

6 Description of the project

The CBD Metro project includes the construction and operation of a new electrified passenger metro railway between the Sydney CBD and Victoria Road, Rozelle. The project includes development of all associated or ancillary works, activities, uses, structures and facilities. This chapter describes the project and its operation. A description of how it would be constructed is provided in Chapter 7.

The Director-General's requirements

The Environmental Assessment must include a description of the project including:

- *Route alignment and station locations.*
- *Key design elements of the project, including basic or indicative station plans.*
- *Ancillary operational components including energy infrastructure, ventilation, administration and control facilities, maintenance and stabling facilities.*

6.1 Corridor alignment

The CBD Metro would comprise a seven-kilometre underground metro railway from RailCorp's Central Station to Rozelle. It would include new stations at Central, Town Hall Square, Martin Place, Barangaroo-Wynyard, Pyrmont and Rozelle and infrastructure at White Bay for a future metro station. The CBD Metro would be primarily within twin underground tunnels known as 'running tunnels' (see Figure 6.2). Spur lines to the Rozelle stabling and maintenance depot from the main running tunnels would also be included.

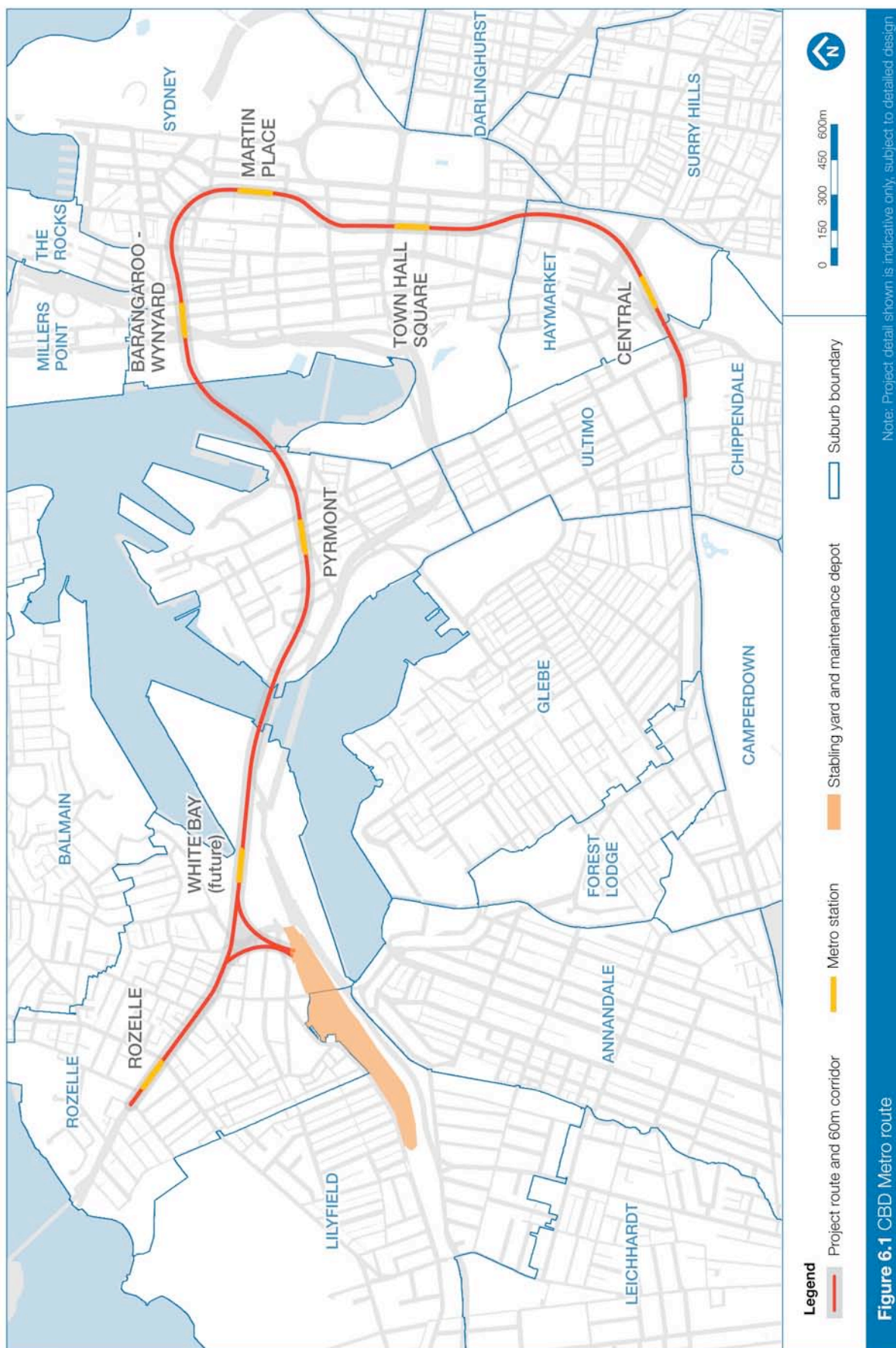
Sydney Metro is seeking approval for a 60-metre wide rail corridor within which to construct these tunnels, the rail track alignment, stations, station complexes and other metro infrastructure.

An overview of the rail corridor alignment is shown in Figure 6.1. The route alignment within this corridor, presented in this Environmental Assessment, is subject to further refinement during the detailed design development phase (prior to construction). The alignment is described below, and more detail on the tunnel and alignment is shown in Figure 6.3.

At Central Station, the running tunnels would end in stub tunnels about 100 metres south of Railway Square. A diamond crossover would be constructed within the tunnels at the southern end of Central Station to allow trains to turn back.

From Central Station, the rail corridor alignment proceeds north, traversing the area under the Western Forecourt of Central Station. It continues under Belmore Park and along Castlereagh Street before following an alignment beneath Pitt Street near the intersection with Liverpool Street. The alignment follows Pitt Street to the proposed Town Hall Square Station at Park Street.

From Town Hall Square, the alignment returns to Castlereagh Street before arriving at the proposed Martin Place Station. From Martin Place Station, the alignment turns west to Margaret Street where it enters the proposed Barangaroo-Wynyard Station located between York and Clarence streets.



At Barangaroo-Wynyard Station, the alignment heads south-west crossing under Darling Harbour and beneath Union Square, near to where the proposed Pymont Station would be located. The alignment runs parallel to the Anzac Bridge under Johnstons Bay to the Bays Precinct area, where provision for a future station would be made at White Bay.

At the future White Bay Station, the corridor alignment branches in two directions:

- The main corridor alignment to the north-west (for the running tunnels) continues to just past the intersection of Victoria Road and Darling Street at Rozelle, where a station is proposed beneath Victoria Road.
- The first minor branch of the alignment veers to the south-west and emerges below Lilyfield Road, at the rear of the residences, in order to access the proposed Rozelle stabling and maintenance depot.
- The second minor branch of the alignment, adjacent to where the tunnel portal emerges at the depot, rejoins the main corridor alignment just past the intersection of Victoria Road and Robert Street, in order to provide a connection to the Rozelle stabling and maintenance depot.

The two minor branches form a connection to the depot that allows trains to be launched from and returned to the depot in either direction. A crossover would be provided adjacent to the White Bay Station site, on the Pymont end, to provide access to the depot for rolling stock from both running tunnels.

At Rozelle Station, the running tunnels would end in stub tunnels about 100 metres north-west of the station. A diamond crossover would be constructed adjacent to the Pymont end of the station to allow trains to turn back.

6.2 Running tunnels

The CBD Metro running tunnels are the largest scale engineering component of the project.

Tunnel length

About 14 kilometres of running tunnel would be constructed. This would comprise about 6.2 kilometres for each running tunnel and about two kilometres for the connections to the stabling and maintenance depot.

Vertical gradient and curvature

The tunnels would have a maximum gradient of 4.5 per cent and appropriate curvature to accommodate a maximum metro design speed of up to 100 kilometres per hour.

The vertical gradient of the running tunnels is influenced by the harbour crossings as well as the need to provide sufficient clearance to existing and proposed building basement levels, and numerous other transport and utility services which occur throughout the CBD area. Figure 6.3 shows how existing CityRail lines, the Cross City Tunnel and other deep constraints have influenced the vertical alignment of the CBD Metro tunnels.

Tunnel depth

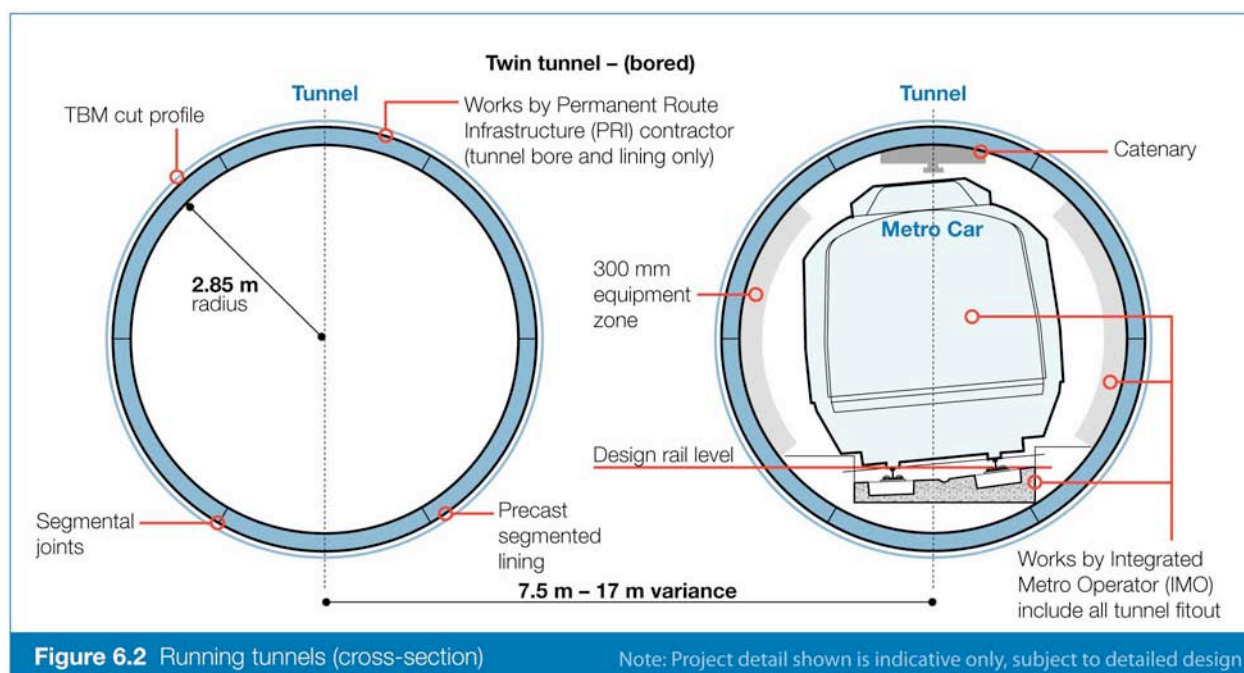
Within the tunnels, the rail level would generally be about 20–35 metres below street level. However, at some locations in the CBD, the depth would reach as much as 38 metres below street level. The crossings of Darling Harbour and Johnstons Bay would be about 30 metres below sea level. Low points in the tunnel alignment, up to 35 metres below ground, would occur between Central and Town Hall Square (at Campbell Street), Martin Place and Barangaroo-Wynyard (at Pitt Street), under Darling

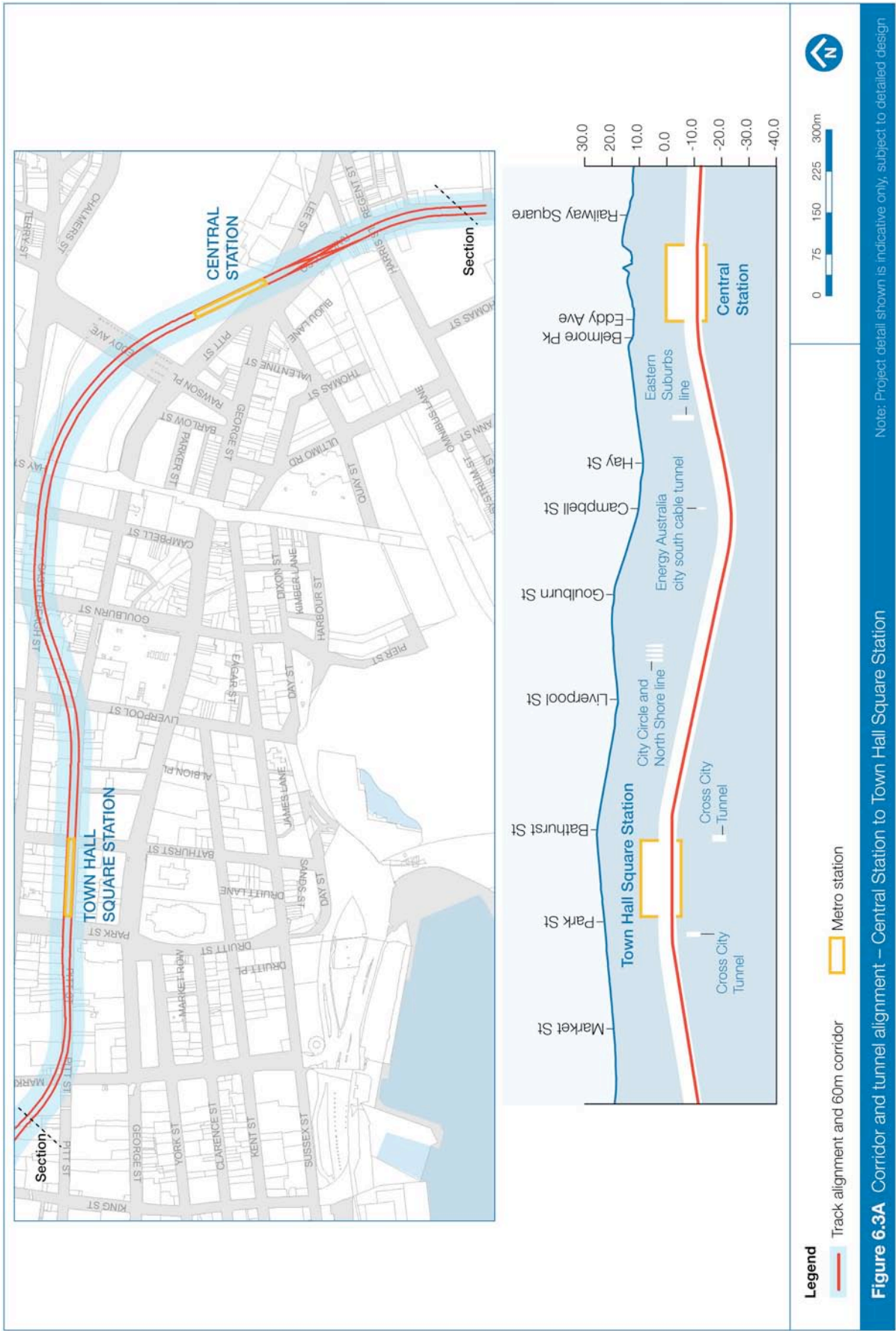
Harbour, under Johnstons Bay (at Anzac Bridge) and in the depot entrance tunnels between the running tunnels and the exit portal to the Rozelle stabling and maintenance depot.

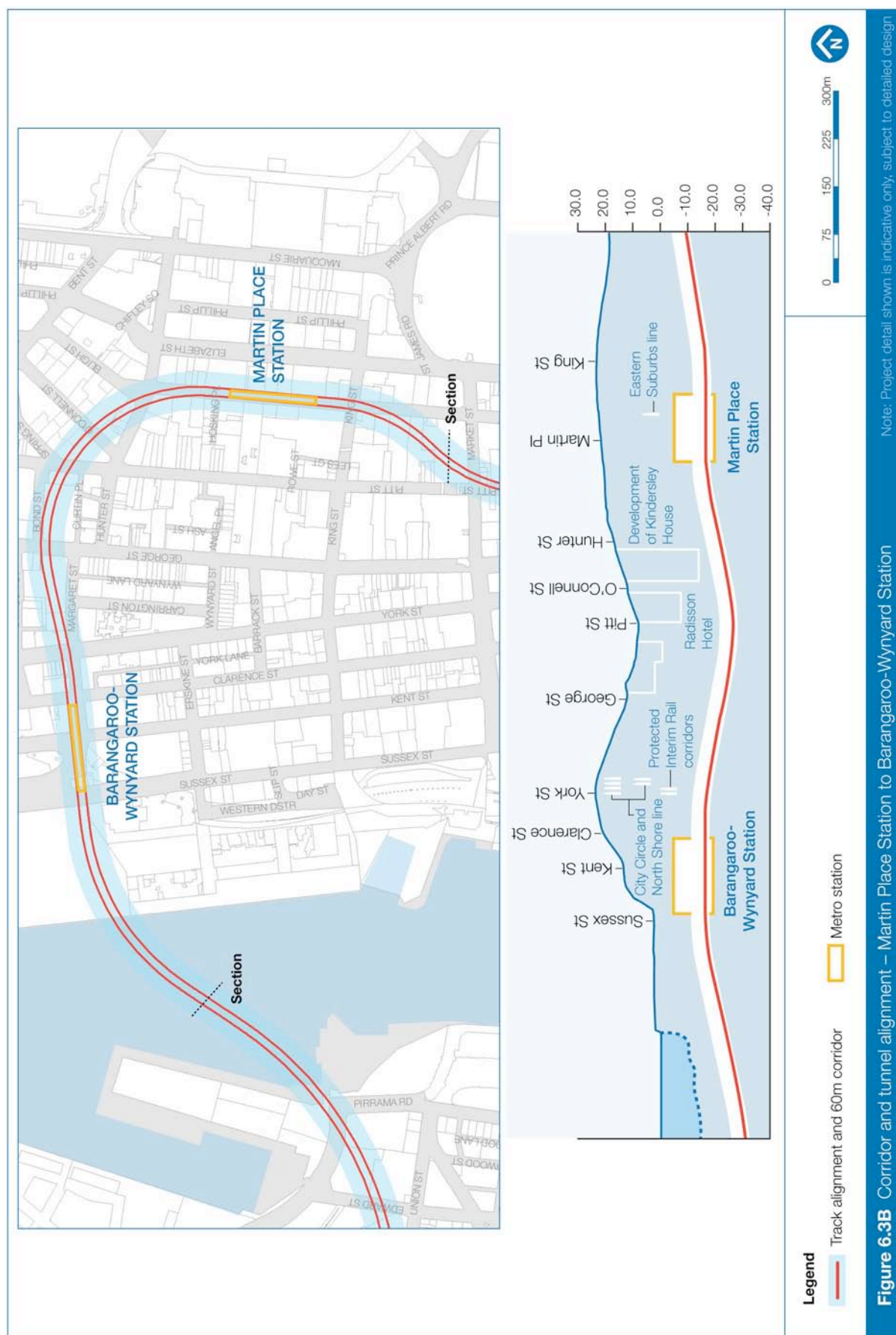
Tunnel cross-section

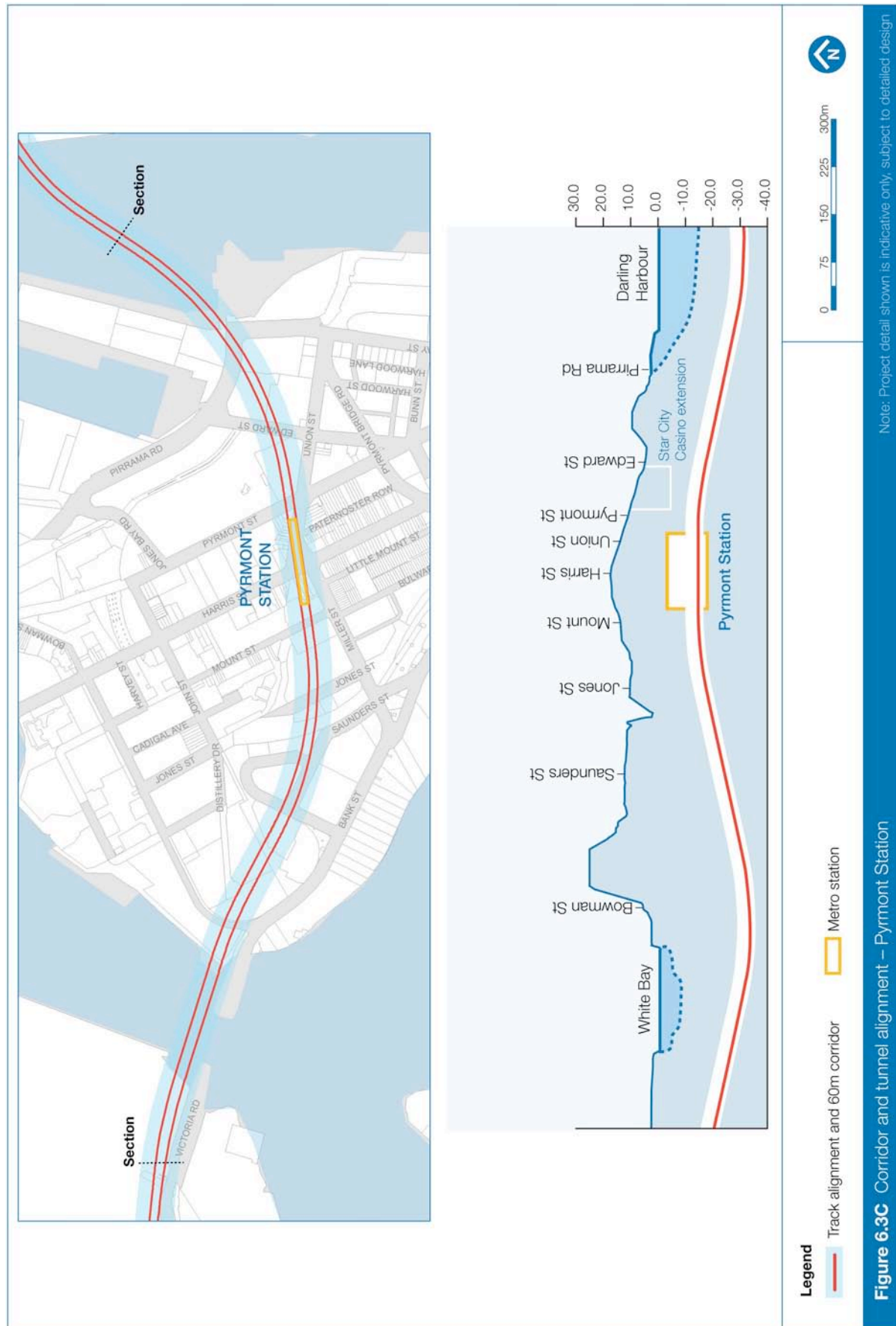
The tunnels would have a circular cross-section and an internal lined diameter of about 5.7 metres. This is sufficient to accommodate rolling stock, overhead traction power equipment, fire systems and emergency access. The running tunnels would be linked with cross passages to facilitate emergency egress.

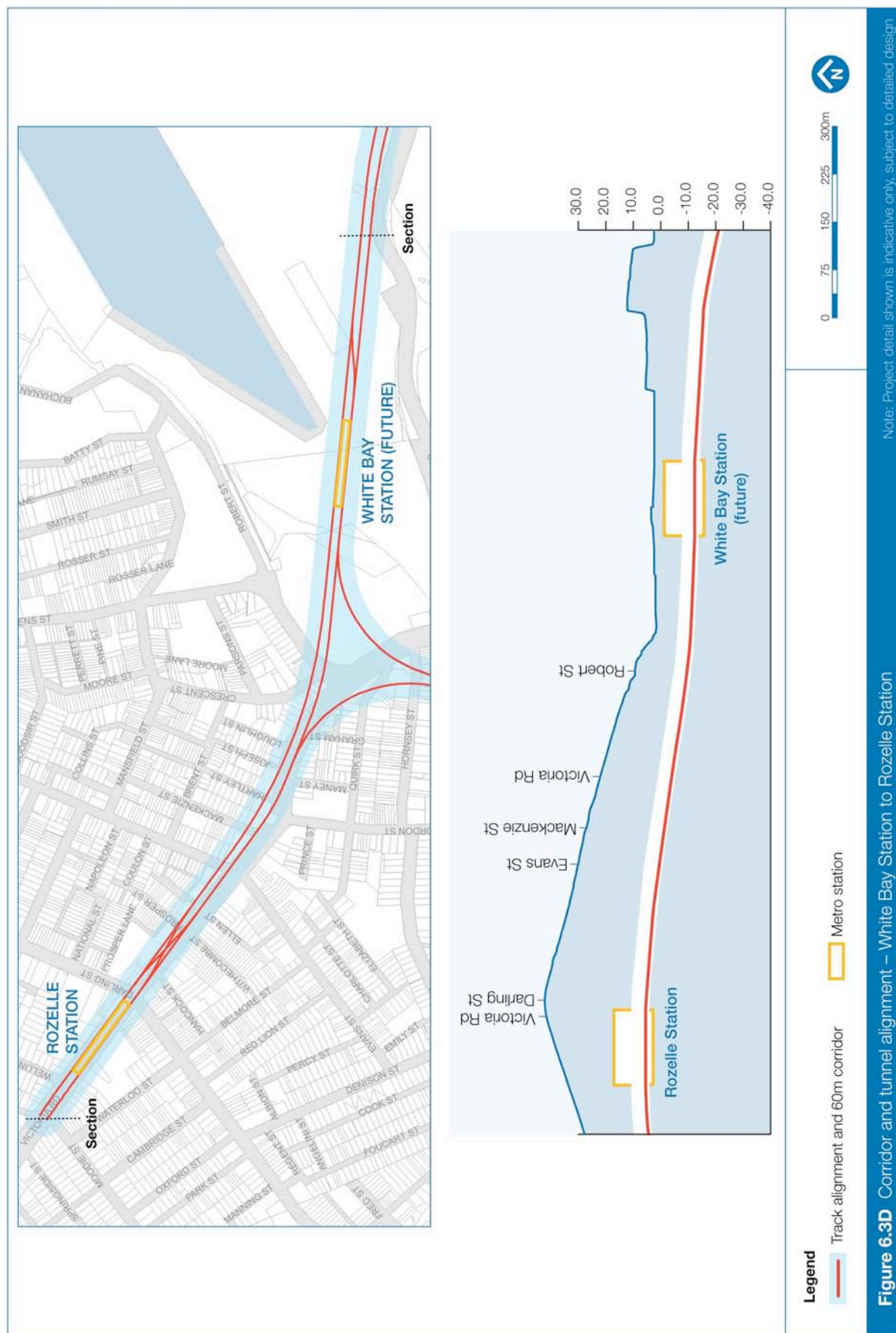
The tunnels would be lined with precast concrete segments to provide a watertight structure and ensure the long-term life of the asset. A typical tunnel cross-section is shown in Figure 6.2.











6.3 Metro stations

A general overview of metro stations is presented in this section. A more detailed overview of each station is presented in the following sections.

6.3.1 Station concepts and configurations

The CBD Metro would provide a customer-focused transport service. The stations would be attractive, clean and safe, and accessible for all customers. The station sites have been selected to ensure stations are in the optimum locations taking account of the local land uses, land acquisition requirements and feasibility of construction. Features of the stations would include:

- The ability of the public to easily locate and access the station, including the wider station precinct area.
- An ‘access-for-all’ philosophy, in which the surrounding station precinct and entrances are designed around ‘way-finding’ principles.
- An ability to accommodate maximum customer flows, including: peak period; special event flows; and customer surges at entrances, access ways and any unpaid access through the station.

The stations would be deep cavern constructions – tunnelled out from shaft excavations from the surface – and have an elliptical cross-section with a general internal width of about 20 metres. The depth of the stations would range from about 17–38 metres (refer to Table 6.1 for specific station depths). Martin Place Station would be the deepest station at a range of 36–38 metres below street level, primarily to account for the need to pass below the Eastern Suburbs CityRail Line (ESL) to the south, and the Radisson Hotel basement to the north.

Table 6.1 Station depth and construction

Station	Approximate platform depth (m)
Central	25–30
Town Hall Square	23–26
Martin Place	36–38
Barangaroo-Wynyard	17–37
Pymont	27–30
Rozelle	27–36

The six stations have been designed on a modular basis, with one standardised design being the basis for all stations. While individual station configurations would have unique horizontal and vertical transportation designs, the station facilities and layout, from platform level upwards, would be alike. A typical CBD Metro station is shown in Figure 6.4 and an indicative platform arrangement is detailed in Figure 6.5.

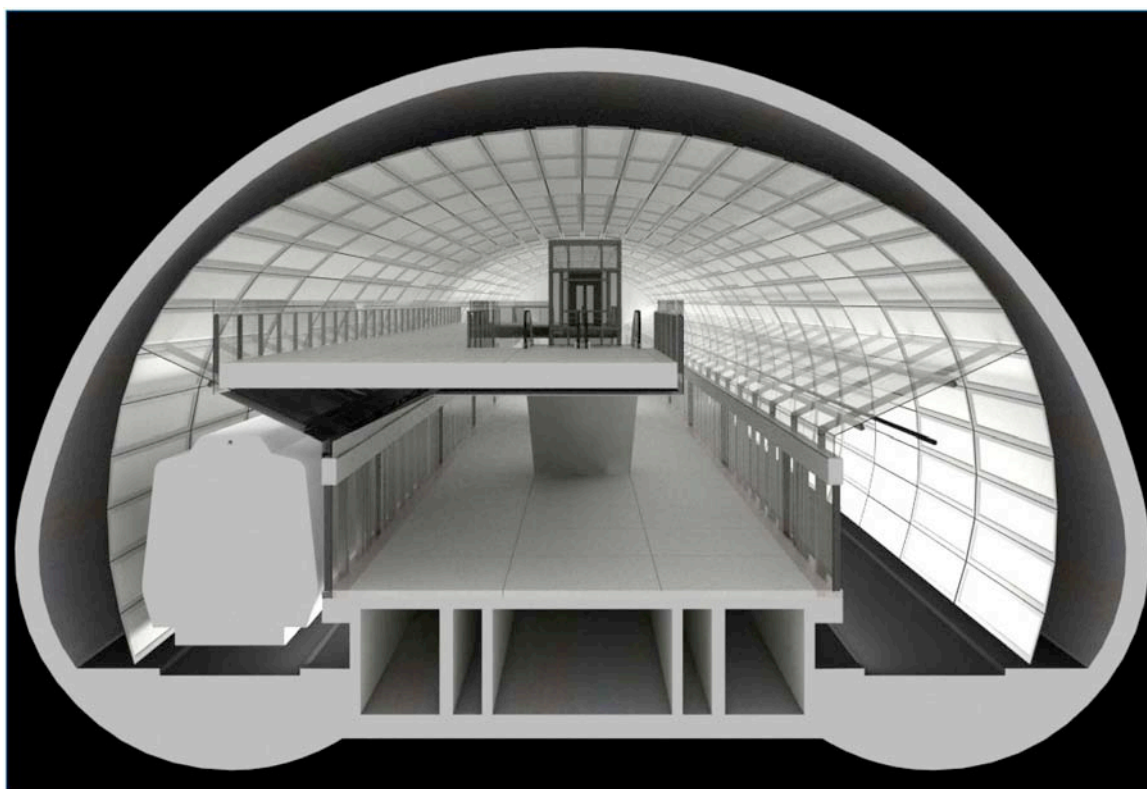


Figure 6.4 Typical CBD Metro station

Note: Project detail shown is indicative only, subject to detailed design

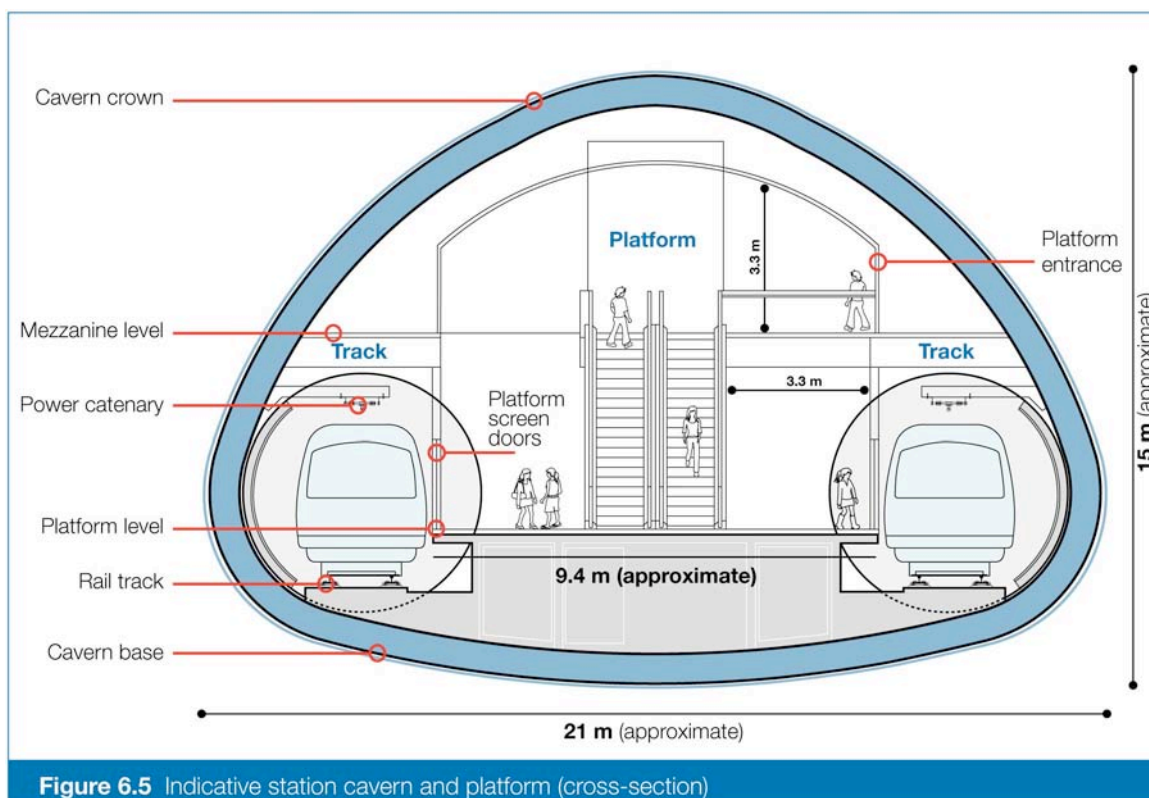


Figure 6.5 Indicative station cavern and platform (cross-section)

Note: Project detail shown is indicative only, subject to detailed design

Platform level

Each station would have an island platform about nine metres wide and 130 metres long to accommodate rolling stock comprising six-car sets (refer to Figure 6.5). (However, it should be noted that the initial rolling stock is likely to comprise five-car sets until an increase in passenger demand warrants an expansion to six cars).

The station platforms would have full height platform screen doors, which would effectively separate the station from the running rail line, resulting in less disruption to services, less littering and consequent trackside cleaning, improved safety, a quieter platform environment and a reduced need for ventilation.

At each station, facilities for customers would include seats and lean bars on the platform, help points to enable customers to access emergency assistance, passenger information display screens and public address systems.

Safety at station platforms and station entrance points would be provided through well-designed and efficiently controlled lighting systems, visible closed circuit television (CCTV) surveillance and the presence of metro staff within concourse areas during operational hours. Emergency egress and ventilation facilities would be provided at each station emergency intervention point.

Mezzanine and concourse levels

Views of typical mezzanine and platform arrangements are illustrated in Figure 6.6. The mezzanine and concourse levels would provide access to and from the platform via escalators and lifts. Ticket barriers would also be provided at either of these levels. The mezzanine level would be the first level above the platform and typically would not include subsurface connections or retail floor space (refer to Figure 6.6). The concourse level would be the first level below street level. At some locations the concourse may provide secondary subsurface pedestrian links and retail space.

Street level

Entrances to the stations would be provided at street level. At some locations the entrances would comprise a lobby area and ticketing hall including ticket offices and ticket vending machines. At other locations the entrance would simply provide escalator or stair and lift access to the concourse or mezzanine levels.

Services would also be accommodated at street level. These would include emergency exit points and tunnel ventilation. Ventilation systems would be provided in the tunnels to ensure a comfortable environment for passengers and operating personnel. The ventilation shafts would connect the running tunnel to the surface to allow effective natural ventilation and supplementary mechanical ventilation.

Ventilation facilities would supply fresh air to stations and tunnels and discharge stale air. Ventilation is also required to manage incidents in the tunnels, such as fire. The locations of these ventilation shafts are shown on each station figure. The height of vent shafts would generally be about three metres above ground level, but would vary between locations.

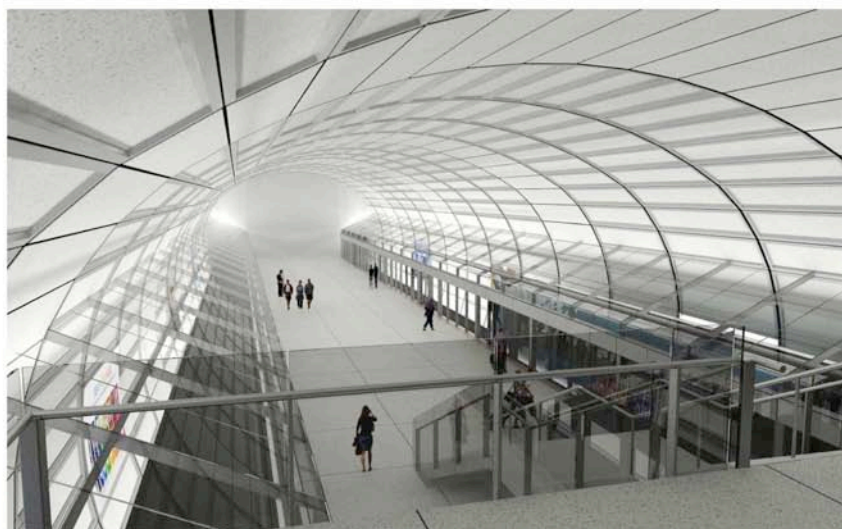
Small-scale commercial or retail premises would be provided at street level within some of the station complexes. At some locations, the potential to incorporate community facilities could be investigated.



INTERIOR PERSPECTIVE ONE – PLATFORM LEVEL



INTERIOR PERSPECTIVE TWO – MEZZANINE LEVEL



INTERIOR PERSPECTIVE THREE – PLATFORM FROM MEZZANINE LEVEL

Figure 6.6 Typical mezzanine and platform arrangement

Note: Project detail shown is indicative only, subject to detailed design

6.4 CBD Metro stations

6.4.1 Overview

The project defined in the Environmental Assessment is based on a Reference Design and the Station Plans. The Reference Design presents a general arrangement of each station based on current information. The Reference Design will be further developed and refined as the project progresses. In some cases, the detailed design of a station may vary from the Reference Design. However, the nature of such variations will be generally consistent with the Reference Design. Reference Designs are provided in Appendix E *Reference Design*.

The station plans describe the above-ground elements of the project within the context of other public domain proposals. The Station Plans will be updated over time in response to consultation with stakeholders and the community.

6.4.2 Central Station

Central Station would be located at the southern end of the CBD, to the north-east of Railway Square, on the western side and adjacent to RailCorp's Central Station terminal building. Given that the majority of CityRail and all CountryLink services serve Central, the station would provide the primary interchange between metro and CityRail services.

Central Station would be a key interchange station, allowing convenient interchange with nearby bus and coach services, light rail, taxi and 'kiss-and-ride' drop-off points. The metro platform would be located about 25–30 metres below street level.

Central Station would service a significant walk-up catchment. The area includes educational facilities such as the University of Technology Sydney (UTS), Sydney TAFE and Curtin University, the retail precincts of Broadway, Paddy's Market (Chinatown) and Darling Harbour, cultural facilities such as the Sydney Entertainment Centre and the Capitol Theatre and commercial office space. Future development includes the redevelopment of the Carlton and United Breweries site (Frasers Broadway), which is proposed to provide about 36,000 square metres of publicly accessible open space, and about 255,500 square metres of residential and commercial space.

Central Station would be centrally located within the Western Forecourt. Figure 6.7, Figure 6.8 and Figure 6.9 all show plan and sub-surface schematic layouts of the Central Station platform and access points. The location of Central Station and the corridor alignment are designed to allow for future metro extensions, including the proposed extensions to the west and to safeguard a future south-east line.

The ultimate scheme at Central Station is shown in Figure 6.7 and Figure 6.9 with entrances to the station to be staged over time (see Figure 6.8). These include:

- An entrance to the metro station at the corner of Eddy Avenue and Pitt Street within the existing Central Station building.
- Entrances to the metro station from Pitt Street using existing vehicle entrances to Central Station.
- An entrance from the metro station providing access to Henry Deane Place.
- An entrance to Lee Street across a re-designed Western Forecourt.
- An entrance from Quay Street with an underpass link under George Street.
- An east-west concourse below the current Central Station platforms.

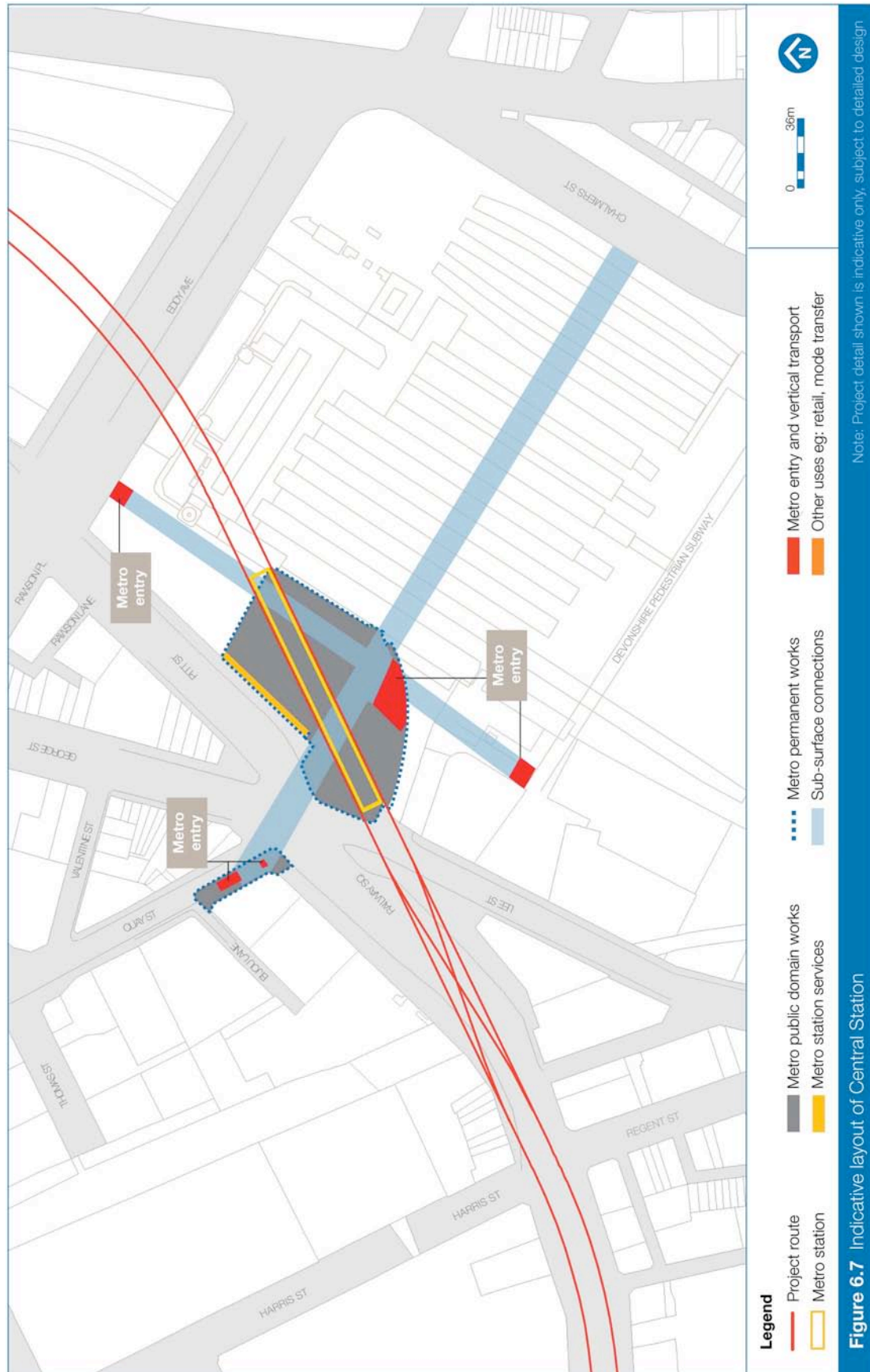
This east-west concourse below RailCorp platforms and through to Chalmers Street would be staged over time and be consistent with a station plan for Central Station being developed. The concourse would allow interchange between the metro station and RailCorp platforms. The form, size and location of this link would evolve through ongoing development of the station plan for Central.

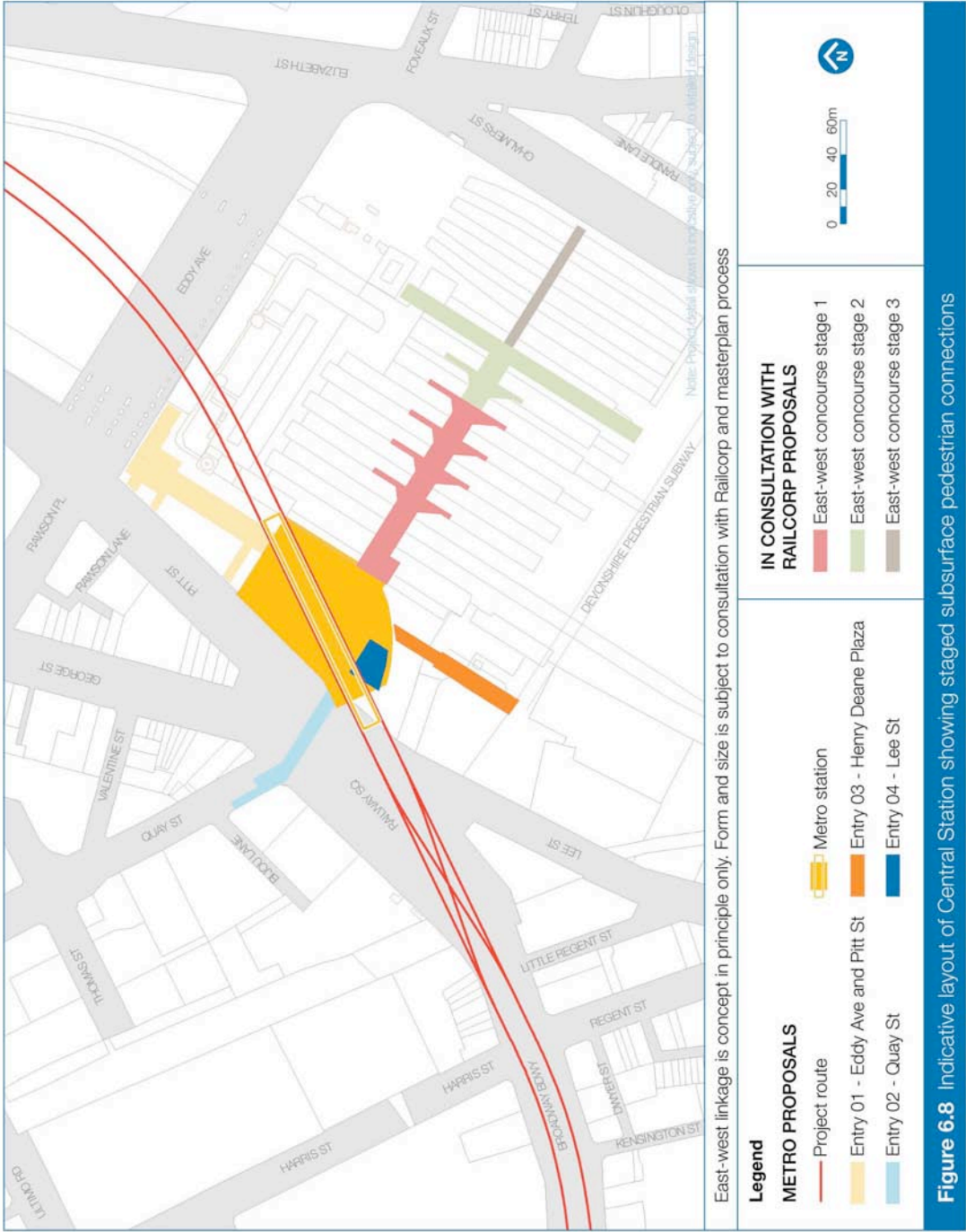
Tunnel services would be predominantly located underground, with tunnel ventilation and emergency exit points located in the vicinity of the southern entrance (Lee Street).

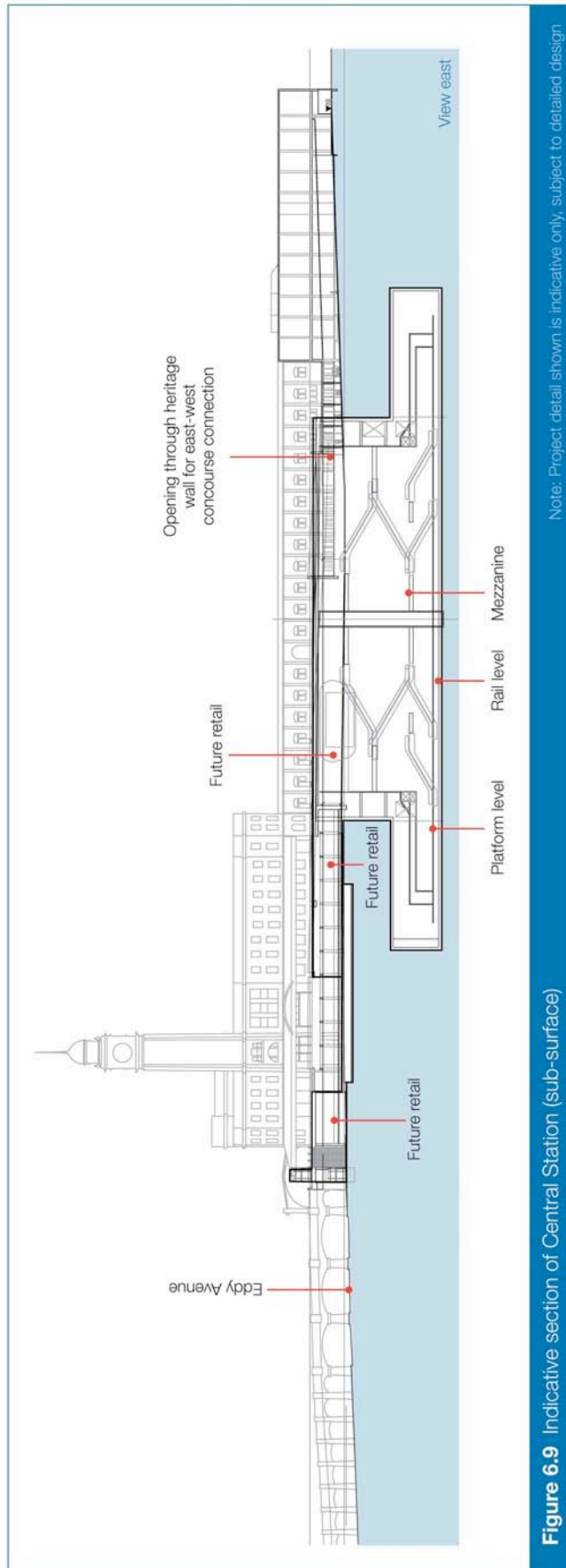
The ultimate design (including the form and dimensions of the east-west concourse connection to Chalmers Street) and passenger interface at Central Station would be subject to ongoing consultation with RailCorp. Consistency with current and future master planning activities being undertaken by RailCorp is critical to achieving an effective integrated transport solution as well as ensuring the new metro station is integrated with the heritage structure and station precinct.

Similarly, the ongoing works required at Central Station would be subject to consultation with RailCorp, the City of Sydney Council, NSW Transport and Infrastructure and other stakeholders to ensure that all modes are integrated with the station precinct.









6.4.3 Town Hall Square Station

Town Hall Square Station would be located within the midtown precinct of Sydney's CBD, which has a strong retail focus, as well as a mix of commercial, residential and civic buildings (refer to Figure 6.10). The midtown precinct extends between Hyde Park and Darling Harbour and includes the key landmarks of Town Hall, Pitt Street Mall and the Queen Victoria Building (QVB). This area is the major destination for shopping in the CBD, reinforced with the recent redevelopments of Westfield Sydney Tower and the Mid-City Centre, and the growing hotel/tourism/theatre presence.

Town Hall Square Station would also provide a place-making opportunity to integrate with the southern CBD, including World Square, and facilitate the delivery of the City of Sydney's proposed Town Hall Square development on the current Woolworths site.

The provision of a metro station within this area would provide an alternative transport option to CityRail, and provide a degree of relief to the much-congested Town Hall Station. The project would include a pedestrian connection to CityRail's Town Hall Station. The interface with Town Hall Station would be subject to liaison with RailCorp.

The main station entrance would be at the south-western corner of the intersection of Park and Pitt streets (refer to Figure 6.10). An additional entrance would be provided on the north-western corner of this intersection, beneath the Pitt Street Monorail Station. This entrance would provide a subsurface connection across Park Street to the concourse level beneath the main station entrance. Ticket barriers would be located at the mezzanine level.

The station would be located under Pitt Street, between Bathurst and Park streets as shown in Figure 6.11. The station type would be a large underground single cavern located about 23–26 metres below ground level.

Emergency exits would be provided at both ends of the station. The northern emergency exit would surface within the main entrance on Park Street. The southern emergency exit would surface within a services building on Bathurst Street. Services, such as tunnel vents, would also be located at each of these locations, within or incorporated into commercial buildings to minimise intrusion into the public domain.

The proposed enhancements to the public domain, as presented in the station plan for Town Hall Square Station, are outlined in Table 6.2.

Table 6.2 Public domain enhancements – Town Hall Square Station

Issue	Principles	CBD Metro elements	Potential provision by others
Public domain	- Support delivery of Town Hall Square. - Reinforce the Park Street alignment through public domain works and landscaping. - Protect and introduce viewlines between significant buildings and spaces, including Hyde Park, Town Hall and Uniting Church.	- Reinstatement/enhancement of footpaths adjacent to station. - Widened footpaths on western side of Pitt Street adjacent to station entries. - Transparency of northern side of station to allow sightline to Town Hall from Hyde Park. - Sightline protected from new square to Uniting Church on Pitt Street. <i>Developed in conjunction with others</i> - New Town Hall Square, including landscaping, lighting, seating and other public domain elements.	Future shared zone on Pitt Street between Market and Bathurst streets.

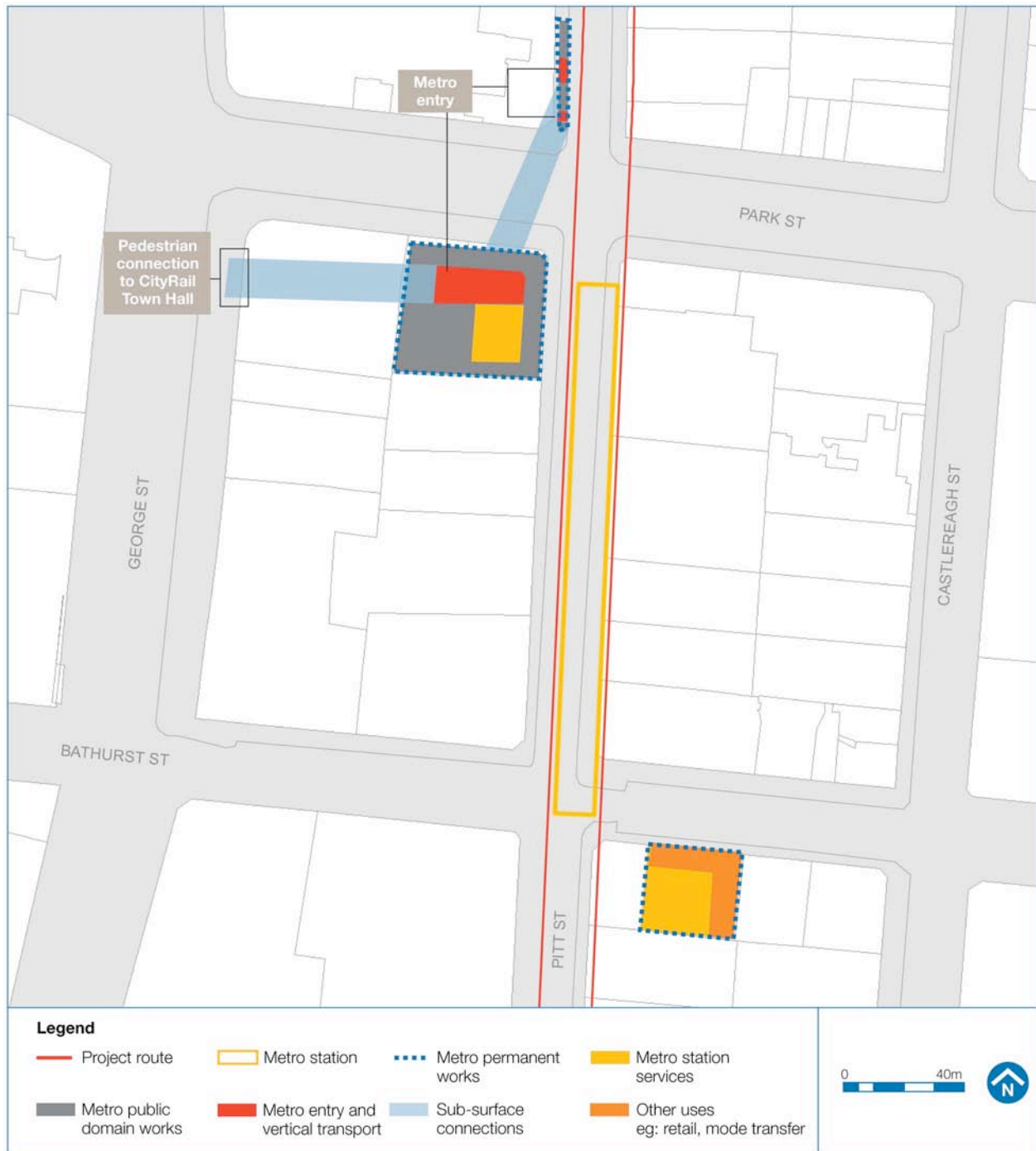
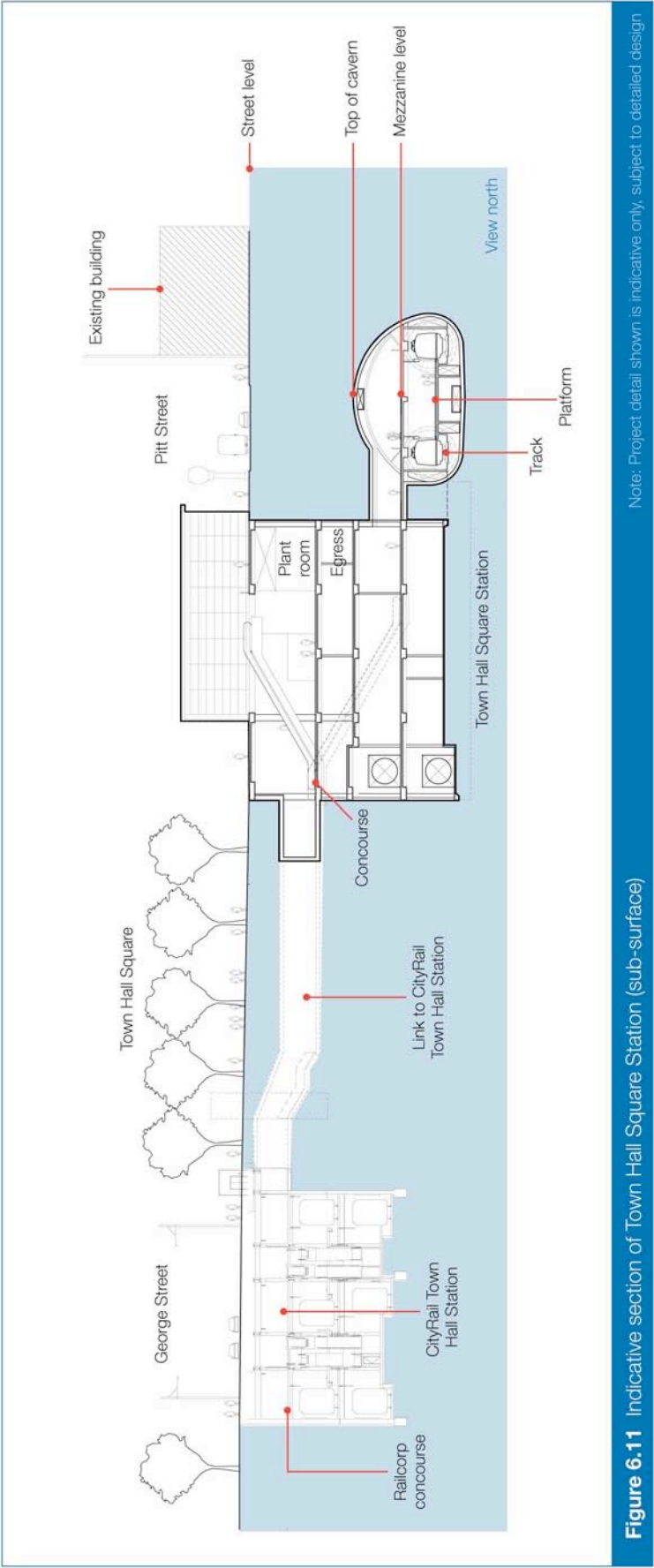


Figure 6.10 Indicative layout of Town Hall Square Station

Note: Project detail shown is indicative only, subject to detailed design



6.4.4 Martin Place Station

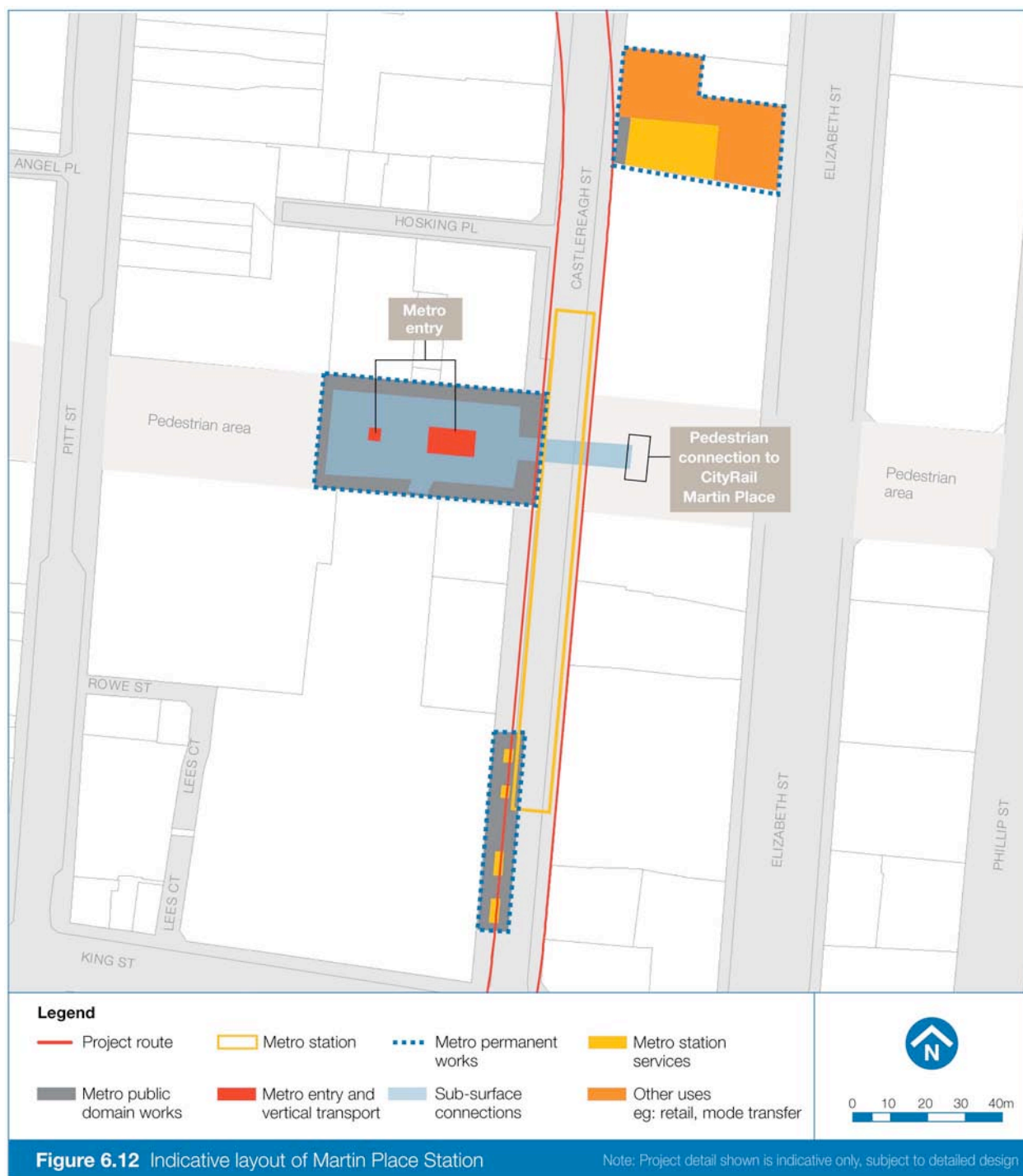
Martin Place is located within the centre of the financial district of the CBD, an area with the highest density of jobs within the CBD. This precinct includes some of the CBD's finest civic heritage buildings, which are major attractors in their own right, including Customs House, the Domain, the State Library, the Mint and NSW Parliament House, and Circular Quay.

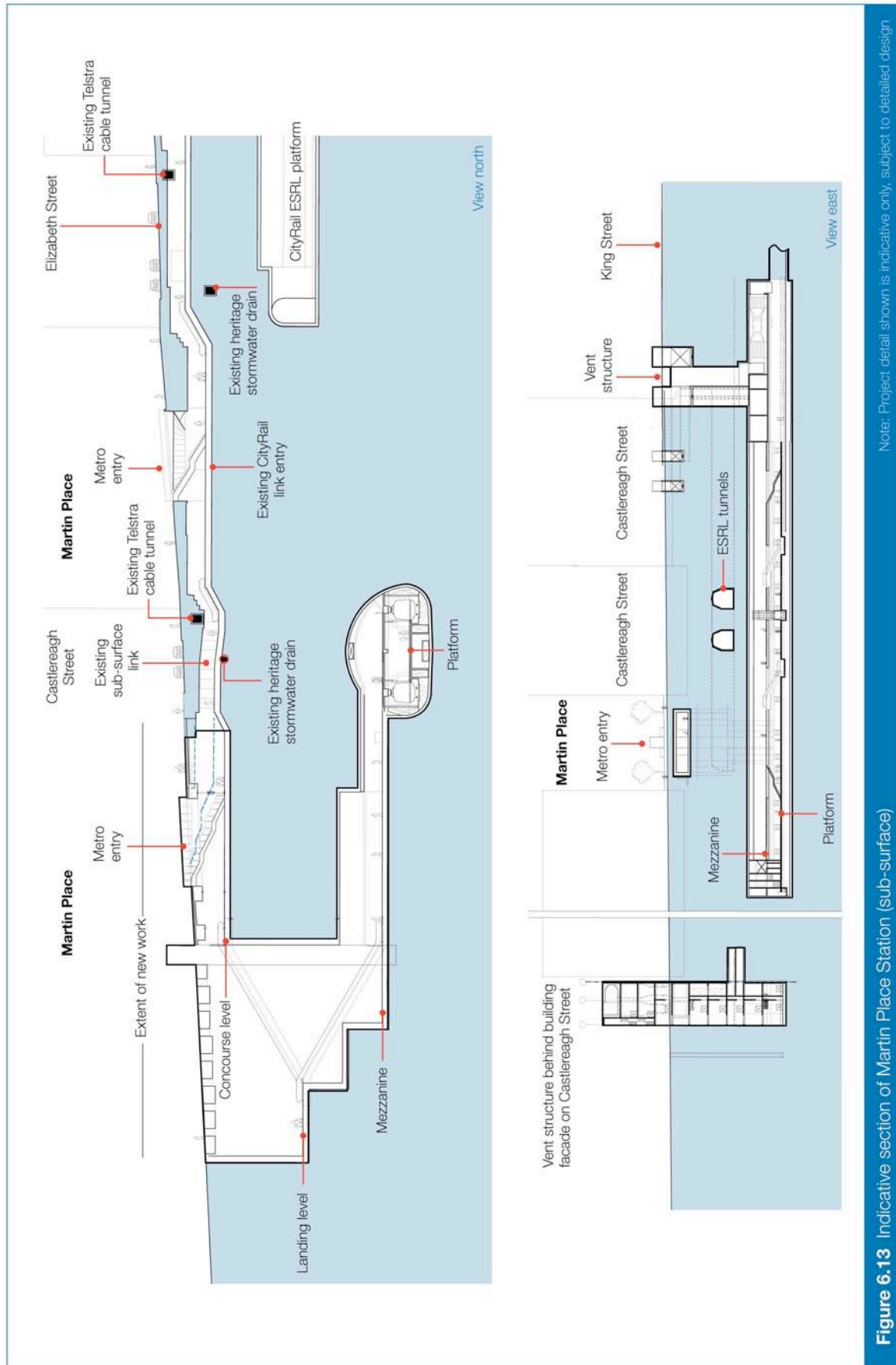
Martin Place provides an important east-west pedestrian axis between George and Macquarie streets, as it is one of the few 'vehicle-free' spaces within the CBD. It is a significant civic space, being the location of the Cenotaph, No. 1- the General Post Office and the five star Westin Hotel, as well as the headquarters for the Commonwealth Bank of Australia. Martin Place is also used for small concerts; the Commemoration associated with the Cenotaph, and other special events, and is the location of the City of Sydney's Christmas tree. It is also in close proximity to the civic spaces of Chifley Square and Richard Johnson Square and the location of CityRail's Martin Place Station, which services the Eastern Suburbs CityRail Line (ESL).

Martin Place Station would be located under Castlereagh Street, between Martin Place and King Street, as shown in Figure 6.12. People accessing the station would use the surface links around Martin Place and the subterranean links to the concourse, MLC Centre and Prudential Building. The interface with Martin Place Station would be subject to liaison with RailCorp. The station would be about 36–38 metres below street level (refer to Figure 6.13). It has been located and designed in consideration of any potential future metro extension to the south-east.

Access to Martin Place Station would be provided from one location within Martin Place, on the western side of Castlereagh Street, where there are existing entrances to Martin Place Station. The existing retail link to CityRail services would be retained and linked to the metro station unpaid concourse. The concourse would maintain a connection to Martin Place Station and the MLC Centre, and would include ticket barriers that would provide access to the metro station mezzanine level.

Services and an emergency exit would surface within a services building located between Castlereagh and Elizabeth streets. Tunnel vents would also be located on Castlereagh Street within the public domain.





The proposed enhancements to the public domain, as presented in the station plan for Martin Place Station, are outlined in Table 6.3.

Table 6.3 Public domain enhancements – Martin Place Station

Issue	Principles	CBD Metro elements	Potential provision by others
Public domain	- Reinforce predominant street edge and building alignments, especially along Martin Place. - Protect view lines along Martin Place and Castlereagh Street.	- Entry structures in Martin Place minimised and arranged to reduce visual and physical impact. - Reinstatement of areas of Martin Place impacted by construction, including paving, street furniture and other elements. - Reinstatement of footpaths adjacent to construction sites.	- Future upgrades to Martin Place. - Future footpath widening/lane closures along Castlereagh Street.

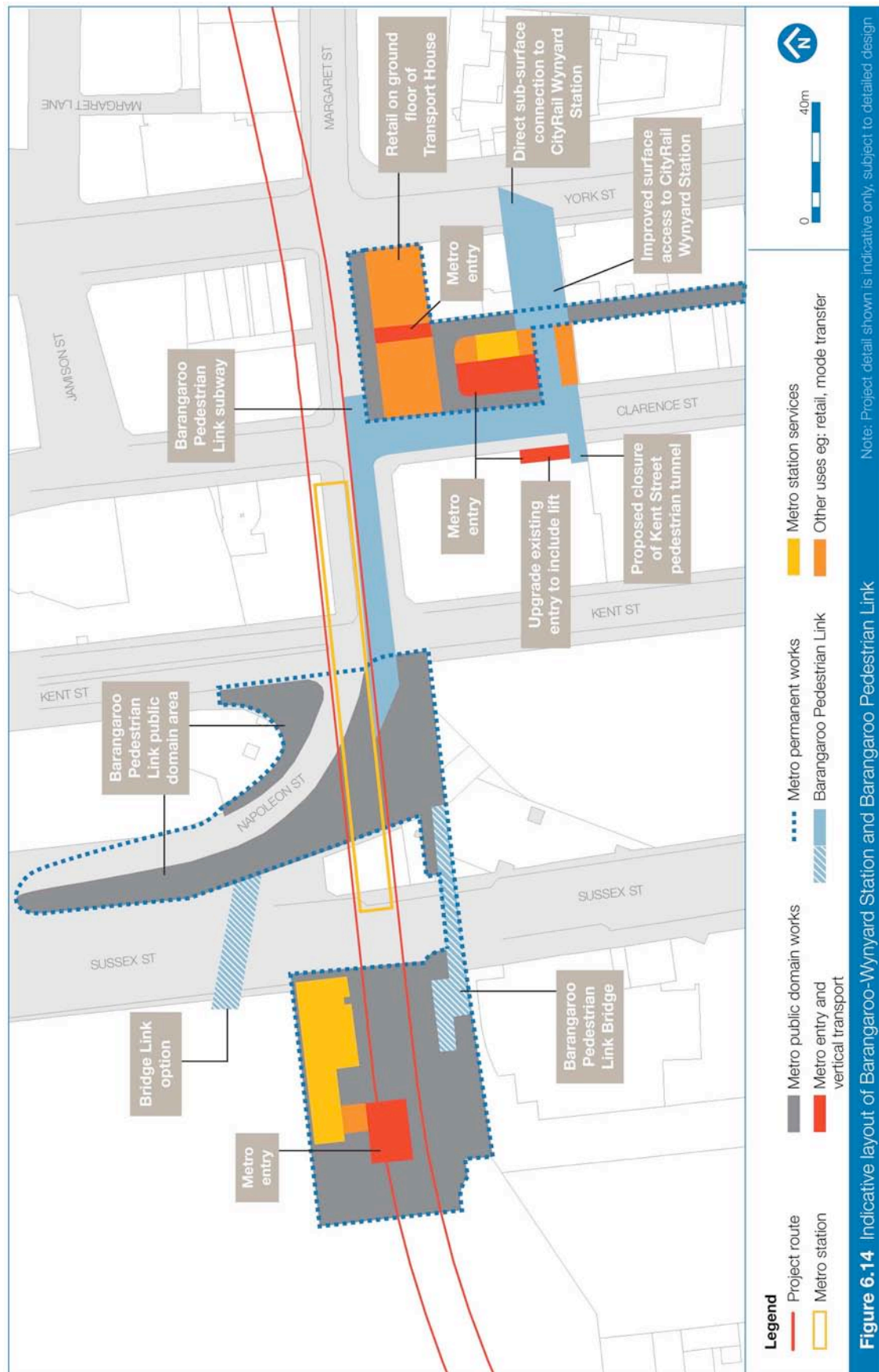
6.4.5 Barangaroo-Wynyard Station

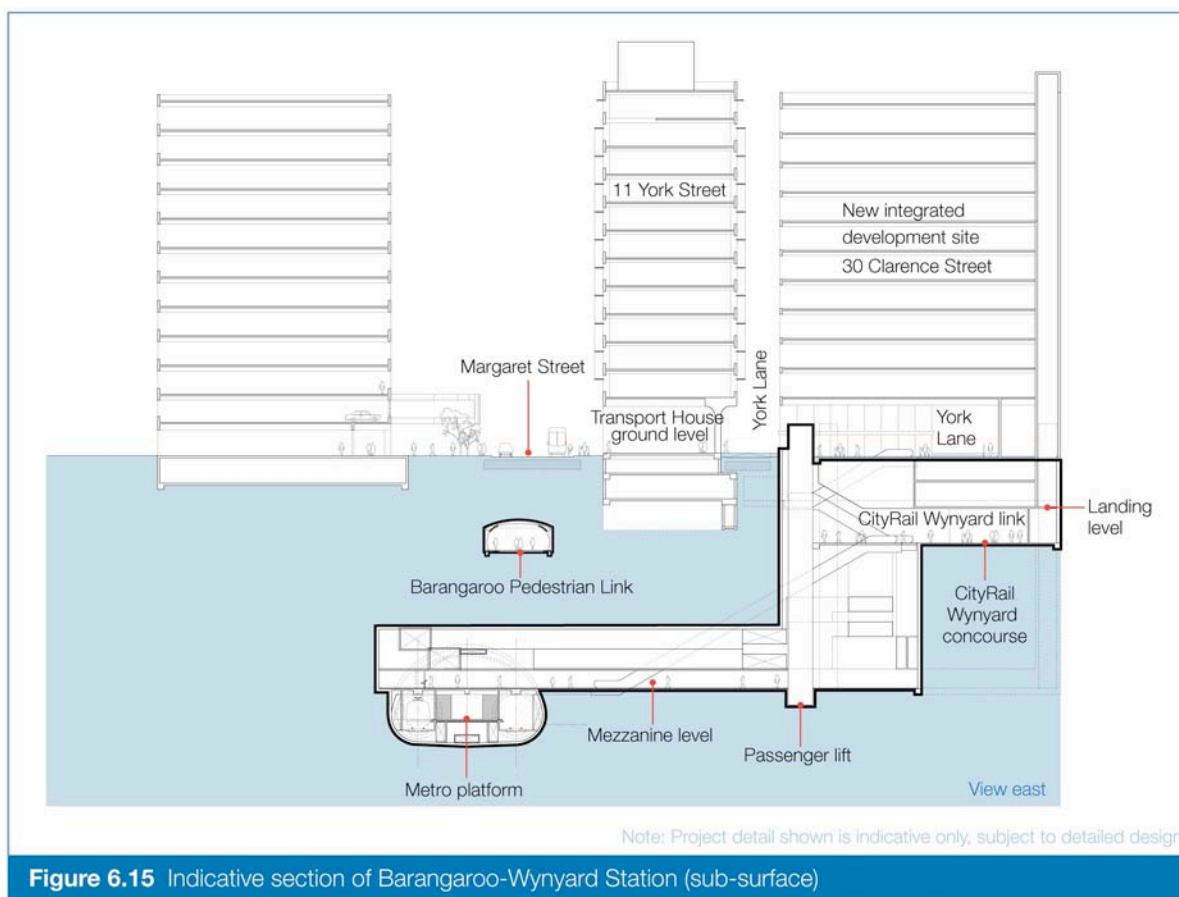
Barangaroo-Wynyard Station would be located within the western corridor of Sydney's financial district. This area is projected to have a working population of up to 78,000 by 2051. It includes the new headquarters buildings of Westpac, KPMG, Macquarie Bank and Lend Lease, as well as the proposed redevelopment of the Barangaroo precinct. The Barangaroo precinct is located at the former maritime area of East Darling Harbour and is the largest CBD development site and the last major waterfront to be redeveloped, providing up to 22,000 jobs and accommodation for 1,500 residents. The CBD Metro is a key aspect to the sustainable redevelopment of this future CBD precinct. Existing east-west pedestrian links to and from the Barangaroo precinct are poor, and the provision of a metro station and associated pedestrian links would enhance the accessibility of this area.

A metro station at Barangaroo-Wynyard would provide the opportunity to interchange with CityRail services at Wynyard Station on the Bankstown, Inner West, Airport/East Hills, South, North Shore Western and Northern lines. This interchange opportunity would help to provide a degree of relief during peak periods to the much-congested station. The station would also provide an opportunity for interchange with future ferry services.

The Barangaroo-Wynyard Station would be located beneath Margaret Street between Clarence and York streets, about 17–37 metres below street level (refer Figure 6.14 and Figure 6.15). Station entrances are proposed on Shelley Street near Sussex Street (Barangaroo), at the current Kent Street pedestrian subway entrance at 1 Margaret Street and at 30-38 Clarence Street at the De La Salle House building adjacent to York Lane. The interface with Wynyard Station and related electrical services would be subject to liaison with RailCorp.

Two buildings at 30 Clarence Street and 36-38 Clarence Street, which includes the De La Salle House building would be demolished and redeveloped as part of the station complex. Existing retail and other elements within the ground floor of Transport House would be removed, to allow for the construction of the station entrance and provision of retail space.





The proposed enhancements to the public domain, as presented in the station plan for Barangaroo-Wynyard Station, are outlined in Table 6.4.

Table 6.4 Public domain enhancements – Barangaroo-Wynyard Station

Issue	Principles	CBD Metro elements	Potential provision by others
Public domain	• Improve legibility and amenity of pedestrian movement along Clarence Street Margaret Street through public domain spaces and elements. • Where possible, create new open spaces and landscape areas that allow for orientation, different paths of movement and vantage points. • Upgrade footpaths, laneways, streets and open spaces to enhance safety, attractiveness and quality of station precinct.	• Provide a metro station entry building that is built to the site boundary while allowing pedestrian access between York Lane and Clarence Street to link with the existing CityRail entry. • Footpaths and open spaces around entry at Barangaroo. <i>Delivered in conjunction with others:</i> • Regrading and improvement of open spaces at eastern end of Napoleon Street.	• Upgrade of York Lane.

6.4.6 Pyrmont Station

Pyrmont is a transitional location between the CBD and the residential suburbs of Rozelle and Balmain. Pyrmont serves a significant employment catchment area, and also has a mixed residential development pattern of terrace houses and adapted warehouse apartment buildings. Key features of the local area include Darling Harbour to the east, (including the Sydney Convention and Exhibition Centre, Sydney Aquarium and the Australian Maritime Museum), Johnstons Bay and Blackwattle Bay to the west, Star City Casino, Union Square, the light rail station, and the Sydney Fish Markets.

Pyrmont has strong pedestrian connections to Glebe (west), Darling Harbour and the CBD (east), as well as major vehicular routes such as the Western Distributor (south). Local streets running north-south connect through the institutional precinct of Ultimo to Central Station and beyond to Redfern and Botany Road.

A metro station at Pyrmont would provide an opportunity to interchange with light rail services. The Sydney Light Rail includes stops at the Fish Market, John Street Square, StarCity Casino and Pyrmont Bay, and links the Pyrmont Peninsular with Central Station to the east and Lilyfield to the west. The Monorail stations at the Sydney Convention Centre and Harbourside connect Pyrmont to the Sydney CBD.

Pyrmont Station would be located generally under Union Square and would have both an eastern entrance and a western entrance to ensure that effective access to significant attractors and wider catchments is achieved. Its location provides an opportunity for improved pedestrian connectivity, including new connections to Harris Street and Pyrmont Bay Park, cycle routes and the extension of pedestrian areas.

Two alternatives have been developed for the eastern entrance.

Under Alternative 1, Pyrmont Station, as shown in Figure 6.16, would be located beneath Union Street, Union Square and buildings on Harris Street, near the intersection of Harris Street and Miller Street. The platform would be about 27–29 metres deep (refer to Figure 6.17). The eastern entrance

to the station would be located within the property boundaries of 3-9 Union Street. The development of this entrance would require the acquisition and demolition of a number of existing commercial buildings including 3-11 Union Street. The station would be designed in context with the surrounding streetscape and would reinforce the predominant street edges and buildings. Retail spaces would be provided to activate the station entrance.

Under Alternative 2 (refer Figure 6.18 and Figure 6.19) an eastern entrance would be provided at the vacant site on the corner of Union and Pyrmont streets (11 Union Street). In order to enable an entrance at this location, the station box and the alignment would need to be located further to the north than for Alternative 1, and would be partially located beneath residential properties on the northern side of Union Street. Alternative 2 would require acquisition of the commercial buildings fronting Union Street (3-11 Union Street) for the period of construction only. The front portions of the buildings would be retained and a section at the rear of the buildings would be demolished to provide a space to locate services buildings. Rear lane access to these properties would be modified and retained. Union Street would become pedestrianised between Paternoster Row and Pyrmont Street, and Union Square would be reconfigured for vehicle access from Paternoster Row. The formal pedestrian part of Union Square would be extended east to Pyrmont Street, with light wells within Union Street providing a visual feature from the Square. Alternative 2 would require a cut and cover excavation within Union Street from Pyrmont Street to Paternoster Row.

The western entrance for both Alternative 1 and Alternative 2 would be located at the corner of Mount and Miller streets. Access improvements at the escarpment end of Mount Street would be constructed as part of the CBD Metro project. However, prior to construction, the operation of any lift facilities would require ownership and operating agreements with the City of Sydney Council.

Emergency egress points, ventilation shafts and other services would be located at both station entrances, within or incorporated into commercial buildings to minimise intrusion into the public domain.

While both alternative station configurations are viable, Alternative 2 is Sydney Metro's preferred alternative for Pyrmont Station. Notwithstanding, Alternatives 1 and 2 would both require consultation with the City of Sydney Council, RTA, landowners, business owners and the local community to ascertain which option has the best overall outcome. Further detail on the options assessment process for Pyrmont Station is provided in Appendix C *Pyrmont Station: review of station options*.

The proposed enhancements to the public domain, as presented in the station plan for Pyrmont Station, are outlined in Table 6.5.

Table 6.5 Public domain enhancements – Pyrmont Station

Issue	Principles	CBD Metro elements	Potential provision by others
Public domain	• Use landscape and public domain elements to emphasis east-west movement. • Preserve and improve Union Square as a significant pedestrian environment. • Allow for future extension of east-west alignment to existing cliff walk. • Improve quality, safety and attractiveness of public domain. • Protect viewlines from Union Square along Miller and Union streets.	• Reinstatement of areas of Union Square and footpaths adjacent to stations that are impacted by development, in accordance with City of Sydney plans. • Alternative 2: alterations to the road layout to increase the pedestrian area of Union Street and reinstate vehicle access through Union Square from Paternoster Row.	• Future footpath widening, pedestrianisation or shared zones on Union and Miller streets. • Harris Street and Union Square upgrades. • Future connection between Harris Street and Cliff Top Walk via station site.

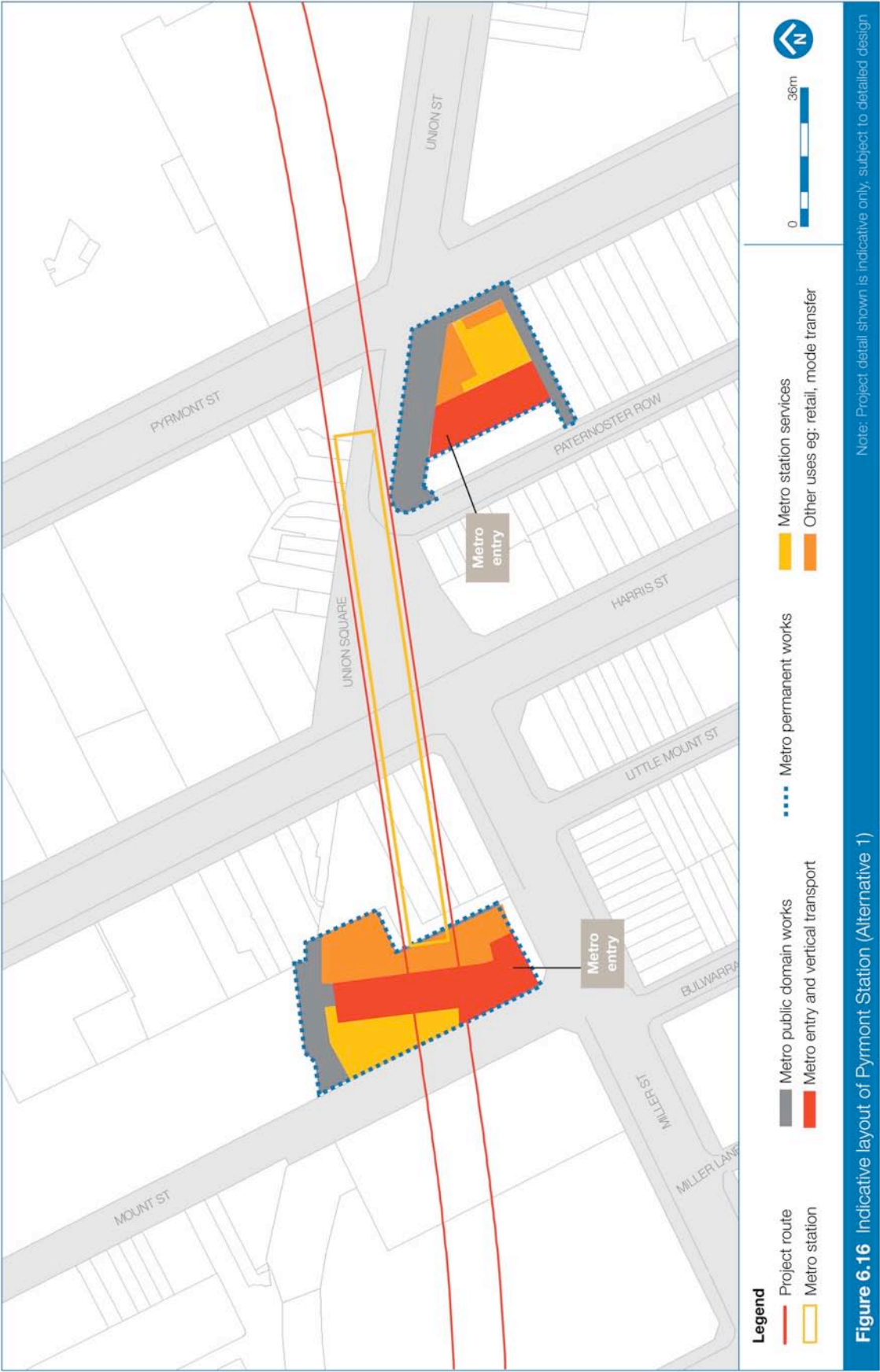


Figure 6.16 Indicative layout of Pymont Station (Alternative 1)

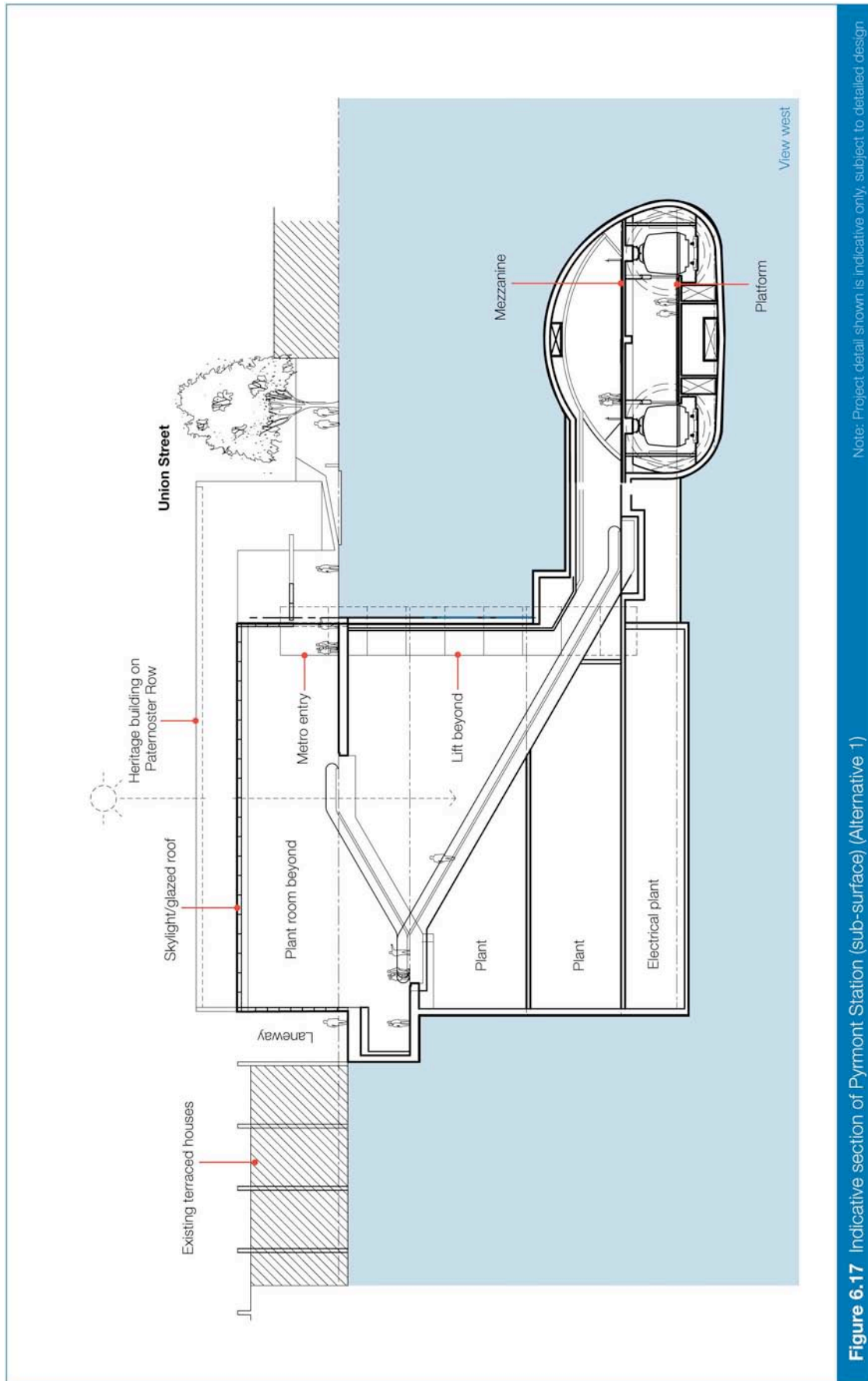
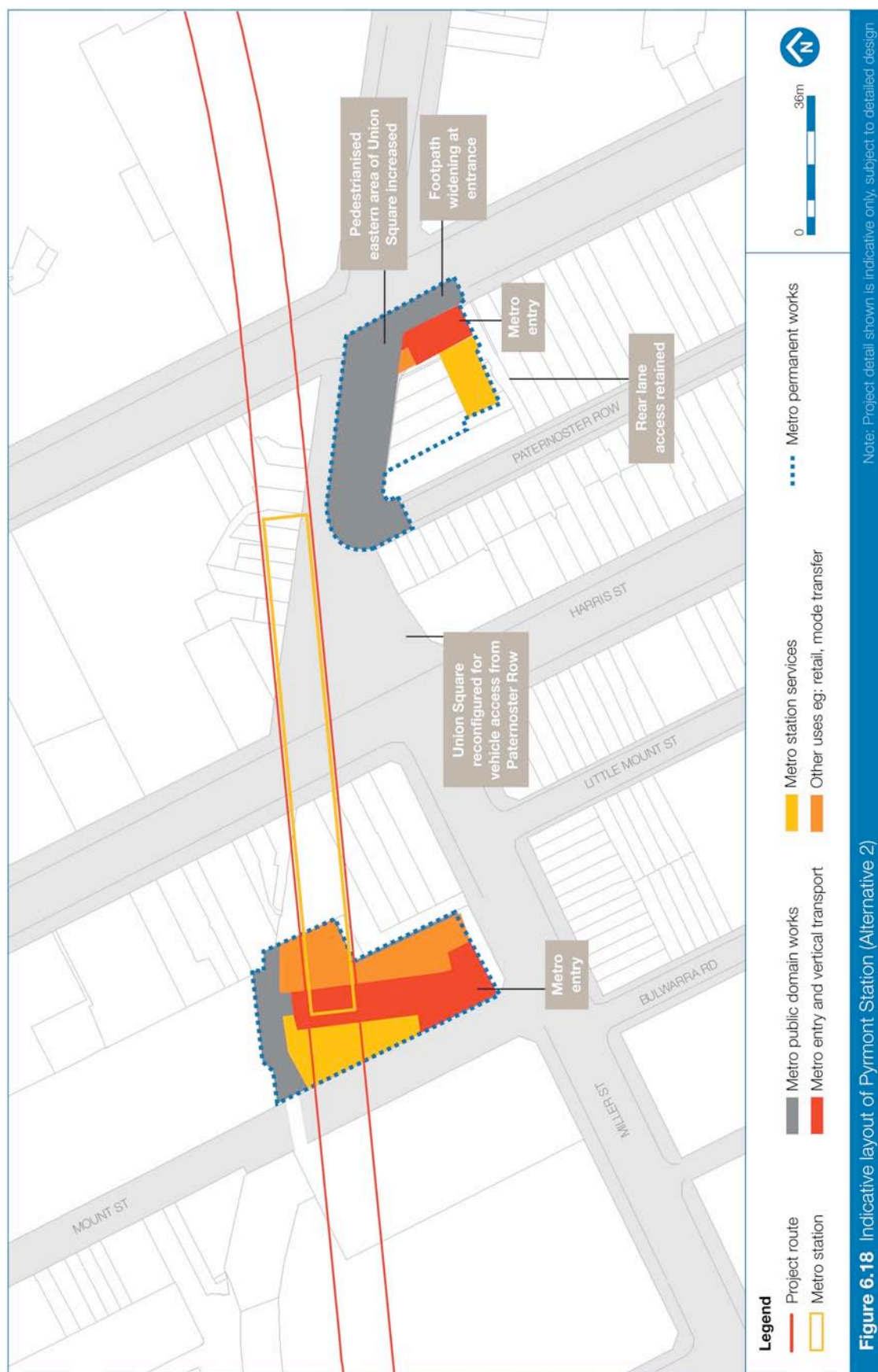
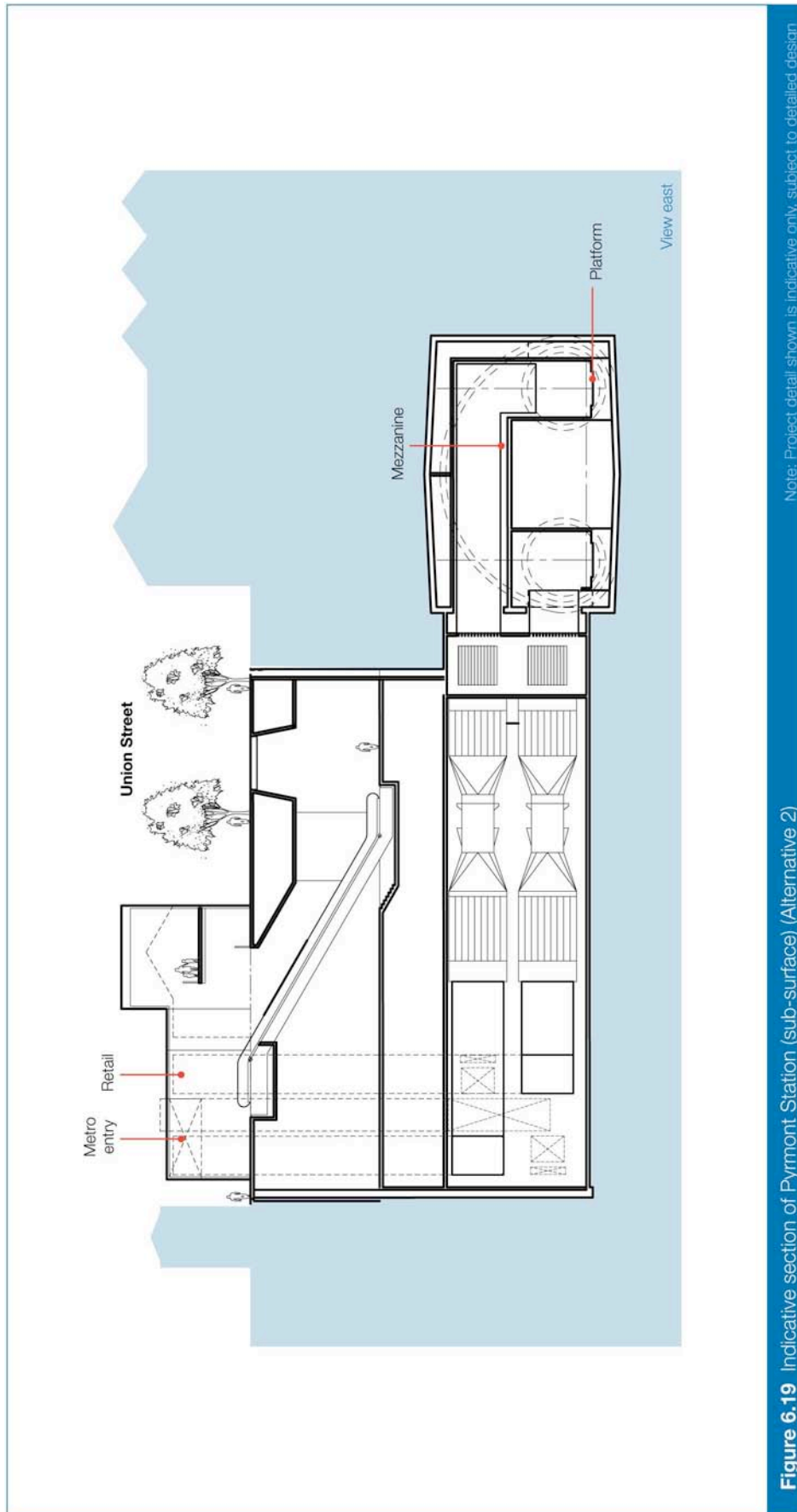


Figure 6.17 Indicative section of Pymont Station (sub-surface) (Alternative 1)





6.4.7 White Bay Station

The location of the future White Bay Station comprises the land at White Bay adjacent to the Western Distributor, Robert Street and the disused White Bay Power Station site.

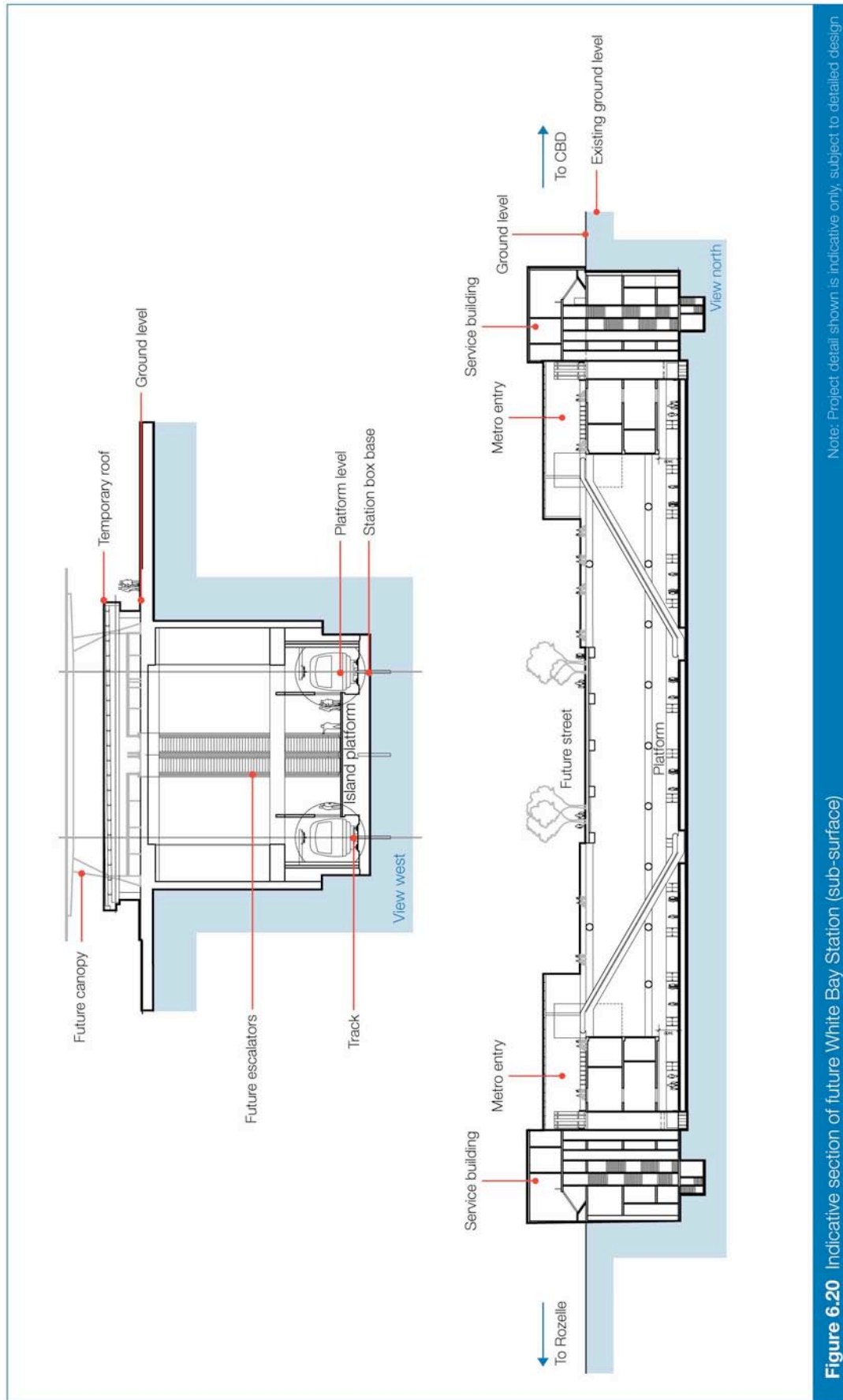
The NSW Government has committed to preparing a master plan for the future use of the Bays Precinct with particular emphasis on the renewal of White Bay. A future metro station at White Bay would support the renewal of the Bays Precinct, providing an opportunity for interchange with future bus services, as well as potential ferry services. As part of the master planning for the precinct, pedestrian and cycle links would also be provided.

The NSW Government recognises that the Bays Precinct is important to both the local community and to wider Sydney. Future planning for the precinct therefore needs to consider local needs, as well as the protection of Sydney's maritime economy and the strengthening of Sydney's role as a global city. Safeguarding a site for a future metro station at White Bay provides a unique opportunity for the Bays Precinct.

An indicative section of the sub-surface layout of the future White Bay Station is provided in Figure 6.20. The location of the station box within the White Bay site is shown on Figure 7.12. During construction of the CBD Metro, the White Bay Station site would be used as a main construction and spoil removal site for the project, details of which are provided in Chapter 7. The future White Bay Station would have a station box formed for the platforms with a view to safeguarding for future station construction.

A bus interchange at White Bay does not form part of the CBD Metro project.





6.4.8 Rozelle Station

Rozelle Station would be located under Victoria Road, immediately west of the intersection with Darling Street, as shown in Figure 6.21 and Figure 6.22, and would have a platform depth of about 27-36 metres below street level. The area is characterised as a mixed-use precinct containing restaurants and bars and small shops along Darling Street and Victoria Road. The Balmain/Rozelle precinct predominately comprises residential land uses with some recreational uses including parks and reserves along the foreshore.

Given the current residential development in the area, Rozelle Station would service a significant walking catchment. This catchment is likely to increase to higher density mixed uses with the proposed redevelopment of the Balmain Leagues Club and the Terry Street precinct.

Victoria Road is a major arterial road and strategic bus corridor connecting Parramatta and Sydney CBD, and is often heavily congested. Rozelle Station would provide an alternative mode of transport to bus or private vehicle for commuters wishing to travel from Rozelle to the CBD. As well as providing for the local residential population of Rozelle and its surrounds, Rozelle Station would increase the transport options for bus passengers travelling through Rozelle, allowing them to change to the CBD Metro at Rozelle or continue their journey via bus, depending on their ultimate destination.

Rozelle Station would include facilities to allow the interchange of passengers between the CBD Metro and bus services (plus taxis and cycling).

The station would have one main station entrance on the north-western corner of the intersection of Victoria Road and Darling Street, adjacent to the Balmain Leagues Club site. Additional entrances would be provided to connect to the unpaid concourse level below the main entrance. These entrances would be located at:

- The north-eastern corner of the intersection, adjacent to St Paul's Church.
- The south-eastern corner of the intersection, adjacent to St Thomas' Church.

Provision would be made so that a future entrance could be constructed within the Balmain Leagues Club site to connect it to the station.

As a consequence of creating an effective bus transfer bay within the site of the proposed Balmain Leagues Club development, vehicular access arrangements have been moved to a location opposite Wellington Street. This like-for-like access arrangement, which is consistent with the Local Environmental Plan and approved Development Control Plan, mitigates the impact of the project on the future development site.

Services for Rozelle Station, including emergency egress points, ventilation shafts and other services, would be located at the main station entrance and within a services building on Victoria Road. These services would be incorporated into commercial buildings to minimise intrusion into the public domain.

