

SYDENHAM TO BANKSTOWN ENVIRONMENTAL IMPACT STATEMENT OVERVIEW

September 2017



Marrickville

Dulwich Hill

Hurlstone Park

Canterbury

Campsie

Belmore

Lakemba

Wiley Park

Punchbowl

Bankstown



Sydney's new metro train

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Sydney Metro is Australia's biggest public transport project, delivering 31 stations and 66 kilometres of new metro rail, and revolutionising the way Australia's biggest city travels.

Services start in 2019 on the \$8.3 billion Sydney Metro Northwest project, which is Stage 1 of Sydney Metro.

Stage 2, Sydney Metro City & Southwest, will deliver 30 kilometres of new metro rail between Chatswood and Bankstown, including new twin tunnels under Sydney Harbour, and the upgrade and conversion of all 11 stations between Sydenham and Bankstown to metro standards. In December 2015, the NSW Minister for Planning declared Sydney Metro City & Southwest to be critical State Significant Infrastructure under the *Environmental Planning and Assessment Act 1979* (NSW).

Transport for NSW is the NSW Government agency that leads the planning and operation of the state's transport infrastructure and services.

The Sydney Metro Delivery Office has been established as part of Transport for NSW to manage the planning, procurement and delivery of the Sydney Metro network.

This document is intended to be an overview of the Sydenham to Bankstown component (the Project) of Sydney Metro City & Southwest.

For further detail, please see the Environmental Impact Statement and supporting documents available on our website at:

- o www.sydneymetro.info

The Chatswood to Sydenham component of Sydney Metro City & Southwest was the subject of a separate environmental assessment process in 2016 and was granted planning approval in January 2017. The Sydenham Station and Sydney Metro Trains Facility South component of Sydney Metro City & Southwest was submitted as a modification to this previous environmental assessment in June 2017.

Contact us

To speak to your local Place Manager or a member of the Project team, please contact us via:

- o the community information line: **1800 171 386**
- o project email: sydneymetro@transport.nsw.gov.au



Premier's message

The NSW Government is proud to be delivering Sydney Metro – Australia's biggest public transport project.

Construction is progressing rapidly on Sydney Metro Northwest, which will open to customers in the first half of 2019, and work has begun on Sydney Metro City & Southwest between Chatswood and Sydenham, with major construction activity underway in the city.

We are now preparing to deliver the next phase of Sydney Metro City & Southwest – the upgrade and conversion of all stations between Sydenham and Bankstown to metro standards.

With 15 new metro trains an hour in the peak, the upgrade of the Bankstown Line will address one of Sydney's biggest rail bottlenecks, delivering benefits right across our rail network.

This Environmental Impact Statement will provide the opportunity to find out more about this transformation project and I encourage you to participate in one of our community forums.

Gladys Berejiklian MP
PREMIER OF NEW SOUTH WALES



Minister's message

The NSW Government is getting on with the next stage of Sydney Metro – the upgrade of the Bankstown Line to metro standards.

There'll be more trains and faster services, with a metro train every four minutes in the peak and ultimate capacity for a train every two minutes through the CBD.

Customers will have fully accessible services, with lifts at all stations and level access between platforms and trains. There'll also be platform screen doors, to keep our customers safe.

When services start in 2024, customers will have new and direct access to key employment and education precincts including Martin Place, Barangaroo, North Sydney, Chatswood and Macquarie University.

Sydney Metro represents the largest investment in rail infrastructure in the state's history. We're nearing completion in the north west, we're getting ready to tunnel under the city and Sydney Harbour, and now we're moving ahead with the Sydenham to Bankstown upgrade.

We look forward to working with the community to bring this state-of-the-art project to life.

Andrew Constance MP
MINISTER FOR TRANSPORT
AND INFRASTRUCTURE



THE BENEFITS OF SYDNEY METRO

Sydney Metro will deliver a train every four minutes in the peak and upgraded stations will be opened progressively from 2020

The T3 Bankstown Line is being converted to metro between Sydenham and Bankstown. This means:

- an air-conditioned train every four minutes in the peak
- full disability access for all stations, including lifts and level access
- safer platform environments, with improved CCTV surveillance, screen doors, platforms level with train floors, and minimal gaps between platforms and trains
- new or upgraded concourses, greater circulation space, and new station entries better located to connect with local town centres
- improved public domain

- improved station interchange facilities
- all trains stopping at all local stations – no waiting for the right train
- less time spent waiting due to higher frequency services (four minutes instead of the current wait of six to nine minutes in the peak, and 10 minutes instead of up to 30 minutes in the off-peak)
- safe and efficient connections during the peak and off-peak periods between key centres along the T3 Bankstown Line
- reduced travel times to key destinations such as Central and Town Hall
- new direct and fast services to Martin Place, Barangaroo, North Sydney, Chatswood and Macquarie Park
- interchanges to other rail services at Sydenham, Central and Martin Place.

Lifts for every station

Station	Lift access now	Lift access with upgraded station
Bankstown	✓	✓
Punchbowl	✗	✓
Wiley Park	✗	✓
Lakemba	✓	✓
Belmore	✓	✓
Campsie	✓	✓
Canterbury	✗	✓
Hurlstone Park	✗	✓
Dulwich Hill	✗	✓
Marrickville	✓	✓
Sydenham	✓	✓

All Sydney Metro stations will have level access between platforms and trains - no more steps up into the train



Current access between platforms and trains

Artist's impression of access between platforms and trains on Sydney Metro

Customers won't need a timetable when Sydney Metro opens – you'll just turn up and go

Sydney Metro

A new standalone railway, this 21st century network will deliver 31 metro stations and 66 kilometres of new metro rail for Australia's biggest city – revolutionising the way Sydney travels.

Sydney's new metro railway will have a target capacity of about 40,000 customers per hour, similar to other metro systems worldwide. Sydney's current suburban system can reliably carry 24,000 people an hour per line.




Sydney Metro, together with signalling and infrastructure upgrades across the existing Sydney

rail network, will increase the capacity of train services entering the Sydney CBD – from about 120 an hour today to up to 200 services beyond 2024. That's an increase of up to 60 per cent capacity across the network to meet demand.

Sydney Metro City & Southwest features will include:

- 16.5 kilometres of new metro line between Chatswood and Sydenham
- 15.5 kilometres of new twin rail tunnels
- 13-kilometre upgrade and conversion of the T3 Bankstown Line to metro standards.

KEY

-  Sydney Metro Northwest
-  Sydney Metro City & Southwest
-  Sydney Trains suburban network



Sydney Metro has two core components:

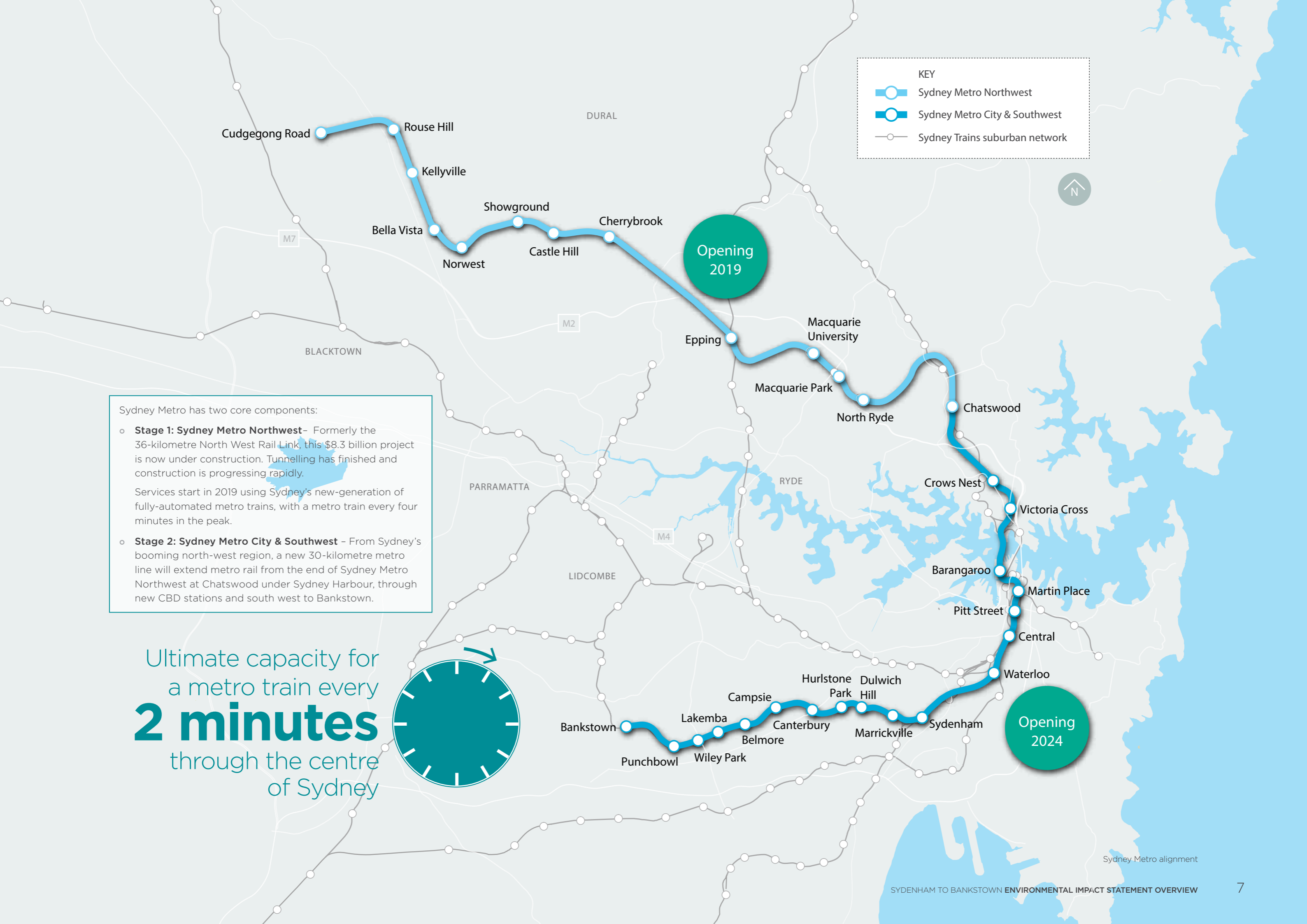
- Stage 1: Sydney Metro Northwest** - Formerly the 36-kilometre North West Rail Link, this \$8.3 billion project is now under construction. Tunnelling has finished and construction is progressing rapidly. Services start in 2019 using Sydney's new-generation of fully-automated metro trains, with a metro train every four minutes in the peak.
- Stage 2: Sydney Metro City & Southwest** - From Sydney's booming north-west region, a new 30-kilometre metro line will extend metro rail from the end of Sydney Metro Northwest at Chatswood under Sydney Harbour, through new CBD stations and south west to Bankstown.

Ultimate capacity for a metro train every **2 minutes** through the centre of Sydney



Opening 2019

Opening 2024



Sydney Metro - the facts

Frequency

When services start in 2024, there will be at least 15 trains an hour in the peak in each direction, with plenty of space to grow in the future. Stations along the T3 Bankstown Line currently have between four and 10 trains per hour in the morning peak.



Now **4-10** per hour



Sydney Metro **15** per hour

Capacity

Over the three-hour morning peak, Sydney Metro will be able to move 51,000 people in each direction on the Bankstown Line - that's an extra 15,000 people than now.



Publicly owned

Sydney Metro infrastructure, like the stations, trains and railway tracks are owned by the NSW Government.



Seating

In the three-hour morning peak, Sydney Metro will deliver more than 17,000 seats on 45 services from Bankstown to the city.



More than **17,000** seats



Transport during upgrades

The T3 Bankstown Line will remain open during the majority of construction.

Some major work will be done during rail possessions when trains are not running, including at night and additional rail possessions during July and Christmas school holidays. A final three to six month possession will be used to complete the upgrade, including installing platform screen doors and testing and commissioning the line.

Temporary bus services will keep customers moving.



Curved platforms, steps and gaps

Sydney Metro will have level access between platforms and trains. The current platforms were built when steam trains used the Bankstown Line in the 19th century. Sydney Metro will straighten platforms, reducing the gap and removing the step up to the train that is common at some stations.



Beyond Bankstown

Stations west of Bankstown will continue to be serviced by Sydney Trains.



Railway tracks

Sydney's new metro trains will use the existing railway tracks. Some small sections of tracks will be replaced because platforms will be straightened.



Fares

Sydney Metro uses Opal ticketing and fares are set by the NSW Government, the same as the rest of the Sydney public transport network.

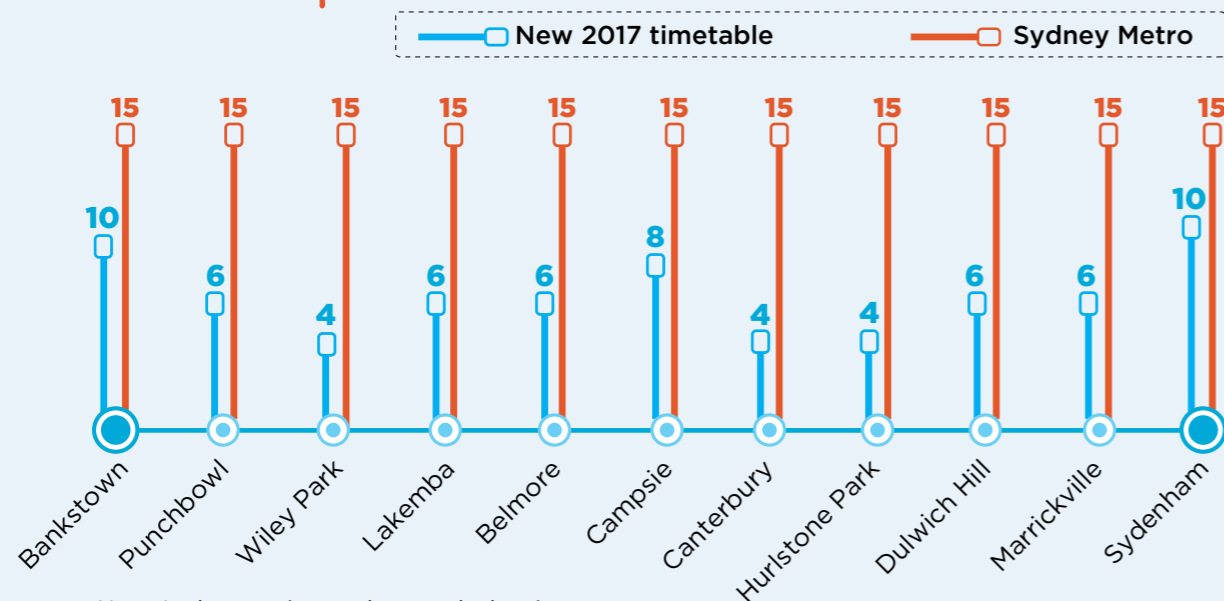


Time savings to Central Station

Faster and more frequent services mean Sydney Metro will save you up to 70 minutes a week.

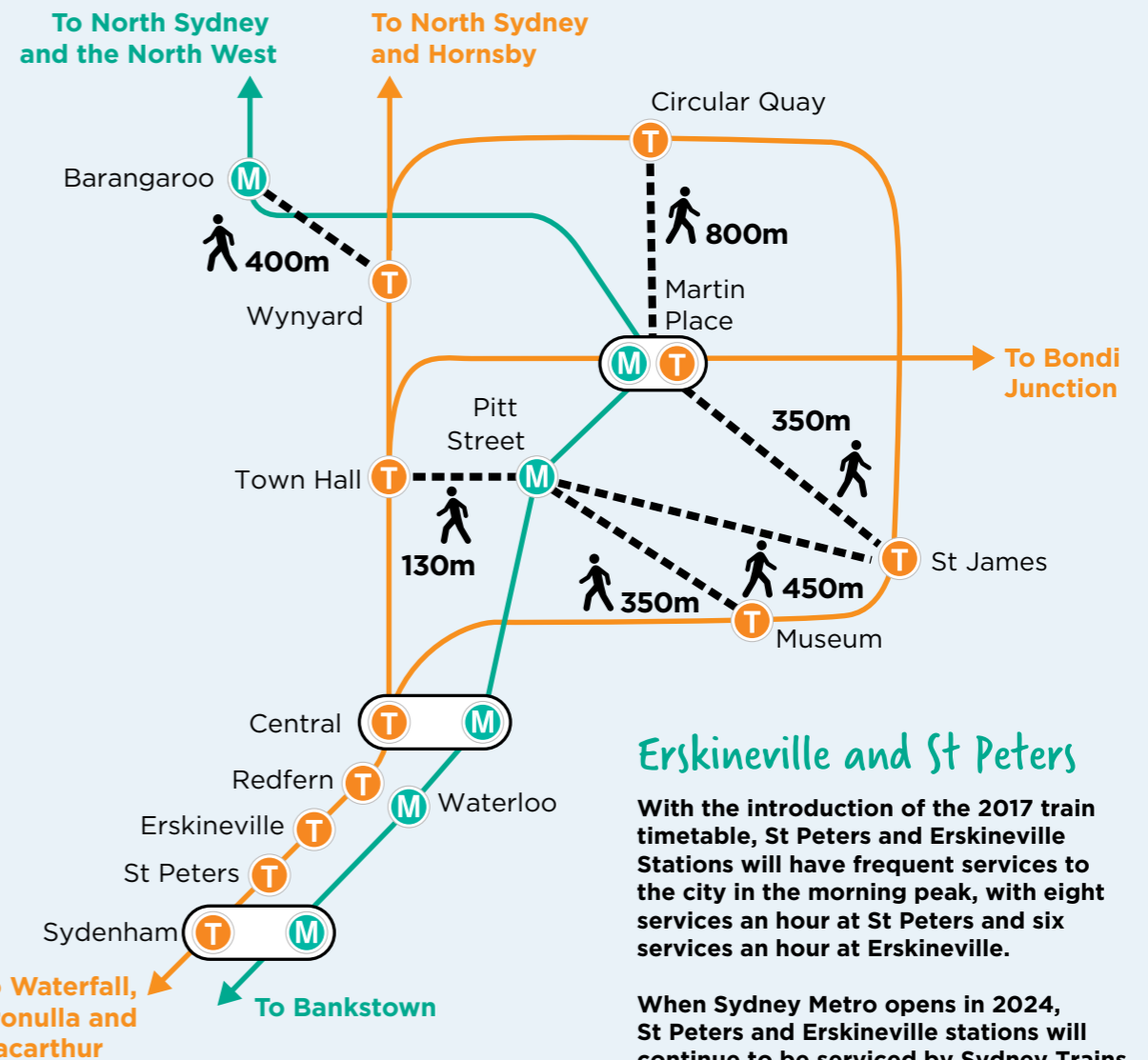
	Now (minutes)	Sydney Metro (minutes)	Savings (minutes)	Savings per week for 5 days of travel (hours:minutes)
Bankstown	Up to 35	28	Up to 7	01:10
Punchbowl	Up to 32	26	Up to 6	01:00
Wiley Park	Up to 30	24	Up to 6	01:00
Lakemba	Up to 28	22	Up to 6	01:00
Belmore	Up to 26	20	Up to 6	01:00
Campsie	Up to 24	18	Up to 6	01:00
Canterbury	Up to 21	16	Up to 5	00:50
Hurlstone Park	Up to 19	14	Up to 5	00:50
Dulwich Hill	Up to 17	12	Up to 5	00:50
Marrickville	Up to 14	10	Up to 4	00:40
Sydenham	Up to 10	7	Up to 3	00:30

More trains per hour on the Bankstown Line



Note: In the morning peak towards the city

Easy CBD connections



Erskineville and St Peters

With the introduction of the 2017 train timetable, St Peters and Erskineville Stations will have frequent services to the city in the morning peak, with eight services an hour at St Peters and six services an hour at Erskineville.

When Sydney Metro opens in 2024, St Peters and Erskineville stations will continue to be serviced by Sydney Trains.

Sydney Metro will deliver new and direct access to key employment and educational precincts like Barangaroo, North Sydney, Chatswood and Macquarie University.

Customers at St Peters and Erskineville will be able to access these areas by catching a train to Central and connecting to the metro.

City Circle access

Customers on the T3 Bankstown Line can continue to access the City Circle by transferring to Sydney Trains services. Alternatively, the Martin Place and Pitt Street metro stations are just 350 metres away from St James and Museum stations.

Sydney Metro network benefits



All stations **fully accessible**, with lifts and level access between trains and platforms



More job opportunities faster, more frequent and direct access to key employment centres



Better access to education, with fast, more frequent and direct connections



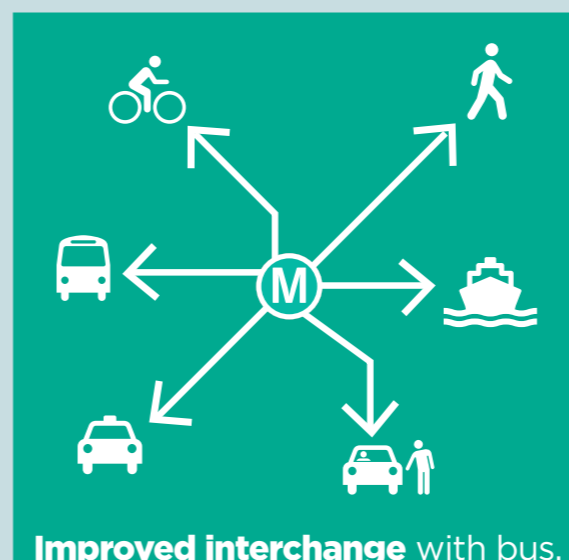
Customers won't need a timetable - you'll just **turn up and go**



New and **direct access to major CBD stations**, including Martin Place, Pitt Street, Barangaroo and North Sydney



Increased train frequency in AM and PM peak services - a train at least every four minutes



Improved interchange with bus, light rail, pedestrian and cycling networks, and provision of taxi, kiss and ride and bike parking facilities at key stations



Fast, safe and reliable a new generation of 21st century metro trains

Sydney's new metro trains

All trains on Sydney Metro will be modern, single deck trains. The trains will deliver a fast, safe and reliable journey for customers, operating at speeds of up to 100 kilometres per hour both in the tunnels and above ground.

KEY FACTS



Stage 1 Northwest
Opens 2019



Stage 2 City & Southwest
Opens 2024



66 kilometres
New metro rail for Sydney



31 metro stations
State-of-the-art, fully accessible



98%
On-time Running reliability



In peak
Train every four minutes



Off peak
Train every ten minutes



Connected
Continuous mobile phone coverage through network



No timetable
Customers will just turn up and go



Opal ticketing

TRAIN FEATURES

- 170 metres long platforms – longer than most of Sydney
- Heating and air conditioning
- Three double doors per carriage for faster loading and unloading
Level access between platform and train
- Two multi-purpose areas per train for prams, luggage and bicycles
- Wheelchair spaces, separate priority seating and emergency intercoms
- Real-time travel information and live electronic route maps
- Platform screen doors keep people and objects away from the edge and allow trains to get in and out of stations much faster
- Inside you can see from one end of the train to the other
- Customer service assistants at every station and moving through the network during the day and night

SAFETY

Sydney Metro is Australia's first fully-automated metro rail network

Around the world, millions of people use these networks every day in cities like Paris, Singapore, Dubai and Hong Kong

- Constant monitoring**
Expert train controllers monitor entire metro system
- Security**
More than 230 tunnel cameras on Sydney Metro Northwest alone
- Signalling and communications systems**
Control the trains, tunnels, platforms and skytrain to deliver a safe and reliable journey
- Operations Control Centre**
State-of-the-art network controlled from new high-tech facility at Tallawong Road
- Faster journeys**
System minimises the time trains are stopped at stations and the time between each train

An example of a metro operations control centre

Tunnel | Train | Track | Platform

Better services for customers

Sydney Metro will make it easy for customers to get where they need to go. New metro services will be integrated with other transport modes, including interchanges with the existing Sydney railway network, buses, light rail and ferries.

Customers are at the centre of Sydney Metro's 21st-century design, including the development of Sydney's new metro train, and new metro railway stations, interchanges and precincts.

State-of-the-art technology will keep customers connected at all stages of their journey, from smart phone travel apps to real-time journey information at metro stations and on-board trains.

This door-to-door approach will help customers achieve their daily tasks, whether it's getting to work, meetings, school or education, sport, a day out or running errands – and, of course, getting home. Making it easy for customers at each stage of their journey will be integral in the successful delivery of Sydney Metro.

Linking communities, schools, hospitals, key destinations and businesses with the new metro railway network is key in attracting and keeping customers, and meeting broader transport and land use objectives.

Transport for NSW is working across government and with the community to get customers to and from new metro services easily and, when travelling on the new trains, to ensure they are safe and comfortable.



Sydney's new metro train

Sydney Metro is being designed to deliver safe, clean, comfortable services that will run on time and be convenient, efficient, accessible and easy for customers to use



Level access between platforms and trains



Sydney Metro Northwest prototype station



Artist's impression of Sydney Metro services

The Sydney Metro network will provide the following long-term benefits:

Transport benefits

- Enabling the transport network to better cater for growth
- Travel-time savings
- Increased network capacity
- Decreased train and station crowding
- Increased reliability of the rail network
- Enhanced customer satisfaction on the use of public transport
- Improvements in customer safety.

City-building benefits

- Increased economic activity
- Land-use efficiency
- Economic productivity
- Increased jobs
- Savings in infrastructure provision
- Sustainability benefits
- Health benefits
- More choice of housing and more affordable housing
- Greater access to services
- Greater social equity.

Sydney Metro makes it fast and easy to transfer between trains, buses, ferries or light rail



Train operations

Sydney Metro City & Southwest will have an ultimate operating capacity of one train every two minutes in each direction through the Sydney CBD.

Sydney Metro will provide frequent rail services, seven days a week. It will operate throughout the day from early morning until late at night. Initially, services will run at least every four minutes during peak periods and at least every ten minutes in off-peak periods.

All Sydney Metro operations will be controlled and monitored from the Sydney Metro Trains Facility in Rouse Hill, which is being built as part of Sydney Metro Northwest, along with maintenance and stabling. Stabling will also occur at the Sydney Metro Trains Facility South near Sydenham Station.

Scheduled maintenance will generally occur between the last and first train services, or during planned weekend maintenance periods, when trains are not operating.

Upgraded stations will be progressively opened from 2020 – you won't have to wait until 2024 for benefits like new lifts, level access and improved entrances to the station



Cooks River

Sydney Metro will contribute to a new active transport corridor

As part of the Sydney Metro Sydenham to Bankstown upgrade, Transport for NSW will work with the Department of Planning and Environment to support the development of an active transport corridor along the alignment, including walking and cycling infrastructure.

Transport for NSW will deliver sections of the active transport corridor around stations.

All stations will have walking and cycling infrastructure delivered as part of the upgrade work, forming part of an active transport corridor. The corridor will provide the first stages of a major east-west spine and include:

- o pedestrian footpaths
- o separated cycleways
- o shared footpaths
- o designated pedestrian and cyclist road crossings.

The corridor will use existing active transport networks where possible, like the existing

footpaths located between Belmore Station and Belmore Sports Ground. Where existing infrastructure is not available, new infrastructure will be located on land currently within the rail corridor, or within existing open space areas (subject to the availability of land).

The design and implementation of the active transport corridor will be undertaken in consultation with local councils, local community groups, bicycle user groups, and relevant NSW Government departments and utility owners.

The location of the active transport corridor will be integrated with future development plans outlined in the *Draft Sydenham to Bankstown Urban Renewal Corridor Strategy*.

Some sections of the active transport corridor, such as in between stations, will be delivered separately by others. Space has been provided in the design of the upgrade to allow for delivery of future parts of the corridor.



Sydney Metro West

In November 2016, the NSW Government announced a new underground metro railway line will be built between Parramatta and the Sydney CBD to help cater for Sydney's growth.

Four key precincts to be serviced have initially been

identified at Parramatta, Sydney Olympic Park, The Bays Precinct and the Sydney CBD.

Transport for NSW has begun engaging with the community, industry and key stakeholders to gather feedback on station locations.



WHY UPGRADE SYDENHAM TO BANKSTOWN?



Wiley Park Station

Why upgrade the T3 Bankstown Line to metro operations?

The T3 Bankstown Line is over 100 years old, with existing infrastructure in varying conditions. Five of the 10 stations between Marrickville and Bankstown remain largely as originally built and require major upgrades to meet today's accessibility and safety standards. Nine of the 10 stations have curved platforms, resulting in large gaps between the train and the platform, making it difficult for many customers to board the train.

The rail network is particularly complex through and around the Sydney CBD, where up to 15 lines converge into six inbound tracks. This constrains the network and creates a more complex rail operation.

There are only two lines through the city (T1 North Shore, Northern and Western Line and T4 Eastern Suburbs and Illawarra Line) and two lines that share the City Circle loop (T2 Airport, Inner West and South Line and T3 Bankstown Line). Because of this, a number of services are required to terminate at Central Station.

The T3 Bankstown Line creates a significant bottleneck for the existing rail network. The line effectively slows down the network because of the way it merges with other railway lines close to the Sydney CBD, including the T2 Airport, Inner West and South Line. Crowding at Town Hall Station further limits the capacity of the network.

Sydney Metro will deliver capacity and crowding relief across the whole network

Sydney Metro, together with signalling and infrastructure upgrades across the existing network, will increase the capacity of train services across Sydney from about 120 an hour today, to up to 200 services an hour beyond 2024.



After the conversion, metro trains from Bankstown will run at least every four minutes in the peak, or 15 trains an hour.

The metro network will be fully segregated from the existing Sydney Trains network between Sydenham and Bankstown, improving the reliability of services on the line. Interchange between Sydney Metro and Sydney Trains at both locations will be provided, with improvements to station way-finding and signage.

By 2036 demand on the T2 Inner West and South Line and the T3 Bankstown Line will exceed capacity

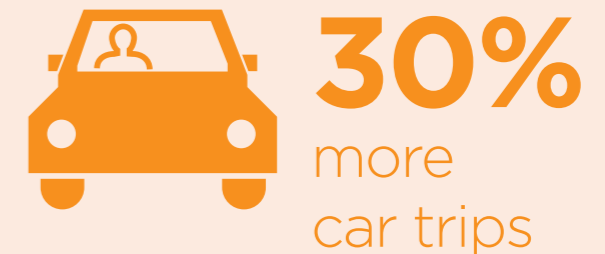
- some customers will not be able to board the trains and there will be major impacts to the reliability of these services

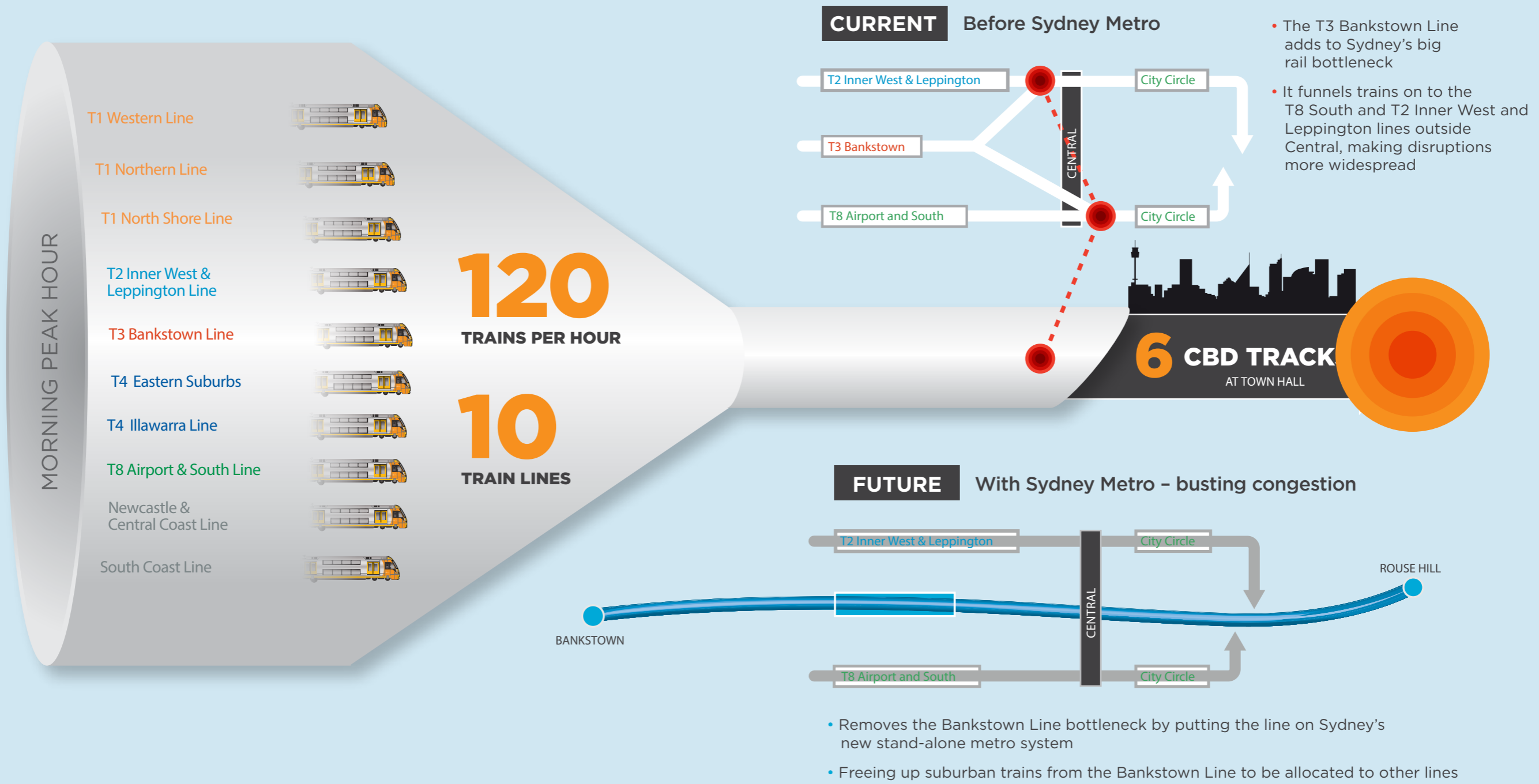
Similarly, demand will exceed capacity on the T1 Northern Line, T1 North Shore Line and T2 Airport and South Line services and will have a material impact on service reliability



Central Station

Over the next **15 years** Sydney will require infrastructure to support:





Ultimately, Sydney Metro will move around 40,000 customers per hour in each direction in peak periods



CONSULTING WITH THE COMMUNITY

Information display at Lakemba in 2017

Community consultation so far

Sydney Metro has been talking to the community and key stakeholders since the release of *Sydney's Rail Future* in 2012.

In June 2015, consultation started along the Sydney Metro City & Southwest corridor. This was not a statutory consultation process, but was carried out to proactively engage with the community before starting the Environmental Impact Statement assessment process. At this time, the community was provided with information about the proposal and given the opportunity to provide feedback.

In June 2016, we again consulted with the community during the preparation and exhibition of the Environmental Impact Statement for the Chatswood to Sydenham component of the Project. Consultation also included meeting key stakeholders, including local government, NSW and Australian Government departments, peak bodies and industry associations.

In 2017, while preparing the Environmental Impact Statement for the Sydenham to Bankstown component of the Project, we have continued to inform and consult with the community, including:

- o distributing a project update to 70,000 properties

- o visiting properties affected by acquisition or located next to the stations
- o hosting community information displays at Marrickville, Campsie, Lakemba and Bankstown
- o hosting information displays at the Sydney Royal Easter Show and Sydney Festival at Barangaroo
- o handing out information flyers and talking to customers at stations
- o informing station design using customer focus groups
- o seeking feedback on alternative transport arrangements during the construction period via an online survey
- o hosting planning focus meetings with local councils and government agencies
- o meeting with community groups, relevant government agencies and key stakeholders.

Transport for NSW and Sydney Metro will continue to work closely with the community and key stakeholders to understand any issues of concern.

The Environmental Impact Statement for Sydenham to Bankstown is now on display, and the community and stakeholders once again have an opportunity to have their say.



Information display at Lakemba in 2017



Information display at Bankstown Central in 2017



In 2017, over

3,250 people

visited information sessions and pop-up displays between Marrickville and Bankstown

31,000 people

visited during the Sydney Festival

88,800 people

visited during the Easter Show

Working with industry

Sydney Metro has held five industry briefings attended by almost 2,000 industry representatives from Australian and international firms. The briefings detailed plans for Sydney Metro and the process for industry to contribute and take part in delivery.

This engagement process has maximised industry input at this early stage and helped ensure an outcome that provides an outstanding transport product, which is value for money and puts the needs of the customer first.

Place Managers working with the community

Our Place Managers will continue to play a vital role in maintaining close and ongoing contact with local communities and stakeholders during the design and delivery of Sydney Metro. Their role is to be a direct point of contact between affected members of the community and the Project team.

Working collaboratively with local councils

Sydney Metro is working with councils to provide the best outcomes for the community.

Inner West Council have a flood management plan to deal with serious flooding and drainage issues. Sydney Metro, Inner West Council and Sydney Water are working collaboratively together to achieve a positive outcome.

Sydney Metro worked with council to preserve and protect the Cedar of Lebanon tree (*cedrus libani*) and its surrounds at Lakemba. The tree is around

30 to 35 years old and Sydney Metro understands its importance to the community.

Sydney Metro also worked with Bankstown City Council to design a public concourse at Bankstown Station providing access to the surrounding precincts, as well as to the existing Sydney Trains platforms and the new Sydney Metro platforms.

Sydney Metro will continue to work with councils along the corridor to plan an active transport corridor.

Customer testing of station designs

In early 2017, Sydney Metro sought customer feedback on early designs for Sydney Metro stations.

Twenty-one group research sessions were held with people representing a range of Sydney Metro customers. The sessions sought to understand how 'fit for purpose' the station designs were in meeting customer needs. Focus areas were usability, safety, efficiency, interchange, the station role in the community, and the challenges faced by people with accessibility needs.

Designing with heritage and the community in mind

Sydney Metro held interactive design workshops with the community to respond to issues and concerns raised about potential impacts of station upgrades on the character of Hurlstone Park and Dulwich Hill.

Participants were presented with the current station reference design, including negotiable and non-negotiable elements (such as accessibility and maintenance requirements).

Customer testing and community workshop feedback has been included in our designs



Sydney Metro prototype train at Sydney Royal Easter Show

THE EVOLUTION OF THE BANKSTOWN LINE



Marrickville Station c.1895

The T3 Bankstown Line is more than 100 years old

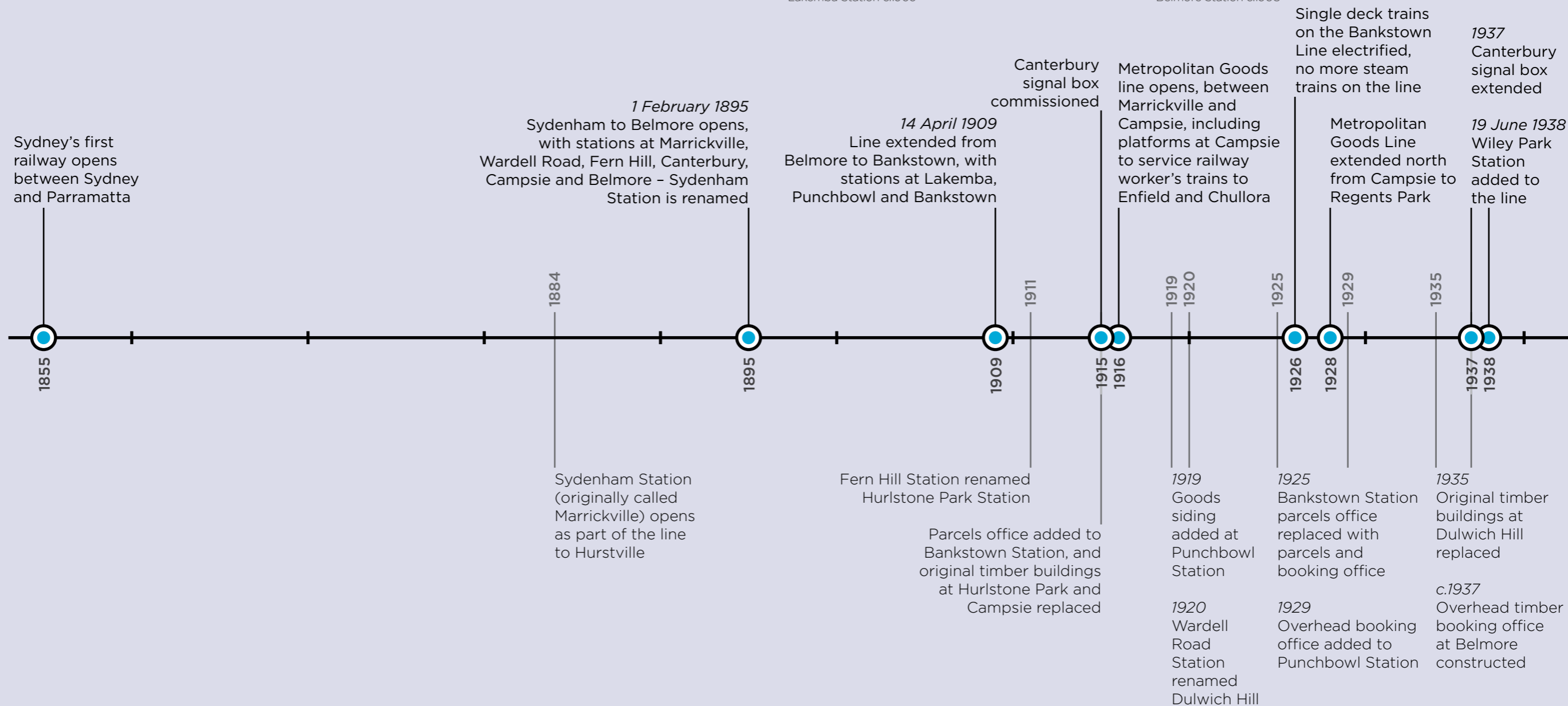
This is not the first time the T3 Bankstown Line has been upgraded and renewed. The line is between 108 and 122 years old. During its long existence it has undergone many periods of renewal, with buildings, infrastructure and technology upgraded, renovated or replaced. Sydney Metro will build on this previous work to ensure the rail line continues to provide services well into the future.



Lakemba Station c.1909



Belmore Station c.1908





Sydenham Station c.1910



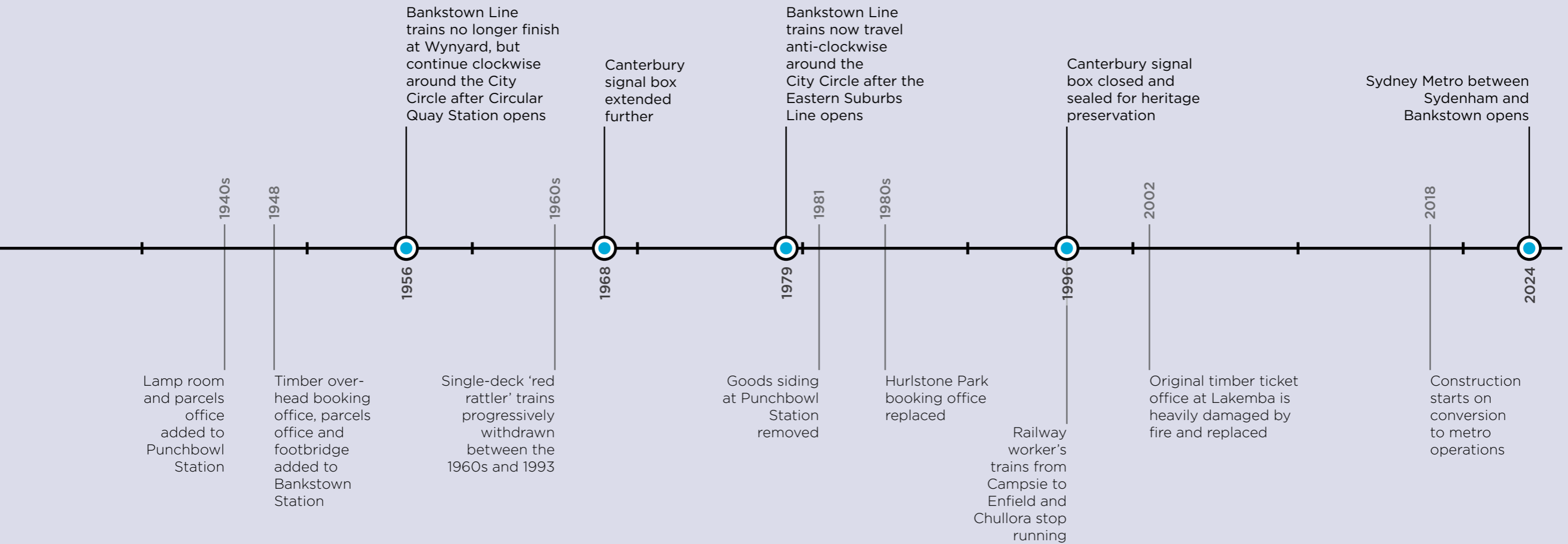
Marrickville Station c.1895



Campsie Station c.1950



Opening of Bankstown Station in 1909



Preserving significant heritage items

Station design has considered the heritage values of each station and seeks to:

- o recognise and demonstrate the heritage significance of the T3 Bankstown Line
- o retain and conserve, wherever possible, elements of heritage significance
- o remove intrusive station elements that detract from the core heritage values
- o adaptively reuse existing heritage buildings for station and related functions
- o deliver a functionally viable line, stations and catchments while enhancing key heritage values.

The design approach involves:

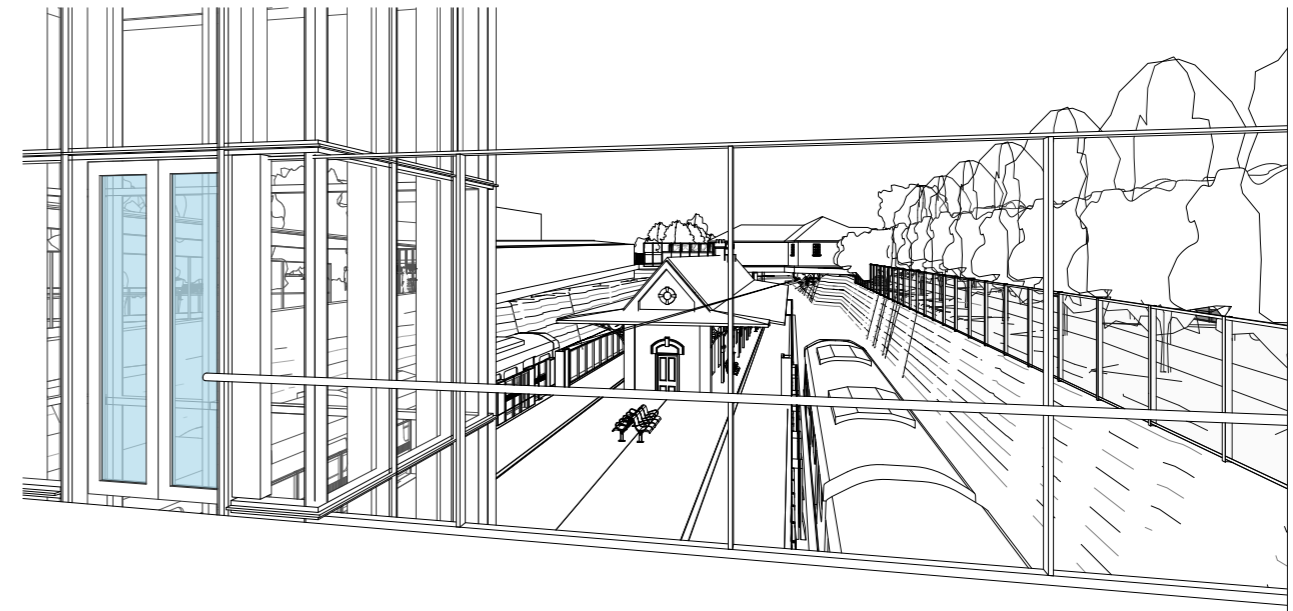
- o placing new aerial concourses with stairs leading directly to heritage buildings, where possible
- o relocating the aerial concourse and station entrance further away from roads or platform heritage buildings, where possible
- o providing contemporary canopies over platforms, to minimise impacts to existing buildings.

Aboriginal heritage

The oldest evidence of Aboriginal occupation in NSW was found at Lake Mungo (near Mildura) and dates back to around 50,000 to 60,000 years ago. In Sydney, evidence of Aboriginal people living at Parramatta dates back to around 30,000 years ago.

Across Australia, there were many different Aboriginal languages and in the Sydney area people spoke Darug. Within this language group there were many different clans. The Wangal clan inhabited the T3 Bankstown Line area, with their territory extending between the Parramatta and Cooks Rivers, and between Darling Harbour and Rosehill.

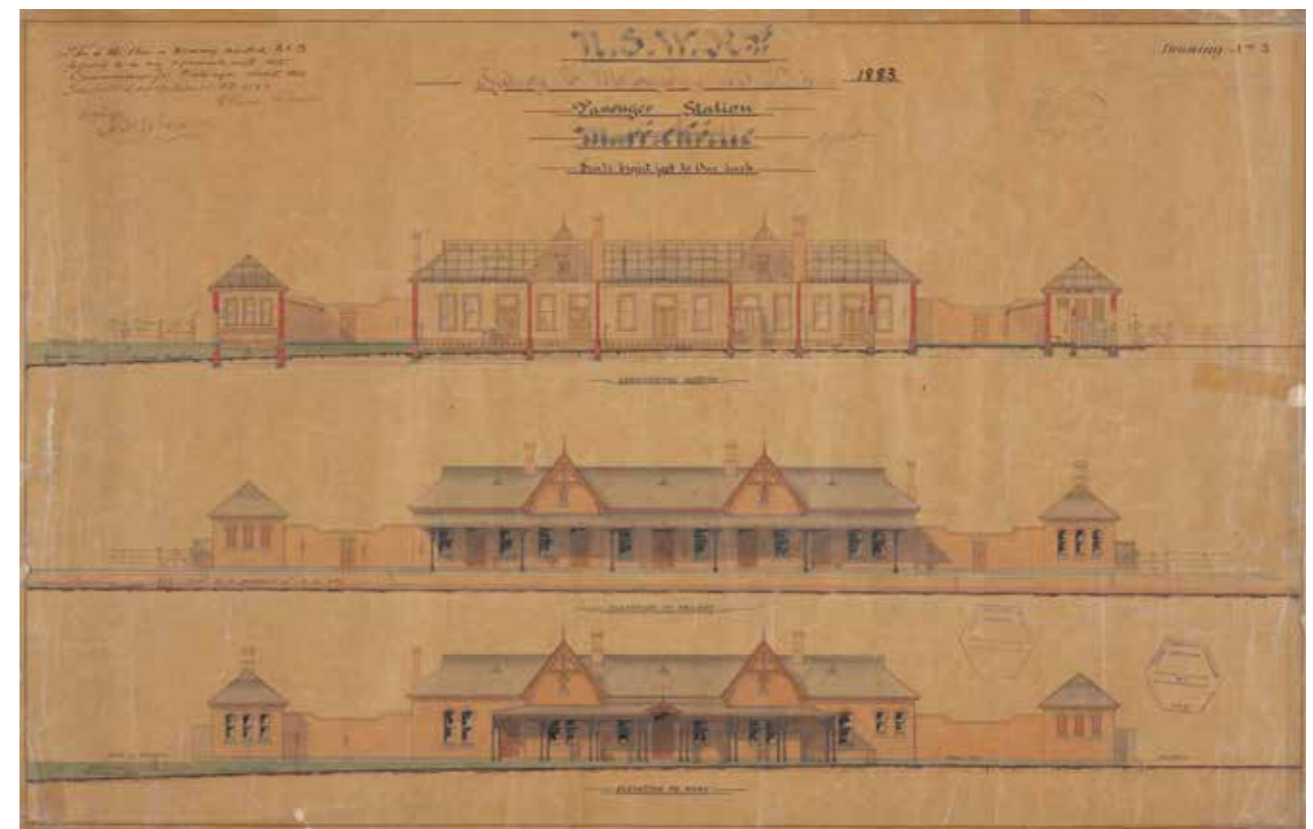
There are no listed Aboriginal sites within the Project area along the T3 Bankstown Line between Sydenham and Bankstown. The closest site is at Fraser Park in Marrickville. Two potential sites have been identified near Belmore and Punchbowl Stations. Mitigation measures are proposed in the Environmental Impact Statement should these sites be impacted.



Indicative sketch of upgraded station with heritage platform building



Marrickville Station



Sydenham Station building plans c.1883

ENVIRONMENTAL IMPACT STATEMENT PROCESS



Marrickville Road, Marrickville

What is the Environmental Impact Statement about?

The Sydenham to Bankstown component (the Project) of Sydney Metro City & Southwest will be assessed under the *Environmental Planning and Assessment Act 1979* (NSW) before major construction can start.

The Sydney Metro City & Southwest Sydenham to Bankstown Environmental Impact Statement is presented in six volumes. Volume One contains the main Environmental Impact Statement and the appendices. Volumes Two to Six contain the technical papers that form the technical basis of the information in Volume One.

This document is intended to be an overview of the Environmental Impact Statement, which assesses environmental issues including:

- o operation and construction of the Project
- o traffic, transport and access
- o noise and vibration
- o business impacts
- o non-Aboriginal heritage
- o Aboriginal heritage
- o land use and property
- o socio-economic impacts
- o business impacts
- o urban design and place making
- o landscape and visual amenity
- o soils and contamination
- o hydrology, flooding and water quality
- o biodiversity
- o air quality
- o sustainability and climate change
- o hazards, risks and safety
- o waste management
- o cumulative impacts.

Strategies to avoid, mitigate and manage potential impacts have been identified and developed. In addition, a construction environmental management framework has been developed to define the approach to environmental management and monitoring during construction. It identifies the minimum environmental and stakeholder and community engagement requirements.

The Environmental Impact Statement is on public exhibition until 8 November 2017.

Anyone may make a submission and these submissions will be considered by the NSW Department of Planning & Environment (DP&E)

in its assessment of the Project. For more information on how to make a submission, see page 83.

The NSW Department of Planning & Environment will provide Transport for NSW with a copy of all submissions received during the exhibition period.

Transport for NSW will review all the submissions and prepare a submissions report to respond to issues raised. If changes are required as a result of the issues raised, a Preferred Infrastructure Report may also be prepared.

Approval from the Minister for Planning is required before Transport for NSW can proceed.

Place making and urban design

The design has been informed by a detailed analysis of existing and future urban design, community, heritage, engineering, planning, constructability, financial and environmental considerations. The Sydney Metro City & Southwest Sydenham to Bankstown Design Guidelines emphasise the need to respond to place and context, acknowledge the existing conditions, and promote the need to improve the urban interfaces at each station. The overarching project design principle is to 'create welcoming, secure and well maintained public domain spaces and station buildings with an attractive sense of place that responds to the distinct cultures of each station precinct'.

The urban design aspects will continue to be developed and refined during future design stages, taking into account considerations such as the stations' place-making role, future urban development opportunities, heritage, links to surrounding town centres, and feedback from stakeholders and the community.

Traffic, transport and access

The Project area is in a highly urbanised environment, with a number of main roads and a range of other transport facilities and infrastructure, including the T3 Bankstown Line, train stations, bus stops, light rail, freight rail, and pedestrian and cycle facilities.

Active transport to stations will continue to be prioritised, with upgrades to pedestrian and cycle facilities to make footpaths safer and more accessible. Sydney Metro will make a provision for the delivery of part of an active transport (walking and cycling) corridor, linking public transport interchanges between Sydenham and Bankstown to encourage healthy lifestyles. The design will also cater for vision and mobility impaired customers.

Bridge work along the rail corridor will require partial or full closures at certain times. To minimise congestion and potential delays, work will

Next steps	Northwest	Chatswood to Sydenham	Sydenham to Bankstown
Prepare State Significant Infrastructure Application Report	✓	✓	✓
Lodge State Significant Infrastructure Application Report	✓	✓	✓
Receive secretary's environmental assessment requirements (SEARs)	✓	✓	✓
Exhibit Environmental Impact Statement - minimum 30 days	✓	✓	WE ARE HERE
Prepare Submissions Report	✓	✓	
Issue Submissions Report	✓	✓	
Receive project approval	✓	✓	
Start construction	✓	✓	2018
Launch tunnel boring machines	✓	2018	-
Open to passengers	2019	2024	

Project development stages

generally be undertaken outside of peak periods and at night.

Sydney Metro will work to ensure traffic, transport and access impacts, including disruptions to customers' travel plans and delays to road users, are minimised.

Noise and vibration

Some station and track infrastructure work cannot be safely undertaken while the rail network is operational. The majority of works during non-possession periods will happen during standard working hours. During possessions, there will be substantial work at night, on weekends and during public holidays.

An out-of-hours work strategy will be developed to guide the assessment, management and approval of work outside standard working hours. The protocol will be developed to ensure that out-of-hours work is managed effectively, reducing impacts on the community.

The results of the noise and vibration assessment indicates some construction activities have the potential to impact surrounding businesses and homes. Use of highly noise-intensive equipment for rock breaking and ballast tamping will be limited to between 7:00am and 10:00pm to minimise these impacts.

For operational noise, mitigation measures, such as noise barriers, may be implemented. Other feasible mitigation measures, such as at-property treatments, may be implemented where noise exceedances are identified. The final form and location of mitigation will be determined during the detailed design phase.

When Sydney Metro opens, significant increases to operational noise are not predicted.

Trees and landscaping

Trees will only be removed where absolutely necessary to complete the works at each station and along the corridor. The final number of trees impacted will be confirmed during detailed design and final construction planning.

Where removal of trees is unavoidable, trees will be replaced in accordance with a tree management strategy, which will be prepared in consultation with councils before work starts.

Landscaping will be completed along the length of the corridor and at all stations.

Biodiversity

Potential impacts on biodiversity will be avoided or minimised by:

- o designing the Project to minimise impacts
- o placing construction compounds within already cleared areas (where possible), such as carparks, to limit vegetation clearance, particularly where land is only required for construction
- o avoiding and protecting areas where Downy Wattle grows between Punchbowl and Bankstown Stations.

The Downy Wattle (*Acacia pubescens*) within the Project area will be protected. The wattle is listed under both the *1995 NSW Threatened Species Conservation Act* and the *Commonwealth Environment Protection and Biodiversity Conservation Act 1999*.

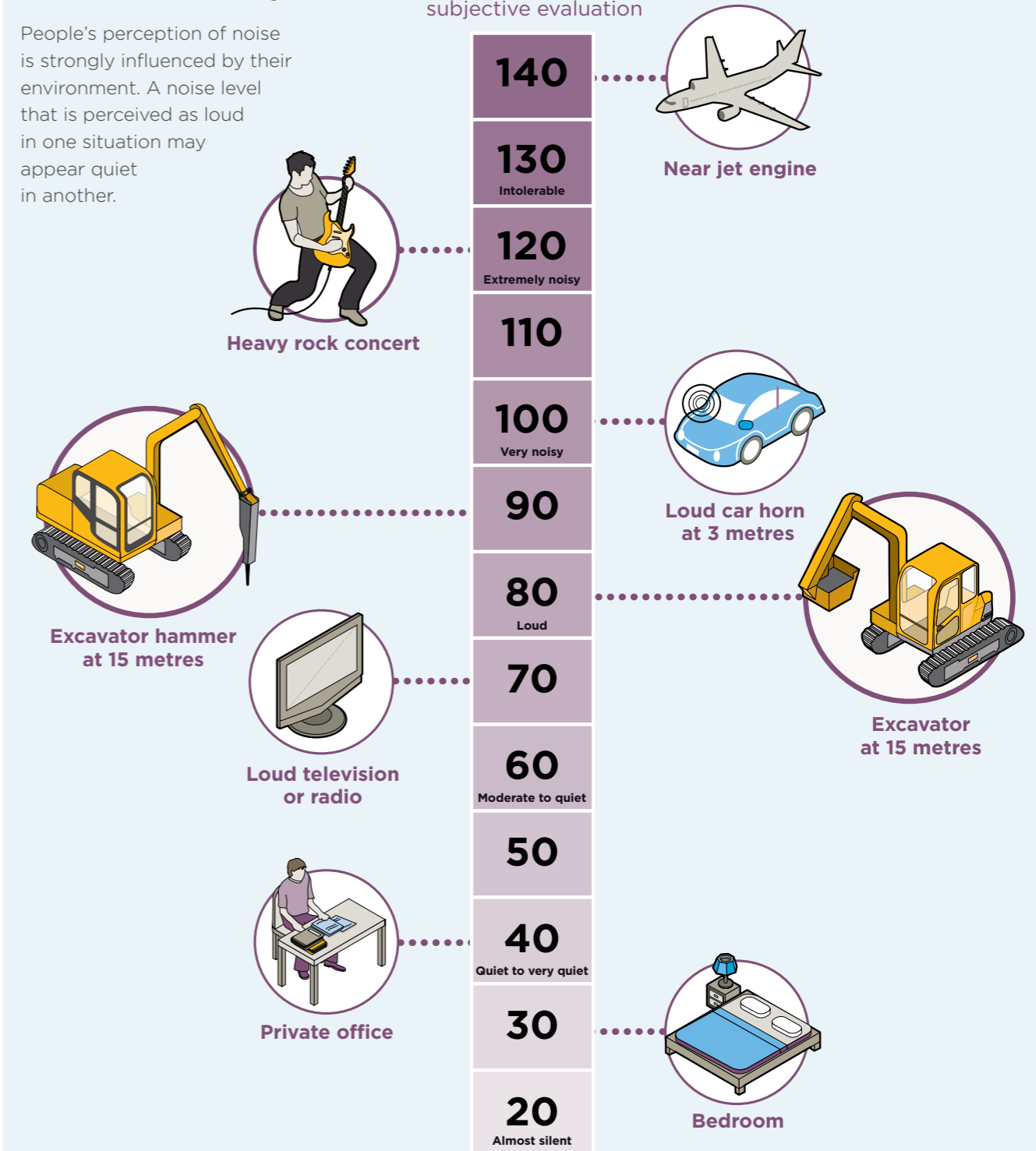


Downy Wattle

Noise level comparisons

dBA levels and subjective evaluation

People's perception of noise is strongly influenced by their environment. A noise level that is perceived as loud in one situation may appear quiet in another.



Note:

- A change of 1 dB or 2 dB in the level of a sound is difficult for most people to detect.
- A 3 dB to 5 dB change corresponds to a small but noticeable change in loudness.
- A 10 dB change corresponds to an approximate doubling or halving in loudness.

Land use and property

The majority of land needed to support delivery and operation of Sydney Metro is used for rail and road transport, and is public land managed by NSW Government agencies.

During construction, impacts on land use will be temporary for the storage and use of construction equipment, plant, vehicles and fenced worksites. The majority of construction sites will be located within the existing rail corridor or on public land to minimise direct impacts on land use and property.

Rail corridor development

Rail corridor development uses the air-space over parts of the rail corridor, including stations. The design of station infrastructure has taken into account possible future development at Campsie. This may include steel and concrete structural elements, space for lift wells, access, parking and building services. All other future rail corridor development will be subject to a separate planning approvals process.

Property acquisition

In designing major infrastructure projects, Transport for NSW makes every possible effort to avoid the need to acquire private property. However, in some cases the NSW Government has no alternative but to purchase property to allow construction of a major project.

There is a standard process used by government to buy land that is required for a public purpose, such as railway infrastructure. The *Land Acquisition (Just Terms Compensation) Act 1991* sets out the steps which must be followed, including how compensation is calculated.

Our preference – just as we did on Sydney Metro Northwest – is to come to a fair agreement with land owners.

Socio-economic and business impacts

The construction and operation of the Project will lead to socio-economic benefits and impacts.

Benefits from construction include jobs, and increased demand for local businesses from construction workers, particularly those selling food and beverages.

Impacts from construction include a small number of business acquisitions. Other impacts include temporary transport arrangements; temporary access restrictions; increased traffic congestion, noise, vibration and dust; and changes to parking availability during construction.

Management measures will be implemented to minimise the potential impacts of construction on the community and businesses. Place Managers will work with businesses and the wider community during the construction period to respond to issues and concerns.

Landscape character and visual amenity

The existing rail corridor is surrounded by highly-developed urban land, including rail and road infrastructure, and a range of buildings.

During construction, there will be temporary visual impacts at worksites and compounds, including machinery and equipment, site hoardings, partially complete structures and other works.

A number of street trees, mainly in the vicinity of stations, will be removed. These trees will be replaced in accordance with the tree management strategy and in consultation with the relevant council.

Station design will reinforce the stations' role as new vibrant spaces and destinations, serving as a catalyst for regeneration in the surrounding neighbourhoods and along the road corridors, reflecting a high level of land use and transport integration. Detailed design will include measures to integrate stations into the surrounding urban fabric.

Soils and contamination

Potential acid sulfate soils may be encountered around Canterbury and Campsie Stations.

Excavation may also disturb contaminated and hazardous materials present in soil. Construction erosion and sediment management measures will be implemented to minimise erosion and sedimentation, and contamination of soils, surface and groundwater. Implementation of these measures will reduce the risk of activities impacting workers, the surrounding community and the environment.

Flooding

The most flood affected area is located around Marrickville Station. The remainder of the line between Dulwich Hill and Bankstown Stations experiences minor overland flooding and drainage issues.

The results of flood modelling indicate flood levels around Marrickville Station will generally reduce once Sydney Metro is operational. Other flood indicators, such as velocity of flows and flood hazard ratings, will remain the same or reduce compared to existing conditions.

Sustainability and climate change

Sustainability principles have been incorporated throughout the design process.

Sydney Metro is targeting an 'excellent' rating under the Infrastructure Sustainability Council of Australia's Infrastructure Sustainability Framework. To assist in achieving this rating, a range of sustainability initiatives and targets have been developed, including:

- use of solar systems
- reduction of greenhouse gas emissions by 20 per cent
- rainwater harvesting
- waste reduction targets for different types of waste.

Contractors will be required to clearly identify how they will achieve specific sustainability objectives, initiatives and targets. This approach will encourage industry to develop innovative value-for-money sustainability solutions.

Energy consumption and greenhouse emissions

When operational, energy consumption during operation is estimated to be 86,576 tonnes of CO₂ equivalent

During the design process, Sydney Metro will continue to investigate opportunities to minimise and/or offset 100 per cent of greenhouse gas emissions.

While emissions are difficult to quantify and assess, there is potential to reduce regional greenhouse gas emissions by providing a low greenhouse gas alternative to private car travel.

Cumulative impacts

A number of major projects are proposed or being undertaken nearby, including the Sydney Metro City & Southwest Chatswood to Sydenham component, and two stages of WestConnex.

The Chatswood to Sydenham component will connect to the Sydenham to Bankstown component east of Marrickville Station.

There is limited potential for cumulative impacts between the Sydney Metro and WestConnex projects due to the distance between them.

Cumulative impacts will be highly dynamic and time/activity specific, and are difficult to define in detail at this stage of the assessment process. Sydney Metro will work closely with relevant stakeholders to manage and coordinate the interface with other major projects under construction at the same time, and develop mitigation strategies as required.

UPGRADING SYDENHAM TO BANKSTOWN



Artist's impression of Dulwich Hill Station

Sydney Metro City & Southwest will upgrade and convert all 10 stations between Marrickville and Bankstown to metro standards.

Upgrades will start from 2018 in existing rail possessions, with additional possessions starting in 2019. Sydney Metro City & Southwest will open in 2024.

Getting around during construction

As part of the Environmental Impact Statement, a Temporary Transport Strategy has been developed to guide the planning and development of Temporary Transport Plans to keep customers moving.

Rail possessions

Rail possessions are periods when trains do not run on the Sydney Trains network to allow maintenance to be completed safely. These already occur over four weekends a year when buses replace trains.

Sydney Metro will use these existing periods and additional possessions to complete some major station works, earthworks and bridge works. Like current rail possessions, buses will replace trains to keep customers moving.

Possession times being considered include:

- o additional weekends
- o school holidays between 2019 and 2024
- o A final three to six month possession for work that can only be done once Sydney Trains services stop using the T3 Bankstown Line. The metro line will open immediately following this.

Temporary station closures

Individual station closures may be required to help accelerate the upgrade and deliver benefits sooner. This will be considered at stations with lower patronage.

As part of the procurement process, tenderers will be asked to investigate ways to reduce the number of temporary closures.

School holidays

The majority of possessions are currently planned for school holiday periods when there will be fewer customers on the network while students and other customers take holidays.

Possessions would include:

- o two weeks in the winter break
- o six weeks in the summer break.

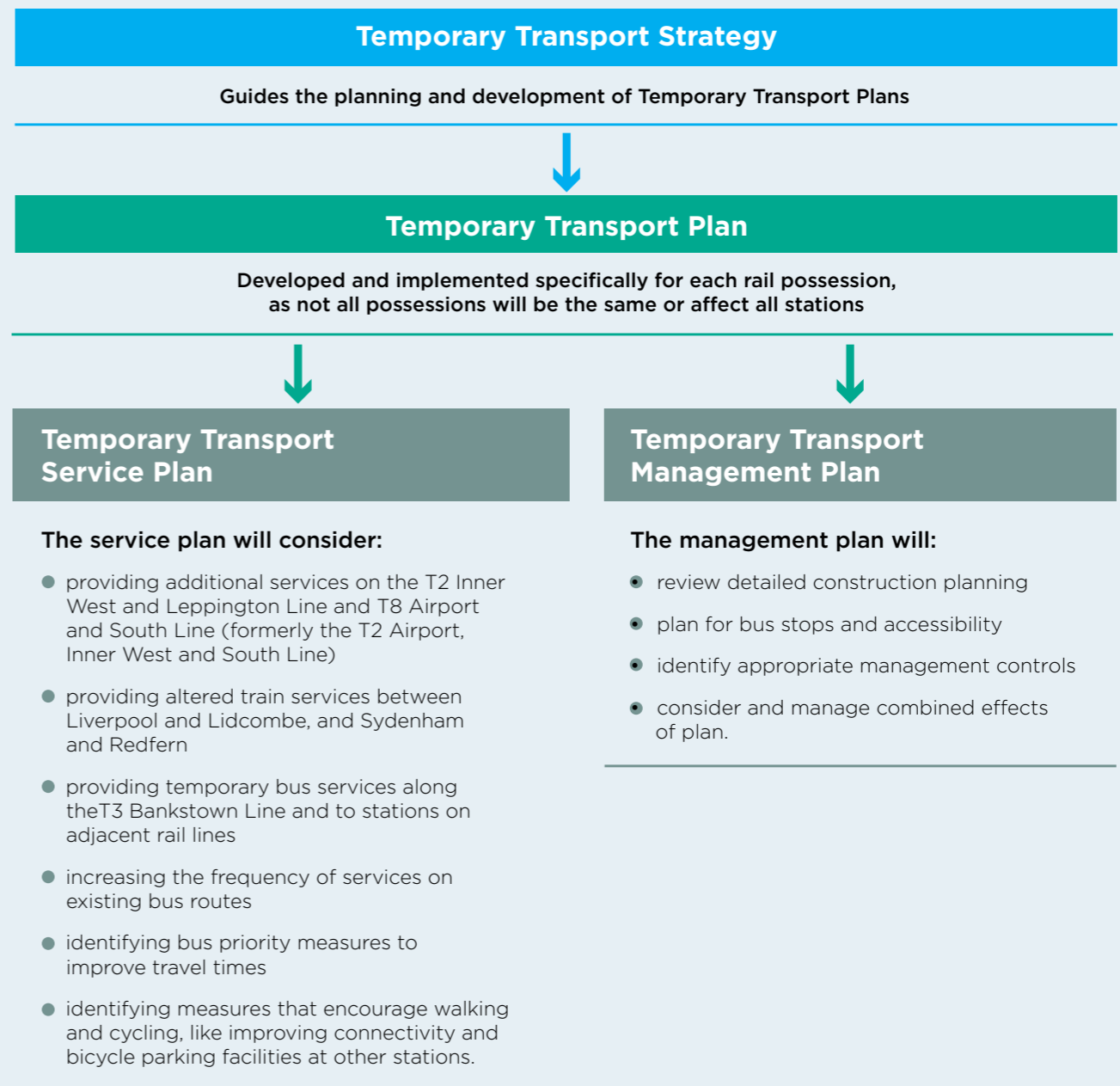
Less traffic on the roads will also potentially deliver faster and more reliable journeys on temporary bus services.

Engaging with the community

Working with the community has been key in developing a strategy to keep people moving during possessions. Feedback from the early stages of consultation has already been taken on board and customers and the local community will continue to be able to provide feedback as we move forward with developing plans. As the plans develop, more detailed information will be released to the community for feedback.



The T3 Bankstown Line will **remain open** during the majority of construction








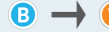




Temporary transport planning

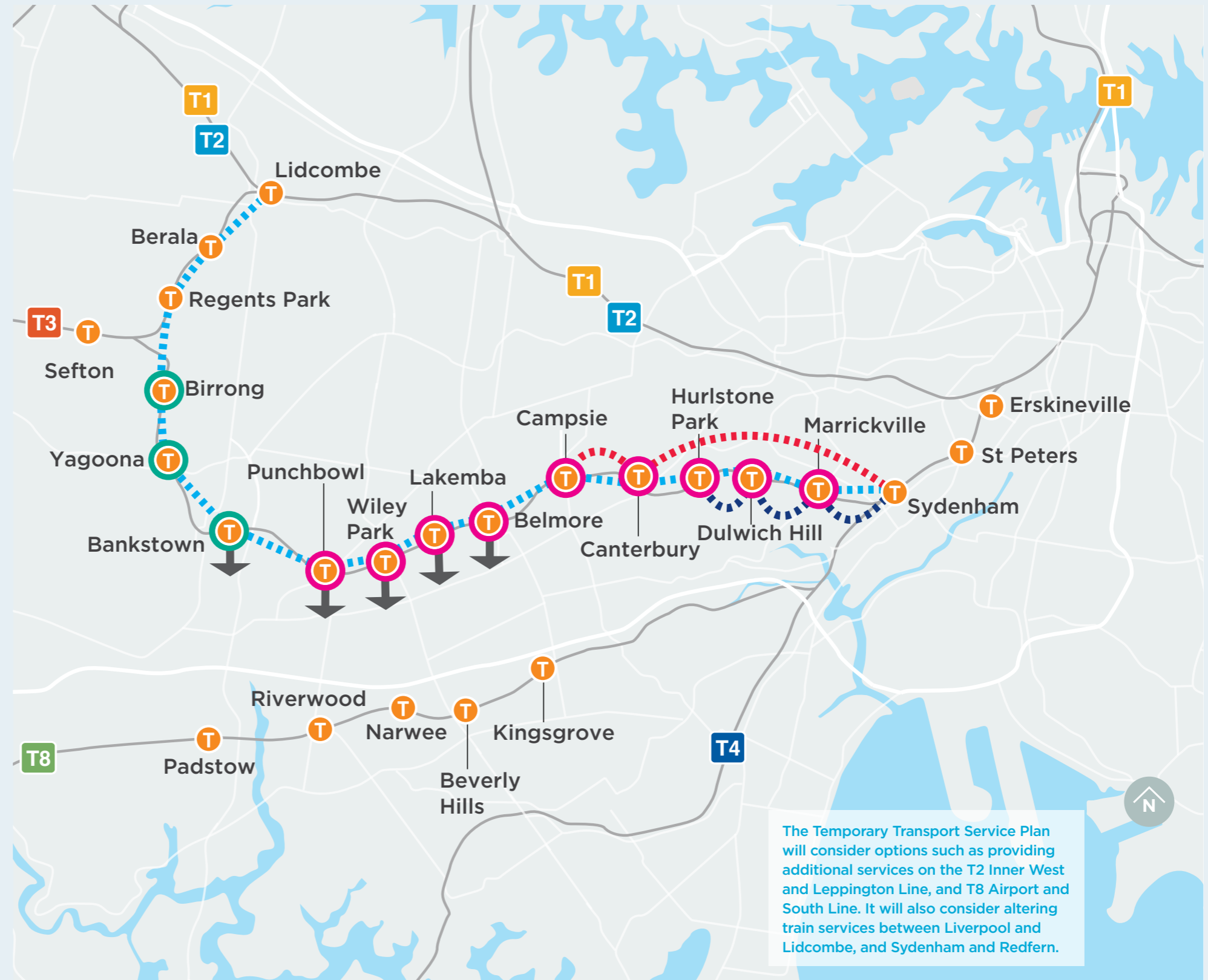
Preliminary approach

As part of the Temporary Transport Strategy, a preliminary approach to a Temporary Transport Plan has been developed. The following map provides an outline of just one scenario.

As part of the procurement process for Sydenham to Bankstown, Sydney Metro will be challenging its tenderers to find ways to manage the construction program to minimise the impact of possessions.

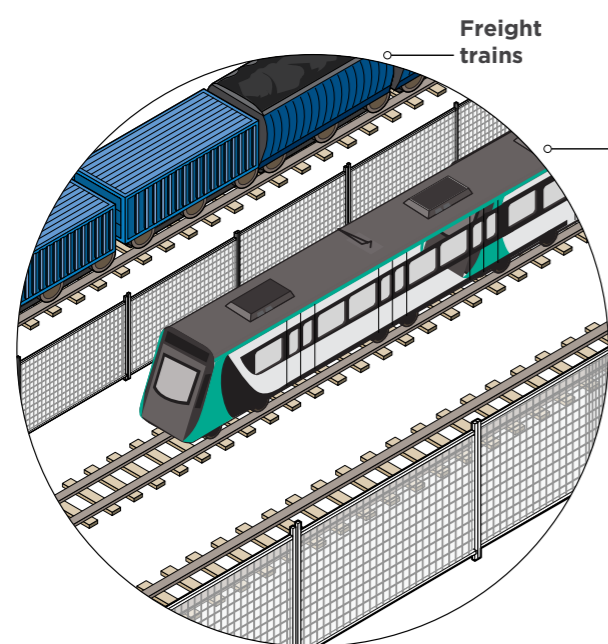
-  All rail possessions close the nine stations between Marrickville and Punchbowl.
-  Some possessions will close Bankstown, Yagoona and Birrong Stations as trains cannot turn back before Bankstown Station.
-  When stations are closed, buses will replace trains:
-  All stop/all hours service between Sydenham and Bankstown (or Lidcombe)
-  Express service between Campsie, Canterbury and Sydenham
-  Service between Hurlstone Park, Dulwich Hill, Marrickville and Sydenham
-  Express buses transfer customers between closed T3 Bankstown Line stations to stations on T8 South Line.
-  Customers travelling on temporary bus services to Sydenham Station can transfer to train services into the Sydney CBD via:
 -  South Line
 -  Illawarra Line

Transport for NSW is making some improvements to Sydney's rail system to ensure it meets the needs of our growing city as part of the NSW Government's \$1.5 billion More Trains More Services Program. A new train timetable will be introduced in late 2017. This map reflects the new network arrangements.



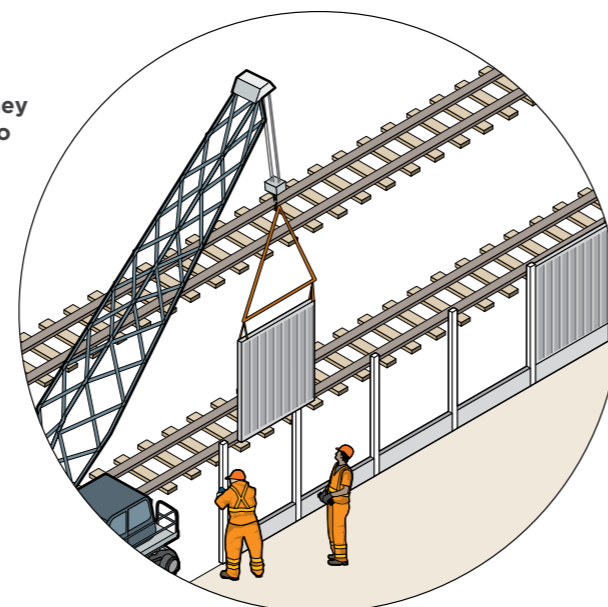
Temporary Transport Strategy preliminary approach

Upgrades in the rail corridor between Sydenham and Bankstown will include:



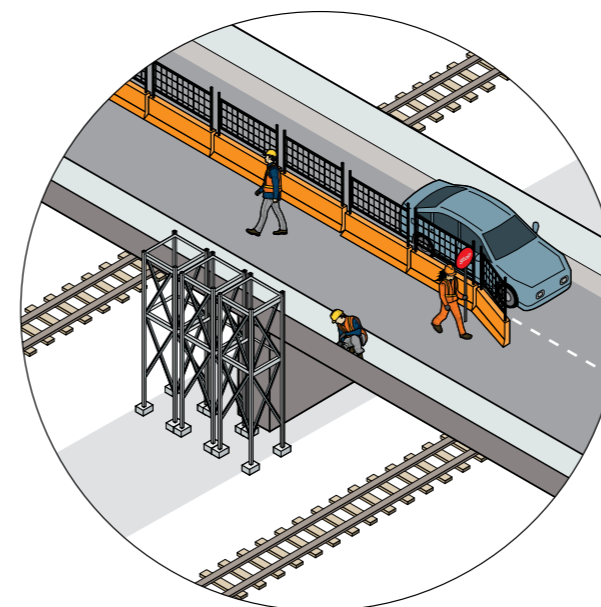
Installing security features

- High-security fencing to prevent access to the rail corridor.
- Trackside intruder detection and emergency warning information systems.



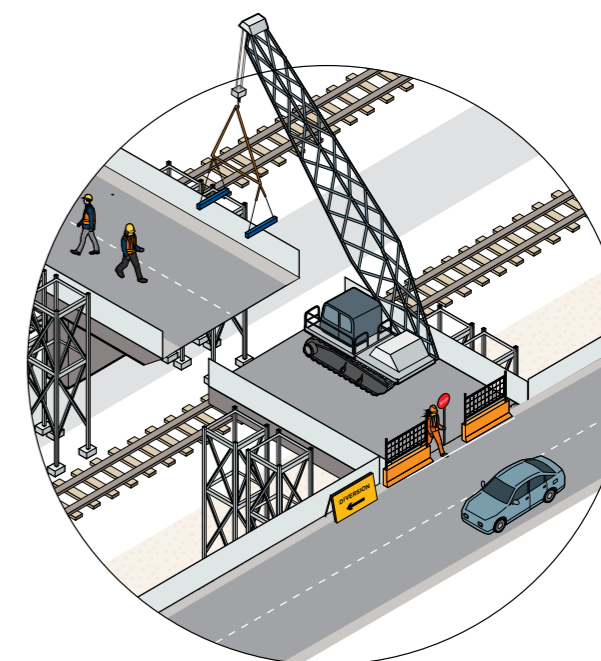
Noise mitigation measures

- Noise barriers may be required in some locations to mitigate operational noise impacts. The final location of barriers will be confirmed during detailed design.
- During construction, noisy equipment will be placed as far as possible from neighbouring homes and businesses to reduce noise impacts.



Bridge upgrades as required

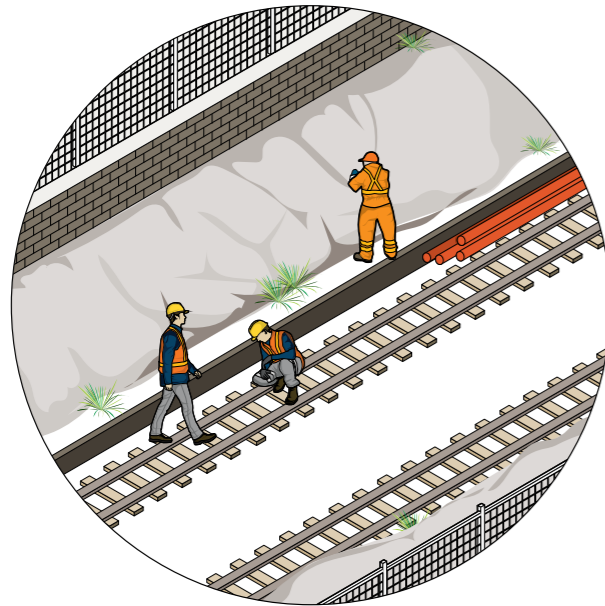
- Strengthen or widen overbridges, underbridges and footbridges.
- Install pier collision protection.
- Install anti-throw screens and vehicle collision barriers.



Bridge replacements as required

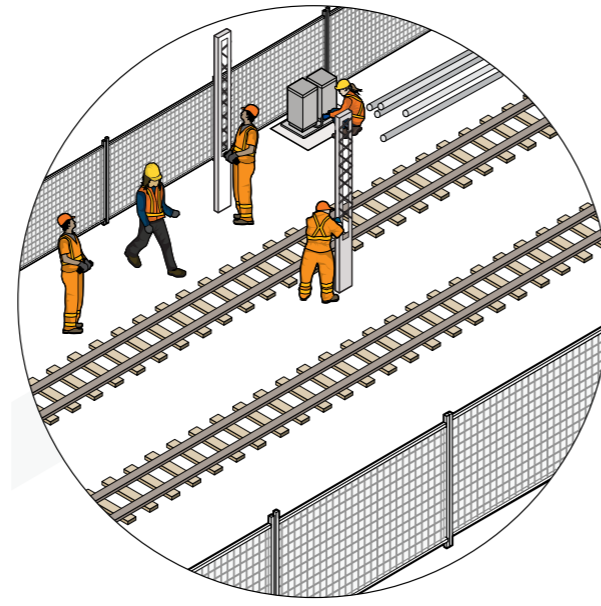
- In two locations, complete replacement of an existing bridge will be required – the Illawarra Road overbridge at Marrickville and the Albermarle Street overbridge at Dulwich Hill.
- New bridges will have pier collision protection, anti-throw screens and vehicle collision barriers.

Upgrading the T3 Bankstown Line is complex and has been carefully planned to deliver benefits to customers and the wider Sydney rail network



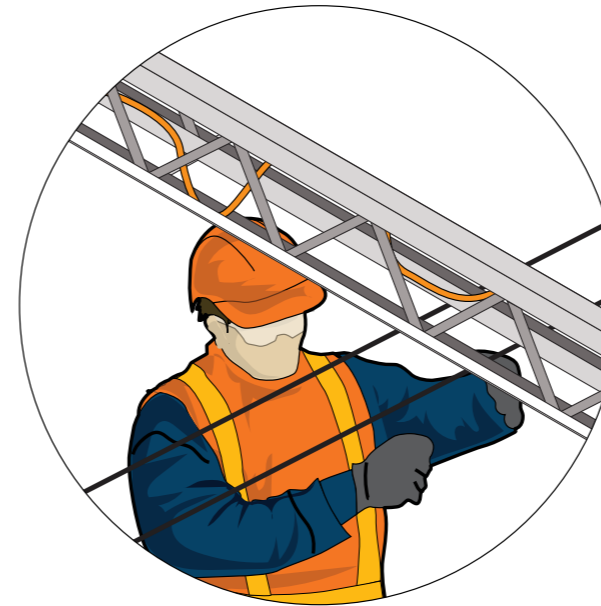
Upgrades to other corridor assets

- Upgrades to embankments, cuttings, retaining walls and stormwater drainage, if required.
- Replace track only if it is in poor condition or needs to be moved to line up with new station platforms.



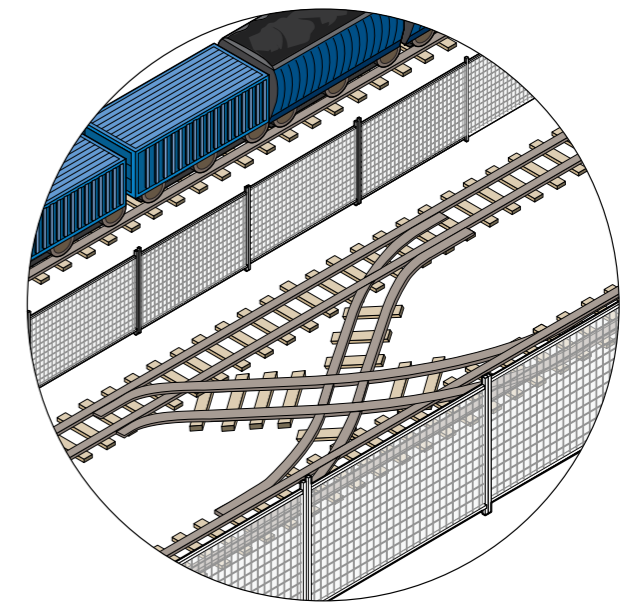
Adjustments to existing Sydney Trains systems

- Upgrades to overhead wiring to meet Sydney Metro requirements.
- Segregate metro tracks and systems from Sydney Trains tracks at Sydenham and Bankstown.
- Remove redundant Sydney Trains systems.



Installing Sydney Metro rail systems along the rail corridor

- Signalling, electrical, radio and communications systems, equipment, buildings and electrical transformers.
- Telecommunications masts with radio antennae and CCTV cameras.
- Integrated information system to communicate with customers or metro staff at each station and on all trains.



Constructing new turnback facilities and track crossovers

- Turnback facilities allow trains to change direction and crossover facilities allow a train on one track to cross over to the other.
- New track, foundations and equipment at these locations.

We're working on how to minimise the impact and get people around during any closures. We're looking at how it's been done overseas as well as any lessons we may learn from the conversion work on Sydney Metro Northwest between Epping and Chatswood

○ Line-wide work

Enabling work

Enabling works for major infrastructure (also known as early works) are typically carried out before the start of substantial construction in order to establish key construction sites and provide protection to the public where required.

Enabling works will include site establishment and removing existing buildings.

Site establishment work includes:

- heritage investigations and protection
- environmental management and traffic controls
- establishing construction compounds and worksites
- connecting temporary or permanent power, water and other utilities
- adjusting, modifying and protecting utilities and services
- adjusting or removing Sydney Trains rail infrastructure
- vegetation clearance within the rail corridor
- minor piling works on platforms to assist with later concourse works.

Building removal work includes:

- establishing hoardings, scaffolding and protection barriers around the buildings
- decommissioning building services
- stripping internal building materials.

Prior to building demolition, any hazardous materials will be removed and disposed of in accordance with relevant legislation, codes of practice and Australian Standards.

Materials such as bricks, tiles, timber, plastics and metals will be sorted where practicable and sent to a waste facility for recycling.

Substation work

Five new traction substations will be built within the rail corridor to provide power to trains. Work to construct substations includes:

- enabling works
- earthworks
- piling and site excavation for in-ground services
- laying a concrete slab
- installing substation buildings
- finishing, testing and commissioning.

In addition, a 33-kilovolt high-voltage electricity feeder cable will be installed between the new traction substation in Campsie and the existing Ausgrid electrical substation about one kilometre south of Canterbury Station in Earlwood.

Construction compounds and worksites

The majority of construction will be located at construction compounds and worksites within the rail corridor between Marrickville Station (near Meeks Road) and about one kilometre west of Bankstown Station, as shown on the maps on the following pages.

Construction compounds will support construction activities at stations and at other key locations where civil works are required. Compounds will generally be located on land owned by RailCorp, mainly within the rail corridor. Some compounds will be located on land outside of the rail corridor on other land owned by a government agency or council, and in one location on land acquired at Marrickville Station.

Construction compounds will generally include site offices, staff amenities (such as toilets, change rooms, meal rooms, shower facilities and first aid facilities), workshops, material storage and lay down areas (including dangerous goods storage), plant and vehicle parking, spoil lay down, loading and removal areas, and site security facilities.

Most compounds will be in use for at least 18 months and potentially for the whole construction period.

A number of worksites will be located outside the rail corridor to support construction of noise walls, culverts, station works, relocation of services, drainage, and locating cranes for station and bridge works.

Most worksites will be in use for about 18 months including a section of McNeilly Park, Marrickville. A water retention basin will be constructed beneath the park and the site will be restored as parkland following construction.

Haulage routes

Haulage routes have been developed for each construction compound and other site access points. These routes were developed to minimise impacts on residential streets while providing the most direct route to a major road. Where possible, routes avoid heavy vehicle movements through town centres, such as Marrickville.

There are three types of haulage routes:

- **primary routes** – the main access for construction vehicles
- **secondary routes** – linking the primary routes and main roads
- **alternative routes** – back-up routes connecting to primary and secondary routes.

These preliminary haulage routes will be reviewed during detailed design and confirmed following appointment of the construction contractor. In general, vehicle movements will be scheduled for outside peak periods and, in some locations, outside school start and finish times where possible.

Construction hours

Standard working hours

- Monday to Friday – 7:00am to 6:00pm
- Saturday – 8:00am to 1:00pm
- Sundays and public holidays – no work.

Work outside standard hours

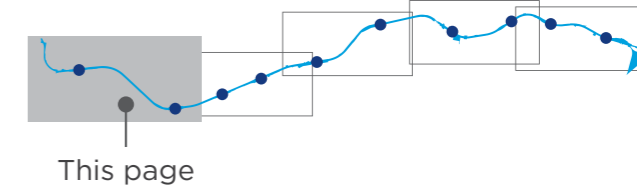
Some work may need to be done outside standard working hours, including large deliveries, concrete pours, non-disruptive work or emergency work.

Work during rail possessions

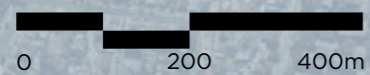
As is standard for normal rail maintenance possessions, work may happen up to 24 hours a day, 7 days a week.

Notifications will be delivered to neighbouring properties before work starts.

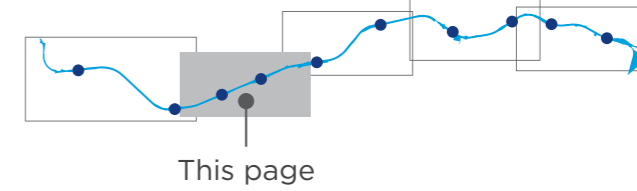
KEY PLAN



Line-wide work - Bankstown to Punchbowl



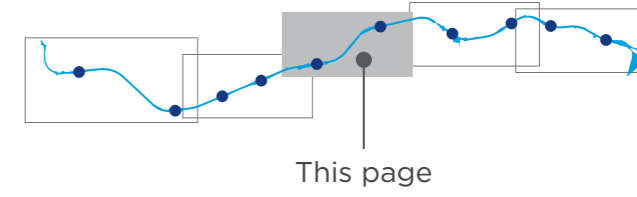
Sydney Metro tracks	Sydney Trains tracks	Indicative construction compound	Indicative worksite	Indicative work area	Primary haulage route	Secondary haulage route	Alternate haulage route
Metro station	Bridge modification	Project area	Traction substation				



Line-wide work - Wiley Park to Campsie



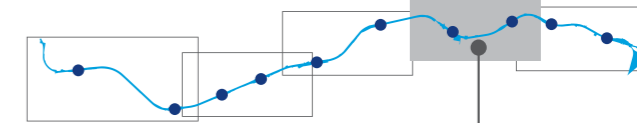
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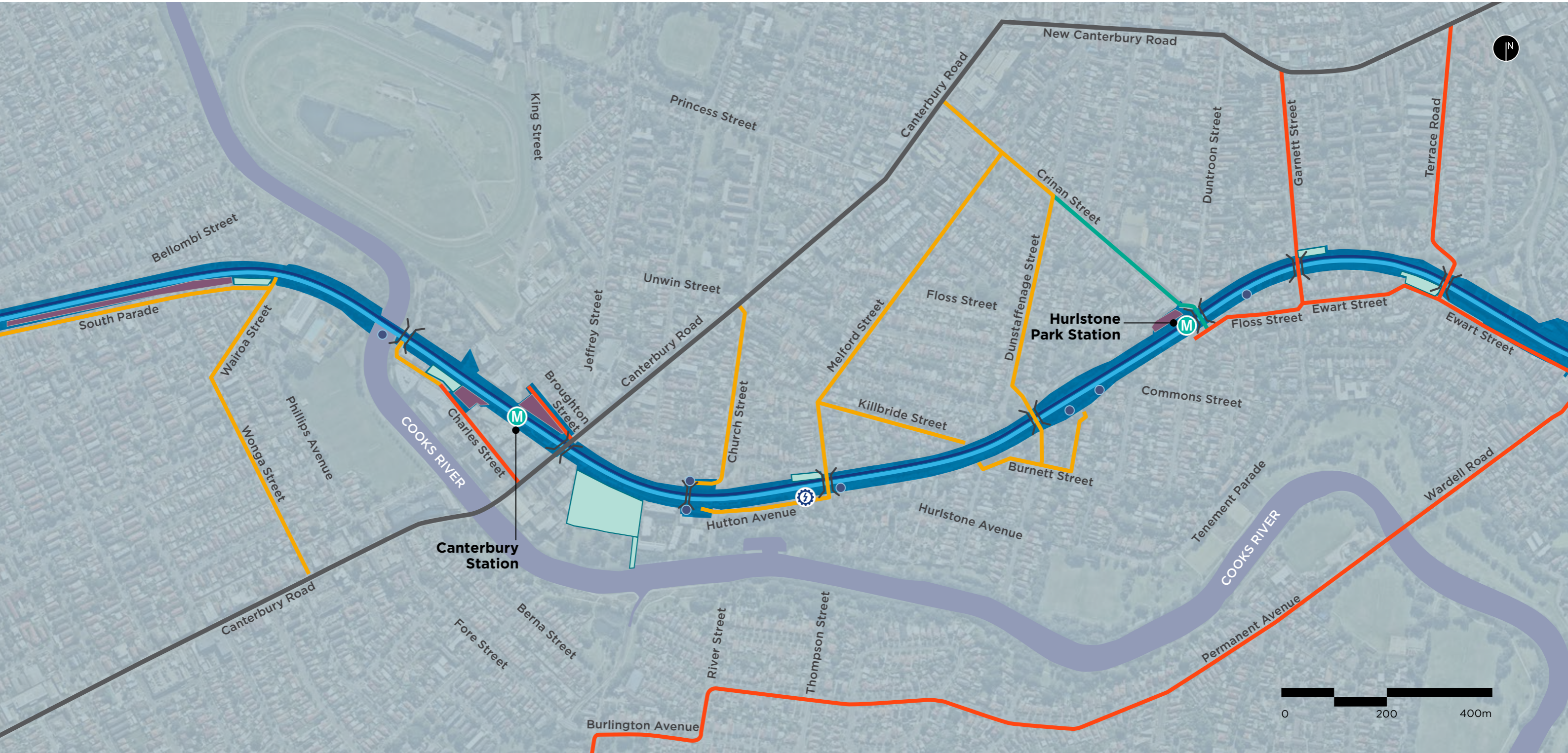
- Sydney Metro tracks
- Freight tracks
- Indicative construction compound
- Indicative worksite
- Indicative work area
- Primary haulage route
- Secondary haulage route
- M Metro station
- Bridge modification
- Project area
- ⚡ Traction substation





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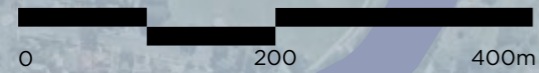
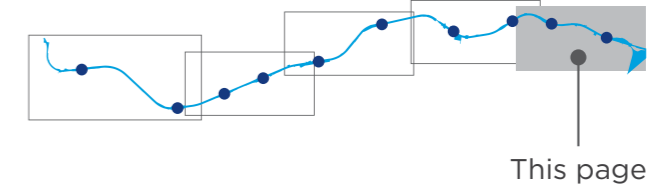
Line-wide work - Canterbury to Marrickville



KEY

- Sydney Metro tracks
- Freight tracks
- Indicative construction compound
- Indicative worksite
- Indicative work area
- Primary haulage route
- Secondary haulage route
- Alternate haulage route
- M Metro station
- Bridge modification
- Project area
- Traction substation

KEY PLAN



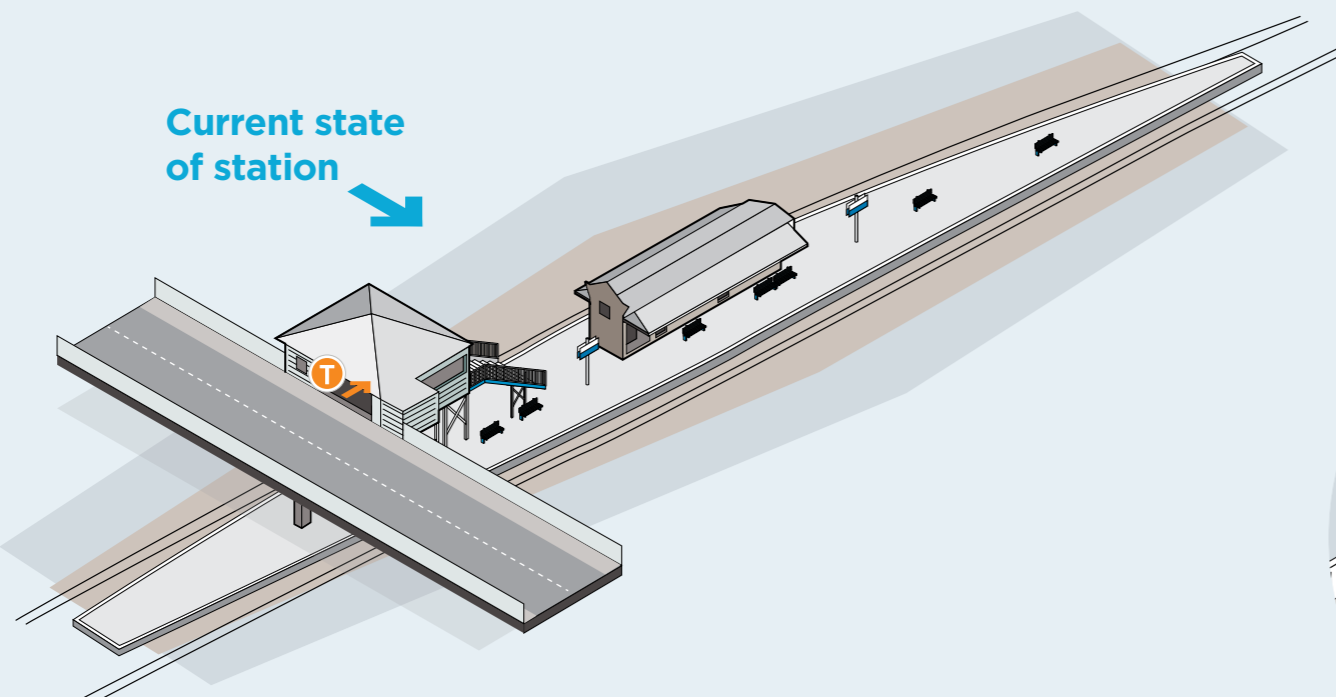
KEY

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|---------------------|----------------------|-----------------|----------------------------|----------------------------------|-----------------------|-------------------------|-------------------------|
| Sydney Metro tracks | Sydney Trains tracks | Freight tracks | L1 Dulwich Hill light rail | Indicative construction compound | Indicative worksite | Project area | Indicative work area |
| Traction substation | Metro station | Light rail stop | Bridge modification | Bridge replacement | Primary haulage route | Secondary haulage route | Alternate haulage route |

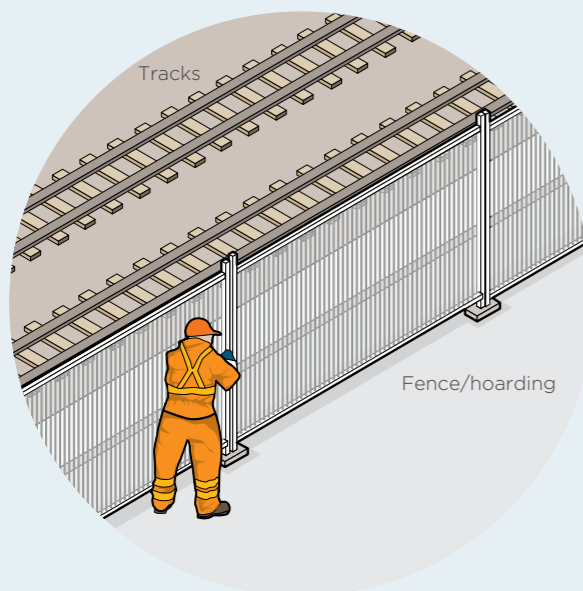
Upgrading a typical station to metro standards

Each station is different and not all upgrades will be the same

Current state of station



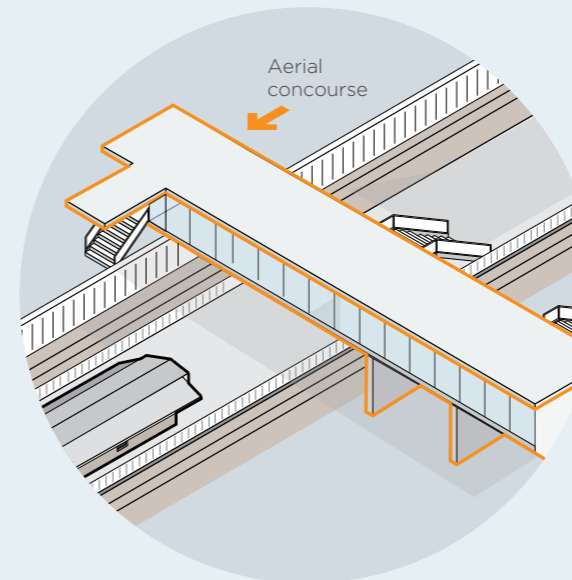
1 Set up site fencing, hoardings and general enabling works



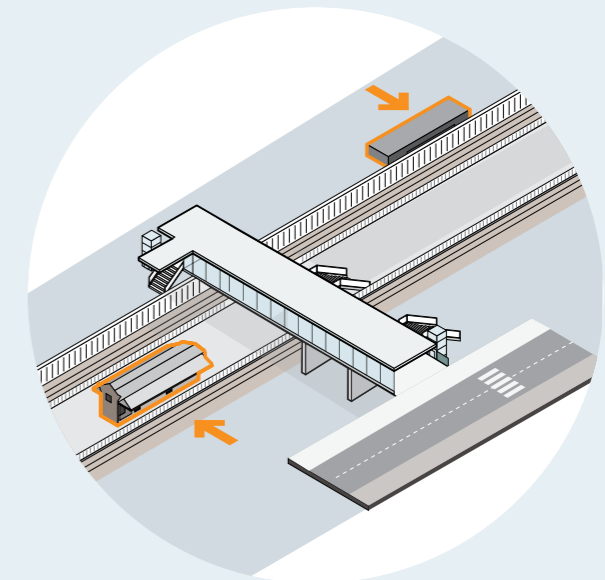
2 In some locations, demolish existing platforms and build new straighter platforms



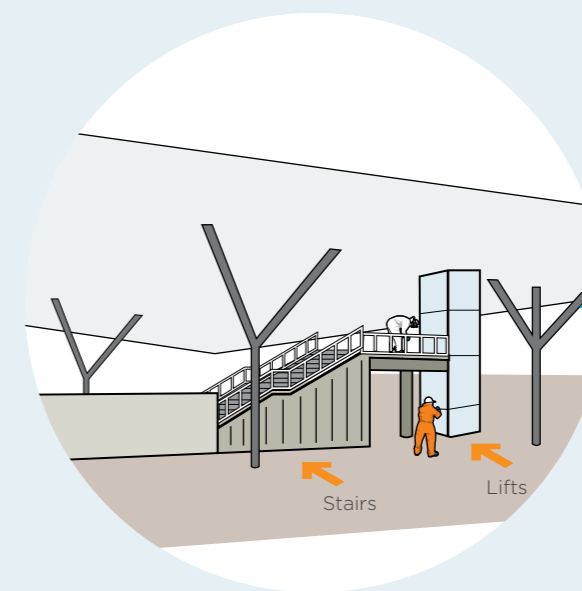
3 In some locations, demolish existing concourse and construct new or modified concourse
Construct buildings to house new rail or station systems



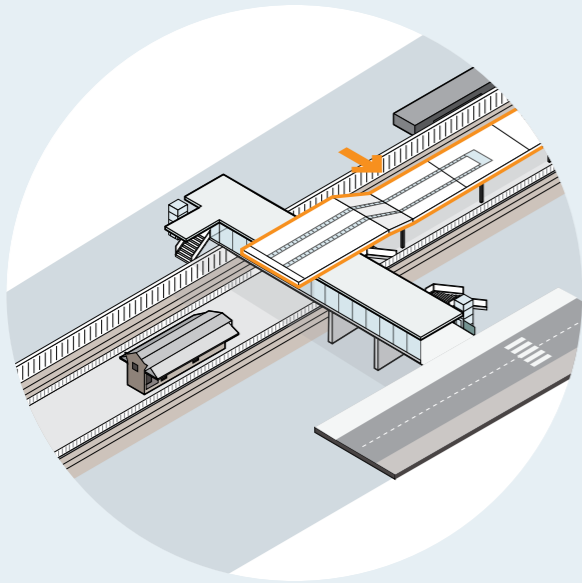
5 Upgrade station services buildings and, in some locations, build new ones
In some locations, upgrade station buildings including toilets and staff facilities



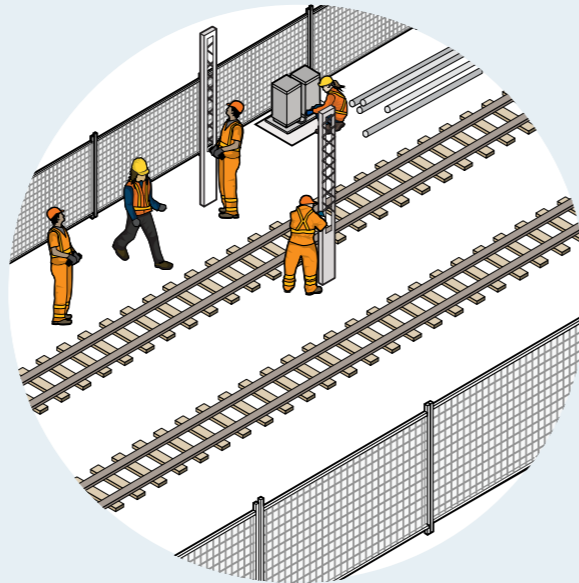
4 In some locations, install new lifts and stairs, to ensure full accessibility compliance



6 Construct new station canopy



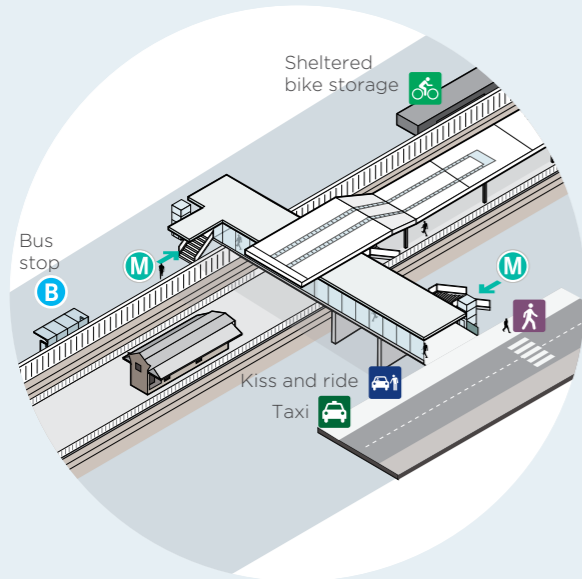
8 Install new Sydney Metro rail systems and remove redundant rail systems
Once station upgrade and renewal complete, commence final shutdown for metro conversion



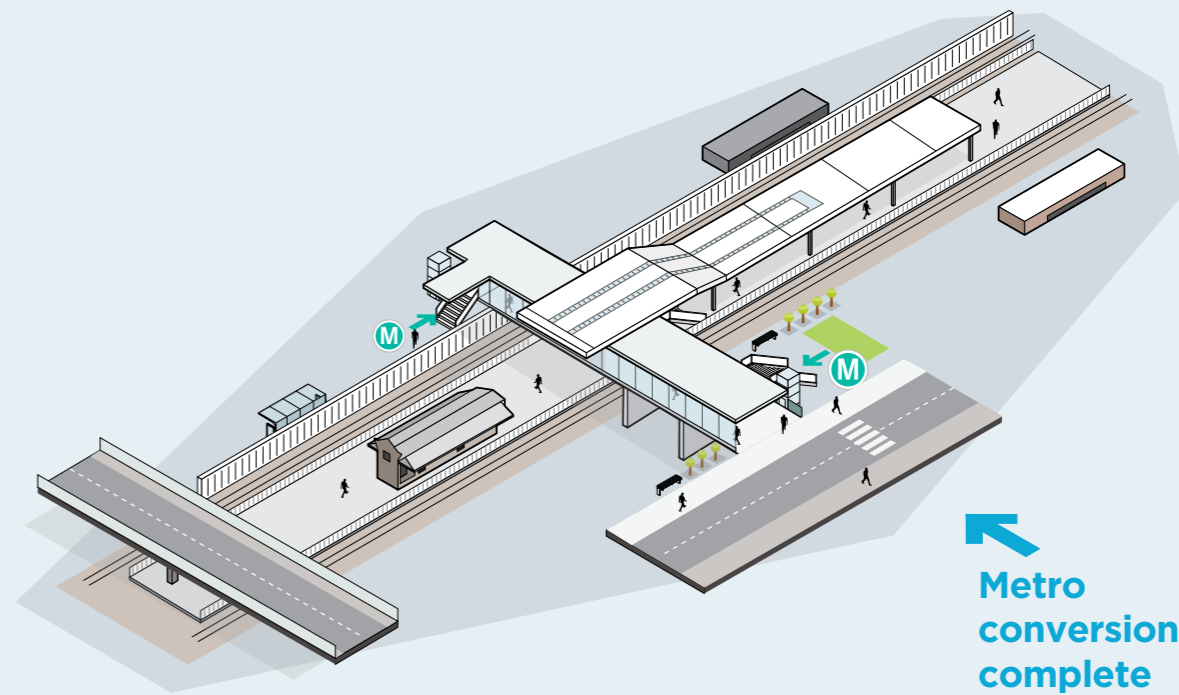
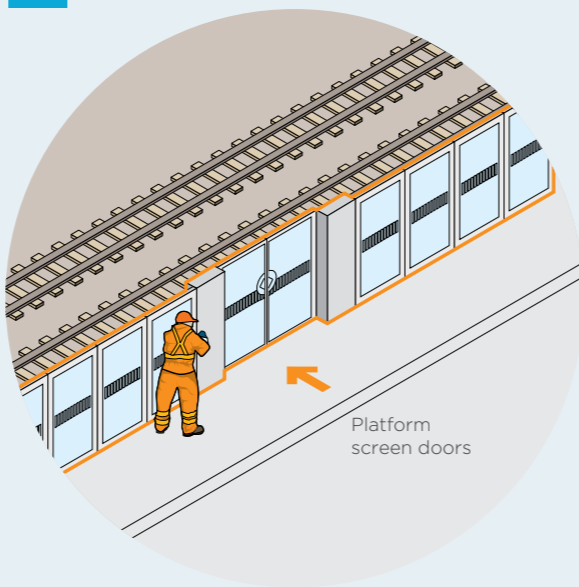
10 In some locations, install new street furniture and landscaping
Test and commission new metro rail systems



7 Complete improvements to public domain and interchange facilities, including pedestrian access and bicycle parking – station renewal complete



9 Install platform screen doors



Marrickville Station



Final arrangements

Feature	Description
Station entry	Existing entrances on Illawarra Road and Station Street upgraded
Main features and transport facilities	<ul style="list-style-type: none"> New station plaza on Station Street and access to the southern station entrance New station buildings on platforms 1 and 2 New toilets New retail space in Station Street Existing bus stops retained New signalised intersection at Warburton Road, Schwebel Street and Illawarra Road New zebra crossing on Illawarra Road near Arthur Street New accessible ramp from platform 2 to Schwebel Street (along Station Street) Improvements to the southern boundary access footpath Station entrances and precincts improved, including landscaping Two accessible parking spaces At least 40 bike parking spaces Five kiss and ride spaces Two taxi spaces
Customers	Customers travelling to and from nearby residential, retail and recreational precincts
Local amenities	<ul style="list-style-type: none"> ○ Casimir Catholic College ○ McNeilly Park ○ Marrickville Town Hall

New and faster services

Marrickville to:	Now (minutes)	Sydney Metro (minutes)	Savings (minutes)
Central	Up to 14	10	Up to 4
Pitt Street (new CBD station)	Up to 25*	12	Up to 13
Barangaroo (new CBD station)	Up to 39*	16	Up to 23
Victoria Cross (new North Sydney station)	Up to 32*	19	Up to 13
Chatswood	Up to 45*	25	Up to 20
Macquarie University	Up to 53*	36	Up to 17

* Includes time to interchange and/or walk

Marrickville



Artist's impression of upgraded Marrickville Station

○ Upgrading Marrickville Station

Construction at a glance

Feature	Description
Construction hours	Standard hours - Monday to Friday 7:00am to 6:00pm, Saturday 8:00am to 1:00pm Possessions - up to 24 hours a day
Vehicle movements during possessions	AM peak (7:30am to 8:30am) - 20 heavy vehicles and 20 light vehicles per hour PM peak (4:15pm to 5:15pm) - 20 heavy vehicles and 20 light vehicles per hour Evening/night (6:00pm to 7:00am) - 18 heavy vehicles and 18 light vehicles per hour
Workforce	Standard hours - average of 40 workers and a maximum of 60 workers Possessions - average of 65 workers and a maximum of 130 workers
Demolition	One house and two commercial buildings Platforms 1 and 2, east of heritage platform buildings Illawarra Road overbridge
Heritage	Heritage station buildings on platforms 1 and 2 retained for potential re-use Former booking office on platform 2 retained Heritage Illawarra Road overbridge removed and replaced
Material and water usage	Concrete - 600 to 800 cubic metres Steel - 100 to 150 tonnes Water - 500,000 litres Ballast - 0 tonnes
Plant and equipment	<ul style="list-style-type: none"> ○ Bobcats ○ Compressors ○ Concrete pumps ○ Concrete trucks/agitators ○ Diamond saws ○ Excavators ○ Excavators with breaker ○ Franna cranes ○ Generators ○ Hand tools ○ Mobile cranes (50 tonne) ○ Piling rigs (bored) ○ Rollers (non-vibratory) ○ Scissor lifts ○ Semi-trailers ○ Trucks ○ Water tankers ○ Welding equipment
Traffic changes	<p>Station Street - affected for duration of construction due to construction compound and work site for new station forecourt and shared road</p> <p>Station Street, Illawarra Road, Schwebel Street, Leofrene Avenue and Warburton Street - affected for short periods due to construction access or upgrades to intersections</p> <p>Left turn into Station Street from Illawarra Road - active traffic management for larger trucks</p> <p>Illawarra Road - existing signalised crossing at station removed</p>

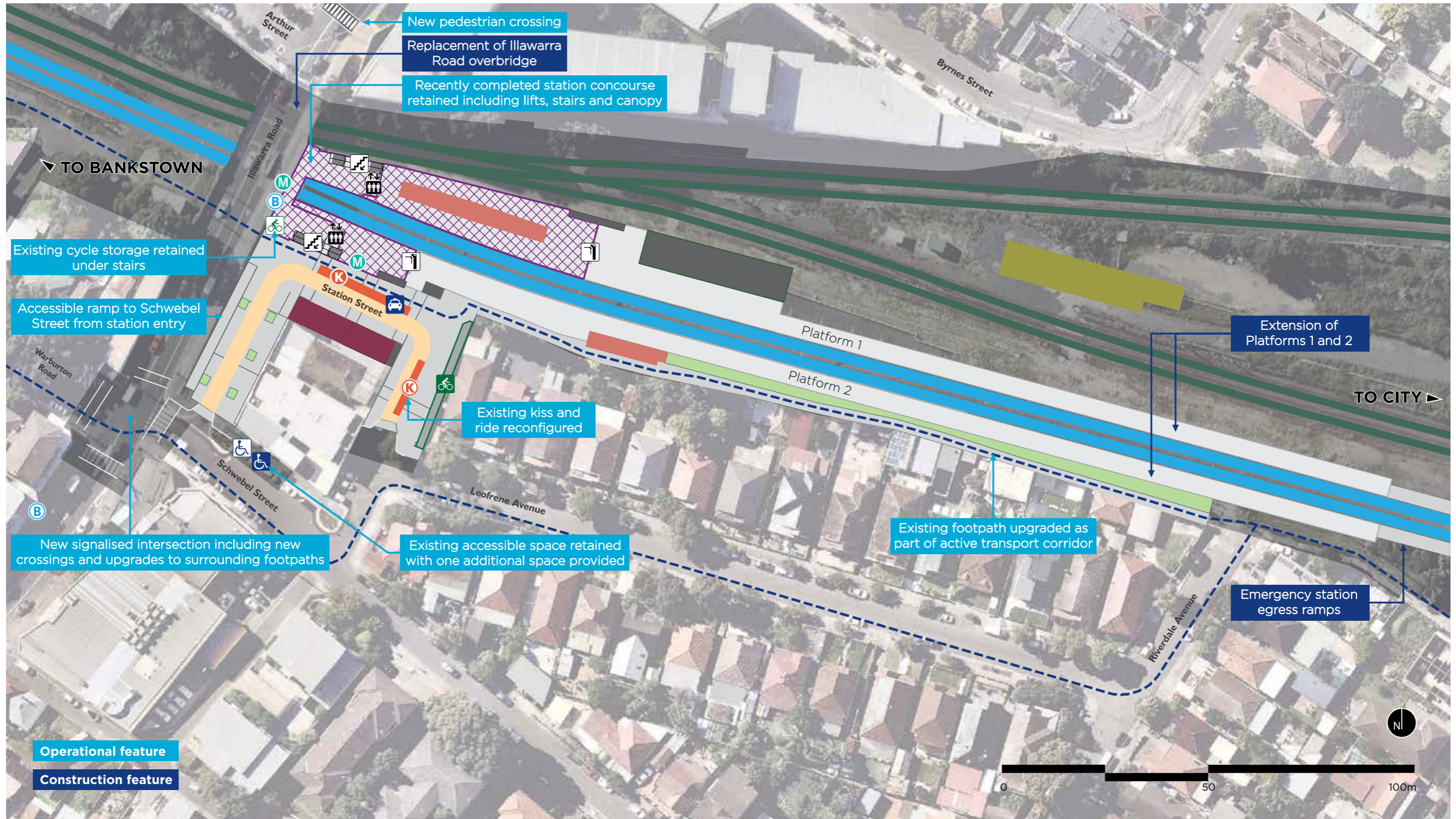
Feature	Description
Traffic changes <i>continued</i>	<p>Illawarra Road overbridge - partial closures (28 days - 14 days per side) and full closure (two days)</p> <p>Charlotte Avenue underbridge - partial closures (14 weeks) and full closure (three days)</p> <p>Livingstone Road overbridge - narrow lanes (weekends/nights eight months) and full closure (two days)</p>
Public transport changes	<p>Illawarra Road bridge - bus services diverted via Charlotte Avenue underbridge</p> <p>Illawarra Road - potential temporary short-term bus stop relocations</p> <p>During final 3-6 month possession - rail replacement buses will use existing bus stops on Illawarra Road</p>
Pedestrian and cyclist changes	<p>Station Street - modified pedestrian zone</p> <p>Warburton Road, Schwebel Street and Illawarra Road - new signalised intersection and upgrades to the surrounding footpaths</p> <p>Illawarra Road - existing signalised crossing at station removed</p> <p>Schwebel Street, Leofrene Avenue and Riverdale Avenue - rerouting existing cycle route along the southern side of corridor</p>
Street parking changes	<p>Three spaces unavailable during construction and seven spaces unavailable intermittently (such as during possessions)</p> <p>19 on-street spaces unavailable during temporary transport arrangements</p>



Marrickville Station

Station map

Marrickville



Operational feature
Construction feature

Metro tracks	ARTC tracks	Concourse/platform (unpaid area)	Concourse (paid area)	Platform (paid area)	Heritage buildings to be retained	Service buildings	Station buildings	New pavement	Landscaping
Project Area	Active transport corridor	Retail	Kerbside facilities	Shared zone	Metro station entry	Existing bus stop retained	Proposed kiss and ride	Existing kiss and ride retained	
Proposed taxi stand	Proposed bike parking	Existing bike parking retained	Proposed accessible parking	Existing accessible parking retained	Proposed ticket gates	Stairs	Lifts		

Dulwich Hill Station



Final arrangements

Feature	Description
Station entry	New entrances on Bedford Crescent and Ewart Lane
Main features and transport facilities	<ul style="list-style-type: none"> New aerial concourse connecting to Ewart Lane and existing stairs and lift to light rail on Bedford Crescent New public plaza on Ewart Lane New pedestrian zone on Bedford Crescent, providing easy transfer to light rail New lifts to platforms New toilets New retail space within the southern station entrance Existing bus stops in Dudley Street and Wardell Road retained New footpaths along Ewart Lane, Ewart Street and Dudley Street New kiss and ride, taxi and accessible parking on Bedford Crescent Station entrances and precincts improved, including landscaping Two accessible parking spaces At least 40 bike parking spaces Five kiss and ride spaces One taxi space
Customers	Customers travelling to and from nearby residential, retail, education and recreational precincts
Local amenities	<ul style="list-style-type: none"> Cooks River and surrounding parklands Dulwich Hill Public School Dulwich Hill Skate Park Jack Shanahan Park Marrickville Golf Club Marrickville West Primary School St Maroun's College

New and faster services

Dulwich Hill to:	Now (minutes)	Sydney Metro (minutes)	Savings (minutes)
Central	Up to 17	12	Up to 5
Pitt Street (new CBD station)	Up to 28*	14	Up to 14
Barangaroo (new CBD station)	Up to 47*	18	Up to 29
Victoria Cross (new North Sydney station)	Up to 35*	21	Up to 14
Chatswood	Up to 48*	27	Up to 21
Macquarie University	Up to 62*	38	Up to 24

* Includes time to interchange and/or walk

Dulwich Hill



Artist's impression of upgraded Dulwich Hill Station

○ Upgrading Dulwich Hill Station

Construction at a glance

Feature	Description				
Construction hours	Standard hours - Monday to Friday 7:00am to 6:00pm, Saturday 8:00am to 1:00pm Possessions - up to 24 hours a day				
Vehicle movements during possessions	AM peak (7:30am to 8:30am) - 20 heavy vehicles and 20 light vehicles per hour PM peak (4:15pm to 5:15pm) - 20 heavy vehicles and 20 light vehicles per hour Evening/night (6:00pm to 7:00am) - 18 heavy vehicles and 18 light vehicles per hour				
Workforce	Standard hours - average of 40 workers and a maximum of 60 workers Possessions - average of 65 workers and a maximum of 130 workers				
Demolition	Platforms 1 and 2, except for portion beneath heritage platform buildings Overhead booking office building, support structure and stairs to platforms Albermarle Street overbridge				
Heritage	Existing heritage overhead booking office removed Heritage platform station building retained for potential reuse				
Material and water usage	<table border="0"> <tr> <td>Concrete - 600 to 800 cubic metres</td> <td>Water - 500,000 litres</td> </tr> <tr> <td>Steel - 100 to 150 tonnes</td> <td>Ballast - 7,880 tonnes</td> </tr> </table>	Concrete - 600 to 800 cubic metres	Water - 500,000 litres	Steel - 100 to 150 tonnes	Ballast - 7,880 tonnes
Concrete - 600 to 800 cubic metres	Water - 500,000 litres				
Steel - 100 to 150 tonnes	Ballast - 7,880 tonnes				
Plant and equipment	<table border="0"> <tr> <td> <ul style="list-style-type: none"> ○ Bobcats ○ Compressors ○ Concrete pumps ○ Concrete trucks/agitators ○ Diamond saws ○ Excavators ○ Excavators with breaker ○ Franna cranes ○ Generators </td> <td> <ul style="list-style-type: none"> ○ Hand tools ○ Mobile cranes (50 tonne) ○ Piling rigs (bored) ○ Rollers (non-vibratory) ○ Scissor lifts ○ Semi-trailers ○ Trucks ○ Water tankers ○ Welding equipment </td> </tr> </table>	<ul style="list-style-type: none"> ○ Bobcats ○ Compressors ○ Concrete pumps ○ Concrete trucks/agitators ○ Diamond saws ○ Excavators ○ Excavators with breaker ○ Franna cranes ○ Generators 	<ul style="list-style-type: none"> ○ Hand tools ○ Mobile cranes (50 tonne) ○ Piling rigs (bored) ○ Rollers (non-vibratory) ○ Scissor lifts ○ Semi-trailers ○ Trucks ○ Water tankers ○ Welding equipment 		
<ul style="list-style-type: none"> ○ Bobcats ○ Compressors ○ Concrete pumps ○ Concrete trucks/agitators ○ Diamond saws ○ Excavators ○ Excavators with breaker ○ Franna cranes ○ Generators 	<ul style="list-style-type: none"> ○ Hand tools ○ Mobile cranes (50 tonne) ○ Piling rigs (bored) ○ Rollers (non-vibratory) ○ Scissor lifts ○ Semi-trailers ○ Trucks ○ Water tankers ○ Welding equipment 				
Traffic changes	<p>Ewart Lane, Bedford Crescent and Wardell Road - affected for short periods due to construction of new station entries and pavement/landscaping, construction of kerbside facilities, and construction access</p> <p>Albermarle Street overbridge - full closure (one month), and combination of partial and full closures (weekends/nights seven months)</p> <p>Wardell Road overbridge - partial closures (weekends/nights six months)</p> <p>Ness Avenue/Terrace Road underbridge - partial closures (weekends/nights six months)</p>				

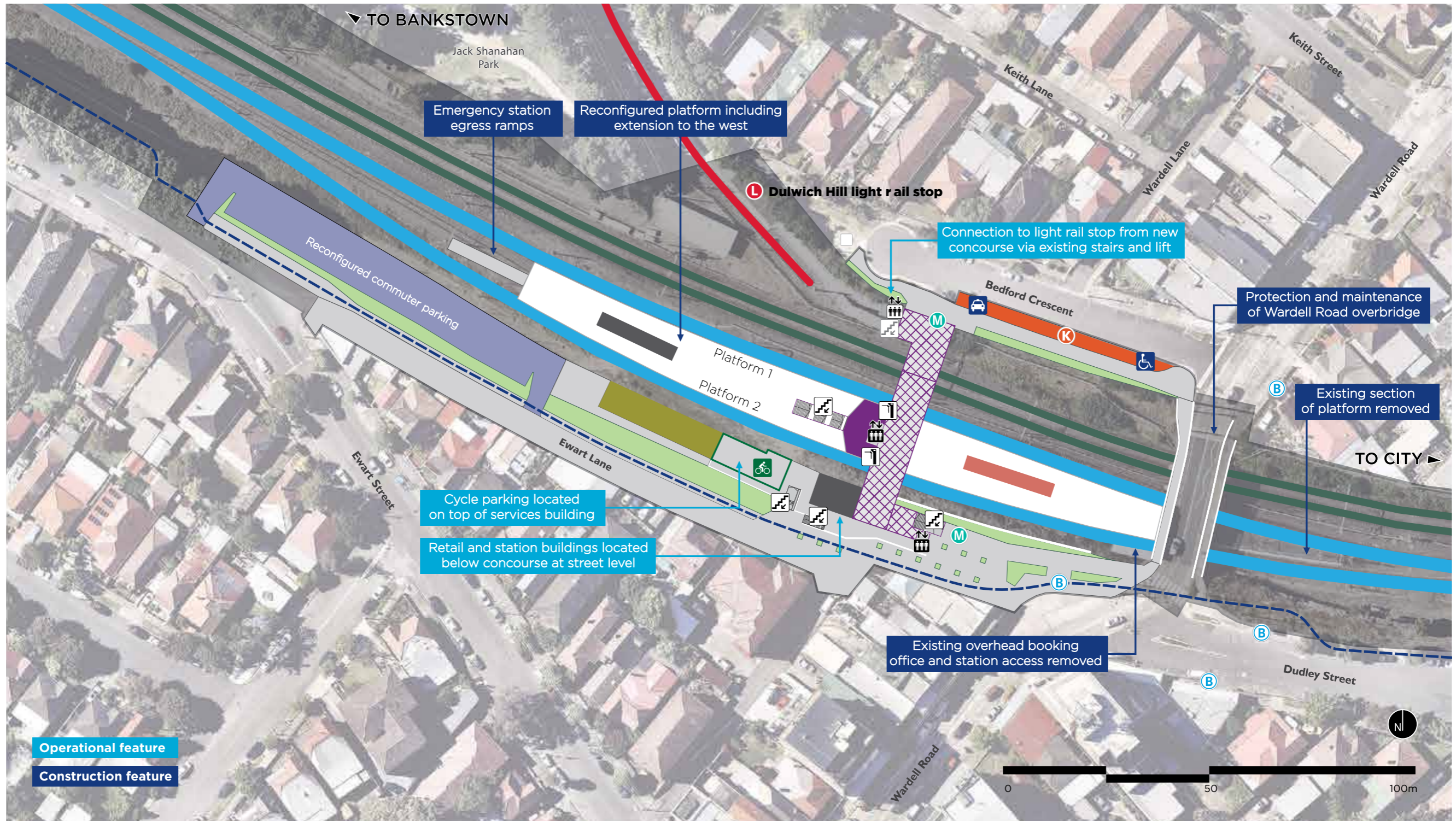
Feature	Description
Public transport changes	Livingstone Road bridge - bus services diverted via Illawarra Road overbridge During final 3-6 month possession - rail replacement buses will use existing bus stops on Dudley Street
Pedestrian and cyclist changes	Ewart Lane, Bedford Crescent - restricted access and possible diversions for access to existing station Bedford Crescent - existing cycle racks may be inaccessible during station upgrade works
Street parking changes	Nine spaces unavailable during construction and 27 spaces unavailable intermittently (such as during possessions) Three on-street spaces unavailable during temporary transport arrangements



Dulwich Hill Station

Station map

Dulwich Hill



Operational feature
Construction feature

Metro tracks	ARTC tracks	Concourse (unpaid area)	Concourse (paid area)	Platform (paid area)	Heritage buildings to be retained	Service buildings	Station buildings	New pavement	Landscaping
Project Area	Active transport corridor	Retail	Kerbside facilities	Reconfigured commuter parking	Metro station entry	Dulwich Hill light rail stop	L1 Dulwich Hill light rail line	Proposed ticket gates	Proposed kiss and ride
Proposed taxi stand	Proposed bike parking	Proposed accessible parking	Stairs	Lifts	Existing stairs retained	Existing lifts retained	Existing bus stop retained		

Hurlstone Park Station



Final arrangements

Feature	Description
Station entry	Existing entrance on Crinan Street upgraded
Main features and transport facilities	<ul style="list-style-type: none"> New station plazas on Duntroon Street and Floss Street New, enlarged aerial concourse on Crinan Street, with larger station forecourt and entry set back from the road Widened approaches to new concourse, connecting to new pedestrian crossings north and south of the station New lifts to platforms New toilets New station buildings within the concourse and on platforms New retail space as part of the new concourse Existing bus stops on Crinan Street overbridge retained New pedestrian crossing facilities on Crinan Street New footpath connections on Duntroon Street Station entrances and precincts improved, including landscaping At least 40 bike parking spaces Two kiss and ride spaces One taxi space Three accessible parking spaces
Customers	Customers travelling to and from nearby residential, retail, education and recreational precincts
Local amenities	<ul style="list-style-type: none"> Canterbury Hurlstone Park RSL Cooks River and surrounding parklands Edgeware School Euston Park Ewen Park Hurlstone Memorial Reserve St Paul of the Cross Catholic Primary School

New and faster services

Hurlstone Park to:	Now (minutes)	Sydney Metro (minutes)	Savings (minutes)
Central	Up to 19	14	Up to 5
Pitt Street (new CBD station)	Up to 30*	16	Up to 14
Barangaroo (new CBD station)	Up to 49*	20	Up to 29
Victoria Cross (new North Sydney station)	Up to 37*	23	Up to 14
Chatswood	Up to 50*	29	Up to 21
Macquarie University	Up to 64*	40	Up to 24

* Includes time to interchange and/or walk

Hurlstone Park



Artist's impression of upgraded Hurlstone Park Station

○ Upgrading Hurlstone Park Station

Construction at a glance

Feature	Description	
Construction hours	Standard hours - Monday to Friday 7:00am to 6:00pm, Saturday 8:00am to 1:00pm Possessions - up to 24 hours a day	
Vehicle movements during possessions	AM peak (7:30am to 8:30am) - 20 heavy vehicles and 20 light vehicles per hour PM peak (4:15pm to 5:15pm) - 20 heavy vehicles and 20 light vehicles per hour Evening/night (6:00pm to 7:00am) - 18 heavy vehicles and 18 light vehicles per hour	
Workforce	Standard hours - average of 40 workers and a maximum of 60 workers Possessions - average of 65 workers and a maximum of 130 workers	
Demolition	Platform 1 and its platform building Platform 2, except for portion beneath heritage platform building Overhead booking office, footbridge and stairs to platforms	
Heritage	Heritage station building on platform 1 removed Heritage building on platform 2 retained	
Material and water usage	Concrete - 600 to 800 cubic metres Steel - 100 to 150 tonnes	Water - 400,000 litres Ballast - 3,505 tonnes
Plant and equipment	<ul style="list-style-type: none"> ○ Bobcats ○ Compressors ○ Concrete pumps ○ Concrete trucks/agitators ○ Diamond saws ○ Excavators ○ Excavators with breaker ○ Franna cranes ○ Generators 	<ul style="list-style-type: none"> ○ Hand tools ○ Mobile cranes (50 tonne) ○ Piling rigs (bored) ○ Rollers (non-vibratory) ○ Scissor lifts ○ Semi-trailers ○ Trucks ○ Water tankers ○ Welding equipment
Traffic changes	<p>Floss Street - affected for duration of construction due to construction compound for station works, new pavement and bike parking</p> <p>Crinan Street and Duntroon Street - affected for short periods due to upgrades/ construction of pedestrian crossings, new station entry, and construction/removal of kerbside facilities</p> <p>Left turn into Crinan Street from Floss Street - kerb adjustment works, tree removal and/or adjustment to construction hours</p> <p>Garnet Road overbridge - partial closures (weekends/nights eight months) and full closure (two days)</p>	

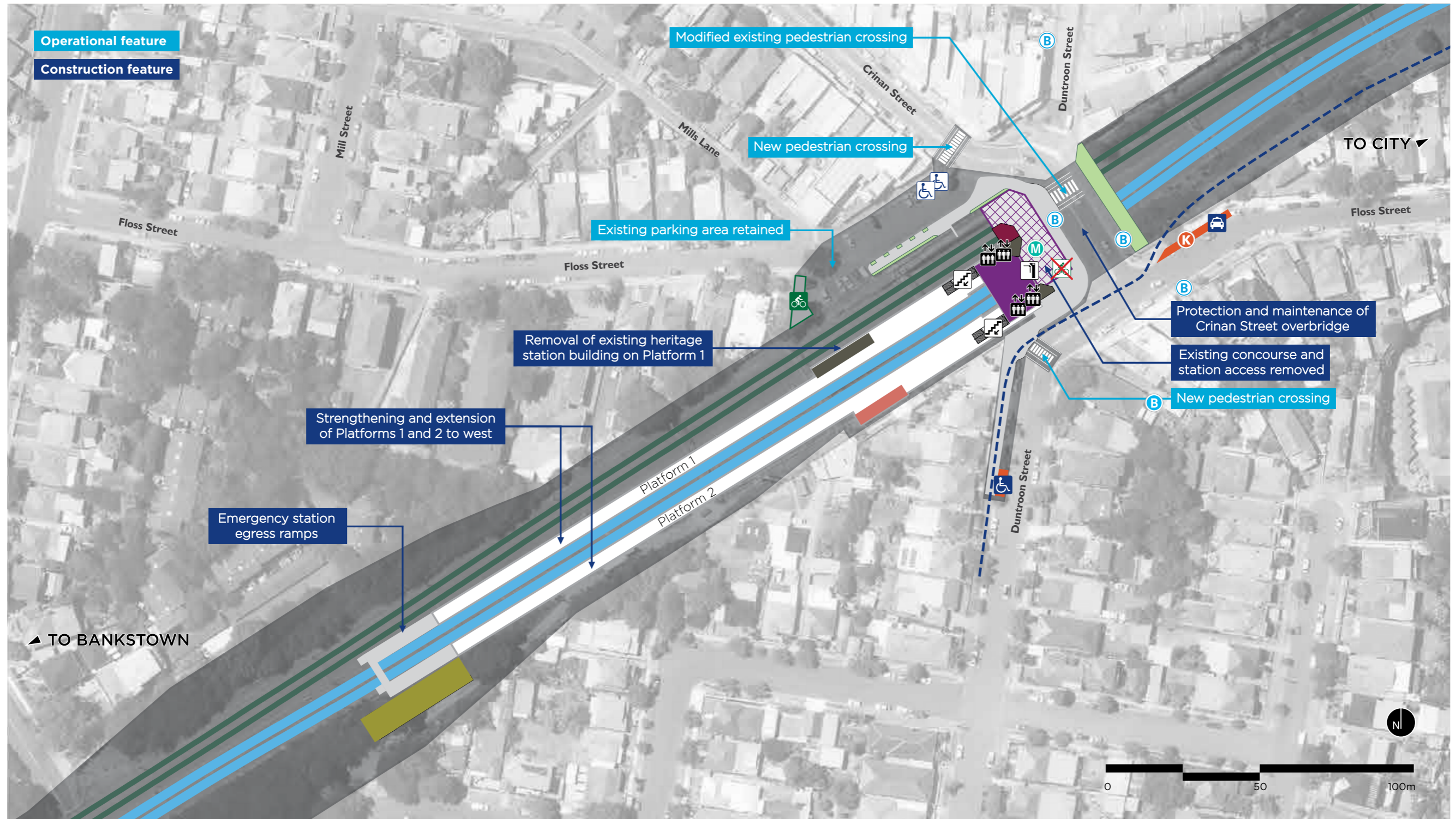
Feature	Description
Traffic changes <i>continued</i>	<p>Duntroon Street overbridge - partial closures (weekends/nights eight months) and full closure (two days)</p> <p>Foord Avenue underbridge - partial closures (weekends/nights six months)</p> <p>Melford Road overbridge - full closures (weekends/nights eight months)</p>
Public transport changes	<p>Garnett Street bridge - bus services diverted via Hampden Street</p> <p>Crinan Street bridge - bus services diverted via Garnett Street overbridge</p> <p>Crinan Street - short-term relocation of bus stops during temporary Crinan Street overbridge closure</p> <p>Crinan Street - temporary relocation of the existing bus stop on Crinan Street (northbound) due to construction compound/worksite</p> <p>During final 3-6 month possession - rail replacement buses will use existing bus stops on Floss Street and Duntroon Street</p>
Pedestrian and cyclist changes	<p>Floss Street and Duntroon Street - footpath diversions</p> <p>Duntroon Street - existing cyclist facilities relocated</p> <p>Crinan Street - existing crossing on the rail bridge modified to improve pedestrian flow by including more space on the south-western side</p>
Street parking changes	<p>23 time-restricted dedicated commuter spaces unavailable during construction</p> <p>Four on-street spaces unavailable during temporary transport arrangements</p>



Hurlstone Park Station

Hurlstone Park

Station map



Metro tracks	ARTC tracks	Concourse (unpaid area)	Concourse (paid area)	Platform (paid area)	Heritage buildings to be retained	Service buildings	Station buildings	New pavement	Landscaping
Project Area	Active transport corridor	Retail	Kerbside facilities	Metro station entry	Proposed bus stop	Existing bus stop retained	Proposed ticket gates	Stairs	Lifts
Proposed kiss and ride	Proposed taxi stand	Proposed bike parking	Existing bike parking removed	Proposed accessible parking	Existing accessible parking retained				

○ Canterbury Station



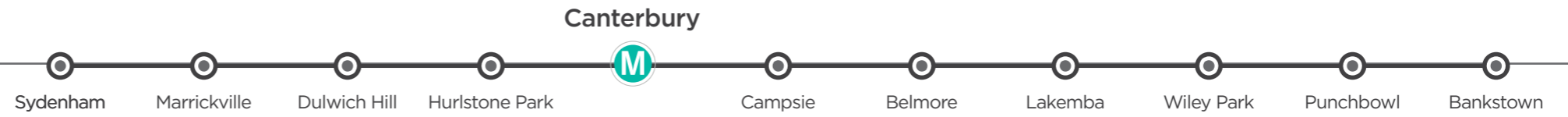
Final arrangements

Feature	Description
Station entry	Existing entry on Canterbury Road upgraded and relocated to western side of the rail corridor New entrance on Broughton Street and potential future entrance on Charles Street
Main features and transport facilities	New station plaza on Broughton Street New aerial station concourse west of Canterbury Road New retail space at the station entrances at Broughton Street and Canterbury Road New lifts to platforms New toilets New station buildings on Broughton Street Existing bus stops retained Bus stop on Broughton Street relocated closer to new Broughton Street entrance New bus shelter and pedestrian crossing at station entrance on Broughton Street Station entrances and precincts improved, including landscaping At least 40 bike parking spaces Four kiss and ride spaces Two taxi spaces Two accessible parking spaces
Customers	Customers travelling to and from nearby residential, retail, education and recreational precincts
Local amenities	<ul style="list-style-type: none"> ○ Canterbury Aquatic and Fitness Centre ○ Canterbury Girls High School ○ Canterbury Olympic Ice Rink ○ Canterbury Park Racecourse ○ Canterbury Public School ○ Cooks River and surrounding parklands ○ Saint Mary Mckillop Reserve ○ Tasker Park

New and faster services

Canterbury to:	Now (minutes)	Sydney Metro (minutes)	Savings (minutes)
Central	Up to 21	16	Up to 5
Pitt Street (new CBD station)	Up to 32*	18	Up to 14
Barangaroo (new CBD station)	Up to 51*	22	Up to 29
Victoria Cross (new North Sydney station)	Up to 39*	25	Up to 14
Chatswood	Up to 52*	31	Up to 21
Macquarie University	Up to 66*	42	Up to 24

* Includes time to interchange and/or walk



Artist's impression of upgraded Canterbury Station

○ Upgrading Canterbury Station

Construction at a glance

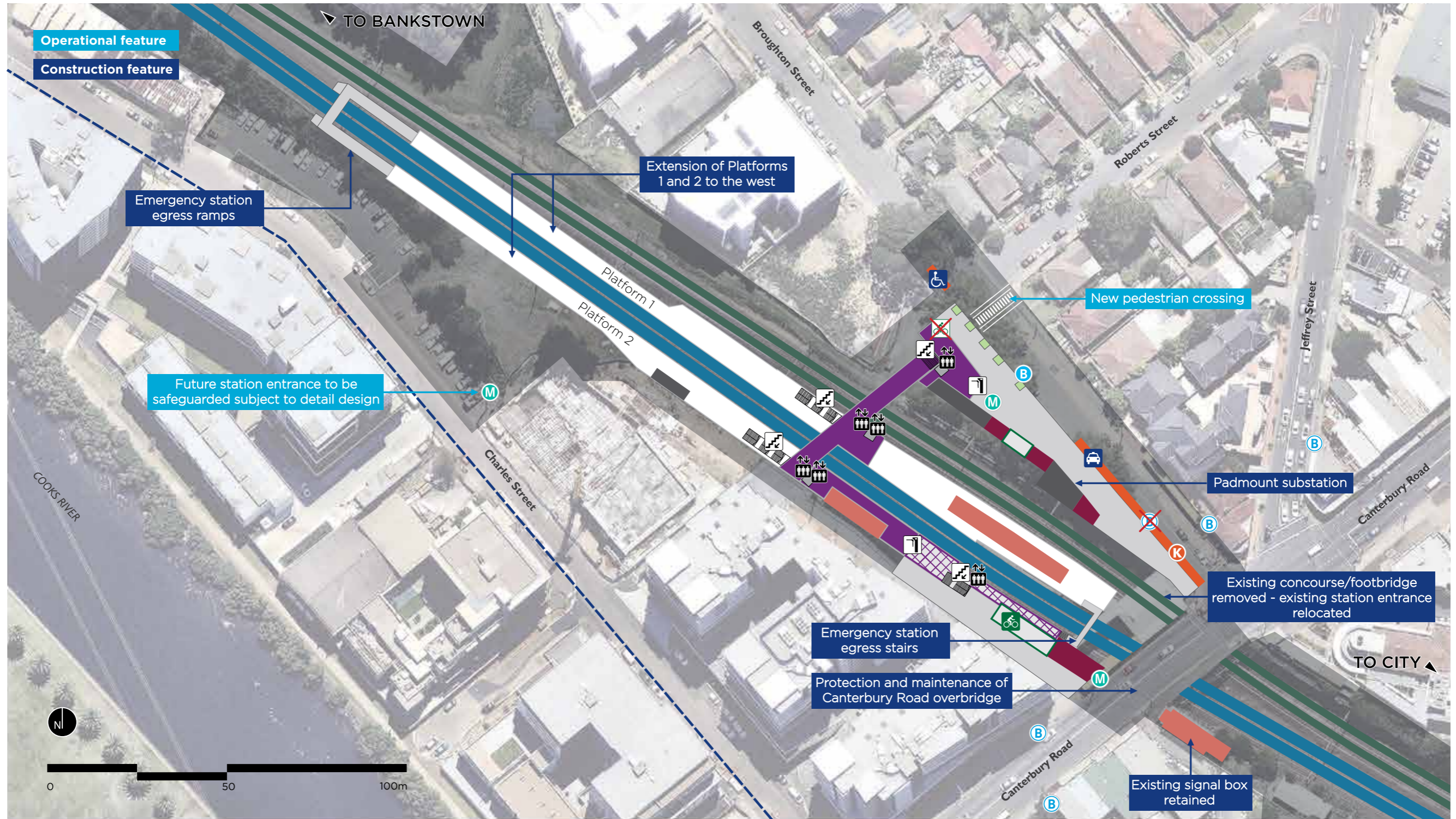
Feature	Description				
Construction hours	Standard hours - Monday to Friday 7:00am to 6:00pm, Saturday 8:00am to 1:00pm Possessions - up to 24 hours a day				
Vehicle movements during possessions	AM peak (7:30am to 8:30am) - 20 heavy vehicles and 20 light vehicles per hour PM peak (4:15pm to 5:15pm) - 20 heavy vehicles and 20 light vehicles per hour Evening/night (6:00pm to 7:00am) - 18 heavy vehicles and 18 light vehicles per hour				
Workforce	Standard hours - average of 50 workers and a maximum of 75 workers Possessions - average of 75 workers and a maximum of 160 workers				
Demolition	Platforms 1 and 2, except for portion beneath heritage platform buildings Platform canopies, overhead booking office, footbridge and stairs to platforms				
Heritage	Existing heritage-listed footbridge and overhead booking office removed Heritage-listed buildings on platforms 1 and 2 retained for potential re-use Heritage-listed signal box south-east of the Canterbury Road overbridge retained				
Material and water usage	<table border="0"> <tr> <td>Concrete - 600 to 800 cubic metres</td> <td>Water - 350,000 litres</td> </tr> <tr> <td>Steel - 100 to 150 tonnes</td> <td>Ballast - 1,071 tonnes</td> </tr> </table>	Concrete - 600 to 800 cubic metres	Water - 350,000 litres	Steel - 100 to 150 tonnes	Ballast - 1,071 tonnes
Concrete - 600 to 800 cubic metres	Water - 350,000 litres				
Steel - 100 to 150 tonnes	Ballast - 1,071 tonnes				
Plant and equipment	<table border="0"> <tr> <td> <ul style="list-style-type: none"> ○ Bobcats ○ Compressors ○ Concrete pumps ○ Concrete trucks/agitators ○ Diamond saws ○ Excavators ○ Excavators with breaker ○ Franna cranes ○ Generators </td> <td> <ul style="list-style-type: none"> ○ Hand tools ○ Mobile cranes (50 tonne) ○ Piling rigs (bored) ○ Rollers (non-vibratory) ○ Scissor lifts ○ Semi-trailers ○ Trucks ○ Water tankers ○ Welding equipment </td> </tr> </table>	<ul style="list-style-type: none"> ○ Bobcats ○ Compressors ○ Concrete pumps ○ Concrete trucks/agitators ○ Diamond saws ○ Excavators ○ Excavators with breaker ○ Franna cranes ○ Generators 	<ul style="list-style-type: none"> ○ Hand tools ○ Mobile cranes (50 tonne) ○ Piling rigs (bored) ○ Rollers (non-vibratory) ○ Scissor lifts ○ Semi-trailers ○ Trucks ○ Water tankers ○ Welding equipment 		
<ul style="list-style-type: none"> ○ Bobcats ○ Compressors ○ Concrete pumps ○ Concrete trucks/agitators ○ Diamond saws ○ Excavators ○ Excavators with breaker ○ Franna cranes ○ Generators 	<ul style="list-style-type: none"> ○ Hand tools ○ Mobile cranes (50 tonne) ○ Piling rigs (bored) ○ Rollers (non-vibratory) ○ Scissor lifts ○ Semi-trailers ○ Trucks ○ Water tankers ○ Welding equipment 				
Traffic changes	<p>Broughton Street, Canterbury Road and Close Street - affected for short periods due to the construction/removal of station buildings, entries and pavement, kerbside facilities including a new bus stop, pedestrian crossing, and construction access</p> <p>Canterbury Road/Close Street - implementation of active traffic management for access out of Close Street onto Canterbury Road</p> <p>Close Street - implementation of active traffic management</p> <p>Site entry to Canterbury Bowls gate - implementation of active traffic management</p> <p>Left turn into Broughton Street from Canterbury Road - temporary relocation further back of Broughton Street approach traffic light limit line</p>				

Feature	Description
Traffic changes <i>continued</i>	<p>Canterbury Road overbridge - partial closures (weekends/nights eight months)</p> <p>Cooks River/Charles Street underbridge - full and partial closures (weekends/nights six months)</p> <p>Wairoa M24 Street underbridge - partial closures (weekends/nights six months) and full closure (one night)</p> <p>Church Street/Hutton Street footbridge (pedestrians and cyclists only) - full closure (periodic over six months)</p>
Public transport changes	<p>Broughton Street - relocation of bus stop to outside new station entrance</p> <p>During final 3-6 month possession - rail replacement buses will use existing bus stops on Canterbury Road</p>
Pedestrian and cyclist changes	<p>Broughton Street - footpath diversions and existing cyclist facilities relocated into new station pavement areas north and south of the station</p> <p>Corner of Broughton Street and Canterbury Road - footbridge relocation</p>
Street parking changes	32 spaces dedicated commuter spaces unavailable intermittently (such as during possessions)



Canterbury Station

Station map



Metro tracks	ARTC tracks	Concourse (unpaid area)	Concourse (paid area)	Platform (paid area)	Heritage buildings to be retained	Kerbside facilities	Station buildings	New pavement	Landscaping
Project Area	Active transport corridor	Retail	Metro station entry	Proposed bus stop	Existing bus stop retained	Existing bus stop removed	Proposed ticket gates	Proposed kiss and ride	Proposed taxi stand
Proposed bike parking	Existing bike parking removed	Proposed accessible parking	Existing accessible parking retained	Stairs	Lifts				

Campsie Station



Final arrangements

Feature	Description
Station entry	Existing entry on Beamish Street upgraded New entry on North Parade
Main features and transport facilities	New shared zone along Lilian Lane between Beamish and Dewar Streets New enlarged, elevated station concourse on Beamish Street, with existing concourse built in 2001 retained New station facilities within the concourse New toilets Existing bus stops in the vicinity of the station retained Station entrances and precincts improved, including landscaping At least 50 bike parking spaces Six kiss and ride spaces Six taxi spaces Six accessible parking spaces
Customers	Customers travelling to and from nearby commercial, residential, retail, education and recreational precincts
Local amenities	<ul style="list-style-type: none"> o ANZAC Square o Campsie Public School o Campsie RSL o Carrington Square o City of Canterbury Bankstown Customer Service Centre o Orion Theatre o St Mel's Parish School

New and faster services

Campsie to:	Now (minutes)	Sydney Metro (minutes)	Savings (minutes)
Central	Up to 24	18	Up to 6
Pitt Street (new CBD station)	Up to 35*	20	Up to 15
Barangaroo (new CBD station)	Up to 49*	24	Up to 25
Victoria Cross (new North Sydney station)	Up to 42*	27	Up to 15
Chatswood	Up to 55*	33	Up to 22
Macquarie University	Up to 63*	44	Up to 19

* Includes time to interchange and/or walk

Campsie



Artist's impression of upgraded Campsie Station

○ Upgrading Campsie Station

Construction at a glance

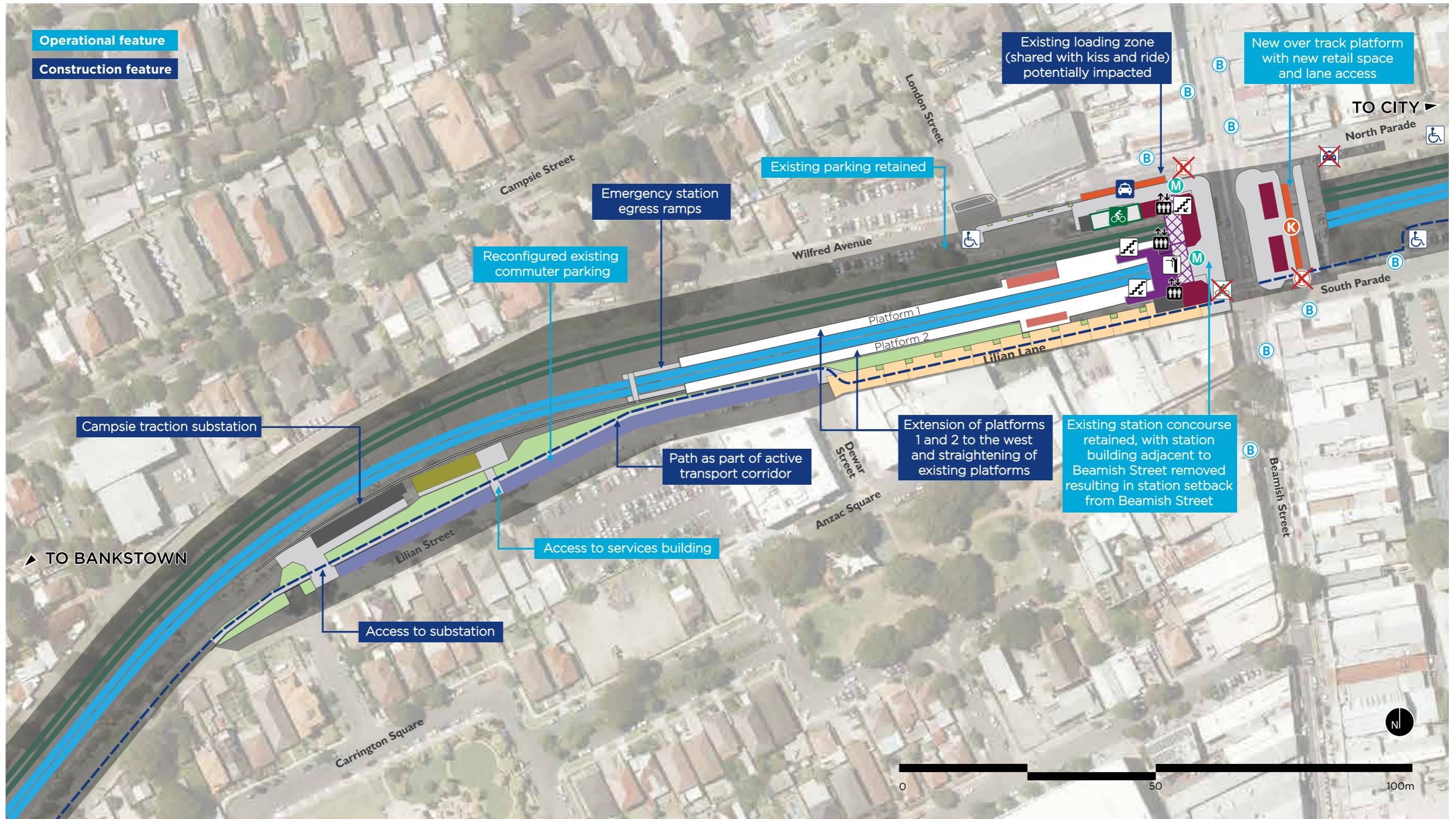
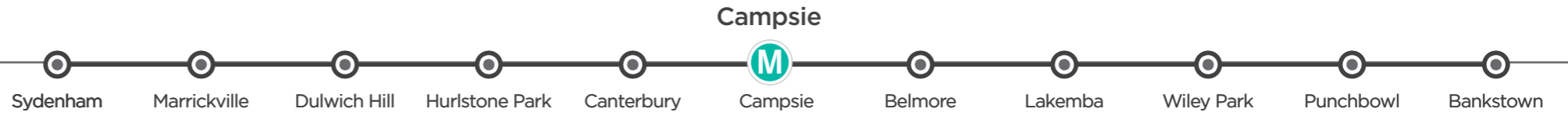
Feature	Description				
Construction hours	Standard hours - Monday to Friday 7:00am to 6:00pm, Saturday 8:00am to 1:00pm Possessions - up to 24 hours a day				
Vehicle movements during possessions	AM peak (7:30am to 8:30am) - 20 heavy vehicles and 20 light vehicles per hour PM peak (4:15pm to 5:15pm) - 20 heavy vehicles and 20 light vehicles per hour Evening/night (6:00pm to 7:00am) - 18 heavy vehicles and 18 light vehicles per hour				
Workforce	Standard hours - average of 50 workers and a maximum of 75 workers Possessions - average of 75 workers and a maximum of 160 workers				
Demolition	One commercial building Platforms 1 and 2, except for portion beneath heritage platform buildings, platform 3, and platform canopies				
Heritage	Remove and upgrade overhead concourse (except part built in 2001) and footbridge Retain heritage listed buildings on platforms 1 and 2 for potential reuse				
Material and water usage	<table border="0"> <tr> <td>Concrete - 600 to 800 cubic metres</td> <td>Water - 1,100,000 litres</td> </tr> <tr> <td>Steel - 100 to 150 tonnes</td> <td>Ballast - 4,869 tonnes</td> </tr> </table>	Concrete - 600 to 800 cubic metres	Water - 1,100,000 litres	Steel - 100 to 150 tonnes	Ballast - 4,869 tonnes
Concrete - 600 to 800 cubic metres	Water - 1,100,000 litres				
Steel - 100 to 150 tonnes	Ballast - 4,869 tonnes				
Plant and equipment	<table border="0"> <tr> <td> <ul style="list-style-type: none"> ○ Bobcats ○ Compressors ○ Concrete pumps ○ Concrete trucks/agitators ○ Diamond saws ○ Excavators ○ Excavators with breaker ○ Franna cranes ○ Generators </td> <td> <ul style="list-style-type: none"> ○ Hand tools ○ Mobile cranes (50 tonne) ○ Piling rigs (bored) ○ Rollers (non-vibratory) ○ Scissor lifts ○ Semi-trailers ○ Trucks ○ Water tankers ○ Welding equipment </td> </tr> </table>	<ul style="list-style-type: none"> ○ Bobcats ○ Compressors ○ Concrete pumps ○ Concrete trucks/agitators ○ Diamond saws ○ Excavators ○ Excavators with breaker ○ Franna cranes ○ Generators 	<ul style="list-style-type: none"> ○ Hand tools ○ Mobile cranes (50 tonne) ○ Piling rigs (bored) ○ Rollers (non-vibratory) ○ Scissor lifts ○ Semi-trailers ○ Trucks ○ Water tankers ○ Welding equipment 		
<ul style="list-style-type: none"> ○ Bobcats ○ Compressors ○ Concrete pumps ○ Concrete trucks/agitators ○ Diamond saws ○ Excavators ○ Excavators with breaker ○ Franna cranes ○ Generators 	<ul style="list-style-type: none"> ○ Hand tools ○ Mobile cranes (50 tonne) ○ Piling rigs (bored) ○ Rollers (non-vibratory) ○ Scissor lifts ○ Semi-trailers ○ Trucks ○ Water tankers ○ Welding equipment 				
Traffic changes	<p>Lilian Lane - affected for duration of construction due to construction compound and upgrade of Lilian Lane</p> <p>Lilian Street, Beamish Street, Wilfred Avenue, North Parade, South Parade, and London Street - affected for short periods due to construction access, construction of kerbside facilities, station entry and pavement, and removal of existing kerbside facilities</p> <p>Duke Street footbridge (pedestrians and cyclists only) - full closure (periodic over six months)</p> <p>Beamish Street overbridge - partial closures (weekends/nights six months)</p> <p>Loch Street overbridge - partial closures (weekends/nights six months)</p>				

Feature	Description
Public transport changes	<p>Beamish Street bridge - bus services diverted via Loch Street overbridge, temporary half-lane closures during bridgeworks, and temporary relocation of bus stops, potentially to North Parade</p> <p>During final 3-6 month possession - rail replacement buses will use existing bus stops on South Parade</p>
Pedestrian and cyclist changes	<p>South Parade, Beamish Street, North Parade and Lilian Street - potentially reduced footpath widths near construction compounds and worksites</p> <p>Lilian Lane - safe pedestrian alternatives will be provided</p> <p>Beamish Street - relocation of existing cyclist facilities on station forecourt to the pavement on Wilfred Avenue</p>
Street parking changes	<p>14 dedicated commuter spaces unavailable during construction and 45 dedicated commuter spaces unavailable intermittently (such as during possessions)</p> <p>40 dedicated commuter spaces and three on-street time-restricted spaces unavailable during temporary transport arrangements</p>



Campsie Station

Station map



Metro tracks	ARTC tracks	Concourse (unpaid area)	Concourse (paid area)	Platform (paid area)	Heritage buildings to be retained	Service buildings	Station buildings	New pavement	Landscaping
Project Area	Active transport corridor	Retail	Kerbside facilities	Shared zone	Existing parking reconfigured	Metro station entry	Lifts	Proposed ticket gates	Stairs
Proposed kiss and ride	Existing kiss and ride removed	Proposed taxi stand	Existing taxi stand removed	Proposed bike parking	Existing bike parking removed	Existing accessible parking retained	Existing bus stop retained		

Belmore Station



Final arrangements

Feature	Description
Station entry	New entries on Tobruk Avenue and Redman Parade
Main features and transport facilities	<ul style="list-style-type: none"> New station plazas on Tobruk Avenue and Redman Parade New elevated concourse east of the heritage platform building New station buildings within the concourse and at eastern end of platform New retail space as part of the new station plaza on Tobruk Avenue New toilets New signalised intersection at Tobruk Avenue, Bridge Road and Burwood Road New footpaths along Tobruk Avenue and existing footpaths along the southern side of the rail corridor Existing northbound bus stop on Burwood Road retained Existing southbound bus stop on Burwood Road south of Tobruk Avenue relocated Station entrances and precincts improved, including landscaping At least 40 bike parking spaces Four kiss and ride spaces One taxi space Five accessible parking spaces
Customers	Customers travelling to and from nearby residential, retail, education and recreational precincts
Local amenities	<ul style="list-style-type: none"> ○ All Saints Grammar School ○ Canterbury Hospital ○ Belmore Sports Ground ○ Canterbury League Club

New and faster services

Belmore to:	Now (minutes)	Sydney Metro (minutes)	Savings (minutes)
Central	Up to 26	20	Up to 6
Pitt Street (new CBD station)	Up to 37*	22	Up to 15
Barangaroo (new CBD station)	Up to 51*	26	Up to 25
Victoria Cross (new North Sydney station)	Up to 44*	29	Up to 15
Chatswood	Up to 57*	35	Up to 22
Macquarie University	Up to 65*	46	Up to 19

* Includes time to interchange and/or walk



Artist's impression of upgraded Belmore Station

○ Upgrading Belmore Station

Construction at a glance

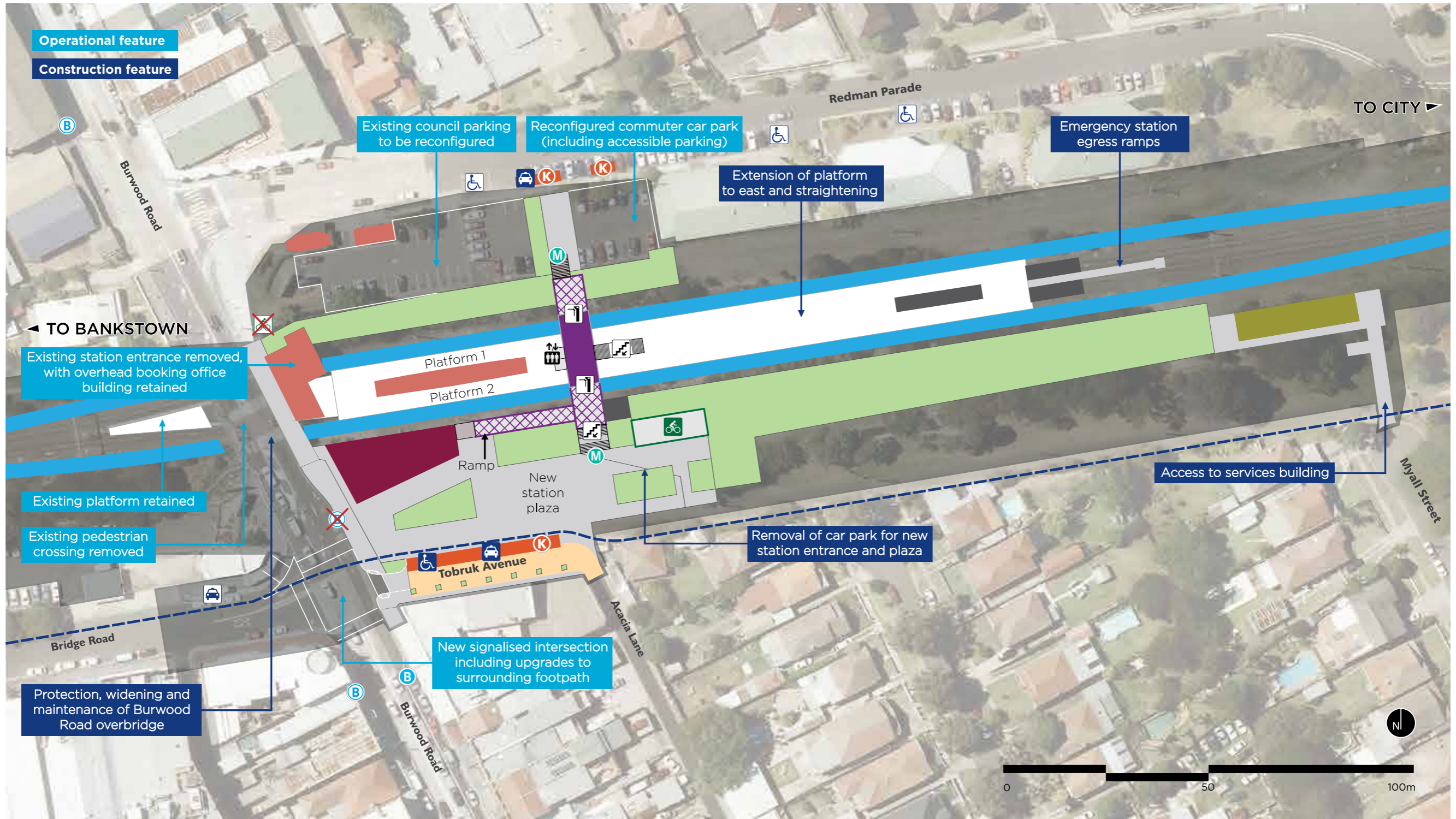
Feature	Description				
Construction hours	Standard hours - Monday to Friday 7:00am to 6:00pm, Saturday 8:00am to 1:00pm Possessions - up to 24 hours a day				
Vehicle movements during possessions	AM peak (7:30am to 8:30am) - 20 heavy vehicles and 20 light vehicles per hour PM peak (4:15pm to 5:15pm) - 20 heavy vehicles and 20 light vehicles per hour Evening/night (6:00pm to 7:00am) - 18 heavy vehicles and 18 light vehicles per hour				
Workforce	Standard hours - average of 40 workers and a maximum of 60 workers Possessions - average of 60 workers and a maximum of 130 workers				
Demolition	Platforms 1 and 2, except for portion beneath heritage platform building Platform canopies				
Heritage	Existing heritage listed platform building retained Existing heritage overhead booking office retained and existing stairs from overhead booking office to platform removed Existing heritage buildings in car park retained				
Material and water usage	<table border="0"> <tr> <td>Concrete - 400 cubic metres</td> <td>Water - 500,000 litres</td> </tr> <tr> <td>Steel - 100 to 150 tonnes</td> <td>Ballast - 5,427 tonnes</td> </tr> </table>	Concrete - 400 cubic metres	Water - 500,000 litres	Steel - 100 to 150 tonnes	Ballast - 5,427 tonnes
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Steel - 100 to 150 tonnes	Ballast - 5,427 tonnes				
Plant and equipment	<table border="0"> <tr> <td> <ul style="list-style-type: none"> ○ Bobcats ○ Compressors ○ Concrete pumps ○ Concrete trucks/agitators ○ Diamond saws ○ Excavators ○ Excavators with breaker ○ Franna cranes ○ Generators </td> <td> <ul style="list-style-type: none"> ○ Hand tools ○ Mobile cranes (50 tonne) ○ Piling rigs (bored) ○ Rollers (non-vibratory) ○ Scissor lifts ○ Semi-trailers ○ Trucks ○ Water tankers ○ Welding equipment </td> </tr> </table>	<ul style="list-style-type: none"> ○ Bobcats ○ Compressors ○ Concrete pumps ○ Concrete trucks/agitators ○ Diamond saws ○ Excavators ○ Excavators with breaker ○ Franna cranes ○ Generators 	<ul style="list-style-type: none"> ○ Hand tools ○ Mobile cranes (50 tonne) ○ Piling rigs (bored) ○ Rollers (non-vibratory) ○ Scissor lifts ○ Semi-trailers ○ Trucks ○ Water tankers ○ Welding equipment 		
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Traffic changes	<p>Tobruk Avenue, Redman Parade, Burwood Road, Bridge Road, Acacia Lane, and Myall Street - affected for short periods due to construction of kerbside facilities, station entries, plaza and pavement, new signalised intersection, new access, removal of existing kerbside facilities, and construction access</p> <p>Right turn into Tobruk Avenue from Burwood Road - restriction or possible removal of car parking spaces during construction hours</p> <p>Right turn into Burwood Road from Dean Avenue - restriction or possible removal of car parking spaces during construction hours</p>				

Feature	Description
Traffic changes continued	<p>Pedestrian access oval underbridge - full closure (weekends/nights eight months)</p> <p>Burwood Road overbridge - partial closures (weekends/nights six months) and partial closures (four weeks continuous)</p>
Public transport changes	<p>Burwood Road overbridge - bus services diverted via Moreton Street overbridge, and potential relocation of bus stops to minimise walking distances due to temporary closure</p> <p>During final 3-6 month possession - rail replacement buses will use existing bus stops on Burwood Road</p>
Pedestrian and cyclist changes	<p>Tobruk Avenue - footpaths may be inaccessible during station and shared zone construction</p> <p>Burwood Road - existing signalised crossing removed, footpaths may be temporarily inaccessible</p> <p>Bike parking - upgraded and relocated to southern side of the station, some may be temporarily unavailable during the upgrade</p>
Street parking changes	<p>29 dedicated commuter spaces and 46 time-restricted spaces unavailable during construction, and 21 spaces unavailable intermittently (such as during possessions)</p> <p>Seven on-street spaces unavailable during temporary transport arrangements</p>



Belmore Station

Station map



Metro tracks	ARTC tracks	Concourse (unpaid area)	Concourse (paid area)	Platform (paid area)	Heritage buildings to be retained	Service buildings	Station buildings	New pavement	Landscaping
Project Area	Active transport corridor	Retail	Kerbside facilities	Shared zone	Metro station entry	Proposed bus stop	Existing bus stop retained	Existing bus stop removed	Stairs
Proposed kiss and ride	Proposed taxi stand	Existing taxi stand retained	Proposed bike parking	Existing bike parking removed	Proposed accessible parking	Existing accessible parking retained	Lifts	Proposed ticket gates	

Lakemba Station



Final arrangements

Feature	Description
Station entry	Existing entries on Railway Parade and The Boulevarde upgraded
Main features and transport facilities	<ul style="list-style-type: none"> Station plaza on The Boulevarde upgraded and station plaza on Railway Parade extended Existing elevated concourse retained with a minor expansion for additional station buildings and facilities New station buildings in concourse, on platform and next to Railway Parade entrance New toilets Existing bus stops on The Boulevarde, Railway Parade and Haldon Street retained New footpath on southern side of Railway Parade, next to existing car park, leading to station entrance Cedar of Lebanon tree (<i>cedrus libani</i>) retained Station entrances and precincts improved, including landscaping At least 40 bike parking spaces Three off-road kiss and ride spaces Three taxi spaces Seven accessible parking spaces
Customers	Customers travelling to and from nearby residential, retail and recreational precincts
Local amenities	<ul style="list-style-type: none"> Jubilee Reserve Lakemba Library Lakemba Senior Citizen's Centre The Lakemba Club Parry Park Peel Street Reserve Wiley Park

New and faster services

Lakemba to:	Now (minutes)	Sydney Metro (minutes)	Savings (minutes)
Central	Up to 28	22	Up to 6
Pitt Street (new CBD station)	Up to 39*	24	Up to 15
Barangaroo (new CBD station)	Up to 53*	28	Up to 25
Victoria Cross (new North Sydney station)	Up to 46*	31	Up to 15
Chatswood	Up to 59*	37	Up to 22
Macquarie University	Up to 67*	48	Up to 19

* Includes time to interchange and/or walk



Artist's impression of upgraded Lakemba Station

○ Upgrading Lakemba Station

Construction at a glance

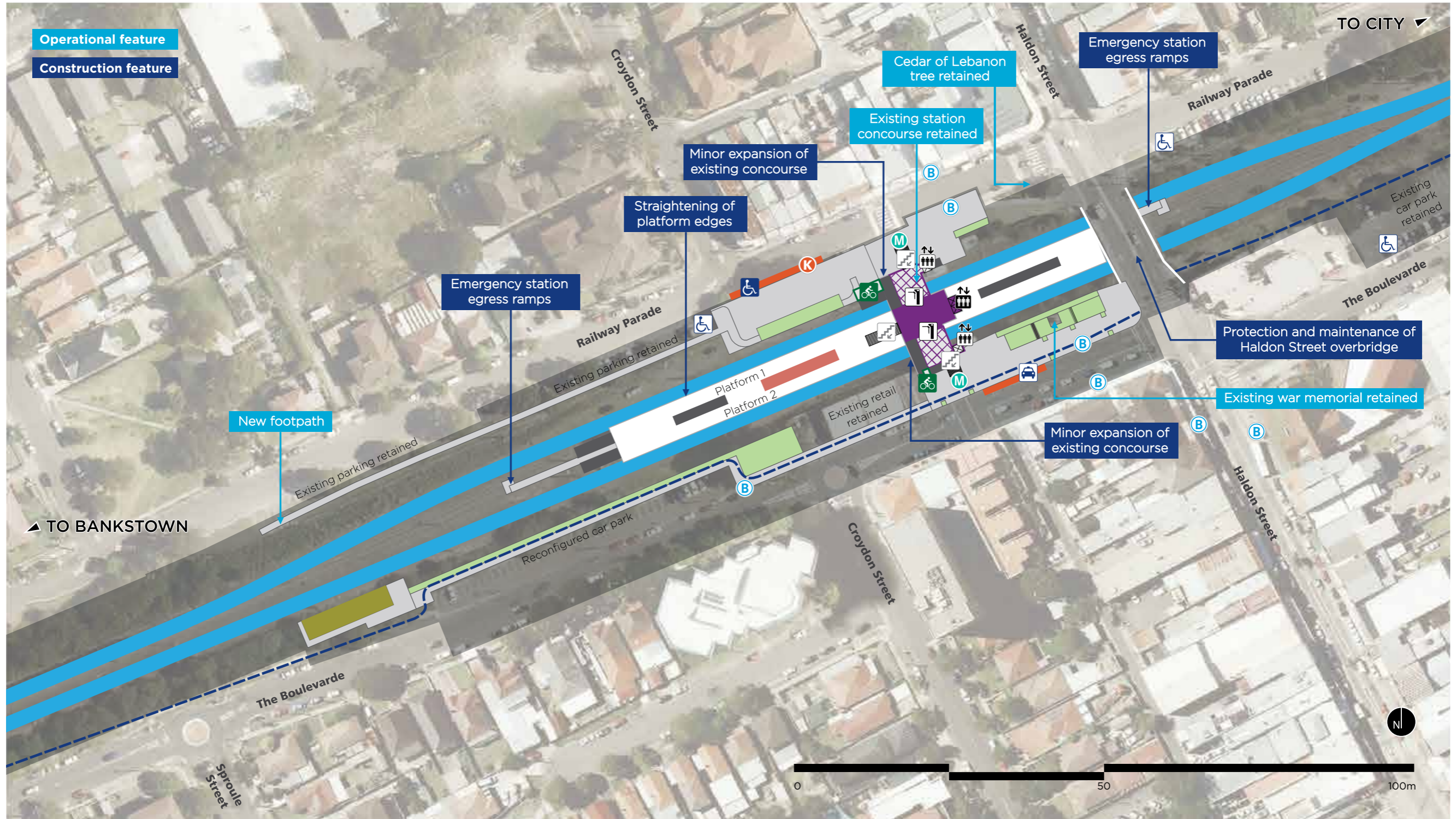
Feature	Description				
Construction hours	Standard hours - Monday to Friday 7:00am to 6:00pm, Saturday 8:00am to 1:00pm Possessions - up to 24 hours a day				
Vehicle movements during possessions	AM peak (7:30am to 8:30am) - 20 heavy vehicles and 20 light vehicles per hour PM peak (4:15pm to 5:15pm) - 20 heavy vehicles and 20 light vehicles per hour Evening/night (6:00pm to 7:00am) - 18 heavy vehicles and 18 light vehicles per hour				
Workforce	Standard hours - average of 40 workers and a maximum of 60 workers Possessions - average of 60 workers and a maximum of 130 workers				
Demolition	Platforms 1 and 2, except for portion beneath heritage platform building, and platform canopies				
Heritage	Heritage platform building retained				
Material and water usage	<table border="0"> <tr> <td>Concrete - 600 to 800 cubic metres</td> <td>Water - 700,000 litres</td> </tr> <tr> <td>Steel - 100 to 150 tonnes</td> <td>Ballast - 3,987 tonnes</td> </tr> </table>	Concrete - 600 to 800 cubic metres	Water - 700,000 litres	Steel - 100 to 150 tonnes	Ballast - 3,987 tonnes
Concrete - 600 to 800 cubic metres	Water - 700,000 litres				
Steel - 100 to 150 tonnes	Ballast - 3,987 tonnes				
Plant and equipment	<table border="0"> <tr> <td> <ul style="list-style-type: none"> ○ Bobcats ○ Compressors ○ Concrete pumps ○ Concrete trucks/agitators ○ Diamond saws ○ Excavators ○ Excavators with breaker ○ Franna cranes ○ Generators </td> <td> <ul style="list-style-type: none"> ○ Hand tools ○ Mobile cranes (50 tonne) ○ Piling rigs (bored) ○ Rollers (non-vibratory) ○ Scissor lifts ○ Semi-trailers ○ Trucks ○ Water tankers ○ Welding equipment </td> </tr> </table>	<ul style="list-style-type: none"> ○ Bobcats ○ Compressors ○ Concrete pumps ○ Concrete trucks/agitators ○ Diamond saws ○ Excavators ○ Excavators with breaker ○ Franna cranes ○ Generators 	<ul style="list-style-type: none"> ○ Hand tools ○ Mobile cranes (50 tonne) ○ Piling rigs (bored) ○ Rollers (non-vibratory) ○ Scissor lifts ○ Semi-trailers ○ Trucks ○ Water tankers ○ Welding equipment 		
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Traffic changes	<p>Railway Parade, Haldon Street, and The Boulevard - affected for short periods due to the construction of the station entries and kerbside facilities</p> <p>Left turn into Haldon Street from The Boulevard - minor kerb cutback</p> <p>Moreton Street overbridge - partial closures (weekends/nights six months) and partial closures (four weeks continuous)</p> <p>Haldon Street overbridge - partial closures (weekends/nights six months) and full closures (four weeks continuous)</p>				

Feature	Description
Public transport changes	<p>Haldon Street overbridge - bus services diverted via Moreton Street overbridge, and potential relocation of bus stops to minimise walking distances due to temporary closure</p> <p>During final 3-6 month possession - rail replacement buses will use existing bus stops on The Boulevard</p>
Pedestrian and cyclist changes	<p>The Boulevard and Railway Parade - potentially reduced footpath widths near construction compounds and worksites</p> <p>Bike parking - some may be temporarily unavailable during upgrade</p>
Street parking changes	<p>47 dedicated commuter spaces unavailable during construction and 25 dedicated commuter spaces unavailable intermittently (such as during possessions)</p> <p>12 on-street spaces unavailable during temporary transport arrangements</p>



Lakemba Station

Station map



Metro tracks	ARTC tracks	Concourse (unpaid area)	Concourse (paid area)	Platform (paid area)	Heritage buildings to be retained	Service buildings	Station buildings	New pavement	Landscaping
Project Area	Active transport corridor	Retail	Kerbside facilities	Metro station entry	Existing bus stop retained	Proposed ticket gates	Lifts	Existing lifts retained	Existing stairs retained
Proposed kiss and ride	Existing taxi stand retained	Proposed bike parking	Proposed accessible parking	Existing accessible parking retained					

Wiley Park Station



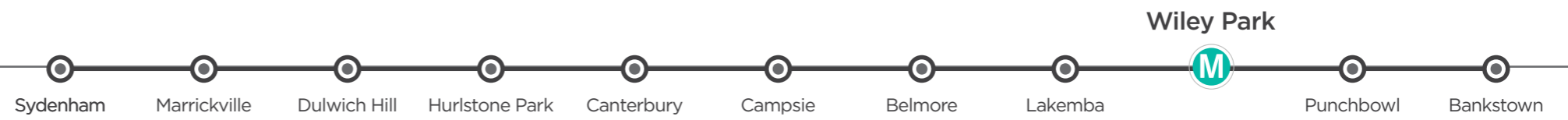
Final arrangements

Feature	Description
Station entry	New entries on The Boulevarde and Stanlea Parade
Main features and transport facilities	<ul style="list-style-type: none"> New enlarged station concourse New elevated concourse adjoined to upgraded existing station concourse New station buildings within new concourse, on platforms 1 and 2, and next to The Boulevarde New retail space in new concourse along King Georges Road New lifts to platforms New toilets Existing bus stops retained Station entrances and precincts improved, including landscaping At least 40 bike parking spaces Five kiss and ride spaces One taxi space One accessible parking space Replacement off-street parking on The Boulevarde, as part of the Roads and Maritime Services' King Georges Road clearways project
Customers	Customers travelling to and from nearby residential, retail, education and recreational precincts
Local amenities	<ul style="list-style-type: none"> Lakemba Public School Wiley Park Wiley Park Girls High School Wiley Park Public School

New and faster services

Wiley Park to:	Now (minutes)	Sydney Metro (minutes)	Savings (minutes)
Central	Up to 30	24	Up to 6
Pitt Street (new CBD station)	Up to 41*	26	Up to 15
Barangaroo (new CBD station)	Up to 60*	30	Up to 30
Victoria Cross (new North Sydney station)	Up to 48*	33	Up to 15
Chatswood	Up to 61*	39	Up to 22
Macquarie University	Up to 75*	50	Up to 25

* Includes time to interchange and/or walk



Artist's impression of upgraded Wiley Park Station

○ Upgrading Wiley Park Station

Construction at a glance

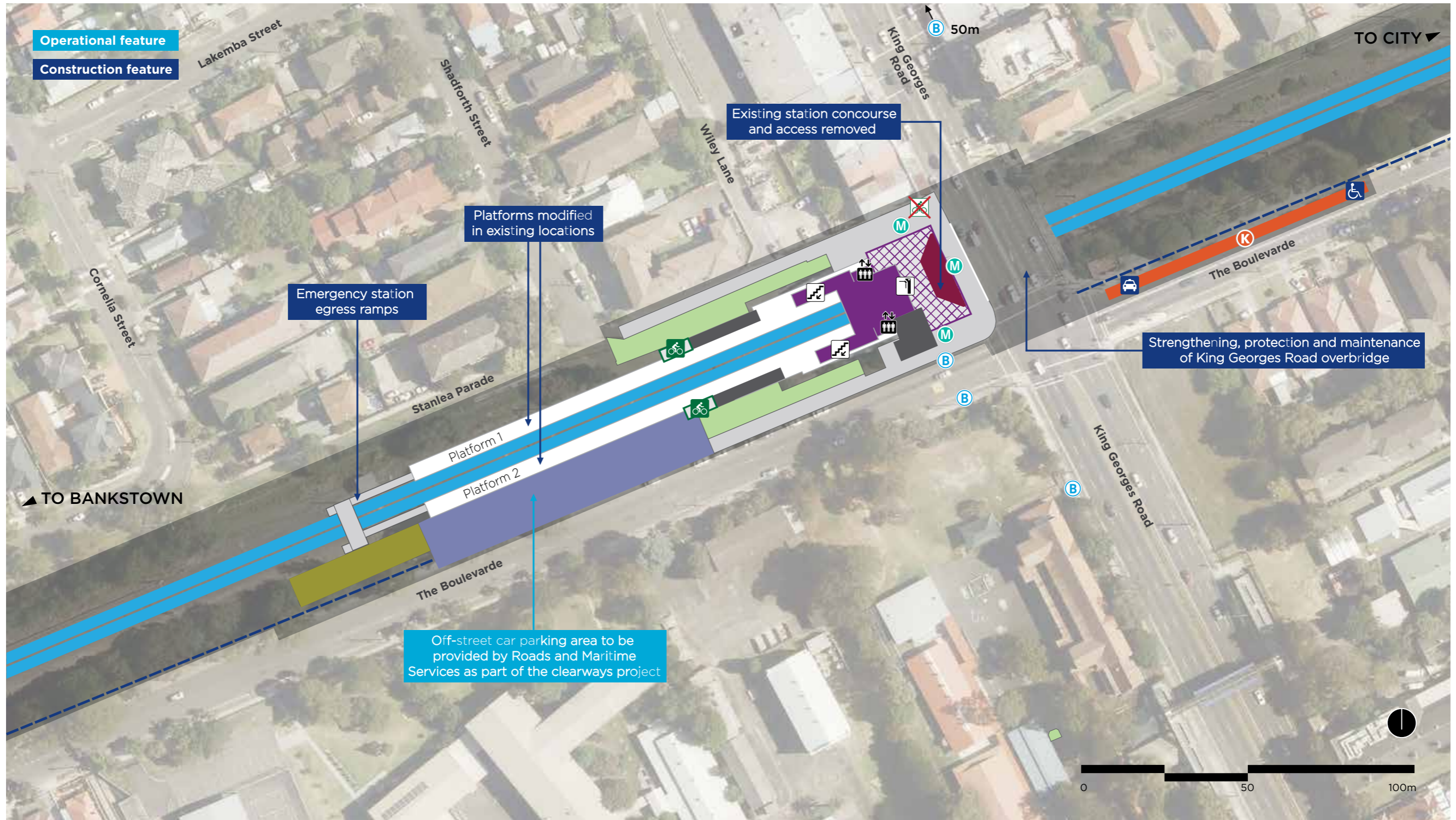
Feature	Description
Construction hours	Standard hours - Monday to Friday 7:00am to 6:00pm, Saturday 8:00am to 1:00pm Possessions - up to 24 hours a day
Vehicle movements during possessions	AM peak (7:30am to 8:30am) - 20 heavy vehicles and 20 light vehicles per hour PM peak (4:15pm to 5:15pm) - 20 heavy vehicles and 20 light vehicles per hour Evening/night (6:00pm to 7:00am) - 18 heavy vehicles and 18 light vehicles per hour
Workforce	Standard hours - average of 40 workers and a maximum of 60 workers Possessions - average of 60 workers and a maximum of 130 workers
Demolition	Platforms 1 and 2, including platform buildings and platform canopies Overhead booking office, footbridge, access ramp canopies and stairs to platforms
Heritage	Existing heritage-listed overhead booking office, platform buildings and platforms removed
Material and water usage	Concrete - 600 to 800 cubic metres Steel - 100 to 150 tonnes Water - 400,000 litres Ballast - 0 tonnes
Plant and equipment	<ul style="list-style-type: none"> ○ Bobcats ○ Compressors ○ Concrete pumps ○ Concrete trucks/agitators ○ Diamond saws ○ Excavators ○ Excavators with breaker ○ Franna cranes ○ Generators ○ Hand tools ○ Mobile cranes (50 tonne) ○ Piling rigs (bored) ○ Rollers (non-vibratory) ○ Scissor lifts ○ Semi-trailers ○ Trucks ○ Water tankers ○ Welding equipment
Traffic changes	<p>King Georges Road, Wiley Lane, Shadforth Street, and The Boulevard - affected for short periods due to the construction/removal of kerbside facilities, new station entry and pavement</p> <p>Left turn into The Boulevard from King Georges Road (northbound) - traffic management and a temporary re-alignment of the centre line on The Boulevard</p> <p>Left turn into Lakemba Street from King Georges Road - traffic management and closure of kerbside lane on King Georges Road during construction hours</p> <p>King Georges Road overbridge - partial closures (three weeks)</p>
Public transport changes	During final 3-6 month possession - rail replacement buses will operate from The Boulevard

Feature	Description
Pedestrian and cyclist changes	The Boulevard and Stanlea Parade - potentially reduced footpath widths near construction compounds and worksites Bike parking - upgraded and relocated to the north and south side of the station, and some may be temporarily unavailable during this upgrade
Street parking changes	25 spaces unavailable during construction 16 on-street spaces unavailable during temporary transport arrangements



Wiley Park Station

Station map



Metro tracks	ARTC tracks	Concourse (unpaid area)	Concourse (paid area)	Platform (paid area)	Service buildings	Station buildings	New pavement	Landscaping
Project Area	Active transport corridor	Retail	Kerbside facilities	Reconfigured commuter parking	Metro station entry	Existing bus stop retained	Proposed bike parking	
Proposed kiss and ride	Proposed taxi stand	Existing bike parking removed	Proposed accessible parking	Stairs	Lifts	Proposed ticket gates		

Punchbowl Station



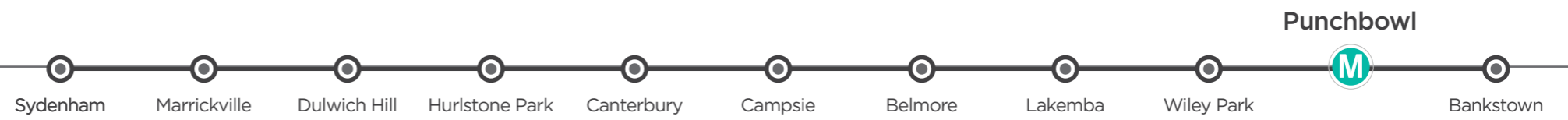
Final arrangements

Feature	Description
Station entry	New entries on The Boulevarde and Warren Reserve
Main features and transport facilities	<ul style="list-style-type: none"> New station plazas on The Boulevarde and Warren Reserve/Urunga Parade New aerial concourse New station buildings at station entrances and on platforms New retail space within the southern station plaza, next to The Boulevarde New lifts to platforms New toilets Existing bus stops on Punchbowl Road retained Eastbound stop on The Boulevarde relocated to east of Arthur Street, next to new station entrance New pedestrian crossing on Punchbowl Road north-east of Bruest Place Station entrances and precincts improved, including landscaping At least 40 bike parking spaces Eight kiss and ride spaces Three taxi spaces Three accessible parking spaces
Customers	Customers travelling to and from nearby residential, retail, education and recreational precincts
Local amenities	<ul style="list-style-type: none"> Punchbowl Boys High School Warren Reserve Punchbowl Community Centre

New and faster services

Punchbowl to:	Now (minutes)	Sydney Metro (minutes)	Savings (minutes)
Central	Up to 32	26	Up to 6
Pitt Street (new CBD station)	Up to 43*	28	Up to 15
Barangaroo (new CBD station)	Up to 57*	32	Up to 25
Victoria Cross (new North Sydney station)	Up to 50*	35	Up to 15
Chatswood	Up to 63*	41	Up to 22
Macquarie University	Up to 71*	52	Up to 19

* Includes time to interchange and/or walk



Artist's impression of upgraded Punchbowl Station

○ Upgrading Punchbowl Station

Construction at a glance

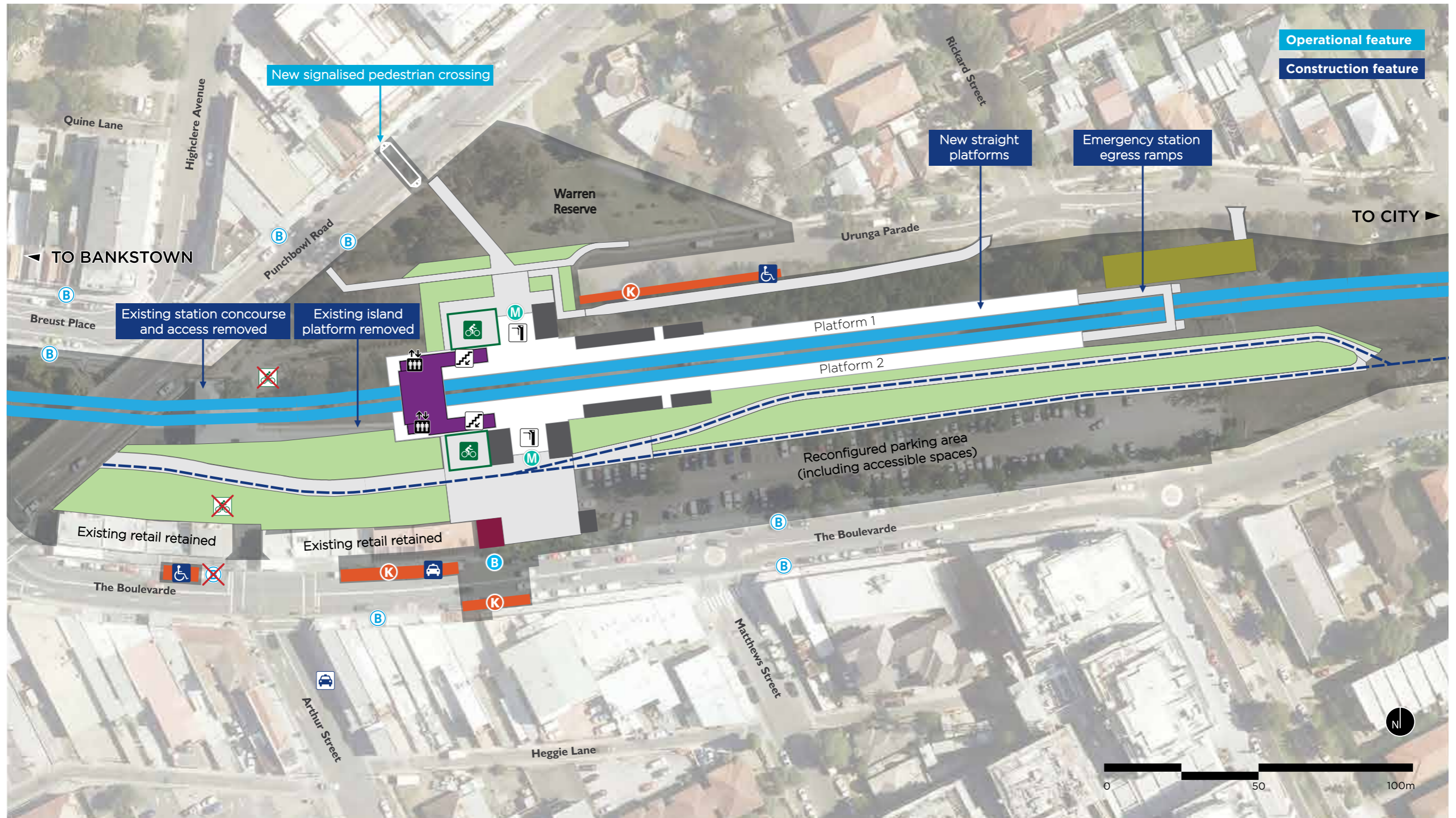
Feature	Description	
Construction hours	Standard hours - Monday to Friday 7:00am to 6:00pm, Saturday 8:00am to 1:00pm Possessions - up to 24 hours a day	
Vehicle movements during possessions	AM peak (7:30am to 8:30am) - 20 heavy vehicles and 20 light vehicles per hour PM peak (4:15pm to 5:15pm) - 20 heavy vehicles and 20 light vehicles per hour Evening/night (6:00pm to 7:00am) - 18 heavy vehicles and 18 light vehicles per hour	
Workforce	Standard hours - average of 40 workers and a maximum of 60 workers Possessions - average of 60 workers and a maximum of 130 workers	
Demolition	Platforms 1 and 2, including platform buildings and platform canopies Overhead booking office, footbridge and stairs to platforms	
Heritage	Heritage-listed station buildings, platforms and overhead booking office removed	
Material and water usage	Concrete - 600 to 800 cubic metres Steel - 100 to 150 tonnes	Water - 1,000,000 litres Ballast - 6,885 tonnes
Plant and equipment	<ul style="list-style-type: none"> ○ Bobcats ○ Compressors ○ Concrete pumps ○ Concrete trucks/agitators ○ Diamond saws ○ Excavators ○ Excavators with breaker ○ Franna cranes ○ Generators 	<ul style="list-style-type: none"> ○ Hand tools ○ Mobile cranes (50 tonne) ○ Piling rigs (bored) ○ Rollers (non-vibratory) ○ Scissor lifts ○ Semi-trailers ○ Trucks ○ Water tankers ○ Welding equipment
Traffic changes	<p>Punchbowl Road, Urunga Parade, and The Boulevarde - affected for short periods due to construction/removal of kerbside facilities, new station entries/removal of existing concourse, and new signalised pedestrian crossing</p> <p>Left turn into Highclere Avenue from Wattle Street - traffic management, realignment of Highclere Avenue centre line (including removal of existing centre median) and temporary parking ban on both sides of Highclere Avenue at times of delivery</p> <p>Left turn onto South Terrace from Loder Lane - temporary removal of parking on South Terrace and use of cones or other physical barriers to separate trucks from on-coming vehicles</p> <p>Punchbowl Road overbridge - no lane closures required</p>	

Feature	Description
Public transport changes	During final 3-6 month possession - rail replacement buses will use existing bus stops on The Boulevarde
Pedestrian and cyclist changes	<p>Punchbowl Road and Warren Reserve - footpath modifications</p> <p>Punchbowl Road and Warren Reserve station access - removed and new entrance constructed off Urunga Parade</p> <p>The Boulevarde - construction of new pavement and kerbside facilities</p> <p>Bike parking - upgraded and relocated east towards the new station entrances, and some may be temporarily unavailable during this upgrade</p>
Street parking changes	<p>30 dedicated commuter spaces unavailable during construction and 50 spaces unavailable intermittently (such as during possessions)</p> <p>Six on-street time-restricted spaces unavailable during temporary transport arrangements</p>



Punchbowl Station

Station map



Metro tracks	ARTC tracks	Concourse (paid area)	Platform (paid area)	Service buildings	Station buildings	New pavement	Landscaping	
Project Area	Active transport corridor	Retail	Kerbside facilities	Metro station entry	Existing bus stop retained	Proposed bus stop	Existing bus stop removed	Proposed kiss and ride
Proposed taxi stand	Existing taxi stand retained	Proposed bike parking	Existing bike parking removed	Proposed accessible parking	Proposed ticket gates	Stairs	Lifts	

Bankstown Station



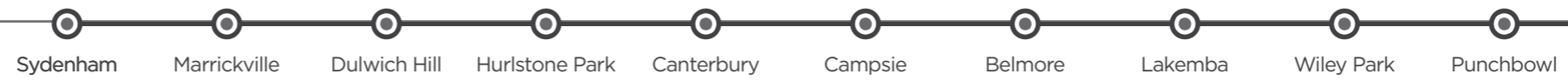
Final arrangements

Feature	Description
Station entry	Existing entry on Bankstown City Plaza upgraded New entries on North Terrace and South Terrace
Main features and transport facilities	Existing station and platforms extended east to serve Sydney Metro services New, unpaid, at-grade corridor crossing at the eastern end of the existing Sydney Trains platform, with access to Sydney Trains and Sydney Metro platforms New canopy over the Sydney Trains platform between the new station entrance and the existing platform building New Sydney Metro platforms constructed to east of new aerial concourse New services building next to new metro platform on northern side of rail corridor New station buildings on new metro platform, with staff/passenger facilities Existing bus layover area off South Terrace retained Existing bus interchange area on South Terrace near existing station entrance retained Existing bus stop on the northern side of station on North Terrace retained Station entrances and precincts improved, including landscaping At least 50 bike parking spaces 13 kiss and ride spaces 10 taxi spaces Three accessible parking spaces An alternative station design for Bankstown has been safeguarded for the future including potential underground platforms. Transport for NSW will contribute to a study being undertaken by the Department of Planning and Environment and Canterbury-Bankstown Council to determine a master plan and business case for the Bankstown town centre, including how the station fits with the centre. The study will be funded by Sydney Metro and Canterbury-Bankstown Council.
Customers	Customers travelling to and from nearby commercial, retail, education, residential and recreational precincts
Local amenities	<ul style="list-style-type: none"> o Bankstown Arts Centre o Bankstown City Plaza o Bankstown Girls High School o Bankstown Library o Bankstown Memorial Park o Bankstown Public School o Bankstown Sports Club o City of Canterbury Bankstown Council Chambers and Customer Service Centre o Paul Keating Park o St Brendan's Primary School o St Euphemia College

New and faster services

Bankstown to:	Now (minutes)	Sydney Metro (minutes)	Savings (minutes)
Central	Up to 35	28	Up to 7
Pitt Street (new CBD station)	Up to 46*	30	Up to 16
Barangaroo (new CBD station)	Up to 60*	34	Up to 26
Victoria Cross (new North Sydney station)	Up to 53*	37	Up to 16
Chatswood	Up to 66*	43	Up to 23
Macquarie University	Up to 70*	54	Up to 16

* Includes time to interchange and/or walk



Artist's impression of upgraded Bankstown Station

○ Upgrading Bankstown Station

Construction at a glance

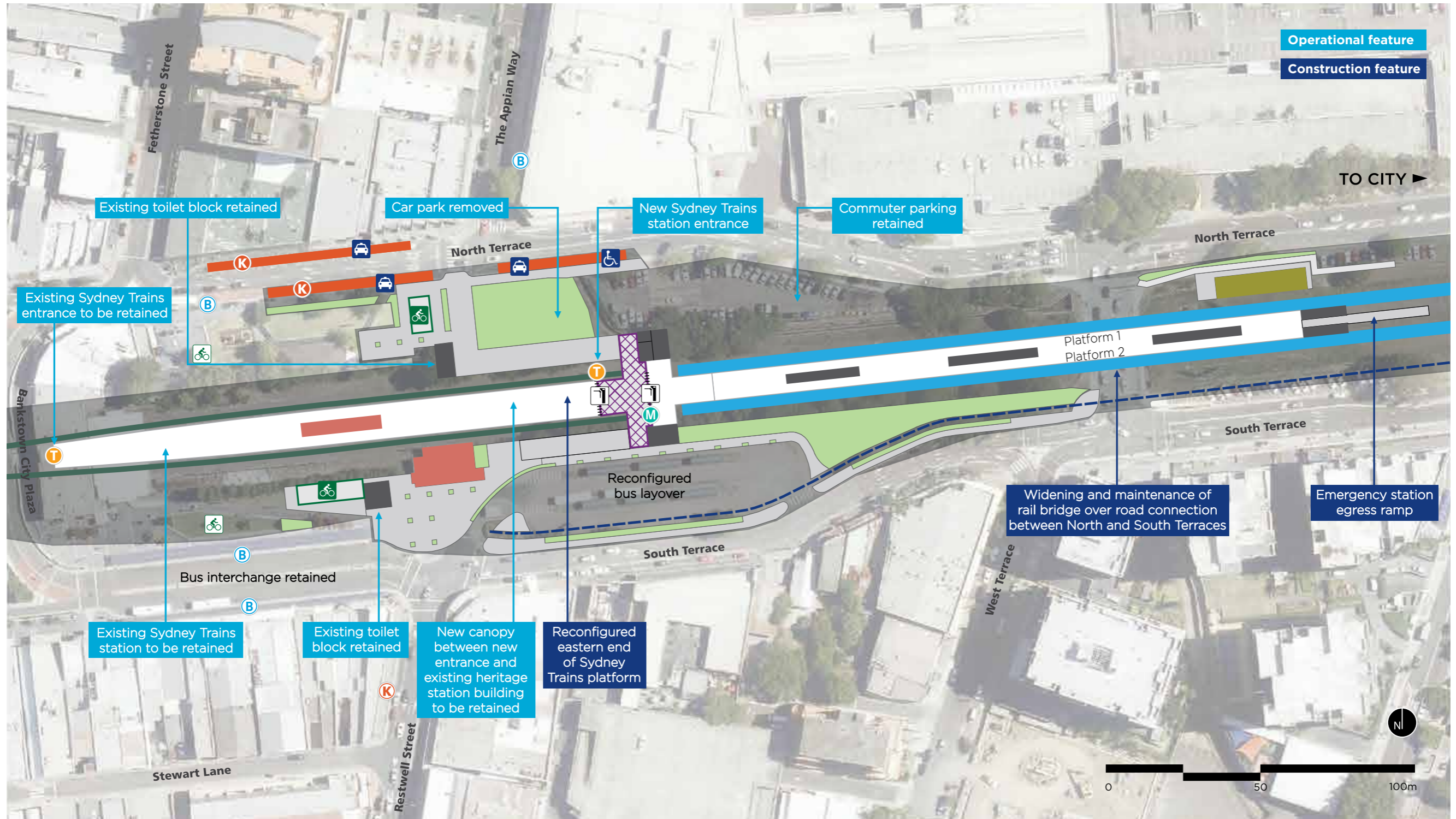
Feature	Description	
Construction hours	Standard hours - Monday to Friday 7:00am to 6:00pm, Saturday 8:00am to 1:00pm Possessions - up to 24 hours a day	
Vehicle movements during possessions	AM peak (7:30am to 8:30am) - 20 heavy vehicles and 20 light vehicles per hour PM peak (4:15pm to 5:15pm) - 20 heavy vehicles and 20 light vehicles per hour Evening/night (6:00pm to 7:00am)- 18 heavy vehicles and 18 light vehicles per hour	
Workforce	Standard hours - average of 90 workers and a maximum of 135 workers Possessions - average of 130 workers and a maximum of 300 workers	
Demolition	Small section of platforms at the eastern end	
Heritage	Heritage-listed station building and parcels office retained Minor adjustments to platforms	
Material and water usage	Bankstown Station	Corridor between Bankstown and Punchbowl Stations
	Concrete - 800 cubic metres Steel - 50 tonnes Water - 600,000 litres Ballast - 2,934 tonnes	Concrete - 400 cubic metres Steel - 80 tonnes Water - 1,200,000 litres Ballast - 6,000 tonnes
Plant and equipment	<ul style="list-style-type: none"> ○ Bobcats ○ Compressors ○ Concrete pumps ○ Concrete trucks/agitators ○ Diamond saws ○ Excavators ○ Excavators with breaker ○ Franna cranes ○ Generators 	<ul style="list-style-type: none"> ○ Hand tools ○ Mobile cranes (50 tonne) ○ Piling rigs (bored) ○ Rollers (non-vibratory) ○ Scissor lifts ○ Semi-trailers ○ Trucks ○ Water tankers ○ Welding equipment

Feature	Description
Traffic changes	<p>North Terrace and South Terrace - affected for short periods due to construction of kerbside facilities, reconfigured bus layover, new station entry and pavement</p> <p>Right turn into Restwell Street from Raymond Street - minor line-marking changes</p> <p>Left turn into Stacey Street from North Terrace - minor adjustments to existing traffic island/road marking</p> <p>Stacey Street overbridge - partial closures (weekends/nights six months and four weeks continuous)</p> <p>North Terrace/South Terrace underbridge - partial closures (weekends/nights six months) and full closures (four weeks continuous)</p> <p>Chapel Road overbridge - no lane closures required</p>
Public transport changes	During final 3-6 month possession - rail replacement buses will use existing bus stops on North Terrace, South Terrace and The Appian Way (this includes a special events bus zone used as a bus layover, and relocating and extending existing layovers)
Pedestrian and cyclist changes	<p>South Terrace and North Terrace - access to station modified</p> <p>North Terrace - temporary pedestrian diversions</p>
Street parking changes	<p>90 dedicated commuter spaces unavailable during construction</p> <p>18 on-street spaces unavailable during temporary transport arrangements</p>



Bankstown Station

Station map



Metro tracks	ARTC tracks	Concourse (unpaid area)	Concourse (paid area)	Platform (paid area)	Heritage buildings to be retained	Service buildings	Station buildings	New pavement	Landscaping
Project Area	Active transport corridor	Kerbside facilities	Metro station entry	Sydney trains entry	Existing bus stop retained	Proposed ticket gates	Proposed kiss and ride		
Proposed taxi stand	Proposed bike parking	Existing bike parking retained	Proposed accessible parking						



HAVE YOUR SAY

Information display at Lakemba in 2017

The Environmental Impact Statement is on public exhibition until 8 November 2017



The community, government agencies and Project stakeholders can make a submission on the Environmental Impact Statement to the NSW Department of Planning and Environment. At the end of exhibition, the Department will collate submissions and publish them on its website.

It is the NSW Department of Planning and Environment's policy to also place a copy of your submission on their website. If you do not want your name made available to Transport for NSW, or on the Department's website, please clearly state this in your submission.

Your submission must reach the NSW Department of Planning and Environment by 8 November 2017 and must include:

1. Your name and address
2. The name of your application
3. The application number **SSI 17_8256**
4. A brief statement on whether you support or object to the proposal
5. The reasons why you support or object to the proposal.

Your submission should be marked Attention: Director, Transport Assessments and can be sent via:

- o **Website:**
www.majorprojects.planning.nsw.gov.au
and follow the 'on exhibition' links
- o **Post to:**
Major Projects Assessment
Department of Planning and Environment
GPO Box 39, SYDNEY, NSW 2001

Anyone lodging submissions must declare reportable political donations (including donations of \$1,000 or more) made in the previous two years.

For more details, and a disclosure form, go to www.planning.nsw.gov.au/donations

Under section 1152(5) of the *Environmental Planning and Assessment Act 1979* (NSW), the Director-General may provide copies of submissions received during the exhibition period, or a summary of the submissions, to the proponent.

All submissions and information obtained during the public exhibition period will be used in accordance with the *Privacy Act 1988*. All submissions received are regarded as public documents and any information contained in them can be published in subsequent assessment documents. Copies of the submissions received may be issued to interested parties. If the author of a submission does not wish the information to be distributed, this needs to be clearly stated in the submission.

For enquiries, please contact the NSW Department of Planning and Environment:

- o **Phone:**
1300 305 695
- o **Email:**
information@planning.nsw.gov.au

Following exhibition, issues raised in these submissions will be summarised in a submissions report. Transport for NSW will consider the issues raised, and may make changes to the Project as a result of submissions or to reduce impacts on the environment. The Minister for Planning will then make a decision about whether to approve the Project.

If the Project proceeds, Transport for NSW will continue to liaise with key stakeholders and the community during the detailed design, construction and operation phases. This ongoing engagement process will play an important role in reducing the potential impacts and enhancing the benefits of the Project for all stakeholders.

Where to view the Environmental Impact Statement

The Environmental Impact Statement and its accompanying documents may be viewed on the NSW Department of Planning and Environment website: www.majorprojects.planning.nsw.gov.au and www.sydneymetro.info

You can also view the documents at:

- o **Inner West Council Customer Service Centre:**
 - Petersham: 2-14 Fisher Street
- o **Inner West Council Libraries:**
 - **Marrickville Library:** Corner Marrickville and Petersham Roads
 - **St Peters/Sydenham Library:** Unwins Bridge Road, Sydenham
 - **Emanuel Tsardoulis Community Library:** 362-372 New Canterbury Road, Dulwich Hill
- o **City of Canterbury Bankstown Customer Service Centres:**
 - Bankstown: Upper Ground Floor, Bankstown Civic Tower, 66-72 Rickard Road (Corner of Jacob Street)
 - Campsie: 137 Beamish Street
- o **City of Canterbury Bankstown Libraries:**
 - **Campsie:** 14-28 Amy Street
 - **Lakemba:** 62 The Boulevard
 - **Bankstown:** 80 Rickard Road.

Community information sessions

The Project team has organised a series of community information sessions where displays and information about the Environmental Impact Statement will be available.

You are invited to attend these sessions and meet expert members of the Project team who will be there to answer any questions you may have.

There is no need to make a booking.

Date and time	Location
Saturday, 23 September 2017 10am-2pm	Marrickville Town Hall 303 Marrickville Road, Marrickville
Wednesday, 11 October 2017 3-7pm	Canterbury-Hurlstone Park RSL Club 20-26 Canterbury Road Hurlstone Park
Thursday, 12 October 2017 3-7pm	Canterbury Bankstown Arts Centre 5 Olympic Parade, Bankstown
Saturday, 14 October 2017 10am-2pm	Canterbury Bankstown Arts Centre 5 Olympic Parade, Bankstown
Thursday, 19 October 2017 3-7pm	Marrickville Town Hall 303 Marrickville Road, Marrickville
Thursday, 26 October 2017 3-7pm	Canterbury League Club 26 Bridge Road, Belmore
Saturday, 28 October 2017 10am-2pm	Canterbury League Club 26 Bridge Road, Belmore
Saturday, 2 8 October 2017 10am-2pm	Canterbury-Hurlstone Park RSL Club 20-26 Canterbury Road Hurlstone Park

Government engagement between Sydenham and Bankstown

As the NSW Government plans for Sydney's future, many different agencies are engaging with the community from Sydenham to Bankstown. The following is a snapshot of some of the projects and plans underway and the responsible agency:

Department of Planning and Environment

Develop policies that guide planning activity for government and local government across NSW.

- Sydenham to Bankstown Urban Renewal Corridor
- Sydney Metro Northwest Priority Urban Renewal Corridor

www.planning.nsw.gov.au

Greater Sydney Commission

Coordinate and align the planning that will shape the future of Greater Sydney.

- Directions for Greater Sydney
- District Plans
- Towards Our Greater Sydney 2056

www.greater.sydney

Local councils

Handle community needs like waste collection, public recreation facilities and town planning.

- Local master plans
- Community Strategic Plan
- Development Approvals

www.innerwest.nsw.gov.au
www.cbccity.nsw.gov.au

Transport for NSW

Lead the planning and operation of NSW transport infrastructure and services.

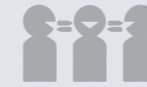
- Draft NSW Long Term Transport Master Plan
- Sydney's Rail Future

Sydney Metro Delivery Office

Established to manage the planning, procurement and delivery of the Sydney Metro network.

- Delivering stages 3, 4 and 5 of Sydney's Rail Future - Sydney Metro Northwest and Sydney Metro City & Southwest

www.transport.nsw.gov.au
www.sydneymetro.info



Translating and Interpreting Service

If you require the services of an interpreter, please contact the **Translating and Interpreting Service on 131 450** and ask them to call **Sydney Metro on 1800 171 386**. The interpreter will then assist you with translation.

আপনার, একজন দোভাষার (হল্‌টারপ্রেটার) সেবা-সাহায্য আবশ্যিক হলে, অনুগ্রহ করে **১৩১ ৪৫০** নং এ **ট্রান্সলেটিং এন্ড ইন্টারপ্রেটিং সার্ভিস** এর সাথে যোগাযোগ করুন, এবং **১৮০০ ১৭১ ৩৮৬** নং এ **সিডনী মেট্রো** কে কল করতে তাদের বলুন। তখন অনুবা / ভাষান্তরে, দোভাষী আপনাকে সাহায্য করবে।

如果您需要翻译服务, 请致电131 450 翻译和口译服务, 让他们打 1800 171 386 给悉尼地铁, 翻译员然后将帮助您进行翻译。

Εάν χρειάζεστε τις υπηρεσίες διερμηνέα, παρακαλείστε να επικοινωνήσετε με την **Υπηρεσία Μεταφραστών και Διερμηνέων** στο **131 450** και ζητήστε τους να καλέσουν το **Sydney Metro** στο **1800 171 386**. Ο διερμηνέας θα σας βοηθήσει στη μετάφραση.

통역서비스가 필요하시면, 번역 및 통역 서비스 (Translating and Interpreting Service) 전화 **Translating and Interpreting Service on 131 450** 에 연락하시어 **Sydney Metro 전화 1800 171 386** 에 연결해달라고 요청하십시오. 통역관이 통역을 도와 드릴 것입니다.

إذا كنتم بحاجة إلى خدمات مترجم, يرجى الاتصال بخدمة الترجمة الكتابية والشفهية على الرقم **131 450** واطلبوا منهم الاتصال بمترو سيدني على الرقم **1800 171 386**. وبعد ذلك سيقوم المترجم بمساعدتكم في الترجمة.

Nếu quý vị cần dịch vụ thông dịch viên, xin liên lạc **Dịch vụ Thông Phiên Dịch (Translating and Interpreting)** ở số **131 450** và yêu cầu gọi Sydney Metro ở số **1800 171 386**. Sẽ có thông dịch viên giúp cho quý vị việc thông dịch.

यदि आपको दुभाषिए की सेवाओं की ज़रूरत है, तो कृपया अनुवाद एवं दुभाषिया सेवा (**Translating and Interpreting Service**) से **131 450** पर संपर्क करें और उन्हें सिडनी मेट्रो **1800 171 386** पर फोन करने का निवेदन करें। फिर दुभाषिया अनुवाद में आपकी मदद करेगा।

KEEPING IN TOUCH

For more information visit our website sydneymetro.info or contact us via:

Sydney Metro



1800 171 386 24-hour community information line



sydneymetro@transport.nsw.gov.au



Sydney Metro, PO Box K659,
Haymarket, NSW 1240



If you need an interpreter, call TIS National on **131 450** and ask them to call **1800 171 386**



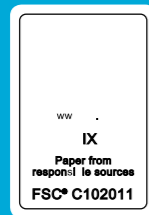
Inside Sydney's new metro train

sydneymetro.info

sydneymetro@transport.nsw.gov.au



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Information in this document has been prepared in good faith and is correct at the time of printing. September 2017.
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