Appendix C

Sydenham to Bankstown Design Guidelines

NSW GOVERNMENT | Transport for NSW

Sydney Metro City & Southwest

Sydenham to Bankstown Design Guidelines

June 2017

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1 Introduction

1.1 Purpose of these Guidelines

The Guidelines will support the development of healthy, cohesive and inclusive communities.

The Guidelines establish the design approach for the Sydney Metro Sydenham to Bankstown upgrade (the project) by guiding the design of the interface between stations and their surrounding locality including:

- Station entries
- Transport interchange facilities (bicycle facilities, bus stops, kiss and ride, taxi ranks and connections to existing rail and light rail transport)
- Landscaping and other public domain elements
- Rail corridor works including rail cuttings and embankments
- Station and service buildings

Any development above or adjacent to Metro stations would be subject to a separate planning approval.

The Guidelines have been developed to respond to the strategic directions and urban design strategies of NSW Planning and Environment and local Councils. The Guidelines will be used by Transport for NSW (TfNSW) to guide the design development process for the project.

The Sydney Metro Delivery Office, part of TfNSW, is managing the planning, procurement and delivery of the Sydney Metro Network.

Cheltenham Station
Source: COX

1.2 Project Scope

The Sydney Metro City & Southwest Project will upgrade all ten stations between Sydenham to Bankstown to conform with current accessibility standards, before conversion to metro operations. The project will upgrade stations at;

- Marrickville
- Dulwich Hill
- Hurlstone Park
- Canterbury
- Campsie
- Belmore
- Lakemba
- Wiley Park
- Punchbowl
- Bankstown

The project will also convert two of the existing station platforms at Sydenham Station to metro operations.

Key Project features include:

- 13km upgrade of corridor and stations of the T3 Bankstown Line between Sydenham and Bankstown and their subsequent conversion to metro operations
- Fully accessible stations, with lifts and level access between trains and platforms
- Improved interchange with bus, light rail, pedestrian and cycling networks, and provision of taxi, kiss and ride and bike parking facilities at all stations
- Fast, safe and reliable – a new generation of 21st century metro trains.

Sydney Metro Sydenham to Bankstown Alignment

1.3 Project Vision

Transport for NSW's vision for Sydney Metro is:

"Transforming Sydney with a new world class metro".

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

Sydney Metro is also a unique opportunity to demonstrate an exemplary approach to station and precinct design and foster exemplary urban design, 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 the Sydney Metro project meets customer needs and expectations and maximises its city shaping potential and broader urban benefits.

Cherrybrook Station, artists impression
Source: TfNSW

1.4 Design Objectives

To help meet the transformational vision and world class aspirations of the project, five **Design Objectives** for the project have been agreed to guide decision making and the design process for the City & Southwest project.

A **Design Principle** is prescribed under each design objective, describing the intention of the objective for the design of stations, station 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. This local character is to be embraced through internationally benchmarked high quality station architecture and public domain that is well integrated with the valuable inherited urban fabric of existing places.

Objective 5: Delivering an enduring and sustainable legacy for Sydney.

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

Sydney Metro places the customer first.
Source: TfNSW

1.5 Understanding Customer Needs

Customer Centred Design

At Sydney Metro we aim to serve a diverse set of customers who will undertake a number of journeys throughout the day and week using our Metro. The design and delivery of service is centred around the customer – their needs, behaviours, and jobs to be done (tasks they want to achieve using the service).

Our commitment is to deliver a reliable "door-to-door-to-door" transport solution that is surprisingly easy for all our customers by the delivery of a thoughtfully designed, seamlessly integrated experience that moves customers around quickly and easily and is adaptive to change. Providing services centred around the customer is key to Sydney Metro's ongoing success and building a solid customer base.

Our customer experience target

Sydney Metro customer experience pyramid
Source: TfNSW

At a very basic level our customers expect Sydney Metro to provide a service that is on time, clean, safe, comfortable, efficient, and convenient, has the right information, and has adequate customer service. These basics are key drivers of customer satisfaction.

Our goal is to deliver a level of service that goes beyond satisfaction and makes it easy for customers to use the Metro and encourages repeat use across the multiple types of journeys they may make. This will endeavour to support TfNSW's goal of increasing the number of journeys taken on public transport by the public both in the peak and off peak.

Designing for an easy customer experience is an important part of engaging customers to use Sydney Metro as part of their journey. Customers will expect more from our service over time and ease of use is the foundation for design and development of all our products, services, systems and spaces going forward.

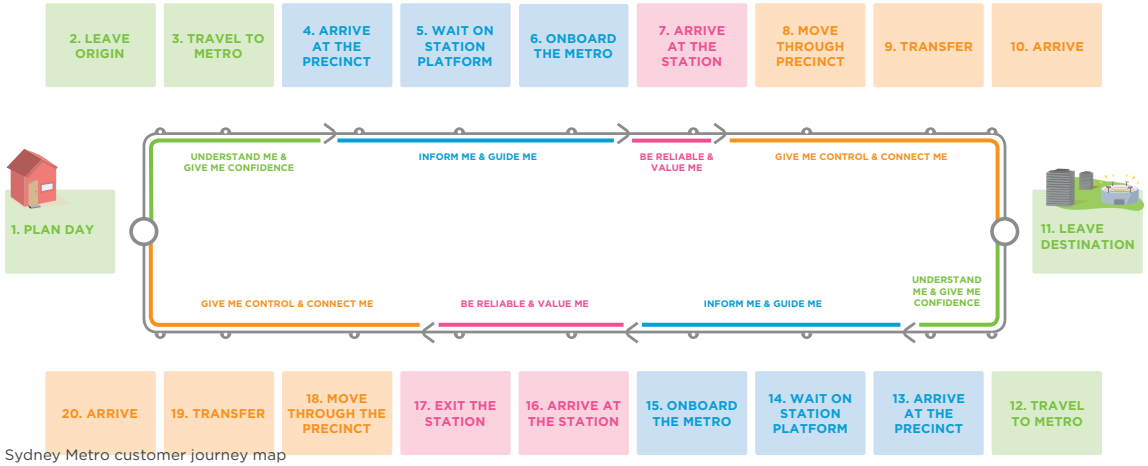
An integrated customer journey - 'door-to-door-to-door'

Customers see their journey from door-to-door-to-door (from origin to destination and back again) and may plan and utilise multiple travel modes throughout their journey in order to achieve their job to be done. It is critical to customers that their journey is seamless and well integrated across all connecting modes and that there is easy access to connect to the Metro.

A customers' ideal journey starts at their origin when they are planning their day. At this point they decide whether they travel with Sydney Metro or not. The information about all our modes and connection with Metro systems and services will be key in enabling customers to make a choice to use us. If a customer cannot easily see how they can leave their origin, get to their destination and then return or do another onward journey – they are less likely to engage with Sydney Metro as part of their journey.

At each stage of the journey there are a number of touchpoints where the customer will interact with a TfNSW product, service, system or is interacting in one of our spaces such as a precinct or an interchange or using one of our modes. At these touchpoints we aim to make it easy to interact as well as provide consistency in service delivery and information such that it is easy for a customer to have a seamless journey from door to door to door.

The customer journey map diagram captures the touchpoints in a customer's ideal journey door (origin – planning the day) to door (destination) to door (return to origin). Key elements that are important to customers have been noted at each touchpoint. We need to make sure that these elements are well understood so we can deliver a product and service that matches customer needs



Sydney Metro customer journey map
Source: TfNSW

Sydney Metro Easy Customer Principles

The Sydney Metro Customer Principles are to be used to guide the design, development and operation of the services, products, systems and spaces to enable customers to have an easy customer experience. They outline:

What customers need:

- Understand Me – means demonstrating awareness and appreciation of my requirements for certainty, safety and value by providing me with easy and effective transport experiences that match my specific needs and wants.
- Give Me Confidence – means providing me with a clear appreciation for the integrated service offerings available through Sydney Metro. Assure me that throughout the journey that I can trust Sydney Metro to provide dependable, safe and secure solutions that will meet my particular needs whilst getting me to my destination in time and home again comfortably.

What the service must offer:

- Inform Me – means providing me with easy access to clear, accurate, relevant and up-to-date information at appropriate times and through convenient channels that enables me to plan my day, execute my plans and share details with others so I can easily achieve my goals with the least amount of effort, confusion and with minimal disruption.
- Guide Me – means showing me the best way to get to where I want to go, in order to get there in time, with the least amount of frustration, stress or uncertainty by directing, instructing and managing flow, crowding or impediments. It also means helping me resolve any problems or difficulties I might encounter that might negatively impact my overall experience.

How the organisation must deliver it:

- Be Reliable – means providing an effective frequency of integrated services that meet my specific needs, whilst dependably collecting and delivering me at scheduled times that enable me to successfully manage my commitments and run my life.
- Value Me – means providing effective transport solutions that I can access with the minimum amount of effort, at the right times and through convenient channels that truly respects my time. In addition, my safety, security, health and wellbeing are all considered and provided for in the way the services are delivered.

How customers want to feel:

- Give Me Control – means empowering me with the necessary knowledge and ability to make choices. It means reducing uncertainty and stress by allowing me to play an active role in managing my situation. Providing advance notice of problems with guidance and real-time updates that keep me informed gives me the freedom to update arrangements with others that may be impacted by the situation.
- Connect Me – means bringing customers closer to the people and things that are most important to them. A more effective transport solution provides a vital contribution to meeting customers' interpersonal needs including a sense of belonging, self-esteem, friendship, love and security. Being connected is an integral enabler and a key component of the broader community experience.

Sydney Metro Customer Principles
Source: TfNSW

1.6 A Commitment to Safety

Transport for NSW is committed to ensuring Sydney Metro is designed, constructed and operated in a manner that facilitates safe working and customer passage. The project will provide facilities for customers, staff and contractors that meet or exceed any required safety standards. Sydney Metro 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 in the city must provide safe interfaces between stations and the existing urban environment. The safe movement of customers, staff and contractors through station areas needs to 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 crush zones.

Station and station realm 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 managed through a rigorous safety in design process which will identify, develop and implement safety controls, and 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.

Construction of Sydney Metro Northwest.
Source: TfNSW

1.7 A Commitment to Sustainability

Transport for NSW has a clear vision for Sydney Metro to achieve new benchmarks in sustainable infrastructure delivery. This means demonstrating that Sydney Metro is at the forefront of best practice, delivering environmental, social and economic improvements throughout the delivery and operational phases of the project.

This commitment is articulated through a strategic Sydney Metro objective to deliver a sustainable metro product which contributes to environmental, social and economic sustainability and the project Environment and Sustainability Policy which contains specific sustainability objectives. Sustainability objectives relevant to these design guidelines are presented in the table below.

Microclimate and customer comfort can be improved through the use of landscaping and appropriate shading and weather protection.
Source: AECOM.

Governance	Demonstrate leadership by embedding sustainability objectives into decision making
	Demonstrate a high level of performance against objectives and appropriate benchmarks
Carbon & Energy Management	Improve the shift toward lower carbon transport
	Reduce energy use and carbon emissions during operations
	Support innovative and cost effective approaches to energy efficiency, low-carbon / renewable energy sources and energy procurement
Pollution Control	Reduce sources of pollution and optimise control at source to avoid environmental harm
Climate Change Resilience	Infrastructure and operations will be resilient to the impacts of climate change
Resources - Water Efficiency	Minimise use of potable water
	Maximise opportunities for reuse of rainwater, stormwater, wastewater and groundwater
Resources - Waste & Materials	Minimise waste through the project lifecycle
	Reduce materials consumption
	Consider embodied impacts in materials selection
	Maximise beneficial reuse of spoil
Biodiversity Conservation	Protect and create biodiversity through appropriate planning, management
Heritage Conservation	Protect and promote heritage through appropriate design, planning, and management controls
Liveability	Promote improved public transport patronage by maximising connectivity and interchange capabilities
	Provide well designed stations and precincts that are comfortable, accessible, safe and attractive.
Community Benefit	Make a positive contribution to community health and well-being
	Ensure community and local stakeholder engagement and involvement in the development of the project
	Contribute to the delivery of legacy projects to benefit local communities
	Optimise community benefit of residual land development

1.8 Structure of the Guidelines

The Design Guidelines are structured into four sections:

1. Introduction (this part)

Provides an overview of the Sydney Metro City & Southwest, the project objectives, design principles, an understanding of our customers' needs and the importance of design in meeting those needs.

2. Stations

Outlines the key contextual factors and design drivers that impact the design of the station and surrounding environment.

3. Function & Experience

Outlines the principles and design guidelines to be applied to the design strategies for stations and their interface with adjoining areas.

4. Elements

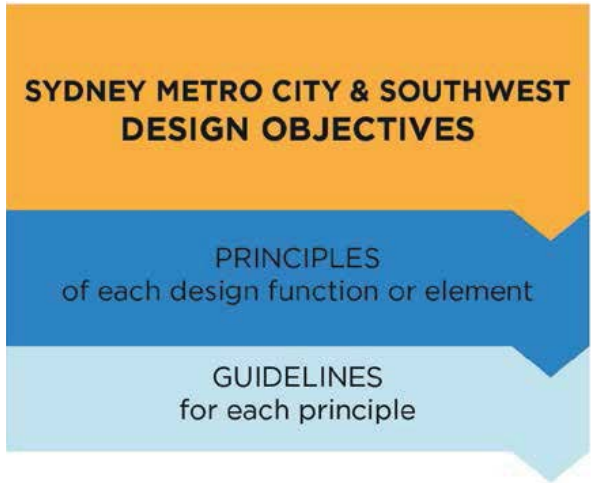
Outlines the principles and design guidelines to be applied to the elements of the new stations and their interface with adjoining areas.

Document Structure
Sections 3 and 4 are structured to include:

Relevant Design Objectives - how each design guideline relates to the project Design Objectives.

Principle - of each design element.

Guidelines - describes best practice design responses that address the objective.



1.9 Application of the Guidelines

Review of Design
The design of Sydney Metro is subject to ongoing internal review processes to ensure the designs are developed to respond to these Guidelines. This will ensure design quality meets the needs and expectations of Sydney Metro customers and the people of NSW. These Guidelines will be kept under review through subsequent detailed design and procurement stages to ensure that they remain up to date and relevant.

The design of Sydney Metro and implementation of these Guidelines is also subject to independent review by the Sydney Metro Design Review Panel. The Design Review Panel provides independent, high-level design review of the project to support the achievement of Sydney Metro project objectives and ensure quality design outcomes.

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

These panel members will provide independent design review and advice periodically throughout the development of the design. They will maintain an ongoing review role in the design process for the project, ensuring that as the design of individual components develops, it delivers on the principles contained within this document.

Updating the Guidelines
These Guidelines will be reviewed and updated following exhibition of the Sydenham to Bankstown EIS. The Guidelines may be updated from time to time through the project delivery stage, including application of the Guidelines in relevant contracts. It is envisaged that future updates would provide additional detail and guidance as design progresses. The objectives and principles contained in this version of the document would continue to apply in subsequent versions. Updated versions of the Guidelines would be subject to the review and endorsement of the Design Review Panel.

Artists rendering of Cudgegong Road station, Sydney Metro Northwest.
Source: TfNSW

2 Stations

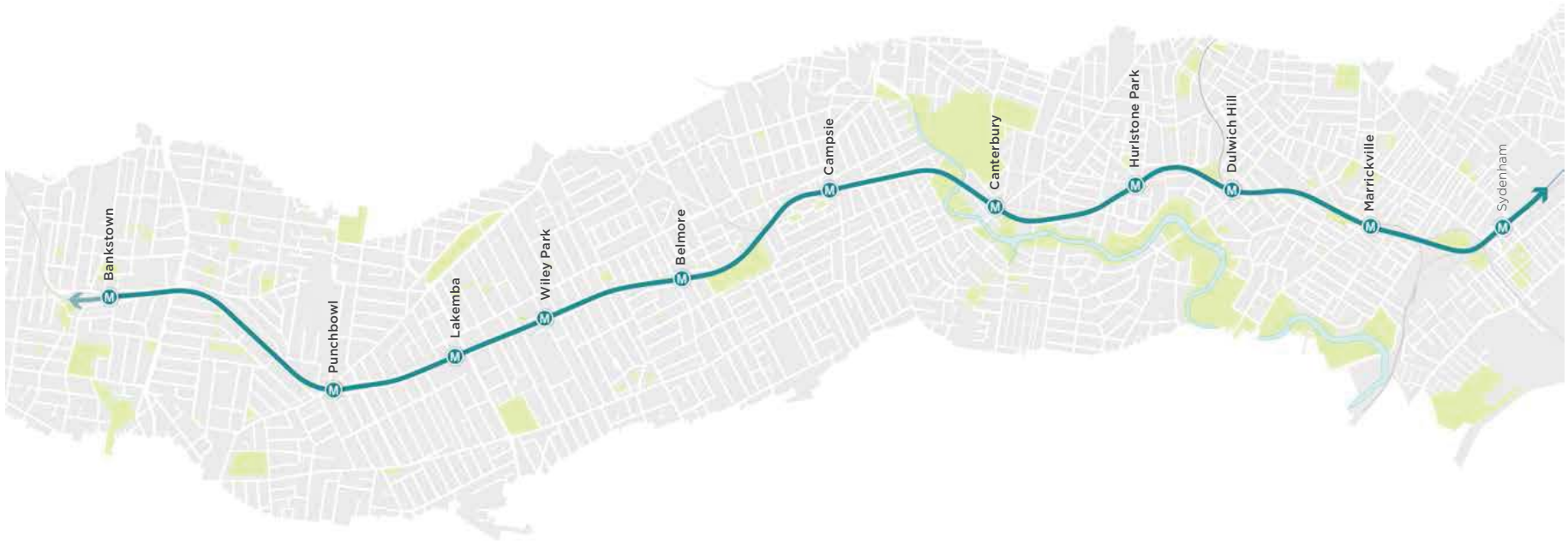
About this Section

This section describes the context and functional character of the Sydney Metro stations. It acknowledges the existing conditions and urban interfaces of each station in order to inform the delivery of contextually responsive and integrated environmental outcomes.

The urban and public domain design must be developed with reference to the existing urban context and infrastructure (including built form and public domain conditions, landscape elements and existing and proposed services) as well as planned initiatives in the locality.

New metro stations are proposed at:

- Marrickville
- Dulwich Hill
- Hurlstone Park
- Canterbury
- Campsie
- Belmore
- Lakemba
- Wiley Park
- Punchbowl
- Bankstown



Sydney Metro Sydenham to Bankstown Alignment

2.1 Corridor

Bankstown Line Heritage Summary
The Bankstown Line was built in three primary stages between 1895 and 1917:

- 1895 Belmore Branch Line - Sydenham to Belmore
- 1909 Bankstown Extension - Belmore to Bankstown
- 1917 Metropolitan Goods Line - Belmore Triangle to Sydenham

The opening of the various Bankstown Line stations was the primary catalyst for suburban development along the corridor. Colonial era land grants were subdivided as the stations were built, with the earliest development often focused on station entrances and the rail alignment.

The stations are variously listed on three Registers; the State Heritage Register; the S170 Heritage and Conservation Register; and the Local Register.

Sydney Metro's heritage philosophy is to:

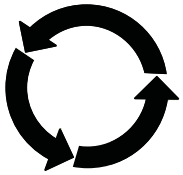
- Recognise and demonstrate the heritage significance of all phases of rail transport development along the Line;
- Retain and conserve, wherever possible, elements of heritage significance; and
- Remove intrusive station elements that detract from the core heritage values.

Corridor Design Philosophy
The design of Sydney Metro Southwest will draw on the landscapes and heritage, the cultural history and the communities of the Bankstown Line, revealing and enhancing the qualities of these places, making new connections between communities and contributing to the regeneration of town centres.

Sydney Metro will provide an efficient and easy travelling experience as part of an integrated transport system - a contemporary, sustainable system that will leave an enduring legacy for Sydney.

Three Corrridor Themes have been identified that address the project Design Objectives:

- Re-discovery
- Re-connection
- Re-generation



RE-DISCOVER

The notion of rediscovering existing qualities found in the Bankstown corridor reflects a number of the project design objectives.

Two of its primary qualities are the heritage fabric of the line itself and the diversity of its centres and communities. A design that is responsive to this context, that reveals and re-purposes heritage buildings and structures, adds a new layer of high quality architecture and new public spaces attuned to local settings, will be a catalyst for wider urban renewal but also deliver an important public legacy for southwest Sydney.

- Conserve and re-use heritage fabric wherever possible
- Utilise locally responsive design to express unique community characteristics, through public art, community facilities and new physical links across the corridor
- Build on the landscape character of the corridor, and identify wider connections to green spaces
- Enable the cultural diversity across the corridor that has come about with successive waves of migrants to thrive, but using social life as the generative point of design

RE-CONNECT

Renewal of the corridor allows for the creation of a more integrated transport system and an enhanced customer experience for users.

Easy, accessible interchange between modes will be designed in, while improved walking and cycling facilities at, and between, stations will prioritise these modes. New links to town centres, across the corridor and from station to station will better connect communities and build on existing landscape and open space qualities.

Considered integration of the new will ultimately build a durable project legacy.

- Create identifiable and legible new stations within existing contexts, with easy connections to interchange points and the surrounding fine grain street networks
- Ensure a reliable and comfortable customer experience in and around station precincts, with efficient transfers between modes and a high level of urban amenity
- Build on the existing landscape character of the corridor, connecting corridor landscaping to adjacent landscapes
- Integrate disconnected areas of open space around stations, providing clearer links across the wider network

RE-GENERATE

Updating the Sydenham to Bankstown line to contemporary standards will be a critical catalyst for the 11 town centres of the corridor.

Thoughtful integration with existing landscape areas and provision of new links will foster connection and ease of travel in the region and locally.

Adding public spaces and public architecture of quality to town centres will be an important broader legacy of the project.

- Expand and enhance the existing vegetation along the corridor, building on adjacent roadway plantings and protecting endangered species.
- Establish and expand cross corridor green connections, building on the wider green grid network and enhancing opportunities for active transport and recreation
- Design for drought resilience and low maintenance, using endemic species where appropriate
- Rejuvenate local centres using Sydney Metro as the catalyst for change

2.2 Marrickville

Centre type: Local Centre

Primary Function: Origin

Catchment: Residential and retail

Local Government Area: Inner West Council

Station & Platform Type: Surface, side platform

Context
Marrickville is located 7km south-west of Sydney CBD and is the largest suburb in the Inner West Council (formerly Marrickville) Local Government Area. The suburb lies between Stanmore, Enmore, Newtown, St Peters, Sydenham, Tempe, Dulwich Hill, Hurlstone Park and Petersham.

The primary station entry is on Illawarra Road, a largely retail strip in the section between Warren Road and Marrickville Road. Some larger, multi-storey apartment buildings occur on Illawarra Road along with a significant number of shop-top housing developments. Back from the high street the southern part of Marrickville is generally a low-rise residential neighbourhood.

A secondary entry at platform level occurs on Station Street, adjacent to the country bound platform. Small apartment buildings and retail outlets characterise the Station Street block. Further to the east in the Carrington Road precinct, industrial land uses predominate.

Marrickville is listed on the State Heritage Register.

Key design drivers:
- Integration of a contemporary Metro station into an urban context characterised by the diversity of its building form.
- Improvements to pedestrian connectivity and safety in the precinct through dedicated crossings, improved pathways and a shared zone adjacent to the station.
- Enhancement of interchange provision through the addition of accessible taxi, kiss & ride and accessible parking bays, and secure bicycle parking facilities.

Existing Station Street entry
Source: COX/HASSELL

Existing Marrickville Station platform building
Source: COX/HASSELL

Cafe at Warburton Street
Source: COX/HASSELL

Street art at existing station
Source: COX/HASSELL

Landscape and Urban Character
The low-lying land of the Gumbramorra Swamp once defined the Marrickville area, along with dense woodlands and the sandstone ridgelines of the valley. The clay loam soils of the area proved to be fertile soils for market gardening and later as the source material for the brick making industry that arose in the 1880s. By the 1920s and 1930s the clay had run out and Marrickville Council had resumed most of the brick pits for public parks.

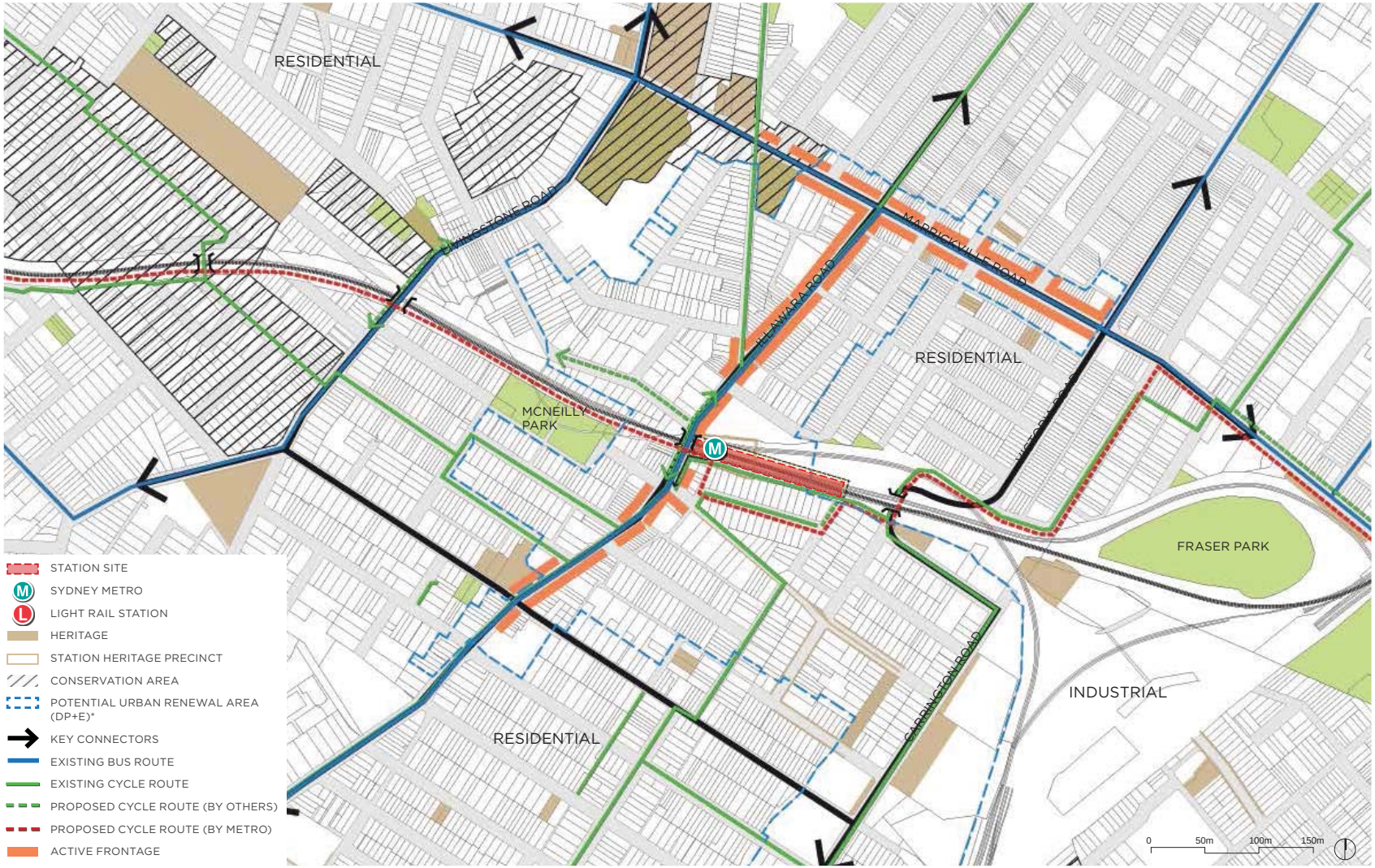
The industrial legacy is still very apparent, especially in eastern sections of the suburb where the landscape is distinctly commercial and industrial.

Residential areas are a mix of Victorian era terrace housing, Federation bungalows and a range of twentieth century building types, up to and including recent multi-storey apartment buildings.

There are extensive retail/commercial strips along Illawarra and Marrickville which combine to form one of the longest main streets in Sydney.

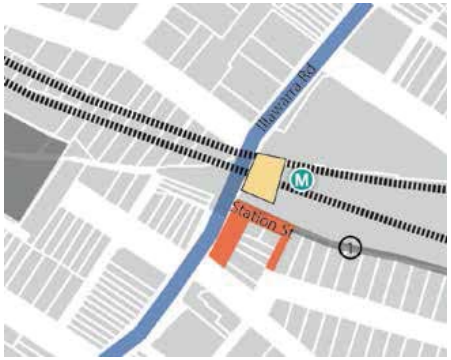
The rail corridor divides the precinct in two and restricts north-south movement. The main commercial strip is defined by traditional, fine grain, built form with 1–2 storey high street buildings of varying quality and a mix of newer, larger infill buildings. The recently completed seven storey mixed use development, north of the station, helps define the station precinct.

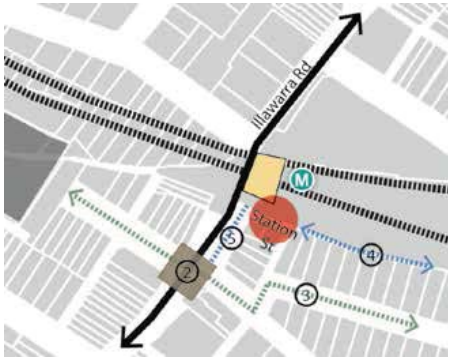
McNeilly Park, Marrickville
Source: COX/HASSELL

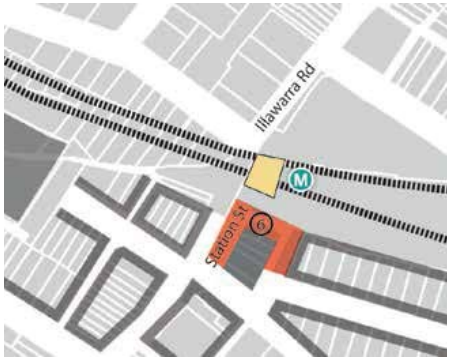


Marrickville Station Local Context Plan

* Source: Sydenham to Bankstown Urban Renewal Corridor Strategy 2015







Marrickville Urban Design Strategies

Local public domain

- Station Street plaza/shared zone will add a new, intimate public space to the public domain of the Illawarra Road precinct.
- Renewal of the southern access path and the Station Street shared zone will improve the station interface with local streets. 1

Connectivity and access

- Improvements to crossing conditions at Illawarra Road, Schwebel and Warburton Streets facilitates better connectivity. 2
- Proposed cycle route as part of active transport corridor: on Leofrene Avenue, through Station Street shared zone, below Illawarra Road and westwards in corridor. 3
- Southern station access path upgrade to improve access to the station from the east. 4
- Improve accessibility on Station Street (west) to overcome non-compliant grade. 5

Catalyst

- Marrickville Metro station and associated public space is the potential nexus for adjacent redevelopment.
- Station Street plaza/shared zone creates an intimate public space away from the high street. 6

Accessible interchange

- Secure and sheltered bicycle parking.
- Taxi and kiss and ride bays in Station Street shared zone.
- Accessible ramp on Station Street (west) to provide an accessible path to Illawarra Road northbound bus stop and Schwebel Street accessible parking bays.
- Cycle route on Leofrene Avenue, through Station Street shared zone, below Illawarra Road and in corridor west of Station Street. 7

2.3 Dulwich Hill

Centre type: Local Centre

Primary Function: Origin

Catchment: Residential

Local Government Area: Inner West Council

Station & Platform Type: Surface in cutting, island platform

Context
Dulwich Hill is located 8km south-west of Sydney CBD and is located in the Inner West (formerly Marrickville) Local Government Area. The suburb is bounded by Marrickville to the east, Hurlstone Park to the west, New Canterbury Road to the north and Cooks River to the south.

The area around the station is a mixture of single storey housing and 2-3 storey apartment blocks. In recent years a handful of taller shop-top housing developments have been added to the existing Wardell Road strip of retail and small commercial buildings. The area has a relatively coherent urban form that includes a large Heritage Conservation Area southeast of the station. The existing station entry is on the Wardell Road overbridge and the Inner West Light Rail terminus is accessed from Bedford Crescent on the northern side of the heavy rail station.

Key design drivers:
- Relocation of the station concourse to the west allows retention of the heritage platform building.
- New concourse to serve both the Metro station and the Inner West Light Rail terminus to assist efficient interchange.
- Utilise available land south of the station for a generous public space while Bedford Crescent north of the station becomes a fully accessible interchange zone.

Dulwich Hill platform
Author: Gareth Edwards

Street art along the existing cycle route at Dulwich Hill
Source: COX/HASSELL

Dulwich Hill Light Rail Station entrance
Source: COX/HASSELL

Dulwich Hill houses
Source: Walk Sydney Streets

Landscape and Urban Character
Dulwich Hill Village includes a small group of shops directly adjacent to the station while the larger Dulwich Hill town centre is on Marrickville Road and New Canterbury Road. This primary commercial and retail area is located approximately 800m north of the station.

The station village extends for a single block to the north and south. The village generally has a traditional 2 storey high street elevation, with a handful of taller mixed use buildings.

Low vehicle speeds and the relatively narrow carriageway along Wardell Road makes for an attractive public domain for pedestrians, even though the street gradient is steep. The station area is surrounded by a zone of medium density walk-up residential buildings, primarily to the south of the station.

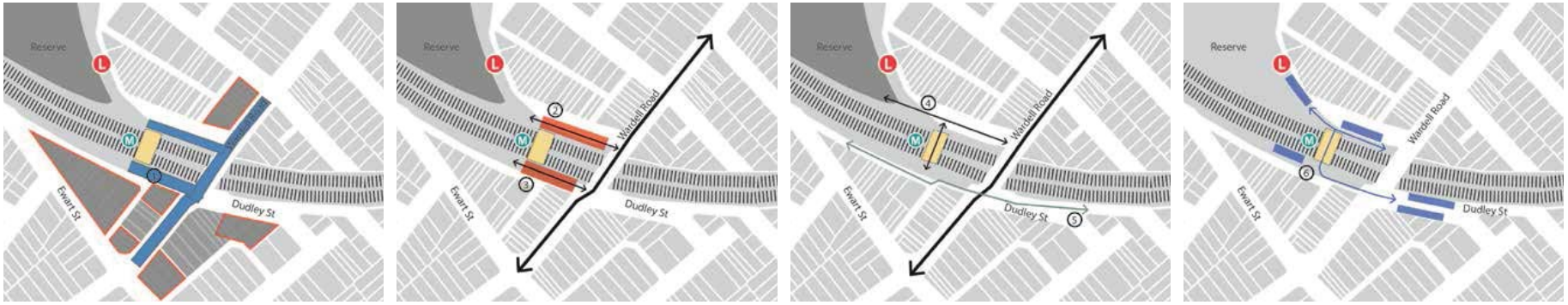
Beyond this area, the residential streets are characterised by single detached houses on relatively compact lots, generally dating from the early-20th century. The streets are relatively wide with nature strips, street trees and footpaths. Some streets, such as Ness Avenue and Albermarle Street have distinctive brick paved footpaths that date from the Depression of the 1930s.

Tom Kenny Reserve in Bayley Street and Jack Shanahan Park, adjacent to the Light Rail provide public open space in the wider station precinct.

Dulwich Hill Village Fair
Source: Your Say Inner West

Dulwich Hill Station Local Context Plan

* Source: Sydenham to Bankstown Urban Renewal Corridor Strategy 2015



Dulwich Hill Urban Design Strategies

Station and Public Space as Catalyst

- Broad public connections to new station concourse.
- Improved public domain has potential to generate wider precinct improvements.
- Southern plaza as catalyst for adjacent north facing development sites. 1

Public Domain

- Generous pedestrian / interchange zone north of station. 2
- Generous terraced plaza and shared zone to south of station. 3

Connectivity

- New Opal enabled cross-corridor connection.
- Accessible approaches to station.
- Improved link to light rail terminus and Jack Shanahan Park. 4
- Upgrade cycleway through station precinct as part of the proposed Southwest active transport corridor. 5

Accessible Interchange

- At grade accessible connection between interchange zone and station concourse.
- Lift from concourse to light rail terminus.
- Accessible path from station plaza to Wardell Road crossing.
- Secure and sheltered bicycle parking in station plaza. 6

2.4 Hurlstone Park

Centre type: Local Centre

Primary Function: Origin

Catchment: Residential and retail

Local Government Area: City of Canterbury Bankstown

Station & Platform Type: Surface in cutting, side platform

Context
Hurlstone Park Station is located approximately 8.5km south-west of the Sydney CBD in the City of Canterbury- Bankstown. The suburb is bordered by Dulwich Hill to the north and east, Earlwood to the south and Canterbury to the west. The existing station on the overbridge is immediately before the small strip shopping centre further north on Crinan Street.

The village centre is largely low scale retail and residential buildings. Beyond Crinan Street, the built form is generally single or two-storey detached housing dating to the early twentieth century. There is also a grouping of later walk up apartment blocks north of the station.

Key design drivers:
- Maintenance of the traditional station address as a local landmark at the centre of the village.
- Maintenance of the station entry on the high street overbridge, adjacent to existing bus stops.
- Improvements to the public domain around station, including connections to the Crinan Street retail centre and to the proposed interchange zone.

Excavated sandstone cutting on Platform 2
Source: COX/HASSELL

Hurlstone Park Station
Source: COX/HASSELL

Crinan Street, Dulwich Hill
Source: COX/HASSELL

Mural on overbridge
Source: COX/HASSELL

Landscape and Urban Character
Hurlstone Park is predominantly residential in nature. The small row of local shops along Crinan Street forms the village centre. Significant other commercial activities are centred on the Canterbury Road and New Canterbury Road intersection to the north. The Cooks River forms the southern boundary of the precinct.

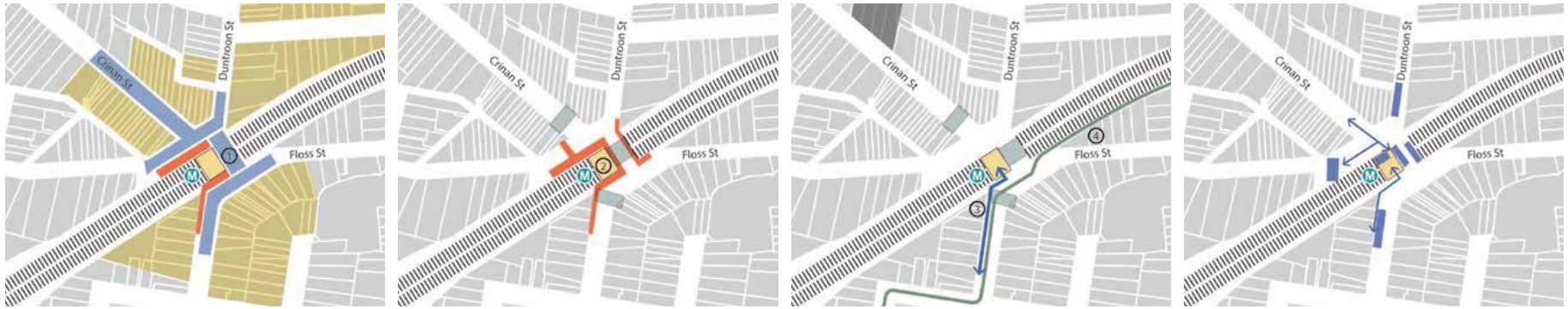
The village centre has a traditional, fine grain built form with 1–2 storey high street buildings. The centre has a consistent form created by building height and street width proportions. Together with its low vehicular speed and narrow carriageway, Crinan Street provides a comfortable and attractive public domain for pedestrians.

A small area of medium density walk-up buildings are located primarily to the north of the railway station. These buildings are a mixture of strata-title and freehold. The surrounding residential areas are largely occupied by single detached houses on relatively compact lots dating from around the early-20th century. Building stock is generally in good condition.

Hurlstone Park Wanderers
Source: Hurlstone Park Wanderers

Hurlstone Park Station Local Context Plan

* Source: Sydenham to Bankstown Urban Renewal Corridor Strategy 2015



Hurlstone Park Urban Design Strategies

Station and Public Space as Local Catalyst

- Station forecourt/plaza adds a central meeting space in the Hurlstone Park village. 1
- Improved public domain has the potential to generate wider streetscape improvements in the retail village and tie into the traditional character of the centre.

Public Domain

- Enlarged station forecourt doubling as a new local square. 2
- Kerb outstand at overbridge crossing to improve sightlines.
- New crossings on Duntroon Street (south) and Crinan Street (north) to improve pedestrian safety and amenity.

Connectivity

- Improved pathways and crossing conditions for pedestrians on both sides of the station.
- Accessible approach on southern side of station. 3
- Potential active transport connection in corridor east of the station and on-road west of the station. 4

Accessible Interchange

- At-grade accessible connection between Duntroon Street interchange zone and station entry.
- Accessible path to bus stops from station entry.
- Secured and sheltered bicycle parking.

2.5 Canterbury

Centre type: Local Centre

Primary Function: Origin

Catchment: Residential

Local Government Area: City of Canterbury Bankstown

Station & Platform Type: Surface in cutting, side platform

Context
Canterbury is located 10.5km south-west of Sydney CBD and is located in the City of Canterbury-Bankstown. The suburb closely borders the Cooks River to the south and is bisected by Canterbury Road. Earlwood lies south of the river, Hurlstone Park to the east, Campsie to the west and Ashbury to the north. The rail corridor and Canterbury Road limit pedestrian and cycle connectivity in the Canterbury Town Centre and the station precinct, in particular restricting connections to the Cooks River from the north.

The precinct north of the station is largely detached housing of the federation and Inter-war periods. South of the station a former industrial area has become a multi-storey residential zone with some ground floor retail. Further development of this type is anticipated east and north of the station and along Canterbury Road itself. Canterbury-Bankstown Council and Department of Planning and Environment are promoting the development of a new town centre to the west of Canterbury Road.

The station entry is currently on Canterbury Road where heavy vehicle traffic and extended clearways create a challenging pedestrian environment.

Key design drivers:
- A new station address aligned to changes in the local development pattern, whereby a new town centre is developing west of Canterbury Road.
- Station entries and plaza areas designed to improve pedestrian amenity and interchange efficiency.
- Improved north-south connectivity in the Canterbury urban renewal area.

Existing Platform building, Canterbury Station
Source: COX/HASSELL

Canterbury Club Hotel, Canterbury Road
Source: COX/HASSELL

Canterbury Racecourse
Source: Australian Turf Club

Platform 2 and recent development adjacent
Source: COX/HASSELL

Landscape and Urban Character
The key features of the Canterbury precinct are the Cooks River which runs through the middle of the precinct and the 35ha Canterbury Park Racecourse.

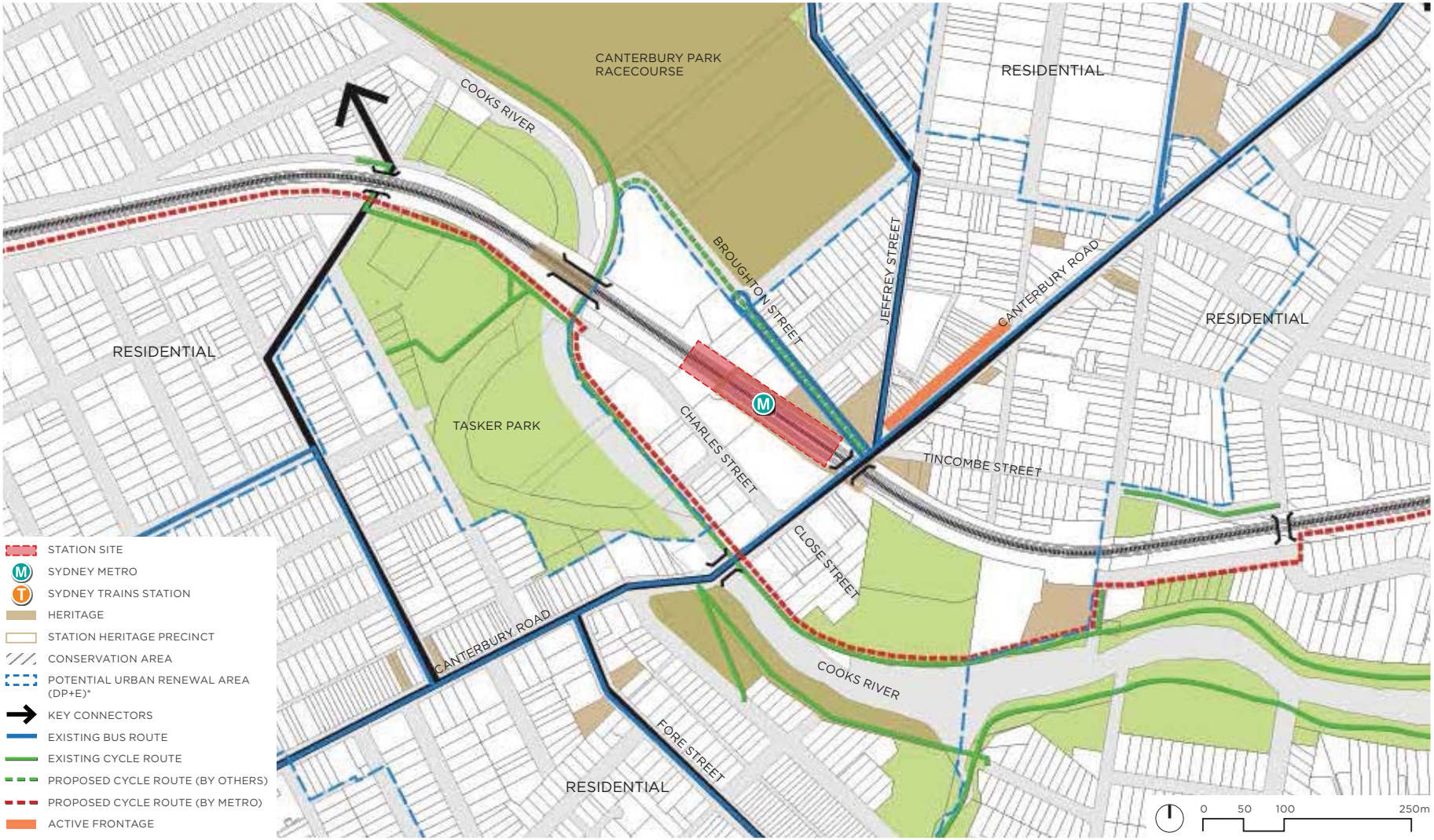
Canterbury has a linear, small business zoned centre focused along Canterbury Road and Broughton/Jeffery Street. The Cooks River and rail corridor divide the centre from the areas to the south.

The centre generally has a remnant of a fine grain, built form with 1–2 storey high street buildings along Canterbury Road. However, traffic volumes and car parking restrictions means this no longer functions as a retail street. A large supermarket complex is located off Jeffrey Street, behind the commercial strip.

Former industrial land immediately south and west of the station has been developed in recent years for mixed use and higher density residential uses. These precincts feature larger, perimeter block buildings of up to 12 storeys in height.

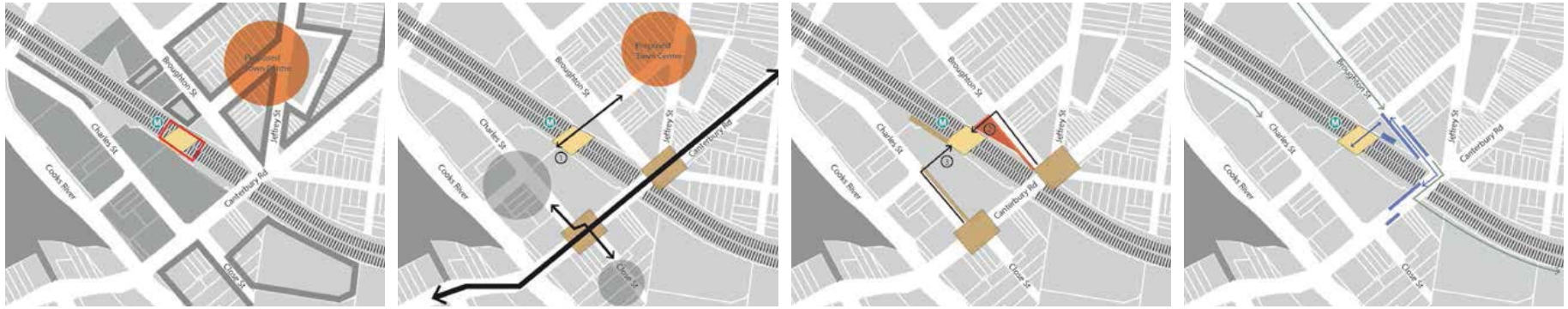
Building stock is generally in average to good condition, however a number of shop fronts along Canterbury are vacant and in poor condition awaiting redevelopment.

Cooks River
Source: City of Canterbury



Canterbury Station Local Context Plan

* Source: Sydenham to Bankstown Urban Renewal Corridor Strategy 2015



Canterbury Station Urban Design Strategies

New Canterbury Town Centre

- Canterbury-Bankstown Council and Department of Planning and Environment led promotion of a new town centre to the west of Canterbury Road precinct.
- Completion of foreshadowed development south of the rail line.

Connectivity and Access

- Station concourse provides a new (Opal enabled) cross-corridor connection between the prospective new town centre and the southern urban renewal area and the Cooks River, as well as to the bus interchange zone on Canterbury Road. 1
- Council proposed signalisation of Charles and Close Streets/Canterbury Road intersection will improve east-west connectivity.

Public Space and Pedestrian Amenity

- Proposed interchange plaza on Broughton Street will create a comfortable, attractive public forecourt to the station. 2
- New entry south of the station. 3

Accessible Interchange

- Broughton Street interchange plaza will provide comfortable, accessible connections to bus stops, taxi and kiss and ride bays, and accessible parking.
- Southern entry arrangement will provide an accessible path back to city bound Canterbury Road bus stops.
- Subject to provision of a lift at Charles Street, the existing access easement will connect to Charles Street.
- Secure bicycle parking.

2.6 Campsie

Centre type: District Centre

Primary Function: Origin

Catchment: Residential, retail, civic, interchange

Local Government Area: City of Canterbury Bankstown

Station & Platform Type: Surface in cutting, side platform

Context
Campsie Station lies approximately 13km south-west of the Sydney CBD. Campsie falls within the City of Canterbury-Bankstown (formerly Canterbury) Local Government Area. The suburb is bounded by Belfield to the north, the Cooks River to the east, Clemton Park to the south and Belmore to the west. The busy retail spine of Beamish Street runs through the centre of Campsie, a suburb that is otherwise largely residential.

The housing stock is generally a mixture of detached housing and 2-3 storey apartment blocks. Recently, more intense development has begun to emerge in the vicinity of the station. The former City of Canterbury chambers are located north of the station on Beamish Street while important local public spaces – Anzac and Carrington Squares – are found immediately southwest of the station.

The concourse at Campsie Station directly abuts the Beamish Street road bridge with the concourse retail and station buildings aligned to the Beamish Street building line. Entry to the station is from the narrow Beamish Street footpath only. The station was the subject of an upgrade in 2002 that extended the station concourse, renewed amenities and retail outlets and provided lift access to station platforms.

Key design drivers:
- Retention of primary station address and entry on Beamish Street to maintain the urban pattern/street wall.
- Creation of a generous station forecourt and a shared zone on Lilian Lane to relieve congestion and improve the public domain.
- Secondary entry on North Parade to allow accessible connections to taxis and bus services.

Entry to Station from Beamish Street
Source: COX/HASSELL

ARTC freight line, Campsie
Source: COX/HASSELL

ANZAC Square, Campsie
Source: COX/HASSELL

Campsie Centre
Source: COX/HASSELL

Landscape and Urban Character
The Campsie town centre comprises a commercial strip running in a north-south direction along Beamish Street. The precinct contains a large variety of shops, civic and community services supporting the needs of the surrounding suburbs.

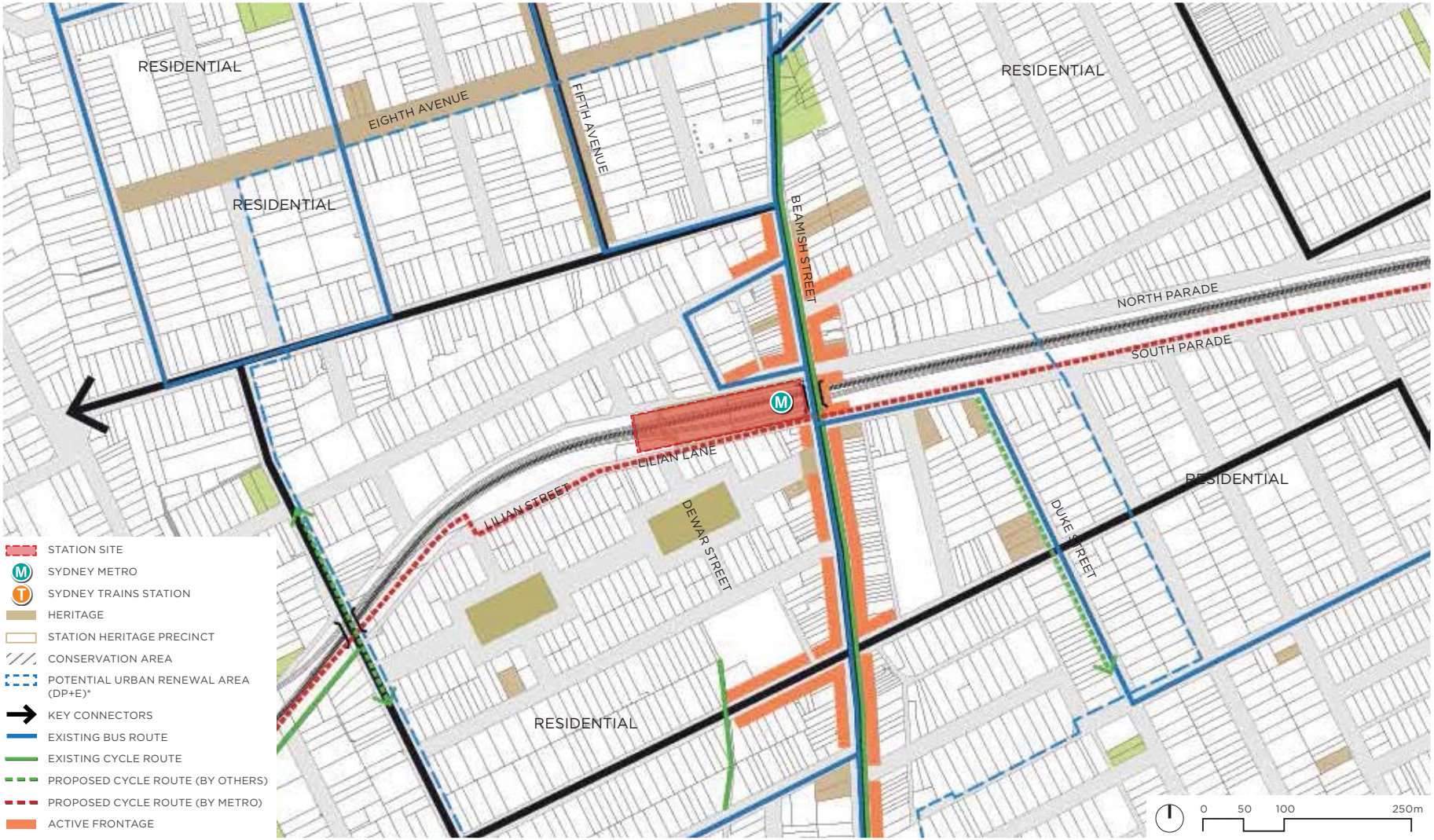
Campsie is the largest commercial centre in the former City of Canterbury local government area and is the civic and administrative hub for the surrounding area. The centre is split into two main areas by the railway line. The primary commercial strip extends along a distance of approximately 900m.

The centre generally has a traditional, fine grain built form with 1–2 storey high street buildings. Although buildings within Beamish Street are of varied architectural styling, it has a consistent form created by building height and street width proportions. Larger buildings include the council chambers within the northern section of the core and the Campsie Centre shopping centre in the southern section.

There are also a number of more recent 4–6 storey shop top housing developments. These are generally located on the eastern and western perimeter of the Beamish Street commercial strip.

The residential areas surrounding the commercial core consist of a mix of two to three storey walk up residential flat buildings and single detached houses on relatively large lots dating from around the mid 20th Century.

Campsie Food Festival
Source: Weekend Notes



Campsie Station Local Context Plan

* Source: Sydenham to Bankstown Urban Renewal Corridor Strategy 2015

Campsie Station Urban Design Strategies

Station and public space as catalyst

- Contribute to the urban renewal of Campsie town centre.
- Improved public domain on Beamish Street, Lilian Lane and North Parade to generate wider precinct improvements.
- Retention of station address on Beamish Street will keep the station as the central focus of the precinct.

High Street character

- New station will reinforce Beamish Street as the central spine of the town centre.
- New retail buildings on the station concourse and the station canopy will maintain the consistent street wall of Beamish Street across the alignment. 1
- New retail buildings on the eastern side of the Beamish Street will reinforce retail street wall.

Public domain and pedestrian amenity

- Generous 8 metre setback to create station forecourt and ease pedestrian congestion in front of station.
- New station entry and footpath upgrade on North Parade. 2
- Landscaped shared zone on southern approach to station on a widened Lilian Lane. 3
- Widened footpath on eastern side of Beamish Street.

Accessible interchange

- Greater concentration of interchange provision adjacent to station, specifically:
  - Maintenance of existing bus stops and services.
  - New taxi and kiss and ride bays.
  - Secure and sheltered bicycle parking.
  - Active transport link along Lilian Street and Lilian Lane. 4

2.7 Belmore

Centre type: Local Centre

Primary Function: Origin

Catchment: Residential and retail

Local Government Area: City of Canterbury Bankstown

Station & Platform Type: Surface in cutting, island platform

Context
Belmore Station is located on Burwood Road in Belmore, approximately 14km south-west of the Sydney CBD in the City of Canterbury-Bankstown. The existing station on Burwood Road lies in the centre of the town centre strip shopping centre. The proposed Metro station at Belmore is located to the east of the existing station entry with an entry plaza on the southern side of the alignment and a shared interchange zone on Tobruk Avenue.

The suburb of Belmore is bounded by Belfield to the north, Campsie to the east, Kingsgrove to the south and Lakemba to west. Belmore is characterised by low scale built form, generally single or two-storey detached housing and apartment blocks. Although there are three discrete areas of land with higher density zoning in Belmore, the prevailing character of the suburb is established by its many detached bungalows on relatively large lots.

Key design drivers:
- Retention of state heritage listed platform building made possible through relocation of station entry and concourse to the east.
- Creation of an interchange zone on Tobruk Avenue adjacent to station plaza with associated changes to traffic flow on Tobruk Avenue and signalisation of the Tobruk/Burwood/ Bridge intersection.
- A large public plaza on Tobruk Avenue to connect the town centre, the station and Belmore Park/Sports Ground.

Belmore Station
Source: COX/HASSELL

Belmore town centre, Burwood Road
Source: COX/HASSELL

Existing buildings, Burwood Road
Source: COX/HASSELL

Burwood Road station entry
Source: COX/HASSELL

Landscape and Urban Character
The Canterbury League Club building on Bridge Road is the most significant built form within the locality. In addition, the nearby Belmore Sports Ground and the landscaped open space and pedestrian walkway from Burwood Road are also key land use features of the precinct.

The centre generally has a traditional, fine grain/ human scale built form with 1–2 storey high street buildings.

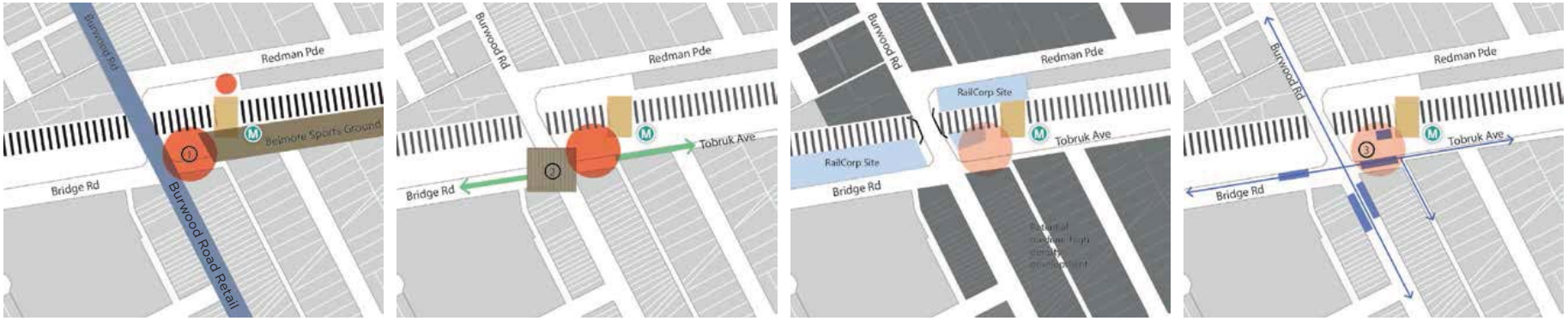
The surrounding precinct has three discrete areas of higher density residential development. Compared to the adjoining precincts of Campsie and Lakemba, the precinct is relatively small and has a smaller area of strata titled buildings. The outer residential areas of the precinct are largely occupied by single detached houses on relatively large blocks dating from around the mid-20th century.

Belmore retains much of its early twentieth-century Federation and interwar California Bungalow housing stock.

Belmore Sports Ground, home to Canterbury Bankstown Bulldogs and Sydney Olympic FC
Source: NBA Live Score Now

Belmore Station Local Context Plan

* Source: Sydenham to Bankstown Urban Renewal Corridor Strategy 2015



Belmore Station Urban Design Strategies

A Public Plaza Connecting Park and High Street

- A landscaped urban plaza will connect the station, the Burwood Road village and the linear parkland of the Belmore Sports Ground. 1
- A small, northern entry plaza on Redman Parade which will include retail development, secure bicycle parking, public seating, artwork and landscaping.

A Green Connected Corridor

- A generous station plaza and shared zone on Tobruk Avenue. 2
- Tobruk Avenue/Bridge Road/Burwood Road will become a signalised intersection, improving vehicle, pedestrian and cycling connectivity from east to west.
- The crossing and shared zone will link the proposed on-road cycle route on Bridge Road to the shared path through Belmore Sports Ground.

Belmore Town Centre Urban Renewal

- Metro at Belmore will contribute to the renewal of the town centre. Zoning proposals outlined in the Department of Planning and Environment's Sydenham to Bankstown Draft Urban Renewal Corridor Strategy (2015) allow for 3-5 storey shop-top housing along Burwood Road and a mixture of medium and high density development within 400 metres of the station.
- Future development on the Redman Parade site could include a northern station entry.

Accessible Interchange

- The Tobruk Avenue shared zone will consolidate taxi and kiss and ride bays immediately adjacent to the station plaza with additional provision on Redman Parade. 3
- Secure bicycle parking will be located in the plaza.
- Bus stops on Burwood Road will remain within 50 metres walking distance of the station plaza.

2.8 Lakemba

Centre type: Local Centre

Primary Function: Origin

Catchment: Residential

Local Government Area: City of Canterbury Bankstown

Station & Platform Type: Surface in cutting, island platform

Context
Lakemba is located 15km south-west of Sydney CBD and is located in the City of Canterbury-Bankstown. The suburb is bounded by Greenacre to the north, Belmore to the east, Roselands to the south and Wiley Park to the west.

The main retail/commercial strip runs north-south along Haldon Street with extensions to it on Railway Parade and The Boulevarde, adjacent to the station. Haldon Street is an attractive and dynamic retail strip, and a slow traffic environment, conducive to pedestrian and social activity. The existing station plazas are well used public spaces.

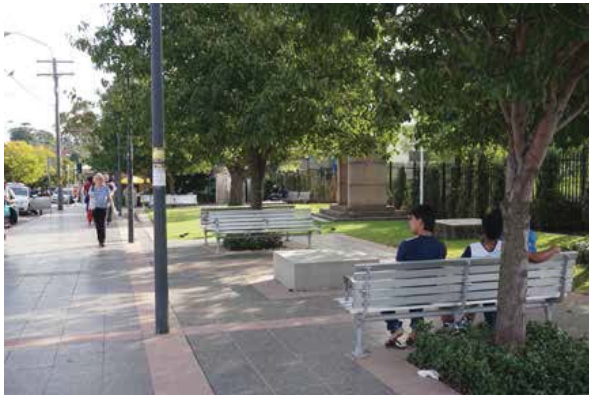
The wider precinct takes in a number of community, religious, cultural and educational sites, from the Lakemba Library and Lakemba Club on The Boulevarde, the Lakemba Mosque on Wangee Road, the Musallah (outdoor Mosque) on Railway Parade and Haldon Street, to a range of private and public schools (Hampden Park Public School, Holy Spirit College, Risallah College and St Therese's Public School.

Key design drivers:
- Retention of station entries in existing well-used plazas, on The Boulevarde and Railway Parade.
- Extension and modification of plazas to allow accessible interchange provision and increased public amenity.
- Protection and retention of plaza memorial and mosaic.

Railway Parade station entry
Source: COX/HASSELL

The Boulevarde, Lakemba
Source: COX/HASSELL

Railway Parade Reserve with multicultural mosaic and Mediterranean plantings.
Source: COX/HASSELL



The Boulevarde plaza, WWI Memorial
Source: COX/HASSELL

Landscape and Urban Character
Lakemba town centre comprises a retail/commercial strip running north-south along Haldon Street. The centre has a traditional, fine grain built form with 1–2 storey high street buildings. Although buildings within Haldon Street are of varied architectural styling, it has a consistent form created by building height and street width proportions. Together with its low vehicular speed and narrow carriageway, Haldon Street provides a comfortable and attractive public domain for pedestrians.

The town centre is surrounded by an area of medium density housing. Strata titled apartment buildings are generally concentrated within the western portion of the high density residential area.

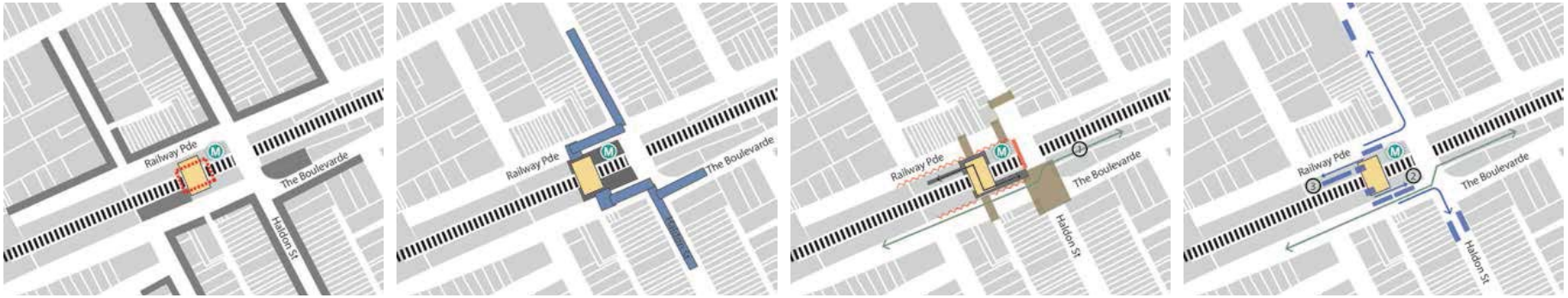
The outer areas of the precinct are largely occupied by single detached houses on relatively large lots dating from around the mid 20th century, including some weatherboard housing stock.

Lakemba Mosque
Source: Skyscraper City

Haldon Street Festival
Source: Haldon Street Festival

Lakemba Station Local Context Plan

* Source: Sydenham to Bankstown Urban Renewal Corridor Strategy 2015



Lakemba Station Urban Design Strategies

Station and Public Space as Catalyst

- The station and its plazas will contribute to the wider urban renewal of the precinct.
- The existing low rise retail site south of the station is a significant development and activation opportunity.

Public Domain

- The extension and upgrade of station plazas has the potential to generate wider public domain improvements in the town centre.
- The war memorial and local mosaic will be maintained as features of the new plazas.
- Tree planting in the plazas can build on the Mediterranean theme currently apparent in the northern plaza.

Connectivity

- Redevelopment of the southern plaza and an extension west of the northern plaza will allow accessible connections to, respectively, taxi bays and Haldon Street and Railway Parade kiss and ride bays.
- The proposed active transport corridor will provide an on-road cycle route adjacent to Lakemba Station. 1
- Separated paths are proposed in the corridor west of the station and a cycle path in the corridor to the east.

Accessible Interchange

- Re-grading of the southern plaza will create an accessible connection to taxi bays and to Haldon Street bus stops. 2
- A kiss and ride zone on Railway Parade with allow for an accessible path to station. 3
- Secure and sheltered bicycle parking.

2.9 Wiley Park

Centre type: Local Centre

Primary Function: Origin

Catchment: Residential

Local Government Area: City of Canterbury Bankstown

Station & Platform Type: Surface in cutting, side platform

Context
Wiley Park is located 17km south-west of Sydney CBD in the City of Canterbury-Bankstown. The suburb is bounded by Greenacre to the north, Lakemba to the east, Roselands to the south and Punchbowl to the west.

The station precinct is dominated and divided by King Georges Road, a busy arterial road with extended clearway hours. There is a small retail centre adjacent to the station on King Georges Road which extends to Lakemba Street.

Three public schools lie immediately south of the station - Wiley Park Girls High, Wiley Park Public School and Lakemba Public School - but otherwise the precinct is predominantly residential. Medium density apartment buildings, of generally 3 storeys, occur just north and east of the station. Remaining areas are typically occupied by single detached houses.

Key design drivers:
- Maintain traditional entry on King Georges Road but with additional openings to The Boulevarde and the northern side laneway for a more permeable station concourse and public domain.
- Wider setback from the main road and landscaped approaches from the west to improve the pedestrian environment.
- New retail kiosk on enlarged station concourse.

Existing Wiley Park station entry
Source: COX/HASSELL


King Georges Road
Source: COX/HASSELL


Wiley Park Station platforms
Source: COX/HASSELL


Cao Dai Vietnamese Temple, King Georges Road, Wiley Park
Source: COX/HASSELL

Landscape and Urban Character
Wiley Park comprises a small local centre and has a limited range of retail and takeaway food and drink premises, focused on King Georges Road and Lakemba Street.

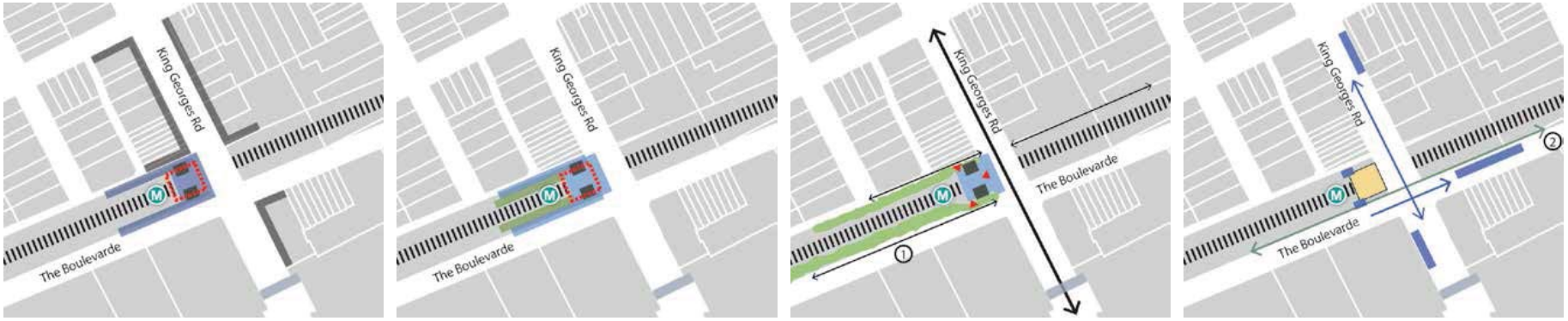
The centre is largely occupied by convenience and fast food type uses, together with the Wiley Park Hotel. Built form is generally 1–2 storey shop-top housing buildings with the exception of two larger and more recent mixed-use buildings.

The precinct is characterised by medium-density residential flat buildings to the north and east of the commercial core. This area generally consists of older, small scale (3 storey) buildings occupying narrow sites with a high proportion of strata-titled properties. Outside the core, residential areas are largely occupied by single detached houses on relatively large blocks dating from around the mid-20th century.

Wiley Park Amphitheatre
Source: City of Canterbury Bankstown

Wiley Park Station Local Context Plan

* Source: Sydenham to Bankstown Urban Renewal Corridor Strategy 2015



Wiley Park Station Urban Design Strategies

New Metro Station as Local Catalyst

- The new station and its associated plazas will introduce a new urban standard to this currently run down urban setting.

Public Domain

- Attractive station forecourt.
- More generous setback of station from King Georges Road.

Pedestrian Environment

- Landscaped pedestrian approaches to the station.
- Station design creates a more permeable entry arrangement, with entry from the north, east and south.
- Extended shared path on the southern side of the station as part of a future active transport corridor. 1

Accessible Interchange

- At-grade accessible connection to interchange zone on The Boulevarde.
- Secure and sheltered bicycle parking.
- Shared path as part of future active transport corridor on southern station approach. 2

2.10 Punchbowl

Centre type: Local Centre

Primary Function: Origin

Catchment: Residential and education

Local Government Area: City of Canterbury Bankstown

Station & Platform Type: Surface, side platform

Context
Punchbowl is located 17km south-west of Sydney CBD and is within the City of Canterbury-Bankstown. The suburb is bounded by Greenacre to the north, Wiley Park to the east, Riverwood to the south and Bankstown/Mt Lewis to the west.

The immediate station precinct is a mix of small retail and commercial premises, recent multi-story apartment blocks, shop-top housing and a range of community, educational and religious institutions. The wider area is largely 2-3 storey walk up apartment blocks and detached housing. The main and most lively retail street is The Boulevarde where the southern station entry is found. By contrast, pedestrians and the businesses on Punchbowl Road suffer from a more hostile traffic environment. Punchbowl Road divides the northern part of the centre around Breust Place from the southern area centred on The Boulevarde. A narrow pedestrian underpass below Punchbowl Road connects Brueust Place back to Warren Reserve and the station. The northern station entry lies in Warren Reserve.

Key design drivers:
- New station entry locations allow for more generous public spaces north and south of the station.
- Relocation of the southern entry will enable a better relationship between the new station and the emerging mixed use, revitalised main street activity along The Boulevarde.
- Creation of the northern plaza and associated paths and landscaping will result in improved circulation and amenity in Warren Reserve.
- An accessible ramp to Urunga Parade and a pedestrian crossing on Punchbowl Road will add accessible, safe connections to the interchange and across the north of the precinct.
- Reconfiguration of the rail tracks provides the opportunity for a replacement pedestrian/cycle under Punchbowl Road.

Punchbowl Station platform
Source: COX/HASSELL

Entry plaza on The Boulevarde
Source: COX/HASSELL

Punchbowl town centre, historic signage
Source: COX/HASSELL

Rest Park (Warren Reserve) approach to northern entry from Punchbowl Road
Source: COX/HASSELL

Landscape and Urban Character
The Punchbowl town centre is spread between Punchbowl Road and The Boulevarde and includes a range of retail, community and residential land use. It extends from the station approximately 200m to the east, south-west and north east in a semi-radial fashion. The rail corridor, coupled with Punchbowl Road, divides the town centre.

In recent times, the commercial precinct has extended further east, with the development of a large multi-building, mixed-use development that includes a supermarket and several minor retail tenancies, with residential apartments above.

Similar shop-top housing, generally 4–5 storeys in height, has also arisen on Punchbowl Road.

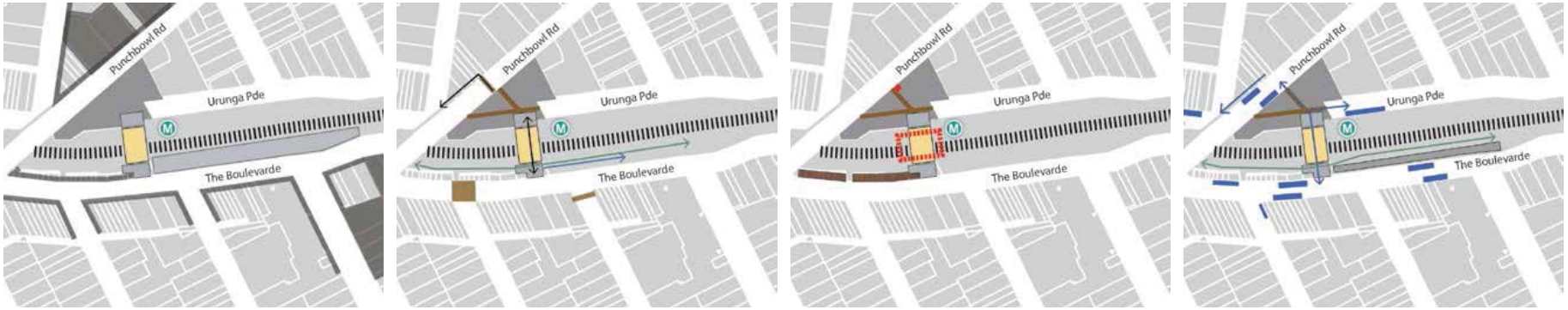
The centre has a finer grain built form, with 1–2 storey High Street buildings. Although building form and architectural expression is varied, the centre is reasonably consistent in terms of building height and street width proportions. The public domain has been upgraded in recent years and is generally a comfortable and attractive place for pedestrians.

The core is adjoined by a large area of higher density zoned residential land to the south. This largely contains existing detached houses and 3 storey walk up residential flats. Land located beyond the Punchbowl Road commercial strip, on the north-western side of the precinct, is generally restricted to low density residential uses.

Punchbowl Community Centre
Source: GroupN

Punchbowl Station Local Context Plan

* Source: Sydenham to Bankstown Urban Renewal Corridor Strategy 2015



Punchbowl Station Urban Design Strategies

Station and public space as catalyst

- Recent development pattern evident on The Boulevarde and Punchbowl Road likely to extend throughout the centre with the advent of Metro station.
- Large site south of the station suited to mixed use or residential development.
- New station plaza likely to promote new retail and commercial activity.

Public domain, access and circulation

- The new station plaza on The Boulevarde will provide a generous public space for the centre.
- Pedestrian and cycle paths will connect to the station plaza and the adjacent car park.
- A new signalised crossing on Punchbowl Road will provide safe connections to Breust Place and to the north of the precinct.

Station address and legibility

- Station entry plazas will create clear view corridors to the station from the precinct.
- The Metro entrance will be highly visible in the centre and specifically from the Punchbowl Road bridge.

Interchange

- The eastbound bus stop on The Boulevarde and is proposed to be moved closer to the new station plaza.
- A new crossing on Punchbowl Road to eastbound bus stop and to school bus stops on Breust Place.
- New taxi and kiss and ride bays are proposed and taxi bays on Arthur Street will remain.
- Dedicated kiss and ride and accessible parking bays are proposed on Urunga Parade.
- Generous secure and sheltered bicycle parking.

2.11 Bankstown

Centre type: District Centre

Primary Function: Origin, Destination and Interchange

Catchment: Employment, retail, civic, interchange

Local Government Area: City of Canterbury Bankstown

Station & Platform Type: Surface, island platform

Context
Bankstown is located 20km south-west of Sydney CBD and is located in the City of Canterbury-Bankstown Local Government Area. The suburb is bounded by Potts Hill to the north, Punchbowl to the east, Padstow to the south and Condell Park to the west.

Bankstown is a major strategic centre in southwest Sydney with strong employment, civic, retail functions. It also is a significant centre of interchange between bus and train services. The building stock and urban form is varied, from larger twentieth century commercial buildings, a range of public buildings and spaces, shops and residential buildings of traditional scale and more recent multi-storey apartment buildings.

The Bankstown CBD is centred on the Bankstown station and exhibits a vibrant street character, especially on smaller commercial streets such as Bankstown City Plaza and Chapel Road. Large retail centres like Bankstown Central and their attendant surface and/or rooftop car parking also typify the centre. A civic precinct north of the station features striking new architectural buildings including the library overlooking a major town centre park. Other key civic buildings include a performing arts centre/theatre adjacent to the library. The rail corridor and the South Terrace bus interchange and its associated restricted traffic pattern profoundly divide the centre.

Key design drivers:
- New station concourse to provide direct, fully accessible connection to Metro platforms and secondary access to Sydney Trains' platforms.
- New concourse and extensions to existing plazas to provide an unpaid cross-corridor connection in central Bankstown.
- Southern plaza extension to provide a forecourt to heritage listed former Parcels Building.

Bankstown Station platform
Source: COX/HASSELL

South Terrace bus interchange
Source: COX/HASSELL

Recent apartment development along South Terrace
Source: COX/HASSELL

Bankstown City Plaza
Source: COX/HASSELL

Landscape and Urban Character
Bankstown offers extensive retail, community and civic services within a CBD precinct focused on the northern and southern sides of the Bankstown Station.

Building stock varies considerably in age, condition and architectural presentation. Key building typologies include older style attached shop fronts with office space or residential development above, larger commercial office buildings from the late 20th century and newer civic buildings around Paul Keating Park.

Other key sites within the CBD include the Bankstown Central Shopping Centre, Bankstown Sports Club and Bankstown RSL Club.

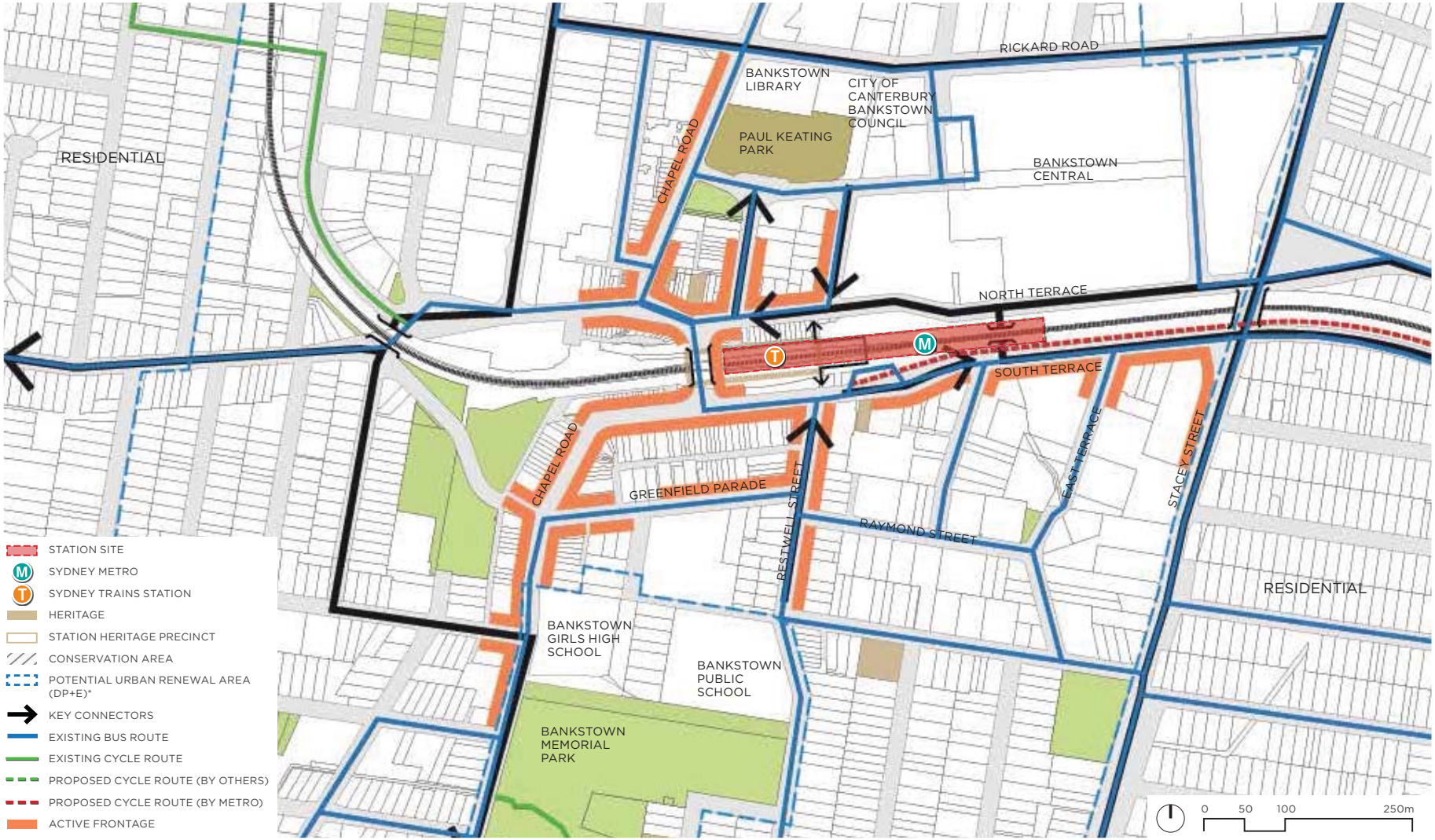
Residential buildings within the north-east, north-west and south eastern precincts surrounding the CBD core also vary significantly in age and style from 3 storey walk up flats to more modern strata title, multi-storey residential flat buildings over basement car parking.

The majority of the building stock has been constructed within the later part of the 20th century with limited newer stock present near to the railway line. These buildings are often interspersed with a number of single storey dwellings which are yet to be redeveloped, particularly within the northern precinct.

Beyond this area, there is generally lower density housing with a number of more modern villa and townhouse style developments present.

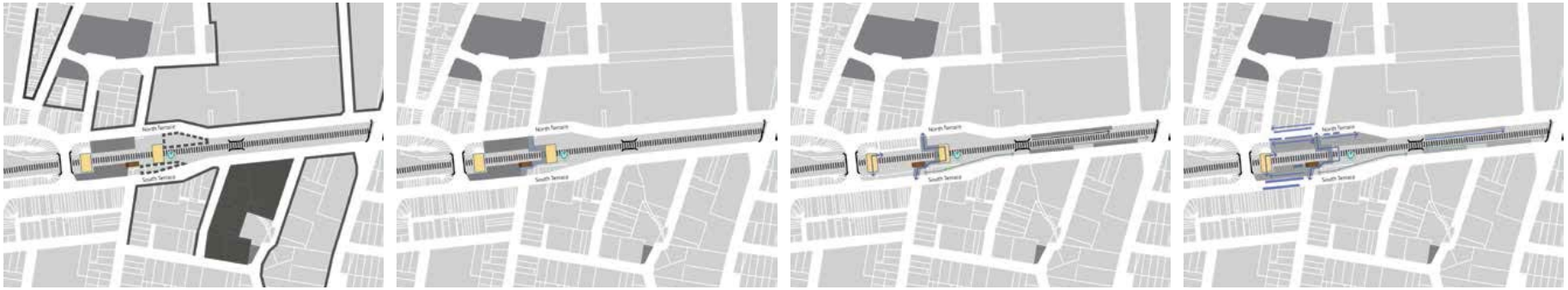
Sydney Eid Festival, Paul Keating Park
Source: Daily Telegraph

Youth Week 2015, Paul Keating Park
Source: Chirstopher Woe Photography



Bankstown Station Local Context Plan

* Source: Sydenham to Bankstown Urban Renewal Corridor Strategy 2015



Bankstown Station Urban Design Strategies

Station and public space as catalyst

- New Metro station and high frequency service will reinforce Bankstown's strategic role in Sydney's southwest.
- The station is likely to stimulate urban renewal and greater housing density in the centre, building on recent development on South Terrace, and supporting mooted regeneration of retail and commercial sites north of the station.

Public domain

- Existing station plazas will be extended eastwards to serve Metro entries, providing additional public amenities.
- Metro will introduce an unpaid concourse across the corridor, enabling additional mid-block pedestrian access.
- Southern plaza extension will provide an improved setting for the heritage listed Parcels Building.

Connectivity and access

- Existing unpaid Sydney Trains concourse will remain.
- New unpaid cross-corridor connection aligned to Restwell Street/The Appian way.
- New access paths servicing commuter parking east of the station.
- Southern access path doubling as active transport link shared path.

Accessible interchange

- Bus interchange will remain on South Terrace.
- Extended taxi and kiss & ride zones on North Terrace.
- Generous secure and sheltered bicycle parking in the station plaza.
- Accessible parking bays on North Terrace.
- Active transport link on southern side of the alignment.

3 Function & Experience

About this Section

This section provides guidelines for the spatial and functional design of the urban and public domain in each station precinct, as well as the urban form of associated project development. The guidelines are articulated according to a number of core design strategies that guide the planning and design of Metro stations and their precincts. The strategies are grouped under the following family headings:

- An Easy Customer Experience
- Identity
- Connectivity

More detailed design guidelines and key requirements for each of these strategies will be included in the scope and performance documents during the procurement stage.

The customer is at the centre of design.
Source: TfNSW

3.1 An Easy Customer Experience

An easy customer experience is central to all aspects of the Sydney Metro design. A high quality customer transport product across the whole 'door-to-door' customer journey is critical to the customer experience. Sydney Metro will be a fast, safe, reliable, easy service for all customers.

Sydney Metro will cater to all customers including daily commuters, people with disabilities, families and infrequent users.

The key public transport customer service design principles which underpin customer focused design are provided below.

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.

This part of the document provides guidelines for the following areas of the customer experience:

- Customer Centred Design
- Customer Circulation
- Wayfinding and Legibility
- Comfort and Amenity
- Customer Safety
- Accessibility

Provide an easy experience for a diverse range of customers.
Source: TfNSW

3.1.1 Customer Centred Design

Relevant Design Objectives	
1	Ensuring an easy customer experience

Principle

Customer Centred Design (CCD) is the process that brings the 'customer to the centre of everything we do'.

Guidelines

Understand	Discover	Define	Ideate	Prototype	Test
Analysis of contextual data to understand the customer's environment.	Understand the needs and behaviours of customers for whom we are designing. Uncover the root cause of customer pain points and build empathy through customer stories.	Articulate the problems to be solved for our customer segments.	Generate ideas and evaluate to ensure customer/problem fit.	Development of ideas to prototypes (both low and high fidelity).	Validation of product/ solution fit with customers.

3.1.2 Customer Circulation

Relevant Design Objectives

1	Ensuring an easy customer experience

Principle

Provide adequate space to meet customer demands, including during peak periods and long-term patronage demands. Provide customer circulation that is comfortable, enabling an easy customer experience.

Guidelines

- Each part supports a different range of functions that must be addressed on station opening and in future scenarios.
- The movement capacity, configuration and spatial sequences of each of the Sydney Metro stations is to respond to patronage requirements as defined by a Level of Service (LOS) appropriate to the location and context.
- Pedestrian paths, crossings and spaces adjacent to Sydney Metro stations are to have sufficient capacity to meet potential demand with particular consideration of key decision points (gatelines, entrances, exits, customer queue zones) and information points. Where constrained, this may be met by extending the public domain into the station forecourt.
- The customer circulation paths within the station 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. These should reflect pedestrian desire lines as much as possible to enhance the convenience of circulation routes.
- Provide natural light over primary customer circulation zones where possible.
- To deliver ease, safety and efficiency, stations must cater for and avoid friction between habitual-use customers and unfamiliar customers. Information and services for each type of customer should coexist without friction.
- Ancillary development and activities (retail, commercial or residential development, services areas and advertising structures) within Sydney Metro station sites are not to compromise efficient transport operations.
- All areas are to provide sufficient space for emergency access and movements in accordance with relevant design standards and legislation.

South Morang Rail Extension, Vic. Clear sight lines and circulation paths through station entry.
Source: COX, Copyright: Dianna Snape

3.1.3 Wayfinding and Legibility

Relevant Design Objectives

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

Principle

Provide intuitive, clear and consistent wayfinding as well as legible, intuitive spaces to enhance customer journeys through efficient navigation and interchange. Wayfinding is to create a seamless and intuitive customer journey from origin to final destination to support an easy customer experience.

Guidelines

- Planning for wayfinding and legibility will support all customers to travel independently and easily on Sydney Metro. This is done by:
  - Anticipating the needs of customers
  - Providing the accurate information at the right time
  - Planning and creating predictable and intuitive environments
  - Applying consistent system of signs and information.
- Spaces are to be visually simple and intuitive to negotiate, to contribute to an easy customer experience. This is done 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 routes for customer access
- Wayfinding must be easily understood by all customers and reduce the need for customers to ask staff for directions and information.

Note - further guidelines on Information and Signage are set out in Section 4.4.1

Legible spaces at North Sydney Station
Source: COX

3.1.4 Comfort and Amenity

Relevant Design Objectives

1	Ensuring an easy customer experience

Principle

Provide a comfortable customer environment that provides sufficient personal space and amenity and is well lit with effective and appropriate microclimate amenity for all users.

Guidelines

- Station entry orientation and design are to minimise adverse micro climate effects including wind tunnel impacts.
- Customer weather protection outside Sydney Metro stations is to be provided to ensure good levels of customer comfort are maintained and to provide useable spaces 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 cycle ways are to have adequate shade and day and night time lighting, while minimising energy consumption, providing an appropriate balance between sun access in winter and shade in summer.
- Minimise urban heat island effect through light coloured finishes, roofs and pavements, green walls, roofs, plantings and shade trees.
- Furniture and materials selected are to be appropriate to the local climatic environments.

West End Ferry Terminal, QLD. Shaded seating areas provide comfortable places for customers to wait with high visibility to the surrounding area.
Source: COX, Copyright: Christopher Frederick Jones

3.1.5 Customer Safety

Relevant Design Objectives

1	Ensuring an easy customer experience

Principle

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

Guidelines

General

- Design for safety is to be optimised through the application of relevant Crime Prevention through Environmental Design (CPTED) principles and guidelines.
- Integrated CCTV systems must be provided at entry and exits, stairways, ramps, bridges, 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

- An initial CPTED review of station precincts is to assess activity generators, edge effects, movement predictors, conflicting user groups, crime hotspots, the 'displacement phenomenon' and building elements
- All public domain areas are to be planned with guidance from CPTED experts, adopt a risk prevention design approach and eliminate entrapment and concealed space opportunities.

Stations

- The station design is to incorporate CPTED strategies:
  - Eliminating hidden spaces, recesses or voids that could provide a person with the ability to conceal themself or others from general view.
  - Secured stations out of operating hours and during emergencies.
  - Ticket Vending Machines positioned to allow surveillance.
  - Minimising inadvertent or intentional access to hazardous or unauthorised areas of the station.
  - Physical barriers to minimise the risk of trespass or self-harm by station users.
  - Protective screening to elevated walkways and concourse areas particularly where persons traverse above or immediately adjacent to the rail corridor.
  - Glazed lift car and lift shaft enclosures to maximise visibility and safety.
- Station designs are to support visible staff presence as close as possible to customer movement and decision making zones to enhance customer safety.
- The stations are to be designed to minimise obstructions and projections, providing clear routes for customers.
- Station designs are to eliminate crush zones and provide equipment at safe and accessible locations.

Help Points

- Help points should be easily identifiable, accessible components integrated into station cladding systems.
- Help points are to be easily differentiated from customer information points.
- Help point enclosures should be integrated with the surrounding wall or equipment cabinet.

Vandal-resistant fittings and levels of visibility between concourse and platform at Cheltenham Station
Source: COX

3.1.6 Accessibility

Relevant Design Objectives	
1	Ensuring an easy customer experience
2	Being part of a fully integrated transport system

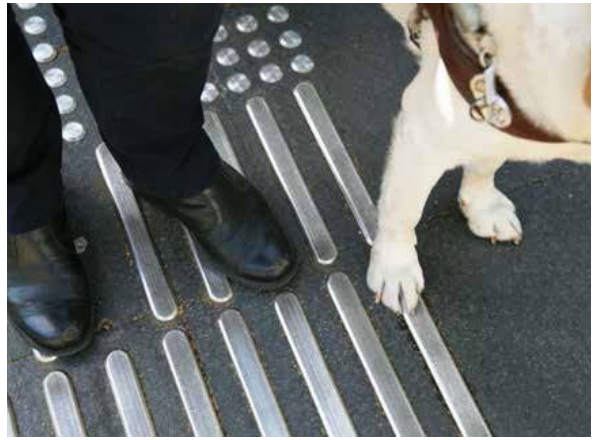
Principle

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 easy, safe and accessible for all to use including the elderly, customers with disabilities, young children and those with prams and 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, then they must be easy and safe to use.
- Where obstacles to universal access are unavoidable, clearly legible alternative routes must be provided as close as possible to the main travel path.
- Where stairs are required, clearly legible, alternative accessible circulation routes are to be provided. These alternatives are to be as close as possible and not isolated from the primary circulation route.
- Where lifts 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 must be designed to be accessible to all customers. Accessible and ambulant toilets must be provided.
- Cluster accessible features and facilities as close as possible to each other to avoid lengthy journeys between.
- Priority seats and adequate space should be provided in waiting areas and around groups of seating to accommodate the elderly and customers with disabilities and prams.
- Information must be provided throughout the customer journey that considers user impairment, culture and language.
- Equivalent service and safety information must be provided for customers with disabilities in their preferred accessible format.
- Provide obvious help points for staff assistance where needed.
- All Metro service elements must comply with the Disability Discrimination Act 1992 and associated Public Transport and Premise Standards.

Universal access must be provided to all stations and precinct facilities.
Source: San Francisco Municipal Transportation Agency



Universal access must cater to customers with a wide range of disabilities.
Source: TfNSW

3.2 Identity

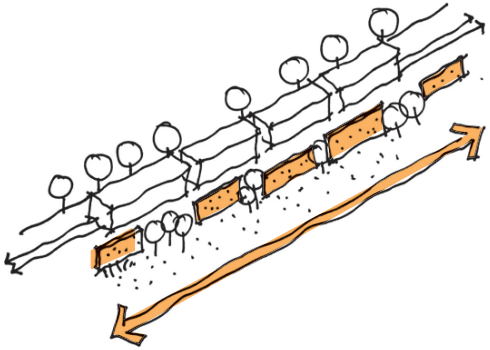
The project is an opportunity to foster an exemplary architectural and urban design experience that connects with the diverse communities along the corridor so that they embrace and identify with the metro, the rail line and the opportunities it creates.

The Sydney Metro line-wide identity relies on consistent themes and design elements across the internal and external areas of the station. It is important that the station entrances engage with their local context to create welcoming landmarks in the urban environment.

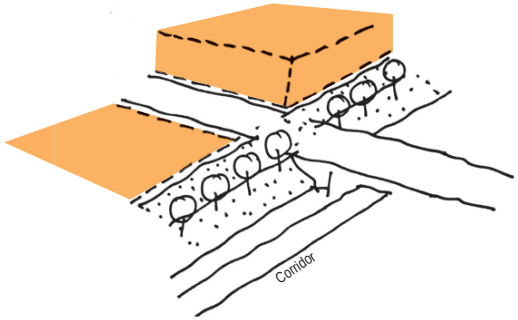
Achieving a 'whole-of-corridor' identity for Sydney Metro is a key design objective. The design strategies in this section contribute to the character, appearance, accessibility and function of the stations and their surrounding precincts. A unified approach can be fostered through adherence to common strategies for buildings and structures, finishes, accessibility and legibility that respond to local contexts while forming part of a 'whole-of-corridor' identity.

This part of the document provides guidelines for the following areas of creating a Sydney Metro identity:

- Network and Station Legibility
- Place Making
- Heritage & Archaeology
- Environment & Sustainability
- Corridor Landscape
- Art
- Lighting



Rediscover



Renew

3.2.1 Network and Station Legibility

Relevant Design Objectives	
1	Ensuring an easy customer experience
2	Being part of a fully integrated transport system
4	Being responsive to distinct contexts and communities

Principle

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

Guidelines

- A network identify has been established for the metro service, including a brand and key system element.
- A line-wide identity is to be established through the architectural language and layout of the station types (open cut / at grade – island platform / side platform).
- 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
  - Local identity
  - Interchange with other modes of travel.
- Stations, service facilities, public domain elements, component elements and the rail corridor are all 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.

Architectural elements are to form a line-wide identity.
Source: COX

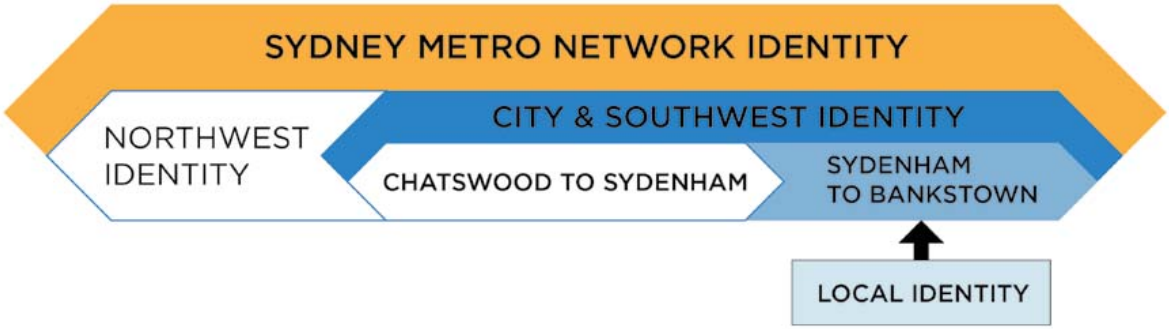


Diagram highlighting the various layers of identity that should be considered in the design.

3.2.2 Place-making

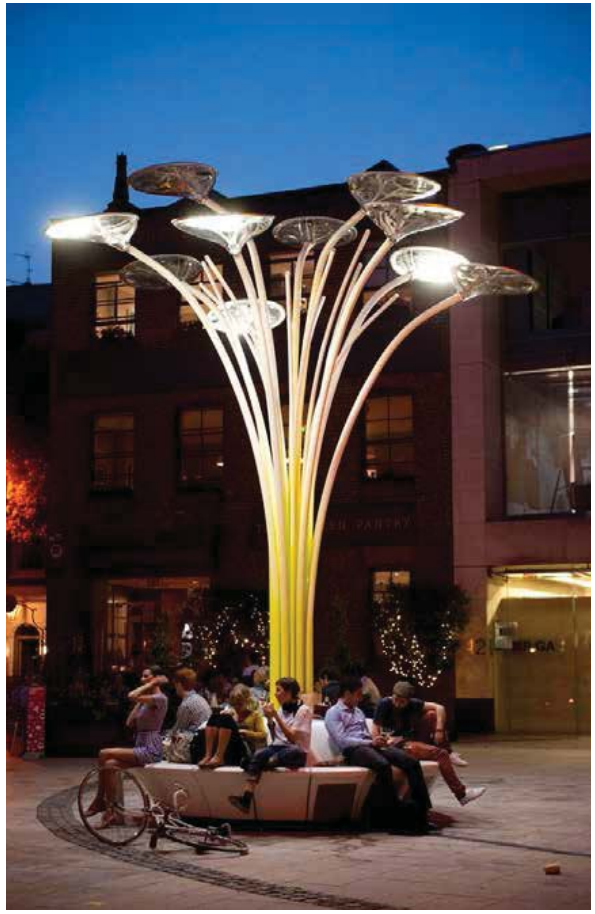
Relevant Design Objectives	
1	Ensuring an easy customer experience
3	Being a catalyst for positive change

Principle

Create welcoming, secure and well maintained public domain spaces and station buildings with an attractive 'sense of place' that responds to the distinct contexts and cultures of each station precinct.

Guidelines

- Stations and associated spaces are to promote a welcoming image or identity that reinforces a positive sense of place within the locality, and is a positive catalyst for growth.
- Station plazas are to be designed as an extension of the internal station environment providing shelter, comfort, safety and security for customers, and contributing positively to customer journey experiences. These spaces are to reflect the local public realm context and character.
- Enhance station spaces by introducing a range of uses, services and facilities such as retail, food and beverage, shade trees, landscaping and public art.
- New public spaces are to be designed to allow for spontaneous uses and activities, temporary events, pop ups, retail spaces and the night time economy.
- Create opportunities to facilitate the activation of adjoining areas, and informal gathering paces at station entries.
- Apply a consistent hierarchy of landscape treatments to public spaces, reflecting local character and context, integrate within their settings, and provide attractive space and streetscapes, and improve connectivity.
- Fixtures, including furniture and lighting, are to enrich site context and sense of place and contribute to wayfinding.
- A coordinated lighting approach is to create aesthetic consistency across Sydney Metro by defining station address, public domain areas and attracting customers into station forecourts and plazas.
- A positive precinct image is to be developed around the particular heritage values of a place or by the qualities of the existing urban context.



'Solar Tree' St John's Square, London
Artist: Ross Lovegrove
Source: Ross Lovegrove

3.2.3 Heritage and Archaeology

Relevant Design Objectives	
4	Being responsive to distinct contexts and communities
5	Delivering an enduring and sustainable legacy for Sydney

Principle

Ensure elements and items of heritage significance are appropriately managed and respected. Identify opportunities for heritage conservation to contribute to the celebration of local identity in station design.

Guidelines

- Sydney Metro is to be fully integrated within, and sensitive to, its heritage context. This includes built and natural heritage, European and Aboriginal archaeology and may include places, buildings, works, relics, moveable objects or precincts.
- Where Sydney Metro intervenes in or interfaces with heritage places (such as platform buildings and overhead booking office buildings), design excellence is to be sought to support inventive, interpretive and contemporary responses to the heritage values of that place.
- Where appropriate, the design of the rail corridor and station precincts are to integrate and conserve existing heritage items and mitigate any negative impacts.
- Actively anticipate the research, site investigation, salvage and culturally appropriate safekeeping of Aboriginal heritage uncovered by the Sydney Metro project.
- New work is to be based on an understanding of the heritage significance of heritage items, heritage conservation areas and places and is also to take into consideration:
  - Siting - including urban grain, streetscape rhythm, setbacks, orientation and address of buildings, location of boundary walls, key views, significant 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,
  - Details – creating complementary relationships between new and old elements to provide visual interest.
  - Landscape character – including indigenous and endemic planting communities, endangered species, and historical plantings.Where heritage items must be removed or relocated, they must be documented.
- Continuous approach to change.
- Where possible retain visual settings.
- Consider options for adaptation where appropriate.
- Interpretation should respond to the sites cultural significance.
- Consideration is to be given to integrating heritage interpretation including public art.

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

Edmonston Park Station, Heritage Interpretation.
Source: TfNSW

3.2.4 Environment and Sustainability

Relevant Design Objectives

5	Delivering an enduring and sustainable legacy for Sydney

Principle

Ensure best practice sustainable design solutions are adopted for the public domain, stations and buildings, to minimise environmental impacts and benefit customers and local communities.

Guidelines

- Achieve a high level of performance using sustainable design rating systems.
- Adopt energy efficient and low carbon design solutions that minimise the carbon intensity of the project.
- Incorporate passive design solutions to optimise solar access, introduce daylight, and maximise natural ventilation.
- Harness both direct and indirect daylight to minimise energy consumption in lighting, while creating a light and airy ambience in stations and surface buildings.
- Utilise energy efficient lighting and lighting control systems.
- Ensure resilience to climate change, by incorporating climate change adaptation measures which respond to weather extremes, including flood risk, and temperature increases.
- Provide a positive journey experience in station precincts by protecting users from the potential negative impacts of extreme weather.
- Ensure designs respond to the local microclimate and incorporate opportunities to reduce heat island effects, including (as appropriate) light coloured finishes, roofs and pavements, green walls or roofs, plantings, and shade trees.
- Furniture and materials selection is to be appropriate to local climatic conditions, particularly where exposed to direct sun.
- Include integration of renewable energy sources at stations and in the public domain where feasible.
- Consider water efficiency in design, utilising water from recycled sources where appropriate.
- Opportunities for collection, treatment, storage and reuse of rainwater from station roofs, canopies and other surfaces are to be incorporated within the urban environment.
- Reuse rainwater for public domain irrigation and station toilets where possible.
- Water Sensitive Urban Design (WSUD) initiatives are to include an integrated and site-responsive range of design solutions, influenced by urban design considerations and be adaptable into the future.
- Prioritise reuse of materials, use of recycled materials, and selection of materials from sustainable sources.
- Use durable, climate resilient, long life, healthy, low maintenance materials.
- Minimise materials consumption, and reduce embodied energy and impacts in materials selection.
- Maximise opportunities for beneficial reuse of spoil in landscape features and other uses.
- Provide noise control measures to ensure appropriate and comfortable acoustic conditions for users.
- Minimise waste through efficient design and material selections.
- Consider the use of locally sourced materials wherever practical.

WSUD initiatives integrated at Cheltenham Station.
Source: COX

3.2.5 Landscape

Relevant Design Objectives

2	Being part of a fully integrated transport system
3	Being a catalyst for positive change
4	Being responsive to distinct contexts and communities
5	Delivering an enduring and sustainable legacy for Sydney

Principle

The landscape design is an important component of a positive, high quality and appealing public domain identity for Sydney Metro stations and the rail corridor. Consistent, well resolved landscape design at each station is required to achieve a clear Sydney Metro standard for the whole southwest alignment.

Guidelines

- Station landscape design should respond to the character of each precinct with planting tailored to suit local soils and microclimate, the development environment, heritage values and social context.
- Landscape design should be appropriate to functional station and related transport operations settings. It must address safety-in-design issues relevant to a transport customer and adjacent road and public realm environment.
- Landscape treatments must be designed to provide appropriate scale and comfort to users throughout the seasons.
- Planting in the corridor should be derived from the previously naturally occurring vegetation communities unless appropriate species in terms of scale or form are not available from these particular plant groupings. In such circumstances, alternative native species suited to local conditions must be used.

Park at Bankstown Station.
Source: TfNSW

Integrate new facilities with corridor and precincts. Interchange car parking facilities at Wyong.
Source: RMS

Existing mature Eucalypt at Belmore Station to be retained in the new station plaza.
Source: Hassell

3.2.6 Art

Relevant Design Objectives

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

Principle

Ensure public art is integrated within the design of stations and station plazas to aid place making. Enhance local amenity and celebrate local character and enhance the customer experience.

Guidelines

- Public art is to enhance 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.
- Public art is to be integrated into the station and building designs to enliven and enrich the public realm and contribute to a sense of place.
- The design and location of art works is to be coordinated within the broader urban context of Southwest stations.
- Consider the re-installation of artworks present in existing buildings or streets to be changed as part of Sydney Metro works.
- Artworks are to contribute to the cultural identity of precincts and neighbourhoods and are to be developed in consultation with the local community and stakeholders.
- Maximise community involvement/representation/ownership in public art.
- Art works must be located to support the safe intermodal function of precincts around Metro stations.
- In station concourse and precinct areas, appropriate integration is required of permanent artworks with station wayfinding, information and other customer amenities.
- Public art is to be integrated but separate from the architecture, budgeted and managed from the architectural scope.

Artwork may also be incorporated into the public realm as part of a local placemaking strategy. FIDO, Fairfield Station, VIC
Artists: Ian Sinclair, Jackie Staude, David Davies and Alistair Knox
Source: Fairfield Village

Artwork may be incorporated into the public realm as part of a building element. Lewisham West Light Rail Stop Platform Shelter. Artwork by Sarah Drury
Source: Courtesy of Marla Guppy and Associates

3.2.7 Lighting

Relevant Design Objectives

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

Principle

Ensure a coordinated approach to lighting that responds to the local context, addresses CPTED and operational requirements and provides feature lighting representative of the Sydney Metro image. Use light to enhance station built form and landscape, whilst delivering functional and efficient lighting that creates a safe and high quality experience for all users.

Guidelines

General

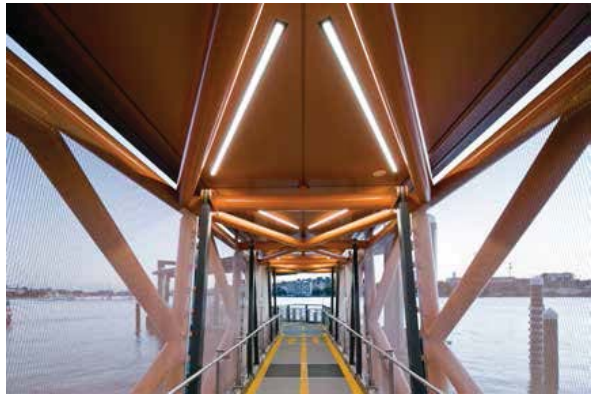
- Lighting is to integrate with access, wayfinding and public art strategies.
- Lighting is to reinforce the visibility of station entries as safe and welcoming elements within the local context at night.
- Illumination levels are to be appropriate to the task, be it wayfinding, reading tasks and facial recognition, while creating visual interest within the stations.
- Glare and visual discomfort is to be eliminated through appropriate specification and positioning of luminaires.
- The number of luminaires is to be minimised to aid maintenance and sustainability aspirations.
- A coordinated lighting approach is to provide aesthetic consistency across Sydney Metro by defining station address, public domain areas and attracting customers into station precincts.
- Precinct, corridor and station lighting design should consider public safety, staff movement and navigation, site security and operational requirements.
- Provide market leading energy efficient lighting and lighting control systems.

Public Domain

- Lighting must provide a safe, secure, legible and comfortable environment for all operators and users.
- Provide public space lighting to facilitate diverse uses including night time use of public spaces.
- The Metro stations are to be defined by the application of an iconic, consistent, multi-functional pole and luminaire system.
- To eliminate unnecessary clutter, lighting must be coordinated with all other public domain elements.
- Lighting is to celebrate the station address and pedestrian links with lighting systems that are of an appropriate scale, different to that which defines the precinct streets and street frontages.

Stations

- Lighting is to complement the architectural design and seek to provide an appropriate balance of artificial light and daylight.
- Natural light is to be maximised and artificial lighting is to support natural light levels.
- Natural lighting is to be balanced with adequate shade in summer.



Bulimba Ferry Terminal, QLD. Lighting is integrated with the structural and architectural design.
Source: COX, Copyright: Ross Pottinger

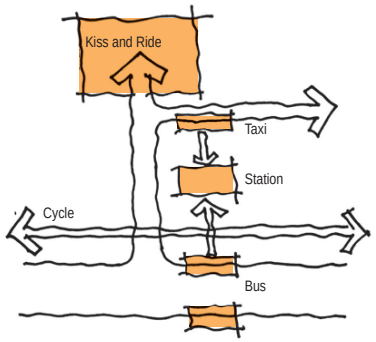
3.3 Connectivity

Safe and convenient connections to and from Sydney Metro stations are an important part of an easy customer experience. Connectivity between different transport modes including walking, cycling, rail, light rail, buses, taxis, kiss and ride and commuter parking, must be legible and easy, acknowledging that Sydney Metro is part of an integrated transport system.

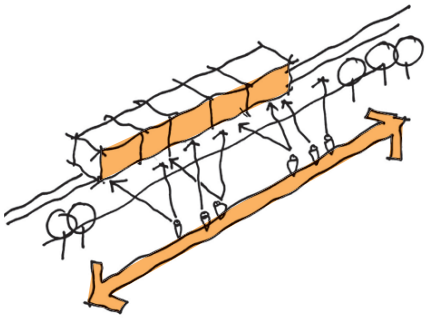
A modal hierarchy that prioritises pedestrian connections guides the Sydney Metro design and ensure the safety and wellbeing of customers and users of the station environs.

The design of the Sydney Metro stations and station precincts must facilitate safe, welcoming intuitive and accessible connections between transport modes. This part provides guidelines for the following:

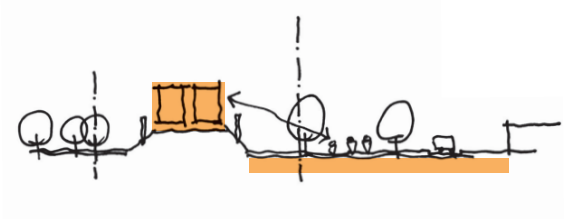
- Line-Wide Connectivity
- Station Interchange
- Pedestrian Movement
- Bicycle Movement
- Vehicular Interface
- Parking



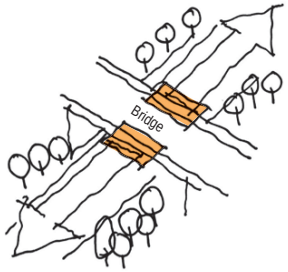
Connected and Integrated



Along Corridor Movement



Commuter Movement



Cross Corridor Movement

3.3.1 Line-Wide Connectivity

Relevant Design Objectives

1	Ensuring an easy customer experience
2	Being part of a fully integrated transport system
3	Being a catalyst for positive change
4	Being responsive to distinct contexts and communities
5	Delivering an enduring and sustainable legacy for Sydney

Principle

Facilitate safe, legible and enjoyable pedestrian and bicycle connections along the rail corridor between Bankstown and Sydenham stations as well as to surrounding town centres and land uses. The active transport corridor will facilitate alternative transport and healthy lifestyle choices.

Guidelines

- Provide an active transport route along the Sydenham to Bankstown corridor that connects to each station.
- Enable links and connections to the wider cycling and pedestrian network.
- Maximise access, as far as possible, for the full range of potential users on the active transport corridor.
- The design of the active transport corridor is to incorporate the Crime Prevention Through Environmental Design (CPTED) principles. Passive surveillance of the active transport route should be achieved.
- The active transport corridor should utilise existing public lighting such as street lighting and public transport interchange and/or car park lighting where it is available and it meets the appropriate public lighting standard.
- Lighting design along the corridor is to minimise light spill to surrounding receivers and not pose an operational hazard to train operations.
- The pedestrian and bicycle pavements and infrastructure shall be durable and designed to optimise whole of life costs.

Cycle path along the Eastern Busway, Brisbane. Low planting for passive surveillance and wayfinding with clear sight lines.
Source: AECOM, Copyright: Chris Frederick Jones

3.3.2 Station Interchange

Relevant Design Objectives

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

Principle

Provide an efficient, safe transport environment that is part of a fully integrated and accessible transport system, enabling easy connections between transport modes.

Guidelines

- Station planning and design is to be consistent with the following hierarchy of movement modes:
  - Priority 1: Pedestrian, wheelchair and pram movement and access (mobility impaired)
  - Priority 2: Bicycle movement and access
  - Priority 3: Other primary Public Transport services (including Light Rail and Bus movement and access)
  - Priority 4: Taxi movement and access
  - Priority 5: Kiss and ride movement and access
  - Priority 6: Park and ride movement and access
- Station interchange planning and design is to support good access to and between public transport modes for all customers, with connections designed to support efficient and timely interchange for all customers.
- Integration of station precincts with the surrounding urban structure is to facilitate cross movements and through movements, enhancing precinct permeability and access to the transport interchange functions in the locality.
- The stations are to provide a safe, welcoming, intuitive and accessible environment for customers transferring between transport modes.
- Station design is to minimise movement conflicts for customers between key transport modes.
- Station forecourt areas are to accommodate adequate customer access and waiting spaces (as relevant), while ensuring that customer confidence, sense of safety and wellbeing are not compromised.
- The varying spatial requirements of different transport modes, including third party operators, are to be accommodated to avoid user conflicts.
- Point of decision wayfinding signage is to be provided to facilitate walking and cycling choices.

Station modal access hierarchy
Source: TfNSW

Support good access to and between public transport modes.
Source: TfNSW

3.3.3 Pedestrian Movement

Relevant Design Objectives

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

Principles

Provide pedestrian movement systems that clearly connect the stations with their surrounding locality, ensuring they are safe, efficient, accessible, legible and enjoyable.

Ensure the vertical journey is a core element of the station architecture and provides step free access between the street and the platforms.

Guidelines

- The station forecourt and associated areas are to adopt a clear hierarchy of movement functions that favours pedestrians ahead of vehicular circulation, thereby promoting opportunities for public transport patronage, walking and cycling.
- Station precincts are to provide pedestrian routes that connect people with places they want to go (desire lines) and provide clear sight lines through open, uncluttered spaces along pedestrian desire lines between key destinations, including between transport modes.
- Pedestrian movements are to accommodate an appropriate level of service in all areas of the station. Precinct designs are to optimise the variety of movement functions in order to minimise potential conflicts.
- Circulation systems are to respond to context and reinforce the character of precincts so they are easy and efficient to navigate.
- Design decisions affecting movement planning are to consider varying customer usage patterns including commuters, customers with disabilities, station employees, tourist customers and non-travelling visitors.

Kogorah Station and precinct upgrade. Well integrated with precinct and accommodates pedestrian flows.
Source: COX

3.3.4 Bicycle Movement

Relevant Design Objectives

2	Being part of a fully integrated transport system

Principle

Prioritise bicycle movement consistent with the modal access hierarchy by providing optimum connectivity and convenient and accessible bicycle parking at stations to accommodate current and future demands. Enable bicycle connectivity between stations along the rail corridor.

Guidelines

- Bicycle paths to/from stations are to be located so as to enable connections with existing and future regional and local government bicycle networks (by others).
- The design of bicycle paths and routes connecting directly to/from stations are to meet future demands, be legible and be safe for bicycle riders and other users.
- Access to bicycle networks is to be easy, enabling the comfortable flow of bicycle traffic.
- Conflicts between pedestrians and cyclists at stations are to be designed out, particularly at high activity zones such as station entries and retail areas, with priority to pedestrians.
- Provide safe, accessible and convenient bicycle parking storage facilities, with active and passive surveillance and weather protection, connected to existing bicycle networks where possible.
- Sheltered and Opal accessed bicycle parking at stations is to be placed directly adjacent to movement paths where possible to provide clear and legible access, without compromising safe, accessible paths of travel for customers with mobility and vision impairment.
- Design for bicycle facilities is to give priority to bicycle safety at road interfaces where possible.

Bicycle Parking

- Secure access bike parking enclosure and roofed sheltered parking areas should be designed as single integrated structure.
- Bicycle parking is to be designed as part of the suite of station buildings and public domain elements, in terms of scale and architectural expression and be designed to the same standard as other station buildings.
- Bicycle parking should be integrated with other functions, such as ticketing and information, community or retail facilities, where feasible.

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

Bicycle parking hub, Woy Woy
Source: TfNSW, Courtesy of The Circus Group 2016

3.3.5 Vehicular Interface

Relevant Design Objectives

2	Being part of a fully integrated transport system

Principle

Reinforce a legible hierarchy of safe vehicular streets within the established street network that respond to the varying customer and operational requirements for pedestrians, bicycle and vehicular movements in accordance with the modal hierarchy.

Ensure there is no net loss of commuter parking spaces on rail corridor land along the length of the corridor.

Guidelines

- The design of stations and associated station precinct is to respond to the character of established streets and variations in carriageway width, on-street parking, existing and planned cycle ways, landscape/ street tree planting and pedestrian amenity.
- Streets are to be designed as urban places with a high level of pedestrian amenity, allowing for inherent traffic calming measures where possible.
- Accessible car parking spaces are to be located as close to the station entries as possible. Some existing accessible parking spaces may be used.
- Modifications to existing roads are to consider:
  - Agreed adjustment of existing roads with relevant authority
  - Number of traffic lanes
  - Length and type of slip lanes
  - Intersection types and configurations
  - Signalling requirements
  - Speed environments, traffic calming measures
  - Bus layover zones
  - Kerbside zones
  - Shared zones
  - Cycling
  - Footpaths
  - Crossings
  - Mobility and DDA compliance
  - Street trees and landscaping
- Changes to streets, footpaths and bicycle paths are to contribute to the quality and character of the existing urban area and contribute positively to the customer experience.
- Vehicular traffic planning is to be integrated with the built form and spatial planning of precincts.
- Provide for bus stops close to the station in accordance with the modal hierarchy, bus movements where buses operate on streets adjacent to station entries and safe and accessible paths to bus stops.
- Taxi, kiss and ride and park and ride spaces are to be located in accordance with the modal hierarchy.
- Service vehicle access for all precinct functions is to be addressed as part of the broader station precinct movement strategies.

Note - further guidelines on Service Vehicle Access are set out in Section 4.5.7

Cheltenham Station
Source: COX

4 Elements

About this Section

This section provides guidelines for developing the detailed elements of the public domain around and within stations including connecting customer areas through station entries.

The guidelines for the design elements in this part of the document are arranged according to the following topics:

- Stations
- Station Public Domain
- Rail Corridor
- Operation and Services

More detailed design guidelines and key requirements for each of these elements will be included in the scope and performance documents during the procurement stage.

Thomastown Station, VIC. Legible station entry integrated with the public domain.
Source: COX

4.1 Stations

The Sydney Metro stations are part of a wider system requiring consistency between station planning, operations and architecture. Each station will take on a unique identity that relates to its locality, expressed through the station design. The interface between the station and surrounding context is critical in providing an integrated and legible transport system that is easy for the customer to use.

The design of each station must be framed around the benefits to or impacts upon the customer experience. Station entries, platforms and circulation elements must be designed to meet operational requirements while ensuring an easy customer experience. Stations are public buildings and all circulation elements, finishes and fittings must be of a robustness and quality associated with outdoor public spaces as well as suitability for the rail environment.

This part provides guidelines for the following station elements:

- Station Typology
- Station Entries
- Station Canopies
- Platforms
- Circulation Elements
- Flooring
- Internal Walls and Ceilings
- Lighting

Craigieburn Railway Station, VIC.
Source: COX

4.1.1 Station Typology

Relevant Design Objectives

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

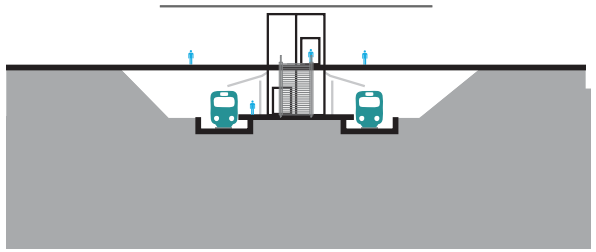
Principle

The designs are to provide consistency between station planning, operations and architecture across the differing station typologies that will be adopted between Sydenham and Bankstown. There will be two principal typologies that relate to their construction type:

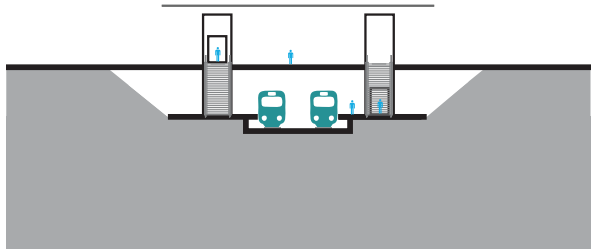
- ***Island platform***
- ***Side platform***

Guidelines

- The stations are to be integrated within the adjoining precinct to provide direct and safe accessibility to the station entry.
- The station is designed to enable integration with existing and future local development opportunities within adjacent sites as relevant.
- Station designs are to provide a seamless transition between transport modes.
- Stations must be easy and safe for all to use regardless of physical mobility; able bodied customers, wheelchair users, carers with strollers, the visually and cognitively impaired must all be provided with equal access.
- The Sydney Metro stations should maximise consistency in the key functional elements of the architecture.
- Integration of operational and customer facilities is to be consistent across the two typologies providing a high quality and consistent experience for all users.
- Design to minimise level changes between the street and station entries and to platforms.
- Maximise access to natural light and ventilation.
- All entries and concourses are to be open and transparent, generous and inviting.
- Design for efficient customer circulation and intuitive wayfinding to and from station entries and platforms.
- Where stations are located in cuttings, designs are to maximise soft landscaping in cuttings and embankments to minimise hard surfaces and vertical walls.
- Allow for flexible commercial opportunities including pop ups, start-ups, micro and small businesses in station plazas.
- Opportunities to provide for active uses and frontages should take priority over service related structures.
- Expression of major structural elements is to be considered in station design.
- Consider the role of station elements in supporting a night time economy, including retail areas, lighting, and use of public spaces by the community.



ISLAND PLATFORM STATIONS
DULWICH HILL
BELMORE
LAKEMBA
BANKSTOWN



SIDE PLATFORM STATIONS
SYDENHAM
MARRICKVILLE
HURLSTONE PARK
CANTERBURY
CAMPSIE
WILEY PARK
PUNCHBOWL

4.1.2 Station Entries

Relevant Design Objectives

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

Principle

Station entries including canopies and concourses are to create a strong and consistent line-wide visual identity to the station environments and be designed as intuitive interchange spaces for customers.

Guidelines

General

- Entrances to stations including canopies and concourses are to provide a consistent line-wide identity for Sydney Metro and are to be clearly visible from the immediate area.
- Designs are to provide a legible station entry integrated with public domain with clear sightlines to the station from the surrounding precinct, particularly where a station has been moved from its existing location.
- Station entries are to be oriented towards established communities and active streets to reinforce wayfinding and identity .
- Station entries are to be legible from the street and public domain and are to minimise long blank walls through articulation of the built form.
- Station entries are to incorporate canopies/awnings as appropriate to provide weather protection for customers, community information, amenities, and ticketing equipment, gateline and appropriate queuing zones.
- Entry concourses should be clutter-free with clear and simple directional signage, simple volumes and flush continuous materials with components that support wayfinding.
- Entry spaces are to be well lit, bright and welcoming to enhance customer experience providing a safe, open environment that has good permeability and clear sight lines from inside and outside the station.
- Adequate space should be provided to meet patronage demand and to provide clear zones for queuing at Ticket Vending Machines (TVMs) and gatelines, including during special events, separate to paths of travel.
- Station entries are to provide adequate space for customers to wait and meet without impeding pedestrian flows.
- Columns are to be minimised and carefully positioned not to obstruct key sightlines or pedestrian movement, particularly for the mobility or visually impaired.
- Lighting, communication, wayfinding and information and security systems are to be well integrated with equipment and recessed where possible.
- Unobtrusive maintenance access is to be provided.
- The materials palette is to be of high quality and is to integrate with surrounding high quality public realm context.
- Integration of permanent public art within the station architecture is to be considered. Art should act as a visual cue to enhance wayfinding.

Craigieburn Railway Station, VIC. Station entry canopy provides weather protection for customers.
Source: COX

4.1.3 Station Canopies

Relevant Design Objectives

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

Principle

Station canopies are to create a strong overall visual identity in the station environment, sitting comfortably within their context and providing weather protection for all queuing zones. Platform canopies are to provide comfort for waiting and alighting customers.

Canopies, roofs and soffits are key elements that should share common materiality and form across all stations to provide a common line-wide identity.

North Melbourne Station, VIC. Canopy over concourse
Source: COX

Guidelines

General

- Natural daylight to the station environment is to be maximised for well-being and comfort.
- Canopies with extensive glazing are to consider solar control measures.
- Canopy designs are to ensure reduced heat transmittance and ultraviolet radiation.
- Canopy design is to contribute positively to the built environment by enhancing the immediate public domain.
- Canopy detailing must consider impacts of bird nesting.
- All canopies are to consider:
  - Modular and prefabricated systems
  - High quality material finishes
  - Integration of acoustic treatments
  - Edge treatments are to be well-considered
  - Integration of services (CCTV, PA, signage, lighting etc.)
  - Drainage and downpipe integration – concealed downpipes
  - Cleaning and maintenance requirements
  - Integration with photovoltaic cells

Entry and Concourse Canopies

- The canopy design is to create a recognisable identity for all stations along the Sydenham to Bankstown line.
- Entry canopies are to be clearly visible from the surrounding public domain and promote a sense of arrival.
- Entry canopies are to provide weather protection for customers and community information, amenities (ATMs and vending machines), Opal top-up/purchase, gateline and appropriate queuing zones.

Platform Canopies

- Platform canopies are to provide adequate coverage during peak periods and an even distribution of covered areas.
- Platform canopies are to provide weather protection to vertical transport and platforms.
- The canopy is to the platform edge to provide weather protection.
- Column supports are to be located to minimise obstructions
- Access to daylight is to be a key feature of the design of the canopy while balancing weather protection.
- New platform canopies are to be sensitively integrated with retained heritage platform buildings and canopies.

Roof Lights

- The appearance and function of roof lights is to be suitable for a rail environment and reinforce the Sydney Metro identity.
- Roof light design is to consider:
  - Material consistency
  - Slope of transparent surfaces to minimise build-up of dirt
  - Cleaning and maintenance access
  - Any visible fixings to be stainless steel
  - Integration with signage
  - Dedicated zones for equipment and cabling
  - Constructability and replacement requirements

4.1.4 Platforms

Relevant Design Objectives

1	Ensuring an easy customer experience

Principle

Platform designs are to maximise efficiency, safety and provide a high level of service and an easy customer experience.

Guidelines

- Platforms are to provide efficient and safe access to the Metro service through good sightlines and generous circulation.
- Platforms should prioritise efficient train loading and unloading in relation to fixed platform elements.
- Vertical transport distribution and position on the platform is to be coordinated with the demand and movement patterns of customers.
- Platforms are to be free of recesses and indentations which could offer hiding places and litter traps, disrupt continuous paths of travel for the visually impaired and hinder CCTV coverage.
- All platforms are to provide platform screen doors and barriers.
- Emergency egress is to be provided.
- Platforms should establish a strong relationship with the vertical circulation zone through lighting and material palette selection.
- Platforms should minimise structures and columns to maximise sightlines and customer waiting and circulation space.
- Platforms are to be safe and weather protected while maximising outward views, natural light and ventilation.
- Platforms are to include customer seating, positioned to ensure safety and maintain pedestrian flows.
- Platforms are to have minimal gaps between trains and platform edges
- Platforms are to provide level access, wheelchair waiting positions and those with luggage and bulky items.
- Platforms are to integrate with platform edge barriers.
- Platforms are to provide efficient wayfinding and signage
- Platforms are to provide level and gap free access to trains.

Platform Screen Doors (PSDs)

- Platform screen doors are to be minimal and elegant, seamlessly integrating customer information and supporting the station servicing requirements.
- Platform screen doors must run along the full platform and the integration of fixed platform screen end walls must be well considered.
- Fixed platform screens are to be the same height and material as platform screen doors.
- The architectural language is to be consistent with the platform screen doors and the door and fixed panels are to be set out on a consistent grid.
- Stations are to integrate the following PSD design considerations:
  - Be full height
  - Run full platform length
  - Integration of the end walls is to be well-considered
  - Security requirements
  - Modularity of units - constructability, repair and replacement
  - Interface with other wall, floor and ceiling junctions.

Artists impression of platform at Cudgegong Road Station maintaining clear sightlines and generous circulation
Source: TfNSW

4.1.5 Circulation Elements

Relevant Design Objectives	
1	Ensuring an easy customer experience
2	Being part of a fully integrated transport system

Principle

Enable step free access between the street and the platform via lifts and stairs that are integrated with the station design.

Guidelines

- All Sydney Metro platforms are to be served by lifts, which are to provide direct access from entry concourse to platform level .
- All circulation elements are to provide a means of safe movement of people in and around the stations.
- Ramps are favoured in the transition from concourse to public domain areas where lifts can be avoided.
- Where ramps and lifts are provided as an alternative to stair access they must not result in a longer journey than the primary circulation route.
- Lifts are to integrate into each station designs and be strong architectural elements in their own right to promote the inclusion of customers using step free circulation elements.
- All circulation elements are to incorporate high quality materials that contribute to the Sydney Metro identity.
- Weather protection must be provided over vertical circulation elements.

Note - further design guidelines on accessible pathways are set out in Section 4.2.2 and further guidelines on station canopies set out in Section 4.1.3.

Chatswood Transport Interchange, NSW. Good example of a glazed lift and shaft
Architect: CoxDesignInc.
Source: COX

4.1.6 Floor Finishes

Relevant Design Objectives

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

Principle

Ensure the safe, efficient movement of pedestrians, including people with disabilities, through high quality and robust flooring design suitable for the station environment.

Guidelines

- Flooring is to provide a safe and robust solution, suitable for the station environments. Types of flooring include those appropriate to public areas and others to areas of the station where special flooring is required.
- Flooring is to form a part of the Sydney Metro line-wide identity and maximise operational efficiencies.
- Flooring selection is to consider long term wear and tear, maintenance, sustainability objectives including dematerialisation and embodied energy, and future replacement as an important consideration in the design process.
- Flooring is to consider the urban realm context of the station, creating a complementary transition between the public domain and station.
- Flooring is to provide a clean, attractive and uniform appearance throughout the stations and is to be integrated with the broader station materials palette to aid wayfinding.
- Flooring pattern and design is to accentuate movement.
- Flooring materials must be designed for all weather usage, not contribute to customer discomfort (such as heat and glare), and meet slip resistance requirements.
- Ensure flooring material selection responds to the local microclimate and incorporates opportunities to reduce heat island effects, including (as appropriate) light coloured finishes while considering the impact of glare.
- Flooring is to be the same on each side of the station gateline.
- A smooth transition must be provided between abutting paved surfaces, free of trips and hollows.

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

Flooring provides a clean and attractive appearance. Artists impression of concourse flooring at Sydney Metro Northwest
Source: TfNSW

4.1.7 Walls and Ceilings

Relevant Design Objectives

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

Principle

The design of wall and ceiling elements is to contribute to the Sydney Metro line-wide identity and be suitable for the station environment, and appropriate to heritage buildings and local context.

Guidelines

General

- The appearance and function of the walls is to be suitable for a rail environment and reinforce the Sydney Metro identity.
- Wall systems and details are to respond to their location, function and acoustic environment.
- Ease of access, maintenance and replacement of walls sections is to be considered.
- Robust cladding materials and finishes are to be selected in response to the local environment and conditions.
- Opportunities for public art, feature walls or green wall treatments should be explored through the form, finish, angle, articulation, and materiality of walls to create an identifiable station element. This may be used in vertical circulation zones, and used to accentuate the customer pathways and establish a strong architectural language, and enhance wayfinding.
- Walls and ceilings are to contribute to the high quality station environment and customer experience.
- The materials palette is to balance a calm and neutral quality with vibrant materials to aid wayfinding and accentuate movement.
- Use of colour/texture is to assist in legibility and wayfinding.
- Wall and ceiling detailing is to take into consideration the integration of station assets such as signage, fixtures and machines.
- Wall surfaces are to consider anti-vandalism / anti-graffiti treatments.
- Walls are to provide light coloured surfaces for effective indirect lighting.
- Services buildings and structures at stations must be designed to the same standard as station buildings.

South Morang Rail Extension, VIC. Calm and neutral materials with integrated services.
Source: COX

4.2 Station Public Domain

The public domain is a significant component of the door-to-door journey for Sydney Metro customers. The design quality of station precincts, forecourts and streetscapes outside station entries will therefore be of paramount importance to the overall public experience and perception of the new 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 will need to be co-ordinated to ensure that coherent and distinctive station environs are delivered.

Station architecture will have a consistent line-wide identity, with a unique response to the locality expressed in the public domain. The interface between the station and surrounding streetscape needs to be well integrated and functional as part of the provision of robust and legible interchanges at Sydney Metro stations.

In some cases, the creation of better streetscapes and civic or community spaces adjacent to the project alignment and stations will be for other government authorities to pursue at local or state level, with assistance from the Metro project team and/or the private sector. Design guidelines specific to those urban realm opportunities will be more appropriately considered on a site by site basis as they are identified.

Key elements of the public realm around Metro stations and the alignment that are considered in this part of the document include:

- Plazas
- Accessible pathways
- Furniture
- Plaza Walls and Fences
- Station Service Facilities

Guidelines for public domain between stations along the rail corridor are detailed in Section 4.3.

4.2.1 Plazas

Relevant Design Objectives	
1	Ensuring an easy customer experience
2	Being part of a fully integrated transport system
4	Being responsive to distinct contexts and communities
5	Delivering an enduring and sustainable legacy for Sydney

Principle

Provide new and upgraded plazas that include hard and soft landscape areas that are appropriate to plaza functions, local conditions, and consistent with the existing and varied character of the Sydenham to Bankstown Line while contributing to line-wide legibility and a clear identity for Sydney Metro City & Southwest.

Guidelines

- Plaza design must achieve a safe, clean, clutter free and functional environment that provides easy access for all users.
- Plaza areas and station approaches must be distinctive in design and highly visible from adjacent high streets and town centres.
- The public domain and plaza works associated with the stations must integrate seamlessly with the existing built environment and streetscapes of each centre while also considering the planned future context of stations.
- Plazas are to be designed to provide shade during summer and good solar access in winter
- Plaza design is to consider the reduction of heat island effects with the inclusion of planting including (as appropriate) light coloured finishes without ignoring the potential for glare.

Pavements

- The materials palette is to contribute to a clear Sydney Metro identity and yet be appropriate to a suburban station environment.
- Materials and finishes are to be high quality, durable be designed for ease of maintenance.
- Use of colour/texture and paving pattern and arrangement to assist in wayfinding and in highlighting the main direction of travel should be considered.
- Materials are to minimise slips, trips and falls.
- Consider reuse of materials salvaged from demolition e.g. in public space landscaping.
- Integrate water sensitive urban design including permeable pavements, where feasible.
- Paved surfaces are to be well drained to avoid water pooling.
- In general, driveway locations are to be separated from active frontages, collocated and kept to a minimum. Driveways are to be visually highlighted against adjacent pedestrian or shared paths through contrasting paving layout, materials or finish.

Planting

- Plant species must be suited to local environmental conditions and urban context.
- Planting arrangements and species are to suit the scale of each public domain area without compromising pedestrian capacity and circulation around stations.
- Plaza planting areas should employ passive irrigation and water sensitive urban design where feasible.
- Screen planting is to be used to mitigate the visual impact of blank building walls, retaining structures, noise walls and service facilities.
- Suitable street tree species are to be used, to reinforce spatial movement, connectivity with adjacent areas, civic quality, visual continuity and/or identity and character.

Afghan Bazaar Cultural Precinct, Dandenong, VIC. Public spaces should draw upon and celebrate the unique cultural identities of the locality
Source: HASSELL

4.2.2 Accessible Pathways

Relevant Design Objectives

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

Principle

Provide pathways to and from station entries and facilities that are accessible, safe and comfortable 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.
- Station precincts must 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 should all be provided with equal access.
- Stairs are to be avoided as far as possible as they reduce opportunities for universal access.
- A continuous accessible path of travel must be provided from any accessible car park space linking footpaths, public transport set down areas, accessible passenger loading zones and any adjacent associated buildings.
- Where stairs are used, they must be short in length, easy and safe to use.
- Clearly legible alternative circulation routes using accessible lifts and ramps must be provided in addition to the use of stairs. These alternatives must be as close as possible and not isolated from the primary circulation route and easy to identify.
- 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.
- Colour, texture, lighting, finishes and customer information is to be used selectively to further define paths of travel, circulation spaces and the location of key facilities.
- Pathways are to be well drained to avoid water pooling.
- Tactile Ground Surface Indicators should be used on paths of travel to warn customers with vision impairment of hazards and assist wayfinding where required.
- Where possible, provide a consistent, clear path of travel for customers with vision and mobility impairments by keeping one side of paths of travel clear of fittings and fixtures.

Milton Ferry Terminal, QLD. Ramps provide equal access for all customers. Integrated seating provides rest points along paths of travel.
Source: COX, Copyright: Chris Frederick Jones

4.2.3 Furniture

Relevant Design Objectives	
1	Ensuring an easy customer experience
2	Being part of a fully integrated transport system

Principle

Furniture and fixtures are to provide respite, safety, comfort, services and functionality to public spaces, as well as contributing to the spatial and aesthetic composition of station plazas.

Guidelines

General

- Furniture and fixings are to be robust, high quality and attractive and contribute to the Sydney Metro identity.
- Furniture and fixings are to be arranged to assist in the delineation of functional and circulation zones.
- Elements in public areas (bins/seating/drinking fountains/bollards) are to adopt a rational and ordered layout that minimises visual clutter and optimises safe, accessible paths of travel.
- The use of bollards should be minimised. Safety and access to station precincts should, where practical, be achieved by integrating vehicle protection with street furniture, landscaping or public art.
- All components should be accessible and integrated with station design. Furniture and fixtures must accommodate all users with a wide range of physical abilities.
- Street furniture selection and arrangement should facilitate active plaza uses and informal recreation.

Weather Protection

- Weather protection is to be provided at all transport interchanges.
- Shelters must be robust and form part of the suite of furniture, fixtures and associated station architectural elements. The integration of solar panels in shelters is to be investigated.

Seating

- Seating placement should provide resting points on the customer's journey, in accordance with requirements of the Disability Standards for Accessible Public Transport, and avoid impeding easy circulation.
- Seating is to be located along main paths of travel adjacent to entrances, transit shelters and meeting points and no more than 60m apart.
- Seating should be located in both shade and open areas, with weather protection provided where possible.
- Seating is to be located away from street corners and arranged in accordance with CPTED principles.
- The location and grouping of seating and other elements is also an opportunity to help create meeting places and a sense of place.

Handrails and Balustrades

- Handrails and balustrades should assist in safe, accessible customer movement and be consistent in material and quality with fixtures across Sydney Metro City and Southwest.

Waste Bins

- Bins should be consistent throughout southwest Metro line.
- Bins are to be located to minimise litter while considering the attractiveness of the station precinct.
- Facilities should aid waste separation and recycling.

Seating can be integrated with landscape elements where it does not impede customer flows. Flinders Street Mall, Townsville
Source: COX

4.2.4 Plaza Walls and Fences

Relevant Design Objectives

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

Principle

Wall and fencing element design is to be a system which can be applied across the corridor and to station sites with a high quality, robust and durable form that is representative of the Sydney Metro image and each station's context.

Guidelines

- The appearance and function of external walls and fencing is to be suitable for a rail environment and reinforce the Sydney Metro identity.
- Location, scale and articulation of external walls and fences are important elements of the public realm. Their design is to be an integral part of the urban design of station areas and corridor to minimise excessively long unarticulated lengths, bland and unappealing frontages.
- Wall and fencing systems and details are to respond to their location, context, function and acoustic environment.
- Ease of access, maintenance and replacement of walls and fencing sections is to be considered.
- Robust cladding materials and finishes are to be selected in response to the local environment and conditions, and sustainability objectives including dematerialisation and embodied energy.
- Feature walls are to be used to accentuate customer pathways and establish a strong architectural language at stations, employing artworks where appropriate.
- The materials palette should balance a calm and neutral quality with vibrant materials to aid wayfinding and accentuate movement.
- Use of colour/texture should assist in legibility and wayfinding.
- Retaining walls are to attempt to knit into adjacent landscape formations, or with adjacent elements.
- Fencing throughout station precincts and public domain areas must avoid creating dead ends or sightline conflicts.

Appropriate scale and articulation of walls and fences are important in the public domain.
Source: COX/HASSELL

4.2.5 Station Service Facilities

Relevant Design Objectives

4	Being responsive to distinct contexts and communities

Principle

The rail infrastructure elements for stations and service facilities must be integrated into the design, whilst being able to be easily maintained. Service buildings (including Traction Power Substation) in stations and the public domain shall be designed to the same standard as other station elements. These buildings also need to be sensitively designed. Traditional railway architecture achieved this very well.

Guidelines

- Service facilities are to form an integrated solution with the station architecture and precinct taking into account the scale, context and purpose of the structure.
- Design integrity must be addressed through careful positioning of equipment.
- Similar materials and components as used in station design are to be selected where appropriate to support the Sydney Metro identity.
- Service elements visible in the public domain need to consider impacts including visual, environmental and acoustic on the streetscape.
- Each facility/service building is to respond appropriately to its local context yet maintain a distinct Sydney Metro identity.
- Service elements located in public areas of the station and surrounds are to be integrated with other functions such as public facilities, ticketing and information, fire stairs, community facilities or retail to minimise the impact of the services on the station precinct, where feasible.
- Integrate service facilities with landscaping and topography to mitigate any negative streetscape impacts; provide landscape screening to all buildings elevations visible from streets and public areas.
- Design of service facilities is to consider opportunities to use vertical green walls.
- The designs should be coordinated with civil engineering and rail systems requirements to ensure efficient, economical designs.
- The designs are to provide efficient space planning of all service requirements to minimise bulk and scale of service buildings.
- Access for maintenance and replacement of plant must be considered including personnel access for regular maintenance tasks.
- The designs should allow for safe access and egress to all areas of services buildings.
- Access requirements should be considered to minimise negative impact on associated public functions.

Caufield Station, VIC. Platform service building
Source: Lovell Chen

4.3 Rail Corridor

The rail corridor is a significant spine that runs through 11 established communities and urban settings. The design approach to the corridor will ensure a safe and secure corridor, establish a line wide identity, recognise the corridor as part of the door to door customer journey and be responsive to the environments it passes through.

The rail corridor will have a strong landscape quality, with a planting palette that draws on the pre-existing native vegetation communities in a design that responds to the variable nature of the corridor. Built elements in the corridor such as retaining walls, protection screens and noise walls must be part of an integrated line-wide design, one where the range of structures are designed in relation to each other and to their urban and landscape setting. The form and placement of structures should allow for adequate landscape screening where visual mitigation is required. Security and segregation fencing must provide the required security for corridor infrastructure, and safety for maintenance operations, while maximising visual openness across and along the corridor.

Connectivity across the corridor occurs at existing bridges, overpasses and underpasses, and in some locations, new station concourses; all of which are, or will become, important urban links for local communities. Many of the existing bridges are an important part of the heritage fabric of the line. The addition of new elements such as vehicle barriers and anti-throw screens must be sensitively designed with this in mind.

Key elements of the rail corridor that are considered in this part of the document include:

- Cuttings and Earthworks
- Corridor Landscape
- Corridor Walls and Fences
- Bridges, Over Passes and Under Passes
- Rail Corridor Services

Rail Corridor with Sydney Trains service
Source: TfNSW, Photographer: Simon Freeman 2013

4.3.1 Cuttings and Embankments

Relevant Design Objectives

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

Principle

Visually integrate earthworks into their landscape setting as much as possible to keep engineered structures to a minimum.

Guidelines

- Where cut embankments are required, a combination of engineered slopes and low retaining walls are to be used to create an integrated, 'sculpted' landform, suited to the setting.
- Planted cut or fill battered slopes are to be used wherever possible and are preferable to walling solutions.
- All engineered earthworks are to make transition between areas of cut to areas of fill parallel to the main corridor alignment.
- All formations are to be gently rounded out at both top and bottom of slopes, and at each end of each formation, in order to achieve a 'natural' transition into adjacent landforms.
- Visually all earthworks should sit lightly in their context, exhibiting a 'natural fit' within their landscape setting by integrating planting and reducing gradients wherever possible.
- Embankments and cuttings are to be landscaped with native planting to reinforce the green connection along the corridor. Grading of embankments is to be accessible for maintenance.
- Erosion control matting is to be used on batters and embankments to aid soil stabilisation and promote vegetation growth along the corridor.

Combination of engineered slopes and low retaining walls to achieve a sculpted land form.
Source: COX/HASSELL

Inner Northern Busway, Brisbane. Ensure earthwork batters sit lightly in their context, exhibiting a 'natural fit' with their landscape contexts.
Source: AECOM

4.3.2 Corridor Landscape

Relevant Design Objectives	
1	Ensuring an easy customer experience
2	Being part of a fully integrated transport system
3	Being a catalyst for positive change
4	Being responsive to distinct contexts and communities
5	Delivering an enduring and sustainable legacy for Sydney

Principle

Provide a landscape design that considers the variable nature of the corridor as well as that of existing adjacent open space, streetscapes and potential new areas of open space.

Guidelines

- Clear sightlines to Metro stations and at adjacent roads and junctions, are to be maintained through the application of CPTED principles.
- The corridor landscape wherever possible should be integrated with adjacent open space.
- Landscape design is to consider the variable topography and ground conditions of the corridor.
- Landscape design should incorporate water sensitive urban design initiatives where feasible.
- Corridor landscaping is to consider the prevailing physical conditions, soils and climate of southwestern Sydney, be drought tolerant and low maintenance.
- Planting adjacent to existing bushland or areas of extant indigenous vegetation is to be derived from naturally occurring appropriate species to augment these areas.
- Wherever possible, healthy street plantings should be maintained and protected.
- Screening planting is to be used adjacent to retaining and noise walls, where clearance offsets permit, to mitigate their visual impact.

Graceville Rail Corridor, NSW. Noise Walls
Source: AECOM.

4.3.3 Corridor Walls and Fences

Relevant Design Objectives

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

Principle

Visually integrate fences and walls into the rail corridor and urban or landscape setting as part of a coordinated line-wide design, and ensure adequate security of corridor infrastructure and safety of its users.

Guidelines

General

- Fences and walling, including retaining walls and noise walls, must be designed as a unified suite of materials that relate to the station precincts and corridor. The visual appearance along the corridor for customers as well as for residents helps create a whole of corridor identity.
- The design, detailing and materials including joints, junctions, fixings, and placement of support posts, is to be fully coordinated with all other urban elements, including with retaining walls, noise walls and bridge throw-screens.
- Corridor walls and fences are to be robust and suitable to the rail environment, considering maintenance and future replacement.
- Material and system selection to consider sustainability objectives including dematerialisation and embodied energy.
- Vandalism and graffiti is to be considered in the design of corridor walls and fences finishes and maintenance.

Fences

- Security fencing is to include permanent gated access at controlled locations. Fencing and gate locations are to be coordinated with strategic emergency access and egress points.
- Fencing system designs are to be as consistent as possible. Fencing design is to be minimal and contemporary, with a common modularity, materiality and appearance through the choice of readily available materials, considering whole-of-life and replacement costs.
- Fencing design is to deter climbing, providing no footholds.

Noise Walls

- Noise wall panels are to comprise robust, vandal-resistant materials and be resilient to damage by adjacent planting.
- Reduce the apparent scale and visual impact of noise walls with careful planting to both sides of noise walls where possible.
- Overshadowing of noise walls to adjacent residential properties must be minimised. The use of transparent materials is to be considered to mitigate overshadowing impacts where appropriate.
- The use of textures and patterns is to be avoided, noise walls are to consist of simple, contemporary, modular panel systems that are easily read at speed from a moving train.

Retaining Walls

- Retaining walls and related elements are to be designed as a unified composition and be integrated with the adjoining landscape (as appropriate) and other components such as fencing, guard rails, steps and other walls.
- Enable access for maintenance and cleaning.
- Existing sandstone cuttings are to be maintained and enhanced where possible. New cuttings are to respect the natural geology of the area.

Trackside Walls

- Trackside walls within the station precinct are to be designed and treated as part of the station architecture.
- Trackside wall materials are to have smooth finishes that do not attract dust and dirt.
- Trackside wall design is to consider constructability, maintenance and access.

4.3.4 Bridges, Over Passes and Under Passes

Relevant Design Objectives	
1	Ensuring an easy customer experience
2	Being part of a fully integrated transport system
4	Being responsive to distinct contexts and communities

Principle

Upgrade bridges in a way that sensitively manages old with new, integrating all architecture, engineering and rail systems requirements while establishing a coordinated, elegant family of bridges, overpasses and under passes that respect their heritage identity.

Bridges, over passes and under passes are to establish functional and clear connections across the rail corridor, connecting communities and contributing to placemaking.

Guidelines

- Bridges, over passes and under passes provide safe and easy connections across the rail corridor.
- The design of bridges, over passes and under passes are to be of high quality materials appropriate to context and consider opportunities for landscaping
- Bridge design is to be fully coordinated with associated structures to visually integrate with their setting. Visual continuity contributes to the overall success of the urban design outcome for the corridor.
- The design of bridges is to present smooth, clean lines and have a minimum structural depth that is consistent with their spans and method of construction.
- Bridges are to be designed as holistic, coherent and symmetrical structures considering the proportion of all elements of the structure including parapets, barriers, fencing, protection screens and other critical elements.
- The junction between bridges and adjacent retaining walls are to establish a clear separation from, or integration with, the bridge girder.

Protection Screens

- All overbridges are to have protection screens, either entirely new or affixed to existing masonry parapets.
- The design of protection screens is not to result in an enclosed 'cage' effect. Protection screens are to be fully integrated with other bridge and abutment elements.
- The modular screen panels are to be integrated with the bridge parapet detail.
- Protection screens are to be integrated with the design of the road bridge and adjoining station fences as a whole.
- Screens are to be designed with post spacing to provide a pleasing and ordered visual relationship with other road bridge details, including safety barrier posts, lighting columns and parapet joints; and be provided with fixing points which are in line with the double rail barrier to minimise visual clutter.

Hume Highway, Albury NSW.
Source: AECOM.

4.3.5 Rail Corridor Services

Relevant Design Objectives

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

Principle

Rail services should be low maintenance, seamlessly integrated into the corridor design and ensure safe rail operations. The design should allow for discrete placement of services to create a clutter free corridor where possible, and incorporate landscape treatments to screen prominent service utilities, to create a positive travel experience.

Guidelines

- Overhead wiring masts, tensioning structures, communications equipment and localised refuges must be located in a dedicated zone within the rail corridor, as close as possible to the rail track infrastructure, and located to minimise the visual impact and spatial width requirement of the rail infrastructure within the urban environment.
- Combined services route (CSR) must be rationalised and designed to be integrated with landscape elements, including retaining walls and features where feasible, to minimise the visual impacts, particularly in station environments.
- Consider integration of the CSR with fences, masts and landscaping to reduce visual impact and rationalise the design of services and structures.

South Morang Station, Vic. Services are rationalised, integrated into retaining wall design.
Source: COX, Copyright: Dianna Snape

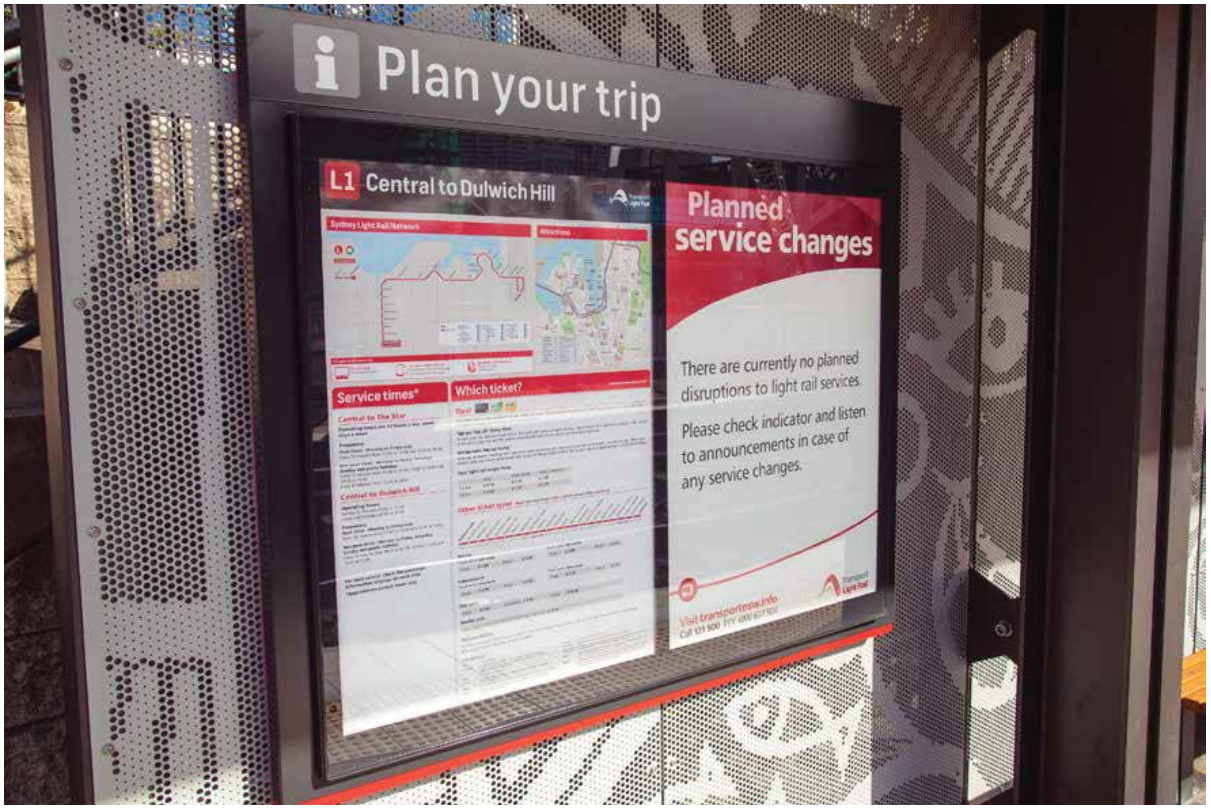
4.4 Operation and Services

The design of project infrastructure must be tailored to meet operational requirements and the transport function and integrity of the Metro system over the longer term. Design should also respond to the management and maintenance obligations that will be a critical part of the success of the Metro over successive generations as the greater Sydney region grows and demands on the transit services increase.

Stations, buildings, external areas and related corridor structures must be suitable for a high capacity passenger rail environment traversing an evolving urban setting and a complexity of interfaces. The stations need to have a consistent, reliable series of facilities that assist both staff, servicing and security operations and meet the needs of the customers who will utilise the system.

This part of the guidelines relates to the following elements:

- Information and Signage
- Advertising
- Ticketing equipment and Fixtures
- Engineering and Services Integration
- Management and Maintenance
- Security
- Emergency Requirements
- Service Vehicle Access
- Corridor Sharing
- Temporary Works



Trip Planning Information, Inner West Light Rail
Source: Courtesy of Transdev, Photographer: Scott Riley

4.4.1 Information and Signage

Relevant Design Objectives

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

Principle

Provide intuitive, clear and consistent information and signage to enhance customer journeys through efficient navigation and interchange, creating a seamless and intuitive customer journey from origin to final destination.

Guidelines

- All customer wayfinding and information signage should:
  - Enable customers to navigate each station and precinct as part of a cohesive door-to-door journey.
  - Support customers to travel independently and successfully on the transport system.
  - Anticipate the needs of customers.
  - Provide the right information at the right time.
  - Assist to in creating predictable and intuitive environments.
  - Facilitate customer movement around stations.
  - Provide information for customers interchanging between services and modes.
  - Support customers when connecting to and from public transport by walking, cycling, catching a taxi, being dropped off, or picked up in a private vehicle, or parking in their car.
- Information is to include:
  - information for trip planning;
  - finding the right platform;
  - making connections to another form of transport;
  - destinations in the local precinct;
  - 'real time' information for all public transport modes;
  - wayfinding;
  - facilities and amenities.
- A modern public address system is provided that is capable of projecting clear and audible information throughout the station.
- Provide an integrated, modular signage system of attractive, robust, easily maintained materials and fixings as an enhancement of place making.
- Signage is to be located at route decision points where most needed, adopting long sightlines that enable intuitive wayfinding, reducing the need for signs.

Transport for NSW Modal Signage
Source: TfNSW

4.4.2 Advertising

Relevant Design Objectives	
1	Ensuring an easy customer experience
2	Being part of a fully integrated transport system

Principle

Advertising is to be integrated into the station architecture or building elements, with the ability to support customer information systems and does not impact on station operations or customer experience.

Extent, type and placement of advertising should be considered in relation to station signage and passenger information.

Guidelines

- Ensure that advertising:
  - is coordinated to achieve unobstructed sightlines and legibility of the signage
  - does not conflict with customer signage or wayfinding or impede customer flows
  - is not located on stair treads or risers, seating, gateline, flooring, ceiling and in 'slow spaces'
  - does not compromise wayfinding.
- The design and placement of customer information is prioritised as follows:
  - Wayfinding and customer information
  - Customer campaigns
  - Advertising
- The following types of advertising can be considered:
  - Digital screens
  - Digital poster cases
  - LED backlit static lightboxes
  - Technology base advertising platforms (eg beacons, wifi etc)
  - Advertising screens integrated into the passenger information screens

Digital screen advertising positioned so it does not compromise wayfinding.
Source: APN Outdoor

4.4.3 Ticketing Equipment

Relevant Design Objectives

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

Principle

Provide ticketing equipment and fixtures that are integrated standard products across the Sydney Metro and Sydney Trains network and that contribute to quality and efficient service for customers.

Guidelines

General

- Common ticketing equipment and fixtures include:
  - Ticket Gates
  - Ticket Vending Machines (TVMs) and Opal Top-up Machines
- Equipment and fixtures are to be high quality, consistent throughout the Sydney Metro network and fully integrated with the station design.
- All components are to be robust and durable, suitable for the rail environment.
- Equipment and fixtures are to be located where they are visible and accessible to customers and station staff for wayfinding, security and maintenance
- Materials and installation must enable ease of access for maintenance and future repairs or replacement

Gatelines

- Gatelines are to be standard products used line-wide that contribute to quality and efficient service for customers.
- Provision should be made for accessible gates and glazed manual wide aisle gates to allow for large equipment and prams.
- The number of ticket gates provided is to be sufficient for peak periods
- Ticket gates are to be located to enable sufficient space for comfortable and safe queuing without interfering with circulation routes.
- Wide aisle gates are to be clearly visible and located on accessible paths of travel.

Ticket Vending and Top-up Machines

- Ticket vending and top-up machines are to be clustered together to provide a legible ticket sales zone within the station entrance, and designed to integrate with interior components, materials and information systems.
- Ticket vending and top-up machines are to be publicly accessible and close to the station entrance without interfering with circulation routes. Design is to provide adequate space for queuing and manoeuvring by customers using mobility aids.

Sydney Trains Opal Only Gates
Source: TfNSW

4.4.4 Engineering and Services Integration

Relevant Design Objectives	
1	Ensuring an easy customer experience
2	Being part of a fully integrated transport system
4	Being responsive to distinct contexts and communities

Principle

The rail engineering and service elements for the stations and service facilities should be integrated into the design holistically, whilst being able to be easily maintained.

Guidelines

- The station structures and engineering elements are to be designed holistically, fusing architecture and engineering as one cohesive and compelling product.
- The station and station surrounds are to integrate all structural, civil, mechanical, electrical and rail systems to ensure efficient designs.
- Design integrity must be addressed through careful positioning of equipment.
- Minimise the visual impact of engineering components in public areas by concealing all services.
- Station and services design must allow for personnel access and regular maintenance of all engineering elements.
- Dedicated services zones should be integrated into the station designs allowing sufficient space proofing for future requirements.
- Location of equipment and fixings, including speakers and CCTV cameras, is to be well-considered for both public and back of house areas.
- Design is to consider the placement of access hatches in floors and ceilings away from primary customer circulation routes.

Engineered systems integrated into the platform canopy, Cheltenham Station
Source: COX

4.4.5 Management and Maintenance

Relevant Design Objectives

2	Being part of a fully integrated transport system

Principle

Ensure the selection of cost effective, adaptable materials and assets that are durable and easily maintained and fit-for purpose for high traffic rail environments and customer interfaces.

Guidelines

- The design for each station is to accommodate maintenance and access for all elements, including heavy and large equipment.
- Adopt a consistent and coordinated palette of materials, furniture and fixtures within stations and their precincts to promote cost effectiveness and assist in the development of an efficient management and maintenance plan for Sydney Metro.
- All signage, street furniture and operational equipment (e.g. Passenger Information Displays and CCTVs systems) in the public domain are to be designed to minimise vandalism and simplify cleaning.
- Placement and detailing of furniture, fixtures and equipment should consider impacts by birds, insects and mammals 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 that is readily available and have readily replaceable components. Assets are to be robust and durable, with consideration of detailing and placement to resist vandalism.
- All components should meet the required life cycle objectives of Sydney Metro and consider sustainability objectives including dematerialisation and embodied energy.
- The design for each station is to accommodate future maintenance access to all elements, including components that may require the use of heavy or large machinery or structures to be erected for installation of structures and equipment, regular cleaning or repair.
- Stations and station precincts should be designed to facilitate access in a safe environment for operational staff and customers alike. Maintenance considerations are to be integral to the design process from an early stage.
-

Design to accommodate maintenance
Source: TfNSW

4.4.6 Security

Relevant Design Objectives

2	Being part of a fully integrated transport system

Principle

Ensure adequate security for the rail corridor infrastructure, station assets and their users. Visually integrate security elements such fencing, security screens and CCTV into the rail corridor, precinct or station design as part of a coordinated whole-of-corridor design.

Guidelines

- Risks to the rail corridor and stations must be regularly assessed during the design phase to ensure adequate control measures can be put in place.
- A public address system is to be provided at emergency egress and risk points, controllable from Station Control Rooms and Operational Control Rooms.
- CCTV must be provided throughout the station and at all egress points and risk-sensitive areas.
- CCTV cameras are to be situated where they cannot easily be evaded, damaged or obscured and must be clearly visible.
- Lighting levels are to be sufficient for adequate operation of CCTV.
- Security bollards may be provided where necessary but must not impede safe pedestrian movement. Where required, security bollards should adopt a rational layout in order to minimise visual clutter and maximise safe and accessible paths of travel.
- The visual impact of bollards should be minimised. Station precincts should, where practical, be achieved by integrating vehicle protection with street furniture or public art.
- Security fencing must be provided along the sections of the rail corridor and include permanent gated access at controlled locations. Fencing and gate locations are to be coordinated with strategic emergency access and egress points.
- Two tiers of fencing are to be utilised along the length of the rail corridor and appropriately detailed including; inner security segregation fence, outer rail corridor fence.
- Fencing throughout the station precincts and public domain areas must avoid creating dead ends or sightline conflicts.
- Passive surveillance is to be considered in the design of stations and station plazas.

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: COX/HASSELL

4.4.7 Emergency Requirements

Relevant Design Objectives

2	Being part of a fully integrated transport system

Principle

Ensure that station precincts, facilities and rail corridors are provided with clearly identified zones for emergency access and egress, eliminating the potential for movement conflicts during emergencies.

Guidelines

- The precincts and rail corridor should provide access for emergency service vehicles and appropriate measures to safeguard all users.
- All station precincts and public domain areas must comply with statutory requirements and emergency procedures and relevant guidelines for fire and safety.
- Emergency requirements are to consider;
  - Effective and clearly signposted station emergency evacuation routes and assembly areas.
  - Adequate zoning and space at emergency assembly points to ensure they are free of clutter and remain accessible at all times.
  - Fire safe refuge areas with CCTV and accessible communication system in underground stations for people who are unable to self-evacuate.
  - Full integration within the relevant station and facilities evacuation plan.
  - Emergency lighting to the immediate station curtilage.
  - The appropriate location of firefighting equipment such as hydrants; all clearly identified and readily accessible.
  - The provision of emergency/security electronic help points.
- Hydrant enclosures should be easily identifiable, easily accessed modular components integrated into station cladding systems.
- Hydrant enclosures should be integrated with the surrounding wall system to minimise their visual impact.

Sydney Trains platform help point.
Source: TfNSW

4.4.8 Service Vehicle Access

Relevant Design Objectives

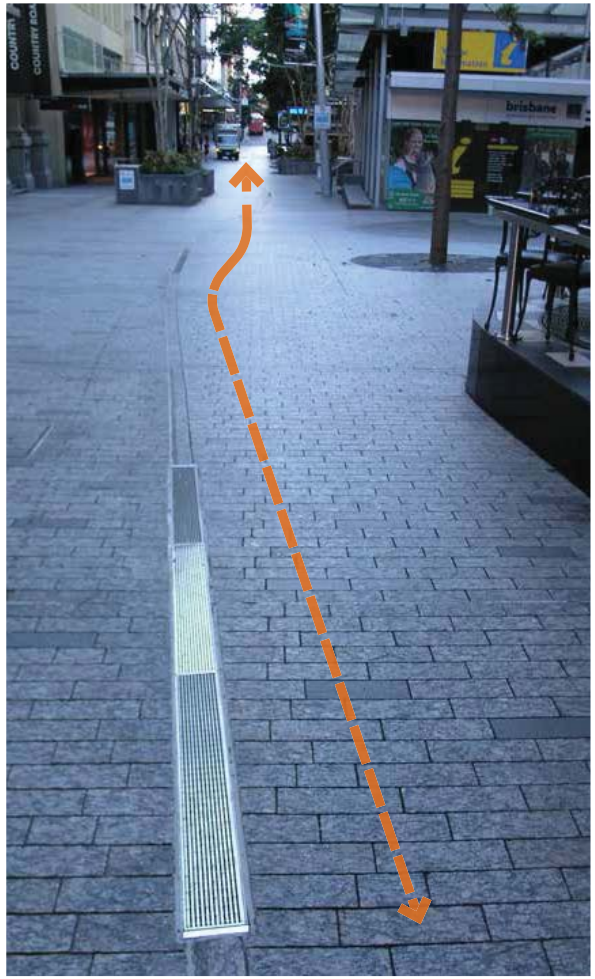
2	Being part of a fully integrated transport system
4	Being responsive to distinct contexts and communities

Principle

Ensure well defined and efficient coordination of service vehicle movements around stations.

Guidelines

- The station design is to enable access for service vehicles. Service vehicle access is not to compromise the public domain areas of the station forecourt or interchange and connectivity functions.
- Service vehicle access for all precinct functions must be addressed as part of the broader station precinct movement strategies. These strategies must address both the project works requirements and increased movements over the life of the station precincts.
- The operational function and frequency of service vehicles should be considered to determine dedicated zones for daily or frequent access, or shared zones for occasional access within station precincts. Multi-use conflicts in shared zones should be eliminated.



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

4.4.9 Temporary Works

Relevant Design Objectives	
2	Being part of a fully integrated transport system
4	Being responsive to distinct contexts and communities

Principle

Temporary works must minimise impacts to existing infrastructure, public domain, and structures; and ensure that means of rectification is achieved without further disturbance of surrounding areas.

Guidelines

- All temporary station access must be appropriately located within the existing streetscape and public domain to minimise disruption to general pedestrian access of the precinct.
- Hoardings must be sensitively designed and located to minimise disruption and mitigate some of the visual effects of the construction.
- Local access pathways and desire lines must be retained where feasible, with adequate way finding provided to ensure general accessibility of the precinct around the stations is retained.
- Minimise impacts to existing landscapes and trees that are to be retained.
- Explore opportunities to integrate artwork, heritage and cultural interpretation that respond to the unique character of local communities on temporary hoardings.

Artwork on hoarding
Source: ScrimWorks

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