Liverpool City Council

The Liverpool City Council City Activation Strategy establishes an innovative model for precinct activation that will encourage the development of a well-integrated and economically vibrant city centre. The vision is for an 18-hour walkable city with a lively mix of activities, in order to attract private investment and stimulate Liverpool's communities (including business, residents, workers and visitors) to make greater use of the city centre and its attributes.

The Strategy identifies the need to improve Liverpool's public domain, its current business, social and cultural offerings and to assist with changing perceptions to make Liverpool a much stronger and more desirable hub for a variety of activities.

The Master Plan directly addresses key activation initiatives as outlined in this document, including undertaking a strategic review of the current city centre:

- Streetscapes;
- Lighting;
- Furniture;
- Pavement;
- Finishes, and
- Other elements of the public realm.

The Strategy recommends developing a comprehensive Master Plan to guide public space improvements, which have the potential to be catalysts to encourage a variety of activations to occur. This directly relates to the development of this Master Plan.

2.5

Strategic Review

Local Documents

Connected Liverpool 2040 - Local Strategic Planning Statement

A Land Use Vision to 2040 - Liverpool City Council, 2019



Figure 2.44 Connected Liverpool 2040 - Local Strategic Planning Statement

Connected Liverpool 2040, is Liverpool City Council's Local Strategic Planning Statement which is a vision for land use for the next 20 years, and is an outline for growth expected in the Liverpool Local Government Area (LGA). It outlines the basis for the strategic plan, identifies the planning priorities and the actions required to achieve the priorities, and identifies how Liverpool City Council aims to implement those actions.

The document details 16 planning priorities that fall under the following 4 categories of the Connected Liverpool 2040 vision, which the Master Plan supports, these include:

- Four priorities for better connections within the LGA. These involve improved strategic public transport, a smart transit link between Liverpool and the Western Sydney (Nancy-Bird Walton) International Airport, the connecting of suburbs within the LGA, and improving innovation within the LGA;
- Five priorities to promote liveability within the LGA. These involve improving the city's vibrancy and liveliness, delivering high-quality public amenities and infrastructure, improving the diversity of housing, the enhancement of community and heritage values, and the enhancement of well being, health and safety;
- Four priorities to improve productivity within the LGA. These involve the development of an innovation precinct, promoting business environments within the LGA, the monitoring of industry and employment land, and ensuring that the 24-hour Western Sydney (Nancy-Bird Walton) International Airport effectively contributes to productivity within the LGA, and
- Three priorities that aim to promote sustainability within the LGA. These involve the enhancement and protection of all the natural aspects within the LGA, the implementation of water-sensitive strategies, and the protection and enhancement of rural areas.

Liverpool City Centre Open Space Analysis Report

Liverpool City Council, 2019



Figure 2.45 Liverpool City Centre Open Space Analysis Report - Liverpool City Council

The Liverpool City Centre Open Space Analysis Report is an in-depth study of open space within the Liverpool City Centre. The purpose of the study is to evaluate open space provision and identify approaches for the planning, development and management of open space, to improve and support the growth of the Liverpool City Centre.

The report identifies the importance of open space, including for passive and active recreation, natural habitats, aiding in flood and urban heat mitigation, and increasing water filtration. The document identifies the benchmark measure of 2.83ha of open space per 1,000 persons, that is used to assess the current and future amount of open space in Liverpool City Centre and across the LGA. Population catchments for existing open space is mapped and identifies that there is a deficit in open space provision in the city centre, to serve the current and future population. The report identifies current and future uses of open space, and opportunities and constraints to address the deficit of open space, including potential improvements for underutilised spaces and precedents that demonstrate innovation in open space provision within urban environments. The report also identifies the Transit Orientated Development (TOD) strategic approach to planning and development, that ensures that future developments support future growth, and remain sustainable, liveable and affordable. The TOD approach has also been used to inform planning, and to identify demands for public open space.

The report has informed the Master Plan, including the proposed open space network in the city centre. The mapped population catchments have been applied to the Master Plan to help identify opportunities for new and upgraded open spaces, in line with the overall vision for the city centre.

2.5

Strategic Review

Local Documents

Community Facilities Strategy

Liverpool City Council

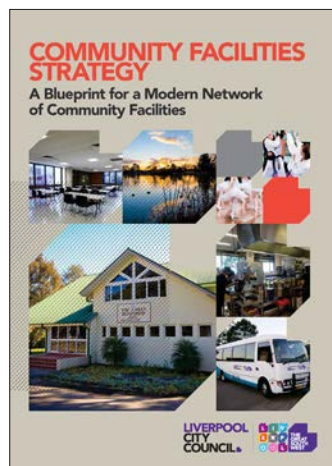


Figure 2.46 Community Facilities Strategy, Liverpool City Council

The Liverpool City Council Community Facilities Strategy provides a blueprint for a modern network of community facilities, with a vision to create best practice recreation spaces for people that inspire and connect residents and act as a catalyst for community life. The Strategy seeks to build on the work already undertaken by Council and identifies four major challenges that aim to maximise participation, inclusion and occupancy rates, improve promotion of key assets and implement system improvements to facilitate booking of community facilities. These being; delivering a world-class network of facilities, customer focused delivery, a new model of governance, and implementing best practice facility asset management.

The strategy includes a Community Facilities Asset Review, which identifies community facilities sites that are located within the Master Plan area and provides recommendations for the future development and management of these sites. This includes:

- Dr James Pirie Community Centre;
- Hilda M Davis Citizens Centre;
- Liverpool City Community Centre;
- Liverpool Respite Centre;
- Liverpool District Men's Shed;
- Rosebank Cottage, and
- Liverpool District Child and Parent Stress Centre (Speed Street).

The Master Plan acknowledges the recommendations made for these facilities which include retaining, rationalising, re-purposing and redeveloping facilities and considers the impacts that this could have on the city centre public domain.

Cultural Strategy 2017-2021

Liverpool City Council

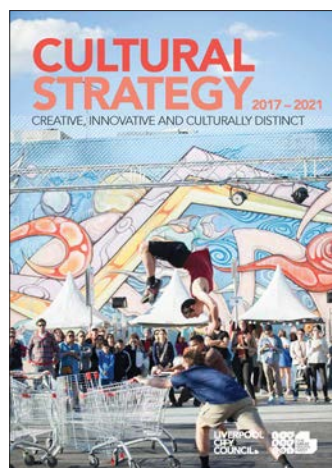


Figure 2.47 Cultural Strategy, Liverpool City Council

The Cultural Strategy is a four-year framework detailing Liverpool City Council's priorities for investment in culture, in Liverpool. The Strategy is an extension of the Cultural Policy in providing strategic direction and defining Council's role and commitment to meeting the cultural needs of the city. Through implementation of the strategy, Council seeks to realise the vision to capture opportunities, to be creative, innovative and promote the city's cultural distinctiveness, to position Liverpool as the cultural destination of South West Sydney.

The Cultural Strategy:

- Acknowledges the role of culture in promoting social cohesion, civic pride, economic growth, environmental sustainability and individual well-being;
- Recognises Council's role in facilitating cultural development and growth in Liverpool by presenting greater opportunities for participation through a diverse range of creative and cultural offerings;
- Directs Council's resource investment in cultural projects, programs and services;
- Supports the development of partnerships that will actively build the cultural life of the city and shape Liverpool's vibrant cultural landscape, and
- Celebrates Liverpool's unique identity and diversity, and recognises the importance of sharing the cultural heritage of our communities.

The Master Plan supports a number of strategic directions in the Cultural Strategy, including generating new opportunities for arts creation, creative outcomes and audience participation outside existing facilities and programs. Specific actions include capitalising on opportunities during precinct master planning stages to include public art, and engage artists to assist with community engagement. This includes investigation of opportunities for artists' engagement in the design of new facilities and open spaces. The Master Plan identifies opportunities for new public art within the city centre.

2.5

Strategic Review

Local Documents

Destination Management Plan (Draft)

Liverpool City Council, 2018



Figure 2.48 Destination Management Plan (Draft), Liverpool City Council

The Destination Management Plan is a five-year Strategy that details Liverpool City Council's priorities for the development of the visitor economy in Liverpool. The Plan provides strategic direction and defines Council's role and commitment to meeting the needs of the visitor economy in the Liverpool local government area. Growing Liverpool's visitor economy is part of Council's broader vision to stimulate the local economy through the injection of new dollars, creation of employment opportunities and increased demand for local goods and services. The vision is for Liverpool to become an attractive visitor destination, loved and promoted by its locals for its diversity, heritage and nature.

The objective of the Plan is to build a thriving visitor economy and increase the economic benefits that flow from tourism to local businesses and communities through unique visitor experiences. The Plan has four strategic directions:

- Promote Liverpool as a core visitor destination through increased engagement and support from locals;
- Support local businesses, groups and organisations to build and develop the visitor economy and their tourism products;
- Celebrate Liverpool's diversity and utilise it to grow and strengthen the visitor market base, and
- Attract new businesses, events and investment to engage locals and increase visitation to Liverpool.

The Master Plan supports actions identified in the Destination Management Plan, including:

- Create a new strategy for signposting and way finding around Liverpool (including gateways into Liverpool, such as motorways and public transport), and
- Develop the Heritage Activation Strategy.

Georges River Precinct Plan (Draft)

Liverpool City Council, 2016



Figure 2.49 Georges River Precinct Plan (Draft), Liverpool City Council

The Georges River Precinct Plan (Draft) establishes a high level framework for the regeneration of the Moorebank Precinct, located across the Georges River from the Liverpool city centre. It is intended to guide the transition of an industrial precinct into a modern River City that is responsive to strategic opportunities and characterised by vibrant, balanced development. The Plan identifies that by 2035 Liverpool and the Georges River Moorebank Precinct will become a true River City that has a vibrant mix of uses and activities. To support this vision, employment opportunities will be created by leveraging the existing health-related industries in Liverpool and capitalising on the precinct's strategic location in south-west Sydney. The unique natural environment that surrounds the precinct will be taken advantage of with mixed use development overlooking the river. New and upgraded open space along the river will encourage greater interaction and enjoyment of the area.

Design principles proposed to underpin the development of a River City are; unlock the precinct to benefit Liverpool and create a more liveable and inclusive city, a complementary and integral extension to the city centre, an activated, mixed use precinct based on balanced development, continuous public access to the waterfront as part of a connected open space network, placemaking inspired by the natural character of the river, a safe and walkable precinct integrated with public transport, a flexible and resilient development framework. The study area incorporates land to the east of the Georges River that is located within the Master Plan area. The proposals in the Master Plan align with strategies in the Precinct Plan including; creating a public Waterfront to make the river synonymous with Liverpool, and creating a network of diverse and multi-functional open space.

2.5

Strategic Review

Local Documents

Innovation Liverpool Liverpool City Council, 2018



Figure 2.50 Innovation Liverpool, Liverpool City Council

Innovation Liverpool is a strategy that enables Council to be systematic in finding new ways to meet the needs of the people who live, work and play in Liverpool. The Innovation Strategy is a tool to help Council deliver on the Community Strategic Plan and assist Council's role as a leader in the community, supporting and showcasing new ways of doing things. Furthermore, the Innovation Strategy provides a framework for investment in Liverpool from stakeholders including Federal and State governments and the private sector.

The strategy is organised around three themes:

- Council as an innovation leader;
- Liverpool as a city of innovation, and
- Innovation through collaboration.

Each of these themes facilitates new ways to address the four priority areas in the Liverpool Community Strategic Plan. The Master Plan supports these themes and the outcomes, actions and success measures of the strategy that are related to the city centre public domain, including:

- Outcome: A Cooler City;
- Outcome: There is a vibrant night-time economy in Liverpool;
- Action: Plant more trees in the city;
- Success Measure: Reduced extreme heat temperature in areas identified as heat islands, and
- Success Measure: People feel safe walking in the city at night.

Lighthorse Park Landscape Master Plan Liverpool City Council, 2019



Figure 2.51 Lighthorse Park Landscape Master Plan, Liverpool City Council

This document is the Sketch Design phase of the Landscape Master Plan for Lighthorse Park, which lies within the Master Plan area. Through Contextual Analysis, the document identifies existing site conditions and issues, including:

- Poor connections, including the lack of direct access to the park, inequitable access to the site and poor sight lines on internal park paths;
- Inactive edges, contributed to by steep level changes and limited vehicular and pedestrian access to the site, contributing to an unsafe park structure;
- Barrier to the river, including dense planting limiting views to the river and across the river and limited access to the riverfront;
- Disconnected spaces, contributed to by dense tree/shrub plantings and meandering paths making the site feel disjointed and unsafe;
- Limited activities, contributed to by degraded facilities;
- Flooding constraints, and
- No acknowledgement of the original Lighthorse Bridge.

The Master Plan seeks to address these issues and proposes new and upgraded facilities including a Community and Sports Facility Building with rooftop courts, southern field, pylon playground, fitness area, community gardens, car park, northern lawn, Light Horse Memorial, Riverfront Memorial to the Lighthorse Brigade, acknowledgement to the alignment of the original Lighthorse Bridge, new lift and stair access from Lighthorse Bridge and a pedestrian connection to Liverpool Railway Station.

2.5

Strategic Review

Local Documents

Liverpool's Biodiversity 2019

Liverpool City Council, 2019



Figure 2.52 Liverpool's Biodiversity 2019, Liverpool City Council

Recent changes to biodiversity legislation and regional planning, along with a revision to the Local Environment Plan (LEP), warrants an update to Council's Biodiversity Management Plan 2016. Liverpool's Biodiversity 2019 is an update to the plan, which focuses on:

- Updates to legislation, plans and policies;
- Changes vegetation mapping and extent;
- Changes to the conservation status of threatened entities, and
- A recommended framework to ensure the long-term protection of biodiversity within the Local Government Area (LGA).

The Liverpool LGA contains a diverse array of flora, fauna and vegetation communities. The Cumberland Plain, within which the LGA is located, contains many flora and fauna unique to the region. Of the 30,620 ha of land within Liverpool LGA, approximately 9,859 ha supports native vegetation communities, 5,260 ha (53%) of which are listed as one of the ten state listed threatened ecological communities present in the LGA. In addition, there are 36 threatened flora and 58 threatened fauna that have been previously recorded in the LGA or could potentially occur. Many of the biodiversity values in the LGA are threatened by land use change. A knowledge of these values and where they occur will help council to responsibly and adequately protect and manage these values on small to LGA wide scales.

The plan identifies areas of biodiversity value, including Threatened Ecological Communities (as identified under the NSW Conservation Management Act 1995 and/or the Environmental Protection and Biodiversity Conservation Act 1999) that are located within the Master Plan area. The proposals in the Master Plan work within the framework of the Liverpool Biodiversity Management Plan, with the goal of protecting native biodiversity and maintaining ecological processes and systems.

Liverpool CBD Active and Public Transport Study

Liverpool City Council, 2017

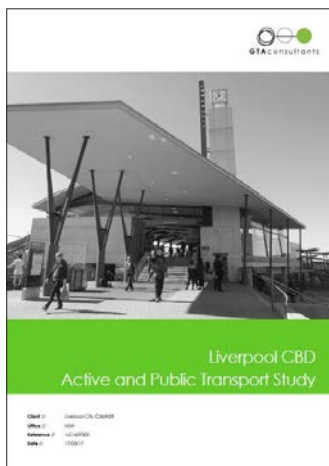


Figure 2.53 Liverpool CBD Active and Public Transport Study, Liverpool City Council

The Liverpool CBD Active and Public Transport Study notes the State Government's 2014 Plan for Growing Sydney report identified Liverpool City Centre Precinct (LCCP) as a Regional City Centre, boasting a strong retail and economic core, supported by a broad health, community and education precinct. As such, Liverpool City Council is actively pursuing strategic infrastructure and planning mechanisms to bolster economic resilience, strengthen connectivity and safeguard the sustainability of this precinct. The Study identifies that Council submitted a planning proposal to rezone portions of the city centre from B3 to B4 to facilitate mixed use development as a first step towards energising the city centre. In addition, a number of other substantial developments and projects, including the Southwest Growth Centre, Sydney's Second Airport, and Moorebank Freight Terminal, are expected to be completed in the region over the next 20 years, contributing to the ongoing expansion of the Western Sydney area.

In recognition of this, the Study identifies that the demand for travel could be expected to increase dramatically, resulting in a multitude of transport challenges, including parking within the city centre. The Study provides a review of the existing transport conditions, a needs and gap analysis and recommendations for future options to help improve traffic conditions within the city centre over a 10 to 20 year period.

The Master Plan supports options proposed in the study including:

- Consolidating bus routes and bus stops within the city centre;
- Improving links to and from Liverpool Railway Station, within the city centre;
- Improving way finding within the city centre;
- Strengthening the pedestrian link along Macquarie Street (i.e. segment between Moore Street and Scott Street), and
- Establishing a strong network of end-of-trip facilities for cyclists within the city centre.

2.5

Strategic Review

Local Documents

Liverpool CBD Street Pavement Guidelines 2018

Liverpool City Council, 2018

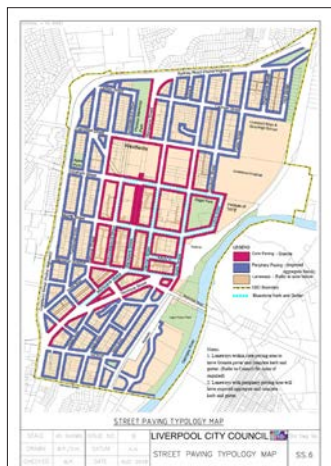


Figure 2.54 Liverpool CBD Street Pavement Guidelines 2018, Liverpool City Council

The Liverpool CBD Street Pavement Guidelines 2018 is an update to Council's 2015 street paving plan and a set of respective construction details. The street paving typology plan identifies a hierarchy of paving types, that correspond to street types and locations within the city centre. This includes:

- Granite paving in core paving areas. This is mostly concentrated within the central core area of the city centre, extending along Macquarie Street north and south to the extents of the city centre;
- Exposed aggregate finish pavement in periphery areas. This is mostly on residential streets located around the periphery areas of the city centre;
- Granite pavers and concrete kerb and gutter to laneways located in core paving areas;
- Exposed aggregate and concrete kerb and gutter to laneways within periphery paving areas, and
- Bluestone kerb and gutter in specific core areas, mostly on main streets within the central core area of the city centre.

Construction details are provided for both paving typologies and for paving treatments around multifunction poles, to kerb ramps and for in-fills to utility service pits.

The paving plan included in the Master Plan is in keeping with these guidelines, however adjustments have been made to the boundaries of the paving typologies and additions have been made to provide detail for treatments around tree pits and other aspects of the streetscape.

Liverpool City Centre Civic Improvement & Contributions Plan 2007

Liverpool City Council, 2007



Figure 2.55 Liverpool City Centre Civic Improvement & Contributions Plan 2007, Liverpool City Council

The Liverpool Civic Improvement & Contributions Plan is one of four documents prepared jointly by the Department of Planning and Liverpool City Council for the Liverpool city centre as part of the Cities Taskforce established by the Minister for Planning. The four planning documents comprise a Vision, Local Environmental Plan (LEP), Development Control Plan (DCP) and Civic Improvement Plan (CIP). The LEP has since been incorporated into Liverpool LEP 2008 while the DCP has been incorporated into Liverpool DCP 2008.

The Plan details the civic infrastructure needed to support the growth and development of the city centre, and outlines the framework for contributions to be made towards the funding and provision of the infrastructure, in association with future development in the Liverpool city centre. The plan sets design principles and incorporates design strategies for the public domain and special projects needed to support growth and development in the city centre, permitted under the Liverpool LEP and DCP. It guides the funding and provision of civic infrastructure and includes public domain projects for paving, street trees and urban furniture which are important components of public domain, contributing to the character of the city.

Several of the projects listed in this Plan are located with the Master Plan area, many of which have now been completed, and it is noted that this Plan was updated in 2018. The Master Plan acknowledges the contribution that these projects have made to the city centre and considers their context and current condition within the Master Plan proposal. These include:

- Georges River Foreshore Improvement and Bridge Connection;
- Bigge Park landscape upgrade;
- Pioneer Memorial Park embellishment;
- Carparks, intersection upgrades and bus priority, and
- Stormwater management works.

2.5

Strategic Review

Local Documents

Liverpool City Centre Precinct Car Parking Strategy Report

Liverpool City Council, 2017



Figure 2.57 Liverpool City Centre Precinct Car Parking Strategy Report, Liverpool City Council

The Liverpool City Centre Precinct Car Parking Strategy is a report which guides the management of existing and future parking conditions and confirms the extent to which the city centre can support sustainable and economic growth.

The strategy aims to:

- Establish existing car parking characteristics and review the adequacy of the quantum of parking spaces within the precinct;
- Understand the future planning vision for the precinct and identify potential issues with respect to development growth;
- Establish the tools and mechanisms available to manage existing and future parking demands and their impacts on the surrounding areas;
- Identify parking shortfalls and develop strategies to address the identified issues, and
- Outline strategies and mechanisms which are most appropriate for adoption, including anticipated timeframes for integration.

The Master Plan supports key strategic objectives of the strategy including:

- Maximising the use of available parking resources;
- Providing for CBD customers and visitors over other long-stay users, such as commuters and staff;
- Minimise travel time circulating streets and car parking facilities to locate an available space, and
- Sacrifice on-street parking where it can be used to facilitate improved active and sustainable transport modes, such as bicycle lanes or pedestrian amenity improvements.

Liverpool CBD Site Design & Regeneration Study

Liverpool City Council, 2018



Figure 2.58 Liverpool CBD Site Design & Regeneration Study, Liverpool City Council

The Liverpool CBD Site Design & Regeneration Study outlines the recent amendments to the Liverpool Local Environmental Plan Amendment (no.52) that underpin the opportunity for a review and unification of strategic priorities for the city and unification, into a broad vision for the Liverpool city centre.

The strategic priorities that underpin the Study are the key themes from which spatial principles for the city centre can be derived. These are; strengthen and support culture, community oriented, improve recreational and open spaces, combine health, education and research, future infrastructure, mixed use, attract jobs and streets for people.

This study looks at the development potential for three Council owned sites that are located within the Master Plan area, these being:

- Bathurst Street carpark (113 Northumberland Street);
- Northumberland Street carpark (235-250 Northumberland Street), and
- Existing Library site and adjacent lots (33 Moore St, 170-166 George St & 185 Bigge St).

The study (when complete) will test the potential and provide recommendations for each site which fulfil the broader strategic directions of the city by creating functional and people-oriented streets, buildings and spaces. This Study and recommendations made in the final version of the Study will be considered both in the Master Plan and in future updates to the Master Plan.

2.5

Strategic Review

Local Documents

Liverpool City Centre Streets

Liverpool City Council, 2016



Figure 2.59 Liverpool City Centre Streets, Liverpool City Council

The Liverpool City Centre Streets study is a review of Liverpool City Council's existing street tree master plan for Liverpool's City Centre streets. This included a review of Council's existing street tree policies alongside a range of strategic controls, policies and reports including the Draft Liverpool LEP 2016. Opportunities identified in the study have informed the development of the Master Plan, including:

- Reinforcing the street grid through establishing tree planting that differentiates east-west and north-south oriented streets;
- Maximising tree canopy across the city centre to improve micro-climate, maximise shading and reduce wind impacts;
- Utilising street trees to provide the primary spatial structure for the city centre;
- Developing a street tree strategy focused on arrangement, performance and form (rather than species alone);
- Modifying public domain layout and street tree configurations on east-west streets to respond to shadowing from future built form;
- Providing additional street tree planting where setbacks are nominated;
- Exploring opportunities for footpath widening where no setbacks are provided to improve pedestrian amenity and create capacity for tree planting;
- Creating visual connections within the city through the use of trees and vegetation;
- Exploring opportunities for pedestrian occupation and gathering within the public domain, and
- Linking tree planting proposals on east-west streets (Elizabeth and Scott Street) to the proposals of the Gateways Strategy 2014.

Liverpool City Centre Study, Access Strategy Traffic Modelling Report

Liverpool City Council, 2017



Figure 2.60 Liverpool City Centre Study, Access Strategy Traffic Modelling Report, Liverpool City Council

Liverpool City Council engaged consultants to undertake traffic modelling of the Liverpool city centre as part of the Liverpool City Centre Precinct (LCCP) Study. The study aims to inform the NSW Department of Planning and Environment with the possible traffic impact resultant from the additional developments and the planning and development proposals that are submitted to Council. The Liverpool City Centre Study, Access Strategy Traffic Modelling Report outlines potential strategies to address road network deficiencies with a view to enhance the access to the Liverpool city centre.

Key objectives of the study are:

- Strengthen active and public transport;
- Lower car dependence;
- Promote the economic viability of the CBD;
- Facilitate transport mode shift, and
- Enable the CBD to become a destination but limit through traffic.

The study recommends potential road infrastructure improvements that aim to respond to specific transport issues around the Liverpool city centre that were identified in the study. The Master Plan supports several of these recommendations, including:

- Analysing the feasibility of introducing a Bus Boulevard on Moore Street, including between Bathurst Street and Bigge Street;
- Analysing the feasibility of a one-way road network in the city centre, and
- Pedestrian priority on Macquarie Street.

2.5

Strategic Review

Local Documents

Disability Inclusion Action Plan 2017-2021

Liverpool City Council



Figure 2.61 Disability Inclusion Action Plan 2017-2021, Liverpool City Council

The vision of the Liverpool City Council Disability Inclusion Action Plan 2017-2021 is for Liverpool to be an inclusive place to live, learn and grow. Liverpool City Council promotes and supports access and inclusion in all areas of its business, this includes:

- How Council listens to and talks to people with a disability;
- How Council supports and encourages employment opportunities;
- How Council plans buildings and outdoor spaces;
- How Council provides information and services;
- How Council promotes community awareness and improves attitudes towards people with disability, and
- What Federal and State government services Council advocates for.

Council believes access and inclusion are everybody's business. The four year Action Plan seeks to address all forms of disability, reflecting individual limitations and the barriers that our society places which restrict life choices. Council will be a leader in making Liverpool an inclusive community where diversity is promoted and positive change for people with a disability can occur. We will improve our own practices to develop Council's internal systems and processes to ensure they support better outcomes for people with disability.

The action plan builds on the work undertaken for Council's Disability Strategy 2012-2017 and Action Plan 2013-2017 and meets Council's obligations under the Disability Inclusion Act, 2014 (NSW). The Master Plan considers accessibility within the city centre and utilises this Action Plan to ensure that the Master Plan best meets the needs of the community.

Liverpool City Centre Development Control Plan (DCP), Part 4,

Development in the Liverpool City Centre

Liverpool City Council, 2008

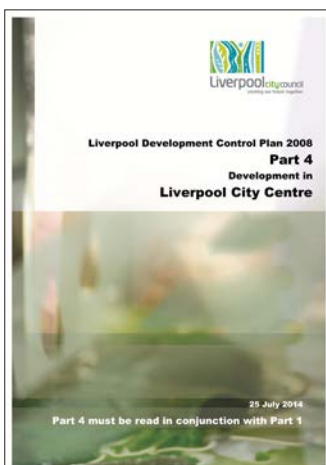


Figure 2.62 Liverpool City Centre Development Control Plan (DCP), Part 4, Development in the Liverpool City Centre, Liverpool City Council

The Liverpool City Centre was identified by the NSW Department of Planning and Environment as a Regional City, through the Sydney Metropolitan Strategy (A City of Cities). Following this, an LEP, DCP and CIP Plans were developed for the city centre. Part 4 of the consolidated Liverpool Development Control Plan 2008 identifies the character of the Liverpool City Centre through dividing it into special areas with a number of key character elements, as prescribed by the zoning of the Liverpool LEP 2008. These are:

- Residential;
- Commercial and retail core;
- Education and medical precinct;
- Riverfront;
- Ring road and laneways, and
- Eastbank industrial land.

The DCP contains various detailed objectives and controls, all of which impact the public domain and have been considered in the development of the Master Plan. These objectives and controls include:

- Building Form;
- Amenity;
- Traffic and Access;
- Environmental Management;
- Residential Development, and
- Special Areas.

2.5

Strategic Review

Local Documents

Liverpool Economic Development Strategy 2013-2023

Liverpool City Council



Figure 2.63 Liverpool Economic Development Strategy 2013-2023, Liverpool City Council

The Liverpool City Council Economic Development Strategy 2013 – 2023 represents the community’s aspirations for Liverpool to become a vibrant, dynamic location where prosperity is shared across all sections of the community and where business can operate effectively in an environmentally and economically sustainable manner.

The Strategy identifies that the key ingredients in underpinning Liverpool’s future growth will be land use planning that balances economic opportunities with environmental requirements, improved freight and passenger transport, continued investment in key infrastructure projects by public and private sector interests and a growing, trained workforce to support contemporary business needs. The Strategy acknowledges that the announcement of Badgerys Creek as the location for the Western Sydney (Nancy-Bird Walton) International Airport will see new knowledge intensive jobs attracted to Liverpool, and its associated land transport infrastructure provides an economic catalyst that will drive business investment and growth in Liverpool and broader South West Sydney.

The document includes key strategies and action items that relate to the Master Plan area and have been considered in the design process. These include:

- Strategy to activate the city centre and develop vibrant places that attract residents, visitors and workers to Liverpool;
- Action to develop and implement improvements to the public domain in the Liverpool city centre, and
- Action to trial and implement a range of programs that activate key precincts in the city centre during the day and at night.

Liverpool: The Gateway to Sydney’s Aerotropolis

Liverpool City Council, 2017



Figure 2.64 Liverpool: The Gateway to Sydney’s Aerotropolis, Liverpool City Council

The Liverpool: Gateway to Sydney’s Aerotropolis Report outlines the key opportunities that will arise as a result of the proposed Western Sydney (Nancy-Bird Walton) International Airport (WSIA) and Aerotropolis, including those that will be enhanced through proximity to WSIA. It identifies Liverpool as the leading ‘edge city’ surrounding the WSIA and acknowledges the importance of Liverpool, as it:

- Offers the largest commercial hub of the edge cities proximal to WSIA;
- Is well-situated roughly midway between WSIA and the Sydney CBD, offering an obvious hub from which business and people can access the city and the airport;
- Is well-situated at roughly the midpoint between WSIA and the existing Sydney Airport, offering a convenient base from which companies can maintain freight operations across both airports, and
- Already has a diverse mix of strong industries including manufacturing, health, education and public administration, and a young, well-educated, ethnically diverse population.

Leveraging these advantages, Liverpool has the opportunity to be the CBD/main ‘edge city’ of the Aerotropolis, where airport-related businesses set up their Sydney/Western Sydney offices/headquarters and is a place to stay for incoming tourists and business people. While there may be a number of transit hotels that set up near/at WSIA, Badgerys Creek is sufficiently remote that travellers will be more inclined to stay somewhere like the Liverpool City Centre that’s closer to other amenities. The document provides recommendations to ensure the success of the Aerotropolis and ensure that Liverpool can unlock the opportunities that WSIA provides. This includes enhancement of the Liverpool CBD to ensure that Liverpool is perceived as a great place to live, visit, work and play.

2.5

Strategic Review

Local Documents

Liverpool Heritage Strategy 2019 - 2023

Liverpool City Council, 2019

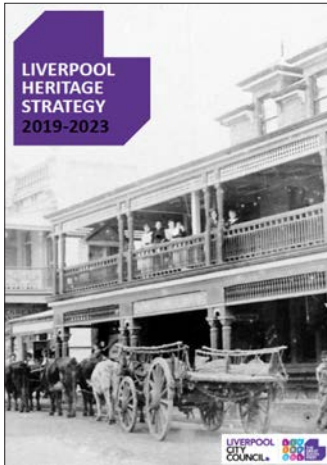


Figure 2.65 Liverpool Heritage Strategy, Liverpool City Council

The Liverpool Heritage Strategy provides guidance to Council for the implementation of a Local Heritage Management Program over the 2019-2023 period, which ensures the responsible and effective management of local heritage and its own assets. The Strategy has been developed based on the Heritage Council of NSW guidelines and reflects the direction provided by the community of Liverpool and Council staff.

Heritage is an integral part of an individual's and community's identity. The intangible aspects of heritage which include traditions, memories, knowledge, language, rituals and cultural practices are all important to sustaining and understanding Liverpool's diverse multicultural heritage. Heritage buildings or places are conserved as an acknowledgement of our past and to ensure our legacy is passed on to future generations.

The Strategy outlines appropriate actions to support the long term management of heritage assets and develop the community understanding and appreciation of the heritage of Liverpool. The actions are divided into a series of strategic directions including knowing, protecting, supporting and celebrating Indigenous and Colonial Heritage and the evolution of the community. Each action is rated based on the anticipated cost and priority, with the works divided across the four-year period of the Strategy.

The actions include ongoing items such as heritage referrals, constant review of the heritage register and the heritage advisory committee as well as specific projects such as the preparation of conservation management plans for Council's heritage buildings. The Strategy is flexible, allowing for the priority of projects to change based on the needs of the community and the availability of funding.

Liverpool Local Environmental Plan 2008 (Amendment No. 52)

Liverpool City Council, 2014

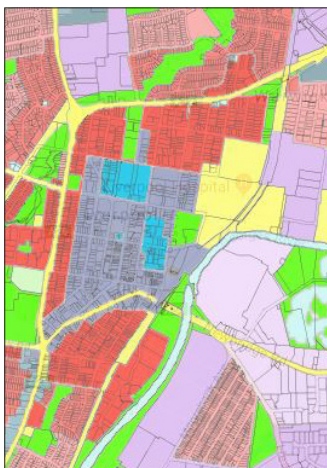


Figure 2.66 Liverpool Local Environmental Plan 2008 (Amendment No. 52), Liverpool City Council

The Liverpool Local Environmental Plan 2008 (LEP) (Amendment No. 52) was approved in 2018 and contains development standards applying to all land in Liverpool except for areas where other planning instruments have overridden the plan. Some new growth centre areas no longer use the Liverpool Local Environmental Plan 2008 and have now been overridden by State Environmental Planning Policies. It is the primary instrument used to guide planning decisions and for each piece of land it specifies; what may be built, what the land may be used for, and what building heights and floor spaces are allowed, in order to shape the character of the area.

This LEP reduces the area of the Liverpool city centre zoned as B3 Commercial Core and increases the area of Liverpool city centre zoned as B4 Mixed Use, in order to attract a more diverse set of uses (including residential) and support the revitalisation of the area. The co-location of residential, commercial, retail, education, health services and amenity within the Liverpool city centre is outlined as a key opportunity to bring investment into the city.

Notes within the amendment include "Most importantly the proposed changes to the LEP reflect the shift in planning theory that has started to recognise the importance of the 'liveability' and attractiveness of a centre as means of attracting business, including office location. In other words, the effect of increasing the residential population in centres not only has a direct effect by increasing patronage and spending in the centre but makes the place more attractive to workers and therefore businesses overall. The theoretical development capacity for commercial floor space is arguably less important than attracting and stimulating business location and investment decisions".

2.5

Strategic Review

Local Documents

Local Refugee Action Plan

Liverpool City Council, 2017



Figure 2.67 Local Refugee Action Plan, Liverpool City Council

Liverpool is the face of modern multicultural Australia, with the richness of Aboriginal heritage, cultural diversity and language. Liverpool is home to one of the highest concentrations of Australia's recent arrivals. The cultural diversity of our city creates opportunities to increase the community's capacity, develop community leadership, and become active members of society. Liverpool is going through rapid and significant economic, demographic, infrastructural, and physical change and is one of the fastest growing regions in Sydney.

The Local Refugee Action Plan aims to engage and give a voice to those who may feel isolated or marginalised, and encourage all to participate in all aspects of civil society. Through consultation with stakeholders, issues and challenges related to current programs and gaps in service provision were identified. Several of these relate to public infrastructure and have been considered in the development of the Master Plan. These include:

- New arrivals face the challenge of understanding how to navigate the transport systems;
- Venues and facilities are lacking. This is partially because of the cost attached to existing venues, which makes it difficult to run community programs and seminars near the Liverpool city centre, and
- Recreational activities and space for young people and adults is lacking. Addressing this could significantly improve social support and connection.

The Master Plan identifies opportunities for multi-use public spaces, recreational activities and spaces for young people and adults, and includes proposals for improved way finding within the city centre.

Macquarie Street Mall and Bigge Park Master Plan Design Report

Liverpool City Council, 2014



Figure 2.68 Macquarie Street Mall and Bigge Park Master Plan Design Report, Liverpool City Council

This document comprises of urban design concepts for Macquarie Mall and Bigge Park, for the Liverpool City Centre Revitalisation project.

The project consisted of the following major components:

- Development of a design process beginning with a response to site conditions (physical, historical, economical, and social), urban plan and city context, establishment of a public realm vision, principles and strategies;
- Public realm which incorporates Macquarie Mall and Bigge Park, with future possible links between the two sites and connections to adjacent developments, and
- Project-wide co-ordination with the specialist consultants for other City Revitalisation projects and co-ordination with the city infrastructure, utilities, and public transport for the Liverpool city centre.

The report is intended to be used to provide clear and precise instructions for the future public realm character and opportunities for the Macquarie Mall and Bigge Park Precinct. The revitalisation of Macquarie Mall (referred to as the city's heart) and Bigge Park (the city's most significant civic open space) provides working and recreational experiences for the people of Liverpool and a platform for future investment and change. These two public realm projects provide the residents with a unique urban landscape setting, exciting recreational opportunities and a strong sense of community on which the rich interplay of local urban life will occur. The Master Plan considers these revitalised spaces in the context of the entire city centre and acknowledges their contribution to the city's public domain.

2.5

Strategic Review

Local Documents

Reconciliation Action Plan 2017-2020

Liverpool City Council, 2017

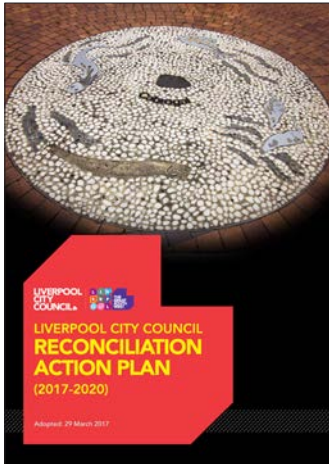


Figure 2.69 Reconciliation Action Plan 2017-2020, Liverpool City Council

Liverpool City Council acknowledges the original inhabitants of the Liverpool area, being the Darug and Tharawal Aboriginal people, and Council provides a number of initiatives to promote and celebrate Aboriginal culture within Liverpool. Council has developed a Statement of Commitment, in consultation with local Aboriginal and Torres Strait Islander community members of Liverpool. Following this, the Reconciliation Action Plan 2017-2020 was developed, as the next stage in ensuring Council's commitment to working alongside local Aboriginal and Torres Strait Islander communities to improve the lives of our fellow Australians and to celebrate the rich Aboriginal culture in the area.

The Plan is divided into three key strategic themes, being Respect, Relationships and Opportunities, with focus areas and measurable actions. Several of the focus areas and measurable actions relate to the Master Plan, including:

- Investigating opportunities for incorporating Aboriginal themes and public art into newly planned community hubs and social infrastructure;
- Investigating the costs associated with displaying dual naming signs in the Darug or Dhurwal language at all gateways in the Liverpool LGA, and
- Aboriginal and Torres Strait Islander flags to be flown outside the administration building/s and where possible across Council's facilities.

The Master Plan identifies opportunities to include local art, provided by Aboriginal artists within the city centre and considers the inclusion of dual naming on signage at key sites in the city centre. Opportunities to include both Aboriginal and Torres Strait Islander flags in the city centre have been considered, where flag poles are proposed.

Recreation, Open Space and Sports Strategy, 2018-2028

Liverpool City Council



Figure 2.70 Recreation, Open Space and Sports Strategy, Liverpool City Council

The Recreation, Open Space and Sports Strategy 2018 – 2028 sets a vision to create best practice recreation, open space and sports facilities for the community that connect residents and fosters a healthy community. The Strategy notes that the Liverpool LGA is one of the fastest growing in Australia, with 300,000 people expected in the next 10 years and there will be an increased need for public open space.

The Strategy also notes the importance of providing quality open spaces and facilities in response to the gradual reduction of private open spaces, including the limited private outdoor spaces provided in apartment buildings, such as in the city centre.

The document establishes a strategic framework to guide the future provision and management of Liverpool's recreational, open space and sporting facilities and services. This incorporates a number of significant spaces that are located within the Liverpool Central Business District such as Bigge Park, Georges River, Lighthorse Park, Liverpool Pioneers' Memorial Park and Macquarie Mall. The Master Plan considers maximising the potential of these spaces and aligns with the Strategy's key themes and actions aimed at improving the City's open space network. This includes:

- Creating places for people;
- Promoting active living;
- Improving play opportunities;
- Improving safety;
- Implementing a 'landscaping first' approach, and
- Greening the City.

2.5

Strategic Review

Local Documents

Reimagining... the Liverpool Health, Education, Research and Innovation Precinct

Liverpool City Council, 2018



Figure 2.71 Reimagining... the Liverpool Health, Education, Research and Innovation Precinct, Liverpool City Council

The Reimagining... the Liverpool Health, Education, Research and Innovation Precinct Report was commissioned by an alliance of stakeholders including Liverpool City Council and a range of health and education providers, and outlines the vision and implementation opportunities for the Liverpool Innovation Precinct.

The document envisions Liverpool's city centre as an innovation district, capitalising on the co-location of services and amenity due to the proximity of Liverpool city centre and Health Precinct, significant population growth and investment by health and education organisations.

The document outlines nine future Liverpool Urban principles to encourage the evolution of the precinct. These are supported by the Master Plan and include:

- Create distinct focus zones that are easy to identify;
- Develop the in-between spaces into social catalysers;
- Mandate cross connections that increase intersections;
- Encourage connections across bounding elements;
- Focus on CBD soft transport options and reducing cars;
- Support mixed use and shared use developments;
- Development consistent materiality for identity in each zone;
- Provide housing that meets needs across the spectrum, and
- Activate day and night, re-purpose and multi use spaces.

Revitalising Liverpool, City Centre Plan 2006

Liverpool City Council and NSW Department of Planning

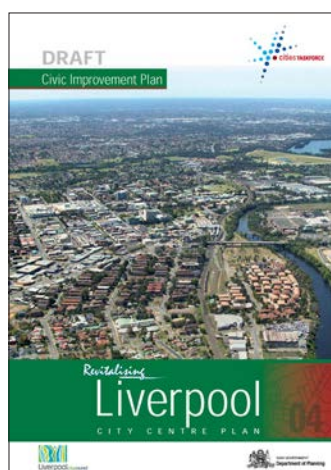


Figure 2.72 Revitalising Liverpool, Liverpool City, Council and NSW Department of Planning

The Revitalising Liverpool City Centre Plan is a Civic Improvement Plan for the Liverpool city centre and provides a description of the infrastructure needs to support the growth and development of the city centre, and outlines the framework for contributions to be made towards the funding and provision of the infrastructure, in relation to the development of the city centre.

The Plan sets design principles and incorporates design strategies for the public domain and special projects needed to support growth and development in the city centre permitted under the LEP and DCP. The document includes public domain projects for paving, street trees, and urban furniture that contribute to the character of the city centre.

Projects within the City Centre Plan, that are within the Master Plan area include:

- Improvements to Georges River foreshore;
- Improvements to Woodward Park;
- Improvements to Collimore Park;
- Stormwater Management Works;
- Improvements to Bigge Park (Completed), and
- Improvements to Liverpool Pioneers Memorial Park (Completed).

The Master Plan builds off the work undertaken in this document and considers the projects that have already been completed in the context of the entire city centre, acknowledging their contribution to the public domain and character of the city centre.

2.5

Strategic Review

Local Documents

The Liverpool CBD Public Domain Strategy

Liverpool City Council



Figure 2.73 The Liverpool CBD Public Domain Strategy, Liverpool City Council

The Liverpool CBD Public Domain Strategy establishes an urban design framework, objectives and performance criteria for the public domain within the Liverpool City Centre. The Strategy was designed to supplement The Liverpool City Centre DCP no. 30 and outlines the scope for supplementary policies including The Liverpool CBD Street Tree & Landscape Strategy.

The document outlines recommendations related to built form, facade treatments, ground floor activation, paving treatments and setbacks. The built form recommendations within the Strategy have been largely superseded by the modifications to the city centre, as described in the Draft Liverpool LEP 2016. The Strategy aims to achieve a city centre that; is easy to get to and move through, has its own identity, has clearly distinguished public and private spaces, has appealing and successful outdoor areas, has a clear image, has the ability to incrementally, provides variety and choice, has a balance between the natural and built environment, and responds to the diverse range of user needs.

The Strategy emphasised the significance of the remaining street grid and defines a ring road around the core of the city centre on Bathurst Street, Campbell Street, Bigge Street and Pirie Street to define the boundary to the outer city centre. Relevant principles from this document that are applicable to the Master Plan include to:

- Identify, acknowledge and celebrate the unique character of Liverpool's public domain;
- Improve legibility of the city by reinforcing a strong street hierarchy and marking edges, entries and gateways;
- Differentiate between various street types including north-south and east-west streets, and
- Improve flow and safety within the public domain.

The Liverpool CBD Street Tree & Landscape Strategy

Liverpool City Council

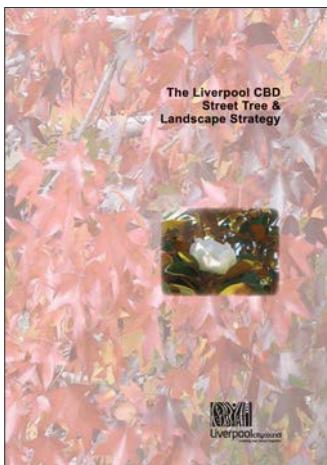


Figure 2.74 The Liverpool CBD Street Tree & Landscape Strategy, Liverpool City Council

The Liverpool CBD Street Tree & Landscape Strategy provides tree planting proposals for the Liverpool's City Centre through the use of tree and low level planting. The Master Plan supports the objectives of this strategy, including using street trees to:

- Provide seasonal shade and solar access;
- Signal that Liverpool is the major commercial centre for South-West Sydney;
- Aid in understanding city layout;
- Provide colour, movement and seasonal variation (i.e. through evergreen and deciduous trees);
- Increase residential and commercial property values and generate increased business activity;
- Ensure a 'Green City' for future populations, and
- Foster a sense of pride in the city centre.

The Master Plan re-enforces many of recommendations made in the strategy, including; A mixed tree planting palette to differentiate the north-south orientated streets (described as Avenues) and east-west orientated streets (described as Boulevards), defining entry roads by gateway plantings, and a mix of deciduous and evergreen species.

Some of these recommendations have been implemented, (e.g. on Bigge and Bathurst streets). The Master Plan revises some of the recommendations made including the use of *Magnolia grandiflora* - Exmouth, which has been nominated for many CBD streets. This species remains small to medium in height with narrow canopy, thereby providing limited shade. These trees, along with Maiden hair trees have moderate growth rates. The standard spacing nominated in this strategy limits capacity for interconnected canopies.

2.5

Strategic Review

Local Documents

The Liverpool CBD Streetscape & Paving Guidelines

Liverpool City Council, 2005

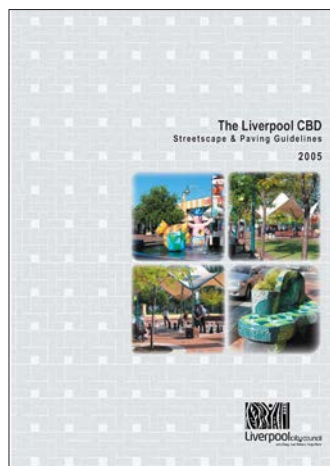


Figure 2.75 The Liverpool CBD Streetscape & Paving Guidelines Strategy, Liverpool City Council

This Liverpool CBD Streetscape & Paving Guidelines has been produced in conjunction with The Liverpool CBD Public Domain Strategy and The Liverpool CBD Street Tree & Landscape Strategy. It defines the principles and importance of integrated urban elements and public space design for the city and nominates paving types for the city centre, to reinforce the street hierarchy.

The aim of the document is to assist Liverpool City Council and developers in implementing the vision for a living vibrant 24 hour centre, of which the public domain and great streets are important elements. The Technical Details are important to ensure that appropriate standards are achieved and to define minimum requirements. The series of Design Principles and Standard Details act as a guide to the design of Liverpool's Public Domain Streets and pavements. It is intended to become both Council's reference manual for assessing proposed developments and as a guideline for developers in formulating site-specific details for the public domain. Adherence to the guidelines will help to achieve an acceptable minimum standard for public domain improvements.

The document includes construction details and specifications for the implementation of public domain upgrades including paving, tree pits, and furniture, with the intention to ensure consistency and co-ordination of the physical form, materials, detail and construction of public areas. Many of the details have been superseded by updates including new paving typology guidelines and details that were adopted in 2018. A review of the details within this guideline has been undertaken as part of the Master Plan, and recommendations made, including proposed updates to streetscape infrastructure.

Liverpool City Centre Parking Strategy 2019-2029

Liverpool City Council, 2019

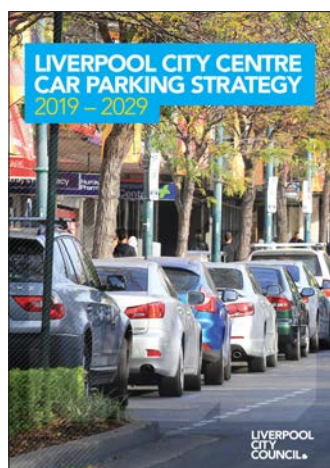


Figure 2.76 Liverpool City Centre Parking Strategy (2019-2029)

The Liverpool City Centre Parking Strategy 2019-2029 aims to manage existing and future parking demand and supply for all on-street and off-street public car parking in the Liverpool City Centre. The strategy seeks to balance the needs for parking with other demands for the public domain in the city centre. The Strategy aims to:

- Establish a baseline of the city's parking, acknowledging current provisions and issues;
- Include an implementation plan, that devises a plan to manage these issues based on modern literature, land/funding availability, and good principles;
- Remain revenue-neutral;
- Improve the effectiveness of current parking provisions;
- Seek opportunities to create new, or re-purposing existing parking, where beneficial;
- Reduce the demand for car parking, where viable;
- Suggest practical methods to increase car parking capacity, where warranted, and
- Be consistent with other Council strategies and policies.

The Master Plan has included the following proposals that are consistent with this Strategy:

- George Street – Explore the feasibility of a north-south on-street dedicated cycle lane;
- Moore Street – Explore the feasibility of an east-west cycle lane on the northern side as part of future Public Transport Boulevard;
- Streetscape – Evaluate on street tree planting opportunities between existing car parking spaces within parking lanes;
- Laneway/Service Way parking and public car parks to be utilised for pop up street events and/ or markets during weekends or after hours;
- Providing safe and direct pedestrian and cycle links from peripheral/ CBD fringe parking to the city centre, and
- Provide an efficient and effective way-finding scheme including directional and real time information for car parks.

2.5

Strategic Review

Local Documents

Youth Strategy 2012-2017 and Action Plan 2013-2017

Liverpool City Council



Figure 2.78 Youth Strategy 2012-2017 and Action Plan 2013-2017, Liverpool City Council

The Youth Strategy 2012-2017 and Action Plan 2013-2017 builds on previous work completed by Council, aimed at improving the quality of life of young people in Liverpool.

The purpose of the Youth Strategy 2012-2017 is to:

- Provide an overview of young people aged 12 to 24 years in the Liverpool Local Government Area (LGA);
- Document issues affecting young people in the Liverpool LGA;
- Highlight priority areas for young people in Liverpool, and
- Provide an Action Plan that will assist Council to work towards the provision of targeted, coordinated and appropriate services and facilities for young people.

The strategy identifies several issues affecting young people in Liverpool including drugs and alcohol, crime and safety, employment, transport, leisure and recreation, education, and bullying. The strategy takes into account these issues which have resulted in key priority areas for action, these being; sports and recreation, art and culture, participation and leadership, safety, health and well-being, employment and education, and planning and infrastructure. The strategy includes an Action Plan which identifies key priority areas, many of which tie into the Master Plan. These include:

- Promote public art projects that engage young people, especially in the city centre;
- Deliver mural and public art projects across the City for local residents and young people;
- Involve young people in the development of new Council assets, where appropriate;
- Consider the needs of young people in the planning, upgrading and development of new Council assets e.g. parks and facilities;
- Consider the needs of young people in recreation planning, and
- Consider the needs of young people in the planning and provision of transport services.

Reimagining Innovation in Health, Education and Research

Liverpool Innovation Precinct, Liverpool City Council, 2019



Figure 2.79 Reimagining Innovation in Health, Education and Research, 2019

The Liverpool Innovation Precinct (LIP) is a region within the Liverpool city centre, that is anchored by and in the vicinity of the Liverpool Hospital. The Land Use Analysis and Precinct Strategy is a document that outlines the vision for land use within the Liverpool Innovation Precinct. The strategy highlights the plans for the area, to become a designated centre for medical innovation and technology on an international scale, aiming to include facilities associated with education and research in the industry.

The document identifies the various opportunities for land use within the LIP. It also identifies how other existing anchors such as schools, universities, transport, and other already established medical institutions in the area, would assist and support the future success of the LIP. It communicates that Liverpool city centre is interested in engaging with stakeholders to enable the future vision of the LIP. The document aims to promote and encourage investors, researchers, innovators and developers to see the potential in the region and notes that the LIP will create a significant amount of job opportunities in the city centre and will also stimulate commercial and residential growth in the area.

Aspects of the city centre and its public domain will contribute to the success of the future vision of the LIP, including green open space provision, future transport infrastructure, and the plans for improved connectivity in the city centre. The LIP will also rely on the city's existing facilities, services and infrastructure. The Master Plan has taken into account the future growth and developments of the LIP and how it will impact the public domain.

2.5

Strategic Review

Local Documents

Liverpool Bike Plan 2017-2022

Liverpool City Council, 2017



Figure 2.80 Liverpool Bike Plan 2017-2022, Liverpool City Council

The Liverpool Bike Plan identifies the requirements for bicycle-related infrastructure, with the aim to encourage and promote bicycle use in the Liverpool Local Government Area (LGA). It has been compiled to guide and inform future developments of bicycle infrastructure and developments that impact bicycle usage, networks and activities. The bike plan considers all suburbs in the LGA, including urban and identified growth areas.

The document outlines the present and expected future use of bicycles across the LGA. It identifies challenges and opportunities for bicycle networks, and the existing and newly proposed cycleways, in their context. It also presents an in-depth analysis of the Liverpool precincts and identifies suburb specific strengths, opportunities, weaknesses, barriers and threats of bicycle activity.

The strategic approach outlined by the document includes an action plan for all future bicycle related works and its implementation strategies. The plan aims to improve safety, connections and access for bicycle users. Key issues identified by the plan include poor connectivity and links, shared pathways and the absence of way finding signage for cyclists. The plan aims to deliver aspects of the plan within the five-year life of the current plan.

The Liverpool Bike Plan has informed the Master Plan, through the identified opportunities and constraints of bike activity in the Liverpool City Centre. It has also identified that the master plan should prioritise cyclists in its design to improve safety, inclusion, accessibility, way finding and links and connections for cyclists in the Liverpool city centre.

Liverpool Contributions Plan 2018 - Liverpool City Centre

Liverpool City Council, 2018

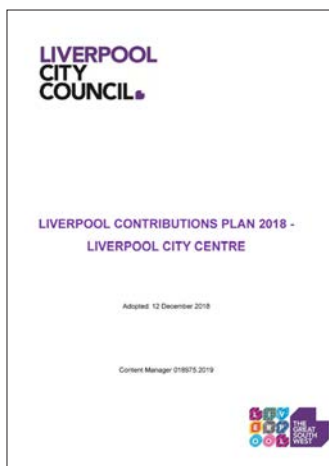


Figure 2.81 Liverpool Contributions Plan 2018 - Liverpool City Centre, Liverpool City Council

Liverpool Contributions Plan 2018 - Liverpool City Centre was adopted by Council in December 2018 and replaces the Liverpool Contributions Plan 2007 (Liverpool City Centre). The plan is an administrative framework and lays out a comprehensive strategy for all stages of development to facilitate and coordinate the implementation of public infrastructure within the city centre. It aims to provide adequate public facilities and authorises Council to impose conditions where applicable.

The increasing population and density in the city centre, increases the demand for public amenities and community facilities. The Master Plan supports the key considerations within the plan including provision of public open space, improved accessibility and improved quality of streetscapes.

The Master Plan supports several of the key projects listed within the plan:

- Improvements to recreational facilities;
- Embellishment of Georges River foreshore (western side);
- Embellishment of Liverpool Pioneers Memorial Park;
- Embellishment of Apex Park;
- The provision of additional community facilities;
- Increased accessibility within the city centre, including prioritising public transport, and
- Improved streetscapes, both within and around the city centre.

This chapter of the report provides a detailed analysis of the existing site conditions within the city centre, and identifies respective opportunities and constraints that have guided the development of the Master Plan.





3.0

SITE ANALYSIS & APPRAISAL





3.1

SITE ANALYSIS & APPRAISAL

OVERVIEW

Overview

This chapter of the report includes an analysis and appraisal of existing site conditions within the Liverpool city centre. This includes a detailed analysis of the natural and built systems, physical spaces and infrastructure that comprise the city centre, and existing planning controls that will guide the development of the city centre, and have impacts on the public domain. This includes an analysis of the ground plane itself (i.e. topography), conditions above the ground plane (e.g. public/private spaces and buildings) and conditions below the ground plane (e.g. geology, utilities and services).

The site analysis and appraisal includes a series of maps that show the spatial arrangement and quality of various layers of information, related to the site conditions within the city centre. Accompanying text provides an overview of each layer analysed and identifies respective opportunities and constraints. The maps have been arranged in chronological order, to show how the city centre has developed and evolved over time. The first layers analyse the land form, natural systems and processes, and environmental conditions within the city centre. The next layers analyse the introduction of built elements (e.g. public spaces and buildings) and associated systems and planning controls, that are contributing to the character of the public domain. The following layers analyse the infrastructure and facilities within these public spaces, followed by utilities and services that are located within the public domain. The maps are also arranged chronologically to reflect the landscape-first approach that has been taken to the Master Plan, consistent with the Greater Sydney Commission's vision for Liverpool, including to reinforce the Western Sydney parkland character.

A photo inventory was completed as part of the site analysis and appraisal, that includes imagery of the streets, serviceways/laneways, gateways, carparks, parks and reserves, rivers and creeks, heritage sites, and other public spaces in the city centre. The photo inventory also includes images of the existing public domain infrastructure within these public spaces, including as furniture, fixtures and fittings.

The purpose of the site analysis and appraisal is to understand the existing conditions in the city centre and, through the mapping, interpretation and analysis of the data and information collected, identify opportunities and constraints to inform the development of the master plan. The data and information gathered in this chapter has been used to make design decisions that directly respond to the opportunities and address the constraints identified. The column to the right shows a list of the layers mapped and analysed, in the order that they are arranged within this chapter of the report. Pages 60 to 119 contain the mapping and detailed information relating to each layer, and the full photo inventory is located in Chapter 8.1 'Appendices - Site Appraisal' on pages 310 to 331.

Layers Analysed

Physical & Environmental Context

- Topography
- Hydrology
- Geology
- Ecology
- Climatic Conditions
- Environmental Conditions

Open Space & Vegetation

- Open Space
- Trees
- Nature Strips & Other Vegetation

Heritage

- Heritage Items

Transport

- Public Transport
- Active Transport
- Vehicular Transport & Car Parking
- Traffic Direction & Speed

Planning Controls

- Liverpool Local Environmental Plan, Zoning
- Liverpool Local Environmental Plan, Land Ownership
- Liverpool Local Environmental Plan, Minimum Lot Sizes

Built Form

- Building Typologies & Liverpool Local Environmental Plan, Maximum Permissible Building Heights
- Liverpool Local Environmental Plan, Applicable Floor Space Ratio (FSR)
- Street Setbacks
- Awnings & Shade Structures
- Active Street Frontages

Places of Interest & Character

- Important Locations, Landmarks & Community Facilities
- Character Areas

Streetscape Infrastructure

- Street Furniture, Fixtures & Fittings
- Public Lighting
- Public Signage & Wayfinding
- Paving Treatments

Public Art & Activation

- Public Art, Late Night Trading Areas & Event Locations

Utilities & Services

- Water & Sewerage Network
- Stormwater Network
- Existing Overhead Power Lines

3.2

SITE ANALYSIS & APPRAISAL PHYSICAL & ENVIRONMENTAL CONTEXT

Topography

Overview

The overall land form within the city centre is characterised by a diagonal ridge that runs across the city centre (from north-east to south-west), sloping towards the Georges River (on the eastern side of the ridge) and towards Brickmakers Creek (on the western side of the ridge). The diagonal ridge also extends towards the Georges River in the south-eastern area of the city centre, creating a steep escarpment along the eastern edge of the railway line. At the highest points, there is a 24 metre difference in level between the ridge top and Georges River, and a 10 metre difference in level between the ridge top and Brickmakers Creek.

Topography and the Street Grid

The street network of the city centre generally incorporates the natural site topography. The orthogonal street grid (referred to as the 'The Town Plan of Liverpool') was introduced after Governor Macquarie founded Liverpool as a colony in the year 1810, and lays out the basic north-south and east-west street layout which is composed within the natural fabric and defines the pattern for future development within the city centre. The street grid then distorts in response to the topography towards the south of the city centre, forming a secondary grid which is aligned to the extension of the diagonal ridge that extends towards the Georges River. The meeting of the regular grid with the secondary grid along Memorial Avenue creates a distinct pattern for the blocks at the southern end of the city centre.

Highpoints

Prominent high points within the city centre include; along certain streets & at certain street junctions, on publicly accessible elevated bridges & walkways, and on semi-public rooftops. There are prominent highpoints at the intersections of Moore Street & Bathurst Street, Bigge Street & Lachlan Street and at Copeland Street & Mill Road. Highpoints located in semi public and/or publicly accessible areas include the Liverpool Railway Station concourse, Westfield Shopping Centre rooftop car park, and the Newbridge Road bridge.

Views & Vistas

Overall, the alignment of the landform with the street grid creates linear view corridors along several streets within the city centre, particularly where the two elements intercept. There are prominent views along the length of several east-west streets in the city centre (including Campbell Street, Elizabeth Street, Moore Street, Memorial Avenue) and north-south views along Macquarie Street, including at the junction of Macquarie Street & Scott Street (looking north), and outside the Westfield Shopping Centre (looking south). The above-mentioned highpoints also offer; vistas of the city (i.e. the Newbridge Road bridge), views across the city (i.e. from the Westfield Shopping Centre rooftop car park) and views of the Georges River (i.e. from the Liverpool Railway Station concourse). Commuters can also experience views across the Georges River when travelling by train along the railway line.

Opportunities

Key opportunities related to topography within the city centre include:








- Reinforce existing sightlines and frame prominent view corridors within the city centre, including through urban and landscape interventions (e.g. through strategic planting and lighting treatments);
- Improve public access to existing highpoints and viewing areas (e.g. through new/improved stairs, ramps, elevators and viewing platforms);
- Reinforce the relationship between the natural topography and street grid through public domain interventions that maximise views at key intersections;
- Align focal points with high and low points along streets for enhanced legibility (e.g. locations for key markers, signage, public art, visual displays and interactive public domain elements);
- Emphasise vistas along natural ridgelines, and streets located along ridgelines (e.g. through placement of trees and built elements);
- Utilise topography to maximise sightlines on both sides of the Georges River, in order to improve the visual connection between the city centre, the Georges River and Moorebank, and
- Plant vegetation according to site topography, and associated microclimates and geological conditions.

Constraints

Key constraints related to topography within the city centre include:

- The railway line is constructed along the natural eastern cliff edge and physically separates and isolates the south-eastern edge of the city (i.e. Lighthouse Park and the Georges River) from the rest of the city. For the city centre to embrace the Georges River, this significant constraint will require major interventions, and
- Topographically low areas within the city centre (including within Lighthouse Park and in the north-western corner of the site) are flood prone, restricting site uses and possible site interventions.

Legend

	Railway Station
	Railway Line
	Liverpool City Centre - Project Site Boundary
	View Corridors
	Key Topographical High Points
	Key View Points
	Contour Number

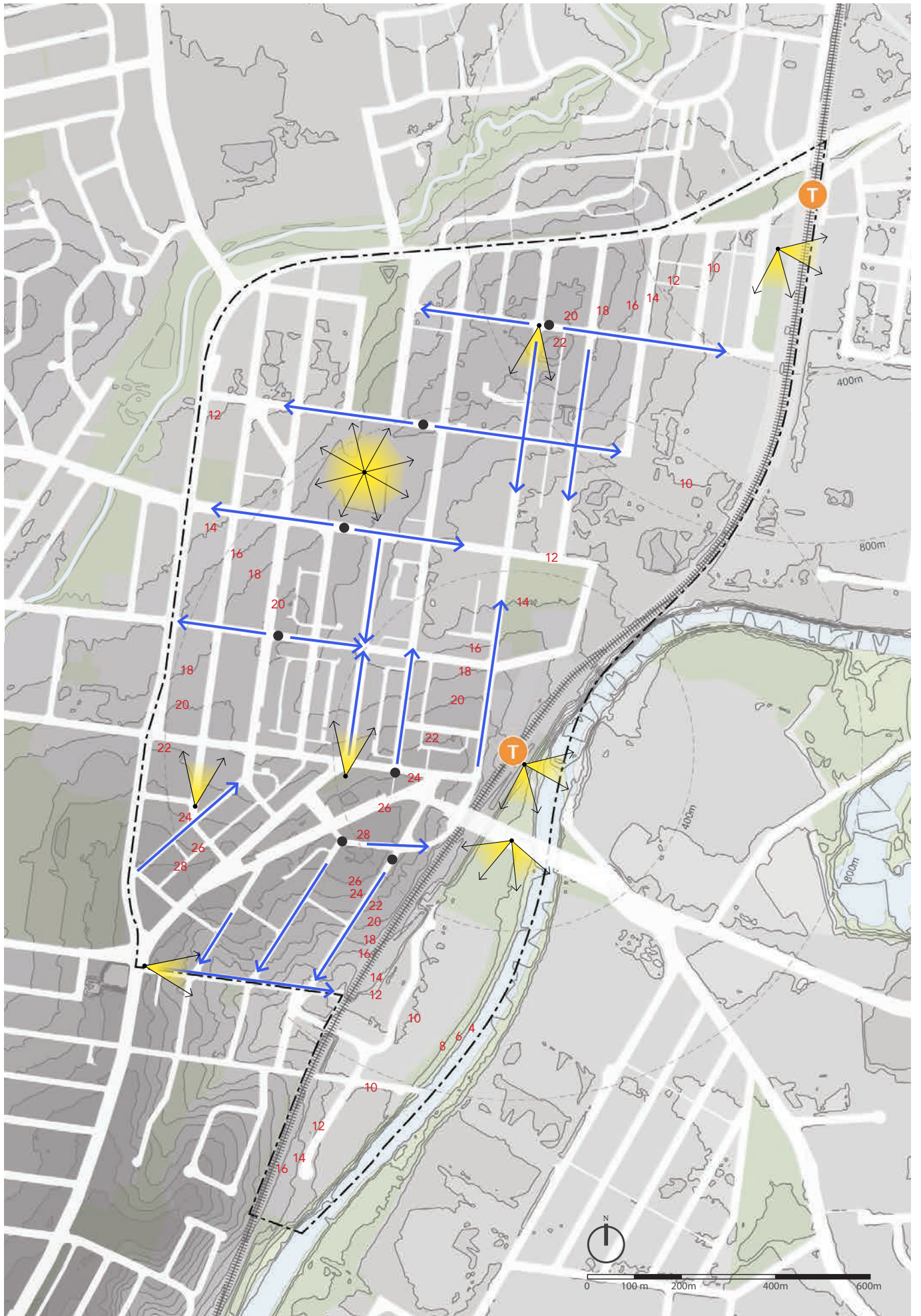


Figure 3.84 Liverpool City Centre - Topography (Liverpool City Council)

3.2

Site Analysis & Appraisal

Physical & Environmental Context - Hydrology

Overview

The Liverpool City Centre is bordered by the Georges River to the east and Brickmakers Creek towards the north and west, with associated flood prone land around these water bodies. The diagonal ridge that runs across the city centre (from north-east to south-west) creates a natural watershed area that feeds into both water bodies. There is an extensive constructed stormwater network, which generally follows the street network and the former creek lines throughout the city centre, and drains into both water bodies.

Georges River

The Georges River flows from Appin to Botany Bay and borders the eastern side of the city centre for almost two kilometres in length. There is a rich riparian corridor that runs along the river, with numerous aquatic and other vegetation species thriving along the river banks. There are 11 identified species of native flora under threat, and several industrial lots along the eastern side of the river that have overgrown weeds and other anthropogenic issues that are deteriorating the condition of the wetland ecosystem. The presence of Acid Sulphate soils and the spread of invasive species is also contributing the current condition of the river banks.

Brickmakers Creek

Brickmakers Creek flows north from Lurnea through Liverpool before emptying into Cabramatta Creek at Warwick Farm. It was named Brickmakers Creek because of the Liverpool Steam Brickworks site that was located on its banks. The section of the creek that borders the city centre is largely an open grassed swale.

Former Creeks

Originally there was a broader riparian network within the city centre that fed into both the Georges River and Brickmakers Creek (See Figure 3.85). With the development of the city street network and built form, most of these former creeks and riparian networks have been built over and formalised into the stormwater network.

Flooding

Flood prone land associated with the Georges River is located between the river and eastern edge of the Railway line, covering a large portion of Lighthorse Park. Flood prone land associated with Brickmakers Creek is within the north-western corner of the city centre, extending to the Westfield Shopping Centre and Liverpool Pioneer Memorial Park.

Stormwater Network

The existing storm water network runs along the city centre streets and former creek lines, as a gravity fed system that captures surface runoff and collects storm water during rain events, draining into the Georges River and Brickmakers Creek. Liverpool City Council has recently completed major upgrades to the network, including in the north-east and south-west parts of the city centre and to the trunk drainage along Brickmakers Creek.

Opportunities

Key opportunities related to hydrology within the city centre include:









- Strengthening the relationship between the city centre and the Georges River & Brickmakers Creek, including through maximising physical and visual connections;
- Implementing Water Sensitive Urban Design (WSUD) principles to optimise the use of surface runoff, improve overall water quality and support aquatic biodiversity;
- Incorporating water features into the city centre to provide increased visual amenity and maximise public opportunities to engage with water;
- Introducing references to former creek lines and riparian networks in the city centre, to promote an understanding of historical natural systems in the city;
- Integrating active transport systems including pathways and cycleways with hydrological corridors, to increase public access to water, and
- Improving the condition of the Georges River and Brickmakers Creek, to support biodiversity and local ecosystems within and along the waterways.

Constraints

Key constraints related to hydrology within the city centre include:

- Physical access to the Georges River is restricted by the railway line that separates the city centre from the river;
- Ownership and management of Brickmakers Creek is by Council, and the ownership and management of the Georges River involves many stakeholders;
- Flood prone land located in the north-eastern and south-western parts of the city centre may restrict the ability to redevelop certain areas;
- Acid Sulphate Soils located along the banks of the Georges River needs to be considered for major works;
- Possible geotechnical issues along both water bodies, due to the proximity to the river/creek and high water table, may limit the scope for interventions, and
- Upstream water quality impacts outside Council's jurisdiction to address.

Legend

	Railway Station
	Railway Line
	Liverpool City Centre - Project Site Boundary
	Low Flood Risk Category
	Medium Flood Risk Category
	High Flood Risk Category
	Existing Storm Water Drainage Network
	Riparian Corridors (Historic + Present)

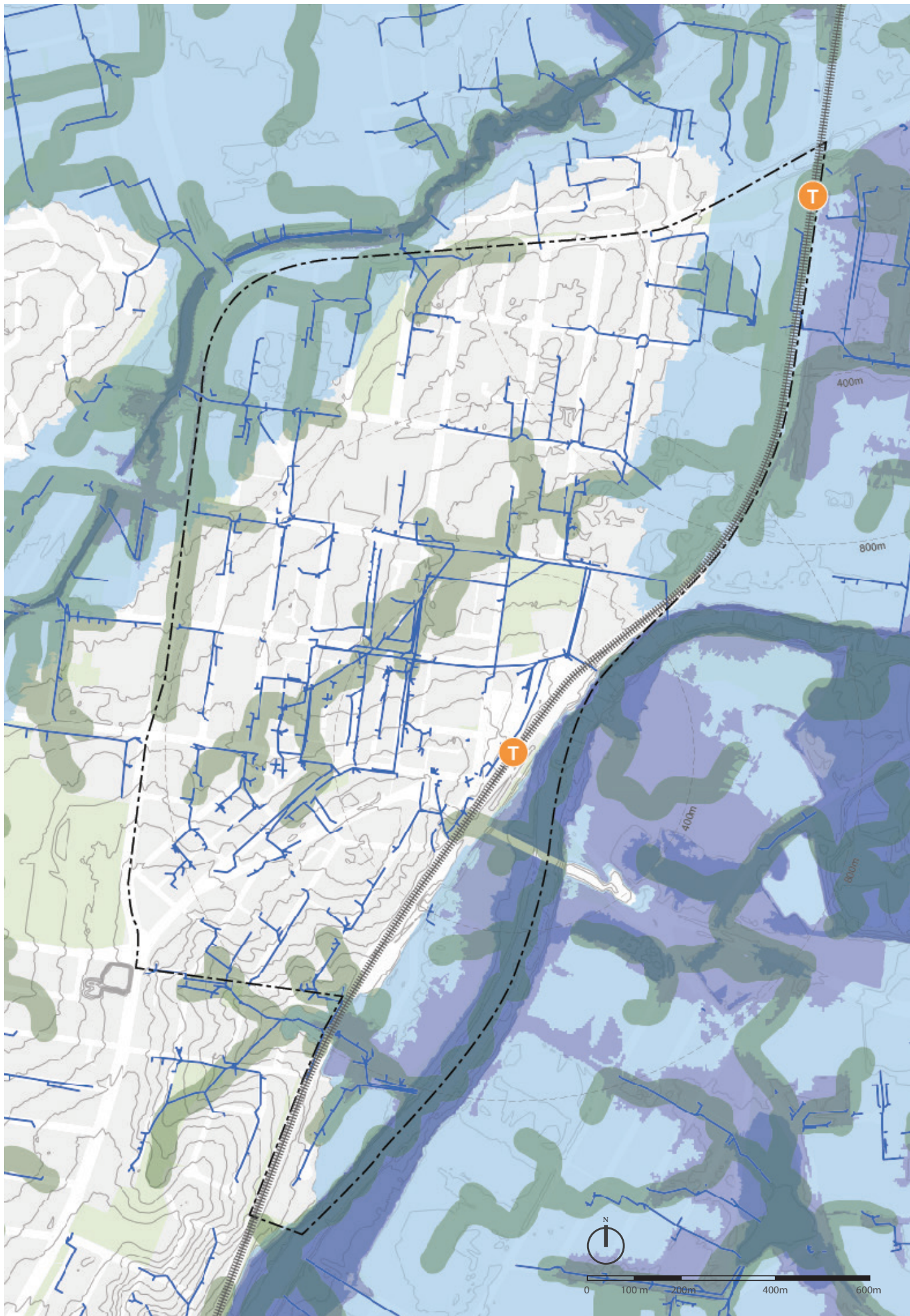


Figure 3.85 Liverpool City Centre - Hydrology (Liverpool City Council)

3.2

Site Analysis & Appraisal

Physical & Environmental Context - Geology

Overview

The soil landscape within the Liverpool City Centre is predominately Blacktown soil type with areas of Luddenham and South Creek soils, both of which are typically associated with Blacktown soil landscapes. These soils are usually seen with cleared-open forest and open-woodlands, with Eucalyptus Tereticornis (Forest Red Gum) being the dominant vegetation. Overall, the soils within the city centre have a moderate to high salinity potential.

Blacktown Soils

The Blacktown soil type occurs extensively on the Cumberland Lowlands between the Georges and Parramatta Rivers in south-western Sydney, and covers the majority of the Liverpool City Centre. The Blacktown soil landscape is generally characterised by gently undulating rises on Wianamatta Group shales and Hawkesbury shale. This soil landscape typically has a local relief to 30 metres and slopes are usually <5%, with broad rounded crests, and ridges with gently inclined slopes. The Blacktown soil landscape is typically characterised by cleared eucalypt open-woodland (dry sclerophyll forest) and tall open-forest (wet sclerophyll forest).

Luddenham Soils

The Luddenham soil type is found in the southern part of the city centre, between Terminus Street and the Georges River and is generally either a brown loam, clay loam or clays with clay subsoils. It is typically shallow on crests (<100 cm) and moderately deep (<150 cm) on slopes and depressions. The soil landscape has generally low to moderate fertility and is generally capable of being grazed and cultivated.

South Creek Soils

South Creek soils occur along the Brickmakers Creek corridor and are found within the north-western tip of the city centre. Generally, South Creek soils consist of grey, yellow and brown chromosols (grey, red, brown podzolic soils), black and brown dermosols (prairie soils) and tenosols (alluvial soils).

Soil Salinity

The soil landscape within the city centre has moderate salinity potential, with the exception of a low-lying area in the north-western part of the site, which has a high soil salinity potential. This area is low-lying and generally follows the course of former tributaries of Brickmakers Creek, that have been built over by new development.

Opportunities

Key opportunities related to the Blacktown soil types within the city centre include:

- Organic Content - Whilst Blacktown topsoils are often hardsetting and have high fine sand and silt content, they have high to moderate organic matter content, which can support vegetation growth, and
- Urban Development - The prominent land uses supported by Blacktown soils are intensive residential, light-heavy industrial and animal husbandry. With appropriate foundation design, the Blacktown soil type has a high capability to support urban development in the city centre.

Constraints

Key constraints related to the Blacktown soil types within the city centre include:

- Soil fertility - Blacktown soils have low to moderate soil fertility, which pose challenges when growing vegetation species that are not native to the area;
- Reactiveness - Blacktown soils are moderately reactive highly plastic, clay-type soils that swell on wetting and shrink on drying, which can result in ground movement and affect drainage ability;
- Waterlogging - Blacktown soils are prone to seasonal waterlogging, affecting drainage ability, and
- Erosion - The erosion hazard for non-concentrated flows is generally moderate, but ranges from low to very high. Calculated soil loss during the first twelve months of urban development ranges up to 73 t/ha for topsoil and 68 t/ha for exposed subsoil. Soil erosion hazard for concentrated flows is moderate to high. Blacktown soil materials have moderate erodibility and surface movement potential, which requires consideration when designing the public realm.

Legend

	Railway Station
	Railway Line
	Liverpool City Centre - Project Site Boundary
	Blacktown
	South Creek
	Disturbed Terrain
	Luddenham
	Richmond
	Water
	High Soil Salinity Potential
	Moderate Salinity Potential

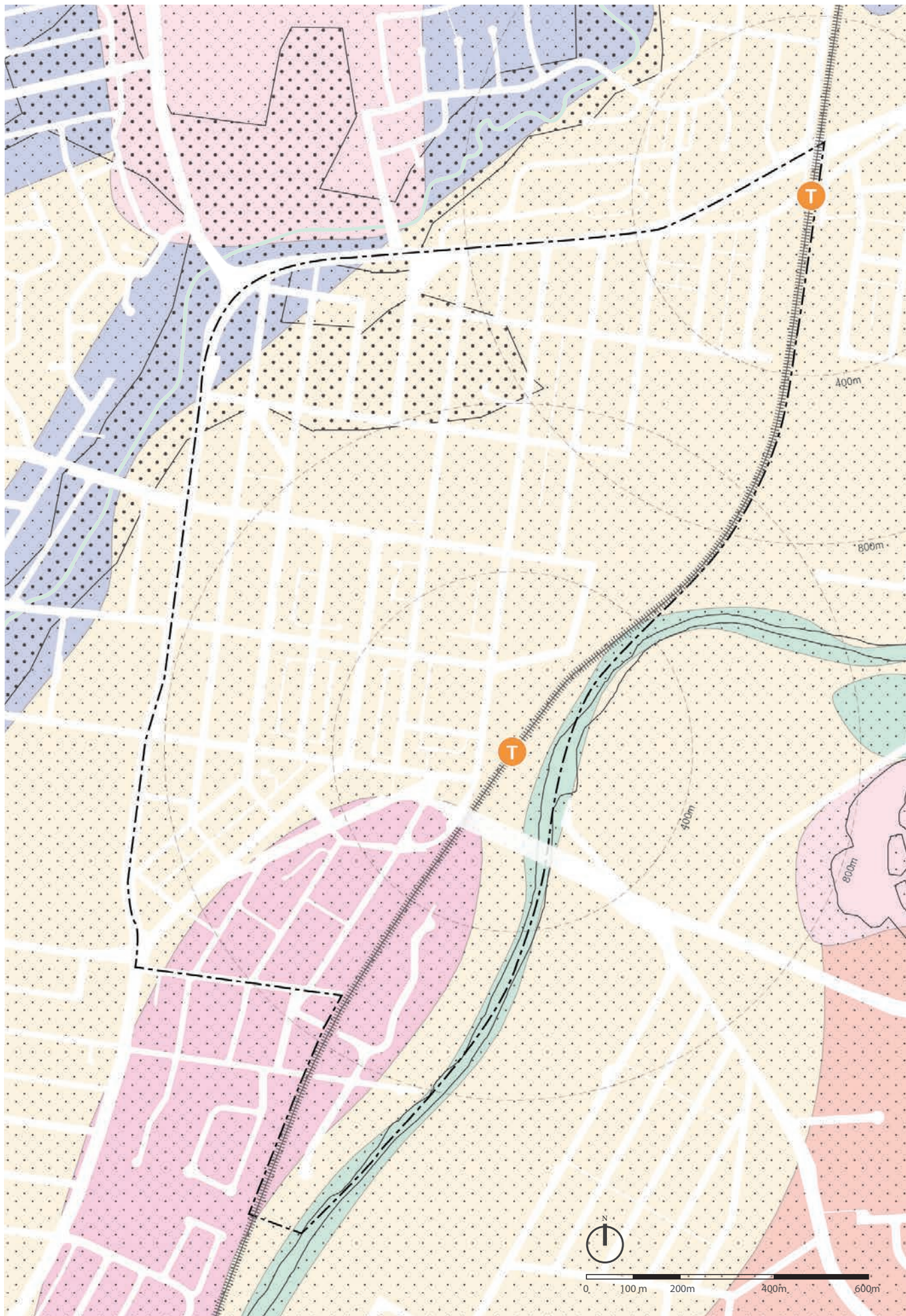


Figure 3.86 Liverpool City Centre - Geology (Liverpool City Council)

3.2

Site Analysis & Appraisal

Physical & Environmental Context - Ecology

Overview

The Liverpool City Centre is predominately a built, urbanised environment with limited biodiversity that is sustained by exotic vegetation, various built structures, and the remnant native flora which is located in patches of open space within and around the city centre, and along the Georges River.

Flora

The city centre previously supported threatened ecological communities, including two critically endangered Cumberland Plain Woodland communities. A small number of species from these communities remain; Eucalyptus Moluccana (located in Bigge Park and Berryman Reserve) and Eucalyptus Tereticornis - Forest Red Gum (located in Apex Park). Various other mixed and unclassified species are located in Liverpool Pioneers Memorial Park and along the banks of the Georges River. The vegetation patches in the city centre have a high edge-to-area ratio, providing little support to native fauna, including local bird species.

Fauna

The Georges River forms a major source of sustenance for the few diverse species that are present in and around the city centre. The limited flora and open space to support local fauna, rubbish, and invasive weed species located along the Georges River and Brickmakers Creek has impacted habitat conditions. The Green and Golden Bell Frog and Regent Honeyeater bird have been known to occur within the Master Plan study area. The Green and Golden Bell Frog have been recorded to be found in the vicinity of the mid-to-lower Georges River floodplain near Hammondville, Lighthouse Park and Bill Morrison Park and the Regent Honeyeater is of particular significance, being listed as critically endangered, both at the national and state level.

Opportunities

Key opportunities related to the ecology within the city centre include:

- Protect and enhance existing parks, reserves and other open spaces within the city centre that contain local flora and fauna species, and habitats;
- Increase and diversify habitat opportunities for existing native fauna within the city centre (e.g. through WSUD interventions);
- Encourage urban-tolerant native species that are currently present within, and are well adapted to, urban environments;
- Encourage and promote the importance of planting trees within the private domain and the benefits of having terrace/balcony gardens, to the community;
- Strengthen linkages to wider networks (e.g. Brickmakers Creek) to increase native flora and fauna, and
- Improve the condition of the Georges River and Brickmakers Creek to support biodiversity and ecological communities (e.g. riparian restoration).

Constraints

Key constraints related to the ecology within the city centre include:

- The city centre is predominately urbanised, resulting in limited opportunities for expansion of open space and interventions to support biodiversity;
- Increasing urban development provides pressure on open space and associated habitats;
- Land ownership and management of the natural systems and assets within and around the city centre are spread over various government departments and agencies, and private owners. This results in challenges related to decision making, competing priorities, management of land, and scope for new/improvement works e.g. Water management of Georges River, and
- Competing demands on open space to support ecological and recreational outcomes.

Legend

	Railway Station
	Railway Line
	Liverpool City Centre - Project Site Boundary
	River Flat Eucalyptus Forest
	Cumberland Plain Woodland
	Mixed - Unclassified
	Threatened Ecological Communities
	Sighting of The Green and Golden Bell Frog



Eucalyptus Moluccana



Eucalyptus Tereticornis



Regent Honeyeater



Green and Golden Bell Frog

Figure 3.87 Images of Flora & Fauna (Liverpool City Council)

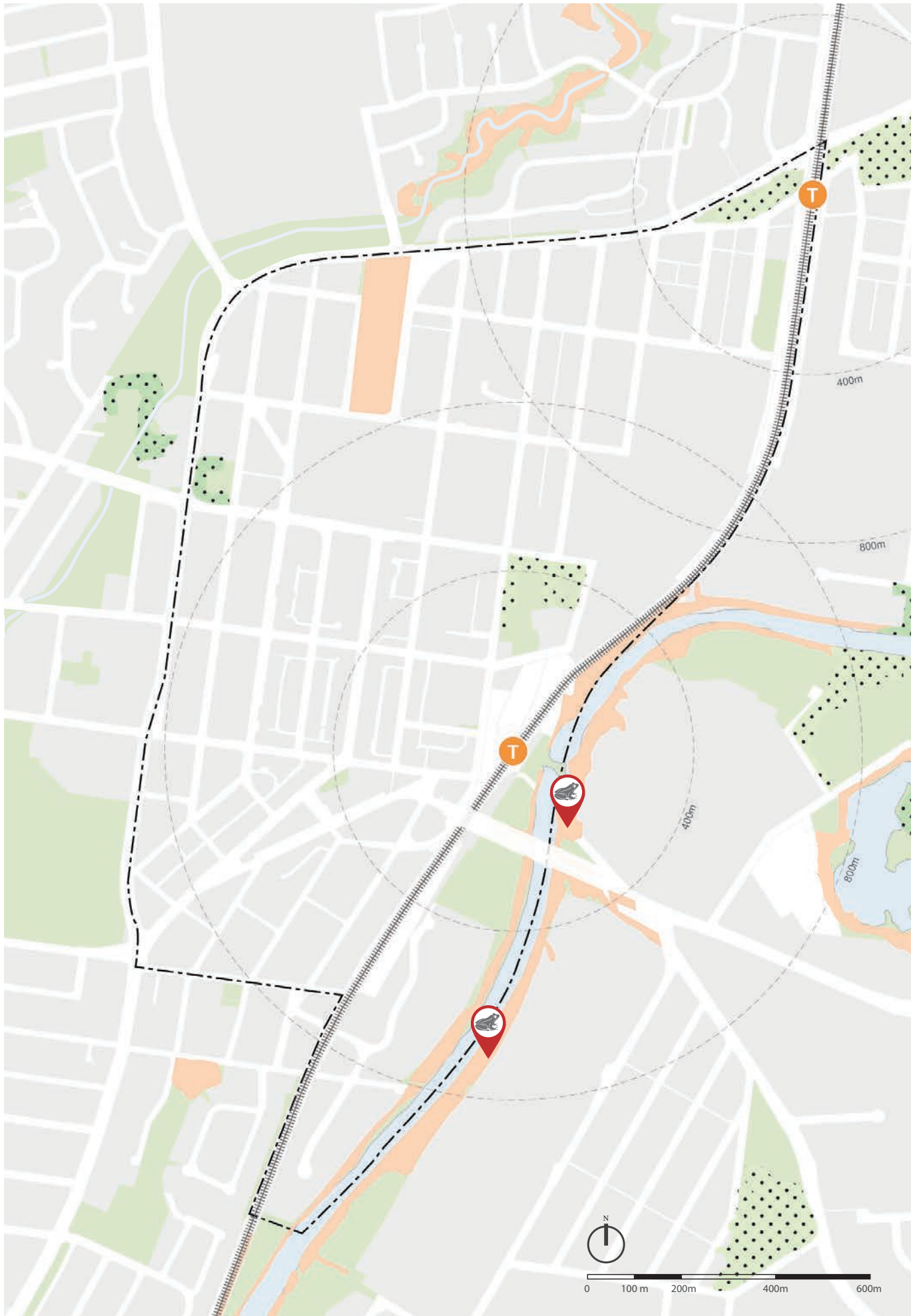


Figure 3.88 Liverpool City Centre - Ecology (Liverpool City Council)

3.2

Site Analysis & Appraisal

Physical & Environmental Context - Climatic Conditions

Overview

Liverpool has a warm temperate climate that is characterised by warm to hot summers and cool winters. Liverpool receives a high amount of sunshine and rainfall throughout the year.

Rainfall

Liverpool is located in the rain shadow of both the Blue Mountains and Illawarra Escarpment. The Liverpool City Centre receives 865mm of annual rainfall. Rainfall varies throughout the year, with the wettest months being January to March, while the driest being July to September. Spring and summer months are dominated with rainfall from convective afternoon thunderstorms moving east off the lower mountains. Autumn and winter rainfall is dominated by maritime showers that are moderate in intensity and generally brief in length. Liverpool like the rest of Australia is also prone to periodic drought where usual rain bearing weather systems do not occur.

Temperature

Liverpool's distance from the coast results in a large temperature range between summer and winter, as well as day and night. In winter, Liverpool's maximum temperatures average 17 degrees Celsius, while in summer the maximum averages 28 degrees Celsius. In winter the minimum temperature averages 5 degrees Celsius, while in summer it averages 17 degrees Celsius. Liverpool is prone to regular heat waves, especially during summer. In winter, frost occurs on an average of 12 days per year.

Urban Heat Island

Urban heat island effect (UHI) is a meteorological phenomenon that results in higher temperatures in urban areas as opposed to nearby natural environments. Liverpool has been identified as having urban temperatures higher than 9 degrees Celsius than the surrounding environment. The UHI effect places strain on population health, resources, natural processes, and affects disadvantaged people.

Wind

Liverpool experiences both pleasant and unpleasant winds. In summer, afternoon easterly sea breezes provide a cool relief, while cold south westerly winds in winter can make even sunny days feel bitterly cold with a wind chill factor.

Opportunities

Key opportunities related to Physical and Environmental Context – Climatic Conditions within the city centre include:

- Promote sustainable design and green building practices to achieve energy, water and material efficiency, reduction in waste and reduce maintenance costs;
- Capture and filter and/or re-use stormwater runoff;
- Reduce temperatures to address high summer temperatures and the Urban Heat Island Effect (e.g. through street tree planting & building awnings), and
- Use tree plantings to funnel summer breezes along street corridors and shield pedestrians from cold winter winds.

Constraints

Key constraints related to Environmental Context – Climate Conditions within the city centre include:

- Dry conditions and high temperatures pose challenges for growing certain tree and plant species;
- Heavy but brief rainfall causes high water runoff rates and low soil water infiltration, and
- The UHI is exacerbated by the built form density, traffic volumes and limited space for new tree planting in the city centre.

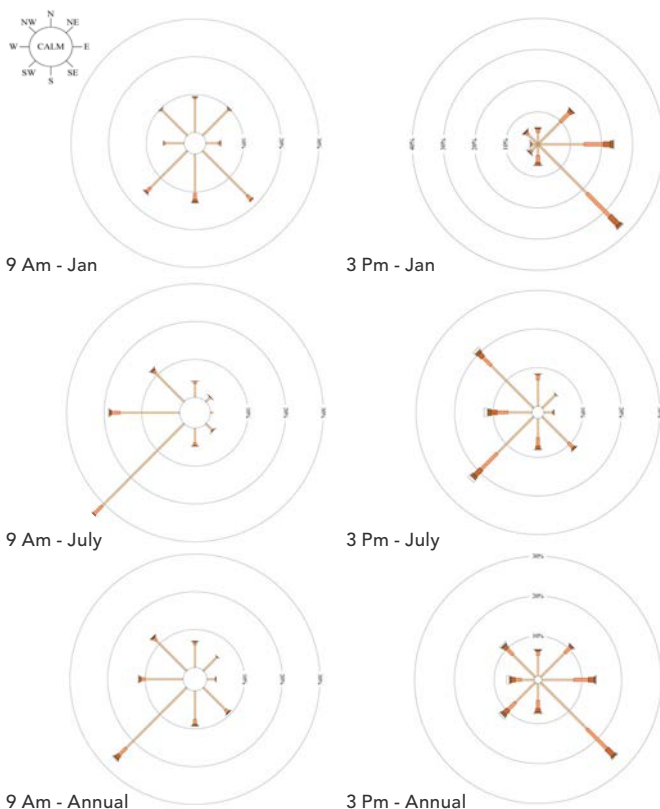


Figure 3.89 Wind Rose Diagrams (Whitlam Centre, Liverpool, 1962-2001)

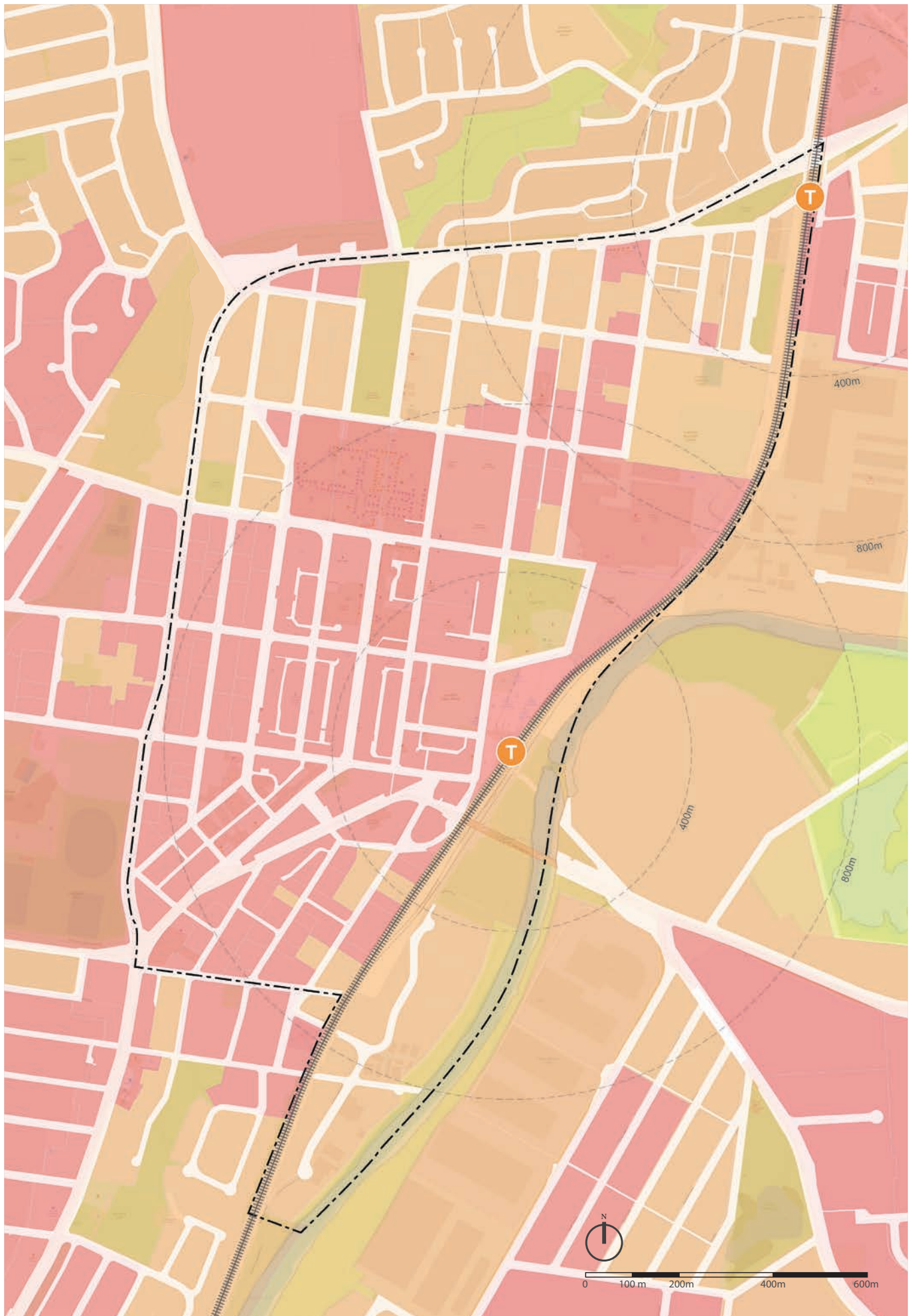


Figure 3.90 Liverpool City Centre - Temperature (Liverpool City Council)

3.2

Site Analysis & Appraisal

Physical & Environmental Context - Environmental Conditions

Overview

The streets and public spaces of a city can be an assault on the senses with noise and pollution if they are not designed and planned to consider human comfort. The diagram on the opposite page identifies major sources of noise through vehicular traffic and rail movements, and shows the average pollution levels within the city centre.

Air Quality

Air quality is generally poor when measured near a source of pollution such as industry and vehicle traffic. Within the Liverpool City Centre air quality is reduced due to vehicles using its streets and roadways. Traffic volume is a major contributor to reduced air quality, and so is the type (car, truck, bus) of vehicle. Within the city centre CO₂ emissions range from 9,747 tonnes near Lighthorse Park to 43,395 tonnes across a large area of the city centre.

Noise

The main source of environmental noise in Liverpool is generated by trains and vehicular traffic. Passenger trains pass along the railway line several times per hour and generally last only a approximately 10 to 15 seconds. Less frequent are freight trains, however due to their carriage length and weight, they produce noise readings that are higher and last for a longer period.

Vehicular traffic occurs on all streets in the city centre. Traffic volume and speed contribute to the feeling of comfort and the ability for a human to be present without being adversely impacted by noise. The higher the volume and higher the speed, the lower the quality of the space, due to noise. The public domain along major road corridors in the city centre including the Hume Highway, Macquarie and Terminus Streets are the most impacted by noise to due high speed, high volume and high numbers of trucks.

Noise disperses quickly and can reduced by solid barriers. The further away from a noise source, the lower the noise reading. Providing vegetation barriers, although does not reduce the actual noise level, it does provide mental separation and a perception of less noise.

Opportunities

Key opportunities related to Environmental Conditions within the city centre are:

- Improve air quality through increasing urban canopy cover (e.g. through increased street tree plantings) and reducing energy consumption and resulting emissions;
- Address traffic noise by reducing traffic speed and volume on city streets;
- Provide mental (vegetative – trees and shrubs) separation from major roadways and vehicle traffic (e.g. Hume Highway), and
- Ensure land uses (e.g. recreation areas) are designed to consider noise generators.

Constraints

Key constraints related to Environmental Conditions within the city centre are:

- High levels of traffic noise and pollution along the busy and exposed streets affect the overall pedestrian experience;
- Passenger and freight train services impact the user experience, in areas that are in close proximity to the railway line, and
- Noise and pollution dispersal carrying upwards into residential and commercial buildings located along Hume Highway and other busy roads within and around the city centre.

Legend















	Railway Station
	Railway Line
	Liverpool City Centre - Project Site Boundary
	C1 - CO ₂ Emissions - (6,312 to 9,747 tonnes)
	C2 - CO ₂ Emissions - (9,747 to 12,409 tonnes)
	C3 - CO ₂ Emissions - (12,409 to 20,515 tonnes)
	C4 - CO ₂ Emissions - (20,515 to 43,395 tonnes)
	C5 - CO ₂ Emissions - (43,395 to 100,277 tonnes)
	Operational Noise - Railway Traffic (Loudest)
	Operational Noise - Railway Traffic
	Operational Noise - Major Vehicular Traffic (Loudest)
	Operational Noise - Major Vehicular Traffic
	Operational Noise - Minor Vehicular Traffic (Loudest)
	Operational Noise - Minor Vehicular Traffic



Figure 3.91 Liverpool City Centre - Transport (Liverpool City Council)

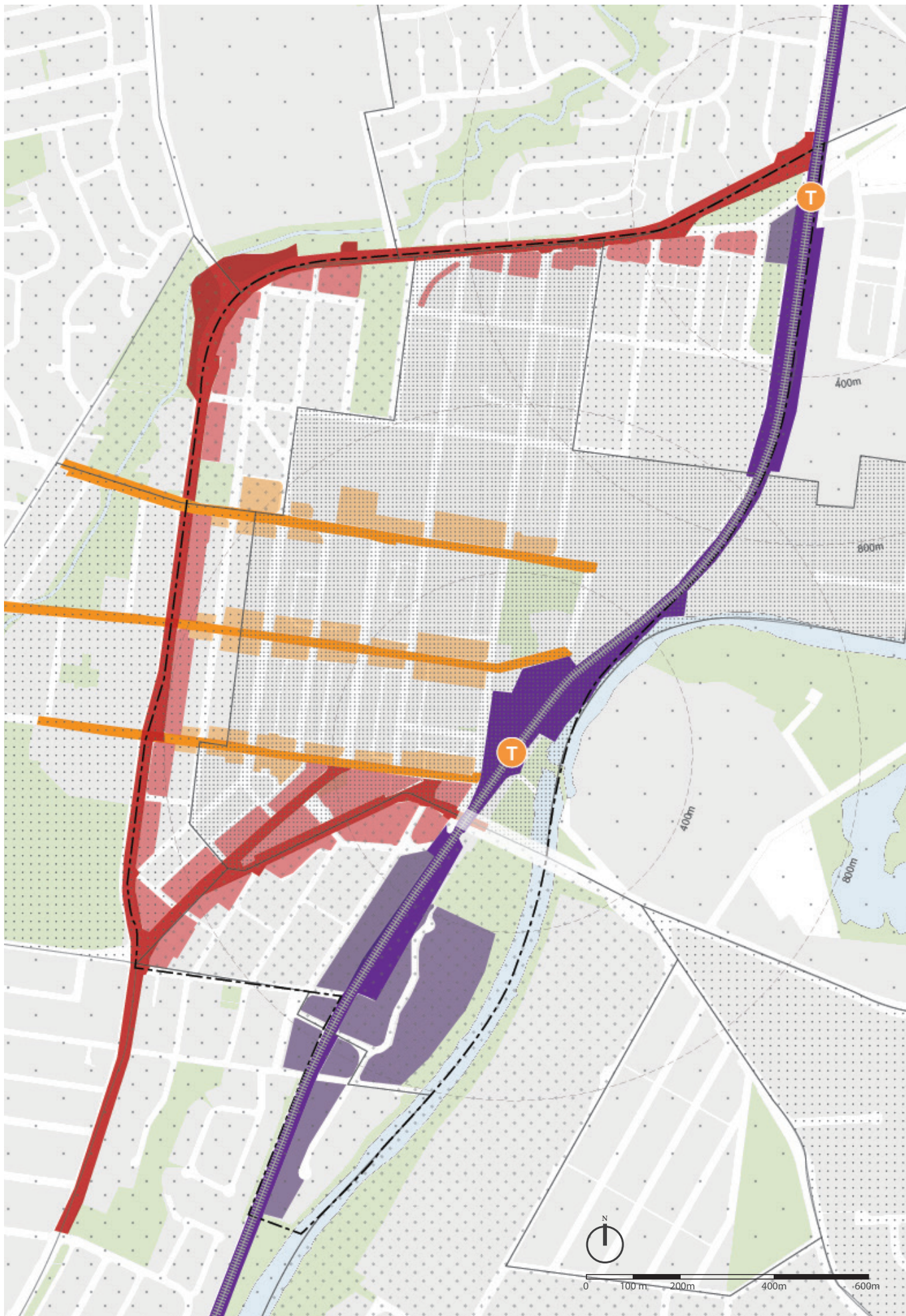


Figure 3.92 Liverpool City Centre - Air Quality & Noise (Liverpool City Council)

3.3

SITE ANALYSIS & APPRAISAL OPEN SPACE & VEGETATION

Open Space

Overview

The Liverpool City Centre includes a range of Regional, District, Neighbourhood, Local and Pocket Parks (as per the Australian Department of Sport and Recreation’s Classification of Public Open Space). These open spaces range from green to urban spaces, and include both active and passive facilities. Additionally, there are several semi-public and private open spaces located within the city centre, including within public schools. Council’s ‘Liverpool City Centre Open Space Analysis’ report has revealed a deficit in public open space provision within Liverpool, particularly in southern & northern parts of the city centre.

Regional Open Space

Lighthorse Park is located on the Georges River and includes both active and passive facilities. A master plan is currently being developed for the site, which will include new community facilities, a new play space, amenities building, passive recreation facilities, pathways, seating, and improved pedestrian connections to Liverpool Railway Station and across the Georges River.

District Open Space

Bigge Park is located within the city core and includes a water play area, play spaces, fitness equipment, tennis courts, pathways, seating, trees, garden beds and a public bathroom & change room (currently under construction). Liverpool Pioneers Memorial Park is located at the northern end of the site and includes a cemetery, pathways, seating, trees, garden beds and turfed areas. Berryman Reserve is located at the north-eastern corner of the site, and includes native vegetation, turfed areas and pathways.

Neighbourhood/Local Open Space & Pocket Parks

Apex Park is located on the western edge of the site. A master plan is currently being developed for the site, which will include a new play space, seating, pathways, assemblages of a variety of tree species and garden beds. Hart Park is located near the north-eastern corner of the site and includes a play space, outdoor fitness equipment, seating & tables, a half basketball court and community garden. St. Luke’s Anglican Church forecourt is located opposite Westfield Shopping Centre and includes seating, pathways, assemblages of a variety of tree species, turf and other vegetation.

Plazas & Malls

Macquarie Mall is a pedestrian mall located within the city core and includes covered outdoor dining areas, outdoor cinema screen, play space, water play area, seating, feature lighting, trees & other vegetation. Augusta Cullen Plaza is located at the intersection of Macquarie Street and Memorial Avenue and will be master planned as part of the Liverpool Civic Place development. Railway Street is currently being master planned and will become a pedestrian mall. The Liverpool Library forecourt currently includes an open paved areas, seating and awnings. This site is subject to possible redevelopment in the future.

Opportunities

Key opportunities related to open space within the city centre include:






















- Include additional open space & recreational facilities within existing parks, to maximise the value of existing open spaces within the city centre;
- Include facilities in city centre periphery open spaces (e.g. Brickmakers Creek Reserve) to help serve the current open space deficit in Liverpool;
- Investigate innovative solutions for new open spaces within the city centre, e.g. access to private rooftops;
- Include open space facilities in currently underutilised spaces (e.g. laneways & serviceways);
- Investigate opportunities for shared open space agreements with public schools, within the city centre;
- Improve connections to and from existing open spaces;
- Improve access and inclusion in current open spaces;
- Ensure that there is provision of sufficient public amenities within the city centre, and
- Consider the needs of all people in the planning, upgrading and development of new parks and facilities.

Constraints

Key constraints related to open space within the city centre include:

- There is limited ability for Council to acquire land for new open space within the city centre;
- Shared or semi-public open space opportunities depend on agreement by other land owners;
- Council resources for maintenance of open spaces are limited, and
- Several open spaces within the city centre are heritage listed (e.g. Apex Park, Bigge Park and Liverpool Pioneers Memorial Park), restricting possible site uses.

Legend

	Railway Station		Parks & Open Areas
	Railway Line		Junior Play Equipment
	Site Boundary		Play Equipment
	Public Open Space		Water Play Areas
	Private Open Space		Place of Worship
	Public Plaza		Hospital Forecourt
	Corner Open Space		Institutional Facility
	Macquarie Mall		Shopping & Retail Plaza
	Educational Facility		Outdoor Dining
	Swimming Facility		Public Toilets
	Active Sports / Play		Drinking Fountains
	Cemetery		

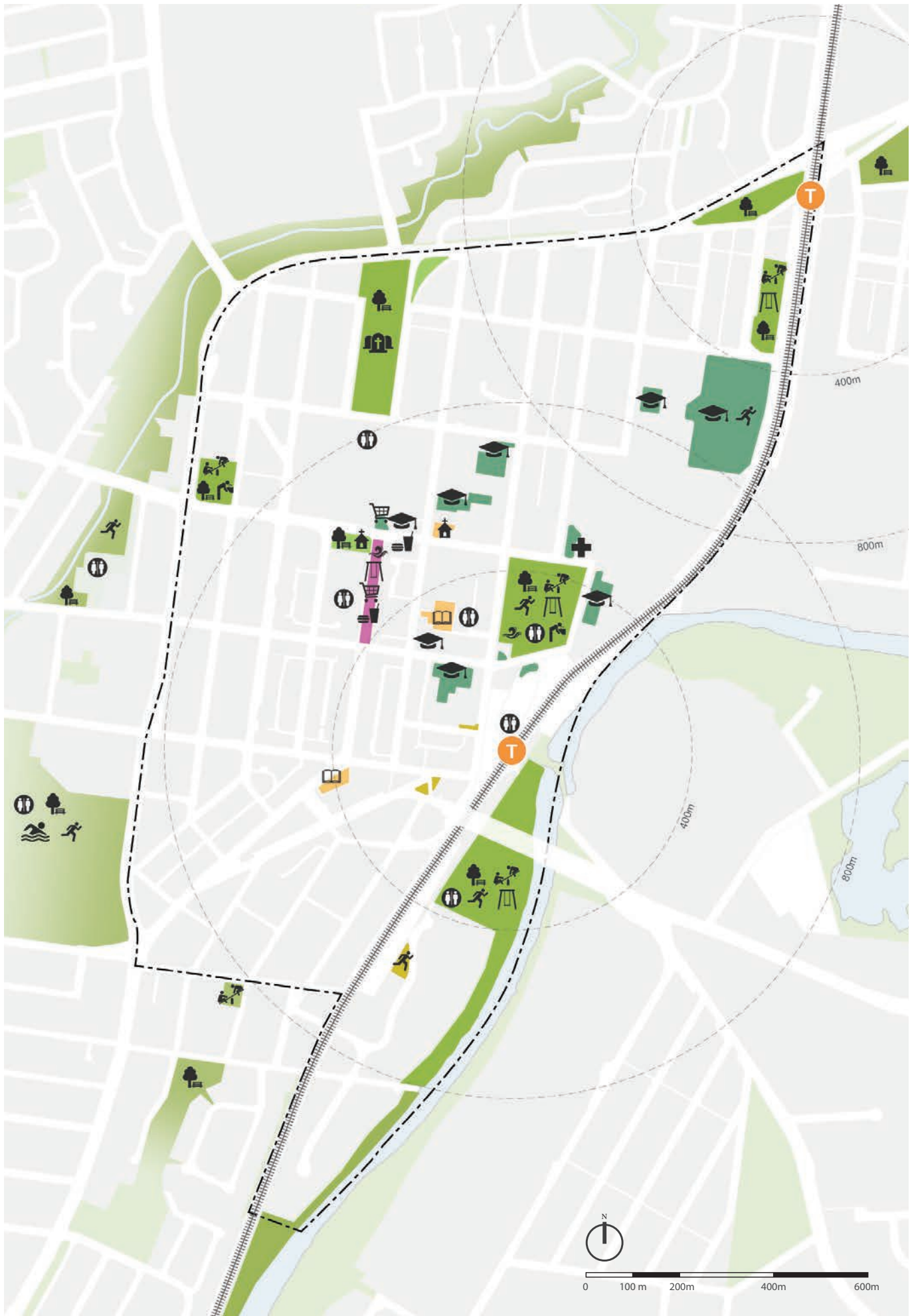


Figure 3.93 Liverpool City Centre - Open Space (Liverpool City Council)

3.3

Site Analysis & Appraisal

Open Space & Vegetation - Trees

Overview

Overall, tree canopy within the city centre is limited, with the majority of mature trees located within existing parks & open spaces, and on some of the streets within the public domain. The existing street tree palette is varied, with a mix of evergreen and deciduous trees, and both native and introduced species.

Tree Coverage

Overall, tree coverage within the city centre public domain is minimal. The areas with the highest tree coverage are the existing parks & open spaces (i.e. Liverpool Pioneers Memorial Park, Bigge Park, Lighthorse Park and Apex Park). Streets within the city centre that have the highest tree coverage include some of the north-south streets (i.e. Northumberland Street and Macquarie Street south). Most of the east-west streets have minimal tree coverage (e.g. Campbell Street, Elizabeth Street, Moore Street and Memorial Avenue). The wide spacing of many of the recently planted trees in the city centre limits capacity for interconnected canopies.

Tree Locations

Existing trees within the parks & open spaces are located within garden beds and lawn areas, and there are recently planted trees within urban open spaces in the city centre (e.g. in Macquarie Mall). The majority of trees located on the streets are planted within sidewalks, either in constructed tree pits or within planted beds, close to the street kerb edge.

Tree Species

There is a mix of evergreen and deciduous trees, and both native and exotic trees within the city centre. The majority of native species are located within the existing parks & open spaces, including two critically endangered Cumberland Plain Woodland communities, these being, *Eucalyptus microcarpa* - Grey box (located in Bigge Park and Berryman Reserve) and *Eucalyptus tereticornis* - Forest Red Gum (located in Apex Park). Many of the recently planted tree species within the streets are small to medium in height with narrow canopies, thereby providing limited shade (e.g. *Magnolia grandiflora* 'Exmouth') and many of the newly planted species have only moderate growth rates (e.g. *Gingko biloba*).

Opportunities

Key opportunities related to trees within the city centre include:

- Increase tree canopy, working towards the NSW Department of Planning, Industry and Environment's targets to achieve 40% canopy coverage across NSW, in order to keep the city cool, contribute to a healthier environment, enhance biodiversity and ensure ecological resilience;
- Link together existing open spaces into an interconnected green network (e.g. through greener streets and river/creek corridors), delivering on the Government Architect NSW's Green Grid Strategy;
- Select appropriate tree species that are: suitable for their location and context (e.g. climatic conditions, scale of street/built forms and available growing space) and promote the Western Sydney Parkland image;
- Utilise trees to define entry points/gateways/key locations, provide colour/movement/seasonal variation, provide shade/solar access;
- Utilise strategic tree plantings to define street hierarchy and/or differentiate north-south and east-west streets;
- Provide alternatives to street trees (e.g. green walls, garden beds or planters) where street tree planting would be unsuitable/not possible, and
- Encourage tree planting within the private domain, to also provide visual/physical benefit to the public domain.

Constraints

Key constraints related to trees within the city centre include:

- Limited space within areas of the public domain for street planting (e.g. narrow verges);
- Other limitations on planting mature trees within the public domain (e.g. overhead awnings & power lines, underground services);
- Private land ownership;
- Rapidly increasing demand for open space, and
- Balancing ecological outcomes (e.g. habitat, weed species) and anthropocentric considerations (e.g. shade) outcomes in the selection of tree species.

Legend

	Railway Station
	Railway Line
	Liverpool City Centre - Project Site Boundary
	Parks & Reserves within the City Centre
	Parks & Reserves outside the City Centre
	Trees within the Public Domain
	Trees within Private Property



Moore Street, Trees



Elizabeth Street, Trees

Figure 3.94 Images of Street Trees in the city centre (Liverpool City Council)



Figure 3.95 Liverpool City Centre - Trees (Liverpool City Council)

3.3

Site Analysis & Appraisal

Open Space & Vegetation - Nature Strips & Other Vegetation

Overview

In addition to open space and trees, there are several turfed/vegetated nature strips and various other plantings that form part of the green network within the city centre public domain. This includes garden beds with hedges & ornamental plantings (e.g. within streetscapes & car parks) and planter boxes.

Nature Strips

There are several green nature strips (i.e. the strip of land between the footpath and the road carriageway) within the city centre. These are predominately located in the residential areas, outside of the city core (i.e. within the northern, western and southern parts of the city centre). The nature strips mostly contain 1.2 metre-wide concrete footpaths, turf with intermittent trees and/or shrubs, and other street infrastructure.

Garden Beds

There are various constructed garden beds within the city centre, mostly located along streets within the city core (e.g. along parts of George Street south and Macquarie Street south), and in the form of blisters within the carriageway parking lane. There are generally hedges and other ornamental plantings within the garden beds.

Planter Boxes

There are many planter boxes within the city centre, with the majority located within the city core, on the kerb side of the sidewalk. These have been installed for a variety of reasons, including to provide greenery (e.g. where it is not feasible to plant trees due to overhead/underground constraints) and/or to act as a physical barrier between pedestrian sidewalks and busy vehicular streets. There are generally small shrubs and other hardy and/or ornamental species (e.g. Tulbaghia violacea - Variegated Ornamental Garlic) planted within the planter boxes.

Opportunities

Key opportunities related to nature strips and other vegetation within the city centre include:

- Integrate WSUD interventions (where appropriate) into existing nature strips and garden beds, to help filter surface water runoff and support environmental sustainability and ecological functions;
- Convert turfed nature strips into planted garden beds where appropriate (i.e. where turf is unsuccessful);
- Increase street tree plantings in nature strips and existing garden beds, in order to increase the overall urban tree canopy within the city centre, and deliver on the Sydney Green Grid;
- Include more garden beds (where possible) to enhance the visual amenity (i.e. through greenery and colourful plant displays), provide a physical and visual buffer (e.g. between vehicular roads and pedestrian footpaths/outdoor dining/recreational areas), and to assist in reducing traffic speed (i.e. through vegetated road blisters), within the city centre;
- Consider replacing planter boxes with trees, garden beds, raised garden beds, or other permanent alternatives that achieve a high quality public domain;
- Work with property owners and developers to promote urban greening within the private domain, to increase the overall visual amenity of the city centre, and
- Select vegetation and ornamental plant species that enhance the character of the city centre and assist in identifying/marketing key locations and areas (including street intersections).

Constraints

Key constraints related to nature strips and other vegetation in the city centre include:

- Narrow nature strips and/or parallel parking adjacent to sidewalks can limit the ability to accommodate garden beds;
- Garden beds, particularly those that include ornamental plantings, can require frequent and costly maintenance, which may not be feasible, and
- Theft and vandalism

Legend




	Railway Station
	Railway Line
	Liverpool City Centre - Project Site Boundary
	Parks & Reserves
	Nature Strips
	Garden Beds
	Planter Boxes



Figure 3.96 Liverpool City Centre - Nature Strip Images (Liverpool City Council)

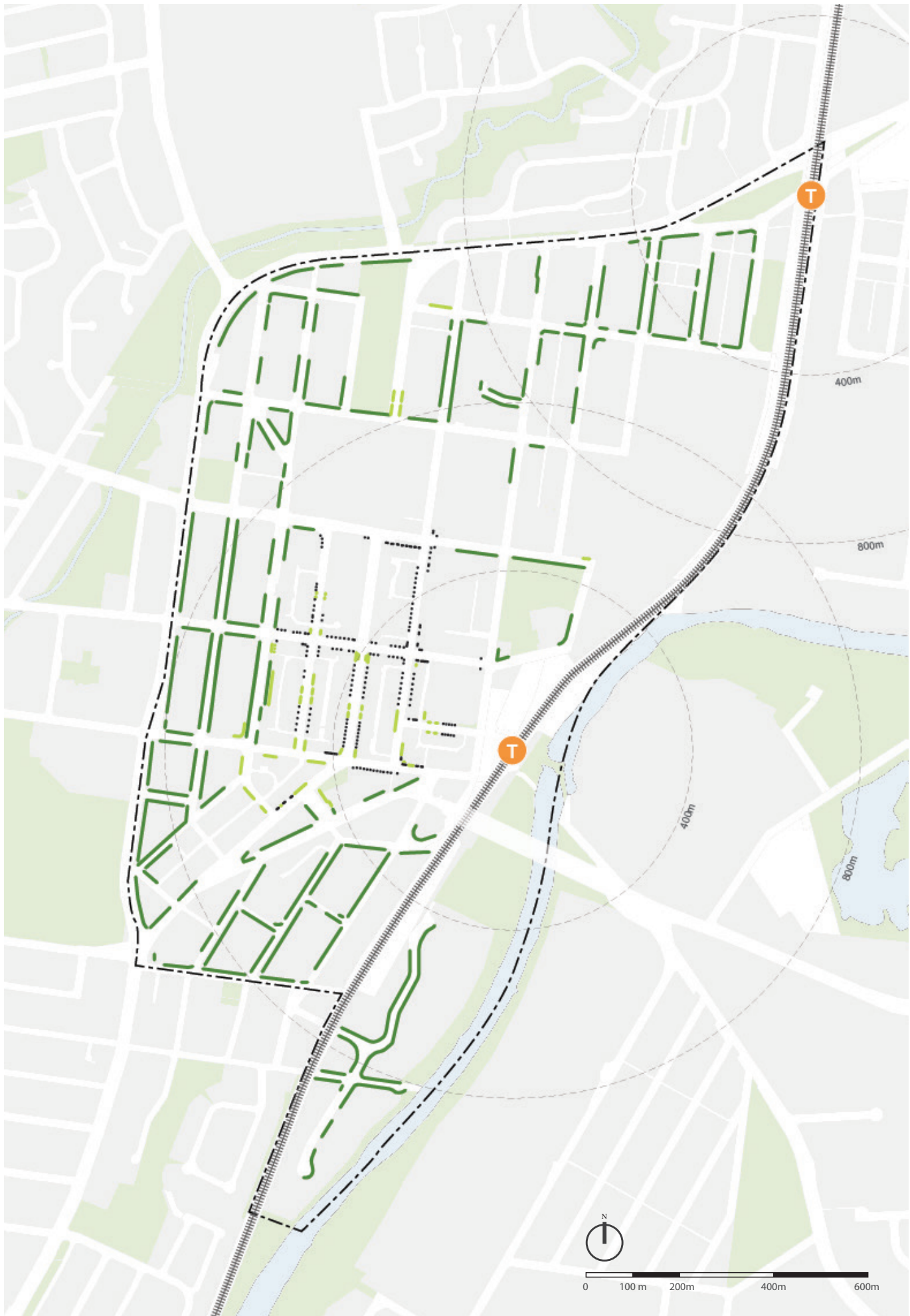


Figure 3.97 Liverpool City Centre - Nature Strips & Other Vegetation (Liverpool City Council)

3.4

SITE ANALYSIS & APPRAISAL

HERITAGE

Overview

The Liverpool City Centre has a rich and diverse multicultural heritage, with the original inhabitants of Liverpool being the Darug, Gandangara and Tharawal Aboriginal people. Heritage listed items within the city centre include parks, streets, buildings and other items that represent the city's indigenous and colonial past. Additionally, there are indigenous stories that relate to the general area, rather than specific sites or items within the city centre.

The 'Town Plan of Liverpool'

Declared by Governor Lachlan Macquarie in 1810, Liverpool adopted the "Town Plan of Liverpool" street layout which laid the foundations of town planning and further development within the city centre, and is now heritage listed. The 'Town Plan of Liverpool' features a north-south and east-west street grid and a network of laneways & arcades dissecting the centre (i.e. similar to Melbourne).

Heritage Precinct

A Heritage Precinct is located in the central-eastern part of the city centre and encompasses Bigge Park, Lighthorse Park, Dr Pirie Centre, The Old Courthouse, Liverpool Railway Station, Liverpool Public School and TAFE campus.

Heritage Buildings & Sites

Heritage listed buildings located within the city centre include All Saints Catholic Church, Collingwood Inn Hotel, Commercial Hotel, Dr James Pirie Child Welfare Centre Building, Former Liverpool Court House, Golden Fleece Hotel, Legend Hotel, Liverpool College (TAFE) site, Liverpool Fire Station, Liverpool Public School, Lyndeer House & Stables, McGrath Services Centre Building, Memorial School of Arts, St Luke's Anglican Church, The Corner Pub, The Liverpool Railway Station, various dwellings (i.e. 3 Bigge Street & 115 Castlereagh Street), various Commercial buildings (i.e. corner Macquarie Street & Memorial Avenue, 261–263 Macquarie Street, 275–277 Macquarie Street, 14 Scott Street, 16 Scott Street), various Residential buildings (i.e. 7 Speed Street, 17 Speed Street, 27 Speed Street).

Heritage Parks & Open Spaces

Heritage listed parks and open spaces located within the city centre include Apex Park (i.e. the first Liverpool Cemetery), Berryman Reserve, Bigge Park, Light Horse Park, Liverpool Memorial Pioneer's Park, (i.e. formerly St Luke's Cemetery and Liverpool Cemetery).

Other Heritage Items

Other heritage items located within the city centre include; Boer War Memorial (including memorial to Private A.E Smith), Cast-iron letterbox (on College Street), Liverpool Weir, Macquarie Monument, Milestone (i.e. corner of Elizabeth Drive and George Street), Pylons (former Liverpool railway bridge), Railway Viaduct and a row of 3 palm trees (opposite 306 Macquarie Street).

Opportunities

Key opportunities related to heritage within the city centre include:

- Protect and enhance heritage within the city centre;
- Deliver on the Government Architect NSW's Ochre Grid;
- Engage with the local Aboriginal community to expand the recognition of Aboriginal cultural heritage within the city centre;
- Integrate heritage buildings and precincts into design and encourage appropriate adaptive building/site reuse;
- Enhance heritage building forecourts and landscape areas to better integrate heritage buildings with the city fabric;
- Encourage the installation of high quality heritage interpretation (e.g. including signage and/or public art) as part of major developments to promote the history and heritage of the area and key sites within the city centre;
- Retain and enhance significant historic plantings, including those that are not heritage listed, and
- Increase and promote the value of heritage by engaging with the local community in recognising and identifying heritage assets within the city centre.

Constraints

Key constraints related to heritage within the city centre include:

- Increased pressure for residential and commercial development on sites that often disregard the presence of heritage;
- Limited understanding of heritage values;
- Limited availability of quality technical advice and support, and
- Limited availability of funds for maintenance and upkeep of heritage items contributing to dilapidation.

Legend

	Railway Station
	Railway Line
	Liverpool City Centre - Project Site Boundary
	Heritage Listed Buildings/Sites/Other Items
	Heritage Listed Roads (i.e. The 'The Town Plan of Liverpool')
	Open Space
	Heritage Precinct

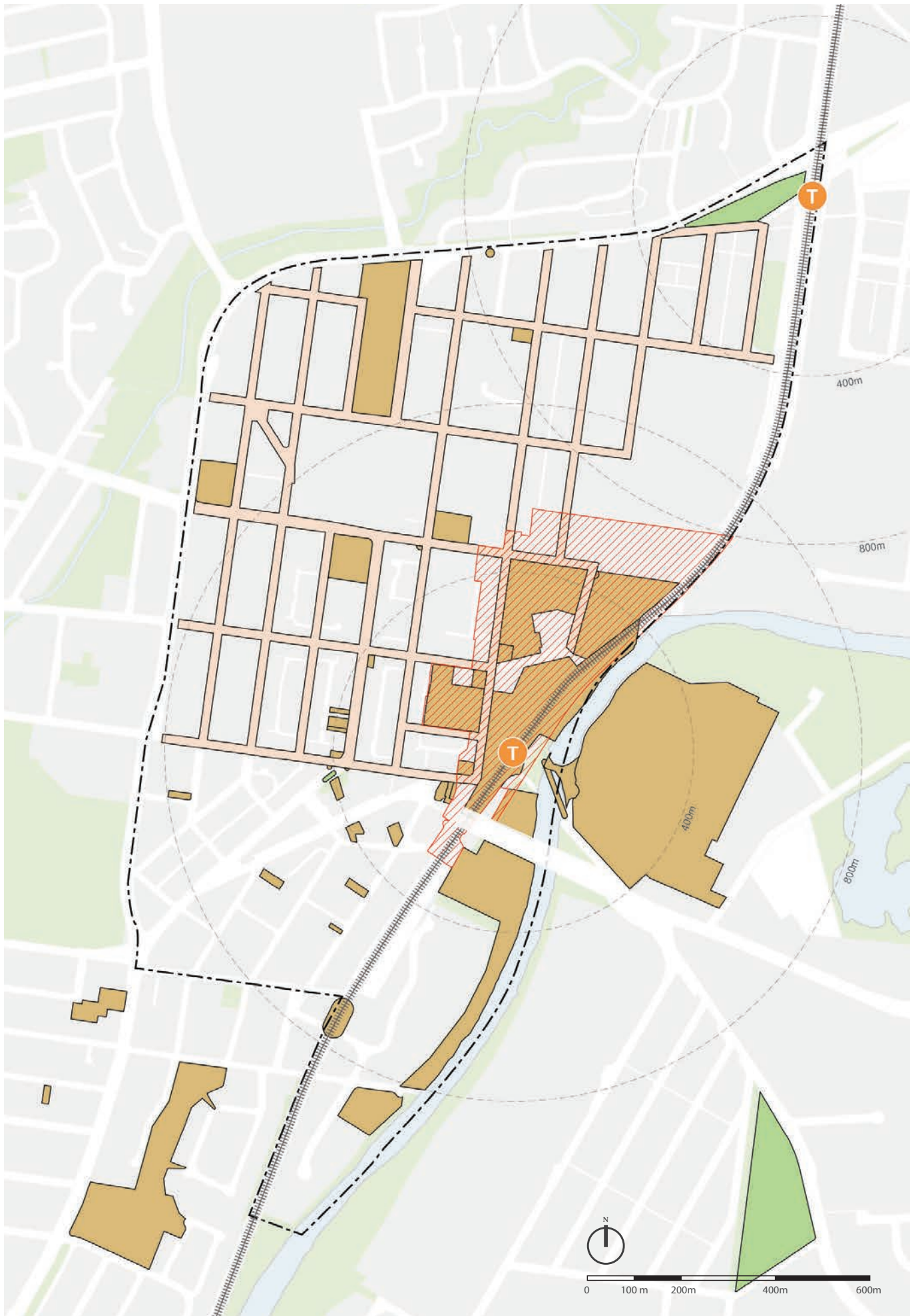


Figure 3.98 Liverpool City Centre - Heritage Items (Liverpool City Council)

3.5

SITE ANALYSIS & APPRAISAL

TRANSPORT

Public Transport

Overview

The Liverpool City Centre is serviced by high frequency public transport, which provides a range of public transport options. The majority of the city centre is located within a walkable catchment of either Liverpool or Warwick Farm Railway Station, Bus routes cover the majority of the city centre and taxi's service key areas within the city core. The Liverpool Railway Station is a transit hub for the city centre, as both a bus and rail interchange, and a taxi pickup zone.

Bus

There are approximately 30 bus routes that service the city centre, with the majority of services concentrated along Moore Street, George Street and Elizabeth Street, and all bus services are focused on the Liverpool Bus Interchange, located at Liverpool Railway Station. With a single point of access off Moore Street, the buses need to manoeuvre inside the bus interchange which has implications on interchange capacity and operational efficiency. Moore Street also functions as a Bus Transitway (i.e. T-Way) that extends from Liverpool Railway station to beyond the city centre. There are AM and PM services equalling 118 and 117 respectively, and an approximately even split for buses travelling both in and out of the city centre. The local bus network is operated by three bus service providers, these being Interline Bus Services, Transdev and Transit Systems.

Rail

The railway line runs along the eastern side of the city centre, along a ridgeline that forms the majority of the eastern site boundary. The city centre includes two train stations, these being Liverpool Railway Station and Warwick Farm Railway Station, which are serviced by regular train services connecting Liverpool with both Sydney CBD and Parramatta CBD. The majority of the city centre area falls within an 800 metre walking catchment of either railway stations. The rail network is accessed daily by over 11,000 passengers through Liverpool Station (293 trains) and Warwick Farm Station (280 trains). Approximately 80% of passengers use Liverpool Station and 20% use Warwick Farm Station.

Taxi

There are four Taxi pick-up zones located within the city centre, these being; at both Liverpool and Warwick Farm Railway Stations, outside Westfield Shopping Centre (on George Street) and on Northumberland Street (opposite St. Luke's Anglican Church).

Rideshare

Rideshare is a location-based application that has recently grown in popularity, allowing users to hire an on-demand private driver. Popular rideshare pickup locations with the city centre include Liverpool Railway Station, Liverpool Hospital and George Street.

Opportunities

Key opportunities related to public transport within the city centre include:

- Develop Moore Street as a public transit boulevard, forming part of Council's planned 15th Avenue Smart Transit Corridor, linking the future Western Sydney (Nancy-Bird Walton) International Airport and the Liverpool City Centre;
- Develop Liverpool Railway Station as a public transport interchange. Improvements could include additional 'kiss and ride' zones and improved end-of-trip facilities;
- Integrate the pedestrian and cycleway network with Liverpool Railway Station interchange and Warwick Farm Railway Station;
- Investigate the feasibility of a shuttle loop within the city centre to link Places of Interest with the transport interchange;
- Improve access routes to Liverpool and Warwick Farm Railway Stations and Bus Stops within the city centre, and improve associated signage and wayfinding, and
- Upgrade existing bus shelters and bus stops, to achieve improved access, inclusion and comfort.

Constraints

Key constraints related to public transport within the city centre include:

- Increased population within the city centre will place pressure on the existing public transport system;
- Public transport infrastructure in the city centre including the railway line is owned by others (i.e. NSW Government), limiting Council's capacity to make decisions relating to public transport infrastructure upgrades and improvements;
- Integrating active transport modes with the public transport system may be challenging (e.g. limited road widths to accommodate new cycle ways), and
- A preference for driving over other modes of transport, including public transport.

Legend

	Railway Station
	Railway Line
	Liverpool City Centre - Project Site Boundary
	Bus Stops
	Bus Terminal
	Taxi Pickup / Waiting Zones
	Bus Routes
	Bus Transitway (T-Way)

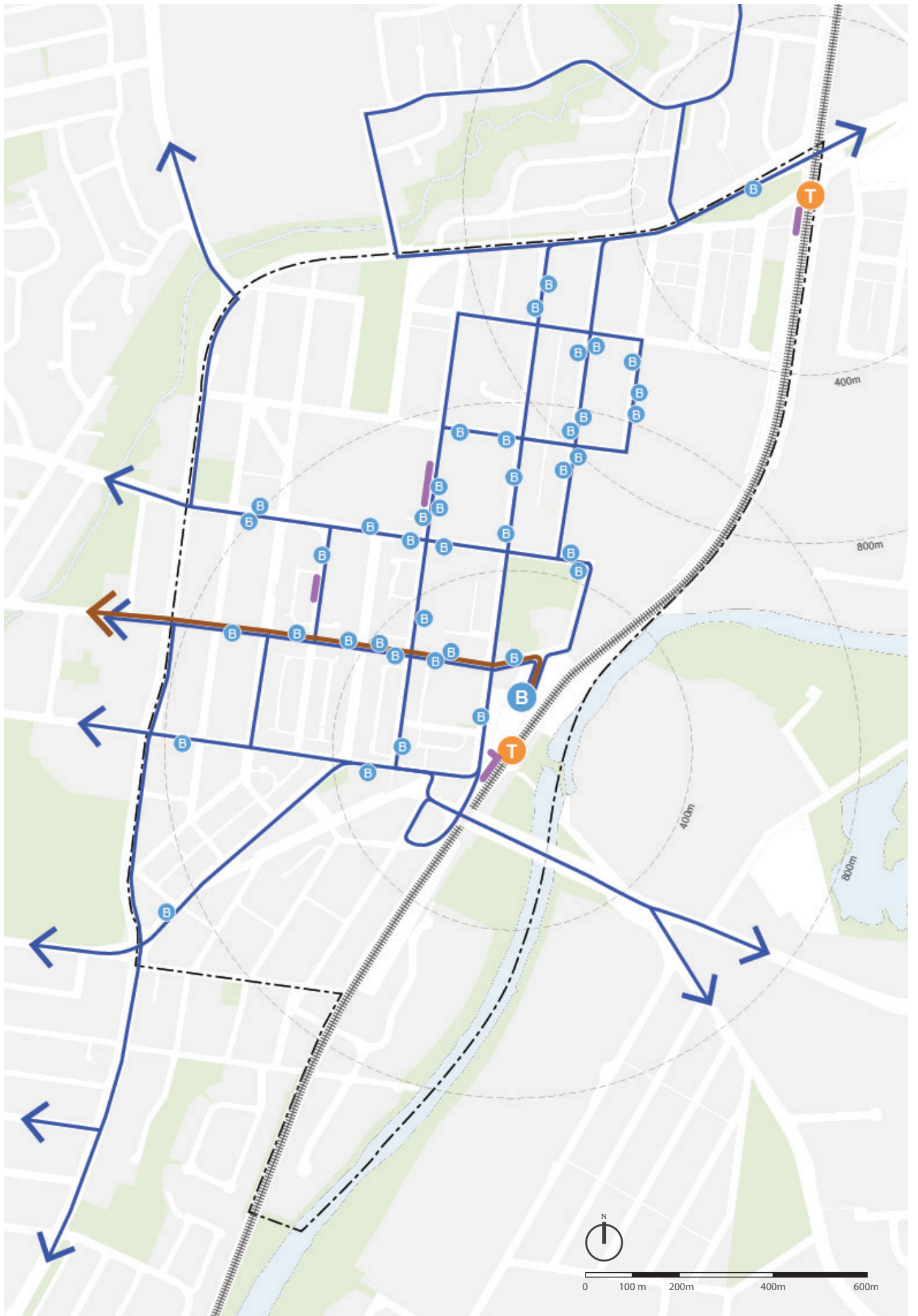


Figure 3.99 Liverpool City Centre - Public Transport (Liverpool City Council)

3.5

Site Analysis & Appraisal Transport - Active Transport

Overview

Cycle Paths

The Liverpool City Centre currently includes both off-road and on-road cycle paths, with a proposed cycling network that, when completed, will provide connections throughout the city centre. The majority of the existing off-road cycle paths run along the eastern side of the city centre, forming part of the Parramatta to Liverpool "Rail Trail" (i.e. an off-road cycle path that follows the railway line between Parramatta and Casula). The off-road cycle paths within Liverpool are separate from the road network, and have the ability to be restricted to cyclists only or shared with pedestrians. The majority of the cycle paths currently within the city centre are on-road cycle paths, that are located within the road network. For roads with high traffic volumes, cyclists are given access to the road shoulder, and for roads with low traffic volumes, cyclists share the road with other vehicles. Cycling end of trip facilities within the city centre are generally limited to bicycle parking, mostly located at Liverpool Railway Station, Warwick Farm Railway Station, outside TAFE & Westfield Shopping Centre and within Macquarie Mall.

Pedestrian Paths

The core of the city centre covers an area of approximately 800m by 1km, with main blocks generally measuring 100m by 250m, making it an easily walkable centre. Within the city centre, pedestrian infrastructure is focused along the commercial and retail centre. Three different types of pedestrian paths can be found in the city centre, these being fully sealed with a consistent surface (i.e. in the city centre core), fully sealed with an inconsistent surface (i.e. on the edge of the city core), and partially sealed (i.e. along the residential areas within the city centre). There are several pedestrian crossings within the city centre that provide mid-block connections, including elevated, marked and refuge island crossings. A network of internal walkways (i.e. arcades that connect two streets) supports the pedestrian paths and increases permeability within the city.

Opportunities

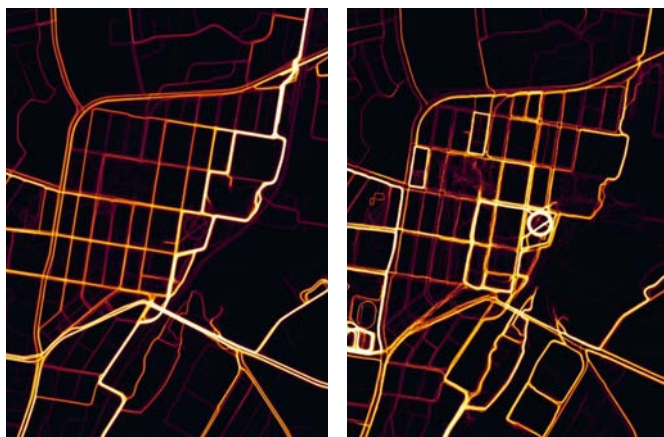
Key opportunities related to active transport within the city centre include:

- Complete the missing links of the proposed cycleway network (i.e. as per Council's adopted Bike Plan);
- Include adequate end of trip facilities at appropriate locations;
- Improve wayfinding for pedestrians and cyclists, for easier navigation within the city centre;
- Increase the amount of dedicated off-road cycle ways within the city centre;
- Provide pedestrian and cycle paths along the Georges River, river crossing and to Liverpool Railway station;
- Improve and increase active transport linkages with Lighthorse Park and eastern edges of the Georges River;
- Prioritise pedestrians and cyclists in street design, including through increasing the amount and quality of public domain (e.g. shaded and cooler streets), and
- Ensure that footpaths and cycleways are accessible and inclusive, and implement the recommendations of Liverpool Disability Inclusion Action Plan relating to active transport.

Constraints

Key constraints related to active transport within the city centre include:

- A lack of existing road width to accommodate dedicated active transport facilities and infrastructure;
- A preference for motorists over pedestrians may impact the ability to reconfigure streets;
- Retrofitting existing private buildings to incorporate improved access is dependant on owners, and
- The Georges River and private land ownership of lots located along the river are barriers to connectivity between the city centre and areas east of the river.



Strava Labs - Cyclist Activity Map Strava Labs - Pedestrian Activity Map
Figure 3.100 Liverpool City Centre Active Transport (Strava Labs)

Legend

	Railway Station
	Railway Line
	Liverpool City Centre - Project Site Boundary
	Pedestrian Footpaths/Sidewalks - Highly Used
	Pedestrian Footpaths/Sidewalks - Moderately Used
	Existing Bicycle Routes
	Proposed Bicycle Routes
	Bicycle Racks
	East-West Pedestrian Arcades

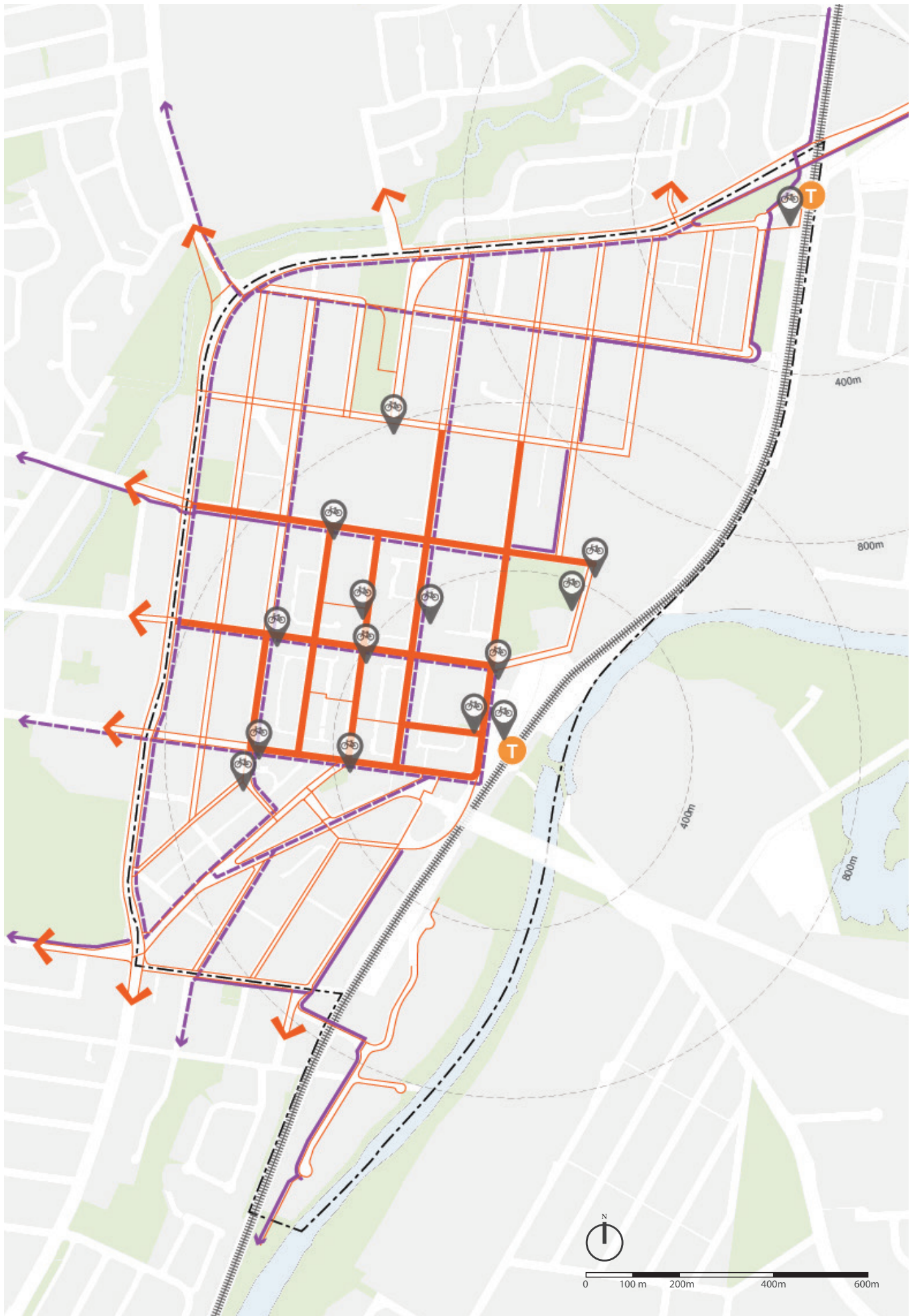


Figure 3.101 Liverpool City Centre - Active Transport (Liverpool City Council)

3.5

Site Analysis & Appraisal

Transport - Vehicular Transport & Car Parking

Overview

Road Hierarchy

The overall vehicular movement structure within Liverpool City Centre corresponds to the rectilinear city street grid and the established hierarchy of highways, roads and streets. The Hume Highway & Newbridge Road provide regional connectivity and other major arterial roads provide access to the city centre, and frame the grid of secondary and tertiary roads and streets. The majority of the trips from surrounding neighbourhoods to and from Liverpool City Centre is dominated by private vehicle movement which creates significant congestion during peak hours especially in areas with signalised intersections.

Road Classification

Roads within the city centre are classified as either State, Regional or Local roads, according to the NSW Roads and Maritime Services classification for roads. The following roads are classified as State roads; Cumberland Highway, Hume Highway, Macquarie Street (Hume Highway to Terminus Street), Moore Street, New Bridge Road (East of Terminus Street), and Terminus Street (Macquarie Street to New Bridge Road). The following roads are classified as Regional roads; Memorial Avenue (Hume Highway to Bathurst Street), Bathurst Street (Memorial Avenue to Macquarie Street), Macquarie Street (Bathurst Street to Pirie Street), Pirie Street (Macquarie Street to Terminus Street). All other roads within the city centre are classified as Local roads.

Road Ownership

The following roads within the city centre are owned and managed by NSW Roads and Maritime Services; Bathurst Street (Memorial Avenue (Hume Highway to Macquarie Street), Cumberland Highway, Hume Highway, Macquarie Street (Hume Highway to Terminus Street), Memorial Avenue (Hume Highway to Bathurst Street), Moore Street, New Bridge Road (East of Terminus Street), Pirie Street (Macquarie Street to Terminus Street), Terminus Street (Macquarie Street to New Bridge Road). All other roads within the city centre are owned and managed by Liverpool City Council.

Parking

Off-street parking is currently located at Westfield Shopping Centre (3,498 spaces), Warren Serviceway car park (640 spaces), Northumberland car park (440 spaces), Bathurst Street car park (240 spaces), Liverpool Plaza Shopping Centre (230 spaces), Speed Street car park (87 spaces), Macquarie Street car park (49 spaces) and at both Liverpool and Warwick Farm Railway Stations. On-street parking is currently located on most roads within the city centre.

Accident Locations

Repeated traffic accidents have been reported at various intersections within the city centre. These includes intersections along; the Hume Highway, Bathurst Street, Elizabeth Street, Moore Street, and Terminus Street.

Opportunities

Key opportunities related to vehicular transport within the city centre include:











- Encourage active over vehicular transport modes, through creating pedestrian-friendly streets and pedestrian-priority streets, within the city centre;
- Explore opportunities to increase the amount of off-street parking, both within the city core and outside the city centre, including through new developments;
- Explore the possibility of introducing shuttle bus services to link with parking locations outside the city centre;
- Explore dynamic parking systems to increase parking efficiency and reduce parking search time;
- Explore the possibility of increasing 'kiss & ride' zones rather than dedicated parking spots at key locations (e.g. Liverpool Railway Station);
- Improve the quantity and quality of accessible parking spaces, close to essential services and key locations;
- Explore the potential of one-way streets that increase intersection capacities and overall network speed, and result in increased footpaths for active transport, and
- Implement traffic-calming measures, including at reported high accident intersections, in the city centre.

Constraints

Key constraints related to vehicular transport within the city centre include:

- Some roads within the city centre are owned and managed by the NSW Government, limiting Council's ability to implement interventions, and
- There is significant cost associated with providing off-street (e.g. multi-storey) car parking.

Legend

	Railway Station
	Railway Line
	Liverpool City Centre - Project Site Boundary
	Major State Roads
	Liverpool City Arterial Roads
	Main Roads & Collector Streets
	Parking Locations
	Street Parking
	Designated Parking Spaces
	Prominent Accident Locations
123	Number of Parking Spots

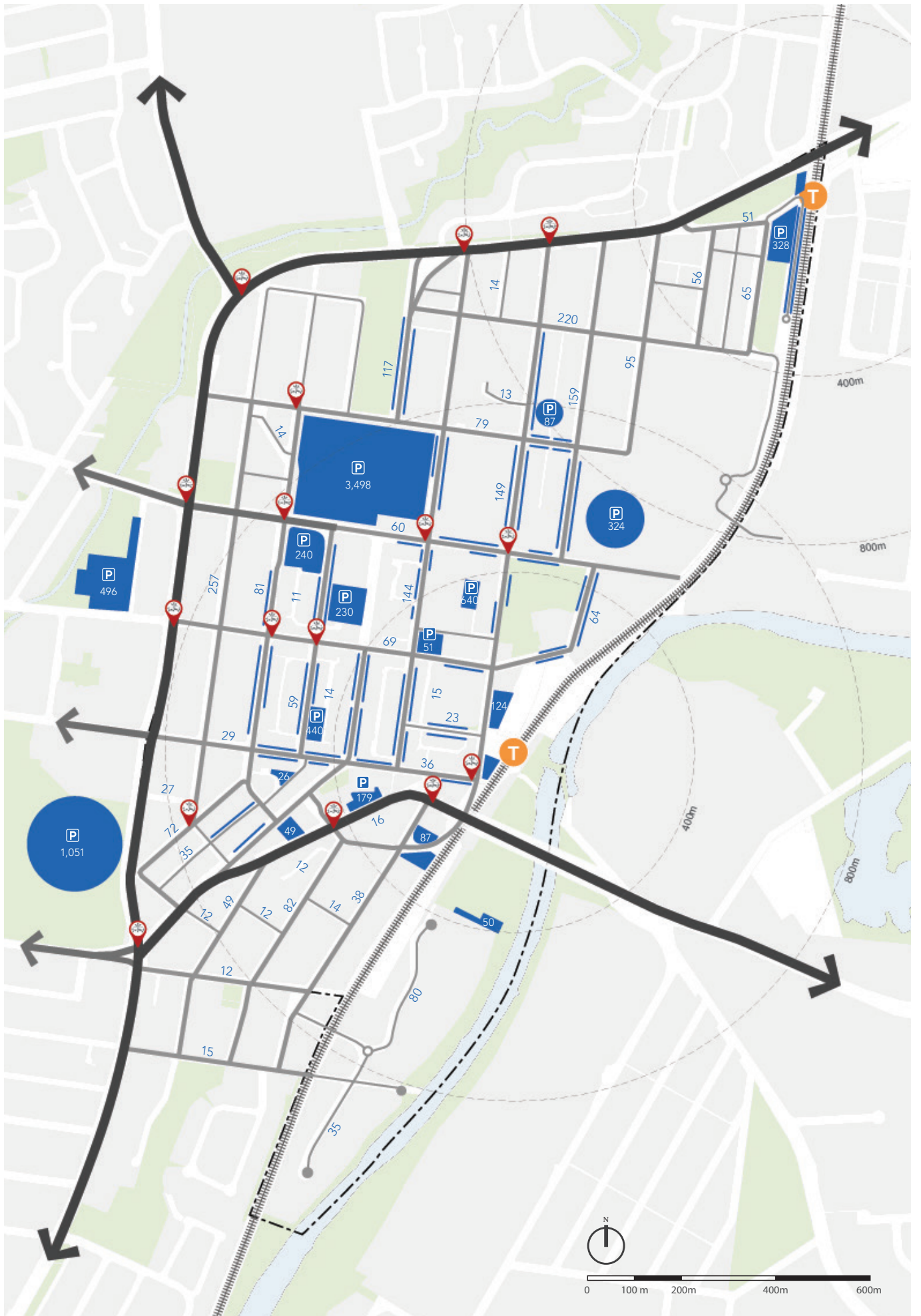


Figure 3.102 Liverpool City Centre - Vehicular Transport & Car Parking (Liverpool City Council)

3.5

Site Analysis & Appraisal

Transport - Traffic Direction & Speed

Overview

The Liverpool City Centre includes both one-way and two-way streets, with the majority of streets being two-way and the majority of one-way streets located within the city core. Traffic speeds range from 40 to 70 kilometres per hour, with the highest speed limits along the Hume Highway and the lowest speed limits within the city core.

Traffic Direction

The majority of one-way streets are located within the city core, with George Street and Northumberland Street being the two main streets that are uni-directional (i.e. between Elizabeth Street to the north and Scott Street to the south). The corresponding laneways that connect to these two streets are also designated for one-way traffic (i.e. Laurantus Serviceway, Huckstepp Serviceway, Northumberland Serviceway, Hanwell Serviceway and George Lane). Other one-way streets include Warren Serviceway, Crawford Lane, and parts of Terminus Street, Scott Street and Macquarie Street (north). All other streets within the city centre are designated as two-way vehicular traffic.

Speed Limits

The average traffic speed within the city centre is assigned as 50 kilometres per hour, with the exception of the core commercial area and school/hospital zones which have a speed limit of 40 kilometres per hour. The lower speed limit was introduced by Liverpool City Council in areas with high pedestrian access, in conjunction with Council's Pedestrian Access and Mobility Plan (PAMP), to ensure pedestrian safety in key locations within the city centre. Higher speed limits apply to the southern portion of Macquarie Street, Hume Highway and Copeland Street. The speed limit along Macquarie Street south and the Hume Highway is 60 kilometres per hour, and the speed limit along Copeland Street is 70 kilometres per hour.

Red-Light & Speed Cameras

There are both Red Light/Speed Cameras and School Zone Speed Cameras located within the Liverpool City Centre. Combined Red Light/Speed Cameras are located at the following intersections; Copeland Street/Hume Highway & Elizabeth Drive, Hume Highway & Hoxton Park Road, Memorial Avenue & Bathurst Street, and Moore Street & Bathurst Street. There is a fixed School Zone Speed Camera located on Bigge Street, between Elizabeth Drive and Campbell Street (within the All Saints Catholic College). Mobile Speed Cameras are also located within the city centre from time-to-time, including along the Hume Highway/Copeland Street.

Opportunities

Key opportunities related to traffic direction and speed within the city centre include:







- Explore the possibility of reducing vehicular lane widths, in order to slow traffic speed, and increase the amount of public domain within the city centre;
- Introduce traffic calming measures and devices (e.g. raised thresholds & crossings) to reduce vehicular traffic speeds and prioritise pedestrian movement within the city centre;
- Introduce dynamic signage to regulate traffic conditions and divert traffic at peak times, to improve vehicular traffic movement and reduce congestion within the city centre;
- Explore the possibility of introducing additional one-way traffic along certain core streets, to further regulate traffic speeds within the city centre;
- Consider (where appropriate) substituting on-street car parking for improved active and sustainable transport facilities (e.g. bicycle lanes or pedestrian amenity improvements), and
- Encourage mode shift by investing in the provision of alternative & sustainable travel choices.

Constraints

Key constraints related to traffic direction and speed within the city centre include:

- Limited active and public transport infrastructure and/or services (i.e. limited off-peak/weekend services) encourages vehicular transport to and from the city centre, contributing to congestion, and
- The relatively flat topography, linear streets and good sightlines enables motorists to drive at faster speeds, within the city centre.

Legend

	Railway Station
	Railway Line
	Liverpool City Centre - Project Site Boundary
	Two Way Roads / Streets
	One Way Roads / Streets
	Vehicular Speed Limits
	40km/hr zone

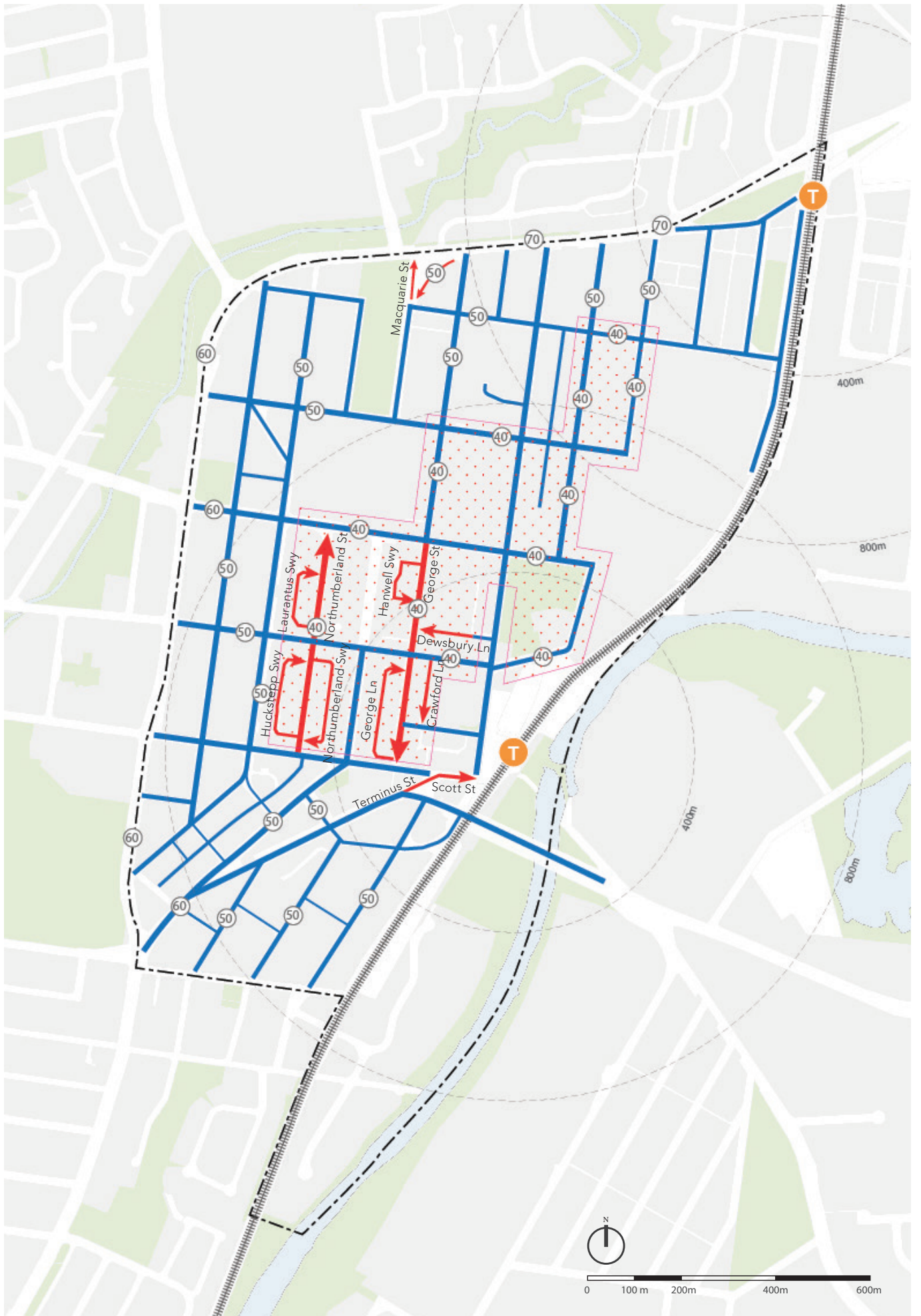


Figure 3.103 Liverpool City Centre - Traffic Direction & Speed (Liverpool City Council)

3.6

SITE ANALYSIS & APPRAISAL PLANNING CONTROLS

Liverpool Local Environmental Plan (LLEP)

Overview

The Liverpool Local Environmental Plan (LLEP) and the Liverpool City Centre Development Control Plan (DCP) are the primary planning documents that apply to Liverpool City Centre. The LLEP is currently being reviewed by Council, and the revised plan will support increased commercial and residential uses and aims to make Liverpool City Centre a walkable, active river city with attractive open spaces and increased connections. The health and innovation precinct is expected to play an important role in shaping the future of the city centre.

Zoning

The LLEP identifies the following zoning within the city centre; B4 - Mixed Use and B3 - Commercial (i.e. land generally within the City Core and extending along Macquarie Street south to the Hume Highway), R4 - High Density Residential (i.e. in periphery areas of the city centre including northern & southern areas and along the western edge of the city centre along the Hume Highway/Copeland Street), SP2 - Infrastructure (i.e. the Health and Innovation Precinct and along parts of the Railway Line), B1 - Neighbourhood Centre (i.e. a row of local shops located along Copeland Street (north), and RE1 - Public Recreation (i.e. existing parks and reserves within the city centre).

Land Ownership

The majority of land within the city centre is privately owned. However there are several sites that are Crown Land, Community Land, Operational Land and Leased Land. Crown land includes Apex Park, Bigge Park, Former Liverpool Courthouse, Lighthouse Park (partially), Liverpool Memorial Pioneers Park and land adjacent to Railway Street. Community Land includes Hart Park (partially) and Lighthouse Park (partially). Operational Land includes St Luke's Anglican Church, Liverpool City Library and Northumberland Street carpark. Leased Land includes the Liverpool Hospital site.

Minimum Lot Sizes

The majority of minimum lot sizes within the city centre is 1,000m², with parcels of land adjoining the city centre boundary having minimum lot sizes of 300m² (i.e. residential lots around the northern, western and southern edges of the city centre), 600m² (i.e. east of Warwick Farm Railway Station), 2,000m² (i.e. residential lots south of the city centre), and 10,000m² (i.e. Woodward Park).

Opportunities

Key opportunities related to planning controls within the city centre include:

- Integrate land use with transport planning, to help achieve a 30-minute city;
- Promote diversity of land uses to help activate the city centre and sustain an 18-hour economy;
- Capitalise on opportunities for developers to deliver public domain improvement works, through the Development Application process;
- Integrate public parking within new buildings, through the Development Application process;
- Utilise Developer Contributions to fund public domain improvements within the city centre;
- Integrate the active transport network with green corridors to create a comprehensive place-based approach;
- Encourage environmentally sustainable design for new developments within the city centre, through Design Excellence Panel reviews, and
- Encourage high quality public and private domain design for new developments in the city centre, through the Development Application process and Design Excellence Panel reviews.

Constraints

Key constraints related to planning controls within the city centre include:

- Residential zoning and quality of the residential buildings along the Hume Highway/Copeland Street impacts the city centre gateway experience;
- Densification of the city centre and increasing population within the LGA will impact the demand for public space and public domain facilities within the Liverpool city centre;
- Private/other ownership of land will impact Council's ability to make decisions related to areas within the public domain;
- Regulatory barriers restricting local planning responsibilities and strategies;
- Reliance on State and Federal Government policies that can affecting the housing market, and reliance on the market for delivery of dwellings and businesses, and
- Possible community objection to key planning policy directions.

Legend
















	Railway Station		B5 - Business Development		R2 - Low Density Residential
	Railway Line		B6 - Enterprise Corridor		R3 - Medium Density Residential
	Project Site Boundary		SP2 - Infrastructure		R4 - High Density Residential
	B1 - Neighbourhood Centre		IN1 - General Industrial		RE1 - Public Recreation
	B3 - Commercial Core		IN2 - Light Industrial		RE2 - Private Recreation
	B4 - Mixed Use		R1 - General Residential		W1 - Natural Waterways



Figure 3.104 Liverpool City Centre - LLEP Zoning (Liverpool City Council)

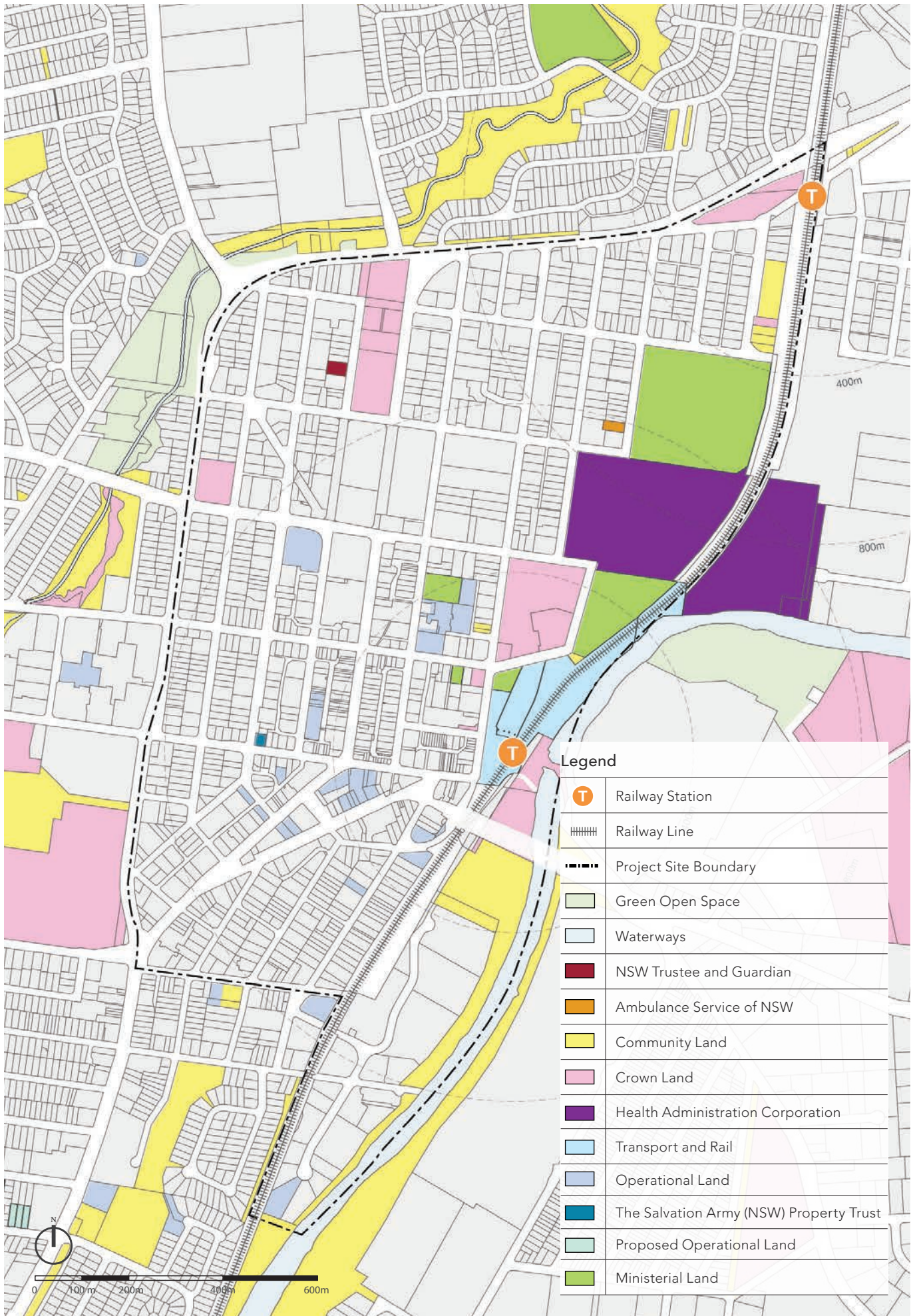


Figure 3.105 Liverpool City Centre - LLEP Land Ownership (Liverpool City Council)

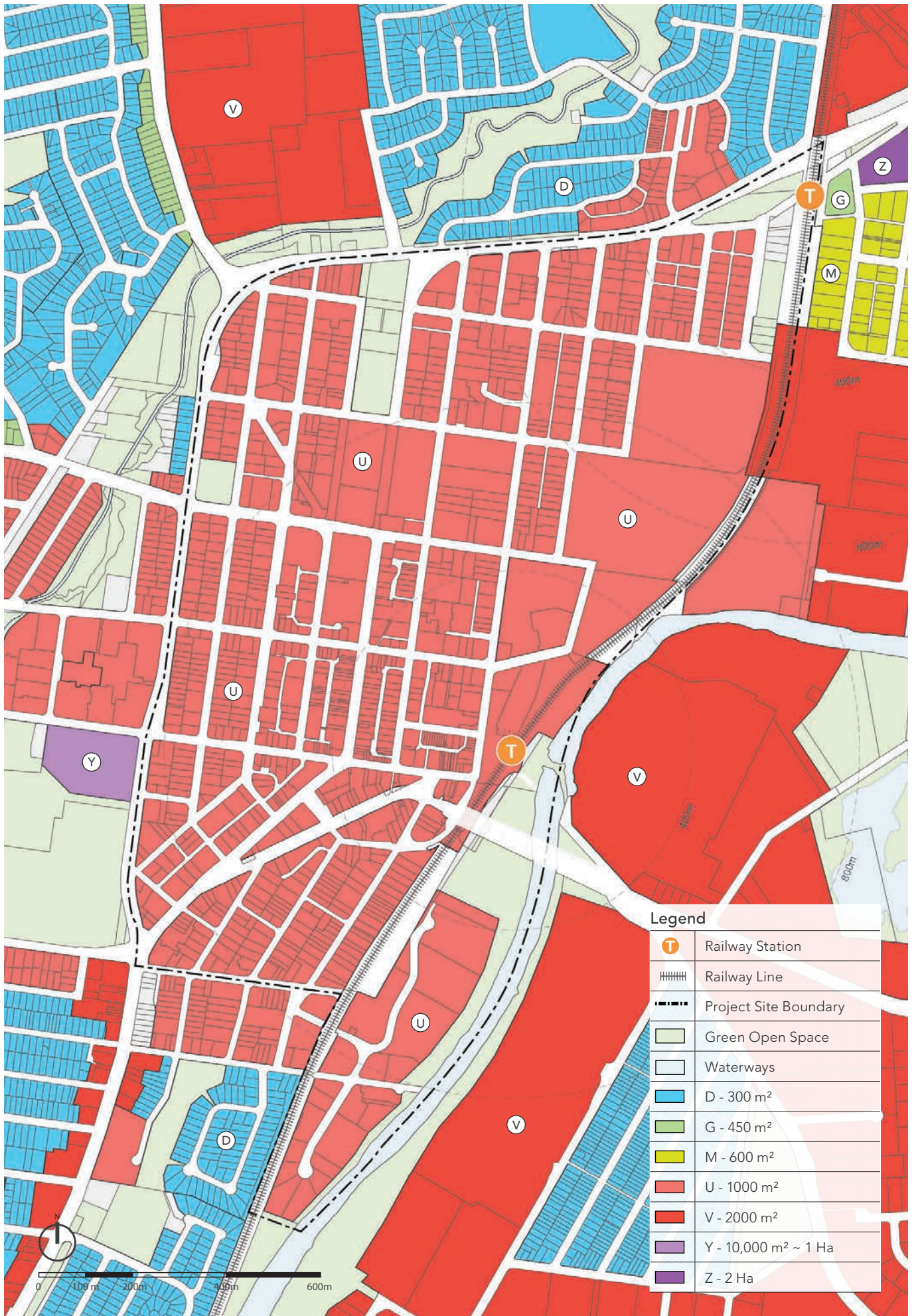


Figure 3.106 Liverpool City Centre - LLEP Minimum Lot Sizes (Liverpool City Council)

3.7

SITE ANALYSIS & APPRAISAL BUILT FORM

Building Typologies and Permissible Building Heights

Overview

Building form refers to the individual elements of building design that collectively contribute to the character and appearance of the built environment. The Liverpool Local Environmental Plan (LLEP) 2008 includes provisions for land use, building heights, sun access, floor space ratio (FSR) and design excellence, all of which contribute to building form. The development controls in Part 4 of Council's Development Control Plan (DCP) are intended to reinforce the desired outcomes for the city centre, with the resulting built form and character of new development contributing to an attractive public domain in the city centre, and producing a desirable setting for the intended uses.

Building Typologies

Council's DCP establishes that new buildings within the city centre are developed using the following building typologies for the city centre precincts (i.e. Precincts established in Council's LLEP):

- Perimeter block typology for Fine Grain precinct;
- Perimeter block typology for Midrise precinct, with the exception of those Midrise sites developed pursuant to clause 7.5A of LLEP 2008 (which may also be developed with a tower on podium typology);
- Perimeter block, tower on podium or detached building typology for Long Term Civic Sites;
- Tower on podium or detached building typology for Standalone sites;
- Perimeter block, tower on podium or detached building typology for Commercial Core sites;
- Perimeter block, or detached building typology for Mixed Use;
- Detached building typology for High Density Residential sites, and
- Perimeter block, or detached building typology for Enterprise Corridor sites and Neighbourhood Centre sites.

Maximum Permissible Building Heights

Council's Planning Controls establish the maximum permissible building heights, ranging between 8.5 metres to 100 metres in the city centre. These include:

- Up to 35 metres for the majority of the city centre, including many periphery residential areas in the north, west and south of the city core;
- Up to 21 metres for the fine grain precinct along Macquarie Street and the Liverpool Railway Station;
- Up to 18 metres for St Luke's Anglican Church and residential areas along the Georges River;
- Up to 29 metres for areas within the city core and along Macquarie Street south;
- Up to 45 metres for many mixed use areas and residential areas, and
- Up to 100 metres for several sites within the city and commercial core.

Certain sites that have a site area greater than 1,500m² and two or more street frontages may exceed the maximum height and plan for FSR up to 10:1.

Opportunities

Key opportunities related to building typologies and permissible building heights within the city centre include:



























- Consider scale, height and form in relation to the public domain (e.g. incorporate tree species that are appropriate for surrounding built forms);
- Consider incorporating materials in the public domain that are complimentary to the built forms within the city centre;
- Consider using public domain interventions to compliment prominent buildings that function as way finding mechanisms and landmarks within the public domain;
- Encourage active edges to increase building permeability and strengthen the relationship between buildings and the public domain;
- Consider that building height is a key factor in defining and framing the overall volume of the public realm and streetscape, and
- Consider future development in accordance with maximum permissible building heights and consider how this may shape the future public domain and streetscapes.

Constraints

Key constraints related to building typologies and permissible building heights within the city centre include:

- Possible overshadowing of public spaces (i.e. on sites that have high maximum permissible building heights);
- Overall densification of the city centre will increase usage of the existing public domain within the Liverpool city centre, and
- Densification within the city core will increase the demand for public domain infrastructure in key sites (e.g. likely increased requirements for public furniture near future towers).

Legend

	Railway Station		R - 21m		Z1 - 56m
	Railway Line		S - 24m		Z2 - 58m
	Site Boundary		T1 - 25m		AA1 - 65m
	Green Open Space		T2 - 28m		AA2 - 68m
	Waterways		T3 - 29m		AA3 - 76m
	I - 8.5m		U - 30m		AA4 - 77m
	O - 15m		V - 35m		AB - 80m
	P - 18m		X1 - 45m		AC - 100m
	Q - 20m		X2 - 46m		

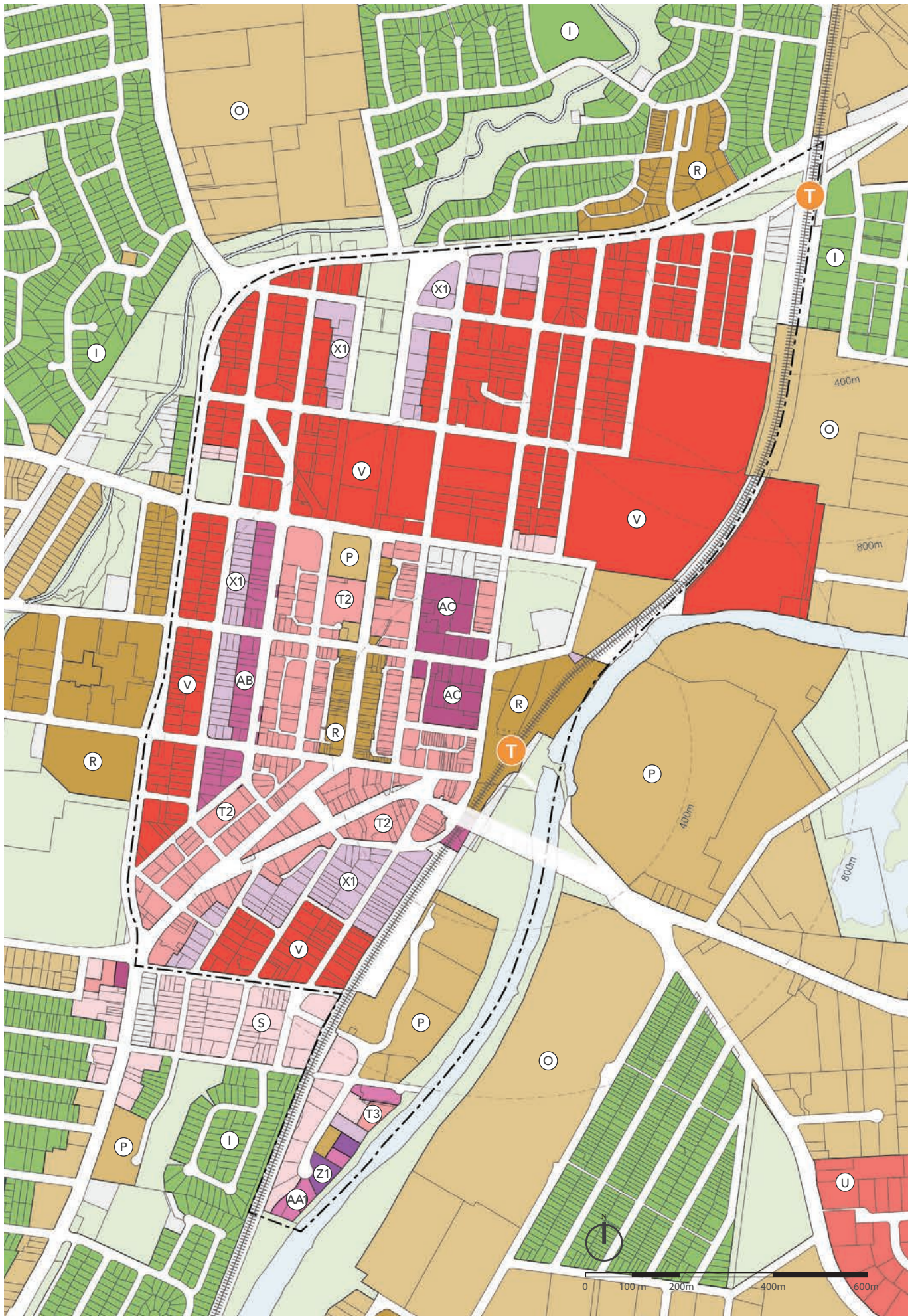


Figure 3.107 Liverpool City Centre - LLEP Maximum Permissible Building Heights (Liverpool City Council)

3.7

Site Analysis & Appraisal Built Form - Applicable Floor Space Ratio (FSR)

Overview

The Liverpool Local Environmental Plan (LLEP) 2008 includes provisions for Floor Space Ratio (FSR) controls, which is one of the factors that contribute to building form. FSR is the ratio of the floor area of a building to its site area, establishing the standards for maximum development density within a designated area and the intensity of land use. FSR defines the size of a building and controls the intensity of development on each parcel of land, appropriating the size of each site with the extent of possible development. FSR, combined with building heights guide the overall built form and help in maintaining the visual relationship between new developments and the existing character of the area, whilst taking into account various factors. These include the availability of infrastructure, generation of vehicular & pedestrian traffic, adverse environmental effects, affect on adjoining properties & surrounding public domain, and the desired future character of specific areas.

LLEP & FSR Controls

Liverpool City Council's FSR controls aim to achieve design excellence within the city centre by ensuring the extent of floor space within building envelopes allows for generous space, for articulation & modulation in design.

The objectives of Council's FSR controls are:

- Establish the scale, dimensions, form and separation of buildings as appropriate for the city centre and the range of uses;
- Provide a strong definition of the public domain with buildings on a common alignment, and
- Promote building frontages with good connections to the street.

The LLEP 2008 identifies specific precincts relating to FSR controls for the Liverpool City Centre. The precincts relate to specific character areas, defined as follows:

- The Fine Grain Precinct;
- The Midrise Precinct;
- The Long-Term Civic Sites Precinct;
- The Commercial Core Precinct, and
- The Standalone site, known as 77-83 Moore Street and 193 Macquarie Street.

Applicable FSR in the city centre

Higher FSR controls and Amendment 52 of the Local Environmental Plan (LEP) allows for an increased development and growth within the Liverpool city centre. This provision is not only restricted to the city centre core but also extends to mid-rise and B3 areas. Development sites greater than 1500m² in area, having two or more street frontages can seek an approval for FSR 10:1. This provision ensures that an appropriate density and built volume is achieved within the city centre over a period of time.

Opportunities

Key opportunities related to FSR within the city centre include:

- Higher FSR controls within the city core area allows for densification of the city centre, that will result in increased activation and growth of the city centre public domain;
- Lot amalgamation could be an option to utilise FSR controls within the city centre, which can lead to increased opportunities for public domain upgrades associated with new developments, and
- Through guiding built form outcomes, FSR can help achieve Council's aspirations for the city centre, including strengthening character areas, which can be complimented in public domain improvements.

Constraints

Key constraints related to FSR within the city centre include:

- Market forces guide development, which could result in maximum FSR controls not being utilised, and
- Densification within the city core will increase the demand for public open space and public domain infrastructure within the city centre.



New Apartments on Bigge Street



Apartments on Scott Street

Figure 3.108 Images of large scale developments in Liverpool City Centre

Legend

	Railway Station		P - 1.2		W1 - 3.5
	Railway Line		S1 - 1.5		W2 - 3.6
	Site Boundary		S2 - 1.7		W3 - 3.7
	Green Open Space		T - 2.0		X - 4.0
	Waterways		U - 2.5		Z - 5.0
	A4 - 0.25		V1 - 3.0		AA - 6.0
	D - 0.5		V2 - 3.3		AE - 10.0
	I - 0.75				
	N - 1.0				

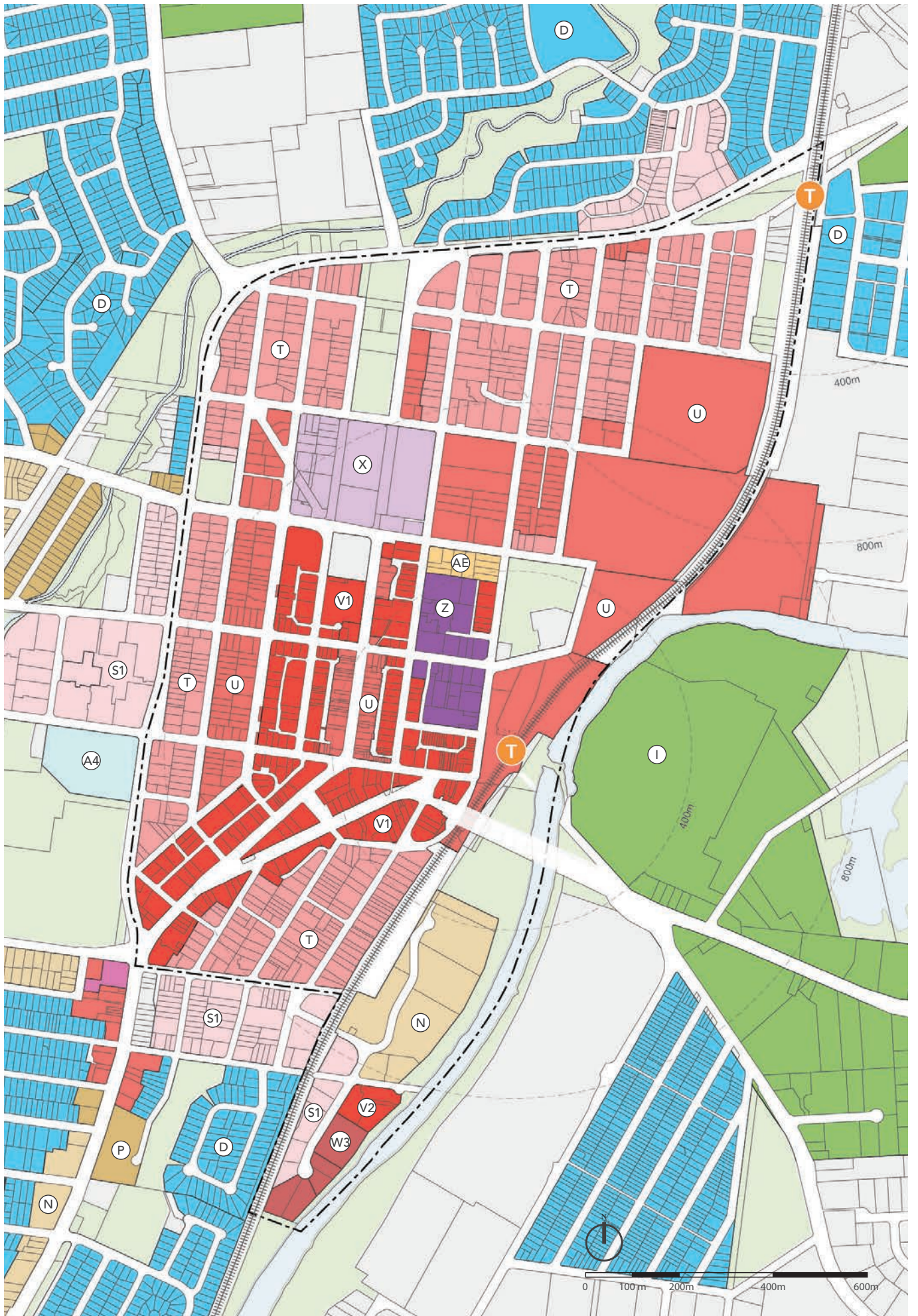


Figure 3.109 Liverpool City Centre - LLEP Applicable Floor Space Ratio (FSR) (Liverpool City Council)

3.7

Site Analysis & Appraisal

Built Form - Street Setbacks

Overview

Buildings define the street network and public domain. For this reason, the alignment and setbacks of buildings are critical to the quality of internal and external environments. Land in the setback areas can be utilised for a variety of uses such as outdoor dining, and may have basement car parking located under it if required. Council's Development Control Plan (DCP) Part 4 – Development in Liverpool City Centre establishes objectives and controls for setbacks within the Liverpool City Centre.

DCP Objectives & Setbacks

The objectives of Council's setback controls are as follows:

- Create a strong and consistent definition of the public domain;
- Define the street as a spatial entity. Reinforce the importance of the public role of the street;
- Provide front setbacks appropriate to building function and character;
- Establish the desired spatial proportions of the street;
- Provide sunlight access to streets, comfortable wind conditions, a generous footpath for pedestrians, and to assist growing conditions for street trees. Allow for street landscaping;
- Locate active uses, such as shop fronts, close to pedestrian activity areas. Allow an outlook to, and surveillance of, the street, and
- Create a transition between public and private space.

DCP Controls & Setbacks

The setback controls set out in Council's DCP are as follows:

- Buildings are to comply with the front setbacks (See Figure 3.110);
- Upper level frontages to a lane/serviceway must be setback 6 metres from the centre line of the lane/serviceway;
- Construct perimeter block buildings and podiums, which comply with the building envelope requirement, to the street and side boundaries (0m setback);
- Buildings with a boundary to the Hume Highway have a minimum setback of 8m;
- Buildings on the southern side of certain streets identified have minimum front setbacks, in order to maximise solar access;
- Pave the land in the setback zone to match the paving in the public street so that it provides a seamless and level ground plane;
- Ensure that balconies project a maximum of 1.2 metres into front building setbacks in the R4 - High Density Residential Zone;
- Ensure that minor projections into front building lines and setbacks are designed for sun shading, entry protection or building articulation and enhance the amenity of the public domain, and
- Include enclosures or screening of balconies that is moveable where this can be shown to aid the amenity of the apartments.

Opportunities

Key opportunities related to street setbacks within the city centre include:











- Utilise wide applicable street setbacks of 8m (i.e. along the Hume Highway and Copeland Street) to encourage mature tree planting within the public and/or private domain, and achieve a consistent green edge to the Liverpool city centre;
- Explore opportunities to utilise the applicable setbacks of 6m (i.e. along Elizabeth Drive) for a dedicated cycleway and/or other publicly accessible infrastructure;
- Utilise areas with applicable setbacks of 2.5m (i.e. areas surrounding the city centre core) to provide high quality landscaping (e.g. planting, WSUD treatments, public art);
- Utilise areas with applicable setbacks of 4.5m (i.e. within city centre periphery residential areas), to accommodate tree canopies (i.e. of trees planted within the public domain) and encourage further tree planting within the private domain;
- Future development that occurs along street frontages with 0m applicable setbacks will provide awnings (i.e. in accordance with Council's DCP controls for awnings), to achieve consistent awning coverage within the city centre core, and
- Explore possibility of amending DCP street setback controls to achieve a consistent street setback along key city centre streets (e.g. Elizabeth Street).

Constraints

Key constraints related to street setbacks within the city centre include:

- Potential road widening along Bathurst Street, Terminus Street, Forbes Street, and parts of Bigge Street, Campbell Street and Lachlan Street will reduce the amount of public/semi-public domain, and
- Inconsistent street setbacks (e.g. along Elizabeth Street & Macquarie Street south) result in inconsistent building edges and street definition.

Legend

	Railway Station
	Railway Line
	Project Site Boundary
	Applicable Setback - 0.0 m
	Applicable Setback - 2.5 m
	Applicable Setback - 3.0 m
	Applicable Setback - 4.5 m
	Applicable Setback - 6.0 m
	Applicable Setback - 8.0 m
	Potential Road Widening Locations

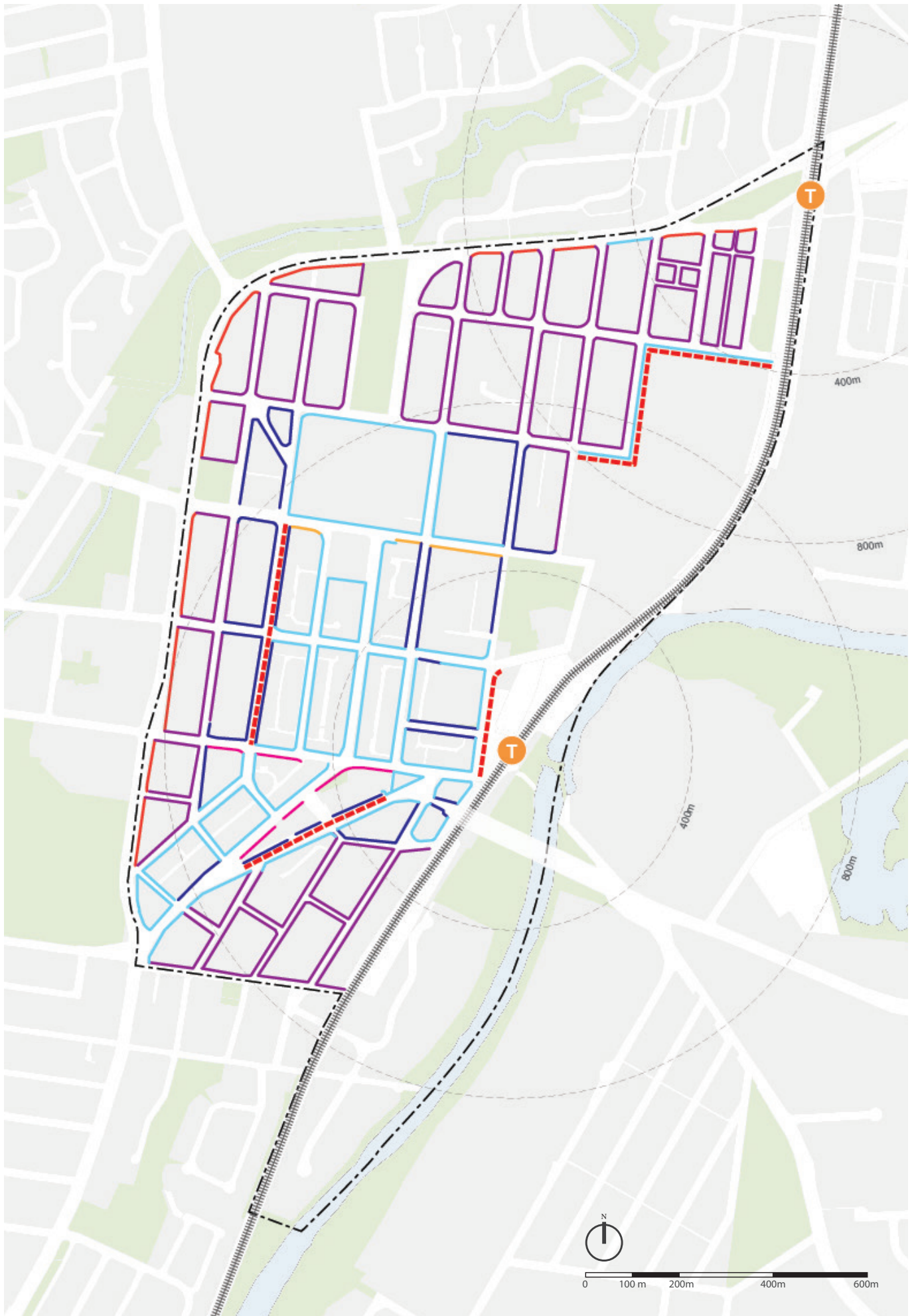


Figure 3.110 Liverpool City Centre - Applicable Street Setbacks & Potential Road Widening Locations (Liverpool City Council)

3.7

Site Analysis & Appraisal Built Form - Awnings & Shade Structures

Overview

Awnings can positively contribute to the public domain, providing weather and sun protection to pedestrians and building frontages, defining and sheltering pedestrian space, reducing the perceived scale of tall buildings and focusing pedestrian views on street frontages and ground level activities. Awnings can encourage pedestrian activity along the streets (i.e. in conjunction with active edges), to support and enhance the vitality of the city, and awnings can also be characteristic of certain shops, cafés and other buildings that are reliant on pedestrian interaction. Awnings mediate between the inside and outside of buildings, private and public realm and between individual buildings and city blocks. Awnings are hybrids of ownership as they are attached to private buildings yet extend into and over the public domain. Similarly, shade structures form part of the streetscape and provide protection from sun and rain, and are a key element in outdoor dining, helping activate the city centre.

Awnings

The majority of building awnings within the city centre are located within the city core. There are continuous building awnings along Macquarie Street south (both sides of the street), Macquarie Mall (eastern side of the mall), George Street (both sides of the street, between Elizabeth Street and Scott Street) and Railway Street (southern side of the street). There are also awnings along parts of Elizabeth Street, Moore Street, Memorial Avenue, Scott Street and Northumberland Street. Additionally, there are small sections of awnings located on Macquarie Street (far southern end between Scott Street and Hume Highway), along Terminus Street and Secant Street. Awnings currently within the city centre vary in terms of their form, design, material, colour, height, length, width and fascia depth. There is also a variety of lighting types underneath existing awnings and differences in the size, colour and location of signage located on and/or underneath awnings, within the city centre.

Shade Structures

The majority of shade structures within the city centre are located within Macquarie Mall (both sides) and there are also shade structures located along the entrance to Westfield Shopping Centre (Elizabeth Street entrance). These shade structures are in the form of fixed umbrellas that are grouped together and have retractable side coverings, and include fixed and/or movable furniture. They are generally used for outdoor dining, associated with adjacent restaurants, cafés and other eateries.

Opportunities

Key opportunities related to awnings and shade structures within the city centre include:

- Ensure a level of consistency in the design of new awnings (e.g. height, quality, materials);
- Ensure that new awnings are sufficient in depth, to provide adequate shade;
- Ensure that the design of new awnings accommodate street tree plantings;
- Achieve consistency in the size and location of signage attached/affixed to awnings;
- Ensure that the design of new/replacement awnings reflect the desired character areas within the city centre;
- Fill in the missing sections of awnings along streets within the city core, to achieve consistent protection for pedestrians and building frontages, and
- Include additional shade structures, where appropriate (e.g. in proposed outdoor dining areas).

Constraints

Key constraints related to awnings and shade structures within the city centre include:

- Existing awnings in some areas cover the majority of the footpath, limiting the available space for street tree plantings;
- Hot temperatures and limited shade within the city centre, increase the need for awnings and shade structures, and
- Gaps in awning coverage may take some time to fill, whilst infill development occurs.









Awning on Macquarie St



Shade Structure on Elizabeth St

Figure 3.111 Images of Awnings & Shade Structures in Liverpool City Centre

Legend

	Railway Station
	Railway Line
	Liverpool City Centre - Project Site Boundary
	Building Awnings
	Shade Structures
	Umbrellas

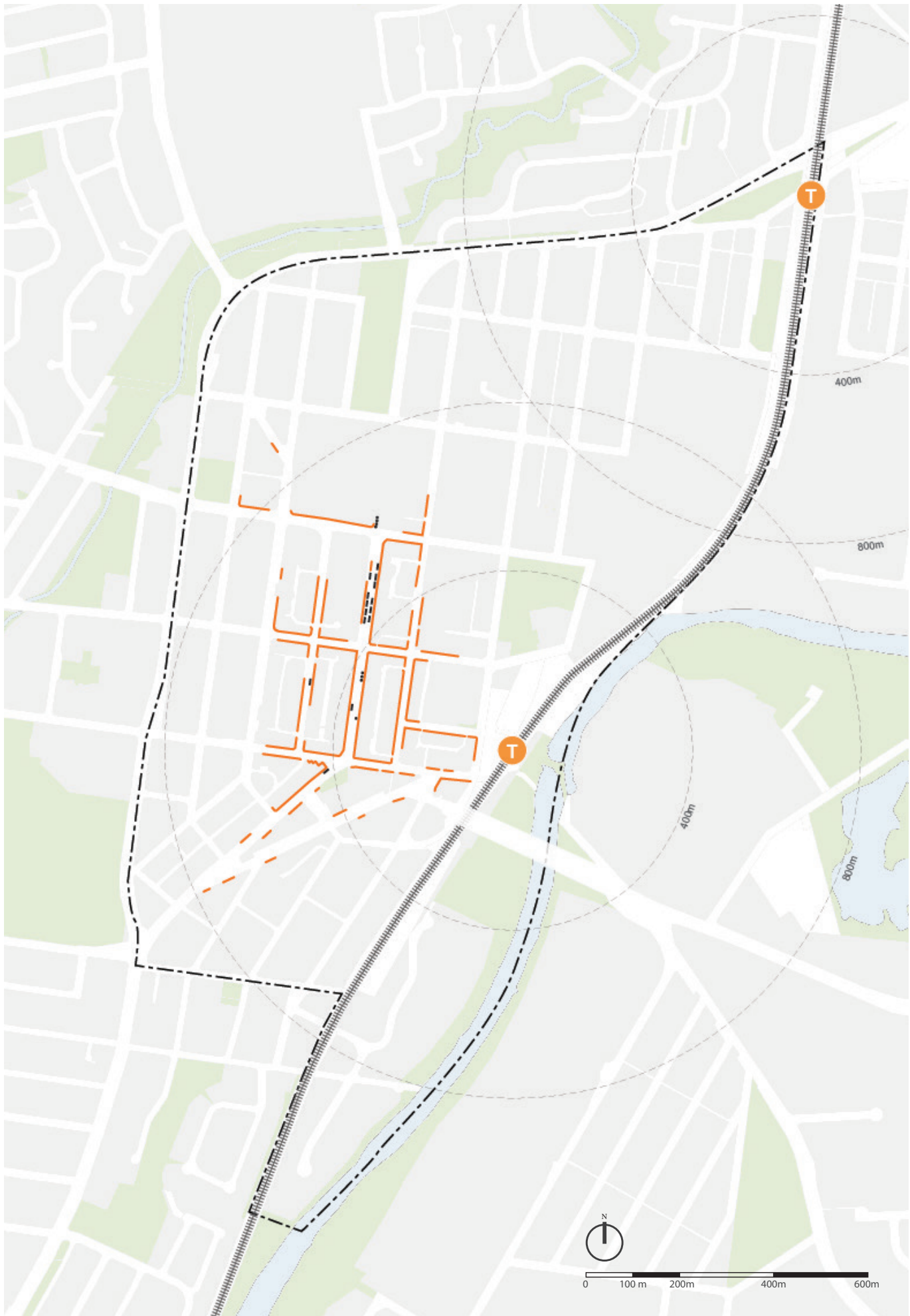


Figure 3.112 Liverpool City Centre - Awnings & Shade Structures (Liverpool City Council)

3.7

Site Analysis & Appraisal Built Form - Active Street Frontages

Overview

Active street frontages promote an interesting and safe pedestrian environment. Council's Development Control Plan (DCP) Part 4 – Development in Liverpool City Centre establishes objectives and controls for active street frontages, within the Liverpool City Centre. Active street frontage uses are defined as one or a combination of the following at street level:

- Entrance to retail;
- Glazed entries to commercial and residential lobbies;
- Café or restaurant, if accompanied by an entry from the street;
- Active office uses, such as reception, if visible from the street; and/or
- Public building if accompanied by an entry.

DCP Objectives & Active Street Frontages

The objectives of Council's setback Active Street Frontages controls are as follows:

- Promote pedestrian activity and safety in the public domain, and
- Maximise active street frontages in Liverpool City Centre.

DCP Controls & Active Street Frontages

The Active Street Frontage controls set out in Council's DCP are as follows:

- Locate active street frontages on the ground level of all commercial or mixed use buildings, including adjacent through-site links;
- Locate active street frontages in the Mixed Use, Commercial Core, Enterprise Corridor and Neighbourhood zones (See Figure 3.104, on page 89), on ground level. This does not preclude servicing activities particularly in the serviceways;
- Locate active street frontages at first floor level in addition to ground floor sites addressing major roads (i.e. Hume Highway, Copeland Street, Macquarie Street (between Hume Highway and Memorial Avenue), Terminus Street, and Newbridge Road (between Terminus Street and the Newbridge Road bridge);
- Locate street fronts at the same level as the footpath and with direct access from the street, and
- Use only open grill or transparent security (at least 50% visually transparent) shutters to retail frontages.

Opportunities

Key opportunities related to active street frontages within the city centre include:

- Encourage the extension of active street frontages (i.e. through the Development Assessment process) to achieve consistent active frontages, and activate the city centre core (e.g. around the Westfield Shopping Centre street frontages);
- Consider increasing active street frontages (i.e. through planning controls) to increase pedestrian activity along key city centre streets (e.g. Macquarie Street north), and through city centre gateways sites;
- Consider increasing active street frontages (i.e. through planning controls) to increase the surveillance of key public spaces (e.g. Bigge Park and Liverpool Pioneers Memorial Park);
- Consider public domain treatments that are complimentary to building uses and associated active street frontages (e.g. street furniture in close proximity to take-away shops and other food & beverage restaurants);
- Consider future opportunities for outdoor dining areas, in relation to active street frontages, and
- Explore possibility of amending DCP controls for active street frontages to achieve more design consistency (e.g. percentage of permeable surfaces) of active street frontages, within the city centre.

Constraints

Key constraints related to active street frontages within the city centre include:

- Large sites with mostly inactive street frontages (e.g. Westfield Shopping Centre), may take a while to be re-developed, and provide increased active edges;
- There is currently limited active edges along some key pedestrian routes within the city centre (e.g. parts of Elizabeth Street, Moore Street, and Macquarie Street north), resulting in limited building surveillance of the public domain, and
- There is currently limited active edges at key city centre gateway sites (e.g. Elizabeth Street/Copeland Street intersection), impacting the entry experience of the city centre.



Active Frontages, Macquarie Mall

Active Frontages, Macquarie Street

Figure 3.113 Images of Active Frontages in Liverpool City Centre

Legend

	Railway Station
	Railway Line
	Liverpool City Centre - Project Site Boundary
	Active Street Frontage
	Food & Beverage
	Outdoor Dining

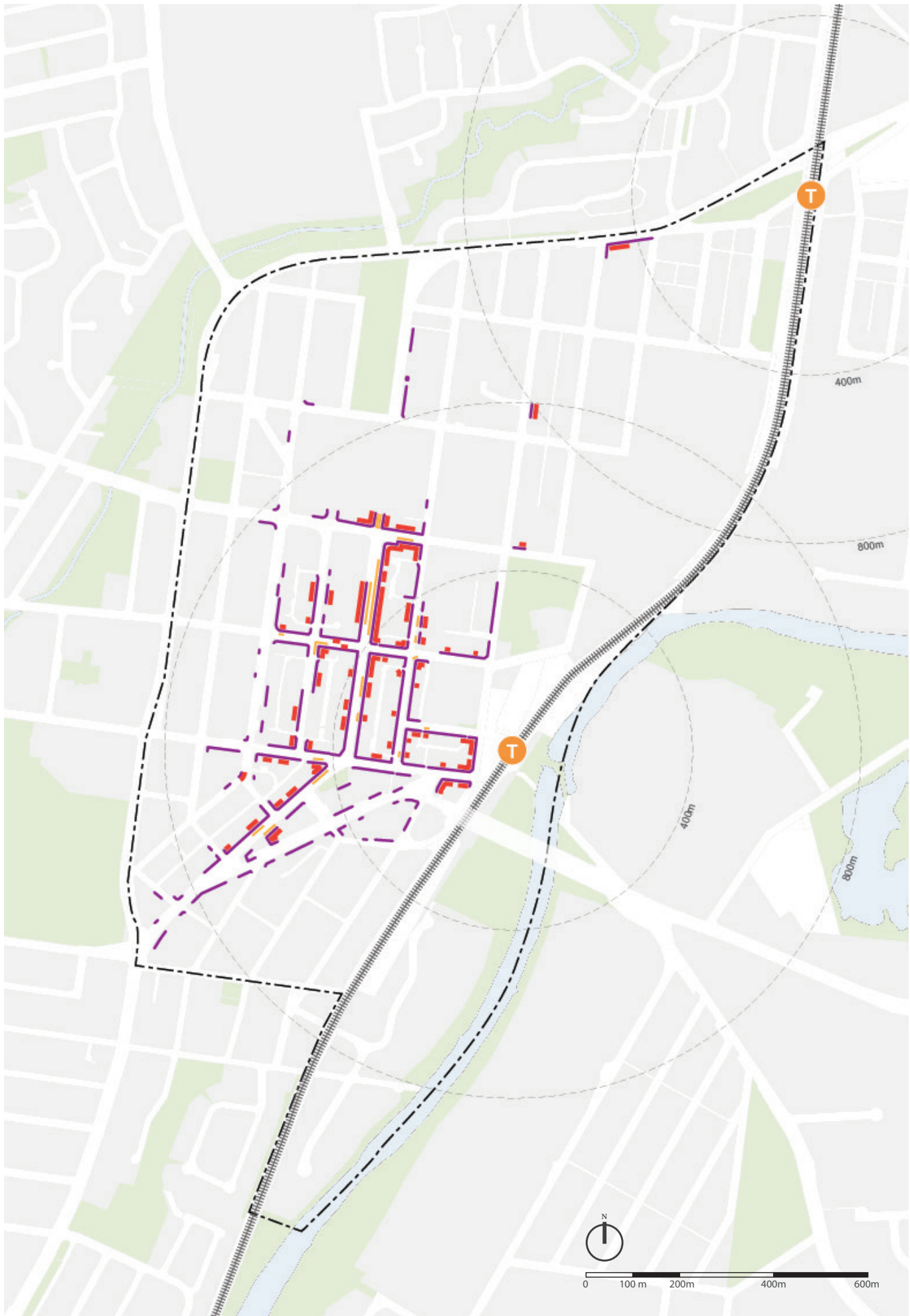


Figure 3.114 Liverpool City Centre - Active Street Frontages (Liverpool City Council)

3.8

SITE ANALYSIS & APPRAISAL PLACES OF INTEREST & CHARACTER

Important Locations, Landmarks & Community Facilities

Overview

Dining

Dining options within the city centre include Westfield Shopping Centre (i.e. Food court, cafés and restaurants), Liverpool Plaza (i.e. Cafés and takeaway restaurants), Macquarie Mall (i.e. Cafés, restaurants and takeaway restaurants), and various other restaurants, cafés, takeaway restaurants and pubs located along Macquarie Street south, and along streets within the city centre.

Educational

Educational facilities located within the city centre include; Schools (i.e. All Saints Catholic College, Liverpool Boys High School, Liverpool Girls High School, Liverpool Public School), universities (i.e. Western Sydney University and University of Wollongong campuses), TAFE NSW Liverpool campus, Australian Careers Business College, Ingham Institute of Applied Medical Research, and Liverpool City Library.

Healthcare

The healthcare precinct, located on the eastern side of the city centre has a range of healthcare facilities, including; Liverpool Public Hospital, Ingham Institute of Applied Medical Research, Sydney Southwest Private Hospital and various other healthcare and medical facilities.

Parks & Reserves

Parks & reserves located within the city centre, include Apex Park, Bigge Park, Hart Park, Lighthorse Park and Liverpool Pioneers Memorial Park. Plazas & malls located within the city centre include Macquarie Mall, Augusta Cullen Plaza, and the Liverpool Library forecourt (subject to possible future redevelopment, with the relocation of the library to the Liverpool Civic Place development). Railway Street will also be converted into a pedestrian mall.

Parking

Off-street parking is currently located at Westfield Shopping Centre, Warren Serviceway car park, Northumberland car park, Bathurst Street car park, Liverpool Plaza Shopping Centre, Speed Street car park, Macquarie Street car park, and at both Liverpool and Warwick Farm Railway Stations. On-street parking is currently located on most roads within the city centre.

Places of Worship

Places of Worship located within the city centre include All Saints' Catholic Church Liverpool, St Luke's Anglican Church, and St Raphael Church.

Retail

Westfield Shopping Centre and Liverpool Plaza are the two major retail centres within the city centre. There are also retail shops located on both sides of Macquarie Mall and along street fronts (e.g. Macquarie Street south, George Street and Moore Street) and arcades within the city core.

Opportunities

Key opportunities related to community facilities within the city centre include:


















- Ensure that public domain improvements enhance and compliment the character and style of community facilities within the city centre;
- Include landscape treatments that compliment the uses of community facilities (e.g. restorative plantings within the Liverpool Health Precinct streetscapes);
- Include signage and wayfinding mechanisms to help the community navigate the city and identify community facilities and places of interest;
- Promote community facilities as identifiable landmarks within the city centre;
- Include more public bathrooms within the city centre to meet the needs of the community;
- Ensure that community facilities are equitable and inclusive, and
- Enhance walkability and visibility through creating short links & through ways, offering numerous routes & intersections, and increasing permeability of the city centre to enable easier access between community facilities.

Constraints

Key constraints related to community facilities within the city centre include:

- The growing population increases the pressure on the existing community facilities in the city centre;
- The growing population increases the demand for new community facilities in the city centre, and
- Current ageing stock of existing community facilities requires renewal works.

Legend

	Railway Station		Bus Interchange
	Railway Line		Healthcare
	Site Boundary		Government
	Educational		Library
	Retail		Police Station
	Parks & Reserves		Train Station
	Dining / F&B		Cemetery
	Parking		Whitlam Centre
	Church		

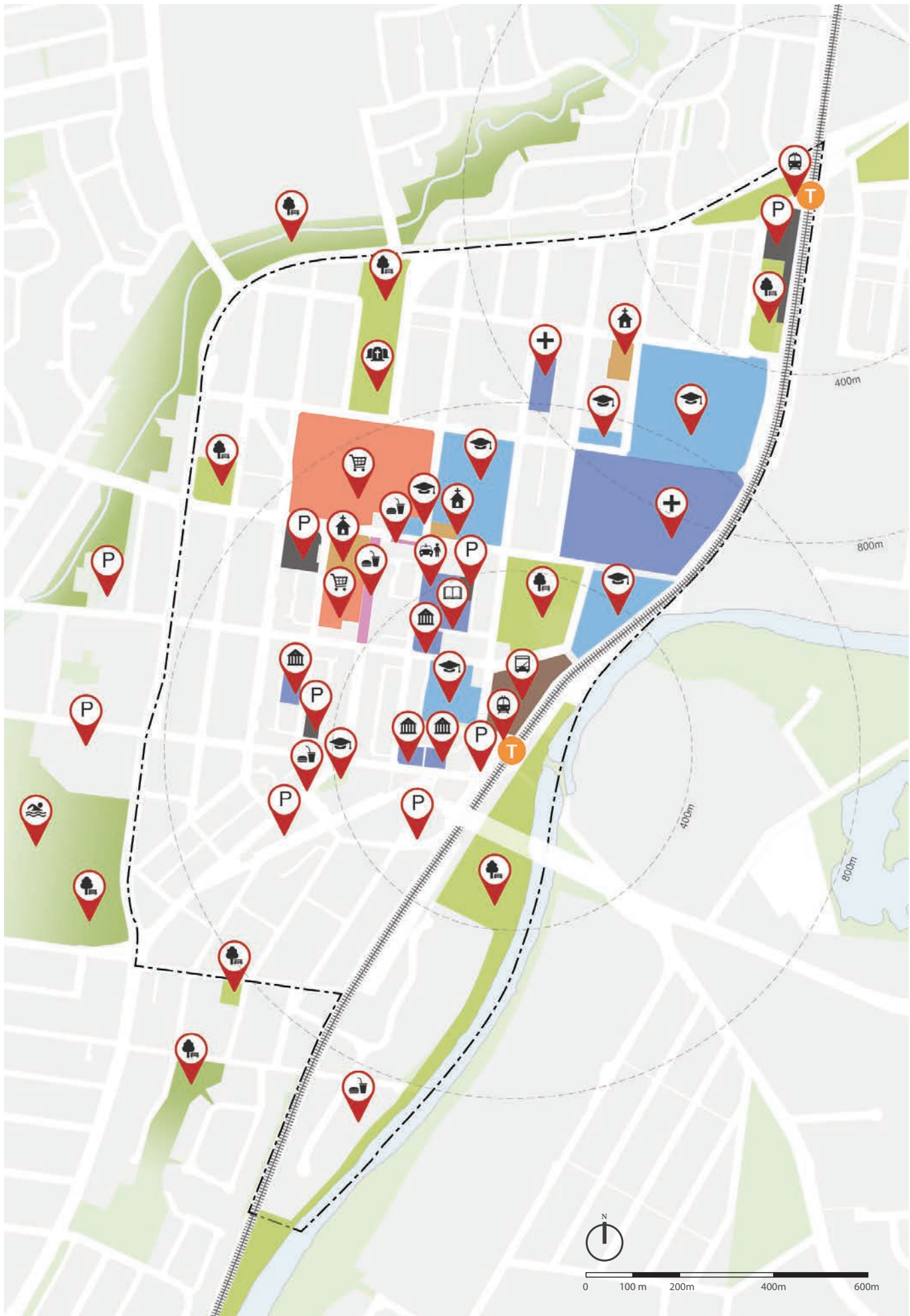


Figure 3.115 Liverpool City Centre - Places of Interest (Liverpool City Council)

3.8

Site Analysis & Appraisal

Places of Interest & Character - Character Areas

Overview

Through the Liverpool Collaboration Area Place Strategy, the Greater Sydney Commission has developed a vision for Liverpool, which includes activities in the Collaboration Area. Many of these activities areas are located within the project boundary (i.e. as identified in the character area map on the following page), these being; Liverpool City Centre Core, Diverse Residential, High Density Residential, Eco/Utility/Recreation, Innovation/Research/Health/Advanced Manufacturing, and Mixed Use. The Liverpool City Centre has had a long historical presence and an evolution that defines its distinct character. The character areas within the city centre form clear associations with functional allocations and various uses within it.

Liverpool City Centre - Core

The Liverpool City Centre - Core area has been defined as the primary commercial centre for Liverpool and a mixed use central business district that accommodates high order retail, commercial offices, university campuses, government services and residential apartments with activated ground floor uses.

Diverse Residential

Diverse Residential area has been defined as a mix of housing densities and typologies, from affordable to executive housing, from low to high density, retaining or enhancing the current proportion of affordable housing.

High Density Residential

The High Density Residential area has been defined as high density residential and mixed use in close proximity to public transport services and the city centre core.

Eco/Utility/Recreation

The Eco/Utility/Recreation area has been defined as a recreation area co-located with water services provided by Sydney Water, providing passive and active recreation areas connected to the river.

Innovation/Research/Health/Advanced Manufacturing

The Innovation/Research/Health/Advanced Manufacturing area has been defined as a high-tech, transit-oriented, advanced manufacturing business park that leverages the growth of the health, education and equine sectors, excluding residential development.

Mixed Use

The Mixed Use area has been defined as a mixture of commercial, retail, residential and community uses that provide sustainable employment, that is complementary to, and not in competition with, the commercial core.

Opportunities

Key opportunities related to character areas within the city centre include:

- Align proposed public domain improvements with character areas within the city centre (i.e. establishing distinctive qualities that create an identity of a place and is reflected by the look and feel of each area);
- Ensure future private development supports and enhances the identity of character areas within the city centre, including aligning zones with primary uses of proposed developments;
- Improve the visual and physical connections within the existing built form, to strengthen the environment within each character area;
- Promoting adaptive reuse and innovation in the existing heritage listed items, to align use and function of buildings with character areas, and
- Ensure that local character statements and proposed interventions for the city centre are aligned to achieve the desired character of each area, and guides future development to achieve the envisioned character.

Constraints

Key constraints related to character areas within the city centre include:

- The character of an area can be subjective and might not get translated effectively;
- Existing private development may not currently align with the desired character areas;
- Other factors may impact the location of community facilities and infrastructure, which may not align with the desired character areas, and
- Market forces guide private development, which may impact the process of achieving the desired character.

Legend

	Railway Station
	Railway Line
	Liverpool City Centre - Project Site Boundary
	Liverpool City Centre - Core Precinct
	Innovation / Health / Research / Advanced Manufacturing
	Mixed Use Precinct
	Diverse Residential Precinct
	High Density Residential Precinct
	Industrial Precinct
	Business Development Precinct

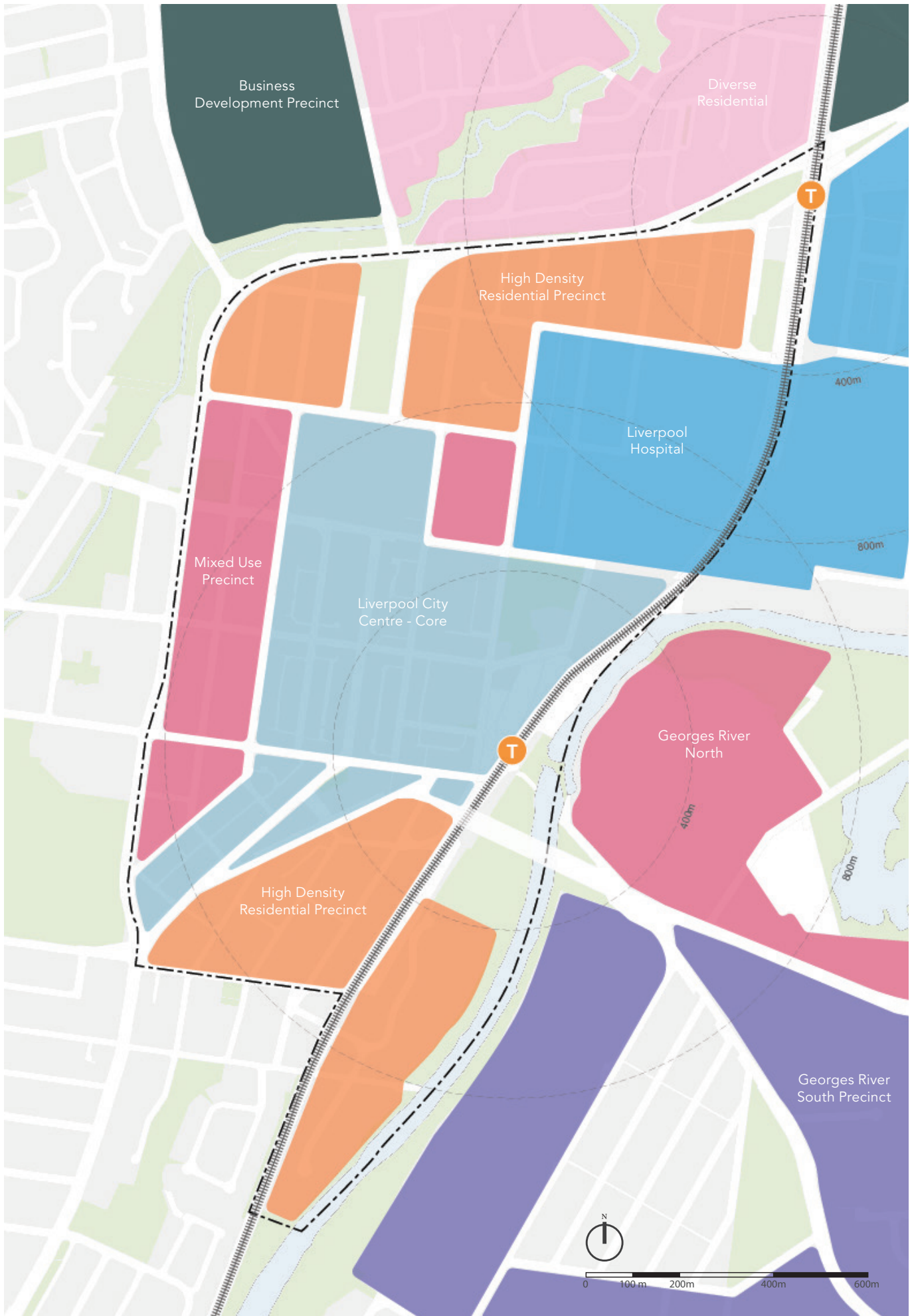


Figure 3.116 Liverpool City Centre - Character Areas as per Greater Sydney Commission, Liverpool Collaboration Area Place Strategy (Liverpool City Council)

3.9

SITE ANALYSIS & APPRAISAL

STREETSCAPE INFRASTRUCTURE

Street Furniture, Fixtures & Fittings

Overview

The public domain within the Liverpool City Centre includes a wide variety of streetscape infrastructure, including street furniture, fixtures and fittings, such as banners & flags, bins, bollards, parking ticket machines and seating. There is also a large number of other infrastructure including lighting, signage and paving treatments within the city centre (covered in the following pages). The majority of streetscape infrastructure is concentrated within the city core, and is also located within the major public parks, malls, streets and laneways within city centre.

Banners & Flags

The majority of banners & flags are located along Macquarie Mall and Macquarie Street south, on the Newbridge Road bridge, and at the intersections of Copeland Street & Cumberland Highway, and Hume Highway & Hoxton Park Road. Council has a Flag & Banner Policy that dictates the specification, locations and content permitted on Council's flags and banners, including within the Liverpool City Centre.

Bins

There are numerous bins located within the city centre, including along both sides of most major streets within the city core and within the major parks & reserves within the city centre. The majority of bins are housed within various styles of bin enclosures, many of which are specified in previous public domain documents for the city centre, using former Council corporate colours and logos. More recently installed bin enclosures (i.e. in Macquarie Mall and Bigge Park), feature Council's current corporate branding style.

Bollards

The majority of bollards are located within parks, malls, car parks and in other locations to prevent/restrict vehicular access. Currently, the bollards located within the city centre vary in their design, size and material (e.g. brushed steel, painted steel, sandstone).

Parking Ticket Machines

Parking ticket machines are located along several streets (E.g. Bathurst Street, Goulburn Street) and within Council owned carparks (e.g. Bathurst Street carpark) in the city centre, that have time-limited parking restrictions. Most of the parking ticket machines are of a consistent style and specification.

Seating

Seating is located throughout the city centre, with concentrations of seating located along core city centre streets, and within the Macquarie Mall, Apex Park, Bigge Park, Lighthorse Park and Liverpool Pioneers Memorial Park. There are various styles of seating currently within the city centre, many of which are specified in previous public domain documents for the city centre, using former Council corporate colours and logos.

Opportunities

Key opportunities related to street furniture, fixtures and fittings within the city centre include:







- Propose a consistent and coherent palette of street furniture, fixtures & fittings, that is in-line with the desired vision for the city centre;
- Consider street furniture, fixtures & fittings to develop themes for key areas within the city centre (e.g. a furniture palette that is specific to laneways);
- Consider developing future designs for bespoke street furniture, fixtures & fittings (e.g. for the city core area);
- Consider the integration of smart technology into street furniture, fixtures & fittings, within the city centre;
- Incorporate sustainable and durable materials & finishes in the selection of street furniture, fixtures & fittings;
- Consider maintenance requirements (including WH&S requirements) in the selection of street furniture, fixtures & fittings;
- Include new/replacement street furniture, fixtures & fittings in Development Application conditions, and
- Consider developing a Public Domain Technical Manual, to compliment this report and provide the design and specification of streetscape furniture, fixtures & fittings.

Constraints

Key constraints related to street furniture, fixtures & fittings within the city centre include:

- The cost associated with new and/or replacement streetscape furniture, fixtures & fittings;
- Reliance on developers to deliver new and/or replacement streetscape furniture, fixtures & fittings could result in delays in achieving a consistent palette of streetscape infrastructure, and
- Financial and sustainability costs associated with disposal of existing furniture, fixtures & fittings (Recycling and/or relocating unwanted streetscape infrastructure should be considered).

Legend

	Railway Station
	Railway Line
	Liverpool City Centre - Project Site Boundary
	Flags
	Banners
	Bins
	Bollards
	Seating
	Parking Ticket Machine

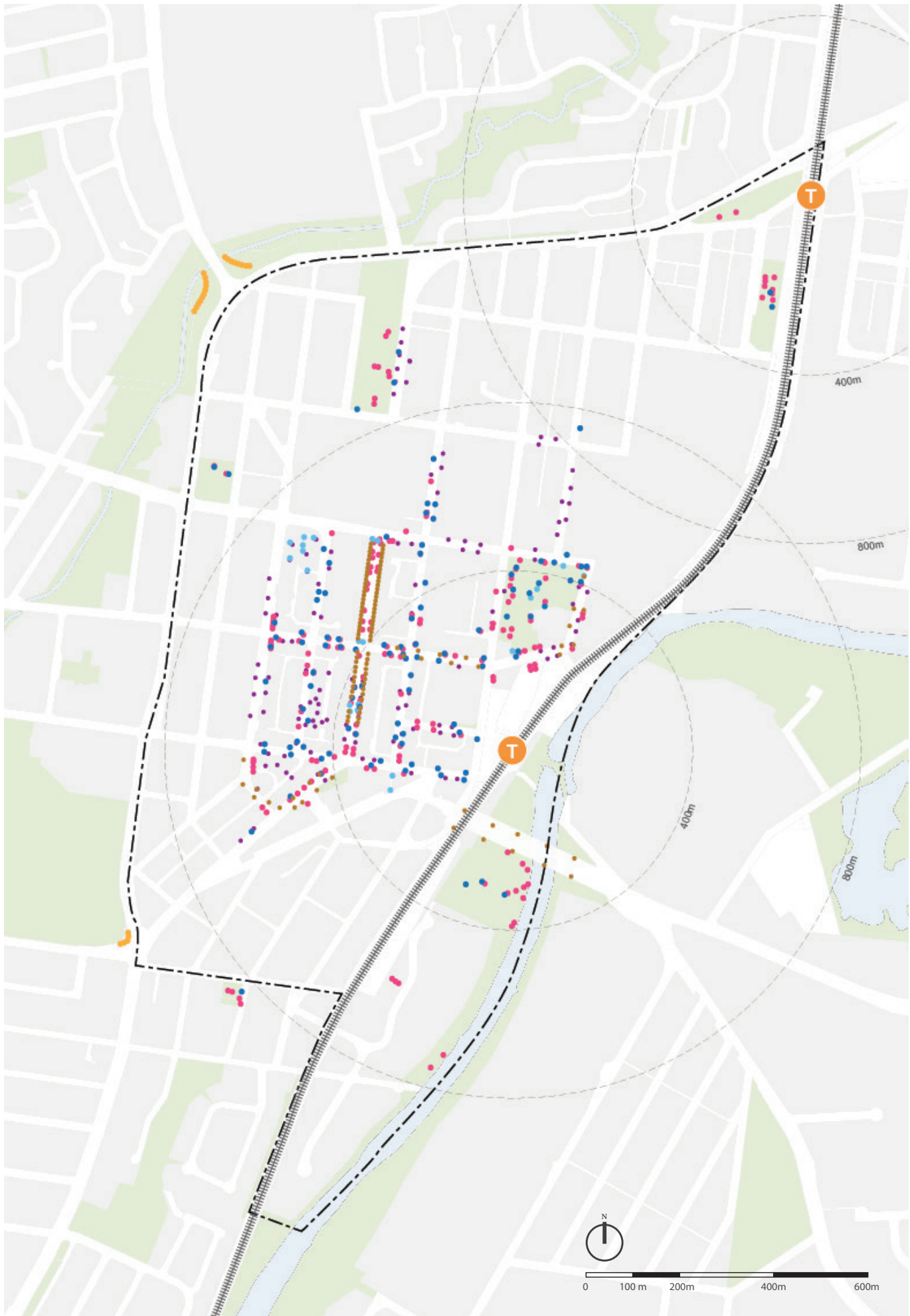


Figure 3.117 Liverpool City Centre - Street Furniture, Fixtures and Fittings (Liverpool City Council)

LIVERPOOL CITY CENTRE PUBLIC DOMAIN MASTER PLAN 107

3.9

Site Analysis & Appraisal

Streetscape Infrastructure - Public Lighting

Overview

There is a variety of street, park and feature lighting located within the Liverpool City Centre that is owned and managed by either Liverpool City Council and/or Endeavour Energy, and provides light to streets, laneways, pedestrian footpaths, underpasses, arcades, bridges and within parks & reserves in the city centre. The majority of lamps are mounted to posts (i.e. either multifunction poles or standard street light posts) that are located within road reserves, in the city centre.

Street Lighting

Street Lighting is located along all streets within the Liverpool City Centre, in accordance with requirements of the Australian Standards for Road Lighting. Most of the street lighting within the city core and recently developed areas in the northern city centre are attached to multifunction poles and most of the street lighting in periphery areas in the city centre are attached to standard light posts. Multifunction poles are installed to Council's current specification (i.e. traditional shaped profile and teal in colour) and the standard light poles are timber or galvanised steel. Most street lights also provide spillover lighting to footpaths located along road reserves within the city centre, with no separate pedestrian lighting provided.

Park Lighting

There is park lighting located within Apex Park, Bigge Park and sections of Lighthorse Park within the city centre. The majority of park lighting within these parks & reserves have been installed as part of upgrades to these sites. The lighting within these sites are in the form of black post-style lights that are located along main pedestrian routes. Other parks within the city centre, such as Hart Park and Berryman Reserve rely on spillover lighting from street lights located on adjacent streets. The majority of Lighthorse Park and the Georges River river front walk does not include park lighting, limiting the safe movement of pedestrians at night time.

Feature Lighting

There is feature lighting located along Macquarie Mall and Macquarie Street south in the city centre. Feature lighting in Macquarie Mall was installed as part of a recently completed major upgrade to the mall, and is in the form of catenary pendant lights that are mounted on catenary cables that are strung between posts located along both sides of the mall. The lights emit a bright pink coloured light, highlighting the mall at night time. Feature light posts located along Macquarie Street south are in the form of traditional style lamp posts, and provide lighting to the street and spillover lighting to the adjacent footpaths.

Opportunities

Key opportunities related to public lighting within the city centre include:

- Consider utilising multifunction light poles to combine existing streetscape infrastructure (e.g. Traffic signals, CCTV, bicycle racks) and proposed streetscape infrastructure (e.g. 5G);
- Consider including feature lighting in key areas, sites and/or streets within the city centre (e.g. specific lighting for laneways or main streets);
- Consider including new types of lighting (e.g. up-lighting to feature trees) within the city centre;
- Consider using lighting and light posts as wayfinding mechanisms (e.g. feature lighting at landmarks or feature light posts along key streets);
- Consider including new and/or additional lighting to area within inadequate lighting and/or unsafe areas within the city centre;
- Include new/replacement street furniture, fixtures & fittings in Development Application conditions, and
- Consider developing a Public Domain Technical Manual, to compliment this project and provide the design and specification of streetscape furniture, fixtures & fittings.

Constraints

Key constraints related to public lighting within the city centre include:

- The complexity related to consolidating streetscape infrastructure onto multifunction poles (e.g. various asset owners including Council, NSW Roads and Maritime Services, Endeavour Energy);
- The cost associated with new and/or replacement public lighting;
- Reliance on developers to deliver new and/or replacement streetscape lighting could result in delays in achieving a consistent palette of streetscape infrastructure, and
- Financial and sustainability costs associated with disposal of streetscape lighting (recycling and/or relocating unwanted public lighting should be considered).

Legend

	Railway Station
	Railway Line
	Liverpool City Centre - Project Site Boundary
	Public Lights

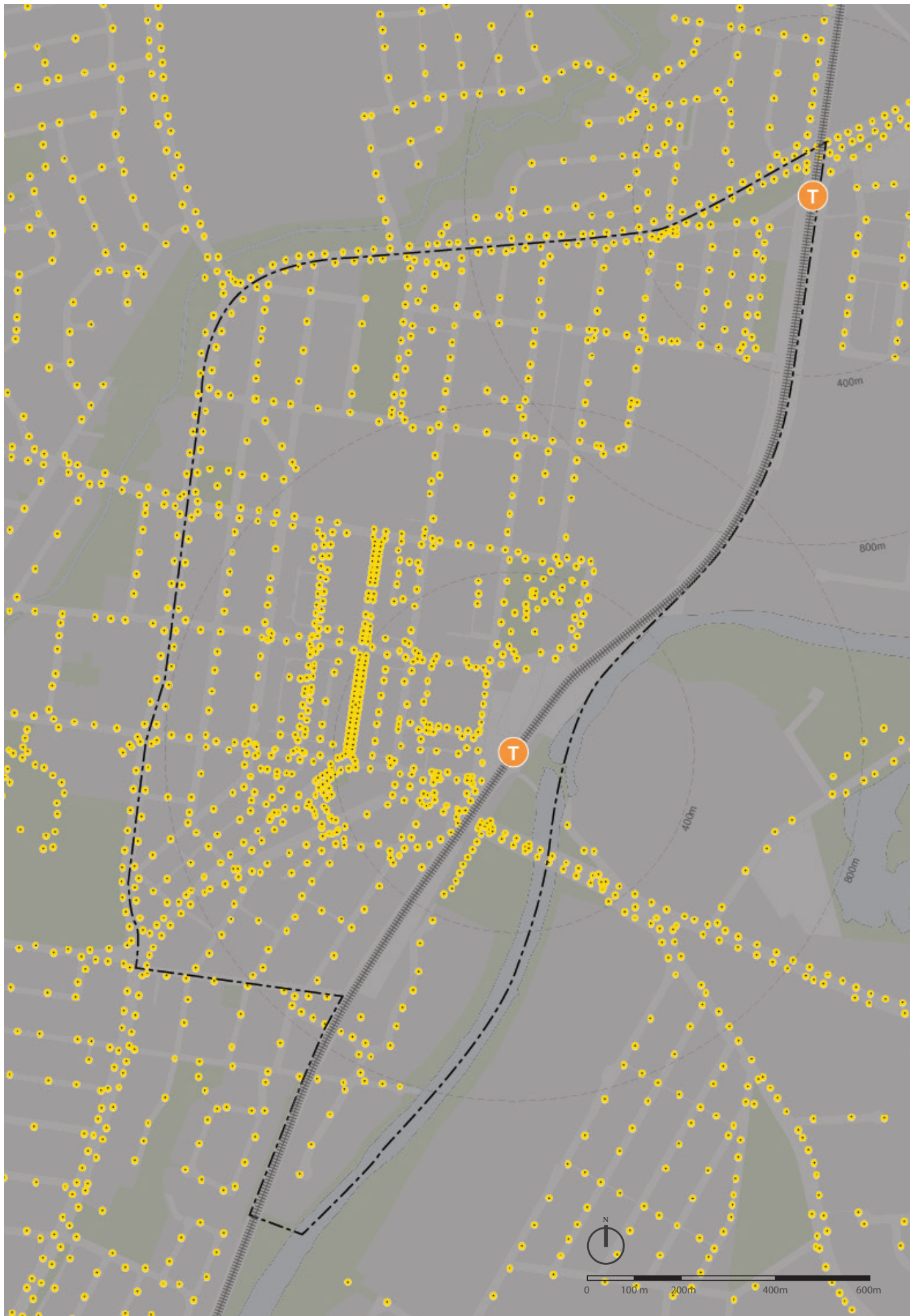


Figure 3.118 Liverpool City Centre - Public Lighting (Liverpool City Council)

3.9

Site Analysis & Appraisal Streetscape Infrastructure - Public Signage & Wayfinding

Overview

There is a variety of public signage located within the Liverpool City Centre, including wayfinding, identification, informative and regulatory signage that enables motorists, pedestrians & cyclists to navigate the city centre, identify places of interest, obtain information, and understand relevant rules & regulations. Public signage is located throughout the city centre precinct, with a concentration of signage within the city core area. The style and design of Council-owned public signage in the city centre is varied, and includes several styles and previous Council corporate branding schemes, logos and colours. Some public signage is dictated by rules and regulations (e.g. NSW Roads and Maritime Services traffic movement signage).

Gateway Signage

Gateway signage is currently located at some of the gateways into the city centre precinct (e.g. at the junction of Newbridge Road & Terminus Street). The current design of the gateway signage is standalone board signage on galvanised steel posts, with a predominately black and yellow colour scheme.

Street Signage

Street name blade signs are located at most intersections within the city centre and are mostly attached to galvanised steel posts. Most of the street name blade signs include black lettering on a white background, some with Council's current logo, and some with former Council logos. Most other traffic signage located within the city centre is related to vehicular traffic movement (e.g. traffic directional, speed, parking), and is in accordance with NSW Roads and Maritime Services standards for traffic signage. There is limited pedestrian and cyclist wayfinding signage, and limited braille/tactile signage within the city centre streets.

Public Building & Parks Signage

There is identification signage located outside most public buildings and within public parks in the city centre. The current design of these signs are either standalone board signage on galvanised steel posts or attached to buildings, with either Council's current or former logos and black lettering on a white background. Park signage also includes key regulatory and other information that is relative to each specific site.

Heritage/Interpretive Signage

There is various heritage/interpretive signage located within the city centre, including outside heritage buildings and at other places of interest in the city centre. The majority of heritage/interpretive signage within the city centre is in the form of standalone post or blade signs, or engraved inlays with ground pavements.

Opportunities

Key opportunities related to public signage and wayfinding within the city centre include:

- Consolidate signage where possible (e.g. combining signage with multifunction poles);
- Consolidate types of signage where possible (e.g. combine identification and regulatory information on park signage);
- Consider incorporating new types of signage, including pedestrian and cyclist signage to promote active transport in the city centre;
- Include new/replacement signage in Development Application conditions of consent;
- Consider the incorporation of site specific and custom signage for key sites within the city centre, to differentiate the city centre from other areas within the local government area;
- Consider accessibility and inclusion in the future design of signage and way finding mechanisms in the city centre (e.g. braille, tactiles & colour contrast), and
- Consider developing a Signage and Wayfinding Manual to compliment this report and provide the design and specification of signage within the city centre and the broader local government area.

Constraints

Key constraints related to public signage and wayfinding within the city centre include:

- The cost associated with new and/or replacement public signage across the city centre;
- Reliance on developers to deliver new and/or replacement signage could result in delays in achieving a consistent palette of streetscape signage, and
- The appearance of signage is subjective and must consider the opinion of various stakeholders and incorporate Council's corporate branding, legal, risk management and maintenance requirements.



School Sign on George St



Street Sign on Bigge St

Legend

	Railway Station
	Railway Line
	Liverpool City Centre - Project Site Boundary
	Street Signage

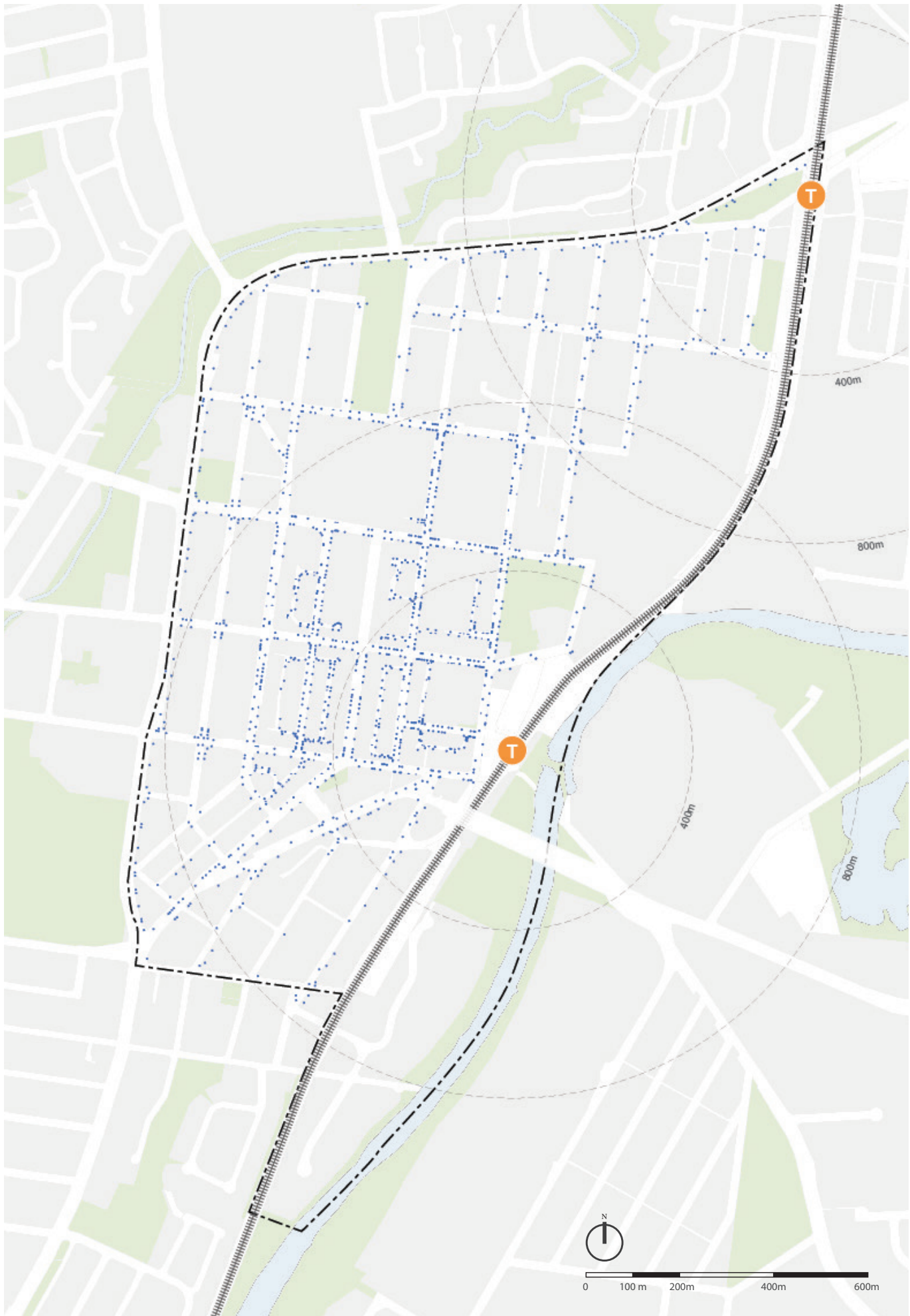


Figure 3.119 Liverpool City Centre - Street Signage (Liverpool City Council)

3.9

Site Analysis & Appraisal Streetscape Infrastructure - Paving Treatments

Overview

There is currently a variety of paving treatments within the Liverpool City Centre, forming a patchwork of pavement types, that is reflective of the different Council adopted paving styles over time that have been implemented in parts of the city centre. In 2018 Council adopted a paving style for the city centre which included treatments for the city core, periphery areas and laneways, and this has been implemented by both Council and developers in some areas of the city centre.

Current Paving Strategy

Council's current paving strategy (i.e. adopted in 2018) includes black granite paving with blue stone kerb & gutter (i.e. for most city core areas and Macquarie Street), and concrete pavement with an exposed aggregate finish (i.e. for periphery city centre areas). The current strategy specifies two treatments for laneways, these being black granite paving with concrete kerb & gutter (i.e. for laneways within the city core area), and concrete with exposed aggregate with concrete kerb & gutter (i.e. for laneways within periphery areas in the city centre). The paving strategy also includes construction details for treatments around multifunction poles & utility pits, kerb ramps and other streetscape elements. Council's current paving strategy has been implemented in various locations in the city centre, including core treatment (e.g. outside 33 Moore Street) and periphery treatment (e.g. in various residential streets in the northern area of the city centre).

Former Paving Strategies

Former paving strategies for the city centre include those adopted in previous public domain documents such as the 2005 Liverpool CBD Streetscape & Paving Guidelines. Styles of pavement from former strategies and guidelines that currently exist within the city centre include small format herringbone paving (e.g. along Macquarie Street south), small format herringbone paving with highlight pavers (e.g. along the eastern side of College Street), herringbone paving with banding (e.g. along parts of Lachlan Street), 1.2m wide exposed concrete footpath (e.g. along Campbell Street south), and nature strips with no pavement treatment (e.g. along both sides of Hay Street). The majority of these pavement types are located along streets that have remained undeveloped for many years, or along sections of streets that have sites that are currently being developed over time.



Core Paving - Granite with Blue Stone Kerb



Core Paving - Herringbone pattern with highlight Pavers



Core Paving - Pavers in Herringbone Pattern

Opportunities

Key opportunities related to paving treatments within the city centre include:


- Revisions to Council's current paving strategy. (e.g. extension of core paving to enhance the city gateway experience/delineate pedestrian priority streets);
- Include new/replacement paving treatment in Development Application conditions of consent;
- Consider timing of other works for pavement upgrades (e.g. Service authority works within streetscapes);
- Combine park upgrade works with adjoining streetscape pavement upgrades;
- Consider introducing new paving treatments to laneways to assist in developing a specific laneway character;
- Consider the use of contrasting pavement (e.g. texture, colour or markings) over driveways, footpath crossing and at intersections, for increased pedestrian safety;
- Enforce the use of Council's adopted paving strategy into private domain forecourts and areas that adjoin the public domain, to assist in integrating the public and private domain (i.e. as per Council's Development Control Plan), and
- Consider developing a Public Domain Technical Manual, to compliment this report and to revise/update the design and specification of pavement design (e.g. substitute aggregate mix in periphery paving for a more cost effective & easier to source aggregate material).

Constraints

Key constraints related to paving treatments within the city centre include:

- Cost associated with replacing existing pavements, and
- Reliance on developers to deliver new and/or replacement pavements could result in delays in achieving consistent pavements within the city centre.

Legend

	Railway Station
	Railway Line
	Liverpool City Centre - Project Site Boundary
	Core Paving - Herringbone with Highlight Pavers
	Core Paving - Herringbone
	Periphery Paving - Exposed Concrete Path & Nature Strip
	Exposed Concrete Paving (Full width)
	Core Paving - Granite with Blue Stone Kerb
	Core Paving Herringbone with Banding
	Nature Strips Only (No Footpath)

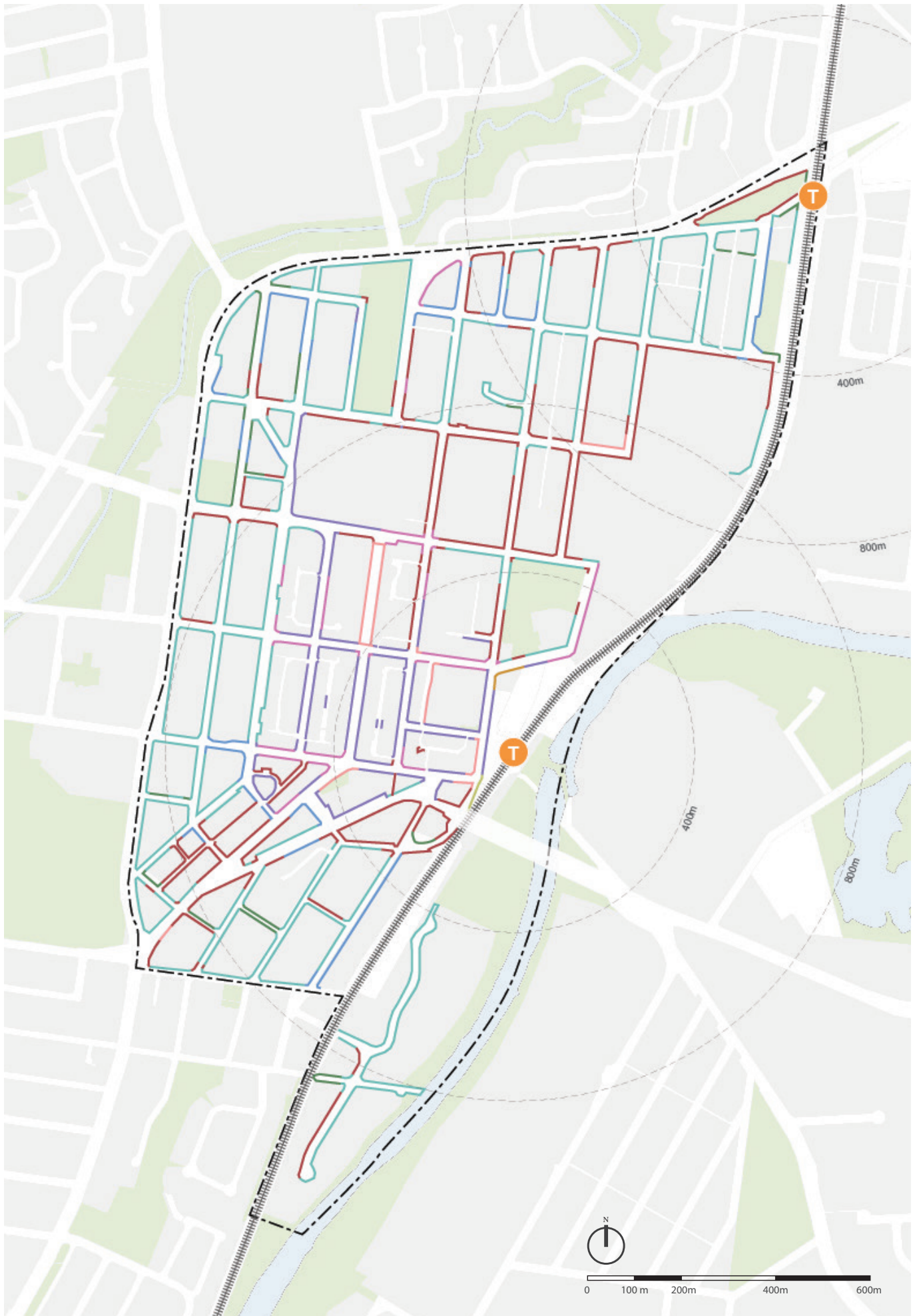


Figure 3.120 Liverpool City Centre - Paving Treatments (Liverpool City Council)

3.10

SITE ANALYSIS & APPRAISAL

PUBLIC ART & ACTIVATION

Public Art, Late Night Trading Areas & Event Locations

Overview

Public Art

There is various public art installations located within the city centre, mostly concentrated within the city core area and along the Macquarie Street south corridor. Public art within the city centre is in the form of wall murals, standalone sculptures and paving inlays, representing a variety of themes, including sites and stories relating to the history of Liverpool. The majority of public art has been commissioned by Council or developed by Council in partnerships with private land/building owners and artists (e.g. the recently installed mural located on a building on Bigge Street, by University of Wollongong alumnus Claire Foxton), commissioned with the assistance of Council.

Late Night Trading Areas

Late night trading areas within the city centre are mostly limited to a small row of restaurants and cafés located along Macquarie Street (south), that are open until late evening. There are a small number of cafés (e.g. within Macquarie Mall), eateries, pubs (e.g. Macquarie Hotel) and other venues (e.g. Plus Fitness gym) that are open late in the city centre. Westfield Shopping Centre and Liverpool Plaza are open until 9pm on Thursday evenings, and Event Cinemas (located within Westfield Shopping Centre) is open late with movies screening till around midnight on most evenings, including week nights.

Community Event Locations

The main event locations within the city centre are Macquarie Mall and Bigge Park, which accommodate several Community & Council run events throughout the year, including food, live music and performances, markets and art. This includes annual/seasonal events such the 'Easter in the Mall' event. Other common event locations within the city centre include the Liverpool Library forecourt (i.e. for Youth Events), and other streets and laneways (e.g. Eat Your Heart Out Liverpool event).

Busking

Busking is permitted within the city centre (i.e. with Council approval, an issued permit, and in accordance with Council's adopted Busker's Policy). Busking in the city centre is typically an individual or group playing a musical instrument, dancing, singing, clowning, juggling, or performing acts of a similar nature with the intention of receiving donations from members of the public. Busking usually occurs in Macquarie Mall, and on popular streets/intersections and public spaces within the city core area.

Opportunities

Key opportunities related to public art & activation within the city centre include:









- Work with Council's Public Arts Officer to identify opportunities for new public art within the city centre (including locations and types of artworks);
- Explore the possibility of developing an art walk within the city centre;
- Include new artworks at key sites, as part of Development Application conditions of consent;
- Retain or relocate/update (where appropriate) existing artwork within the city centre;
- Ensure a coordinated approach across Council to public art within the city centre, including identifying opportunities to combine public art with heritage and accessibility/inclusion considerations (e.g. sensory art);
- Consider opportunities to combine art and streetscape infrastructure;
- Explore opportunities within the public domain to support Council's vision to achieve an 18-hour economy in the city centre (e.g. increased active edges/rooftops);
- Explore public domain solutions to activate laneways laneways and arcades within the city centre, and
- Explore opportunities to increase community event and spaces and busking areas within the city centre.

Constraints

Key constraints related to public art & activation within the city centre include:

- Funding is often prioritised for other types of public infrastructure, over public art;
- The demand for increased late night trading within the city core is somewhat dependant on residential/mixed-use development occurring in the future;
- Limited public transport services to the city centre at night is impacting the demand for late night trading within the city centre, and
- Public perception relating to safety issues deter some people from spending time in the city centre.

Legend

	Railway Station
	Railway Line
	Liverpool City Centre - Project Site Boundary
	Outdoor Dining Areas
	Community Event Locations
	Late Night Trading Locations
	Specific Late Night Trading Locations
	Public Art Locations

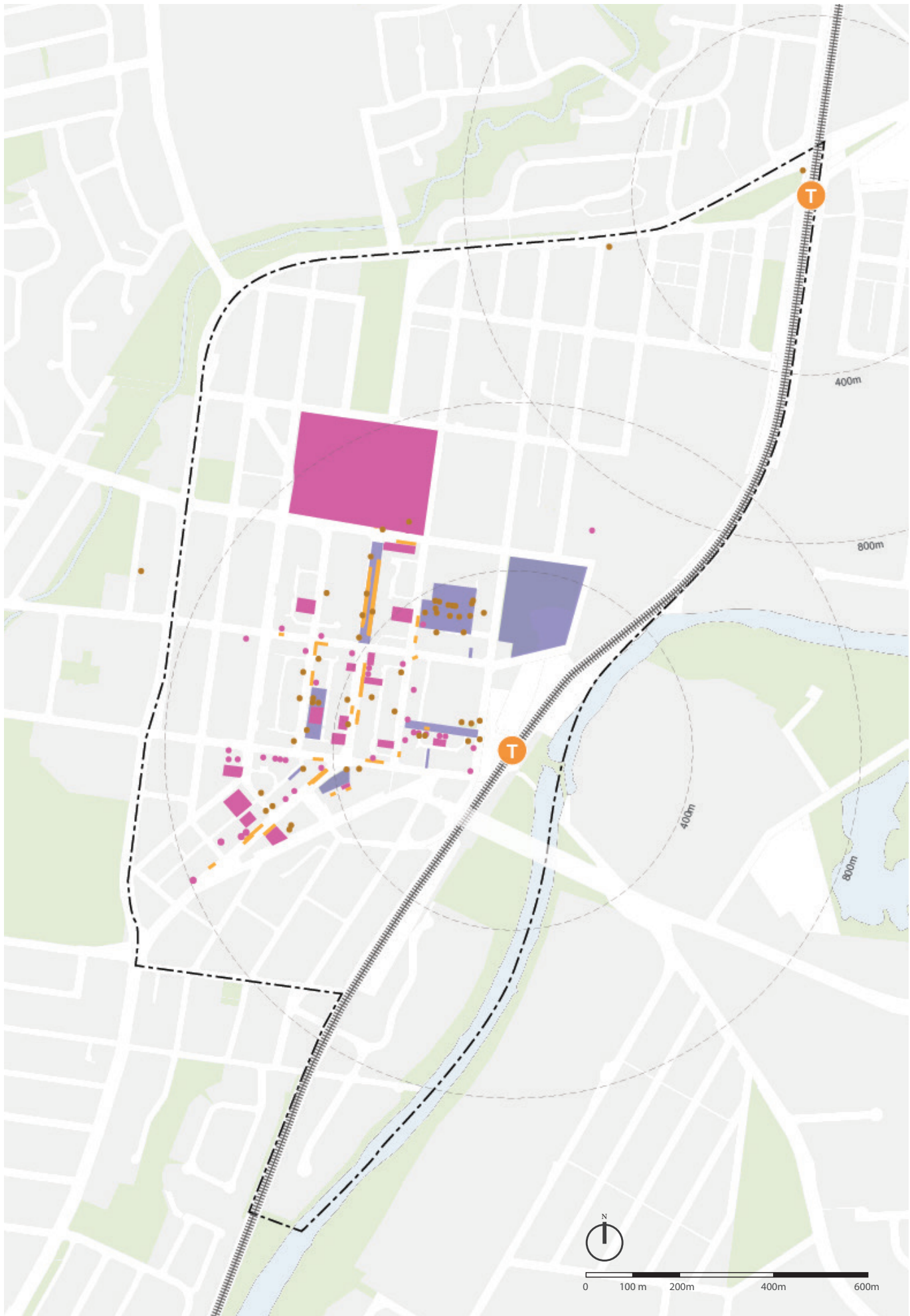


Figure 3.121 Liverpool City Centre - Public Art, Late Night Trading Areas & Community Event Locations (Liverpool City Council)

3.11

SITE ANALYSIS & APPRAISAL

UTILITIES & SERVICES

Water & Sewerage Network

Overview

There are numerous above and below ground services located within the city centre, mostly located within road reserves along city centre streets. This includes electricity, gas, internet, telecommunications and water (i.e. water supply, sewer & stormwater) assets, in the form of cables, lines, pipes and pits. These assets are owned and managed by various utility and service providers and Council is required to seek approval from each asset owner if changes are to be made within a utility easement or to any non-Council owned asset (e.g. relocation/alterations to service pits, underground/overhead cables or underground wires/pipes).

Electricity

Electricity assets within the city centre include both underground and overhead power lines, above-ground power poles & service pits located within road reserves (and associated easements), that are currently owned and/or managed by Endeavour Energy and TransGrid.

Internet

Internet assets within the city centre include underground cables (including fibre optic cables) & service pits located within road reserves (and associated easements), that are currently owned and/or managed by AARNet NSW, NBN Co NSW & ACT and Nextgen NCC NSW.

Gas

Gas assets within the city centre include underground pipes and service pit lids located within road reserves (and associated easements), that are currently owned and/or managed by Jemena Gas West.

Telecommunications

Telecommunications assets within the city centre include underground/aboveground cables and service pit lids located within road reserves (and associated easements), that are currently owned and/or managed by Optus, Uecomm NSW, PIPE Networks NSW and Telstra NSW.

Water

Water assets within the city centre include underground pipes, water-related infrastructure (e.g. stormwater drains, hydrants and outlets) and service pit lids located within road reserves and parks (and associated easements), that are currently owned and/or managed by Sydney Water, Water NSW and/or Council.

Opportunities

Key opportunities related to utilities & services within the city centre include:







- It is recommended that any concept/detail design work that is developed beyond this Master Plan includes a Dial Before You Dig (DBYD) search and Service Scan, to obtain detailed and current information relating to the location and nature of utilities/services;
- Align Water Sensitive Urban Design (WSUD) infrastructure with stormwater infrastructure and the broader hydrological network;
- Work with utility providers to incorporate (where possible) necessary utility/service relocations (i.e. to accommodate public domain improvements), as part of Development Application conditions of consent, and
- Work with utility providers to incorporate new utility/service infrastructure (where possible) into existing infrastructure (e.g. accommodate 5G into existing multifunction poles if possible).

Constraints

Key constraints related to utilities & services within the city centre include:

- Detailed maps showing the location of most utility/service assets across the city centre have not been made available to Council;
- Maps that have been made available to Council are diagrammatic and do not include detailed information (e.g. exact location and depth of services within the road reserves are unknown);
- Approvals are required to make alterations to utility/service providers assets. Approvals can take a long period of time and often lapse prior to construction;
- The relocation of utility/service provider assets is usually costly;
- The location of underground and/or above ground services can impact the location/ability to plant street trees, and
- Maintenance/upgrades carried out by service authorities often results in removal/damage to pavement and other public domain infrastructure.

Legend

	Railway Station
	Railway Line
	Liverpool City Centre - Project Site Boundary
	Sewer Network
	Water Supply Network
	Water Hydrant

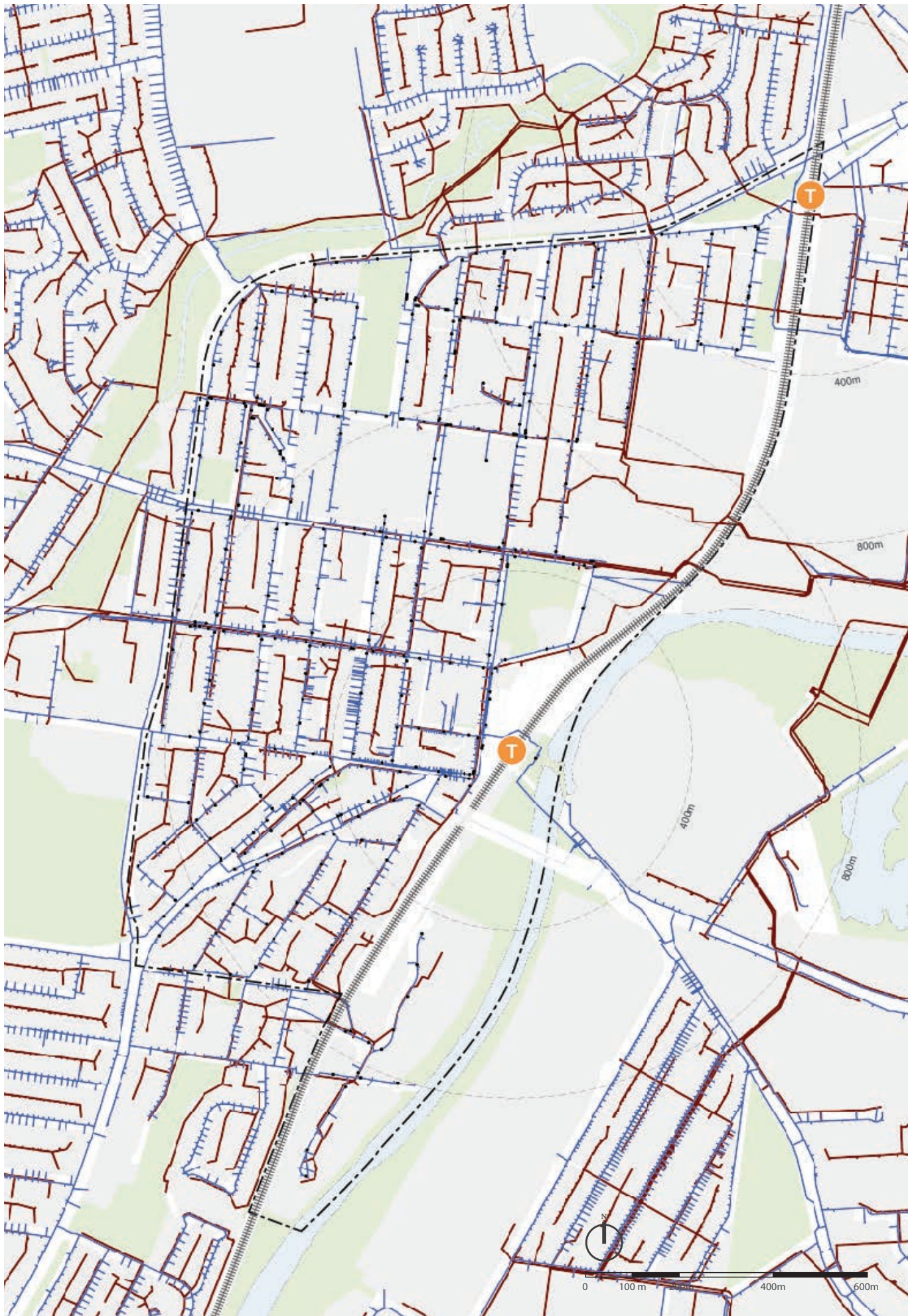


Figure 3.122 Liverpool City Centre - Water Supply & Sewage Network (Liverpool City Council)

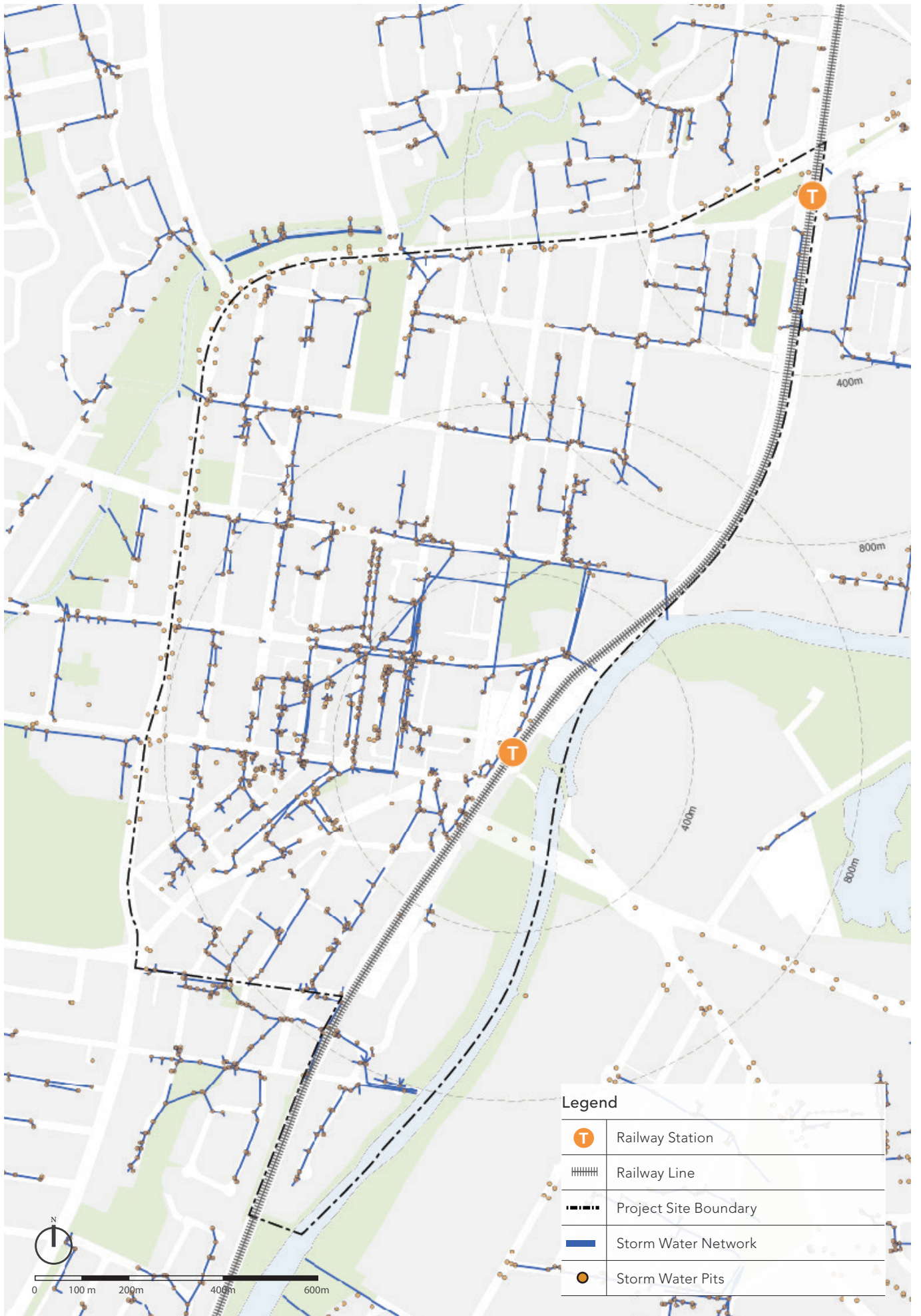


Figure 3.123 Liverpool City Centre - Stormwater Network (Liverpool City Council)

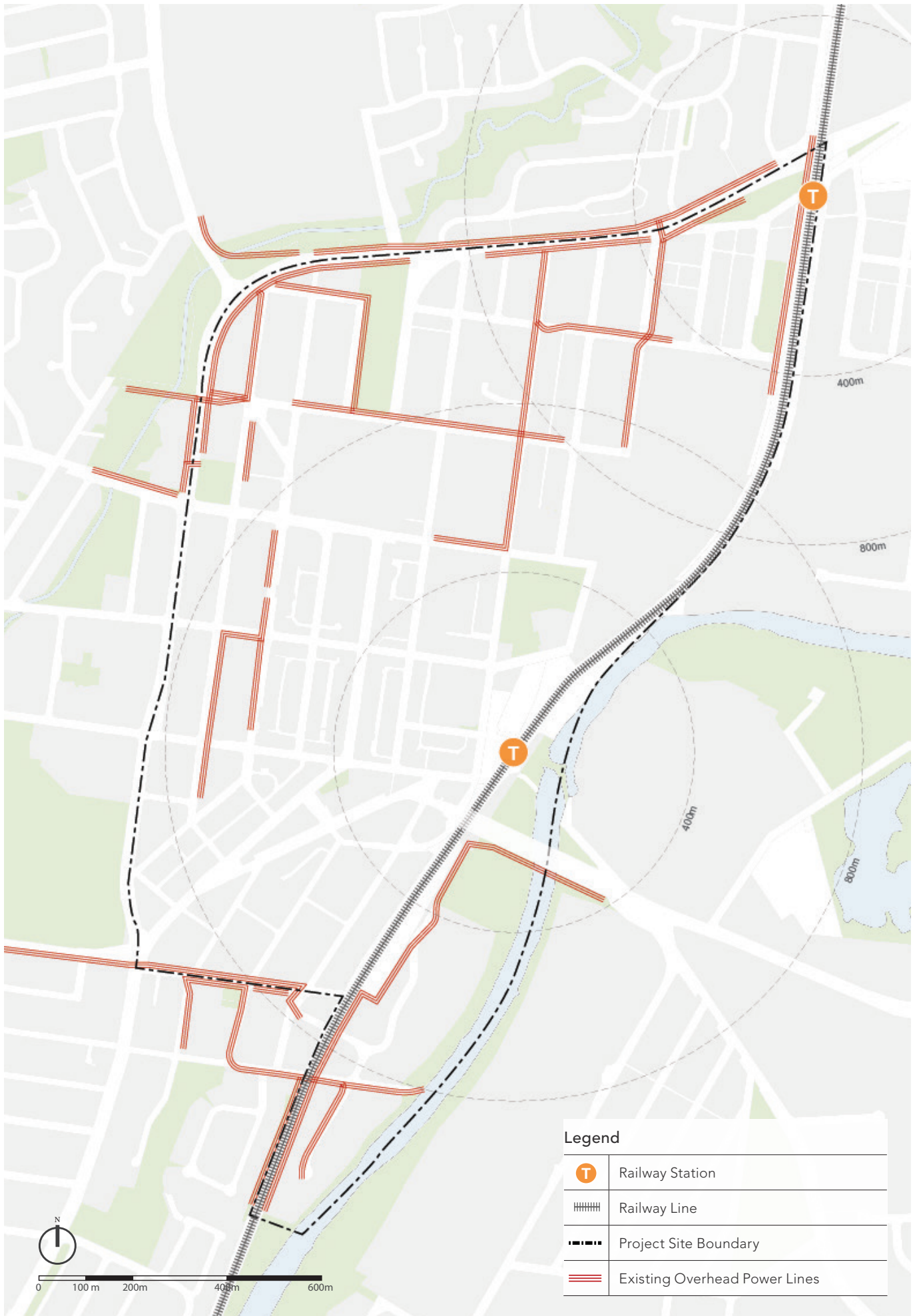


Figure 3.124 Liverpool City Centre - Existing Overhead Power Lines (Liverpool City Council)

This chapter of the report includes a summary of the engagement that was undertaken, with the community and internal & external stakeholders. This includes an overview of the community, list of stakeholders, engagement methodology and feedback received, that has been considered in the Master Plan.





4.0

COMMUNITY &
STAKEHOLDER
ENGAGEMENT

4.1

COMMUNITY & STAKEHOLDER ENGAGEMENT OVERVIEW

Overview

Community and stakeholder engagement refers to the interactions between Council, communities and other stakeholders. The community includes residents, business, visitors, and other individuals or groups of people with a common interest in the Liverpool city centre. Stakeholders include both internal (i.e. Council) and external (i.e. outside of Council) individuals, groups or organisations that have an interest or stake in, or who may be affected by the decisions of Council, with relation to the Liverpool City Centre.

The purpose of community and stakeholder engagement is to understand:

- How the public domain is currently being used;
- What is liked about the existing public domain;
- What is disliked about the existing public domain;
- What the community and stakeholders would like to do but currently cannot do in the public domain;
- What could be changed in the public domain to support what the community and stakeholders want to do;
- What could be changed in the public domain to support/improve business within the Liverpool city centre, and
- What modes of transport people use to get to and from the city centre and why?.

Additionally, the engagement process ensures that the community and stakeholders have the opportunity to be involved in the master plan process, and help shape decisions made for the future public domain of the Liverpool city centre.

Community

In the context of this master plan, the Liverpool community includes people (individuals or groups) who live, work, conduct business, study, volunteer, own property, participate in services or recreate in the Liverpool City Centre. Liverpool is a city of rich Aboriginal heritage, diversity of language and culture, a growing population of migrants and refugees, an increasingly growing young city and an ageing population. Liverpool is one of the most culturally diverse cities in New South Wales with around one in three people born overseas and more than half the population speaking a language other than English at home. Liverpool also has a significant Aboriginal community.

According to the 2016 Australian Bureau of Statistics census data, some of the key statistics relating to Liverpool are:

- The total population was 212,232 in 2016, and is expected to be around 331,000 in 2036;
- 37% of people are less than 25 years old, and the median age is 33 years old;
- 41% of people were born overseas, with the top five places of birth being Iraq, Vietnam, Fiji, India and Lebanon;
- 1.5% of people are Aboriginal or Torres Strait Islander;
- 46% of households comprise couples with children, and
- The top five languages spoken are English, Arabic, Vietnamese, Hindi and Italian.



Figure 4.125 Snapshot of the Liverpool community (Census 2016 & Liverpool City Council)

4.1

Community & Stakeholder Engagement

Introduction

Internal Stakeholders

In the context of this Master Plan, internal stakeholders includes the Mayor, Councillors, the CEO, Directors, and staff from various directorates, departments and teams across Council. This includes staff that are either directly or indirectly involved in the planning, design, management, renewal or assessment of proposed works to the public domain within the Liverpool city centre. Below is a list of directorates and various departments (i.e. within each directorate) that have collaborated to assist in the development of the master plan.

City Environment & Infrastructure

- City Environment
- Infrastructure Delivery
- Special Projects
- Technical Support

City Economy & Growth

- City Design & Public Domain
- City Economy
- Community Standards
- Development Assessment
- Planning & Transport Strategy
- Infrastructure Planning

City Community & Culture

- Casula Powerhouse Arts Centre
- Children's Services
- Community Development & Planning
- Civic Events & Other Events
- Recreation & Community Outcomes
- Library and Museum Services

City Corporate

- Customer Experience
- Financial Services
- Governance, Legal and Procurement
- Information Management
- People & Organisational Development
- Property & Commercial Development
- Risk Management and Safety & Wellness

City Presentation

- City Works
- Operational Facilities
- Waste & Cleansing

Office of the CEO

- Communications

Other

- Aerotropolis & City Planning
- Fifteenth Avenue Smart Transit Corridor

External Stakeholders

In the context of this Master Plan, in addition to the general community, external stakeholders include various government and non-government organisations that have a particular interest or stake in the Liverpool city centre, or who may be affected by the decisions made as part of the Master Plan. Below is a list of external stakeholders that have collaborated to assist in the development of the Master Plan.

- Residents living within the Liverpool City Centre
- Businesses located within the Liverpool City Centre
- Owners of property located within the Liverpool City Centre
- All Saints Catholic College
- City Deal Coordination Group
- Chamber of Commerce & Industry (Liverpool)
- Government Architect NSW
- Greater Sydney Commission (GSC)
- Health NSW
- Infrastructure NSW
- Liverpool Boys High School
- Liverpool Girls High School
- Liverpool Hospital
- Liverpool Public School
- Liverpool Innovation Precinct Strategy Group
- Liverpool Environment Committee
- Liverpool Tourism, Events and CBD Committee
- Liverpool Youth Committee
- NBN Co.
- NSW Department of Planning, Industry & Environment
- NSW Health (South Western Sydney Local Health District)
- NSW Office of Environment & Heritage
- NSW Office of Open Space
- NSW Police Force
- NSW Roads & Maritime Services (RMS)
- Scentre Group (Westfield)
- School Infrastructure NSW
- State Emergency Services
- Sydney Buses
- Sydney Metro Authority
- Sydney Water
- TAFE Western Sydney
- Telecommunication providers
- The Bio-technology and Bio-medical industries
- Transport for NSW (TfNSW)
- University of Wollongong
- Western Sydney University

4.2

COMMUNITY & STAKEHOLDER ENGAGEMENT METHODOLOGY

Community Engagement

The Community Engagement process was intended to be timely and responsive, accessible and inclusive, creative and adaptable, transparent and reflective, and aimed to build and strengthen the community's trust and relationship with Council. A seven week period of community engagement was completed between March and May 2019. The purpose of the long engagement period was to maximise opportunities for community participation, without being impacted by the Easter school holiday period. Opportunities were provided for both in-person and online feedback, including through interactive engagement events, intercept surveys, and an online survey. These were advertised through a mail-out to residents and businesses located within the city centre, a newspaper advertisement and social media posts. Council's Customer Experience department were also provided with information related to the project, to assist with answering general queries related to the project. Below is further detail relating to the various methods of community engagement that was completed.

Interactive Engagement Events

A series of pop-up style events were held across the city centre. The events were held on different days, and at different times and locations, to ensure that a wide audience was reached. Each event had Council staff available to participate in one-on-one discussions with the community and to answer any questions. Council staff facilitated a series of simple activities, asking questions about what participants like, dislike and what their vision was for the Liverpool City Centre. Additional questions were asked including how they come to the city centre and what they did there, and some demographic questions to assist with the analysis of the information.

The following engagement sessions were held:

- Wednesday 27 March 2019, 11:00am – 1:00pm: Liverpool City Library;
- Tuesday 02 April 2019, 3:00pm – 5:00pm: Liverpool City Library;
- Thursday 04 April 2019, 12:00 noon – 2:00pm: Macquarie Mall, Liverpool;
- Wednesday 10 April 2019, 3:00pm – 5:00pm: Westfield Shopping Centre, Liverpool;
- Friday 12 April 2019, 12:00 noon – 2:00pm: Westfield Shopping Centre, Liverpool;
- Monday 15 April 2019, 12:00 noon – 2:00pm: Liverpool City Library;
- Thursday 18 April 2019, 10:00am – 12:00 noon: Macquarie Mall, Liverpool;
- Tuesday 30 April 2019, 11:30am – 1:30pm: Bigge Park, Liverpool;
- Thursday 02 May 2019, 11:00am – 1:00pm: Bigge Park, Liverpool, and
- Monday 06 May 2019, 12:00 noon – 1:00pm: Liverpool Plaza Shopping Centre, Liverpool.

Intercept Surveys

Short intercept surveys were completed on different days, at different times and locations across the city centre. This provided an opportunity for community members to offer their feedback in an informal manner and within a short time-frame. It also provided an opportunity to capture responses from members of the community who may prefer to offer their feedback in-person, but may not have participated in the formal engagement events or online surveys.

Online Survey

An online survey was available through Council's Liverpool Listens website, for the entire engagement period. This provided the option for the community to offer feedback online, rather than in-person if preferred and/or if they were unable to provide feedback in-person. The questions asked in the online survey were consistent with those asked in the interactive engagement events, which enabled consistent analysis of the information across the different engagement methods.

Customer Call Centre & Front Counter

Council's Customer Experience department was provided with information related to the project, which enabled Council's Customer Service Officers at both the customer call centre and front counter to answer inbound queries and provide further information to the community about the project. More complex and technical inquiries were forwarded to Council's City Design and Public Domain department for attention, as required.

Advertising

The community engagement events and online survey were advertised through the local newspaper, on the Council website, on posters in the Liverpool City Library and as posts on the Liverpool City Council Facebook page. This assisted in raising community awareness about the project and helped encourage community participation. A flyer was distributed to households and businesses located within the master plan area to encourage participation from local residents and business owners and staff.

Community Engagement Summary Report

The data collected throughout the community engagement period was interpreted and collated. A separate Community Engagement Summary Report summarising the feedback received was prepared and was publicly exhibited via Council's 'Liverpool Listens' web page. This enabled the community to view the results and provide any additional comments that may not have been captured. This also ensured that the community remained informed about the project after they provided input and ensured that Council 'closed the loop' to show how the feedback received contributed to the development of the master plan and next steps.

4.2

Community & Stakeholder Engagement
Methodology



Figure 4.126 Images from Community Engagement Workshops (Liverpool City Council)

4.2

Community & Stakeholder Engagement

Methodology

Internal Stakeholder Engagement

Internal stakeholder engagement was completed through initial presentations to staff across Council, two rounds of 'speed date' style interactive workshops, and individual meetings with various Managers, Coordinators, Team Leaders and staff across Council. Further brainstorming sessions and site walkovers were completed with key staff during the master plan process. Other forums, including recurring internal meetings were used to collaborate and update staff with progress on the project. Below is further detail articulating the internal engagement process.

Presentations

Initial presentations were given to staff across the organisation, to introduce the project and provide information on the project scope and extent, and help identify opportunities for collaboration with other departments in Council. These presentations also enabled participants to be involved early on, and raise any questions, comments or concerns prior to development of the Master Plan.

Interactive Workshops

Interactive 'speed date' style workshops were held with Council's Mayor and Councillors, Directors and staff from various departments and teams across Council. Individual workshops were run over several consecutive days, and staff were grouped together according to their working disciplines and/or areas of expertise. Two rounds of interactive workshops were completed, to enable input from staff both early on and during the development of the master plan. Round one of the workshops was aimed at identifying opportunities, constraints, and generation of ideas. Round two of the workshops was aimed at presenting draft Master Plan proposals to staff and seeking their input.

Individual Meetings

Individual meetings were held with staff from key disciplines across Council, including those that wished to provide further specific input and staff that are managing major projects that currently being planned or delivered and will have a significant impact on the Master Plan.

Brainstorming Sessions with key Staff

Brainstorming sessions and site walkovers were held with key staff across Council to gain their input in resolving specific and/or complex issues that affect several disciplines current or planned future works.

Streetscape Coordination Meeting

Council's City Design and Public Domain department has established a recurring streetscape coordination meeting, as a forum to bring together coordinators from various teams within Council involved in the planning, design, construction, management or approval of works. This meeting was a forum for teams to provide input in the project and to provide updates on the progress of the Master Plan.

External Stakeholder Engagement

External stakeholder engagement was completed through emails and phone calls, presentations and mini workshops with key stakeholder groups and individual meetings with key stakeholders that wished to provide additional input. Below is further detail articulating the external engagement process.

Emails & Phone Calls

Individual emails were sent to external stakeholders, which included an overview of the project, to articulate the relevance of the project to the specific stakeholders and provide opportunity to discuss the project and provide input through various methods.

Presentations

Presentations were given to key stakeholder groups that have a particular interest in the city centre, such as committees and industry groups and stakeholders that requested additional information about the project. The presentations aimed to provide more detailed and specific information to stakeholders and facilitate questions and discussions. Presentations were held either at Council or at stakeholders offices.

Workshops

Workshops were held with stakeholders that wished to provide additional input, test ideas and resolve complex design issues, as part of the master plan process. This included stakeholders that have planned future projects within the city centre that would be impacted by the Master Plan. Workshops were held either at Council or at stakeholders offices.

Individual Meetings

Individual meetings were held with various stakeholders that wished to gain more information about the project, discuss specific aspects of the Master plan, or preferred to provide feedback in-person rather than via other methods. Individual meetings provided an opportunity for collaboration between organisations and assisted in identifying opportunities to integrate current and planned projects with the Master Plan. Meetings were held either at Council or at stakeholders offices.

4.2

Community & Stakeholder Engagement
Methodology



Figure 4.127 Images from Stakeholder Engagement Workshops (Liverpool City Council)

4.3

COMMUNITY & STAKEHOLDER ENGAGEMENT

FEEDBACK RECEIVED

Community Feedback

The feedback received from the Community Engagement activities was collated, interpreted and analysed. Analysis of the feedback revealed common themes, that have been summarised below. Some of the key responses to questions are summarised in the diagrams on the following page.

Shade

Many respondents felt that there was insufficient shade in the city centre. Some of these respondents requested all-weather pedestrian protection along the streets.

Maintenance

Respondents felt that the level of maintenance of the streets should be increased. Many respondents felt that the streets need to be cleaned more regularly and some areas are frequently reported to have illegally dumped rubbish. Respondents specifically mentioned that abandoned shopping trolleys and general rubbish are an issue in the streets of Liverpool.

Green Space

Many respondents requested more green space and trees in the city centre. Some respondents noted that the existing green space is very busy, with high levels of use. Upgrades to children's play equipment and youth facilities e.g. skateboard, basketball and bike track facilities was requested.

Street Trees

The existing street trees are valued by the community. The provision of more street trees was one of the most requested streetscape items from respondents. Respondents felt that trees were the most effective method to provide shade on the streets. Some respondents also requested other forms of weather protection, including more awnings, for protection from rain and sun.

Street Condition, Traffic and Parking

Some respondents requested improved road surfaces within the city centre. A large number of respondents felt that traffic congestion and a lack of car parking was an issue within the city centre. This was an interesting finding, as the respondents mostly traveled from elsewhere in the suburb of Liverpool by car and parked in the city Centre. While some respondents requested cheaper car parking rates, others requested increased enforcement of timed parking. Respondents felt that cars were prioritised over pedestrians in the current street arrangements. This was particularly noted in areas near the Hume Highway and Copeland Street.

Footpaths

A few respondents requested improved footpaths, with updated paving and/or improved condition of paving. Respondents felt that some areas of paving were low in quality, and others requested improved walkability in the future city centre.

Public Transport

Most respondents requested improved public transport to Liverpool. This included additional and more frequent public transport services.

City Economy

Many respondents were satisfied with the existing retail and other shops in Liverpool. Several respondents requested increased retail and entertainment options outside of the Westfield Shopping Centre, and later night trading hours for bars, cafes and restaurants.

Sense of Place

Respondents felt that Liverpool's streets are looking tired and outdated. Most respondents liked the character of Liverpool but felt that it could be improved through the modernisation of shop-fronts and the streetscapes.

City Centre Community

Respondents felt that there was a good sense of community in Liverpool, and many felt that visitors and residents are friendly in Liverpool.

Accessibility

Some respondents requested that greater priority be given to access and inclusion, for future upgrades within the city centre.

Street Furniture

Respondents requested that additional street furniture be provided in the city centre. This included more seats, bins, water drinking fountains and public barbecues.

Bicycle Infrastructure

Some respondents requested improved bicycle infrastructure, including bicycle lanes and bike racks. A few respondents outlined that the lack of bicycle facilities was limiting their ability to cycle within the city centre.

Georges River

Respondents felt that the Georges River was both physically and visually disconnected from the city centre. Respondents requested recreational activities along and within the river, such as pontoons and a floating pool, or for the river to become swimmable again.

Public Bathrooms

A high proportion of respondents requested more public bathrooms in the city centre, and for existing bathrooms to be cleaned more regularly.

City Innovation

Respondents requested smart technologies be incorporated in the city centre, including outdoor USB charging ports, free public wifi and outdoor cinema screens.

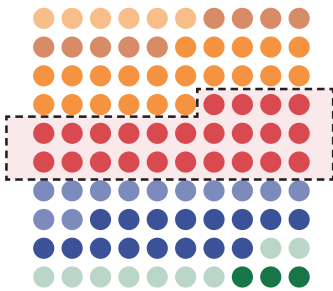
4.3

Community & Stakeholder Engagement Feedback Received

What age were respondents?

- under 18
- 18-24
- 25-34
- 35-44
- 45-54
- 55-64
- 65-74
- 75+

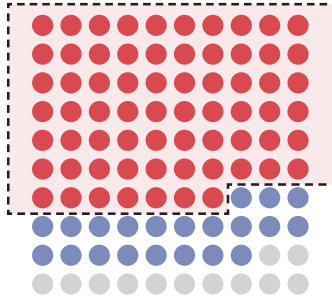
If Liverpool was 100 people...



Do respondents live in the LGA?

- Yes
- No
- No response

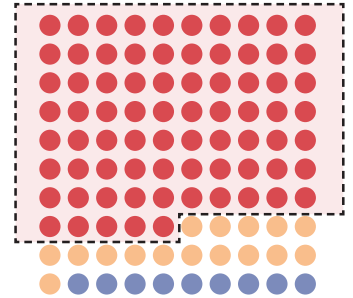
If Liverpool was 100 people...



Top three suburbs that respondents live in?

- 1. Liverpool (75%)
- 2. Lurnea (16%)
- 3. Moorebank (9%)

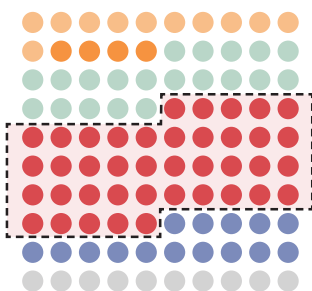
If Liverpool was 100 people...



Mode of transport taken to get to the city centre?

- Bus
- Train
- Walking
- Car
- Multiple modes
- No response

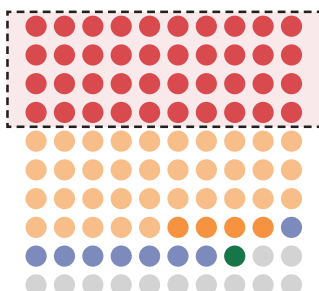
If Liverpool was 100 people...



How often do respondents visit Liverpool?

- Daily
- 2-3 times per week
- Weekly
- Monthly
- Rarely
- No response

If Liverpool was 100 people...



How long did respondents stay in Liverpool?

- 0-10 min
- 10 min - 1 hr
- 1-2 hr
- 2 hrs+
- All day
- Overnight
- No response

If Liverpool was 100 people...

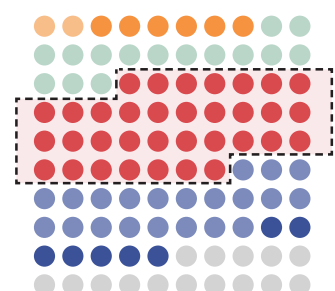


Figure 4.128 Summary of Community Engagement Feedback (Liverpool City Council)

4.3

Community & Stakeholder Engagement

Feedback Received

Stakeholder Feedback

The feedback received from the internal and external stakeholder engagement activities was collated, interpreted and analysed. Analysis of the feedback revealed common themes, that have been summarised below. Precedent images showing key priorities and most commonly requested items are shown on the following page.

Open Space

Respondents identified open space deficiencies in the city centre, and an overall need to improve existing open spaces. Open space located along the city centre peripheries were identified as needing improvement. In addition, parks that have power available and have flexible spaces was desirable for events.

Public Amenities

Respondents noted deficiencies in the following areas: public bathrooms, footpaths, lighting, signage & wayfinding, public furniture, and play spaces. Suggested improvements in these areas include: increased public toilets; wider footpaths of consistent quality, and easy to maintain; more lighting to improve safety; consistent and updated signage; more spaces for commuting and play.

Street Trees and Shade

Respondents felt that there was deficit of street trees, appropriate shade and shelter. Established trees creating a shady tree canopy are highly desired along main streets and boulevards, in recreational areas, and in open spaces such as Macquarie Mall. Additional seating, to increase use of public open spaces and shelter from the elements, provided by continuous awning cover, was suggested.

Traffic and Parking Conditions

Respondents felt that the city centre is car-dominated, causing traffic congestion. Suggestions included increased pedestrianisation of streets, parking & relocating parking to the city fringes, and reducing traffic speeds to 40km/hour.

Transit and Pedestrian Access

Respondents felt that the historic 'Town Plan of Liverpool' street layout was an asset to the city centre, and can be optimised with additional pedestrian amenity, strengthening arcade and laneway linkages, and decreasing traffic speed limits to encourage increased walkability. Increased public and active transport options, along with support infrastructure, was suggested. Respondents felt that improved pedestrian and cycleway connections to Woodward Place will increase access to open space for city centre residents. Access & inclusion was a priority city centre for improvements.

Innovation

Respondents showed an interest in 'smart' technological solutions to support the community through services, infrastructure, design and way finding. Some examples include provision of power and wi-fi, electronic charging stations, and digital way finding.

Economic Development and City Activation

Respondents were supportive of Council's vision to achieve an 18-hour economy. Current event hotspots are Macquarie Mall, Bigge Park and the Liverpool library forecourt, which play host to a range of large and small-scale events and activations from both Council and the community. Council has also been presenting events and activations in public and private spaces throughout the city centre, such as laneways, roads and carparks, to encourage different styles of events in a range of spaces, in order to stimulate local business and provide a range of entertainment options to the community. Respondents felt that a livelier day time and energetic night time economy can be achieved by increasing the verity and quality of retail and dining options, event and activation initiatives, and spaces which are further supported by public art and places of interest. Rooftop bars, markets, riverside events and more youth spaces are desired to launch more events in future.

Community and Cultural Diversity

Respondents felt that there is a diverse mix of offerings, cultures and services that require better integration in order to achieve accessibility to a range of users. There is a desire to strengthen the community 'identity' through better integration of culturally and linguistically diverse services and sharing the diverse stories of the community through public art and social media.

Environmental Conditions

There is a desire to achieve improved community health and environmental outcomes for the city centre through smoking restrictions, colling of the streets, Water Sensitive Urban Design, pest management, and the preservation and increase of habitats for native flora and fauna. Respondents felt that connections to the river should be achieved whilst respecting the natural environment.

Heritage

There are three layers of heritage, these being, Aboriginal, colonial and migrant, which are all to be respected and can be highlighted in different ways throughout the city centre. It was noted that Bigge Park and Apex Park have Native Titles. There are multiple spaces, parks and buildings that hold colonial heritage value and are heritage listed. Migrant heritage is less documented, but is prevalent and celebrated today through the community's cultural diversity. Opportunities to celebrate heritage in the public domain were identified, including through integrating heritage buildings with the landscape, including through public art.

Development and Design

Private development and design will play a significant role in the re-imagining of the city centre. Respondents felt that it is essential that the Master Plan is integrated into Council's Development Application process, with supporting policy & design guidelines, to ensure that objectives and vision of the master plan is achieved as development occurs.

4.3

Community & Stakeholder Engagement
Feedback Received

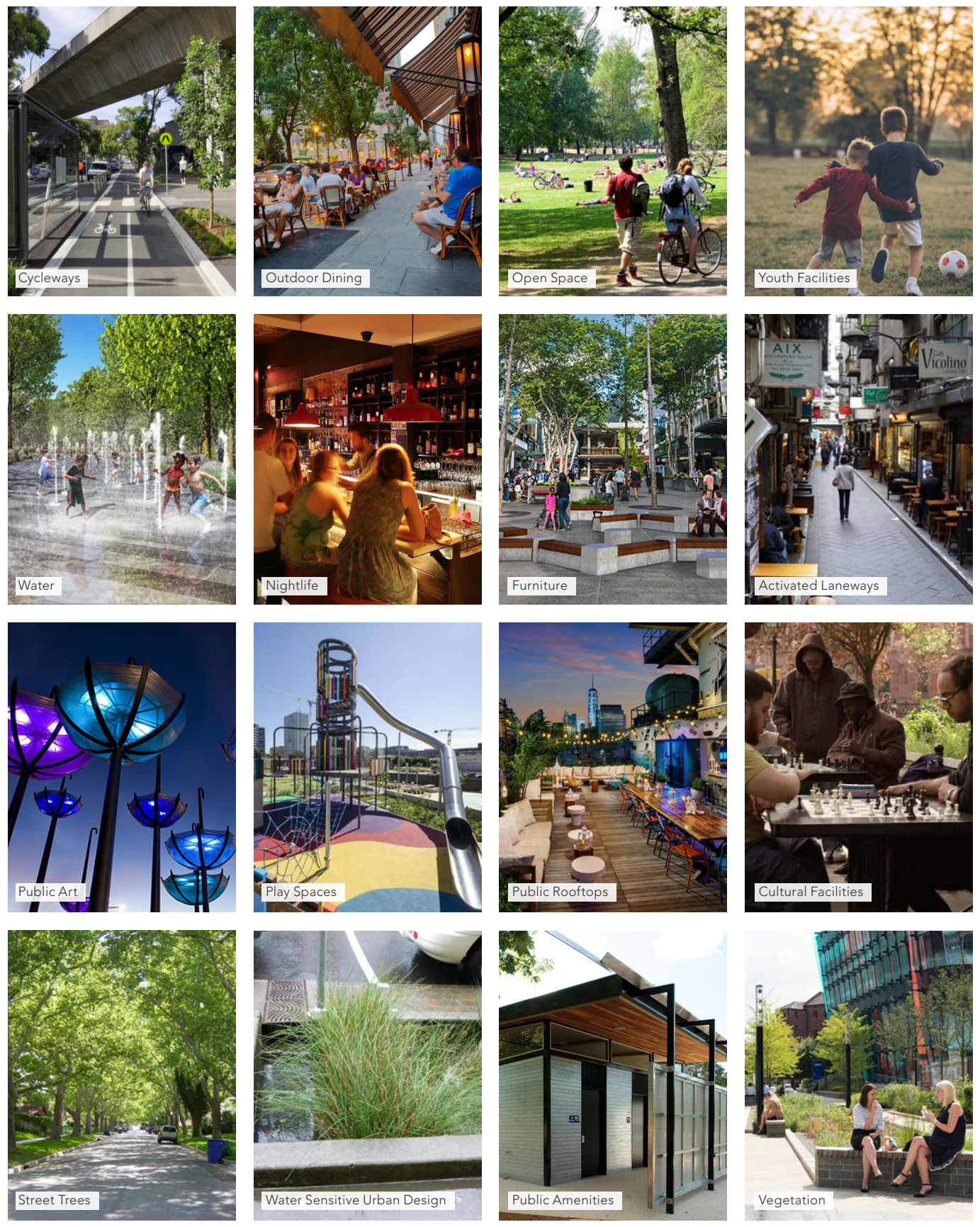


Figure 4.130 Images showing commonly requested items by stakeholders (Liverpool City Council)

This chapter of the report establishes a vision and set of design principles that guided the development of the Master Plan, which were developed in response to the information collected and work undertaken in the previous chapters of the report. A benchmarking study of precedent projects was completed, in accordance with the identified character areas for the city centre, which has informed the Master Plan.





5.0

VISION, PRINCIPLES &
BENCHMARKING



5.1

VISION, PRINCIPLES & BENCHMARKING OVERVIEW

Overview

This chapter of the report builds on the information gathered and work completed in the previous chapters of the report, including the Strategic Review, Site Analysis and Appraisal and Community & Stakeholder Engagement, to develop a guiding framework for the Master Plan. The framework consists of a vision statement, Master Plan principles and a benchmarking study.

The vision statement describes the inspirational long-term desired change, resulting from the consolidation of the information collected and shared vision for the city centre, as per feedback received from the community and stakeholders. The vision statement has guided the formation of five master plan principles, that have been used to guide the development of the Master Plan.

The master plan principles are as follows:

- Improve Connectivity;
- Enhance Liveability;
- Increase Productivity;
- Achieve Sustainability, and
- Deliver Governance.

These principles are aligned with the objectives of both; key strategic documents that have been instrumental in initiating this Master Plan, and key current best practice Urban Design guidelines. Generally, the objectives of these documents are focused around improved social, environmental, economic and governance outcomes.

These documents include:

- Greater Sydney Commission’s ‘Liverpool Collaboration Area Place Strategy’, as part of ‘A Metropolis of Three Cities’, Greater Sydney Region Plan;
- Council’s Community Strategic Plan, ‘Our Home Liverpool 2027’;
- Council’s Local Strategic Planning Statement ‘Connected Liverpool 2040’, and
- The Government Architect NSW’s ‘Good Urban Design’ Guideline.

Alignment of the master plan principles with the objectives of these broader strategic documents ensures that the Master Plan is delivering on these objectives, at the fine grain level. A project validation list is included in Chapter 7.2 Project Validation (See page 308-309). This list validates the proposed master plan projects (See Chapter 6.0 Master Plan) against the objectives of these key documents. As projects within the master plan progress through to concept and detailed design, the five master plan principles should continue to be used, to ensure that the aspirations of the master plan are being delivered at all stages of design.

A benchmarking study was also undertaken to find examples of industry best practice and trends in public domain design, that are in accordance with the master plan principles. These examples have been used as precedents to inform the development of the Master Plan.

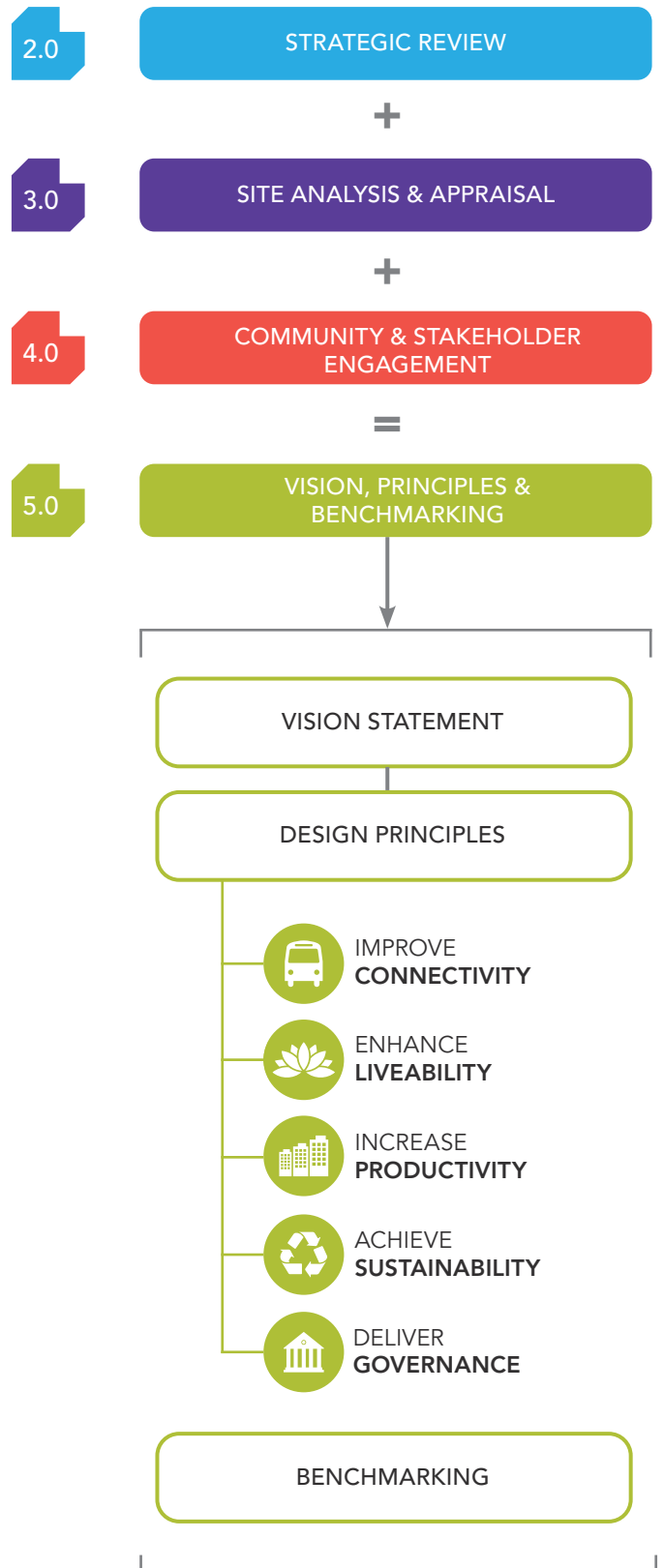


Figure 5.131 Master Plan development process, and structure of the Master Plan Principles & Benchmarking chapter (Liverpool City Council)

5.2

VISION, PRINCIPLES & BENCHMARKING

VISION & PRINCIPLES

Vision Statement

The vision statement is a description of the overall objectives that is intended to guide the Master Plan, which has been developed as a result of the research undertaken in the previous chapters of this report. The findings from the Project Context, Strategic Review, Site Analysis and Appraisal, and Community and Stakeholder Engagement chapters have been consolidated and distilled into a vision. The vision statement articulates the inspiration and aspiration for the city centre. The Master Plan vision statement is below.



*The Master Plan for the Liverpool city centre aims to create a **rejuvenated and revitalised river city** which is **vibrant and active**, and aspires to achieve a **high quality public realm** for the community, using **sustainable design principles and best industry practices**. It aims to establish a more **coherent, cohesive and integrated urban core** which is **greener, healthier, inclusive and accessible** for the city's residents, businesses and visitors. The Master Plan establishes the foundation for a **high quality built environment that is safe and liveable**, and leverages off the new Western Sydney (Nancy-Bird Walton) International Airport and Aerotropolis, supporting growth & businesses to promote an **18 hour economy** within the city centre.*



Figure 5.132 Master Plan Vision Statement (Liverpool City Council)



Figure 5.133 Examples showing key elements to achieve the vision for the Liverpool city centre (Liverpool City Council)

Design Principles

The Master Plan principles aim to deliver on the vision statement, focusing on the key priorities to guide the design decisions within the Master Plan. The principles are aligned with the objectives of the key strategic documents that have been instrumental in initiating this Master Plan, and key current best practice Urban Design guidelines, to achieve improved social, environmental, economic and governance outcomes for the city centre. The Master Plan principles are; Improve Connectivity, Enhance Liveability, Increase Productivity, Achieve Sustainability, and Deliver Governance. A description of each Master Plan principle and list of objectives that explain how each principle will be delivered in the Master Plan is below.



IMPROVE CONNECTIVITY

The Liverpool city centre is well connected, accessible, inclusive, legible and easy to navigate. The public domain is designed to encourage active and public transport, and access is improved to the city's open spaces, rivers and creeks and public facilities. Connections to the city's history, culture and people is strengthened.

Key aims include:

- The city centre is well connected and accessible; to surrounding neighbourhoods, the Western Sydney region and Greater Sydney;
- Active and public transport is encouraged to and from, and within the city centre;
- A clear hierarchy of streets is established;
- Streets are designed to provide increased priority to active and public forms of transport;
- Intersections are improved to increase connectivity between the city centre and Brickmakers Creek corridor;
- Serviceways/Laneways are upgraded to encourage pedestrian activity across the city centre;
- Upgrading of east-west arcades is encouraged to increase mid-block connections across the city centre;
- Entry points into the city centre and clearly defined;
- Car Parking is encouraged around the periphery of the city centre, to reduce congestion and encourage pedestrian and cyclist activity within the city core;
- Access to places of interest and public facilities is improved;
- Access to, and between open spaces is improved;
- Access to rivers and creeks is improved and increased;
- Access to heritage sites is improved and increased;
- Connections to the city's Indigenous, European and Migrant and Transnational heritage is enhanced, strengthened and promoted;
- Connections to the city's history, culture and people is promoted through increased public art;
- The city is easier to navigate, including through improved signage and wayfinding mechanisms, and
- The city centre is accessible for all people.

5.2

Vision, Principles & Benchmarking

Vision & Principles



ENHANCE LIVEABILITY

The Liverpool city centre is a great place to live, work and visit. The public domain is designed to better meet the needs of the community and reflects the unique character of Liverpool. The city is healthy and liveable, with increased access to nature, open space, facilities and amenities.

Key aims include:

- The city centre has vibrant, diverse, accessible and resilient public spaces that reflect the local character;
- Streets are designed to be attractive and comfortable, with increased shade, shelter and amenities;
- Serviceways/Laneways are activated and upgraded to accommodate community events;
- Gateways to the city are improved to provide a sense of arrival and reflect the character of the city;
- Vehicular congestion and associated air pollution is reduced within the city centre;
- The quantity and quality of open space is improved;
- Access to water is increased, including through improved connections to rivers and creeks, and additional water features and water play within the city centre;
- Heritage sites are conserved, enhanced and promoted;
- Public spaces are safe for people, at both day and night;
- Public domain infrastructure is upgraded to better meet the needs of the community, and
- The city centre is inclusive for all people.



INCREASE PRODUCTIVITY

The public domain within the Liverpool city centre is designed to support the needs of residents, workers, students and visitors, thereby encouraging them to spend time in the city centre and engage in local commerce, to foster an 18-hour a day economy.

Key aims include:

- Public spaces within the city are designed to support the needs of residents, workers, students and visitors;
- Interfaces between the public and private domain are improved, including increased active edges, to achieve more interaction between shop fronts and streets;
- Streets are designed to provide people with things to see and do, places to stop, recreate and engage in commerce;
- Serviceways/Laneways are designed to encourage businesses to be dual-facing (i.e. to address and activate both the street and Serviceway/Laneway frontages);
- Transport and Car Parking strategies that increase visitor access to, from and around the city centre are supported;
- The quantity and quality of public facilities and amenities is increased to support the needs of the community, and
- Where possible, underutilised buildings and spaces are re-purposed, providing opportunities for local businesses.



ACHIEVE SUSTAINABILITY

Sustainability is achieved within the Liverpool city centre through social, environmental, economic and leadership initiatives that increase the resilience of the city centre.

Key aims include:

- The quantity and quality of storm water runoff is improved, including through the implementation of Water Sensitive Urban Design (WSUD) measures in streets;
- The collection and reuse of storm water is encouraged;
- Temperatures are reduced, to address the urban heat island effect, including through increased canopy coverage across the city centre;
- Native flora and fauna is supported through improved environmental outcomes, including additional open space and the incorporation of suitable vegetation species;
- Air quality is improved, including through additional trees and other vegetation to help clean the air;
- Active and public transport is encouraged, as an alternative to vehicular transport within the city centre;
- Heritage sites are conserved, enhanced and promoted;
- The community is educated about sustainability, including through public art;
- Sustainable materials and finishes is considered in the selection of public domain infrastructure;
- Strategies for sustainable waste management is considered;
- The incorporation of energy efficient lighting is encouraged, including LED lighting and photovoltaic panels to generate electricity,
- The incorporation of electric vehicle charging stations is supported, to encourage the use of electric vehicles, and
- Public spaces are designed with consideration to on-going maintenance requirements and life cycle cost.



DELIVER GOVERNANCE

Liverpool City Council leads the community and stakeholders with a clear vision for the Liverpool city centre, and provides the information required to deliver the Master Plan.

Key aims include:

- Provide a holistic vision, that delivers on the community and stakeholders vision for the city centre;
- Continue to engage with the community and stakeholders as the Master Plan is implemented, and
- Review the process and outcomes of the Master Plan as projects within the plan are delivered, to ensure continual improvement is achieved, including through the capturing of critical feedback to inform future updates to the Master Plan.

5.3

VISION, PRINCIPLES & BENCHMARKING

BENCHMARKING

Overview

Benchmarking was a process used to measure the success of precedent public domain projects against the established Master Plan principles. The process was also used as a tool to understand industry best practice and trends in public space design. Benchmarking was undertaken based around five individual character areas, as per the character areas identified for the city centre in the Greater Sydney Commission's 'Liverpool Collaboration Area Place Strategy'.

The five character areas are as follows:

- City Centre Core;
- High Density Residential Precinct;
- Mixed Use Precinct;
- Healthcare and Innovation Precinct, and
- Riverfront Precinct.

Benchmarking was completed through a number of methods, including:

- A desktop review of precedent projects, including both constructed and unconstructed projects;
- A desktop review of project imagery, including exemplar international and local project examples;
- A literature review of best practice urban design, including a review of national, state, regional and local industry guidelines and manuals;
- Sites visit to well-designed public spaces in Sydney, including a photo documentation of various features and elements within the public domain;
- Telephone discussions with other Councils and organisations to understand the background of precedent projects and ask questions;
- Meetings with other Councils, NSW Government departments to gain more information about precedent projects;
- Meetings with Council staff that are involved in the planning, design, construction, maintenance and management of the public domain to understand what they consider to be best practice design;
- Completing workshop activities, including with industry professionals to analyse precedent projects;
- Completing workshop activities within the project team to discuss the information gathered through the benchmarking process and determine its relevance to the Master Plan, and
- Meetings with suppliers of public domain infrastructure to learn more about innovation, technology and new products.

The benchmarking process provided an understanding of best industry practice, both locally and internationally. The process helped determine what interventions could work in the context of the five character areas within the Liverpool city centre.

Common Principles

The benchmarking process highlighted that while public domain interventions vary depending on the project, common principles have been used to improve the public domain and achieve successful spaces for people.

The list of common principles derived from the benchmarking process include:

- Design streets provide increased priority to active and public forms of transport;
- Ensure that street infrastructure supports this hierarchy (e.g. traffic calming devices);
- Design public spaces that are inclusive and accessible for all people, regardless of their age, level of ability or cultural background;
- Ensure that public spaces make people feel welcome, relaxed and safe both during the day and at night time;
- Ensure that streets are easy to cross, including through low vehicular traffic speeds and reducing the length of pedestrian crossing distances at street intersections;
- Design for improved environmental outcomes, including cleaner air, cooler temperatures & increased biodiversity;
- Minimise noise from vehicles, including through reduced traffic speed limits and volumes of vehicular traffic;
- Provide places for people to rest, interact and recreate;
- Design streets to have multifunctional outcomes (e.g. water treatment, movement, commerce);
- Integrate Water Sensitive Urban Design (WSUD) within streets, and including low cost interventions (e.g. passive irrigation);
- Provide shade including through street trees, awnings and other shade structures;
- Encourage increased vegetation in both the public and private domain, to contribute to the overall greening of the city. This includes trees, understorey planting, and vertical gardens (where appropriate);
- Ensure streets offer things for people to see and do;
- Ensure there is a regular turn-over of parking to ensure street car parks are used by those engaging in commerce and street activity;
- Reduce clutter within streets, including through consolidating and removing unnecessary signage and fencing;
- Provide high quality and low maintenance pavements, furniture, fixtures and fittings for longevity;
- Minimise or remove fencing to streets and allow free pedestrian movements across city streets, and
- Encourage good interfaces between the public and private domain.

The following pages contain a snapshot of the images collected as part of the benchmarking process. This includes precedents and best practice examples of projects that relate to the five character areas within the city centre. The images collected have been used to inform the development of the master plan.

5.3

Vision, Principles & Benchmarking
Benchmarking

City Centre Core

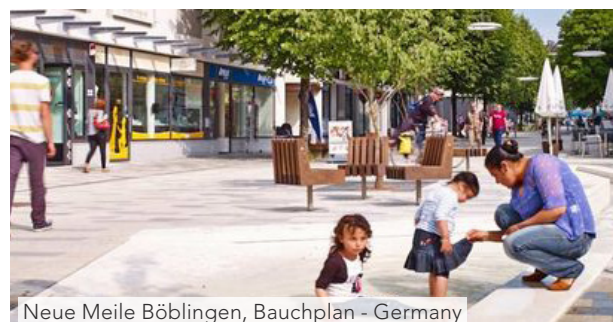


Figure 5.134 Precedent Images for City Centre Core (Liverpool City Council)

5.3

Vision, Principles & Benchmarking

Benchmarking

High Density Residential Precinct

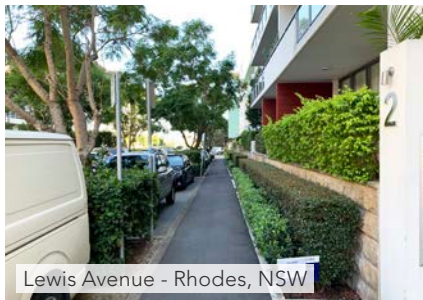
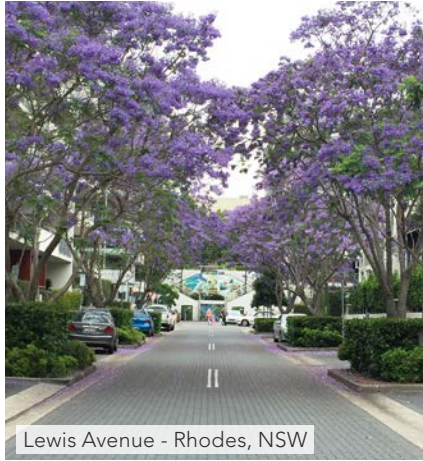


Figure 5.135 Precedent Images for Residential Streets (Liverpool City Council)

Mixed Use Precinct

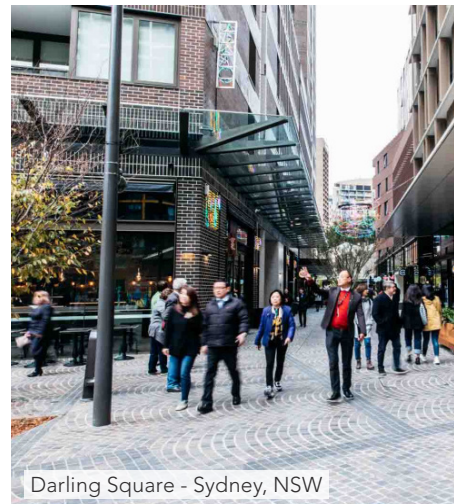


Figure 5.136 Precedent Images for Mixed Use Precinct (Liverpool City Council)

5.3

Vision, Principles & Benchmarking

Benchmarking

Healthcare and Innovation Precinct

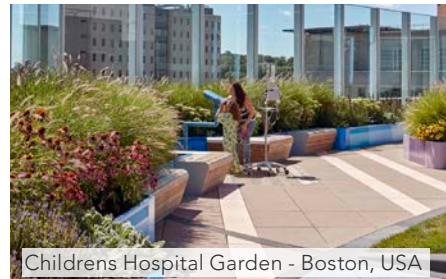


Figure 5.137 Precedent Images for Healthcare and Innovation Precinct (Liverpool City Council)

Riverfront Precinct



Figure 5.138 Precedent Images for Riverfront Precinct (Liverpool City Council)

This chapter of the report provides the holistic public domain framework for the city centre, in accordance with the Master Plan vision and principles. A structure plan establishes the broad vision and overall spatial plan for the public domain. This is followed by sub-chapters that are arranged by project typologies, with each typology being an individual layer within the overall structure plan. Each of these typologies is further detailed through a series of typology-related projects and interventions.





6.0

MASTER
PLAN



6.1

MASTER PLAN OVERVIEW

Overview

The Master Plan is a consolidated planning and management direction that enables works to be implemented, as part of a holistic public domain framework for the city centre. The Master Plan has been developed as a response to the information gathered, and work completed in the previous chapters of this report, that have formed a foundation for the master plan.

To this extent, the Master Plan responds to the following:

- The directions and actions related to the city centre, as per the plans, policies, strategies & guidelines that were reviewed in the Strategic Review chapter;
- The site conditions that were mapped & analysed, and the respective opportunities & constraints that were identified, in the Site Analysis and Appraisal chapter;
- The feedback received from the community, and internal & external project stakeholders, in the Community & Stakeholder Engagement chapter, and
- The established design principles, and best practice design, as per the benchmarking studies completed in the Master Plan Principles & Benchmarking chapter.

The Master Plan chapter is organised around an overarching structure plan, followed by typology plans, and individual projects that relate to each typology plan. The Structure Plan is the overall spatial plan for the city centre that outlines the key master plan moves and broad vision for the city centre. This is supported by an illustrative master plan that provides an overview of all the projects within the master plan. The structure plan is then detailed out through sub-chapters that are arranged by typologies. Each typology is an individual layer within the overall structure plan, and these include streets, serviceways/laneways, gateways, car parking, open space, hydrology, heritage, public art, safety, accessibility and inclusion, sustainability, maintenance, and tactical urbanism. Each of these typologies is further detailed through a series of typology-related projects.

Typology related projects within the master plan include the following:

- Acknowledgement of existing projects that are currently being developed or delivered by Council, located within the city centre;
- Proposals for the public domain that are articulated through diagrams, plans, sections, 3D renders, text and images. These will be used to guide projects, as they progress through to concept & detailed design, in the implementation phase of the master plan;
- Recommendations for site specific master plans or concept designs to be developed;
- Recommendations for new or updated policies, and
- Recommendations for further studies to be completed to inform concept & detailed designs.

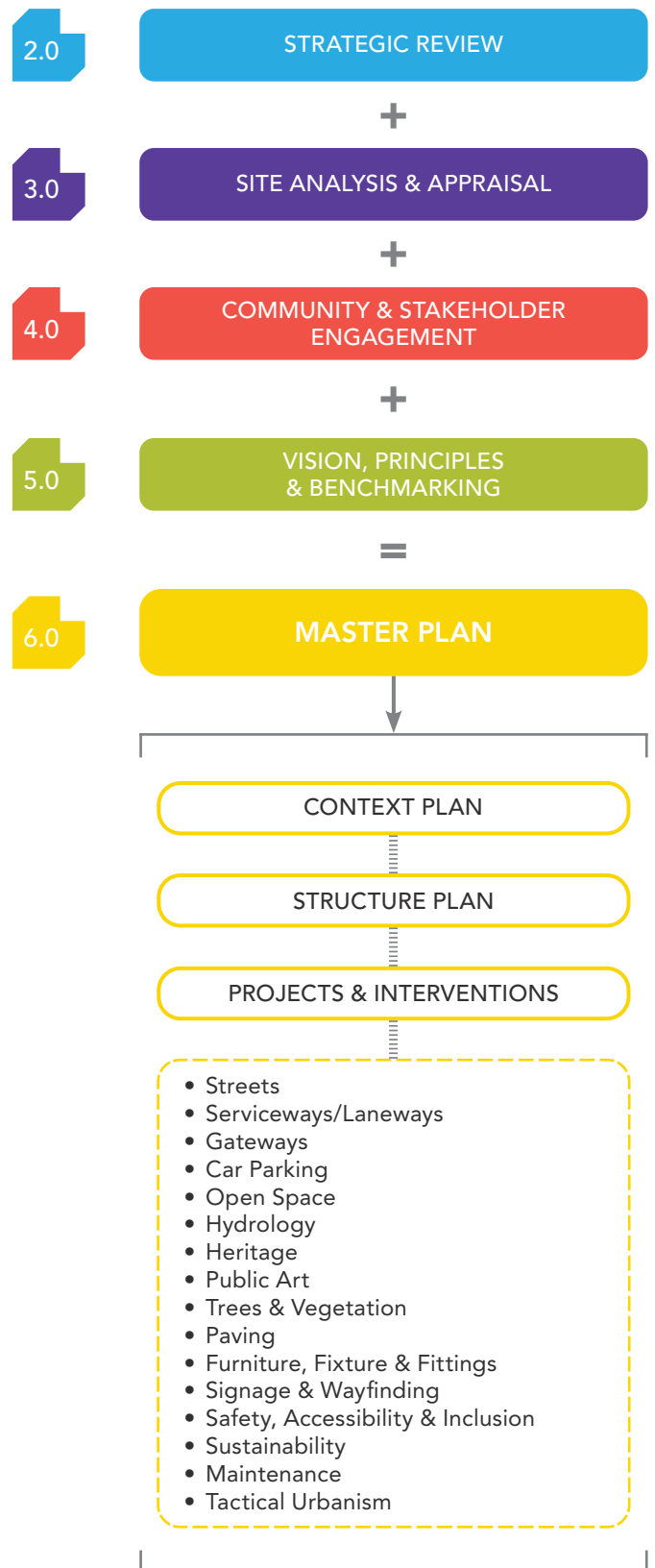


Figure 6.139 Master Plan development process, and structure of the Master Plan chapter (Liverpool City Council)

6.2

MASTER PLAN CONTEXT PLAN

Local Context and Key Opportunities

Overview

The Context Plan establishes the local context for the Liverpool city centre through identifying key opportunities, including significant constructed or natural assets, and major existing or potential projects that; are located in close proximity to the city centre, interact with the city centre, or are catalysts to unlock further opportunities and investment into the city centre, thereby impacting the future development of the city centre (See Figure 6.141). These key opportunities have informed the Master Plan, ensuring that the city centre is integrated within the local context.



















The opportunities are as follows:

- Green Grid Links, including those identified in the Sydney Green Grid Strategy, South West District Plan (Government Architect NSW). This includes open space corridors (i.e. along rivers and creeks located around the city centre), and green streets that link existing parks and reserves to these corridors, to form a network of green spaces;
- Blue Grid Links, including those identified in the Sydney Green Grid Strategy, South West District Plan (Government Architect NSW). This includes connecting the city centre to the rivers and creeks that surround the city centre (e.g. Georges River, Brickmakers Creek and Cabramatta Creek);
- Major public transport projects and initiatives, including the Fifteenth Avenue Smart Transit Corridor (FAST), connecting Liverpool and the new Western Sydney (Nancy-Bird Walton) International Airport and Aerotropolis, and a potential shuttle service linking the city centre to car parking located on the periphery of the city centre;
- Key active transport infrastructure, including existing and proposed cycleways, linking the city centre to surrounding neighbourhoods and other parts of Western Sydney;
- Key vehicular transport projects, including improved entries to the city centre at major road intersections, and a proposed 40km/hr vehicular speed zone within the city core, to promote a slow speed, pedestrian environment;
- Key street and intersection improvements, including along the Hume Highway to improve the interface, and access between the city centre and surrounding areas;
- Major existing and potential open space projects including Woodward Place, Lighthorse Park and Casula Parklands that are within and/or in close proximity to the city centre, and
- Other major existing and potential projects that can attract investment into the city centre, and/or are catalysts to unlock some of the master plan projects, including the Liverpool Health and Innovation Precinct, potential Moore Point development and Moorebank Intermodal Terminal.



Figure 6.140 Key Opportunities

Legend

	Railway Station		Active & Public Transport Corridor (Moore Street)
	Railway Line		Shuttle Service (City Centre & Peripheral Parking Areas)
	Liverpool City Centre - Project Site Boundary		Shuttle Service Stops (Indicative Only)
	Primary Green Boulevard (Elizabeth Street)		Proposed 30 Km/hr traffic speed zone
	Green Grid Corridors (Ecological)		Liverpool City Centre - Master Plan Project Site
	Green Grid Corridors (Streets)		Green Grid Opportunity (Major Green Open Space)
	Proposed & Existing Cycle Routes		Liverpool City Centre Gateway Treatment
	Blue Grid Corridors (i.e. Major Rivers & Creeks)		Existing/Potential Open Space Opportunity
	Pedestrian Connections		Existing/Potential Other Opportunity



- Key Opportunities**
- ① **Cabramatta Creek**
A potential future Master Plan for the riparian corridor. Opportunity for open space infrastructure and improvements as part of the blue and green grid, within South Western Sydney.
 - ② **Woodward Park**
Liverpool City Council is currently developing a 25 year Master Plan for the site.
 - ③ **Brickmakers Creek**
A future Master Plan that addresses both hydrological and open space improvements. Opportunity for open space infrastructure, and pedestrian and cycleway connections.
 - ④ **Casula Parklands**
Liverpool City Council has recently completed various open space upgrades including; playgrounds, a dog park and other amenities.
 - ⑤ **Liverpool Health Precinct**
Currently undergoing various stages of the planning and approval process.
 - ⑥ **River Connections Master Plan**
Liverpool City Council is currently developing a Master plan for increased and improved connections to/along the Georges River.
 - ⑦ **Moore Point**
An identified site of significance for future redevelopment, currently undergoing the early stages of the design process.
 - ⑧ **Light Horse Park**
Liverpool City Council has developed a Master Plan for the site, which will be Detailed Designed in the near future.
 - ⑨ **Georges River**
Liverpool City Council is currently developing a long-term foreshore Master Plan and Activation Strategy.
 - ⑩ **Moorebank Intermodal Terminal**
Currently under development, Moorebank Logistics Park is a nationally significant infrastructure project for containerised freight.

Figure 6.141 Liverpool City Centre - Context Plan (Liverpool City Council)

6.3

MASTER PLAN STRUCTURE PLAN

Overall Spatial Framework and Key Moves

Overview

The Structure Plan is the overall spatial framework for the public domain within the city centre, and it establishes the key moves that guide the individual Master Plan projects (See Figure 6.143). The key moves are; Improved Streets, Activated Serviceways/Laneways, Improved Gateways, Increased and Improved Car Parking, New and Upgraded Open Spaces, Improved Rivers and Creeks, and Enhanced Heritage Spaces. A description of each key move is below.

Improved Streets

Streets are improved to be healthier (i.e. as per The Healthy Streets Approach™), more people-focused, and provide increased priority to active and public forms of transport. Streets are considered to be part of the open space network, with increased amenities and facilities, including street trees, vegetation and new streetscape infrastructure.

Activated Serviceways/Laneways

Serviceways/Laneways are activated through encouraging businesses to be dual-facing (i.e. addressing both the street and Serviceway/Laneway frontages) and new laneway-specific infrastructure to develop a distinctive laneway character and encourage pedestrian usage. Laneways are upgraded to better accommodate community events.

Improved Gateways

Gateways are improved to better define the transition between the city centre and surrounding areas, create a sense of arrival, and function as a wayfinding mechanism to help motorists, cyclists and pedestrians recognise entry points to the city. Gateways treatments reflect the character of the city, and incorporate high quality infrastructure.

Increased and Improved Car Parking

Existing parking strategies are supported and there is an increase in the quantity of parking, based on private vehicle demand for parking, with respect to public transport availability and to support modal split shift to increased public transport use. Parking demand and congestion in the city core is reduced, including through peripheral parking.

New and Upgraded Open Spaces

The quality and quantity of open space is increased, including through the retention and embellishment of existing open spaces, and introduction of new pocket parks and potential shared-use spaces. Parks and reserves include new trees and vegetation, additional amenities, sporting and recreational facilities, and new public domain infrastructure.














Improved Rivers and Creeks












The Georges Rivers and Brickmakers Creek is improved through increased connections to the waterfronts and embellishment of the areas around both water bodies, with recreational infrastructure and opportunities to interact with the water. The health and condition of both water bodies is improved through measures to treat stormwater runoff.

Enhanced Heritage Spaces

Indigenous, European, and Migrant and Transnational Heritage is conserved, enhanced and promoted in the city centre. Heritage items including buildings, structures, parks and monuments, are celebrated through site-specific interventions and heritage-inspired treatments, such as trees, vegetation, landscaping and custom signage.

Legend

	Railway Station
	Railway Line
	Liverpool City Centre - Project Site Boundary
	Primary Green Boulevard (Elizabeth Street)
	Green/Blue Grid and Active Transport Links
	Pedestrian Connections (Streets & Arcades)
	Pedestrian Priority Street (Bigge Street)
	Pedestrian Priority Spine and Pedestrian Connections
	Active & Public Transport Corridor (Moore Street)
	Shuttle Service (City Centre & Peripheral Parking Areas)
	Shuttle Service Stops (Indicative Only)
	Existing Green Open Space (Outside Project Site)
	Existing Green Open Space (Inside Project Site)

	Green Open Space (Restricted Use)
	Activated Serviceways/Laneways
	Pedestrian Priority Zone (Macquarie Street)
	Heritage Buildings - Forecourt Upgrades
	Potential Future Redevelopment of Liverpool Station Site
	Gateway Treatment (Liverpool Station Forecourt)
	Innovation Precinct Redevelopment, Liverpool Hospital
	Innovation Precinct Redevelopment, Liverpool High School
	Liverpool City Centre Gateway Treatment
	Major Open Space Opportunity (Site Master Plan)
	Key Landmarks within the Liverpool City Centre
	Liverpool Hospital Precinct Upgrade
	Potential Shared-Use Open Space

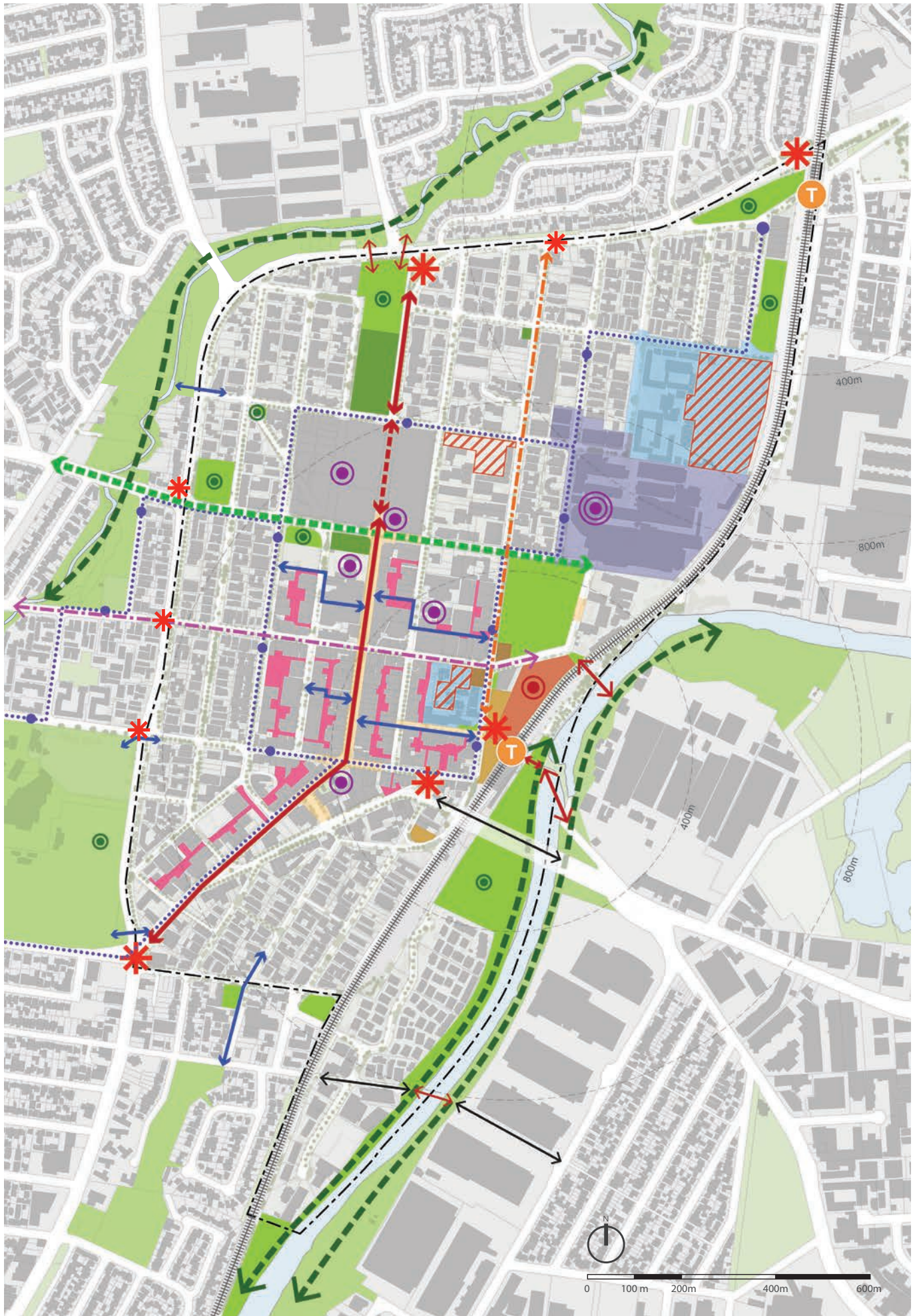


Figure 6.143 Liverpool City Centre - Structure Plan (Liverpool City Council)

6.4

MASTER PLAN

PROJECTS & INTERVENTIONS

Overview of Master Plan Projects & Interventions

Overview

The Projects & Interventions plan provides an overview of the 90 projects within the Master Plan, that collectively deliver on the broader Structure Plan and associated key moves. (See Figure 6.145). The 90 projects are listed below and each project is detailed through site specific interventions, that are articulated through imagery (i.e. diagrams, plans, sections, 3D renders and precedent images), and written text, included in the following chapters of the report (See Chapters 6.5 - 6.20).

List of Projects and Interventions

Streets	
01	Macquarie Street Urban Spine
02	Macquarie Street (Middle) Upgrade
03	Macquarie Street (South) Upgrade
04	Elizabeth Street Upgrade
05	Moore Street Public & Active Transport Corridor
06	Scott Street & Memorial Avenue Upgrade
07	Bigge Street Upgrade
08	George Street Upgrade
09	Typical Street Upgrade (Type A Treatment)
10	Typical Street Upgrade (Type B Treatment)
11	Typical Street Intersection Treatment
12	Liverpool Health Precinct Streets Upgrade
13	Railway Street Upgrade
14	College Street Upgrade
15	Pirie Street - Increased Public Domain
16	Other Streetscape Upgrades
17	Hume Highway - Landscape Treatments
Serviceways/Laneways	
18-26	Various Serviceway/Laneway Upgrades
27	Norfolk Serviceway Upgrade
Gateways	
28-36	Various Gateway Upgrades
Car Parking	
N/A	Increased and Improved Car Parking
Open Space	
37	Brickmakers Creek Corridor - Site Master Plan (Open Space Improvements)
38	Georges River Corridor - Existing & Proposed Open Space Improvements
39	Liverpool Railway Station - Potential Future Public Plaza
40	Bigge Park - Embellishment Works
41	Liverpool Pioneers Memorial Park - Site Master Plan
42	Berryman Reserve - Site Master Plan
43	Apex Park - Existing Concept Plan & Detailed Design
44	Hart Park - Proposed Site Master Plan
45	St. Luke's Anglican Church Forecourt - Landscape Concept Design
46	Augusta Cullen Plaza - Landscape Concept Plan (Part of Liverpool Civic Place)
47	Bathurst Street Car Park - Landscape Concept Plan (Part of future site redevelopment)
48	Dunbier Park - Landscape Concept Plan

49	(Proposed) Secant Street Pocket Park - Landscape Concept Plan
50	(Proposed) Phillimona Gardens - Landscape Concept Plan
51	Liverpool City Library Forecourt - Landscape Concept Plan
52	(Proposed) College Street Pocket Park - Landscape Concept Plan
54	Railway Street Plaza (Adjacent to Liverpool Public School) - Landscape Concept Plan
55	Liverpool TAFE Forecourt - Landscape Concept Plan
56	Pocket Park on Corner of Hume Highway & Memorial Avenue - Landscape Concept Plan
57	Pirie Street Plaza - Landscape Concept Plan
58	Potential Shared-Use Open Spaces
59	WSU Forecourt - Landscape Concept Plan
60	Public Bathroom Strategy

Hydrology

61	Georges River Corridor - Existing & Proposed Hydrological Improvements
62	Brickmakers Creek Corridor - Site Master Plan (Hydrological Improvements)
63	Water Features (Potential Locations)
64	Water Play (Potential Locations)
65	Water Sensitive Urban Design (WSUD) interventions (i.e. As part of Street Upgrades)
66	Interpretation of the Former Creek Line

Heritage

67	Reinforce the Town Plan of Liverpool (i.e. Through public domain treatments)
68	Liverpool Railway Station - Adaptive reuse of historic Liverpool Railway Station Building and Railway Shed
69	Former Liverpool Courthouse Forecourt Upgrade - Landscape Concept Plan
70	Dr. Pirie Community Centre Forecourt Upgrade - Landscape Concept Plan
71	All Saints Catholic Church - Streetscape Upgrade to surrounding public domain
72	Old Commercial Hotel - Retain, Maintain & Conserve
73	Former Liverpool Hospital (Liverpool TAFE) - Retain, Maintain & Conserve
74	St. Luke's Anglican Church Forecourt Upgrade - Landscape Concept Plan
75	Rosebank Cottage - Retain, Maintain & Conserve
76	Liverpool Public School - Redesign and Replacement of front fence, Concept & Detailed Design
77	Bigge Park - Embellishment Works (Heritage Interventions)
78	Liverpool Pioneers Memorial Park - Site Master Plan (Heritage Interventions)
79	Apex Park - Existing Concept Plan & Detailed Design (Heritage Interventions)
80	Berryman Reserve - Site Master Plan (Heritage Interventions)
81	Macquarie Monument - Retain, Maintain & Conserve
82	Milestone - Retain, Maintain & Conserve
83	Pylons (part of the proposed footbridge) - Detailed Design (in progress)
84	Railway Viaduct (Shepherd Street) - Retain, Maintain & Conserve
85	Palm Trees on Macquarie Street - Retain, Maintain & Conserve

Public Art

86	Public Arts Policy
86A	Public Arts Strategy
87	Various Public Art Projects/Interventions

Other Projects

88	Liverpool City Centre Public Lighting Strategy
89	Liverpool City Centre Awnings Policy
90	Liverpool City Centre Outdoor Dining Policy



Figure 6.145 Liverpool City Centre - Projects & Interventions Plan (Liverpool City Council)

6.5

MASTER PLAN STREETS

Overview and Key Themes & Interventions

Overview

A street is a public parcel of land that functions as a thoroughfare for pedestrians, cyclists and motorists, within a built environment. Streets are more than just a means of mobility. Streets are a public stage where life unfolds, from city parades, to markets, to public gatherings, to random encounters with friends, neighbours and strangers. Streets offer opportunities for people to sit and relax, eat, socialise, recreate, exercise and shop. Overall, streets represent the largest area of public space within the city centre, and therefore, streets themselves are critical public spaces that can significantly contribute to the social, civic, and economic fabric of the community.

The NSW Government has increased its focus on improving streets within Western Sydney, including in Liverpool. The Western Sydney Planning Partnership is currently developing the Western Sydney Street Design Guidelines, which will be a key reference for the evaluation, planning and design of streets (See Chapter 8.2). Transport for NSW has recently developed a Place-Based Future Transport Strategy for Liverpool, which aims to enhance the pedestrian and cycling experience (including through lower speed limits), enabling residents to change their travel behaviour towards more sustainable transport modes, and the Government Architect NSW has developed a Movement and Place framework, aimed at achieving better place outcomes. Transport for London has adopted The Healthy Streets Approach™, a framework for creating healthier streets, that is focused on the human experience (See Chapter 8.2).

The Master Plan supports the NSW Government’s focus on improving streets and The Healthy Streets Approach™, to achieve create streets that support the health of the Liverpool community as well as improving the environment within the city centre. This section of the Master Plan acknowledges existing street projects that are currently being developed by Council, and includes proposed concept designs for the streets located within the city centre, based on opportunities identified in the strategic review, site analysis and appraisal and community and stakeholder engagement project phases.

Legend

	Railway Station
	Railway Line
	Liverpool City Centre - Project Site Boundary
	Green Corridor (Hume Highway)
	Primary Green Link (Elizabeth Street)
	Proposed Cycle Routes
	Existing Cycle Routes
	Pedestrian Connections (Streets and Arcades)

Key Themes & Interventions

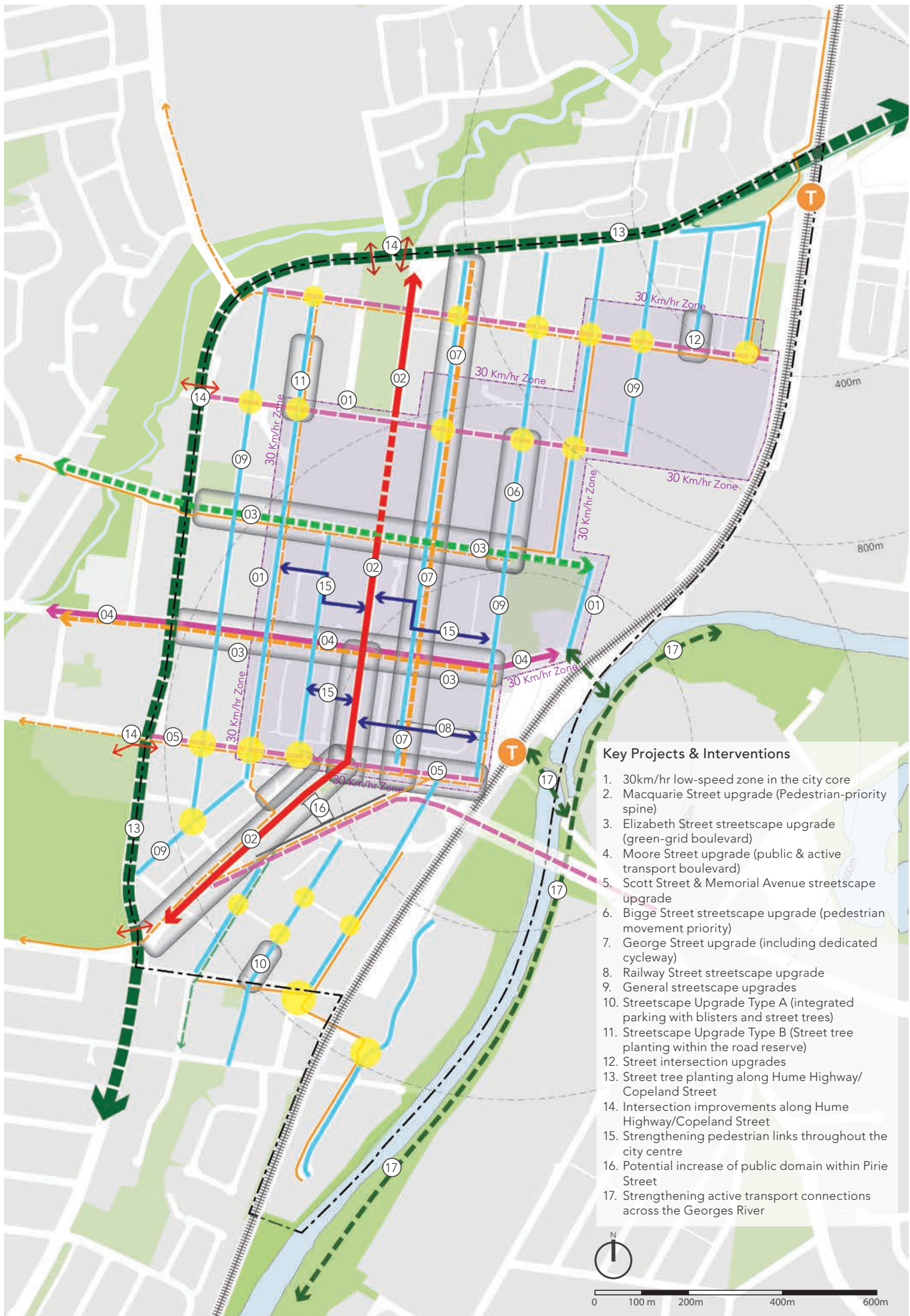
The diagram on the following page shows the proposed street network within the city centre. This includes existing and proposed street interventions that are in alignment with the overall Master Plan vision, and is consistent with the NSW Government and Liverpool City Council’s objectives for streets within the city centre.

The key themes & interventions for the proposed street network in the city centre are as follows:

- Creating healthier streets, as per The Healthy Streets Approach™, 10 Healthy Street Indicators™;
- Streets that provide increased priority to active and public forms of transport, trees and other streetscape infrastructure;
- A 30km/hr vehicular traffic speed zone, supported by traffic calming measures, to achieve a safer and more pedestrian-friendly environment;
- A city centre loop shuttle bus, connecting key POI’s & parking located on the periphery of the city centre;
- Prioritising active transport, including through improved footpaths and dedicated & shared cycleways;
- Street trees to provide shade, cooler temperatures, habitats for native fauna, and help clean the air;
- Intersection improvements along Hume Highway to improve pedestrian access to & from the city centre;
- Establishing connections over the Georges River to better connect the city centre and Moorebank;
- Developing a pedestrian-priority spine and a public transport boulevard, within the city centre;
- Streets are considered to be part of the open space network, and are embellished to provide increased amenity and facilities, and
- Streetscape treatments that evoke the Western Sydney Parkland character.

The following pages of the report articulates how these key themes will be achieved. This includes an acknowledgement of existing projects that are currently being developed by Council, and proposals for new and existing street projects within the city centre. As projects progress to Concept and Detailed Design phases, approvals may be required from Transport for NSW/NSW Roads & Maritime Services and the Liverpool Traffic Committee.

	Pedestrian Priority Spine (Macquarie Street)
	Street Junction Interventions/Traffic Calming Measures
	Detailed Street Plans (i.e. within Chapter 6.5)
	FAST Public Transport Corridor
	Improved Pedestrian Connections along Georges River
	Improved Pedestrian Connections across Hume Highway
	Streetscape upgrade of North-South Streets
	Streetscape upgrade of East-West Streets



- Key Projects & Interventions**
1. 30km/hr low-speed zone in the city core
 2. Macquarie Street upgrade (Pedestrian-priority spine)
 3. Elizabeth Street streetscape upgrade (green-grid boulevard)
 4. Moore Street upgrade (public & active transport boulevard)
 5. Scott Street & Memorial Avenue streetscape upgrade
 6. Bigge Street streetscape upgrade (pedestrian movement priority)
 7. George Street upgrade (including dedicated cycleway)
 8. Railway Street streetscape upgrade
 9. General streetscape upgrades
 10. Streetscape Upgrade Type A (integrated parking with blisters and street trees)
 11. Streetscape Upgrade Type B (Street tree planting within the road reserve)
 12. Street intersection upgrades
 13. Street tree planting along Hume Highway/ Copeland Street
 14. Intersection improvements along Hume Highway/Copeland Street
 15. Strengthening pedestrian links throughout the city centre
 16. Potential increase of public domain within Pirie Street
 17. Strengthening active transport connections across the Georges River

Figure 6.146 Liverpool City Centre - Streets Typology Plan (Liverpool City Council)

6.5

Master Plan Streets - Macquarie Street



Macquarie Street Urban Spine

Macquarie Street is the major north - south road alignment within the grid system of the Liverpool city centre and forms an important central spine, dividing the precinct into two almost equal halves. The various points of interest located along the existing street, it's central location and linkages to other main streets make Macquarie Street well suited to becoming an Urban Spine for the city centre.

The proposed interventions for the Macquarie Street Spine include:

- Strengthening of the northern end with gateway treatments (e.g. markers, lighting, signage and feature tree plantings) to emphasize & highlight the entry into the city centre;
- Extension of the Lachlan Street axis across Macquarie Street and Liverpool Pioneer's Memorial Park, with a raised pedestrian crossing at the intersection of Macquarie Street/Lachlan Street, and avenue planting along the Lachlan Street axis, within the park;
- Work with Westfield Shopping Centre to physically and visually establish the spine along Macquarie Street within the Westfield property boundary, to re-instate the former street, linking Elizabeth Street to Lachlan Street;
- Extend the pedestrian priority zones of Macquarie Street Mall across Elizabeth Street and Moore Street, through pedestrian priority thresholds and public plazas on both sides of Macquarie Mall;
- Create a pedestrian friendly-zone along Macquarie Street South, through streetscape interventions, fine grain paving and restricted vehicular traffic movements;
- Emphasize the junction of Scott Street & Macquarie Street South as a mid-anchor to the Urban Spine through streetscape treatments, pedestrian priority traffic arrangements and a high quality public domain;
- Extend the idea of an "Eat Street" with increased outdoor dining and wider pedestrian realm, along Macquarie Street, south of Scott Street, and
- Emphasize and strengthen the southern entry into the city centre at the intersection of Macquarie Street/ Hoxton Park road, with gateway treatments, landmark development/s and streetscape interventions. Explore the potential of existing and future development proposals top assist in achieving these improved gateway and public domain treatments.



Figure 6.147 Precedent images of pedestrian-priority streets

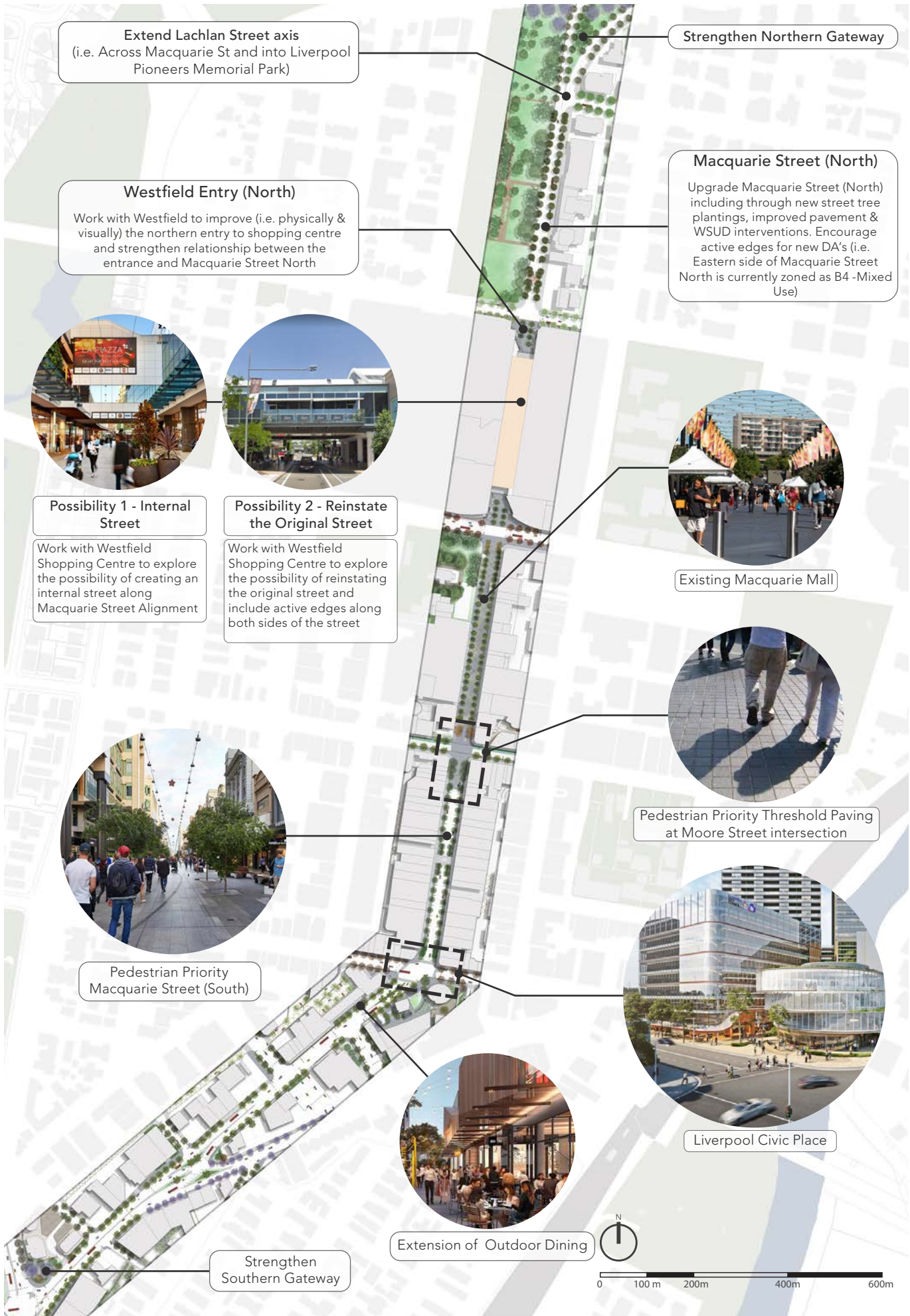


Figure 6.148 Liverpool City Centre - Macquarie Street Spine Interventions (Liverpool City Council)

Master Plan

6.5 Streets - Macquarie Street (Middle)

Macquarie Street (Middle) Upgrade

Macquarie Street has been identified as a pedestrian priority spine and a major link within the city centre. The stretch between Moore Street and Scott Street has been envisaged as a high pedestrian activity zone, with car parking for private vehicles maintained along the street. Service vehicles will be required to use the existing services lanes at the rear of the shop-fronts. The proposed upgrade includes new/improved streetscape infrastructure and a future plaza.

The proposed interventions for Macquarie Street (Middle) include:

- ① New pedestrian plaza at the junction of Moore Street/ Macquarie Street, with existing trees to be retained;
- ② New granite core paving with blue stone kerb as per the Paving Typology Plan (See Chapter 6.14);
- ③ Continuous paving along the Moore Street junction to establish a pedestrian priority crossing;
- ④ Install new furniture, fittings and fixtures (See Chapter 6.15) and future Public Domain Technical Manual. Locations to be confirmed during detailed design stage;
- ⑤ New multi-function poles as per detail design and future specifications;
- ⑥ Upgraded (mid-way) pedestrian crossing with new canopy structure and integrated seating;
- ⑦ Organised outdoor dining and public seating;
- ⑧ Serviceway/laneway activation as per Chapter 6.6, with improved lighting, small format paving and design consideration for future city activation events, whilst ensuring service vehicle access is maintained;
- ⑨ Planted verges and rain gardens along the kerb build-outs, at key intersections (See Chapter 6.13);
- ⑩ Reorganised kerb edges with build-outs at street junctions, to reduce pedestrian crossing width and enhance pedestrian safety (to be detailed later in further design stages);
- ⑪ Strengthening the connections to existing arcades with continuous paving and entry signage that define and reinforce the legibility of these key connections;
- ⑫ Provision of a cul-de-sac for vehicular traffic in the long term as a Public Transport Corridor becomes active on Moore Street, with limited access to vehicular traffic;
- ⑬ Collaborate with an artist and develop pedestrian lighting designs that are 'playful' and reflect the character of Liverpool;
- ⑭ Install laneway tree planting to improve shade, at key pedestrian crossings (See Chapter 6.6);
- ⑮ Install pedestrian priority threshold treatments to alert drivers they are entering a pedestrian priority area, and
- ⑯ Maintain existing parallel parking, in order to retain trees and pedestrian space, for outdoor dining and other social uses.

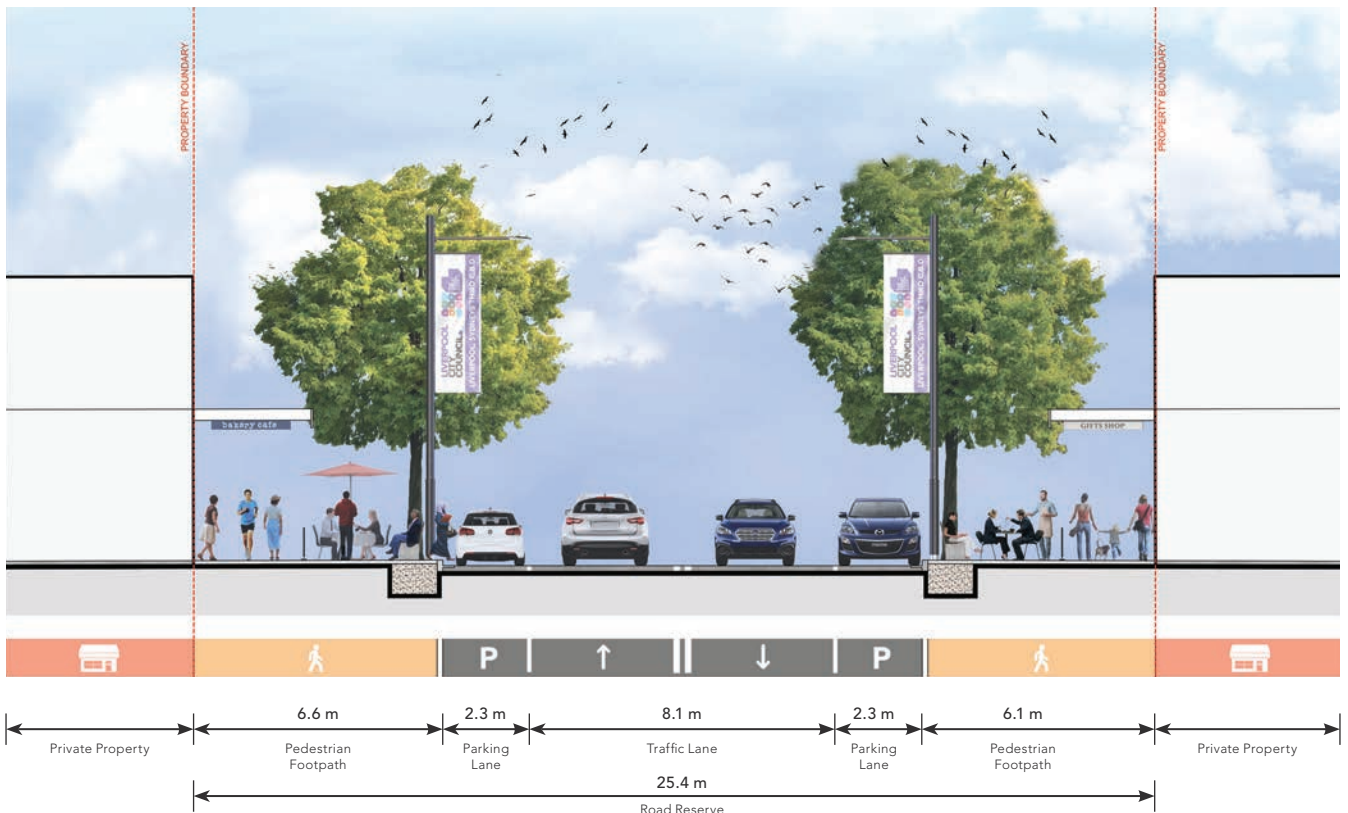


Figure 6.149 Section AA - Macquarie Street (Middle) (Liverpool City Council)

6.5

Master Plan
Streets - Macquarie Street (Middle)



N
Location Plan

Legend

	Seat / Bench
	Rubbish Bin
	Cycle Rack
	Building Footprint
	Building with Awning
	Private Lot / Property
	Granite Core Paving
	Dedicated Cycleway (2-way)
	Mass Planting
	Laneway/Serviceway Paving
	Catenary Lighting
	Multi-function Poles
	Custom Seating
	Bollards
	<i>Robinia pseudoacacia</i> (Black Locust)
	<i>Ginkgo biloba</i> (Maidenhair Tree)
	<i>Liquidambar styraciflua</i> (Sweet Gum)

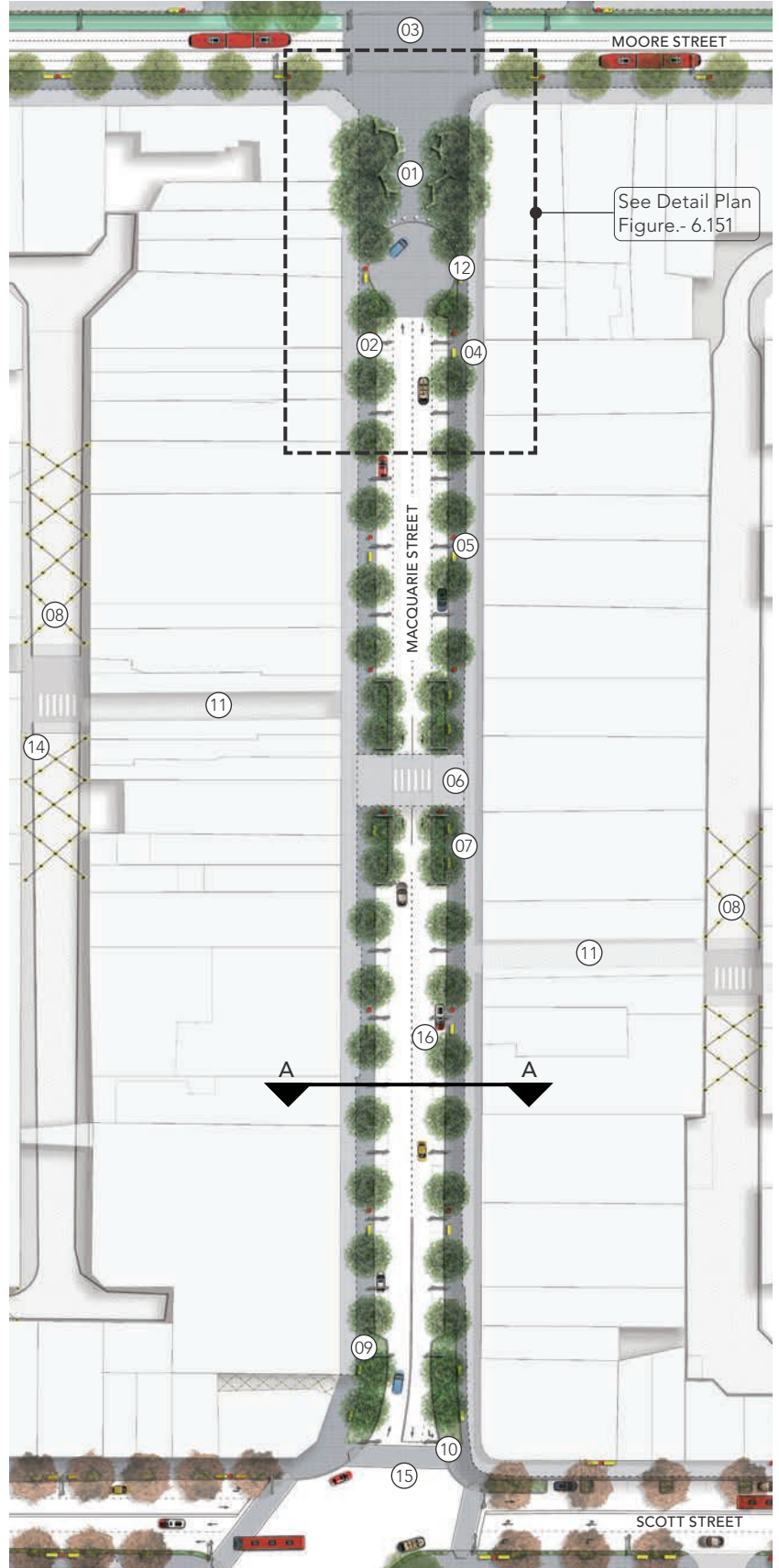
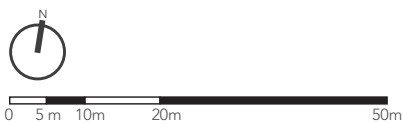


Figure 6.150 Proposed Streetscape - Macquarie Street (South) (Liverpool City Council)

6.5

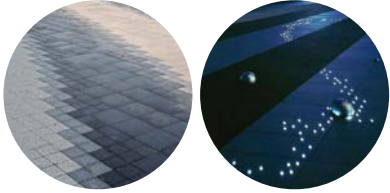
Master Plan
Streets - Macquarie Street (Middle), (Continued)

Pedestrian Priority Threshold
Use of similar paving material to reinforce pedestrian priority across Moore Street and align with existing Macquarie Mall

Macquarie Street Plaza
Plaza on Macquarie Street to establish the continuity of Macquarie Mall. Investigate options of Fifteenth Avenue Smart Transit (FAST) Corridor Stop for the tram

Bespoke Seating & Furniture
The plaza will be detailed with custom seating, with integrated tree planting and innovative lighting

Historical Creek Line Interpretation
Paving patterns and in-ground lighting to interpret the historical creek line passing through the plaza



Pedestrian Lighting
Collaborate with an artist and develop pedestrian lighting designs that are 'playful' and reflect the character of Liverpool



Shared Zone/Vehicular Turning Circle

Rain garden & WSUD
The plaza and cul-de-sac will be detailed with integrated planting and rain gardens that help achieve the WSUD initiatives

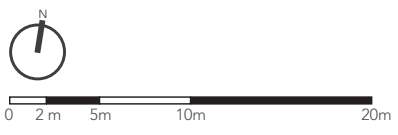
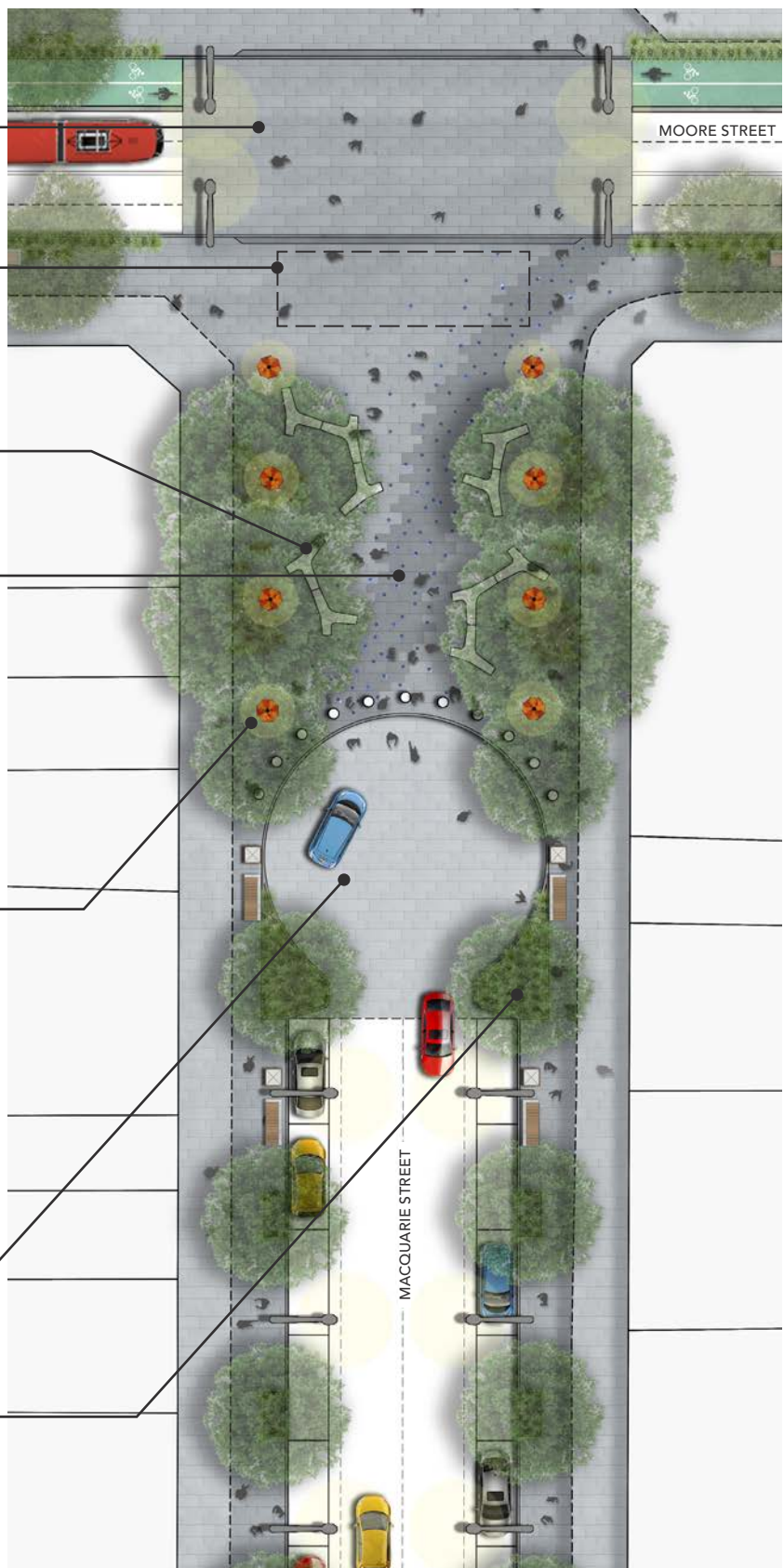


Figure 6.151 Pedestrian Plaza Detail Plan - Macquarie Street (Middle) (Liverpool City Council)

6.5

Master Plan
Streets - Macquarie Street (Middle), (Continued)



Figure 6.152 Macquarie Street - Before (Liverpool City Council)



Figure 6.153 Macquarie Street - After (Liverpool City Council)

6.5

Master Plan Streets - Macquarie Street (South)

Macquarie Street (South) Upgrade

Macquarie Street (South) extends between Scott Street and Hume Highway, and joins with Terminus Street, transitioning to a busy regional road on the far southern end of the Macquarie Street spine. It is mostly characterised by high volumes of vehicular traffic and sparse tree plantings, lighting and furniture along the length of the street.

The proposed interventions for the northern end of Macquarie Street (South) include:

- 01 Install low hedge plantings to provide separation and relief for pedestrians from vehicles;
- 02 New street tree planting with tree grates (Refer to Chapter 6.13 and 6.15), with WSUD planting detail (Refer to Figure 6.245);
- 03 Serviceway/laneway activation, with improved lighting, small format paving and design consideration for future city activation events, whilst ensuring service vehicle access is maintained (See Chapter 6.6);
- 04 A cohesive urban plaza, incorporating the proposed Liverpool Civic Place plaza, and existing Augusta Cullen Plaza;
- 05 Investigate options for a new a cycle lane along Memorial Avenue, as per Transport for New South Wales (TfNSW) proposed Liverpool Transport Plans;
- 06 Pedestrian priority crossings at driveways. Refer to City Centre Paving Typology plan (See Chapter 6.14) and future Public Domain Technical Manual for further details;
- 07 Explore the potential of increasing the public realm along Pirie Street to create a wider public plaza with seating, trees and ground cover planting;
- 08 Collaborate with an artist & develop an art installation as a key marker and element within the streetscape;
- 09 Existing median street trees and plantings to be retained, and
- 10 Install new furniture, fittings and fixtures (See Chapter 6.15) and future Public Domain Technical Manual;



0 5m 10m 20m 50m

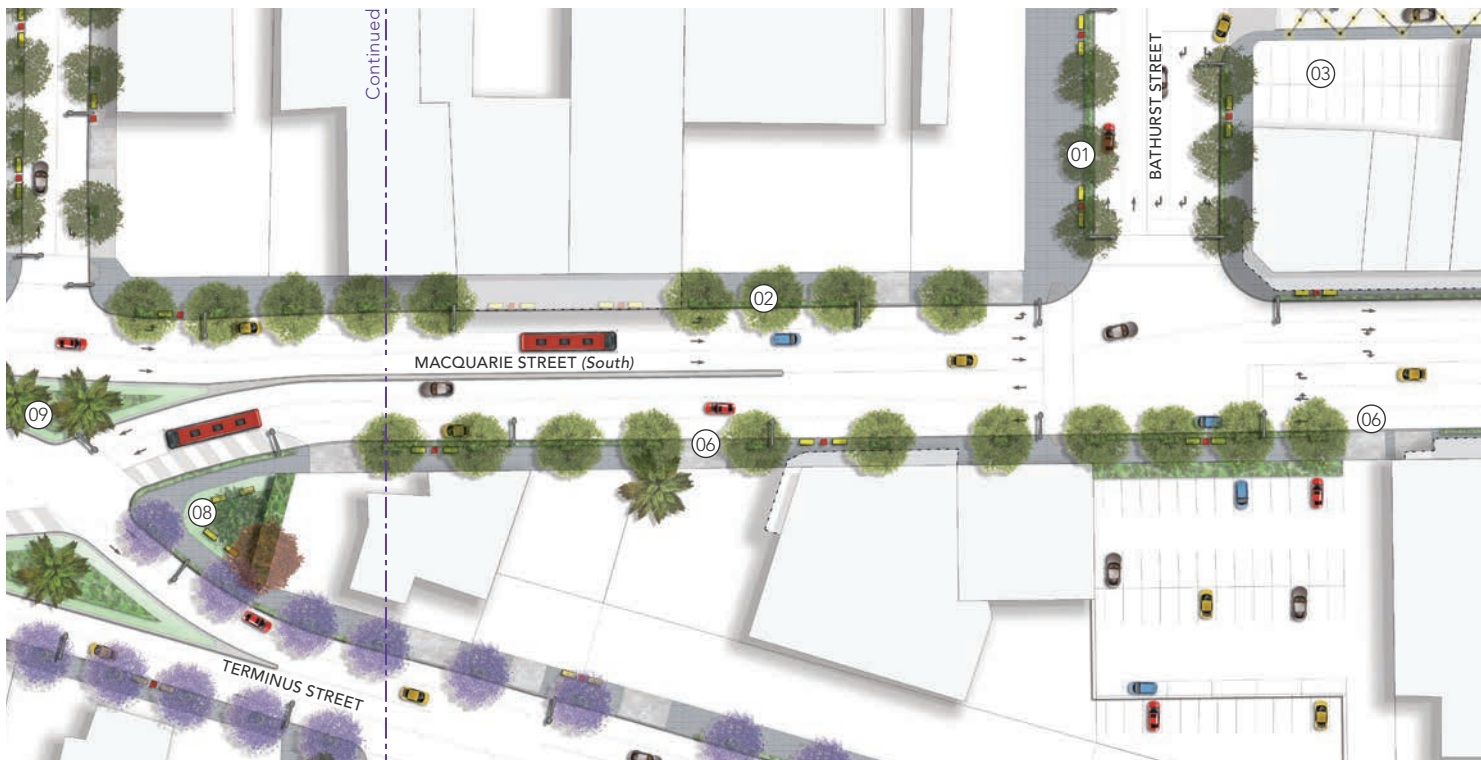
























Figure 6.154 Proposed Streetscape - Macquarie Street (South) (Liverpool City Council)

6.5

Master Plan

Streets - Macquarie Street (South)

Legend

	Seat / Bench		<i>Fraxinus pennsylvanica</i> (Urbanite Ash)
	Rubbish Bin		<i>Robinia pseudoacacia</i> (Black Locust)
	Cycle Rack		<i>Liquidambar styraciflua</i> (Sweet Gum)
	Building Footprint		<i>Jacaranda mimosifolia</i> (Blue Jacaranda)
	Building with Awning		<i>Lophostemon confertus</i> (Brush Box)
	Private Lot / Property		<i>Pyrus calleryana</i> (Ornamental Pear)
	Granite Core Paving		Existing Palm Tree
	Driveway Paving		
	Feature Paving		
	Periphery Paving - Concrete		
	Mass Planting		
	Public Open Space		
	Serviceway/Laneway Paving		
	Catenary Lighting		
	Multi-function Poles		



N
Location Plan



Master Plan

6.5

Streets - Macquarie Street (South), (Continued)

Macquarie Street (South) Upgrade (Continued)

The proposed interventions for the southern end of Macquarie Street (South) include:

- ① Install new street tree planting, as per the Street Tree Master Plan (See Chapter 6.13), with WSUD planting detail and structural soil tree root zones (Refer to Figure 6.245);
- ② Design a second avenue of tree planting and streetscape infrastructure to accommodate possible future street widening by NSW Roads and Maritime Service (RMS);
- ③ Existing median street trees and planting to be retained.
- ④ Install new furniture, fittings and fixtures (See Chapter 6.15) and future Public Domain Technical Manual;
- ⑤ Investigate pedestrian priority threshold crossing across Carey Street;
- ⑥ Ensure new developments have street awnings to provide weather protection for pedestrians. Design awnings around street tree canopies;
- ⑦ Ensure that new developments sufficiently conceal services (e.g. substations behind screens/within basements, and towards the 'back' of the development);
- ⑧ Potential for large canopy trees to be planted at the intersection of Hume Highway to mark the entry (gateway) in to the city centre and identify Liverpool as a cool and green city centre;
- ⑨ Install low hedge planting to provide separation and relief for pedestrians (See Chapter 6.13);
- ⑩ New tree planting to be installed in tree grates (See Chapter 6.13), with WSUD planting detail (Refer to Figure 6.245);
- ⑪ Collaborate with an artist & develop an art installation as a key marker and element within the streetscape, and
- ⑫ Increase street tree plantings with kerb extensions and build-outs. Install trees with structural soil zone and WSUD planting detail (refer Figure 6.245).



0 5m 10m 20m 50m





Figure 6.155 Proposed Streetscape - Macquarie Street (South) (Liverpool City Council)

6.5

Master Plan

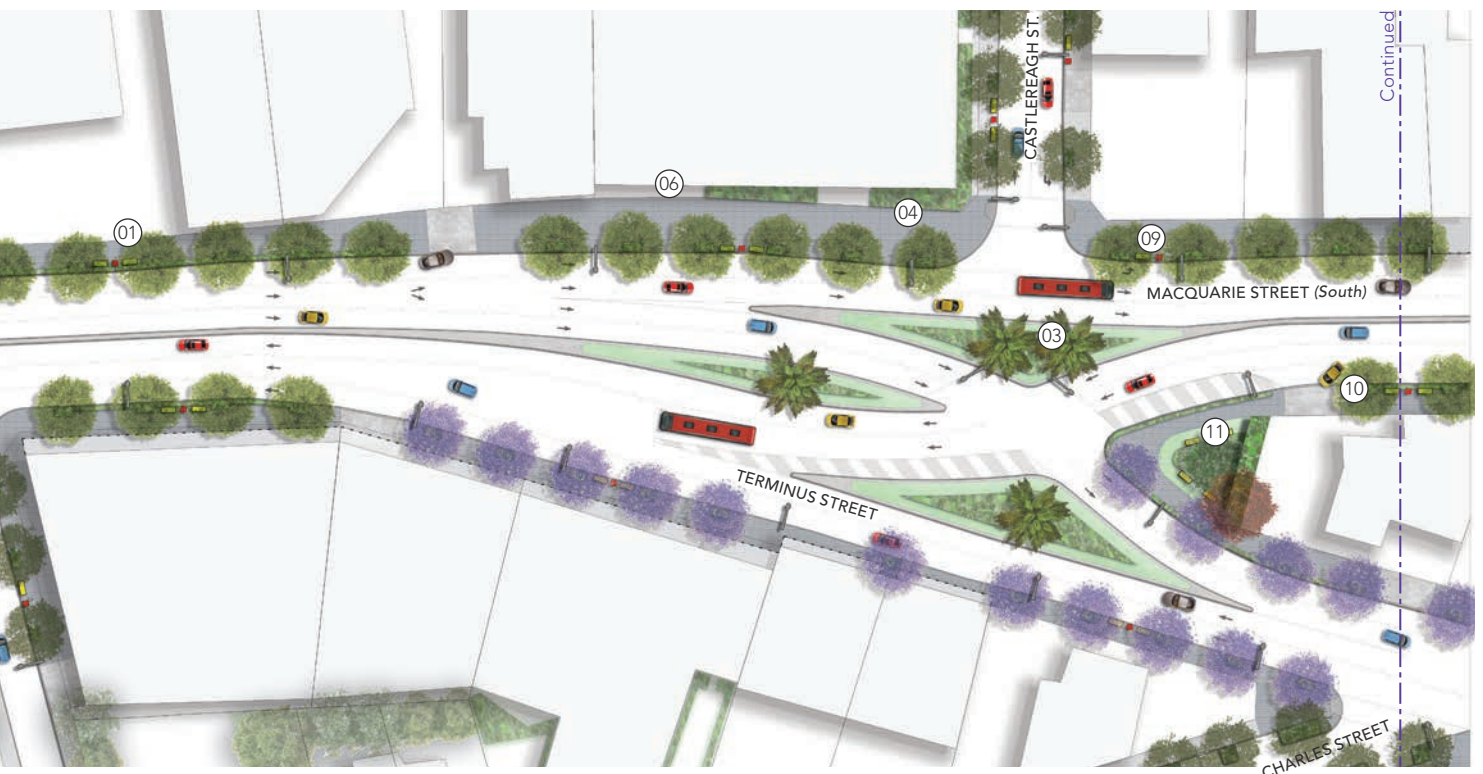
Streets - Macquarie Street (South), (Continued)

Legend

	Seat / Bench		<i>Fraxinus pennsylvanica</i> (Urbanite Ash)
	Rubbish Bin		<i>Jacaranda mimosifolia</i> (Blue Jacaranda)
	Cycle Rack		<i>Lophostemon confertus</i> (Brush Box)
	Building Footprint		<i>Pyrus calleryana</i> (Ornamental Pear)
	Building with Awning		<i>Eucalyptus maculata</i> (Spotted Gum)
	Private Lot / Property		<i>Quercus palustris</i> (Pin Oak)
	Granite Core Paving		Existing Palm Tree
	Driveway Paving		
	Feature Paving		
	Periphery Paving - Concrete		
	Mass Planting		
	Public Open Space		
	Serviceway/Laneway Paving		
	Catenary Lighting		
	Multi-function Poles		



N
Location Plan



6.5

Master Plan

Streets - Elizabeth Street

Elizabeth Street Upgrade

Elizabeth Street forms an important east-west link within the Liverpool city centre and connects some of the key sites within the city centre. Elizabeth Street and Elizabeth Drive are identified as a 'Green Boulevard' that will link key open spaces within the city centre including Bigge Park, Apex Park and the St. Lukes Anglican Church forecourt.

The proposed interventions for Elizabeth Street and Elizabeth Drive include:

- 01 Implement the adopted landscape Master Plan for Apex Park and integrate the streetscape design with the landscape Master Plan (See page 218-219);
- 02 Install new street tree planting, as per the Street Tree Master Plan (See Chapter 6.13), with WSUD planting detail and structural soil tree root zones (Refer to Figure 6.245);
- 03 Retain shared pathway, and replace with new granite core paving and mark as shared pathway for pedestrians and cyclists;
- 04 Negotiate with property owners to remove fencing and allow public access to Church forecourt and turfed areas;
- 05 Investigate options to increase active transport priority along Elizabeth Street;
- 06 Retain 40km/hr speed limit and liaise with Roads and Maritime Services (RMS) to reduce speed to limit 30km/hr;
- 07 Implement 30 km/hr zone in collaboration with RMS;
- 08 Investigate low height median planting as part of the streetscape upgrade (See Chapter 6.13);
- 09 Install low hedge planting to provide separation and relief for pedestrians (See Chapter 6.13);
- 10 Existing street trees and planting to be retained;
- 11 Install new furniture, fittings and fixtures (See Chapter 6.15) and future Public Domain Technical Manual;
- 12 Investigate pedestrian priority threshold crossing at the Intersection of Elizabeth Street/Castlereagh Street;
- 13 Negotiate with property owners to plant new trees along the lot boundary, to provide shade to pedestrians along the footpath;
- 14 Install new granite core paving with blue stone kerb as per the Paving Typology Plan (See Chapter 6.14), and
- 15 Install gateway treatments to mark the entry in to the city centre (See Chapter 6.7).

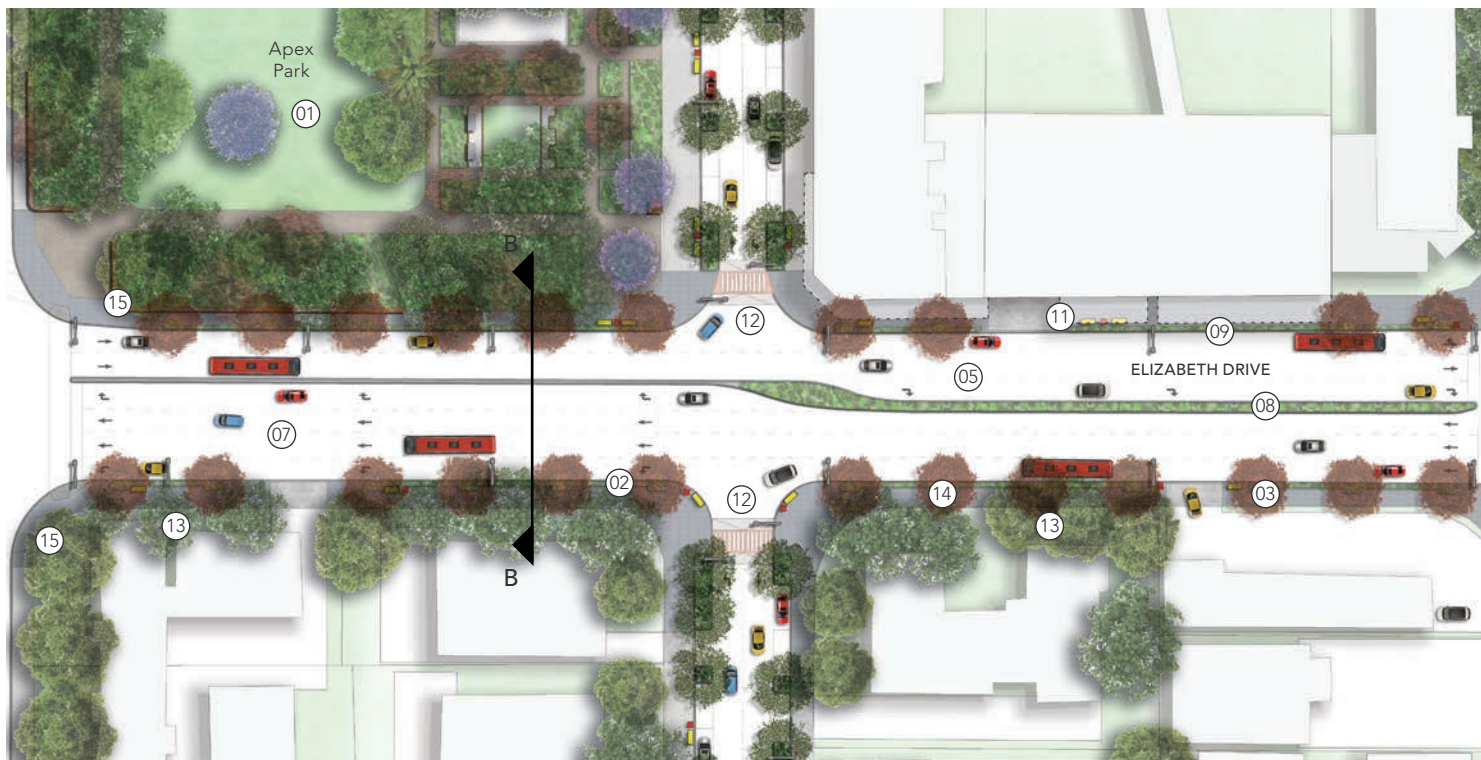
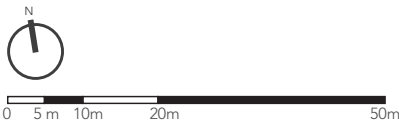























Figure 6.156 Proposed Streetscape - Elizabeth Street (Liverpool City Council)

6.5

Master Plan

Streets - Elizabeth Street

Legend

	Seat / Bench		<i>Quercus palustris</i> (Pin Oak)
	Rubbish Bin		<i>Lophostemon confertus</i> (Brush Box)
	Cycle Rack		<i>Harpulia Pendula</i> (Tulip Wood)
	Building Footprint		<i>Eucalyptus maculata</i> (Spotted Gum)
	Building with Awning		<i>Jacaranda mimosifolia</i> (Blue Jacaranda)
	Private Lot / Property		Existing Palm Tree
	Granite Core Paving		
	Driveway Paving		
	Feature Paving		
	Periphery Paving - Concrete		
	Mass Planting		
	Public Open Space		
	Serviceway/Laneway Paving		
	Catenary Lighting		
	Multi-function Poles		



N
Location Plan



Master Plan

6.5 Streets - Elizabeth Street (Continued)

Elizabeth Street Upgrade (Continued)

The proposed interventions for Elizabeth Street and Elizabeth Drive, between Macquarie Street and Bigge Street include:

- ① Install new paving, furniture and trees, consistent with the treatment within the existing Macquarie Mall;
- ② Maintain building setbacks, as per applicable DCP controls and provide driveway and service access via a new laneway (i.e. to the rear);
- ③ Investigate options to increase active transport priority along Elizabeth Street;
- ④ Reduce the size of street intersections whilst maintaining vehicle swept paths. Install WSUD planting and trees;
- ⑤ Design and install a separated north-south cycle connection along George Street. Ensure traffic lights are reprogrammed to accommodate cyclist movements;
- ⑥ Retain 40 km/hr street speed limits and liaise with Roads and Maritime Services (RMS) to reduce speed limit to 30 km/hr;
- ⑦ Introduce pedestrian priority crossings at driveways. Refer to Liverpool City Centre, Paving Typology Plan for driveway paving (See Chapter 6.14).
- ⑧ Ensure that new developments sufficiently conceal services (e.g. substations behind screens/within basements, and towards the 'back' of the development);
- ⑨ Ensure new developments have street awnings to provide weather protection for pedestrians. Design awnings around street tree canopies;
- ⑩ Install new furniture, fittings and fixtures (See Chapter 6.15) and future Public Domain Technical Manual;
- ⑪ Install new street tree planting, as per the Street Tree Master Plan (See Chapter 6.13), with WSUD planting detail and structural soil tree root zones (Refer to Figure 6.245);
- ⑫ Negotiate with property owners to remove fencing and allow public access to Church forecourt and turfed areas, and
- ⑬ Install new granite core paving with blue stone kerb as per the Paving Typology Plan (See Chapter 6.14).

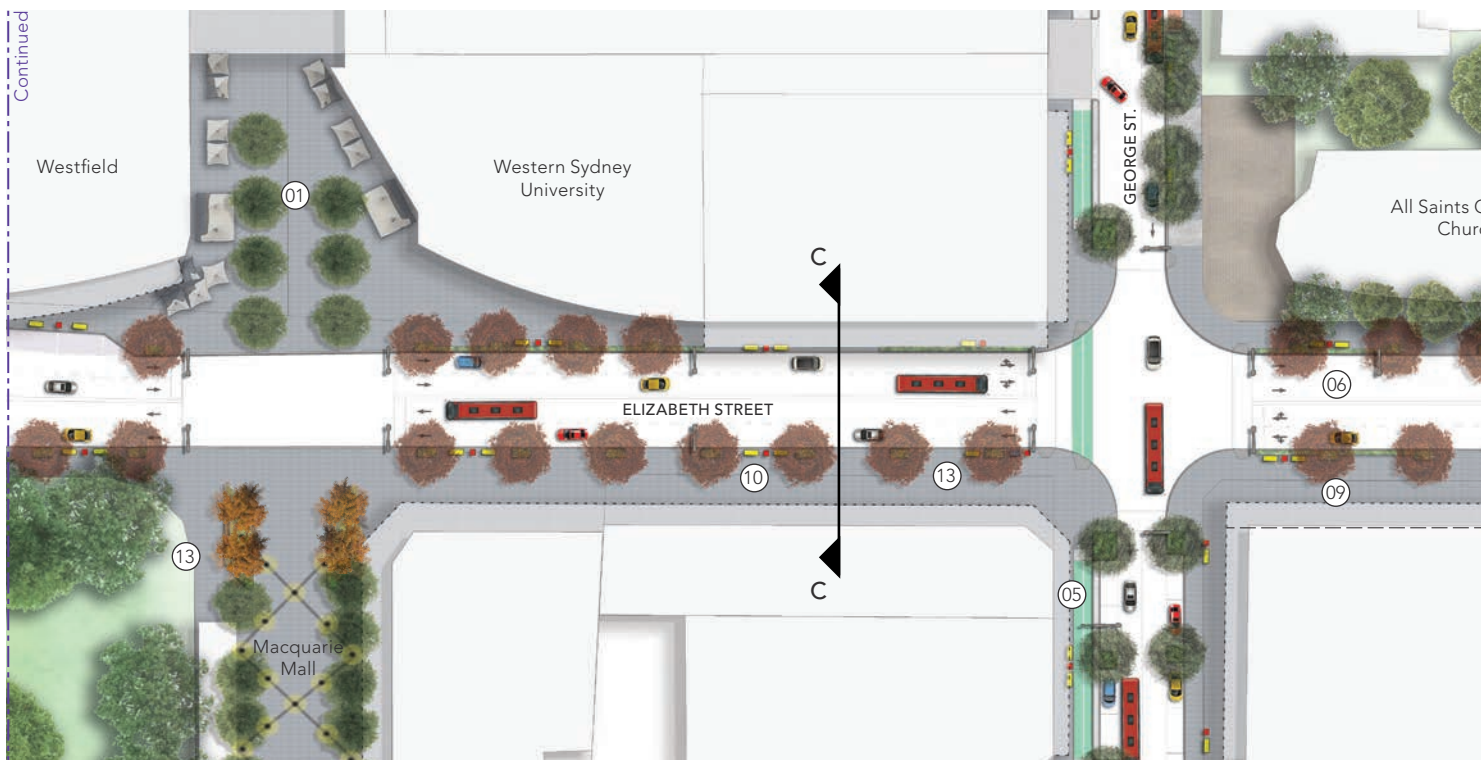
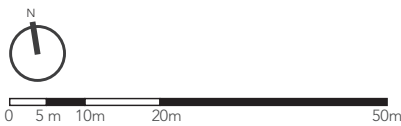
























Figure 6.157 Proposed Streetscape - Elizabeth Street (Liverpool City Council)

6.5

Master Plan

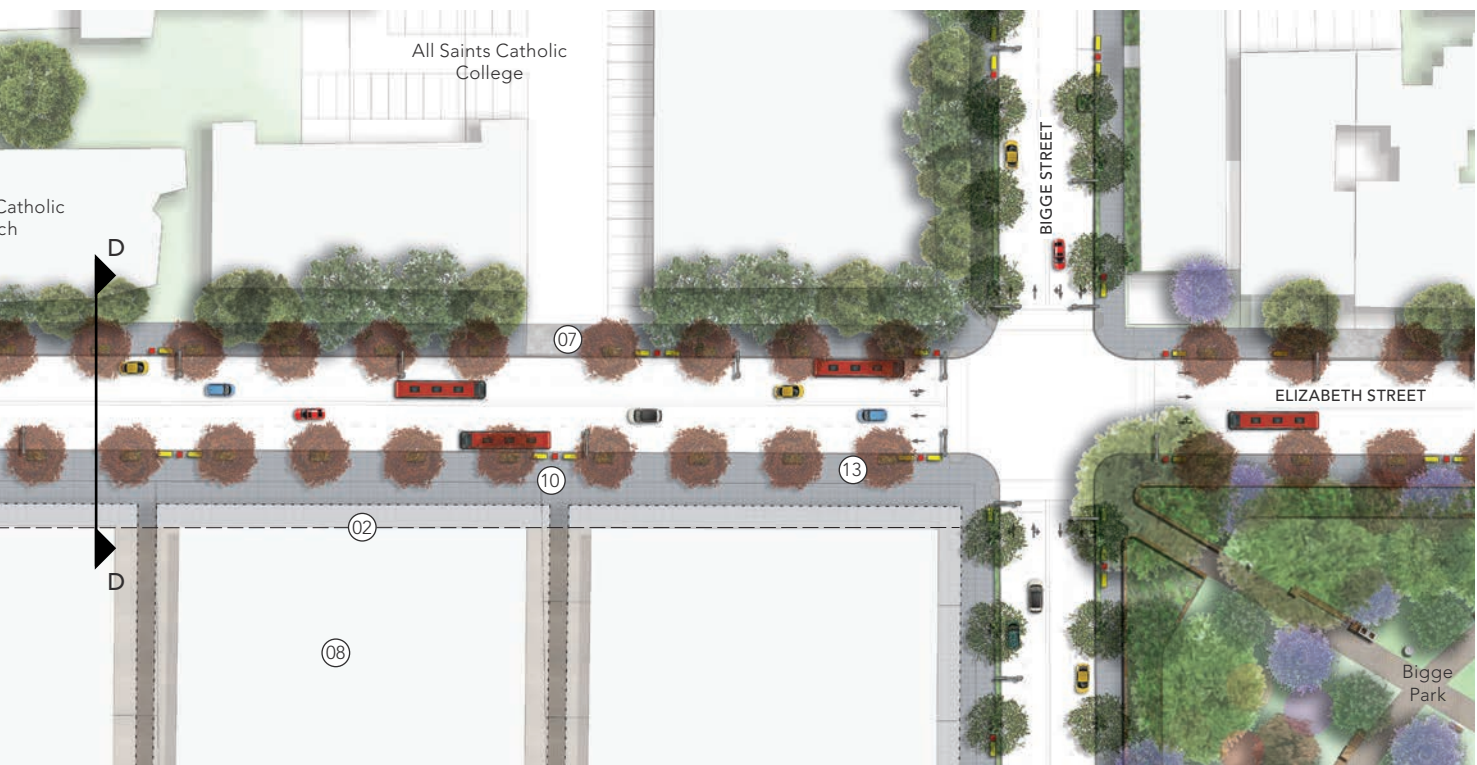
Streets - Elizabeth Street (Continued)

Legend

	Seat / Bench		<i>Quercus palustris</i> (Pin Oak)
	Rubbish Bin		<i>Lophostemon confertus</i> (Brush Box)
	Cycle Rack		<i>Harpulia Pendula</i> (Tulip Wood)
	Building Footprint		<i>Jacaranda mimosifolia</i> (Blue Jacaranda)
	Building with Awning		<i>Fraxinus pennsylvanica</i> (Urbanite Ash)
	Private Lot / Property		Feature Tree (Unspecified)
	Granite Core Paving		
	Driveway Paving		
	Feature Paving		
	Mass Planting		
	Public Open Space		
	Serviceway/Laneway Paving		
	Catenary Lighting		
	Multi-function Poles		
	Outdoor Dining Umbrella		
	Dedicated Cycleway (2-way)		



N
Location Plan



6.5

Master Plan
Streets - Elizabeth Street (Continued)

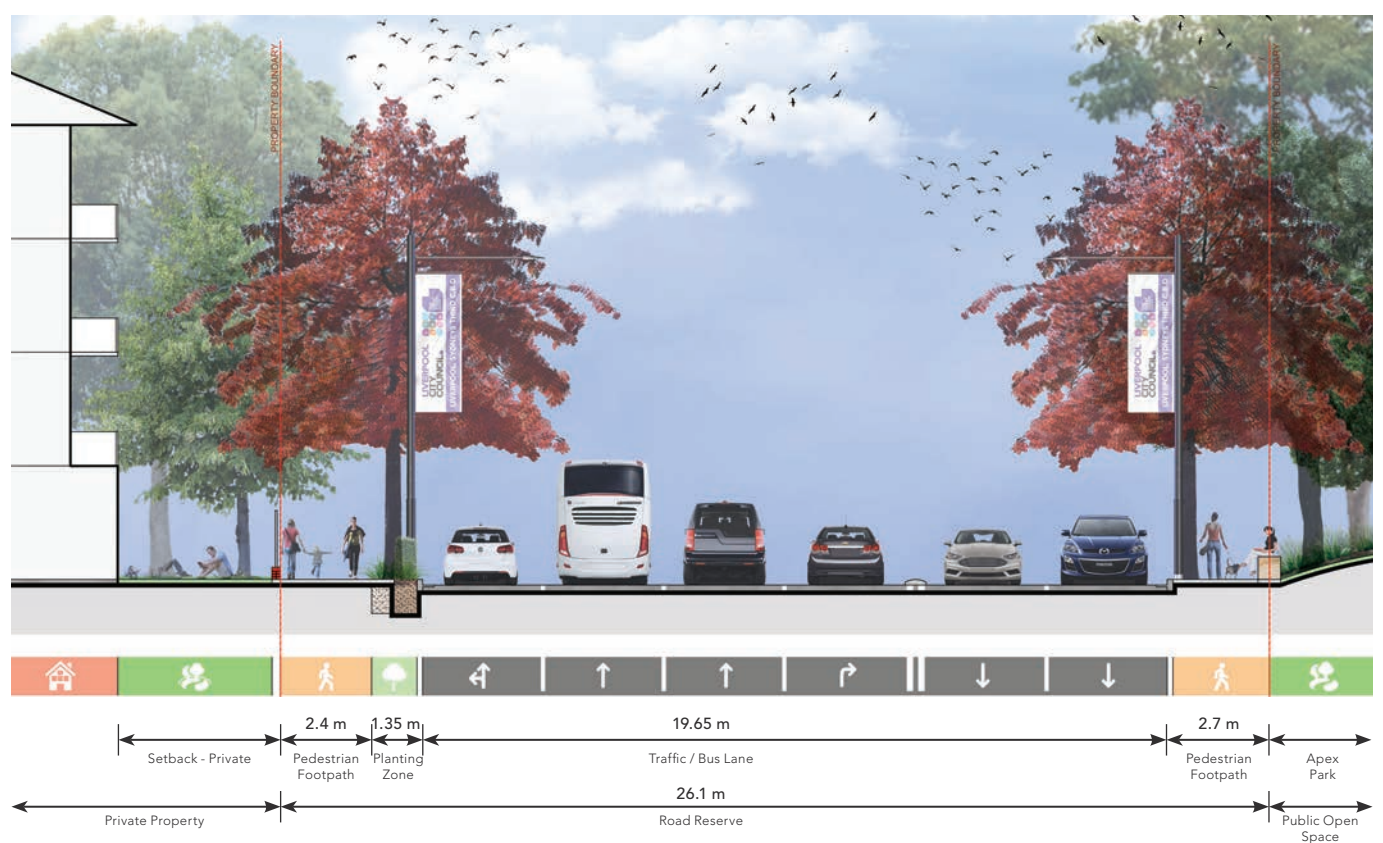
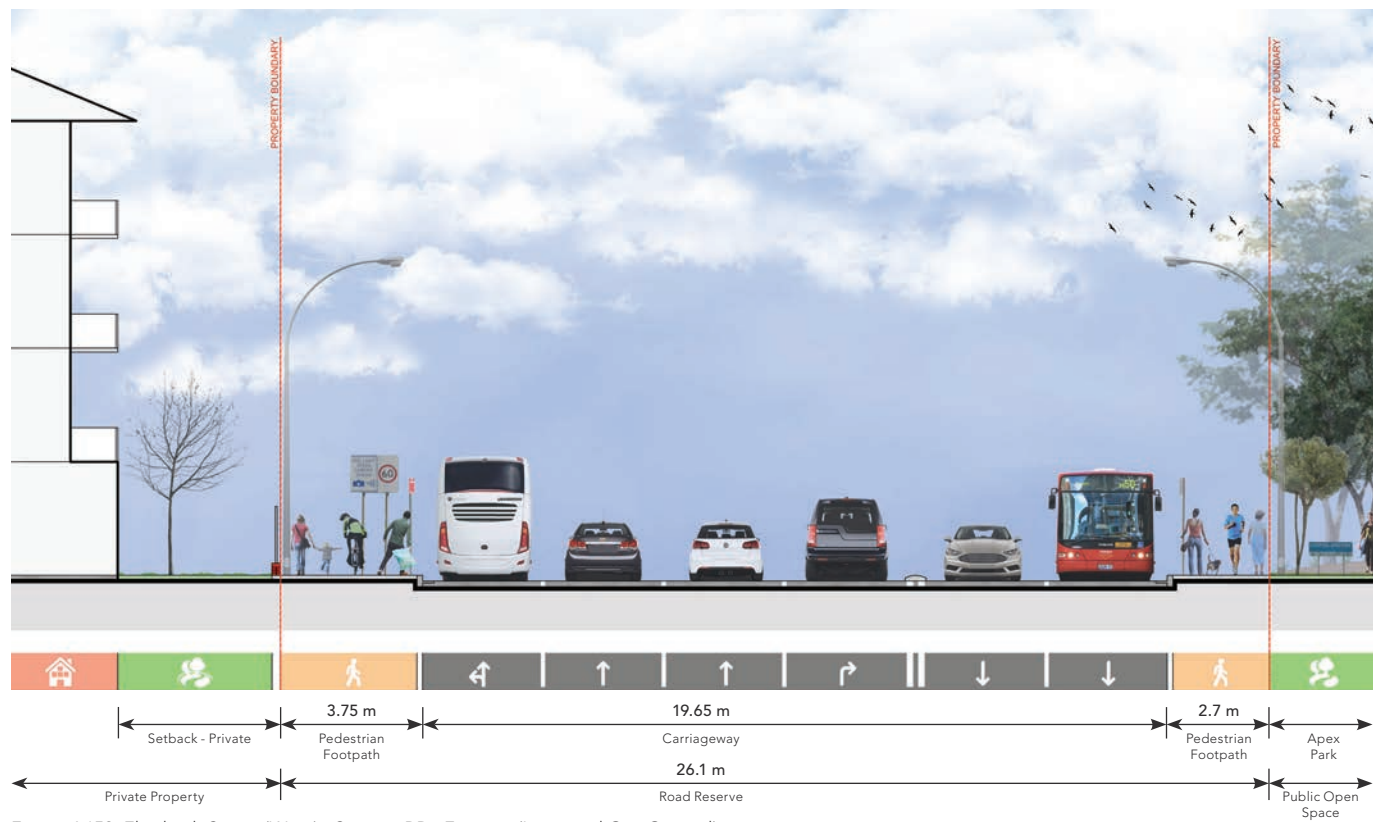


Figure 6.159 Elizabeth Street (West) - Section BB - Proposed (Liverpool City Council)

6.5

Master Plan
Streets - Elizabeth Street (Continued)

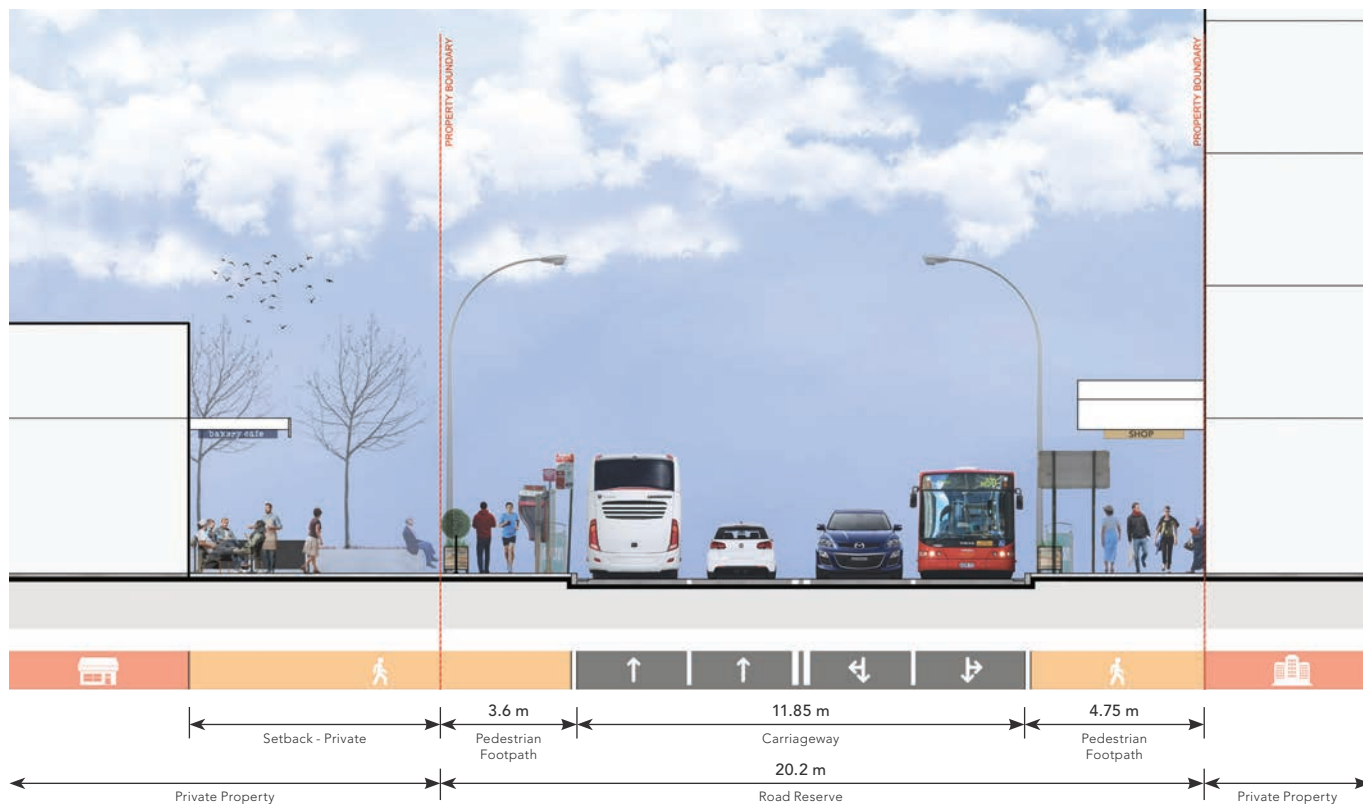


Figure 6.160 Elizabeth Street (Centre) - Section CC - Existing (Liverpool City Council)

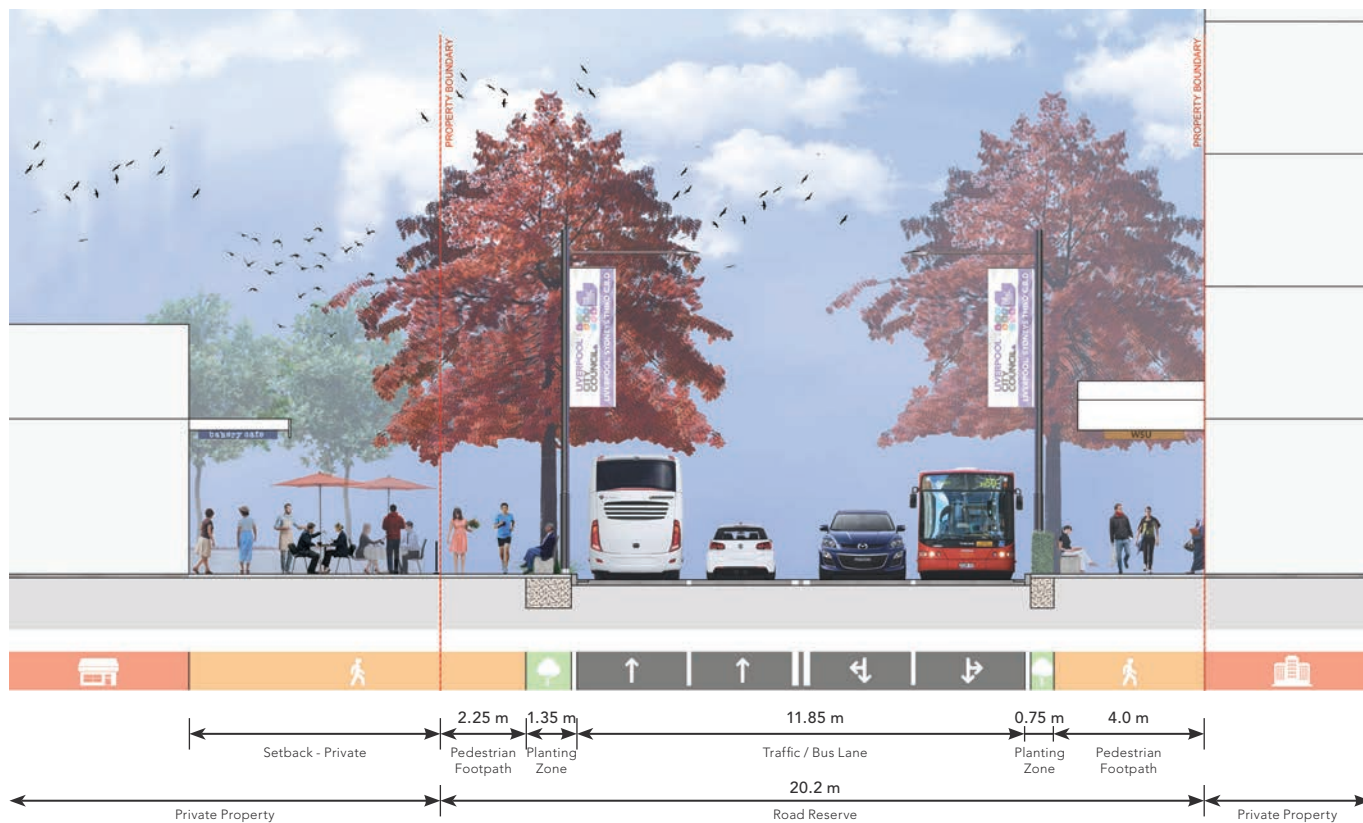


Figure 6.161 Elizabeth Street (Centre) - Section CC - Proposed (Liverpool City Council)

6.5

Master Plan
Streets - Elizabeth Street (Continued)

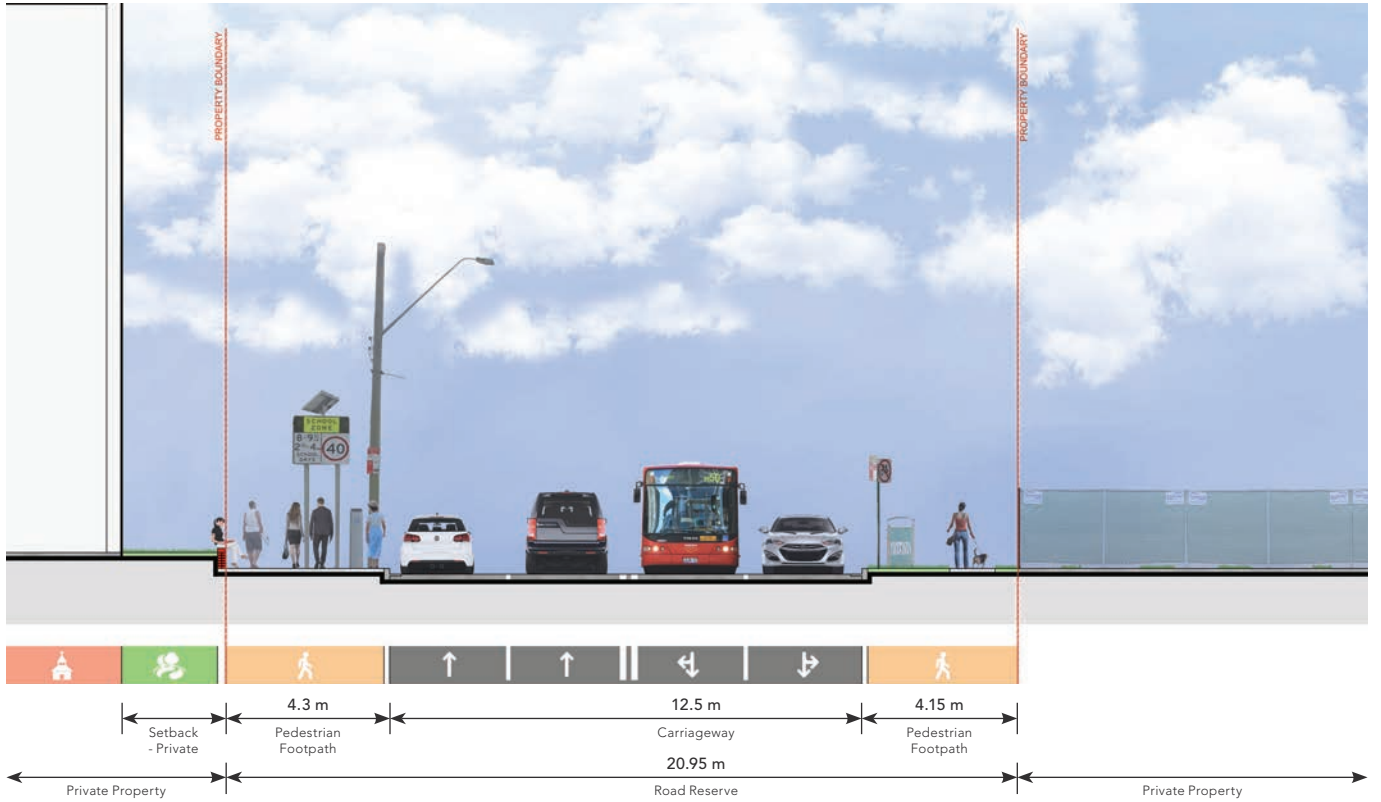


Figure 6.162 Elizabeth Street (East) - Section DD - Existing (Liverpool City Council)

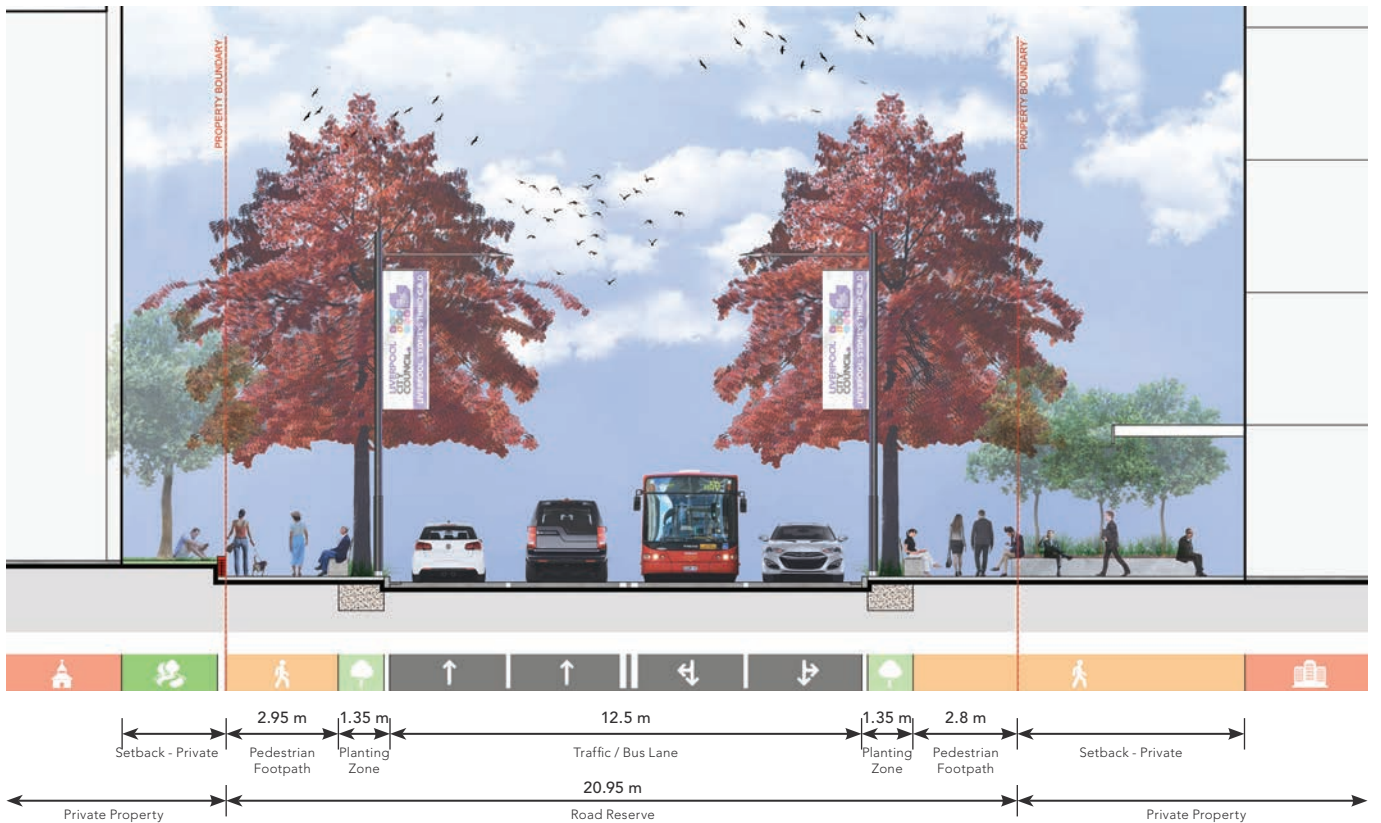


Figure 6.163 Elizabeth Street (East) - Section DD - Proposed (Liverpool City Council)

6.5

Master Plan

Streets - Elizabeth Street (Continued)



Figure 6.164 Elizabeth Street - Before (Liverpool City Council)



Figure 6.165 Elizabeth Street - After (Liverpool City Council)

Master Plan

6.5 Streets - Moore Street

Moore Street Public & Active Transport Corridor

Moore Street has been identified as a Smart Transit Boulevard which forms a part of the Fifteenth Avenue Smart Transit (FAST) corridor. It has been envisioned as an active and public transport corridor that will function as an important east-west link within the city centre.

The proposed interventions for Moore Street (West) include:

- ① Design and implement Moore Street as a Public Transit Boulevard connecting Liverpool Railway Station with the Western Sydney (Nancy-Bird Walton) International Airport, incorporating the FAST corridor works;
- ② Implement a public and active transport only zone between George Street and Bathurst Street, allowing access to emergency vehicles;
- ③ Design and install a dedicated East-West cycleway connection along Moore Street. Ensure traffic lights are reprogrammed to accommodate the cyclist movements;
- ④ Design and implement dedicated public transport lanes for the FAST corridor trackless tram and buses;
- ⑤ Introduce vertical elements and iconic planting to mark & define the entry into centre (See Chapter 6.7);
- ⑥ Design and implement a long term reclamation of the pedestrian realm along southern edge of Moore Street, between George Street and Bathurst Street to increase the quantity and activation of the street;
- ⑦ Install new street tree planting, as per the Street Tree Master Plan (See Chapter 6.13), with WSUD planting detail and structural soil tree root zones (Refer to Figure 6.245);
- ⑧ Negotiate with property owners to plant new trees along the lot boundary, to provide shade for pedestrians along the public footpath;
- ⑨ Retain 40 km/hr street speed limit and liaise with NSW Roads and maritime services (RMS) to reduce the speed limit to 30 km/hr;
- ⑩ Introduce pedestrian priority crossings at driveways. Refer to the Paving Typology Plan for driveway paving treatments (See Chapter 6.14);
- ⑪ Install new granite core paving with blue stone kerb as per the Paving Typology Plan (See Chapter 6.14);
- ⑫ Install new furniture, fittings and fixtures (See Chapter 6.15) and future Public Domain Technical Manual;
- ⑬ Design laneway to accommodate service vehicle access, while increasing pedestrian use with new paving, furniture and lighting (See Chapter 6.6), and
- ⑭ Replace poorly planted trees with correct soil and planting detail. Include engineering elements such as root barriers for successful establishment of trees. Each tree should aim to have 30m³ root volume.

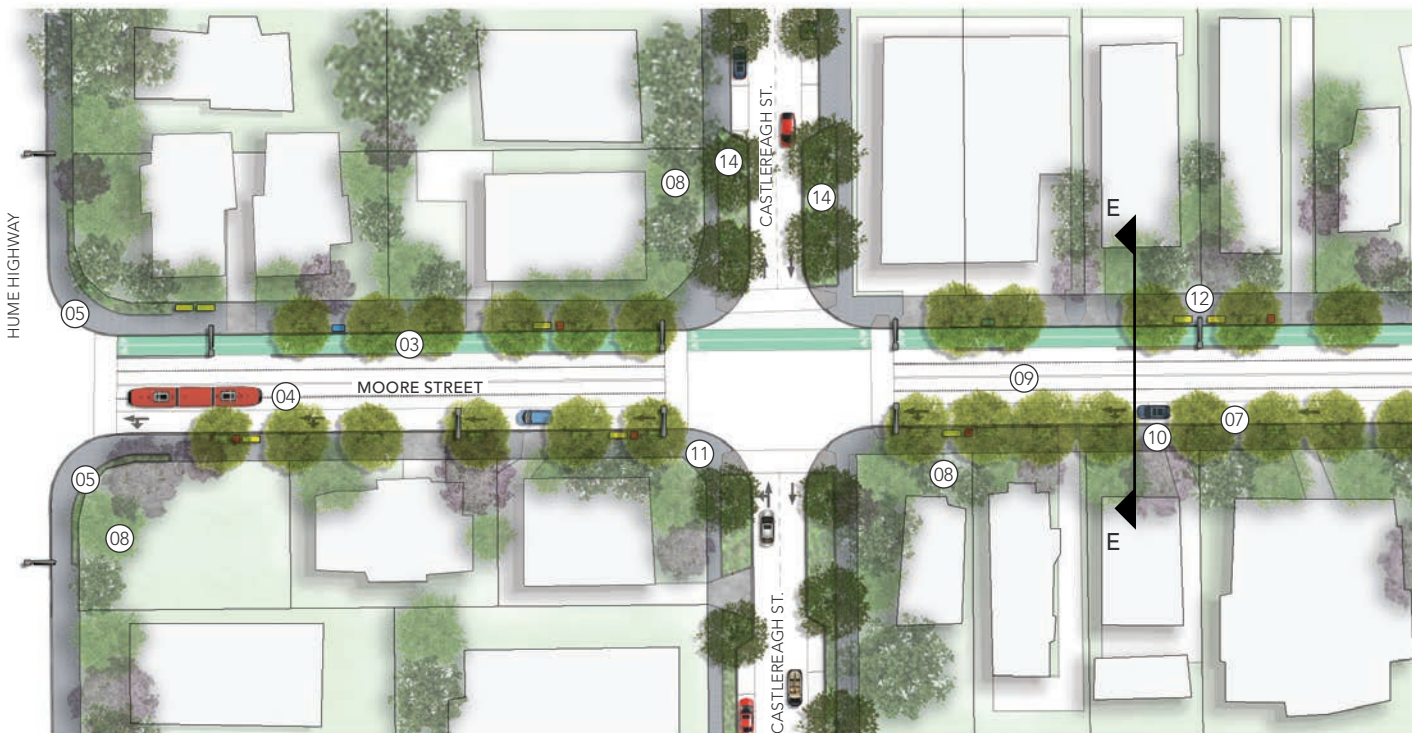
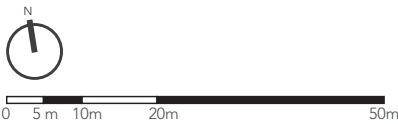


Figure 6.166 Proposed Streetscape - Moore Street (West) (Liverpool City Council)

6.5

Master Plan Streets - Moore Street

Legend

	Seat / Bench
	Rubbish Bin
	Cycle Rack
	Building Footprint
	Building with Awning
	Private Lot / Property
	Granite Core Paving
	Driveway Paving
	Feature Paving
	Mass Planting
	Public Open Space
	Serviceway/Laneway Paving
	Catenary Lighting
	Multi-function Poles
	Dedicated Cycleway (2-way)

	<i>Ginkgo biloba</i> (Maidenhair Tree)
	<i>Lophostemon confertus</i> (Brush Box)
	<i>Harpulia Pendula</i> (Tulip Wood)



N
Location Plan



6.5

Master Plan

Streets - Moore Street (Continued)

Moore Street Public & Active Transport Corridor (Continued)

The proposed interventions for Moore Street (East) include:

- ① Design and implement Moore Street as a Public Transit Boulevard connecting Liverpool Railway Station with the Western Sydney (Nancy-Bird Walton) International Airport, incorporating the FAST corridor works;
- ② Investigate options for FAST Corridor Stops;
- ③ Moore Street to be closed for private vehicle use, from George Street to Bathurst Street;
- ④ Design and install a dedicated East-West cycleway connection along Moore Street. Ensure traffic lights are reprogrammed to accommodate cyclist movements;
- ⑤ Design and implement dedicated public transport lanes for the FAST corridor trackless tram and buses;
- ⑥ Design and implement a long term reclamation of the pedestrian realm along southern edge of Moore Street, between George Street and Bathurst Street to increase the quantity and activation of the street;
- ⑦ Install new street tree planting, as per the Street Tree Master Plan (See Chapter 6.13), with WSUD planting detail and structural soil tree root zones (Refer to Figure 6.245);
- ⑧ Introduce pedestrian priority crossings at driveways. Refer to the Paving Typology Plan for driveway paving treatments (See Chapter 6.14);
- ⑨ Install new granite core paving with blue stone kerb as per the Paving Typology Plan (See Chapter 6.14);
- ⑩ Install new furniture, fittings and fixtures (See Chapter 6.15) and future Public Domain Technical Manual;
- ⑪ Design laneway to accommodate service vehicle access, while increasing pedestrian use with new paving, furniture and lighting (See Chapter 6.6);
- ⑫ Retain 40 km/hr street speed limit and liaise with NSW Roads and Maritime Services (RMS) to reduce speed limit to 30 km/hr, and
- ⑬ Design and install dedicated north-south cycleway connection along George Street. Ensure traffic lights are reprogrammed to accommodate cyclist movements.

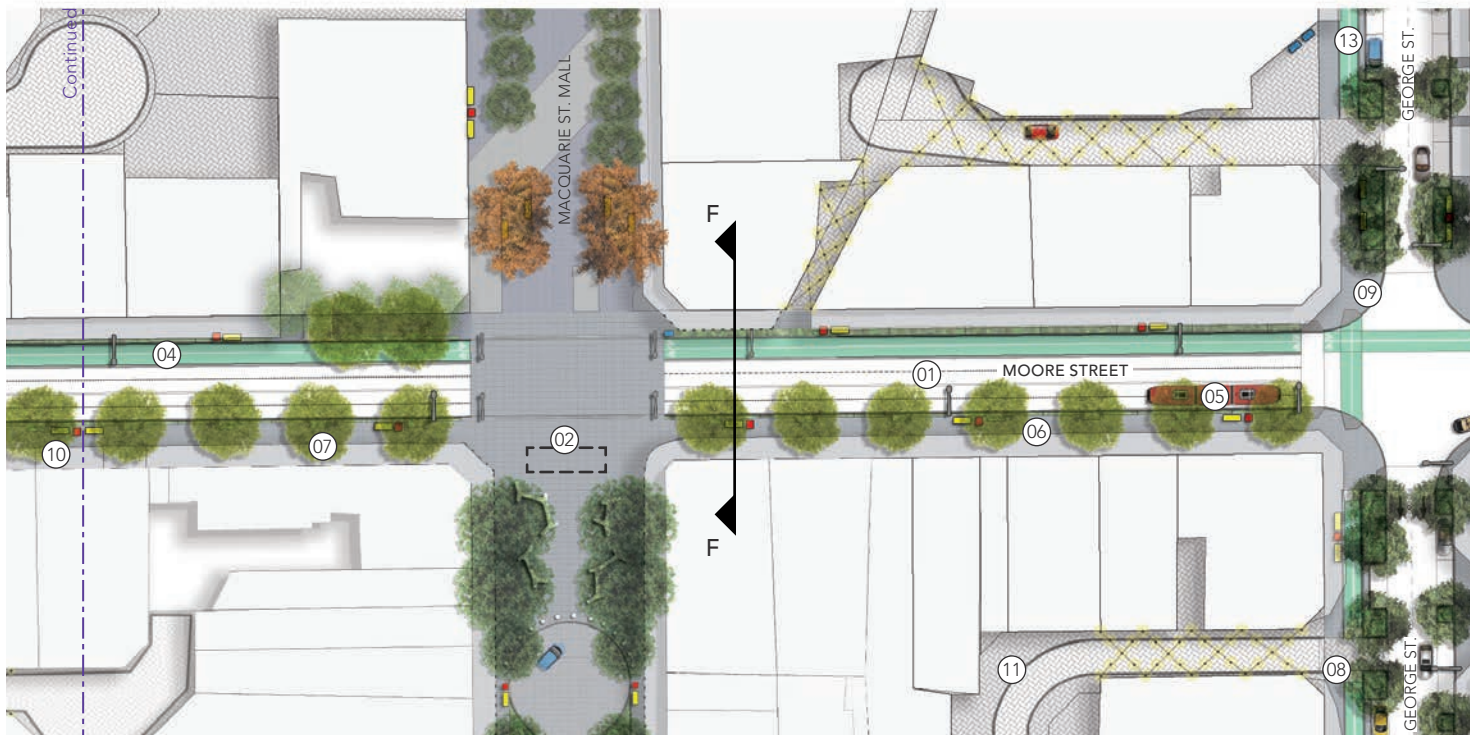


Figure 6.167 Proposed Streetscape - Moore Street (East) (Liverpool City Council)

6.5

Master Plan

Streets - Moore Street (Continued)

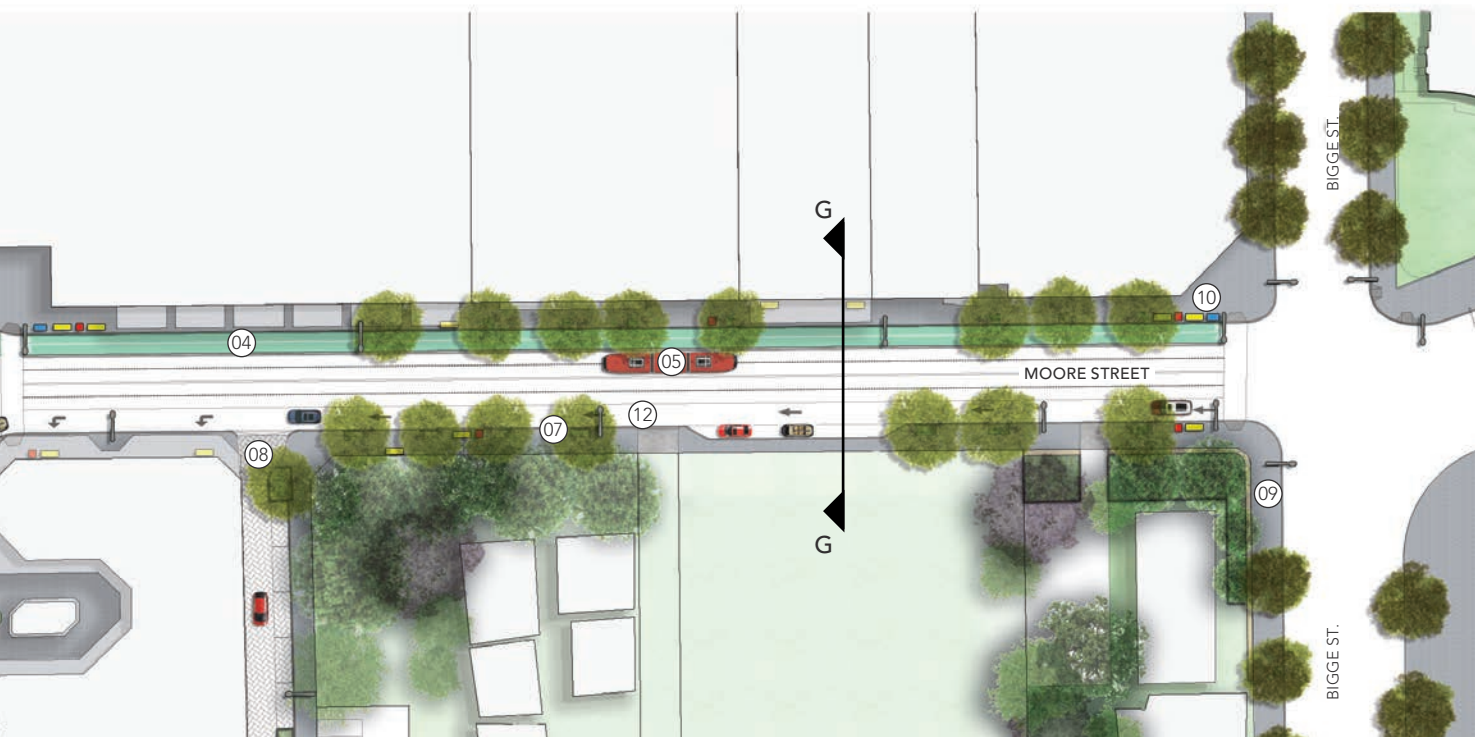
Legend

	Seat / Bench
	Rubbish Bin
	Cycle Rack
	Building Footprint
	Building with Awning
	Private Lot / Property
	Granite Core Paving
	Driveway Paving
	Feature Paving
	Mass Planting
	Public Open Space
	Serviceway/Laneway Paving
	Catenary Lighting
	Multi-function Poles
	Custom Seating
	Bollard
	Dedicated Cycleway (2-way)

	<i>Ginkgo biloba</i> (Maidenhair Tree)
	<i>Harpulia Pendula</i> (Tulip Wood)
	<i>Lophostemon confertus</i> (Brush Box)
	<i>Robinia pseudoacacia</i> (Black Locust)
	<i>Fraxinus pennsylvanica</i> (Urbanite Ash)
	Feature Tree (Unspecified)



N
Location Plan



Master Plan

6.5 Streets - Moore Street (Continued)

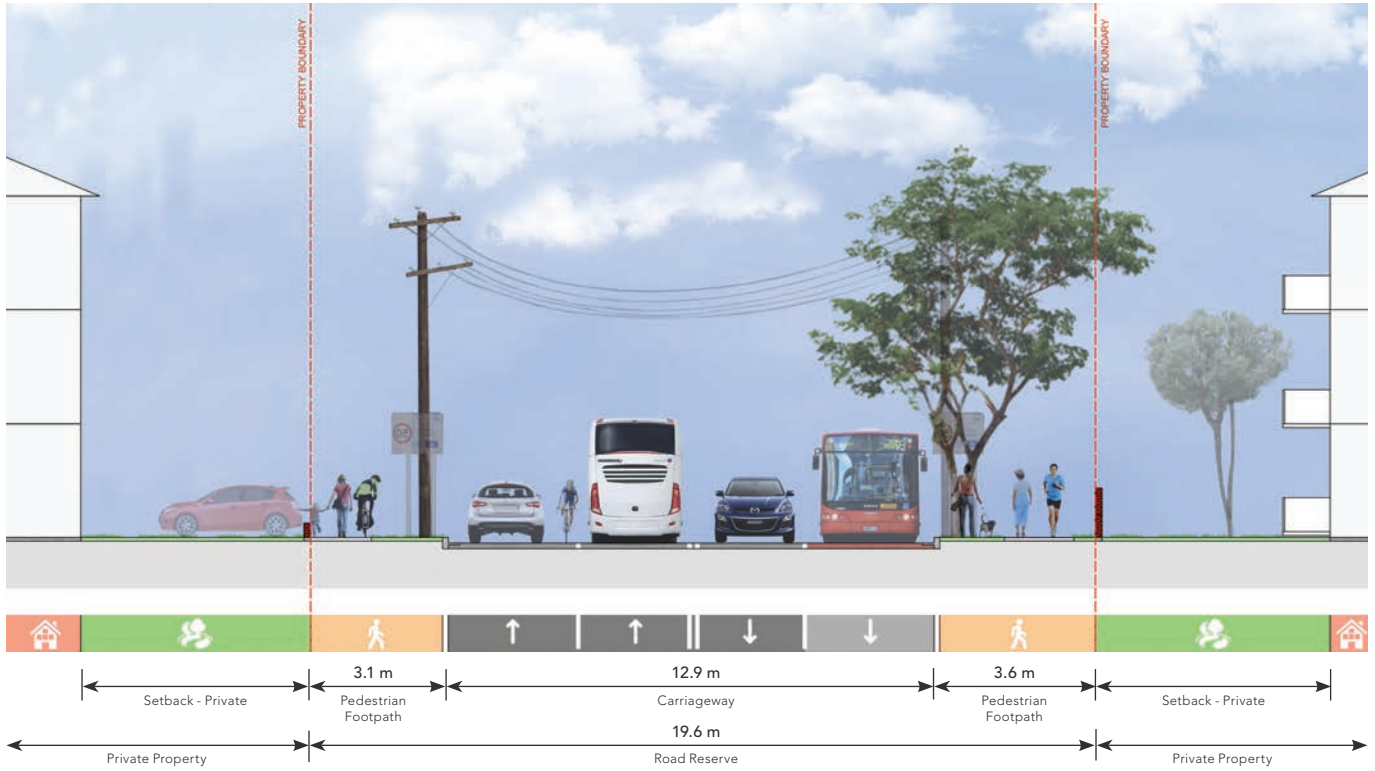


Figure 6.168 Moore Street - Section EE - Existing (Liverpool City Council)

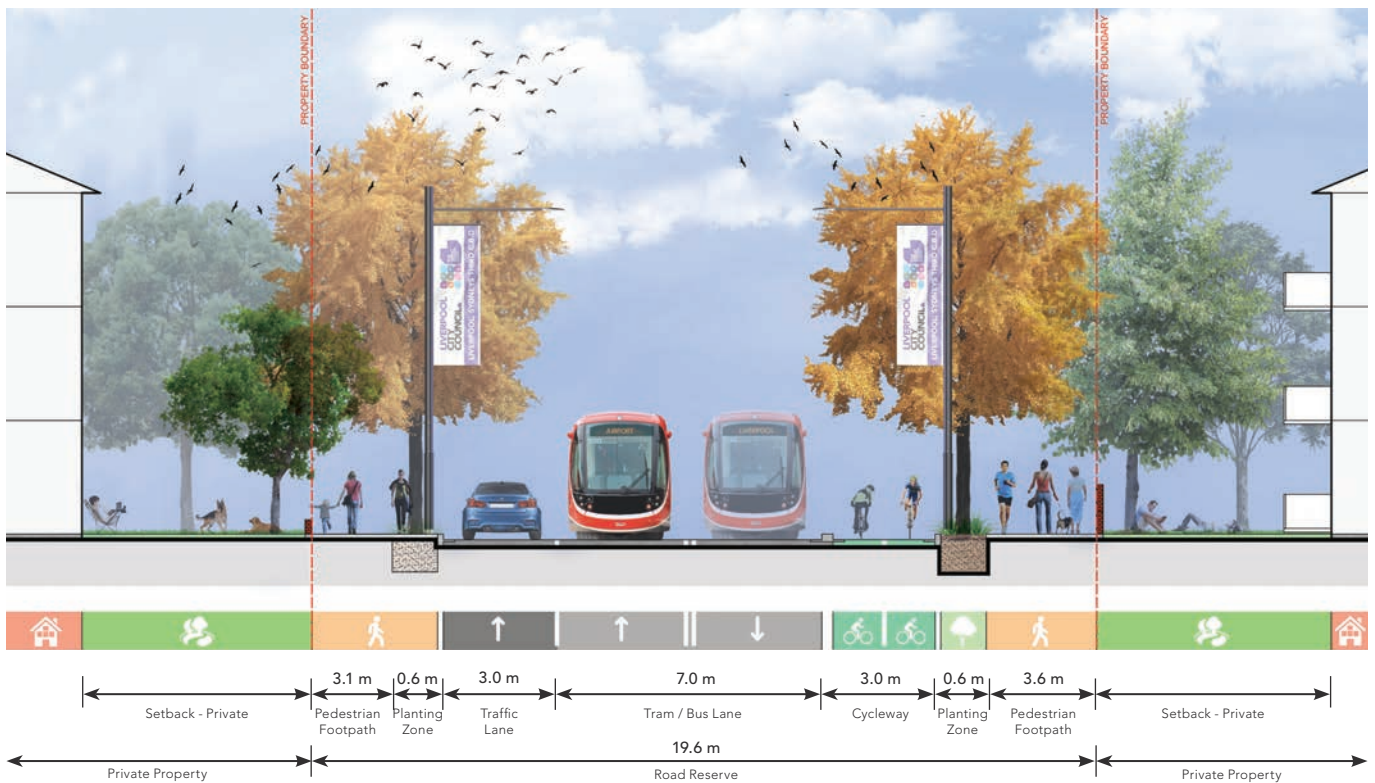


Figure 6.169 Moore Street - Section EE - Proposed (Liverpool City Council)

6.5

Master Plan
Streets - Moore Street (Continued)

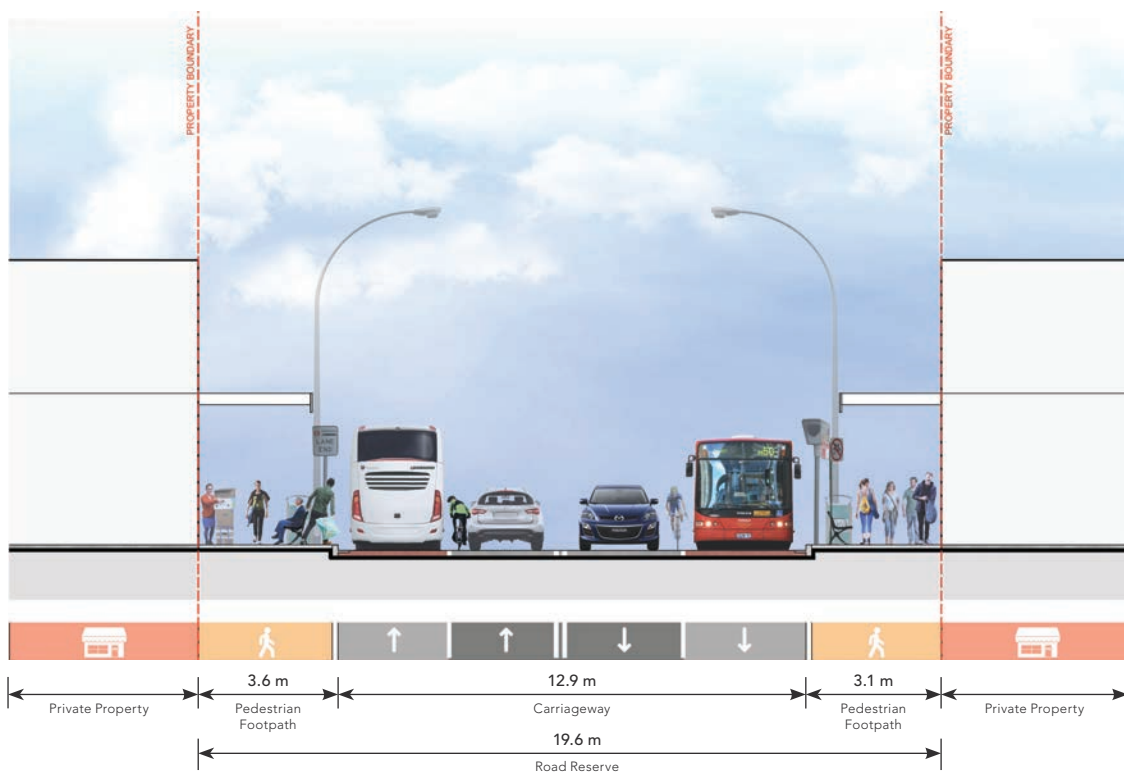


Figure 6.170 Moore Street - Section FF - Existing (Liverpool City Council)

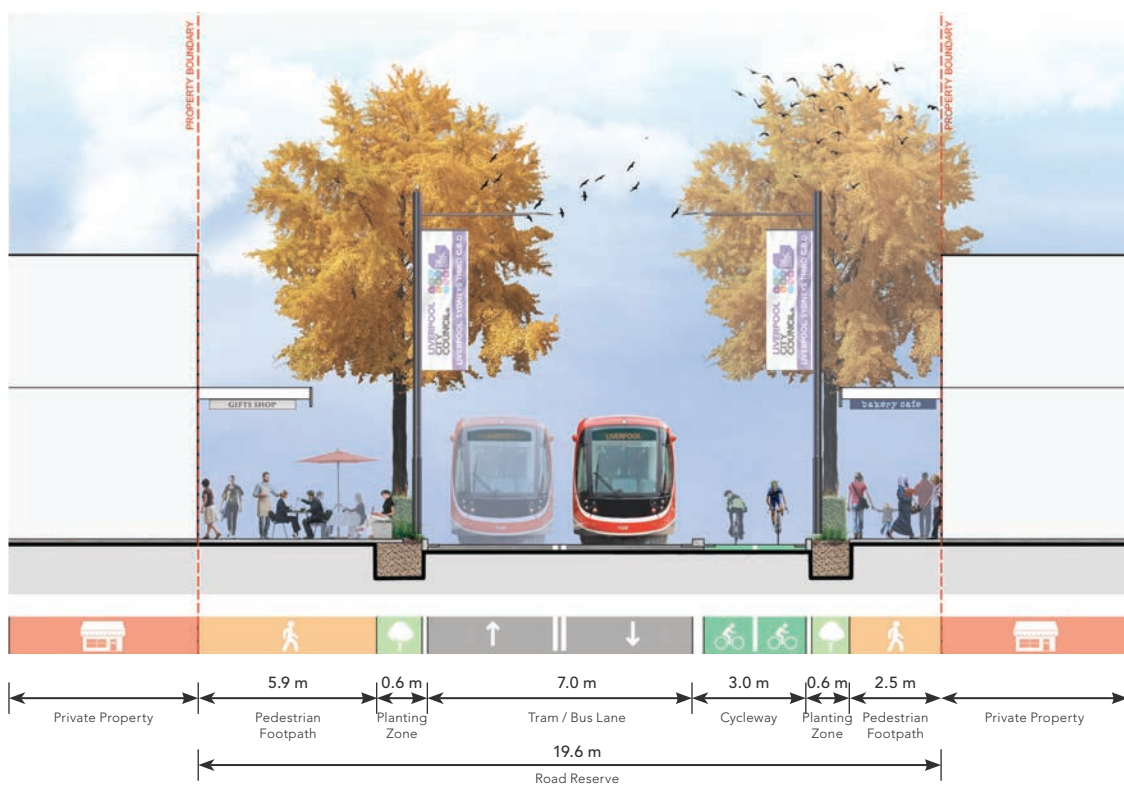


Figure 6.171 Moore Street - Section FF - Proposed (Liverpool City Council)

Master Plan

6.5 Streets - Moore Street (Continued)

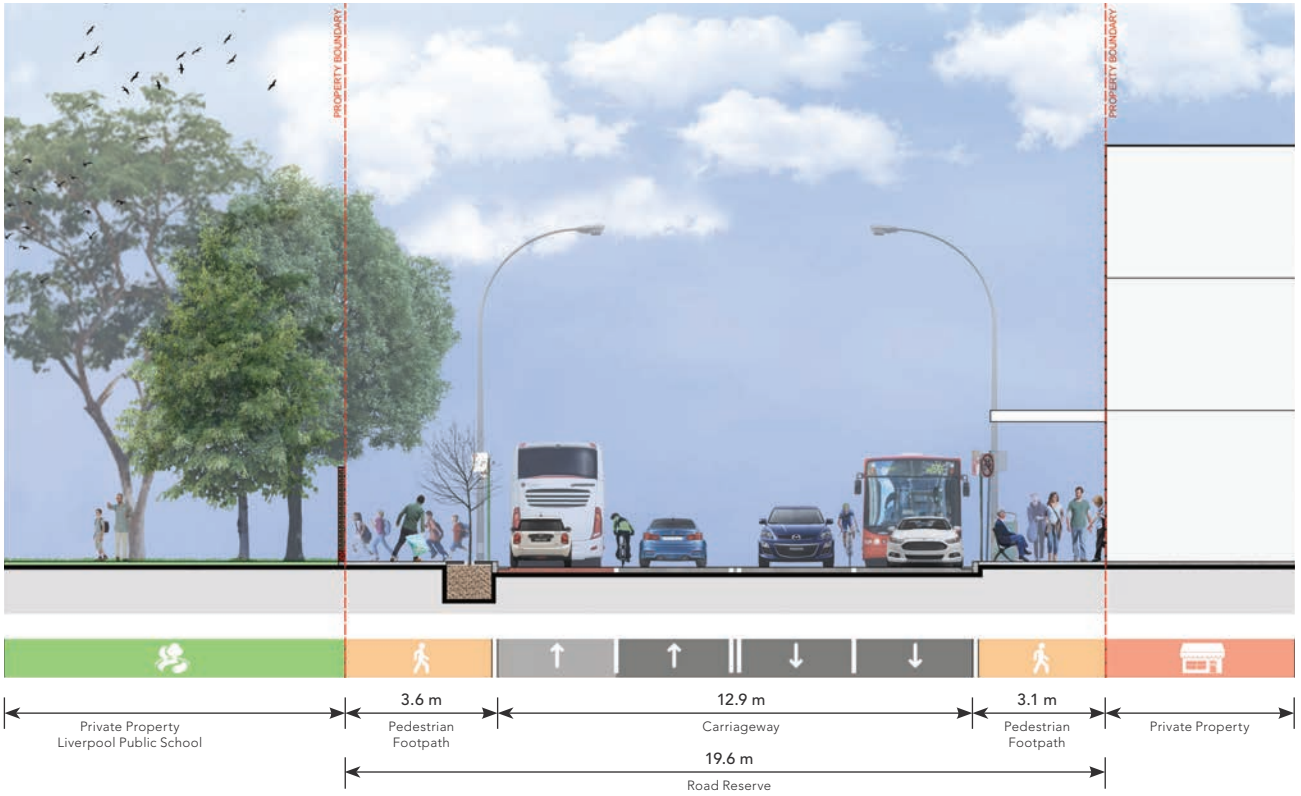


Figure 6.172 Moore Street - Section GG - Existing (Liverpool City Council)

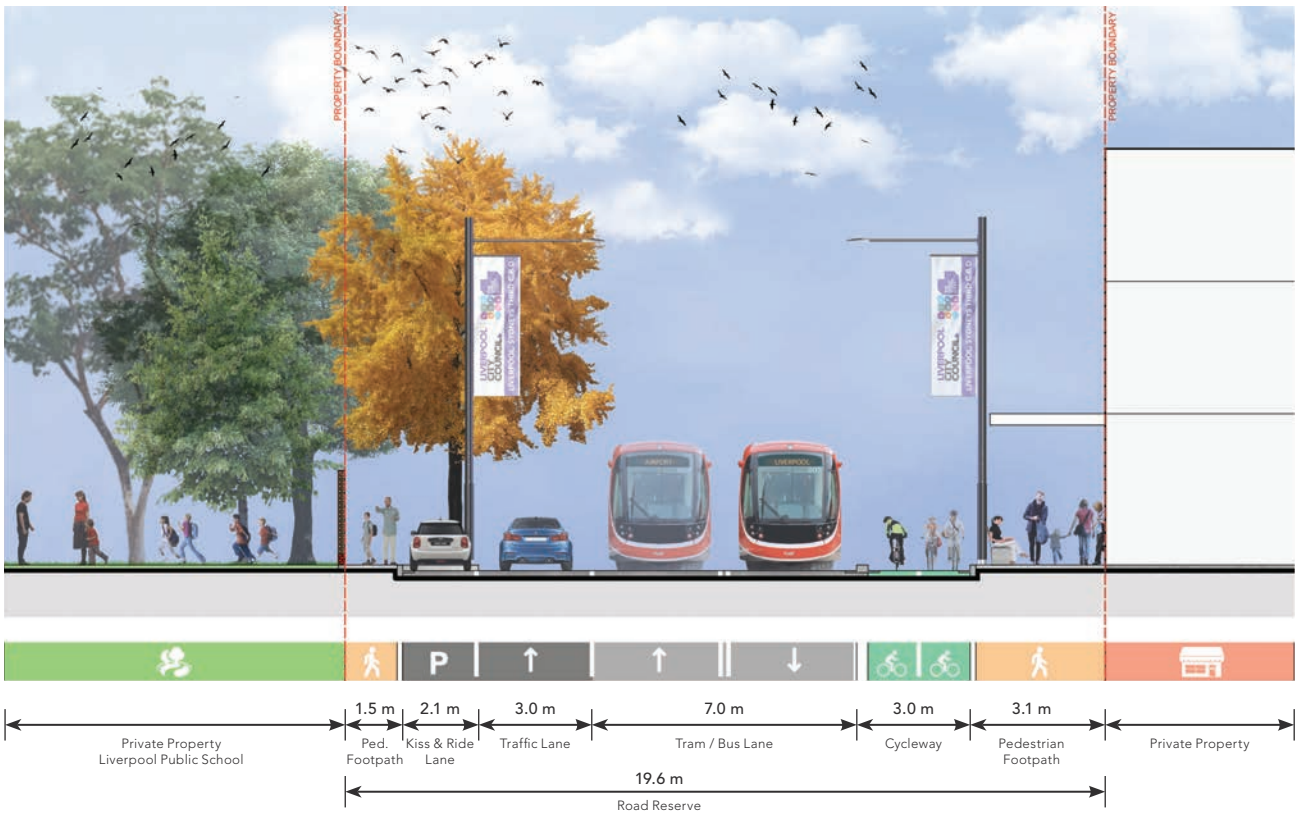


Figure 6.173 Moore Street - Section GG - Proposed (Liverpool City Council)

6.5

Master Plan

Streets - Moore Street (Continued)



Figure 6.174 Moore Street - Before (Liverpool City Council)



Figure 6.175 Moore Street - After (Liverpool City Council)

6.5

Master Plan

Streets - Scott Street & Memorial Avenue

Scott Street & Memorial Avenue Upgrade

Scott Street and Memorial Avenue form the southern part of the city centre core and boundary road of the 'The Town Plan of Liverpool', before the grid starts distorts to the south. Many of the key interventions that are identified along Scott Street could be implemented through the Development Application process, as future developments occur over time.

The proposed interventions for Scott Street and Memorial Avenue include:

- 01 Proposed Liverpool Civic Place development, incorporating a new library and Council administration building;
- 02 Introduce pedestrian priority crossings at the intersection of serviceways/laneways. Refer to the Paving Typology Plan for driveway paving treatments (See Chapter 6.14);
- 03 Install new street tree planting, as per the Street Tree Master Plan (See Chapter 6.13), with WSUD planting detail and structural soil tree root zones (Refer to Figure 6.245);
- 04 Implement stage 1 traffic speed reduction to 40 km/hr, and liaise with Roads and Maritime Services (RMS) to reduce traffic speed to 30 km/hr;
- 05 Undertake traffic and urban design study to investigate options that rationalise vehicle movements and maximise public domain space;
- 06 Retain existing successful street trees and plant drought/shade tolerant ground covers to tree zones (See Chapter 6.13);
- 07 Install tree planting between car parking bays to improve street character and organise on-street parking (See Chapter 6.13);
- 08 Investigate cycle lane options and alternative road configurations;
- 09 Install tree plantings and other laneway treatments to strengthen connections to Railway Serviceway (See Chapter 6.6);
- 10 Use blank wall facade of Quest building as a key public art space. Option of a large scale art work that can be viewed from a number of locations, both close & far (See Chapter 6.12);
- 11 Install new furniture, fittings and fixtures (See Chapter 6.15) and future Public Domain Technical Manual;
- 12 Install new granite core paving with blue stone kerb as per the Paving Typology Plan (See Chapter 6.14), and
- 13 Explore potential pedestrian priority connection across Scott Street.

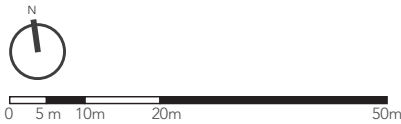


















Figure 6.176 Proposed Streetscape - Scott Street (Liverpool City Council)







6.5

Master Plan

Streets - Scott Street & Memorial Avenue

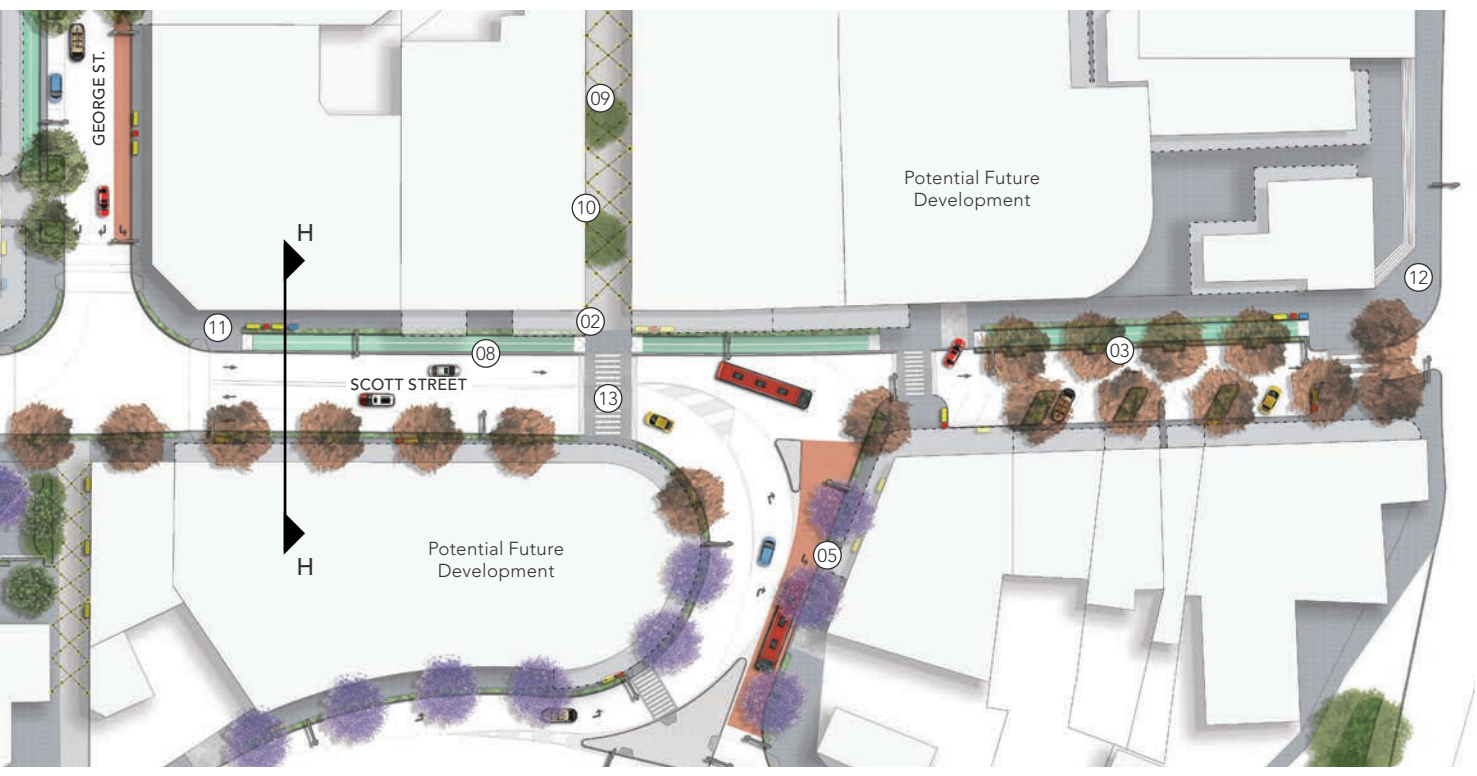
Legend

	Seat / Bench
	Rubbish Bin
	Cycle Rack
	Building Footprint
	Building with Awning
	Private Lot / Property
	Granite Core Paving
	Driveway Paving
	Feature Paving
	Mass Planting
	Public Open Space
	Serviceway/Laneway Paving
	Catenary Lighting
	Multi-function Poles
	Bus Lane
	Dedicated Cycleway (2-way)

	<i>Liquidambar styraciflua</i> (Sweet Gum)
	<i>Robinia pseudoacacia</i> (Black Locust)
	<i>Fraxinus pennsylvanica</i> (Urbanite Ash)
	<i>Jacaranda mimosifolia</i> (Blue Jacaranda)
	<i>Harpulia Pendula</i> (Tulip Wood)
	Existing Palm Tree



N
Location Plan



Master Plan

6.5

Streets - Scott Street & Memorial Avenue (Continued)

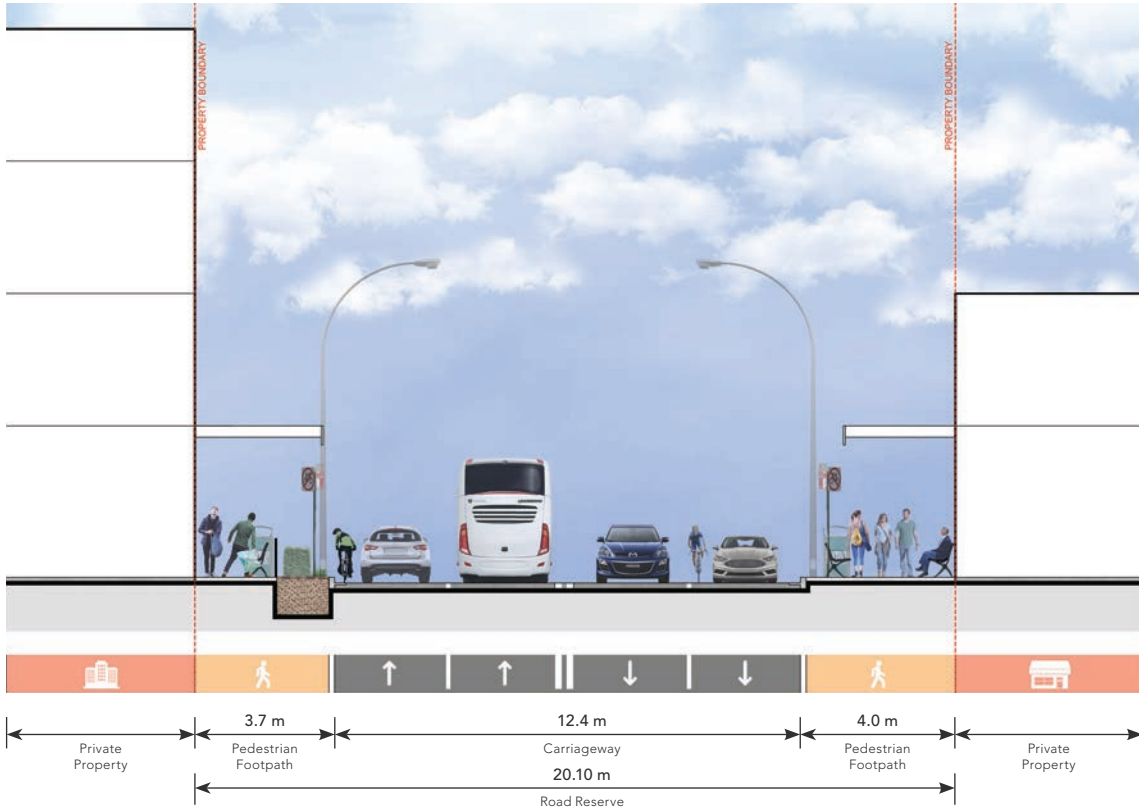


Figure 6.177 Scott Street - Section HH - Existing (Liverpool City Council)

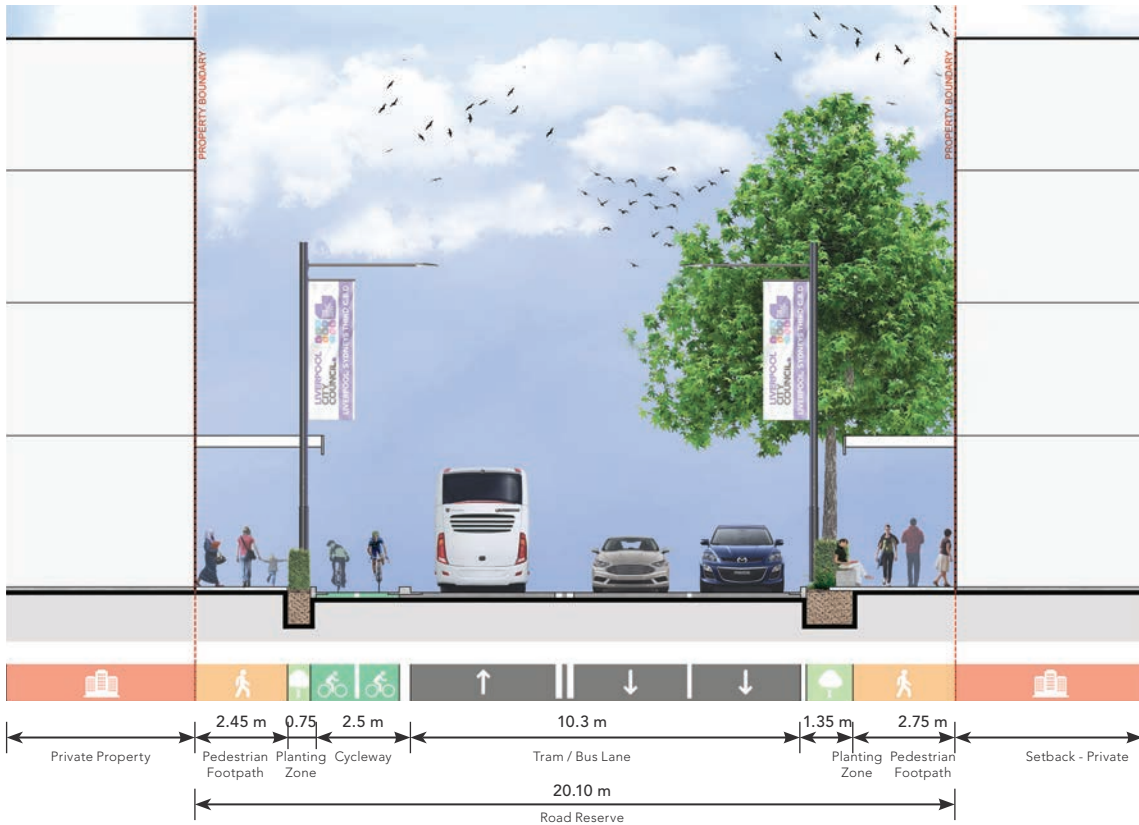


Figure 6.178 Scott Street - Section HH - Proposed (Liverpool City Council)

6.5

Master Plan
Streets - Scott Street & Memorial Avenue (Continued)



Figure 6.179 Junction of Scott Street & Macquarie Street - Before (Liverpool City Council)



Figure 6.180 Junction of Scott Street & Macquarie Street - After (Liverpool City Council)

6.5

Master Plan Streets - Bigge Street

Bigge Street Upgrade

Bigge Street forms a key north-south link within the city centre, with the majority of the vehicular traffic using the street to connect to the Hume Highway or Newbridge Road. The northern part of Bigge Street has significant potential for street upgrades, whereas the southern part is relatively narrow in width and runs parallel to Liverpool Station and the railway line.

The proposed interventions for Bigge Street (North) include:

- ① Increase street tree planting. Install new street trees plantings, as per the Street Tree Master Plan (See Chapter 6.13), with WSUD planting detail and structural soil tree root zones (Refer to Figure 6.245);
- ② Investigate options for an active transport connection along Elizabeth Street;
- ③ Retain 40 km/hr street speed limit, and liaise with NSW Roads and Maritime Services (RMS) to reduce traffic speed limit to 30 km/hr;
- ④ Retain existing successful street trees and plant drought and shade tolerant ground covers to tree zones;
- ⑤ Install tree planting between car parking bays to improve street character and achieve organised on-street parking (See Chapter 6.13);
- ⑥ Install new furniture, fittings and fixtures (See Chapter 6.15) and future Public Domain Technical Manual;
- ⑦ Install new granite core paving with blue stone kerb as per the Paving Typology Plan (See Chapter 6.14);
- ⑧ Introduce pedestrian priority crossings at driveways. Refer to the Paving Typology Plan for driveway paving treatments (See Chapter 6.14), and
- ⑨ Negotiate with property owners to plant new trees along the lot boundary to provide shade for pedestrians along the footpath.

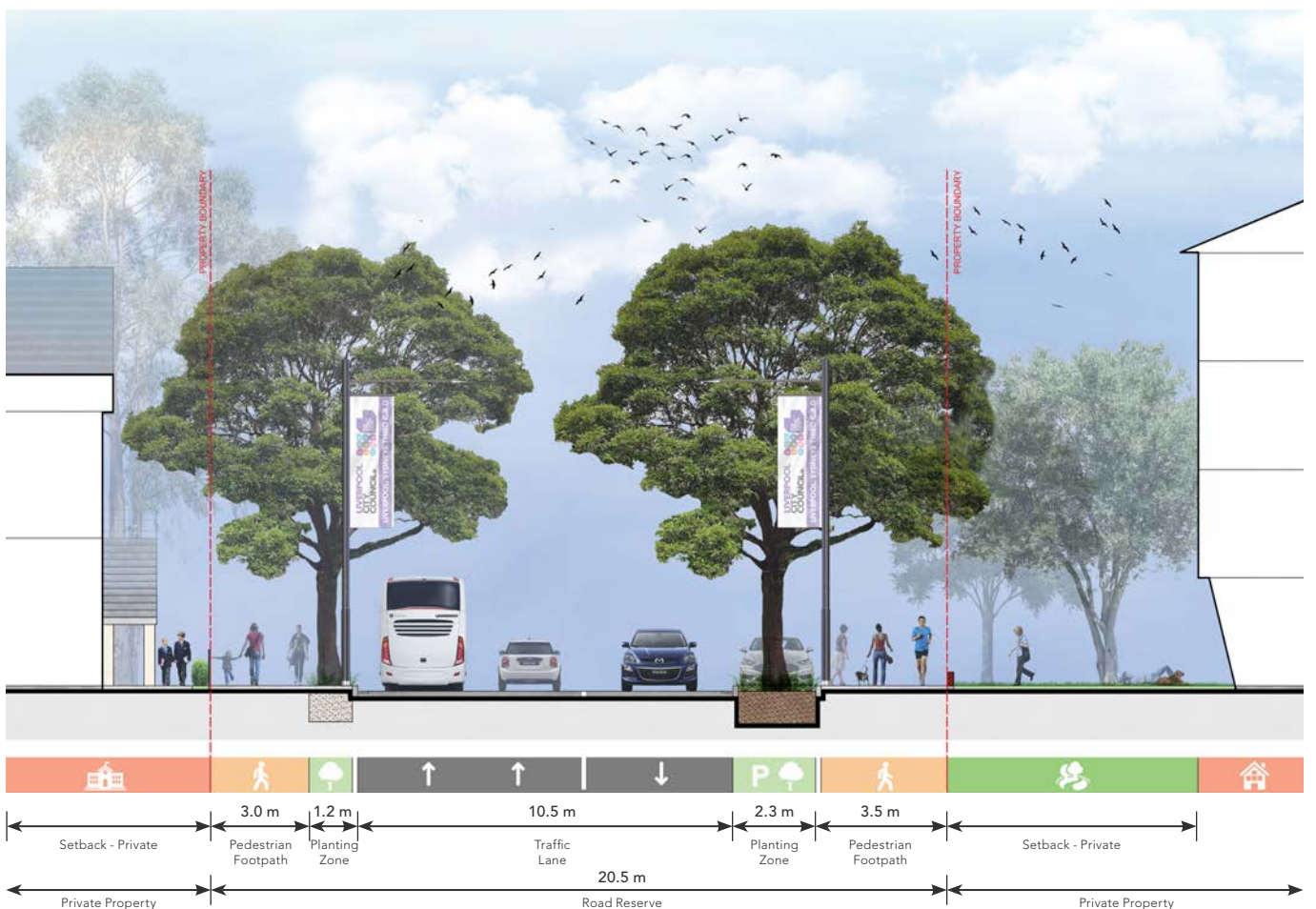


Figure 6.181 Bigge Street - Section JJ - Proposed (Liverpool City Council)

6.5

Master Plan
Streets - Bigge Street



Location Plan

Legend

	Seat / Bench
	Rubbish Bin
	Cycle Rack
	Building Footprint
	Building with Awning
	Private Lot / Property
	Granite Core Paving
	Driveway Paving
	Mass Planting
	Public Open Space
	Multi-function Poles
	<i>Pyrus calleryana</i> (Ornamental Pear)
	<i>Lophostemon confertus</i> (Brush Box)
	<i>Quercus palustris</i> (Pin Oak)
	<i>Jacaranda mimosifolia</i> (Blue Jacaranda)



0 5m 10m 20m 50m

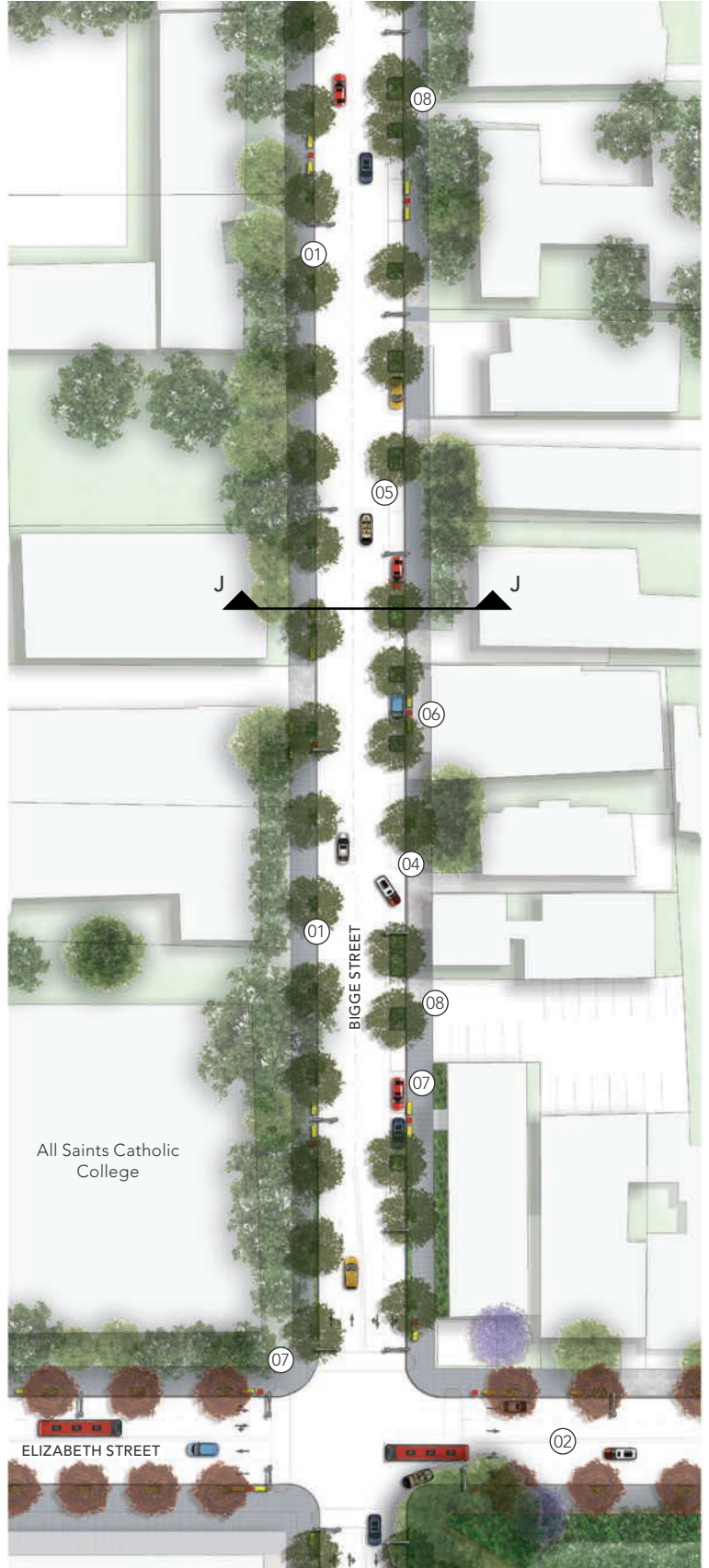


Figure 6.182 Proposed Streetscape - Bigge Street (Liverpool City Council)

6.5

Master Plan Streets - George Street

George Street Upgrade

George Street is a prominent street within the city centre and has been identified as a major north-south link for active transport. With one-way flow of vehicular traffic between Elizabeth and Scott Streets, it offers significant potential for a more pedestrian and cyclist focused approach to the street design.

The proposed interventions for George Street (South) include:

- ① Install tree planting within laneways (See Chapter 6.6);
- ② Design laneway to accommodate service vehicle access, while increasing pedestrian use with new paving, furniture and lighting (See Chapter 6.6);
- ③ Retain 40 km/hr street speed limit, and liaise with NSW Roads and Maritime Services (RMS) to reduce traffic speed limit to 30 km/hr;
- ④ Install tree planting between car parking bays to improve street character and achieve organised on-street parking (See Chapter 6.13);
- ⑤ Install new furniture, fittings and fixtures (See Chapter 6.15) and future Public Domain Technical Manual;
- ⑥ Install new granite core paving with blue stone kerb as per the Paving Typology Plan (See Chapter 6.14);

- ⑦ Introduce pedestrian priority crossings at driveways and entries to serviceways. Refer to the Paving Typology Plan for driveway paving treatments (See Chapter 6.14);
- ⑧ Design and install dedicated north-south cycleway connection along George Street. Ensure traffic lights are reprogrammed to accommodate cyclist movements, and
- ⑨ Increase street tree planting. Install new street trees, as per the Street Tree Master Plan (See Chapter 6.13), with WSUD planting detail and structural soil tree root zones (Refer to Figure 6.245).

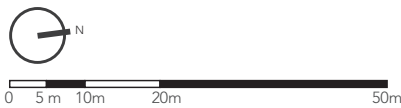


Figure 6.183 Proposed Streetscape - George Street (Liverpool City Council)

6.5 Master Plan Streets - George Street

Legend

	Seat / Bench		<i>Harpulia Pendula</i> (Tulip Wood)
	Rubbish Bin		<i>Liquidambar styraciflua</i> (Sweet Gum)
	Cycle Rack		<i>Ginkgo biloba</i> (Maidenhair Tree)
	Building Footprint		
	Building with Awning		
	Private Lot / Property		
	Granite Core Paving		
	Driveway Paving		
	Feature Paving		
	Mass Planting		
	Public Open Space		
	Serviceway/Laneway Paving		
	Catenary Lighting		
	Multi-function Poles		
	Bus Lane		
	Dedicated Cycleway (2-way)		



N
Location Plan



6.5

Master Plan Streets - George Street (Continued)

George Street Upgrade (Continued)

The proposed interventions for George Street (Middle) include:

- ① Design and install dedicated north-south cycleway connection along George Street. Ensure traffic lights are reprogrammed to accommodate cyclist movements;
- ② Install new furniture, fittings and fixtures (See Chapter 6.15) and future Public Domain Technical Manual;
- ③ Reduce the size of traffic intersections, while maintaining traffic swept paths;
- ④ Increase street tree planting. Install new street trees, as per the Street Tree Master Plan (See Chapter 6.13), with WSUD planting detail and structural soil tree root zones (Refer to Figure 6.245);
- ⑤ Introduce pedestrian priority crossings at driveways and entries to serviceways. Refer to the Paving Typology Plan for driveway paving treatments (See Chapter 6.14);
- ⑥ Design laneway to accommodate service vehicle access, while increasing pedestrian use with new paving, furniture and lighting (See Chapter 6.6);
- ⑦ Retain 40 km/hr street speed limit, and liaise with NSW Roads and Maritime Services (RMS) to reduce traffic speed limit to 30 km/hr;
- ⑧ Building setbacks are to be maintained as per applicable DCP controls, and provide driveway and service access via a new laneway (to the rear);
- ⑨ Install tree plantings between car parking bays to improve street character and achieve organised on-street parking (See Chapter 6.13);
- ⑩ Install new granite core paving with blue stone kerb as per the Paving Typology Plan (See Chapter 6.14);
- ⑪ Retain existing mid-block raised pedestrian crossing;
- ⑫ Ensure that new developments sufficiently conceal services (e.g. substations behind screens/within basements, and towards the 'back' of the development), and
- ⑬ Ensure new developments have street awnings to provide weather protection for pedestrians. Design awnings around street tree canopies.

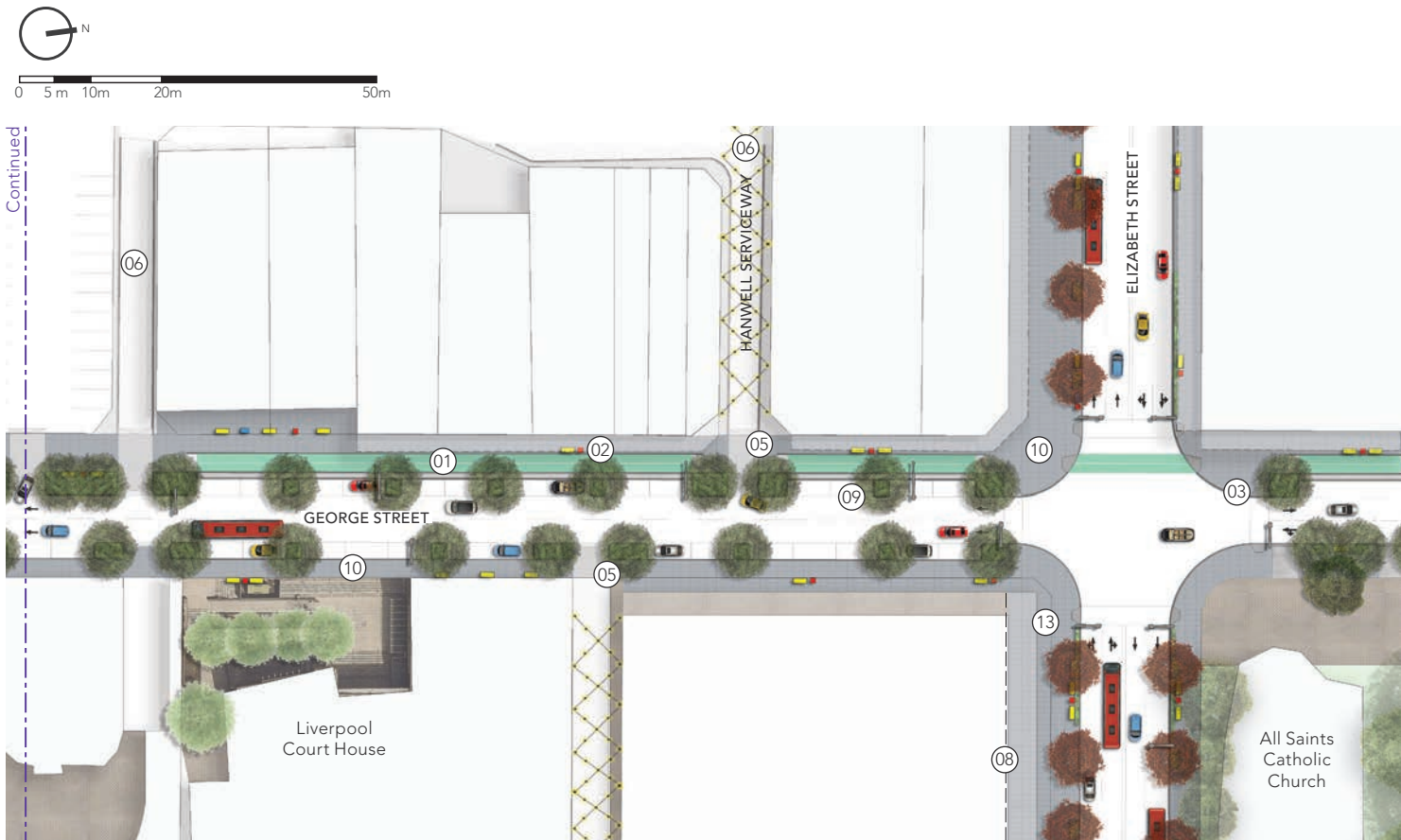


















Figure 6.184 Proposed Streetscape - George Street (Liverpool City Council)




6.5

Master Plan

Streets - George Street (Continued)

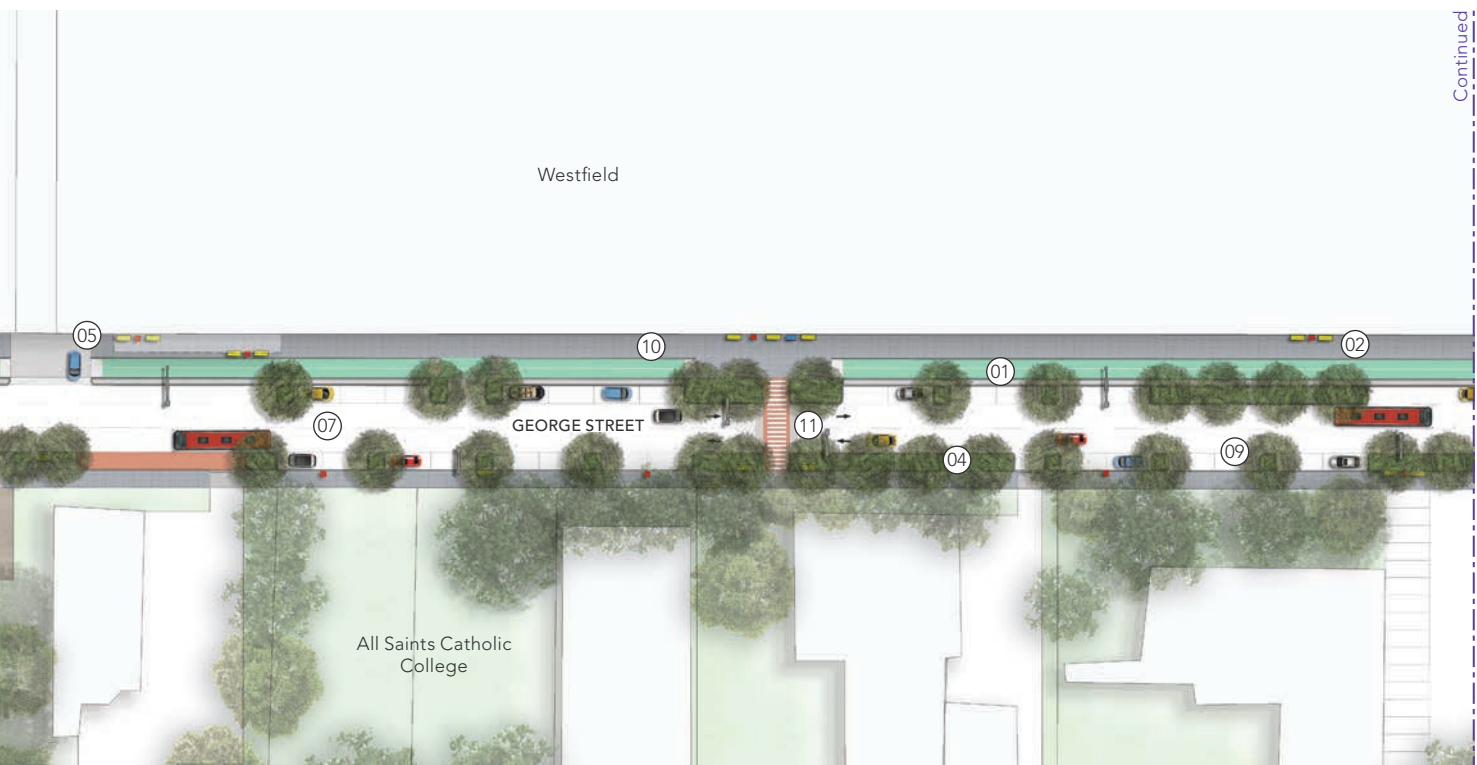
Legend

	Seat / Bench
	Rubbish Bin
	Cycle Rack
	Building Footprint
	Building with Awning
	Private Lot / Property
	Granite Core Paving
	Driveway Paving
	Feature Paving
	Mass Planting
	Public Open Space
	Serviceway/Laneway Paving
	Catenary Lighting
	Multi-function Poles
	Bus Lane
	Dedicated Cycleway (2-way)

	<i>Harpulia Pendula</i> (Tulip Wood)
	<i>Quercus palustris</i> (Pin Oak)
	Feature Tree (unspecified)



N
Location Plan



6.5

Master Plan

Streets - George Street (Continued)

George Street Upgrade (Continued)

The proposed interventions for George Street (North) include:

- ① Design and install dedicated north-south cycleway connection along George Street. Ensure traffic lights are reprogrammed to accommodate cyclist movements;
- ② Increase street tree planting. Install new street trees, as per the Street Tree Master Plan (See Chapter 6.13), with WSUD planting detail and structural soil tree root zones (Refer to Figure 6.245);
- ③ Introduce pedestrian priority crossings at driveways and entries to serviceways. Refer to the Paving Typology Plan for driveway paving treatments (See Chapter 6.14);
- ④ Install new furniture, fittings and fixtures (See Chapter 6.15) and future Public Domain Technical Manual;
- ⑤ Reduce the size of traffic intersections, while maintaining traffic swept paths;
- ⑥ Retain 40 km/hr street speed limit, and liaise with NSW Roads and Maritime Services (RMS) to reduce traffic speed limit to 30 km/hr;
- ⑦ Install tree plantings between car parking bays to improve street character and achieve organised on-street parking (See Chapter 6.13);
- ⑧ Install new granite core paving with blue stone kerb as per the Paving Typology Plan (See Chapter 6.14);
- ⑨ Install new periphery paving as per the Paving Typology Plan (See Chapter 6.14), and
- ⑩ Negotiate with property owners to plant new trees along the lot boundary to provide shade to pedestrians along the public footpath.



0 5m 10m 20m 50m




















Figure 6.185 Proposed Streetscape - George Street (Liverpool City Council)




6.5

Master Plan

Streets - George Street (Continued)

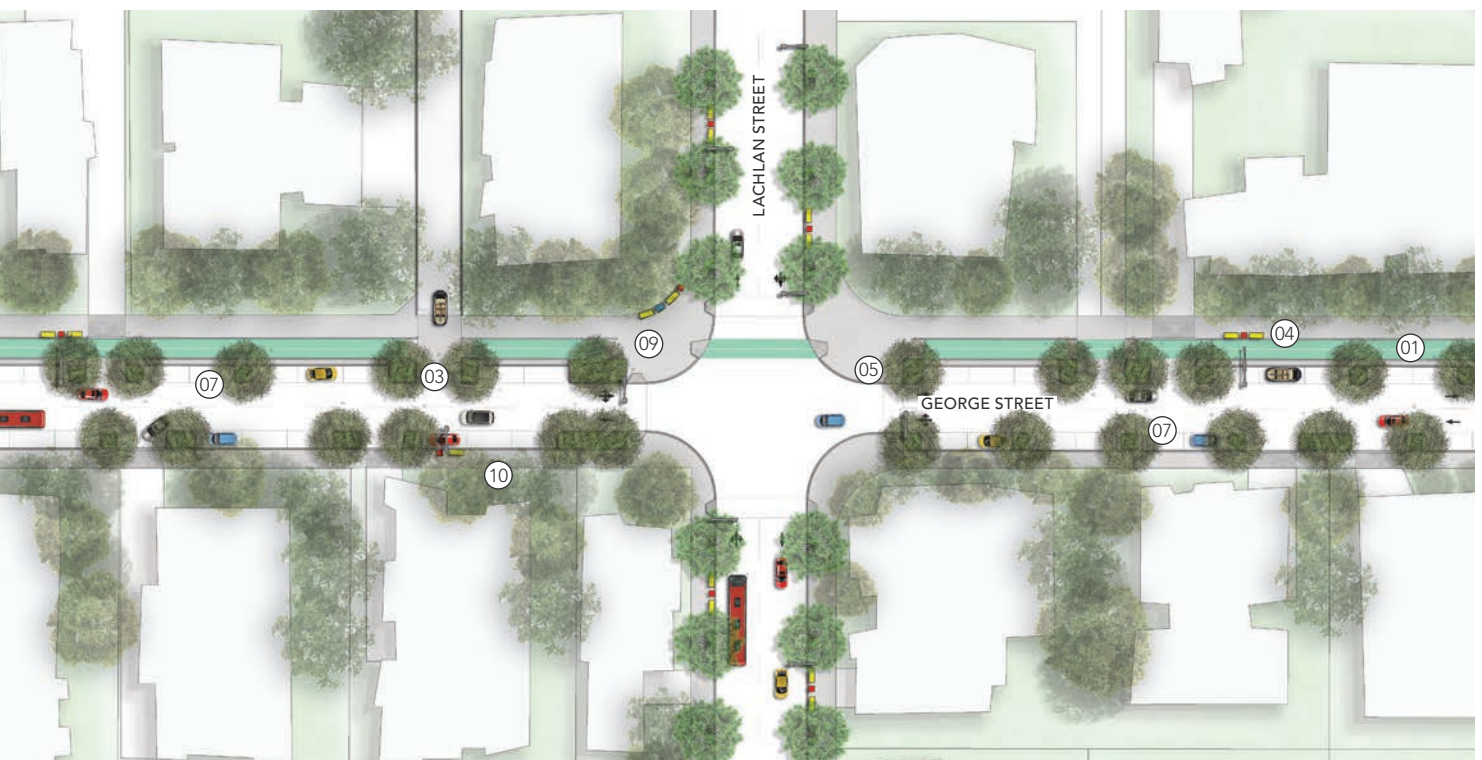
Legend

	Seat / Bench
	Rubbish Bin
	Cycle Rack
	Building Footprint
	Building with Awning
	Private Lot / Property
	Granite Core Paving
	Driveway Paving
	Feature Paving
	Periphery Paving - Concrete
	Mass Planting
	Public Open Space
	Serviceway/Laneway Paving
	Catenary Lighting
	Multi-function Poles
	Bus Lane
	Dedicated Cycleway (2-way)

	<i>Harpulia Pendula</i> (Tulip Wood)
	<i>Pyrus calleryana</i> (Ornamental Pear)
	<i>Triadica sebifera</i> (Chinese Tallow)



N
Location Plan



Master Plan

Streets - George Street (Continued)

6.5

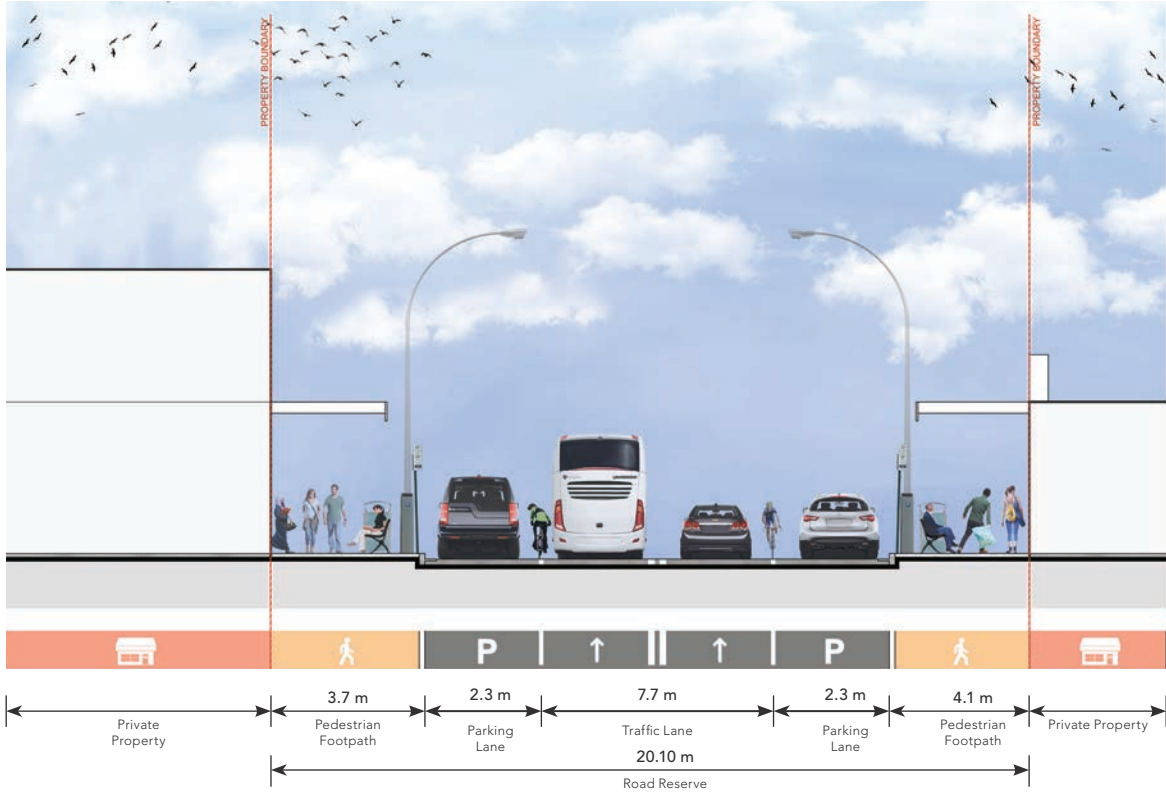


Figure 6.186 George Street - Section KK - Existing (Liverpool City Council)

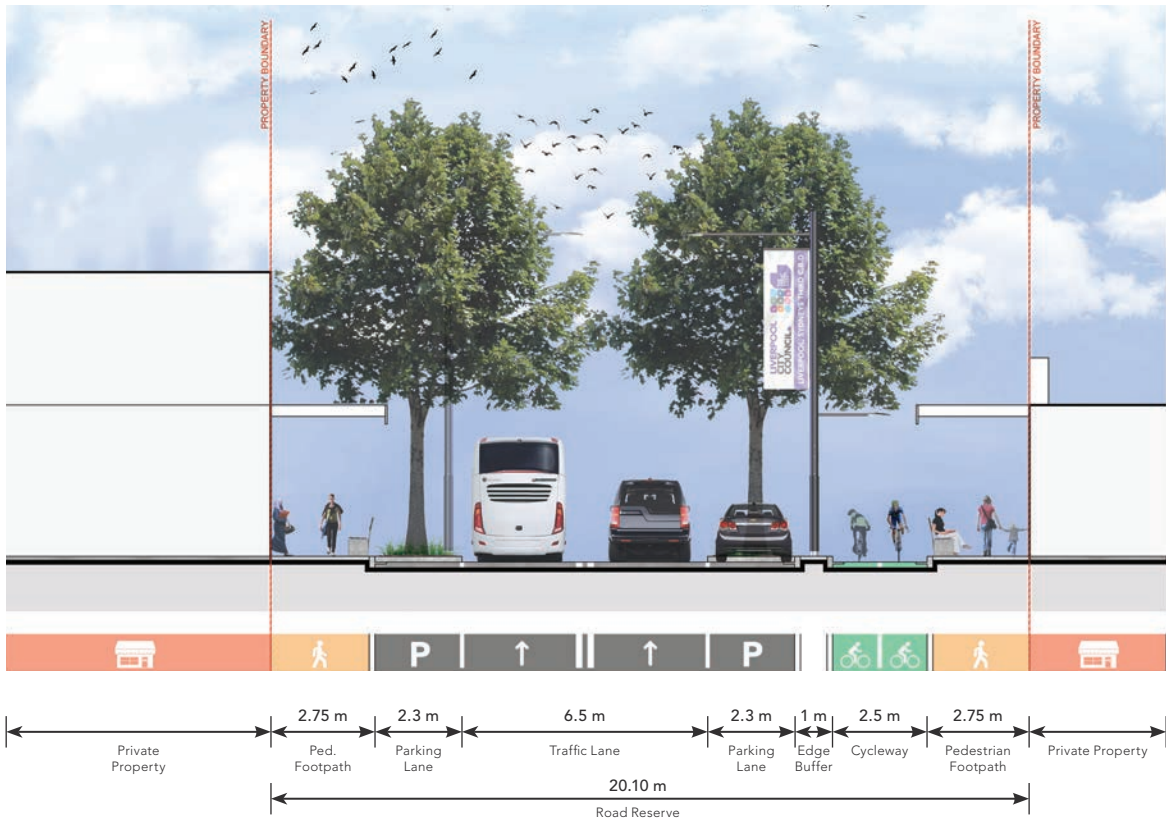


Figure 6.187 George Street - Section KK - Proposed (Liverpool City Council)

6.5 Master Plan Streets - George Street (Continued)



Figure 6.188 George Street - Before (Liverpool City Council)



Figure 6.189 George Street - After (Liverpool City Council)

6.5

Master Plan

Streets - Typical Street Upgrade (Type A)

Integrated Parking with Blisters (e.g. Nagle St)

The peripheral streets within the city centre are predominantly residential streets, and can be upgraded, and detailed designed as per typical street details.

Nagle Street is residential street in the southern part of the city centre, and has been detailed to demonstrate the key interventions that will be applied to other similar streets with kerb build-outs and planting, to increase the street character and achieve more organised parking, whilst helping to slow the speed of vehicles in residential areas of the city centre.

The proposed Type A street interventions include:

- 01 Increase street tree planting. Install new street trees, as per the Street Tree Master Plan (See Chapter 6.13), with WSUD planting detail and structural soil tree root zones (Refer to Figure 6.245);
- 02 Introduce pedestrian priority crossings at driveways entrances. Refer to the Paving Typology Plan for driveway paving treatments (See Chapter 6.14);
- 03 Install new furniture, fittings and fixtures (See Chapter 6.15) and future Public Domain Technical Manual;
- 04 Reduce the size of traffic intersections, while maintaining traffic swept paths;
- 05 Install tree plantings between car parking bays to improve street character and achieve organised on-street parking (See Chapter 6.13);
- 06 Install new periphery paving as per the Paving Typology Plan (See Chapter 6.14), and
- 07 Reorganise street intersections to allow for safer pedestrian crossings.



Location Plan

Legend

	Building Footprint
	Private Lot / Property
	Periphery Paving - Concrete
	<i>Robinia pseudoacacia</i> (Black Locust)
	<i>Quercus palustris</i> (Pin Oak)
	Mass Planting
	Multi-function Poles
	Seat / Bench
	Rubbish Bin



0 2m 4m 10m 20m



Figure 6.190 Proposed Typical Periphery Street Treatment Type A- Nagle Street (Liverpool City Council)

6.5

Master Plan

Streets - Typical Street Upgrade (Type B)

Planting within the Verge (e.g. Bathurst St North)

Bathurst Street (north) is part of the residential precinct in the northern part of the city centre, which contains a wider verges within the road reserve. It has been detailed out to demonstrate key interventions that can be applied along other similar streets, with tree plantings included within the verge. This will enhance the street character and increase visual appeal of the street, whilst helping to slow the speed of vehicles within residential areas of the city centre.

The proposed Type B street interventions include:

- 01 Increase street tree planting. Install new street trees, as per the Street Tree Master Plan (See Chapter 6.13), with WSUD planting detail and structural soil tree root zones (Refer to Figure 6.245);
- 02 Install new furniture, fittings and fixtures (See Chapter 6.15) and future Public Domain Technical Manual;
- 03 Reduce the size of traffic intersections, while maintaining traffic swept paths, and install WSUD planting and trees;
- 04 Introduce pedestrian priority crossings at driveway entrances. Refer to the Paving Typology Plan for driveway paving treatments (See Chapter 6.14);
- 05 Install new periphery paving as per the Paving Typology Plan (See Chapter 6.14), and
- 06 Negotiate with property owners to plant new trees along the lot boundary, to provide shade to pedestrians along the public footpath.



Location Plan

Legend

	Building Footprint
	Private Lot / Property
	Periphery Paving - Concrete
	<i>Lophostemon confertus</i> (Brush Box)
	<i>Robinia pseudoacacia</i> (Black Locust)
	Mass Planting
	Multi-function Poles
	Seat / Bench
	Rubbish Bin

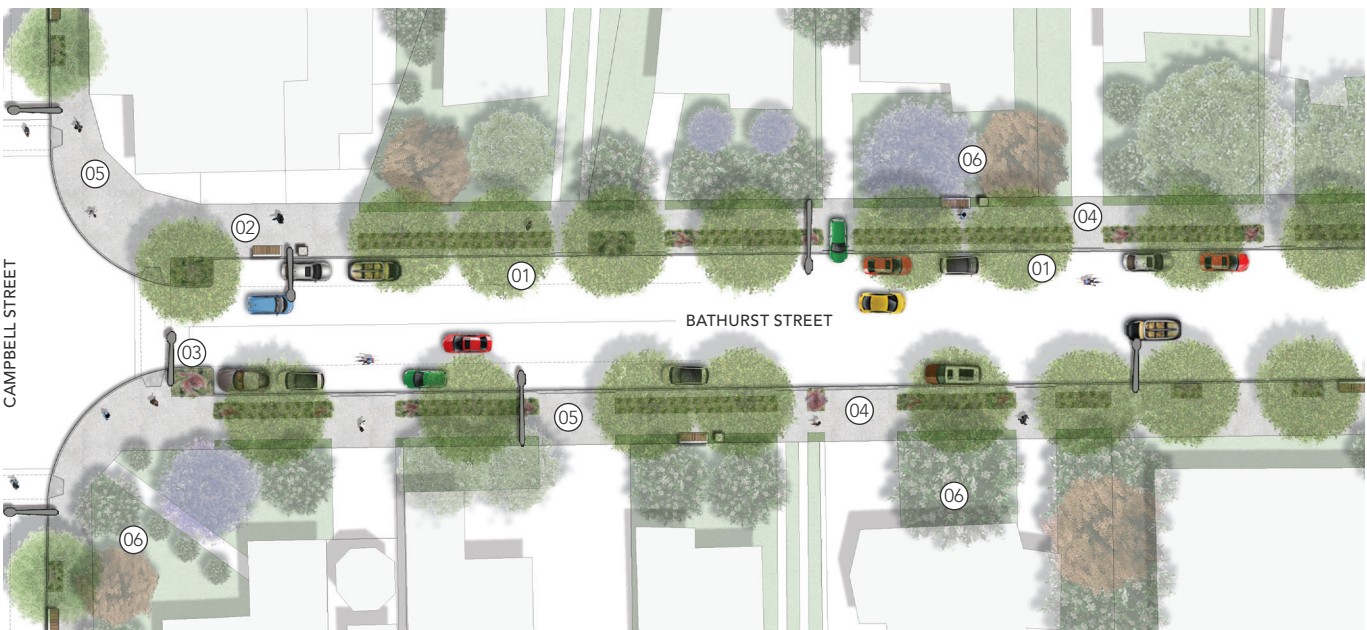
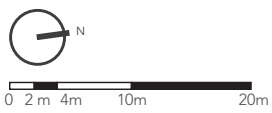


Figure 6.191 Proposed Typical Periphery Street Treatment Type B - Bathurst Street (North) (Liverpool City Council)

Master Plan

6.5 Streets - Typical Street Intersection Treatment

Typical Street Intersection Treatment (e.g. Lachlan/Drummond St)

Drummond Street is one of the peripheral residential streets within the city centre, and has been detailed to show a typical junction detail which can be applied to the majority of peripheral residential streets in the city centre.

The proposed typical junction treatment interventions include:

- 01 Introduction of kerb build-outs with tree plantings integrated within parking, as per the Street Tree Master Plan (See Chapter 6.13);
- 02 Reorganise street intersections to allow for safer pedestrian crossings;
- 03 Incorporate rain gardens and low height planting to reduce the quantity of hard surfaces (See Chapter 6.13);
- 04 Install new periphery paving as per the Paving Typology Plan (See Chapter 6.14);
- 05 Continuous edge planting (See Chapter 6.13);
- 06 Negotiate with property owners to plant new trees along the lot boundary, to provide shade to pedestrians along the public footpath, and
- 07 Install new furniture, fittings and fixtures (See Chapter 6.15) and future Public Domain Technical Manual.



N
Location Plan

Legend

	Building Footprint
	Private Lot / Property
	Periphery Paving - Concrete
	<i>Triadica sebifera</i> (Chinese Tallow)
	<i>Eucalypts</i> (Various)
	Mass Planting
	Multi-function Poles
	Seat / Bench
	Rubbish Bin



0 2m 4m 10m 20m

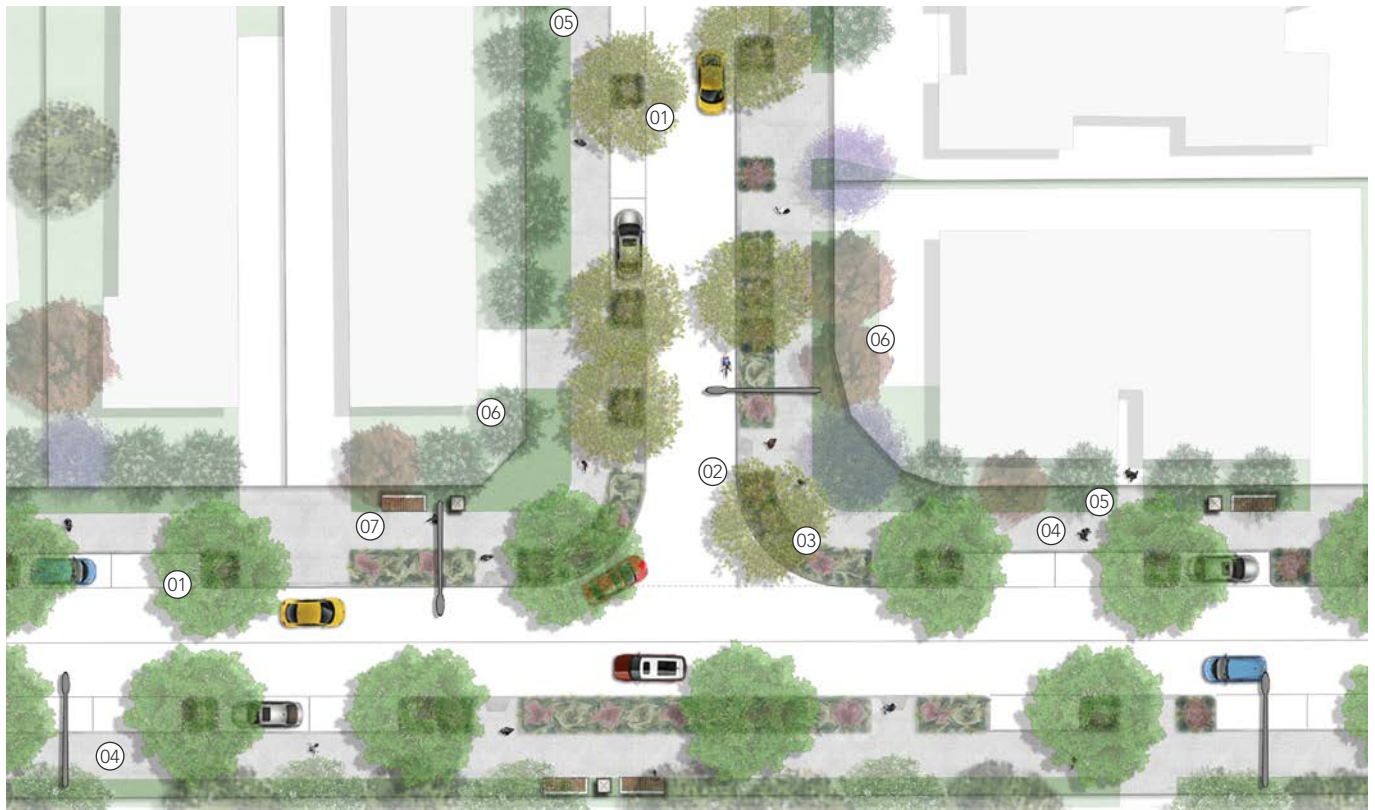


Figure 6.192 Proposed Typical Junction Treatment - Drummond Street (Liverpool City Council)

6.5

Master Plan Streets - Typical Street Intersection Treatment



Figure 6.193 Junction of Drummond Street & Lachlan Street - Before (Liverpool City Council)



Figure 6.194 Junction of Drummond Street & Lachlan Street - After (Liverpool City Council)

6.5

Master Plan

Streets - Other Street Projects

Liverpool Health Precinct Streetscape Upgrades

The Liverpool Health Precinct comprises of Liverpool Hospital, Ingham Institute, Sydney Southwest Private Hospital and other smaller medical facilities, and the public domain within the precinct (such as Goulburn Street, Forbes Street and part of Campbell Street). Council is currently working with Liverpool Hospital and other organisations within the precinct to ensure that proposed future works in the public domain is in alignment with the overall Master Plan vision for the city centre. This includes street trees, new paving and kerbs, intersection improvements & other pedestrian priority infrastructure, and restorative & sensory plantings within the precinct, as per the Master Plan.

Railway Street Upgrade

Railway street connects George Street with Bigge Street and is an important pedestrian link for people using public transport to commute to the city centre, including from Liverpool Railway Station. Council is currently collaborating with an urban design & landscape architecture consultant to prepare a traffic calming and urban design study to explore potential options to reconfigure Railway Street for improved outcomes, including for pedestrians moving between the Railway Station and city core. The study aims to improve the overall arrival experience to the city centre including through interventions to reduce vehicular traffic speed, and prioritise pedestrians through increased/improved public domain.

College Street Upgrade

Council is currently preparing designs for a reconfiguration of parking along College Street for improved overall street outcomes. There is potential for further upgrades to the street, in particular the street verges which are highly utilised by students as a link between Liverpool Railway Station and the TAFE and schools in the northern part of the city centre. It is also a popular route for people travelling between the railway station and Liverpool Healthcare Precinct.

The following interventions are recommended:

- Streetscape upgrade including street trees, new paving and other treatments as per the Master Plan;
- Introduction of a youth space within the parcel of land at the junction of Bigge Street and College Street (See Figure 6.227);
- Creating a stronger connection between the Liverpool TAFE site and Bigge Park. (See Figure 6.229), and
- Investigate the potential for temporary pop-up style or permanent cafe.

Policies and Strategies

The following policies and strategies is proposed to achieve improved street outcomes:

- Liverpool City Centre Public Lighting Strategy;
- Liverpool City Centre Awnings Policy, and
- Review and/or update of the existing Liverpool City Centre Outdoor Dining Policy.

Pirie Street - Increased Public Domain

Pirie Street connects Macquarie Street with Terminus Street, and NSW Roads and Maritime Services (RMS) is exploring the feasibility of extending Bathurst Street to connect with Terminus Street, which would eventually reduce traffic volumes on Pirie Street. This would result in an opportunity to reclaim part of the road carriageway to increase the amount of public domain, to form a small pocket park or plaza with places for people to site, rest, relax and socialise. (See page 226).

Other Streetscape Upgrades

There are several other locations within the city centre where there is potential for the public domain to be better utilised, and provide increased amenity and facilities for the community. The 3D Render on the following page shows an example of a wide sidewalk located on Bathurst Street (south), that could be upgraded to include active frontages (i.e. through future development), outdoor dining, seating, new paving, trees and buffer vegetation between the sidewalk and road (See Figure 6.197). As future development occurs these public domain upgrades can be considered as part of the Development Application process, whereby Council can work with private developers to achieve an improved street outcome.

Hume Highway - Landscape Upgrade

The Hume Highway and Copeland Street are major arterial roads that border the city centre. Whilst there is some groupings of Eucalyptus trees located along sections of the road, there is an opportunity to significantly increase the amount of trees within the public and private domain. It is recommended that Council works with Transport for NSW (TfNSW)/Roads & Maritime Services (RMS) to include more trees in the public domain, and works with private property owners to include trees within private yards, located along the road frontage. The aim is to achieve a feathered green edge to the city centre and along the Brickmakers Creek open space corridor, that evokes the Western Sydney Parkland character and contributes to an overall increase in tree canopy cover.



Figure 6.195 Hume Highway Street Trees (Liverpool City Council)

6.5

Master Plan
Streets - Other Street Projects



Figure 6.196 Pedestrian realm Utilisation - Before (Liverpool City Council)



Figure 6.197 Pedestrian realm Utilisation - After (Liverpool City Council)

6.6

MASTER PLAN SERVICEWAYS/LANEWAYS

Overview and Key Themes & Interventions

Overview

There is approximately 14 serviceways/laneways within the city centre, with the majority of them located within the city core area. These laneways are an integral part of the overall road network within the city centre and provide essential back of house functions for retail and commercial premises, including access for service and delivery vehicles. Overall, the majority of these serviceways/laneways are designed for vehicles and are currently underutilised by pedestrians, despite the fact that they provide mid-block pedestrian access, through arcades that connect with adjoining streets.

These serviceways/laneways form part of the "Town Plan of Liverpool" street layout (i.e. which features a north-south and east-west grid and the network of laneways and arcades dissecting the centre). This is the same street layout of the Melbourne City Centre, and the laneways within Melbourne demonstrate the potential that laneways could provide in terms of activation, functionality and useability. Council currently hosts a number of temporary laneway activation events within Liverpool City Centre laneways. These events are popular with the community and demonstrate the potential to activate Liverpool's laneways with both temporary and permanent interventions.

Key Themes & Interventions

The diagram on the following page shows the proposed key themes & interventions for serviceways/laneways within the city centre, that work in alignment with the overall Master Plan vision for the city centre and implement ideas from Council's laneway activation events & best industry practice.

The key themes and interventions for serviceway/laneways within the city centre are as follows:

- Upgrade laneway infrastructure with a laneway-specific palette of hardscape and softscape materials, to develop a distinctive laneway character and encourage pedestrian usage. This includes a unique paving style, laneway-specific catenary lighting, trees & vegetation, and furniture, fixtures & fittings (See page 204-205);
- Work with private property owners to encourage dual-facing retail, commercial & dining premises. This includes retrofitting existing buildings to be physically and visually permeable at both the street front and laneway, and
- Continue to implement laneway activation events, and consider including ideas such as weekly/monthly markets, pop-up bars, art installations, food & music festivals, night-time cinemas and other cultural events.

The following pages of this chapter articulates how these key themes & interventions can be achieved, through an example concept design for Norfolk Serviceway, in the city centre. As projects progress to concept and detailed design phases, approvals may be required the Liverpool Traffic Committee.

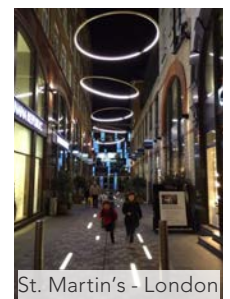
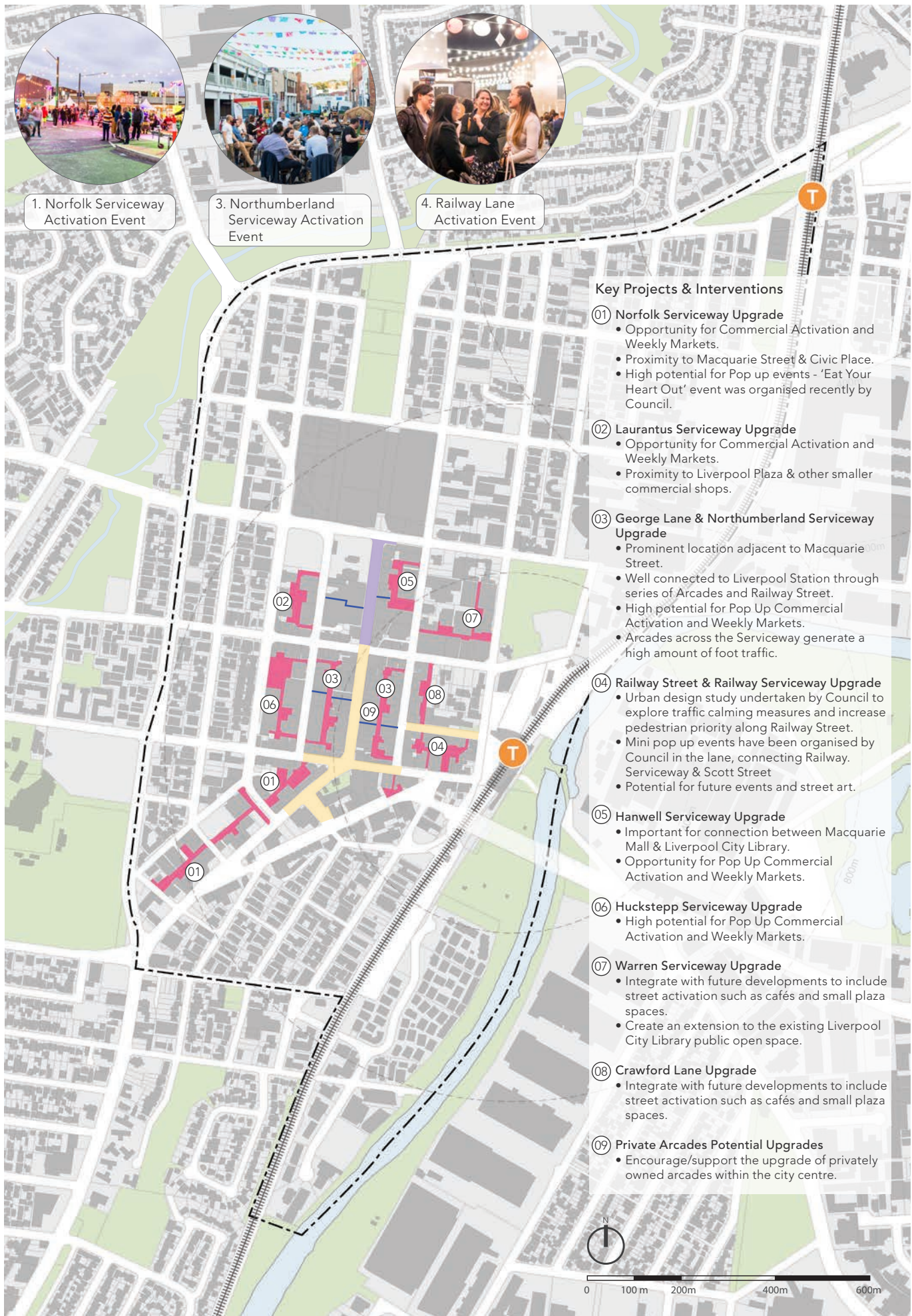


Figure 6.198 Precedent Images of Serviceways/Laneways Activation

Legend

	Railway Station
	Railway Line
	Liverpool City Centre - Project Site Boundary
	Serviceway/Laneway Upgrades and Activation Areas
	Pedestrianised Street (Macquarie Mall)
	Proposed Pedestrian Priority Zone (Macquarie Street)
	Existing Privately Owned Arcades



1. Norfolk Servicerow Activation Event

2. Northumberland Servicerow Activation Event

3. Railway Lane Activation Event

Key Projects & Interventions

- 01 **Norfolk Servicerow Upgrade**

 - Opportunity for Commercial Activation and Weekly Markets.
 - Proximity to Macquarie Street & Civic Place.
 - High potential for Pop up events - 'Eat Your Heart Out' event was organised recently by Council.
- 02 **Laurantus Servicerow Upgrade**

 - Opportunity for Commercial Activation and Weekly Markets.
 - Proximity to Liverpool Plaza & other smaller commercial shops.
- 03 **George Lane & Northumberland Servicerow Upgrade**

 - Prominent location adjacent to Macquarie Street.
 - Well connected to Liverpool Station through series of Arcades and Railway Street.
 - High potential for Pop Up Commercial Activation and Weekly Markets.
 - Arcades across the Servicerow generate a high amount of foot traffic.
- 04 **Railway Street & Railway Servicerow Upgrade**

 - Urban design study undertaken by Council to explore traffic calming measures and increase pedestrian priority along Railway Street.
 - Mini pop up events have been organised by Council in the lane, connecting Railway Servicerow & Scott Street
 - Potential for future events and street art.
- 05 **Hanwell Servicerow Upgrade**

 - Important for connection between Macquarie Mall & Liverpool City Library.
 - Opportunity for Pop Up Commercial Activation and Weekly Markets.
- 06 **Huckstepp Servicerow Upgrade**

 - High potential for Pop Up Commercial Activation and Weekly Markets.
- 07 **Warren Servicerow Upgrade**

 - Integrate with future developments to include street activation such as cafés and small plaza spaces.
 - Create an extension to the existing Liverpool City Library public open space.
- 08 **Crawford Lane Upgrade**

 - Integrate with future developments to include street activation such as cafés and small plaza spaces.
- 09 **Private Arcades Potential Upgrades**

 - Encourage/support the upgrade of privately owned arcades within the city centre.

Figure 6.199 Liverpool City Centre - Servicerow/Laneway Upgrade and Activation Typology Plan (Liverpool City Council)

6.6

Master Plan

Serviceways/Laneways - Norfolk Serviceway

Serviceway/Laneway Upgrade (Norfolk Serviceway)

Norfolk Serviceway is one of the prominent laneways within Liverpool city centre and extends south from Memorial Avenue through to Short Street. Situated between two significant streets, it runs parallel to both Macquarie Street and Norfolk Street. The Master Plan identifies Norfolk Serviceway as an ideal area for laneway activation/events, which could also be used as an extension of outdoor dining along Macquarie Street (south). Council recently hosted an 'Eat Your Heart Out' event within Norfolk Serviceway as a pilot project for laneway activation.

The proposed interventions for the upgrade/activation of Norfolk Serviceway include:

- 01 Liaise with private property owners to allow the parking lots to be converted into temporary event spaces that cater to outdoor dining and mobile food stations/food trucks;
- 02 Liaise with private property owners to open up a second shop front towards the laneway for special events and activities (i.e. dual-facing);
- 03 Install new laneway paving as per the Paving Typology Plan (see Chapter. 6.14);
- 04 Introduce pedestrian priority crossings at serviceway entrances. Refer to Liverpool City Centre Paving Typology Plan for driveway paving (See Chapter 6.14);
- 05 Design the laneway to accommodate service vehicle access;
- 06 Install new street furniture as per the laneway furniture palette (See Page 204), and future Public Domain Technical Manual;
- 07 Install tree plantings between car parking bays to improve laneway/serviceway character and achieve organised on-street parking;
- 08 Liaise with private property owners to include tree planting within their parking lots to increase shade and improve the environment;
- 09 Install new light fixtures and multi-function poles, that include three-phase power supply available for events and other activities (See Page 204);
- 10 Install catenary lighting along the laneway to establish a pedestrian priority area and uplift the overall character of the laneway during night time and support activation, and
- 11 Incorporate outdoor seating and dining to support events and activation of serviceways/laneways.

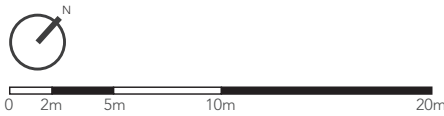


Figure 6.200 Liverpool City Centre - Norfolk Serviceway Upgrade/Activation (Liverpool City Council)

6.6

Master Plan
Serviceways/Laneways - Norfolk Serviceway



N
Location Plan

Legend

	Building Footprint
	Serviceway/Laneway Paving
	Mass Planting
	<i>Lophostemon confertus</i> (Brush Box)
	Catenary Lighting
	Outdoor Dining Umbrella
	Outdoor Dining Table & Chairs
	Outdoor Dining Table & Chairs

Figure 6.201 Norfolk Serviceway Activation Event (Liverpool City Council)



6.6

Master Plan

Serviceways/Laneways - Norfolk Serviceway

Materials Palette

A specific palette of hardscape and softscape materials is proposed for serviceways and laneways in the city centre, to develop a distinctive laneway character and encourage pedestrian usage. This includes a unique paving style, laneway-specific catenary lighting, trees and vegetation, and furniture, fixtures & fittings. The paving style comprises of small format pavers that are of a similar material, colour and texture to the core paving typology, laid in a herringbone pattern (See Chapter 6.14). A specific laneway palette of seating, lighting and other hardscape elements will help unite the laneway network. Trees and vegetation species have been selected for their suitability to the laneway environment. This includes the scale and micro-climate of laneways. Public Art should be incorporated into laneways (See Chapter 6.12).



N
Location Plan

Trees & Vegetation



Paving



Furniture, Fixtures & Fittings

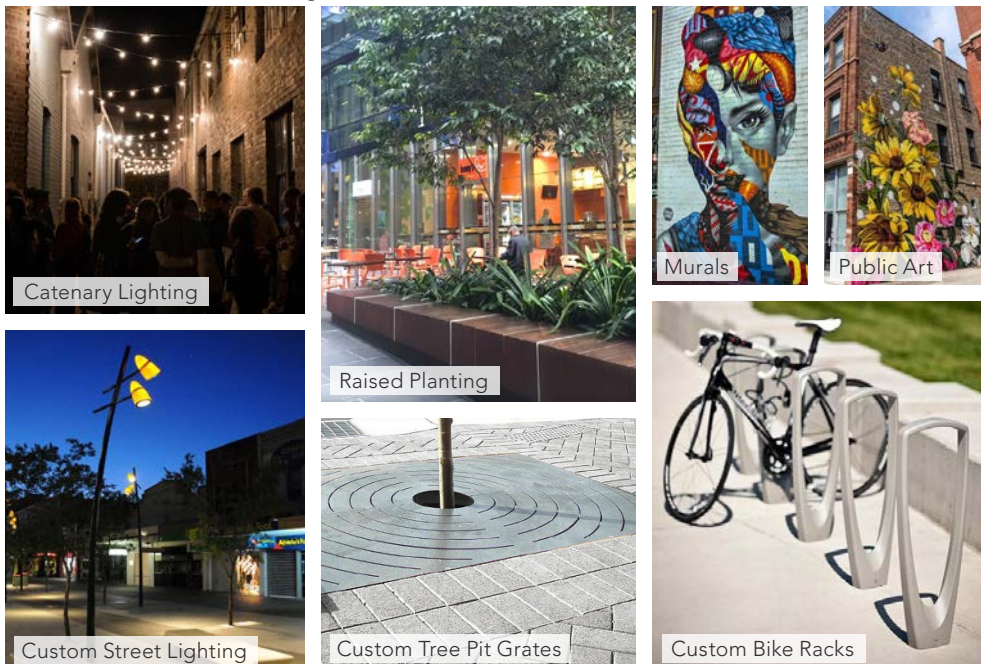


Figure 6.202 Liverpool City Centre - Serviceway/Laneway - Materials Palette (Liverpool City Council)

6.6

Master Plan
Serviceways/Laneways - Norfolk Serviceway



Figure 6.203 Norfolk Serviceway Upgrade - Before (Liverpool City Council)



Figure 6.204 Norfolk Serviceway Upgrade - After (Liverpool City Council)

6.7

MASTER PLAN

GATEWAYS

Overview and Key Themes & Interventions

Overview

Urban gateways are entrances that signify a transition between different spaces, and in the context of the Master Plan this includes key entrance points into the city centre. The majority of these entrances are at junctions between city centre streets and arterial roads, including the Hume Highway and Copeland Street. These streets have heavy traffic volumes and accommodate high pedestrian use. The Master Plan proposes several gateway improvements into the city centre, as described below.

Berryman Reserve

Berryman Reserve forms part of the most northern gateway into the city centre, along the Remembrance Driveway (Hume Highway). Proposed improvements include street trees, improved lawn areas and planting.

Bigge Street

The Bigge Street (north) gateway is located at the intersection of the Hume Highway and Bigge Street, as a secondary northern gateway into the city centre. Proposed improvements include street trees and public art elements.

Elizabeth Street, Moore Street and Memorial Avenue

These gateways are located at the intersections of east-west streets & the Hume Highway. These are key motorist, pedestrian and cyclist entrances to the city centre and are entry points for people moving between the city centre and the future Woodward Place, Brickmakers creek corridor, residential neighbourhoods, and for people travelling via the future trackless trams. Proposed treatments include trees, feature walls, public art and distinctive vegetation.

Liverpool Railway Station

The Liverpool Railway Station gateway includes Liverpool Railway Station & the potential future public plaza at the station site, as a gateway for commuters travelling to the city centre by train. This includes people that will transit between trains and buses, or the future trackless tram to/from other parts of the LGA or the future Western Sydney (Nancy-Bird Walton) International Airport. (See Page 217 for proposed treatments).

Macquarie Street

The Master Plan proposes Macquarie Street to be strengthened as the city's main north-south spine (see page 154). As part of the spine, it is proposed that the Macquarie Street & Hume Highway intersection is the northern gateway, and the Macquarie Street and Copeland Street intersection is the southern gateway to the spine. Improvements include large trees and intersection landscape treatments.

Newbridge Road

The Newbridge Road gateway includes the Newbridge Road bridge & parcels of land located between Scott Street, Terminus Street & New Bridge Road, as the eastern gateway to the city centre. Proposed improvements include custom lighting and public art on the bridge and trees & landscape treatments within the parcels of land.

Key Themes & Interventions

The diagram on the following page shows the proposed gateways to the city centre and articulates the key themes and interventions for each gateway, that are in alignment with the overall Master Plan vision for the city centre. Some of the proposed gateway sites include both Council-owned and NSW Roads and Maritime Services-owned land. Therefore, upgrading of the forecourt would require further discussion and collaboration with NSW Roads and Maritime Services, to develop a plan for these sites.

Overall, the proposed gateway interventions aim to achieve the following:

- Define the transition between the city centre and surrounding environment by providing a physical threshold. This includes through distinctive tree plantings (e.g. *Ficus hillii*) and other treatments to define entry points to the city centre;
- Function as a way finding mechanism, helping motorists, pedestrians and cyclists understand when they are entering the city centre. This includes through treatments that are legible and visible to people travelling through gateways using various modes of transport, such as well-designed signage;
- Create a sense of arrival into the city centre, including through incorporating elements that are reflective of the scale and improved quality of the public domain;
- Reflect the Western Sydney Parkland character, including through the selection of appropriate vegetation species and materials for walls, seating, signage and other elements located at gateways;
- Reflect the existing character of the city centre, including through treatments that enhance the identity of the city centre and highlight existing natural and built features;
- Help motorists become aware that they are entering a slow-speed environment, through treatments to the road carriageway and footpath, such as changes in pavement colour and/or material;
- Incorporate gateway buildings showcasing unique, contemporary architecture. This includes framing views of existing gateway buildings through landscape treatments, and through seeking design input for new gateway buildings, as part of the Development Application process, and
- Incorporate high quality public domain streetscape infrastructure such as banners, uplighting, public art features and other elements, at entry points to the city centre.

The 3D render images on the following pages show the proposed gateway treatments for the Bigge Street (North) and Elizabeth Street (West) gateways, as examples of how the proposed interventions may be designed for these two locations (See Figure. 6.207 and Figure. 6.209).



Key Projects & Interventions

1. Berryman Reserve Gateway treatment
2. Bigge Street (North) Gateway treatment
3. Elizabeth Street (West) Gateway treatment
4. Moore Street Gateway treatment
5. Memorial Avenue Gateway treatment
6. Liverpool Railway Station Entry treatment
7. Macquarie Street (North) Gateway treatment
8. Macquarie Street (South) Gateway treatment
9. New Bridge Road Gateway treatment

Legend

	Railway Station
	Railway Line
	Project Site Boundary
	Primary Gateway Treatment
	Secondary Gateway Treatment

Figure 6.205 Liverpool City Centre - Gateway Typology Plan (Liverpool City Council)

6.7

Master Plan
Gateways - Bigge Street (North) Gateway



Figure 6.206 Bigge Street (North) Gateway - Before (Liverpool City Council)



Figure 6.207 Bigge Street (North) Gateway - After (Liverpool City Council)

6.7

Master Plan
Gateways - Elizabeth Street (West) Gateway



Figure 6.208 Elizabeth Street (West) Gateway - Before (Liverpool City Council)



Figure 6.209 Elizabeth Street (West) Gateway - After (Liverpool City Council)

6.8

MASTER PLAN CAR PARKING

Overview and Key Themes & Interventions

Overview

Car parking in the city centre is a complex matter that requires a multi-disciplinary approach and staged solutions to achieve best outcomes. The strategies in this Master Plan build on works completed by Council to ensure that car parking is supporting the community, businesses and the economy.

Council has recently prepared a draft parking strategy for the city centre that seeks to balance the needs for parking with other demands for the public domain in the city centre. It recognises that a business as usual approach to parking (to satisfy parking demand) will have adverse impact on the achievement of the other broader city centre objectives. This includes achieving a liveable, vibrant, innovative, accessible and green city centre which prioritises non-motorised modes of travel over private car travel. The draft strategy also seeks to make the city centre a safe environment that encourages walking and cycling.

The Master Plan will assist the implementation of Council's City Centre Parking Strategy, within the overall Master Plan vision for the city centre. The key themes and interventions of the Master Plan relating to car parking in the city centre are as follows:]

- Reduce congestion and the demand for car parking within the city centre, through; supporting the provision of peripheral parking (in close proximity to the city centre), providing safe and direct pedestrian & cycle links from peripheral car parking to the city centre, and improving the public domain to encourage active modes of transport;
- Support initiatives for rationalising parking demand management through a review of parking fees, DCP parking rates and encouraging travel mode-shift;
- Improve parking efficiency to reduce traffic congestion, through rationalising car parking time limits, and supporting the provision of an efficient and effective way-finding scheme including directional and real-time information for car parks;
- Support the use of public transport (e.g. potential future city centre loop shuttle bus & Liverpool Railway Station interchange upgrade and proposed trackless tram), and
- Support a staged delivery approach to the streetscape upgrades with consideration to new car parking projects and overall parking provision in the city centre.

Council also recently undertook a survey to establish a baseline of the Liverpool City Centre parking supply. The survey was carried through an on-site inspection of each street to determine on-street parking numbers, and an assessment of the off-street parking supply, in order to understand the full picture of parking provision within the city centre. This included a review of existing and proposed Council owned car parks, other facilities that have public parking and potential developments that is expected to provide car parking spaces for public use.

Current & Proposed Car Parking Provision

The current total (i.e. on-street & off-street) car parking provision within the city centre is approximately 10,502 parking spaces. As identified in Council's City Centre Parking Strategy there will be an additional 1,617 publicly accessible off-street parking spaces (i.e. factoring in recently constructed, under construction and planned car parks). In addition to this, when factoring in the Master Plan interventions and potential future off-street car parking sites within/around the city centre, there would be an additional 2,022 car parking spaces. The diagram on the following page shows the proposed potential total parking provision in the city centre (See Figure 6.210). The table below provides a summary of the existing and proposed parking numbers.

Existing Car Parking

On-Street	Off-Street	Total
2,602	7,900	10,502

Proposed Car Parking - Scenario 1 *

On-Street	Off-Street	Total
2,602	9,517	12,119

Difference

Nil	(+) 1,617	(+) 1,617
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Proposed Car Parking - Scenario 2 **

On-Street	Off-Street	Total
2,313	10,211	12,524

Difference

(-) 289	(+) 2,311	(+) 2,022
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Scenario 1
15% ↑



+ 1,617
Total additional car parking spaces

Scenario 2
19% ↑



+ 2,022
Total additional car parking spaces

* Based on Liverpool City Centre Car Parking Strategy and other Council endorsed strategies.

** Based on the possible redevelopment of Council-owned sites that will include new car parking and the implementation of the Liverpool City Centre Public Domain Master Plan interventions (i.e. trees integrated with organised on-street car parking).

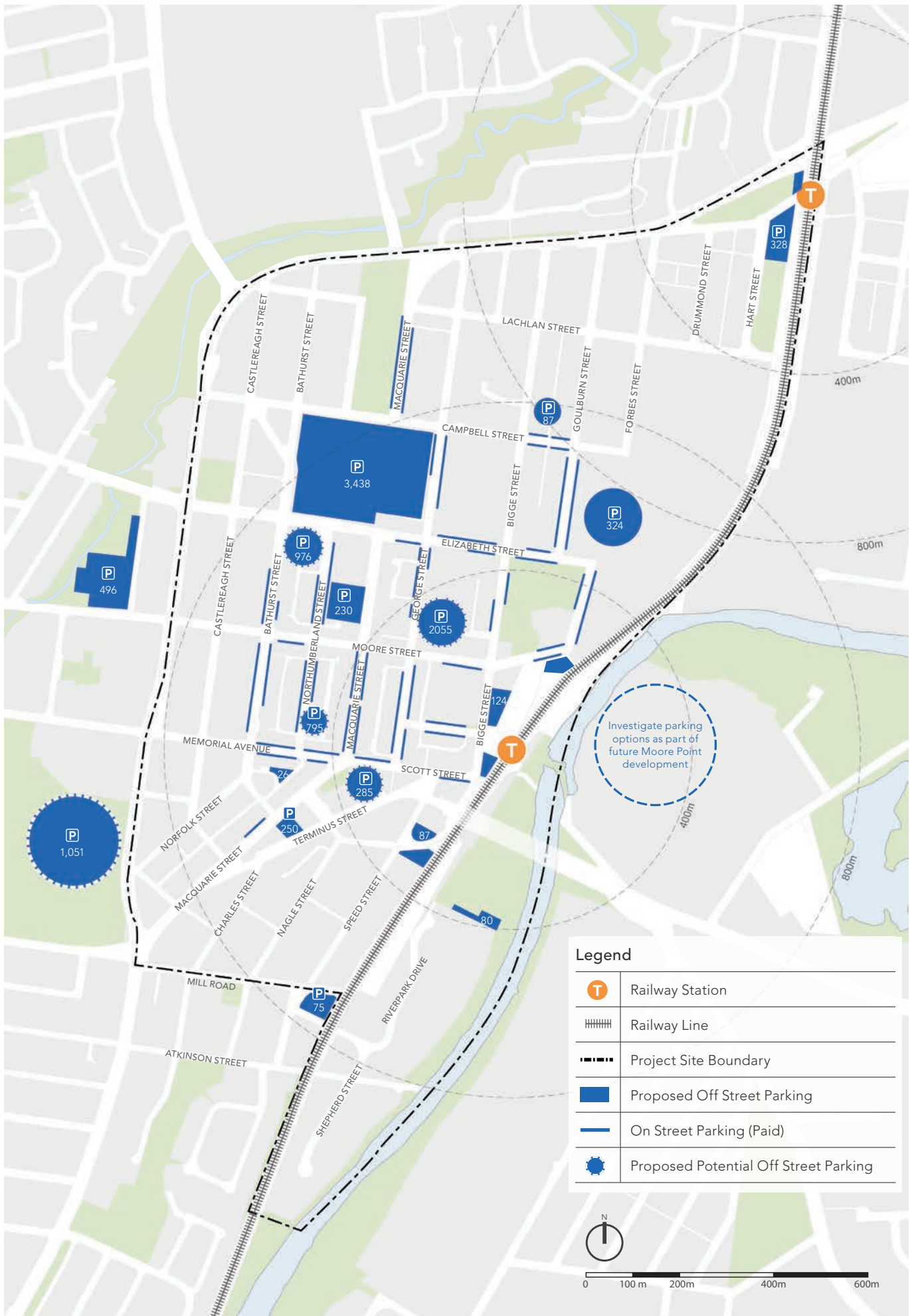


Figure 6.210 Liverpool City Centre - Car Parking Typology Plan (Liverpool City Council)

6.9

MASTER PLAN OPEN SPACE

Overview and Key Themes & Interventions

Overview

Open Space refers to land that has been reserved for the purpose of formal and informal recreation, sport, preservation of natural environments, urban storm water management and/or provision of green space for the community. This includes regional, district, neighbourhood and local scale; parks, reserves and urban plazas. Additionally, streets are a part of the open space network and connect larger areas of open space and in themselves provide opportunities for walking. Streets comprise the majority of open space within the Liverpool City Centre.

The NSW Government has recently increased its focus on open space, including through:

- Appointing a Minister for Public Spaces, in 2019;
- Initiating two Premier’s Priorities for 2019 that are open space focused; 1) Increase the proportion of homes in urban areas within 10 minutes’ walk of quality green, open and public space by 10 per cent by 2023, and 2) Increase the tree canopy and green cover across Greater Sydney by planting one million trees by 2022;
- Establishing the Office of Open Space, within the NSW Department of Planning, Industry and Environment, and
- Supporting the implementation of the Green Grid across NSW, through the Government Architect NSW.

The Master Plan supports the NSW Government’s increased focus on open space, to support the health of the growing community and improve the environment within the city centre. Council recently completed an Open Space Analysis Report for the city centre that evaluates the existing supply of open space in terms of quantity and quality, relative to the current and future population. The report reveals a deficit of parks & reserves to serve the current and future population, and identifies opportunities to improve the open space network within the city centre. This section of the Master Plan aims to acknowledge open space projects that are currently being delivered by Council, build on the opportunities identified within the Open Space Analysis Report, and identify additional open space opportunities, including new parks, plazas and other open spaces.

Legend

	Railway Station
	Railway Line
	Liverpool City Centre - Project Site Boundary
	Brickmakers Creek Corridor Upgrade
	Georges River Foreshore Upgrade
	Primary Green Link (Elizabeth Street)
	Pedestrian Connections (Streets & Arcades)
	Macquarie Street Urban Spine
	Active & Public Transport Corridor (Moore Street)

Key Themes & Interventions

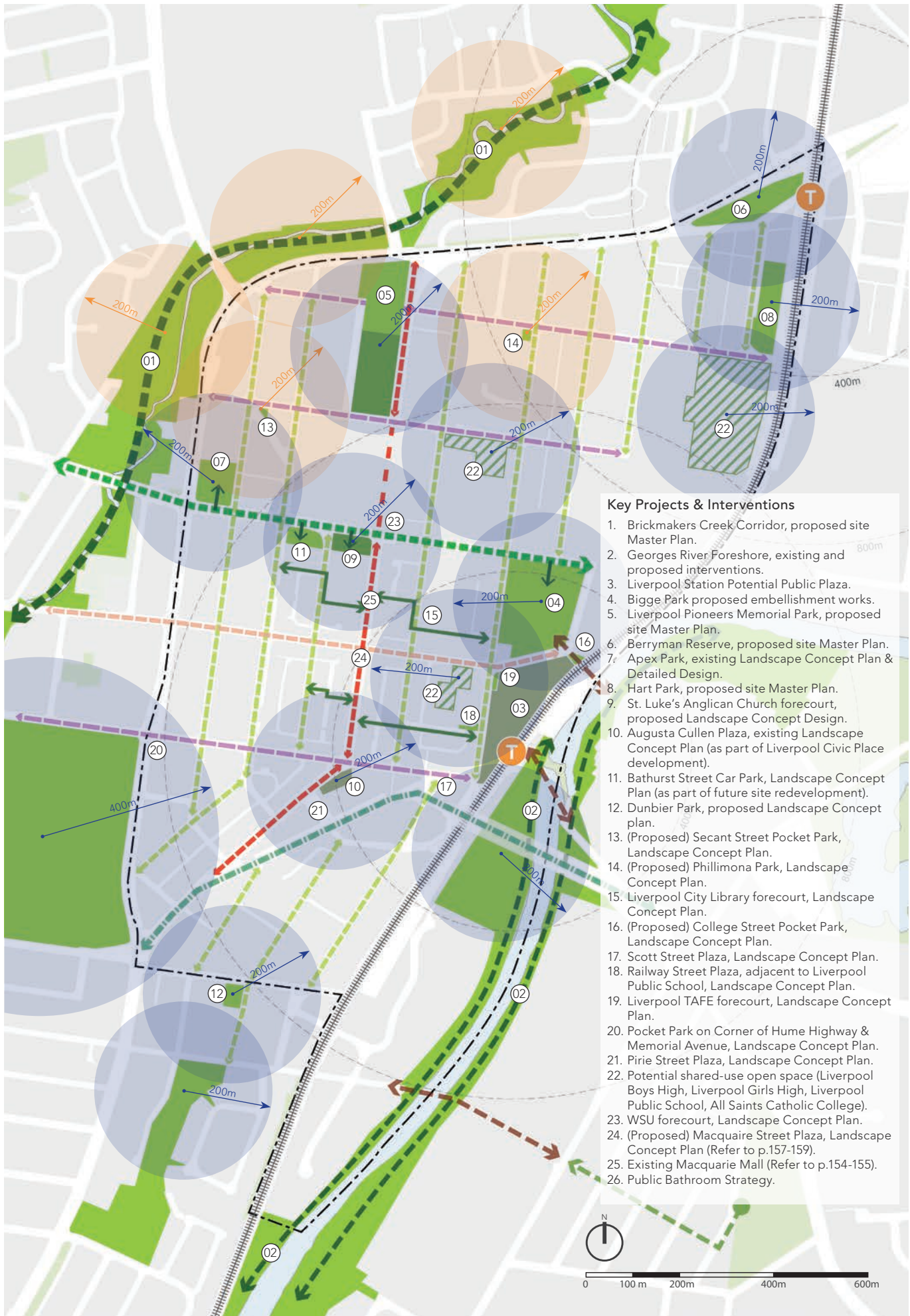
The diagram on the following page shows the proposed open space network within the city centre (See Figure. 6.211). This includes existing and proposed parks & reserves (including population catchments for each park/reserve, as per the Open Space Analysis Report), and proposed open space interventions that are in alignment with the overall Master Plan vision for the city centre, and consistent with the NSW Government and Liverpool City Council’s objectives for open space.

The key themes and interventions for open space within the city centre are as follows:

- Retain existing parks & reserves;
- Streets are considered to be part of the open space network, and are embellished to provide increased amenity and facilities;
- Increased quantity of open space, including through proposed new pocket parks & plazas;
- Increased quality of existing open space, including through embellishment of existing parks & reserves;
- Increased access to open space, including through improved pedestrian and cycleway linkages to/through open spaces, and exploring opportunities for shared-use open spaces with schools in the city centre;
- Increased canopy coverage, including through new street trees and increased trees & vegetation within parks & reserves, and
- Implementing the Green Grid, including through reinforcing an interconnected network of open space within the city centre, and linking with broader local and regional open spaces.

The following pages of the report articulates how these key themes and interventions will be achieved. This includes an acknowledgement of existing projects that are currently being developed or delivered by Council, and proposals for new and existing open spaces within the city centre.

	Active Transport Links across the Georges River
	Streetscape Upgrade (North-South Streets)
	Streetscape Upgrade (East-West Streets)
	Streetscape Upgrade (Terminus Street)
	Green Open Space
	Green Open Spaces (Restricted Use)
	Public Plaza (Liverpool Station Forecourt)
	Potential Shared-Use Open Space
	Open Space Catchments (Existing/New Open Space)



- Key Projects & Interventions**
1. Brickmakers Creek Corridor, proposed site Master Plan.
 2. Georges River Foreshore, existing and proposed interventions.
 3. Liverpool Station Potential Public Plaza.
 4. Bigge Park proposed embellishment works.
 5. Liverpool Pioneers Memorial Park, proposed site Master Plan.
 6. Berryman Reserve, proposed site Master Plan.
 7. Apex Park, existing Landscape Concept Plan & Detailed Design.
 8. Hart Park, proposed site Master Plan.
 9. St. Luke's Anglican Church forecourt, proposed Landscape Concept Design.
 10. Augusta Cullen Plaza, existing Landscape Concept Plan (as part of Liverpool Civic Place development).
 11. Bathurst Street Car Park, Landscape Concept Plan (as part of future site redevelopment).
 12. Dunbier Park, proposed Landscape Concept plan.
 13. (Proposed) Secant Street Pocket Park, Landscape Concept Plan.
 14. (Proposed) Phillimona Park, Landscape Concept Plan.
 15. Liverpool City Library forecourt, Landscape Concept Plan.
 16. (Proposed) College Street Pocket Park, Landscape Concept Plan.
 17. Scott Street Plaza, Landscape Concept Plan.
 18. Railway Street Plaza, adjacent to Liverpool Public School, Landscape Concept Plan.
 19. Liverpool TAFE forecourt, Landscape Concept Plan.
 20. Pocket Park on Corner of Hume Highway & Memorial Avenue, Landscape Concept Plan.
 21. Pirie Street Plaza, Landscape Concept Plan.
 22. Potential shared-use open space (Liverpool Boys High, Liverpool Girls High, Liverpool Public School, All Saints Catholic College).
 23. WSU forecourt, Landscape Concept Plan.
 24. (Proposed) Macquaire Street Plaza, Landscape Concept Plan (Refer to p.157-159).
 25. Existing Macquarie Mall (Refer to p.154-155).
 26. Public Bathroom Strategy.

Figure 6.211 Liverpool City Centre - Open Space Typology Plan (Liverpool City Council)

Master Plan

6.9 Open Space - Regional

Brickmakers Creek Corridor

The Brickmakers Creek Corridor is a linear open space that comprises several parks & reserves located along Brickmakers Creek. Whilst the corridor is located outside the Liverpool city centre boundary, it includes several sites that are within close proximity to the city centre (i.e. Military Reserve, Wadel Park, Collimore Park & Car Park, Barbara Long Reserve and Woodward Park). These sites have the potential to assist in addressing the deficit of open space within the city centre. It is proposed that a broader Master Plan is developed for the entire Brickmakers Creek corridor that addresses both open space and hydrological considerations. This includes improved connections to the corridor, embellishment of the space to include new recreational infrastructure, increased active transport within the corridor, connections to the broader open space network, and improved water quality outcomes as part of the Blue Grid network (See Chapter 6.10). Considerations for the above-mentioned individual sites is articulated below.

Military Reserve & Wadel Park

Military Reserve and Wadel Park is currently underutilised open spaces, located within close proximity to the north-west residential part of the city centre that is becoming increasingly populated. The spaces currently consist of mostly open turfed overland flow paths and some trees. It is proposed that a Landscape Master Plan is developed for the sites that includes stormwater management & recreational infrastructure, and increased trees & vegetation.

Collimore Park & Car Park

Collimore Park currently includes a large at-grade carpark and various sporting & recreational facilities. Council is investigating the possibility of reconstructing the existing carpark as a multi-storey carpark. It is recommended that a Master Plan for the site is developed that explores the possibility of reducing the carpark footprint and utilising the carpark rooftop, resulting in increased public open space. There is also opportunity to further embellish the creek.

Barbara Long Reserve

Barbara Long Reserve currently consists of an open turfed overland flow path and a few trees. It is proposed that a Landscape Master Plan is developed for the site that includes stormwater management & recreational infrastructure, and increased trees & vegetation.

Woodward Park

Liverpool City Council is currently developing a 25 year Master Plan for Woodward Park (i.e. referred to as 'Woodward Place'), which intends to deliver a world class, activated, mixed-use precinct that maximises community use. Council's aspirations for the site include a mix of sporting & recreational facilities, regional destination facilities and commercial realisation. The Master Plan will also address the portion of Brickmakers Creek that is located within the site, as part of the broader hydrological system.

Georges River Foreshore

The Georges River Corridor is a linear network of open spaces located along the length of the Georges River. Council is currently developing a long-term Master Plan for the Georges River foreshore, which will deliver on Green and Blue Grid opportunities identified by the Government Architect NSW's South West Sydney District Green Grid Plan. The portion of this corridor that is located within the Liverpool City Centre project boundary includes Lighthorse Park and a narrow strip of open space that connects Lighthorse Park with Atkinson Street. Council is also currently developing a design for a boardwalk between Lighthorse Park and Mill Park, which will increase access to and along the river foreshore. As these projects progress into detailed design phases it is recommended that opportunities to increase access are considered, including sufficient and consistent pathway widths and lighting, to encourage pedestrian and cyclist movement.

Lighthorse Park

Council has developed a Master Plan for Lighthorse Park, which has recently been adopted by Council, and will progress into the detailed design phase. The master plan aims to create a park that is accessible, safe & welcoming, a destination for enjoyment & play, a park that reflects its history, and a park that embraces the river. Key moves of the master plan includes a new path network, a new community facility building, new open space & recreational facilities, and interventions that celebrate the sites history. The 3D render images on the following page shows the proposed pylon play space and water play area (See Figure 6.212 and 6.213).

Linear Open Space between Lighthorse Park & Atkinson Street

The linear open space between Lighthorse Park and Atkinson Street forms part of the Georges River foreshore. A new cycleway was recently installed, however, further embellishments can achieve increased riverfront activation, including picnic areas, seating and improved lighting along the riverfront.

Boardwalk between Lighthorse Park & Mill Park

Council is currently developing a design for a boardwalk between Lighthorse Park and Mill Park, which will form part of the missing link along the foreshore. As this project progresses into the detailed design phase, it is important that the width of the boardwalk is sufficient for the volume of traffic that is expected and/or desired, and the materials selected, including the surface material is appropriate for both pedestrians and cyclists.



Figure 6.212 Lighthouse Park Master Plan, Pylon Play Area (Community Planning Team, Liverpool City Council)



Figure 6.213 Lighthouse Park Master Plan, Water Play Area (Community Planning Team, Liverpool City Council)

6.9

Master Plan

Open Space - District

Liverpool Railway Station Plaza

The Liverpool Railway Station is located at the eastern edge of the city centre, along the railway line and is directly opposite Moore Point. Currently, the site is underutilised, and is physically and visually disconnected from the Georges River, and surrounding spaces including Bigge Park and Lighthorse Park. The site is likely to undergo significant change in the future, with the possibility of trackless tram and metro rail to be incorporated into the site. This presents an opportunity for the site to be master planned to achieve an integrated transport hub that accommodates a high quality public space that offers public benefit and better integrates with surrounding spaces, and offers economic & commercial benefits for the community.

The precedent images on the following page exemplify key objectives and precedent examples for the site (See p.217). Key objectives for the site include; achieving a site that functions as a regional transport hub, offers commercial and retail facilities, incorporates a generous multi-use public open space, a site that is well connected to its surroundings and history, which successfully incorporates the heritage items located within the site. The public domain should be the priority in the master plan design, with the aim of achieving a large public plaza for the community and improved physical and visual connections with surrounding sites and the Georges River. The railway station is a destination that already attracts a high number of commuters and therefore is an ideal location for a public space that contributes to the liveliness and vibrancy of the city centre. This includes end of trip facilities, public amenities, retail, dining, leisure, cultural and recreational facilities. The plaza should be flexible and provide opportunities for community events and public art.

Bigge Park

Bigge Park is located within the city centre core, close to Liverpool Railway Station, Liverpool TAFE and Liverpool Hospital. The park is heritage listed and originally extended across Moore Street to the current Liverpool Railway Station site. The park was recently upgraded to incorporate new and upgraded open space facilities, including open turfed areas, a play space, outdoor gym equipment, water play facility, public bathrooms, lighting and garden beds.

Whilst the upgrade works were recently completed, it is proposed that more trees are incorporated on the eastern edge of the park, to provide increased shade. It is also recommended that the potential relocation of the existing tennis courts is investigated, to achieve a stronger physical connection between the proposed Liverpool Railway Station plaza and Bigge Park.

Liverpool Pioneers Memorial Park

Liverpool Pioneers Memorial Park is located at the northern end of the city centre, behind the Westfield Shopping Centre. The park, formerly known as 'St Luke's Cemetery' was the second cemetery established in the town of Liverpool. The first cemetery was opened on Glebe land. In 1973/74 Liverpool City Council converted the cemetery into 'Liverpool Pioneer's Memorial Park' (See Chapter 6.11 Heritage).

It is proposed that a master plan is developed for the park that maximises passive open space opportunities, celebrates the sites significance & history, and is in accordance with the Conservation Management Plan for the site, that was recently adopted by Council. This includes increased landscaping throughout the site (i.e. increased tree coverage, low shrubs and ground covers), upgrading of footpaths, furniture and other landscape elements, and improved lighting throughout the site. Opportunities to include additional open space facilities that are sensitive to the site's history can be explored as part of the master plan.

Berryman Reserve

Berryman Reserve is located at the north-western corner of the city centre, situated between the Warwick Farm Railway Station and the Hume Highway. It is currently comprises of open turfed areas with tall Eucalyptus trees, and an art installation located on the western corner of the site. The reserve forms part of the Remembrance Drive, a memorial route that runs between Sydney and Canberra, commemorating all those who served in the Australian Defence Forces in World War II and subsequent wars or who have served since then in defence of the nation's interests. in operational theatres around the world. A plantation of Eucalyptus species, Turpentines, Pines and Poplars at Warwick Farm Railway Station and Berryman Reserve were planted in 1956.

It is proposed that a master plan is developed for the reserve that incorporates the retention of the existing trees, better integrates the art installation with the park and maximises passive open space opportunities, for the Warwick Farm and northern Liverpool population. This could include new pathways, picnic benches, seating and improved lighting.

6.9

Master Plan

Open Space - District

Liverpool Railway Station Plaza Key Objectives

A transport hub



Chatswood Interchange, by COX Architecture

Commercial and retail offerings



Chatswood Interchange, by COX Architecture

A large, multi-use public plaza



Federation Square, Melbourne, by Bates Smart and LAB Architecture Studio

Improved connections to surroundings & site history



Elizabeth Quay, Perth, by TCL Landscape Architecture and ARM Architecture

Public Plaza Design Precedents



Figure 6.214 Level changes incorporating vegetation. Bank of Canada Head Office in Ottawa, Canada, designed by DTAH.



Figure 6.215 Visualisation of Bank of Canada Head Office in Ottawa Canada, design by DTAH.



Figure 6.216 Concept design for Flinders Street Design competition in Melbourne. A large public space, railway station, retail and eateries precinct. Designed by Eduardo Velasquez + Manuel Pineda + Santiago Medina and visualisations by ASPECT Digital. Winner of the Peoples Choice Award.



Figure 6.217 This public square features an underground carpark for 500 cars. Visualisations of Prahran Square (Former Cato Square) in Melbourne. The site is currently under construction. Designed by Lyons Architecture and Aspect Studios.

Master Plan

6.9 Open Space - Neighbourhood/Local

Apex Park

Apex Park is located on the western edge of the city centre, bound by the Hume Highway to the west and surrounded by residential apartments. The park is heritage listed and was one of Liverpool's former cemeteries. Council has recently developed a Master Plan for the site that considers the site's history, which has been adopted by Council. The 3D render images on the following page shows the proposed layout of the park (See Figure 6.218 and 6.219). The Master Plan includes a new children's play space, turfed kick-around area, picnic facilities and shelters, shade trees, relocated steam roller, upgraded footpaths and street trees, cutting back of the existing perimeter mounds to increase passive surveillance of the park, and a new formalised paved entry space. The plan also incorporates a first settlers memorial space and interpretive gardens, with elements that suggest past uses, signage and traditional memorial plant species, that are also consistent with the 'garden park' envisaged in the 1950 Act and the sites Conservation Management Plan.

Hart Park

Hart Park is located at the north-western corner of the city centre, adjacent to the Warwick Farm Railway Station. The park currently contains some recreational facilities including play equipment, a picnic area with seating & shelters, a half basketball court, and community garden. It is recommended that a master plan be developed for the site that aims to consolidate the existing facilities and maximise use of the site. An expansion of the community garden would encourage sustainable food production and community participation. It is recommended that the existing drainage lines be integrated into landscape features. Given the site's proximity to Warwick Farm Railway Station, there is opportunities to incorporate amenities for commuters (e.g. a small cafe or kiosk), which could also cater to the parents and carers that bring children to the play space during the day.

St. Lukes Anglican Church Forecourt

St. Lukes Anglican Church is located adjacent to Macquarie Mall, opposite Westfield Shopping Centre. The perimeter of the forecourt around the Church is currently fenced, which is making the space feel private and limiting community access to the space. The site is heritage listed and contains large eucalyptus trees, turf and other shrubs. Given its central location, and the identified deficit of open space in the city centre, there is opportunities to improve the space. It is recommended that a concept design be developed (with the site owners) for the site that aims to increase physical and visual connections to the site, and embellish the space whilst respecting the heritage items located on site, including the entry gate. It is recommended that the existing desire lines and pedestrian wear trails be considered in the design of new pathways for the site. The before and after 3D render on page 257 shows the proposed interventions for consideration in the site design.

Augusta Cullen Plaza

Augusta Cullen Plaza is located at the intersection of Macquarie Street and Memorial Avenue. The plaza is part of Council's future Liverpool Civic Place site which will include Council's new Administration building and City Library, a hotel and the existing heritage-listed School of Arts building. This redevelopment will place a greater importance on the plaza as a key civic open space within the city centre, that will be ideally positioned to host important civic events. It is recommended that the master plan that is currently being developed for the Liverpool Civic Place site prioritises Augusta Cullen Plaza and the adjoining public spaces on the site, over the built form elements. The plaza should be easily accessible and well connected to surrounding streets and adjoining buildings, be of sufficient size, flexible and designed to maximise community use.

Bathurst Street Park

The Bathurst Street carpark is located on the corner of Bathurst Street, Elizabeth Street and Northumberland Street, opposite Westfield Shopping Centre, and currently comprises of a large at-grade car park. There are plans for the site to be redeveloped in the future to include a new building, incorporating car parking and a new public open space, that could include an outdoor performance area. It is recommended that a Landscape Concept Plan be prepared for the public open space that maximises community use, is well connected to Bathurst Street and considers the relationship between the site and adjacent St. Lukes Anglican Church and adjoining forecourt. The park should incorporate large trees to provide shade and landscaping to increase greenery along the surrounding street frontages.

Dunbier Park

Dunbier Park is a small park located on the corner of Mill Road and Nagle Street, in the southern part of the city centre. The park currently contains play equipment, a community garden, public art, open turfed areas and large shade trees. Given the increased density in the surrounding areas, including the Shepherd Street precinct, the park now serves a increased local population. It is recommended that a Landscape Concept Plan is developed for the site which includes upgrades to the existing play equipment & furniture, landscaping and an expansion of the community garden, to promote sustainable food production. The large shade trees should be retained and utilised as an opportunity to provide shade over new facilities and paths should be upgraded to provide increased access and circulation within the site.

6.9

Master Plan
Open Space - Neighbourhood/Local



Figure 6.218 Apex Park Master Plan (Open Space Construction Team, Liverpool City Council)



Figure 6.219 Apex Park Master Plan (Open Space Construction Team, Liverpool City Council)

Master Plan

Open Space - Plazas & Pocket Parks

Secant Street Pocket Park (Proposed)

Secant street is located in the northern part of the Liverpool City Centre, between Bathurst Street and Castlereagh Street. There is a small sized car park with six parking spaces located at the intersection of Secant Street, Castlereagh Street and Campbell Street. Given the identified deficit of open space, including in the northern part of the city centre which is increasing in population, there is an opportunity for this site to help address this deficit and provide facilities for the community. The site is in a quiet location, surrounded by medium-density residential apartments which include many families with children that would benefit from increased amenity and facilities that are within walking distance. Located on the corner of three streets, the site is highly visible and has a high level of passive surveillance. Situated on a street corner, along a popular walking route, the site also offers opportunities for random encounters and enhanced street life for the community, in the northern part of the city centre. It is proposed that a Landscape Concept Plan is prepared for the site, aimed at converting the site into a pocket park, with a children's play space at the existing car park location and a passive recreation area on the existing parcel of land on the eastern edge of the site. The 3D render on the following page shows the proposed ideas to guide the development of the Landscape Concept Plan (See Figure 6.221).

Proposed ideas for the site include a children's play space with both play equipment and nature play elements, circulation paths, picnic settings, seating, trees and planting. The proposed play equipment includes items that are popular and often requested by the community, such as swings, a climbing frame, a play unit with slide and spinner. Nature play elements include activities that gets children active or thinking actively, with the end goal of building skills and ability to play without the need for parental or adult control. The play space includes colourful trees for visual interest and to provide shade, and the space is fenced for safety, given its proximity to the surrounding streets and moving traffic. A discreet fence composed of tall grass plantings and playfully assembled timber railings is to make the site welcoming and reduce visibility of the fence, whilst providing safety for children. Existing footpaths located along the Campbell Street & Castlereagh Street boundaries, and between Secant Street and Campbell Street are to be retained and incorporated into the design. The existing green space located along the eastern edge of the site is to be retained and remain as a passive recreation area and buffer between the play space and nearby residential apartments. The existing mature trees are to be retained and picnic settings included underneath the trees, to enable users a place to rest, eat and supervise children that are using the play space.

Phillimona Park (Proposed)

The proposed Phillimona Park is the site of a former heritage item, (now predominantly demolished), and the site was recently acquired by Council. The subject site previously included a heritage listed Californian bungalow which was demolished due to structural issues. The site is located within a growing high density community and is therefore an opportunity to create a high quality passive urban park.

Council is currently developing plans to redevelop the site into a new pocket park for the community. The remaining foundations of the heritage item on site, are to be retained and integrated into the future design, as are the remaining bricks which have been salvaged and are currently stored on site.

Objectives of the design are as follows:

- Transform the space into an urban passive park which is inspired by the remaining elements of the former heritage structure and incorporates a contemporary approach to urban design and landscaping;
- Preservation of heritage items on site and interpretation of former heritage elements;
- Develop a concept design that responds to the community consultation process and provides for diverse passive recreational opportunities and needs;
- Provide an attractive park setting and amenities to enable visitors to enjoy the outdoors and engage in passive recreational activities;
- Design park infrastructure according to best practice design principles and Australian Standards;
- Design the site to maximise safety and security;
- Complement the character intent of the concept scheme through careful design of infrastructure, signage and structural elements;
- Test concepts and elements identified as part of this Master Plan;
- Draw attention to and promote the heritage of the city centre;
- Encourage visitation by improving access, and
- Ensure a diversity of community groups and individuals are able to access and utilise the park.

Requirements of the design include:

- Access and Safety, including signage to support the identification and use of the park, adequate passive surveillance, and incorporates CPTED principles;
- Amenities and Facilities, including suitable lighting which limits the impact on adjacent residential units, innovative spaces for passive recreation, and heritage interpretation that supports the understanding of the site as well as the history of the city centre, and
- Landscaping, including native and exotic species that supports solar access; and is suitable for the site conditions, plant selection that encourages privacy and management of noise from surrounding high density development and Bigge Street, and incorporates the remaining bricks and foundations into the park as design features, paving and/or park furniture.

6.9

Master Plan

Open Space - Plazas & Pocket Parks



Figure 6.220 (Proposed) Secant Street Pocket Park - Before (Liverpool City Council)



Figure 6.221 (Proposed) Secant Street Pocket Park - After (Liverpool City Council)

6.9

Master Plan

Open Space - Plazas & Pocket Parks

Liverpool City Library Forecourt

Council's Youth Strategy and Youth Survey identifies a need for dedicated youth spaces within the city centre. The Liverpool City Library has been a popular location for youth within the city centre for several years. Council hosts a number of temporary activation events within the city centre, including several events within the Liverpool City Library forecourt for the City's youth. There is currently limited dedicated outdoor youth spaces within the city centre, and given the popularity of the site with the City's youth, it is proposed that the forecourt is upgraded to include facilities for the City's youth. The Liverpool City Library site is subject to potential redevelopment in the future, however there is an opportunity to include temporary and/or semi permanent facilities, and should the site be redeveloped, it is recommended that a youth space be incorporated into the site master plan.

As part of the community consultation undertaken in the development of this master plan, Council undertook specific workshops with local schools located within the city centre and also hosted a high school work experience student to assist in generating ideas for youth spaces within the city centre, including at the Library forecourt. Data was also collected from surveys completed by youths that attended the temporary activation events held in the space. This provided the information and ideas that were developed by youth that currently use the city centre and the Library, and assisted in understanding what facilities they would like to see in the space. Overall, the Liverpool City Library forecourt was identified as a prime location for creating a dedicated youth space, and youths that provided feedback during the community consultation period expressed their interest for a space of their own to socialise, eat, play and relax, particularly after school hours.

The community consultation undertaken for this project, surveys completed relating to the temporary activation events and ideas generated by local students guided the development of a vision for the space, as depicted in the 3D render on the following page (See Figure 6.224). It is recommended that a Landscape Concept Plan is prepared for the space, that explores numerous temporary and semi-permanent options.

Key considerations for the Landscape Concept Plan, based on community feedback are as follows:

- Catering both for passive and active uses;
- Providing day-time and night-time activation;
- Creating a stylish, creative, gritty and colourful space, with fun activities;
- Providing adequate lighting & shade;
- Providing outdoor Wi-Fi and mobile phone/tablet/laptop power charging stations;
- Offering a variety of furniture types and arrangements that enable lounging, sitting and group gatherings;
- Provide areas for active sport such as basketball, table tennis and air hockey;
- Affordable food & beverage outlets with access to a public bathroom should be provided within walking distance of the space;
- Providing greenery, and
- Incorporating quieter areas for reading and studying outside of school hours.



Figure 6.222 Temporary Activation Events held at the Liverpool City Library Forecourt (Liverpool City Council)

6.9

Master Plan
Open Space - Plazas & Pocket Parks



Figure 6.223 Liverpool City Library Forecourt, Youth Space - Before (Liverpool City Council)



Figure 6.224 Liverpool City Library Forecourt, Youth Space - After (Liverpool City Council)

Master Plan

6.9

Open Space - Plazas & Pocket Parks

College Street Pocket Park (Proposed)

Council currently owns a small parcel of land located on College Street, bordered by the Liverpool TAFE College campus, the Bus Depot at Liverpool Railway Station and the Railway line, situated opposite Bigge Park. The site is currently underutilised, and is predominately being used for storing building materials and is fenced off, restricting public access to the site. However, there is opportunity for the site to be redeveloped as a new pocket park for the community.

Given its location, the new pocket park is well suited to be a dedicated youth space. Through community consultation workshops and feedback, College Street was identified as a popular walking route for students travelling to & from school, walking between the Liverpool Railway Station and both Liverpool Boys High School & Liverpool Girls High School. As well as being located adjacent to the Liverpool TAFE College campus, the site is located within walking distance of the University of Western Sydney and University of Wollongong campus, making it accessible to youths and students within the city centre. Council's Youth Strategy and Youth Survey identifies a need for dedicated youth spaces within the city centre, and whilst the site is located opposite Bigge Park, there are limited facilities and dedicated spaces for youth within the park.

It is recommended that a Landscape Concept Plan be developed for the site, aimed at converted the space into a semi-permanent or permanent dedicated youth space. The space should be designed in such a way that it is flexible and programmable, so it can adapt to the needs of the users. Based on feedback received from youths in the city centre, ideas for the space could include basketball hoops, table tennis tables, a handball court, space for food carts and temporary events, trees & vegetation, lighting, furniture, public art developed by youths. The 3D render on the following page shows how some of these ideas can be incorporated into the site (See Figure 6.227).

There is a possibility that future connections across the Georges River, between the city centre and Moorebank may be established. This site is a possible location for an underground or elevated connection to be made. This should be considered in the development of the Landscape Concept Plan. Establishing this connection will require consultation with the community, and internal & external stakeholders, including with Transport for NSW, Sydney Trains and Water NSW.

Railway Street Plaza, adjacent to Liverpool Public School

There is a small plaza located on the corner of Bigge Street and Railway Street, adjacent to Liverpool Public School. Design options are currently being prepared for Railway Street, to improve pedestrian and vehicular circulation, with this plaza being considered as part of the design. The plaza currently includes large trees, paved areas, garden beds, seating and public art. The current configuration of the space limits site usability, and there is an opportunity to improve the space for the community.

Given that the site is adjacent to Liverpool Public School, there is an opportunity to provide a space for students to gather, including before and after school. The site is also opposite Liverpool Railway Station, which attracts a high number of youths commuting to and from Liverpool City Centre. This space has the potential to be a meeting place with facilities for youth. Council undertook specific workshops with local schools located within the city centre and also hosted a high school work experience student to assist in generating ideas for youth spaces within the city centre, including for this plaza. Ideas for the site included new paving treatments, colourful vegetation, charging stations for phones and other devices, table tennis tables, and a variety of furniture types that enable both individual and group interaction, and allow people to sit, gather, and relax.



Figure 6.225 Activation events within the City Centre (Liverpool City Council)

6.9

Master Plan

Open Space - Plazas & Pocket Parks



Figure 6.226 (Proposed) College Street Pocket Park - Before (Liverpool City Council)



Figure 6.227 (Proposed) College Street Pocket Park - After (Liverpool City Council)

Master Plan

6.9

Open Space - Plazas & Pocket Parks

Liverpool TAFE Forecourt

The Liverpool TAFE forecourt is located outside the Liverpool TAFE College campus, bordered by the campus building, Bigge Street and Moore Street. The site is opposite Bigge Park, and has highly utilised footpaths that are located along the street frontages. The footpath located along Bigge Street is a popular route for pedestrians walking between the nearby Liverpool Railway Station and the city centre. The site is currently an exposed, open paved area with a few small magnolia trees located at the southern side of the site, between the pedestrian footpath and inner forecourt area and cycle racks located along the Bigge Street edge. Sections of the forecourt have overhead awnings that are attached to the building.

The forecourt overlooks two heritage-listed sites, these being the Liverpool Court House and the Doctor Pirie Community Centre, which are proposed to be upgraded in this Master Plan, and feature as key landmarks as part of the arrival experience into the Liverpool City Centre, for many pedestrians entering the city centre from the Liverpool Railway Station and Bus Terminal. There is an opportunity for this forecourt to compliment these spaces and contribute to the arrival experience. Given its location, the space also has the potential to provide increased amenity for users of the Liverpool TAFE College campus, including for students that could meet, gather and use the space before & after classes, or in-between classes throughout the day. Being on a busy street corner, the site could also be a space for social interaction, accidental meetings, and observation, contributing to the vibrancy of the street.

It is recommended that a Landscape Concept Plan be developed for the forecourt, aimed at upgrading the existing site to provide a usable and comfortable space that is integrated with the streetscape and is considerate of the relationship with surrounding sites. Based on community and stakeholder feedback, ideas for the space could include shade trees & vegetation, seating, new and/or relocated cycle racks, public art display boxes, and upgraded paving and kerb & gutter, in accordance with the paving style proposed in this master plan (see pages 276-277). There is also potential for a coffee cart to be included or a cafe to be incorporated into the existing building, for use by college staff, students and the public. The 3D render on the following page shows how some of these ideas could be incorporated into the site (See Figure 6.229).

The forecourt includes both Council-owned and NSW TAFE owned land. Therefore, upgrading of the forecourt would require further discussion and collaboration with the NSW TAFE to develop a plan for the site. There is also a possibility that the college site may be redeveloped in the future, as part of a potential redevelopment of the Liverpool Railway Station site. Whether this happens, and timing of the redevelopment should be considered when developing a Landscape Concept Plan for the forecourt, and may inform whether the interventions are more temporary or permanent.

Pocket Park, on the Corner of Hume Highway & Memorial Avenue

There is a small parcel of land located on the corner of Hume Highway and Memorial Avenue, and bordered by medium-density residential apartments. The site currently includes an open turfed area, with no vegetation or other infrastructure. The site is exposed to the busy traffic on Hume Highway and is physically separated from the adjoining residential development by a colorbond boundary fence. There is adequate passive surveillance over the site both from the traffic on the bordering streets and overlooking residential apartments.

Given the identified deficit of open space, including at the local scale in the southern part of the city centre, it is recommended that a Landscape Concept Plan is developed for the site aims at providing amenity and facilities for the local community. This could include trees, vegetation, a play space, seating and other furniture. Given the proximity to the site to busy roads and moving traffic, safety needs to be considered, particularly if the site includes a children's play space. This may include incorporating a low, permeable boundary fence that could contain children within the space but also maintain passive surveillance into the site, from the surrounding streets.

Pirie Street Plaza

There is a small parcel of green open space adjoining the road reserve along Pirie Street, between Macquarie Street and Terminus Street adjacent to a commercial building. There is a paved pedestrian footpath that runs through the site which is a popular route for pedestrians moving between the city centre core and residential areas located in the southern part of the city centre. Pedestrians often use this space as a resting point within their journey, and the space is also used by staff that work in nearby retail and commercial buildings taking short breaks outside. The space currently contains an open turfed area, a bench seat, paved footpath, shade trees along the street edge and a garden bed along the property boundary.

It is recommended that a Landscape Concept Plan be prepared to upgrade the site, aimed at creating a high quality urban plaza. The plan should provide facilities for pedestrians seeking respite as part of their journey and opportunities for users of the space to sit, gather and rest. Ideas for the site upgrade include custom paving within the plaza to create a unique sense of character for the space, upgraded footpath paving in accordance with the paving style proposed in this Master Plan (See Chapter 6.14), additional seating, vegetation to provide visual interest and colour, and public art.

6.9

Master Plan

Open Space - Plazas & Pocket Parks



Figure 6.228 Liverpool TAFE College Forecourt - Before (Liverpool City Council)



Figure 6.229 Liverpool TAFE College Forecourt - After (Liverpool City Council)

Master Plan

6.9

Open Space - Plazas & Pocket Parks

Shared-Use Open Space

There are several schools located within the city centre, including at Liverpool Boys High, Liverpool Girls High, Liverpool Public School and All Saints Catholic College. These schools predominantly consist of low-rise buildings with accompanying school yards. There is a possibility that some of these schools will be redeveloped in the future to increase their capacity. This could involve consolidation of existing low-rise buildings into taller buildings with reduced footprints and/or reconfiguration of the sites, resulting in increased and/or relocated open space.

There is an opportunity for both existing open space within these schools and additional future open spaces (as a result of site redevelopments) to become shared open spaces, that are accessible to the public outside of normal school hours. Opportunities for shared use agreements between Council and schools located within the city centre could be considered, along with potential upgrades to these spaces to assist in catering to the increasing demand for sporting & recreational facilities in high density areas, such as the city centre. This could include both passive and active facilities, and infrastructure such as synthetic playing fields that would enable increased usage of these spaces.



The Goods Line - Sydney NSW



Branciforte Middle School Sports Field - U.S.A

Figure 6.230 Precedent Images - Shared-Use Open Space (Liverpool City Council)

Western Sydney University Forecourt

There is an open paved forecourt located outside of the Western Sydney University Liverpool campus, adjoining the Westfield Shopping Centre, and including the stairs to the entrance of the university and public domain area along the Elizabeth Street frontage. The space is currently paved and includes water hydrants, and a mural painted onto the adjacent ramp leading to the adjoining cafe. There is currently no vegetation or streetscape infrastructure located within the forecourt.

The space has the potential to provide increased amenity for users of the university campus, including for students that could meet, gather and use the space before & after classes, or in-between classes throughout the day. Given that the site is also located on a busy intersection, opposite Macquarie Mall and close to the pedestrian entrance to the Westfield Shopping Centre, the site could also be a space for social interaction, accidental meetings, and observation, contributing to the vibrancy of Elizabeth Street.

It is recommended that a Landscape Concept Plan be developed for the forecourt, aimed at upgrading the existing site to provide a usable space for students and the community. Ideas for the site include raised planter beds with integrated seating, benches, seating integrated with the existing stairs, public art, shade trees including street trees along the Elizabeth Street frontage, new bollards & vegetation to provide visual interest and colour, and a garden bed to improve the appearance of the footpath & water hydrants. The 3D render on the following page shows how some of these ideas could be incorporated into the site. (See Figure 6.232). The forecourt includes both Council-owned and university-owned land. Therefore, upgrading of the forecourt would require discussion and collaboration with the Western Sydney University to develop a plan for the site.

Other Recommendations

During the community and stakeholder consultation period, there were several requests for additional public bathrooms in the city centre. It is recommended that an evaluation of current supply & demand of public bathrooms is completed and a public bathroom strategy is developed, including for the city centre. Other general considerations relating to open space in the city centre, includes the following:

- Support and enhance ecology when designing open spaces, including when selecting vegetation species, and upgrading open spaces within the city centre;
- Select tree species that assist in reducing pollution and cool the environment, helping to reduce the urban heat island affect;
- Consider safety, accessibility & inclusion in the design of all open spaces & public facilities in the city centre (See Chapter 6.17), and
- Consider sustainability in the design of open spaces within the city centre (See Chapter 6.18).

6.9

Master Plan
Open Space - Plazas & Pocket Parks



Figure 6.231 Western Sydney University Forecourt - Before (Liverpool City Council)



Figure 6.232 Western Sydney University Forecourt - After (Liverpool City Council)

6.10

MASTER PLAN HYDROLOGY

Overview and Key Themes & Interventions

Overview

The hydrological network includes all hydrological infrastructure located within the Liverpool City Centre. This includes the Georges River & Brickmakers Creek and associated flood prone land around these two water bodies, the extensive constructed stormwater network (which generally follows the street network & route of the former creek lines) and drains into both water bodies, and the overland flow paths that run through open spaces within the city centre. The route of the former creek lines that used to run through the city centre, and have now been piped into the constructed stormwater network have been considered in the Master Plan to be part of the hydrological network in the city centre.

Cities are dependent on water, because water plays an essential role for its development and functioning. The Georges River and Brickmakers Creek provide water, support natural processes including flood prevention, and provide habitats for plants and animals. Most of the vegetation that grows on the banks of these two water bodies absorb a lot of water, reducing flood energy which is a threat to people and buildings. These plants also have a cooling effect, helping to lower surface and air temperatures by providing shade and releasing moisture into the air. Water in the city creates opportunities for recreation, helps to connect communities and brings people together.

The Government Architect NSW has established the Blue Grid, which works together with the broader Green Grid, as an open space network plan for NSW. A significant amount of open space is comprised of hydrological corridors of land surrounding rivers, creeks, canals and other water bodies, and to this extent, the Blue Grid forms the skeleton of the Green Grid. The Green Grid comprises of a network of open space that will keep the city cool, encourage healthy living, enhance biodiversity and ensure ecological resilience. Waterways have often become edges to development that become barriers between communities, however, the Blue Grid offers the opportunity to use waterways as central to defining the urban structure of the city and to become the glue that binds communities together. The Blue Grid within the Liverpool City Centre includes the Georges River and Brickmakers Creek.

The Master Plan supports the Government Architect NSW's Blue Grid and Green Grid, to support the health of the growing community and improve the environment within the Liverpool City Centre. This section of the Master Plan aims to acknowledge hydrological projects that are currently being delivered by Council, build on the hydrology-related opportunities identified through community and stakeholder engagement, and identify additional opportunities related to hydrology in the city centre. This includes new hydrological infrastructure and interventions to improve the health of the city's waterways, increase the community's interaction with water and support improved environmental and ecological outcomes.

Key Themes & Interventions










The diagram on the following page shows the proposed hydrological network within the city centre (See Figure 6.233). This includes existing and proposed projects that are in alignment with the overall Master Plan vision for the city centre, and consistent with the NSW Government and Council's objectives for hydrology in the city centre.

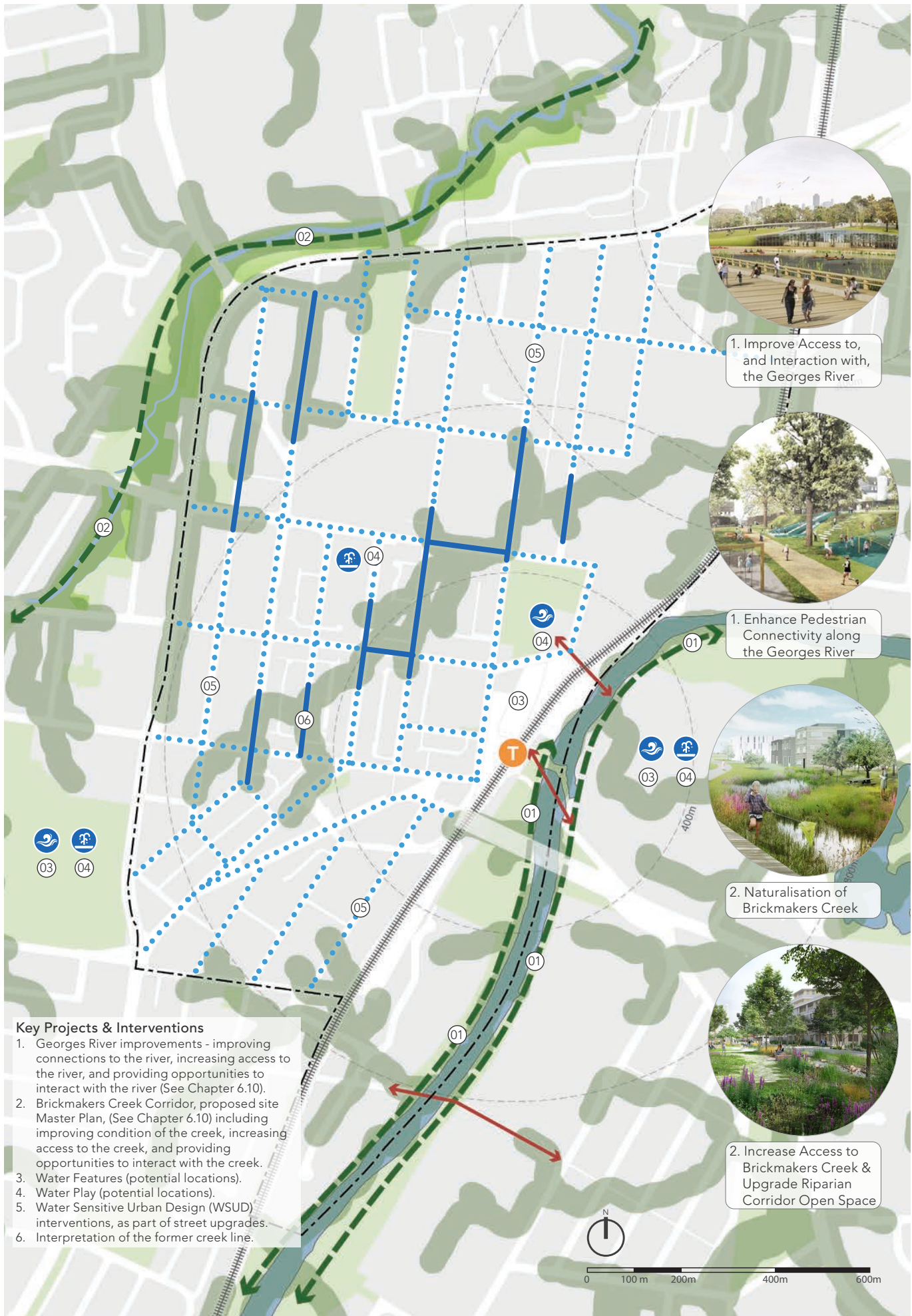
The key themes and interventions for hydrology within the city centre are as follows:

- Increased physical and visual connections to the Georges River and Brickmakers Creek;
- Improved overall water quality of the Georges River and Brickmakers Creek including through new WSUD infrastructure and passive irrigation to help treat surface water runoff;
- Assist with flood mitigation through encouraging on-site detention of rainwater in private developments, and rain gardens & other infrastructure in the public domain to slow down the velocity of water;
- Increased opportunities for people to interact with water including through play, recreational activities and integrating active transport systems with hydrological corridors;
- Interpretation of the former creek lines and riparian networks that used to run through the city centre, to promote understanding of natural systems in the city centre;
- Implementing the Blue Grid, including through improving the identified hydrological network within the city centre, with consideration to the broader local and regional hydrological systems, and
- Undertake Hydrological MUSIC modelling, as detailed designs are developed for streets in the city centre.

The following pages of the report articulates how these key themes and interventions will be achieved. This includes an acknowledgement of existing projects that are currently being developed or delivered by Council, and proposals for new hydrological infrastructure and embellishment of existing hydrological infrastructure within the city centre.

Legend

	Railway Station
	Railway Line
	Liverpool City Centre - Project Site Boundary
	Riparian Corridors (Historical & Present)
	Historical Creek Line Interpretation (Potential Locations)
	Water Sensitive Urban Design (WSUD) Interventions
	Green/Blue Grid and Active Transport Links
	Water Play/Feature Locations (Potential / Existing)
	Potential Connections Across Georges River



Key Projects & Interventions

1. Georges River improvements - improving connections to the river, increasing access to the river, and providing opportunities to interact with the river (See Chapter 6.10).
2. Brickmakers Creek Corridor, proposed site Master Plan, (See Chapter 6.10) including improving condition of the creek, increasing access to the creek, and providing opportunities to interact with the creek.
3. Water Features (potential locations).
4. Water Play (potential locations).
5. Water Sensitive Urban Design (WSUD) interventions, as part of street upgrades.
6. Interpretation of the former creek line.

Figure 6.233 Liverpool City Centre - Hydrology Typology Plan (Liverpool City Council)

6.10

Master Plan

Hydrology - Georges River

Georges River

The Georges River is one of Liverpool’s most significant natural assets that supports the city’s people, and native flora & fauna. The Master Plan aims improve the current condition of the river, increase access to the river from the city centre, increase access over the river, and increase opportunities for people to interact with the river. Existing and proposed projects & interventions to address these opportunities are articulated below. Water NSW and Council owns, and a number of Stakeholders manage the river, therefore further collaboration and consent will be required to develop proposals for the Georges River.

Improving the Condition of the River

Council is undertaking water quality monitoring to assess current water quality conditions and establish a baseline, which will guide the identification of management actions to protect and enhance ecological health of waterways, including the Georges River. Council has previously completed a re-vegetation works along the Georges River corridor. Council has previously completed a re-vegetation works along the Georges River corridor. In addition to water quality improvements, it is recommended that further re-vegetation works are undertaken to support native flora & fauna. This includes removal of overgrown weeds and re-vegetation of the riparian corridor to support the numerous aquatic and other vegetation species located along the river banks, including the 11 identified species of native flora that are under threat.

Increasing Access to the River

Through the potential redevelopment of the Liverpool Railway Station site there is an opportunity for development to occur over or under the rail line, which can increase physical & visual access to the river (see p.217). A Master Plan for Lighthorse Park has recently been adopted by Council, and includes a new building that will provide access between Newbridge Road and Lighthorse Park internally via the building (see p. 214-215). As open space projects that are located along the Georges River are developed, it is recommended that sufficient and consistent pathway widths and lighting are included, to encourage pedestrian and cyclist movement along the river front.

Increasing Access over the River

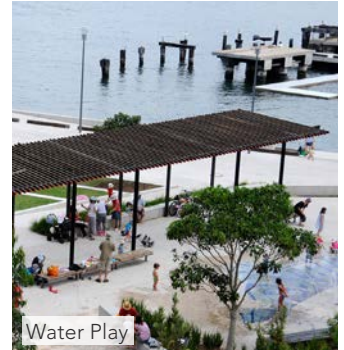
Council is currently preparing a Concept Design for a new bridge crossing over the Georges River, integrated with the existing heritage-listed Weir pylons (see p. 264). Newbridge Road bridge is subject to potential widening. Should this proceed, it is recommended that pedestrian access is increased, including through a wider pedestrian footpaths.

Providing Opportunities to Interact with the River

The river has the potential to provide improved recreational opportunities for the community. Council is currently investigating the potential of developing a long-term strategy to activate the Georges River. Ideas to be considered include swimmable river pools, an artificial beach and floating playgrounds, subject to long-term water quality improvements of the river (See Figure 6.235, 6.236).



Foreshore Open Space



Water Play



Foreshore Boardwalk



River Access



Public Amenities



Cycle Network



Boardwalk & Lighting

Legend

	Railway Station
	Railway Line
	Liverpool City Centre - Project Site Boundary
	Active & Public Transport Corridor (Moore Street)
	Improved Pedestrian Connections
	Existing Major Project Boundary
	Liverpool Railway Station Site Redevelopment
	Street Intersection Upgrades
	Open Space Existing/Potential Opportunity
	Other Existing/Potential Opportunity



Figure 6.234 Liverpool City Centre - George River Corridor Concept Plan (Liverpool City Council)

6.10

Master Plan
Hydrology - Georges River



Badeschiff Floating Swimming Pool (Winter) - Berlin



Badeschiff Floating Swimming Pool - Berlin

Figure 6.235 Concept Idea for floating swimming pool within the Georges River (Liverpool City Council)



Banks of River Seine in Paris, France



Foreshore Boardwalk - Huangpu, China



Floating Stages - Mantua, Italy



Canoeing - Sydney, NSW



Paprocany Lake, Poland



Floating Playground - New Jersey, USA

Figure 6.236 Concept ideas for activities along and/or within the Georges River (Liverpool City Council)

6.10

Master Plan
Hydrology - Georges River



Figure 6.237 Georges River Foreshore (West) - Before (Liverpool City Council)



Figure 6.238 Georges River Foreshore (West) - After (Liverpool City Council)

6.10

Master Plan

Hydrology - Brickmakers Creek

Brickmakers Creek

Brickmakers Creek is adjacent to the city centre and is currently, mostly an overland flow path in the form of open-grassed and concrete-lined swales. However there is an opportunity for the creek to be naturalised to provide improved hydrological, ecological, visual and recreational outcomes. As noted in Chapter 6.9 'Open Space', it is proposed that a broader Master Plan is developed for the entire Brickmakers Creek corridor that addresses both open space and hydrological considerations. This includes improved connections to the corridor, embellishment of the space to include new recreational infrastructure, increased active transport within the corridor, connections to broader open space, and improved water quality outcomes as part of the Blue Grid network. In relation to hydrology, it is recommended that the master plan aims to address the below considerations. The 3D render on page 239 shows how some of these ideas could be incorporated into the site (See Figure 6.243).

Improving the Condition of the Creek

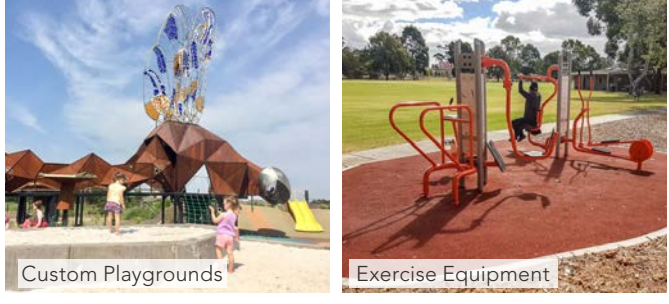
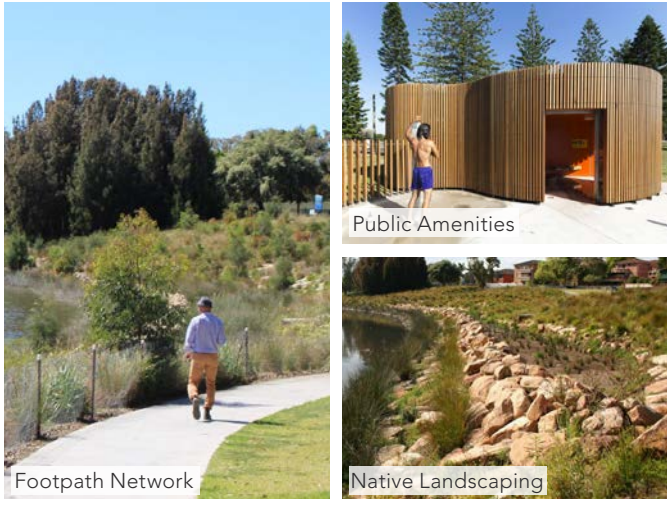
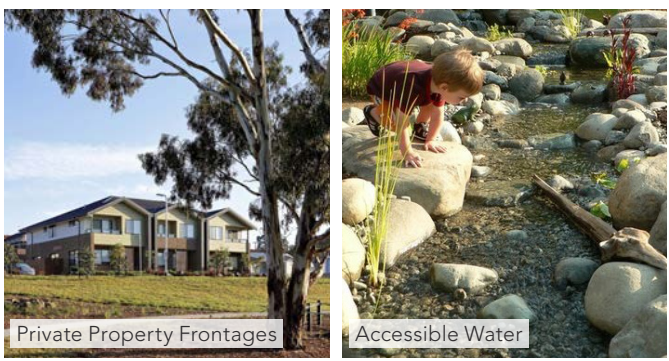
It is proposed that the Master Plan for the Brickmakers Creek Corridor investigates the opportunity to convert the existing open-grassed swale into a naturalised creek. This can include aquatic & other vegetation to provide habitats for native fauna. A series of ponds can be incorporated to increase the capacity of the creek and assist in flood mitigation.

Increasing Access to the Creek

It is recommended that intersection improvements to the Hume Highway are implemented to increase pedestrian and cyclist access between the city centre and the Brickmakers Creek corridor. It is also recommended that active transport routes are integrated into the Brickmakers Corridor to increase pedestrian & cyclist interaction with the creek and open space. Private developments currently border the majority of the western edge of the Brickmakers Creek corridor. These developments mostly turn their back to the creek. However, it is recommended that as redevelopment occurs along the creek, that new developments are dual-facing with both physical & visual connections to the street and creek frontages. Fences located along the creek frontage should be low in height and/or permeable to strengthen the relationship between the private and public open spaces along the creek.

Providing Opportunities to Interact with the Creek

It is proposed that the Master Plan for the Brickmakers Creek Corridor includes opportunities for people to interact with the creek. This could include through meandering paths that run parallel to the creek, locating recreational infrastructure along the creek corridor such as outdoor gym equipment and seating, including footbridges & other crossings over the creek, including seating & viewing areas that overlook the creek, and including lighting to enable night time usage of the site.



Legend

	Liverpool City Centre - Project Site Boundary
	Active & Public Transport Corridor (Moore Street)
	Improved Pedestrian Connections
	Master Plan currently being developed (Woodward Place)
	Existing Lots Fronting onto Creek Corridor
	Improved Pedestrian Street Crossing
	Street Intersection Upgrades
	Open Space Existing/Potential Opportunity
	Other Existing/Potential Opportunity

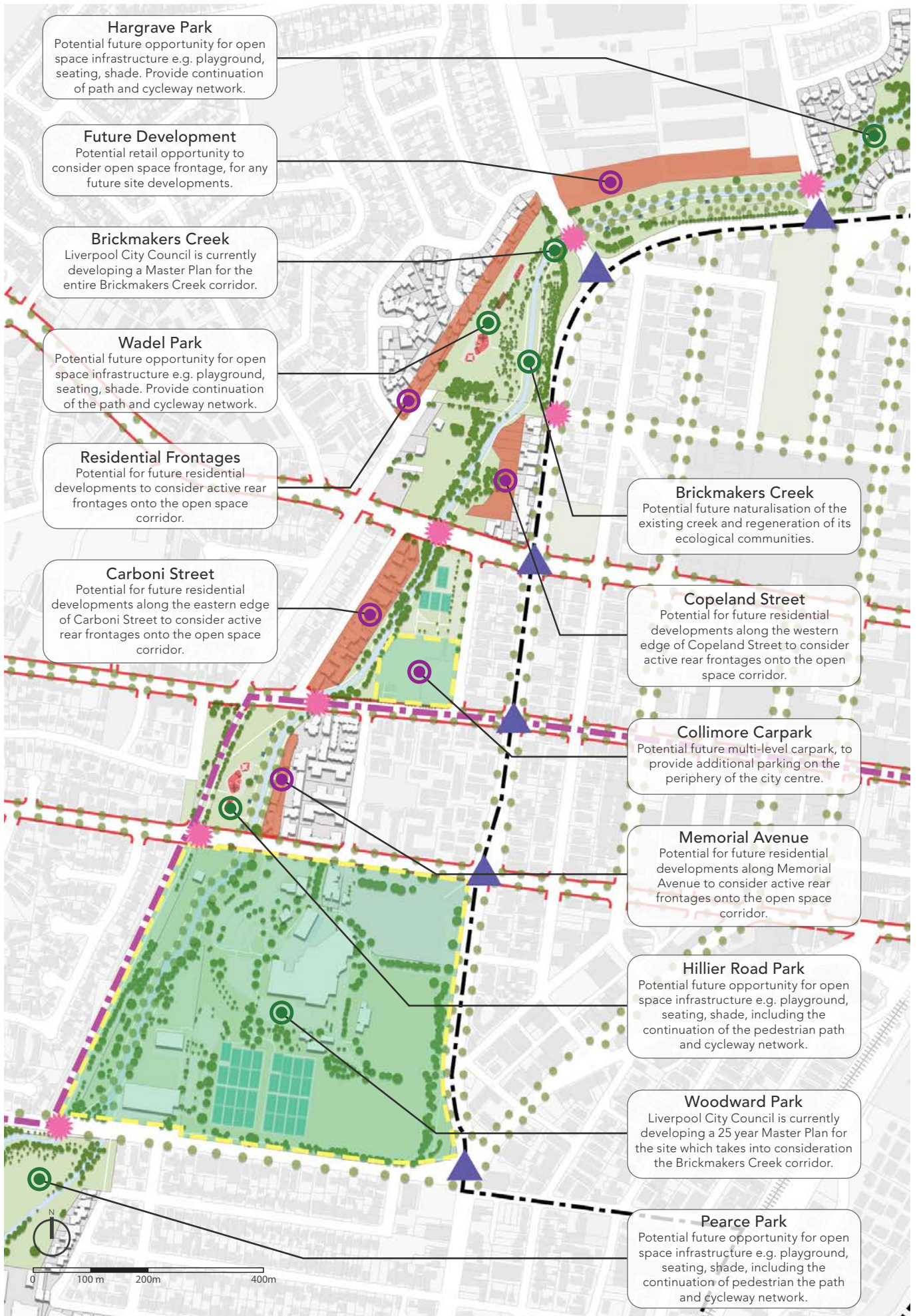


Figure 6.239 Liverpool City Centre - Brickmakers Creek Corridor Concept Plan (Liverpool City Council)

Master Plan

6.10

Hydrology - Bringing Water into the City Centre

Water Features

Water in public spaces is a decorative element, performs important functions and has social benefits for the community. People are attracted to water, and in most cities around the world you see people gathered by fountains in squares or other water bodies, as popular meeting and relaxation points amongst the urban fabric. Water within the city can affect the micro-climate, helping reduce the urban heat island effect, improving air quality and enhancing local biodiversity. As a result, the city can be more liveable and attractive to people & businesses and can support improved environmental outcomes.

It is recommended that opportunities are explored to incorporate water features within the city centre, including in the detailed design phases of projects. This could include:

- Use stormwater as a visible landscape element;
- Water features (including stormwater) as a way of interpreting the former creek lines that used to run through the city centre (see p. 242-243);
- Water features to increase the presence of water in the city centre and strengthen the relationship between the Georges River and Brickmakers Creek;
- Water features (decorative and interactive), and
- Water features that create calming noise, to contribute to the sensory experience within the city centre.

Water Play

Water play includes facilities that offer opportunities for children to participate in water-based activities during the warmer months of the year. Water play features include fountains, tipping buckets, water jets and other interactive features that are integrated into a play space. Council has installed water play spaces at Bigge Park and in Macquarie Mall that is popular with residents, and there is opportunity to provide further water play facilities for the community.

The benefits of water play include:

- Releases energy and promotes physical activity;
- Can be emotionally therapeutic;
- Helps develop motor and social skills;
- Stimulates creativity and imagination, and
- Promotes cognitive development.

Western Sydney, including the Liverpool city centre experiences higher temperatures than other parts of Greater Sydney, and Liverpool is located approximately 25km from beaches and the coastline. Water play offers an opportunity to keep cool and play in water locally. It is recommended that opportunities are explored to incorporate additional water play spaces in the city centre. This could include regional-scale facilities as part of current and/or future master plans, such as the Woodward Place Master Plan.

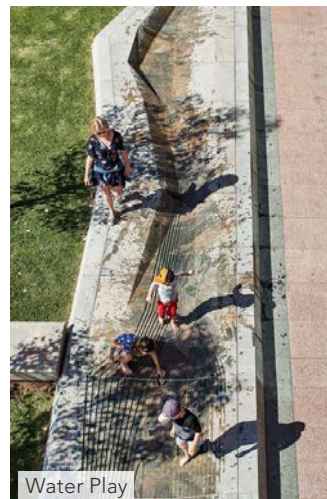
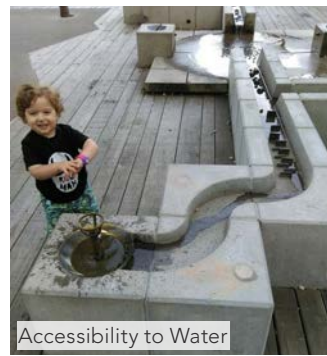


Figure 6.240 Images of Water Features (Liverpool City Council)

Figure 6.241 Images of Water Play (Liverpool City Council)

6.10 Master Plan Hydrology - Brickmakers Creek

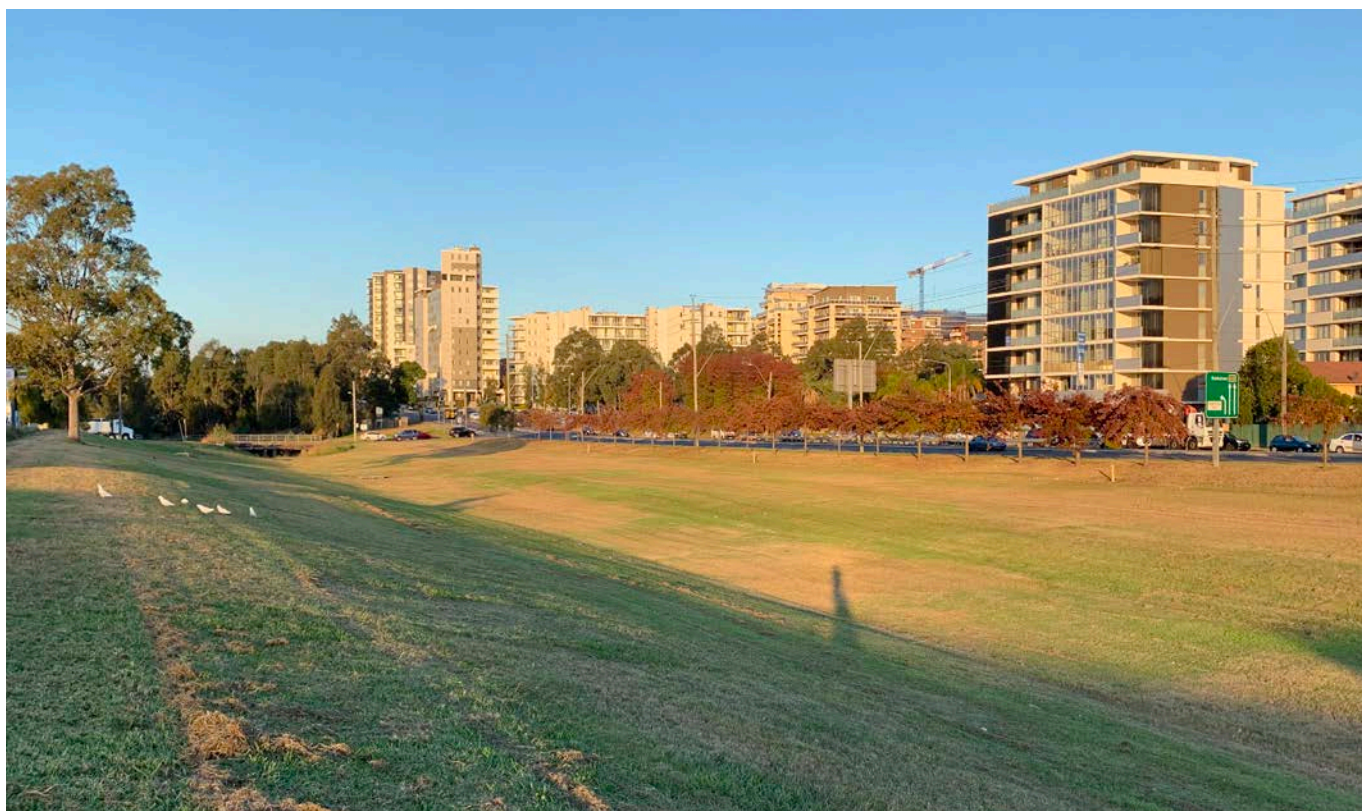


Figure 6.242 Brickmakers Creek Corridor - Before (Liverpool City Council)



Figure 6.243 Brickmakers Creek Corridor - After (Liverpool City Council)

Master Plan

6.10

Hydrology - Water Sensitive Urban Design (WSUD)

Water Sensitive Urban Design (WSUD)

Water Sensitive Urban Design (WSUD) is an approach that integrates whole of water cycle management into urban planning and design. WSUD aims to create urban environments that allow the water cycle to function as it would naturally, thereby reducing the impact of development on the water cycle.

The benefits of WSUD incorporating infrastructure within the city centre include:

- Reduced volume of stormwater entering the Georges River and Brickmakers Creek, leading to an improved aquatic environment;
- Improved stormwater quality, leading to an improved water quality in the Georges River and Brickmakers Creek;
- Reduced reliance on potable water to irrigate street trees, vegetation and green spaces;
- Flood mitigation through retaining & reusing water, and slowing down the velocity of stormwater;
- Improved biodiversity;
- Decreased temperatures as a result of decreased hard surfaces, increased permeable surfaces, and increased irrigation capacity;
- Increased levels of permeable ground and increased soil moisture to support the growth of trees and other vegetation, and
- Better performance of vegetation during drought.

In many instances WSUD can be integrated with other project objectives such as traffic calming to help facilitate multifunctional outcomes. The Master Plan proposes a constructed stormwater network with WSUD infrastructure aimed at improving environmental outcomes and achieve the above-mentioned benefits. The proposed WSUD infrastructure includes:

- Porous pavements;
- Rain gardens;
- Swales;
- Passive irrigation (See Figure 6.245);
- Traffic calming kerb blisters with WSUD treatments.
- Infiltration trenches;
- Rainwater and stormwater harvesting;
- Naturalising Brickmaker Creeks including constructed wetland ponds (See Figure 6.243);
- Green infrastructure including passively irrigated tree pits (See Figure 6.244), and
- Encouraging the incorporation of other green infrastructure such as green roofs and building façades where appropriate.

The majority of WSUD infrastructure that has been proposed in this Master Plan is located within streets (See Chapter 6.5). As the proposed street designs progress through to concept and detailed design phases it is recommended that Council's Floodplain and Water Management team are engaged to provide input on site specific interventions and Council's Maintenance department is engaged to provide advice regarding maintenance requirements.



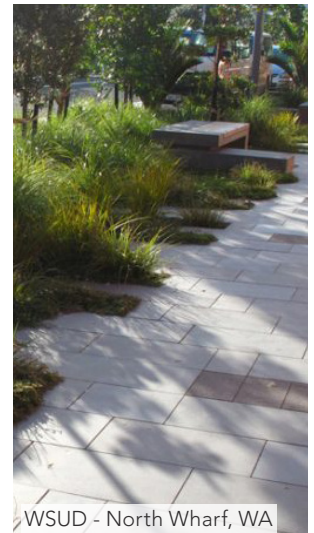
Kerb Extension - Philadelphia, USA



WSUD - Singleton, NSW



Raingarden - City of Melbourne



WSUD - North Wharf, WA



Raingarden - NSW



Permeable Pavement - Victoria



Raingarden - Sydney, NSW

Figure 6.244 Examples of WSUD Treatments (Liverpool City Council)

6.10

Master Plan
Hydrology - Water Sensitive Urban Design (WSUD)



Figure 6.245 WSUD Tree Pit Detail (Liverpool City Council)

Master Plan

6.10 Hydrology - Historical Creek Lines

Interpretation of Former Creek Lines

Prior to the establishment of the Liverpool City Centre, there was a broader riparian network within the city centre that fed into both the Georges River and Brickmakers Creek (See diagram above). With the development of the city centre street network, most of these former creeks and riparian networks have been built over and formalised into the constructed stormwater network. This includes a creek that ran diagonally north-east to south west across the core of the city centre, riparian creek lines in the north western part of the city centre that fed into Brickmakers Creek, and creeks in the south-western part of the city centre that fed into the Georges River.

As streetscape designs contained in this Master Plan progress through to concept and detailed design, it is proposed that these former creek lines and riparian networks are referenced and interpreted, to promote an understanding of historical natural systems in the city centre, and increase the connection between the city centre and the Georges River & Brickmakers Creek. The images on page 242 and 2243 shows ideas of how these historical creek lines and riparian networks could be interpreted through design interventions, including through the following:

- Public art, including art that responds to changing weather conditions, such as rainfall;
- Custom designed paving patterns and inlays to that mimics the qualities of water;
- Custom designed drainage grates;
- In-ground and above ground lighting that mimics the former creek line route and qualities of water;
- WSUD treatments located along the former creek lines;
- Aquatic tree & vegetation species;
- Water features;
- Water play and other tangible water elements;
- Incorporating materials that are associated with water bodies, such as river pebbles, and
- Signage with historical maps at key locations, with information about the former creek line and riparian corridors.



Figure 6.247 Historical Creek Lines in the city centre (Liverpool City Council)

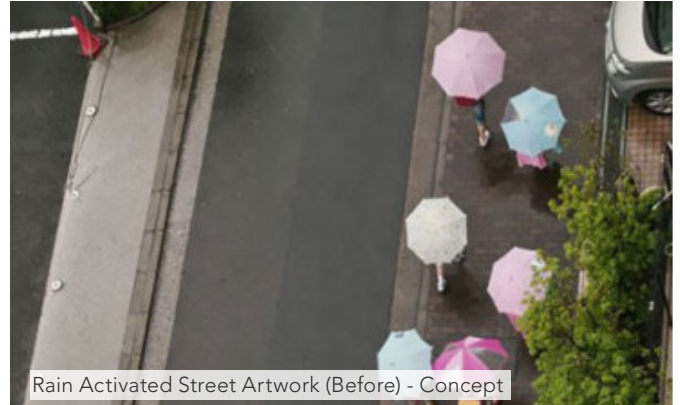


Figure 6.246 Concept idea for integrating dynamic public art within the streetscape using Hydrochromic Paint.

6.10

Master Plan
Hydrology - Historical Creek Lines

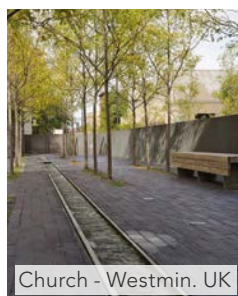
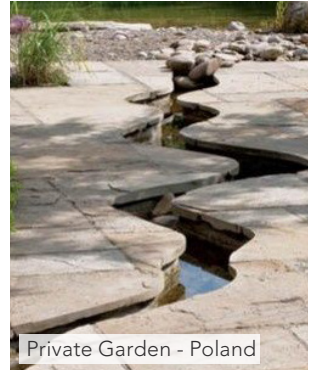


Figure 6.248 Historical Creek Line Interpretation, Concept Ideas (Liverpool City Council)

6.11

MASTER PLAN HERITAGE

Overview and Key Themes & Interventions

Overview

Heritage is a living part of contemporary life, and includes the spaces, buildings, objects, stories, songs, and rituals that become a framework and reference upon which we build the future. Acknowledging our heritage can bring a richness to life, strengthening culture and our understanding of where we have all come from (Better Placed Design Guide for Heritage, Government Architect NSW). Liverpool is one of the oldest settlements within New South Wales, and features a number of old and grand buildings and places which contribute to the landscape and fabric of the Liverpool city centre.

There is 3-types of heritage within the city centre, these being; Indigenous, European, and Migrant and Transnational heritage. While we acknowledge the Colonial heritage of Liverpool, the Indigenous heritage extends the known occupation of the Liverpool area tens of thousands of years into the past, representing one of the oldest civilisations in the world. More recently, Liverpool’s migrant heritage has contributed to the post-war growth and development of the area and remains an untouched resource with the ability to provide information and context to how and why Liverpool is where it is today.

This chapter includes projects and interventions related to heritage in the city centre, which are guided by 4 key objectives, as follows:

- To conserve and sustainably manage Liverpool’s cultural heritage;
- To enhance the visual presence and character of Liverpool’s heritage;
- To promote and enhance the story of Liverpool through the urban fabric; and
- To ensure the long term historical integrity of the Liverpool City Centre.

There is 3 key documents that establish a benchmark for developmental works related to heritage, and have been used to guide to Master Plan decisions, these being:

- Ochre Grid/Designing with Country - Designing with Country is the NSW Guidelines currently being prepared by the Government Architect NSW, which will provide direction and advice regarding the integration of Indigenous values and heritage into the planning and design process;
- Better Placed Design Guide for Heritage - The Better Design Guide for Heritage was prepared by the Government Architect NSW and provides guidance as to the undertaking of development within the context of heritage. The guide establishes a series of principles seek to respond to heritage in terms of material, scale, bulk, form and position, for new works, and
- Liverpool Heritage Strategy 2019/2023 - The Liverpool Heritage Strategy was endorsed late 2018 and provides the guidance for local heritage management in Liverpool. The actions and strategies outlined in the document will provide support in the implementation of the Master Plan.

Key Guiding Principles

Retain & Enhance Heritage Items

Heritage buildings and places contribute significantly to the landscape and history of the area. Any future work should retain and enhance the character and visual presence of an item through suitable landscape treatments.

Public Art & Heritage Interpretation

Public art and heritage interpretation provides an opportunity to depict the history and heritage of the area and to present it publicly, supporting the wide spread enhancement and promotion of the story of the area.

The following pages in this chapter includes proposed projects and interventions for heritage within the city centre. Council is also investigating the development of a Liverpool City Centre Heritage Interpretation Plan, which will guide the development and installation of future public art and heritage interpretation projects in the city centre.



Figure 6.249 The Burra Charter (GANSW Design Guide for Heritage 2019)

Legend

	Railway Station
	Railway Line
	Liverpool City Centre - Project Boundary
	Heritage interventions
	'The Town Plan of Liverpool' - Liverpool City Centre

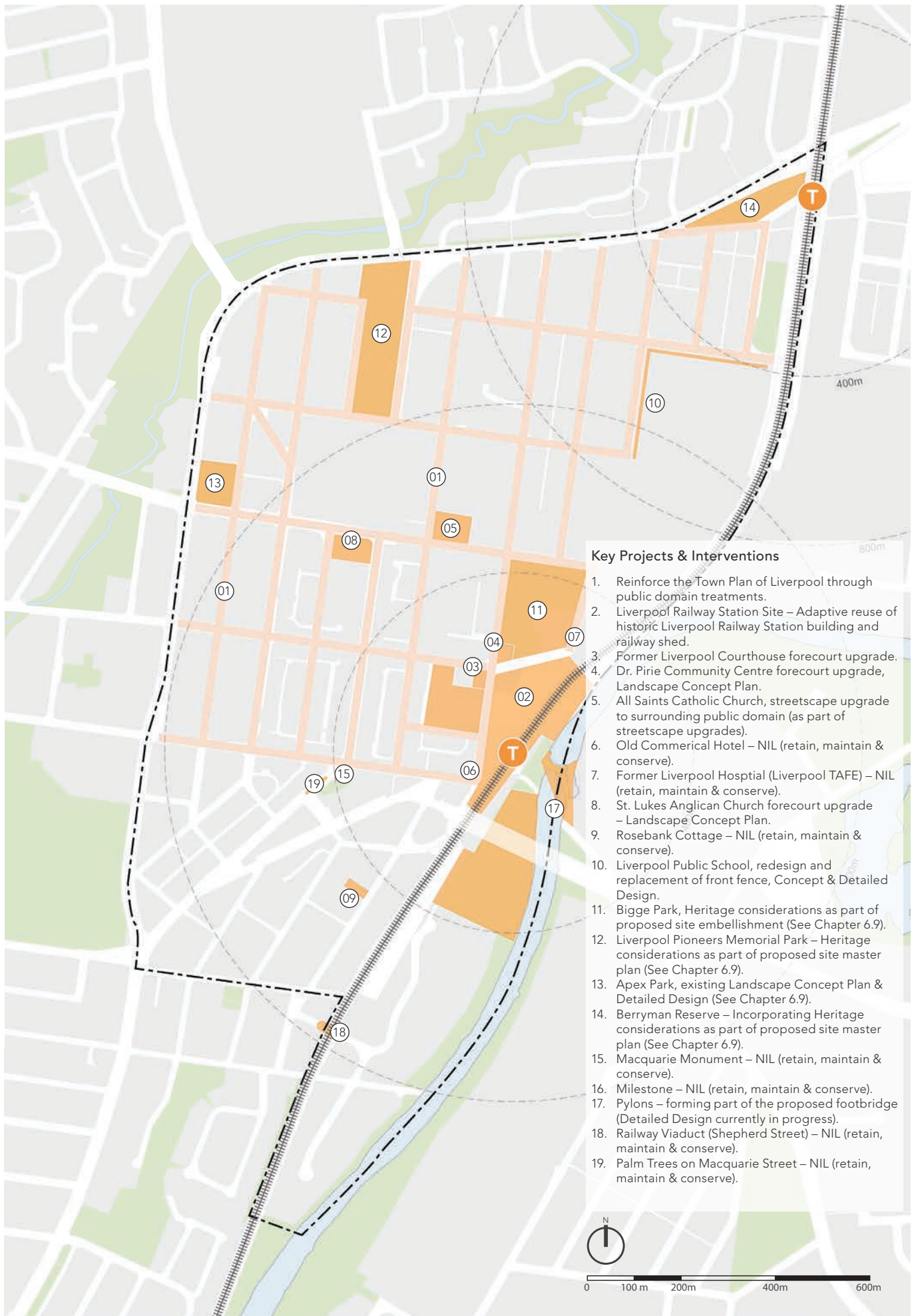


Figure 6.250 Liverpool City Centre - Heritage Typology Plan (Liverpool City Council)

6.11

Master Plan

Heritage - Indigenous

Overview

The Indigenous heritage of Liverpool extends the history of the area tens of thousands of years into the past. Its contribution to the understanding of place and space is undeniable and the significance and value of the local Indigenous culture and value is critical to the identity of the community.

This section of the report outlines the framework and principles which will guide the recognition of Indigenous heritage within the city centre, and the expanding on this will be the Aboriginal Cultural Heritage Values project that is currently being undertaken by Liverpool City Council.

Heritage Framework

Aboriginal cultural heritage is currently protected by the National Parks and Wildlife Act 1974. The destruction of an object or identified site of Aboriginal significance requires a permit and consultation with the local Aboriginal community.

The Environmental Planning & Assessment Act 1979 features an objective for the conservation and sustainable management of cultural heritage, including Aboriginal heritage, requiring the consideration of Aboriginal heritage within the NSW Planning system.

Context

It is recognised that the Cabrogal Clan of the Darug Nation and the Dharrawal Nation once occupied these lands. Records indicate that it is likely that other clans may have walked these lands on their way to other sites. The history and culture of both nations is engrained with the rivers, hills and landscapes of this area with evidence of occupation found throughout the Liverpool LGA.

Key Principles

Empowerment

The management and interpretation of Indigenous heritage involves the consideration of culturally sensitivity and in some cases personal information. What information is used and how it is used is the responsibility of the Indigenous community, who own the knowledge and therefore need to be actively involved in any decision making processes.

Acknowledgement

Where information or artwork is used, the source and rightful Indigenous artist or knowledge should be acknowledged. The method of acknowledgement should be outlined in a legal agreement that allows for the use the information and artwork.

Agreement

Where artwork or cultural knowledge is used, Council or the developer/property owner should enter into a formal agreement for right of use. The agreement will detail the parties, the purpose of the use of the material, and the financial amount to be paid to the Indigenous knowledge holder or artist. Knowledge or artwork should not be used without financial compensation unless freely agreed to by both parties.

Recognition

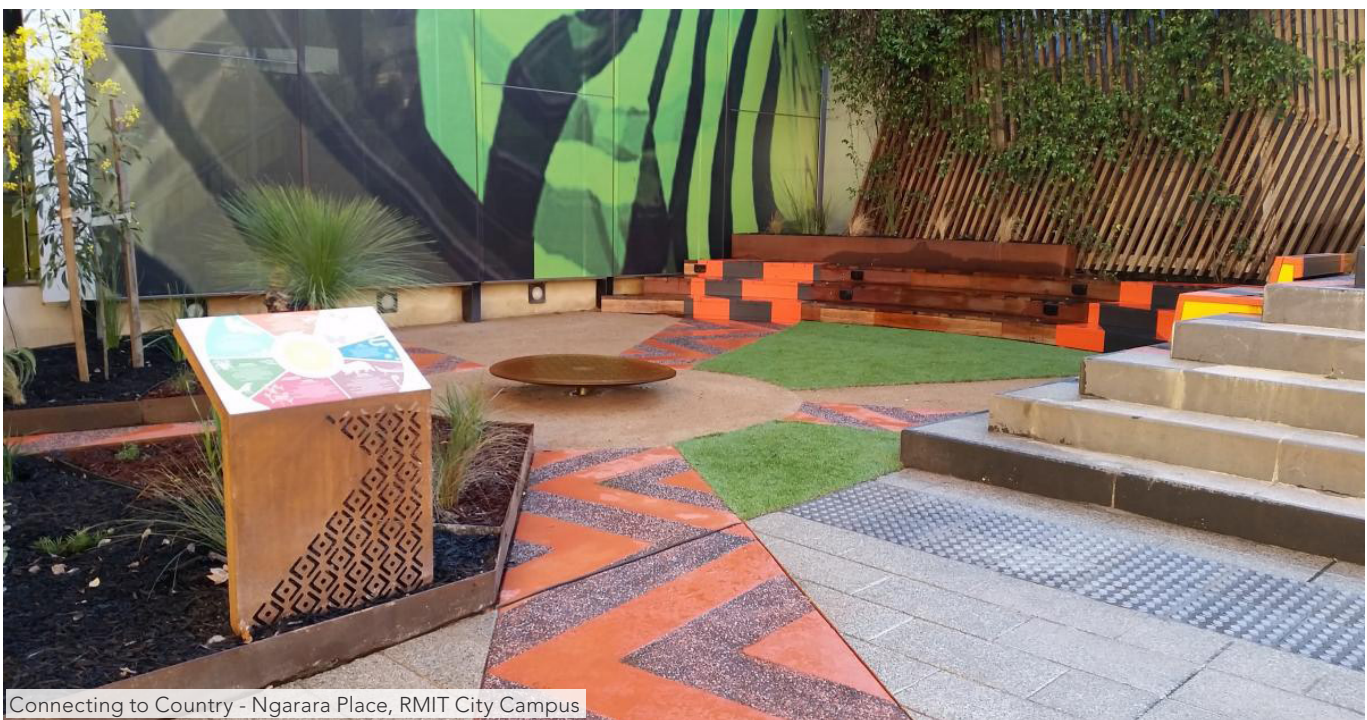
As the oldest ongoing culture, the presence in the past and future of the Aboriginal community should be actively acknowledged within the landscape. The recognition of ancestors who contributed significantly to the developer of the Aboriginal culture and its longevity should be embraced and form part of the local heritage narrative.

Appropriateness

The use of Indigenous material should be appropriate and reflect the cultural significance and sensitivity of the material. Inappropriate uses of the material can reflect negatively on the Indigenous culture and impact on the long term sustainable management of a significant piece of local heritage.

6.11

Master Plan
Heritage - Indigenous



Connecting to Country - Ngarara Place, RMIT City Campus



Aboriginal Health Garden - Royal Adelaide Hospital



Fire & Water Sculpture - Reconciliation Place, Canberra



RBG - Melbourne



Ikara The Meeting Place - South AUS



Lartelare Aboriginal Heritage Park - S.A



Yarning Circle - Deloraine



Hart's Mill - Adelaide



Reconciliation Place, Canberra



Walumba Elders Centre -Warrmarn W.A



Bogong Moths - Australian Capital Territory

Figure 6.251 Aboriginal Heritage Interpretation Ideas (Liverpool City Council)

Master Plan

6.11 Heritage - European

Overview

Liverpool is recognised as one of the oldest settlements in Australia, founded on the 7th November 1810. The settlement was founded by Governor Lachlan Macquarie as the epicentre of agricultural production in the new frontier lands, south-west of the Sydney Colony.

The settlement is the first Macquarie Town and today still features elements such as the grid road layout, town park (i.e. Bigge Park) and key public buildings (e.g. Former Liverpool Hospital, Former Liverpool Courthouse and the Liverpool Public School) which became key features of the other Macquarie towns of Windsor, Richmond, Castlereagh, Pitt town and Wilberforce.

The European settlement and growth of Liverpool has contributed greatly to the history of the Liverpool city centre and forms a key part of its current and future identity. The buildings and places that feature within the Master Plan are key structures representing the European past, and ensure that people understand where Liverpool has come from and who has contributed to its identity.

Heritage Framework

European heritage is managed under the Environmental Planning & Assessment Act 1979 and the Heritage Act 1977. The purpose of these acts is to manage heritage sustainably for conservation and retention, for future generations.

Local heritage is identified under the Liverpool Local Environmental Plan 2008, with decisions relating to its management and care resting with Council. Places and sites of State heritage significance are listed under the Heritage Act 1977 and where a proposal has the potential to impact on the significance of the item, consent is required from the NSW Heritage Council.

Key Heritage Sites in the Liverpool City Centre

Key heritage sites within the Liverpool City Centre include the following:

1. Bigge Park;
2. Rosebank Cottage (State);
3. Former Liverpool Courthouse (State);
4. Liverpool Pioneers' Memorial Park;
5. The Former Soldiers Memorial School of Arts;
6. St Lukes Anglican Church (State);
7. Liverpool Public School;
8. Liverpool Railway Station (State);
9. The Old Commercial Hotel;
10. Former Liverpool Hospital (State);
11. The Town Plan of Liverpool; and
12. Dr. Pirie Community Centre.

Key Principles

Identification

Previous studies and engagement with the community has identified a number of items of heritage significance which are listed today under the Liverpool Environmental Plan 2008. As the community evolves, further places of significance may be identified and these will need to be assessed and considered appropriately.

Conservation

Where a place has been identified, the long term conservation and maintenance of the place is important to ensure its retention for future generations. It is important that through conservation, evolution and adaptation is not prevented, but it should be managed to ensure the values identified by the community are retained.

Management

Government agencies own a number of identified heritage sites within the city centre which contribute significantly to the public domain and should be managed, to ensure their long term retention and continual contribution to the landscape.

Promotion

The promotion and presentation of the history and heritage of Liverpool is critical to ensure its long term retention. Where appropriate, heritage interpretation and other methods of presentation should be encouraged and implemented to provide a connection between the current community and its history.



St. Lukes Anglican Church - Liverpool

Figure 6.252 St. Lukes Anglican Church (Liverpool City Council)

6.11

Master Plan
Heritage - European



Bigge Park



Rosebank Cottage



Former Liverpool Hospital - TAFE NSW



Former Liverpool Courthouse



St. Lukes Anglican Church - Liverpool



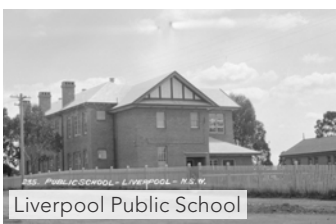
Liverpool Railway Station



Liverpool School of Arts



Pioneers' Memorial Park



Liverpool Public School



Dr Pirie Community Centre

Figure 6.253 European Heritage sites within the Liverpool City Centre (Liverpool City Council)

6.11

Master Plan

Heritage - Migrant & Transnational Heritage

Overview

Migrant or transnational heritage refers to the heritage connections created by migrants who arrived in the community post 1950, or transferred their heritage from their homelands, to places and spaces within the urban landscape.

This form of heritage is commonly not understood or represented in the heritage management system and requires further investigation by Council to identify the places and spaces which are of cultural and historical significance to the migrant communities of the Liverpool area.

Framework

Migrant or Transnational heritage is managed under the Environmental Planning & Assessment Act 1979 and the Heritage Act 1977. The purpose of these acts is to manage heritage sustainably for the conservation and retention for future generations.

Local heritage is identified under the Liverpool Local Environmental Plan 2008, with decisions relating to its management and care resting with Council. Places and sites of State heritage significance are listed under the Heritage Act 1977 and where a proposal has the potential to impact on the significance of the item, consent is required from the NSW Heritage Council.

Key Principles

Empowerment

To support the growth and empowerment of migrant communities, the identification and protection of what is significant should be determined by the migrant communities through processes facilitated by Council.

Acknowledgement

The involvement of the migrant communities and the information provided should be acknowledged in all work undertaken by Council, to ensure appropriate recognition.

Belonging

The creation of public spaces and places of significance to migrant communities is important, as it helps grow a sense of place and develop a feeling of belonging. These experiences can ensure that a new community within an established area can settle and become a part of the local community.

What Heritage?

Places or spaces identified by migrant communities may not be the same as those recognised by the Anglo-celtic or European population. The differences should be respected and the community should work with the migrant populations to ensure these places and spaces are identified and respected appropriately.

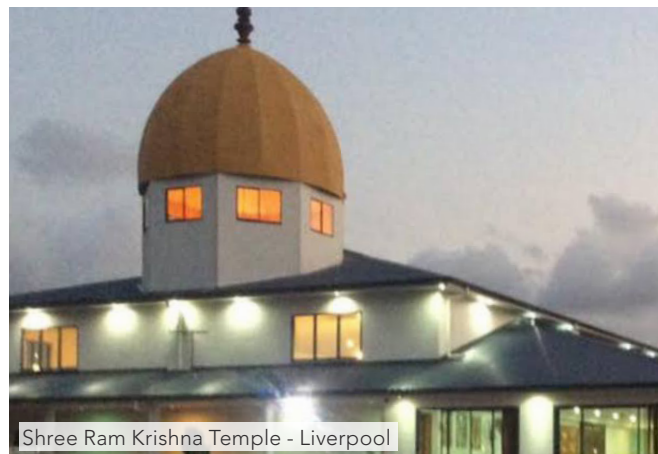


Figure 6.254 Migrant and Transnational Heritage - Food and Culture (Liverpool City Council)

6.11

Master Plan

Heritage - Streets & Buildings

The Town Plan of Liverpool

History

The foundation and settlement of the town of Liverpool is strongly associated with the Macquarie period, Macquarie himself intending Liverpool to be the capital of the south-west area of the Cumberland Plain. The township was quickly established with a range of buildings and other structures.

Liverpool continued to play a role as a service centre for much of the surrounding district throughout the 19th century with sporadic periods of industrialisation and development especially following the establishment of the railway. It is likely that much evidence of former structures and activities would have survived within the township as archaeological sites or relics.

Statement of Significance

Liverpool town centre is one of a small number of townships in the Sydney Region that was initially planned and developed in the Macquarie period. It is likely that a considerable quantity of archaeological evidence may survive below ground on sites within the historic town boundaries. Further archaeological, architectural and documentary research would contribute substantially to knowledge and understanding of the town's establishment, functions, development and living conditions. The township has significant archaeological potential to reveal information about life in the Colonial period and the occupation of Liverpool in particular.

Proposed Interventions

Nil interventions, however, the significance and prominence of the Town Plan of Liverpool should be reinforced through public domain treatments which differentiates the space from newer, less significant roads or laneways.

Consent Requirements

The town plan is a local heritage item with only consent from Liverpool City Council required.

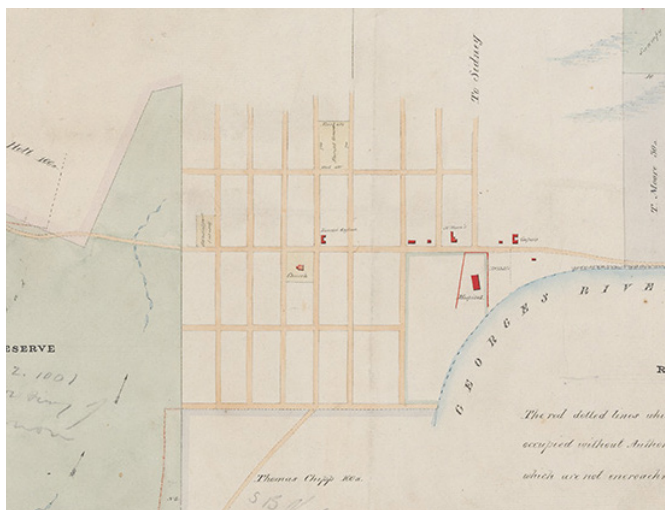


Figure 6.255 Plan of Liverpool City Centre - 1831 (Liverpool City Council)

Liverpool Railway Station Site

History

The railway at Liverpool station was opened in September 1856. This, with the electric telegraph arriving in 1858, provided speedy, safe transport and communication and began the transformation of Liverpool into a major regional city (www.liverpool.nsw.gov.au/ourcity/historyofliverpool.htm).

Statement of Significance

Liverpool station building is a good example of a third class station building in the centre of a large scale redevelopment of the site. It indicates the change in technology and approach to railway construction. Liverpool goods shed is a rare brick structure on the State system which is substantially intact with platforms and a jib crane. It is located in a historic town and is the last remnant of the early station and yard complex at the site. It is rare, as one of the last two surviving brick goods sheds within the State.

Proposed Interventions

The Liverpool Railway Station is a gateway site with the potential to provide improved and increased public domain, which connects to Bigge Park and the new space to be constructed around the Old Commercial Hotel.

The relocation of the drop off and pick up area, as well as the short stay parking in front of the railway station would provide a space that can be enhanced through new paving and landscaping, which provides an inviting space for visitors and the community.

This can be enhanced through the adaptation of the Liverpool Railway Station building for the purposes of a café, supporting the conservation of the building and increasing the public accessibility to this significant building within the city centre, and Liverpool Local Government Area (LGA).

Consent Requirements

The proposed intervention would be required to be developed in consultation with Sydney Trains and would require consent from the NSW Heritage Council.



Figure 6.256 Liverpool Station Past & Present (Liverpool City Council)

Master Plan

6.11 Heritage - Buildings

Former Liverpool Courthouse

History

The former Liverpool Courthouse building was constructed on the site of, or adapted from, the original buildings of the 1819 barracks. As such, it is considered one of the earliest examples of a convict barracks on the mainland, only pre-dated by Hyde Park Barracks (1817-1819).

Statement of Significance

The former Liverpool Courthouse (1819) and Potential Archaeological Site is of state heritage significance as it demonstrates the activities of significant historic importance to the State from 1819, for over 120 years. The archaeology site is one of the earliest surviving examples of a convict barracks on the Australian mainland. It is likely that only Sydney's Hyde Park Barracks, (1817-19) pre-dates it. The potential archaeological remains of the barracks at the rear of the courthouse may provide key ongoing research opportunities in fields such as convict studies, colonial settlement and working class communities, all important themes in Australian history.

The former Liverpool Courthouse and potential archaeology provides evidence of the important role of Liverpool in the early colonial period as a key government administrative centre, during Macquarie's time in office. The extant building served important functions in the colonial period, first as a gaol and then as a courthouse, and demonstrates the history of judicial service in the colony of New South Wales for over 120 years. The Courthouse is a rare example of an early colonial Georgian courthouse with later Victorian additions and embellishments, indicating a level of achievement in its design and construction. Because of its early construction and use as a convict barracks before it became a courthouse, the building demonstrates variation in form and style in NSW, highlighting its rarity and importance.

Proposed Interventions

There is a current proposal to activate the building, through the use of the site by the University of Wollongong. There are opportunities to improve the public space around the courthouse with an enhanced courtyard behind the building, the removal of the intrusive green fence and the provision of period sensitive landscaping along the Moore Street elevation (See Figure. 6.259).

The provision of customised signage would also improve the identification and understanding of the building, and its significance.

Consent Requirements

Interventions to the courthouse precinct would require consent from the NSW Heritage Council.

Dr. Pirie Community Centre

History

Dr. James Pirie was a leading local medical practitioner in the early 20th century and a charitable and well-respected member of the local community.

The Dr. Pirie Community Centre building was constructed immediately preceding World War II, to provide a dedicated health centre for the children and women of the area.

Statement of Significance

The Dr. James Pirie Memorial Community Complex demonstrates the history of a community health care facility in the Liverpool area. It is associated with Dr. James Pirie. The house is representative of Post War International style architecture and exhibits a number of unusual architectural details that are rare within the Liverpool area. It has a prominent location in the streetscape and is aesthetically pleasing. There is the potential to gain more information on the site from further architectural, archaeological and documentary research.

Proposed Interventions

The forecourt of the Dr. Pirie Community Centre sits on a prominent corner, on the intersection of Moore Street and Bigge Street.

There is an opportunity to enhance the corner through improved period specific plantings creating a formal garden, the provision of a new low compatibility fence defining the space, and a new customised and site-sensitive sign to replace the existing unsympathetic signage (See Figure. 6.261).

Consent Requirements

As a local heritage item, any works proposed to the building and land would require consent from Liverpool City Council.



Figure 6.257 Former Liverpool Courthouse - Historical Image (Liverpool City Council)

6.11

Master Plan
Heritage - Buildings



Figure 6.258 Former Liverpool Courthouse, Forecourt - Before (Liverpool City Council)



Figure 6.259 Former Liverpool Courthouse, Forecourt - After (Liverpool City Council)

6.11

Master Plan

Heritage - Buildings

All Saints Catholic Church

History

The Foundation stone of the All Saint Catholic Church was laid on the 11th August 1963 by Most Reverend J.P. Carroll, Auxiliary Bishop to his Eminence N.T. Cardinal Gilroy. The Church replaces an earlier church and convent that was constructed on the site of Westfield Shopping Centre Liverpool, during the 1800s. The church was one of the first Catholic churches in the colony.

Statement of Significance

All Saints Catholic Church demonstrates the history of the Catholic Church in the Liverpool area and has strong social links with the community. The church building in both scale, design and location, is a landmark site in the city. It is representative of Post-War Ecclesiastical style architecture and is rare within Liverpool.

Proposed Interventions

No significant interventions are proposed, however consideration could be given to upgrading of the pavement within the site to match the public domain, and consideration to the enhancement of the landscape areas in the front, and along the sides of the building.

Consent Requirements

As a local heritage item, any works proposed to the building and land would require consent from Liverpool City Council.

Old Commercial Hotel

History

The Commercial Hotel (now the Ground Zero Hotel) was built in 1896. In 1888 it was the estate office for the sale of the "Moorebank Estate" and a photograph of the hotel in 1888 appears in the sale brochure.

Statement of Significance

The former Commercial Hotel demonstrates an aspect of the commercial development of Liverpool in the late 19th and early 20th century. The site, as an example of a late Victorian style building, indicates a level of technical achievement in its design and construction. It is now a rare site type in Liverpool. The hotel also forms a component of a cluster of early 19th century buildings in the environs of the city centre. It is a prominently located and aesthetically pleasing building within the broader cityscape.

Proposed Interventions

Nil Council-initiated interventions are proposed.

Consent Requirements

As a local heritage item, any works proposed to the building and land would require consent from Liverpool City Council.

Former Liverpool Hospital (Liverpool TAFE)

History

In 1820, Macquarie called upon Greenway to draw up the early designs for the new Liverpool Hospital. Following Macquarie's return to England in 1822 and the downgrading of significant colonial investment in public works, the designs for the Liverpool Hospital were reassessed and altered by Greenway to suit the needs of the incoming governor, Sir Thomas Brisbane. To the north of the first 1810 hospital, construction of the new facility commenced in 1822 but, following the laying of the foundations and a quarrel over the prepared estimates and bills, Greenway was dismissed by Governor Brisbane and a new government architect, Standish Lawrence Harris, was appointed.

By December 1829, the construction of the Liverpool Hospital was finally complete. After seven years of construction, and multiple suspected changes to its original design, the final building was a distinct departure from the simple box-like structures of many public buildings in the colony. Despite construction commencing in 1822 (though officially in 1824) and finishing in 1829, the main building of the former Liverpool Hospital complex has a distinctive '1825' embossed sandstone plaque above the entrance. As this date does not correlate with either the commencement or conclusion of the construction work, it is undetermined what the 1825 date actually relates to.

While the construction of the main hospital building was underway, the convict labourers also undertook the construction of the brick wall that surrounds the complex that has survived largely intact. By 1829, convict bricklayers and stonemasons had built a 10-foot high wall, with stone entrance pillars, that was to remain, almost in its entirety, as a historical boundary for the site. This wall has limited the physical expansion of the site throughout its history and ensured that, while the site did not expand, the buildings and the land had a continual history of adaptation, modification and reuse (Cserhalmi, CMP Vol 1 & 4, 1994; Liverpool Heritage Study Vol 1, 1992; Tuck & Douglas, 2002; Keating, 1996).

Statement of Significance

The former Liverpool Hospital complex is of State significance as one of the oldest, substantially intact colonial hospital complexes in Australia. The former hospital is also State significant for its long-standing, continuous history of servicing the health needs of, first the convicts and then of the wider Liverpool community from 1810 to 1958. Built by convict labour, the main 1820s Colonial Georgian building (Block B), its design initiated by Governor Macquarie and attributed to Francis Greenway, is considered one of the finest colonial buildings remaining in Australia, demonstrating the high standard of workmanship carried out by the convict labour gangs. Convict labour was also used to construct the Gate-Keepers Cottages (Blocks S & T), c1820s, and the brick wall that continues, in the most part, to encircle the complex.

6.11

Master Plan
Heritage - Buildings



Figure 6.260 Dr. Pirie Community Centre, Forecourt - Before (Liverpool City Council)



Figure 6.261 Dr. Pirie Community Centre, Forecourt - After (Liverpool City Council)

Master Plan

6.11 Heritage - Buildings

The surviving complex of buildings associated with the hospital period (Blocks A, B, C, S, T, F & G), are a fine representation of the high standard of architectural design and construction in the colony. Flanking the main hospital building, the Edmund Blacket designed Blocks A and C complement the original 1820s building while the Walter Liberty Vernon-designed Block F was a sympathetic addition to the complex, c1902.

Liverpool Hospital is State significant for its associations with Governors Lachlan Macquarie (1810-21), Sir Thomas Brisbane (1821-25) and Sir Ralph Darling (1825-31), the Civil Architect, Francis Greenway (1816-22) and the Colonial/Government Architects, Edmund Blacket (1849-54) and Walter Liberty Vernon (1890-1911).

In-situ archaeology of the original 1810 convict-built Macquarie hospital has State significance for its potential to demonstrate the development of hospital facilities from the earliest years of settlement, as well as the techniques and materials used by the convict labour gangs. The presence of pre-1850 archaeology is rare in NSW.

There are few sites around Australia comparable to the former Liverpool Hospital complex which has State significance for its historic, associative, aesthetic, social, research, rarity and representative values.

Proposed Interventions

Nil.

Consent Requirements

The building is a state heritage listed building, and works to the site and building would require consent from the NSW Heritage Council.



Figure 6.262 Former Liverpool Hospital (Liverpool City Council)

St. Lukes Anglican Church Forecourt

History

Commissioned by Governor Lachlan Macquarie and designed by Francis Greenway, St. Luke's Anglican Church was built in 1818-1819, as part of Macquarie's establishment plan for the town of Liverpool. It was the smallest of the three major church designs commissioned by Macquarie, from Greenway. A rectory was built about the same time but was replaced in 1840.

The site for Liverpool was marked out by Macquarie in 1810. St. Luke's was one of the original public buildings for the town. The building was not fully completed until the early 1820s. A rectory and school building, since demolished, were built close by. The oldest extant associated building on the site is the church hall, part of which dates from the 1840s.

Statement of Significance

St. Luke's Anglican Church is evidence of Governor Macquarie's initiatives in opening up settlement in NSW, and is one of the three oldest surviving Anglican churches in Australia. It is a fine example of Francis Greenway's public architecture in NSW, and is widely regarded with St. James, Sydney and St. Matthew's, Windsor, as a 'foundation' colonial church. The clock in tower is rare in Australia, being one of 3 Thwaites (UK) clocks in Australia, sent (gifted) by King George III (i.e. one in Parramatta at the Former Female Factory, and one in Hobart). (Brown, 2002).

St. Luke's Anglican Church Group as part of Macquarie's original survey of Liverpool demonstrates the history of the early settlement of the city and is a physical link to the character of the early township. It also demonstrates the history of the Anglican Church from the early establishment of the Colony from which period it has been a centre for local worship. Located within the heart of Liverpool, the group is a historic, aesthetically pleasing landmark in an otherwise modernised city centre. It is one of only three surviving early Anglican churches in the country. There is the potential to gain more information on the site from further architectural, archaeological and documentary research.

Proposed Interventions

In the short term, there is an opportunity to provide a greater opening on the east and west access of the site to increase pedestrian movement through the property. This can be enhanced through increased landscaping around the church that is consistent with the period of the building. In the long term, subject to agreement with the church, the external fencing may be removed, and the landscaping can be further enhanced, including through the construction of a long wall and installation of contemporary, but appropriate new signage (See Figure 6.264).

Consent Requirements

The building is a state heritage listed building, and works to the site and building would require consent from the NSW Heritage Council.

6.11

Master Plan
Heritage - Buildings



Figure 6.263 St. Lukes Anglican Church, Forecourt - Before (Liverpool City Council)



Figure 6.264 St. Lukes Anglican Church, Forecourt - After (Liverpool City Council)

6.11

Master Plan

Heritage - Buildings

Rosebank Cottage

History

A summary of the history of Rosebank Cottage is as follows:

- 1882 - 1883, construction by Varney Parkes for his new wife, Mary Cameron Murray, daughter of the owner of the land at the time. Parkes was an architect, local and state politician, and son of Sir Henry Parkes;
- 1883, sold to Louis Haigh, who was involved in the wool scouring business and a mayor in 1880;
- Property rented or owned by a number of prominent people, including Martin and Henrietta Christiansen from 1908 to 1911. Christiansen owned a brick making business, was an alderman for 30 years and mayor of Liverpool in 1900;
- 1929 - 1957, used by Queens College as a boarding school for girls and later, for boys. During this time the rear two storey structure was built;
- 1958 - 1973, used as a male boarding house, and
- 1974, purchased by Liverpool City Council and used for community based offices and meeting rooms.

Statement of Significance

Rosebank is considered to be of State heritage significance for its association with the life and works of the Architect, politician and Postmaster-General, Varney Parkes (1857 - 1935). Varney Parkes, the son of Sir Henry Parkes, was a Liverpool Council Alderman, State Parliamentarian (1885 - 1913), Postmaster-General (1889 -1899) and successful Architect. Parkes who trained under the Colonial Architect, James Barnet between 1878 and 1880 established a successful architectural practice with C. H. E. Blackman and was responsible for the design of a wide range of buildings over much of urban and rural New South Wales, including hotels, warehouses, banks, commercial premises and domestic residences.

Rosebank is a rare surviving example of the residential work of Varney Parkes. Significantly, Rosebank was designed by Parkes (c.1883) for himself and his bride Mary Cameron Murray, and demonstrates the architectural devices used to convey wealth and status, as well as the use of pattern books in the spread of architectural ideas throughout the colonies.

Rosebank is considered to be of Local heritage significance as a grand, relatively unaltered, Architect-designed and built Victorian villa. In addition, Rosebank is the only large Victorian house remaining in the historic Liverpool Township and is held in high esteem by the local community. Rosebank has associations with many of the most prominent families of late nineteenth and early twentieth century Liverpool.

The changing pattern of its use, from a family residence to a school indicates changing economic patterns within the local community. Liverpool was one of the earliest rural settlements in the State and Rosebank is a rare survival illustrating a further, industrial stage in Liverpool's development.

Rosebank is also significant for its twentieth century use as a girl's boarding school and later as a men's boarding house. As a school, Rosebank contributed to the cultural life of twentieth century Liverpool. A collection of moveable heritage has been established, documenting the day to day running of the school. In addition to the house, the garden retains some original Victorian plantings, including mature Bunya Pines. The form of the building, as well as the associated planting, makes it a local landmark. Rosebank is one of a handful of properties, including nearby Del Rose and Collingwood, which can be used to interpret Liverpool's pastoral, industrial and commercial history (NSW Heritage Office, 2005).

Proposed Interventions

Nil.

Consent Requirements

The building is a state heritage listed building and works to the site and building would require consent from the NSW Heritage Council.

Liverpool Public School

History

The present school site was first occupied in 1871 following the erection of a rendered brick schoolhouse, approx. 50ftx18ft, to the design of Architect, George Allan Mansfield. For the remainder of the century, however, the school site was extensively added to in area and building stock. In 1875, for example, two weather sheds (probably weather boarded) and a brick, six-roomed teacher's residence was erected. In 1882 the adjacent "Cumberland Assembly Rooms" (The Masonic Lodge) fronting Bigge Street were rented to house the infants.

Statement of Significance

Liverpool Public School demonstrates the history of the early development of Liverpool and the establishment of the first public school. The various uses of the complex of buildings, particularly as an educational facility, implies a strong social significance to the local community. The early structures indicate a level of technical achievement in their construction and are representative of institutional/educational buildings of their era. It is a rare site type within the Liverpool LGA and now forms part of the Bigge Park Conservation Area.

Proposed Interventions

Opportunities for the replacement of the large brick fence along Bigge Street should be investigated. This would open the site up and improved the visual presence of the heritage buildings on the site.

Consent Requirements

As a local heritage item, any works proposed to the building and land would require consent from Liverpool City Council.

6.11

Master Plan

Heritage - Parks

Overview

The heritage of Liverpool is marked by a range of public open spaces which contribute to the urban setting, but also represent key periods in the history and development of Liverpool.

Bigge Park

History

Bigge Park has remained an open space since the foundation of the township of Liverpool in 1810 when it formed part of the town commons, known as Bigge Square. The area east of what is now College Street was set aside as the site of the District Hospital (now the South Western Sydney Institute of TAFE). Bigge Square originally extended to Scott Street, but the area south of Moore Street was excised when the railway line was constructed in 1855-56.

It is apparent that the area remained undeveloped for some time. An 1880s photograph of the hospital shows the area as being grassed with no trees- at least on the eastern side (Matino 1983). Much of the development of the Park took place in the mid 1950s under the auspices of the Bigge Park Improvement Committee sponsored by Liverpool City Council. In 1996 Liverpool City Council commissioned a Heritage and Management Plan for both Bigge Park and Liverpool Pioneer's Memorial Park.

Statement of Significance

Bigge Park, as part of the original early 19th century commons for the Town of Liverpool, demonstrates the history of early urban planning and land use in the Colony. The establishment of a Town Common is particularly representative of Governor Macquarie's early urban plans in the Colony. As part of the original survey of Liverpool it demonstrates the history of the early settlement of the city and is a physical link to the character of the early township, enhanced by its location near a number of other historic sites in the city centre. It indicates a level of technical achievement in its original design by key Colonial figures Governor Macquarie and Surveyor Meehan. The park is now a public, open, green space with attractive tree planting located in close proximity to a number of historic sites, within the city centre. Its continuity of use as a green open space is rare within Liverpool. There is the potential to gain more information on the group from further architectural, archaeological and documentary research.

Proposed Interventions

Nil, however opportunities could be considered for enhancing the landscaping with more colonial and Indigenous plantings. Indigenous plantings could provide opportunities for Bush tucker and medicine workshops, respecting the Indigenous connection to the site.

Consent Requirements

As a local heritage item, any works proposed to the building and land would require consent from Liverpool City Council.

Liverpool Pioneers Memorial Park

History

St. Luke's Cemetery was the second cemetery established in the town of Liverpool. The first cemetery was opened on Glebe land. The earliest recorded burial was that of Richard Guise, who died 16/4/1821. The cemetery remained in use into the 1950's with a total of 1626 known burials. In 1956 Liverpool Council decided to "tidy up" the cemetery. However, no action was taken until 1973/74 when the cemetery was converted into the "Pioneers Memorial Park".

Statement of Significance

Liverpool Pioneers Memorial Park, demonstrates the life history of the early pioneers of the Liverpool area. It has been a major burial ground for the district for over 150 years and is associated with the numerous individuals, including prominent pioneers and their families. The site contains a comprehensive range of monument types reflecting a level of technical achievement in their creativity. The various monuments are representative of the type, design and craftsmanship of gravestones from a range of eras. The setting of the park in a landscape that contains important remnants of early plantings is aesthetically pleasing. There is the potential to gain more information on the site from further architectural, archaeological and documentary research.

Proposed Interventions

Enhancements can include:

1. Increasing the landscaping on the site through increased tree coverage, greater shrubbery and ground coverage;
2. Opportunities to replace the decomposed granite could be investigated;
3. Improved lighting across the site, and
4. Greater opportunities for passive and reflective recreation.

Consent Requirements

As a local heritage item, any works proposed to the building and land would require consent from Council.

The site is also a known archaeological site due to the presence of colonial graves. Consent from NSW Heritage would be required prior to any excavation works.



Figure 6.265 Liverpool Pioneers Memorial Park (Liverpool City Council)

6.11

Master Plan

Heritage - Parks

Apex Park

History

An area of land on the north-west corner of Elizabeth and Castlereagh Street was set aside by Governor Macquarie as a public burial ground. It was consecrated in 1811 by the Rev. Samuel Marsden, Principal Chaplain of the Colony. The first burial was Thomas Tyrell who died 19 May 1811. In total, more than 120 pioneers of Liverpool and District were buried here until 1821 when the ground was closed to general burial. St. Luke's Cemetery in Macquarie Street became the main district cemetery.

By Act No. 20, 1950, this land was dedicated as a public park to be maintained by the Council of the Municipality of Liverpool as a rest park and garden area. The only original monument from the site which survives, although not in Apex Park, is the altar slab to Nathaniel Lucas dated 1818 which was transferred to the grounds of St. Luke's Church in Macquarie Street in the 1960s.

Statement of Significance

The site demonstrates the history of the expansion of the Colony. It further demonstrates the early planning and pioneer settlement of Liverpool. The site is associated with key Colonial figures Macquarie and Marsden. It is further associated with the 120 early pioneers buried in the cemetery. The site, as an urban parkland, is well-maintained and an open green space in an otherwise urbanised area. It is aesthetically pleasing. There is the potential to gain more information on the site from further architectural, archaeological and documentary research.

Proposed Interventions

Nil, beyond what is already proposed with the Apex Park upgrade Master Plan.

Consent Requirements

As a local heritage item, any works proposed to the building and land would require consent from Liverpool City Council.

The site is also a known archaeological site due to the presence of colonial graves. Consent from NSW Heritage would be required prior to any excavation works.

Berryman Reserve

History

Remembrance Driveway commemorates those from the local Liverpool community who were killed in both World Wars. Lieutenant - General Sir Frank Berryman was the foundation President of Remembrance Driveway between 1952-1981. Various sections of the driveway were established by the Women's League and the War Widows' Guild of Australia in memory of those who fought for their country.

Statement of Significance

The site is of significance as a destination as the Sydney to Canberra Remembrance Driveway and its relationship to Lieutenant - General Sir Frank Berryman, foundation President of the Remembrance Driveway.

Proposed Interventions

There is an opportunity to enhance the landscape of the site and the creation of a passive space which supports the surrounding residential community. New landscaping, working with the existing native plantings and the cenotaph would enhance the space and provide an entrance statement to the Liverpool city centre (See Figure 6.268).

Consent Requirements

As a local heritage item, any works proposed to the building and land would require consent from Liverpool City Council.



Figure 6.266 Berryman Reserve (Liverpool City Council)

6.11

Master Plan
Heritage - Parks



Figure 6.267 Berryman Reserve, Cenotaph - Before (Liverpool City Council)



Figure 6.268 Berryman Reserve, Cenotaph - After (Liverpool City Council)

Master Plan

6.11

Heritage - Parks & Other Items

Lighthorse Park

History

The Park was originally part of the wool wash for Champion Woollen Mills and was then used as a Council dump. In about 1949, Arthur Thompson donated part of the subject land to Council, for public recreation. The reserve north of the Thompson land was also placed under the control of Council by the Lands Department and, together, these were named "John Edmondson V.C. Memorial Park".

On 5 June 1973 Council voted to rename the Park "Light Horse Park" and the Park continues to be known by this name.

The Park contains the Liverpool Weir (SHI 1970179), the Liverpool Footbridge (SHI 1970470- since removed, 2007) , the Light Horse Memorial and a restored steam boiler.

During the 1988 Bicentenary the Light Horse Memorial was dedicated and unveiled by Major General J M L MacDonald, AO, MBE, RFD, ED. The foundations and base were designed by Council Engineers, the construction of which was carried out free of cost by 1 Construction Regiment and 17 Construction Squadron.

The steam boiler was used to produce steam to drive the bridge piles during construction of Liverpool Bridge over the Georges River. The boiler was built about 1900 at Gainsborough, England, by Track Marshall and was thought to have been imported to Australia by Cleveland Bridge Construction Company just prior to construction of the bridge in the middle 1950's.

Statement of Significance

This site has multiple associations from early settlement to the present time and significance in the history of the development of Liverpool and the role of the Light Horse Brigade in WWI. The park is set within a locality that has strong military associations and contains a poignant sculpture and other heritage items set within an attractive, aesthetically pleasing urban parkland. The park is representative of the incorporation of communal green space into town planning and the common practice of dedicating that space to an important event and/or person(s) in the history of Australia. The boiler which is placed within the park is a rare example of a 1900 steam boiler with a collapsible chimney.

Proposed Interventions

Nil, beyond what is already proposed with the Lighthorse Park upgrade Master Plan.

Consent Requirements

As a local heritage item, any works proposed to the building and land would require consent from Council.

Liverpool Weir

History

In 1810 the Liverpool area was the frontier of settlement, with its alluvial and clay soils increasingly being cleared for farming. Small farming enclaves characterised the area around Liverpool which Governor Macquarie proclaimed on 2 November 1810 as the first of his new towns. The first land grants followed. Partly because of Aboriginal hostilities the area did not take off for settlement, however, until the 1830s.

The construction of Liverpool Weir in 1836 would have impacted on the different Aboriginal groups' use of the river as a communication channel. Construction of the weir would also have gradually changed the ecology of the river upstream (Keating, 1996; Goodall & Cadzow, 2009; www.liverpool.nsw.gov.au/aboriginalpeople.htm; Tuck & Douglas, 2002).

Liverpool Weir was constructed in 1836 to supply water to local farmers and the town of Liverpool and to serve as a causeway across the George's River. It was designed by David Lennox, master mason, Superintendent of Bridges for the colony of NSW and Australia's first major bridge builder. Before arriving in Australia in 1832, David Lennox, master mason, had occupied responsible positions in Britain for more than twenty years, working on many bridges including Telford's great suspension bridge over the Menai Straits and the stone-arch bridge over the Severn River at Gloucester. Lennox was appointed by Governor Brisbane as Superintendent of Bridges for the colony of NSW in 1833. Lennox was Australia's first major bridge builder but he also undertook many other civil engineering works in NSW from 1832 to 1844, when he was appointed superintendent of bridges for the Port Phillip District in Victoria. For nine years he had charge of all roads, bridges, wharves and ferries and acted as advisor to various government departments. In this period he built 53 bridges. Liverpool Weir is the only weir Lennox is known to have designed in the colony.

Liverpool Weir was one of the two last convict-built public works at Liverpool, the other being Lennox's Lansdowne Bridge over the Prospect Creek on the Hume Highway, Lansvale

Liverpool Weir, also convict-built, was constructed between February and August 1836. In February some of Lennox's convict gangs from the Lansdowne Bridge encampment moved over to the Liverpool Weir site on George's River, below the Liverpool Hospital (Keating, 1996, 64). Work on Liverpool Weir would have proceeded concurrently with construction of the Landowne Bridge tollhouse. Lennox also used the Voyager's Point quarry for Liverpool Weir with the stone being moved up river on barges (Colonial Architect's correspondence, Clarke, 2010: pers. comm.).

Captain William Harvie Christie of the 80th Regiment, who had been appointed assistant engineer and Superintendent of Ironed Gangs at Liverpool, oversaw the construction of Liverpool Weir.

6.11

Master Plan Heritage - Other Items

Statement of Significance

Liverpool Weir is state significant for its historical association and rarity values. It is the only weir in NSW known to have been designed by master mason David Lennox. Liverpool Weir was one of the first 'engineered' weirs built in the colony.

Liverpool Weir is an example of the construction of the colony's infrastructure by convict labour, in particular by convicts undergoing secondary punishment. It demonstrates the harsher punishment regime in NSW decreed by the British Government from the mid 1820s to the 1840s in order to revive the fear and dread of transportation. Liverpool Weir has local significance for its potential for research into changes in ecology from below to above the weir, during the 170 years of its existence.

Proposed Interventions

Nil.

Consent Requirements

The building is a state heritage listed building and works to the site and building would require consent from the NSW Heritage Council.



Figure 6.269 Liverpool Weir - Historic Image (Liverpool City Council)



Figure 6.270 Concept sketch of pedestrian bridge across Liverpool Weir (Liverpool City Council)

Boer War Memorial

History

The Boer War in South Africa lasted between the years 1899-1902. More than 16,000 volunteers from Australia answered the call to serve with the British army during the campaign. After the campaign, many municipal councils erected memorials to commemorate the colonial troops who had served the Empire. Private AE Smith appears to have been the only soldier from the Liverpool area killed in the Boer War campaign.

Statement of Significance

The Memorial demonstrates the history of Australia's first major overseas military conflict and documents the allegiance of the country to the British Empire in the early 20th century. The site is associated with the only local soldier who died in that conflict. The memorial is rare within the Liverpool area. Its design and construction indicates a level of technical achievement. There is the potential to gain more information on the site from further architectural and documentary research.

Proposed Interventions

Nil.

Consent Requirements

As a local heritage item, any works proposed to the building and land would require consent from Council.

Cast Iron Letterbox

History

Little is known of the cast iron letterbox except that it was erected during the 1800s, as evidence of the growth of government services within the LGA.

Statement of Significance

The Cast Iron Letter Box demonstrates the history of the postal service in the Liverpool area. It now forms part of a historic streetscape and is aesthetically pleasing. The letter box is representative of a once common feature of local postal services, that is now rare in Liverpool and the wider Sydney area. There is the potential to gain more information on the item from further architectural, archaeological and documentary research.

Proposed Interventions

Nil.

Consent Requirements

As a local heritage item, any works proposed to the building and land would require consent from Council.

6.11

Master Plan

Heritage - Other Items

Macquarie Monument

History

The Macquarie Monument is a tribute to Governor Macquarie who founded the town of Liverpool. It is a tribute to the origins of the town and the importance of Liverpool in the early development of the Colony. It reflects the importance of the role of Governor Macquarie in the development of Architecture and Town Planning within the early Colony which is still reflected in contemporary streetscapes. Its is located in the heart of the city, along Macquarie Street and is aesthetically pleasing and contains landmark qualities.

Statement of Significance

Liverpool City Council commissioned renowned Australian sculptor Robin Blau, the designer of the coat of arms over the new Parliament House in Canberra, to create a statue of Macquarie to be placed in the main street. The statue of Governor Lachlan Macquarie was officially unveiled by the Hon. George Paciullo CLO, Mayor of the City of Liverpool on Thursday 5 October 1995.

The sculptor sought to depict the qualities of Macquarie and has used various symbols within the monument to do this. Surveyors tools represent the working man, the T-square shows Macquarie's planning ability while the journal is for knowledge and the sexton foresight. The positioning of the statue near the Westpac Bank is a reminder of the place where Macquarie founded Liverpool and of his founding of the Bank of NSW (now Westpac), in 1817.

Proposed Interventions

Nil.

Consent Requirements

As a local heritage item, any works proposed to the building and land would require consent from Council.



Figure 6.271 Reinstated Macquarie Monument (Liverpool City Council)

Milestone

History

This milestone is likely to pre-date the series of standard design trapezoidal stone which were placed along the line of road between Liverpool and Campbelltown in 1854. The style of the inscription suggests a date earlier than the standardised 1850s milestones.

Statement of Significance

The Milestone demonstrates the history of the early road networks and transport systems of the area. It indicates a level of technical achievement in its original use as a milestone and represents a feature that once formed an integral part of the States' early road networks. It is now a rare monument type in the wider environs of Liverpool. There is the potential to gain more information on the site from further architectural, archaeological and documentary research.

Proposed Interventions

Nil.

Consent Requirements

As a local heritage item, any works proposed to the building and land would require consent from Council.

Pylons

History

The Liverpool Pylons were constructed in 1917 by the NSW Railway Commissioners on behalf of the Department of Defence. The pylons form part of the Liverpool to Holsworthy railway which serviced the military facilities and German Internment Camp.

The pylons are the last remaining evidence of the railway and the work undertaken by German Internees during the war.

Statement of Significance

The pylons are of significance as to their relationship to World War I and World War II and the significance of their role in providing access to the key military facilities at Holsworthy and Moorebank. The pylons are of significance as the last remaining evidence of the railway link and a rare military railway.

Proposed Interventions

The Georges River Strategy proposes adapting the pylons for a pedestrian link (See Figure 6.270).

Consent Requirements

As a local heritage item, any works proposed to the building and land would require consent from Council.

6.11

Master Plan

Heritage - Other Items

Railway Viaduct (Shepherd Street)

History

The viaduct probably dates to the early 20th century, a period when many existing viaducts on the Sydney suburban railway network were replaced by brick arched structures. Nearly all existing structures are pre-1920.

Statement of Significance

The Railway Viaduct demonstrates the history of the early 20th century development of the local Liverpool railway system into a suburban rail network. It indicates a level of technical achievement in its design, construction and continued use. Its modifications reflect the evolution of rail transport to and from Sydney. The arched viaduct is an aesthetically pleasing structure over Mill Road that is now a rare site type in the Liverpool area. Its physical and visual association to the Liverpool Railway Group adds to the significance of the site. There is the potential to gain more information on the item from further architectural, archaeological and documentary research.

Proposed Interventions

Nil.

Consent Requirements

As a local heritage item, any works proposed to the building and land would require consent from Council.

Railway Viaduct (Shepherd Street & Mill Road)

History

Little is known as to the history of the viaducts, however it is assumed that the viaducts date from the early 20th Century and were replacements of the original viaducts in the 1920s.

Statement of Significance

The Railway Viaduct demonstrates the history of the late 20th century development of a suburban rail network. It indicates a level of technical achievement in its design, construction and use that reflects the evolution of rail transport to and from Sydney. There is the potential to gain more information on the item from further architectural and documentary research.

Proposed Interventions

Nil.

Consent Requirements

As a local heritage item, any works proposed to the building and land would require consent from Council.

Palm Trees on Macquarie Street

History

The Palm trees were planted in the last 20 years as replacements for earlier palms trees which were representative of Australia's involvement in the African/desert campaigns of World War 1.

Statement of Significance

This group of palm plantings is a rare example of formal urban landscaping in the Liverpool city centre; possibly established in conjunction with the Memorial School of Arts Building, located opposite.

Proposed Interventions

Nil.

Consent Requirements

As a local heritage item, any works proposed to the building and land would require consent from Council.



Figure 6.272 Palm trees on Macquarie Street (South) (Liverpool City Council)



Figure 6.273 Liverpool Railway Viaduct (Liverpool City Council)

6.12

MASTER PLAN PUBLIC ART

Overview and Key Themes & Interventions

Overview

The term public art refers to works of art in any media that has been planned and executed with the specific intention of being sited or staged in the physical public domain, usually outside and accessible to all people. Public art may be ephemeral, temporary or permanent in nature, and it may be located in (or be part of) a public space or facility and can be commissioned by both the public and private sector. Public art also includes the conceptual contribution of an artist to the design of public spaces and facilities. There is various types and forms of public art, as described below.

Types of public art include the following:

- Functional (i.e. artwork that is integrated with functional objects such as seating, lighting or bollards);
- Decorative (i.e. artwork that is intended to make something look more attractive or ornamental such as decorative paving inlays);
- Iconic (i.e. artwork that is important or impressive because it is a symbol of something famous, popular or meaningful);
- Integrated (i.e. artwork that is fully incorporated into buildings, structures, objects or surfaces such as flooring or windows), and
- Interpretative (i.e. artwork that is used to describe, inform or educate people on issues, events and situations, such as signage, plaques or text-based works).

Forms of public art include the following:

- Sculpture (i.e. stand-alone 3-dimensional objects);
- Painting (i.e. painted surfaces and objects);
- Wall Art, also known as "mural" (i.e. painting or other works of art executed directly on a wall);
- Installations (i.e. art installed for a specific purpose such as a community event);
- Light Works (i.e. artwork incorporated into public lighting);
- Mosaics (i.e. assemblage of tiles or other small objects to create a whole image or object);
- Street Art (i.e. commissioned visual art created in locations for public visibility, such as approved wall paintings, poster art, stencil art and sticker art);
- Temporary (i.e. any form of artwork that is installed for a set period of time and is then removed), and
- Interactive (i.e. any form of artwork that involves spectators in a way that allows the art to achieve its purpose).

This chapter of the report includes an overview of a public art survey that was conducted by Council in 2019, an explanation of why public art is important, proposals to develop a public arts policy and strategy and examples of the types and forms of public art. These examples are intended to give an indication of what public art might be suitable for the Liverpool city centre, based on feedback received in the public art survey and through community and stakeholder engagement. As projects within the Master Plan progress to detailed design stages, it is recommended that Council's Public Arts Officer is consulted to provide input and advice.

Public Art Survey

Council conducted a public art survey in early 2019, via Council's Liverpool Listens website. Similar surveys typically receive 30 – 60 responses, and surveys with additional marketing support or incentives typically receive up to 120 responses. The public art survey generated 577 responses, of which 259 requested they be included in future discussions about public art in the Liverpool Local Government Area (LGA). This indicates that the community has an interest in public art and values it as a key component within the public domain.

The survey included various questions aimed at understanding the following:

- Gauge the levels of community interest in public art;
- Gauge community awareness of existing public art with the Liverpool LGA;
- Understand where people would like to see public art located;
- Understand what functions that the community would like to see public art having;
- Understand what forms of public art are desired by the community, and
- Understand what types of art is preferred by the community.

The pie chart below, from the survey shows that 99% of respondents felt that public art is important (See Figure 6.274). The bar charts on the following page shows responses relating to the forms of public art that the community prefers and priorities related to the commissioning of new public arts (See Figure 6.275).

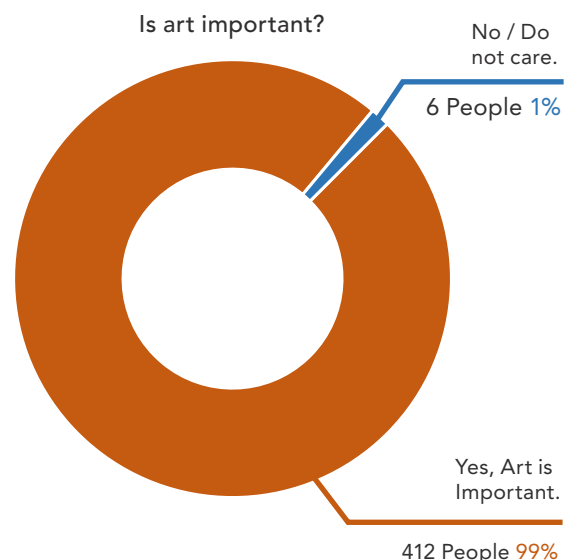
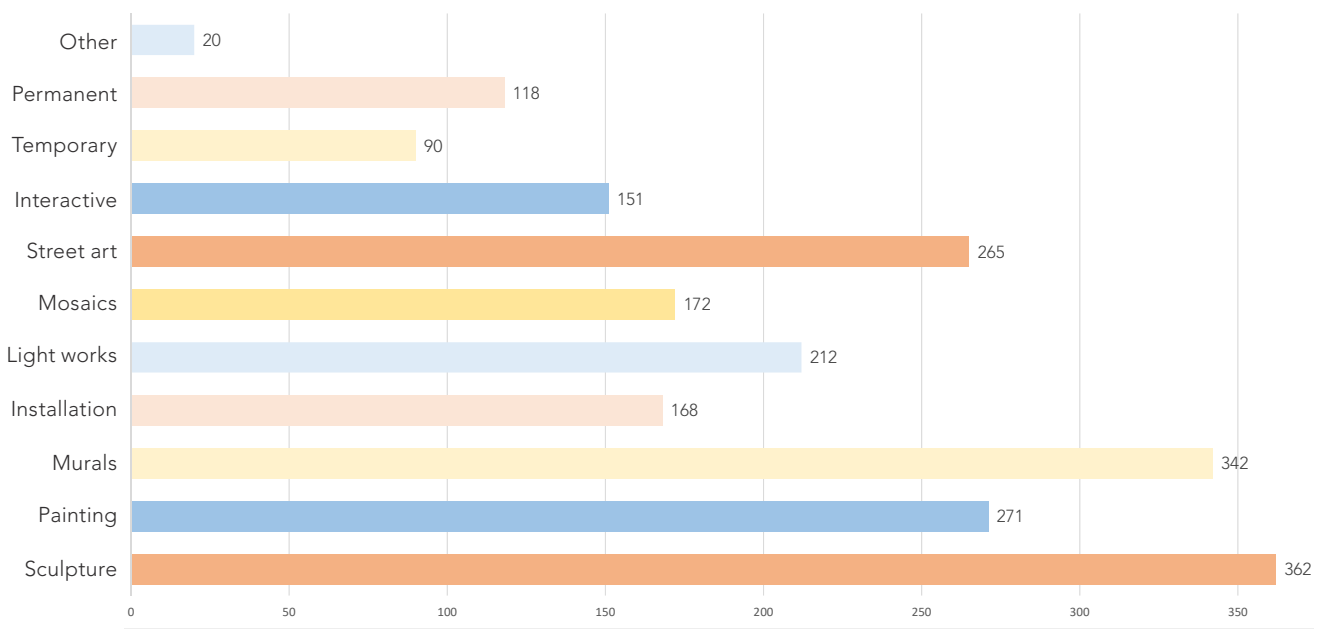


Figure 6.274 Statistical Data from Public Arts Survey (Liverpool City Council)

6.12

Master Plan
Public Art

What are your favourite form(s) of public art?



What should Council consider when commissioning new public artwork?

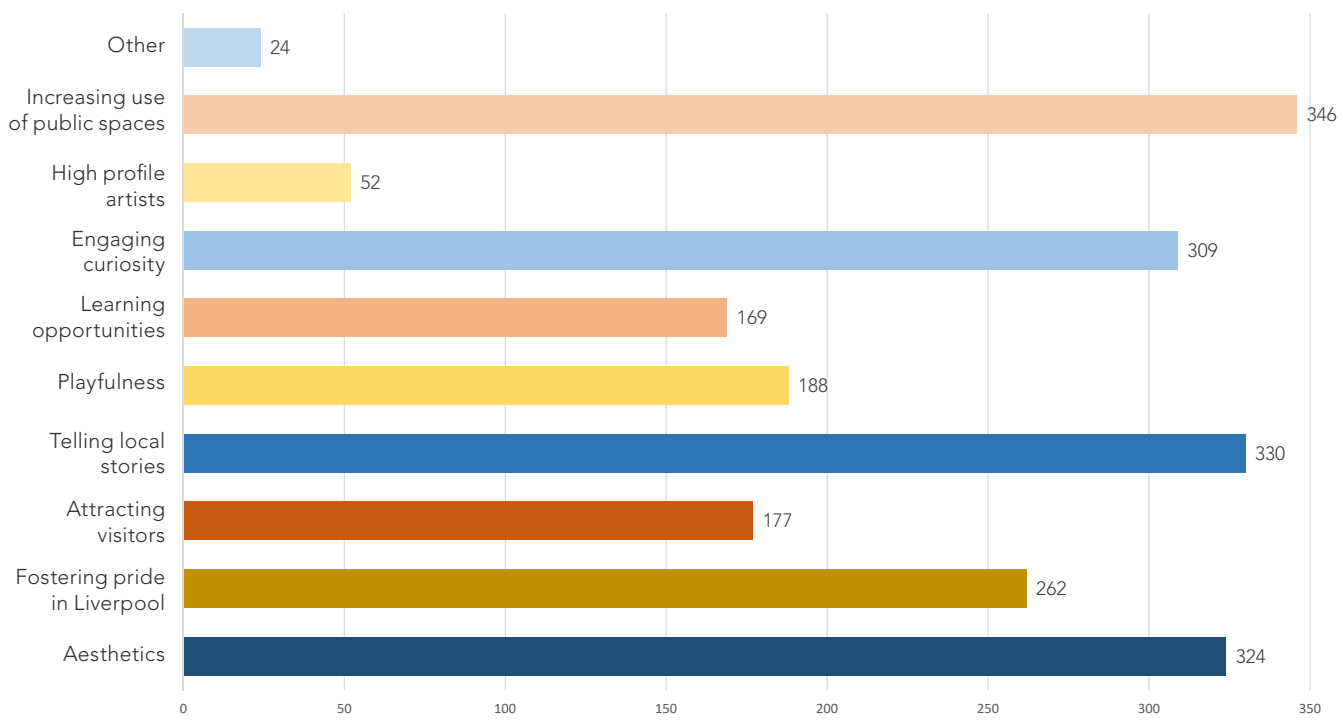


Figure 6.275 Statistical Data from Public Arts Survey (Liverpool City Council)

Master Plan

Public Art

6.12

The Importance of Public Art

The city gains cultural, social and economic value through Public Art. Public Art is a distinguishing part of public history and the evolving culture of the community. It reflects and reveals the society, adds meaning to the city and uniqueness to the community. The results of Council's public art survey, conducted in 2019 indicates that the Liverpool community believes that Public Art is important (See Figure 6.274). 98.1% of respondents identified Public Art as a positive addition to facilities and public spaces, 97.4% cited that they believed the council should invest in and/or identify opportunities to increase Public Art across the LGA, and 97.7% of respondents agreed Public Art should be included in new developments. Public Art provides cultural, social and economic benefits, each of which is described below.

Cultural Benefits

Public Art can help to define a place and create a sense of cultural identity. Public Art contributes to the community's understanding and appreciation of the city's cultural and natural heritage, thereby enhancing the built environment and creating more meaningful public spaces. It is internationally recognised that public art contributes to the transformation of the urban landscape by communicating cultural identity and as a vehicle for engaging communities, through integrating public art into the experience of the city. Public Art imbues a strong identity and points of difference into the public realm, thereby increasing the community's attachment to the city and use of public spaces.

Social Benefits

Public art has the ability to create connection, including through shared narratives, sensory opportunities, playfulness and common interests. Public art provides a sense of community identity, ownership, custodianship and sense of pride, thereby improving the public experience of buildings and spaces. Public art is an opportunity to make the public domain more inclusive through engaging all five human senses (i.e. sight, hearing, smell, taste and touch). Public Art also encourages creative collaborations between artists and other professionals such as Architects, Landscape Architects and Engineers. International studies and research has revealed that public art can decrease crime and antisocial behaviour.

Economic Benefits

Public art, through building and reinforcing community culture, can act as a catalyst for community generation, regeneration and investment into the city. Public art can encourage foot traffic and encourage people to spend more time in public spaces. Public Art can support tourism, including through creating unique experiences for visitors, attract them to visit and extending the period of time they spend within the city and local government area, resulting in economic benefits. These include the increased usage of restaurants, cafés, bars and retail shops, with flow on effects including providing workforce opportunities and increased real estate values.

Key Themes & Interventions

The key themes and interventions for Public Art within the city centre are as follows:

- Retain existing Public Art located within the city centre;
- Conserve and maintain existing Public Art located within the city centre;
- Develop a Public Art Policy to articulate the directions, limits, expectations and principles to inform decision making relating to Public Art, both within the Liverpool city centre and in the Liverpool Local Government Area (LGA);
- Develop a Public Arts Strategy to establish a framework to guide decision making relating to Public Art, both within the Liverpool city centre and in the Liverpool LGA;
- Encourage the incorporation of Public Art in suitable locations within the city centre, through Development Application (DA) conditions of consent, Planning Proposals and Voluntary Planning Agreement (VPA) negotiations, in consultation with Council's Public Arts Officer;
- Incorporate Public Art in suitable locations within the city centre, through capital works and/or maintenance upgrade projects that are delivered by Council, in consultation with Council's Public Arts Officer;
- Encourage community participation in the development of new Public Art in the city centre, and
- Collaborate with private property owners to deliver Public Art in the private domain, where appropriate, in collaboration with Council's Public Arts Officer.

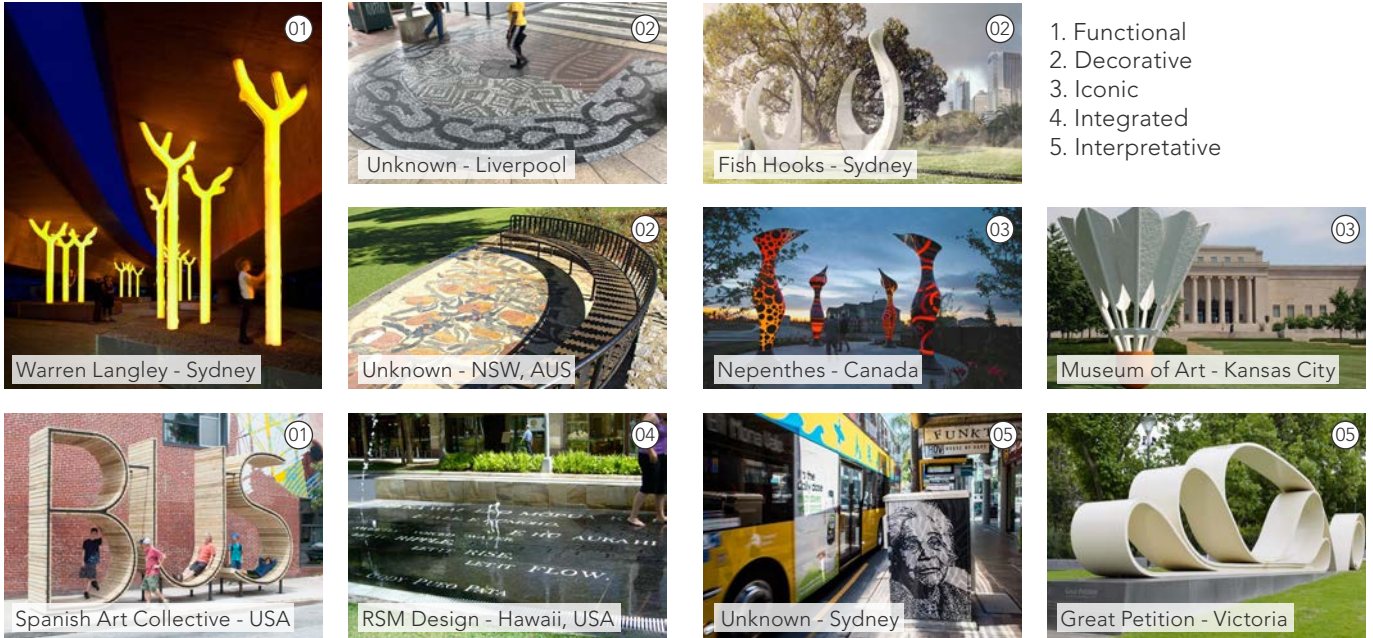
The following pages of this chapter includes examples of the types and forms of public art. These examples are intended to give an indication of what Public Art might be suitable for the city centre, based on feedback received in the Public Art survey and through community and stakeholder engagement.

As projects within the Master Plan progress to detailed design stages, it is recommended that Council's Public Arts Officer is consulted to assist in identifying opportunities to include Public Art within public domain projects and to provide subject matter specific input and advice. Written approval needs to be sought from Council's Public Arts Officer (or their immediate Supervisor or Manager), for the removal and/or alteration to any Public Art item, or addition of a new Public Art item, within the city centre and/or elsewhere in the Liverpool LGA.

6.12

Master Plan
Public Art

Types of Public Art



1. Functional
2. Decorative
3. Iconic
4. Integrated
5. Interpretative

Figure 6.276 Precedent images of Types of Public Art (Liverpool City Council)

Forms of Public Art

Sculpture

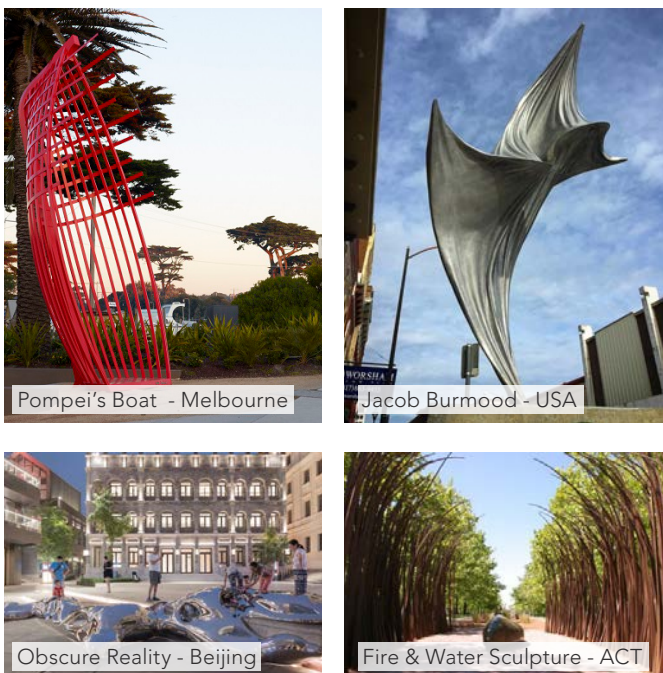


Figure 6.277 Precedent images of Sculpture Art (Liverpool City Council)

Painting

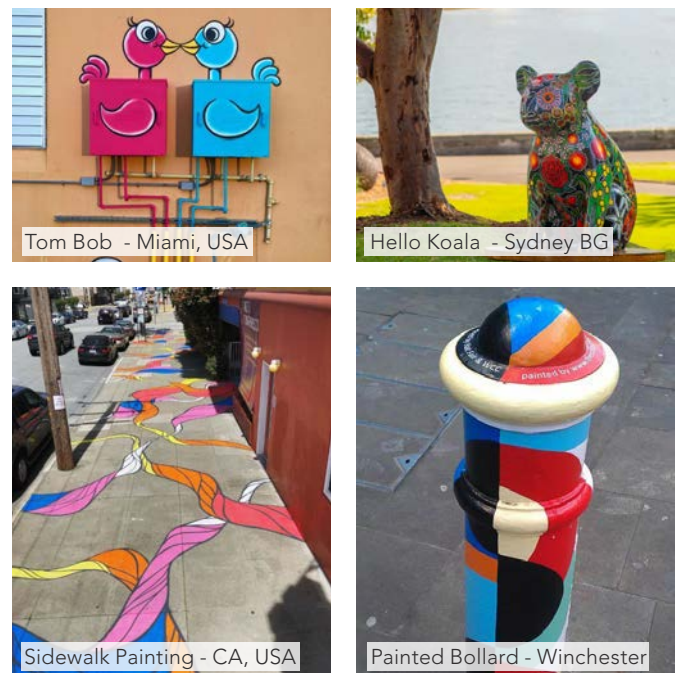


Figure 6.278 Precedent images of Public Painting Art (Liverpool City Council)

6.12

Master Plan
Public Art

Wall Art



Figure 6.279 Precedent images of Wall Art (Liverpool City Council)

Installations



Figure 6.280 Precedent images of Installations Art (Liverpool City Council)

Light Works

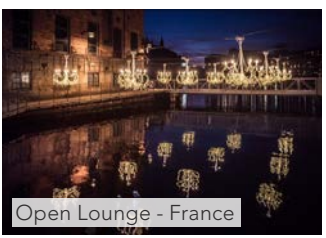
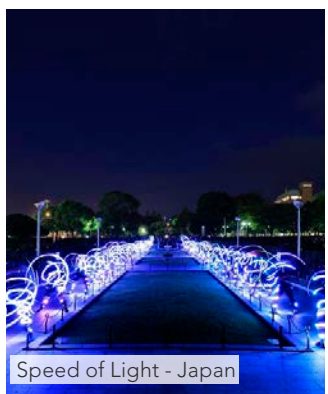
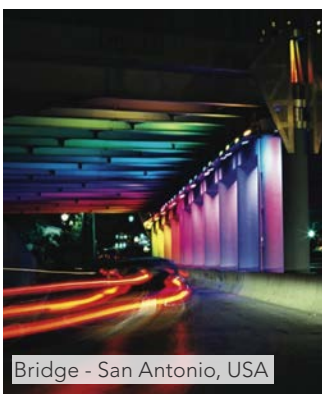


Figure 6.281 Precedent images of Lightworks Art (Liverpool City Council)

Mosaics

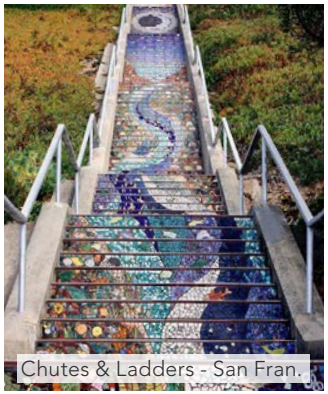


Figure 6.282 Precedent images of Mosaic Art (Liverpool City Council)

6.12

Master Plan
Public Art

Street Art



Sticker Art - Florence



"No comment" - Strasbourg



Liu Bolin Am 25 - NYC, USA



Pavement Giants - Melbourne



Aboriginal Portrait - Melbourne



FAKE - Amsterdam, NED



Eye Trap Art - Istanbul



L7M - Sau Paulo, Brazil

Figure 6.283 Precedent images of Street Art (Liverpool City Council)

Temporary



Flower Puppy - Sydney



Large Rabbit - Orebo, Sweden



Interactive Wheels - Montreal



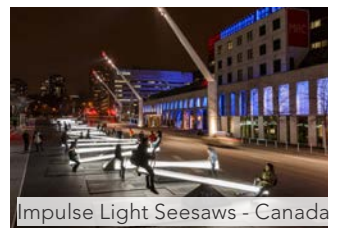
Mobile Gardens - Bristol, UK

Figure 6.284 Precedent images of Temporary Art (Liverpool City Council)

Interactive



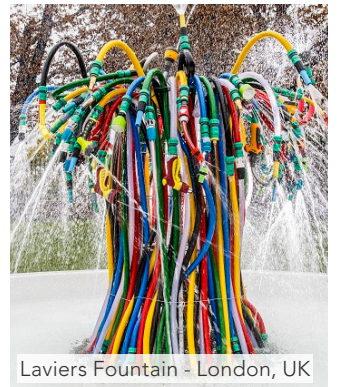
Large Megaphone - USA



Impulse Light Seesaws - Canada



Witnessing to Silence - QLD



Laviers Fountain - London, UK

Figure 6.285 Precedent images of Interactive Art (Liverpool City Council)

6.13

MASTER PLAN TREES & VEGETATION

Overview and Key Themes & Interventions

Overview

Trees and vegetation within city streets has various functions and numerous benefits, including: creating a healthier environment (by reducing air pollution), saving energy & associated costs (through cooling the environment & thereby reducing the need for air-conditioning), providing shade & a cooler environment for pedestrians, providing habitats for animals, cleaning water (through treating storm water runoff), increasing property values, providing visual character, assisting with way finding, and providing ecological benefits (e.g. providing flowers & pollen for bees).

Council conducted an experiment that involved placing temperature sensors in trees for a period in Autumn 2019. The sensors recorded the temperature every 15 minutes day and night, for the purpose of understanding whether:

1. There was a difference between shade temperatures at the pedestrian level produced from structure shade and that from trees, and
2. Whether different tree species (*Harpulia pendula*, *Lophostemon confertus* and *Eucalyptus spp.*) produced different shade temperatures.

The data from the experiment found that tree shade when compared to nearby structure shade varied between species but was consistently cooler by day and warmer by night. *Harpullia pendula* had the highest difference for day at 1.86 degree Celsius cooler and 1.64 degrees Celsius warmer at night. *Lophostemon confertus* was 1.27 degrees Celsius cooler by day and 1.10 degrees Celsius warmer at night. *Eucalyptus spp.* had the least difference, 0.72 degrees Celsius cooler by day and 1.29 degrees Celsius warmer at night. The tree structure including foliage density and leaf orientation, as well as soil moisture are key elements that generated temperature difference between the species and contributed towards tree performance. The findings of the experiment have informed the approach to use dense canopy street trees to maximise cooling and include passive irrigation as standard tree planting details to maximise soil moisture.

Legend

	Railway Station
	Railway Line
	Liverpool City Centre - Project Site Boundary
	<i>Eucalyptus maculata</i> (Spotted Gum)
	<i>Eucalypts</i> (Various)
	<i>Fraxinus pennsylvanica</i> (Urbanite Ash)
	<i>Ginkgo biloba</i> (Maidenhair Tree)
	<i>Harpulia pendula</i> (Tulip Wood)
	<i>Jacaranda mimosifolia</i> (Blue Jacaranda)

Key Themes & Interventions

The diagram on the following page shows the proposed street tree plan for the city centre (See Figure. 6.286). This includes individual tree species for each street, feature trees at key intersections along the Macquarie Street spine, and key marker tree plantings at selected city centre gateway sites. The images and descriptions on page 274 provide further detail about each tree species. Images and descriptions of the selected vegetation species are shown on page 275.

Overall, the proposed tree and vegetation species have been selected based on the following criteria:

- Species that are suitable for the environmental conditions of the city centre, and require low maintenance;
- Species that are already successfully growing within Liverpool and nearby areas;
- A mixture of native and exotic species to provide some solar access in winter, particularly in east-west orientated streets;
- To match with established existing trees that are in good health and vigour on particular streets;
- To match with existing/prior historic trees plantings;
- Cooling benefits of particular tree species, including those identified through the street tree sensor project;
- Drought tolerance and adaptability to climate change;
- Mature size with relation to the existing and future scale of streets/built form and available growing space, and
- Mature canopy size and ability for tree species to achieve a consistent canopy coverage, in accordance with the NSW Government's target to achieve 40% canopy coverage across NSW.

The street tree plan works in conjunction with the city centre Urban Forest Strategy project that is currently being developed by Council. The plan aims to achieve a consistent tree canopy, whereby tree canopies are connected and provide shade over the footpath and road carriageway. A single tree species is proposed for most streets, to assist with way finding and legibility. Each new tree planting should aim to have 30m³ of soil volume for healthy tree growth.

	<i>Liquidambar styraciflua</i> (Sweet Gum)
	<i>Lophostemon confertus</i> (Brush Box)
	<i>Quercus palustris</i> (Pin Oak)
	<i>Pyrus ussuriensis</i> (Manchurian Pear)
	<i>Robinia pseudoacacia</i> (Black Locust)
	<i>Triadica sebifera</i> (Chinese Tallow)
	Key arrival points/markers
	<i>Triadica Sebifera</i> (Chinese Tallow)

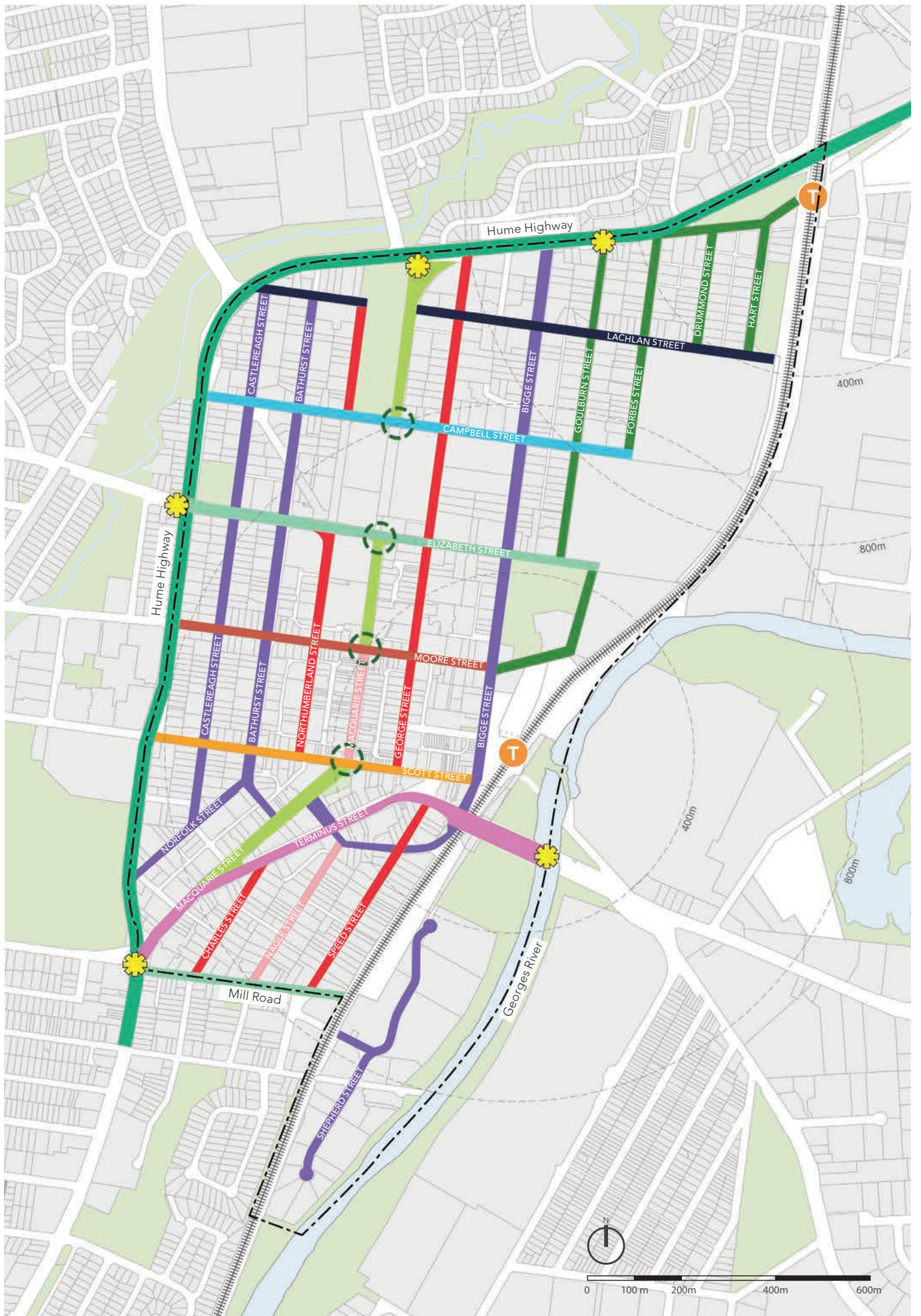


Figure 6.286 Liverpool City Centre - Street Tree Master Plan (Liverpool City Council)

Master Plan

Trees & Vegetation

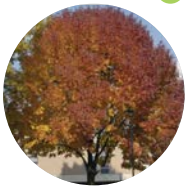
6.13

Street Tree Species

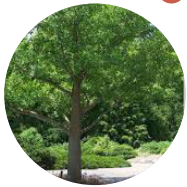
(Refer to Street Tree Master Plan, page 273)



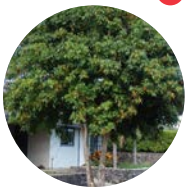
Corymbia maculata (Spotted Gum)
This native evergreen has a tall growth habit of up to 30m. With a very distinctive trunk pattern, covered in old flaky brown bark contrasted by newer smooth and creamy bark. It produces white flowers from winter to spring and is native to the landscapes around Sydney. Its open form allows for dappled light, which makes for filtered sunlight at the ground level, yet providing an abundance of shade during summer. It's tall height and spread is ideal for positioning along wide roads.



Fraxinus pennsylvanica (Urbanite Ash)
This exotic and deciduous tree grows up to 12m with a spread of around 8m. It produces green and yellow flowers within a full sun to partly shaded environment, making it ideal for street tree application. Its foliage displays a wide array of colours throughout the year, from green and yellow to bronze during autumn.



Ginkgo biloba (Maidenhair Tree)
Ginkgo's are an exotic and deciduous species that can grow up to 12m with a canopy coverage of around 5m. Its branch growth is horizontal, providing an optimal shade during the warmer months. It produces short catkins followed by yellow fruit with rich green foliage, turning to golden yellow in autumn.



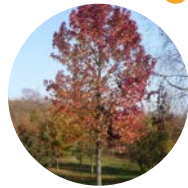
Harpullia pendula (Tulipwood)
This native species is a hardy evergreen growing up to 10m with a canopy coverage of around 4m. During spring it will bloom greenish-yellow, slightly fragrant flowers closely followed by orange seed cases. It tends to stay relatively short in height within urban centres, creating low level green surroundings for a more intimate street.



Jacaranda mimosifolia (Blue Jacaranda)
This fast growing exotic tree grows to around 15m in height with a 8m spread. As a deciduous species its soft green foliage will turn yellow in winter before shedding. Flowering occurs during summer when purple, bell shaped blooms are produced. An ideal light filtering tree providing shade during summer.



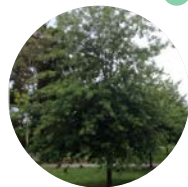
Lophostemon confertus (Brush Box)
A rainforest tree native to North-eastern parts of Australia. It is fast growing, up to 15m with a canopy coverage of around 10m. Highly resistant to pests and disease makes it ideal for application as a street tree. It has dense leathery and dark green foliage that provide an ample provision of shade at the street level.



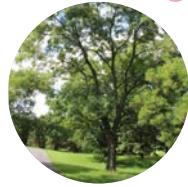
Liquidambar styraciflua (Sweet Gum)
This conical shaped deciduous tree becomes rounded with age as it grows to a height of around 20m with a narrow canopy coverage of 6m. Containing finely toothed leaves which colour to shades of red, orange and purple during autumn. Flowers form in spring followed by spiky, woody, ball-like fruits which hang from the branches.



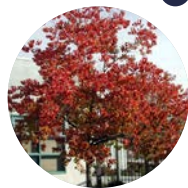
Pyrus ussuriensis (Manchurian Pear)
A deciduous species growing up to 9m in height. The dark green foliage is oval in shape with serrated edges and the onset of Autumn sees this leaves turning to a rich, dark red. Early flowering, dark brown buds open to reveal light pink colour before bursting into white flowers.



Quercus palustris (Pin Oak)
This deciduous and fast growing tree, up to 15m with an 8m spread. A dark and shiny leaved tree, the Pin Oak develops a loose, spreading and layered canopy. In autumn, foliage turns bronze with the occasional red coloured leaves. It provides good shade coverage below.



Robinia pseudoacacia (Black Locust)
This species is a fast growing deciduous tree, between 9-15m with a spread of around 10m. Its foliage, compound leaves and pendulous racemes sented pea-like flowers that produces fragrant scents attracting honey bees. It's spreading green canopy produces good shade coverage making it ideal for street tree application.



Triadica sebifera (Chinese Tallowood)
This ornamental tree is fast growing species. A deciduous tree growing up to 15m with a grey to brownish bark. The heart shaped leaves sit on long drooping branches giving a breadth its form. Street presence is prominent within the autumn months as it displays it wide array of colours.

6.13

Master Plan

Trees & Vegetation

General Planting Palette - The includes species that reinforce the Western Sydney Parkland character, and are low maintenance, provide visual interest, and are suitable for the urban environment, many of which can tolerant foot traffic. These species are readily available from nurseries in Western Sydney, for when replacement stock is required.

Heritage Planting Palette - A planting palette has been developed for locations near and around items of heritage significance. The species selected should reflect the significance of the time period and the specific site. To ensure the planting designs are respectful of place, planting plans for heritage sites are to be developed in consultation with Council's Heritage Officer.

Sensory Planting Palette - Sensory planting is encouraged where possible to provide an inclusive and enhanced sensory experience. This includes species that engage all five human senses; sight, hearing, smell, taste and touch.

WSUD Planting Palette - This includes plant species to be incorporated into WSUD infrastructure such as vegetated swales and rain gardens. Species should be selected that best suit the soil and water treatment requirements of the particular WSUD element. Generally, the planting palette includes grasses and reeds, that typically grow successfully with limited maintenance.

Buffer Planting Palette - Low hedge plantings of *Murraya paniculata* (Mock Orange) is proposed between the pedestrian footpath and Hume highway. This helps provide separation between the busy carriageway and softens the exposure of passing vehicles.

Climbing Vegetation - Climbing vegetation may be included in some locations, particularly where there is limited ground space. This will require input from Council's Maintenance department to ensure that maintenance requirements of the selected species are considered.

General Planting Palette



Heritage Planting Palette



Sensory Planting Palette



WSUD Planting Palette



6.14

MASTER PLAN PAVING

Overview and Key Themes & Interventions

Overview

In 2018, Council adopted a city centre Paving Strategy. Generally, the proposed paving is in accordance with the strategy, with some amendments to align the strategy with the Master Plan. This includes increasing the extent of the core paving area, with specific paving for driveway crossings, and introducing an additional paving type for serviceways/laneways. Tactile indicators are proposed where appropriate, which is to be determined during concept & detailed design phases of individual projects within the Master Plan. The paving typology plan on the following page shows the location and extent of each paving typology, and respective kerb styles (See Figure. 6.292). The descriptions below and images on this page provide further detail on each typology.

Core Paving

The core paving typology is generally within the city core area, which has a high pedestrian activity and requires a durable & high quality surface treatment. The core paving typology comprises of black granite paving, with either blue stone kerb (in the inner areas of the city core), or concrete kerb & gutter (in outer areas of the city core), as per Council's Paving Strategy, with revised locations & extent shown (See Figure. 6.292). Driveways are a shared transition zone and can be points of conflict for pedestrians & vehicles. Small format paving is proposed for driveway crossings within the core paving area (finished flush with adjoining surfaces). This will highlight that driveways are shared zones, increase pedestrian priority, and the small paving format will provide increased stability with frequent vehicle movements.

Periphery Paving

The periphery paving typology is generally located in outer city centre areas, typically with residential dwellings, with a mix of densities & building heights. The periphery paving typology comprises of concrete paving with an exposed aggregate finish (exfoliated), as per Council's Paving Strategy. This is a robust, low maintenance pavement that is suitable for the outer areas of the city centre.

Serviceway/Laneway Paving

The serviceway/laneway paving typology is applicable to all serviceways and laneways in the city centre. This pavement comprises of small format pavers that are of a similar material, colour & texture to the core paving typology, and laid in a herringbone pattern (See Chapter 6.6). The small paving format will provide increased stability with frequent vehicle movements. Paving, kerb & edge details are to be considered during the concept & detailed design phases of individual upgrade projects, and specified according to the functional role of each serviceway/laneway.

Tactile Indicators & Other Elements

Paving throughout the city centre should incorporate tactile indicators and other elements to increase accessibility & inclusion. Tactile indicators should be of sufficient colour contrast for high visibility (e.g. metallic/stainless steel tactiles in city core areas & black tactiles in periphery paving areas).

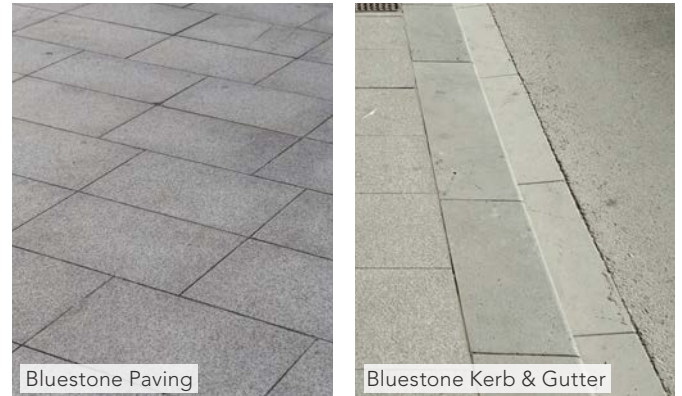


Figure 6.287 Images of Core Paving (Bluestone), Kerb & Gutter and Ramps

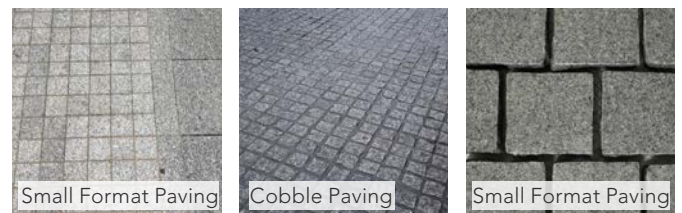


Figure 6.288 Images of Driveway/Pedestrian Crossing Paving, within Core Paving Areas (Bluestone)

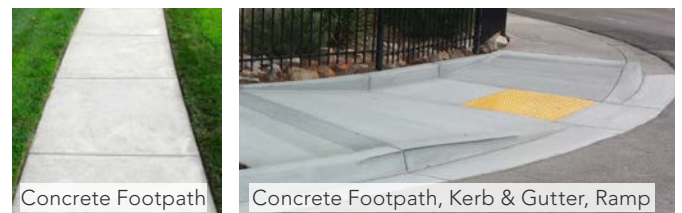


Figure 6.289 Images of Periphery Paving (Concrete), Kerb & Gutter, & Ramps



Figure 6.290 Images of Serviceway/Laneway Paving (Bluestone Herringbone)



Figure 6.291 Images of Tactile Indicators on Paving

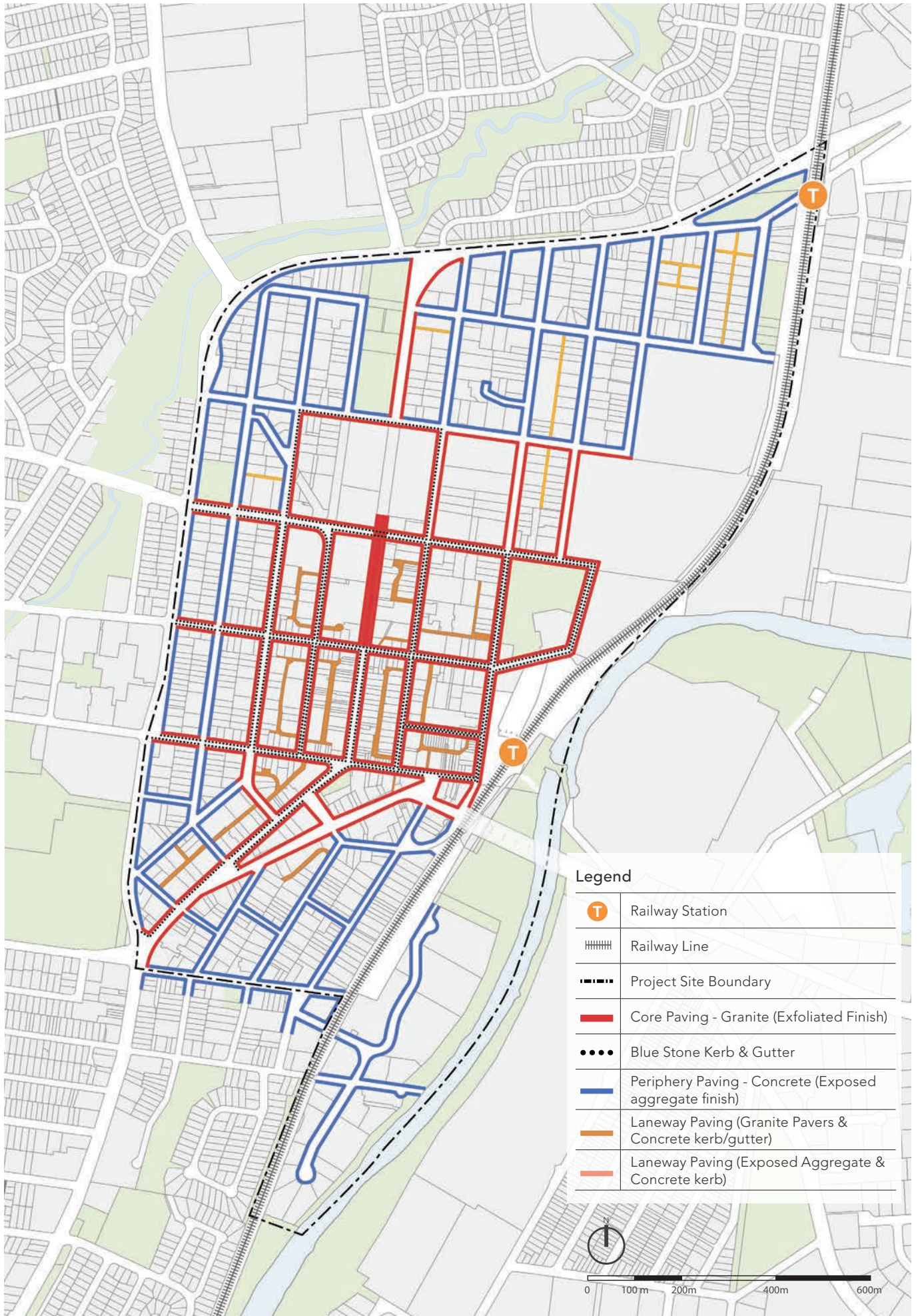


Figure 6.292 Liverpool City Centre - Paving Typology Plan (Liverpool City Council)

6.15

MASTER PLAN

FURNITURE, FIXTURES & FITTINGS

Overview and Key Themes & Interventions

Overview

The proposed furniture, fixtures & fittings have been selected to compliment the character of the city centre, reinforce the Western Sydney Parkland feel and provide a coherent and contemporary palette (including through form, colour and material), that is appropriate for a city centre environment. This includes a combination of custom-designed and off the shelf proprietary items. The Master Plan includes three zones that prescribe individual furniture, fixture & fitting palettes for each zone, and it is proposed that the existing items within Bigge Park & Macquarie Mall are retained. The plan on the following page shows the location & extent of each zone (See Figure. 6.293). The descriptions below and images on pages 280 & 281 provide further detail. Street Plans show the locations of individual furniture, fixture & fitting items (See Chapter 6.5). It is proposed that a Public Domain Technical Manual is developed to compliment this Master Plan, providing detailed specifications for streetscape infrastructure including furniture, fixtures & fittings. Further input will be sought from Council's Maintenance department, to ensure that items specified are robust, durable, low maintenance and consider maintenance issues, including vandalism.

Furniture

Core Seating (Bespoke Design)

Bespoke seats will be designed in collaboration with an artist & manufacturer, to develop a seat that is distinctive to the city centre. The seats are to be installed at intersections and at key locations within the city core.

Core Seating (Proprietary Item)

Seats with timber battens, arms & back rests are to be installed at regular intervals along each street within the city core. Seats are to be installed near the back of kerb and face away from the street.

Bigge Park & Macquarie Mall Seating

The recently installed seating within Bigge Park and Macquarie Mall is to be retained. Replacement seating in these locations should match with existing seating.

Special Furniture

Certain locations in the city centre will require a review of specific site opportunities & constraints, to determine furniture selection. Individual businesses are encouraged to use moveable furniture in the public domain (e.g. for outdoor dining & bars), or furniture types to perform a particular function within a site.

Periphery Seating

Proprietary seats with timber battens, arms & back rests are to be installed in periphery areas within the city centre, near bus stops and at least one location along the length of each street. Longer north-south streets will require an additional seat per street (i.e. two seats in total per street).

Bicycle Racks

Bicycle racks should be located near key destination points with shade & protection. Racks should be a simple design, steel material, with a black-coloured powder coat finish, and installed in a manner that will not impact pedestrian movement. Bicycle repair stations should be considered to support active transport.

Bollards

Bollards should be multifunctional, either as bicycle racks or as seating. Where this is not possible or bollards need to be removable, simple design, stainless steel are recommended to ensure that bollards that are recessive in the streetscape.

Bus stops

Bus stops are to be designed and located in accordance with NSW State Transit Guidelines, including with tactile indicators, bus information signage and a shelter structure.

Drinking Fountains

New or replacement drinking fountains (including pet drinking bowls) are proposed, to enable access to free drinking water and encourage active transport.

Fencing and Railings

The use of fencing & railings on streets should be minimised. Where railings are required by a transport authority, they should be of a simple design, with a black powder coated finish. Where fencing is required as a safety barrier (e.g. around play spaces), it should be of a simple design, with warm materials (e.g. timber or corten steel) and integrated with planting, to minimise its appearance.

Lighting

A uniform suite of multifunction poles are proposed, catering to the requirements of each location, with appropriately specified accessories (e.g. traffic lights, banners, street signage, CCTV, 5G, pedestrian lighting). Council is responsible for maintenance of the multifunction poles, and negotiations are required between the energy provider and pole installer (e.g. Council) to resolve contract logistics (e.g. metering requirements). Poles are to be a black powder-coated finish.

Rubbish Bins & Enclosures

Dual (marked) rubbish & recycling bins, with bin enclosures are to be installed at key locations in the city core area (e.g. near intersections & pedestrian crossings). Rubbish bins are not proposed for city centre periphery areas. Rubbish bin enclosures should accommodate 120L sized wheelie bins and dispensers for disposable waste bags, for pet refuse.

Tree Grates

Tree grates are to be simple in design and square shaped, designed to work in accordance with the engineering requirements. The grate design should consider the needs of water infiltration, maintenance access, future tree growth and the footwear types of street users.

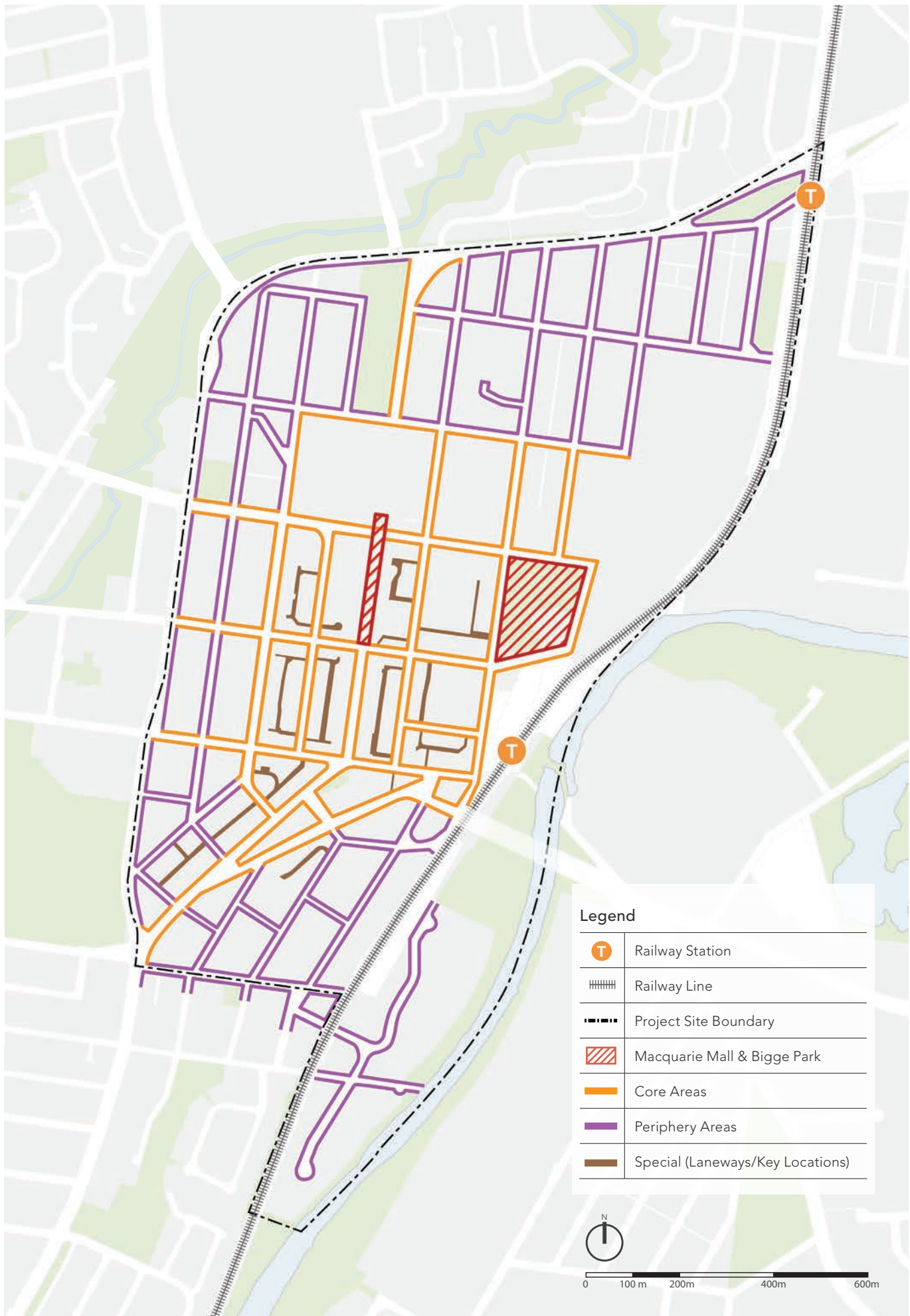


Figure 6.293 Liverpool City Centre - Furniture, Fixtures & Fittings Typology Plan (Liverpool City Council)

6.15

Master Plan Furniture, Fixtures & Fittings

Seats & Benches



Large Concrete Raised Platform for Sitting & Lying



Custom Concrete & Timber Furniture



Concrete/Timber - Backrest & Armrest



Custom Pre-Cast Concrete Bench for Plazas



Public Concrete & Timber Bench

Rubbish Bin Enclosures



Black Clad with Timber

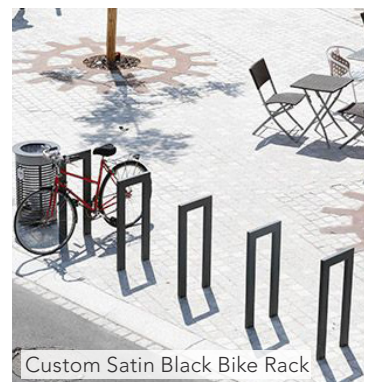


LCC Branded with Recycling & Rubbish

Bicycle Racks



Stainless Steel Bike Rack



Custom Satin Black Bike Rack

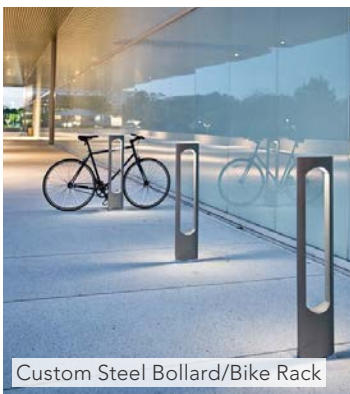
Bollards



Reinforced Concrete Bollard and Seating



Stainless Steel Bollard



Custom Steel Bollard/Bike Rack



Coated Steel Bollard

Figure 6.294 Liverpool City Centre - Furniture, Fixtures & Fittings Palette (Liverpool City Council)

6.15

Master Plan Furniture, Fixtures & Fittings

Fencing & Railings



Custom Pedestrian Safety Guard Railing



Recycled Material Fences - Parks



Planting and Custom Steel

Tree Gates



Custom Black Tree Gate



Custom Design Steel Tree Gate



Stainless Steel Tree Gate

Pedestrian Lights



Pedestrian Lighting as Art within the Public Domain



Unique Pedestrian Lighting



Minimalist Black Lighting

Multi-Function Poles



6.16

MASTER PLAN SIGNAGE & WAYFINDING

Overview and Key Themes & Interventions

Overview

A Signage & Wayfinding Manual should be developed, that includes a suite of custom-designed signs for the city centre. The signage suite should provide aesthetic appeal, uniformity and simplicity, while being legible and functional in providing the necessary wayfinding information. The signage needs to compliment the character of the city centre, reinforce the Western Sydney Parkland feel and provide a coherent and contemporary palette (including through form, colour and material). The signage typology plan on the following page shows indicative locations for primary, secondary and tertiary signage (See Figure 6.298). The descriptions below provide further detail on each signage typology and the images on this page provide an indication of the proposed appearance of the signage suite.

Primary Signage

Primary signage is proposed for key nodes (e.g. junctions along the Macquarie Street spine), major Points of Interest (e.g. Liverpool Hospital & Railway Stations) and at gateways (e.g. intersections at the Hume Highway). Primary signage consists of vertical blade-style signs (surface-mounted) with wayfinding, identification & interpretation elements integrated onto the signage. Wayfinding elements are to be the most prominent feature on the signs, to promote walkability within the city centre. This should include locations maps with key locations and points of interests such as transport stops, public bathrooms and other facilities (e.g. Library, Hospital, Parks & Plazas). Information is to be displayed in walking-time rather than distance (e.g. metres).

Secondary Signage

Secondary signage is proposed for major intersections, and will support the primary signage, to ensure that pedestrians & cyclists are travelling on the correct route. Secondary signage consists of elevated vertical blade-style signs (attached to multi-function poles), with wayfinding & identification elements for key locations within the city centre. Each sign should accommodate three destinations, and wayfinding information is to be displayed in walking-time rather than distance (e.g. metres or kilometres).

Tertiary Signage

Tertiary signage is proposed for minor intersections, and will support the primary and secondary signage, to ensure pedestrians & cyclists are travelling the correct route. Tertiary signage consists of elevated horizontal blade-style signs (attached to multi-function poles), with wayfinding & identification elements for key locations within the city centre. Each sign should accommodate two destinations, and wayfinding information is to be displayed in walking-time rather than distance (e.g. metres or kilometres).

Other Signage

Other signage within the city centre should be considered in the development of the Signage & Wayfinding Manual. This includes updated street name blade signs, gateway signage and braille elements on multi-function poles.



Figure 6.295 Images of Primary Signage Type (City of Sydney)

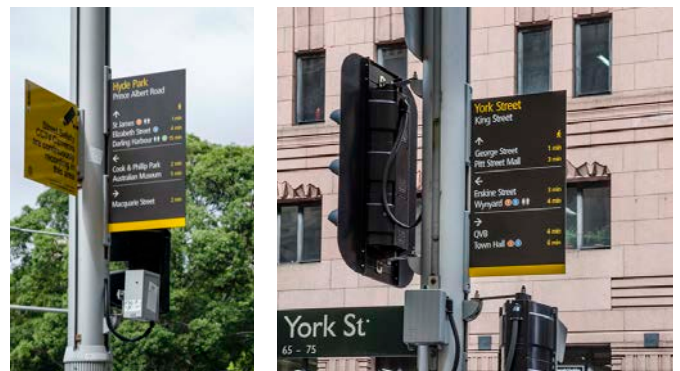


Figure 6.296 Images of Primary Secondary Signage Type (City of Sydney)



Figure 6.297 Images of Primary Secondary Signage Type (City of Sydney)

Legend

	Railway Station
	Railway Line
	Liverpool City Centre - Project Site Boundary
	Primary Signage
	Secondary Signage
	Tertiary Signage

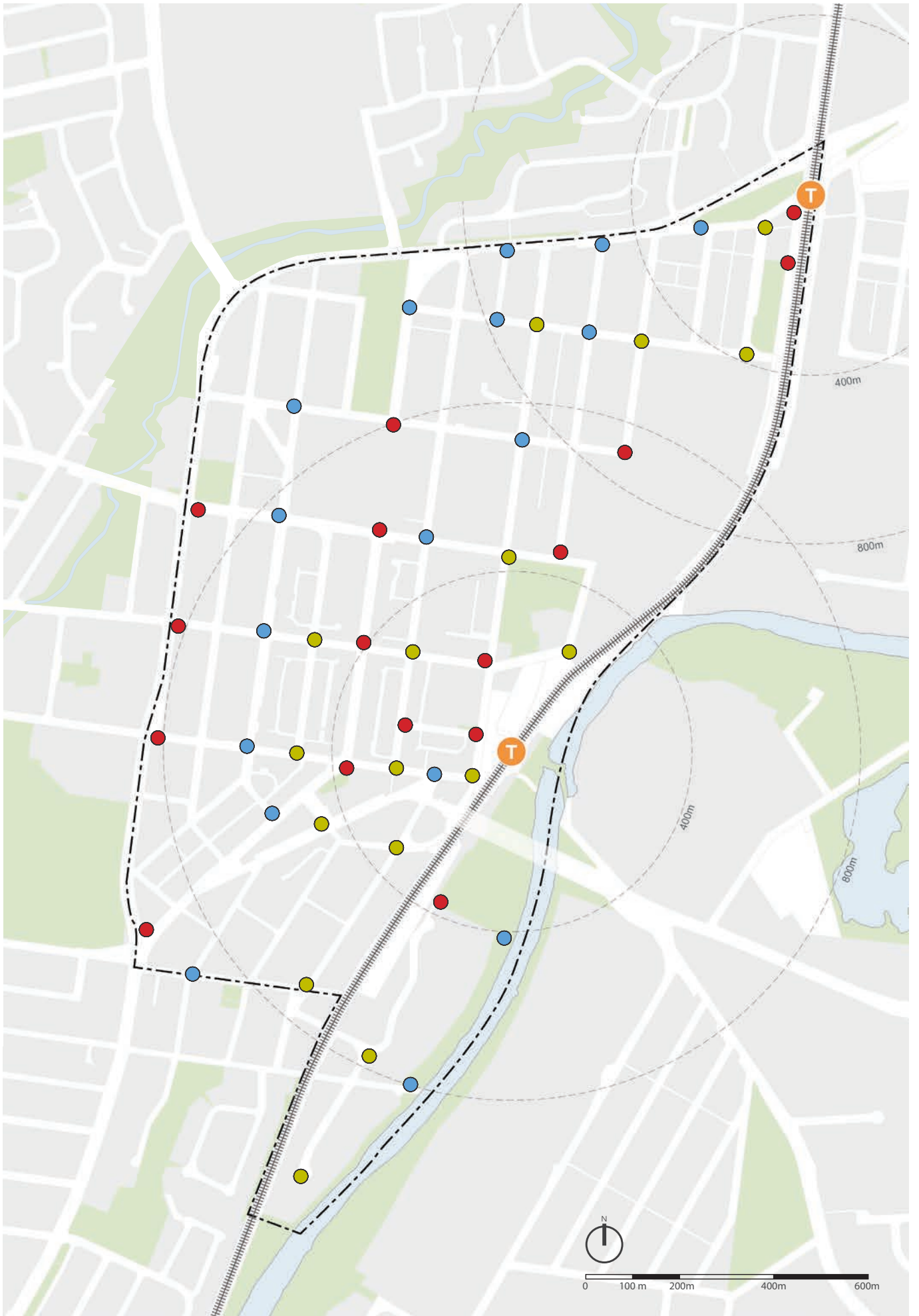


Figure 6.298 Liverpool City Centre - Signage Typology Plan (Liverpool City Council)

6.17

MASTER PLAN SAFETY, ACCESSIBILITY & INCLUSION

Safety

Overview

A safe city includes safe streets, serviceways/laneways, parks and all types of public space. It implies a general sense of security when undertaking typical urban activities such as commuting, socialising, recreation, exercising and when engaging in commerce. Poorly designed public spaces can result in a perceived or actual danger. This can significantly effect an individual’s ability to undertake their daily activities in a safe and comfortable manner. As a result of increased levels of risk and potential hazards within public space, is the possibility of further health and safety issues. Poorly designed streets, roads and footpaths within the city centre that allow higher speeds and without barrier protection, prioritise vehicles over the safety and well being of pedestrians.

There are best practice guidelines and tools that can assist when designing the public domain, so that a safer and more functional urban environment is achieved. These include:

- The Safer by Design Evaluation program that helps “identify and quantify crime hazards and location risk” based on AS/NZS ISO 31000: Risk Management - Principles and Guidelines (NSW Police, 2019);
- Crime Prevention Through Environmental Design (CPTED), using planning and design principles to prevent or limit the risks of crime from occurring, and
- NSW Government, Road Safety Plan 2021 which is the NSW Government’s commitment to improving safety on roads across NSW.

It is recommended that such guidelines be applied to the Liverpool City Centre, together with additional steps to create a safe user-friendly environment that is aesthetically pleasing whilst having the ability to create a sense of civic pride within the community. Which in itself can act as an effective safety provision.

Key Themes & Interventions

As projects and interventions within the master plan progress from concept through to the detailed design phases, it is essential that safety is considered throughout the design process. This includes through the following:

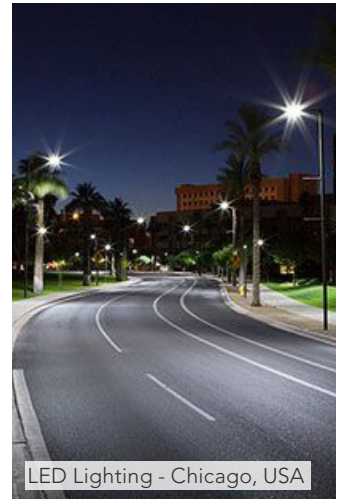
- Applying CPTED principles of safe urban design including by encouraging passive surveillance (re-enforcement, surveillance), access control and space/activity management;
- Design in accordance with Australian Standards relating to safety in the public domain;
- Encourage active building edges including through development application process;
- Promote night life by implementing the Liverpool activation strategies that support an 18-hour economy;
- Implement appropriate maintenance strategies for the city’s public domain to ensure a well-maintained appearance of the urban environment, and
- Actively seek input from the community and key stakeholders (e.g. NSW Police Force) to better understand site specific safety concerns.



Raised Ped. Crossing - Sydney



Traffic Calming Measures - USA



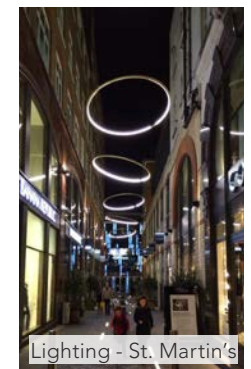
LED Lighting - Chicago, USA



Public Space Lighting Intergrated within Landscaping - Melbourne



Bus Shelters - Hobart, Tasmania



Lighting - St. Martin's



Public Toilets on the Mexico-Morelia Motorway - Mexico

Figure 6.299 Images related to Safety in the public domain

6.17

Master Plan

Accessibility & Inclusion

Overview

The public domain within the city centre should be inclusive and provide barrier-free accessibility for all people regardless of their level of ability. It should endeavour to eliminate the social segregation of people with varying levels of ability, through a collaborative design process that is focused around establishing inclusive design solutions suitable for people of all abilities.

The NSW Government has increased its focus on accessibility and inclusion, including through the 'Everyone Can Play' guidelines, developed by the NSW Department of Planning, Industry and Environment. These guidelines apply broadly to 'play' as a form of recreation for people of all ages and all levels of ability.

- The three principles of the 'Everyone Can Play' framework is:
- 'Can I get there?';
 - 'Can I stay there?'; and
 - 'Can I play there?'

The guideline includes recommendations and tools to apply to specific design projects, in line with these three design principles. These principles can also be applied to the design of any public space, in order to make it more inclusive.

Key Themes & Interventions

As projects and interventions within the master plan progress through to concept and detail design phases, it is recommended that the following considerations are made:

- Design in accordance with Australian standards for accessibility (e.g. AS 1428.1-2009, AS/NZS 10542.1:2015, AS 1428.5-2010 - R2016);
- Design in accordance with best practice for access and inclusion (e.g. NSW Disability Inclusion Plan, Everyone Can Play guidelines, Liverpool Disability Inclusion Action Plan, and the Australian Network on Disability publications);
- Consult with Council's Community Development Workers - Aged and Disability to seek input and advice at all stages of project design;
- Ensure that all infrastructure upgrades promote access and inclusion;
- Design for an inclusive public domain that engages all five human senses (i.e. sight, hearing, touch, taste, smell);
- Design in accordance with the National Construction Code (2019), for access for people with a disability;
- Ensure the importance of transport and connectivity being accessible for everyone is a priority when planning and designing for movement throughout the city centre, and
- Explore options for accessible 'end of trip' facilities at key attractions (e.g. community facilities and major transport nodes) within the city centre.



Figure 6.300 Images related to Access and Inclusion in the public domain.

6.18

MASTER PLAN SUSTAINABILITY

Overview and Key Themes & Interventions

Environment and Storm Water

Water Sensitive Urban Design (WSUD) is proposed for the design of the streets in the city centre. This is to be delivered through several design strategies.

Intersection Design

The redesign of intersections will contribute to sustainable drainage methods in the city centre. Existing intersection designs have excessive vehicle turning space that can be reclaimed from the road reserve to perform multiple sustainable functions. Intersections will incorporate passive irrigation interventions such as the addition of low planting and softscapes. These strategies will provide:

- Natural and sustainable water vegetation and enhance water retention;
- Water infiltration;
- Reduction of urban temperatures;
- Prevention of urban runoff polluting stormwater drains;
- Improvement in water quality through natural filtration;
- Enhancement of biodiversity;
- Support and enhancement for ecosystems;
- Stimulation of evapotranspiration and the cooling of micro-climates;
- Reduction of urban flooding, and
- Reduced expenditure on watering and maintenance.

In addition, the narrowing of intersections will also:

- Reduce the crossing distance for pedestrians and cyclists;
- Slow vehicular traffic, resulting in vehicles travelling at the signed speed limits;
- Increase kerbs sizes that act as refuges for pedestrians;
- Establish a barrier between vehicles and pedestrians, and
- Create safer streets for all users.

Street Tree Planting Design

Street tree plantings will incorporate passive irrigation interventions and will be planted with tree grates, at pavement level. Passively watered tree pits are designed to facilitate the natural watering of trees, that operate to self-mange natural water intake. The space provided between the grate and the tree soil level, will collect water to infiltrate the soil and root zone. Once the soil is saturated and the tree pit is filled, the run-off continues along the street and into the stormwater system.

Passively watered tree pits will enhance and support healthy tree growth in the city centre. Correct soil selection will also assist to improve drainage and nutrient retention and management for trees. Large root zones with structural soil beneath the pavement will assist trees in reaching their optimal height and canopy spread more quickly. Deep soil/ root zones will also ensure that trees establish good root growth with reduced impact on paving or underground services. Additionally, healthy trees will ensure ideal performance during substantial weather events, reducing the risk of limb or tree failure.



Figure 6.301 Images related to Sustainability in the public domain.

6.18

Master Plan Sustainability

Material Selection

The selection of furniture, fixtures and fittings for streets requires consideration to sustainability. To ensure the longevity of these products, each item must be durable and able to withstand extreme environmental conditions. Materials will also be selected that have less impact on the environment throughout their production and manufacturing process. All materials and products should be certified by GECA (Good Environmental Choice Australia), to ensure they are healthier, safer and better for the environment.

- Key considerations for the public domain materials include:
- New timber products, both structural and non-structural, should be sustainably sourced, such as FSC (Forest Stewardship Council) or PEFC (Programme for the Endorsement of Forest Certification) certified timber;
 - Paints or surface finishes for streetscape elements should be zero VOC (Volatile Organic Compounds) products to reduce toxic emissions within the environment;
 - The life-cycle cost, long term maintenance, replacement and disposal of products and or materials;
 - The durability of each material related to its intended use;
 - Permeable or porous paving, concrete and asphalt solutions to improve management of materials affected by water;
 - The support of ethical manufacturing processes and ensuring slavery was not used during its manufacture;
 - Compatibility with environmentally friendly cleaning products;
 - Engaging assessment scheme services to assist with the sourcing of sustainable products and materials such as Eco-Specifier, BREEAM's Green Guide and Global GreenTag;
 - Community compost and vegetable garden spaces to encourage sustainable practices, and
 - When selecting materials consideration should also be made for; the use of highly recycled content, the ability to be recycled (e.g. aluminium), and the use of rapid renewables, such as agricultural products that are grown and raised in less than 10 years and can be harvested sustainably e.g. bamboo, hemp or organic cotton.

Waste

Strategies for waste require further collaboration and strategy development with Council's Waste and Cleansing department. The following items should be included in the city centre public domain:

- Rubbish bins for both recycling and general waste in all rubbish bin locations;
- Public rubbish bins, including wheelie bins, to be enclosed in rubbish bin enclosures;
- Rubbish bins are to be manufactured from durable, sustainable and environmentally friendly materials;
- Specify smart bin technology that incorporate sensors and solar power in areas that experience high bin use, and
- Relabelling of bins to distinguish those that are unsorted and that will contribute to landfill.



Figure 6.302 Recycled plastic street furniture designed by AECO, M for Southport Broadwater Parklands, Gold Coast.



Figure 6.303 The Coal Loader Community Gardens, allotment gardens in North Sydney.



Figure 6.304 Bicycle parking made from untreated and sustainable FSC hardwood, by StreetLife.



Figure 6.305 Picnic settings made from FSC recycled hardwood in the Netherlands, by StreetLife.



Figure 6.306 Smart sensor BigBelly Bins that send alerts when full.



Figure 6.307 Wheelie bin enclosures.



Figure 6.308 Slim box bins made from untreated corten steel.

6.18

Master Plan Sustainability

Pedestrian and Vehicle Lighting

Lighting in the public domain should be provided exclusively through the use of Light Emitting Diode (LED) lighting types. LED lighting is energy efficient and expels less quantities of heat than other lighting types. They also require minimal maintenance and have a long life-span of approximately 20 years. All new lighting in the public domain should be specified as LED and incorporated as part of the multi-function poles. A replacement program should also be implemented for all existing lighting within the city centre.

Solar powered street and open space lighting should also be considered in the public domain, where possible, to reduce energy consumption. Their installation is cost effective, as they do not require deep trenching to connect to electrical wires. Similar to LED lighting, solar power lighting also requires minimal maintenance.

Drinking Water and other sustainable innovation

Drinking water fountains and refill stations should be integrated together across the public domain in the city centre. This will provide all people access to clean drinking water and will promote the reuse of water bottles to minimise waste.

Sustainable innovation through infrastructure should be considered for the public domain. Sustainable public art should be considered to support and promote sustainable and innovative practices. Sustainable art that utilises renewable energy such as wind, water and solar should be selected to support Council’s sustainable initiatives.

Sustainable Policies and Procedures

Sustainable design strategies adopted within Council will work to develop sustainable, safe and environmentally friendly policies and procedures that support the management of the public domain and its facilities.

The Council’s sustainable design strategies will promote:

- The sustainable practices and operations of businesses owned by Council that operate in public spaces, to preserve and maintain the public domain;
- The safe disposal of community sharps such as syringes and needles, to prevent injuries in the public domain;
- The installation of community sharp bins in the public domain to encourage independent and safe disposal;
- Shopping trolley management systems, to prevent trolleys from being damaged and dumped in the public domain;
- Smoking zones and cigarette butt bins for the appropriate disposal of butts in the public domain;
- Regular cleaning and maintenance services for public amenities and facilities, and
- Futureproofing parking provision for shifts in the market toward Electric Vehicles, and potential charging provision within multi-function poles, and supporting on-demand shared services within the city centre.

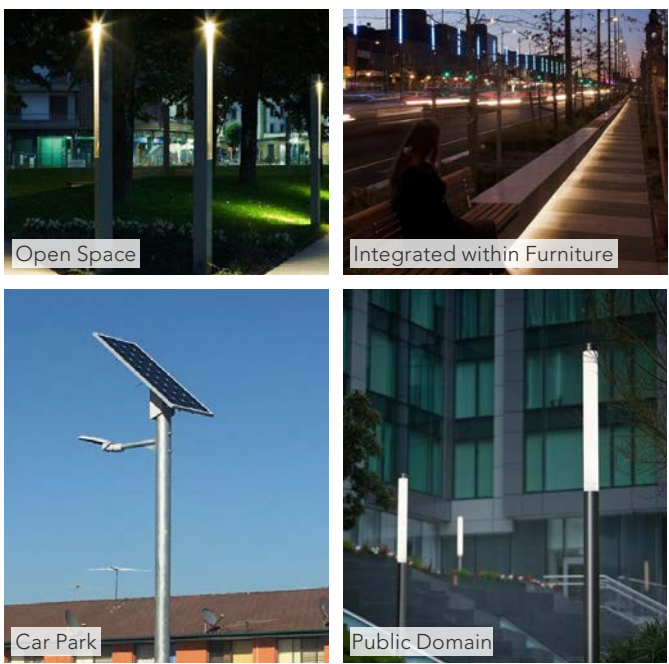


Figure 6.311 Examples of Solar Powered Lighting within the Urban Environment



Figure 6.309 WindNest, a renewable energy public art installation. Proposed for Schenley Plaza in Pittsburgh. Render by Suprafutures.

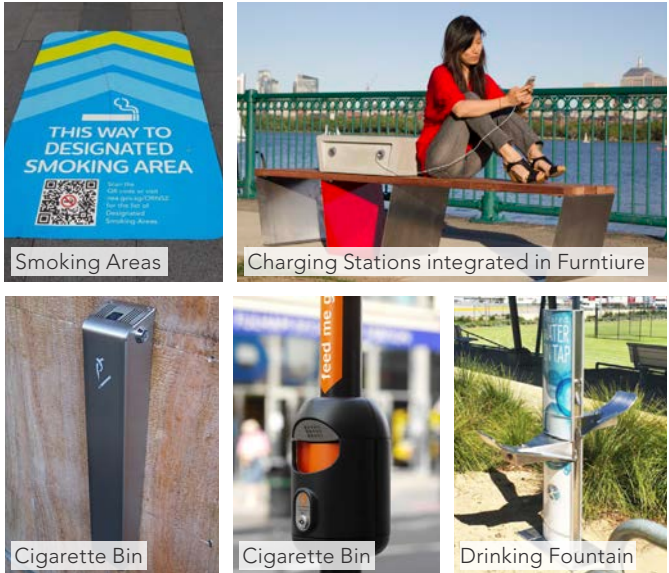


Figure 6.310 Images related to Sustainability in the public domain.

6.19

MASTER PLAN MAINTENANCE

Overview

Overview

Public spaces that are maintainable and are low cost in terms of maintenance, is critical for the ongoing success of the public domain, in the city centre. Consideration is required when designing public spaces, selecting public domain infrastructure and specifying materials and finishes for the public domain, to ensure that decisions made consider the resources and requirements of Council's maintenance staff and consider whole-of-life costs.

Staff from Council's Maintenance department provided input during the development of the Master Plan, from a maintenance perspective. This provided an understanding of the current issues related to maintenance in the city centre and key maintenance-related opportunities and constraints, for consideration in the Master Plan.

The following recommendations were made during the engagement, for consideration in future public domain upgrades within the city centre:

- Low-maintenance, long-life design solutions;
- Standardisation of furniture fixing systems;
- Standardisation of locking systems;
- Standardisation of paint colour palette for ease of colour, for scheduled maintenance and vandalism repair;
- Selection of robust, durable and low maintenance paving that is easy to clean;
- Selection of paving with a slip resistance surface, and
- Development of a Public Domain Technical Manual to provide an updated set of standard details for public domain streetscape infrastructure in the city centre, with input from staff in Council's Maintenance department.

As projects within the Master Plan progress to concept and detailed design phases, it is essential that staff from Council's Maintenance department and Asset Management team are engaged to provide input on site specific projects. Ongoing feedback from maintenance staff helps inform decisions that are made, related to future public domain upgrades.



Rubbish Collection



Graffiti Removal



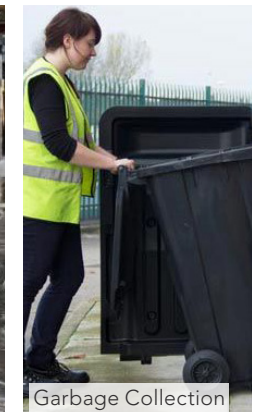
Lawn Mowing



Street Tree Pruning



High Pressure Cleaning of Footpath



Garbage Collection



Street Lighting Maintenance

Figure 6.312 Images related to the Maintenance of the City Centre.

6.20

MASTER PLAN TACTICAL URBANISM

Overview, Key Themes and Interventions

Overview

Tactical urbanism is an aspect of urban renewal aimed at improving the liveability of city centres and the experiences of pedestrians. It allows for small scale, incremental improvements at low cost, over varying periods of time. Incremental, small scale changes are a good way to trial and/or stage improvements within the public domain, and they have a high impact-to-cost ratio, potentially creating a catalyst for more significant long-term improvements.

Tactical Urbanism has brought about a profound shift in the way people think about project development and delivery. Cities around the world are using flexible and short-term projects to advance long-term goals related to street safety, public space, and as a strategy to stimulate economic activity within a local area.

These small scale changes can be conceived as the first step in realising ongoing and lasting improvements. Tactical urbanism will allow for the further trialling of interventions proposed within the Master Plan, at a relatively low cost (i.e. compared with the cost of permanent infrastructure upgrades), and enabling the community to experience and provide feedback on the proposals.

Key Themes & Interventions

The diagram on the following page shows the proposed key themes & interventions for Tactical Urbanism within the city centre, that work in alignment with the overall Master Plan vision for the city centre.

The key themes and interventions for Tactical Urbanism within the city centre are as follows:

- Street and Serviceway upgrades including temporary surface treatments to create increased footpaths and cycleways within road carriageways;
- Forecourt upgrades including installation of pedestrian lighting, wall/ground surface treatments integrated with public art, and
- Street Art Mural installations including on existing blank walls and other public domain infrastructure.

The following pages of this chapter articulates how these key themes & interventions can be achieved, through a plan, text and supporting imagery. As proposed interventions progress to concept and detailed design phases, approvals may be required the Liverpool Traffic Committee.

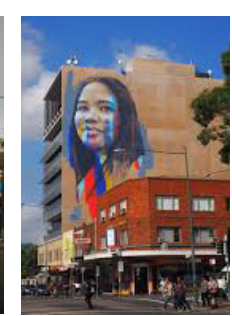
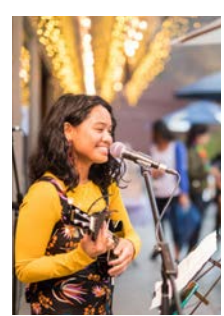


Figure 6.313 Examples of Tactical Urbanism within the Liverpool City Centre

Legend

	Railway Station
	Railway Line
	Liverpool City Centre - Project Site Boundary
	Open Space
	Serviceway/Laneway Interventions (Proposed)
	Street Interventions (Proposed)
	On-road painted cycleway (Proposed)
	Forecourt Interventions (Proposed)
	Street Intersection Interventions (i.e. Traffic calming)



Figure 6.314 Precedent images of Tactical Urbanism

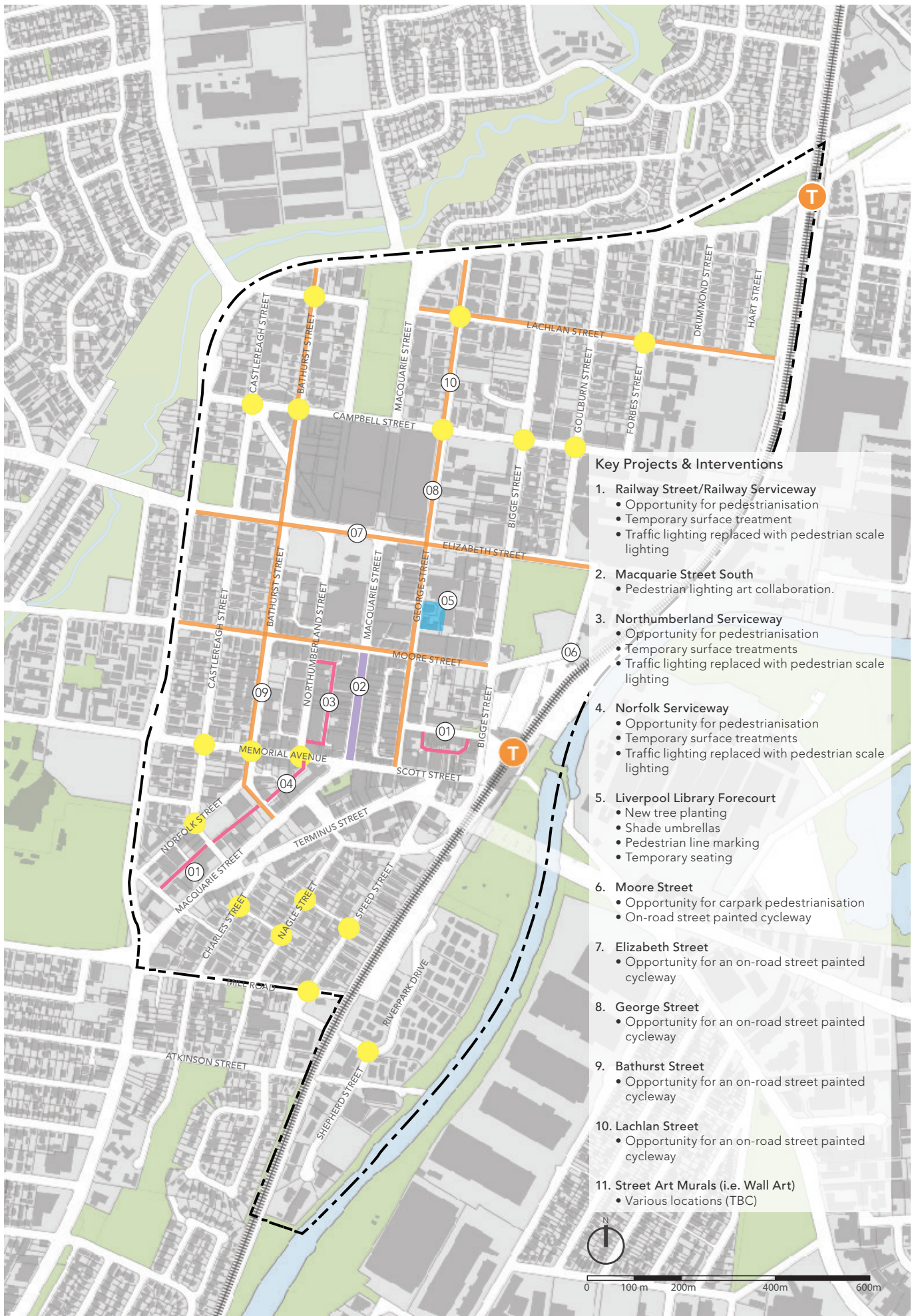


Figure 6.315 Liverpool City Centre - Tactical Urbanism Typology Plan (Liverpool City Council)

Master Plan

6.20 Tactical Urbanism - Concept Ideas



Park(ing) Day - U.S.A



Kansas City - Better Block Project



Park(ing) Day - Portland, Oregon



Cox Avenue, The City of Asheville N.C - Tactical Urbanism



Temporary Parklet - Santa Monica



Happy Streets - Rotterdam



Tactical Urbanism - San Francisco



Tactical Transit - Everett, Massachusetts



Painted Bike Lanes - Seattle



Tactical Urbanism - Montreal



San Francisco's Pavement to Parks Program

Figure 6.316 Concept ideas for the repurposing of space, throughout the Liverpool City Centre (Liverpool City Council)

6.20

Master Plan
Tactical Urbanism - Railway Serviceway



Figure 6.317 Railway Serviceway - Before (Liverpool City Council)



Figure 6.318 Railway Serviceway - After (Liverpool City Council)

This chapter of the report provides a plan for implementing the projects and interventions that are identified in the Master Plan chapter. An Opinion of Probable Cost, actions and timeframes has been provided for each project, and a project validation checklist identifies how each project achieves the objectives and strategies of key documents that have informed the Master Plan.





7.0

IMPLEMENTATION PLAN

7.1

IMPLEMENTATION PLAN OVERVIEW

Overview & Costing

Overview

The Opinion of Probable Costs shown on the following page is to be used as a guide to understand the overall cost of the proposed projects within the Master Plan (See Figure 7.320). This does not necessarily indicate the actual costs to Council, as many of the projects will be delivered by others. The Opinion of Probable Costs will be used to help inform the long term financial plan for allocating funds for design and construction of these projects. However, further discussions will occur within Council to develop detailed Scope of Works and Budgets for each project, as it progresses through to concept and detailed design phases. Projects may be delivered in conjunction with other works for efficiency and effectiveness in project delivery. Implementation of the projects will be dependent on resourcing and planning approvals.

Prioritisation of Projects

Projects have been prioritised as either short, medium or long term, according to various factors (See pages 298-307). These include; already approved works, asset condition, community and stakeholder feedback, potential funding availability/sources, ability for projects to be implemented as part of other works, and alignment with NSW Government and Council strategies.

Financial Summary

The Opinion of Probable Costs provides an itemised cost of each project within the Master Plan. The costs have a 15% allocation for design costs, within the overall project cost, and a contingency of 20% included for each project.

Some projects within the Master Plan have been excluded from the Opinion of Probable Costs. These include:

- Liverpool Railway Station redevelopment works;
- Improvements and Conservation works to Heritage buildings and some other Heritage items;
- Design and construction of potential shared-use open spaces, associated with schools and privately owned lots;
- Works associated with Liverpool Civic Place and Augusta Cullen Plaza;
- Works associated with the Liverpool Health Precinct;
- Works associated with the Bathurst Street Car Park;
- Works to the pocket park, located on the corner of Hume Highway and Memorial Avenue;
- Improvements along the Hume Highway and Copeland Street;
- Under-grounding and/or relocation of services in all projects (if applicable);
- Redesign of Bathurst Street/Pirie Street;
- Some hydrology-related projects;
- Costs associated with special access requirements for construction;
- Traffic signals and signage for roads;
- Additional engineering above or beyond that stated, and
- Goods and Services Tax (GST).

Cost Escalation

The costs listed within the Opinion of Probable Costs table have been calculated using industry rates as per December 2019.

It is recommended the following formulas is applied for budgeting purposes:

- Cost listed in Opinion of Probable Costs x escalation rate x time, and
- Escalation rate of 0.5% per month.

Funding Sources

The projects within the Master Plan are proposed to be funded from various sources, including the following:

- Planning Proposals (PP) and Development Assessment (DA) Applications - The Master Plan will be used to negotiate the delivery of streetscape and other public domain improvements by others when impacted by private developments, through the Planning Proposal/ Development Application process;
- Voluntary Planning Agreements (VPAs) - The Master Plan will be used to negotiate the delivery of streetscape and other public domain improvements by others when impacted by private developments, through Voluntary Planning Agreements;
- Developer Contributions (7/11) Funding - Several projects within the Master Plan can be fully or partially funded by Developer Contributions (7/11) funding;
- Grant Funding - Many projects will require external or grant funding from alternate sources and strong collaboration with stakeholders. This document is to be used to secure this funding and help deliver the additional projects;
- Collaboration Partners/Others - The Master Plan will assist in collaboration with partners, to deliver a shared vision for the city centre, and
- Council funding - The Master Plan will help inform Council funded projects within the city centre, including capital works projects and recurring maintenance projects.

Continual Improvement

It is recommended that a 5-year review/update to the Master Plan is undertaken. In addition, a review of the design process and outcomes of the Master Plan will be conducted, as the Master Plan projects are implemented. This will be beneficial for the following reasons:

- Any issues that arise during the implementation phase can be identified and inform updates to the Master Plan process and design outcomes;
- Critical feedback can be captured and included in future updates of this report, to ensure best practice and innovation is considered, and
- It will allow for lessons learnt during the implementation phase to be captured and considered for Master Plan updates and future construction works.

7.1

Implementation Plan

Overview - Costing

Opinion of Probable Costs

Streets and Serviceway/Laneway Projects

Item / Street Name	Cost (in A\$)	Item / Street Name	Cost (in A\$)	Item / Street Name	Cost (in A\$)
Macquarie Street Spine	\$100,000	Bathurst Street	\$9,913,201	College Street	\$2,750,000
Macquarie Street (Middle)	\$6,288,128	Northumberland Street	\$9,125,031	Pirie Street	\$3,260,557
Macquarie Street (South)	\$5,754,311	Goulburn Street	\$5,991,473	Norfolk Serviceway	\$4,812,623
Elizabeth Street and Elizabeth Drive	\$10,084,968	Forbes Street	\$2,725,166	Laurantus Serviceway	\$3,572,873
Moore Street	\$11,104,680	Hart Street	\$991,778	George Lane	\$3,935,373
Railway Street	\$6,775,364	Norfolk Street	\$3,039,998	Northumberland Serviceway	\$3,895,498
Scott Street and Memorial Avenue	\$7,259,860	Terminus Street	\$11,415,705	Railway Serviceway	\$3,176,936
Bigge Street	\$13,317,293	Nagle Street	\$3,258,368	Railway Lane	\$47,125
George Street	\$8,397,878	Charles Street	\$2,384,489	Hanwell Serviceway	\$3,342,685
Lachlan Street	\$1,005,865	Mill Road	\$4,390,781	Huckstepp Serviceway	\$3,415,185
Macquarie Street	\$6,288,128	Shepherd Street	\$2,228,723	Warren Serviceway	\$3,001,312
Campbell Street	\$1,765,230	Forbes Lane	\$316,571	Crawford Lane	\$211,374
Drummond Street	\$233,450	Drummond Lane	\$296,561	Dewsbury Serviceway	\$2,255,874
Castlereagh Street	\$4,092,031	Railway Street	\$6,775,364	Vic Reeves Serviceway	\$217,500
STREETS AND SERVICEWAY/LANEWAY PROJECTS SUB TOTAL					\$170,151,817
Contingency					\$51,045,545
TOTAL					\$221,197,362

Gateway Projects

Berryman Reserve Gateway	\$460,000	Moore Street Gateway	N/A	Macquarie Street (North) Gateway	\$460,000
Bigge Street (North) Gateway	\$290,000	Memorial Avenue Gateway	\$240,000	Macquarie Street (South) Gateway	\$845,000
Elizabeth Street Gateway	\$515,000	Liverpool Railway Station Entry	N/A	Newbridge Road Gateway	\$690,000

Open Space, Hydrology, Heritage and Other Projects

Brickmaker's Creek Master Plan	\$150,000	Berryman Reserve Master Plan	\$1,350,000	Liverpool City Library Forecourt	\$280,575
Georges River Master Plan	\$150,000	Apex Park	\$1,000,000	College Street Pocket Park	\$460,000
Lighthouse Park	\$24,700,000	Hart Park	\$1,725,000	Liverpool TAFE Forecourt	\$268,250
River Connection and Boardwalk	\$4,000,000	St. Luke's Anglican Church Forecourt	\$48,575	WSU Forecourt	\$41,325
Pedestrian Bridge across Georges River	\$10,000,000	Dunbier Park	\$565,000	Former Liverpool Courthouse Forecourt	\$200,000
Liverpool Pioneers Memorial Park (Stage 2)	\$1,200,000	Secant Street Pocket Park	\$1,150,000	Dr. Pirie Community Centre Forecourt	\$200,000
Bigge Park Embellishment	\$230,000	Phillimona Park	\$1,700,000		
GATEWAY, OPEN SPACE, HYDROLOGY, HERITAGE AND OTHER PROJECTS SUB TOTAL					\$52,918,725
Contingency					\$15,875,617
TOTAL					\$68,794,342

MASTER PLAN TOTAL

\$289,991,704

Figure 7.320 Master Plan - Overview of Opinion of Probable Costs (Liverpool City Council)

7.2

IMPLEMENTATION PLAN

PROJECT IMPLEMENTATION

Summary

List of Projects	Actions	Timeframe*	Probable Cost (OPC)
Streets			
Macquarie Street Urban Spine Development of Macquarie Street as an urban spine within the city centre, including preparation of an overall master plan for the spine and identification of various projects within the spine. (Refer pg. 154-155)	Detailed Master Plan	Medium Term	\$100,000
Macquarie Street (Middle) Upgrade Upgrade of Maquarie Street between Moore Street and Scott Street, including streetscape upgrade works and a new plaza area. (Refer to pg. 156-159)	Detailed design and Construction	Short Term	\$6,288,128
Macquarie Street (South) Upgrade Upgrade of Maquarie Street between Scott Street and Hume Highway, including streetscape upgrade works. (Refer to pg. 160-163)	Detailed design and Construction	Medium Term	\$5,754,311
Elizabeth Street Upgrade Upgrade of Elizabeth Street between Hume Highway and College Street, including streetscape upgrade works and potential future cycleway. (Refer to pg. 164-171)	Detailed design and Construction	Short Term	\$10,084,968
Moore Street Public & Active Transport Corridor Redesign and upgrade of Moore Street as a public transport corridor between Hume Highway and College Street, including increased public domain between George Street and Bathurst Street, new dedicated cycleway and streetscape upgrade works. (Refer to pg. 172-179)	Detailed design and Construction	Short Term	\$11,104,680
Scott Street & Memorial Avenue Upgrade Redesign and upgrade of Scott Street and Memorial Avenue between Hume Highway and Bigge Street, including new dedicated cycleway and streetscape upgrade works. (Refer to pg. 180-183)	Detailed design and Construction	Short Term	\$7,259,860
Bigge Street Upgrade Upgrade of Bigge Street between Hume Highway and Elizabeth Street, including kerb extensions with integrated street trees/car parking, and streetscape upgrade works. (Refer to pg. 184-185)	Detailed design and Construction	Short Term	\$13,317,293
George Street Upgrade Redesign and upgrade of George Street, including kerb extensions with integrated street trees/car parking, new dedicated cycleway and streetscape upgrade works. (Refer pg. 186-193)	Detailed design and Construction	Short Term	\$8,397,878
Lachlan Street Upgrade (i.e. Typical Street Treatment Type A and Type B) Upgrade of Lachlan street, including kerb extensions with integrated street trees/car parking, and/or street tree planting within the verge, and other streetscape upgrade works. (Refer pg. 194-195)	Detailed design and Construction	Short Term	\$1,005,865
Campbell Street Upgrade (i.e. Typical Street Treatment Type A and Type B) Upgrade of Campbell street, including kerb extensions with integrated street trees/car parking, and/or street tree planting within the verge, and other streetscape upgrade works. (Refer pg. 194-195)	Detailed design and Construction	Medium Term	\$1,765,230
Drummond Street Upgrade (i.e. Typical Street Treatment Type A) Upgrade of Drummond street, including kerb extensions with integrated street trees/car parking, and streetscape upgrade works. (Refer pg. 194 and 196-197).	Detailed design and Construction	Long Term	\$233,450
Castlereagh Street Upgrade (i.e. Typical Street Treatment Type A and Type B) Upgrade of Castlereagh street, including kerb extensions with integrated street trees/car parking, and/or street tree planting within the verge, and other streetscape upgrade works. (Refer pg. 194-195)	Detailed design and Construction	Long Term	\$4,092,031

* Timeframe - Short Term (0-5 Yrs), Medium Term (6-7 Yrs) and Long Term (8 Yrs and beyond)

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Project Implementation - Summary

List of Projects	Actions	Timeframe*	Probable Cost (OPC)
Bathurst Street Upgrade (i.e. Typical Street Treatment Type A and Type B) Upgrade of Bathurst street, including kerb extensions with integrated street trees/car parking, and/or street tree planting within the verge, and other streetscape upgrade works. (Refer pg. 194-195)	Detailed design and Construction	Medium Term	\$9,913,201
Northumberland Street Upgrade (i.e. Typical Street Treatment Type A and Type B) Upgrade of Northumberland street, including kerb extensions with integrated street trees/car parking, and/or street tree planting within the verge, and other streetscape upgrade works. (Refer pg. 194-195)	Detailed design and Construction	Medium Term	\$9,125,031
Goulburn Street Upgrade (i.e. Typical Street Treatment Type A) Upgrade of Goulburn street, including kerb extensions with integrated street trees/car parking, and streetscape upgrade works. (Refer pg. 194).	Detailed design and Construction	Medium Term	\$5,991,473
Forbes Street Upgrade (i.e. Typical Street Treatment Type A) Upgrade of Forbes street, including kerb extensions with integrated street trees/car parking, and streetscape upgrade works. (Refer pg. 194).	Detailed design and Construction	Short Term	\$2,725,166
Hart Street Upgrade (i.e. Typical Street Treatment Type A) Upgrade of Hart street, including kerb extensions with integrated street trees/car parking, and streetscape upgrade works. (Refer pg. 194).	Detailed design and Construction	Long Term	\$991,778
Norfolk Street Upgrade (i.e. Typical Street Treatment Type A and Type B) Upgrade of Northumberland street, including kerb extensions with integrated street trees/car parking, and/or street tree planting within the verge, and other streetscape upgrade works. (Refer pg. 194-195)	Detailed design and Construction	Long Term	\$3,039,998
Terminus Street Upgrade (i.e. Typical Street Treatment Type B) Upgrade of Terminus street, including street tree planting within the verge, and streetscape upgrade works. (Refer pg. 195).	Detailed design and Construction	Medium Term	\$11,415,705
Nagle Street Upgrade (i.e. Typical Street Treatment Type A) Upgrade of Nagle street, including kerb extensions with integrated street trees/car parking, and streetscape upgrade works. (Refer pg. 194).	Detailed design and Construction	Long Term	\$3,258,368
Charles Street Upgrade (i.e. Typical Street Treatment Type A) Upgrade of Charles street, including kerb extensions with integrated street trees/car parking, and streetscape upgrade works. (Refer pg. 194).	Detailed design and Construction	Long Term	\$2,384,489
Mill Road Upgrade (i.e. Typical Street Treatment Type A and Type B) Upgrade of Mill Road, including kerb extensions with integrated street trees/car parking, and/or street tree planting within the verge, and other streetscape upgrade works. (Refer pg. 194-195)	Detailed design and Construction	Long Term	\$4,390,781
Shepherd Street Upgrade (i.e. Typical Street Treatment Type A and Type B) Upgrade of Shepherd street, including kerb extensions with integrated street trees/car parking, and/or street tree planting within the verge, and other streetscape upgrade works. (Refer pg. 194-195)	Detailed design and Construction	Medium Term	\$2,228,723

* Timeframe - Short Term (0-5 Yrs), Medium Term (6-7 Yrs) and Long Term (8 Yrs and beyond)

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Project Implementation - Summary

List of Projects	Actions	Timeframe*	Probable Cost (OPC)
Forbes Lane Upgrade (i.e. Typical Street Treatment Type A) Upgrade of Forbes Lane, including kerb extensions with integrated street trees/car parking, and streetscape upgrade works. (Refer pg. 194).	Detailed design and Construction	Long Term	\$316,571
Drummond Lane Upgrade (i.e. Typical Street Treatment Type A) Upgrade of Drummond Lane, including kerb extensions with integrated street trees/car parking, and streetscape upgrade works. (Refer pg. 194).	Detailed design and Construction	Long Term	\$296,561
Typical Street Upgrade (Type A Treatment) Upgrade of various peripheral streets within the city centre, including kerb extensions with integrated street trees/car parking, and streetscape upgrade works. (Refer pg. 194-195)	Detailed design and Construction	Medium Term	N/A (Factored in as part of Street projects within the Master Plan)
Typical Street Upgrade (Type B Treatment) Upgrade of various peripheral streets within the city centre, including street tree planting within the verge, and streetscape upgrade works. (Refer pg. 195)	Detailed design and Construction	Long Term	N/A (Factored in as part of Street projects within the Master Plan)
Typical Street Intersection Treatment Upgrade of various peripheral street junctions within the city centre, including kerb extensions with vegetation, and streetscape upgrade works. (Refer pg. 196-197)	Detailed design and Construction	Medium Term	N/A (Factored in as part of Street projects within the Master Plan)
Liverpool Health Precinct Streets Upgrade Redesign and upgrade of Liverpool Healthcare & Innovation Precinct along Goulburn Street and Forbes Street, including kerb extensions with integrated street trees/car parking, and streetscape upgrade works. (Refer pg. 198)	Detailed design and Construction	Short Term	N/A (Factored in as part of other projects)
Railway Street Upgrade Redesign and upgrade of Railway Street, including with re-organised traffic arrangements, increased public domain and streetscape upgrade works. (Refer pg. 198)	Detailed design and Construction	Short Term	\$6,775,364
College Street Upgrade Redesign and upgrade of College Street, including kerb extensions with integrated street trees/car parking, and streetscape upgrade works. (Refer pg. 198)	Detailed design and Construction	Medium Term	\$2,750,000
Pirie Street - Increased Public Realm Reconfigure Pirie Street, including converting part of the carriageway into public domain with recreational infrastructure and streetscape upgrade works. (Refer pg. 198)	Detailed design and Construction	Long Term	\$3,260,557
Other Streetscape Upgrades Upgrades of other streets in various locations, including streetscape upgrade works to achieve active frontages, additional outdoor dining and other public domain improvements. (Refer pg. 198-199)	Detailed design and Construction	Long Term	N/A (Factored in as part of other projects/future development)
Hume Highway - Landscape Treatments Upgrade of the public and private domain along Hume Highway/ Copeland Street with additional street trees. (Refer pg. 198)	Detailed design and Construction	Long Term	N/A (Factored in as part of other projects/future development)
Serviceways/Laneways			
Norfolk Serviceway Upgrade Upgrade of Norfolk Serviceway, including new laneway-specific treatments and infrastructure, and interventions to increase laneway activation and support community events. Proposal includes an extension of the outdoor dining along Macquarie Street South (Refer pg. 202-205)	Detailed design and Construction	Medium Term	\$4,812,623

* Timeframe - Short Term (0-5 Yrs), Medium Term (6-7 Yrs) and Long Term (8 Yrs and beyond)

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Implementation Plan

Project Implementation - Summary

List of Projects	Actions	Timeframe*	Probable Cost (OPC)
Laurantus Serviceway Upgrade Upgrade of Laurantus Serviceway, including new laneway-specific treatments and infrastructure, and interventions to increase laneway activation and support community events. (Refer pg. 200-201)	Detailed design and Construction	Long Term	\$3,572,873
George Lane & Northumberland Serviceway Upgrade Upgrade of George Lane and Northumbeland Serviceway, including new laneway-specific treatments and infrastructure, and interventions to increase laneway activation and support community events. Proposal includes an extension to the pedestrian-focused upgrade along Macquarie Street (South). (Refer pg. 200-201)	Detailed design and Construction	Medium Term	\$7,830,870
Railway Lane and Railway Serviceway Upgrade Upgrade of Railway Lane and Railway Serviceway, including new laneway-specific treatments and infrastructure, and interventions to increase laneway activation and support community events. Proposal includes potential redirecting of pedestrian movement along Railway Street to Railway Lane and Railway Serviceway (Refer pg. 200-201). Proposal also includes tactical urbanism interventions (Refer pg. 290-293)	Detailed design and Construction	Medium Term	\$3,224,061
Hanwell Serviceway Upgrade Upgrade of Hanwell Serviceway, including new laneway-specific treatments and infrastructure, and interventions to increase laneway activation and support community events. (Refer pg. 200-201)	Detailed design and Construction	Long Term	\$3,342,685
Huckstepp Serviceway Upgrade Upgrade of Huckstepp Serviceway, including new laneway-specific treatments and infrastructure, and interventions to increase laneway activation and support community events. (Refer pg. 200-201)	Detailed design and Construction	Long Term	\$3,415,185
Warren Serviceway Upgrade Upgrade of Warren Serviceway, including new laneway-specific treatments and infrastructure, and interventions to increase laneway activation and support community events. Proposal includes future development with opportunities for additional street activation as an extension of the Liverpool City Library forecourt. (Refer pg. 200-201)	Detailed design and Construction	Long Term	\$3,001,312
Crawford Lane Upgrade Upgrade of Crawford Lane, including new laneway-specific treatments and infrastructure, and interventions to increase laneway activation and support community events. Proposal includes improved connections to Liverpool Public School. (Refer pg. 200-201)	Detailed design and Construction	Long Term	\$211,374
Dewsbury Serviceway Upgrade Upgrade of Dewsbury Lane, including new laneway-specific treatments and infrastructure, and interventions to increase laneway activation and support community events. (Refer pg. 200-201)	Detailed design and Construction	Long Term	\$2,255,874
Vic Reeves Serviceway Upgrade Upgrade of Dewsbury Lane, including new laneway-specific treatments and infrastructure, and interventions to increase laneway activation and support community events. (Refer pg. 200-201)	Detailed design and Construction	Long Term	\$217,500
Gateways			
Berryman Reserve Gateway Upgrade Upgrade of Berryman Reserve gateway, including new/improved public domain infrastructure (i.e. street trees, vegetation and landscaping). (Refer pg. 206-207).	Detailed design and Construction	Long Term	\$460,000
Bigge Street (North) Gateway Upgrade Upgrade of Bigge Street (North) gateway, including new/improved public domain infrastructure (i.e. street trees, vegetation within the public and private domain, landscaping and public art). (Refer pg. 206-208)	Detailed design and Construction	Medium Term	\$290,000

* Timeframe - Short Term (0-5 Yrs), Medium Term (6-7 Yrs) and Long Term (8 Yrs and beyond)

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Project Implementation - Summary

List of Projects	Actions	Timeframe*	Probable Cost (OPC)
Elizabeth Street Gateway Upgrade Upgrade of Elizabeth Street gateway, including new/improved public domain infrastructure (i.e. street trees, vegetation within the public and private domain, feature walls, landscaping and public art). (Refer pg. 206-207 and 209)	Detailed design and Construction	Long Term	\$515,000
Moore Street Gateway Upgrade Upgrade of Moore Street gateway as part of FAST corridor, including new/improved public domain infrastructure (i.e. street trees, vegetation within the public and private domain, feature walls, landscaping and public art). (Refer pg. 206-207)	Detailed design and Construction	Medium Term	N/A (Factored in as part of other projects/future development)
Memorial Avenue Gateway Upgrade Upgrade of Memorial Avenue gateway, including new/improved public domain infrastructure (i.e. street trees, vegetation within the public and private domain, feature walls, landscaping and public art). (Refer pg. 206-207)	Detailed design and Construction	Long Term	\$240,000
Liverpool Railway Station Entry Upgrade Upgrade of Liverpool Railway Station gateway, including new/improved public domain treatments and infrastructure, as part of potential future redevelopment of Liverpool Station site. (Refer pg. 206-207 and 216-217)	Detailed design and Construction	Long Term	N/A (Factored in as part of other projects/future development)
Macquarie Street (North) Gateway Upgrade Upgrade of Macquarie Street (North) gateway, including new/improved public domain infrastructure (i.e. street trees, vegetation within the public and private domain, landscaping and public art). (Refer pg. 206-207)	Detailed design and Construction	Long Term	\$460,000
Macquarie Street (South) Gateway Upgrade Upgrade of Macquarie Street (South) gateway, including new/improved public domain infrastructure (i.e. street trees, vegetation within the public and private domain, landscaping and public art). (Refer pg. 206-207)	Detailed design and Construction	Medium Term	\$845,000
Newbridge Road Gateway Upgrade Upgrade of Newbridge Road gateway, including treatments to the existing bridge structure (e.g. custom lighting and public art), and landscaping to surrounding areas. (Refer pg. 206-207)	Detailed design and Construction	Long Term	\$690,000
Open Space			
Brickmakers Creek Corridor - Site Master Plan (Open Space Improvements) Opportunity to develop a broad master plan for the entire Brickmaker's Creek Corridor to address and explore the potential of various open spaces through the corridor. The Brickmaker's creek master plan will also address the different hydrological concerns related to the creek. (Refer pg. 214)	Landscape Master Plan and Detailed Design	Medium Term	\$150,000
Georges River Corridor - Existing & Proposed Open Space Improvements Develop a long term master plan for Georges River foreshore which will deliver on the Green Grid and Blue Grid opportunities, potentials of various open spaces along the river foreshore. (Refer pg. 214)	Landscape Master Plan and Detailed Design	Short Term	\$150,000
Lighthouse Park Redevelopment Upgrade works to Lighthouse Park, including new/upgraded open space infrastructure, facilities, amenities, and landscaping, in accordance with the existing approved site Concept Master Plan. (Refer pg. 214-215)	Detailed design and Construction	Short Term	\$24,700,000
River Foreshore Connections & Boardwalk Upgrade Upgrade works to Georges River Foreshore Connections, including new/upgraded infrastructure, facilities, amenities, and landscaping. (Refer pg. 214)	Detailed design and Construction	Short Term	\$4,000,000

* Timeframe - Short Term (0-5 Yrs), Medium Term (6-7 Yrs) and Long Term (8 Yrs and beyond)

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Implementation Plan

Project Implementation - Summary

List of Projects	Actions	Timeframe*	Probable Cost (OPC)
Pedestrian Bridge across Georges River Upgrade Upgrade works to Georges River Foreshore Connections, including new/upgraded infrastructure, facilities, amenities, and landscaping. (Refer pg. 214)	Detailed design and Construction	Short Term	\$10,000,000
Liverpool Railway Station - Potential Future Public Plaza Redevelopment of the Liverpool Railway Station site, including a public plaza and integrated active and public transport hub, and potential new development. (Refer pg. 216-217)	Master Plan and Detailed Design	Long Term	N/A (Factored in as part of other projects/future development)
Bigge Park - Embellishment Works Embellishment works to Bigge Park, including new/upgraded open space infrastructure, facilities, amenities, and landscaping. (Refer pg. 216)	Design and Construction	Long Term	\$230,000
Liverpool Pioneers Memorial Park - Site Master Plan Upgrade works to Liverpool Pioneers Memorial Park, including new/upgraded open space infrastructure, facilities, amenities, and landscaping. (Refer pg. 216)	Design and Construction	Medium Term	\$1,200,000
Berryman Reserve - Site Master Plan Upgrade works to Berryman Reserve, including new/upgraded open space infrastructure, facilities, amenities, and landscaping. (Refer pg. 216)	Master Plan, Detail Design and Construction	Long Term	\$1,350,000
Apex Park - Existing Concept Plan & Detailed Design Upgrade works to Apex Park, including new/upgraded open space infrastructure, facilities, amenities, and landscaping, in accordance with the existing approved site Master Plan/Detailed Design. (Refer pg. 218-219)	Detail Design and Construction	Short Term	\$1,000,000
Hart Park - Proposed Site Master Plan Upgrade works to Hart Park, including new/upgraded/re-located open space infrastructure, facilities, amenities, and landscaping. (Refer pg. 218)	Master Plan, Detail Design and Construction	Long Term	\$1,725,000
St. Luke's Anglican Church Forecourt - Landscape Concept Design Upgrade works to St. Luke's Anglican Church Forecourt, including new/upgraded open space infrastructure, facilities and landscaping. (Refer pg. 218 & 257)	Design and Construction	Medium Term	\$48,575
Augusta Cullen Plaza - Landscape Concept Plan (Part of Liverpool Civic Place) Upgrade works to Augusta Cullen Plaza, including new/upgraded open space infrastructure, facilities and landscaping, as part of the Liverpool Civic Place redevelopment. (Refer pg 218)	Master Plan, Detail Design and Construction	Short Term	N/A (Factored in as part of other projects/future development)
Bathurst Street Car Park - Landscape Concept Plan (Part of future site redevelopment) Upgrade works to Bathurst Street car park, including new/upgraded open space infrastructure, facilities and landscaping, as part of the site redevelopment. (Refer pg. 218)	Master Plan, Detailed Design & Construction	Medium Term	N/A (Factored in as part of other projects/future development)
Dunbier Park - Landscape Concept Plan Upgrade works to Dunbier Park, including new/upgraded open space infrastructure, facilities, improved community garden and landscaping. (Refer pg. 218)	Detailed design and Construction	Medium Term	\$565,000
(Proposed) Secant Street Pocket Park - Landscape Concept Plan New Pocket Park at Secant Street, including new/upgraded open space infrastructure, facilities, new play spaces and landscaping. (Refer pg. 220-221).	Detailed design and Construction	Medium Term	\$1,150,000

* Timeframe - Short Term (0-5 Yrs), Medium Term (6-7 Yrs) and Long Term (8 Yrs and beyond)

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Project Implementation - Summary

List of Projects	Actions	Timeframe*	Probable Cost (OPC)
(Proposed) Phillimona Gardens - Landscape Concept Plan New Park and upgrade works to Phillimona Park, including new/upgraded open space infrastructure, facilities, new play spaces and landscaping. (Refer pg. 220).	Detailed design and Construction	Short Term	\$1,700,000
Liverpool City Library Forecourt - Landscape Concept Plan Upgrade works to Liverpool City Library Forecourt, including new/upgraded open space infrastructure, facilities, improved lighting, landscaping and opportunities for activation events. (Refer pg. 222-223)	Detailed design and Construction	Medium Term	\$280,575
(Proposed) College Street Pocket Park - Landscape Concept Plan New pocket park and upgrade works to College Street pocket park, including new/upgraded open space infrastructure, facilities, new active play options, landscaping and temporary activation facilities. (Refer pg. 224-225).	Detailed design and Construction	Medium Term	\$460,000
Railway Street Plaza (Adjacent to Liverpool Public School) - Landscape Concept Plan Upgrade works to Railway Street Plaza, including new/upgraded open space infrastructure, facilities, improved lighting and landscaping as part of Railway Street upgrade. (Refer pg. 224)	Landscape Master Plan and Detailed Design as part of Railway Street Revitalisation	Short Term	N/A (Factored in as part of other projects/future development)
Liverpool TAFE Forecourt - Landscape Concept Plan Upgrade works to Liverpool TAFE forecourt along Bigge Street, including new/upgraded open space infrastructure, facilities, landscaping and opportunities for temporary art installations. (Refer pg. 226-227)	Detailed design and Construction	Medium Term	\$268,250
Pocket Park on Corner of Hume Highway & Memorial Avenue - Landscape Concept Plan New pocket park along Memorial Avenue and Hume Highway, including new/upgraded open space infrastructure, facilities, opportunities for passive recreation and landscaping. (Refer pg. 226).	Detailed design and Construction	Medium Term	N/A (Factored in as part of other projects/future development)
Pirie Street Plaza - Landscape Concept Plan Reconfigure Pirie Street, including converting part of the carriageway into public domain with recreational infrastructure and streetscape upgrade works. (Refer pg. 226 & 198)	Detailed design and Construction	Long Term	N/A (Factored in as part of other projects/future development)
Potential Shared-Use Open Spaces (Liverpool Boys High, Liverpool Girls High, Liverpool Public School, All Saints Catholic College) Prepare a potential shared use agreement for open space within the educational institutes for community during after the school hours and/or on weekends. (Refer pg. 228)	Master Plan Detailed Design Construction	Medium Term	N/A (Factored in as part of other projects/future development)
WSU Forecourt - Landscape Concept Plan Upgrade works to Western Sydney University forecourt along Elizabeth Street, including new/upgraded open space infrastructure, facilities, landscaping and opportunities for art installations. (Refer pg. 228-229)	Design and Construction	Medium Term	\$41,325
Public Bathroom Strategy Develop an LGA wide Public Bathroom Strategy to improve amenities within the public spaces. (Refer pg. 228 and 213)	Design Strategy & Policy Document	Medium Term	N/A (Factored in as part of other projects)

* Timeframe - Short Term (0-5 Yrs), Medium Term (6-7 Yrs) and Long Term (8 Yrs and beyond)

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Implementation Plan

Project Implementation - Summary

List of Projects	Actions	Timeframe*	Probable Cost (OPC)
Hydrology			
Georges River Corridor - Existing & Proposed Hydrological Improvements Develop a long term master plan for Georges River which will deliver on the Green Grid and Blue Grid opportunities, potentials of improving river connections, increasing access to the river and opportunities to interact with the river. (Refer pg. 232-235)	Landscape Master Plan and Detailed Design as part of Open Space Intervention	Medium Term	N/A (Factored in as part of other projects/future development)
Brickmakers Creek Corridor - Site Master Plan (Hydrological Improvements) Develop a broad master plan for the entire Brickmaker's Creek Corridor to address and explore the potential of various open spaces through the corridor and the different hydrological concerns related to the creek. (Refer pg. 236-237 and 239)	Landscape Master Plan and Detailed Design as part of Open Space Intervention	Medium Term	N/A (Factored in as part of other projects/future development)
Water Features (Potential Locations) Identify and propose water features along key sites, including new/upgraded water feature facilities, landscaping and amenities to support the usage of the facility. (Refer pg. 238)	Ongoing advice	Long Term	N/A (Factored in as part of other projects/future development)
Water Play (Potential Locations) Identify and propose water play facilities, including new/upgraded play facilities, landscaping and amenities to support the usage of the facility. (Refer pg. 238)	Ongoing advice	Long Term	N/A (Factored in as part of other projects/future development)
Water Sensitive Urban Design (WSUD) interventions (i.e. As part of Street Upgrades) Identify and propose Water Sensitive Urban Design infrastructure along various streetscape works in the city centre, including new/upgraded WSUD infrastructure and landscaping. (Refer pg. 240-241)	Ongoing advice	Long Term	N/A (Factored in as part of other projects/future development)
Interpretation of the Former Creek Line Identify and propose design elements to interpret the former creek line, including new/upgraded infrastructure, custom lighting and landscaping to identify the historic creek line. (Refer pg. 242-243)	Ongoing advice	Long Term	N/A (Factored in as part of other projects/future development)
Heritage			
Reinforce the Town Plan of Liverpool (i.e. Through public domain treatments) Preserve and maintain the town plan of Liverpool in accordance with Master Plan recommendations. (Refer pg. 245 and 251)	Ongoing advice	Long Term	N/A (Factored in as part of other projects/future development)
Liverpool Railway Station - Adaptive reuse of historic Liverpool Railway Station Building and Railway Shed Upgrade and adaptive reuse of Liverpool Railway Station Building and Railway Shed within the redevelopment proposal for Liverpool Railway Station site. (Refer pg. 251)	Concept and Detailed Design	Medium Term	N/A (Factored in as part of other projects/future development)
Former Liverpool Courthouse Forecourt Upgrade - Landscape Concept Plan Upgrade works to Former Liverpool Courthouse Forecourt, including new/upgraded open space infrastructure, facilities and landscaping. (Refer pg. 252-253)	Design Advice	Medium Term	\$200,000
DDr. Pirie Community Centre Forecourt Upgrade - Landscape Concept Plan Upgrade works to Dr. Pirie Community Centre Forecourt, including new/upgraded open space infrastructure, facilities and landscaping. (Refer pg. 252 and 255)	Design and Construction	Long Term	\$200,000

* Timeframe - Short Term (0-5 Yrs), Medium Term (6-7 Yrs) and Long Term (8 Yrs and beyond)

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Project Implementation - Summary

List of Projects	Actions	Timeframe*	Probable Cost (OPC)
All Saints Catholic Church - Streetscape Upgrade to surrounding public domain Upgrade works to All Saints Catholic Church forecourt, including new/upgraded open space infrastructure, facilities and landscaping. (Refer pg. 254)	Design and Construction	Long Term	N/A (Factored in as part of other projects/future development)
Old Commercial Hotel – Retain, Maintain & Conserve Maintenance and conservation works, in accordance with Master Plan recommendations. (Refer pg. 254)	Ongoing advice	Long Term	N/A (Factored in as part of other projects/future development)
Former Liverpool Hospital (Liverpool TAFE) - Retain, Maintain & Conserve Maintenance and conservation works, in accordance with Master Plan recommendations. (Refer pg. 254)	Design Advice	Long Term	N/A (Factored in as part of other projects/future development)
St. Luke’s Anglican Church Forecourt Upgrade - Landscape Concept Plan Provide Heritage advise on the upgrade works to St. Luke’s Anglican Church Forecourt, including new/upgraded open space infrastructure, facilities and landscaping. (Refer pg. 256-257)	Design Advice	Long Term	N/A (Factored in as part of other projects/future development)
Rosebank Cottage - Retain, Maintain & Conserve Maintenance and conservation works, in accordance with Master Plan recommendations. (Refer pg. 258)	Ongoing advice	Long Term	N/A (Factored in as part of other projects/future development)
Liverpool Public School - Redesign and Replacement of front fence, Concept & Detailed Design Upgrade works to Liverpool Public School, including new/upgraded streetscape infrastructure, fencing and landscaping. (Refer pg. 258)	Concept and Detailed Design	Long Term	N/A (Factored in as part of other projects/future development)
Bigge Park - Embellishment Works (Heritage Interventions) Maintenance and conservation works, in accordance with Master Plan recommendations. (Refer pg. 259)	Design Advice	Long Term	N/A (Factored in as part of other projects/future development)
Liverpool Pioneers Memorial Park - Site Master Plan (Heritage Interventions) Maintenance and conservation works, in accordance with Master Plan recommendations. (Refer pg. 259)	Design Advice	Long Term	N/A (Factored in as part of other projects/future development)
Apex Park - Existing Concept Plan & Detailed Design (Heritage Interventions) Provide heritage advice on upgrade works to Apex Park, including new/upgraded open space infrastructure, facilities, amenities, and landscaping, in accordance with the existing approved site Master Plan/Detailed Design. (Refer pg. 260)	Archaeological Assessment and Design Advice	Short Term	N/A (Factored in as part of other projects/future development)
Berryman Reserve - Site Master Plan (Heritage Interventions) Maintenance and conservation works, in accordance with Master Plan recommendations. (Refer pg. 260-261)	Design Advice	Long Term	N/A (Factored in as part of other projects/future development)
Macquarie Monument - Retain, Maintain & Conserve Maintenance and conservation works, in accordance with Master Plan recommendations. (Refer pg. 264)	Ongoing advice	Long Term	N/A (Factored in as part of other projects/future development)
Milestone - Retain, Maintain & Conserve Maintenance and conservation works, in accordance with Master Plan recommendations. (Refer pg. 264)	Ongoing advice	Long Term	N/A (Factored in as part of other projects/future development)

* Timeframe - Short Term (0-5 Yrs), Medium Term (6-7 Yrs) and Long Term (8 Yrs and beyond)

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Project Implementation - Summary

List of Projects	Actions	Timeframe*	Probable Cost (OPC)
Pylons (part of the proposed footbridge) - Detailed Design (in progress) Provide heritage advice on upgrade and resign of new pedestrian bridge structure and upgrade works to Pylons across Georges River, including new/upgraded bridge structure, supporting infrastructure and facilities and landscaping. (Refer pg. 264 and 262-263).	Concept and Detailed Design	Medium Term	N/A (Factored in as part of other projects/future development)
Railway Viaduct (Shepherd Street) - Retain, Maintain & Conserve Maintenance and conservation works, in accordance with Master Plan recommendations. (Refer pg. 265)	Ongoing advice	Long Term	N/A (Factored in as part of other projects/future development)
Palm Trees on Macquarie Street - Retain, Maintain & Conserve Maintenance and conservation works, in accordance with Master Plan recommendations. (Refer pg. 265)	Ongoing advice	Long Term	N/A (Factored in as part of other projects/future development)
Public Art			
Public Arts Policy for Liverpool city centre Preparation of Public Arts Policy document for the Liverpool city centre. (Refer to pg. 266)	Policy Document	Short Term	N/A (Factored in as part of other projects)
Public Arts Strategy for Liverpool city centre Preparation of Public Arts Strategy document for the Liverpool city centre. (Refer to pg. 266)	Policy Document	Short Term	N/A (Factored in as part of other projects)
Various Public Art Projects/Interventions Advice on public arts being proposed at various locations and its integration with projects in the city centre.	Ongoing advice	Long Term	N/A (Factored in as part of other projects)
Other Projects			
Liverpool City Centre Public Lighting Strategy Prepare a Liverpool city centre public lighting strategy to guide the design, installation and maintenance of public lighting within the city centre.	Policy Document	Short Term	N/A (Factored in as part of other projects)
Liverpool City Centre Awnings Policy Develop an awning policy to guide the design and installation of awnings and canopies that overhang areas within the public domain, within the city centre.	Policy Document	Medium Term	N/A (Factored in as part of other projects)
Liverpool City Centre Outdoor Dining Policy Review and/or update Council's existing outdoor dining policy to inform the design of future outdoor dining areas within the city centre.	Policy Document	Short Term	N/A (Factored in as part of other projects)

* Timeframe - Short Term (0-5 Yrs), Medium Term (6-7 Yrs) and Long Term (8 Yrs and beyond)

7.3

IMPLEMENTATION PLAN PROJECT VALIDATION Overview

Projects	Strategic Planning Frameworks												Best Practice								
	Greater Sydney Commission Place Strategy					Our Home Liverpool Community Strategic Plan				Local Strategic Planning Statement			Government Architect NSW Good Urban Design								
	Connectivity	Liveability	Productivity	Sustainability	Governance	Social	Environment	Economic	Civic Leadership	Connectivity	Liveability	Productivity	Sustainability	Better Fit	Better Performance	Better for Community	Better for People	Better Working	Better Value	Better Look & Feel	
Streets																					
Macquarie Street Urban Spine	✓	✓	✓	✓		✓	✓	✓		✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
Macquarie Street (Middle) Upgrade	✓	✓	✓	✓			✓	✓			✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
Macquarie Street (South) Upgrade	✓	✓	✓	✓			✓	✓			✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
Elizabeth Street Upgrade	✓	✓	✓	✓			✓	✓			✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
Moore Street Public & Active Transport Corridor	✓	✓	✓	✓		✓	✓	✓			✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
Scott Street & Memorial Avenue Upgrade	✓	✓	✓	✓			✓	✓			✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
Bigge Street Upgrade	✓	✓	✓	✓			✓	✓			✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
George Street Upgrade	✓	✓	✓	✓	✓		✓	✓			✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
Lachlan Street Upgrade (I.e. Typical Street Treatment Type A and Type B)	✓	✓	✓	✓			✓	✓			✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
Campbell Street Upgrade (I.e. Typical Street Treatment Type A and Type B)	✓	✓	✓	✓			✓	✓			✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
Drummond Street Upgrade (I.e. Typical Street Treatment Type A)	✓	✓	✓	✓			✓	✓			✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
Castlereagh Street Upgrade (I.e. Typical Street Treatment Type A and Type B)	✓	✓	✓	✓			✓	✓			✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
Bathurst Street Upgrade (I.e. Typical Street Treatment Type A and Type B)	✓	✓	✓	✓			✓	✓			✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
Northumberland Street Upgrade (I.e. Typical Street Treatment Type A and Type B)	✓	✓	✓	✓			✓	✓			✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
Goulburn Street Upgrade (I.e. Typical Street Treatment Type A)	✓	✓	✓	✓			✓	✓			✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
Forbes Street Upgrade (I.e. Typical Street Treatment Type A)	✓	✓	✓	✓		✓	✓	✓			✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
Hart Street Upgrade (I.e. Typical Street Treatment Type A)	✓	✓	✓	✓			✓	✓			✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
Norfolk Street Upgrade (I.e. Typical Street Treatment Type A and Type B)	✓	✓	✓	✓			✓	✓			✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
Terminus Street Upgrade (I.e. Typical Street Treatment Type B)	✓	✓	✓	✓	✓		✓	✓			✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
Nagle Street Upgrade (I.e. Typical Street Treatment Type A)	✓	✓	✓	✓			✓	✓			✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
Charles Street Upgrade (I.e. Typical Street Treatment Type A)	✓	✓	✓	✓			✓	✓			✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
Mill Road Upgrade (I.e. Typical Street Treatment Type A and Type B)	✓	✓	✓	✓			✓	✓			✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
Shepherd Street Upgrade (I.e. Typical Street Treatment Type A and Type B)	✓	✓	✓	✓			✓	✓			✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
Forbes Lane Upgrade (I.e. Typical Street Treatment Type A)	✓	✓	✓	✓			✓	✓			✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
Drummond Lane Upgrade (I.e. Typical Street Treatment Type A)	✓	✓	✓	✓			✓	✓			✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
Typical Street Upgrade (Type A Treatment)	✓	✓	✓	✓			✓	✓			✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
Typical Street Upgrade (Type B Treatment)	✓	✓	✓	✓			✓	✓			✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
Typical Street Intersection Treatment	✓	✓	✓	✓			✓	✓			✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
Liverpool Health Precinct Streets Upgrade	✓	✓	✓	✓		✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Railway Street Upgrade	✓	✓	✓	✓			✓	✓			✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
College Street Upgrade	✓	✓	✓	✓			✓	✓			✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
Pirie Street - Increased Public Realm	✓	✓	✓	✓			✓	✓			✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
Other Streetscape Upgrades	✓	✓	✓	✓			✓	✓			✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
Hume Highway - Landscape Treatments	✓	✓	✓	✓			✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Serviceways / Laneways																					
Norfolk Serviceway Upgrade	✓	✓	✓	✓		✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Laurantus Serviceway Upgrade	✓	✓	✓	✓		✓	✓	✓			✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
George Lane & Northumberland Serviceway Upgrade	✓	✓	✓	✓		✓	✓	✓			✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
Railway Lane and Railway Serviceway Upgrade	✓	✓	✓	✓	✓		✓	✓			✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
Hanwell Serviceway Upgrade	✓	✓	✓	✓		✓	✓	✓			✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
Huckstepp Serviceway Upgrade	✓	✓	✓	✓			✓	✓			✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
Warren Serviceway Upgrade	✓	✓	✓	✓			✓	✓			✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
Crawford Lane Upgrade	✓	✓	✓	✓			✓	✓			✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
Dewsbury Serviceway Upgrade	✓	✓	✓	✓			✓	✓			✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
Vic Reeves Serviceway Upgrade	✓	✓	✓	✓			✓	✓			✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
Gateways																					
Berryman Reserve Gateway Upgrade		✓		✓			✓				✓			✓					✓	✓	✓
Bigge Street (North) Gateway Upgrade		✓		✓			✓				✓			✓					✓	✓	✓
Elizabeth Street Gateway Upgrade		✓		✓			✓				✓			✓					✓	✓	✓
Moore Street Gateway Upgrade		✓		✓			✓				✓			✓					✓	✓	✓
Memorial Avenue Gateway Upgrade		✓		✓			✓				✓			✓					✓	✓	✓
Liverpool Railway Station Entry Upgrade		✓		✓	✓		✓	✓			✓			✓	✓	✓	✓	✓	✓	✓	✓
Macquarie Street (North) Gateway Upgrade		✓		✓			✓				✓			✓					✓	✓	✓
Macquarie Street (South) Gateway Upgrade		✓		✓			✓				✓			✓					✓	✓	✓
Newbridge Road Gateway Upgrade		✓		✓			✓				✓			✓					✓	✓	✓
Open Space																					
Brickmakers Creek Corridor - Site Master Plan (Open Space Improvements)	✓	✓	✓	✓		✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Georges River Corridor - Existing & Proposed Open Space Improvements	✓	✓	✓	✓		✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Lighthorse Park Redevelopment	✓	✓	✓	✓		✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
River Foreshore Connections & Boardwalk Upgrade	✓	✓	✓	✓		✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Pedestrian Bridge across Georges River Upgrade	✓	✓	✓	✓		✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Liverpool Railway Station - Potential Future Public Plaza	✓	✓	✓	✓		✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Bigge Park - Embellishment Works	✓	✓	✓	✓		✓	✓	✓			✓	✓		✓	✓	✓	✓	✓	✓	✓	✓

Figure 7.321 Master Plan - Project Validation Summary (Liverpool City Council)

7.3

Implementation Plan

Project Validation - Overview

Projects	Strategic Planning Frameworks												Best Practice							
	Greater Sydney Commission Place Strategy					Our Home Liverpool Community Strategic Plan				Local Strategic Planning Statement			Government Architect NSW Good Urban Design							
	Connectivity	Liveability	Productivity	Sustainability	Governance	Social	Environment	Economic	Civic Leadership	Connectivity	Liveability	Productivity	Sustainability	Better Fit	Better Performance	Better for Community	Better for People	Better Working	Better Value	Better Look & Feel
Liverpool Pioneers Memorial Park - Site Master Plan		✓		✓		✓	✓				✓			✓					✓	✓
Berryman Reserve - Site Master Plan	✓					✓	✓								✓					
Apex Park - Existing Concept Plan & Detailed Design		✓		✓		✓	✓				✓			✓					✓	✓
Hart Park - Proposed Site Master Plan		✓				✓	✓				✓			✓						✓
St. Luke's Anglican Church Forecourt - Landscape Concept Design		✓				✓	✓				✓			✓						✓
Augusta Cullen Plaza - Landscape Concept Plan (Part of Liverpool Civic Place)		✓				✓	✓				✓			✓						✓
Bathurst Street Car Park - Landscape Concept Plan (Part of future site redevelopment)		✓	✓			✓	✓	✓			✓	✓		✓			✓		✓	✓
Dunbier Park - Landscape Concept Plan		✓				✓	✓				✓			✓						✓
(Proposed) Secant Street Pocket Park - Landscape Concept Plan		✓				✓	✓				✓			✓						✓
(Proposed) Phillimona Gardens - Landscape Concept Plan		✓				✓	✓				✓			✓						✓
Liverpool City Library Forecourt - Landscape Concept Plan		✓				✓	✓				✓			✓						✓
(Proposed) College Street Pocket Park - Landscape Concept Plan		✓				✓	✓	✓			✓			✓						✓
Railway Street Plaza (Adjacent to Liverpool Public School) - Landscape Concept Plan		✓				✓	✓				✓			✓						✓
Liverpool TAFE Forecourt - Landscape Concept Plan		✓					✓				✓			✓						✓
Pocket Park on Corner of Hume Highway & Memorial Avenue - Landscape Concept Plan		✓					✓				✓			✓						✓
Pirie Street Plaza - Landscape Concept Plan		✓					✓				✓			✓			✓			✓
Potential Shared-Use Open Spaces		✓	✓	✓		✓	✓	✓	✓		✓	✓		✓	✓	✓	✓	✓	✓	✓
WSU Forecourt - Landscape Concept Plan		✓	✓			✓	✓				✓			✓			✓		✓	✓
Public Bathroom Strategy		✓					✓		✓		✓			✓			✓		✓	✓
Hydrology																				
Georges River Corridor - Existing & Proposed Hydrological Improvements	✓	✓		✓		✓	✓	✓			✓	✓		✓	✓	✓	✓	✓	✓	✓
Brickmakers Creek Corridor - Site Master Plan (Hydrological Improvements)	✓	✓		✓		✓	✓	✓			✓	✓		✓	✓	✓	✓	✓	✓	✓
Water Features (Potential Locations)		✓					✓				✓									✓
Water Play (Potential Locations)		✓					✓				✓									✓
Water Sensitive Urban Design (WSUD) interventions (i.e. As part of Street Upgrades)		✓		✓			✓				✓	✓							✓	✓
Interpretation of the Former Creek Line		✓		✓			✓				✓			✓						✓
Heritage																				
Reinforce the Town Plan of Liverpool (i.e. Through public domain treatments)	✓	✓					✓				✓			✓						✓
Liverpool Railway Station - Adaptive reuse of historic Liverpool Railway Station Building and Railway Shed	✓	✓	✓				✓	✓			✓	✓		✓	✓	✓	✓	✓	✓	✓
Former Liverpool Courthouse Forecourt Upgrade - Landscape Concept Plan		✓	✓			✓	✓				✓			✓						✓
Dr. Pirie Community Centre Forecourt Upgrade - Landscape Concept Plan		✓				✓	✓				✓			✓						✓
All Saints Catholic Church - Streetscape Upgrade to surrounding public domain		✓				✓	✓				✓			✓						✓
Old Commercial Hotel – Retain, Maintain & Conserve		✓	✓				✓				✓			✓						✓
Former Liverpool Hospital (Liverpool TAFE) - Retain, Maintain & Conserve		✓	✓				✓				✓			✓						✓
St. Luke's Anglican Church Forecourt Upgrade - Landscape Concept Plan		✓				✓	✓				✓			✓						✓
Rosebank Cottage - Retain, Maintain & Conserve		✓					✓				✓			✓						✓
Liverpool Public School - Redesign and Replacement of front fence, Concept & Detailed Design		✓	✓			✓	✓				✓			✓						✓
Bigge Park - Embellishment Works (Heritage Interventions)		✓				✓	✓				✓			✓						✓
Liverpool Pioneers Memorial Park - Site Master Plan (Heritage Interventions)		✓				✓	✓				✓			✓						✓
Apex Park - Existing Concept Plan & Detailed Design (Heritage Interventions)		✓				✓	✓				✓			✓						✓
Berryman Reserve - Site Master Plan (Heritage Interventions)	✓	✓		✓		✓	✓				✓			✓	✓	✓			✓	✓
Macquarie Monument - Retain, Maintain & Conserve		✓					✓				✓			✓						✓
Milestone - Retain, Maintain & Conserve		✓					✓				✓			✓						✓
Pylons (part of the proposed footbridge) - Detailed Design (in progress)		✓	✓	✓	✓		✓	✓			✓			✓	✓	✓				✓
Railway Viaduct (Shepherd Street) - Retain, Maintain & Conserve	✓	✓	✓				✓	✓			✓			✓	✓	✓				✓
Palm Trees on Macquarie Street - Retain, Maintain & Conserve		✓					✓				✓			✓						✓
Public Art																				
Public Arts Policy for Liverpool city centre		✓			✓	✓	✓		✓		✓					✓			✓	✓
Public Arts Strategy for Liverpool city centre		✓			✓	✓	✓		✓		✓					✓			✓	✓
Various Public Art Projects/Interventions		✓				✓	✓		✓		✓				✓				✓	✓
Other Projects																				
Liverpool City Centre Public Lighting Strategy		✓			✓		✓		✓		✓				✓	✓	✓			✓
Liverpool City Centre Awnings Policy		✓			✓		✓		✓		✓				✓					✓
Liverpool City Centre Outdoor Dining Policy		✓			✓		✓		✓		✓				✓					✓

Figure 7.322 Master Plan - Project Validation Summary (Liverpool City Council)

This chapter of the report provides additional supporting information and images that is referred to within the report.



Photo Credit: ED Photography



8.0

APPENDICES

8.1

APPENDICES
SITE APPRAISAL

Existing Photo Documentation - Bigge Street



Figure 8.323 Bigge Street aspect from the intersection with Dewsbury Lane.



Figure 8.324 Bigge Park western entrance on Bigge Street.



Figure 8.325 Aspect of Bigge Street from Moore Street intersection.

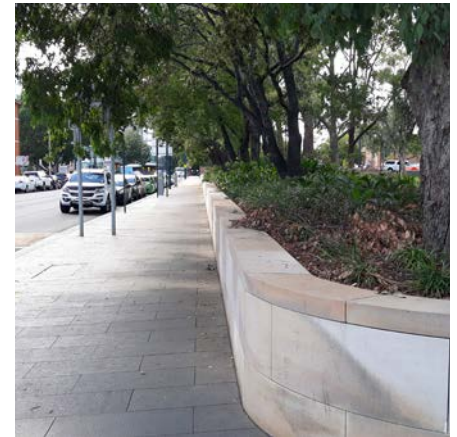


Figure 8.326 Detail of Bigge Park, western entrance edge.

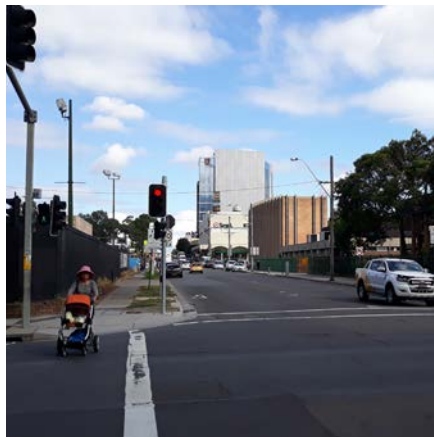


Figure 8.327 Pedestrian crossing on Elizabeth Street towards Bigge Street.



Figure 8.328 Aspect of Bigge Street north close to Campbell Street.

8.1

Site Appraisal

Existing Photo Documentation - Bigge Street



Figure 8.329 Sydney Southwest Private Hospital Entrance near Tindall Avenue.



Figure 8.330 Existing speed camera near intersection of Bigge Street & Campbell Street.



Figure 8.331 Pavement detail. Bigge Street north section close to Campbell Street.

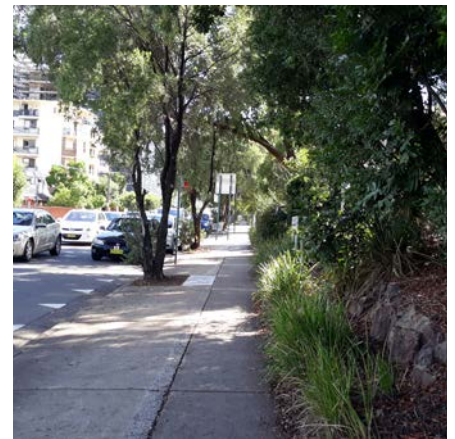


Figure 8.332 Detail of existing nature strip on the eastern side of Bigge Street.

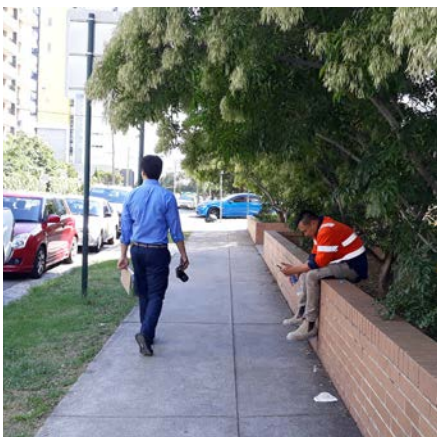


Figure 8.333 A resident sitting on the building edge on the eastern side of Bigge Street near Lachlan Street.



Figure 8.334 Collapsed electrical cap detail. Bigge Street, east side.



8.1

Site Appraisal
Existing Photo Documentation - Hume Highway



Figure 8.335 Intersection between Hume Highway and Bigge Street aspect of west direction.



Figure 8.336 Hume Highway from Bigge Street corner, facing west.



Figure 8.337 Aspect of Bigge Street from George Street intersection.

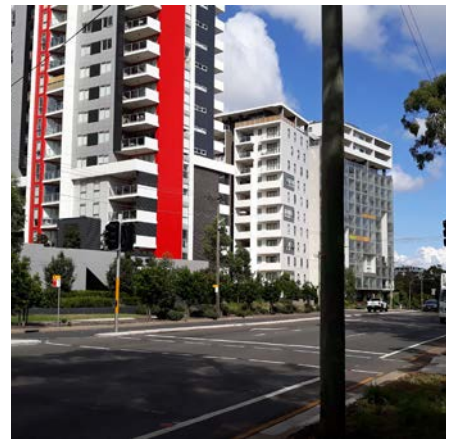


Figure 8.338 Detail of pedestrian crossing in front of Browne Parade.



Figure 8.339 Intersection between Bigge Street and Hume Highway.

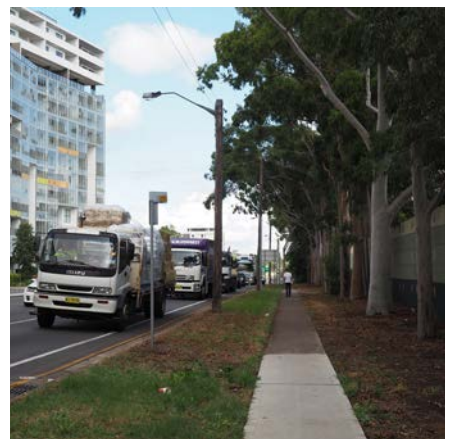


Figure 8.340 Aspect of Hume Highway from Hinkler Pathway, facing west.

8.1

Site Appraisal
Existing Photo Documentation - Hume Highway



Figure 8.341 Hume Highway eastern side, close to Sheahan Pathway, looking east.



Figure 8.342 Intersection between Hume Highway and Goulburn Street.



Figure 8.343 Hume Highway east side, existing bus stop.

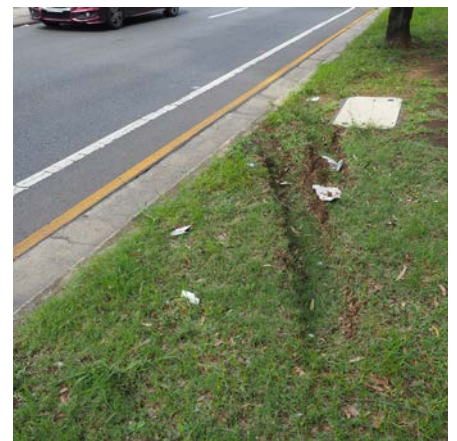


Figure 8.344 Detail of damaged nature strip, near Remembrance Avenue.

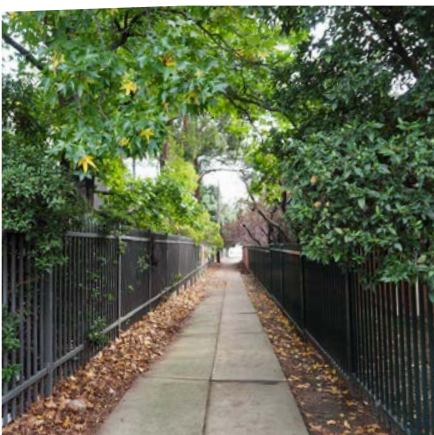


Figure 8.345 Pedestrian avenue between Hume Highway and Station Street, facing north.

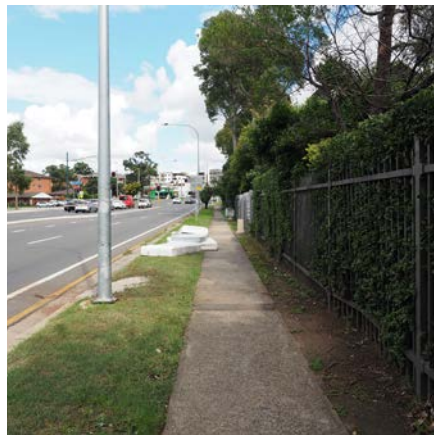


Figure 8.346 Aspect of Hume Highway from Sheahan Pathway, facing west.



8.1

Site Appraisal
Existing Photo Documentation - George Street



Figure 8.347 Intersection between George Street and Elizabeth Street aspect from the north-west corner.



Figure 8.348 Intersection between George Street and Elizabeth Street, looking south.

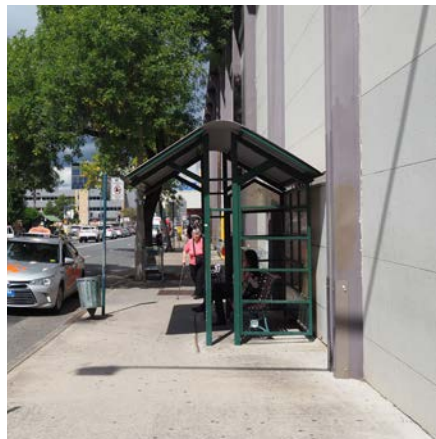


Figure 8.349 George Street's south side, existing bus stop.



Figure 8.350 Aspect of George Street, facing north. From the Intersection with Campbell Street.



Figure 8.351 Detail of existing bin on the western side of George Street.



Figure 8.352 Detail of existing bin on the western side of George Street.

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Site Appraisal
Existing Photo Documentation - George Street



Figure 8.353 George Street's south side, close to Elizabeth Street, looking south.



Figure 8.354 Detail of pavement of George Street's eastern side. Close to Campbell Street.



Figure 8.355 Detail of trolley bay on George Street's south side, close to Elizabeth Street.



Figure 8.356 Detail of pedestrian crossing, close to All Saints Catholic College.



Figure 8.357 View from George Street, facing south.



Figure 8.358 Detail of pavement of George Street's western side. In the middle of the street between Campbell Street and Elizabeth Street.



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Site Appraisal
Existing Photo Documentation - Campbell Street



Figure 8.359 Campbell Street from Bigge Street's corner, looking west.



Figure 8.360 Campbell Street from Goulburn Street's corner, looking east.



Figure 8.361 Pedestrian crossing Campbell Street east side, close to Forbes street.



Figure 8.362 Campbell Street's east side, close to George Street, looking west.



Figure 8.363 Campbell Street from Goulburn Serviceway's corner, looking west.



Figure 8.364 Detail of pavement of Campbell Street's eastern side. In the middle between Forbes Street and Goulburn Street.

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Site Appraisal

Existing Photo Documentation - Campbell Street



Figure 8.365 Campbell Street's east side, close to Forbes Street, looking west.



Figure 8.366 Detail of fill soil over roots, located in Campbell Street east side, close to Forbes Street.



Figure 8.367 Campbell Street's east side, from intersection of Campbell Street and Goulburn Street.

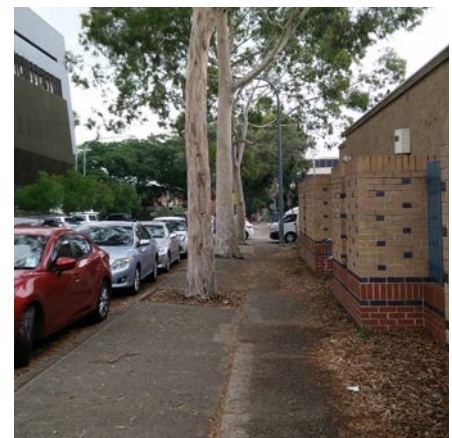


Figure 8.368 Campbell Street's east side, close to Goulburn Street, looking east.



Figure 8.369 Campbell Street's east side, close to Goulburn Serviceway, looking West.



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Site Appraisal
Existing Photo Documentation - Elizabeth Street



Figure 8.370 Elizabeth Street from Macquarie Mall corner, looking east.



Figure 8.371 Elizabeth Street's north side. View from the intersection between George Street and Elizabeth Street.



Figure 8.372 Goulburn Street from Elizabeth Street's corner.

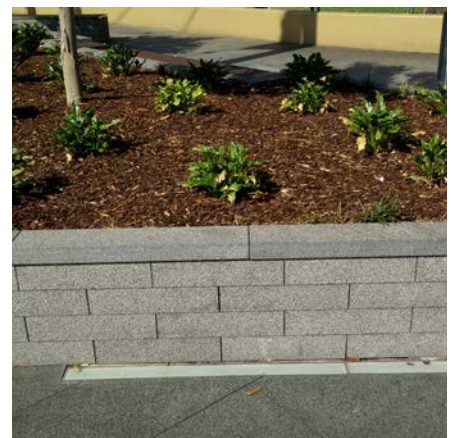


Figure 8.373 Macquarie Mall's planting, view from Elizabeth Street's corner.

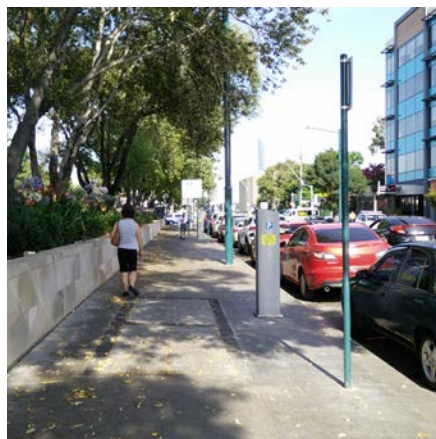


Figure 8.374 Elizabeth Street's south side. Looking east. Near Goulburn Street



Figure 8.375 Elizabeth's south side. View from the corner of Bayhurst Street.

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Site Appraisal
Existing Photo Documentation - Elizabeth Street



Figure 8.376 Elizabeth Street's east side, close to George Street, looking west.



Figure 8.377 Detail of planting box on Elizabeth Street's south side, close to George Street.



Figure 8.378 Elizabeth Street's east side. Looking west from intersection of George Street and Elizabeth St.



Figure 8.379 Detail of bench on Northumberland Street, looking from Elizabeth Street's corner.



Figure 8.380 Detail of surrounding edge on All Saint's Catholic Church, on Elizabeth Street's east, close to George Street.

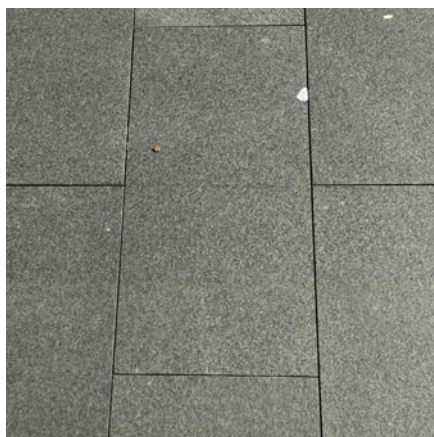


Figure 8.381 Detail of pavement on Elizabeth Street's western side. In the entrance of Macquarie Mall.



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Site Appraisal

Existing Photo Documentation - Elizabeth Street & Macquarie Mall



Figure 8.382 Traffic lights and pedestrian crossing to access Elizabeth Street from Macquarie Mall's north side.

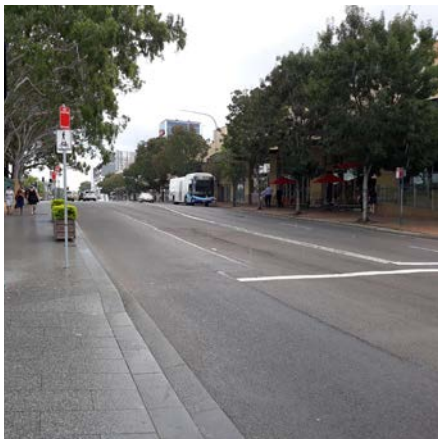


Figure 8.383 Elizabeth Street from Macquarie Mall's corner.



Figure 8.384 Aspect of Macquarie Mall from the intersection with Elizabeth Drive.



Figure 8.385 Aspect of intersection of Macquarie Mall and Elizabeth Drive, facing west.



Figure 8.386 Detail of planting box on Elizabeth Street's south side, view from the entrance of Macquarie Mall.

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Site Appraisal
Existing Photo Documentation - Macquarie Mall



Figure 8.387 Macquarie Mall's south side, close to Elizabeth street.

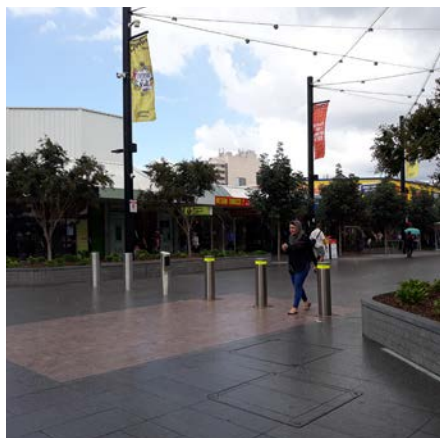


Figure 8.388 Detail of bollard on Macquarie Mall's southern side. In the entrance of Macquarie Mall.



Figure 8.389 Detail of existing bin on the southern side of Macquarie Mall.



Figure 8.390 Detail of existing seating and water fountain on the southern side of Macquarie Mall.



Figure 8.391 Detail of existing planting on the southern side of Macquarie Mall.



Figure 8.392 Pedestrian crossing to access Elizabeth Street from Macquarie Mall's southern side.



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Site Appraisal
Existing Photo Documentation - Macquarie Street



Figure 8.393 Macquarie Street's east side, looking south.



Figure 8.394 Pedestrian crossing Macquarie Street with rooftop cover.



Figure 8.395 Macquarie Street's west side, looking south, from corner of Elizabeth Street.



Figure 8.396 Detail of existing bin on the eastern side of Macquarie Street.



Figure 8.397 Detail of existing bicycle rack on the eastern side of Macquarie Street.



Figure 8.398 Detail of existing bench on the eastern side of Macquarie Street.

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Site Appraisal

Existing Photo Documentation - Macquarie Street



Figure 8.399 Macquarie Street's east side, looking south, near Hume Highway.



Figure 8.400 Round about at the intersection of Campbell Street and Macquarie Street.

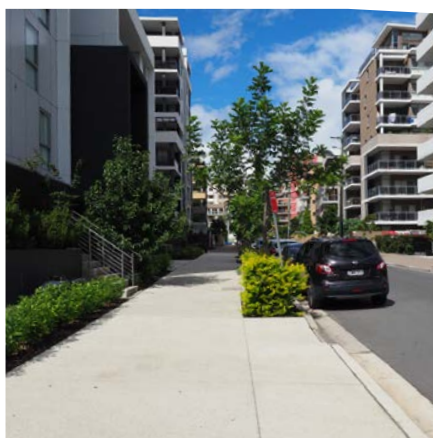


Figure 8.401 Macquarie Street's east side, looking south, near Penny Lane.

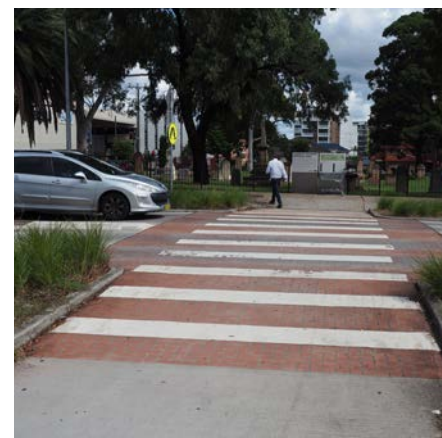


Figure 8.402 Pedestrian crossing to access Macquarie Street, near Campbell Street.



Figure 8.403 North-Entrance of Westfield located at the intersection of Campbell Street and Macquarie Street.



Figure 8.404 Detail of existing vegetation at the road side on Macquarie Street's eastern side. Near the pedestrian crossing.



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Site Appraisal
Existing Photo Documentation - Moore Street

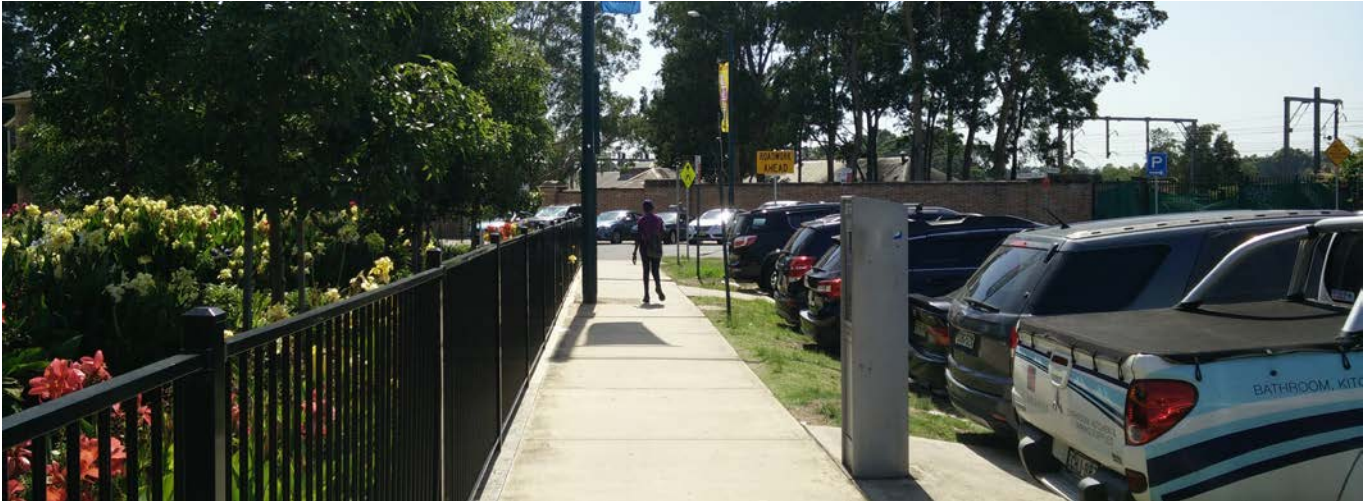


Figure 8.405 Moore Street's north side, close to College Street, looking west.



Figure 8.406 Moore Street's north side, close to Northumberland Street, looking west.

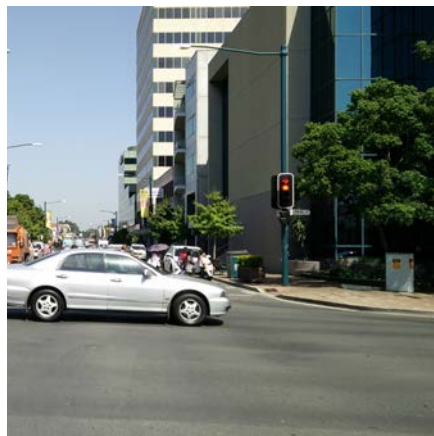


Figure 8.407 Moore Street and Bigge Street intersection. Image taken from north-east corner.



Figure 8.408 Detail of fill soil over roots, located in Moore Street south side, close to Bigge Street.



Figure 8.409 Moore Street's north side, existing bus stop. Close to intersection of Moore Street and College Street.



Figure 8.410 Detail of pavement on Moore Street's northern side. Near the intersection of George Street and Moore Street.

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Site Appraisal

Existing Photo Documentation - Moore Street



Figure 8.411 Moore Street's south side, close to Crawford Lane, looking west.

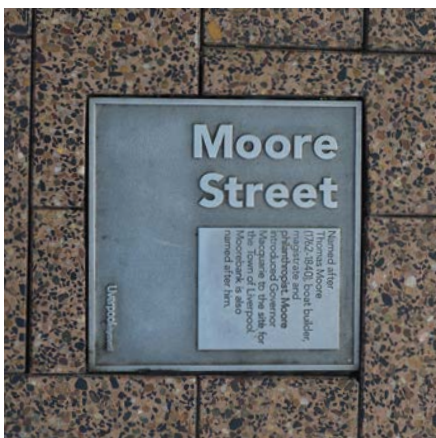


Figure 8.412 Detail of inset sign on the northern side of Moore Street, near Bigge Street.



Figure 8.413 Detail of planting box on Moore Street's north side, near Crawford Lane.



Figure 8.414 Moore Street's north side, close to Bigge Park, looking west.



Figure 8.415 Moore Street's north side, view from the corner of Bathurst Street, looking west.



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Site Appraisal
Existing Photo Documentation - Scott Street



Figure 8.416 Scott Street's west side. View from the intersection between Scott Street and Macquarie Street.



Figure 8.417 Detail of planting box, located in Scott Street North side pathway, near Macquarie Street.



Figure 8.418 Detail of sculpture of Lachlan Macquarie, located at Scott Street western entrance, next to Macquarie Street.



Figure 8.419 Detail of existing bin on the northern side of Scott Street.



Figure 8.420 Detail of street electrical box on the southern side of Scott Street.



Figure 8.421 Detail of pavement of Scott Street. Near the intersection with George Street.

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Site Appraisal
Existing Photo Documentation - Scott Street

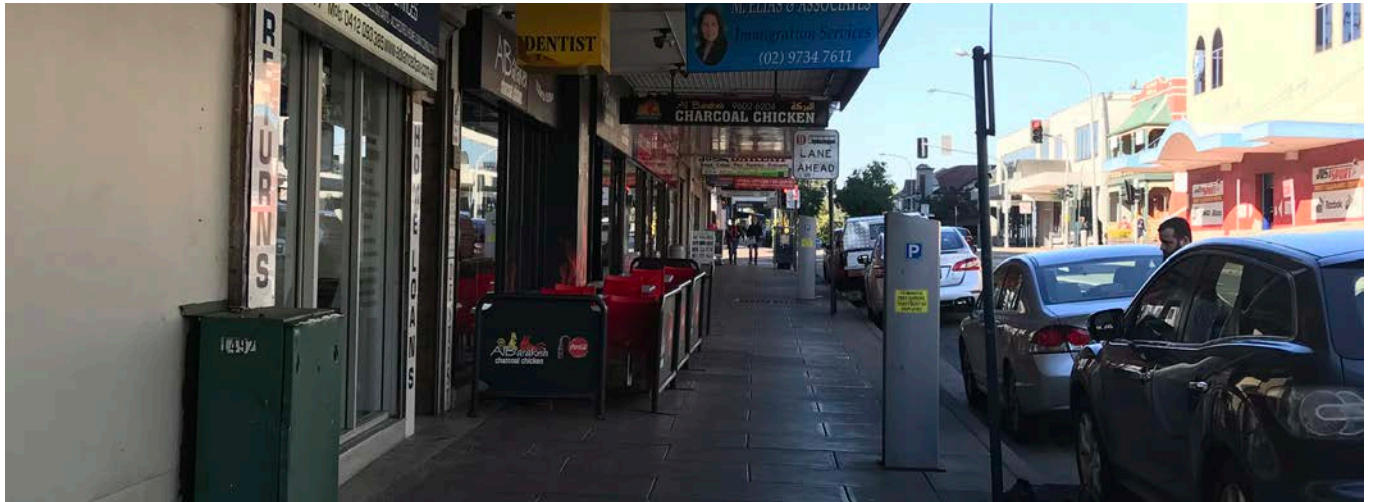


Figure 8.422 Scott Street's south side, close to George Street, looking west.



Figure 8.423 Building located at Scott Street southern side, View from the intersection between Scott Street and George Street.



Figure 8.424 Building located at Scott Street southern side, View from the intersection between Scott Street and George Street.



Figure 8.425 Scott Street northern side, close to George Street, looking east.

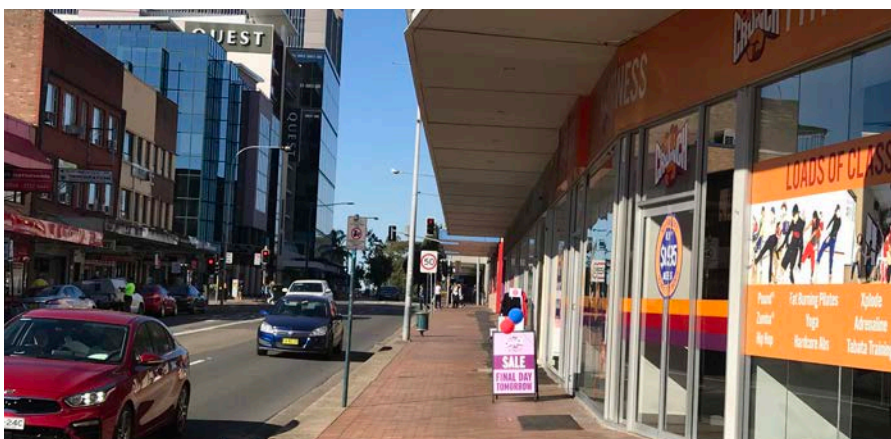


Figure 8.426 Scott Street's south side, view from the corner of Macquarie Street, looking east.



8.1

Site Appraisal
Existing Photo Documentation - Norfolk Serviceway



Figure 8.427 Norfolk Serviceway northern entrance, next to Memorial Avenue, looking east.



Figure 8.428 Detail of public seating, located at Norfolk Serviceway northern entrance, next to Memorial Avenue.



Figure 8.429 Detail of Road Drain, located at Norfolk Serviceway northern entrance, next to Memorial Avenue.

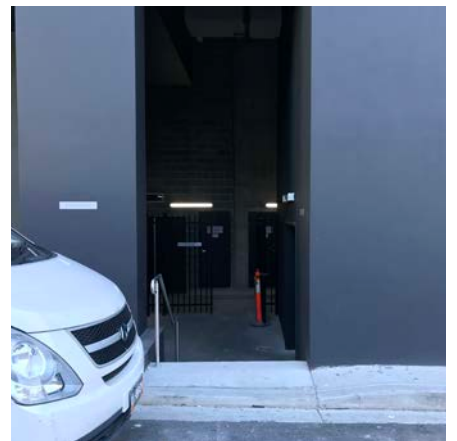


Figure 8.430 Building entrance on Norfolk Serviceway's east side, close to Bathurst Street.

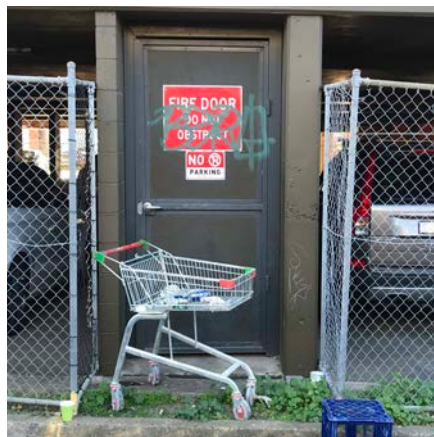


Figure 8.431 Norfolk Serviceway's, back door of car park area for a residential building.



Figure 8.432 Detail of pavement on Norfolk Serviceway's. Near the intersection with Bathurst Street.

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Site Appraisal
Existing Photo Documentation - Norfolk Serviceway



Figure 8.433 Norfolk Serviceway's south side, close to Castlereagh Street, looking north.



Figure 8.434 Detail of Road Drain, located at Norfolk Serviceway northern entrance, next to Memorial Avenue.



Figure 8.435 Parking spots located at Norfolk Serviceway, at the back of a restaurant.

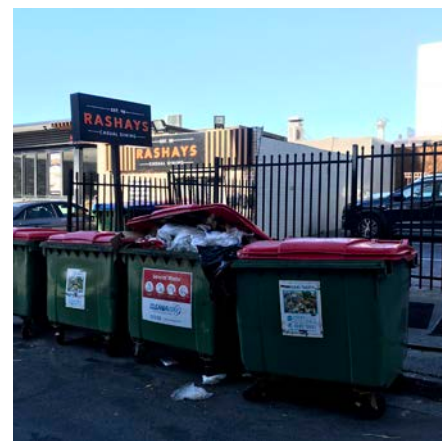


Figure 8.436 Detail of bin collection point, located at Norfolk Serviceway's north side, close to Bathurst Street.

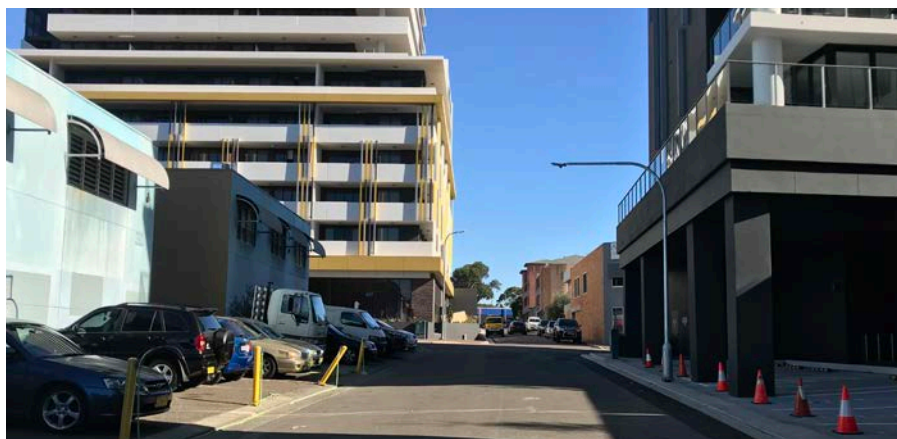


Figure 8.437 Norfolk Serviceway's north side, view from the corner of Castlereagh Street, looking north.



8.1

Site Appraisal
Existing Photo Documentation - Northumberland Street



Figure 8.438 Northumberland Street northern entrance, next to Elizabeth Drive, looking west.



Figure 8.439 Detail of public seating, located at Northumberland Street western side walkway, near to Huckstepp Serviceway.



Figure 8.440 Detail of existing bin, located at Northumberland Street's west side, near to Elizabeth Drive.

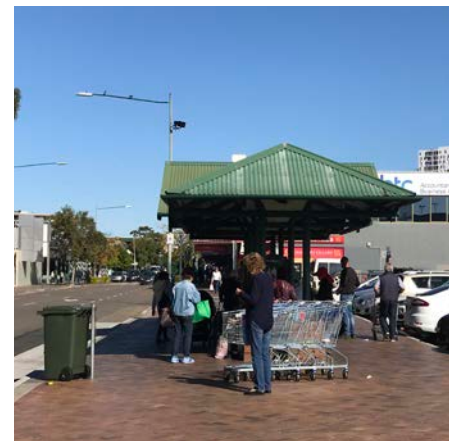


Figure 8.441 Northumberland Street's west side, existing bus stop.

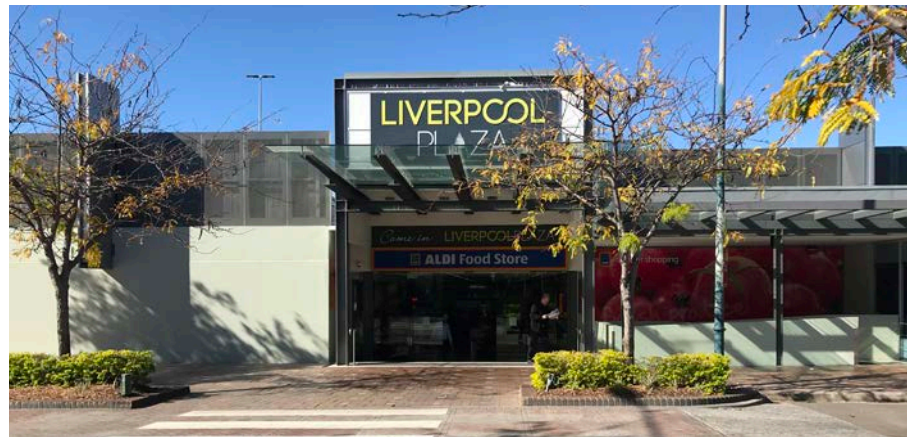


Figure 8.442 Pedestrian crossing Northumberland Street, close to Laurantus Serviceway.

8.1

Site Appraisal
Existing Photo Documentation - Northumberland Street



Figure 8.443 Northumberland Street's west side, close to Laurantus Serviceway. Looking south.

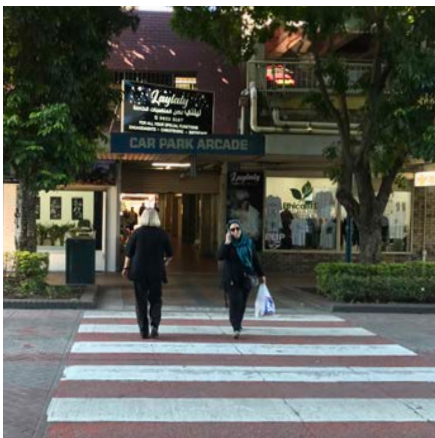


Figure 8.444 Pedestrian crossing to access Northumberland Street from car park arcade's western side.



Figure 8.445 Northumberland Street car park, located at east side of Northumberland Street, near Northumberland Serviceway.



Figure 8.446 Detail of natural strip, located at Northumberland Street's east side, close to Memorial Avenue.



Figure 8.447 Northumberland Street's south-side, view from the corner of Memorial Avenue, looking north.



8.2

APPENDICES

ADDITIONAL INFORMATION

Street Design Guidelines

Western Sydney Street Design Guidelines - Design Speed

Streets should be designed to operate at speeds that create environments that are safe, comfortable, and self-explanatory for pedestrians, cyclists, and motorists.

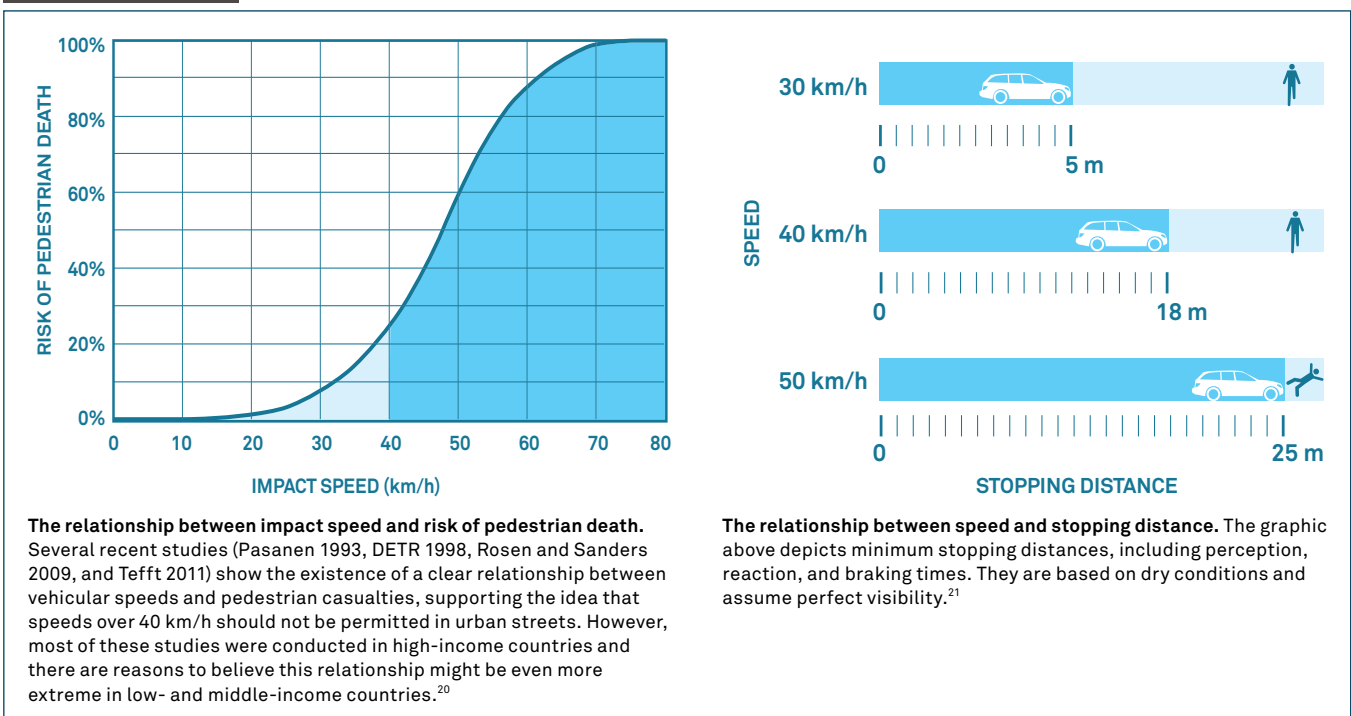
Speed is a key determinant in crash likelihood and severity. As speeds increase, our brains process less of what is seen in our peripheral vision, resulting in longer driver reaction times and longer stopping distances. As speed increases, other street users have less time to react to potential conflicts, while drivers must also scan further ahead for hazards (NACTO, 2016).

Designing for safe speeds is a complex issue that involves consideration of design speeds, sign-posted speed limits, and desired 'behavioural' speeds. The Guidelines propose these for all street types.

On urban local [streets] pedestrian activity, and the potential for vehicle–pedestrian conflicts, is greatest. Pedestrians are particularly vulnerable to serious injury. Design considerations for local [streets] must therefore strive to ensure that these conflicts are avoided and that design speeds are commensurate with potential impact speeds that are survivable.

— Austroads Guide to Road Design
Part 2: Design Considerations

KEY REFERENCE



Global Street Design Guide – Travel speed considerations
credit: NACTO, 2016

Figure 8.448 Page from Western Sydney Street Design Guidelines - Design Speed

8.2

Additional Information

Street Design Guidelines

Western Sydney Street Design Guidelines - Behavioural Speed

Behavioural Speeds for Different Contexts

10

10 km/h.

Local Streets that encourage a shared environment must ensure users to mix at very low speeds—typically 10 km/h—with both activity and geometry keeping speeds low and safe for pedestrians and cyclists in shared travel zones.

30

30 km/h.

Local Streets should encourage social activity in the street. 30 km/h is a safe speed for cycles to ride in mixed traffic and presents low risks to people walking along and crossing the street.

40

40 km/h.

Use speed management techniques to limit speeds to 40 km/h or lower on streets with a high degree of activity in all modes and high demand for pedestrian crossings, such as Local Collectors and High Streets.

50

50 km/h.

On some large streets with cycle tracks, large footpaths, medians, and frequent signalised intersections and pedestrian crossings, it is possible to accommodate traffic speeds of 50 km/h. Adopt speed-limiting measures, such as 3m wide lanes, to discourage speeding.

60

60 km/h.

Speeds of 60 km/h or higher are potentially hazardous on urban streets with a variety of users. Extreme care must be used to protect vulnerable users without destroying the social and economic functions of the street or disrupting the walking network.

Adapted from Global Street Design Guide, credit: NACTO, 2016

Figure 8.449 Page from Western Sydney Street Design Guidelines - Behavioral Speed

8.2

Additional Information

Street Design Guidelines

Western Sydney Street Design Guidelines - Design Hour

The role a street plays in conveying movement and supporting street life varies over different times of the day.

Design hour, or activity levels during an hour, is used to determine the appropriate design parameters of higher order streets, typically Arterial or Sub-Arterial Roads.

The traditional practice of using a single peak hour volume allows traffic volumes to dictate the construction of costly infrastructure, without determining how much traffic is desired on a street (NACTO, 2016).

Designing streets for the morning and evening peak periods invariably leads to over-designed, vehicle-oriented infrastructure that fails to properly serve all street users for the remaining 22 hours of the day. While a proper understanding of peak hour demands is valuable, this shouldn't dictate the design of the street.

Metrics for the street's vehicle carrying capacity should seek to provide comfortable capacity during typical hours of the day, not peak periods. The traffic carrying capacity of a street should be designed to prevent induced demand and encourage a shift to more space-efficient and sustainable modes such as cycling and transit.

Guiding Principles

- Streets should be designed to cater for all users over all hours of the day, not solely for motor vehicles during morning and evening peak periods.
- Traffic carrying capacity should be capped in the long term with capacity targets that encourage a shift to more space-efficient modes such as cycling and transit.

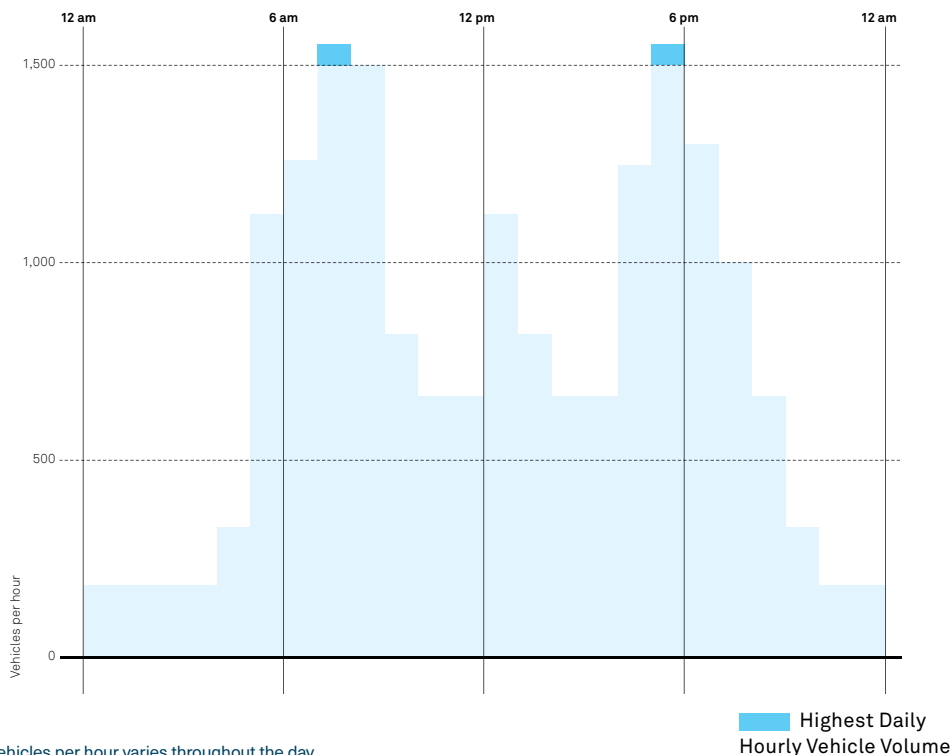


Figure 8.450 Page from Western Sydney Street Design Guidelines - Design Hour

8.2

Additional Information

The Healthy Streets Approach

The Healthy Street Approach™

The Healthy Streets Approach™ was developed by Lucy Saunders as a result of her research into the health impacts of transport, public realm and urban planning over the lives of people. It was inferred that the key elements that are necessary for public spaces to improve people's health are the same as those needed to make urban places socially and economically vibrant and environmentally sustainable.

For further details, refer to www.healthystreets.com

10 Healthy Street Indicators™

As part of her research, Lucy Saunders was able to narrow the parameters to make out streets healthier into 10 Healthy Streets Indicators™ which focus on human experiences and ensures that equal priority is given to everyone on the streets across the globe. These 10 indicators are:

- Everyone feels welcome
- People choose to walk and cycle
- People feel relaxed
- Easy to cross
- Clean air
- Not too noisy
- Places to stop and rest
- People feel safe
- Things to see and do
- Shade and shelter



Figure 8.451 10 Healthy Street Indicators™ by Lucy Saunders. Courtesy: www.healthystreets.com



Acknowledgments

This report was produced by Liverpool City Council's Urban Design team, within the City Design and Public Domain department. The project team included the following staff. Council also wishes to thank all individuals and organisations who have contributed their information and opinions to assist in the production of the Liverpool City Centre Public Domain Master Plan.

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