Appendix M

Design Guidelines

Sydney Metro West

Station and Precinct Design Guidelines

June 2022

Contents

1 Introduction

Purpose of these guidelines

These Station and Precinct Design Guidelines establish design standards for Sydney Metro West to guide the design of:

- the interface between stations and their immediate surrounds (referred to as station precincts in this document), including:
  - station entries
  - transport interchange facilities (bicycle facilities, bus stops, kiss and ride, taxis and transfers to metro, rail, bus and existing and future light rail services)
  - landscaping and other elements of the public domain
  - heritage interpretation and connecting with Country
- stations, services facilities and the stabling and maintenance facility
- rail corridor works including tunnel portals, bridges and underpasses.

These guidelines also apply where Sydney Metro would deliver some development at the same time as the station. Such development, above, adjacent to or around the stations to be delivered separately subject to future planning approvals and community and stakeholder engagement, is not directly addressed in these guidelines. However, some of the guidelines relate to and consider such associated precinct development to ensure an integrated design approach.

The guidelines have considered the strategic aspirations and/or urban design strategies of councils and State agencies, including *Better Placed – an integrated design policy for the built environment of New South Wales* and the *NSW Movement and Place Framework*. Adopting a place-based approach that prioritises movement and place outcomes equally enables Sydney Metro West to achieve the integrated and efficient movement of people within great places that exhibit high levels of amenity.

Concept for Central Station, Sydney.

The guidelines build on the placemaking approach outlined in *Sydney Metro West Environmental Impact Statement – Westmead to The Bays and Sydney CBD* and will be used by Sydney Metro to guide design development.

Sydney Metro will implement these design guidelines through an iterative and collaborative design led process that reviews progress at each stage of the work from concept design to tender evaluation and construction.

1.1 Project scope

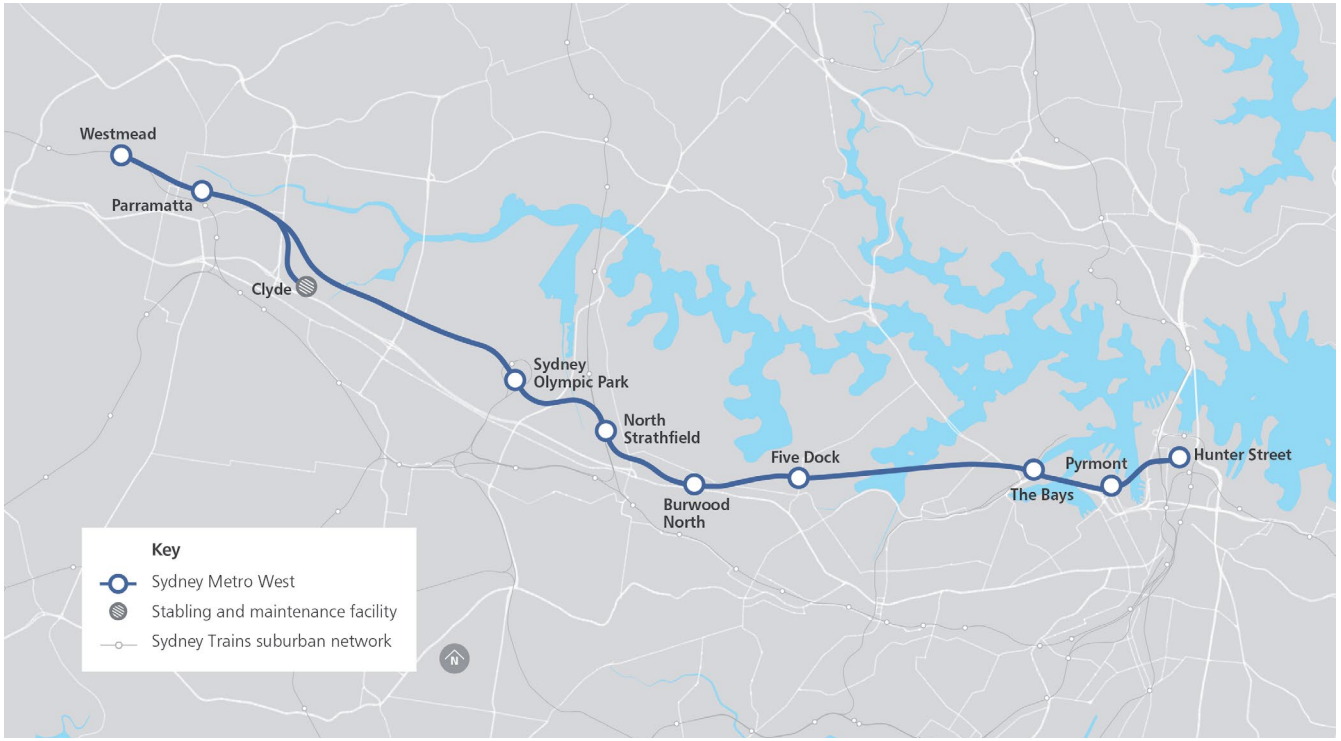
Sydney Metro West comprises a new metro rail line extending from Westmead to Sydney CBD with nine new underground metro stations located at:

- Westmead
- Parramatta
- Sydney Olympic Park
- North Strathfield
- Burwood North
- Five Dock
- The Bays
- Pyrmont
- Hunter Street (Sydney CBD).

Ancillary facilities for stabling, maintenance, ventilation and emergency egress/access are to be located at Clyde-Rosehill.

Key project features include:

- Construction of:
  - twin underground metro rail tunnels extending 24 kilometres between Westmead and Sydney CBD
  - new fully accessible metro stations designed for passenger comfort and convenience including features like platforms enclosed by screen doors
  - safe, convenient and intuitive interchanges with other forms of transport including suburban trains, light rail, buses and taxis.
- Resultant service improvements:
  - doubling of the existing rail capacity between Greater Parramatta and Sydney CBD with an ultimate capacity to move more than 40,000 customers per hour in each direction
  - convenient and reliable turn-up-and-go services operating early morning to late at night, seven days a week.
- Station precinct and public domain works that will deliver new high-quality amenity.



Sydney Metro West alignment from Westmead to Sydney CBD.

- The potential for integrated station developments that respond to each context and locality (subject to separate planning applications).

Sydney Metro West will provide a fast, reliable connection between Greater Parramatta in the Central River City and Sydney CBD in the Eastern Harbour City, supporting the realisation of the 30-minute city envisioned in the Greater Sydney Region Plan – *A Metropolis of Three Cities*. Expansion of the public transport network will provide significant benefits to local communities by improving connections to jobs, services and community facilities, and supporting urban renewal.

The Sydney Metro West line encompasses areas identified for, or currently experiencing, growth or transformation, through initiatives including the Westmead Urban Transformation Precinct, Greater Parramatta and the Olympic Peninsula (GPOP), Sydney Olympic Park Master Plan 2030, Bays West Place Strategy and Pyrmont Place Strategy.

1.2 Structure of the guidelines

These design guidelines are structured into six chapters:

1. Introduction (this chapter)

Provides an overview of the scope of Sydney Metro West and the structure and application of the design guidelines.

2. Vision

Reiterates the vision for Sydney Metro, the overall design objectives and commitments to understanding customer needs, safety, sustainability and Connecting with Country and the role of design in meeting those aspirations.

3. Station design elements

Outlines the principles and guidelines to be applied to the spatial and functional design elements of the stations and their interface with the surrounding locality.

4. Precinct design elements

Outlines the principles and guidelines to be applied to the design elements of station precincts and their interface with adjoining areas.

Chapters 3 and 4 are structured in the following way:

- Relevant design objectives > how each design element relates to the Sydney Metro design objectives
- Principles of each design element or function
- Guidelines for each principle

5. Place-specific design elements

Outlines the vision, place and design principles and urban design strategies for each of the stations and their precincts. Established in consultation with key stakeholders the visions and supporting principles will ensure a contextually sensitive response that is sustainable, safe, engaging and better for the community.

Chapter 5 is structured in the following way:

- Precinct vision
- Context
- Place and design principles
- Urban design strategies

6. Ancillary facilities

Outlines the principles and guidelines to be applied to the design elements of ancillary facilities and their interface with adjoining areas.

1.3 Application of the guidelines

A design-led process

Sydney Metro strives to deliver design excellence at all station precincts with a line-wide approach and processes that encompass setting design guidelines, establishing independent design review panels and undertaking a rigorous design evaluation process. The approach responds to the complexity of designing and constructing underground stations with above/adjacent development and enables the full integration of station design and development through the project lifecycle.

Design review panels are a tried and tested method for achieving excellent design outcomes. Sydney Metro uses independent design panels to support the design development process through three phases:

- Concept design (pre-development approval) – Design Advisory Panel (DAP)
- Detailed design (post-development approval) – Design Review Panel (DRP)
- Design Integrity Review (post tender).

The objectives of the DAP and DRP are to provide independent, high-level design review of the project at all stages. This assists in meeting design objectives and achieving quality design outcomes.

The DAP is chaired by the Government Architect NSW and includes suitably qualified, experienced professionals who provide architectural, urban design, public domain and landscape advice. The panel provides a forum for the critique of design and guidance to placemaking and design teams on design refinements to be considered to realise place and design principles.

The DRP will also be chaired by the Government Architect NSW and supported by suitably qualified and appropriately skilled professionals from the fields of architecture, urban design, landscape design and heritage architecture. The DRP will also be supported by specialist advisers in the fields of community integration, transport integration, sustainability and cultural heritage, as required.

Panel members provide advice periodically throughout the development of the design. They will maintain an ongoing review role in the design process for the project, so that as the design of individual components develop, it delivers on the principles contained in this document.

The Sydney Metro West team will also maintain a Connect with Country Working Group of Aboriginal knowledge holders throughout the piloting of the Connect with Country Framework. This group will be available to advise on the relationship between cultural values and knowledge and design.

Review of design

The design of Sydney Metro West will be subject to internal review processes to confirm that the design adequately responds to these guidelines. The internal review process is one way to maintain a level of quality that will meet the needs and expectations of Sydney Metro customers and the people of NSW. The guidelines themselves will be reviewed as the project moves through design development and procurement stages so that they remain current and relevant.

The design of Sydney Metro and implementation of these guidelines is also subject to independent review by the Sydney Metro DAP and DRP.

Updating the guidelines

These guidelines may be updated from time to time through the project delivery stage, to provide additional detail and guidance as design progresses. The objectives, principles and strategies contained in this document would continue to apply in subsequent versions. Updated versions of the guidelines will be subject to the review and endorsement of the Design Review Panel.

The guidelines may also be updated and adapted to project-specific design guidelines, building on the place-specific urban design strategies outlined in **Chapter 5**, to accompany site-specific development applications.

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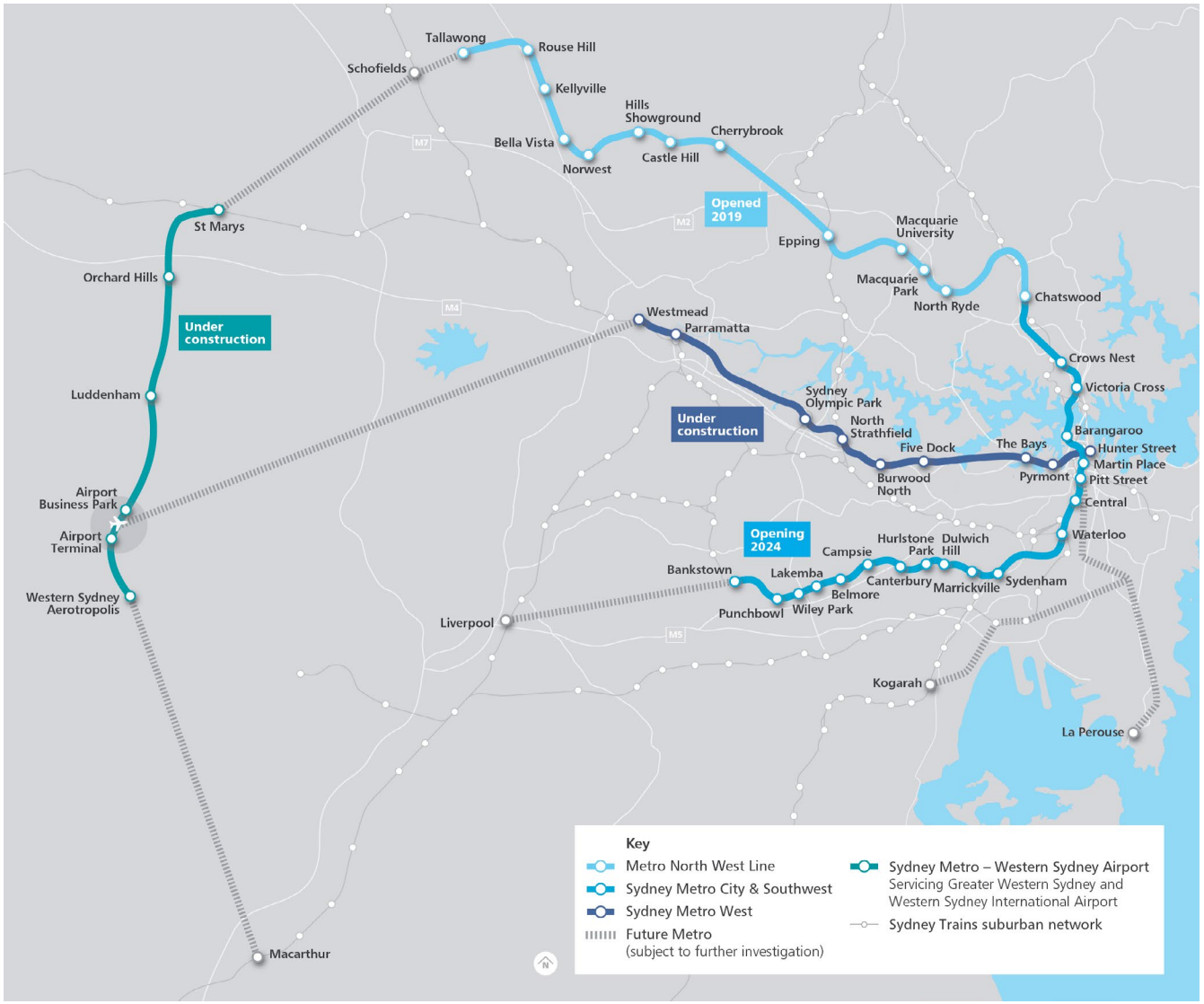
Vision

2

"Transforming Sydney with a new world class metro."

Sydney Metro's mission is to deliver a world class, connected metro, which will provide more choice to customers and opportunities now and in the future.

Sydney Metro presents a unique opportunity to demonstrate an exemplary approach to integrated transport and land use planning. Quality architecture, good urban design and a user friendly and inter-connected transport system are critical to ensuring that Sydney Metro meets customer needs and expectations and maximises its city-shaping potential and broader urban benefits.



Sydney Metro vision.

2.1 Sydney Metro design objectives

To help define the transformational vision and world class aspirations of all Sydney Metro projects, the desired design outcomes are underpinned by five **design objectives** developed to guide decision making and the design process.

A **design principle** is prescribed under each design objective, explaining the intention of the objective for the design of stations, their precincts and the wider metro corridor.

Objective 1: Ensuring an easy customer experience

Principle

Sydney Metro places the customer first. Stations are welcoming and intuitive with simple, uncluttered spaces that ensure a comfortable, enjoyable and safe experience for a diverse range of customers.

Objective 2: Being part of a fully integrated transport system

Principle

Sydney Metro is a transit-oriented project that prioritises clear and legible connections with other public and active transport modes within the wider metropolitan travel network that intersect with this new spine.

Objective 3: Being a catalyst for positive change

Principle

Sydney Metro is a landmark opportunity to regenerate and invigorate the city with new stations and associated development that engage with their precincts, raise the urban quality and enhance the overall experience of the city.

Objective 4: Being responsive to distinct contexts and communities

Principle

Sydney Metro's identity is stronger for the unique conditions of centres and communities through which it passes. Local character is to be embraced through distinctive station architecture and public domain that is well integrated with the inherited urban fabric of existing places.

Objective 5: Delivering an enduring and sustainable legacy for Sydney

Principle

Sydney Metro is a positive legacy for future generations. A high standard of design and functionality across the corridor, stations and station precincts, that sets a new benchmark, is vital to ensuring the longevity of the metro network, its enduring contribution to civic life and an ability to adapt to a changing city over time.

2.2 Understanding customer needs

"The customer is at the centre of everything we do."

Easy Sydney Metro experience

The ease of experience can be defined as the absence of unnecessary effort.

Easy experiences are those that a customer does not have to think about or apply much effort to achieve their goals. The easier an experience feels, the more likely a customer is to continue using a service.

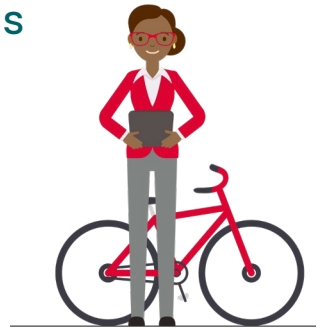
Effort can be divided into two types:

- Physical effort: which is the energy a customer has to exert, and
- Cognitive effort: which is the thinking, planning and physiological energy a customer expends.

Designing for all customers

We recognise that not all customers are the same.

To design for a diverse group of customers, we have developed four personas to understand the needs, challenges and expectations on how they will each use the service.



Direct Davi

"I am task driven, motivated and competitive. I'm always busy and can't afford to disrupt my routine by being late."

Get to my destination on time by:

- providing me with frequent and reliable trains
- creating efficient transfers for me between different transport modes

Provide clear and consistent information by:

- providing me with relevant information that is clear and concise
- giving me real-time information and minimising the impactof disruptions

Make me feel comfortable by:

- providing me with personal space that allows for flexible working conditions
- building spaces for me to move away from crowds
- ensuring the station functions efficiently and provides a pleasant environment

Curious Cho

"I am inquisitive, logic-driven but tend to overthink things. I need mobility assistance, so before I travel anywhere, I must plan everything to know I've made the right choice."

Make it safe and secure by:

- making station facilities accessible and available for me
- giving me clear sight lines through the station and platform

Make station and interchange accessible by:

- creating well-lit spaces, and assistance
- protecting me from the weather
- building surfaces that are stable, even and non-slippery

Provide clear and consistent information by:

- providing real-time updates on changes that will impactmy journey
- legible signage and easy-to-understand announcements

Friendly Fred

I am community minded and observant. These days I've noticed that people can be unfriendly, rude or in a rush.

Keep me informed by:

- incorporating directional icons, landmarks and
- high-contrast colours
- using non-reflective sound and clear announcements
- adding prominent signage that easily directs me to the right transport interchange

Offer positive customer service by:

- enabling me to locate help when I need it
- responding promptly with knowledgeable and friendly assistance

Give me comfort throughout my journey by:

- building available spaces for me to rest and avoid crowded areas
- providing me with adequate space to move through the station and platform
- creating consistent lighting levels between transitions

Protective Pat

I am organised, practical and caring. My loved ones rely on me to be there and keep them safe.

Make it safe and secure by:

- making help points and CCTV safety cameras visible and easily identifiable
- creating spaces which deter unsafe activity
- providing identifiable landmarks to act as meeting points if our group gets separated

Make my journey accessible by:

- creating spacious areas that allow our group to move at a slower pace
- ensuring entrance and exit gates are large and free of obstructions

Keep me informed by:

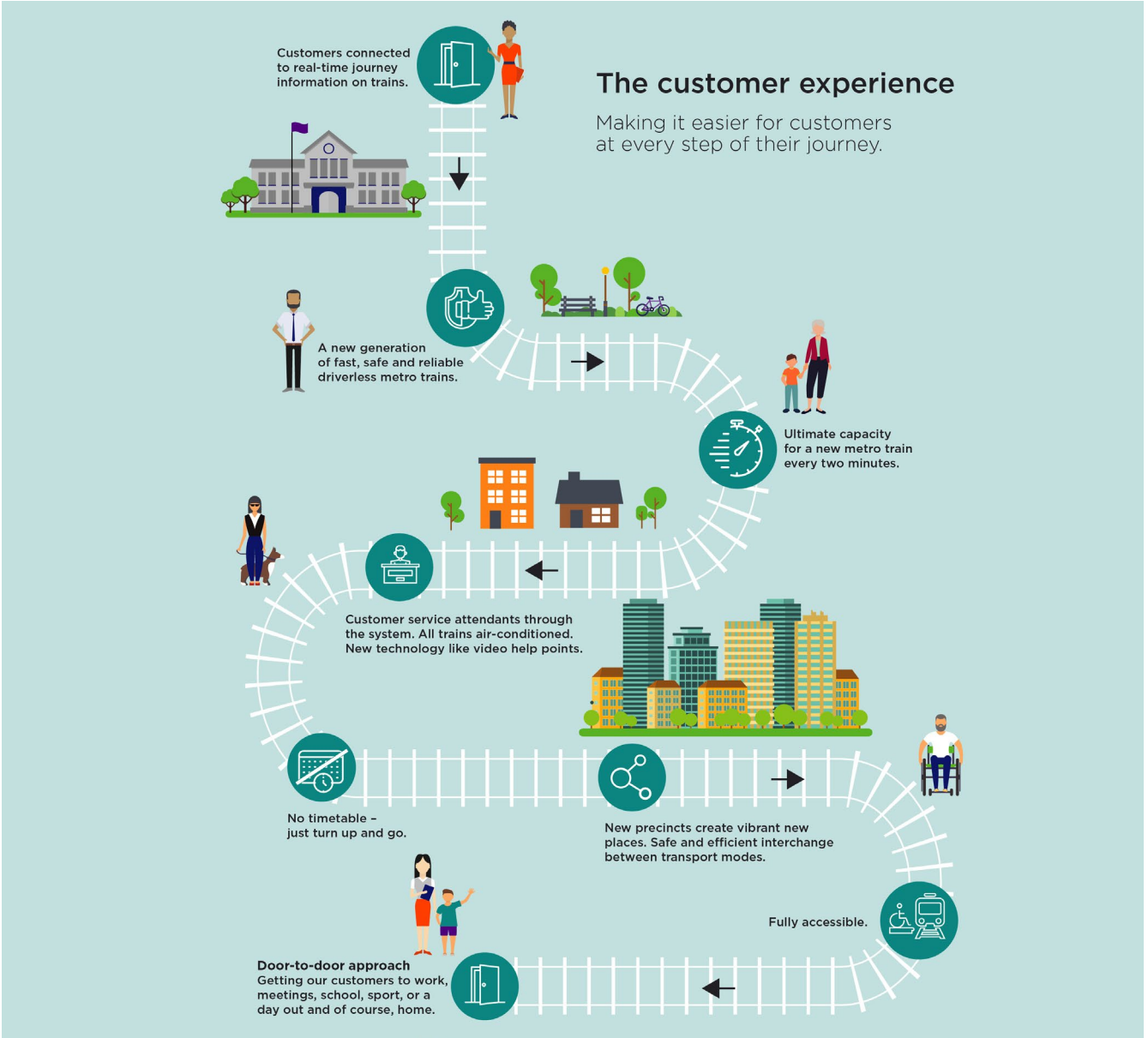
- creating signage that is prominent, clear and accurate
- updating digital communications in real-time to avoid delays.

An easy customer journey

A customer's experience starts long before they arrive at a station.

Research has shown that customers see their journey from door-to-door-to-door (from origin to destination and back again). A customer's decision to use Sydney Metro starts at home. Their choice of transport is based on their perception of ease across their entire journey. A customer's experience begins when they establish a need to travel and plan how they will get to their destination whether by car, walking, cycle, bus, train, metro or other means. Designing stations that are easy to get to and use, means more customers may use our service.

Customers will progress through many stages in their door-to-door-to-door journey. By considering their needs at each stage, we can design a whole journey experience and focus on stages where customers have to exert the most effort.



Measuring customer satisfaction

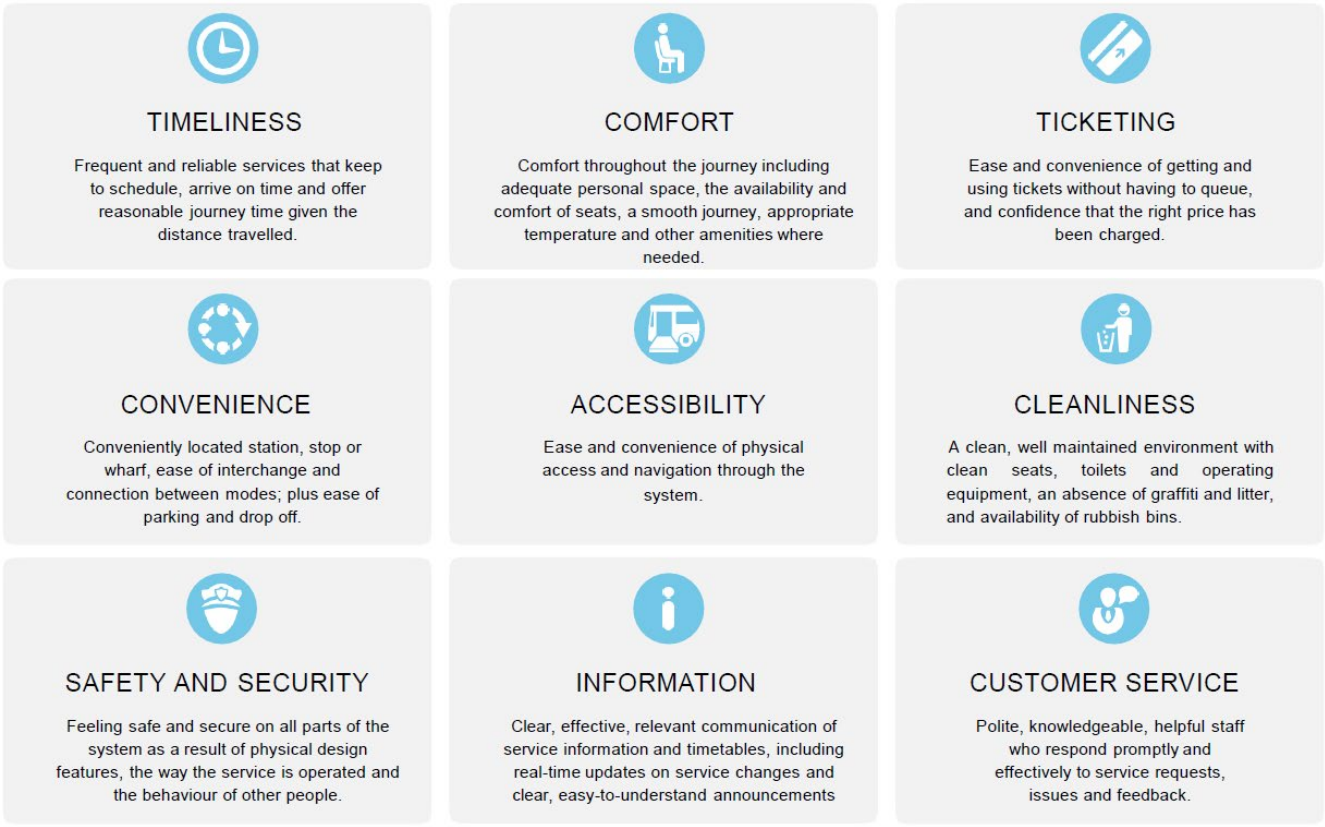
Through engagement with customers across the network, Transport for NSW has identified nine drivers of customer satisfaction.

These are fundamental outcomes that customers expect transport services to deliver. The customer satisfaction drivers are built into the operator contracts and set as key performance indicators across all transport services. The interactions that customers have with these drivers directly impact how they perceive their experience. Understanding the performance of these drivers is critical to evaluating ease of experience. These drivers inform Sydney Metro design elements.

Transport integration

Transport integration considerations deliver on Sydney Metro's commitment to a reliable 'door-to-door-to-door' transport solution for all customers. This is achieved by planning for a seamlessly integrated experience with all modes of transport that moves customers around safely, quickly and easily, and that is adaptive to change.

Well-functioning transport interchange facilities determine the overall effectiveness of the public transport network, particularly in increasingly complex urban environments. Effective transport integration includes well-designed interchanges, co-location of physical infrastructure, such as bus stops, bike storage and pedestrian connections near station entries, and alignment of service delivery and operations across networks. These elements work to create synergies in the journey from door-to-door-to-door (from origin to destination and back) and facilitate ease of use, creating a better experience for customers and reducing travel times. They also create opportunities for efficiencies in delivering transport services.



Nine drivers of customer satisfaction.

2.3 Commitment to safety

Safety is our number one priority at Sydney Metro. Sydney Metro is committed to ensuring the metro network is designed, constructed and operated in a manner that facilitates safe working and customer passage. Sydney Metro West will provide facilities that meet or exceed current required safety codes and standards for customers, staff and contractors alike. Sydney Metro West will also comply with all relevant statutory and regulatory requirements in respect of safe system design, delivery and operation.

Safety will be considered at all stages of design across all aspects of corridor and station planning, construction, operation and maintenance. In particular, the design of metro infrastructure will provide safe interfaces between stations and the existing urban environment. The safe movement of customers, staff and contractors through station areas will be facilitated through many aspects of physical design, including provision of adequate platform capacity and circulation space, clear routes, adequate lighting and slip resistant flooring, as well as by minimising obstructions and eliminating potential for crowding.

Human factors integration is required under Rail Safety National Law National Regulations. The aim of the discipline is to optimise the interactions between people and other elements of the system to enhance safety, efficiency and effectiveness. Human factors will be considered at all stages of the design in accordance with requirements. A Human Centred Design approach will be adopted to include usability, confirmation of ergonomic sightlines, effective working space, accessibility and minimal human error. All derived requirements and recommendations will be achieved in consultation with end-users (or suitable representatives) by simulating tasks and design environment in keeping with Human Centred Design methods.

Station and public domain design will identify and reflect current architectural and engineering best practice with respect to safety. Guidelines and protocols, such as Crime Prevention through Environmental Design (CPTED), will also be important benchmarks in minimising the risks of personal harm, operational disruption and conflict.

Construction and operational safety will be supported through a rigorous safety in design process which will identify, develop and implement engineered safety controls, and construction methodology sequencing to enhance the construction, operational and maintenance outcomes.

Maintenance and asset management strategies will be adopted that reduce risk through safety auditing and reporting. Sydney Metro will have a comprehensive framework to avoid or minimise risk, and to enhance safety, without unreasonably reducing amenity and functionality.

2.4 Commitment to sustainability

For Sydney Metro, sustainability means planning, building and operating a metro network, stations and precincts for current and future generations that optimise environmental, social and economic outcomes. This includes ensuring sustainability informs design and is core to the metro product.

Six sustainability principles govern how Sydney Metro embed and deliver on our commitments to the community, our customers and key partners.

These principles align with the commitments in both the *Transport for NSW Environment and Sustainability Policy* and *Sydney Metro Environment and Sustainability Statement of Commitment* and have been identified based on best practice endeavours on past metro projects, emerging needs and trends and in response to wider government policy.

Project-specific objectives, targets and initiatives will be identified under each of the six principles and will form an integral part of the Sydney Metro West Sustainability Plan.

Sydney Metro six sustainability principles.

2.5 Connecting with Country

The Sydney Metro West corridor traverses Burramattagal, Wangal and Gadigal Country. Westmead and Parramatta are situated on Burramattagal Country, which extends from Rosehill to Prospect. Sydney Olympic Park to The Bays is situated on Wangal Country, which stretches across the southern shore of the Parramatta River between Burramattagal Country and Gadigal Country. The City of Sydney is situated on Gadigal Country, which runs from the south side of Port Jackson, extending from South Head to Darling Harbour.

Sydney Metro is piloting a Connect with Country Framework and developing a line-wide approach to connect with Country and an ongoing approach to Aboriginal engagement throughout the project. A draft Heritage Interpretation Strategy has been prepared in accordance with Concept condition of approval CB4 to CB6 (refer to *Sydney Metro West Environmental Impact Statement – Rail infrastructure, stations, precincts and operations Appendix K – Draft Heritage Interpretation Strategy)*, which provides for the interpretation of Aboriginal heritage.

Sydney Metro is developing a 'Designing with Country' strategy, to inform the development and stewardship of appropriate Aboriginal Cultural Design Principles that will be incorporated into the design, public art and heritage interpretation of the project. The strategy responds to the Transport for NSW Reconciliation Action Plan 2019-2021 deliverables, specifically the requirement for Transport cluster agencies to:

"...make a positive difference to Aboriginal and Torres Strait Islander peoples in areas such as employment, empowerment and economic development, and to enhance and develop cultural understanding".

Three actions identified in the Reconciliation Action Plan have an application to Transport for NSW projects:

Action 1: Establish and maintain mutually beneficial relationships with Aboriginal and Torres Strait Islander stakeholders and organisations...

Action 10: Promote respect for Aboriginal heritage and increase inclusion of Aboriginal art...

Action 11: Embed Aboriginal and Torres Strait Islander co-design principles across Transport Cluster projects...

Across Sydney Metro, the design and integration of stations and station precincts will respect and respond to the culture and stories embedded within the land through which they pass.

Barangaroo Welcome to Country – Wellama artwork at Barangaroo Reserve.
(Artists: Alison Page and Nik Lachajzak, commisioned by the Barangaroo Delivery Authority. Source: UAP Company)

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Station design elements

3

About this chapter

This chapter applies across the entire Sydney Metro West corridor and provides principles and guidelines for developing the spatial and functional design elements that make up the fabric of the stations and their interface with the surrounding locality. It covers the following topics:

- An easy customer experience
- Station layout and materials
- Operation and services.

Greater detail and specific project requirements for these elements will be prepared during the procurement stage.

3.1 An easy customer experience

An easy customer experience is central to all aspects of Sydney Metro design (refer **Section 2.1 Objective 1** and **Section 2.2**). A high quality transport product across the whole door-to-door-to-door journey is critical to the customer experience. This section expands on how Sydney Metro West will deliver a fast, safe, reliable and easy service for all customers including daily commuters, people with reduced mobility, families, visitors to Sydney and infrequent users.

The key public transport customer service design principles which underpin customer focused design are listed to the right.

This section covers the following aspects of the customer experience:

- Door-to-door-to-door journey
- Customer circulation
- Wayfinding and signage
- Comfort and amenity
- Customer safety
- Accessibility

Public transport customer service design principles

Balanced: Functional performance is balanced with customer service to achieve high levels of customer satisfaction.

Efficient, assisted service: A self-service system that is designed for easy, intuitive use. Where assistance may be required, support is available and easy to get.

Universally accessible: Meet the needs of all members of the community, accommodate the distinct needs of key customer segments.

Flexible: Able to adapt to a range of typical usage patterns and services while delivering a consistent level of service outcomes.

Legible and consistent: Reflect a service style and tone that is easily understood and consistent with the experience of an integrated transport system.

Responsive: A service system open to feedback from customers, that adjusts over time as needs and preferences change, and continuously improves.

Metro North West, Cherrybrook Station.

3.1.1 Door-to-door-to-door journey

Applicable design objective

Ensuring an easy customer experience

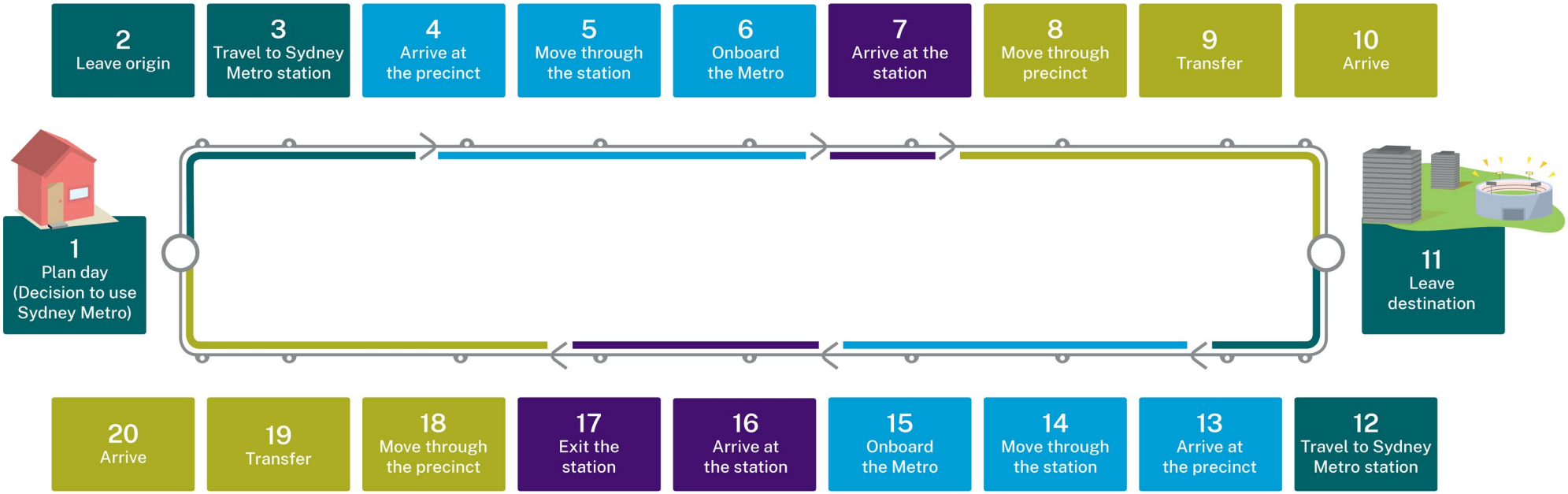
Principle

Make the customer experience central to all aspects of Sydney Metro design by:

- Responding to customer experience drivers
- Providing a comfortable and safe environment.

Guidelines

- Stations are to be designed in direct response to customer journey segments and various user requirements.
- Station design is to address the nine Public Transport Customer Experience Drivers – Timeliness, Convenience, Safety and Security, Comfort, Accessibility, Information, Ticketing, Cleanliness and Customer Service (refer **Section 2.2**).
- The design of all station elements is to cater for the diversity of customers including daily commuters, users with reduced mobility, families, visitors to Sydney and infrequent users.
- Station facilities are to be grouped and integrated to minimise clutter, promote quality design.
- The design of stations is to aim for calm, simple and uncluttered platforms and concourses that emphasise a safe, welcoming customer environment.
- Station entries are to provide a high level of connectivity to the public domain with passive surveillance and activation (refer **Section 3.2.2**).
- Decision points and level changes are to be minimised and placement of lifts and escalators carefully considered.



3.1.2 Customer circulation

Applicable design objective

Ensuring an easy customer experience

Principle

Provide adequate space to meet customer demands during peak periods and for long-term patronage forecasts.

Guidelines

- The movement capacity, configuration and spatial sequences of each station is to respond to patronage requirements defined as Level of Service C or better (based on a scale from A to F), appropriate to the location and context.
- Pedestrian paths, crossings and spaces within station precincts are to have sufficient capacity to meet potential demand with particular consideration of customer decision points (gatelines, entrances, exits, customer queue zones) and information points (refer **Section 4.3.2**).
- Circulation paths within stations are to optimise timeliness for customers moving between concourse, platform and station entries.
- Circulation paths are to be designed for convenience of connections into the station and from surrounding areas and other transport modes, reflecting pedestrian desire lines as much as possible to enhance the convenience of circulation routes.
- Retail activities, services areas and advertising structures within station sites are not to compromise efficient transport operations.
- All stations are to provide sufficient space for emergency access and movements in accordance with relevant design standards and legislation.
- Hard surfaces for circulation are to be balanced with permeable surfaces, shade and vegetation cover to minimise urban heat.

Metro North West, Tallawong Station.

3.1.3 Wayfinding and signage

Applicable design objectives

- Ensuring an easy customer experience
- Being part of a fully integrated transport system
- Being responsive to distinct contexts and communities

Principle

Provide intuitive, clear and consistent information and signage as well as legible, intuitive spaces to enable efficient navigation of stations and easy interchange with other transport modes.

Guidelines

- All wayfinding and signage is to enable customers to easily navigate each station as part of a cohesive journey.
- Planning for wayfinding is to support all customers being able to travel independently and easily on the network by:
  - anticipating the needs of customers
  - providing accurate information at the right time
  - creating predictable and intuitive environments
  - applying consistent system of signs and information.
- Circulation spaces are to be visually simple and intuitive to negotiate by:
  - providing visibility between station levels where possible
  - using intuitive design to minimise wayfinding choices and the need for signage
  - providing safe, legible, efficient, convenient, obstruction-free, level, direct and attractive access routes.
- Stations are to be identifiable when viewed from the train to support wayfinding.
- International icon protocols, colour coding and other graphic devices are to minimise the use of text-based signage and language difficulties.
- Wayfinding signage and information is to be provided in accordance with the Transport for NSW Wayfinding Planning Guide (Sydney Metro).
- Customers are to be provided with wayfinding information when:
  - interchanging between services or modes
  - connecting to and from public transport by walking, cycling, catching a taxi, or being dropped off or picked up in a private vehicle.
- Station information is to include but not be limited to, trip planning including real time information for all public transport modes, station and intermodal connection orientation information, station facilities and amenities and local destinations.
- Design and placement of customer information is to be prioritised as follows:
  - wayfinding and customer information
  - customer campaigns
  - advertising.

Town Hall Station. Wayfinding signage enables easy navigation and interchange. (Source: TfNSW)

Macquarie Park Station design provides a high level of visibility between concourse and platform level to aid wayfinding and legibility. (Architect: Hassell. Source: TfNSW)

3.1.4 Comfort and amenity

Applicable design objective

Ensuring an easy customer experience

Principle

Provide a comfortable well-lit customer environment with sufficient space for movement and an effective and appropriate microclimate.

Guidelines

- Station entry orientation and design are to minimise adverse microclimate effects including wind tunnel impacts.
- Weather protection is to be provided within station precincts so that good levels of customer comfort are maintained, and usable spaces are provided at ground level.
- A range of customer facilities and amenities is to be provided to grow patronage by making public transport a more attractive choice.
- A high level of amenity and security in customer waiting areas is to be provided to positively influence patronage and perceptions of the public transport system.
- Waiting areas, pedestrian walkways and cycleways within station precincts are to have adequate shade, lighting and seating incorporated into the landscape design, providing an appropriate balance between sun access in winter and shade in summer.
- The urban heat island effect is to be minimised through light coloured finishes, roofs and pavements, avoiding large expanses of hard paving, and through the installation of green infrastructure such as roof and/or podium landscapes, green walls, water sensitive urban design and maximising opportunity for shade trees/tree canopy.

Chatswood Transport interchange. Waiting and circulation areas outside the station entry are weather protected and have a high level of amenity and customer facilities. (Architect: CoxDesignInc. Source: Cox Richardson, Photographer: John Gollings)

Newcastle Interchange, west of Stewart Avenue, Wickham. Landscaping and shade provided in waiting areas for enhanced customer experience. (Architect and source: CCG Architects)

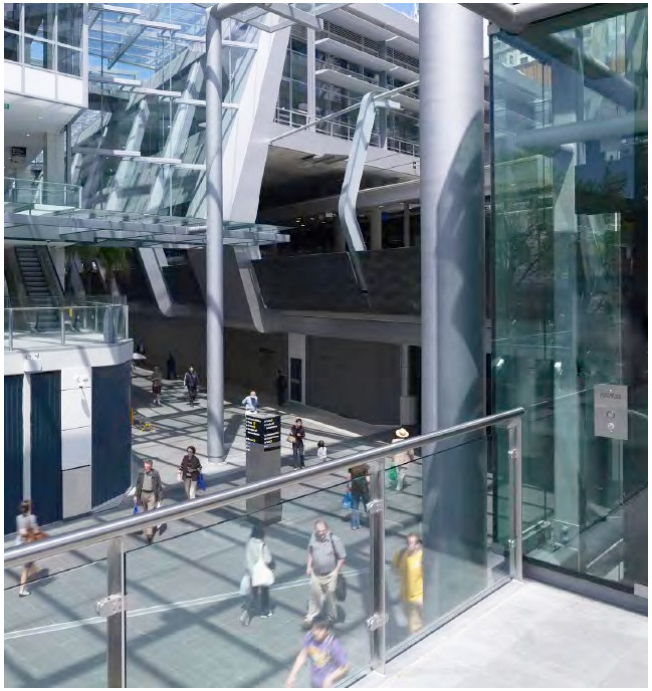
3.1.5 Customer safety

Applicable design objective

Ensuring an easy customer experience

Principle

Design stations and their precincts to provide a safe and secure environment for customers and contribute to the overall public safety of urban places throughout the day and night.



Chatswood Transport Interchange, NSW. Design of the public domain enables passive surveillance with clear sight lines through the station areas. (Architect: CoxDesignInc. Source: Cox Richardson)

Guidelines

General

- Safety considerations and requirements are to be embedded in the design development process and optimised through the application of relevant Crime Prevention through Environmental Design (CPTED) principles and guidelines.
- Operators and maintenance staff are to be consulted on issues such as lighting, lines of sight, access points and CCTV, based on their network experience.
- Integrated CCTV systems are to be provided at entries and exits, stairways, ramps, bridges, tunnels, lifts, ticket office and vending machines, emergency help points, public telephones, waiting and seating areas in accordance with Australian Standards and Sydney Metro requirements.
- Vandal-resistant fittings and fixtures are to be used throughout.

Public domain safety

- An initial CPTED review of station precincts is to assess activity generators, edge effects, movement predictors, conflicting user groups, crime hot spots, the 'displacement phenomenon' and building elements.
- All public domain areas around stations are to be planned with guidance from CPTED experts, adopt a risk prevention design approach and eliminate entrapment and concealed space opportunities.
- A Crime Risk Assessment audit is to be applied to station precinct design to confirm compliance with CPTED guidelines.

Station safety

- Station design is to incorporate CPTED strategies such as:
  - eliminating hidden spaces, recesses or voids that could provide a person with the ability to conceal themselves or others from general view
  - securing stations out of operating hours and during emergencies
  - positioning ticket vending machines to allow surveillance
  - minimising inadvertent or intentional access to hazardous or unauthorised areas of the station
  - including physical barriers to minimise risk of trespass or self-harm by station users
  - installing protective screening to elevated walkways and concourse areas particularly where persons traverse above or immediately adjacent to the rail corridor
  - glazing lift cars and lift shaft enclosures to maximise visibility and safety.
- Station design is to:
  - support visible staff presence as close as possible to customer movement and decision-making zones to enhance customer safety
  - minimise obstructions and projections, providing clear routes for customers
  - eliminate potential for crush zones and provide equipment at safe and accessible locations.
- Help points are to be easily identifiable, accessible components integrated into station cladding systems and positioned to allow surveillance.
- Help point enclosures are to be integrated with the surrounding wall or equipment cabinet.

3.1.6 Accessibility

Applicable design objectives

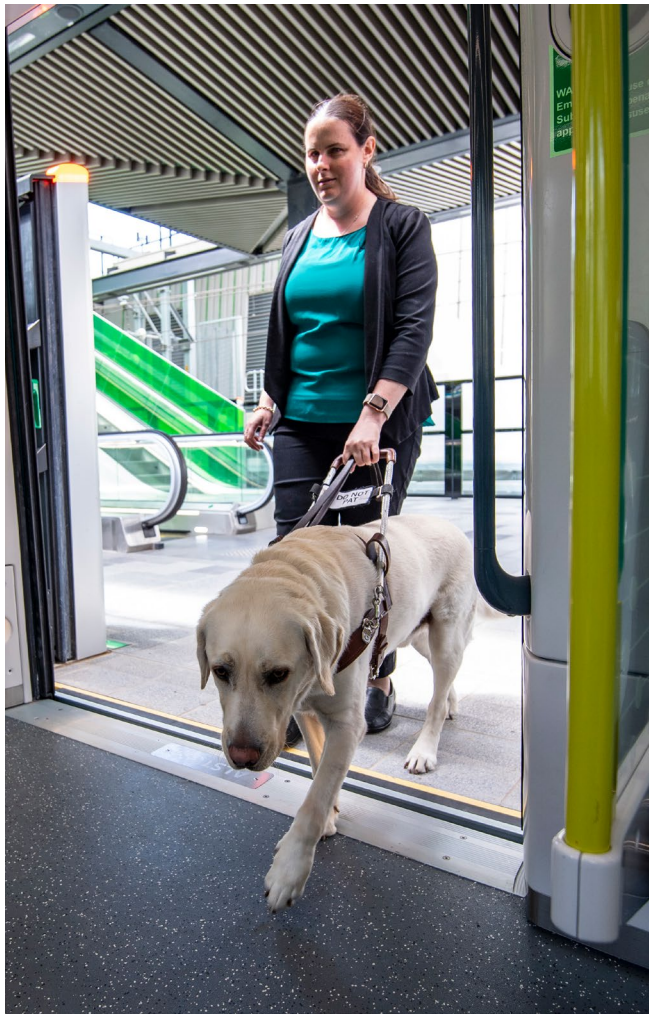
- Ensuring an easy customer experience
- Being part of a fully integrated transport system

Principle

Ensure the stations and associated spaces are safe, efficient, universally accessible, legible and easy for customers and pedestrians.

Guidelines

- Stations and precincts are to be safe and accessible for all to use including the elderly, customers with reduced mobility, young children and those with prams and/or luggage.
- As far as possible, pedestrian pathways are to be obstacle and step free to maximise access for all customers. Where the use of stairs cannot be avoided, they are to be easy and safe to use (refer **Section 3.1.2**).
- Where obstacles to universal access are unavoidable, clearly legible alternative routes are to be provided as close as possible to the main travel path.
- Where the use of stairs is unavoidable, clearly legible, alternative accessible circulation routes are to be provided as close as possible and not isolated from the primary circulation route.
- Where lifts and escalators are provided as an alternative to stair access, they are not to result in a longer journey than the primary circulation route or compromise the safety of customers who need to use them.
- Ramps may provide opportunities for universal access, however where possible, seek alternative means of effecting level changes, for example, by altering the path of travel.
- All facilities, furniture and fixings are to be accessible to all customers.
- Accessible and ambulant toilets are to be provided.
- Priority seats and adequate space are to be provided in waiting areas and groups of seating to accommodate the elderly and customers with reduced mobility and/or prams.
- Information is to be provided throughout the customer journey that considers user impairment, culture and language (refer **Section 3.1.3**).
- Equivalent service and safety information is to be provided for customers with reduced mobility in their preferred accessible format (refer **Section 3.1.3**).
- Public transport information is to be provided across a range of multimedia technologies including mobile phones, audio and visual and tactile signage, assisted listening for the hearing impaired and near field technologies to optimise accessibility for all users (refer **Section 3.1.3**).
- All metro service elements are to comply with the *Disability Discrimination Act 1992* and associated Public Transport and Premise Standards, such as Disability Standards for Accessible Public Transport.



A visual impaired commuter boards a Sydney Metro train with the assistance of their guide dog.

3.2 Station layout and materials

Sydney Metro West stations are part of a wider system that requires some degree of consistency in station planning, architecture and operations across all lines. While stations will be designed in response to their local setting and context, they will be recognisable as metro stations. Station precincts and their interchange facilities will be well integrated with existing or future urban settings and central to a legible and accessible public transport network.

Station entries, circulation and vertical transport zones, platforms and waiting areas will meet operational requirements while providing an easy, uplifting customer experience. Stations are public buildings and their design and materiality require an appropriate quality with structures and finishes sufficiently robust for the public and rail environment, while giving consideration to the use of low impact materials where possible.

This section covers the following aspects of station layout and materials:

- Station typology
- Station entries
- Platforms
- Vertical transport
- Flooring and pavement
- Walls, ceilings and platform screen doors.

Artist impression of Pyrmont Station.

3.2.1 Station typology

Applicable design objectives

- Ensuring an easy customer experience
- Being part of a fully integrated transport system
- Delivering an enduring and sustainable legacy for Sydney

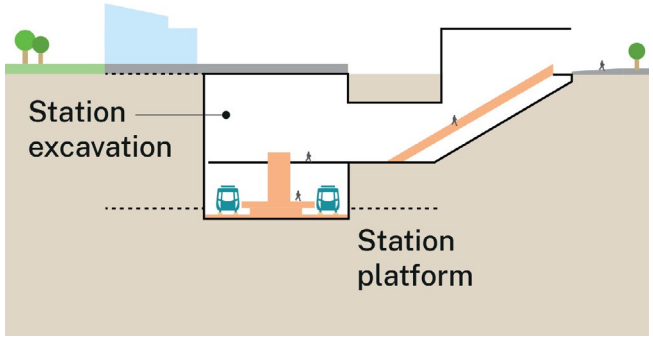
Principles

Deliver consistent station planning and operations across the different station typologies while establishing a recognisable line-wide language for all stations and responding to individual urban contexts.

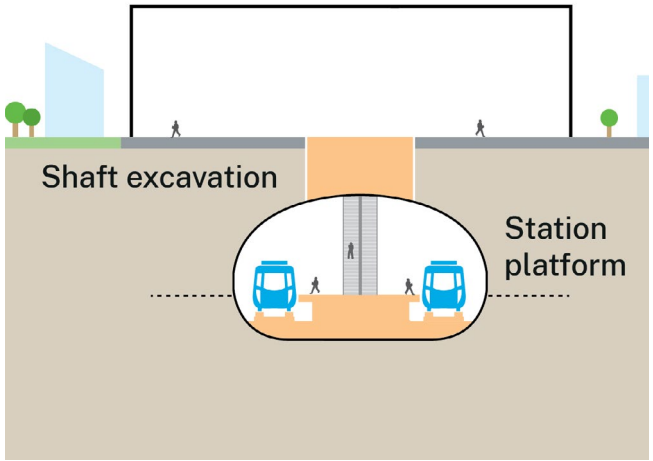
As all Sydney Metro West station platforms will be underground, construction of the stations will exhibit two principal typologies: cut and cover and/or single cavern.

Guidelines

- Stations are to be integrated with adjoining precincts to ensure safe and efficient access to stations.
- Station design is to enable integration with existing and future associated developments or development sites.
- Station entries are to be highly legible and integrated with the public domain.
- Station entries and concourses are to be transparent, efficient and inviting spaces.
- Where space and other urban design considerations allow, entries and gatelines are to be in highly visible locations at street level.
- As far as possible, stations are to maximise access to natural light and natural ventilation.
- Station and precinct design is to provide a seamless transition between transport modes (refer **Section 4.2.1**).
- Key functional elements of stations are to be consistent across stations.
- Operational and customer facilities are to be integrated in a consistent fashion, regardless of station typology, to ensure a consistent customer experience (refer **Section 3.1.1**).
- Level changes between the street and station entries are to be minimised.
- Station design is to provide efficient, intuitive circulation between station entry and platforms (refer **Section 3.1.2**).
- Station planning is to allow for the inclusion of affordable and flexible business premises, such as small-scale retail, pop ups or micro-businesses.
- Design of station plazas, including any retail component, is to consider and promote day and night-time public use and activation.
- Permanent public art is to be included in design of stations and precincts (refer **Section 4.1.6**).
- Stations are to be designed for unobtrusive maintenance access (refer **Section 3.3.3**).



Cut and cover station typology.



Single cavern station typology.

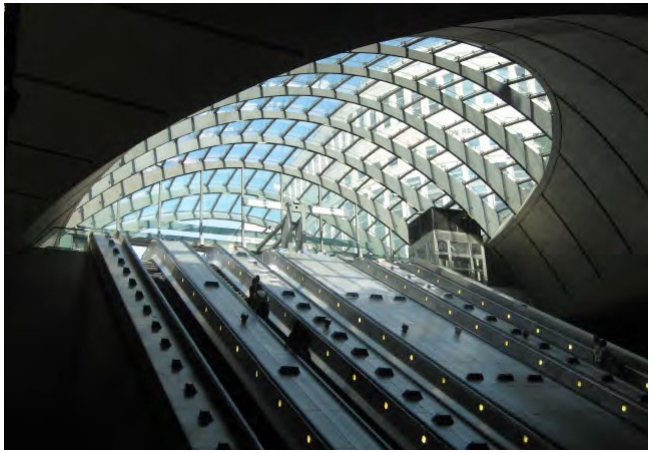
3.2.2 Station entries

Applicable design objectives

- Ensuring an easy customer experience
- Being responsive to distinct contexts and communities
- Delivering an enduring and sustainable legacy for Sydney

Principle

Provide station entries and concourse designs with efficient and intuitive circulation and interchange spaces.



Canary Wharf Station, London. Natural light over entries and VT ehances wayfinding and creates a welcoming station environment. (Architect: Fost + Partners. Source: Cox Richardson)

Guidelines

- Station entry design is to consider the existing or anticipated urban form, in terms of scale, character and heritage, where relevant.
- Station entries are to be:
  - clearly visible in the locality
  - include provision for active street frontages wherever possible
  - include adequate weather protection for customers at gatelines, queuing zones, amenities, ticketing and information areas (refer **Sections 3.1.4** and **4.2.1**).
- Station buildings are to employ articulated built forms and appropriate landscaping to mitigate building mass and avoid long, blank walls addressing the public domain.
- Concourses are to present as simple clutter-free volumes and feature flush, continuous materials with clear directional signage that assists wayfinding.
- Entry spaces are to provide a safe, well lit, open and welcoming customer environment with clear sight lines between the interior and exterior of the station.
- Where possible, natural light is to be provided over vertical transport and concourse areas to reinforce intuitive wayfinding.
- Sufficient space is to be provided, separate to primary paths of travel, to meet anticipated patronage and to provide clear zones for queuing at ticket vending machines, vertical transport and gatelines, including during special events (refer **Section 3.1**).
- The number of columns is to be minimised and all obstacles avoided on key sight lines and paths of travel.
- Lighting, communication, wayfinding, information and security systems are to be architecturally integrated and recessed wherever possible.
- Materials selection in station entry areas is to complement adjacent public domain finishes and aim to minimise embodied impacts of materials and the urban heat island effect (refer **Section 3.1.4**).
- Station entries are to include well-integrated methods to secure stations in non-operational hours (refer **Section 3.1.5**).
- Canopy or awning features are to consider the adjacent character of buildings and sit comfortably within their context.
- Entry canopies are to promote a sense of arrival and offer a weather protected threshold for customers, while giving consideration to the effects of climate change.
- Skylights are to be integrated within entry canopies, with a focus on the primary path of travel to vertical circulation zones, where possible.

3.2.3 Platforms

Applicable design objective

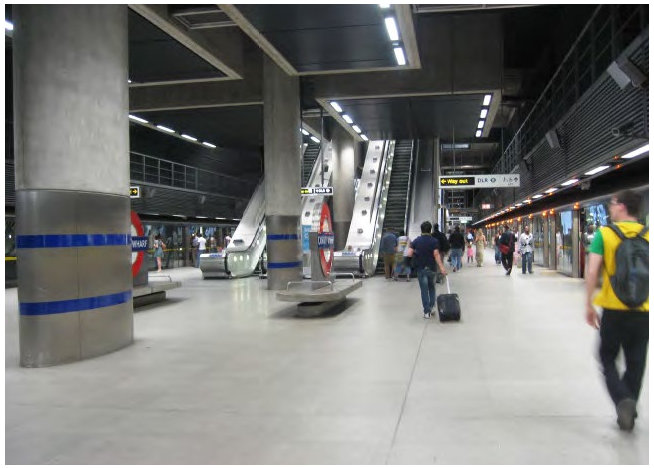
- Ensuring an easy customer experience
- Delivering an enduring and sustainable legacy for Sydney

Principle

Provide platform designs that maximise efficiency with a high level of service and an easy customer experience.

Guidelines

- Platforms are to provide efficient and safe access to metro services through clear sight lines and generous, obstruction free circulation and waiting spaces.
- The location and distribution of vertical transport (lifts and escalators) is to be informed by anticipated customer demand and movement patterns.
- Platforms are to be free of any recesses that could offer hiding places, hinder CCTV coverage, become litter traps or disrupt continuous paths of travel for the visually impaired.
- Emergency egress is to be provided in accordance with the Fire Life Safety requirements.
- Using the architecture, materials and lighting, platform areas are to have a clear relationship to vertical circulation zones.
- Platform materials selection is to aim to minimise embodied impacts of materials.
- Platform designs are to minimise the number of columns and avoid all obstacles on key sight lines and in waiting and circulation zones (refer **Section 3.2.2**).



Canary Wharf Station, London. Example of central columns and fixtures. (Architect: Foster + Partners. Source: Cox Richardson)

Macquarie Park Station. Example of transparent vertical circulation within an open platform that maximises sight lines. (Architect: Hassell. Source: Cox Richardson)

3.2.4 Vertical transport

Applicable design objectives

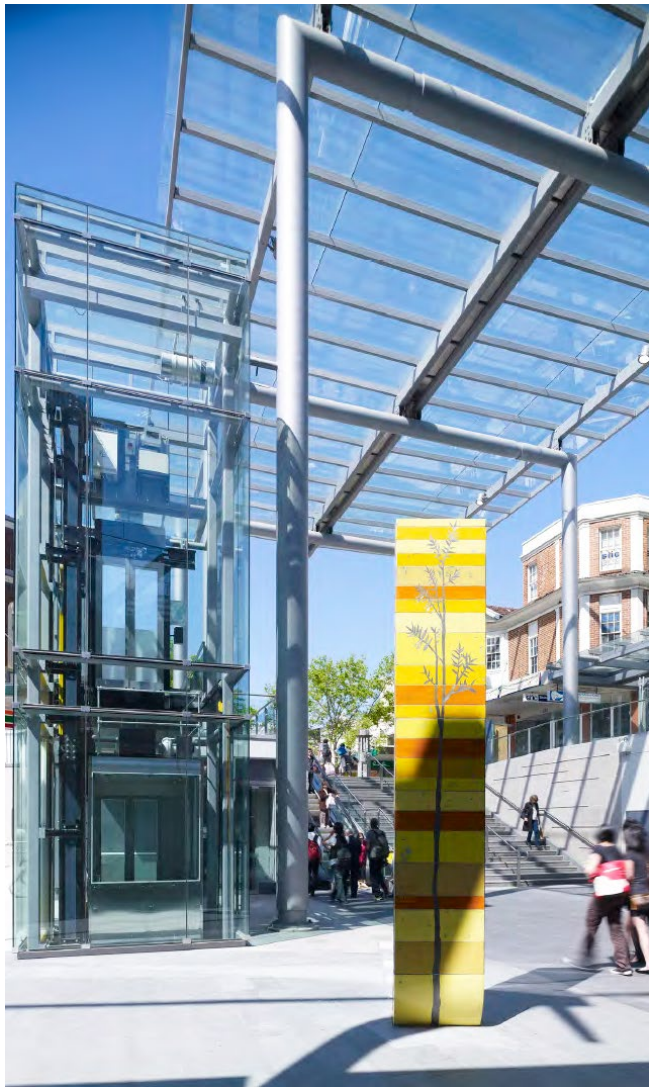
- Ensuring an easy customer experience
- Being part of a fully integrated transport system

Principle

Ensure the vertical journey is a core element of the station architecture and provides step free access between the street and the platforms as it is integral to station design and has a major influence on the function and visual impact of the station environment.

Guidelines

- All platforms are to be served by escalators and lifts that provide efficient access from entry to concourse to platforms.
- Where stairs are included as a secondary means of access, they are to be easy and safe to use (refer **Section 3.1.6**).
- Where stairs form the primary means of access, and ramps, lifts and escalators are an alternative, this alternative path is not to result in a longer journey time than the primary path (refer **Section 3.1.6**).
- Where feasible stairs adjacent to escalators are to be included to cater for higher levels of pedestrian movement and as an alternative when escalators are undergoing maintenance.
- Lifts are to be integrated into station design such that they are expressed as strong, architectural elements in their own right.
- Vertical circulation elements are to be made from high quality materials, whilst minimising embodied impacts of materials selection.
- Lifts and escalators are to maximise energy efficiency and be capable of operating in future climatic conditions.



Chatswood Transport Interchange, NSW. Good example of a glazed lift and shaft. (Architect: CoxDesignInc. Source: Cox Richardson)

3.2.5 Flooring and pavement

Applicable design objectives

- Ensuring an easy customer experience
- Being responsive to distinct contexts and communities

Principle

Allow for the safe and efficient movement of pedestrians, including people with reduced mobility, through the provision of high quality, robust flooring and paving suitable for public areas and the rail environment.

Guidelines

- Floor and pavement surfaces within and outside stations are to be of a consistent, high quality that reflects the locality.
- Flooring is to be durable, hard-wearing, easy to clean and slip resistant.
- Material selection is to consider sustainability factors such as dematerialisation, embodied carbon and replacement.
- Station flooring, and forecourt or plaza pavements are to complement adjacent existing or planned public domain finishes and be consistent with local authority requirements.
- Station flooring is to present a clean, attractive and uniform appearance and form part of a coordinated palette of station materials.
- Paving and flooring patterns or configuration are to serve to indicate, if possible, the prevailing paths of travel (refer **Section 3.1.4** and **4.3.3**).

Coordinate interior and exterior public domain pavements. (Source: AECOM)

North Sydney Station, NSW. Example of an open clutter free concourse with directional flooring. (Architect: Cox Richardson. Source: Cox Richardson)

3.2.6 Walls, ceilings and platform screen doors

Applicable design objectives

- Ensuring an easy customer experience
- Delivering an enduring and sustainable legacy for Sydney

Principle

Use wall and ceiling materials as part of a flexible system of elements that allow for a reasonable level of standardisation of components without precluding individual expression at any or all stations.

Platform screen doors at Macquarie University Station. (Source: TfNSW)

Guidelines

Walls and ceilings

- Wall structure, finish and appearance is to be suitable for the public and rail environment.
- Durable cladding and or finishes are to suit local environmental conditions.
- Wall systems, components and fixing details are to be fit for purpose including appropriateness for the given acoustic environment.
- Design is to consider ease of access for maintenance and replacement of wall and ceiling sections or panels.
- Walls and ceilings in the rail (track) zone are to be subdued and simple.
- Feature walls or ceiling panels may be used as architectural elements to identify a station and/or highlight vertical circulation and primary paths of travel.
- Use of colour or texture is to generally be deployed to assist in station wayfinding.
- The balance of station finishes is to be neutral, or recessive, relative to areas of bolder expression.
- Wall and ceiling detailing are to anticipate the integration of other station elements and fixtures, such as signage, speakers and cameras, and the placement of vending machines, help points, bins and seating.
- Material and finish selection is to consider station-specific response to Designing with Country and sustainability factors such as dematerialisation, embodied carbon and replacement.

Platform screen doors

- Platform screen doors are to be as transparent as practicable, with considered structural framing designed to achieve a minimal and elegant platform edge barrier.
- Platform screen door design is to conform to the following requirements:
  - be full height
  - extend the full platform length with fixed complementary panels on inactive parts of platform
  - be well resolved at end walls and junctions with adjacent surfaces
  - maximise extent of glazing, considerate of customer experience
  - meet security requirements
  - be modular to facilitate ease of fabrication, installation repair and replacement.

3.3 Operation and services

The design of station infrastructure will be tailored to operational requirements and transport functionality over the longer term. Similarly, the design will anticipate system management and maintenance functions over successive generations as Sydney grows and demands on the public transport network increase.

Station buildings and external areas will be suitable for a high capacity passenger rail service that traverses a dense urban setting with a range of complex interfaces. Stations will have consistent, reliable and bespoke facilities to meet servicing and security functions, as well as the needs of regular and occasional customers.

This section covers the following aspects of operation and services:

- Ticketing equipment
- Engineering and services integration
- Management and maintenance
- Security
- Emergency requirements
- Service vehicle access.

Grand Concourse, Central Station. Transport information with passenger information display. (Source: TfNSW)

3.3.1 Ticketing equipment

Applicable design objectives

- Ensuring an easy customer experience
- Being part of a fully integrated system

Principles

Provide integrated ticketing equipment and associated fixtures that are consistent with Sydney Trains and Sydney Metro standards across the network.

Design ticketing equipment to contribute to an efficient, high quality customer experience.

Guidelines

General

- All components of common ticketing equipment and fixtures that include the following, are to be high quality, durable and suitable for the rail environment:
  - ticket gates
  - fixed location readers
  - ticket vending machines and Opal top-up machines.
- Ticketing equipment and fixtures are to be:
  - highly visible and easily accessible to customers and staff
  - easily accessed for maintenance, future repairs or replacement.

Ticket gates/readers

- Opal ticket gates are to be used in all stations.
- Fixed location readers may also be used at some stations.
- The number of gates is to be sufficient for peak periods.
- At least one wide aisle gate is to be provided at each gateline.
- Wide aisle gates are to be clearly visible and located on accessible paths of travel.
- Adequate runoff space outside of circulations zones is to be provided on both sides of gatelines.

Ticket vending and Opal top-up machines

- Ticket vending machines and Opal top-up machines are to be:
  - clustered together to create a clear ticket sales zone in unpaid areas at station entries.
  - publicly accessible, outside primary circulation areas with sufficient queuing and manoeuvring space for people using mobility aids.
  - integrated with station architecture and other elements.
  - standard proprietary items and comply with the *Disability Discrimination Act 1992*.

Sydney Trains Opal Only Gates. (Source: TfNSW)

3.3.2 Engineering and services integration

Applicable design objectives

- Ensuring an easy customer experience
- Being part of a fully integrated system
- Being responsive to distinct contexts and communities

Principle

Include rail engineering and service elements in the corridor, at stations and at ancillary facilities as part of an integrated overall station and precinct design while allowing for ease of maintenance.

Guidelines

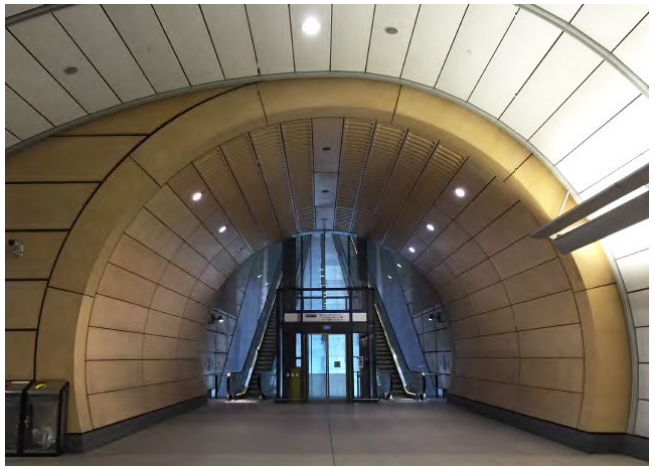
General

- Station structures and engineering elements are to be designed holistically to achieve an integrated engineering and architectural outcome, including all structural, civil, mechanical, electrical and rail systems elements.
- The placement and arrangement of elements for ease of operations and maintenance, including personnel access, is to be a design priority.
- The visual impact of engineering and systems components is to be minimised by concealing all services.
- Dedicated service zones are to be included in stations, including space proofing for future anticipated requirements.
- Architectural expression of primary structural elements of buildings or structures is to be investigated as part of the design.
- Structures and systems are to be designed to be resilient to the future impacts of climate change.

Service buildings

- Service buildings are to form part of the integrated design solution for stations and precincts.
- Material quality and architectural resolution is to be complementary to station architecture.
- Active frontages to service facilities are to be pursued as part of precinct planning.
- Service facilities located in public areas are to be integrated with other functions such as ticketing and information, egress stairs, retail or community facilities, wherever possible.
- The visual, environmental and acoustic impacts of services facilities are to be considered in the design solution.
- Designs are to allow for safe access to all areas of service buildings or facilities.

King's Cross Square, London. Good example of a well designed vent structure integrated with other functions within an urban setting. (Architect: Stanton Williams. Source: Getty)



Macquarie Park Station. Services are concealed and integrated within the cavern structure, enabling the clean expression of the cavern form. (Architect: Hassell. Source: Cox Richardson)

3.3.3 Management and maintenance

Applicable design objectives

Being part of a fully integrated system

Principles

Design and specify cost effective, adaptable, durable and easily maintained materials and assets that are fit-for-purpose for the rail environment.

Consider maintenance as an integral part of the design process from an early stage.

Temporary or ancillary equipment, vending machines or any other structures (i.e. temporary signage) are not be placed in the primary pedestrian paths. (Source: Grimshaw)

Guidelines

- A consistent and coordinated palette of materials, furniture and fixtures is to be adopted to serve a cost-effective management and maintenance approach.
- Public domain elements are to comply with any relevant local authority standards to facilitate consistent future management and maintenance.
- Public domain elements are to be consistent with adjacent public finishes – if of an appropriate standard – for ease of maintenance.
- Pavements and roads are to be designed to take the loads of the vehicle and equipment types that will use the facilities.
- All signage, street furniture and operational equipment in the public domain, such as passenger information displays and CCTV systems, are to be designed to minimise vandalism and simplify cleaning.
- The placement and detailing of furniture, fixtures and equipment is to consider potential impacts from birds, insects and animals on operational assets and the customer environment.
- All assets, including paving, lighting, signage and street furniture are to be of a standardised, modular design as far as practical, and readily available with readily replaceable components.
- All station elements are to meet the required life cycle objectives of Sydney Metro and specifications are to consider sustainability objectives including dematerialisation and embodied energy.
- All station energy and water systems are to be metered and monitored for ongoing maintenance and improvement.
- Materials and finishes in all customer interface areas are to be easily cleaned, maintained, upgraded and graffiti resistant.
- Furniture, fixtures and fittings are to be robust and durable, with consideration of potential vandalism in their detailing and placement (refer **Section 3.1.5**).
- Station design is to accommodate maintenance access to all elements, including components that require the use of heavy or large machinery or structures for installation of equipment, regular cleaning or repairs.
- Stations are to be designed to facilitate safe access for both operational staff and customers.
- Resilience to climate change is to be addressed by incorporating adaptation measures which respond to weather extremes, such as flood risk and temperature increases.
- Where required, stations are to include flood protection from storm surges and potential flooding events.

3.3.4 Security

Applicable design objective

Being part of a fully integrated system

Principles

Ensure adequate security for rail corridor infrastructure, station assets and for rail users.

Visually and physically integrate security elements as part of coordinated station, precinct and corridor design.

Guidelines

General

- Risk assessments are to form part of the design process during all phases.
- A public address system, capable of projecting clearly audible information throughout the station, is to be provided at emergency egress points, controllable from station control rooms and operational control rooms.
- CCTV is to be provided throughout the station, including at all corridor access/egress points and potentially risk-sensitive areas.
- Fencing is to be robust, suitable for the rail environment and consider maintenance and future replacement.

Crowded places

- In high volume stations, station design is to include strategies to manage the movement of crowds, particularly at peak times.
- Hostile vehicle mitigation strategies are to be developed for each station.
- All security and pedestrian management devices are to be:
  - contained within the station development site where possible
  - integrated with the design of the public domain, using features such as furniture.
- Security bollards are to be provided where necessary but are not to impede safe pedestrian movement by adopting a rational layout to minimise visual clutter and maintain safe, accessible paths of travel.

Homebush, Sydney. Rail corridor security fences should be robust, easily maintained, modular systems that are readily integrated with other urban design elements such as retaining walls. (Source: AECOM)

3.3.5 Emergency requirements

Applicable design objective

Being part of a fully integrated transport system

Principles

Ensure that station precincts, rail facilities and corridors have clearly identified emergency access and egress zones.

Design zones to avoid potential conflict between emergency, maintenance and other vehicles as well as pedestrians and cyclists.

Guidelines

- All station precincts and public domain areas are to comply with statutory requirements for emergency procedures and relevant guidelines for fire and safety.
- Emergency requirements are to include:
  - effective and clearly signposted station emergency evacuation routes and assembly areas
  - adequate zoning and space at emergency assembly points to ensure they are clutter free and accessible at all times
  - fire safe refuge areas with CCTV and accessible communication systems in underground stations for people who are unable to self-evacuate
  - emergency lighting to the immediate station curtilage
  - appropriate location of firefighting equipment, clearly identified and readily accessible
  - provision of emergency/security electronic help points.
- Hydrant enclosures are to be easily identifiable, easily accessed modular components integrated with station/wall cladding systems to minimise their visual impact.
- Where required, stations are to include flood protection from storm surges and potential flooding events.

All station precincts must accommodate station evacuation and emergency procedures. (Source: AECOM)

3.3.6 Service vehicle access

Applicable design objectives

- Being part of a fully integrated transport system
- Being responsive to distinct contexts and communities

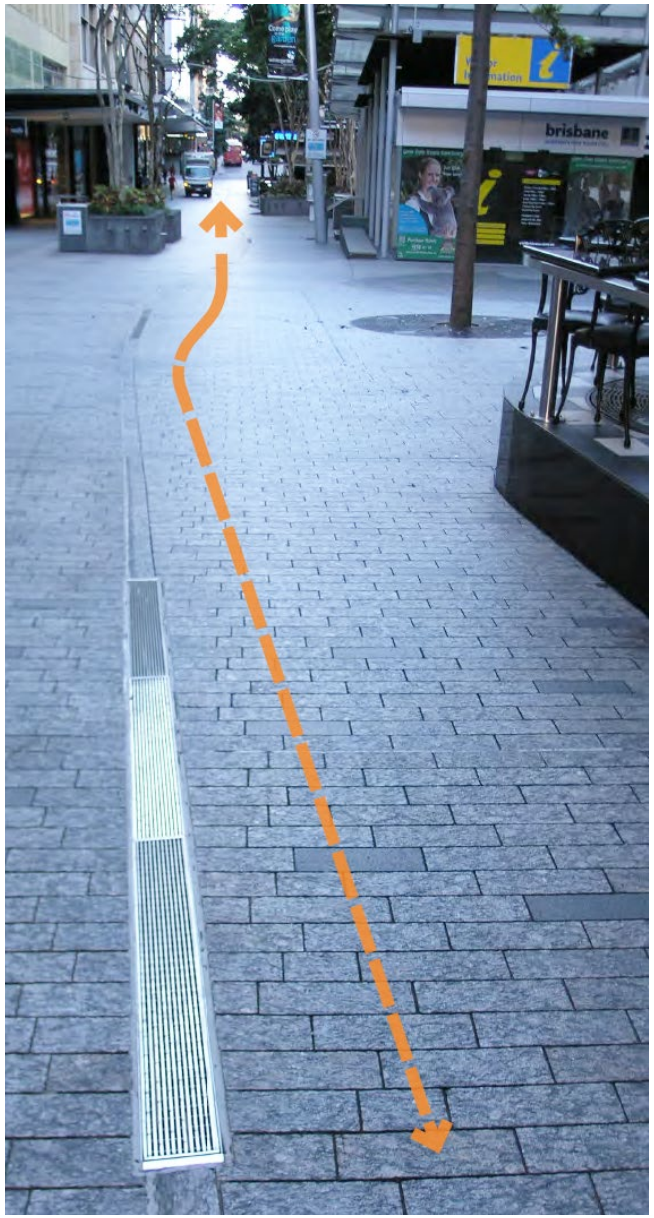
Principles

Include unobtrusive access for service vehicles in the design of stations.

Ensure service vehicle access and movement paths in precincts are well defined and efficient.

Guidelines

- Service vehicle access is not to compromise the public domain areas of station forecourts or interchange and connectivity functions.
- Service vehicle access for all precinct functions is to be addressed as part of the broader station precinct planning, including any increased movements over the life of the project and precinct.
- The operational function and frequency of service vehicles is to be considered to determine dedicated zones for daily or frequent access, or shared zones for occasional access within station precincts.
- Where possible service vehicle access is to be shared with integrated development service access to minimise impacts on the precinct.



Queen St Mall, Brisbane. Emergency vehicle and service vehicle access through the mall has been provided. (Source: AECOM)

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Precinct design elements

4

About this chapter

This chapter applies across the Sydney Metro West corridor and provides overarching principles and guidelines for developing the design elements of station precincts and their interface with adjoining areas. It covers the following topics:

- Built form and identity
- Connectivity
- Public domain.

In these guidelines, public domain refers to all of the spaces external to station buildings and associated development. Station forecourts and plazas refers specifically to the areas adjacent to station entries, ranging from footpath widening (forecourt) to larger open spaces (plazas), all of which are components of the wider public domain.

More detailed design guidelines and key requirements for each of these elements will be prepared during the procurement stage.

Metro North West, North Ryde Station.

4.1 Built form and identity

For a project of this scale, it is imperative that the design delivers not just on the objectives but provides an architectural and urban design experience that connects with places and diverse communities so that they embrace and identify with the project, the rail line and the opportunities it unlocks.

As all public transport infrastructure is public space, the internal and external spaces of stations are in the public domain. Having a consistent approach binds these spaces and helps station entrances integrate with their local context to create welcoming landmarks in the urban environment.

The design of station precincts will seek to strike a balance between incorporating unifying design themes and elements to establish brand and product consistency while responding appropriately and creatively to existing or anticipated urban contexts to deliver unique, place-specific experiences that reflect the locality of each station precinct.

This section covers the following aspects of built form and identity:

- Network and station legibility
- Sense of place, culture and character
- Station buildings and associated precinct development
- Heritage and archaeology
- Environment and sustainability
- Public art
- Lighting.

Southwark Station, London. Station spaces are designed as distinctive, high quality public domain. (Architect: MPJ Architects. Source: MPJ Architects)

4.1.1 Network and station legibility

Applicable design objectives

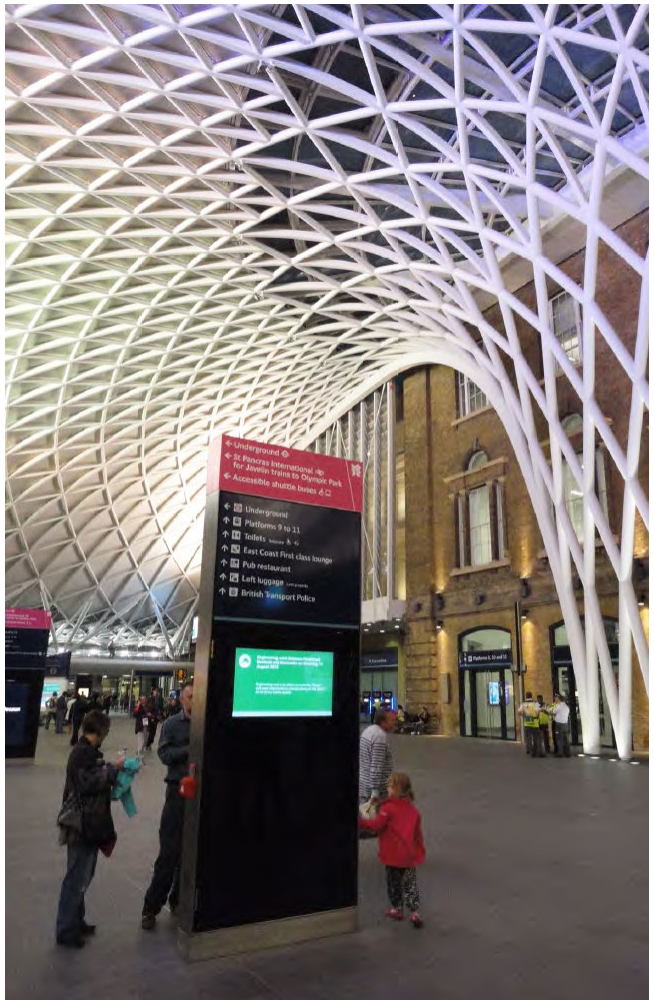
- Ensuring an easy customer experience
- Being part of a fully integrated transport system
- Being responsive to distinct contexts and communities

Principle

Create a line-wide identity for Sydney Metro West that is recognisably part of the Sydney Metro network while enabling elements of station precinct design to respond to context, character and environment to create locally distinctive sustainable outcomes.

Guidelines

- The architectural language and elements of the transport infrastructure and stations are to form a line-wide design that reinforces the Sydney Metro identity within the broader transport network.
- The stations are to maintain a coherent identity with consideration of:
  - network identity
  - line-wide identity
  - place-specific local identity.
- Station buildings, associated development and public domain elements are to form part of the identity and project an image which evokes a modern, contemporary and efficient transport system providing an attractive, comfortable, safe and inspiring customer environment, while also responding to the local context and environment.



Kings Cross Station, London. Clear signage contributes to network and station legibility. The architectural quality of the space creates an attractive place for customers with a local identity. (Architect: John McAslan + Partners. Source: Cox Richardson)

4.1.2 Sense of place, culture and character

Applicable design objectives

- Ensuring an easy customer experience
- Being a catalyst for positive change
- Being responsive to distinct contexts and communities
- Delivering an enduring and sustainable legacy for Sydney

Principles

Create welcoming, safe and well maintained public domain spaces and station buildings which foster activity and a sense of place.

In the design of station precincts respond sensitively to the physical and cultural context.

Guidelines

- Stations and associated spaces are to promote a welcoming image or identity that reinforces a positive sense of place.
- Besides serving all movement and connective functions, station spaces are to be further improved through the introduction of a range of uses, services and facilities such as retail, food and beverage, shade trees, landscaping and public art.
- A positive precinct image is to be developed around the heritage values of a place or by building on the qualities of the existing urban context.
- Opportunities to celebrate Aboriginal culture and voices within the context of the wider cultural narratives are to be created.
- Aboriginal cultural values are to be integrated into all aspects of the design including landscape, project form, materials interpretation as well as art works in accordance with a Connect with Country Framework (refer **Section 2.5**).
- Design approaches are to reflect distinct attributes that respect and celebrate the local community's rich social diversity and unique setting.
- Public spaces associated with stations are to allow for spontaneous uses and activities by their occupants.
- Public art is to be integrated into the urban environment to offer unique experiences and bring a diverse and changing community together (refer **Section 4.1.6**).
- Community artists, designers and landscapers are to be included as part of the creative development of landscape and built form to incorporate and reflect cultural values, narratives and innovation.
- Public spaces are to be created equitably so that all members of the community can access and contribute.
- The relationship between station precincts and the blue and green grid is to be considered in shaping and reflecting culture and character of places (refer **Section 4.1.5**).
- The treatment of public spaces is to reflect local character and context, integrate with its setting, and provide attractive space and streetscapes designed with a consistent hierarchy of landscape treatments.
- The selection of materials and finishes is to respond to the local character and the surrounding built environment.
- Fixtures, including furniture and lighting, are to enrich site context and sense of place and contribute to wayfinding.
- Lighting is to generate interest and activity at night-time and maximise energy efficiency.

4.1.3 Station buildings and associated precinct development

Applicable design objectives

- Ensuring an easy customer experience
- Being a catalyst for positive change
- Being responsive to distinct contexts and communities
- Delivering an enduring and sustainable legacy for Sydney

Principle

Integrate station buildings and associated precinct development where relevant, to contribute to an active, safe and stimulating public domain around stations.

Guidelines

General

- Station and precinct development is to:
  - be scaled and designed to prioritise the activation of the public domain, particularly station plazas and key pedestrian routes
  - minimise potential negative impacts on public spaces, including the overshadowing of key spaces of congregation and activity (refer **Section 3.1.5**)
  - be coordinated with local planning strategies and or master plan initiatives to maximise place opportunities within precincts.

Street frontages, forecourts and plazas

- Built form is to reflect uses and activities and be integrated with spaces and services coordinated between the station buildings and precinct development wherever possible.
- Forecourts and plazas are to be of appropriate scale and designed to facilitate active uses at the interface with station and precinct development, considering the role of landscaping, level changes and outdoor dining space in activating the interface zone.
- Active frontages are to be maximised across the ground plane to provide for a high-quality pedestrian environment and exciting urban experiences.
- Ground floor entries are to be level with the footpath and open towards surrounding streets, wherever possible, to maximise street level activation.
- Expansive and inactive street level frontages in areas of high pedestrian use are to be avoided.

Building design

- The design of new development above stations including structural elements, building grids, column loadings, building infrastructure and services is to be integrated with the station.
- The ground level of buildings is to be well-designed, able to attract a diverse range of active retail and business uses and create variation and interest, using appropriate ceiling heights, floor plate dimensions and fine-grain architectural façade treatments to optimise the number of tenancies addressing the ground plane.
- Design of non-residential buildings and spaces is to be adaptable over time by providing appropriate ceiling heights, floor plate dimensions and servicing and access.
- Façade elements and architectural treatments that break up the massing when viewed from public spaces and at street level are to provide visual interest and reinforce a sense of scale and design continuity.
- Awnings are to be visually appealing to provide weather protection, allow light onto the street, respond to topography, and break the vertical building bulk.
- Wind mitigation devices such as impermeable canopies, awnings, pergolas and trees are to be incorporated where there is potential for significant wind downwash from buildings and where required to achieve the relevant wind comfort and/or safety criteria.
- The extent of grilles, vents, mechanical plant and other operational and security measures are to be minimised in areas that front onto the public domain.

Servicing and parking

- The functional autonomy between the station and precinct development is to be designed so that:
  - all building services required for the use, operation and maintenance of associated development are located entirely within the associated development and do not pass through the station unless specifically required by relevant authorities
  - all pathways required for maintenance or emergency egress and access for the station are located within the station and independent of the associated development
  - utility services for the station do not pass through the associated development
  - adequate clearance zones are provided so that the location of air intakes and exhaust outlets, including cooling tower discharges, eliminate the potential for cross contamination of air flows for exhaust and smoke discharge (in event of fire)
  - back of house operations and services are consolidated wherever possible while maintaining any required separation between the station and precinct development.
- Service vehicles and garbage trucks are to access and egress sites in a forward direction and use turntables in loading areas where required.
- Waste collection and loading areas are to be accommodated wholly within the building.
- Sufficient side and vertical clearances are to be provided to allow the lifting arc for automated bin lifters to remain clear of any walls or ceilings and all ducts, pipes and other services.
- Spatial requirements for garbage trucks and small rigid delivery vehicles, minimum driveway widths and minimum turning circle radius are to meet local authority requirements.
- Separate parking spaces for service vehicles, including bike couriers, are to be provided near vehicle entry points and near lifts, clearly designated and signposted for service vehicles only and screened from the street where possible and are not to be shared with parking provided for any other purpose.
- Further design requirements for the gradient and surface treatment of vehicle access ramps to address local flooding requirements are to be sought from local authorities as required.
- Public transport use is to be encouraged by minimising the amount of car parking provided within new development.
- Include increased car share opportunities, providing de-coupled parking and providing facilities such as bike parking and end-of-trip facilities to promote active transport usage.
- If required, car parking located above ground level is to be appropriately sleeved and designed to be adaptable for other uses in the future.

Metro North West, Bella Vista Station.

4.1.4 Heritage and archaeology

Applicable design objectives*

- Being responsive to distinct contexts and communities
- Delivering an enduring and sustainable legacy for Sydney

* The design of new station and precinct work near heritage places, is to have regard to the following heritage guidelines:

- *The Burra Charter – The Australia ICOMOS Charter for Places of Cultural Significance* (2013), Australia ICOMOS
- *Better Placed – Design Guide for Heritage* (2019), prepared by the NSW Government Architect
- *Design in Context* (2005), prepared by the NSW Heritage Office and the Australian Institute of Architects NSW Chapter
- *New Uses for Heritage Places* (2008), prepared by the Heritage Council of NSW and the RAIA
- *Draft Connecting with Country Framework* (2020), Government Architect NSW.

Principles

Ensure heritage places are managed in accordance with significance, and opportunities realised for tangible and intangible heritage values to contribute to the celebration of identity and place.

Guidelines

- The heritage context, including built and natural heritage places, Aboriginal and non-Aboriginal archaeology, is to be respected and enhanced through sensitive design.
- The Sydney Metro West heritage interpretation strategy is to guide design development and be accompanied by innovative and detailed interpretation plans.
- Where intervention with heritage places is required, design excellence is to be implemented to support sensitive, interpretive and contemporary design responses to heritage significance.
- The design of stations and associated precinct developments is to conserve heritage places, minimise and/or mitigate any negative impacts and respect and enhance its heritage context.
- New work to, or in the vicinity of heritage places is to be based on an understanding of heritage significance, and is to address:
  - siting – including urban grain, streetscape rhythm, setbacks, orientation and address of buildings, location of boundary walls, key views, significant built and natural features and archaeological remains
  - scale – including wall and floor to floor heights, modulation and façade rhythms, massing, density, proportions, relationship to ground plane, wall modulation including openings and roof planes
  - form – including proportion and number of openings, solid to void ratios, roof form, skyline and relationship between internal and external spaces
  - materials and colour – giving consideration to characteristic materials, textures, colours, light and shadow, and retaining and interpreting significant fabric
  - details – creating complementary relationships between new and old elements to provide visual interest.

Newtown Station, Sydney. Heritage interpretation. (Architect: NSW Government Architects Office/Caldis Cook Group. Source: TfNSW)

4.1.5 Environment and sustainability

Applicable design objectives

- Ensuring an easy customer experience
- Being a catalyst for positive change
- Being responsive to distinct contexts and communities
- Delivering an enduring and sustainable legacy for Sydney

Principle

Ensure best practice sustainable design solutions are adopted for stations, associated development and the public domain that minimise environmental impacts, provide environmental improvements and drive beneficial social outcomes for customers and local communities.

Guidelines

- Stations and associated precinct developments are to achieve a high level of sustainability performance using the Green Building Council of Australia Buildings Green Star Tool and other sustainability tools (such as NABERS, the Infrastructure Sustainability Council's (ISC) rating scheme and BASIX) for relevant sites.
- Resilience to climate change is to be addressed by incorporating mitigation and adaptation measures that respond to weather extremes, such as flood risk and temperature increases. Very high and high climate risks are to be prioritised, including protecting users from the negative impacts of adverse weather to create a positive customer experience in station precincts.
- Passive design solutions such as natural daylight and natural ventilation are to be incorporated as far as possible (refer **Sections 3.2.1** and **3.2.2**).
- The carbon footprint is to be minimised by reducing energy intensity, improving operational efficiency, and using onsite and offsite renewables where appropriate.
- High energy efficiency system design is to be prioritised to reduce direct energy demands.
- Embodied carbon and environmental impacts are to be minimised and resources used efficiently by dematerialising where possible, utilising modular and prefabricated elements and selecting low impact structural materials, equipment, fixtures and finishes.
- Embodied carbon impacts of concrete used on the project are to be reduced by setting targets for the use of supplementary cementitious materials and alternate binder systems.
- Opportunities to beneficially reuse 100% of reusable spoil in landscape features and other uses on the project are to be maximised.
- Material reuse in design and use of recycled and recyclable materials is to be prioritised.
- Materials are to be selected from ethical and sustainable sources, including the use of timber products from either re-claimed timber, post-consumer recycled timber, Forest Stewardship Council or Programme for the Endorsement of Forest Certification certified sources.
- Engineered timber for structural and non-structural forms are to be used where feasible.
- Initiatives for the reuse of non-potable water are to be investigated and included.
- Opportunities for rainwater capture, reuse and connection to existing recycled water networks are to be implemented where available and feasible.
- Water Sensitive Urban Design (WSUD) initiatives are to include an integrated and site-responsive range of design solutions, influenced by urban design considerations to manage and treat stormwater and be adaptable into the future.
- Green infrastructure and enhance biodiversity, utilising low maintenance and native landscaping species is to be maximised where feasible.
- Opportunities to reduce urban heat island effects, including (as appropriate) light-coloured finishes, roofs and pavements and green infrastructure such as green walls or roofs, plantings and shade trees/ tree canopy are to be incorporated in the design.
- Emerging environmental and social trends and key areas of concern for the community and customers are to be considered in the design approach.
- Opportunities to integrate design solutions that reflect engagement with Aboriginal knowledge holders are to be considered where feasible.
- Procurement opportunities for local businesses, small and medium enterprises (SMEs) social enterprises and Aboriginal businesses are to be maximised to engage and participate with the construction and operational supply chains.
- Wind impacts are to be mitigated to create a comfortable domain at ground level.

4.1.6 Public art

Applicable design objectives

- Ensuring an easy customer experience
- Being responsive to distinct contexts and communities

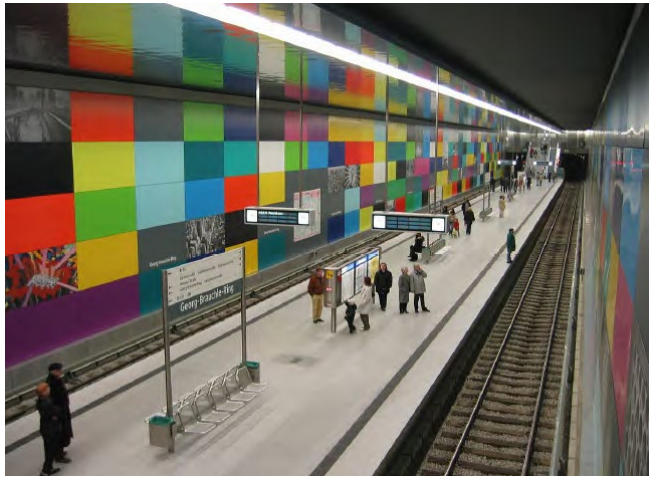
Principle

Ensure public art is integrated within stations, plazas and precincts to elevate the customer experience and enhance sense of place.

Guidelines

- Public art is to be a key feature of the customer experience, bringing joy to customers and adding value to the operation and success of Sydney Metro by contributing to station identity, beauty, amenity, wayfinding, safety, security, community values and the public domain.
- Artworks are to contribute to the cultural identity of precincts and neighbourhoods and are to be developed in consultation with the local cultural stakeholders, including local Aboriginal communities.
- Where appropriate, artwork opportunities are to be created for artists who are members of the relevant local community.
- Artworks are to be located, designed and built to support important station functions including customer journey, safety and wayfinding; sightlines to destinations, facilities and signs; universal access requirements; and operations and maintenance.
- Engagement with relevant stakeholders and artists is to be considered to develop plans for the retention and/or relocation of existing artworks present in buildings or public areas to be changed as part of Sydney Metro works.
- Public art is to comply with the Sydney Metro Public Art Masterplan, which describes Sydney Metro's public art vision, objectives and principles as well as the commissioning process and important technical and functional parameters for public art in stations, and the specific Art Approach development for Sydney Metro West.

Artwork may also be incorporated into the public realm as part of a building element. (Artist: Bronwyn Bancroft. Source: TfNSW)



Georg-Brauchle-Ring Station, Munich U-Bahn, Germany. Artwork on the trackside walls gives the station a distinctive identity and facilitates wayfinding. (Artist: Franz Ackermann. Source: Wikipedia)

4.1.7 Lighting

Applicable design objectives

- Ensuring an easy customer experience
- Being responsive to distinct contexts and communities

Principle

Ensure a coordinated station and precinct lighting design that is appropriate for the local context, addresses Crime Prevention through Environmental Design (CPTED) and operational requirements and contributes to a positive image of Sydney Metro in the locality.

Guidelines

General

- Lighting design is to:
  - form part of a coordinated approach to station access, wayfinding and, where appropriate, public art and activation
  - be generally consistent, in both function and aesthetic intent, across stations.
- Public lighting is to highlight station entries and approaches, enhance station architecture and contribute to the quality of public spaces.
- Illumination levels are to be fit for purpose, whether wayfinding, reading or facial recognition, while minimising light spill.
- Efficiency in lighting design is to be pursued with the number of luminaires minimised as far as possible without compromising design intent.
- Market leading energy efficient luminaires and systems are to be specified.
- Glare is to be minimised through appropriate specification and location of luminaires.
- All outdoor lighting design is to minimise light pollution.

Station lighting

- Lighting design including placement of fittings is to be integrated into and serve the station architecture.
- Station and lighting design is to achieve a considered balance between natural and artificial light.
- Protection from intense summer sunlight penetration is to be provided.
- All outdoor lighting design is to align with AS/NZS4282 or equivalent standard.

Public domain lighting

- Lighting in station precincts and at other facilities is to contribute to a safe, legible and comfortable environment for all staff and users.
- Public lighting is to support a wide range of potential uses.
- All public areas are to use a consistent, multi-function pole and associated luminaires.
- Lighting elements are to be coordinated spatially and aesthetically with all other public domain elements and the public landscape.
- Precinct lighting is to be of an appropriate scale and quality, consistent with surrounding local authority approaches.

Britomart Transport Centre, Auckland. Lighting is designed to provide a safe, legible and comfortable environment for customers and users. (Architects: Mario Madayag & Jasmax. Source: Opus)

Georg-Brauchle-Ring Station, Munich U-Bahn, Germany. Artwork on the trackside walls gives the station a distinctive identity and facilitates wayfinding. (Artist: Franz Ackermann. Source: Wikipedia)

4.2 Connectivity

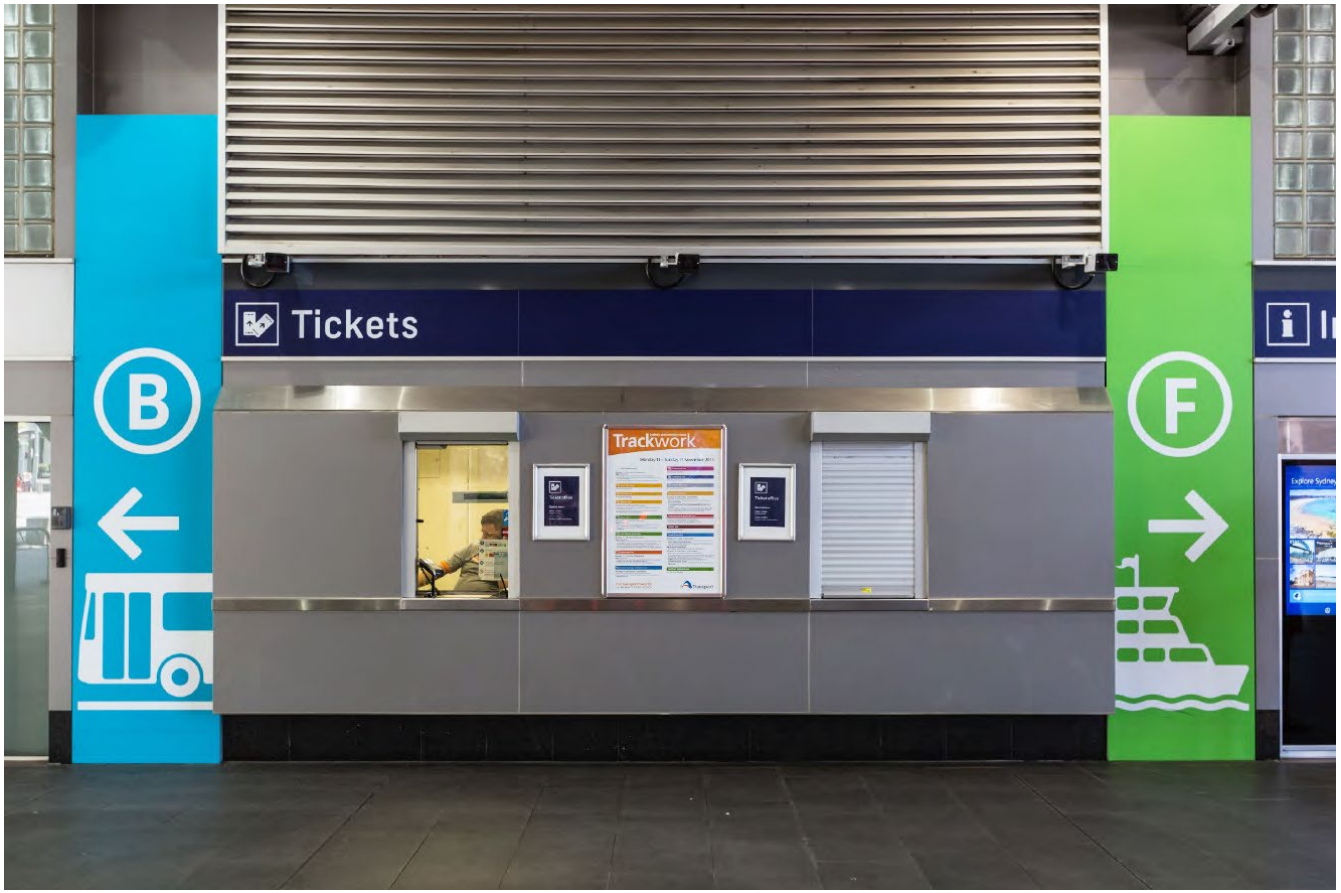
Safe and convenient connections to and from Sydney Metro stations are an important part of an easy customer experience (refer **Section 2.1 Objective 1**, **Section 2.2** and **Section 3.1**). Connectivity between different transport modes including walking, cycling, rail, light rail, buses, taxis and kiss and ride needs to be legible and easy, acknowledging that Sydney Metro is part of an integrated transport system.

A modal access hierarchy that prioritises pedestrian connections has been established to guide the design of Sydney Metro West and ensure the safety and wellbeing of customers and users of the station environment, consistent with Transport for NSW's Movement and Place principles.

The design of station precincts will facilitate safe, welcoming intuitive and accessible connections between transport modes.

This section covers the following aspects of connectivity:

- Interchange
- Pedestrian movement
- Bicycle movement
- Vehicular interface.



Signage supports connectivity between different modes, and provides customer information to assist trip planning. (Source: TfNSW)

4.2.1 Interchange

Applicable design objectives

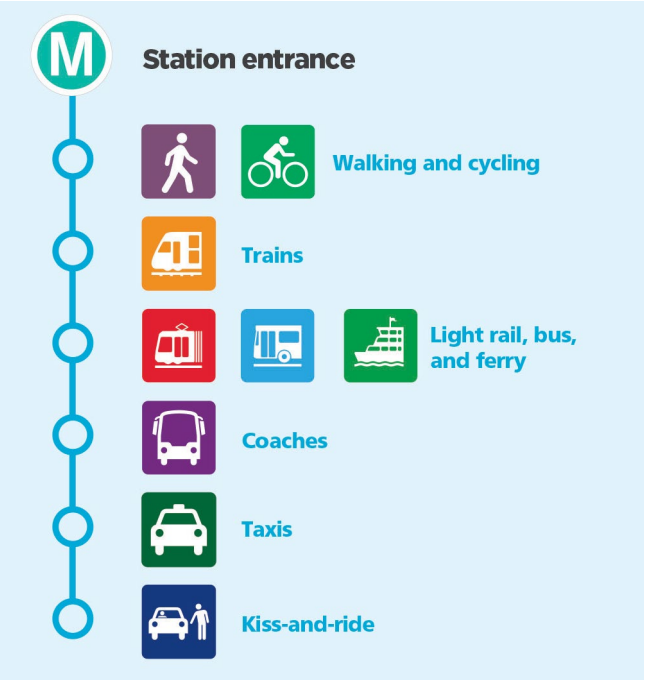
- Ensuring an easy customer experience
- Being part of a fully integrated transport system

Principle

Provide an easy, accessible, safe and efficient transfer experience to serve a diverse set of customers.

Guidelines

- Station planning and design is to acknowledge that Sydney Metro West forms part of an integrated transport network with a modal access hierarchy that prioritises movement as follows:
  - Priority 1: Pedestrian and bicycle access
  - Priority 2: Train
  - Priority 3: Light rail, bus and ferry
  - Priority 4: Coaches
  - Priority 5: Taxis
  - Priority 6: Kiss and ride.
- Where feasible, a less than five-minute transfer between modes is to be provided, aligning with Future Transport Strategy 2056 customer outcomes. Where required, additional infrastructure for each station to achieve safe and fast transfer between modes, such as signalised pedestrian crossings, underpasses and overbridges is to be identified.
- Integration of station precincts with the surrounding urban structure is to facilitate cross and through movements, enhancing precinct permeability and access to the transport interchange functions of the locality.
- Stations and interchanges are to provide a safe, welcoming, intuitive and accessible environment, supporting independent travel for customers transferring between transport modes (refer **Section 3.1.1**).
- Shelter and protection from adverse weather is to be provided to improve the experience as customers transfer or wait to transfer to the next mode (refer **Section 3.1.4**).
- Interchange design is to minimise movement conflicts for customers between key transport modes.
- Station forecourt and/or plaza areas are to accommodate adequate customer access and waiting spaces (as relevant), while ensuring customer confidence, sense of safety and wellbeing are not compromised (refer **Section 4.3.2**).
- The varying spatial requirements of different transport modes, including third party operators, are to be prioritised according to the modal access hierarchy and accommodated to avoid user conflicts.
- Point of decision wayfinding and signage is to be provided to facilitate walking and cycling choices (refer **Section 3.1.3**).
- Stations and interchanges are to be designed to adapt to future technologies, such as micro-mobility and on-demand public transport, to improve the way people work and travel.



Sydney Metro West modal access hierarchy.

4.2.2 Pedestrian movement

Applicable design objectives

- Ensuring an easy customer experience
- Being part of a fully integrated transport system
- Being responsive to distinct contexts and communities

Principles

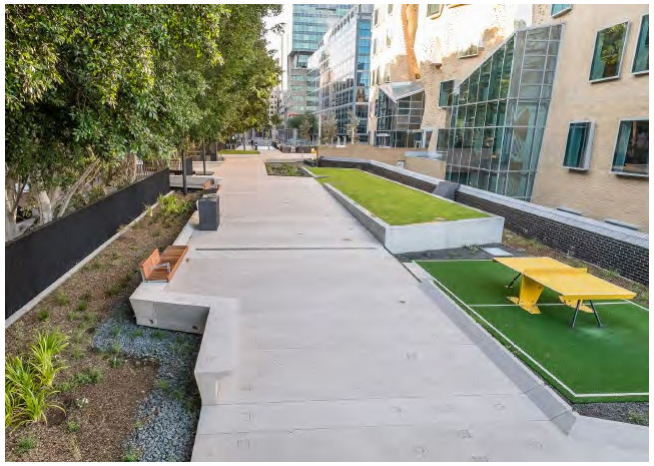
Provide pedestrian connectivity between transport modes that is safe, efficient, accessible, legible and enjoyable.

Provide pedestrian movement systems that clearly connect the stations with their surrounding locality.

Guidelines

- Station forecourts, plazas and associated areas are to adopt a clear hierarchy of movement functions that favour pedestrians ahead of vehicular circulation, thereby promoting opportunities for public transport patronage, walking and cycling.
- Interchange area are to provide clear sight lines through open, uncluttered spaces along pedestrian lines between key destinations.
- Easy-to-navigate connections and legible wayfinding are to facilitate interchange at stations and destinations using elevators and level footways, designed for customers with strollers, wheelchairs or luggage.
- Precinct designs are to accommodate pedestrian movements at an appropriate level of service in all areas of the station and optimise the variety of movement functions to minimise potential conflicts (refer **Section 3.1.2**).
- Circulation systems are to respond to context and reinforce the character of precincts, so they are easy and efficient to navigate (refer **Section 3.1.2**).
- Design decisions affecting movement planning are to consider varying customer usage patterns including commuters, customers with reduced mobility, station employees, tourists and non-travelling visitors (refer **Sections 3.1.1**, **3.1.2** and **3.1.6**).

Wide, clear footpaths enable people to stop and wait without obstructing pedestrian movement flow. (Source: TfNSW)



The Goods Line, Sydney. Design walkable attractive places with high visual amenity. Circulation systems that respond to context and reinforce the character of precincts should be easier to navigate and therefore more efficient. (Architect & Landscape Architect: CHROFI & Aspect Studios. Source: TfNSW)

4.2.3 Bicycle movement

Applicable design objectives

- Being part of a fully integrated transport system
- Being responsive to distinct contexts and communities

Principle

Prioritise bicycle movement consistent with the modal access hierarchy by providing optimum connectivity and convenient, secure and accessible bicycle parking at stations to accommodate current and future demands.

Guidelines

- Bicycle paths to/from stations are to align with and be connected to regional and local bicycle networks, existing and proposed.
- Bicycle infrastructure is to be responsive to the specific characteristics of the station precinct, address the bicycle network and storage requirements, and integrate into the broader precinct movement networks.
- Infrastructure is to be provided to support shared mobility schemes, allowing users to access transport modes on an as-needed basis without requiring ownership of a vehicle.
- Design of bicycle paths and routes connecting directly to/from stations is to be legible and safe for all users, with a distinct and identifiable character.
- Conflicts between pedestrians and cyclists at stations are to be avoided through design, particularly at high activity zones such as station entries and retail areas.
- Sheltered bicycle parking at stations is to be placed directly adjacent to movement paths to provide clear and legible access, without compromising safe, accessible paths for customers with mobility and vision impairment.
- Station design to enable through-access to allow for bicycles to be taken on metro trains.
- Design for bicycle facilities is to give priority to bicycle safety at road interfaces.
- Planning for bicycle movement is to integrate with the directions in Sydney's Cycling Future.

Attractive, secure, weather protected bicycle storage. (Source: Sydney Cycleways)

Provide for people with bicycles throughout the intermodal connections. (Source: TfNSW. Copyright: Glenn Duffus Photography)

4.2.4 Vehicular interface

Applicable design objectives

- Being part of a fully integrated transport system
- Being responsive to distinct contexts and communities

Principle

Establish a legible hierarchy of safe vehicular streets that responds to the varying customer and operational requirements for vehicular, bicycle and pedestrian movements in accordance with the modal access hierarchy and Movement and Place principles.

Guidelines

- The design of stations and associated public domain is to respond to the character of established streets and variations in carriageway width, on-street parking, existing and planned future cycleways, and street tree planting and pedestrian amenity.
- Modifications to existing streets and development of new streets in station precincts are to consider:
  - number of traffic lanes
  - length and type of slip lanes
  - intersection types and configuration signalling requirements
  - speed environments and traffic calming measures
  - kerbside zones
  - cycling movement (on or off street)
  - footpaths
  - crossings.
- Changes to streets, footpaths, and bicycle paths are to contribute to the quality and character of urban area, as they can heavily influence customer experience.
- Kerbside space is to be provided in a flexible manner so that it can be reallocated according to changing access requirements, be used to encourage efficient and complementary access routes for all modes, avoiding conflict and unnecessary circulation and accommodate rail replacement vehicles.
- Vehicular traffic planning is to be integrated with the built form and spatial planning of precincts.
- Bus stops are to be located close to the station in accordance with the modal access hierarchy and be accessed safely and efficiently by all customers.
- Design of streets adjacent to station entries that allow private vehicle and bus access are to prioritise the safe and efficient movement of the active transport network.
- Locker provision is to be considered at stations to cater for storage of electric scooters, electric bicycles and batteries, and charging of personal electric transport.
- Taxi and kiss and ride spaces are to be located in accordance with the modal access hierarchy, where safe and efficient vehicle access and high turnover is available, minimising conflicts with pedestrians, cycles, buses and other vehicles.
- Service vehicle access for all precinct functions is to be addressed as part of the broader station precinct movement strategies and located and designed to minimise potential conflicts with pedestrians and disruption to active frontages.

Sydney. Dedicated bicycle and bus lanes. (Source: TfNSW)

Dedicated taxi pick up zones. (Source: TfNSW)

4.3 Public domain

The public domain is a significant component of the door-to-door-to-door journey for Sydney Metro customers. The design quality of station precincts, their forecourts and streetscapes are therefore of paramount importance to the overall public experience and perception of the system. This has implications for the detailed design stages of the project with a range of architectural and engineering structures, landscaping elements and operational equipment that need to be coordinated so that coherent and distinctive station environs are delivered.

Each station will take on a unique identity that responds to its locality, expressed through the station design in both precinct public domain and buildings. The interface between the station and surrounding streetscape needs to be well integrated and functional as part of the provision of robust and legible interchange precincts around Sydney Metro stations.

This section covers the following aspects of public domain:

- Landscape design
- Plazas and forecourts
- Accessible pathways
- Furniture and fixtures
- Walls and fencing
- Earthworks and engineered structures.

Wynyard Walk, Sydney. (Architect & Landscape Architect: Woods Bagot & Aspect Studios. Source: FLUMINIS)

4.3.1 Landscape design

Applicable design objectives

- Ensuring an easy customer experience
- Being responsive to distinct contexts and communities
- Delivering an enduring and sustainable legacy for Sydney

Principle

Include substantial hard and soft landscaping in well-designed public spaces in station precincts to set a high standard of public amenity.

Guidelines

General

- Urban and landscape design is to respond to existing local conditions, site history and anticipated future character.
- Public domain design is to ensure diversity, and promote variation in the character, scale and materiality to align with and complement role and function.
- Materials and planting selections are to consider context.
- Landscape design is to be functionally appropriate for the local environment and adequately address safety in design issues pertinent to the generic rail environment and the specific public domain environment of each station (refer **Section 3.1.5**).
- Landscape design is to result in appropriately scaled spaces and elements that provide a reasonable level of comfort to users across the seasons, with consideration of the regional and local micro-climate and any anticipated associated development.
- The design of plazas, forecourts and associated spaces is to be clearly legible to assist in wayfinding.
- Opportunities to deliver increased greening throughout station precinct are to be explored, including garden areas, green roofs, green walls and deep soil planting where possible.

Hard landscape

- Paving design is to aid legibility, in particular the principal paths of travel.
- Plazas and precincts are to incorporate water sensitive urban design (refer **Section 4.1.5**).
- The use of recycled materials, especially those derived from any demolition works is to be investigated (refer **Section 4.1.5**).
- Materials, furniture and fixtures are to be durable, high quality and contribute to a recognisably civic character.
- Material choice is to maximise economies of scale and be designed for safe installation, low maintenance and long-term durability.
- Hard landscape elements and their detailing are to meet all functional requirements including customer interface, and component and services integration.
- A hierarchy of paving types is to be provided such that pavements are appropriate for their location and function and include consideration of urban heat island effect mitigation (refer **Sections 3.1.4** and **4.1.5**).
- The paving palette is to be developed with reference to local authority public domain guidelines, where available.
- Paving on either side of gatelines is to be relatively seamless and if not the same, then clearly complementary.
- Paving materials are to meet the required standards, design codes and specifications for visual and tactile contrast and slip resistance to avoid the potential for trips and falls.

Soft landscape

- Plant species are to be suited to local environmental conditions, appropriate for the proposed urban or open space setting and endemic to the local area.
- Planting type, scale and configuration is to be spatially appropriate for the scale of the setting and not compromise the pedestrian capacity of circulation spaces.
- Where appropriate, street trees are to provide strong, legible structural planting and reinforce connections with adjacent streets or areas and contribute to visual continuity and local character.
- Depending on orientation and degree of urban enclosure, trees are to provide summer shade and good solar access in winter.
- Planting is to be low maintenance, with generally no irrigation requirements beyond the establishment phase, where possible.
- Planting design is to seek to mitigate urban heat island effects and maximise public amenity (refer **Sections 3.1.4** and **4.1.5**).
- Screen planting is to be used to visually mitigate service and ancillary buildings.
- Planting design is to be flush with sufficient soil volumes in accordance with relevant guidelines and achieve clear sight lines at road intersections, in plazas on main paths of travel and at interchange facilities.

4.3.2 Plazas and forecourts

Applicable design objectives

- Ensuring an easy customer experience
- Being a catalyst for positive change
- Being responsive to distinct contexts and communities
- Delivering an enduring and sustainable legacy for Sydney

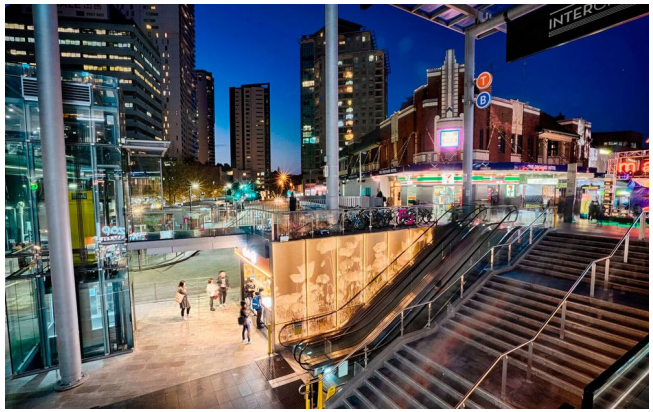
Principles

Integrate appropriately scaled plazas or forecourts with the station entry, street frontages, pedestrian crossing points and transport interchange facilities to achieve a coherent public domain around stations.

Ensure pedestrian priority across local streets is aligned with station entries.

Guidelines

- Station plazas and forecourts are to be designed as both an extension of the internal station environment providing shelter, comfort, safety and security for customers, and a reflection of the context and character of local public spaces by using materials and elements to help achieve a seamless transition through these spaces.
- Ground levels are to allow gently graded walkways rather than stairs and ramps wherever possible.
- The layout, furniture arrangement and finishes are to enhance legibility and wayfinding.
- Weather protection is to be provided at station entries and all interchange facilities, where feasible.
- Architectural lighting in plaza/forecourt is to enhance station identity.
- All tree planting in plazas/ forecourts is to be provided at grade, and where on structure, minimum set downs for soil depth to trees to be 1.6m.
- Clearly defined entry points are to mark a sense of arrival at stations.
- Setbacks are to be maximised at station entries to allow for an appropriately sized forecourt or plaza.
- Station plazas are to be designed to receive a substantial portion of sunlight in winter months and to support plant growth, where feasible.
- As far as possible, future access points and potential complementary urban settings for potential development sites are to be considered in station precinct plans.



Chatswood Interchange plaza integrated with surrounding public domain areas and retail uses. (Architect and Landscape Architect: Cox Richardson/CoxDesignInc and Fiona Yeates Consulting. Source: Di Emme)

4.3.3 Accessible pathways

Applicable design objectives

- Ensuring an easy customer experience
- Being part of a fully integrated transport system

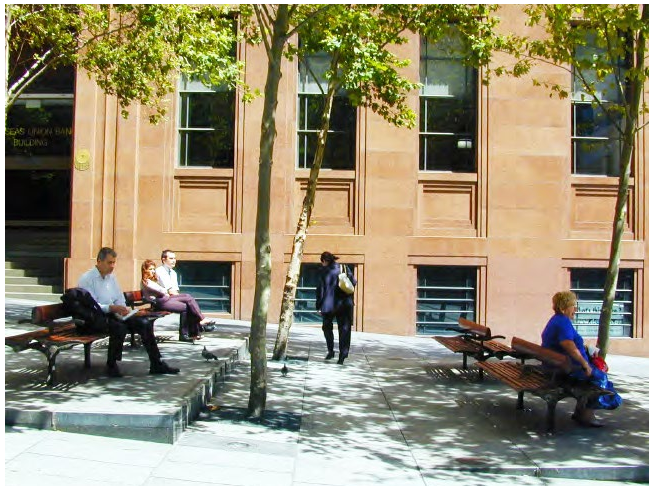
Principle

Provide accessible, safe and comfortable pathways to and from station entries and facilities for all users.

Guidelines

- A system of appropriate pathway surfaces, widths and gradients is to provide safe and equitable pedestrian access throughout the public domain and to link transport modes.
- Access to station precincts is to be easy and safe for all to use regardless of physical mobility: able bodied customers, wheelchair users, carers with strollers, and the visually and cognitively impaired.
- Stairs are to be avoided as far as possible as they reduce opportunities for universal access. Where the use of stairs cannot be avoided, then they are to be short in length, easy and safe to use (refer **Section 3.1.6**).
- Where the use of stairs is unavoidable, clearly legible alternative circulation routes are to be provided, as close as possible to and not isolated from primary circulation routes (refer **Section 3.1.6**).
- Ramps may provide opportunities for universal access; however, where possible, seek alternative means of effecting level changes, for example, by altering the path of travel (refer **Section 3.1.6**).
- Selective use of colour, texture, lighting, finishes and customer information is to further define paths of travel, circulation spaces and the location of key facilities (refer **Section 4.3.1**).
- Tactile ground surface indicators are to be used on paths of travel to warn customers with vision impairment of hazards and assist wayfinding where required (refer **Section 4.3.1**).
- Where possible, a consistent, clear path of travel for customers with vision and mobility impairments is to be provided by keeping one side of paths of travel clear of fittings and fixtures.

Design paths and ramps for access for all. All modal connections must be located in convenient, safe, well-lit areas with good natural surveillance. (Source: AECOM)



Martin Place, Sydney. Carefully locate all street furniture to minimise potential obstructions and maximise use of circulation spaces. (Source: AECOM)

4.3.4 Furniture and fixtures

Applicable design objectives

- Ensuring an easy customer experience
- Being a catalyst for positive change
- Being responsive to distinct contexts and communities
- Delivering an enduring and sustainable legacy for Sydney

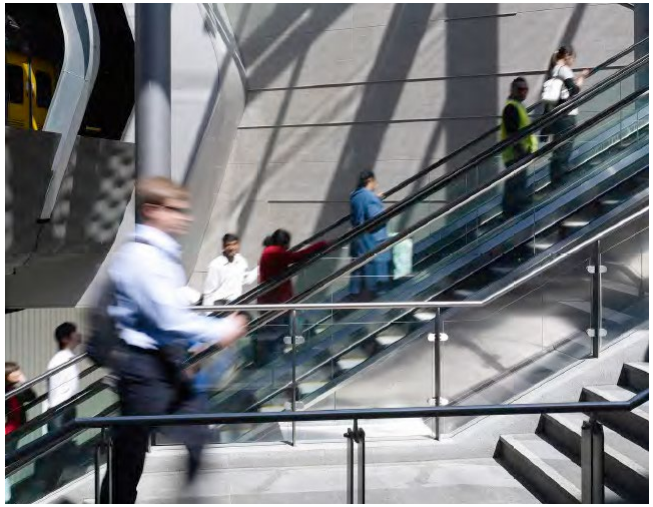
Principle

Design furniture and related fixtures as an integrated suite of elements that are high quality, durable and fit for purpose.

Guidelines

- The design of furniture and fixtures is to achieve a clear, honest expression of materials, complementary to station architecture.
- Natural and recycled materials are to be used where feasible, without compromising aesthetic and performance outcomes.
- The use of durable, self-finished materials is desirable.
- The siting of furniture and fixtures is to avoid clutter, be located with street trees to provide shade and not obstruct pedestrian movement in station plazas and interchange areas.
- All furniture and fixtures are to be accessible to the full range of potential users.
- Furniture and fixtures may be used to delineate functional areas or spatial arrangements.
- Seating may be integrated with other landscape elements as appropriate to the design.
- Seating is to be located at convenient locations along main paths of travel, adjacent to entrances and in interchange areas.
- Litter and recycling bins are to be co-located in appropriate locations in stations and the public domain.
- The layout and design of street furniture is to be undertaken in consultation with local authorities.

Barangaroo, Sydney. The furniture and fixing colour palette should be coordinated with architectural elements, surface finishes and pavements. (Architect: Tzannes Associates. Source: TfNSW)



Chatswood Station, Sydney, NSW. Example of handrail and stanchion. (Architect: CoxDesignInc. Source: Cox Richardson)

4.3.5 Walls and fencing

Applicable design objectives

- Ensuring an easy customer experience
- Being responsive to distinct contexts and communities
- Delivering an enduring and sustainable legacy for Sydney

Principles

Utilise a simple, standardised family of elements that are of high quality, durable and fit for purpose for station precinct fencing and gates.

Consider the location and alignment of fencing as part of the integrated landscape and urban design of stations.

Guidelines

- Fencing is to be visually recessive as far as possible, especially in the station precinct environment.
- Fences and gates are to be suitably robust and for the public and rail environment.
- Fixing details are to be discreet and well resolved, not visually intrusive.
- Ease of maintenance access is to be considered in the design of fencing.
- Security fencing is to be set back from street edges to allow for a landscape buffer.
- Fencing in station precincts and public domain areas is to be minimised and avoid creating dead ends.

Terracotta louvred facade provides a vibrant wall surface. (Source: AECOM)

4.3.6 Earthworks and engineered structures

Applicable design objectives

- Being responsive to distinct contexts and communities
- Delivering an enduring and sustainable legacy for Sydney

Principles

Visually integrate earthworks and engineered structures with their urban or landscape setting.

Bridges should be elegant, consistent structures that are proportionally well-resolved with a clear relationship between elements.

Ensure safe maintenance access to earthworks and structures.

Guidelines

Earthworks and embankments

- All earthworks are to sit lightly in their context, exhibiting a 'natural fit' within their landscape setting.
- Use of retaining walls is preferred on batter slopes where gradients exceed 3H:1V.
- Planted batters are to be a minimum of 4H:1V.
- Earthworks are to be rounded out at the top and bottom of batters, and at ends of formations, to achieve a 'natural' transition to adjacent landform.
- Where these requirements are unable to be met due to limited space, the use of retaining walls is preferred.

Retaining walls and portals

- Retaining walls and related elements are to form part a unified composition, integrated with other components such as fencing, guard rails, lighting, landscape, and drainage.
- Retaining walls are only to be used where there is no other alternative.
- Cut and fill batters of 3H:IV or flatter are to be vegetated.
- Wall elevations are to present a consistent, modular pattern of vertical and horizontal joints expressed as shadow lines.
- Vertical joints are to be coordinated with vertical joints or stanchions of related, adjacent elements.
- Concrete retaining walls are to have a smooth Class 2 concrete finish.
- The use of shotcrete is only permitted where there is no other acceptable retaining wall or vegetated embankment alternative.
- Shotcrete finishes are to be detailed (smooth trowelled and jointed) to mimic adjacent structures.
- Surface finish of shotcrete is to be consistent off-white or grey (according to specified and approved colour prototype) with no obvious patches or stains due to curing agents or the like.

Bridges and underpasses

- The design, form, materials and finishes of bridges and underpasses are to ensure visual continuity.
- Bridges are to integrate structural and architectural elements to create high quality, simple and elegant pieces of infrastructure, presenting as coherent, well-proportioned, symmetrical structures.
- Abutments are to be visually integrated with the bridge and sit comfortably in their landscape context.
- Bridge design is to minimise structural depth and have appropriate under bridge clearances with clean architectural treatment and lighting.

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Place-specific design elements

5

About this chapter

This chapter describes the context and functional character of each station as a place along the Sydney Metro West corridor. It addresses the existing conditions and urban interfaces of each place to inform the delivery of contextually responsive and integrated environmental outcomes.

The urban design of each station precinct needs to be developed with reference to the Connect with Country Framework, the existing or desired future character and infrastructure – including existing built form, movement and place principles, public domain conditions, landscape character and services – as well as planned initiatives in the locality.

These place-specific guidelines apply to:

- Westmead metro station
- Parramatta metro station
- Sydney Olympic Park metro station
- North Strathfield metro station
- Burwood North Station
- Five Dock Station
- The Bays Station
- Pyrmont Station
- Hunter Street (Sydney CBD) Station

In this section each station precinct is described in terms of:

- key descriptors including centre type, primary function (e.g. origin/destination) and local government area
- existing and desired future context, and
- evolving place and design principles.

This background culminates in place-specific urban design strategies to guide further design development that are in addition to the precinct guidelines in **Chapter 4**. The structure of the urban design strategies is informed by a set of corridor-wide urban design principles that have been formulated for Sydney Metro West.

Artist impression of North Strathfield metro station.

Sydney Metro West urban design principles

While all stations contribute to local character, they are also part of a network and together contribute to a corridor of activity centres that offer social, employment and housing opportunities.

These urban design principles will guide precinct design that speaks to the history and sense of place of the corridor and the design of places that build connections to, and between, station precincts. The principles underpin aspirations for best practice urban design and sustainable development.

The corridor-wide principles have been applied to create place-specific urban design strategies for each of the station precincts, as set out in the following sections, except for those relating to Country – environment and sustainability that are addressed in **Chapter 4**.

Theme	Title	Urban design principles
Use	**Land use and function**	• **Identify** uses that support and contribute to the delivery of unique, attractive and vibrant urban centres that provide a sense of connection and identity for local communities and visitors. • **Activate** the public domain of station precincts to integrate stations and supporting infrastructure with existing and desired future urban settings.
Built form	**Places and spaces**	• **Ensure** the scale of development reflects existing and desired future character. • **Reflect** and build on opportunities to strengthen design and place outcomes for Aboriginal and non-Aboriginal heritage. • **Create** a safe and legible hierarchy of public spaces such as parks, plazas and pedestrian links for active and passive recreation.
Movement	**Access and connectivity**	• **Prioritise** walking and other modes of active transport in the design of stations, interchanges and associated developments. • **Integrate** walkable urban environments with the Green Grid to contribute to safe, permeable and well-connected station precincts. • **Manage** the design of streets in accordance with Movement and Place principles. • **Enable** easy connections with other transport services.
Country	**Environment and sustainability**	• **Shape** precinct planning using local Aboriginal community expertise and narratives. • **Contribute** to the evolution of a new urban development paradigm which incorporates environmentally sustainable elements, processes and designs. • **Maximise** green infrastructure.

5.1 Westmead metro station

Centre type

Metropolitan centre
(part of Greater Parramatta)

Station function

Interchange, destination and origin

Local Government Area

Cumberland and Parramatta

Precinct vision

A well connected and accessible health and education precinct, and a revitalised, high amenity living and employment centre, as an extension of Parramatta CBD.

Context

Site

Located south of the existing Westmead train station, Westmead metro station precinct site is bounded by Hawkesbury Road, Bailey Street, Hassall Street and the railway line and includes Alexandra Avenue. The Sydney Trains station currently has two entries, one to the north off Railway Parade and the other to the south off Alexandra Avenue.

Country

The precinct is located on the traditional lands of the Darug people.

Precinct description

The area to the north of the train line largely comprises the Westmead health and education precinct, characterised by large blocks with expansive hospital buildings and parking structures set back from the street. There are some areas of ground level retail along Hawkesbury Road and Railway Parade close to the existing station.

South of the train line, the area is characterised by low density dwellings, medium density walk-up apartments and small areas of convenience retail along Hawkesbury Road.

Heritage items within the vicinity include the former Westmead Boys Home (now WSU), Westmead Public School and Parramatta Park.

Precinct future

The precinct will become an integrated transport hub with direct interchange between Metro, Sydney Trains, buses and Parramatta Light Rail. It will act as a gateway to the Westmead health and education precinct and support enhanced activation along Hawkesbury Road, connecting the areas to the north and south of the existing train line.

Reference documents

Central City District Plan (2018)

Cumberland Local Strategic Planning Statement (Feb 2020)

Westmead 2036 Draft Place Strategy (Dec 2020)

Westmead Innovation District Master Plan

Parramatta Development Control Plan 2011

Holroyd Development Control Plans 2013

Parramatta Local Environmental Plan 2011

Cumberland Local Environmental Plan 2021

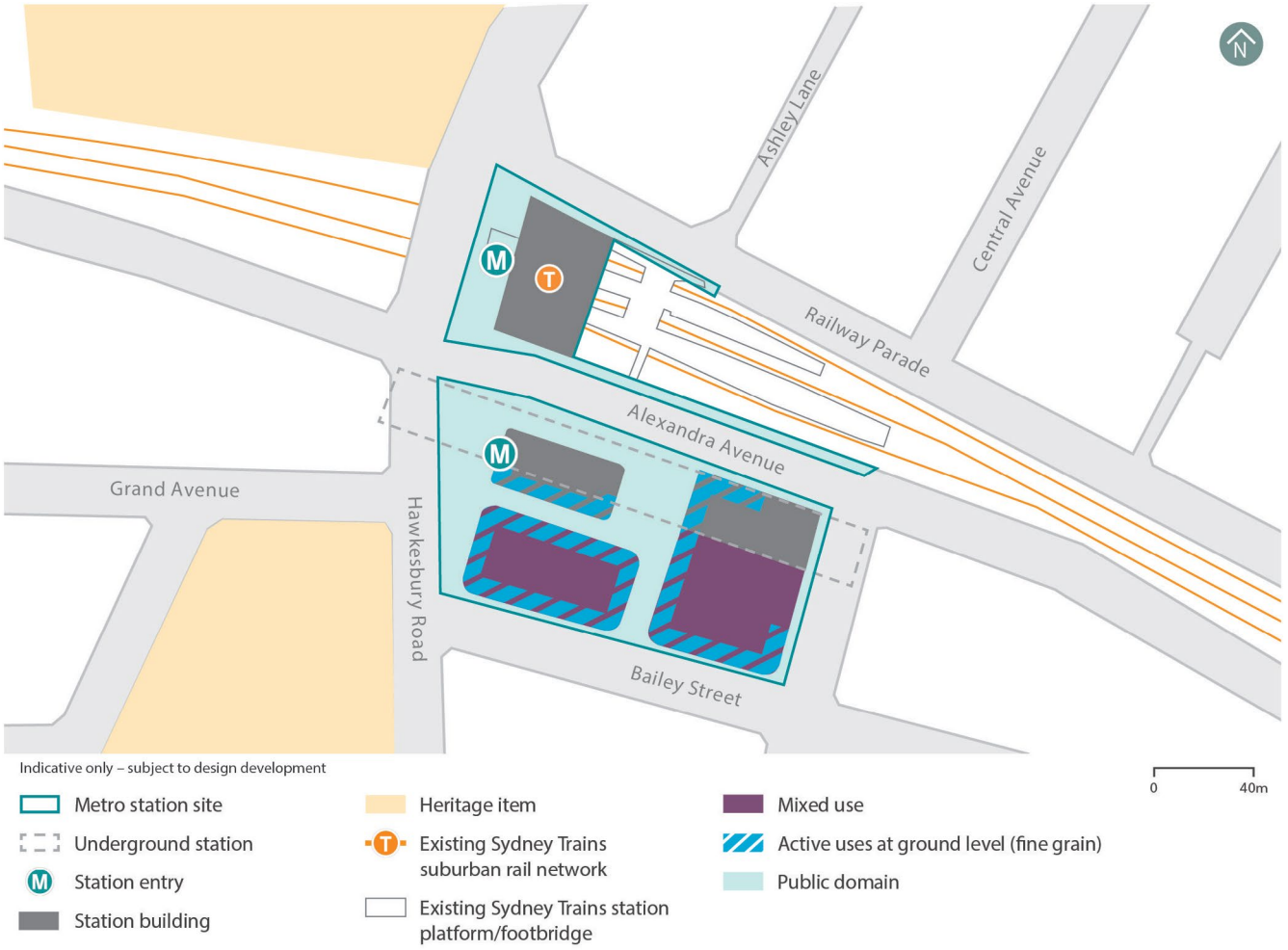
Place and design principles

- Facilitate an integrated transport hub with direct interchange between Sydney Metro and Sydney Trains services, and safe, equitable and legible connections with active transport, buses and Parramatta Light Rail.
- Provide a gateway to the Westmead Health and Education Precinct in recognition of its status.
- Support greater activation along Hawkesbury Road connecting North and South Westmead.
- Support growth and renewal opportunities by enhancing connections across the existing railway line with the station as a focal point.
- Create an inviting public place at the station with high amenity and landscaped spaces that will encourage activation.

Urban design strategies

Land use and function

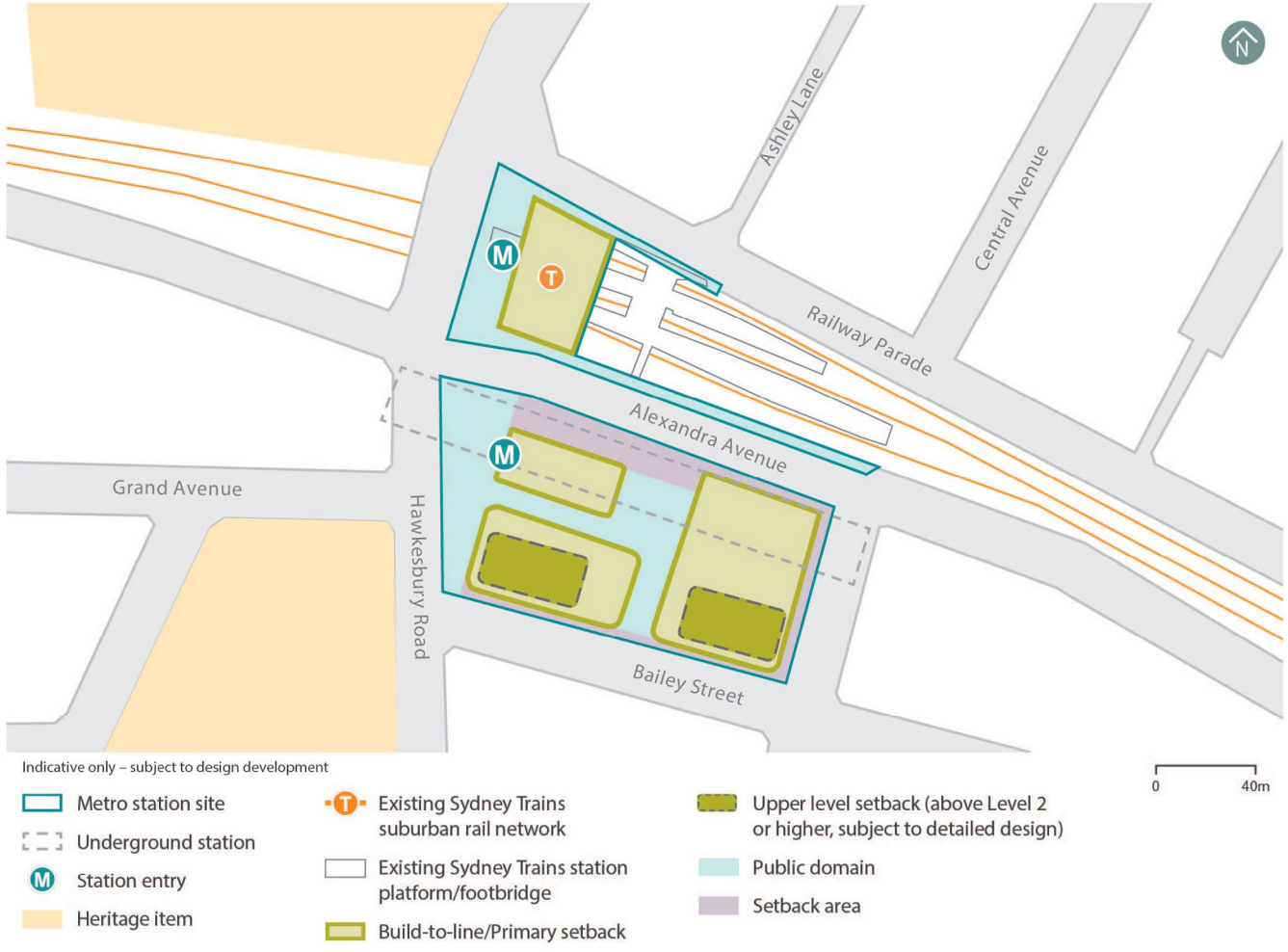
- Create a station precinct that is visually recognisable with a distinct place character and identity, acts as a focal point for the community and functions as a gateway to the emerging Westmead Town Centre and Westmead South.
- Reinforce the transport interchange function of the station precinct by creating a station entry with unified access to Sydney Metro and Sydney Train services.
- Accommodate health, innovation and education campuses to support the expansion of Westmead town centre to the southern side of the rail corridor.
- Cater for a diverse range of local businesses including retail, hospitality, ancillary health, innovation, education, accommodation and community activities to create an 18-hour precinct with a vibrant day and night-time economy and activated the public domain.



Westmead metro station land use and function.

Places and Spaces

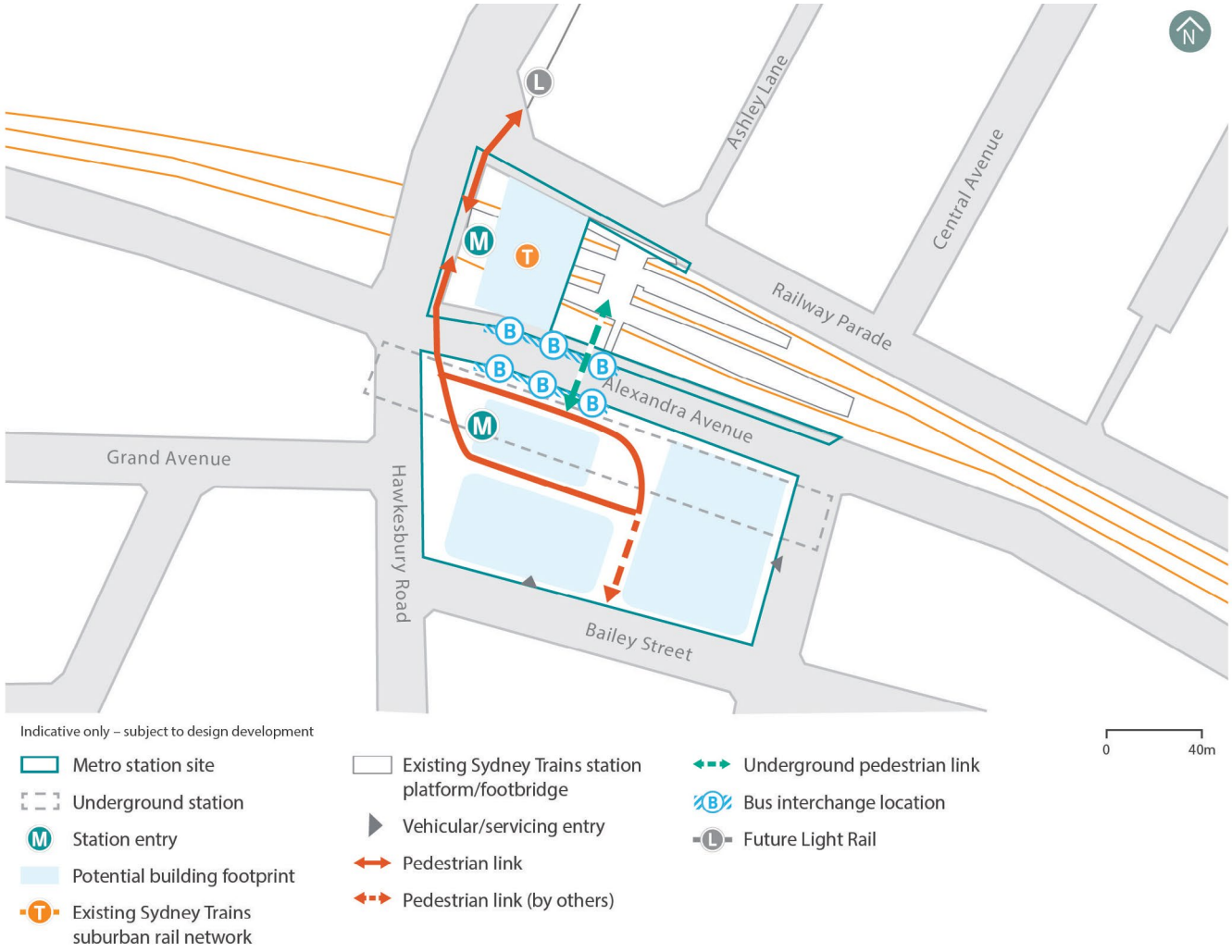
- Provide a sense of arrival and wayfinding, by orientating customers towards views along Hawkesbury Road (north or south) when exiting the station.
- Encourage multiple tenancies with high activity and seating overlooking the plaza and Hawkesbury Road, incorporating operable doors and windows.
- Provide fine grain retail uses along the southern side of the station corridor/plaza edge.
- Provide a publicly accessible open space within the precinct adjacent to the station entry on the southern side of the rail corridor, which provides a safe and inviting outdoor space for people that also functions as a landscaped frontage to Hawkesbury Road.
- Create a publicly accessible through-site link open 24 hours a day at ground level and lined with active uses between Alexandra Avenue and Bailey Street to enable north-south permeability through the block for a clear, safe, direct and convenient connection within the emerging town centre.
- Provide high quality materials and finishes in the public domain that respond to the future character of Westmead town centre and differentiate between the slow trafficked streets within the station precinct and public roads.



Westmead metro station places and spaces.

Access and connectivity

- Provide easy and intuitive transfer between the two train modes and manage the crossflows between customers entering or exiting the station.
- Improve pedestrian amenity along Hawkesbury Road, including on the bridge over the railway line, and along Alexandra Avenue by maximising the footpath width to accommodate higher volumes of pedestrian movement and opportunities for tree planting and landscaped areas.
- Ensure bus stops and the light rail stop are directly visible from the station entry to assist customers transferring between different transport modes.
- Reconfigure Railway Parade, Bailey Street, Hassall Street and Alexandra Avenue as pedestrian-focused streets by improving amenity and connectivity between the station precinct and the surrounding neighbourhood. This may include upgrading intersections and providing new pedestrian crossings.
- Provide wider verges on both sides of streets with high pedestrian volumes to allow space for generous footpaths, landscape areas, street trees, social interaction and outdoor dining opportunities.
- Design Railway Parade, between Hawkesbury Road and Ashley Lane, to accommodate low volumes of vehicles moving at a lower speed.



Westmead metro station access and connectivity.

5.2 Parramatta metro station

Centre type

Metropolitan centre (part of Greater Parramatta

Station function

Origin and destination

Local Government Area

Parramatta

Precinct vision

A well-designed and connected employment, living and cultural centre in the heart of Greater Sydney's Central River City.

Context

Site

Parramatta metro station precinct is located in the heart of the Parramatta CBD between Parramatta River to the north and Parramatta Square to the south. The station site occupies much of the block bounded by George, Macquarie, Church and Smith Streets, and is adjacent to Parramatta Light Rail and near Parramatta train station.

Country

The precinct is located on the traditional lands of the Darug people.

Precinct description

The area is characterised by a mix of medium to large scale contemporary developments and low scale historic buildings, in a grid street pattern. Several new commercial and mixed use developments are under construction that will significantly increase the density and activity in the locality. Parramatta Square to the south, once fully complete, will become a new mixed use, active place and focal point for Parramatta.

Parramatta has a rich Aboriginal and colonial history including archeological history. State and local heritage items within and adjoining the station precinct include Kia Ora House and the Roxy Theatre.

Key existing pedestrian spaces and destinations include Church Street, Centenary Square and the Parramatta River, providing civic places for the wider community at different times of the day and hosting a range of events through the year.

Precinct future

The station precinct will support the delivery of part of the new Civic Link, a continuous green spine connecting Parramatta Square to River Square and the broader foreshore precinct. The precinct will become a vibrant focal point supporting interchange with pedestrian and cycle transport, Metro, Sydney Trains, Parramatta Light Rail and bus services.

Reference documents

Central City District Plan (2018)

Parramatta Local Strategic Planning Statement 2036 (Mar 2020)

Civic Link Framework Plan (Jul 2017)

Parramatta CBD Planning Proposal (Jul 2021)

Draft Parramatta City Centre Development Control Plan (Dec 2021)

Parramatta Public Domain Guidelines (Jul 2017)

Parramatta Development Control Plan 2011

Parramatta Local Environmental Plan 2011

Sydney Metro Parramatta Archaeological Research Design and Excavation Methodology 2021

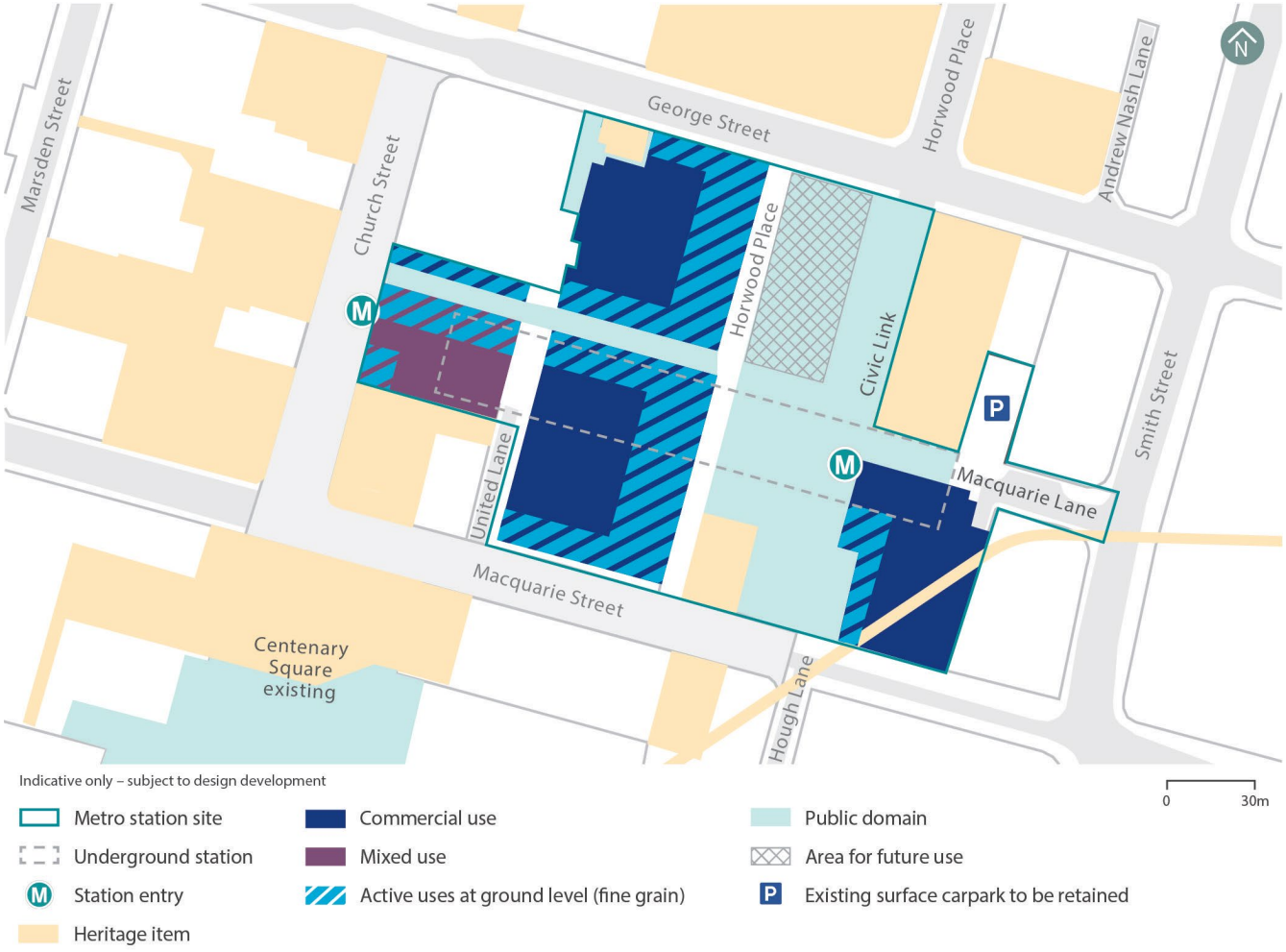
Place and design principles

- Support the transformation, expansion and economic growth of the Parramatta CBD by facilitating a well-designed high-quality station, public domain and development.
- Strengthen the connectivity of the city centre between Parramatta Square and the Parramatta River by supporting realisation of the Civic Link.
- Facilitate activation of the ground plane at the station and its surrounds, encouraging pedestrian movement in the area.
- Enhance permeability by introducing fine-grain pedestrian links between the station and surrounding streets, breaking down the large city block.
- Facilitate intuitive interchange with pedestrian and cycle transport, the future Parramatta Light Rail (Stage 1), and bus services with legible, safe and direct connections from the station entry.

Urban design strategies

Land use and function

- Accommodate commercial office development to support Parramatta CBD's economic competitiveness.
- Support a diverse range of businesses and uses to create a vibrant day and night-time economy and activate the public domain.
- Implement adaptive, reuse strategies in accordance with Conservation Management Plans for heritage items within the precinct.
- Support an intense mixed use precinct with retail, commercial, hospitality, residential, community uses, and entertainment and live music venues.

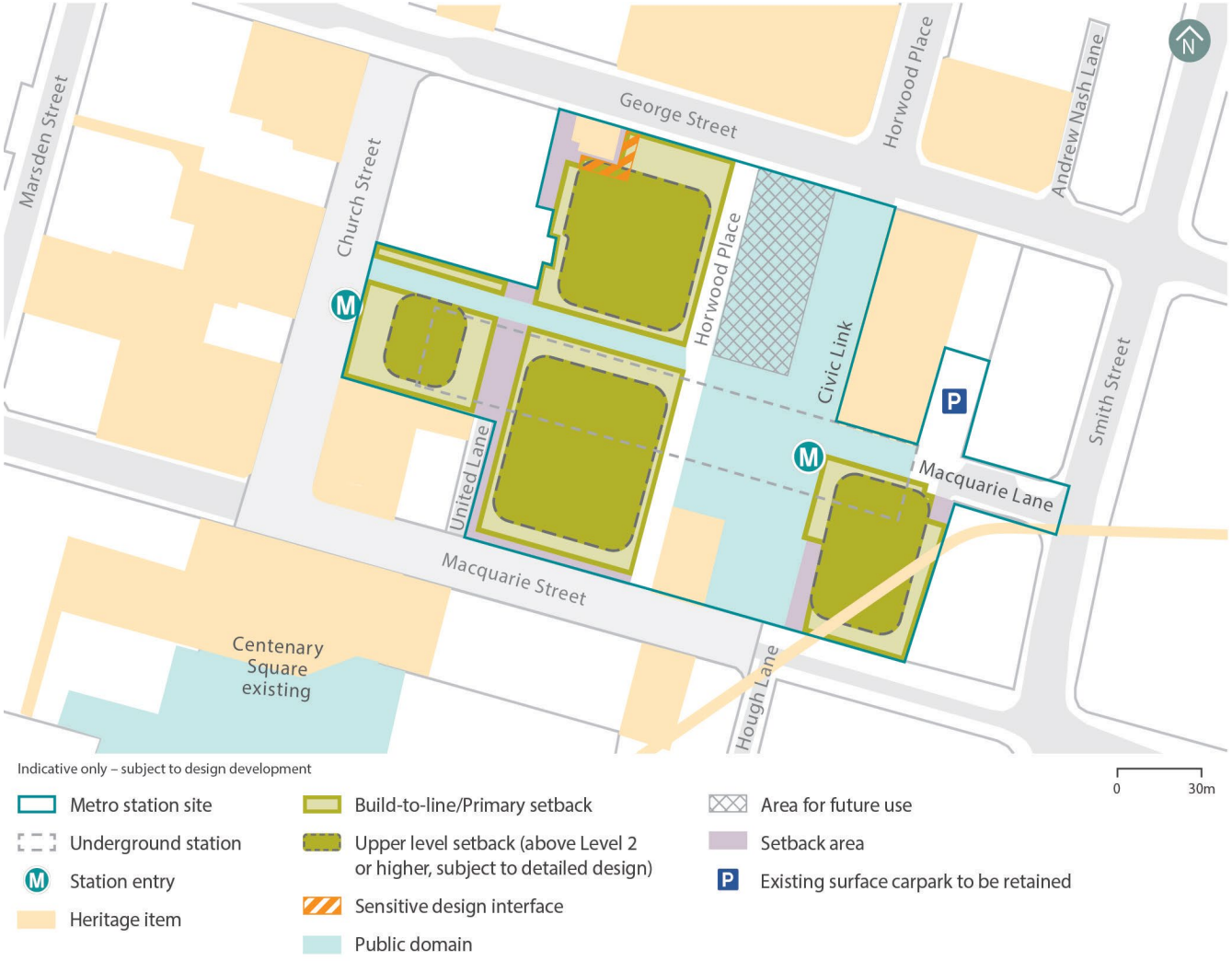


Parramatta metro station land use and function.

- Encourage multiple tenancies with high activity and seating overlooking Civic Link and Horwood Place, incorporating operable doors and windows.
- Allow for fine grain retail uses along new through site links and along United Lane.
- Provide ground floor active frontages at the same level as the footpath, where possible. In flood prone areas, the design response will need to manage the potential impact of flooding on street level activation with design responses such as staggered and stepped shop fronts and internal level changes instead of external level changes.

Places and spaces

- Support the realisation of Civic Link, a publicly accessible pedestrian connection passing through the station precinct from Macquarie Street to George Street, aligned alongside the heritage-listed former Roxy Theatre.
- Maintain a generous minimum width across the length of Civic Link.
- Maximise opportunities for deep soil planting and landscape areas along Civic Link.
- Provide good levels of solar access to Civic Link for pedestrian amenity and to support plant growth.
- Provide a prominent primary metro station entry from Civic Link.
- Provide a secondary metro station entry from Church Street at the corner of the east-west through site link.
- Provide setbacks and respond sensitively to the scale of heritage items within and adjoining the station to minimise visual impacts and enhance their setting.



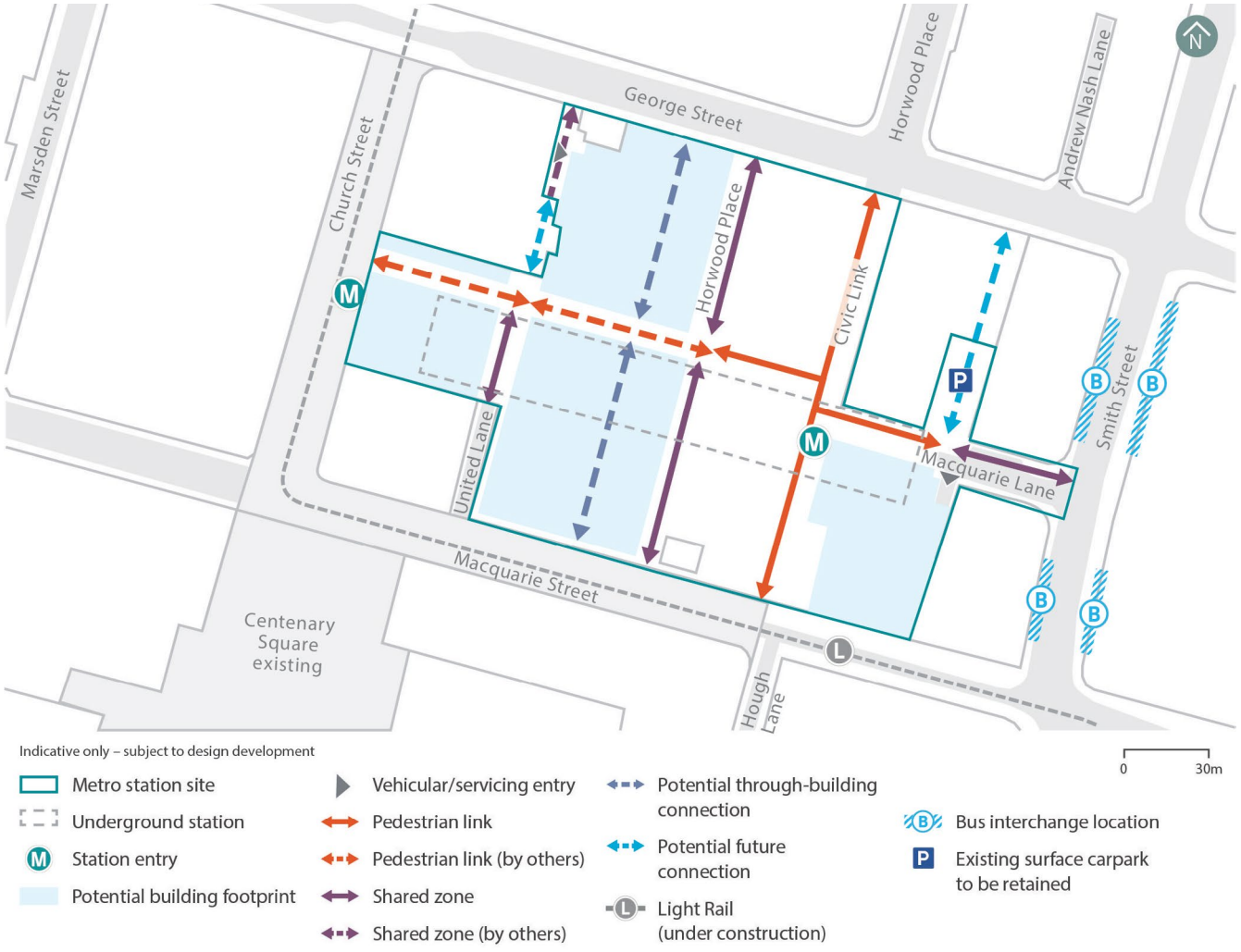
Parramatta metro station places and spaces.

- Provide a contextually sensitive interface with heritage buildings through architectural treatments and strategies.
- Articulate building podiums as separate elements from towers above and use entries, access ways or cut-outs to break the overall length of podiums, where appropriate.
- Differentiate the architectural expression of towers from each other and podiums using design measures such as different forms, setbacks or materials.
- Articulate the facade of towers so they present as multiple forms and incorporate elements of relief to reduce the visual bulk and scale.
- Observe City of Parramatta's solar access provisions for Parramatta Square and Lancer Barracks and minimise overshadowing impacts on Civic Link and the wider public domain.
- Create a publicly accessible through-site link, open 24 hours a day at ground level and lined with active uses, from Church Street to Smith Street via Macquarie Lane to enable east-west permeability through the block for a clear, safe, direct and convenient connection from the metro station entry to the bus interchange on Smith Street.
- Provide high quality materials and finishes in the public domain that respond to the future character of Parramatta CBD.

Artist impression of Parramatta metro station.

Access and connectivity

- Realign Horwood Place perpendicular to Macquarie Street and George Street, to support direct vehicle movement and maintain access to existing properties.
- Provide wide footpaths on both sides of Horwood Place to accommodate landscape areas, street trees, places for social interaction and outdoor dining.
- Design Horwood Place, Macquarie Lane and United Lane to accommodate low volumes of vehicles moving at a lower speed.
- Extend pedestrian access from United Lane to meet the new through-site east-west link to enhance permeability.
- Maintain the rights of the adjoining owners to access properties abutting United and Macquarie Lanes.
- Include active uses at ground level along laneways to encourage pedestrian activity.
- Consolidate basements for new development to minimise the number of vehicle entry points from the street.
- Avoid vehicle entries to basements from Horwood Place to minimise the number of vehicles along this shared space with pedestrians; vehicle entries from George Street and Macquarie Lane (via Smith Street) are preferred.
- Enable additional above or below ground station entry points from associated station development to optimise connectivity across the Parramatta CBD.



Parramatta metro station access and connectivity.

5.3 Sydney Olympic Park metro station

Centre type
Strategic centre

Station function
Origin, destination and major events

Local Government Area
Parramatta

Precinct vision
A thriving urban centre with a vibrant mix of homes and jobs and a premier destination for cultural, entertainment, recreation and sporting events.

Context

Site

Sydney Olympic Park metro station precinct is located to the south of Sydney Showground and east of Stadium Australia. The station site occupies much of the western half of the block bounded by Herb Elliott Avenue, Australia Avenue, Figtree Drive and Olympic Boulevard. The existing Olympic Park train station lies to the north of the precinct.

Country

The precinct is located on the traditional lands of the Wangal people.

Precinct description

Sydney Olympic Park is a nationally significant event precinct catering for large sports, music, arts, cultural and civic events. It is characterised by large venues and stadia set among wide boulevards and framed by extensive areas of green space which border two tributaries of the Parramatta River (Powells Creek and Haslams Creek).

The area is characterised by medium and high-rise commercial buildings and hotels with more recent high rise residential development to the east.

The station precinct adjoins the Abattoir Heritage Precinct to the north, a State listed heritage item, which comprises a collection of five Federation era buildings within an attractive garden setting.

Sydney Olympic Park has a strong landscape character with a high-quality public domain.

Precinct future

The Central City District Plan identifies Sydney Olympic Park as a strategic centre and a Lifestyle Super Precinct. An amendment to the Sydney Olympic Park Master Plan 2030 is currently under consideration to accommodate the new station. The station precinct is within the area identified as the Central Precinct, which will become the high-density mixed use town centre for the whole of Sydney Olympic Park.

Reference documents

Central City District Plan (2018)

Sydney Olympic Park Masterplan 2030 (Interim Metro Review) (Dec 2021)

Strategic Plan for Greater Parramatta and Olympic Peninsula

Parramatta Local Environmental Plan 2011

Place and design principles

- Support the creation of a new town centre and reinforce Sydney Olympic Park as a premier destination for major events in line with the principles outlined in the Sydney Olympic Park 2030 masterplan.
- Deliver a station and public domain designed to support day to day activities and flexibility to accommodate major events and periodic large crowds.
- Facilitate east-west access from Olympic Boulevard to the station and town centre to accommodate event crowds.
- Enhance permeability with new pedestrian links and connections to places within the wider station precinct supported by active street frontages, and new open spaces.
- Ensure the station provides easy, safe and intuitive interchange with other modes of transport, during day to day operation and events.

Urban design strategies

Land use and function

- Support an intense mixed use precinct with retail, commercial offices, hospitality, residential, education, community uses, and entertainment and live music venues.
- Support a diverse range of businesses and uses to create a vibrant day and night-time economy and activate the public domain.
- Maximise active frontages along streets and laneways with retail, dining and community activities to support a vibrant town centre.
- Encourage multiple tenancies with high activity and seating overlooking Central Urban Park and through site links.
- Allow for fine grain retail uses along the new through site links.

Sydney Olympic Park metro station land use and function.

Places and spaces

- Design Central Urban Park, a centrally located publicly accessible green space, as the focal point for the town centre, to support a range of informal active and passive recreation activities with places to meet, sit, pause and engage.
- Design a prominent metro station entry fronting the station plaza as a local focal point.
- Provide generous soft landscaping, tree planting, areas with seating and create a sense of arrival.
- Provide a direct and safe publicly accessible pedestrian link, Central Spine Promenade, from Figtree Drive to Herb Elliot Avenue to create a direct pedestrian connection through the town centre connecting the bus interchange with the metro station, station plaza, Central Urban Park and onwards to the wider Sydney Olympic Park precinct.
- Maintain extended views along the length of the link to support wayfinding and orientation.
- Ensure the through site link is fully accessible to all, open 24 hours a day at ground level and lined with active uses.
- Consider podium and tower heights, responding to local context and future desired character.
- Consider and integrate the recommendations in the existing Conservation Management Plan for State Abattoir Heritage Site and ways to enhance its setting.
- Provide a contextually sensitive interface to the State Abattoir Heritage Precinct through architectural treatments and strategies.
- Articulate building podiums as separate elements from towers above and use entries, access ways or cut-outs to break the overall length of podiums, where appropriate.

Sydney Olympic Park metro station places and spaces.

- Provide minimum building setbacks above podium heights as required by the applicable planning controls.
- Differentiate the architectural expression of towers from podiums using design measures such as different forms, setbacks or materials.
- Articulate the facades of towers so they present as multiple forms and incorporate elements of relieve the visual bulk and scale.
- Minimise overshadowing impacts on the Central Urban Park and the station plaza.
- Provide high quality materials and finishes in the public domain that respond to the future character of the town centre and denote significant elements of the public domain.

Access and connectivity

- Provide the site layout and hierarchy of connected public open spaces, streets, laneways and links to form the new town centre precinct structure.
- Design all new streets to accommodate low volumes of vehicles moving at a lower speed.
- Ensure public spaces are accessible to all, safe and open 24 hours a day.
- Provide fully accessible pedestrian connections to the bus interchange.
- Consider the location of tree planting to delineate areas for pedestrian movement, social interaction and active frontages with retail, dining and community uses.

Sydney Olympic Park metro station access and connectivity.

- Design the open space between Olympic Boulevard and the station plaza for both day-to-day function and its operation during events.
- Locate street furniture within the alignment of tree planting and landscape areas to minimise physical obstructions between Olympic Boulevard and the station plaza to support crowd management during events.
- Ensure the precinct remains accessible for local pedestrian movement during events without impeding on crowd management.
- Consolidate basements for new development to minimise the number of vehicle entry points from the street.
- Avoid vehicle entries to basements from Figtree Drive and Herb Elliott Avenue.

Artist impression of Sydney Olympic Park metro station.

5.4 North Strathfield metro station

Centre type
Local centre

Station function
Origin, destination and interchange

Local Government Area
City of Canada Bay

Precinct vision
A high amenity living precinct, well connected to Sydney's key employment and leisure destinations.

Context

Site
North Strathfield metro station precinct is located to the east of the existing North Strathfield train station. It is bounded by the existing T9 Northern line to the west, Pomeroy Street to the north, Queen Street to the east, and Hamilton Street East to the south. A small ornamental garden marks the primary entry to the existing station from Queen Street. There is secondary access from Hamilton Street East and via a pedestrian walkway from Pomeroy Street.

Country
The precinct is located on the traditional lands of the Wangal people.

Precinct description
The wider precinct is characterised as a local neighbourhood centre, and includes detached dwellings, medium rise apartment buildings, a low-rise retail strip on Queen Street, schools, and a mix of office, retail and entertainment uses at the historic Bakehouse Quarter. The eastern portion of the existing North Strathfield train station accommodates the North Strathfield Rail Underpass used by the freight line.

The existing train station including the island platform and station building are identified as a heritage item. An avenue of mature Brushbox trees line parts of Queen Street, with some south of the station listed as a local heritage items.

Precinct future
North Strathfield is expected to continue to retain its medium density residential character.

The station precinct will deliver a direct interchange with the T9 Northern Line, providing a more direct and efficient route for customers linking between the suburbs of Northern Sydney serviced by the T9 Northern Line, Parramatta and Sydney CBDs.

The metro station will also accommodate large crowds coming to and from Sydney Olympic Park for major events.

The area to the west of the station precinct is identified as an 'Urban Renewal Area' and the area to the east is identified as a 'housing diversity investigation area' for potential dual occupancies and terraces.

Reference documents
Eastern City District Plan (2018)

Canada Bay Local Strategic Planning Statement (Mar 2020)

City of Canada Bay Development Control Plan 2020

Canada Bay Local Environmental Plan 2013

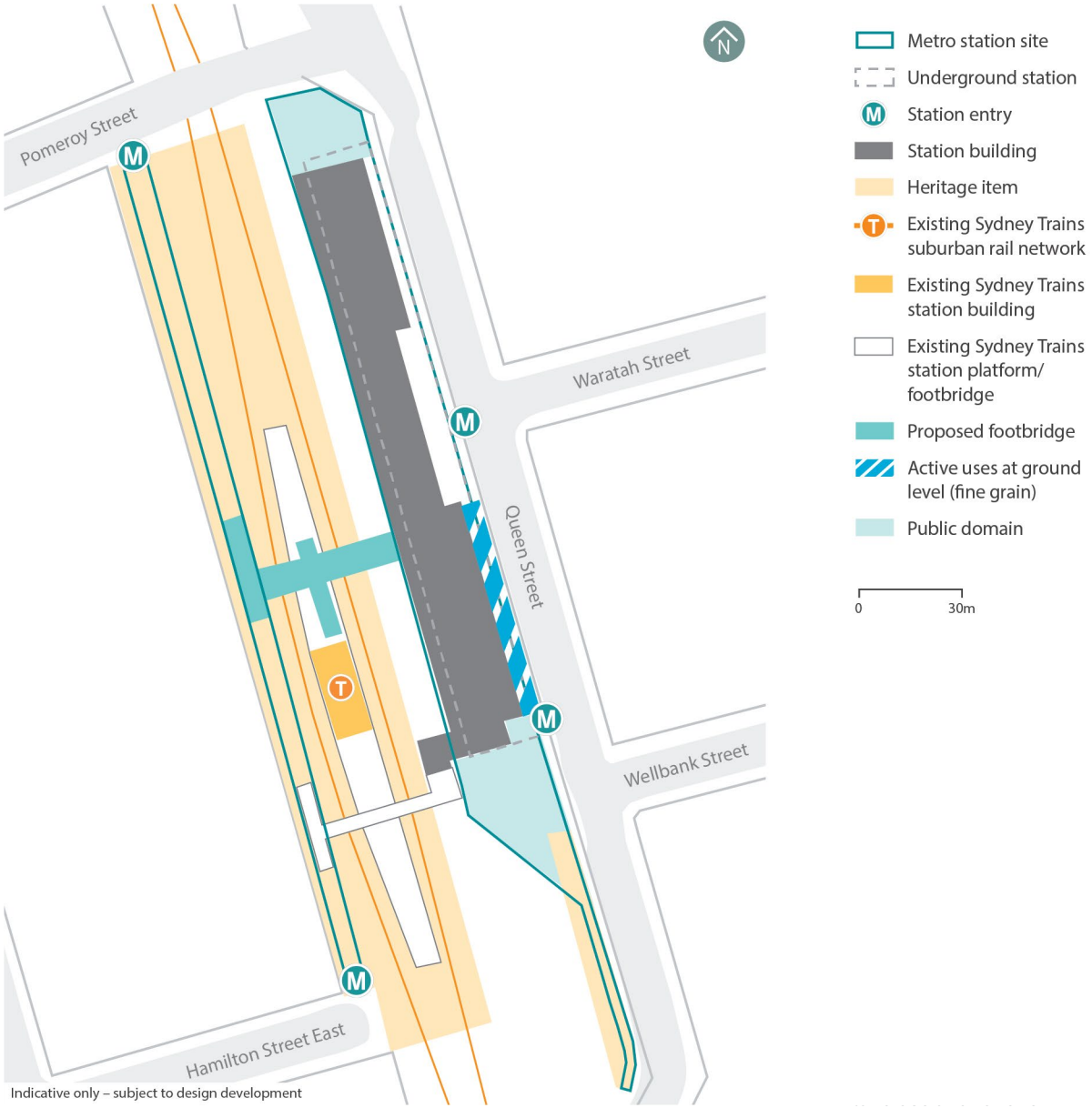
Place and design principles

- Facilitate direct interchange between Sydney Metro and Sydney Trains services on the T9 Northern Line and easy connections with other modes.
- Ensure legible, safe and intuitive station access to the east and west of the existing rail corridor.
- Support an active public domain area focused on Queen Street.
- Enable an easy connection across the existing rail corridor and to key destinations including the Bakehouse Quarter and the Powells Creek open space corridor.
- Integrate the historic value of North Strathfield Station into the design of the metro station, and its surrounding station precinct.

Urban design strategies

Land use and function

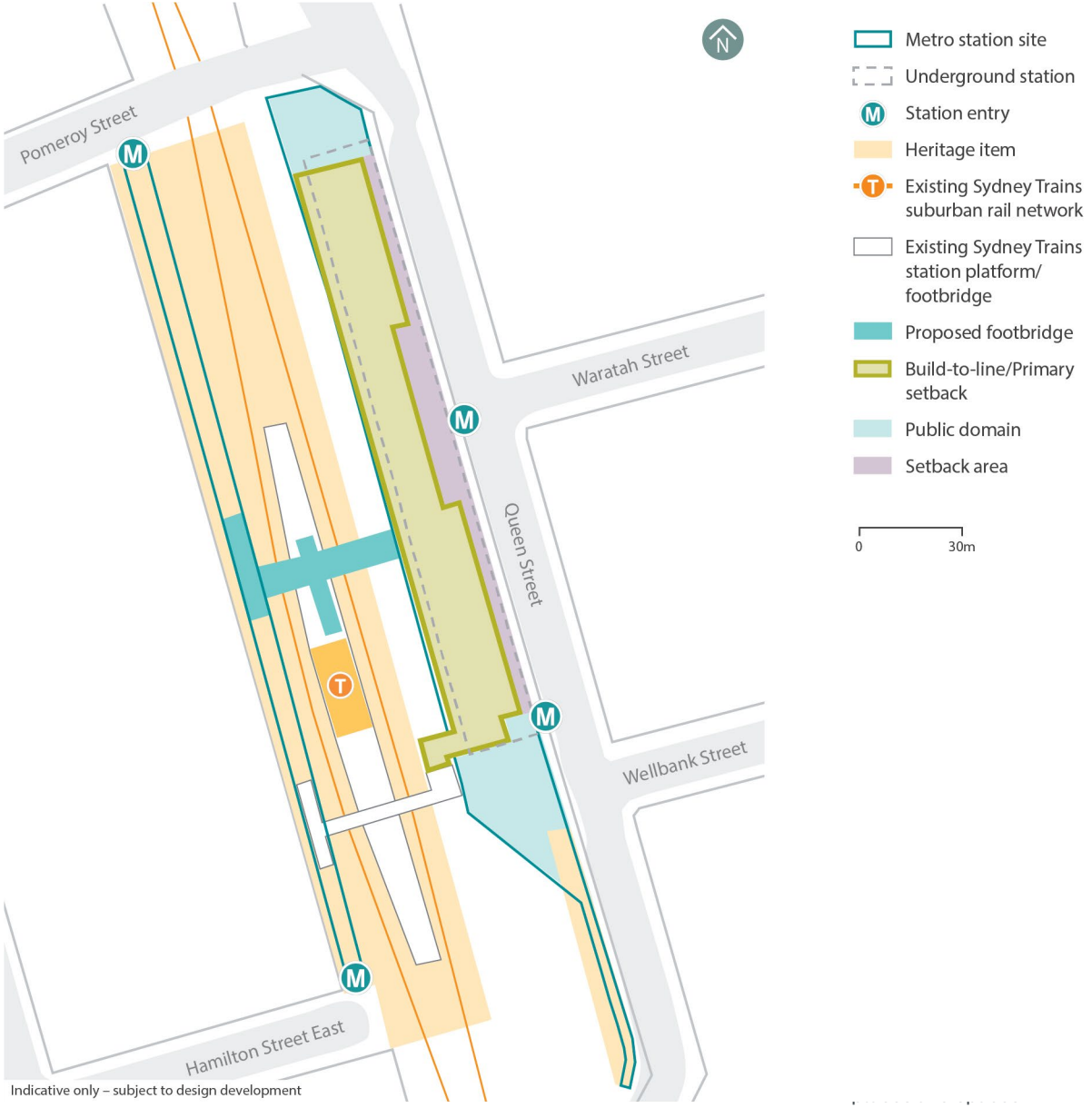
- Facilitate a direct and intuitive interchange with Sydney Trains.
- Activate the Queen Street frontage with appropriate retail tenancies to interact with existing retail, bring energy to the street, and screen services buildings.
- Create opportunities for activation of the southern plaza, to promote a safe and active place.



Indicative only – subject to design development

Places and spaces

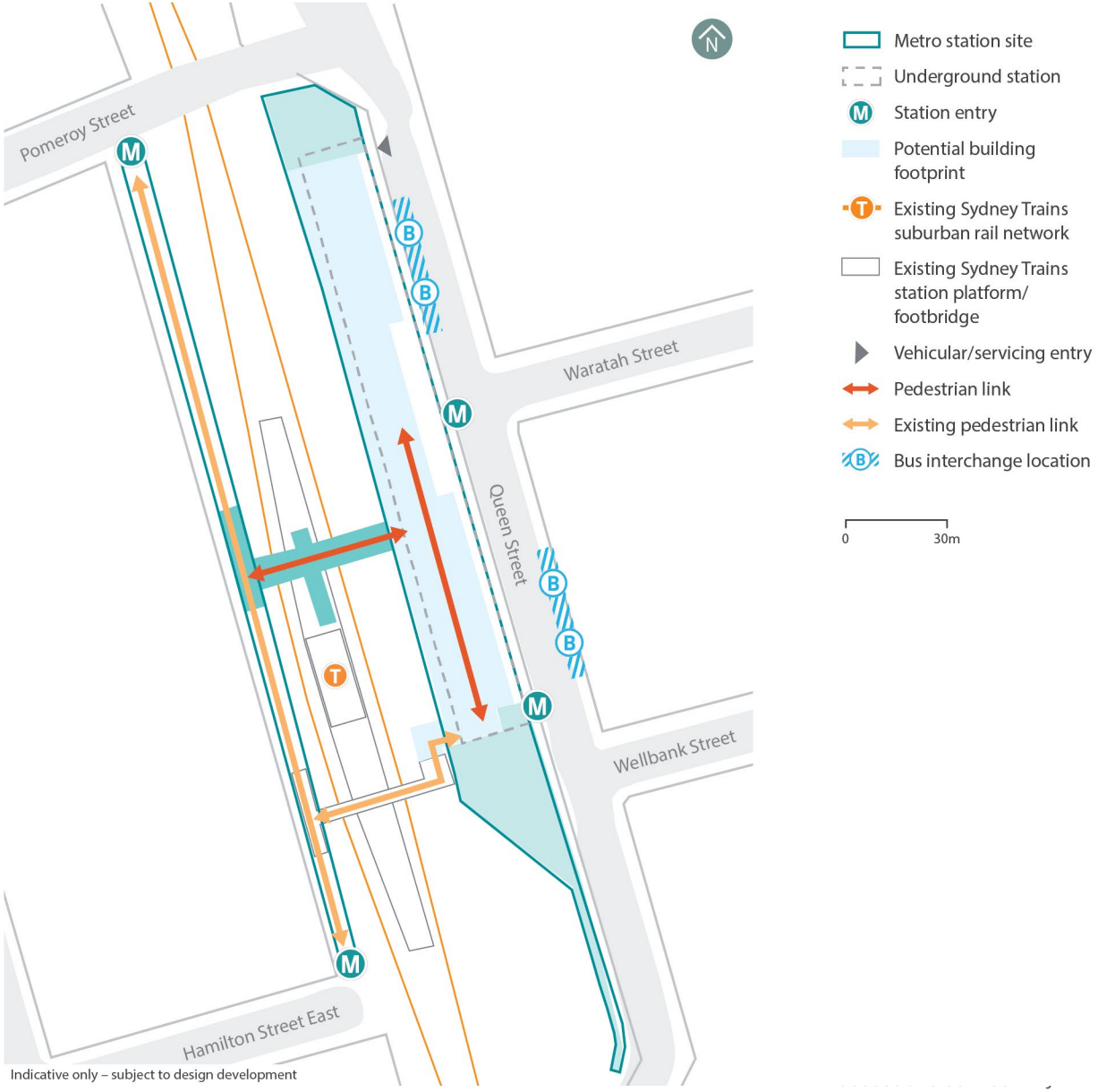
- Ensure the station design and interchange integrates seamlessly with the existing precinct.
- Set the metro station back from Queen Street to cater for a flexible activation zone and high-quality landscaped area equipped with services to enable the space to adapt over time.
- Demonstrate a design response to integrate and celebrate heritage elements and the historic value of the station precinct.
- Maximise opportunities to deliver a high-quality public plaza south of the station, which reflects local history.
- Design the station and surrounding precinct to support periodic event crowds from Sydney Olympic Park that may interchange with Sydney Trains at North Strathfield Station.
- Optimise sunlight to the southern plaza, through appropriate scaling of the station building, and any associated canopy structure.
- Enhance the pedestrian and cycle experience at Hamilton Street East, and along the western link (from Hamilton Street East to Pomeroy Street), through landscape improvements.



Indicative only – subject to design development

Access and connectivity

- Retain an accessible unpaid pedestrian link across the rail corridor, to maintain the walking and cycling catchment around the station.
- Enable easy bicycle access to the station entries, by connecting with existing and proposed cycle lanes.
- Design Queen Street with quality footpaths of appropriate widths, with shade and rest points, to enhance pedestrian connections and movement through the precinct.
- Provide enhanced pedestrian priority crossing points on Queen Street at intersections with Wellbank Street, Waratah Street and Beronga Street, to facilitate a high-quality pedestrian environment.
- Space proof areas on Queen Street for bus stops and waiting to accommodate future bus routes.



Indicative only – subject to design development

5.5 Burwood North Station

Centre type
Local centre

Station function
Origin and bus interchange

Local Government Area
City of Canada Bay (northern entry);
Burwood (southern entry)

Precinct vision
A well-designed high density living and employment precinct centred on the enhanced spines of Parramatta Road and Burwood Road, providing a second mass transit node for the Burwood strategic centre.

Context

Site
Burwood North station precinct is located to the north of Burwood strategic centre, adjacent to Concord Oval. The precinct is bounded by Burwood Road to the west, Burton Street to the north, Loftus Street to the east and Esher Lane to the south. Parramatta Road divides the precinct into two distinct areas.

Country
The precinct is located on the traditional lands of the Wangal people.

Precinct description
Along Burwood Road, a mix of lot sizes, building styles and heights accommodate a range of residential and commercial uses. Parramatta Road is dominated by large floor-plate buildings, some with generous setbacks that accommodate car sales and service centres and a few taller apartment buildings. Residential development is either low density detached houses or low-rise apartments. Local heritage items within the wider precinct include St Luke's Anglican Church and the Bath Arms Hotel. There is little diversity in the public domain, which is dominated by footpaths of varying quality and widths. Burton Street is wide with small street trees. Parramatta Road, Burwood Road and Burton Street generally lack street trees. A series of underutilised laneways within the precinct provide a framework for increased connectivity.

Precinct future
Burwood Road the north-south spine connecting to Burwood strategic centre and Parramatta Road will be marked by taller residential and mixed use buildings with active frontages, shops and commercial uses. Public transport options along Parramatta Road will improve connections for people working and living around the precinct. Generous setbacks from Parramatta Road, an improved network of footpaths, cycle routes and through site links will make it easier to reach destinations by active transport. New public open spaces along Burton Street will support the successful transformation of the area around the new metro station.

Reference documents
Eastern City District Plan (2018)
Parramatta Road Corridor Urban Transformation Strategy (PRCUTS) (2016)
Burwood Local Strategic Planning Statement (Feb 2020)
Canada Bay Local Strategic Planning Statement (Mar 2020)
Burwood Development Control Plan 2021
City of Canada Bay Development Control Plan 2020
City of Canada Bay Council's PRCUTS Planning Proposal and Burwood-Concord Urban Design Master Plan (2021)
Burwood Local Environmental Plan 2012
Canada Bay Local Environmental Plan 2013

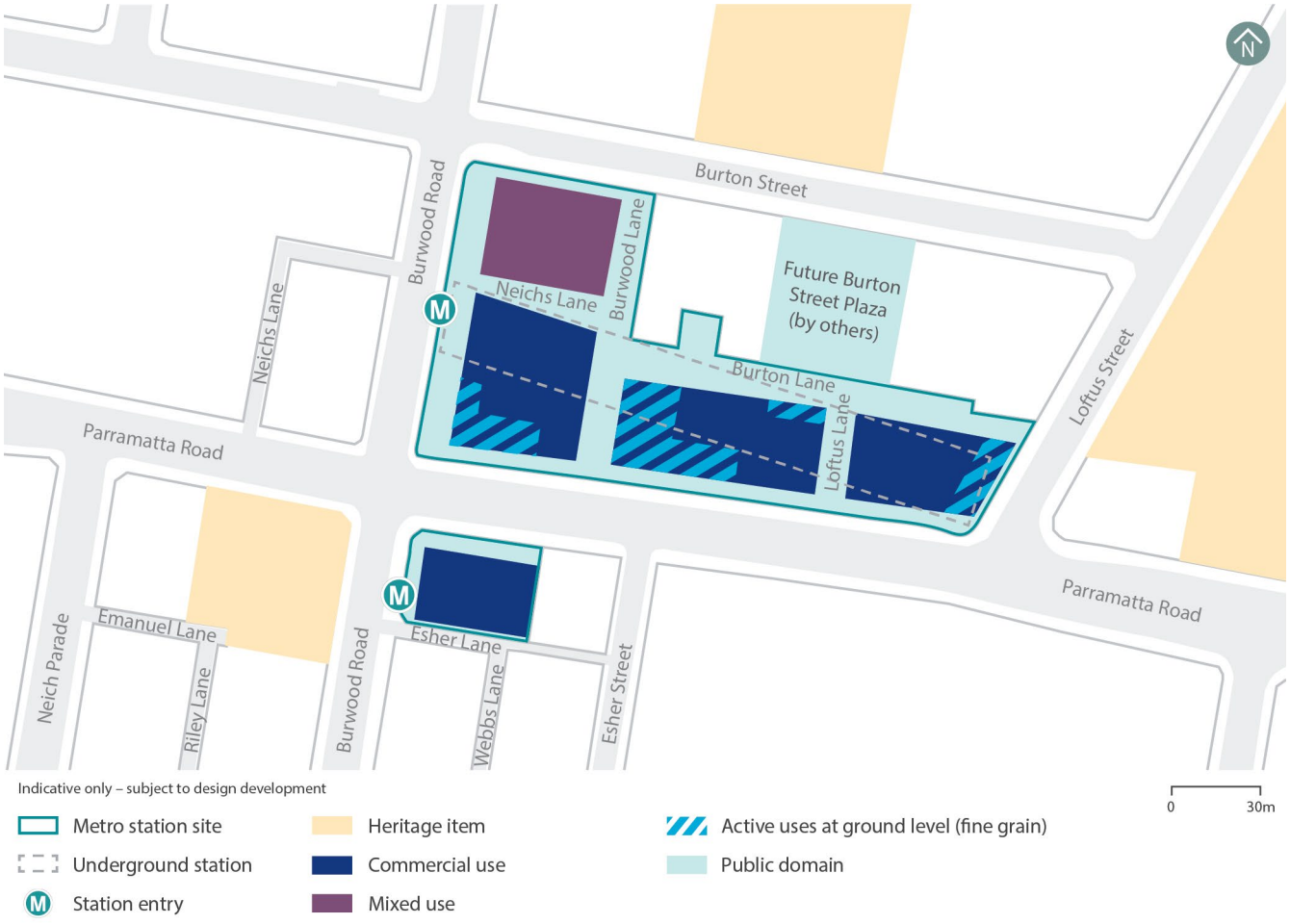
Place and design principles

- Improve amenity north and south of Parramatta Road with Sydney Metro as a catalyst for positive change.
- Facilitate transit-oriented development with public spaces and local services that support the station as a focal point for activity.
- Deliver legible, safe and intuitive station entries that address both north and south of Parramatta Road.
- Improve the priority and amenity for pedestrians in the area.
- Facilitate activation and urban renewal around the station in accordance with the Parramatta Road Corridor Urban Transformation Strategy.
- Enable provision of through-site links to enhance permeability in and around the station.

Urban design strategies

Land use and function

- Create a station precinct that support the Burwood Town Centre and has a positive identity and sense of place.
- Enable a diverse range of non-residential uses along Parramatta Road, including strategically located commercial, retail, cultural, night-time and business uses to serve the existing and future community.
- Focus residential development towards the corner of Burwood Road and Burton Street away from Parramatta Road placing it into locations with greater amenity.
- Support ground level active uses in appropriate locations, focused along Parramatta Road and integrated with the southern station entry building.

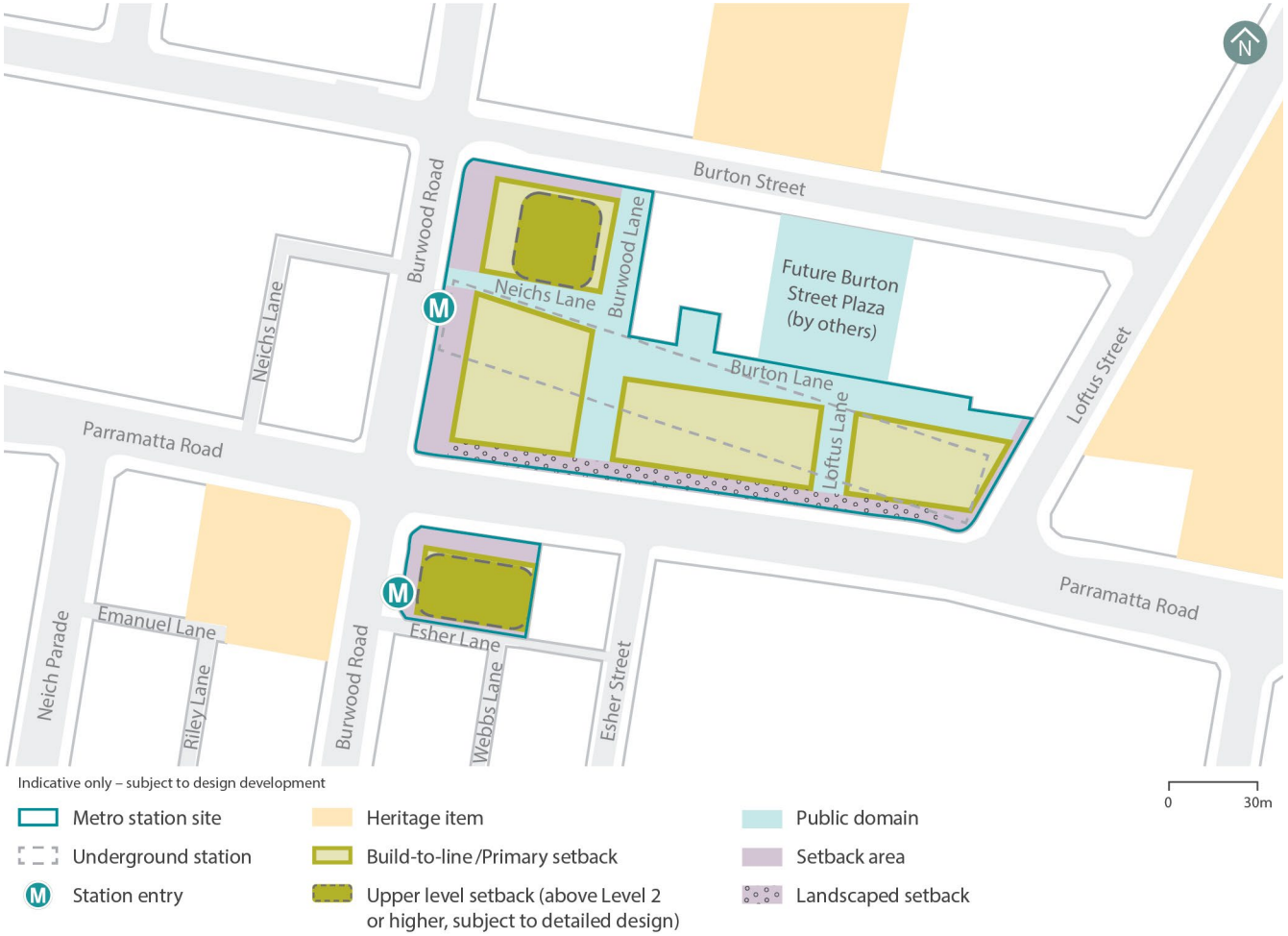


Burwood North Station land use and function.

- Maximise opportunities for a wide range of retail, business and commercial tenancies to activate key building frontages along Parramatta Road and Burwood Road, near station entries, public spaces and through site links or laneways and encourage people to stay in the precinct.
- Support the activation of the potential public space adjacent to the northern station entry plaza.
- Maximise opportunities for an active frontage at the ground level of the eastern services building at the corner of Parramatta Road and Loftus Street.

Places and spaces

- Utilise a built form and massing approach that reinforces the desired future character for the station precinct, generally consistent with the Parramatta Road Corridor Urban Transformation Strategy (PRCUTS) and any further refinements proposed by the local planning authority.
- Provide appropriate setbacks and building separation in consideration of adjoining sites and the nature and character of future through site links and/or laneways.
- Provide primary setbacks to support the strategic intent of PRCUTS to increase amenity and improve the place character of both Parramatta Road and Burwood Road, as active transport corridors.
- Manage the bulk, scale and visual presentation of buildings through appropriate building separation, maximum street wall lengths and upper-level setbacks to optimise floor plates for tower components.
- Ensure that siting and built form optimises acoustic amenity and air quality to manage the environment of busy roads such as Parramatta and Burwood Roads and allow for night-time uses to operate within the precinct.
- Provide activated, distinct, inclusive and comfortable public spaces adjacent to the station entry along Burwood Road.

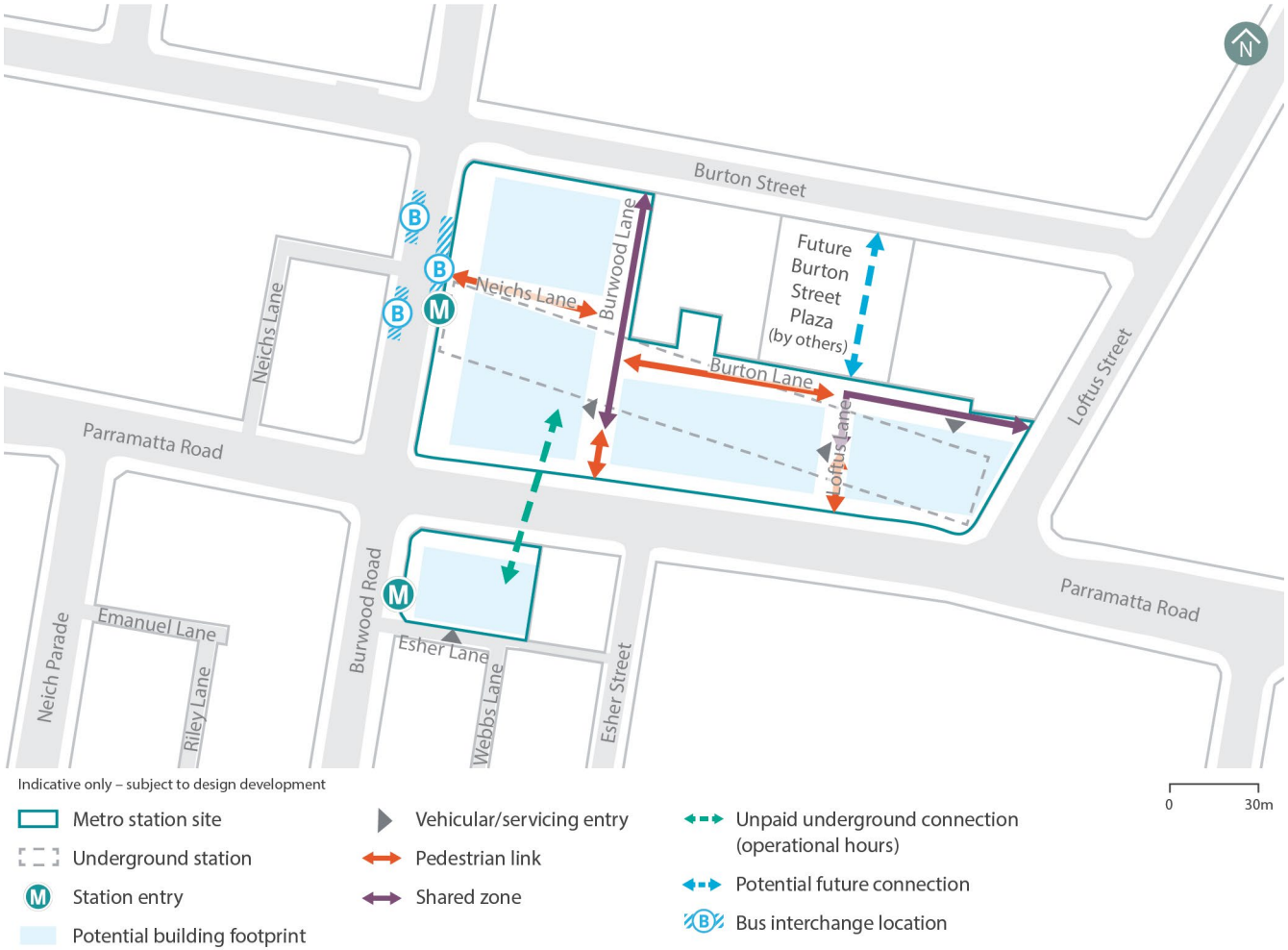


Burwood North Station places and spaces.

- Appropriately address the frontage along Burton Lane facing Burton Street Plaza (delivered by others on adjoining land) by maximising opportunities for ground level active uses and the overlooking of the new open space to maximise passive surveillance and activation.
- Design and deliver Burwood Lane, Burton Lane, realigned Niechs Lane and new through site links in accordance with applicable planning controls.
- Ensure that public domain treatment and landscape approach appropriately address level changes and provide a high amenity pedestrian experience.
- Design the unpaid underground link between the northern and southern entries to be welcoming and safe both during the day and night.
- Maximise opportunities for interactive art or advertising and retail along the underground link or at both ends of the link for activation.
- Provide landscape treatments along the northern Parramatta Road frontage, consistent with the green edge interface design as required by the applicable planning controls.
- Provide an expanded, activated and cohesive public domain around the southern entry building.

Access and connectivity

- Facilitate a bus interchange along Burwood Road.
- Improve permeability providing well-designed links that prioritise pedestrians and cyclists through public domain treatment, traffic calming and management.
- Limit access to Burton Lane to one way off Burton Street and one way onto Loftus Street primarily to service buildings fronting Parramatta Road.
- Limit vehicle access and servicing for buildings fronting Parramatta Road via shared underground areas accessed Burton Lane and Esher Lane, where possible.



Burwood North Station access and connectivity.

5.6 Five Dock Station

Centre type
Local centre

Station function
Origin and bus interchange

Local Government Area
City of Canada Bay

Precinct vision
A distinct station precinct that contributes to the character and identity of Five Dock as a revitalised, diverse and vibrant local centre, well connected to other transport modes.

Context

Site
Five Dock station precinct is located in the heart of Five Dock Town Centre to the north of Fred Kelly Place. Great North Road extends through the centre of the precinct which is divided into an eastern site and western site.

Country
The precinct is located on the traditional lands of the Wangal people.

Precinct description
The eastern site, located at the corner of Second Avenue and Waterview Street, is surrounded by low scale commercial and residential development.

The western site, bounded by Great North Road and East Street, is surrounded by small to medium scale retail and commercial uses along Great North Road and low density residential along East Street. To the north the site adjoins the heritage-listed St. Alban's Church.

Five Dock Town Centre has a distinctive local village character. Great North Road and Fred Kelly Place are key focal points for activity, along with public spaces such as Five Dock Park, Halliday Park, and Barnwell Park Golf Club.

Precinct future
The station precinct will support the Five Dock Town Centre revitalisation project, led by Canada Bay Council that focuses on providing new links and public spaces and reinforcing the centre's distinctive character by encouraging street-based retail and managed long-term residential growth. The development of the station precinct will support this future vision by contributing to the expansion and activation of Fred Kelly Place, providing a contextually responsive integrated station development with active ground level uses at key frontages, and enabling the delivery of a new link within the eastern metro station site.

Reference documents
Eastern City District Plan (2018)

Canada Bay Local Strategic Planning Statement (Mar 2020)

Five Dock Town Centre Urban Design Study (Oct 2013)

City of Canada Bay Development Control Plan 2020

Canada Bay Local Environmental Plan 2013

Place and design principles

- Facilitate improved public and active transport accessibility for the community by providing efficient access and interchange.
- Respect and contribute to the local character and amenity of the Five Dock town centre.
- Facilitate an active ground plane along Great North Road and Fred Kelly Place.
- Support an enhanced Fred Kelly Place, in consideration of the principles outlined in the Five Dock Town Centre Urban Design Study.
- Promote connectivity to and from the station through streets, lanes and public places.

Urban design strategies

Land use and function

- Provide a diverse range of land uses and activities that complement the existing and desired future character of the Five Dock Town Centre while balancing the amenity of surrounding residential areas.
- Activate the ground plane with well-designed spaces that respond to customer desire lines focussed on key places such as Fred Kelly Place, as the heart of the town centre, and key street frontages such Great North Road, Waterview Street, Second Avenue along the frontage of the future east-west link (to be delivered by others on Council land).

Five Dock Station land use and function.

Places and spaces

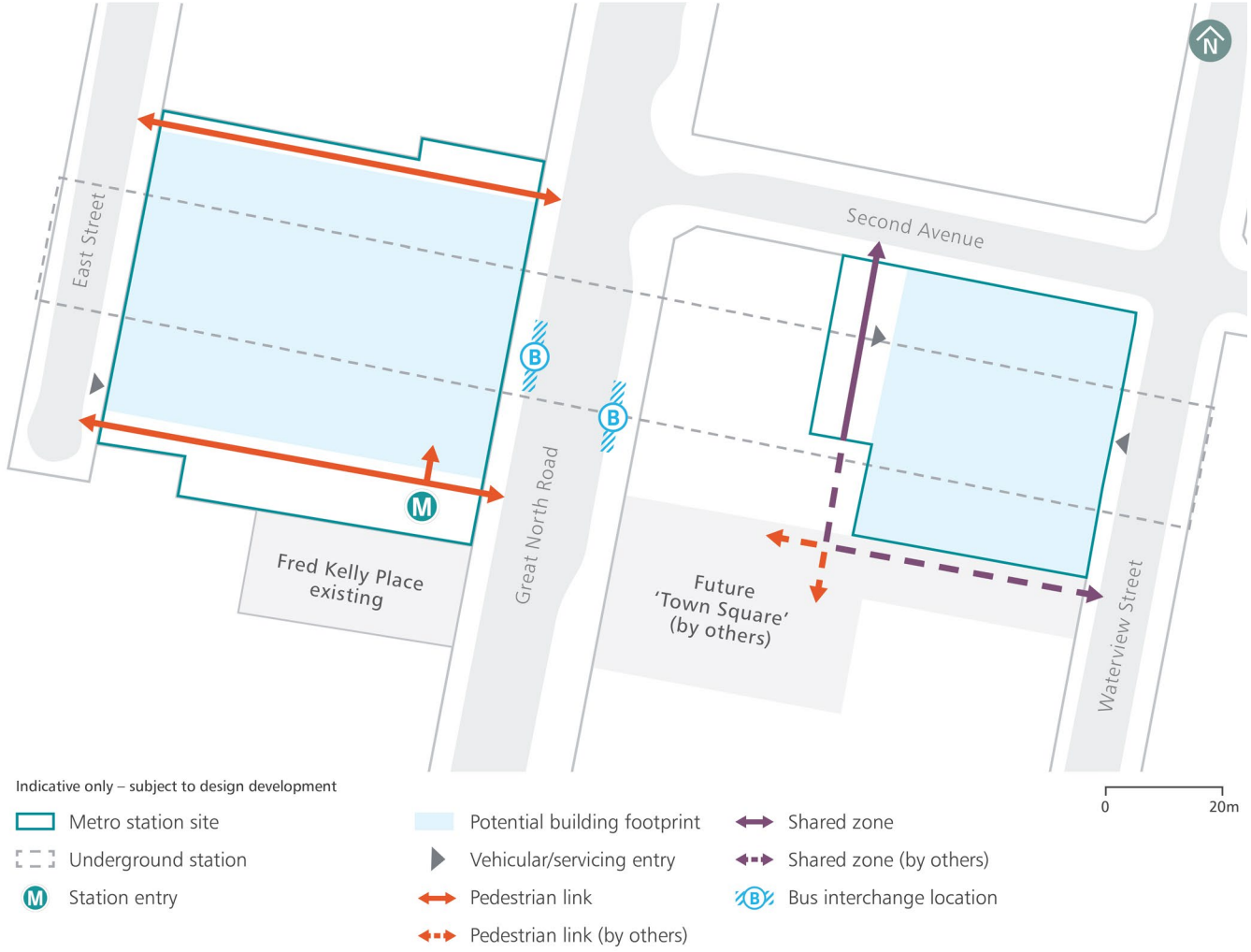
- Implement an integrated approach in the design and planning of the station development to accommodate station services and adaptable floor plates which cater for a wide range of commercial, retail, community and other non-residential uses.
- Provide appropriate primary and secondary setbacks and architectural strategies to minimise bulk and scale, in response to the existing and desired future character of Five Dock Town Centre.
- Minimise visual presentation of station services at street level and key viewpoints from highly used and pedestrianised areas through siting, layout, built form integration and massing and architectural treatment.
- Contribute to the established active urban environment of Great North Road by maintaining the existing built form to the boundary line and seamlessly responding to the site's topography.
- Provide an active and articulated frontage on the northern side of the western station building to address the heritage significance of St. Alban's Church and the civic character of Great North Road.
- Provide a contextually sensitive interface for the western station building towards East Street through architectural treatments and strategies.
- Provide flexible ground level spaces for a range of retail, dining and business uses along the future Fred Kelly Place extension frontage. This includes consideration of higher ceiling heights, servicing requirements for a diverse range of tenancies and providing space for outdoor dining.
- Provide visual interest and surveillance and a contextually sensitive presentation for the eastern station building towards the new north-south link and future east-west link (to be delivered by others on Council land).

Five Dock Station places and spaces.

- Provide an active and articulated edge on the corner of Second Avenue and Waterview Street and Second Avenue and the new north-south link.
- Extend, enhance and activate Fred Kelly Place with a focus on providing a distinct, inclusive and memorable space for customers and the wider community to dwell and socialise. The design for the Fred Kelly Place extension is to respond to the conceptual design for the enhanced Fred Kelly Place and adjacent public spaces on Council-owned land, developed in collaboration with Council.
- Utilise a paving and lighting approach that establishes a cohesive relationship between the enhanced Fred Kelly Place, surrounding public domain areas and new town square on the other side of Great North Road (to be delivered by others on Council land).

Access and connectivity

- Facilitate an easy, intuitive and accessible bus interchange along Great North Road.
- Deliver the new north-south link from Second Avenue for servicing and access for the eastern station services building and adjacent sites, in accordance with applicable planning controls.
- Limit servicing for the station buildings and any associated development from East Street (western station entry building) and new north-south link from Second Avenue (eastern services building).



Five Dock Station access and connectivity.

5.7 The Bays Station

Centre type

Metropolitan centre (part of Harbour CBD)

Station function

Origin and destination

Local Government Area

Inner West

Precinct vision

A new mixed use innovation precinct including employment, civic, retail and residential activities in a high amenity harbour-side setting.

Context

Site

The Bays metro station precinct is located on the western edge of White Bay, adjoining the western approach to the Anzac Bridge. It is bounded to the north by Robert Street, to the west by Victoria Road, to the south by the Western Distributor and to the east by Glebe Island. The former White Bay Power Station is a prominent landmark within the precinct.

Country

The precinct is located on the traditional lands of the Wangal people.

Precinct description

The station precinct comprises a significant area of reclaimed land previously dedicated to port activities with characteristics of a working harbour. It forms part of the wider Bays West Precinct, which is subject to an urban renewal initiative led by the Department of Planning and Environment.

The wider precinct contains a range of facilities and landmarks including the former White Bay Power Station, the White Bay Cruise Terminal, the Glebe Island Silos, the Glebe Island Bridge and the Super Yacht Marina on Rozelle Bay. The White Bay Power Station is a heritage landmark of State significance, representative of the industrial working character of the area.

Precinct future

The Bays West Precinct is expected to undergo significant renewal over the coming years into a high-density mixed use and harbourside destination for Sydney. The station precinct is part of the initial phase of the renewal of the wider precinct that will provide a wide range of commercial, retail, residential and community and cultural uses, leveraging off the emerging innovation corridor.

A network of public spaces will be created that capitalise on the precinct's harbour setting and unique Country and industrial heritage context, including the future park at Rozelle Rail Yards, which is part of the Rozelle Interchange Project.

Reference documents

Eastern City District Plan (2018)
Inner West Council Local Strategic Planning Statement (Mar 2020)
Bays West Place Strategy (Nov 2021)
Draft Bays West Urban Design Framework and White Bay Power Station and Metro Sub-precinct Master Plan (Mar 2021)
Bays West Strategic Place Framework (Aug 2021)
Draft Bays West Place Based Transport Strategy
Draft Bays West Connecting with Country Framework (Mar 2021)
Rozelle Interchange Urban Design and Landscape Plan (Aug 2020)
White Bay Power Station Conservation Management Plan (Jul 2011)

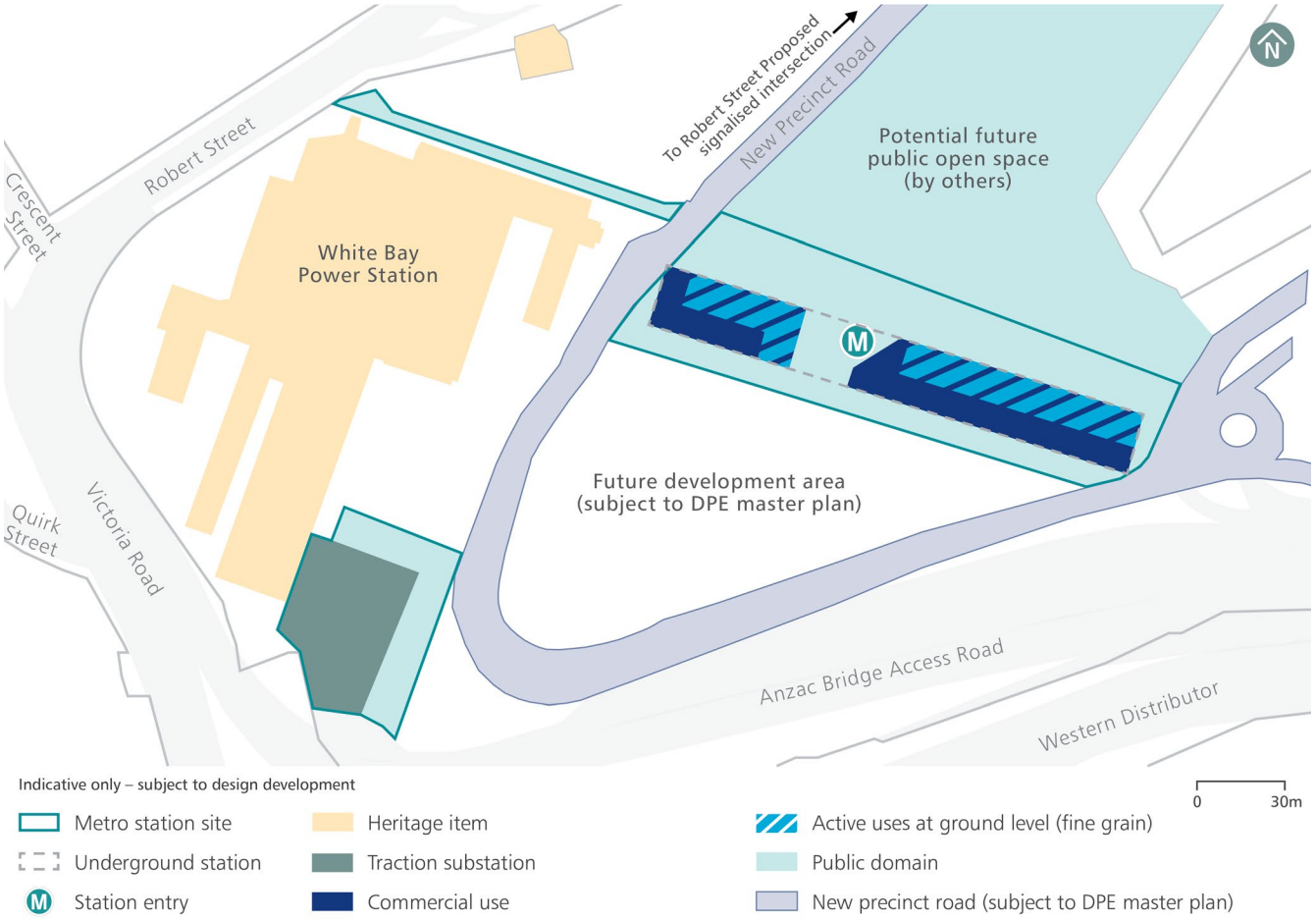
Place and design principles

- Support the establishment of Bays West by facilitating well-designed, high-quality station, public domain and development.
- Ensure station and precinct designs are coordinated with wider precinct planning frameworks.
- Facilitate intuitive and accessible interchange between Sydney Metro and other modes.
- Enhance legibility and accessibility through the Bays Precinct by facilitating connections to White Bay Power Station, Anzac Bridge and White Bay.
- Promote active street frontages in development around the station to support a vibrant public domain and public amenity in this important harbour-side precinct.
- Ensure key view corridors frame the new precinct.

Urban design strategies

Land use and function

- Support a diverse range of uses that enable activation both during the day and night-time, including retail, commercial offices, hospitality, education, business, cultural and community uses and entertainment and live music venues.
- Deliver a high-density mixed use precinct over time with distinguishable areas and an activated ground plane at key interfaces.
- Play an important role in the Innovation Corridor by maximising opportunities for a diverse range of commercial and business uses that support creative industries and other innovative uses.

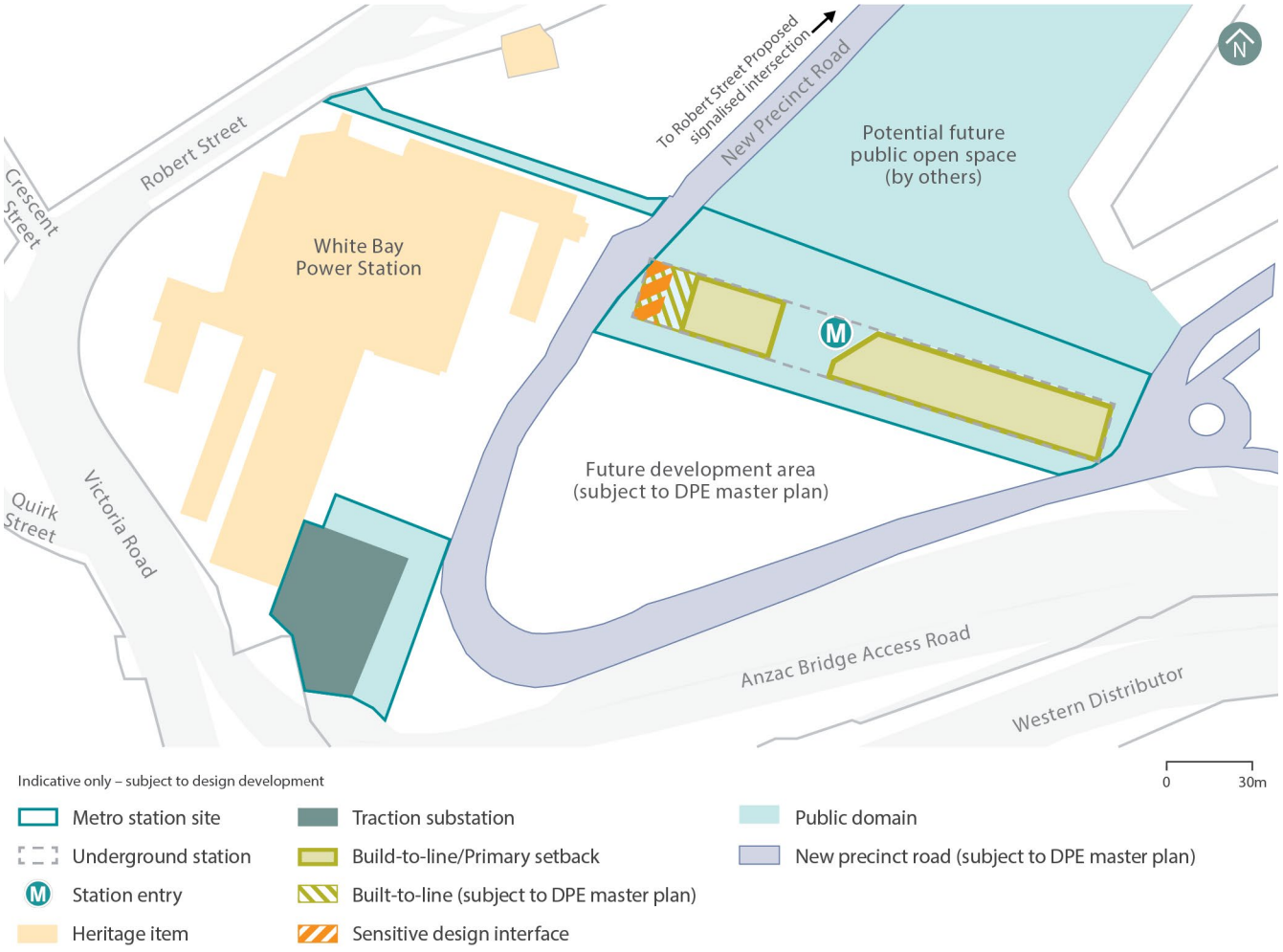


The Bays Station land use and function.

- Balance land use interfaces to achieve appropriate levels of residential amenity while enabling non-residential activity including night-time and entertainment uses and activities associated with the working harbour.
- Maximise opportunities to deliver retail, commercial and other active uses as part of the initial metro station development to support activation day and night.

Places and spaces

- Implement the precinct structure to deliver the strategic and design intent of the Bays West Place Strategy and associated Draft Bays West Urban Design Framework and White Bay Power Station and Metro Sub-precinct Master Plan (Mar 2021) to enable a well-designed and people-focused high-density precinct around the new metro station.
- Provide streets and through site links to ensure permeability and promote a fine grain precinct structure.
- Provide appropriate primary setbacks to minimise bulk and scale to respond to the desired built form character for the metro station as per the Bays West Place Strategy and associated Draft Bays West Urban Design Framework and White Bay Power Station and Metro Sub-precinct Master Plan (Mar 2021).
- Maximise district and harbour views and solar access and minimise impacts on view corridors.
- Utilise place-specific acoustic management measures to mitigate noise impacts from station services, arterial roads, working harbour and ports operational activities and the range of night-time and cultural uses desired for the precinct.



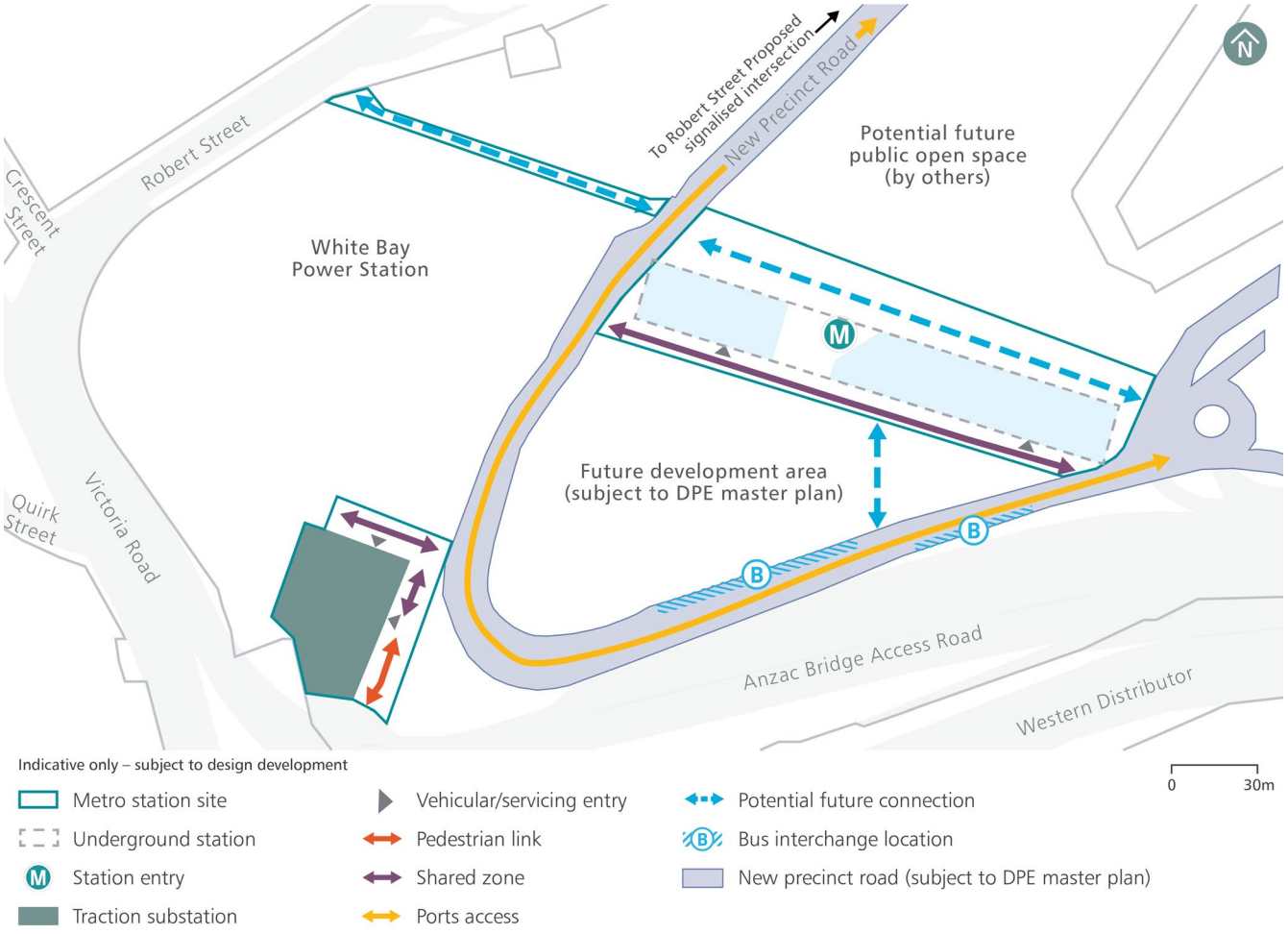
The Bays Station places and spaces.

- Respect the overall heritage qualities and elements within the wider Bays West Precinct, including consideration of requirements under the White Bay Power Station Heritage Conservation Management Plan and minimising the impacts of the traction substation.
- Ensure that primary view corridors are maintained and impacts to secondary view corridors are minimised, as identified in the White Bay Power Station Conservation Management Plan and the Bays West Place Strategy and associated draft Urban Design Framework.
- Design a prominent metro station entry, integrated within a building with active uses, in a central location that addresses the promenade, station entry plaza and maximises the vantage point towards the harbour and new waterfront park to celebrate the precinct's harbour setting and relationship to water and provide high amenity for customers and wider community.
- Provide a publicly accessible station plaza adjacent to the station entry to accommodate high volumes of pedestrian movement from the metro station and through the precinct.
- Maximise active frontages around the station plaza with retail, dining and community uses.
- Ensure the station plaza and linkages to primary and secondary streets and laneways are fully accessible to all users, open 24 hours a day.
- Design the traction substation to be sympathetic to the heritage context of the White Bay Power Station, while providing a positive interface to the surrounding public domain and accommodating line-wide operational, maintenance and safety requirements.
- Create a varied landscape character throughout the precinct by highlighting the drowned river valley, former sandstone plateaus, inter-tidal zones, the creek line, and sheltered gully in the landscape treatment and planting approach.
- Utilise landscape design to protect existing and future development, including White Bay Power Station, from storm surges and potential flooding events.
- Utilise the overland flow path from the Balmain Peninsula as a key feature of future parkland and other public spaces.

White Bay Power Station.

Access and connectivity

- Provide fully accessible and activated pedestrian connections between the bus interchange and the metro station entry.
- Provide generous footpath widths and public spaces that can accommodate the forecast pedestrian flows from the metro station and other transport modes.
- Manage vehicular movements associated with ports operations in consultation with Port Authority NSW.
- Provide consolidated basements for new development to minimise the number of vehicle entry points from the street while safeguarding deep soil planting areas.
- Locate servicing and loading within buildings where access is immediately adjacent to primary streets to minimise potential conflicts with pedestrians and cyclists.
- Locate servicing and loading through secondary streets and tertiary links, where possible.



The Bays Station access and connectivity.

5.8 Pyrmont Station

Centre type

Metropolitan centre (part of Harbour CBD)

Station function

Origin and destination

Local Government Area

City of Sydney

Precinct vision

A new harbour-side precinct enabled by the metro station, focused on knowledge-intensive employment and supported by public domain, retail and residential activities.

Context

Site

Pyrmont Station precinct is centrally located within the Pyrmont Peninsula adjoining Union Square and Pyrmont Bridge Road. The station will occupy two sites. The eastern site comprises the triangular block bounded by Union Street, Edward Street and Pyrmont Bridge Road. The western site comprises the south end of the block bound by Pyrmont Bridge Road, Pyrmont Street, Union Street and Paternoster Row.

Country

The precinct is located on the traditional lands of the Gadigal people.

Precinct description

Pyrmont is a key residential and employment area within Central Sydney. The station precinct is characterised as mixed-use, which includes residential, commercial, cultural and entertainment uses. Several intact mid to late nineteenth century terrace houses and former industrial and commercial heritage listed buildings are found within the precinct, as well as a number of contemporary medium to high rise residential and commercial buildings.

Union Square is a pedestrianised area on Union Street, between Paternoster Row and Harris Street which provides a distinctive village character to Pyrmont. Primary east-west pedestrian and vehicular connections through the Pyrmont Peninsula are via Pyrmont Bridge Road, which is heavily trafficked, and Union Street, which contains a separated cycleway. The precinct is within walking distance of the western edge of the CBD, linking pedestrians and cyclists via Pyrmont Bridge. The precinct also connects to Ultimo, Darling Harbour and the site of the Sydney Fish Markets and proposed Blackwattle Bay redevelopment.

Precinct future

The vision for Pyrmont is to become an innovative, creative and cultural precinct and an engine room of the Eastern Harbour City. This vision, defined in the Pyrmont Peninsula Place Strategy, guides the future of Pyrmont as protecting the quality and history of the Harris Street spine, while unlocking the potential of sites to deliver jobs aligned with Pyrmont's position within the Innovation Corridor identified in the Eastern City District Plan.

Reference documents

Eastern City District Plan (2018)

City Plan 2036: Local Strategic Planning Statement (Mar 2020)

Pyrmont Peninsula Place Strategy (Dec 2020)

Draft Pyrmont Peninsula design guidelines (Nov 2021)

Pyrmont Urban Design Report Vol. 3 Sub-Precinct Master Planning (Oct 2021)

Sydney Development Control Plan 2012

Sydney Local Environmental Plan 2012

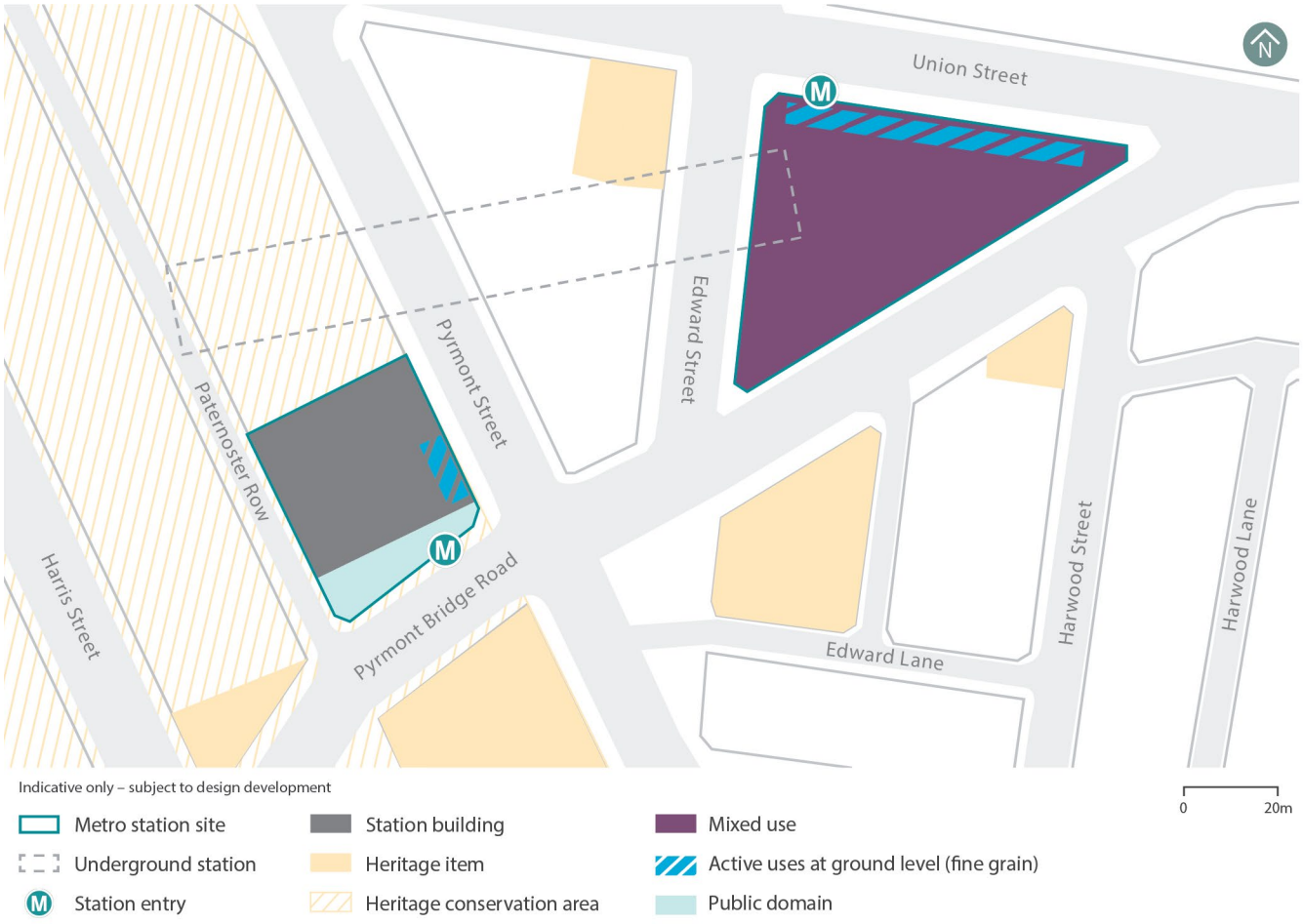
Place and design principles

- Support Pyrmont's role as a significant employment and entertainment destination and urban renewal area with a new metro station, connected to the Sydney CBD, The Bays Precinct and Western Sydney.
- Provide a direct rail service to Pyrmont to support a catchment not currently serviced by the Sydney Trains network.
- Align with the strategic directions of the Pyrmont Peninsula Place Strategy to deliver a metro station that will reinvigorate investment and facilitate a future integrated development which achieves design excellence, responds to context and delivers Place Strategy aspirations.
- Facilitate efficient interchange with bus and light rail and enable comfortable and safe connections for pedestrians and cyclists, including Union Street, Pyrmont Street and Pyrmont Bridge Road.
- Deliver an activated ground plane and high-quality public domain that contributes to the streetscape, complements the surrounding context and heritage character and offers a welcoming place for people.

Urban design strategies

Land use and function

- Integrate the station precinct within Pyrmont's established urban context with a mix of tenancies which operate day and night, bringing life and interest to the street.
- Complement the western station entry with a small retail tenancy along Pyrmont Street, to bring visual surveillance and serve basic customer needs while respecting adjacent residential amenity.



Pyrmont Station land use and function.

- Provide a diverse range of retail and business tenancies to Union Street at ground level, complementing the busy station setting, and adding visual richness.
- Design for a high-quality and visually interesting interface along the Pyrmont Bridge Road frontage and where possible, activate Pyrmont Bridge Road to create an attractive and welcoming pedestrian environment.

Places and spaces

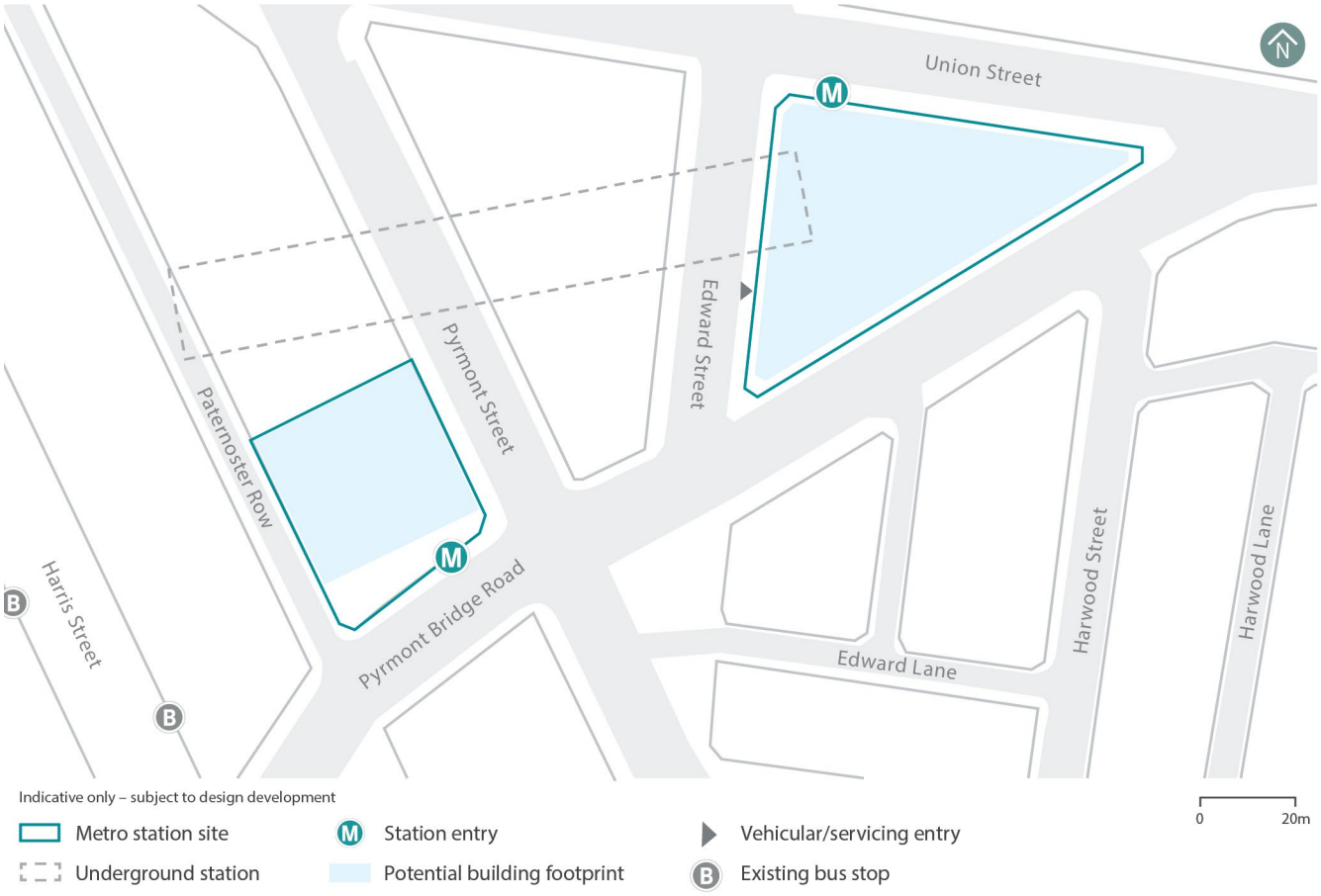
- Set back the eastern station building along Pyrmont Bridge Road to accommodate a safe and comfortable walking environment.
- Design a high-quality public interface along Union Street with active edges, places for people to dwell, and generous space for customers and pedestrians.
- Design station services within the podium to have minimal visual impact to Union Street.
- Set back the western station entry to Pyrmont Bridge Road to deliver suitable public space for safe pedestrian movement and gathering.
- Design the western station building to respond to, and act as a companion building to the heritage listed woolstore opposite.
- Sensitively design the western station building to sit comfortably within the Harris Street Heritage Conservation Area.
- Respond to the local heritage conservation area setting with a high-quality façade design which aligns with the heritage values, manages the visual impact of station services to the street and enhances the character and amenity of its setting.

Pyrmont Station places and spaces.

- Reinforce the building line at all frontages with a strong built edge, responding with a warehouse style podium, to reflect the local character and style of buildings in this location.

Access and connectivity

- Promote intuitive pedestrian connections with established pedestrian links along Union Street, and to local attractors including Darling Harbour, Harbourside, the Sydney Fish Markets and the proposed Blackwattle Bay redevelopment.
- Orientate the eastern station entry to Union Street to create easy and intuitive access to the Inner West Light Rail and Harris Street bus stops and ensure a permeable network for pedestrians.
- Integrate bicycle parking within the eastern station building, accessed via Edward Street (from the Union Street cycle route), to provide convenient and intuitive access for cyclists.
- Facilitate on site loading/ parking from Edward Street to minimise the impact on pedestrian connections and to reduce visual impact to Union Street.



Pyrmont Station access and connectivity.

5.9 Hunter Street (Sydney CBD) Station

Centre type

Metropolitan centre (part of Harbour CBD)

Station function

Destination, origin and interchange

Local Government Area

City of Sydney

Precinct vision

A landmark station that reinforces the commercial heart of the Eastern Harbour City, unlocking public transport capacity and catalysing new economic opportunities by linking with Greater Parramatta in the Central River City.

Context

Site

Hunter Street metro station precinct is located in the northern part of Sydney CBD, within the heart of the financial and legal centre of the city. The station development will occupy two sites, one on the corner of Hunter and George Street, and the other on the corner of Hunter, O'Connell and Bligh Streets. The precinct is within close proximity of Wynyard train station and CBD Light Rail to the south west and Martin Place station to the east.

Country

The precinct is located on the traditional lands of the Gadigal people.

Precinct description

The wider precinct is characterised by a concentration of commercial towers and represents a major employment district and flagship location for many global and national organisations.

Several heritage items are located within the precinct including the Skinners Family Hotel, Richard Johnson Square, Perpetual Trustee Building and the City Mutual Life Assurance Building and the Tank Stream. These historic buildings, landscapes and archaeological sites are intermixed with more recent and contemporary high-rise buildings.

The walking catchment of the station encompasses significant major employment, attractors at ground level and part of an extensive subterranean pedestrian network linking Barangaroo and Martin Place.

Future integration

The station will have direct interchange with Sydney Metro City & Southwest and Sydney Trains T4 line at Martin Place Station, and direct connections to T1, T2 and T8 lines at Wynyard Station. Sydney Light Rail (Wynyard Stop) is near the George Street entry and Wynyard bus station is nearby.

Reference documents

Eastern City District Plan (2018)

City Plan 2036: Local Strategic Planning Statement (Mar 2020)

Central Sydney Planning Strategy (Nov 2021)

Sydney Development Control Plan 2012

Sydney Local Environmental Plan 2012

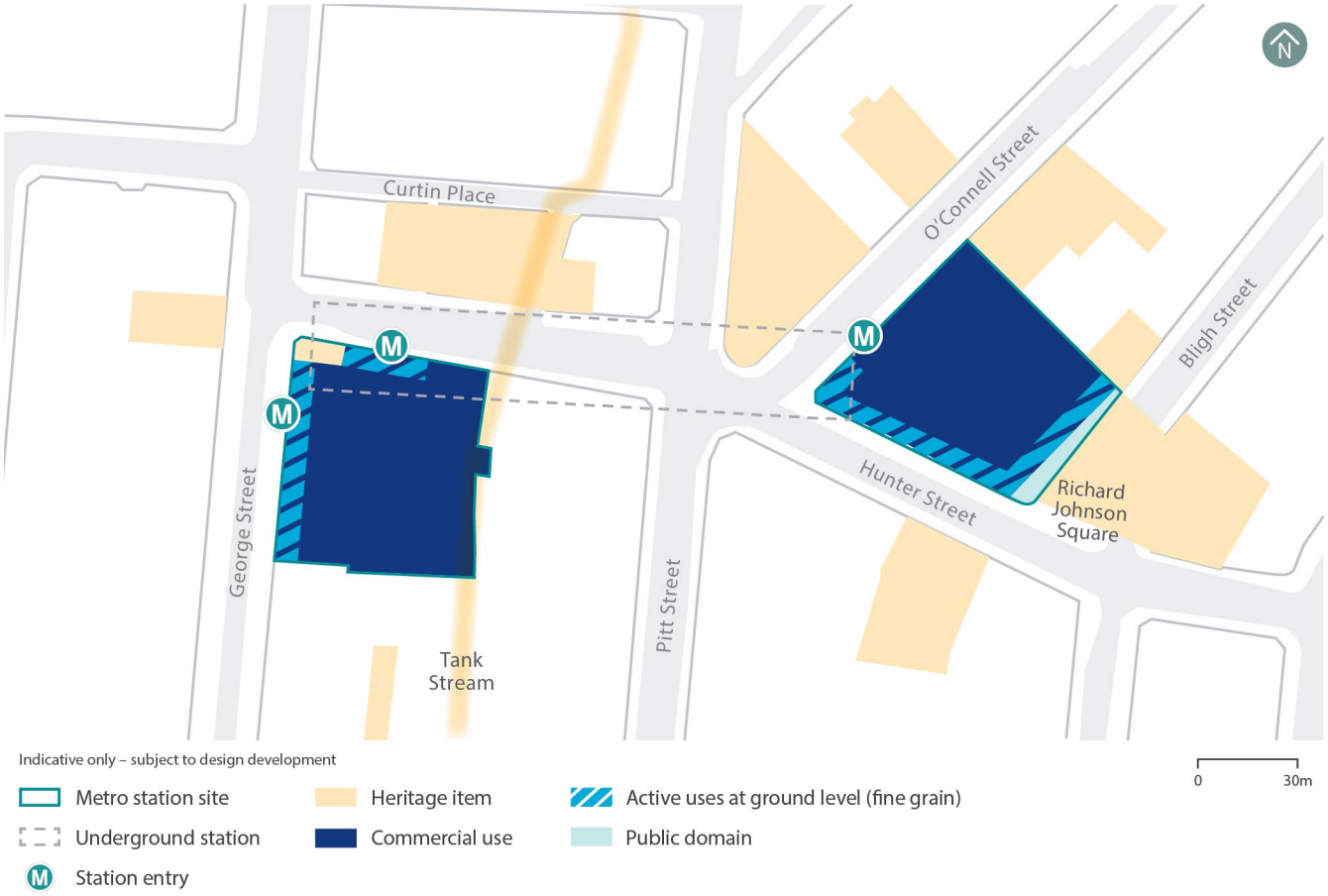
Place and design principles

- Reinforce Sydney's global standing by significantly improving public transport accessibility between the Eastern Harbour City and the Central River City, enhancing 'job-to-job' connections and catalysing economic growth.
- Establish an integrated transport hub in this northern CBD precinct, strengthening Sydney's rail network and linking important destinations to deliver a more connected city.
- Deliver highly efficient interchanges between metro and other public transport modes, with capacity to support high volumes of pedestrians above ground and underground, while delivering a high-quality customer experience.
- Facilitate integrated station developments that promote design excellence and contribute to the unique attributes and character of this northern CBD location, aligned with the Central Sydney Planning Strategy.
- Deliver a design that promotes active street frontages to support a vibrant public domain in the heart of the Sydney CBD, and which delivers a high-quality station address to George Street – the CBD's north-south pedestrian boulevard.

Urban design strategies

Land use and function

- Provide a diverse range of retail and business tenancies at ground level (where possible) that complement the busy station setting, and activate the street and unpaid station concourse areas to support customer needs and create lively and interesting places.

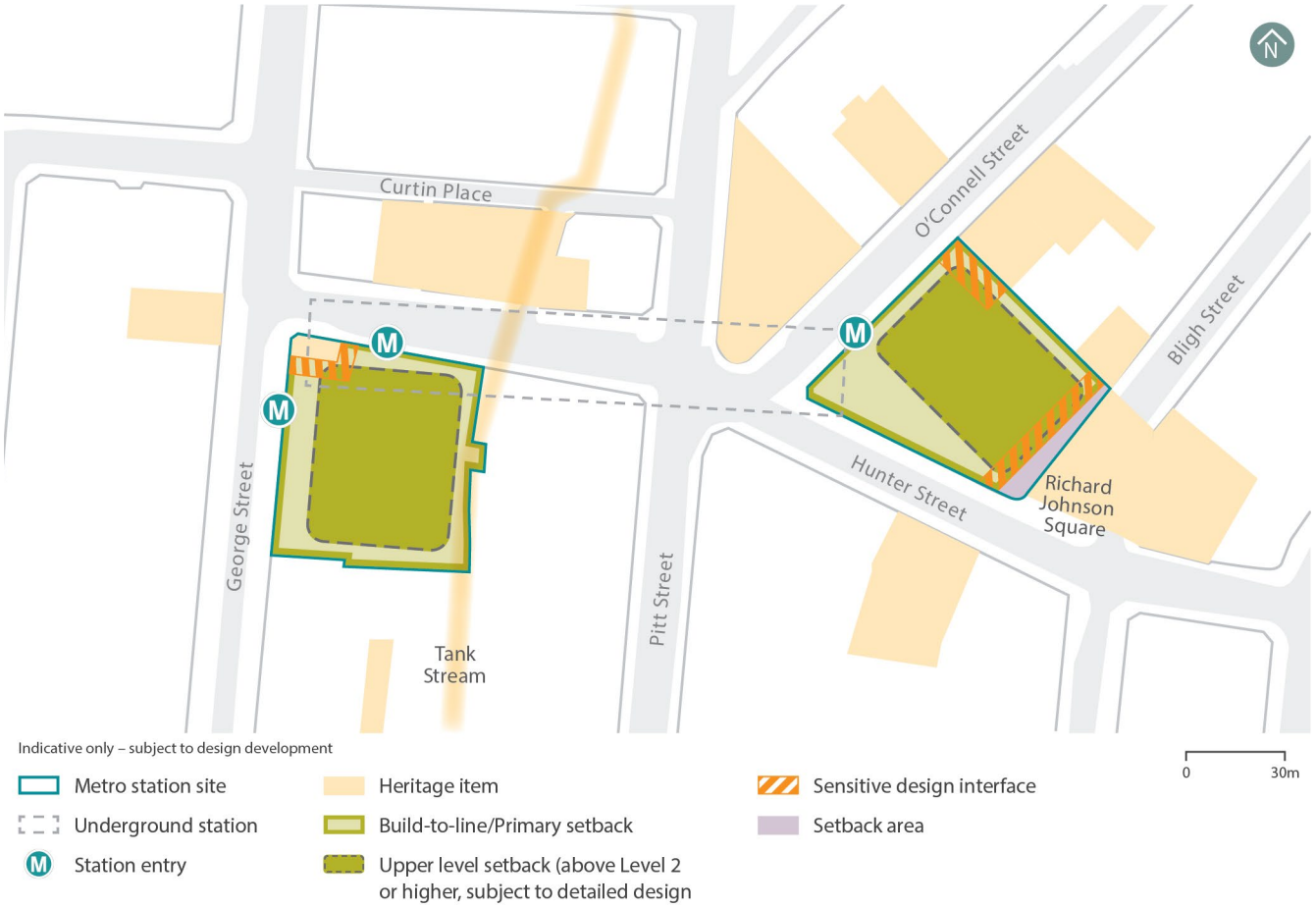


Hunter Street (Sydney CBD) Station land use and function.

- Promote night-time uses which can activate Sydney CBD streets, laneways and through site links.
- Design for high quality commercial tenancies within the podium (where possible), aligning with this highly sought-after central CBD address.
- Design for a high-quality commercial interface (retail /business tenancies) along the George Street frontage to complement the station entry.
- Support active uses at Bligh Street fronting onto Richard Johnson Square, to align with the role and programming of this public space.
- Design for ground level tenancies along O'Connell Street where practical to activate the station entry.

Places and spaces

- Deliver a high-quality design which responds to the unique attributes of each street and recognises the importance of its Sydney CBD address.
- Explore opportunities to tell our First Nations story and create a place of healing.
- On the eastern site set the building back from Bligh Street to align with the adjoining heritage building (Lowy Institute Building) to celebrate this heritage façade and promote a visual connection to Richard Johnson Square.
- Sensitively integrate Richard Johnson Square into the ground plane of the station precinct.
- Establish a legible station address at O'Connell Street, with a design which responds to its important CBD location.



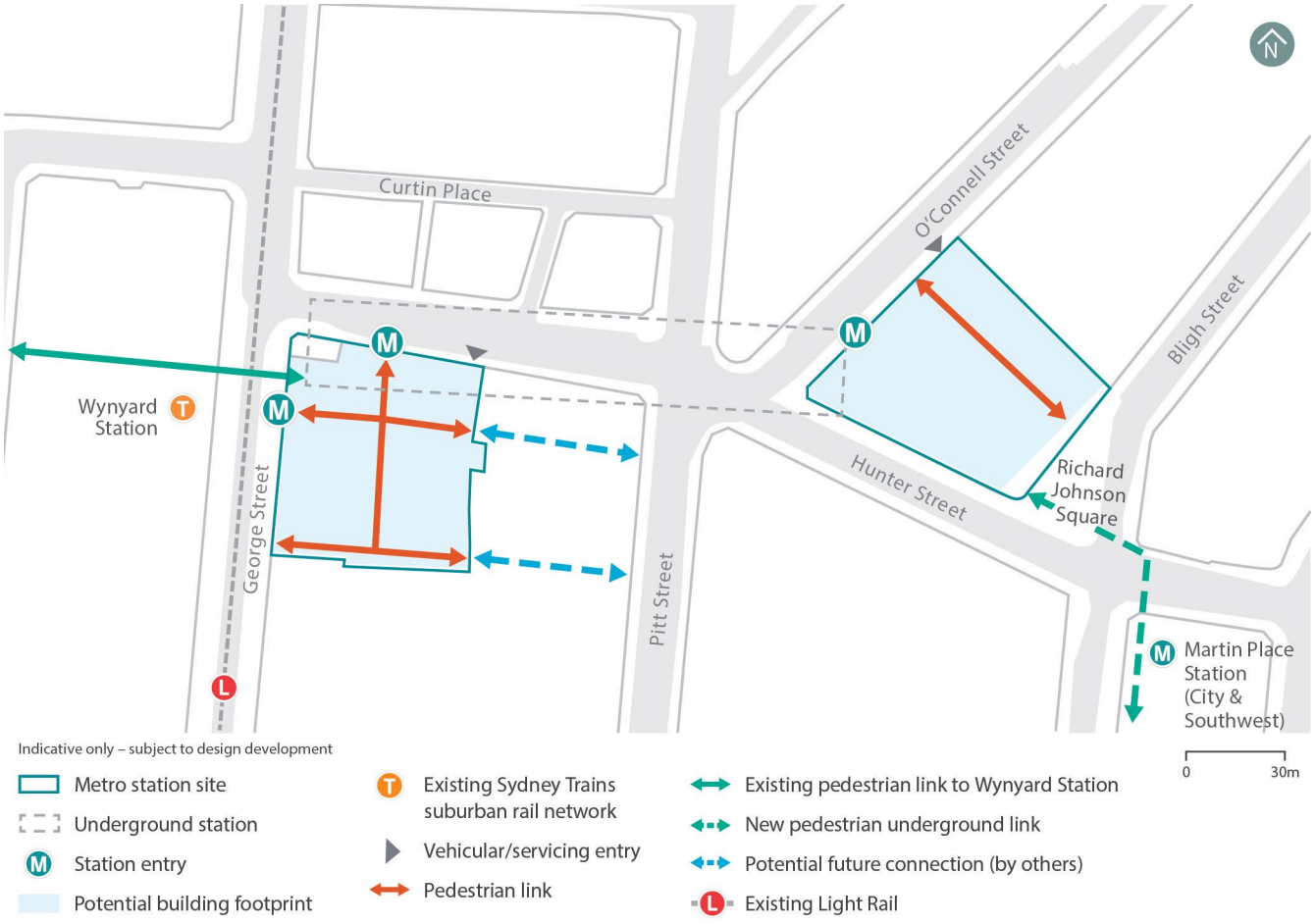
Hunter Street (Sydney CBD) Station places and spaces.

- Integrate a through site link between Bligh and O'Connell Streets, to connect with the station entry and scaled to support activation where possible.
- On the western site build to the street alignment to reinforce the established building line along Hunter and George Streets.
- Align streetwall design for the eastern building with established streetwall heights of neighbouring heritage buildings including the former Wales House on Hunter Street, former Bank of New South Wales on O'Connell Street and former New South Wales Club on Bligh Street to protect streetscape vistas.
- Align streetwall design for the western building to the predominant streetwall heights along George Street to the south, the scale of the former Skinners Family Hotel at the corner of Hunter and George Streets, and step up to the east to respond to the former New South Wales Sports Club.
- Carefully integrate the design of the station precinct with the heritage-listed former Skinners Family Hotel through appropriate tower setbacks and podium heights and sensitive design response within heritage interface zones, to allow it to read as a well-defined heritage asset within the precinct.
- Establish a memorable station entry experience at George Street, consistent with the landmark address, and which complements the Wynyard Station entry located opposite.
- Respect and interpret the Tank Stream within the station precinct, protecting its historic and archaeological value, and communicating the importance of the Tank Stream from First Nations People through to Colonisation.

Artist impression of Hunter Street (Sydney CBD) Station.

Access and connectivity

- Support clear wayfinding with legible station entries which are appropriately scaled and seamlessly connect with adjacent streets and public spaces including George Street (western site) and O'Connell Street (eastern site).
- Establish an accessible through site connection to link Richard Johnson Square (Bligh Street) to O'Connell Street, adjacent to the metro station entry.
- Integrate vehicular access via O'Connell Street (eastern site).
- Design a high-quality subterranean connection to Martin Place to provide a seamless interchange with the City & Southwest line and Sydney Trains services.
- Explore the extension of adjacent footpaths to cater to metro customers.
- Locate station entries on George Street and Hunter Street to provide an accessible and intuitive interchange between Sydney Metro and Sydney Trains stations, light rail and bus stops.
- Retain established subterranean connections to Wynyard to contribute to the network of underground pedestrian links to key city sites and transport modes.
- Investigate the opportunity to connect with lanes adjacent to the site, to deliver through site pedestrian links to Pitt Street (via Empire Lane and the former Hunter Connection) and south to connect with Ash Lane.
- Integrate vehicular access at Hunter Street (western site), protecting pedestrian priority to George Street.



Hunter Street (Sydney CBD) Station access and connectivity.

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Ancillary facilities

6

6.1 Clyde-Rosehill precinct

Context

Location

The Clyde-Rosehill precinct that will house the Clyde stabling and maintenance facility and Rosehill services facility is situated between the Parramatta and Sydney Olympic Park metro station precincts along the southern edge of the Camellia-Rosehill peninsula. The precinct is generally bounded by Unwin Street to the north, James Ruse Drive to the west, the M4 Western Motorway to the south and Duck Creek to the east, which together with A'Becketts Creek traverse the area.

Country

The precinct is located on the traditional lands of the Barramattagal people.

Purpose and access

The Clyde stabling and maintenance facility will provide operational functions including the control centre and all infrastructure required to run and maintain the train fleet.

Vehicular access will be via separate access/egress points on Unwin Street (for general staff access) and Wentworth Street (for delivery, contractors, visitors and large vehicle access).

An internal access road network will enable general circulation while providing appropriate separation to the main train fleet (with limited crossing points).

Other ancillary facilities required for the operation of Sydney Metro West within the precinct include the Rosehill services facility accommodating tunnel ventilation and a substation, tunnel portal, dive structure and water treatment plant.

All these facilities will also be fenced and lit at night for safety and security.

Precinct description

The area surrounding the Clyde stabling and maintenance facility and Rosehill services facility is primarily characterised as an industrial and warehousing and logistics precinct for light and heavy industry. Rosehill Gardens Racecourse is located to the north of Unwin Street.

The former Rosehill Station and footbridge, the remaining façade of the former RTA depot are local heritage items, as are the wetlands along the banks of Duck and A'Becketts creeks. These retain some native vegetation although parts are heavily weed infested.

The precinct housed the former Sydney Speedway that Sydney Metro has re-established at Eastern Creek.

Precinct future

The wider precinct is identified as an area that will provide 'essential urban services, advanced technology and knowledge centres' within the Greater Parramatta to Olympic Peninsula (GPOP) urban renewal corridor.

The greater Camellia-Rosehill area is expected to undergo significant urban renewal in the future which may bring new and mixed uses into the area as a result of the recently released Draft Camellia-Rosehill Place Strategy.

Reference documents

Central City District Plan (2018)

Greater Parramatta and Olympic Peninsula (GPOP) Vision (2016)

Draft Camellia-Rosehill Place Strategy (Dec 2021)

Parramatta Employment Lands Strategy (Jul 2016)

Parramatta Employment Lands Strategy – Review and Update (Jul 2020)

Parramatta Development Control Plan 2011

Parramatta Local Environmental Plan 2011

Place and design principles

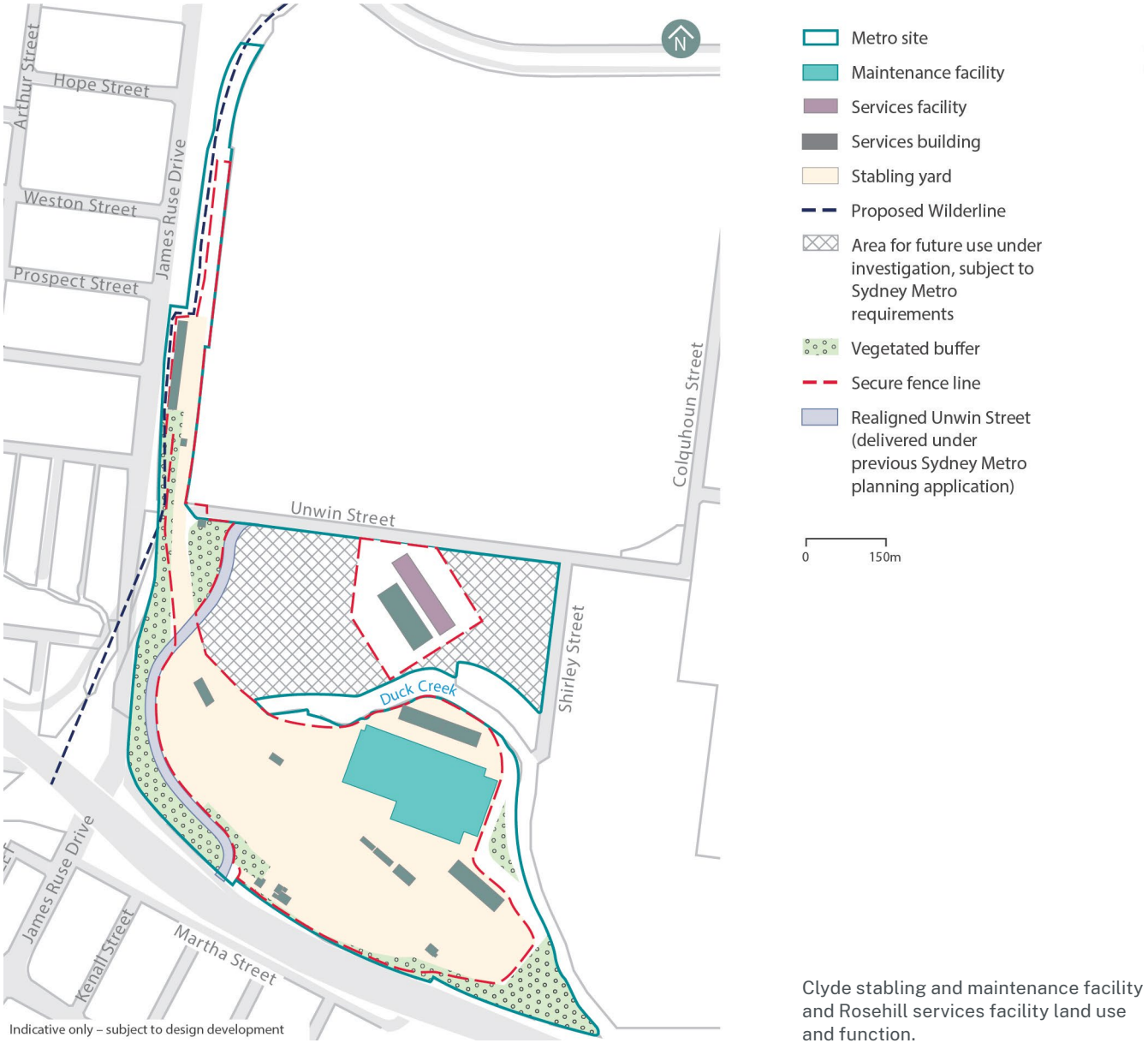
- Provide a well-designed stabling and maintenance facility to support operations and integrated into its surrounding context including strategic planning for the Camellia-Rosehill Peninsula.
- Provide for the safe and legible staff pedestrian movement within site.
- Minimise impact to Duck Creek and support rehabilitation to the riparian corridor adjacent to the site.
- Maintain industrial uses on residual land (construction site), including access and integration with the surrounding uses.
- Achieve a minimum Infrastructure Sustainability Council IS Design and As Built Rating of 75 points.
- Provide a high efficiency stabling and maintenance facility with a focus on renewable energy technologies, water efficiency and low embodied carbon materials.

Urban design strategies

The urban design strategies in this section should be read in conjunction with relevant guidelines in **Chapter 4**.

Land use and function

- Deliver the Clyde stabling and maintenance facility and Rosehill service facility to meet all relevant construction and operational standards.
- Prepare a precinct development plan that indicates how the proposed facilities can be integrated into the existing and emerging environment, addressing matters such as land use context, flooding and drainage, contamination, transport and access and sustainable design.



Clyde stabling and maintenance facility and Rosehill services facility land use and function.

- Support opportunities for flexible uses for residual land including industrial and recreation.
- Provide active transport connections around the site that build on existing and proposed links.
- Optimise opportunities to restore and regenerate habitats particularly along rehabilitated creek lines.
- Minimise impacts to existing creek lines and fauna movement corridors, including to adjoining creeks.
- Manage potential land use conflicts so that appropriate levels of residential amenity and non-residential activity are achieved.

Places and spaces

- Design ancillary facilities to be visually unobtrusive and minimise adverse impacts on the surrounding environment, including the existing residential development to the west.
- Provide landscape screening to reduce the visual impact of, and any light spill from, facilities.
- Implement nature-based solutions such as wetlands where possible to naturally sequester carbon, contribute towards resilience and provide enhanced biodiversity outcomes.
- Incorporate rainwater harvesting and onsite renewables in the stabling and maintenance facility.
- Revegetate areas outside the service facilities to maximise tree canopy cover within the precinct.

Metro North West Stabling and Maintenance Facility.

Access and connectivity

- Realign Unwin Street to accommodate the Clyde stabling and maintenance facility while maintaining heavy vehicle access to Wentworth Street.
- Maintain footpath access along the realigned Unwin Street.
- Support the realisation of Parramatta Council's Wilderline proposal along the western boundary of the site.
- Provide active transport routes where possible, integrated with the broader active transport network for the precinct.
- Reinstate pedestrian access across James Ruse Drive to the Rosehill Gardens Racecourse site following the removal of the footbridge from the former Rosehill Station.

Clyde stabling and maintenance facility and Rosehill services facility access and connectivity.